

## Department of Hawaiian Home Lands


RELEASE DATE: DECEMBER 7, 2015

REQUEST FOR PROPOSALS  
No. RFP-16-HHL-001

SEALED OFFERS  
FOR  
SINGLE FAMILY HOMES AT KAKAINA SUBDIVISION  
STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

WILL BE RECEIVED UP TO 2:00 P.M. (HST) ON  
FEBRUARY 1, 2016

AT HALE KALANIANAOLE, 91-5420 KAPOLEI PARKWAY, KAPOLEI, HAWAII 96707.  
DIRECT QUESTIONS RELATING TO THIS SOLICITATION TO DARRELL ING,  
PROJECT MANAGER, TELEPHONE (808) 620-9276, FACSIMILE (808) 620-9299; E-  
MAIL AT [darrell.h.ing@hawaii.gov](mailto:darrell.h.ing@hawaii.gov).

  
JOBIE M. K. MASAGATANI  
CHAIRMAN, HAWAIIAN HOMES COMMISSION  
PROCUREMENT OFFICER

RFP-16-HHL-001

## TABLE OF CONTENTS

	<u>Page</u>
<b>SECTION ONE: INTRODUCTION, TERMS AND ACRONYMS, AND KEY DATES.....</b>	<b>1</b>
<b>SECTION TWO: BACKGROUND AND SCOPE OF WORK .....</b>	<b>7</b>
<b>SECTION THREE: PROPOSAL FORMAT AND CONTENT .....</b>	<b>16</b>
<b>SECTION FOUR: EVALUATION CRITERIA .....</b>	<b>21</b>
<b>SECTION FIVE: CONTRACTOR SELECTION AND CONTRACT AWARD.....</b>	<b>22</b>
<b>SECTION SIX: SPECIAL PROVISIONS.....</b>	<b>28</b>
<b>SECTION SEVEN: ATTACHMENTS AND EXHIBITS .....</b>	<b>31</b>
ATTACHMENT 1 OFFER FORM, OF-1	
ATTACHMENT 2 OFFER FORM, OF-1A	
ATTACHMENT 3 OFFER FORM, OF-2	
ATTACHMENT 4 NOTICE OF INTENT	
EXHIBIT A GENERAL PROVISIONS	
EXHIBIT B SAMPLE CONTRACT	
EXHIBIT C AG 103D GENERAL CONDITIONS	
EXHIBIT D OVERVIEW OF THE RFP PROCESS	
EXHIBIT E DHHL CONSTRUCTION GENERAL CONDITIONS	
EXHIBIT F BOND FORMS	
EXHIBIT G INFRASTRUCTURE CONSTRUCTION PLANS	
EXHIBIT H SUBSURFACE INVESTIGATION REPORT	
EXHIBIT I WAGE RATE SCHEDULE BULLETIN NO. 485	
EXHIBIT J APPRENTICE SCHEDULE NO. 485	
EXHIBIT K GENERAL DECISION NUMBER HI150001 09/04/2015	
EXHIBIT L GREEN BUILDING	
EXHIBIT M DESIGN GUIDELINES	
EXHIBIT N RESIDENTIAL TELECOMMUNICATIONS AND INSIDE WIRING SPECIFICATION (SANDWICH ISLES COMMUNICATION)	



**SECTION ONE**  
**INTRODUCTION, TERMS AND ACRONYMS, KEY DATES**

**1.1 INTRODUCTION**

The State Department of Hawaiian Home Lands (DHHL) is issuing this Request for Proposals (RFP) for the design, construction, financing, and marketing of approximately 28 single-family houses in the Kakaina Subdivision, located in Waimanalo, Koolaulopoko, Oahu. Kakaina Subdivision is 7.0 acres in size and is designed for 45 single-family residential lots. This RFP is specifically for the design and construction of 28 single-family developer-built homes. The remaining 17 lots are reserved for self-help and/or owner/builder houses. On-site and off-site improvements are currently being constructed under a separate contract and will be completed prior to the commencement of house construction. DHHL is specifically interested in design build concepts that are “green build” in nature and affordable to buyers in the 80-120% AMI categories. Proposals that bring these often conflicting concepts together will be viewed in a better light.

**1.2 CANCELLATION**

The Request for Proposals (RFP) may be cancelled and any or all proposals rejected in whole or in part, without liability to the State, when it is determined to be in the best interest of the State.

**1.3 TERMS AND ACRONYMS USED THROUGHOUT THE SOLICITATION**

ADA	=	Americans with Disabilities Act
AMI	=	Area Median Income
BAFO	=	Best and Final Offer
CPO	=	Chief Procurement Officer
DAGS	=	Department of Accounting and General Services
DCAB	=	Disability and Communication Access Board
DHHL	=	Department of Hawaiian Home Lands
FHA	=	Federal Housing Administration
GC	=	103D General Conditions, issued by the Department of the Attorney General
GET	=	General Excise Tax
HAR	=	Hawaii Administrative Rules
HRS	=	Hawaii Revised Statutes
HUD	=	Department of Housing and Urban Development.
NAHASDA	=	Native American Housing Assistance and Self Determination Act of 1996
RFP	=	Request for Proposals
UIA	=	Undivided Interest Awards Program
VA	=	Department of Veteran Affairs

Addendum – A written document which may be issued by the Chairman during the solicitation period establishing changes to the request for proposals.

Advertisement – A public announcement inviting proposals for work to be performed or materials to be furnished.

Area Median Income (AMI) – the median income for a County as defined by HUD, and as adjusted for family size.

Chairman – Chairman of the Hawaiian Homes Commission. The Chairman also serves as the Director of the Department of Hawaiian Home Lands and is the Procurement Officer for the department.

Commission – The Hawaiian Homes Commission (HHC).

Contact Person – The person designated by the Department to receive various communications in writing to the Department in conjunction with the project.

Department of Hawaiian Home Lands (DHHL or Department) – A public body responsible for administering the day-to-day operations of the Hawaiian Homes Commission Act of 1920, as amended.

Design-Build Contract – A contract in which the Offeror will both design and construct the proposed project.

Developer – The entity or person retained by the Department to design, construct, and market the residential dwellings.

Developer-Built Homes – Houses constructed by the developer (as opposed to self-help, owner-builder, etc.).

Federal Labor Standards – U.S. Department of Housing and Urban Development form HUD-4010, as may be amended from time to time.

Federal Rate Schedule – HUD General Decision HI150001 09/04/2015, as may be amended from time to time.

Green building – Design and construction practices that minimize environmental impact, maximize the quality of homes and reduce the cost of maintenance and operation.

HALE – The DHHL HALE Program aids beneficiaries with financial literacy services. Currently HALE offers two types of services for beneficiaries. They include Homebuyer Education classes and Foreclosure Prevention Management.

Hawaiian Home Lands Trust Fund – The trust fund created by Act 14, Special Session Laws of Hawaii, 1995, which established a trust fund within the State Treasury to which all specified appropriations from the State legislature shall be deposited therein.

Hawaiian Homes Commission Act of 1920 (HHCA) – The Act of July 9, 1921, c 42, 42 Stat. 108, which is now part of the Hawaii State Constitution, and is subject to amendment or repeal as prescribed in Article XII of the Hawaii State Constitution.

Housing Contractor ("Contractor") – For the purpose of this RFP, a company whose primary or a significant portion of business is the construction of residential dwellings.

Inspector – The person assigned to make detailed inspections of contract performance and services supplied.

Laws – All Federal, State, County laws, ordinances, rules and regulations including any amendments thereto effective as of the date of the solicitation for sealed proposals.

Native American Housing Assistance and Self Determination Act of 1996 (NAHASDA) – A program of block grant assistance to native Hawaiians administered by HUD.

native Hawaiian – Defined as any descendant of not less than one-half (50%) part of the blood races inhabiting the Hawaiian Islands previous to 1778 (a lower case "n" is commonly used in the phrase "native Hawaiian" when referring to Hawaiian Homes Commission Act beneficiaries. The upper case "N" is used when more generally describing persons with any percentage of Hawaiian ancestry).

Off-site Infrastructure – Physical facilities and improvements located outside the boundary of the Project, which provide access and support to the Project. Such physical facilities and improvements include, but are not limited to, roads and utility lines for water, sewer, electricity, drainage, telephone, and cable television.

Offeror – Any individual, partnership, firm, corporation, joint venture, or representative or agent, submitting an offer in response to this solicitation.

On-Site Infrastructure – Physical facilities and improvements located within the boundary of the Project, including, but not limited to, clearing and grubbing, mass grading of the property to building pad sub-grade elevation, local streets and utility lines for water, sewer, electricity, drainage, telephone, and cable television.

Project – Design and construction of 28 single-family houses (turnkey/complete), and related work, at the Kakaina Subdivision (see Section Two: Scope of Work, and Section Four: Contractor's Responsibilities)

Project Lots – Within the Kakaina Subdivision, the lots on which the selected developer shall construct houses.

Procurement Officer – The contracting officer for the State of Hawaii, Department of Hawaiian Home Lands.

Proposal – A document submitted by an Offeror in the prescribed manner in response to this RFP.

Responsible Managerial Employee (RME) – The individual who is designated by the Developer to be responsible for all work of the project and is authorized by the Developer to receive and fulfill instructions and notices from the Department.

Selection Committee – A committee consisting of a maximum of four persons, appointed by the Chairman, which will evaluate proposals and recommend the Selected Housing Developer for this Project to the Chairman for approval.

Selected Housing Developer – The Offeror selected by the Selection Committee and approved by the Chairman.

State – The State of Hawaii acting through its authorized representative.

Subcontractor – An individual, partnership, firm, corporation, joint venture or other legal entity, as covered in Chapter 444, HRS, which enters into an agreement with the Contractor to perform a portion of the work for the Contractor.

Surety – The qualified individual, firm or corporation other than the Developer, which executes a bond for the benefit of the Developer and the Department to insure acceptable performance of the Construction Contract.

Undivided Interest Awards (UIA) Program – The DHHL program that provides an award to a group of individuals for a large parcel of land that is not subdivided. There are no financial pre-qualification requirements for the awardees/lessees. The large piece of property is subsequently subdivided and developed. During the infrastructure construction period, lessees work toward qualifying for their home mortgage loans, while having the rights and benefits under the homestead lease.

#### 1.4 RFP SCHEDULE AND SIGNIFICANT DATES

The schedule set out herein represents the State's best estimate of the schedule that will be followed. All times indicated are Hawaii Standard Time (HST). If a component of this schedule, such as "Proposal Due" date is delayed, the rest of the schedule will likely be shifted by the same number of days. The approximate schedule is as follows:

<b>Release of Request for Proposals.</b>	12/7/15
Deadline for DHHL to receive written inquiries to be answered at the Pre-proposal Conference Location: DHHL, 91-5420 Kapolei Parkway, Kapolei, HI 96707	12/11/15
<b>Pre-proposal Conference</b> Location: Ka Ho'olina Na Kuhio Community Center, 41-253 Ilauhole Street, Waimanalo, Oahu 96795	9:00am, 12/14/15
<b>Site Inspection</b> Location: Construction baseyard near the intersection of Hihimanu Street and Mekia Street, Waimanalo, Oahu, Hawaii (following Pre-proposal Conference)	12/14/15
Final deadline for written inquiries	1/21/16
Deadline for DHHL to receive written Notice of Intent to submit offer Location: DHHL, 91-5420 Kapolei Parkway, Kapolei, HI 96707	1/22/16

DHHL's responses to offerors' written inquiries distributed	1/25/16
<b>Proposals Due</b> Location: DHHL, 91-5420 Kapolei Parkway, Kapolei, HI, 96707	2/1/16
Proposal Evaluations	2/11/16
Discussion with Priority Listed Offerors (if necessary)	2/18/16
Best and Final Offer (if necessary)	2/25/16
Notice of Award	3/10/16
Contract Start Date	5/5/16

Solicitation documents may be obtained at the Department of Hawaiian Home Lands Web site:

<http://dhhl.hawaii.gov/procurement/>

There is no fee assessment to download the RFP documents from the DHHL Web site. It is the responsibility of potential offerors to check the DHHL Web site for any addenda issued by DHHL.

## 1.5 PRE-PROPOSAL CONFERENCE

The purpose of the pre-proposal conference is to provide Offerors an opportunity to be briefed on this procurement and to ask any questions about this procurement. The pre-proposal conference is not mandatory, however, Offerors are encouraged to attend to gain a better understanding of the requirements of this RFP.

Offerors are advised that anything discussed at the pre-proposal conference does not change any part of this RFP. All changes and/or clarifications to this RFP shall be done in the form of an addendum.

The pre-proposal conference will be held as follows:

Date: December 14, 2016

Time: 9:00 am

Location: Ka Ho'olina Na Kuhio Community Center  
41-253 Ilauhole Street  
Waimanalo, Oahu 96795

A site visit will be conducted following the pre-proposal conference. Attendees will meet at the construction trailer near the intersection of Hihimanu Street and Mekia Street, Waimanalo. Note that this is an active construction site and appropriate safety attire is required. Attendance at the site visit is not mandatory but is highly recommended.

## 1.6 QUESTIONS AND ANSWERS PRIOR TO OPENING OF PROPOSALS

All questions shall be submitted by the due date specified in Section 1.4, *RFP Schedule and Significant Dates*, as amended.

The State will respond to questions through Addenda/Amendments by the date specified in Section 1.4, *RFP Schedule and Significant Dates*, as amended.

## **1.7 NOTICE OF INTENT TO SUBMIT OFFER**

In accordance with Section 103D-310, Hawaii Revised Statutes, and Section 3-122-111, Hawaii Administrative Rules, a written notice of intention to submit an offer must be submitted to the Chairman, who is the officer charged with letting the contract. The notice may be faxed, hand carried, mailed or e-mailed to the office indicated in the Request for Proposals.

The written notice must be received by the office indicated in the Request for Proposals no later than 2:00 p.m. on the tenth calendar day prior to the day designated for receipt of proposals. If the tenth calendar day prior to the day designated for receipt of proposals is a Saturday, Sunday, or legal State holiday, then the written notice must be received by the Department no later than 2:00 p.m. on the last working day immediately prior to said Saturday, Sunday, or legal State holiday. The written notice will be time stamped when received. The time designated by the time stamping device in said office shall be official. If the written notice is hand carried, then the bearer is responsible to ensure that the notice is time stamped. If the notice is faxed, the time of receipt by the Department fax machine shall be official.

It is the responsibility of the prospective Offeror to ensure that the written notice of intention to bid is received in time and the Department assumes no responsibility for failure of timely delivery caused by the prospective Offeror or by any method of conveyance chosen by the prospective Offeror.

## SECTION TWO

### **BACKGROUND AND SCOPE OF WORK**

#### **2.1 PROJECT OVERVIEW AND HISTORY**

Kakaina Subdivision is a 7.3 acre site consisting of 45 single-family residential house lots with a minimum lot size of 5,000 square feet. Approximately 28 single-family houses will be constructed per this RFP. The remaining lots are reserved for either self-help or owner-builder programs. On-site and off-site improvements are currently being constructed and are scheduled for completion by December 2015.

The units shall be sold to native Hawaiian beneficiaries awarded undivided interest leases in the Kumuhau and Kakaina Subdivisions. Start of house construction is currently scheduled for June 2016.

The location of the Kakaina Subdivision housing project is shown in Exhibit G, Sheet 1. The site is located on Kakaina Street in Waimanalo, Oahu, approximately 700 feet *mauka* of Kalanianaʻole Highway. The lots to be constructed on per this RFP are numbered 1, 2, 4, and 22 through 48 on the Exhibit G, Sheet 7A

#### **Site Conditions**

**Landowner:** State of Hawaii, Department of Hawaiian Home Lands.

**City and County of Honolulu Zoning:** AG-1, Restricted Agriculture. The Department is not subject to County Zoning. DHHL has declared that the subdivision and homes will be designed and built in conformance with R-5, Residential zoning standards.

**Current Use of the Site:** Construction of the on-site and off-site improvements is currently in progress. Access to the subdivision will be from Kakaina Street or Hihimanu Street.

**Surrounding Uses:** Adjacent to the site, there are privately-owned residential lots on the north, multi-family residential complexes to the east, and agricultural uses to the south and west. Note that some of the existing residents abutting the lots on the northern boundary have expressed concern for their privacy because the DHHL lots are at a higher elevation than the neighboring lots.

**Soils:** Refer to Exhibit H, Geotechnical Exploration Report. Lots have been mass graded per Exhibit G. Prior to mass grading, soil samples were tested by the Department of Health, Hazard Evaluation and Emergency Response Office. The samples were analyzed for arsenic and dioxin, the two most commonly found contaminants associated with former sugar cane operations. Both contaminants were detected below DOH unrestricted Environmental Action Levels.

**On-Site and Off-Site Infrastructure:** (See Exhibit G)

- 1) **WATER:** A new on-site 8-inch waterline is being constructed and will provide domestic water service and fire protection for the Kakaina Subdivision. Individual water service laterals are being installed for each lot. The new on-

site waterline is being connected to the existing 12-inch waterline along Kakaina Street.

- 2) **WASTEWATER SYSTEM:** New on-site 8-inch sewer lines are being constructed and will provide sewer service for the Kakaina Subdivision. Individual sewer laterals are being installed for each lot. The new on-site sewerlines are being connected to the existing 12-inch sewer line along Kakaina Street.
- 3) **DRAINAGE:** New on-site catch basins, drain lines, and an underground detention system to discharge into Waimanalo Stream are being constructed and will control the on-site storm runoff from the Kakaina Subdivision. On-site drainage ditches are being constructed along the northern boundary which to connect to the existing drainage system under Poalima and Mekia Streets and discharge into Kahawai Stream.
- 4) **TRANSPORTATION:** Kakaina Street is being improved to accommodate the additional traffic from the Kakaina Subdivision. Kaulukanu Street is being extended into the subdivision.
- 5) **OTHER UTILITIES:** Existing electric system is adequate to service the Kakaina Subdivision. New on-site underground electrical, telephone, and cable television systems are being constructed and will provide electrical, telephone, and cable television service for the Kakaina Subdivision. Individual service connections are being installed for each lot. Telephone service will be provided by Sandwich Isles Communication (SIC). No gas distribution lines have been installed within the subdivision.

## **2.2 SCOPE OF WORK**

All services and for whom services are to be provided for shall be in accordance with this RFP, including its attachments and any addenda.

### **2.2.1 DHHL Project Objectives**

This Request for Proposals ("RFP") is being issued by the Department of Hawaiian Home Lands ("DHHL") for the purpose of soliciting proposals from interested house developers who meet the qualifications described herein to develop single-family homes on the Project Lots in the Kakaina Subdivision. Proposals shall meet DHHL's overall objectives for this Project, which are summarized below:

- To design, finance, construct, and market houses as specified in this RFP.
- To provide affordable homes to meet the needs of undivided interest lessees.
- To incorporate green building practices (minimum two-star rating, Hawaii BuiltGreen™ Home Builder Checklist) into the construction of the proposed house models in order to achieve a lower cost of ownership by minimizing energy use. DHHL is interested in new concepts that take into consideration and embrace green-build concepts both within and outside the house.



### 2.2.2 Work Product

Offerors shall provide proposed prices for each model type with the understanding that approximately 28 single-family houses will be built, but that the quantity of each model of house to be constructed and the various options will not be known in advance of the proposal submission. The actual number of houses to be constructed will depend on the number of financially pre-qualified beneficiaries who execute sales contracts at lot selection. Prices shall reflect hard and soft costs related to house development only. The land shall be conveyed to the home buyers by lease pursuant the HHCA, as amended.

The four house models to be proposed are:

<b>Model</b>	<b>Number of Bedrooms</b>	<b>Approximate Living Area (Square Feet)</b>	<b>Desired Price Range (\$)</b>
A	Two	750	\$150,000 – 175,000
B	Two	900	\$200,000 – 250,000
C	Three	1,000	\$225,000 – 275,000
D	Four	1,200	\$250,000 – 300,000

The designs must include specifications to meet at least the minimum FHA requirements and standards, including but not limited to the following:

- Garbage Disposal (1/2 HP Minimum)
- Carpeting (Living Area)
- Sheet Vinyl or Vinyl Tile (Kitchen and Bathrooms)
- Roofing (minimum 25-Year Warranty)
- Free-Standing Range with Oven
- Range Hood with Ventilation Fan
- Solar Water Heater
- Conduits and junction box for the future installation of an electrical outlet suitable for charging electric vehicles (not an FHA requirement)
- Concrete driveway (minimum 18 feet wide, by 20 feet long) and carport
- All appliances must be Energy Star rated.

The design and features of Model A should meet only the minimum requirements. The intent is to offer a house at the lowest possible price. The design should allow relatively easy expansion to meet future needs and financial resources of the homeowner.

The proration of soft costs (consultants, overhead, marketing, etc.) and profits, among the house models should be balanced appropriately. House prices and/or developer compensation will not be revised due to changes in the mix of models.

House designs and plot plans must conform to the Design Guidelines. Refer to Exhibit M. (Note: Plans and designs submitted in response to this RFP are not subject to review by the Design Committee.)

The Disability and Communication Access Board has determined that a surcharge may not be placed on a beneficiary with a disability (or a beneficiary with an expected occupant

who has a disability) for accessibility features that comply with the minimum requirements of the 2010 ADA Standards or UFAS, whichever is more stringent.

### **2.2.3 Proposed Development Schedule**

Execute Development Agreement .....	March 2016
Lessees Select Lots, Contract for Houses .....	May 2016
House Construction Starts.....	June 2016
First Occupancy .....	December 2016
Last House Complete .....	March 2017

### **2.2.4 Developer's Responsibilities**

The Developer shall be responsible for, but not limited to, the following. Cost of these items shall be incidental to and included in the house price.

- 1) Assemble and coordinate a development team for the Project. Identify the Responsible Managerial Employee who shall be the authorized representative for the entire project. Identify consultants and subcontractors to be employed in the Project.
- 2) Provide house plans, which meet or exceed the quality of the DHHL requirements for the single-family homes, and site the houses on the Project Lots that are shown on the subdivision plans for the Project. All homes shall be designed to meet all County code requirements on all lots designated for this RFP. Every house model should fit on every lot (please indicate exceptions). House designs shall take into account the soil engineer's recommendations.
- 3) Provide house designs and specifications to support implementation of the Project Green Building Strategy. Particularly, the designs and specifications for each house shall achieve or exceed the minimum two star Hawaii BuiltGreen certification level.
- 4) Prepare Composite Plot Plans for the Project Lots. The Plot Plan shall show the location of the house and driveway relative to the property lines, finish elevation of the house, and fine grading, including individual lot swales around each house.
- 5) Obtain all permits (e.g., Building and Grading Permits) and approvals required for the construction of the homes, in accordance with the requirements of the County and other agencies having jurisdiction over the Project. Including a Fine Grading Permit for installation of the imported top soil on the Project Lots.
- 6) Perform site inspection and accept all existing improvements within the subdivision and lots, including house pads, prior to start of construction. Proposed prices shall include any site work needed to construct the houses. Developer shall be responsible and repair all damages caused to existing improvements within the subdivision and lots.

- 7) Construct houses per DHHL and County approved house plans and specifications and according to applicable Codes.
- 8) Install water meter for each lot. Cost of water meter shall be included in house price.
- 9) Provide geotechnical inspections and compaction tests prior to concrete pours for the driveways and house foundations. Written reports and compaction test results shall be provided to DHHL.
- 10) Construct concrete driveways for the Project Lots. Driveways shall be a minimum of 18 feet in width and 20 feet in length. Lots 4, 22, 23, 27, 28, 31, 32, and 34 will require extended driveways. The cost of the addition length shall be added to the price of the house and paid for by the homebuyer. The cost per lineal foot shall be stated in the proposal.
- 11) Upon completion of each house, the Developer shall import and install top soil and grass all exposed areas around the house. Developer shall maintain all common area grassing within the subdivision until the all houses are accepted by DHHL and lessees. Grassing and vegetation on each lot shall be cut just prior to homeowner move-in.
- 12) The Developer shall maintain existing swales between lots. See typical swale section Exhibit G, Sheets 13 and 14.
- 13) Take into account infrastructure systems constructed by DHHL and others, and connect the houses to the appropriate utilities, including Sandwich Isles Communications.
- 14) Provide construction management and coordinate all inspections with architect, structural engineer, City, State and federal agencies. Provide weekly written reports to the Department. Submit appropriate written documents for FHA/VA acceptance.
- 15) Install dust screens along the perimeter of the subdivision for the duration of house construction. Remove and dispose of the dust screens upon completion of the house construction.
- 16) Install 6-ft. high chain link fencing (with vinyl privacy slats) for houses on Hihimanu Street and Kakaina Street side of the subdivision (sitework contractor is installing fences along boundary with existing residential lots). Privacy fences at rear yards required; fences at sideyards are recommended, but not required. Cost of fencing shall be pro-rated among prices for all houses.
- 17) Be responsible for dust control, noise control, erosion control and related damages.
- 18) Close all permits (e.g., Building and Grading Permits), including an existing Grading Permit that will be transferred to DHHL from the sitework contractor.

- 19) Submit a certified copy of each weekly payrolls to the Department within seven calendar days after the end of each weekly payroll period. Failure to do so on a timely basis shall be cause for withholding of payments, termination of the contract, and/or debarment. The Developer shall be responsible for the timely submission of certified copies of payrolls of all subcontractors. The certification shall affirm that payrolls are correct and complete, that the wage rates contained therein are not less than the applicable rates contained in the wage determination decision, any amendments thereto during the period of the contract, and that the classifications set forth for each laborer and mechanic conform with the work they performed.
- 20) Maintain payroll records for all laborers and mechanics working at the site of the work during the course of the work and preserve for a period of four (4) years thereafter.
- 21) Provide any other services or functions that are necessary for successful completion of the proposed construction, including, but not limited to, final inspection of each house, turnover of each house to DHHL/Buyer, preparation and submittal of final Warranty Packages for each house to DHHL/Buyer, and any unique circumstances of their proposal.
- 22) Prepare and issue to each buyer a Homeowner's Manual consisting of warranty information (including claim filing procedures), important telephone numbers, recommendations for periodic maintenance, and community association information.
- 23) Formulate a financial plan to address costs and sources of construction financing in accordance with the contract. Arrange sources and funds for all design and construction capital necessary to complete the homes in accordance with the contract. Explore alternative funding mechanisms including, affordable housing tax credits, and grants or loans from other public agencies or private sources.
- 24) Market and sell all dwelling units, including applicant notification and conducting information/orientation meetings. The contractor will be required to maintain and protect each house until sale and loan closing, and turnover of the home to a lessee takes place.
- 25) Provide sufficient warranties to ensure correction of construction defects during the warranty period.
- 26) Allow DHHL access for inspections and other purposes.

#### **2.2.5 House Buyer Eligibility and Qualification Requirements.**

Beneficiaries who apply to purchase Homes must also satisfy the following requirements or conditions:

- 1) Each applicant will complete, sign and deliver to DHHL an "Application for Homestead Lease".

- 2) Each beneficiary must be a “native Hawaiian” as that term is defined under HHCA, section 201 (a) (5).
- 3) The selection of beneficiaries to purchase Homes and the specific Home which each beneficiary may purchase will be accomplished through DHHL’s homestead award program procedures and will be administered and determined solely by DHHL in accordance with this Agreement.
- 4) Beneficiaries will be required to attend and successfully pass a homeownership counseling course if and to the extent that such a program is required by any lender lending monies to the applicable beneficiary for the applicable Home purchase.
- 5) Beneficiaries must use their Homes purchased from Developer as their principal dwellings.
- 6) The Homes will be sold subject to the provisions of HHCA and DHHL Administrative Rules.
- 7) Each beneficiary must meet such other qualifications as established by HHCA or rules adopted by DHHL.

### **2.3 DEPARTMENT OF HAWAIIAN HOME LANDS RESPONSIBILITIES**

DHHL shall be responsible for the following:

- 1) Grant right-of-entry to the Developer for the construction of the houses.
- 2) Provide for the completion of site construction and infrastructure in accordance with civil engineering plans as prepared by Akinaka and Associates, Ltd. DHHL shall be responsible for the planning, design, funding, and construction of on- and off-site infrastructure for the Kakaina Subdivision Housing Project, and related common areas.
- 3) Pay water facility and sewer charges.
- 4) Establish the mix of houses based on market analysis prior to the lot selection meeting.
- 5) Interim Loan fund. The department may provide zero-interest interim construction loan funds to qualified developers to fund the construction of the turn-key housing units. Said loans will require no monthly re-payments; loan will be paid down from the proceeds of the sales of turn-key homes through escrow to the department. These funds may be made available and utilized in lieu of developer financing from a commercial lending institution provided that the developer offers a reduction of the sales price for houses constructed utilizing the interim loan fund. Term of loan shall be for a period of eighteen (18) months from the recordation of Contract of Loan.
- 6) Affordable Housing Credits will not be available to the Developer.

- 7) Confirm eligibility of buyers pursuant to the HCCA.
- 8) Provide beneficiaries with financial counseling and other homeowner related assistance through the DHHL HALE Program.
- 9) Conduct lot selection meeting.
- 10) Convert Undivided Interest Leases to DHHL homestead leases.
- 11) Record leases, mortgages and other documents necessary for the conveyance of any home by Developer to a beneficiary, and shall do so in a timely manner in accordance with applicable contracts.
- 12) Monitor house construction for compliance with approved plans and specifications.

## **2.4 TERM OF CONTRACT**

The contract shall be for a period of one year beginning approximately May 2016 and ending April 2017.

Unless terminated, the State may extend the term of the contract for an additional period of up to one year or portions thereof without the necessity of re-bidding, upon mutual agreement in writing at least sixty (60) days prior to the expiration of the contract. The house prices for the extended period shall remain the same as described in the offer.

When interests of the State so require, the State may terminate the contract for convenience by providing six (6) weeks prior written notice to the Developer.

## **2.5 CONTRACT ADMINISTRATOR**

For the purposes of this contract, Norman Sakamoto, Acting Land Development Division Administrator, (808) 620-9271, or authorized representative, is designated the Contract Administrator.

## **2.6 OFFEROR QUALIFICATIONS**

Minimum Qualifications for Offerors, at the time the proposal is submitted:

- 1) A principal member of the Offeror's company must have at least five (5) years of residential housing development experience in the State of Hawaii.
- 2) The Offeror shall name the Responsible Managerial Employee (RME) who will be responsible for day-to-day operations and oversight throughout the design and construction of the Project. The RME shall have had substantial responsibility, or been materially involved in the development of at least three (3) separate residential housing projects with at least one project consisting of twenty (20) or more units in the State of Hawaii.

- 3) The Offeror shall show evidence of credit worthiness and financial resources to complete the design and construction of the Project lien-free;
- 4) At the time of the submittal of the proposal, the Offeror must be authorized to do business in the State of Hawaii and have all licenses necessary to carry out the housing design and construction of the Project. All persons and entities to be used on the design and construction shall possess all required professional and other licenses issued by the State of Hawaii including, but not limited to, architects, engineers, contractors, subcontractors, lenders, and others.
- 5) At the time of submittal of the proposal, the Offeror shall not be in default or have failed to perform under any contract, agreement, development or design-build agreement, or lease with the State of Hawaii, and not have any outstanding judgments.
- 6) The Offeror shall provide its two (2) most recent audited annual financial statements, a statement of financial net worth, or statement of bonding capacity.

## **2.7 DISQUALIFICATION OF OFFERORS**

Any one or more of the following causes will be considered as sufficient for the disqualification of an Offeror and the rejection of its proposal or proposals:

- 1) Non-compliance with Section 103D-310 HRS.
- 2) Evidence of collusion among Offerors.
- 3) More than one proposal for the same work from an individual, firm, partnership, corporation or joint venture under the same or different name.
- 4) Delivery of proposals after the deadline specified in the advertisement calling for proposals.
- 5) Debarment or suspension pursuant to Section 103D-702, HRS.

## **SECTION THREE**

### **PROPOSAL FORMAT AND CONTENT**

#### **3.1 OFFEROR'S AUTHORITY TO SUBMIT AN OFFER**

The State will not participate in determinations regarding an Offeror's authority to sell a product or service. If there is a question or doubt regarding an Offeror's right or ability to obtain and sell a product or service, the Offeror shall resolve that question prior to submitting an offer.

#### **3.2 REQUIRED REVIEW**

- 3.2.1 Before submitting a proposal, each Offeror must thoroughly and carefully examine this RFP, any attachment, addendum, and other relevant document, to ensure Offeror understands the requirements of the RFP. Offeror must also become familiar with State, local, and Federal laws, statutes, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the work required.
- 3.2.2 Should Offeror find defects and questionable or objectionable items in the RFP, Offeror shall notify the Department of Hawaiian Home Lands in writing prior to the deadline for written questions as stated in the RFP *Schedule and Significant Dates*, as amended. This will allow the issuance of any necessary corrections and/or amendments to the RFP by addendum, and mitigate reliance of a defective solicitation and exposure of proposal(s) upon which award could not be made.

#### **3.3 PROPOSAL PREPARATION COSTS**

Any and all costs incurred by the Offeror in preparing or submitting a proposal shall be the Offeror's sole responsibility whether or not any award results from this RFP. The State shall not reimburse such costs.

#### **3.4 TAX LIABILITY**

- 3.4.1 State GET Exemption – It is intended that gross income derived from the construction of all housing units will be certified for exemption from Hawaii General Excise Taxes pursuant to Section 201G-116 HRS. The proposed house prices shall not include any provision for GET.
- 3.4.2 Federal I.D. Number and Hawaii General Excise Tax License I.D. Offeror shall submit its current Federal I.D. No. and Hawaii General Excise Tax License I.D. number in the space provided on Offer Form, page OF-1, thereby attesting that the Offeror is doing business in the State and that Offeror will pay such taxes on all sales made to the State.

#### **3.5 PROPERTY OF STATE**

All proposals become the property of the State of Hawaii.



### **3.6 CONFIDENTIAL INFORMATION**

- 3.6.1 If an Offeror believes that any portion of a proposal, offer, specification, protest, or correspondence contains information that should be withheld from disclosure as confidential, then the Offeror shall inform the Procurement Officer named on the cover of this RFP in writing and provided with justification to support the Offeror's confidentiality claim. Price is not considered confidential and will not be withheld.
- 3.6.2 An Offeror shall request in writing nondisclosure of information such as designated trade secrets or other proprietary data Offeror considers to be confidential. Such requests for nondisclosure shall accompany the proposal, be clearly marked, and shall be readily separable from the proposal in order to facilitate eventual public inspection of the non-confidential portion of the proposal.

### **3.7 EXCEPTIONS**

Should Offeror take any exception to the terms, conditions, specifications, or other requirements listed in the RFP, Offeror shall list such exceptions in this section of the Offeror's proposal. Offeror shall reference the RFP section where exception is taken, a description of the exception taken, and the proposed alternative, if any. The State reserves the right to accept or not accept any exceptions.

No exceptions to statutory requirements of the AG General Conditions shall be considered.

### **3.8 PROPOSAL OBJECTIVES**

- 3.8.1 One of the objectives of this RFP is to make proposal preparation easy and efficient, while giving Offerors ample opportunity to highlight their proposals. The evaluation process must also be manageable and effective.
- 3.8.2 Proposals shall be prepared in a straightforward and concise manner, in a format that is reasonably consistent and appropriate for the purpose. Emphasis will be on completeness and clarity and content.
- 3.8.3 When an Offeror submits a proposal, it shall be considered a complete plan for accomplishing the tasks described in this RFP and any supplemental tasks the Offeror has identified as necessary to successfully complete the obligations outlined in this RFP.
- 3.8.4 The proposal shall describe in detail the Offeror's ability and availability of services to meet the goals and objectives of this RFP as stated in Section 2.2 SCOPE OF WORK.
- 3.8.5 Offeror shall submit a proposal that includes an overall strategy, timeline and plan for the work proposed as well as expected results and possible shortfalls.

### **3.9 PROPOSAL FORMS**

3.9.1 To be considered responsive, the Offeror's proposal shall respond to and include all items specified in this RFP and any subsequent addendum. Any proposal offering any other set of terms and conditions that conflict with the terms and conditions providing in the RFP or in any subsequent addendum may be rejected without further consideration.

3.9.2 Offer Form, Page OF-1. Offer Form, OF-1 is required to be completed using Offeror's exact legal name as registered with the Department of Commerce and Consumer Affairs, if applicable, in the appropriate space on Offer Form, OF-1 (SECTION SEVEN, Attachment 1). Failure to do so may delay proper execution of the Contract.

The Offeror's authorized signature on the Offer Form, OF-1 shall be an original signature in ink, which shall be required before an award, if any, can be made. The submission of the proposal shall indicate Offeror's intent to be bound.

3.9.3 Offer Form, Page OF-2. Pricing shall be submitted on Offer Form OF-2 (SECTION SEVEN, Attachment 3). The price shall be the all-inclusive cost, excluding the GET, to the State. No other costs will be honored. Any unit prices shall be inclusive.

3.9.4 Handwritten offers are not acceptable.

### **3.10 PROPOSAL CONTENTS**

Proposals must:

3.10.1 Include a transmittal letter to confirm that the Offeror shall comply with the requirements, provisions, terms, and conditions specified in this RFP.

3.10.2 Include a signed Offer Form OF-1 with the complete name and address of Offeror's firm and the name, mailing address, telephone number, e-mail address, and fax number of the person the State should contact regarding the Offeror's proposal.

3.10.3 If subcontractor(s) will be used, append a statement to the transmittal letter from each subcontractor, signed by an individual authorized to legally bind the subcontractor and stating:

- a. The general scope of work to be performed by the subcontractor;
- b. The subcontractor's willingness to perform for the indicated.

3.10.4 Provide all of the information requested in this RFP in the order specified.

3.10.5 Be organized into sections, following the exact format using all titles, subtitles, and numbering, with tabs separating each section described below. Each section must be addressed individually and pages must be numbered.

- a. Transmittal Letter

- b. Offer Form, OF-1
- c. Offer Form OF-1A, Experience and Capabilities. .
- d. Offer Form OF-2, Proposal, Strategy and Projected Timetable.

### **3.11 RECEIPT AND REGISTER OF PROPOALS**

Proposals will be received and receipt verified by two or more procurement officials on or after the date and time specified in Section One, or as amended.

The register of proposals and proposals of the Offeror(s) shall be open to public inspection upon posting of award pursuant to section 103D-701, HRS.

### **3.12 BEST AND FINAL OFFER (BAFO)**

If the State determines a BAFO is necessary, it shall request one from the Offeror. The Offeror shall submit its BAFO and any BAFO received after the deadline or not received shall not be considered.

### **3.13 MODIFICATION PRIOR TO SUBMITTAL DEADLINE OR WITHDRAWAL OF OFFERS**

3.13.1 The Offeror may modify or withdraw a proposal before the proposal due date and time.

3.13.2 Any change, addition, deletion of attachment(s) or data entry of an Offer may be made prior to the deadline for submittal of offers.

### **3.14 MISTAKES IN PROPOSALS**

3.14.1 Mistakes shall not be corrected after award of contract.

3.14.2 When the Procurement Officer knows or has reason to conclude before award that a mistake has been made, the Procurement Officer should request the offeror to confirm the proposal. If the Offeror alleges mistake, the proposal may be corrected or withdrawn pursuant to this section.

3.14.3 Once discussions are commenced or after best and final offers are requested, any priority-listed Offeror may freely correct any mistake by modifying or withdrawing the proposal until the time and date set for receipt of best and final offers.

3.14.4 If discussions are not held, or if the best and final offers upon which award will be made have been received, mistakes shall be corrected to the intended correct offer whenever the mistake and the intended correct offer are clearly evident on the face of the proposal, in which event the proposal may not be withdrawn.

- 3.14.5 If discussions are not held, or if the best and final offers upon which award will be made have been received, an Offeror alleging a material mistake of fact which makes a proposal non-responsive may be permitted to withdraw the proposal if: the mistake is clearly evident on the face of the proposal but the intended correct offer is not; or the Offeror submits evidence which clearly and convincingly demonstrates that a mistake was made.

Technical irregularities are matters of form rather than substance evident from the proposal document, or insignificant mistakes that can be waived or corrected without prejudice to other Offerors; that is, when there is no effect on price, quality, or quantity. If discussions are not held or if best and final offers upon which award will be made have been received, the Procurement Officer may waive such irregularities or allow an Offeror to correct them if either is in the best interest of the State. Examples include the failure of an Offeror to: return the number of signed proposals required by the request for proposals; sign the proposal, but only if the unsigned proposal is accompanied by other material indicating the Offeror's intent to be bound; or to acknowledge receipt of an amendment to the request for proposal, but only if it is clear from the proposal that the Offeror received the amendment and intended to be bound by its terms; or the amendment involved had no effect on price, quality or quantity.

### **3.15 RESPONSIBILITY FOR EXPENSES IN PREPARING PROPOSALS**

Offerors that respond to this RFP shall be solely responsible for all costs and expenses incurred in connection with responding to this RFP. The Selected Housing Contractor shall be responsible for whatever costs they may incur up to the time of execution of the Construction Contract.

## SECTION FOUR

### **EVALUATION CRITERIA AND CONTRACTOR SELECTION**

The award will be made to the responsible Offeror whose proposal is determined to be the most advantageous to the State based on the evaluation criteria listed in this section. **The total number of points used to score this contract is 100.** Evaluation of submitted proposals will be based on the following point distribution.

<i>Criteria Description</i>		<i>Points</i>
1.	Offeror's qualifications, experience, financial strength, creativity, and track record in house construction projects of a similar nature.	20
2.	Proposed house prices (including adjustments for preferences as applicable).	20
3.	Proposed housing designs.	20
4.	Proposed outline specifications.	15
5.	Green building features.	10
6.	Proposed financing	10
7.	Proposed project schedule.	5
	Unusual or unacceptable terms and conditions (potential penalty of up to 10 points).	
	<b>TOTAL POSSIBLE POINTS</b>	<b>100</b>

## SECTION FIVE

### **CONTRACTOR SELECTION AND CONTRACT AWARD**

#### **5.1 EVALUATION OF PROPOSALS**

The Procurement Officer, or an evaluation committee of at least three (3) qualified State employees selected by the Procurement Officer, shall evaluate proposals. The evaluation will be based solely on the evaluation criteria set out in Section Four of this RFP.

Prior to holding any discussion, a priority list shall be generated consisting of offers determined to be acceptable or potentially acceptable. However, proposals may be accepted without such discussions.

If numerous acceptable and potentially acceptable proposals are submitted, the evaluation committee may limit the priority list to the three highest ranked, responsible Offerors.

#### **5.2 DISCUSSION WITH PRIORITY LISTED OFFERORS**

The State may invite priority listed Offerors to discuss with their proposals to ensure thorough, mutual understanding. The State in its sole discretion shall schedule the time and location for these discussions, generally within the timeframe indicated in *RFP Schedule and Significant Dates*. The State may also conduct discussions with priority listed Offerors to clarify issues regarding the proposals before requesting Best and Final Offers, if necessary.

#### **5.3 AWARD OF CONTRACT**

**Method of Award.** Award will be made to the responsible Offeror whose proposal is determined to be the most advantageous to the State based on the evaluation criteria set forth in the RFP.

#### **5.4 RESPONSIBILITY OF OFFERORS**

Offeror is advised that in order to be awarded a contract under this solicitation, Offeror will be required, to be compliant with all laws governing entities doing business in the State including the following chapters and pursuant to HRS §103D-310(c):

1. Chapter 237, General Excise Tax Law;
2. Chapter 383, Hawaii Employment Security Law;
3. Chapter 386, Worker's Compensation Law;
4. Chapter 392, Temporary Disability Insurance;
5. Chapter 393, Prepaid Health Care Act; and
6. §103D-310(c), Certificate of Good Standing (COGS) for entities doing business in the State.

The State will verify compliance on Hawaii Compliance Express (HCE).

**Hawaii Compliance Express.** The HCE is an electronic system that allows vendors/contractors/service providers doing business with the State to quickly and easily demonstrate compliance with applicable laws. It is an online system that replaces the necessity of obtaining paper compliance certificates from the Department of Taxation, Federal Internal Revenue Service; Department of Labor and Industrial Relations, and Department of Commerce and Consumer Affairs.

Vendors/contractors/service providers should register with (HCE) prior to submitting an offer at <https://vendors.ehawaii.gov>. The annual registration fee is \$12.00 and the 'Certificate of Vendor Compliance' is accepted for the execution of contract and final payment.

**Timely Registration on HCE.** Vendors/contractors/service providers are advised to register on HCE soon as possible. If a vendor/contractor/service provider is not compliant on HCE at the time of award, an Offeror will not receive the award.

## **5.5 PROPOSAL AS PART OF THE CONTRACT**

This RFP and all or part of the successful proposal may be incorporated into the contract.

## **5.6 PUBLIC EXAMINATION OF PROPOSALS**

Except for confidential portions, the proposals shall be made available for public inspection upon posting of award pursuant to HRS §103D-701.

If a person is denied access to a State procurement record, the person may appeal the denial to the office of information practices in accordance with HRS §92F-42(12).

## **5.7 DEBRIEFING**

Pursuant to HAR §3-122-60, a non-selected Offeror may request a debriefing to understand the basis for award.

A written request for debriefing shall be made within three (3) working days after the posting of the award of the contract. The Procurement Officer or designee shall hold the debriefing within seven (7) working days to the extent practicable from the receipt date of written request.

Any protest by the requestor following a debriefing, shall be filed within five (5) working days, as specified in HAR §103D-303(h).

## **5.8 PROTEST PROCEDURES**

Pursuant to HRS §103D-701 and HAR §3-126-3, an actual or prospective Offeror who is aggrieved in connection with the solicitation or award of a contract may submit a protest. Any protest shall be submitted in writing to the Procurement Officer at:

Honorable Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission

Department of Hawaiian Home Lands  
91-5420 Kapolei Parkway  
Kapolei, Hawaii 96707

A protest shall be submitted in writing within five (5) working days after the aggrieved person knows or should have known of the facts giving rise thereto; provided that a protest based upon the content of the solicitation shall be submitted in writing prior to the date set for receipt of offers. Further provided that a protest of an award or proposed award shall be submitted within five (5) working days after the posting of award or if requested, within five (5) working days after the PO's debriefing was completed.

The notice of award, if any, resulting from this solicitation shall be posted on the Procurement Awards, Notices and Solicitations (PANS), which is available on the SPO website: <http://www.hawaii.gov/spo2/source/>.

## **5.9 APPROVALS**

Any agreement arising out of this offer may be subject to the approval of the Department of the Attorney General, and to all further approvals, including the approval of the Governor, as required by statute, regulation, rule, order, or other directive.

## **5.10 CONTRACT EXECUTION**

Successful Offeror receiving award shall enter into a formal written contract in the form as in Exhibit B. Performance and payment bond are required for this contract.

No work is to be undertaken by the Contractor prior to the effective date of contract. The State of Hawaii is not liable for any work, contract, costs, expenses, loss of profits, or any damages whatsoever incurred by the Contractor prior to the official starting date.

If an option to extend is mutually agreed upon, the Contractor shall be required to execute a supplement to the contract for the additional extension period.

## **5.11 INSURANCE**

5.11.1 Prior to the contract start date, the Developer shall procure at its sole expense and maintain insurance coverage acceptable to the State in full force and effect throughout the term of the Contract. The Developer shall provide proof of insurance for the following minimum insurance coverage(s) and limit(s) in order to be awarded a contract. The type of insurance coverage is listed as follows:

<u>Insurance Coverage</u>	<u>Minimum Policy Limits</u>
General Liability	\$2,000,000.00 in the aggregate for property damage; \$1,000,000.00 per occurrence for injuries to or death of any one person in any accident in the aggregate
Workers' Compensation	As required by Hawaii laws



Fire and extended coverage	100% replacement value
Builder's risk covering the general contractor and all subcontractors	100% replacement value
Malicious mischief	100% replacement value
Flood insurance (if required)	Maximum coverage available

The insurance policies shall be in a form and substance including amounts of coverage, acceptable to DHHL.

Developer shall furnish DHHL with insurance polices and/or certificates, which shall name DHHL as an additional insured. Such insurance policies shall provide that the insurance company shall give DHHL no less than thirty (30) days prior written notice of any termination or cancellation of such insurance policies.

Developer acknowledges notice that it is free to procure all required insurance policies, from any insurance company authorized to do business in the state of Hawaii, pursuant to chapter 479, Hawaii revised statutes.

- 5.11.2 The Developer shall deposit with the DHHL, on or before the effective date of the Contract, certificate(s) of insurance necessary to satisfy the DHHL that the provisions of the Contract have been complied with, and to keep such insurance in effect and provide the certificate(s) of insurance to the DHHL during the entire term of the Contract. Upon request by the DHHL, the Developer shall furnish a copy of the policy or policies.
- 5.11.3 The Developer will immediately provide written notice to the DHHL should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed upon expiration.
- 5.11.4 The certificates of insurance shall contain the following clauses:
  - 1. "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."
  - 2. "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy."
- 5.11.5 Failure of the Developer to provide and keep in force such insurance shall constitute a material default under the Contract, entitling the State to exercise any or all of the remedies provided in the Contract (including without limitation terminating the Contract). The procuring of any required policy or policies of insurance shall not be construed to limit the Developer's liability hereunder, or to fulfill the indemnification provisions of the Contract. Notwithstanding said policy or policies of insurance, the Developer shall be responsible for the full and total amount of any damage, injury, or loss caused by the Contractor's negligence or neglect in the provision of services under the Contract.

## **5.12 REQUIREMENTS FOR PERFORMANCE AND PAYMENT BONDS**

Pursuant to HAR §3-122-224, before any contract is entered into, the Developer shall provide performance and payment bonds to the State. The bonds shall each be in the penal sum of one hundred percent (100%) of the amount of the contract awarded.

If the option to extend for an additional period is mutually agreed upon, the Developer shall provide a new performance bond with the Supplemental Contract.

## **5.13 PAYMENT**

Developer shall be paid from the proceeds of the sales of turn-key homes through escrow.

If DHHL interim financing is utilized, the Developer will be allowed loan draws on a monthly basis. The monthly draw shall be based on the items of work satisfactorily completed and the value thereof at unit prices and/or lump sum prices set forth in the contract as determined by the Project Manager

## **5.14 CONTRACT INVALIDATION**

If any provision of this contract is found to be invalid, such invalidation will not be construed to invalidate the entire contract.

## **5.15 NO ASSIGNMENTS**

The Developer may not assign the Contract without DHHL's written consent. If the Developer desires to assign the Contract, the assignee must submit a "Contractor's Application and Qualification Form," meet all requirements imposed by DHHL, and must be acceptable to DHHL. If DHHL shall consent to an assignment of the Contract, DHHL shall not be required to release the Developer, including any guarantor nor security which secures the payment and performance of the Developer's obligations under the Contract.

## **5.16 RELATIONSHIP BETWEEN THE DEVELOPER AND DHHL**

There will be no partnership, joint venture, employer and employee, master and servant, or other agency relationship between DHHL and Developer. The Developer, inclusive of any person acting by, through, under, or for the benefit of the Developer, such as, for example, any real estate broker or sales person, will not represent or hold itself out as being a partner, joint venture, employee, servant, or agent of DHHL, nor will the Developer, inclusive of any person acting by, through, under, or for the benefit of Developer, have any authority to bind, act for, or represent DHHL in any respect. The Developer will be constructing the Project in the Developer's own behalf and will release, indemnify, defend, and hold DHHL harmless from all claims, demands, lawsuits, judgments deficiencies, damages (whether paid by DHHL as part of a settlement or as a result of a judgment), and expense, including attorney's fees, and all costs of suit, made against DHHL or incurred or paid by DHHL arising out of or in connection with Developer's design and construction of the Project and of the dwelling units therein.

## SECTION SIX

### SPECIAL PROVISIONS

#### 6.1 OFFER GUARANTY

A proposal security deposit is required for this RFP. Subject to the exceptions in Section 3-122-223(d) HAR, proposals that are not accompanied by proposal security are non-responsive.

Proposal security shall be one of the following:

- a. Surety bid bond underwritten by a company licensed to issue bonds in this State which shall be substantially in the form of the Surety Bid Bond (Exhibit A on Exhibit F, BOND FORMS); or
- b. Legal Tender; or
- c. Certificate of Deposit; credit union share certificate; or cashier's, treasurer's, teller's or official check drawn by, or a certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.
  - (a) These instruments may be utilized only to a maximum of \$100,000 (one hundred thousand dollars).
  - (b) If the required security or bond amount totals over \$100,000 (one hundred thousand dollars), more than one instrument not exceeding \$100,000 (one hundred thousand dollars) each and issued by different financial institutions shall be accepted.
  - (c) CAUTION - Offerors are cautioned that certificates of deposit or share certificates with an early withdrawal penalty must have a face value sufficient to cover the maximum penalty amount in addition to the proposal guaranty requirement. If the certificate is made out to two names, the certificate must be assigned unconditionally to the Chairman.

Since the mix of houses models has not been determined, the proposal security shall be in an amount equal to at least five percent (5%) of an estimated average cost per house of \$275,000:

$$\begin{aligned} \$275,000 \times 28 \text{ houses} &= \$7,700,000 \\ \times 5\% &= \$385,000 \text{ Minimum Proposal Security Amount} \end{aligned}$$

If the Offeror is a corporation, evidence in the form of a corporate resolution, authorizing the corporate representative to execute the bond must be submitted with the proposal. (See sample in Appendix.) If the Offeror is a partnership, all partners must sign the bond or evidence in the form of a partnership agreement must be submitted showing the authority of the partner.

If the Offeror is a joint-venture, all parties to the joint-venture must sign the bond; provided, that one party to the joint-venture may sign on behalf of the joint-venture if evidence in the form of a joint-venture agreement or power of attorney, is submitted showing the authority of the signatory to sign the bond on behalf of the joint-venture.

## 6.2 PREFERENCES

### a. Hawaii Products Preference.

In accordance with HRS §103D-1002, the Hawaii products preference is applicable to this solicitation. Hawaii Products may be available for various materials used in this project. The Hawaii products list is available on the SPO webpage at <http://hawaii.gov/spo>, click on *Procurement of Goods, Services, and Construction-Chapter 103D, HRS*; under *Procurement* click on *Preferences, Hawaii Products*, and select *Hawaii Products List* to view. Offeror submitting a Hawaii Product (HP) shall identify the HP on the solicitation offer page(s). Any person desiring a Hawaii product preference shall have the product(s) certified and qualified if not currently on the Hawaii products list, prior to the deadline for receipt of offer(s) specified in the procurement notice and solicitation. The responsibility for certification and qualification shall rest upon the person requesting the preference.

Persons desiring to qualify their product(s) not currently on the Hawaii product list shall complete form SPO-038, *Certification for Hawaii Product Preference* and submit to the Procurement Officer issuing the solicitation (IFB or RFP), and provide all additional information required by the Procurement Officer. For each product, one form shall be completed and submitted (i.e. 3 products should have 3 separate forms completed). Form SPO-038 is available on the SPO webpage at <http://hawaii.gov/spo> under the 'Quicklinks' menu; click on 'Forms for Vendors, Contractors, and Service Providers'.

When a solicitation contains both HP and non-HP, then for the purpose of selecting the lowest bid or purchase price only, the price offered for a HP item shall be decreased by subtracting 10% for the class I or 15% for the class II HP items offered, respectively. The lowest total offer, taking the preference into consideration, shall be awarded the contract unless the offer provides for additional award criteria. The contract amount of any contract awarded, however, shall be the amount of the price offered, exclusive of the preferences.

Change in Availability of Hawaii product. In the event of any change that materially alters the offeror's ability to supply Hawaii products, the offeror shall notify the procurement officer in writing no later than five working days from when the offeror knows of the change and the parties shall enter into discussions for the purposes of revising the contract or terminating the contract for convenience.

**b. Apprenticeship Agreement Preference.**

Hawaii Revised Statutes §103-55.6 (ACT 17, SLH 2009) provides for a Hawai'i Apprenticeship Preference for public works contracts having an estimated value of \$250,000.00 or more. The preference shall be in the form of a 5% cost adjustment applied to the offeror's amount for offerors that are parties to apprenticeship agreements. The estimated value of this public works contract is \$250,000.00 or more and the apprenticeship agreement preference shall apply.

To be eligible for the preference, the offeror shall:

1. Be a party to an apprenticeship agreement registered with the DLIR at the time the offer is made for each apprenticeable trade the offeror will employ to construct the public works project for which the offer is being made.
  - a. The apprenticeship agreement shall be registered and conform to the requirements of HRS Chapter 372.
  - b. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.
  - c. The offeror is not required to have apprentices in its employ at the time the offer is submitted to qualify for the preference.
  - d. If a offeror's employee is multi-skilled and able to perform work in more than one trade (for example, a project requires a carpenter and a laborer, and the employee is a carpenter, but is also able to perform the work of a laborer), the offeror need only be a party to the carpenter's apprenticeship agreement and does not need to be a party to the laborer's apprenticeship agreement in order to qualify for the preference. The offeror is not "employing" a laborer, only a carpenter, and so only needs to be a party to the carpenter's apprenticeship agreement.
  - e. Qualification for the preference is given on a project-by-project basis and depends upon the specific offer for a specific project. A offeror's employees may vary from project to project and may qualify for the preference on one project but may not qualify on another project. For example, on one project, if the offeror only employs carpenters to perform work in the carpentry and labor trades, then the offeror only needs to be a party to the carpenter's apprenticeship agreement in order to qualify for the preference. However, on another project if the same offeror employs both carpenters and laborers, then the offeror will not qualify for the preference if the offeror is only a party to the carpenter's apprenticeship agreement and not the laborer's apprenticeship agreement.
2. State the trades the offeror will employ to perform the work;
3. For each trade to be employed to perform the work, the offeror shall submit a completed signed original *CERTIFICATION OF BIDDER'S PARTICIPATION*

*IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Certification Form 1)* verifying the participation in an apprenticeship program registered with the State Department of Labor and Industrial Relations (DLIR);

4. The *Certification Form 1* shall be authorized by an apprenticeship sponsor of the DLIR list of registered apprenticeship programs. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor; and
5. The completed *Certification Form 1* for each trade must be submitted by the offeror with the offer. A facsimile or copy is acceptable to be submitted with the offer; however, the completed **signed original** must be submitted within five (5) working days of the due date of the offer. If the signed original is not received within this timeframe, the preference may be denied. Previous certifications shall not apply.

Failure to comply with ALL of the conditions noted above, without exception, shall disqualify the offeror from qualifying for, and thus receiving, benefit of the Hawai'i Apprenticeship Preference.

The *Certification Form 1* and the List of Construction Trades in Registered Apprenticeship Programs is available on the DLIR website at: <http://hawaii.gov/labor/wdd>

Upon receiving *Certification Form 1*, the DHHL will verify with DLIR that the apprenticeship program is on the list of apprenticeship programs registered with the DLIR. If the program(s) are not confirmed by the DLIR, the offeror will not qualify for the preference.

If the offeror is certified to participate in an apprenticeship program for each trade which will be employed by the bidder for the project, a preference will be applied to decrease the offeror's total proposal amount by five per cent (5%) for evaluation purposes.

Should the offeror qualify for other preferences (for example, Hawaii Products Preference), all applicable preferences shall be applied to the offer amount.

While preference for Hawai'i Apprenticeship will be taken into consideration to determine the low offeror, the contract awarded shall be the original offer amount, exclusive of any preferences. The preference is only for evaluation purposes.

## **SECTION SEVEN**

### **ATTACHMENTS AND EXHIBITS**

ATTACHMENT 1 OFFER FORM, OF-1  
ATTACHMENT 2 OFFER FORM, OF-1A  
ATTACHMENT 3 OFFER FORM, OF-2  
ATTACHMENT 4 NOTICE OF INTENT

EXHIBIT A	GENERAL PROVISIONS
EXHIBIT B	SAMPLE CONTRACT
EXHIBIT C	AG 103D GENERAL CONDITIONS
EXHIBIT D	OVERVIEW OF THE RFP PROCESS
EXHIBIT E	DHHL CONSTRUCTION GENERAL CONDITIONS
EXHIBIT F	BOND FORMS
EXHIBIT G	INFRASTRUCTURE CONSTRUCTION PLANS
EXHIBIT H	SUBSURFACE INVESTIGATION REPORT
EXHIBIT I	WAGE RATE SCHEDULE BULLETIN NO. 485
EXHIBIT J	APPRENTICE SCHEDULE NO. 485
EXHIBIT K	GENERAL DECISION NUMBER HI150001 09/04/2015
EXHIBIT L	GREEN BUILDING
EXHIBIT M	DESIGN GUIDELINES
EXHIBIT N	RESIDENTIAL TELECOMMUNICATIONS AND INSIDE WIRING SPECIFICATION (SANDWICH ISLES COMMUNICATION)

## NOTICE OF INTENTION TO OFFER

Date: \_\_\_\_\_

Honorable Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission  
DEPARTMENT OF HAWAIIAN HOME LANDS  
91-5420 Kapolei Parkway  
Kapolei, Hawaii 96707

Attention: Darrell Ing, Land Development Division  
**Notice of Intention to Offer due 2:00 p.m., January 22, 2016.**

In accordance with the provisions of Section 103D-310, Hawaii Revised Statutes and Hawaii Administrative Rules 3-122-111, it is the intention of the undersigned to submit an offer on RFP No. RFP-16-HHL-001, Single Family Homes at Kakaina Subdivision, Waimanalo, Hawaii, for which proposals will be received no later than **2:00 p.m., February 1, 2016.**

_____ Name of Firm	_____ Contractor's License No.
_____ Address	_____ Hawaii General Excise Tax No.
_____ City, State and Zip Code	_____ Telephone No. / Facsimile No.
	_____ e-mail address
Respectfully submitted,	
	_____ Signature
	_____ Print Name and Title

---

Date: \_\_\_\_\_

The Department of Hawaiian Home Lands acknowledges on the date above, your Notice of Intention to Offer for RFP-16-HHL-001.

\_\_\_\_\_  
Darrell Ing, Project Manager  
Department of Hawaiian Home Lands



Offer Form OF-2

**RFP-16-HHL-001**  
**Single Family Homes at Kakaina Subdivision**

**Table of Contents**

Basic Instructions

A. Pricing Schedule

B. House Plans and Outline Specifications

C. Warranty Program

D. Financing

E. Green Building

F. Schedule

G. Conditions / Exceptions

## **Basic Instructions for Packaging of Proposals**

1. Please package your proposal in 3-ring binder.
2. Major sections of the proposal shall be identified by "Tabs".
3. Section I of the Proposal shall be "Offer Form OF-1" and "Offer Form OF-1A".
4. Section II of the Proposal shall be this "Offer Form OF-2".
5. Section III of the Proposal shall be exhibits. All drawings and exhibits to the proposal shall be neatly folded and clipped into the 3-ring binder.
6. Fill in all blank spaces with information requested; failure to provide all requested information may cause the proposal to be invalidated.
7. Please submit an original and five (5) copies of your proposal, for a total of six (6) sets.
8. An Offeror shall request in writing nondisclosure of information such as designated trade secrets or other proprietary data Offeror considers to be confidential. Such requests for nondisclosure shall accompany the proposal, be clearly marked, and shall be readily separable from the proposal in order to facilitate eventual public inspection of the non-confidential portion of the proposal.

## **A. PRICING SCHEDULE**

Offeror's proposal must include detailed cost estimates for four (4) house models. Every house model should fit on every lot. DHHL and the selected developer will negotiate the actual mix of houses to be constructed prior to lot selection by the lessees.

Offeror shall provide the cost estimate of each model "turnkey"/completed, vertical as well as lot improvements (including, but not limited to landscaping, driveway, utility connections, and rear and side fences. Cost estimates will include breakdown of profit and overhead per each model.

The Contractor shall be responsible for compliance with Chapter 104, HRS, for the payment of minimum prevailing wages to mechanics and laborers employed on the Project for the corresponding work classifications as determined by the Department of Labor and Industrial Relations.

Offeror shall hold the price for one year (the duration of this contract). The only allowable price increases would be for additional driveway length or unusual lot grade conditions.

It is intended that gross income derived from the construction of all housing units will be certified for exemption from Hawaii General Excise Taxes pursuant to Section 201G-116 H.R.S. The proposed house prices shall not include any provision for GET.

Units by type and proposed price:

Model	Bedrooms	Bath-rooms	No. of Stories	Area (square feet)				Proposed Price
				Net Living	Carport	Patio/Lanai	Total	
A	2							\$
B	2							\$
C	3							\$
D	4							\$

Extended Driveways: Lots 4, 22, 23, 27, 28, 31, 32, and 34. Cost to be added to sales price, per lineal foot: \$\_\_\_\_\_.

Optional Standard Features. These items will not be factored in the scoring of proposals, but may be included by DHHL in the final house package offered to the beneficiaries, or offered to prospective buyers as optional up-grades:

Feature	Model A	Model B	Model C	Model D
Enclosed Garage, including electronic roll-up door	\$	\$	\$	\$
Rain Gutters	\$	\$	\$	\$
Irrigation Catchment System	\$	\$	\$	\$

Fire-protection Sprinkler System	\$	\$	\$	\$
Ceiling Fans	\$	\$	\$	\$
Central air conditioning	\$	\$	\$	\$
2 kW Photovoltaic system	\$	\$	\$	\$

[other –add pages if necessary]

Options (Home-buyer consideration): These items will not be factored in the scoring of proposals, but would be offered to prospective buyers at the indicated prices:

Options	Model	A	B	C	D
Refrigerator		\$	\$	\$	\$
Upgrade carport to enclosed garage with remote garage door opener.		\$	\$	\$	\$
Flooring Upgrade		\$	\$	\$	\$
Washer/ Dryer		\$	\$	\$	\$
Cabinetry Upgrade		\$	\$	\$	\$
Landscape Irrigation		\$	\$	\$	\$

[other –add pages if necessary]

#### Cost Breakdown for Basic Models Without Options

Model	Materials	Labor	Overhead	Profit	Proposed Price
A	\$	\$	\$	\$	\$
B	\$	\$	\$	\$	\$
C	\$	\$	\$	\$	\$
D	\$	\$	\$	\$	\$

ADA and DCAB regulations do not permit assessment of a surcharge to install options for accessibility. If the basic house design is not ADA-compliant, a contingency amount should be included in all house costs should buyer(s) require installation of accessible features.

## HAWAII PRODUCTS PREFERENCE

(Refer to Section 6.2 a. of the RFP)

DESIGNATION OF HAWAII PRODUCTS TO BE USED		
Description	Manufacturer	Cost FOB Jobsite
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____
		\$ _____

It is further understood by the Offeror that if upon being granted Hawaii Products, and being awarded the contract, if the Offeror fails to use such products or meet the requirements of such preference, the Offeror shall be subject to penalties, if applicable.

**APPRENTICESHIP AGREEMENT PREFERENCE**

(Refer to Section 6.2 b. of the RFP)

The offeror hereby certifies that it will employ the following apprenticeable trades to perform the work for this project:

TRADE	APPRENTICESHIP PROGRAM SPONSOR

(Add additional sheets if necessary)

## **B. HOUSE PLANS AND OUTLINE SPECIFICATIONS**

Offeror shall submit complete detailed house plans and specifications for four house models. "Off the shelf" plans are acceptable. HUD, USDA, and NAHASDA guidelines shall be followed in the design and construction of the homes. Offeror may highlight any special design features incorporated into its proposal. The Composite Plot Plans shall show the location of the house and driveway relative to the property lines, finish floor elevations, fine grading, including individual lot swales around the house for proper drainage toward the adjacent street or drainage structure.

Provide schematic plans and outline specifications for a minimum of proposed single family units. Schematic plans shall include floor plans and elevations at a scale of 1/4" = 1'0". Outline specifications shall include preliminary information on the following items:

1. Foundation (including termite treatment)
2. Framing (including termite treatment)
3. Roofing
4. Partitions
5. Interior Wall Finishes
6. Exterior Wall Material & Finishes
7. Ceiling Finishes
8. Carpeting & Floors
9. Doors & Windows
10. Cabinetry
11. Fixtures & Appliances
12. Garage/Carport
13. Special Features (if any)

House plans shall be attached to Section III of the Proposal. Mark each sheet "Model A", "Model B", etc. In addition to the drawings submitted with the proposal, please submit one extra set of drawings (unfolded), and a reduced black and white version of all drawings in an 11" x 17" format.

### **C. WARRANTY PROGRAM**

Provide a brief description of the proposed warranty program, including:

1. Ground Soil Treatment
2. Defective Materials and Workmanship
3. Treatment of Structural Lumber
4. Appliances
5. Roofing Material
6. Common Area Landscaping and Maintenance
7. Infrastructure
8. Others



#### **D. FINANCING**

Provide a brief description of the proposed financing plan, including the following:

1. Sources of funds for construction.
2. Takeout financing for the interim loan.
3. Permanent financing that the Developer will provide to homebuyers, if any.
4. Grants or other financial assistance to be offered to applicants to purchase their houses.

A letter of interest shall be provided by lending institution(s) acknowledging review of the Project as proposed by the Offeror and expressing interest in providing the proposed financing.

Please see section 2.3 5) of the RFP regarding availability of the DHHL Interim Loan fund. If proposing to utilize the DHHL Interim Loan Fund, the deduction should be included in the house prices submitted in Section A. PRICING SCHEDULE.

## **E. GREEN BUILDING**

DHHL has identified a minimum two star rating using the Hawaii BuiltGreen Self Certification Checklist as the desired baseline standard for all Contractor-built homes. Offerors shall submit a completed Hawaii BuiltGreen Checklist that shows prospective measures to be included in all Contractor-built homes to achieve or exceed this goal.

Solar water heaters are a required measure to be included in all proposals. The value of any State and/or Federal tax credits made eligible by the use of solar water heaters should be passed on to the home buyer.

Offerors shall also submit a brief (not to exceed one page) narrative justification for the green building approach and a separate, brief narrative on how the design will promote building orientation-related benefits. Please read Exhibit L “Green Building” for more information on Hawaii BuiltGreen; a list of preferred strategies; resources that support residential green building in Hawaii, and a copy of the Hawaii BuiltGreen Checklist.

Attach the completed Hawaii BuiltGreen Self-Certification Checklist.

**F. SCHEDULE (at minimum, include the following milestones)**

Notice to Proceed (Assume April 18, 2016)

Lot selection, contracting

Plans and permits approved

Start construction of first house

Start construction of last house

Finish construction of first house

Finish construction of last house

## **G. CONDITIONS / EXCEPTIONS**

Provide a brief description of any special conditions that are contained in your proposal, whether relating to pricing, plans, designs, specifications, costs, warranties, schedule or other factors.

List any exceptions taken to the terms, conditions, specifications, or other requirements listed herein. Reference the RFP section where exception is taken, a description of the exception taken, and the proposed alternative, if any.

## OFFER FORM 1A

### DEVELOPER'S APPLICATION AND QUALIFICATION FORM

#### Section 1: General Information

Person to Contact/Title	Contact Person's E-mail Address
Contact Person's Address	Contact Person's Telephone No.
City, State, Zip Code	Contact Person's Facsimile No.

#### List of Corporate Officers and Directors or Individual Partners, Joint Ventures or Owners

Name: _____	Name: _____
Title: _____	Title: _____
Telephone No.: _____	Telephone No.: _____
Address: _____	Address: _____
_____	_____
Name: _____	Name: _____
Title: _____	Title: _____
Telephone No.: _____	Telephone No.: _____
Address: _____	Address: _____
_____	_____
Name: _____	Name: _____
Title: _____	Title: _____
Telephone No.: _____	Telephone No.: _____
Address: _____	Address: _____
_____	_____

NOTE: Please attach separate page if more space is needed. Should any information change during the proposal evaluation, selection, and award process, it is the responsibility of the applicant to update DHHL in writing of such changes.

**Corporate Shareholders Holding 25% or More of the Outstanding Shares:**

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

**Section 2: Project Development Team**

	Company/ Address	Contact Person/ Telephone No.
Developer		
Architect		
Civil Engineer		
House Contractor ( <u>if different from above</u> )		
Financing		
Sales		
Legal		
Other (specify – attach additional sheets if necessary)		

### Section 3: Financial Information

**Note: Financial information submitted to DHHL shall be kept confidential and shall not be considered as a public record as defined in Chapter 92, Hawaii Revised Statutes. Financial information shall not be released without the express written consent of the applicant.**

1. All Applicants shall include the following:
  - (a) If applicable, a certified copy of the Articles of Incorporation.
  - (b) If applicable, a certified copy of the By-Laws.
  - (c) If applicable, a certified copy of the Corporation Resolution which authorizes the applicant and borrowing or guaranty, if applicable.
  - (d) If applicable, a certified copy of the Partnership Certificate.
  - (e) If applicable, a certified copy of the Joint Venture Agreement.
  - (f) If applicable, a description of any financial default, modification of terms and conditions of financing to avoid default, or legal actions taken or pending against the applicant and borrowing and guaranteeing entities and their principals.
2. If your proposal will require DHHL funds, whether in whole or part, the following data must be submitted by the borrowing and guaranteeing entities:
  - (a) The most recent two years of audited fiscal year-end balance sheets and income statements. If this data is unaudited, copies of filed tax returns must be provided.
  - (b) If the fiscal year-end financial statements which are listed above are over nine months old, submit current interim balance sheets and income statements.
  - (c) Current (less than nine months old) financial statement(s) and file copy of tax return(s) of any personal guarantor(s).

#### Section 4: Resume of Offeror's Experience in Real Estate Development

The applicant must meet the following criteria:

A principal member of the Offeror's company must have at least five (5) years of real estate development experience; and a member of the Offeror's company who is responsible for day to day operations must have been materially involved in the development of at least three (3) separate projects with at least one project consisting of twenty (20) or more units.

Please attach a description of the Offeror's company experience which supports the foregoing requirement and which includes the following information:

- A. A list of housing projects developed;
- B. The role of the applicant in developing the listed housing projects;
- C. A brief description of the housing projects;
- D. If applicable, a description of all housing projects or facilities owned and operated by the applicant;
- E. If applicable, a statement of the applicant's past or current involvement with the Department of Hawaiian Home Lands (DHHL), Hawaii Housing Finance and Development Corporation (HHFDC), and/or the Hawaii Public Housing Authority (HPHA). Include a description of any assistance received from DHHL, HHFDC, and/or HPHA.



**OFFER FORM  
OF-1**

SINGLE FAMILY HOMES AT KAKAINA SUBDIVISION  
STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS  
RFP-16-HHL-001

Honorable Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission  
Department of Hawaiian Home Lands  
State of Hawaii  
Honolulu, Hawaii 96813

Dear Chairman Masagatani:

The undersigned has carefully read and understands the terms and conditions specified in the Request for Proposals, the General Conditions, and DHHL Construction General Conditions by reference made a part hereof; and hereby submits the following offer to perform the work specified herein, all in accordance with the true intent and meaning thereof. The undersigned further understands and agrees that by submitting this offer, 1) he/she is declaring his/her offer is not in violation of Chapter 84, Hawaii Revised Statutes, concerning prohibited State contracts, and 2) he/she is certifying that the price(s) submitted was (were) independently arrived at without collusion.

Offeror is:

☐ Sole Proprietor    ☐ Partnership    ☐ \*Corporation    ☐ Joint Venture  
☐ Other \_\_\_\_\_

\*State of incorporation: \_\_\_\_\_

Hawaii General Excise Tax License I.D. No. \_\_\_\_\_

Federal I.D. No. \_\_\_\_\_

Payment address (other than street address below): \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_

Business address (street address): \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_

Respectfully submitted:

Date: \_\_\_\_\_ (x) \_\_\_\_\_  
Authorized (Original) Signature

Telephone No.: \_\_\_\_\_

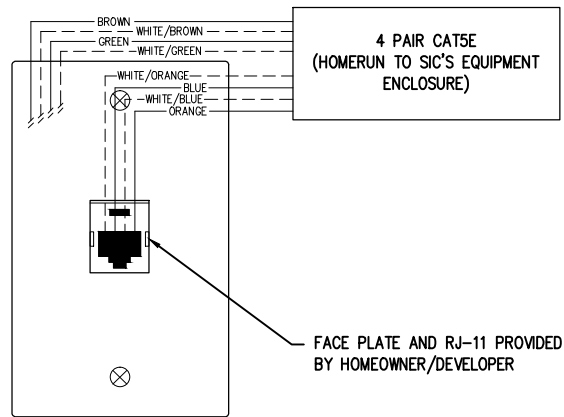
Fax No.: \_\_\_\_\_ Name and Title (Please Type or Print)

E-mail Address: \_\_\_\_\_  
\*\* \_\_\_\_\_  
**Exact Legal Name of Company (Offeror)**

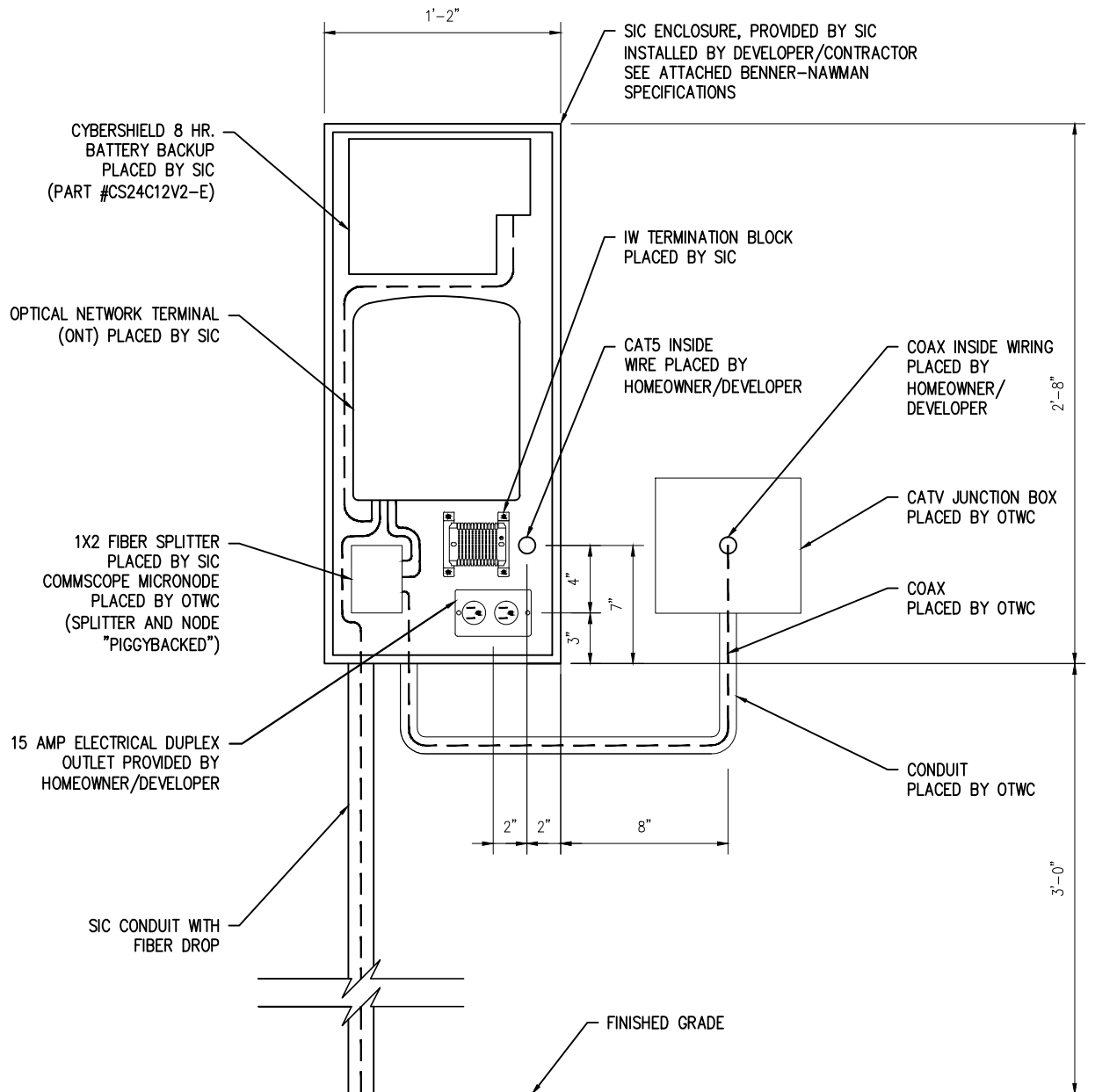
\*\*If Offeror is a "dba" or a "division" of a corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

# STANDARD NOTES FOR TELEPHONE INSTALLATION

1. THE SANDWICH ISLES COMMUNICATIONS (SIC) EQUIPMENT ENCLOSURE SHALL BE LOCATED A MINIMUM OF TWO FEET FROM THE ELECTRICAL METER. HOMEOWNER/DEVELOPER MUST ENSURE SUFFICIENT CLEAR SPACE IS ALLOWED FOR SIC'S ENCLOSURE.
2. THE HOMEOWNER/DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF THE TELEPHONE RJ-11 JACKS AND WIRING WITHIN THE HOUSE. INSIDE WIRE (IW) SHALL BE 4-PAIR, CATEGORY 5 WIRE, HOMERUN FROM EACH JACK TO THE SIC ENCLOSURE. LEAVE THREE FEET OF SLACK MINIMUM AT THE SIC ENCLOSURE FOR TERMINATION. THE HOMEOWNER/DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF CATV CABLE WITHIN THE HOUSE. FOR CATV SPECIFICATIONS, CONTACT OCEANIC TIME WARNER CABLE. LEAVE AT LEAST FOUR FEET OF SLACK AT THE CATV JUNCTION BOX.
3. THE HOMEOWNER/DEVELOPER SHALL PROVIDE A 15 AMP CIRCUIT, ELECTRICAL WIRING, AND AN OUTLET AT THE INDICATED LOCATION WITHIN SIC'S ENCLOSURE. THE CIRCUIT SHALL BE DEDICATED TO SIC SERVICE AND LABELLED AT THE CIRCUIT BREAKER.



CAT5 TERMINATION DETAIL  
BY HOMEOWNER/DEVELOPER



05/07/2015

REVISED

MSC

## TELECOM/CATV RESIDENTIAL INSTALLATION

SCALE: NTS



*Sandwich Isles*  
**Communications, Inc.**

A Waimana Company

## KUMUHAU SUBDIVISION AND KAKA'INA SUBDIVISION

### DESIGN GUIDELINES

These Design Guidelines are made a part of the Declaration of Covenants, Conditions and Restrictions (hereinafter referred to as the "Declaration") for Kumuhau Subdivision and Kaka'ina Subdivision (hereinafter referred to as the "Subdivision") and are incorporated therein by this reference. All capitalized terms not otherwise specifically defined herein shall have the meanings given them in the Declaration.

**RESIDENTIAL AREA: BUILDING REQUIREMENTS.** Any new construction, Improvement, alteration, repair or other work undertaken upon any Residential Lot which is or may be Visible from a Neighboring Lot property or street, shall be subject to the conditions, limitations and restrictions set forth below (hereinafter referred to as the "Building Requirements"):

A. **COMPLIANCE WITH LAWS, CODES AND ORDINANCES.** All work undertaken within the Community Area shall comply with the appropriate existing laws, rules, regulations, codes and ordinances. Where requirements hereunder are more stringent than the applicable laws, rules, regulations, codes, and ordinances, the requirements hereunder shall govern.

B. **GENERAL REQUIREMENTS.**

1. **Consultation Service.** Before preparation of preliminary drawings, the Owner may arrange for consultation with a member of the Design Committee for suggestions as to siting of a dwelling on the Owner's Lot and assistance in interpretation of these Building Requirements. Any additional consultation will be at the Owner's expense.

2. **Preliminary Drawings.**

a. Before proceeding with the working drawings or with any work at the site, the Owner shall submit to the Design Committee, and secure its approval of two (2) copies of the preliminary drawings prepared by or under the direct and responsible supervision of a registered Architect. Plans, when submitted, shall be accompanied by a letter of transmittal from the Architect requesting preliminary approval and stating the estimated construction cost of the dwelling proper. The preliminary drawings shall consist of: (i) a site plan at either a 1/16 inch = 1 foot or 1 inch = 20 feet scale, showing the existing and proposed topography (2 foot contours), setback lines, view channels, outlines of the proposed structure(s) and paved areas, proposed placement of major trees, and materials and methods for retaining soil on cut embankment slopes; (ii) a reduced scale site plan at a 1 inch = 40 feet scale, showing accurately the same items and details as the aforementioned site plans as well as other major structures such as swimming pools, greenhouses, etc. Further, roof lines for all structures and lot

drainage control facilities (surface swales or other design) must be indicated. This plan shall also indicate the elevations, referring to City and County of Honolulu (hereinafter referred to as the ("City") datum based on mean sea level, of the floor level, roofs and roof ridges. This plan will be used to assemble a composite layout plan for the subdivision, showing the relationship of proposed locations of all major structures and drainage control facilities. This layout plan will assist the Design Committee in its review of house sitings and may result in suggestions which could be of benefit to the Owner; (iii) a house plan at either a 1/8 inch = 1 foot or 1/4 inch = 1 foot scale, showing floor plans for each floor. Floor elevations shall be indicated in numerals and shall refer to County datum, based on mean sea level; (iv) exterior elevations at either a 1/8 inch = 1 foot or 1/4 inch = 1 foot scale, showing each exposed side of the proposed structures), indicating proposed materials; and (v) a longitudinal section at either a 1/16 inch = 1 foot or 1/18 inch = 1 foot scale through the structure and property, commencing at the street and extending to the opposite end of the property.

b. The Design Committee will approve the preliminary drawings provided that they comply with all of the requirements hereunder and are, in the Design Committee's opinion, suitable for the Community Area and in accord with the objectives as described in the Declaration. In such cases where approval of the preliminary drawings is contingent upon conformance with certain recommendations, requirements or corrections, a revised set of preliminary drawings shall be submitted for approval prior to proceeding with working drawings.

### **3. Working Drawings.**

a. Before commencing any work at the site and prior to submittal of plans to the City for a building permit, the Owner shall first submit to the Design Committee and second, the Department of Hawaiian Home Lands (hereinafter referred to as the "Department") a Request Form for Improvements (Department form) and two (2) copies of the completed working drawings, outline specifications and detailed specifications prepared by or under the direct and responsible supervision of a professional Architect registered by and in the State of Hawaii and so certified by him or her. The working drawings shall be a development of the approved and required elements of the preliminary drawings. Upon submittal, plans shall be accompanied by the completed Request Form for Improvements. The Request Form for Improvements may be supplemented by a transmittal from the Owner's Architect summarizing the proposed improvement(s), estimated construction cost of the proposed improvement(s) and its projected construction schedule.

b. The Design Committee will first review and approve the submitted working drawings provided that they comply with the conditions and requirements hereunder. Should the working drawings be approved, the Design Committee will forward the approved Request Form for Improvements and working drawings to the Department for review and approval. After approval by the Department, the Department will authorize the Owner to proceed with the application for building permit with the City. If no building permit is required for the construction of the

proposed improvements, the Owner may proceed to construct the improvement as proposed.

c. At the time of the submission of the working drawings, the Owner shall also deposit with the Association the sum of \$50.00 to cover, in whole or in part, the cost of review by the Design Committee.

4. **Variances.** Individual solutions, at variance with the requirements herein, or with substantial departures from the approved preliminary drawings, will be considered by the Design Committee on their architectural merit and on their contribution to the objectives stated in the Declaration. Such variances or departures from the approved preliminary drawings shall be specifically requested from the Design Committee in writing by the Owner or his or her Architect and such request shall detail the reasons for the requested variance. Improvements which constitute a variance from the original working drawings will first receive approval in conformance with the approval procedure outlined in Paragraph 3b. Working Drawings.

5. **Design and Construction Details.**

a. **Alterations and Additions.** The General Requirements herein shall also govern future buildings, structures and improvements and any alterations or additions thereto.

b. **Grading.**

(1) All site work required on any Lot shall be done only in accordance with plans approved by the Design Committee and at the expense of the Owner.

(2) Fill or top soil material brought to a Lot site by the Owner shall be free of expansive clay-type soil, termites and deleterious and/or hazardous materials and chemical compounds.

(3) The Owner shall obtain a grading permit for cuts and Fills as required by the Ordinances of the City and shall abide by all requirements of those ordinances.

(4) Cut and Fill areas shall be shaped to blend into the adjacent land forms, and where exposed, shall be landscaped and treated in an attractive manner.

c. **Drainage.** Plans for Lot drainage are on file with the Department and with the Association. The Owner is required to direct the Owner's Architect to examine said drainage plans before preparing the site plans. The flow of surface or subsurface drainage onto, across or from each Lot must not be obstructed. Such run-off shall be dispersed or channeled by surface swales or other facilities in such

a manner as to prevent erosion and damage to Owner's property and any neighboring property. The Design Committee will evaluate the proposed location of Lot drainage facilities and may suggest revisions to provide for acceptance of discharge at certain points or locations along Lot boundaries. The Owner, however, will be responsible for the actual design and construction of these facilities and be liable for all claims for damages resulting therefrom. The Design Committee will not unreasonably withhold approval of any design for Lot drainage facilities but will disapprove designs which, in its opinion, are impractical or do not adequately consider the possible adverse effects on adjoining property.

d. **Materials.** All materials used for improvements shall be new and of a quality consistently associated with that used in the development of the Subdivision.

e. **Ground Termite Treatment.**

(1) Soil under all concrete slabs on ground and under all building floors, whether on ground or over air space, and under all footings and masonry foundation walls shall be treated against subterranean termites by a reliable, established and licensed termite and/or pest control agency.

(2) Treatment shall be guaranteed in writing by said agency against termite infestation for a period of not less than one (1) year.

(3) Termite treatment chemicals and other chemicals in general used inside or outside of the buildings or in accessible spaces under buildings shall be used in conformance with manufacturer's instructions.

f. **Foundations.**

(1) To the best of the Department's knowledge, all areas within the Subdivision, excluding the Community Area have been compacted in accordance with approved engineering and geotechnical methods and standards. However, over time ground settlement of areas and erosion within the Subdivision is possible. The Owner through his architect should give due consideration to the design of the foundation systems of all structures, including, without limitation, the dwelling, exterior walls and fences and concrete improvements, such as swimming pools. Subdivision construction plans are on file at the Department and the Association. It shall be the Owner's responsibility to direct his or her Architect to examine these plans and arrange for subsurface soil investigation and, thereafter, to design his or her dwelling improvements accordingly. Plot plans showing embankments will be supplied to the Owners and their Architects; provided, however, grades and contours indicated thereon are not guaranteed and are subject to verification by Owner, the Owner's Architect, and/or the Owner's surveyor.

(2) All plans for retaining walls, and any foundation placed upon embankments or Filled areas of more than four (4) feet, shall be designed and stamped by a registered Architect or structural engineer.

(3) All framing lumber shall be pressure-treated against termites and rot and shall carry a guarantee against termite damage, similar to that provided with the original framing lumber on the Owner's structure.

g. **Single Wall Construction.** Wood siding, if used in single-wall structures, shall have a minimum thickness of 1" net for all load-bearing sections in order to obviate the need for girts.

h. **Double Wall Construction.** Outside siding for double wall construction may consist of 5/8" material, or equal, subject to the approval of the Design Committee. Interior surfacing material shall not be less than 1/2" thick.

i. **Roofs.**

(1) Slope: In no event shall more than forty percent (40%) of the total roof area be flat. All roofs shall be constructed such that the roof will positively drain to roof drains or downspouts removing all water from flat areas.

(2) Asphalt shingle-type roofs or metal roofs shall slope at a minimum ratio of 4 to 12 for eaves and roofs.

(3) The Design Committee will consider approval of the use of other types of building materials such as clay or cement tile in earth tone shades, or colors similar to that in the Subdivision.

(4) Materials and paints for trim and fascia surfaces shall be non-reflective and non-glaring.

(5) Roof overhangs shall be substantial to reduce the amount of splash on exterior walls near ground levels, especially where there are door and window openings.

(6) The Variances will be considered on the basis of the objective stated in the introduction to the Declaration.

j. **Structural Analysis.** In reviewing building plans, the Design Committee shall not undertake any structural analysis nor make any representations as to the sufficiency of the design or the proposed construction. This will be a matter solely for determination by the Owner and the Owner's Architect.

k. **Height of the Under-House for Post on Pier Construction.**

(1) Vertical support members of the lowest floor shall not be longer than 9 feet measured from the finish floor level to the finish ground grade or to the top of a continuous garden wall serving as a foundation.

(2) Knee bracing shall be avoided or concealed.

(3) Because of the visual importance of the underhouse construction, individual solutions will be reviewed and approved on the basis of the objectives stated in the Declaration.

1. **Walls, Fences and Hedges.** Walls, fences and hedges built or grown along property lines, whether or not used as a retaining wall, shall be no higher than six (6) feet at any point, as measured from the top of the wall to the existing or approved finished grade level at the nearest point on the property line; provided, however, that walls, fences or hedges between the setback lines and the property line at street frontage, the property line perpendicular to the driveway, shall be set back from the property line the minimum distance set forth:

<u>Height</u>	<u>Setback</u>
3 feet maximum	Up to 6 feet from street frontage (driveway) property line
6 feet maximum	Beyond 6 feet from street frontage (driveway) property line

Walls, fences and hedges along flag lot driveways shall follow the same height and setback requirements, parallel to the flag lot driveway to provide for adequate site distance. Gates within flag lot driveways shall be set back a minimum of 18 feet. Walls, fences and hedges along side yard boundary lines without driveway entry point may be maximum 6 feet in height. Construction plans for retaining walls shall comply with County building permit requirements and subject to its height may require its preparation by a certified engineer or architect. Fences, walls or hedges are prohibited from crossing over concrete drainage ditch easement area.

(1) All walls and fences shall be maintained by the Owner and kept in good order and repair, clean and in like-new condition. Owners are responsible to remove any graffiti and repair any damage to the outer facing surface of any walls and fences.

(2) Owner shall be responsible for making certain that the location of any walls or fences, its foundation footings and any landscaping does not encroach onto any other Lot, Common Area or utility easement and does not block, obstruct or otherwise impede the designed drainage flow on his or any adjoining Lots, does not impede or block the site distance on roadways, and does not impede or block the pedestrian traffic along the sidewalks.



(3) The framework for all chain link fences shall consist of at least line posts, end posts, corner posts, top rail, bottom rail, dome cap, loop cap, tie wire, brace band, tension band, tension bar, line rail clamp and concrete. All chain link framework and appurtenances shall have a galvanized finish. Chain link fence fabric may be vinyl coated and may be interwoven with slats.

m. **Driveways.**

(1) Driveways shall be paved with concrete.

(2) Drop driveways may be constructed by the Owner prior to any work requiring heavy equipment being done and shall be used during construction in order to prevent damage to existing road right-of-way infrastructure, including but not limited to road pavement, concrete gutters, curbs, sidewalks, planterstrips and any utility lines or structures. Any damage to road right-of-way infrastructure caused by the Owner or Owner's contractor or agent, shall be the responsibility of the Owner.

n. **Utilities.** All utility service lines, wires, conduits, pipes and ducts, including those for electric, gas, telephone, water and sanitary sewer service shall be underground. Above ground propane gas tanks are allowed subject to standard construction practices, be properly maintained and shall be placed within allowed setback lines.

o. **Painting.**

(1) Colors for exterior walls and surfaces shall be non-glaring and in general conformance with existing colors of exterior walls.

(2) Wherever painted surfaces are specified, paint shall be applied in accordance with manufacturer's specifications and instructions.

p. **Mail Boxes.**

(1) Cluster mail box units and keys are provided by the United State Postal Service. House address numbers for individual homes shall be installed by Owner in a conspicuous location fronting the roadway.

q. **Air Conditioning System.** Prior to the installation of air conditioning systems, the Owner shall secure the written concurrence of the Design Committee as to the location and type of system. Any air conditioning systems shall be installed such as to minimize visual and noise nuisance.

r. **Noise Abatement.** Should undue noise, in accordance with Department of Health standards, result from the operation of any

mechanical equipment or apparatus, Owner shall design additional soundproofing methods and shall, upon approval of these methods by the Design Committee, proceed expeditiously with necessary adjustments.

**C. TIME LIMITATIONS FOR DESIGN COMMITTEE APPROVAL.**

Except for approvals for variances or other approvals for which a specific time limit is set forth herein or in the Declaration, the Design Committee shall act upon all requests for approvals required to be obtained pursuant to these design guidelines within forty-five (45) days after the submission of all required documents by the Owner. If the request is not approved or disapproved within such 45-day time period, the request shall be deemed approved.

**D. SPECIFIC LIMITATIONS.** Until such time that the Specific Limitations are amended by the Board, the following specific conditions, limitations and restrictions shall be applicable to any improvement, alteration or repair undertaken upon any Lot, subject to prior approval from the Design Review Committee:

1. Non-reflective finishes shall be used upon exterior house surfaces, including walls, fences and accessory structures; no mirror or highly reflective glass shall be used;
2. Other than existing exterior lighting and newly installed motion sensitive intermittent security lighting proposed, no permanently lit exterior lighting shall be installed, the light source of which will be directed towards neighboring Lots;
3. New material shall be used in any construction; use of any other type of material will require prior approval of the Design Committee;
4. Rain gutters shall be of a matching type for the entire dwelling unit served and, except for copper gutters, shall be coated with non-reflective finish;
5. If Visible from a Neighboring Lot or the street, accessory structures, such as fences, courtyard walls, covered lanais, playhouses, sheds, dog kennels or other animal enclosures, shall be permitted when painted in colors complementary to the main dwelling unit, and when such accessory structure which is Visible from a Neighboring Lot or the street shall be constructed or made of new and non-reflective materials. Plastic construction fencing, chicken wire or unpainted and reflective materials are not desirable;
6. Various types of aluminum, plastic or canvas awnings and tents may be erected on a temporary and intermittent basis only, subject to the approval of the Design Committee;

7. Except as is reasonably necessary for and incident to the Improvement, alteration, repair or other work undertaken upon any Lot, plans for which the Owner has obtained the approval of the Design Committee:

a. there shall be no grading, Excavation or Fill undertaken upon any such Lot; and

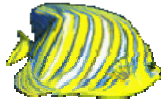
b. there shall be no change in the natural or existing drainage for surface water upon any such Lot, and no power, telephone or other utility lines, wires, conduits, pipes or ducts which would be Visible from a Neighboring Lot shall be installed upon any Lot unless the Design Committee approval is first obtained.

10. In connection with the construction of any Improvement on any Lot and any household trash, the Owner of such Lot, including Owner's contractor and/or agent shall be strictly responsible to insure that all trash, debris and other refuse material is properly disposed of and that no trash, debris or other refuse materials is placed on any other Lot or property in the Community Area, other than for household trash placed adjacent to Owner's lot during times of scheduled City pick-up.

E. **VIOLATIONS.** In the event of any violation of the provisions of these Design Guidelines, the Association may take any and all reasonable steps to restore the Lot upon which such violation has occurred to its existing condition prior to the violation. The Association may assess the Owner of such Lot, or in the event that trash, debris or other refuse material from one Lot is being disposed of on another Lot, may assess the Owner of the Lot from which the trash, debris or other refuse material originates, for all costs and expenses associated with its removal incurred in connection therewith. The Association may assess the Owner of such Lot containing a drainage easement costs associated with the removal of trash, debris accumulated within the drainage easement, if such trash and debris constitutes a danger to the Association or other Owner's.

1. The Board may adopt a fee and/or fine schedule and structure to address different types of violations, subject to provisions contained in the Bylaws of the Kumuhau Subdivision and Kaka'ina Subdivision Community Association (hereinafter referred to as "Bylaws").

2. The Board may also amend the Kumuhau Subdivision and Kaka'ina Subdivision Design Guidelines, including its Specific Limitations, subject to provisions contained in the Bylaws.



# HOME BUILDER

## Self-Certification Checklist

Please complete the checklist to qualify for a HAWAII BUILTGREEN Star Rating™ ... Mahalo!

Ratings	Home Builder User Guide
<p><b>Requirements to Qualify at 1-Star Level</b></p> <ul style="list-style-type: none"> <li>• Program Orientation (one time only)</li> <li>• (All ★'d items)</li> <li>• Earn minimum of points: <ul style="list-style-type: none"> <li>- For Naturally Ventilated (NV) homes, <b>35 pts.</b></li> <li>- For Air-Conditioned (A/C) homes, <b>45 pts.</b> (Also see ★'d requirements under "A/C homes only" sections.)</li> </ul> </li> </ul> <p><b>Requirements to Qualify at 2-Star Level</b> (minimum <b>115 points NV</b>; <b>125 points A/C</b>)</p> <ul style="list-style-type: none"> <li>• Meet 1-Star requirements</li> <li>• Earn 85 additional points; at least 5 points to come from each section.</li> </ul> <p><b>Requirements to Qualify at 3-Star Level</b> (minimum <b>210 points NV</b>; <b>220 points A/C</b>)</p> <ul style="list-style-type: none"> <li>• Meet 2-Star requirements plus 95 additional points.</li> <li>• Attend a workshop on green building topic within past 12 months (e.g., Green Building Conference or construction waste management seminar)</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Air-conditioned (A/C) homes require more energy to operate and add cost to the consumer's energy bill. Hawaii BUILTGREEN™ strongly encourages well-designed Naturally Ventilated (NV), energy-efficient homes. The program recognizes, however, special circumstances where A/C may be warranted such as areas where microclimates require greater heat or humidity control, when occupants have special needs, or existing conditions include environmental noise, dust, and pollution. To create equivalency between NV and A/C homes, there are some requirements that apply to A/C homes only. These are the ★'d items in the A/C-only sections. In addition, because there are additional items that are applicable only to A/C homes there are more points available to those homes; hence the higher thresholds for A/C homes.</p> </div>	<p>Please refer to the <a href="#">User Guide</a> for the Hawaii BUILTGREEN™ Home Builder Checklist when planning your project.</p> <p>This companion guide explains what is required to complete each Action Item.</p> <p>The User Guide also includes:</p> <ul style="list-style-type: none"> <li>• Suggested Top Picks for each Section of the Checklist;</li> <li>• Additional information on key technical issues;</li> <li>• References to additional resources to help you implement BuiltGreen™ Action Items in your projects.</li> </ul> <p>For a copy of the <a href="#">User Guide</a> for the Hawaii BUILTGREEN™ Home Builder Checklist, contact the Building Industry Association of Hawaii (BIA-Hawaii): Phone (808) 847-4666; E-mail <a href="mailto:RTC@bia-hawaii.com">RTC@bia-hawaii.com</a>, or visit <a href="http://www.bia-hawaii.com">www.bia-hawaii.com</a></p> <p><b>How to Use the Checklist</b></p> <div style="margin-top: 10px;"> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <input type="checkbox"/> (3) <div style="margin-left: 10px;"> <div style="margin-left: 10px;">1—22</div> <div style="margin-left: 10px;">Amend disturbed soil to a minimum depth of 8"</div> </div> </div> <div> <div style="margin-left: 10px;">Action item to be implemented</div> <div style="margin-left: 10px;">Order action item appears in Section (numerical)</div> <div style="margin-left: 10px;">Section where action item description appears</div> <div style="margin-left: 10px;">Point value of action item (★ items are required) (for ranges, refer to User Guide)</div> <div style="margin-left: 10px;">Check (✓) when completed.</div> </div> </div> <ol style="list-style-type: none"> <li>1) Check (✓) all Action Items included in project.</li> <li>2) Add up points from checked Action Items</li> <li>3) Subtotal points for each Section.</li> <li>4) Add subtotals for your final rating – see Ratings, above left.</li> <li>5) Complete the Rating Information on Page vi of the Checklist.</li> </ol> </div>

## Section 1: Protecting Your Site's Features & Functions

### DESIGN CHOICES

- ☐ (1) I-1. Use plastic, low toxic wood preservatives (no CCA), or naturally rot-resistant wood for landscaping.
- ☐ (3) I-2. Natural water drainage maintained.
- ☐ (3) I-3. Surface water managed with detention ponds, grassy swales, or dry wells.
- ☐ (3) I-4. Water management system allows groundwater to recharge.
- ☐ (5) I-5. Minimum impervious surfaces on the site (no more than 15% of site excluding house and garage.) (See porous pavers in energy section.)
- ☐ (10) I-6. Minimum impervious surfaces on the site (no more than 10% of site excluding house and garage.) (See porous pavers in energy section.)

### JOB SITE OPERATIONS

- ☐ (★) I-7. No soil exposed during job (protected with mulch).
- ☐ (★) I-8. No fill in sensitive areas.
- ☐ (★) I-9. Sensitive areas flagged and protected during construction.
- ☐ (★) I-10. Post cleanup procedures for spills.
- ☐ (★) I-11. Hazardous wastes separated and properly disposed of.
- ☐ (★) I-12. Sediment traps installed for construction.
- ☐ (★) I-13. No adverse impacts on adjoining properties or critical areas during construction.
- ☐ (★) I-14. Water quality monitored during construction.
- ☐ (★) I-15. Concrete trucks and pumps washed in designated areas (not in planned pervious areas).
- ☐ (1) I-16. Slopes stabilized with mulch.
- ☐ (1) I-17. Balance cut and fill.
- ☐ (1) I-18. Topsoil stockpiled and protected with mulch during excavation for post-construction use.
- ☐ (2) I-19. No significant change to topography.
- ☐ (2) I-20. Least-toxic form releases used.
- ☐ (2) I-21. Amend disturbed soil to min. depth of 4" to restore soil functions.
- ☐ (3) I-22. Amend disturbed soil to min. depth of 8" to restore soil functions.
- ☐ (3) I-23. Native vegetation saved and reused or donated.

### OUTDOOR WATER CONSERVATION

- ☐ (1) I-24. Mulch used in landscaping to minimize evaporation.
- ☐ (2) I-25. Rainwater recovery from roof for irrigation
- ☐ (3) I-26. Drought-resistant, native plants (site-appropriate) used for 50% of landscaped area.
- ☐ (3) I-27. Irrigation system has water-saving features, such as drip irrigation, electronic timer, valves with manual flow control, and rain shut-off device.

### Bonus Points (Applicable for Custom Homes)

- ☐ (5) I-28. Set aside 20% of site to be left undisturbed.
- ☐ (5) I-29. Limit grading to 20 ft. outside building footprint.

\_\_\_\_\_ Subtotal for Section 1

## Section 2: Energy Performance & Comfort

### DESIGN CHOICES

#### Site

- ☐ (1) 2-1. Space and arrange (stagger) buildings so all structures have good air flow.
- ☐ (1) 2-2. Porous paving materials installed to reduce thermal mass, heat gain, and glare.
- ☐ (2) 2-3. Longer sides of home oriented to face north and south to reduce heat build-up.
- ☐ (2) 2-4. Existing or new landscape elements (such as trees) shade building and paved areas.
- ☐ (2) 2-5. Built elements (e.g. trellises, carports) shade paved areas.
- ☐ (2) 2-6. Buildings oriented to maximize cooling potential or prevailing winds.
- ☐ (2) 2-7. Landscaping elements used to improve air flow around structure.
- ☐ (3) 2-8. Generous areas of planting and ground cover (less hardscape) included to reduce site temp.

#### Shell

- ☐ (1) 2-9. Light colored roofing installed.
- ☐ (2) 2-10. Light colored exterior wall surfaces used.
- ☐ (2) 2-11. Attic or roof cavity vented with continuous ridge and eave vents.
- ☐ (2) 2-12. Attic or roof cavity vented with gable end vents.
- ☐ (2) 2-13. Sill vents, floor vents, and venting skylights used to allow hot air to escape the building by thermal convection
- ☐ (5) 2-14. Shading on at least 50% of east and west wall surfaces.
- ☐ (5) 2-15. Radiant barriers and/or insulation installed in walls exposed to the sun, beyond any applicable local codes and ordinances.
- ☐ (5) 2-16. Radiant barriers and/or insulation installed in ceilings and attic spaces, beyond any applicable local codes and ordinances.

#### Openings

- ☐ (1) 2-17. Orient to minimize heat build-up through openings.
- ☐ (2) 2-18. Inlet openings (air comes in) slightly larger than outlet openings (air goes out) to enhance air flow.
- ☐ (2) 2-19. Windows located at body level.
- ☐ (2) 2-20. Generous screened openings protected from rain.
- ☐ (2) 2-21. High performance glazing used on windows exposed to the sun (SHGC = .65 or less; U-value - .45 or less; VLTC of .7 or more; designed to keep heat out.)
- ☐ (2) 2-22. For spaces with openings on adjacent walls, windows located far apart and at diagonal.
- ☐ (2) 2-23. For spaces with openings on same wall, use appropriately-spaced casement windows or wing walls.
- ☐ (2) 2-24. Operable openings equal to at least 12% of floor area.
- ☐ (2) 2-25. At least two operable windows to the outside included in each space.
- ☐ (2) 2-26. Diffuse glare from skylights through baffles, splaying, or use of translucent glazing.
- ☐ (3) 2-27. All skylights used have SHGC of 0.5 or less.
- ☐ (3) 2-28. Operable skylights or skylights with built-in vents (on leeward side of skylight) installed.
- ☐ (3) 2-29. Casement or jalousie windows used for best air flow.
- ☐ (3) 2-30. No more than 25% of total glass area is located on east and west walls combined.

- ☐ (3) 2-31. Exterior horizontal shading installed for north and south windows (sufficient to protect completely from direct sun).
- ☐ (3) 2-32. Exterior vertical shading installed for east and west windows (sufficient to protect completely from direct sun).
- ☐ (3) 2-33. Light shelves used for sidelighting.
- ☐ (3) 2-34. For toplighting, roof monitors or clerestories used. (No skylights.)

#### Interior Layout and Finishes

- ☐ (1) 2-35. For spaces with openings on opposite walls, rooms oriented 45 degrees from wind direction.
- ☐ (2) 2-36. Design floor plans to provide effective cross ventilation and air flow at body level.
- ☐ (2) 2-37. Layout designed so activities with highest illumination needs are daylight.
- ☐ (2) 2-38. Floor plan allows deep daylight penetration.
- ☐ (3) 2-39. Use light colored interior finishes to enhance daylight (but avoid glare).

#### Mechanical Venting and Cooling

- ☐ (1) 2-40. Timers installed on bathroom fans.
- ☐ (2) 2-41. All bedrooms and family room wired for ceiling fans.
- ☐ (2) 2-42. Solar powered attic vent installed.
- ☐ (3) 2-43. Whole house fan installed.
- ☐ (3) 2-44. Ceiling fans installed in all bedrooms and family room.
- ☐ (10) 2-45. No air conditioning.

#### AIR CONDITIONED (A/C) HOMES ONLY

- ☐ (★) 2-46. House meets Hawaii Model Energy Code standards for A/C buildings. (See Quick References for further details.)
- ☐ (★) 2-47. A/C system sized for efficient operation (not oversized).
- ☐ (★) 2-48. Programmable thermostats provided.
- ☐ (2) 2-49. Provide alternate means to balance air flow (e.g. undercut doors, return air ducts)
- ☐ (2) 2-50. Duct unions and joints sealed with low-toxic mastic and fibrous tape.
- ☐ (3) 2-51. Ducts in conditioned space OR insulated to R-11.
- ☐ (3) 2-52. Insure easy access to A/C system for maintenance and repair.
- ☐ (3) 2-53. Minimum SEER 12 A/C system.
- ☐ (5) 2-54. Duct Blaster Test conducted.
- ☐ (5) 2-55. House is Energy Star-compliant (Hawaii MEC for A/C, PLUS options defined by EPA; see User Guide for further details.)

#### WATER HEATING

##### Distribution

- ☐ (1) 2-56. Electric water heater upgrade w/min .93 EF (energy factor)
- ☐ (1) 2-57. Water heater timer installed.
- ☐ (1) 2-58. Gas water heater upgrade w/min .60 EF
- ☐ (1) 2-59. Heat trap installed or 1-inch pipe insulation on at least first 8' of outlet pipe from water heater. (Required (★) for A/C homes as part of meeting MEC.)
- ☐ (1) 2-60. Solar heater or heat pump for swimming pool heaters. (Required (★) for A/C homes as part of meeting MEC.)
- ☐ (1) 2-61. Water heater located within 20' pipe length of bathroom fixtures.
- ☐ (2) 2-62. Use a heat pump water heater w/min. 1.9 EF.

- ☐ (2) 2-63. Hot water lines insulated to min. R-3 throughout house.
- ☐ (5) 2-64. Design south-facing roof area for future solar collector (min. 80 sq. ft within 30° of true south) and rough in plumbing necessary for solar water heating system.
- ☐ (10) 2-65. Solar water heater installed.

#### Indoor water conservation

- ☐ (★) 2-66. Low flow shower heads & sink faucets used (2.5 gpm).
- ☐ (★) 2-67. Low flow bath faucets used (2.0 gpm).
- ☐ (2) 2-68. Front-loading, horizontal axis, or equal clothes washer provided.
- ☐ (5)\* 2-69. Rainwater collection for potable use (with filtration as required.)

**\*Double points in locations that have municipal supply.**

#### ELECTRIC LIGHTING

- ☐ (1) 2-70. Reflectors in can fixtures to maximize available light.
- ☐ (1) 2-71. Dimmers for spaces where low-level lighting appropriate.
- ☐ (2) 2-72. Light tubes installed to reduce need for electric lighting.
- ☐ (3) 2-73. Compact fluorescent lamps (CFLs) used in three high-use locations (including kitchen and entry light).
- ☐ (3) 2-74. Fluorescent lamps (T-8 or T-5) used in service areas of the home. (Bulbs with CRI > than 80 and CCT of 3000K)
- ☐ (3) 2-75. Electronic ballasts for all fluorescents installed.
- ☐ (3) 2-76. CFLs substituted for incandescent down lights.

#### APPLIANCES

- ☐ (2) 2-77. Provide a microwave oven to reduce reliance on range.
- ☐ (2) 2-78. Energy efficient range provided.
- ☐ (2) 2-79. Energy Star clothes dryer provided.
- ☐ (3) 2-80. Energy Star clothes washer provided.
- ☐ (3) 2-81. Energy Star dishwasher provided.
- ☐ (5) 3-82. Energy Star refrigerator provided.

#### Bonus Points for Custom Homes

- ☐ (10) 2-83. Photovoltaic or other renewable source for electricity (>10% of electric load) installed.

#### Subtotal for Section 2

### Section 3: Health and Indoor Air Quality

#### DESIGN

See Section 2: Energy and Comfort. It contains several Action Items that enhance airflow and cross ventilation naturally.

#### FLOORS

- ☐ (1) 3-1. If using carpet, specify with Carpet and Rug Institute's (CRI) Indoor Air Quality (IAQ) label.
- ☐ (1) 3-2. Ceramic tile grout seams sealed to control mold growth.
- ☐ (2) 3-3. Water-based finishes used on wood floors.
- ☐ (2) 3-4. If using carpet, install by tacking (no glue).
- ☐ (2) 3-5. Use plywood and composites of exterior grade or formaldehyde-free.
- ☐ (2) 3-6. Low toxicity, low solvent mastics, sealants, and adhesives used for flooring.

- ☐ (2) 3-7. Formaldehyde-free subfloor and underlayment material used.
- ☐ (3) 3-8. Install low-pile or less allergen-attracting carpet and pad (w/ CRI IAQ label).
- ☐ (3) 3-9. Natural linoleum with low-toxic adhesive or backing used.
- ☐ (5) 3-10. Hardwood or tile floors installed in 50% of living area.
- ☐ (5) 3-11. Carpet limited to one-third of home-square footage.
- ☐ (10) 3-12. No carpet installed in home.

#### CABINETS AND TRIM

- ☐ (1) 3-13. Ceramic tile grout seams sealed to control mold growth.
- ☐ (2) 3-14. Water-based finishes applied on woodwork.
- ☐ (2) 3-15. Low-toxicity, low solvent mastics, sealants, and adhesives used for cabinetry, trim, and countertops.
- ☐ (3) 3-16. Cabinets and trim made with formaldehyde-free board and low-VOC finish.

#### INTERIOR WALLS

- ☐ (1) 3-17. Seal ceramic tile grout seams to control mold growth.
- ☐ (1) 3-18. Formaldehyde-free fiberglass insulation (available with BIBs or spec'd. Not standard batts).
- ☐ (3) 3-19. Low-VOC/low-toxic interior paints and finishes used for large surface areas (VOCs no more than 50 g/l)
- ☐ (3) 3-20. Low toxicity, low solvent mastics, sealants and adhesives used for wallcoverings.

#### MECHANICAL AND OTHER CONTROLS

- ☐ (★) 3-21 Clothes dryer vented to outdoors.
- ☐ (1) 3-22. Exhaust fans installed in home office areas.
- ☐ (1) 3-23. Polyethylene piping used for supply plumbing.
- ☐ (3) 3-24. Crawl and attic spaces ventilated to prevent moisture accumulation.
- ☐ (3) 3-25. Quiet fans (1.5 sones or less) installed in baths and kitchens to encourage use. (Include 60-minute timer).
- ☐ (3) 3-26. Moisture barriers sealed prior to installation of flooring.
- ☐ (3) 3-27. No electronic filters used in home.

#### AIR CONDITIONED (A/C) HOMES ONLY

- ☐ (3) 3-28. Use construction filters and replace just prior to move-in.
- ☐ (3) 3-29. Seal at doors, windows and all penetrations against moisture and air leaks.
- ☐ (5) 3-30. A/C systems provide fresh air at 0.35 AC/H or 15 CFM per person (whichever is higher).

#### JOB SITE OPERATIONS

- ☐ (1) 3-31. Use "green" cleaners for final cleanup.
- ☐ (1) 3-32. Protect building materials from moisture damage.
- ☐ (2) 3-33. Vacuum stud bays before drywalling.
- ☐ (2) 3-34. Vacuum floors before final flooring installation.
- ☐ (3) 3-35. Ventilate after each new finish is applied.

#### Bonus Points (Applicable for Custom Homes)

- ☐ (3) 3-36. No pollen-bearing shrubs and trees (e.g. mock orange, pikake, plumeria, and mango) or allergenic grasses (e.g. rye) planted next to operable windows.

Subtotal for Section 3

### Section 4: Durability and Materials Conservation

#### DESIGN CHOICES

- ☐ (2) 4-1. Standardize dimensions used to reduce waste.
- ☐ (2) 4-2. Install materials with longer life cycles.
- ☐ (2) 4-3. Use stacked floor plans.
- ☐ (2) 4-4. Install materials produced in Hawaii.

#### TERMITE DETAILS

- ☐ (★) 4-5. Ensure that all wood used has EPA-approved chemical treatment.
- ☐ (★) 4-6. Field-treat all cuts and drill-holes in treated wood.
- ☐ (1) 4-7. All plantings at least 24 inches from the building perimeter.
- ☐ (1) 4-8. All roots thoroughly removed when vegetation cleared.
- ☐ (1) 4-9. Regular inspection for termites during construction (post schedule).
- ☐ (1) 4-10. Easy access provided for termite inspection by homeowner.
- ☐ (1) 4-11. Use only materials impervious or highly resistant to termites (pressure treated lumber, concrete, masonry, galvanized steel, and plastic lumber).
- ☐ (1) 4-12. Poured concrete in place of wood or CMU for building foundations.
- ☐ (1) 4-13. All slab penetrations sealed with epoxy or non-shrink grout.
- ☐ (1) 4-14. Galvanized termite pans separate foundations from wood structures.
- ☐ (2) 4-15. Install termite colony elimination system.
- ☐ (3) 4-16. Install 4-inch basalt termite barrier (BTB) around footings and beneath slabs (protect during construction).
- ☐ (3) 4-17. Install a non-chemical ground treatment termite control system (steel mesh or equivalent).
- ☐ (3) 4-18. Use copper termite pans to separate foundations from wood structures.

#### FRAMING

- ☐ (1) 4-19 Use two-stud corners.
- ☐ (0) 4-20. Deleted
- ☐ (0) 4-21. Deleted
- ☐ (0) 4-22. Deleted
- ☐ (1) 4-23. Install recycled content fascia, soffits, or trim.
- ☐ (2) 4-24. Use Intermediate Framing System (16" O.C. studs, with 2-stud corners, ladder partitions, let-in headers).
- ☐ (2) 4-25. Use recycled-content sheathing.
- ☐ (0) 4-26. Deleted
- ☐ (0) 4-27. Deleted
- ☐ (0) 4-28. Deleted (Covered in 4-5)
- ☐ (3) 4-29. Use Advanced Framing System when permitted (24" O.C. studs, 2-stud corners), ladder partitions, let-in headers, etc.

#### FOUNDATION

- ☐ (3) 4-30. Non-asphalt based damp proofing used for foundation and basement walls.
- ☐ (3) 4-31. Use concrete with fly ash content.
- ☐ (3) 4-32. Use recycled aggregate containing crushed concrete, brick, concrete block, asphalt, or glass cullet for base or fill.



### SUB-FLOOR

- ☐ (2) 4-33. Use recycled-content underlayment.

### WINDOWS AND DOORS

- ☐ (1) 4-34. No luan doors used.
- ☐ (1-3) 4-35. Use window frames and doors made of wood certified as “sustainably produced” (see User Guide for recognized certifiers).
- ☐ (2) 4-36. Flashing to seal above doors, windows, and other openings.
- ☐ (3) 4-37. Frames are wood/composite with recycled content.
- ☐ (3) 4-38. Interior doors reclaimed.

### INSULATION

- ☐ (2) 4-39. Use insulation with recycled content, including cellulose, fiberglass, expanded polystyrene (EPS), and mineral wool.
- ☐ (2) 4-40. Use environmentally-preferable foam insulation (formaldehyde-free, CFC-free, HCFC-free).

### INTERIOR WALLS

- ☐ (1) 4-41. Use drywall with recycled-content gypsum.

### FINISH FLOOR

- ☐ (1-3) 4-42. Use wood flooring certified as “sustainably produced” (see User Guide for recognized certifiers).
- ☐ (1) 4-43. If installing vinyl flooring, use product with post-industrial recycled content.
- ☐ (1) 4-44. Install recycled-content carpet pad.
- ☐ (2) 4-45. Use recycled-content or renewed carpet.
- ☐ (3) 4-46. Use reclaimed wood.
- ☐ (3) 4-47. Install cork or bamboo flooring.
- ☐ (1) 4-48. Install laminated or veneered wood floor.
- ☐ (3) 4-49. Use concrete or indigenous stone flooring.
- ☐ (3) 4-50. Use recycled-content ceramic tile.
- ☐ (1) 4-51. Use resilient flooring with no chlorine used during manufacturing.

### CABINETRY AND TRIM

- ☐ (3) 4-52. Cabinets made with medium density fiberboard or wheatboard.
- ☐ (2) 4-53. Finger-jointed or engineered wood trim (including MDF).
- ☐ (3) 4-54. Use countertops with recycled content.
- ☐ (3) 4-55. Install concrete or indigenous stone countertops.
- ☐ (3) 4-56. Use refurbished cabinets.
- ☐ (1-3) 4-57. All hardwood trim or casework from wood certified as “sustainably produced” (see User Guide for recognized certifiers).

### ROOF

- ☐ (1) 4-58. Flash all roof-to-wall intersections.
- ☐ (1) 4-59. Use resource-efficient roofing such as metal panels or composite shingles with recycled content.
- ☐ (2) 4-60. Install 30-year roofing material.
- ☐ (3) 4-61. Install 40-year roofing material.

### EXTERIOR FINISH

- ☐ (1) 4-62. Use resource-efficient siding such as metal, vinyl, cement fiberboard, and stucco.
- ☐ (1) 4-63. Use 50-year siding product.

- ☐ (1) 4-64. Use reworked paint.
- ☐ (2) 4-65. Exterior coatings and paints have recycled content.
- ☐ (2) 4-66. Materials are factory finished.

### OUTDOOR FEATURES

- ☐ (0) 4-67. Deleted (Covered in 4-5)
- ☐ (1) 4-68. Compost or mulch used in landscaping.
- ☐ (1) 4-69. Crushed/ground gypboard used as a soil amendment.
- ☐ (2) 4-70. Reclaimed or salvaged material used for landscaping walls.
- ☐ (2) 4-71. Recycled content materials used for fences, benches, decking, docks, retaining walls, picnic tables, and landscape borders.
- ☐ (5) 4-72. Create functional outdoor living spaces while limiting overall square footage of structure.

### JOB SITE OPERATIONS

*(For custom homes, triple points for each item in this category, due to increased difficulty.)*

- ☐ (1) 4-73. Posted job-site waste management plan (including reduce, reuse, recycle goals/actions).
- ☐ (1) 4-74. Waste management education conducted on site for field personnel.
- ☐ (1) 4-75. Detailed take-off provided as cut list to framer.
- ☐ (1) 4-76. Recycling areas or containers well-signed.
- ☐ (1) 4-77. Central cutting area or cut packs.
- ☐ (1) 4-78. Subcontractors required to participate in waste reduction efforts.
- ☐ (1) 4-79. Use suppliers offering reusable, recyclable or U-turn packaging.
- ☐ (1) 4-80. Reuse building materials.
- ☐ (1) 4-81. Reuse dimensional framing materials.
- ☐ (1) 4-82. Use recyclable supplies, e.g., construction fences, tarps, etc.
- ☐ (1) 4-83. Excess materials donated to a non-profit organization (e.g., Hawaii Materials Exchange).
- ☐ (1) 4-84. Wood scraps sold or given away.
- ☐ (1) 4-85. Reusable items sold or donated.
- ☐ (1) 4-86. Use reusable forms.
- ☐ (1) 4-87. Recycle cardboard.
- ☐ (1) 4-88. Recycle metal scraps.
- ☐ (1) 4-89. Recycle clean wood (borate-treated or untreated scrap), e.g., for composting.
- ☐ (1) 4-90. Recycle packaging.
- ☐ (1) 4-91. Recycle drywall.
- ☐ (1) 4-92. Recycle concrete/asphalt rubble, rock, and brick.
- ☐ (1) 4-93. Least toxic materials selected to reduce disposal requirements (e.g., paints, termite treatments).

### Bonus Points

- ☐ (5) 4-94. Track and prominently post waste reduction results on site (similar to safety record signs).
- ☐ (5) 4-95. Home no larger than 1,800 square ft.
- ☐ (10) 4-96. Home no larger than 1,400 square ft.
- ☐ (10) 4-97. More than 50% of wood used in home is certified by a third-party agency as “sustainably-produced.”

\_\_\_\_\_ Subtotal for Section 4



Section 5: Environmentally-Friendly Home Operations

- ☐ (★) 5-1. Owners provided with information on operating and maintaining their "green" home for optimum performance. If A/C, must include instructions about efficient O&M for A/C system and operation of programmable thermostats. (See User Guide for minimum requirements.)
- ☐ (★) 5-2. Owners provided with information about maintaining their outdoor landscaping using "green" techniques. (See User Guide for minimum requirements.)
- ☐ (2) 5-3. Provide a list of Energy Star appliances for those not installed.
- ☐ (2) 5-4. Provide a laundry line. (If indoors, e.g. garage, MUST PROVIDE ADEQUATE VENTILATION.)
- ☐ (2) 5-5. Recycling center with two or more bins included in or near kitchen (can be outdoors).
- ☐ (2) 5-6. Build a lockable storage closet for hazardous cleaning & maintenance products, separate from occupied space
- ☐ (3) 5-7. Furnish three compact fluorescent light bulbs to owners (encouraged if installing screw-in compacts)
- ☐ (3) 5-8. Conduct consumer orientation during final walk-through (point out BUILTGREEN™ features, how to maintain them, operate them.)
- ☐ (2) 5-9. Builder's own idea for education and encouraging consumers to take care of their home in an environmentally friendly way.

\_\_\_\_\_ Subtotal for Section 5

**Rating Information**

**Developer/Builder** \_\_\_\_\_

**Project** \_\_\_\_\_

**Home location** \_\_\_\_\_

**Total Points for Home** \_\_\_\_\_

**Program Level Obtained:**

☐ 1-Star ★      ☐ 2-Star ★★      ☐ 3-Star ★★★

*(See front of checklist for qualifying requirements)*

By my signature, I certify that I have performed all Action Items checked above:

\_\_\_\_\_  
(Home Builder Signature and Date)

# Hawaii BuiltGreen™

---



## User Guide for Home Builder Checklist

Produced by  
Building Industry Association of Hawaii  
(808) 847-4666  
[www.bia-hawaii.com](http://www.bia-hawaii.com)  
&  
Department of Business, Economic  
Development and Tourism  
(808) 587-3807  
[www.hawaii.gov/dbedt/info/energy](http://www.hawaii.gov/dbedt/info/energy)



## ACKNOWLEDGMENTS

The User Guide for the Hawaii BuiltGreen™ Home Builder Checklist was tailored for the Hawaii BuiltGreen™ Program of the Building Industry Association of Hawaii (BIA-Hawaii). It represents the combined effort of many BIA-Hawaii members, community representatives, and industry experts from the State of Hawaii.

Funding for the program and this User Guide were provided through a U.S. Department of Energy (USDOE) grant to the State of Hawaii Department of Business, Economic Development, and Tourism (DBEDT).

We wish to thank all those BIA-Hawaii members who participated in the original development of the Pilot Checklist, including:

Robert Armstrong - Armstrong Builders, Ltd.; Kenneth Choate – HASEKO Construction, Inc.; Warren Ho - Lani Properties Corp.; Randy Ouye - Gentry Homes, Ltd.; Brian Yahata - Castle & Cooke Homes Hawai'i, Inc.; Randy Lau – Designer Built Systems, Inc.; Craig Watase - Mark Development, Inc.; Ralph Valentino - Hunt Building Corporation/HPFA; Terry Inglet – Honsador Lumber Corp.; Gail Suzuki-Jones - DBEDT; Steve Meder - University of Hawaii at Manoa School of Architecture; Alan Ewell – Knox Hoversland Architects; Sharon Suzuki - Hawaii Electric Company (HECO); Sam Nichols - HECO; Dean Masai - DBEDT; John Valera - Department of Health; Wayne Kawano - Cement and Concrete Products Industry of Hawaii.

In addition, feedback interviews on Pilot Checklist were completed with the following:

Jim Bixbee – Homeworks Construction, Inc.; Jeff Brown – Brookfield Homes Hawaii Inc.; Kenneth Choate – HASEKO Construction, Inc.; Russ Lambing - Royal Clark Development, LLC; Craig Watase - Mark Development, Inc.

Local technical experts helped the BuiltGreen™ Program reflect the best practices available in Hawaii, and ensured the technical accuracy of Action Item descriptions. Special thanks to:

Alan Ewell - Knox Hoversland Architects; Steve Meder - University of Hawaii, School of Architecture; Jim Reinhardt - Architectural Diagnostics; Robyn Sweesy - Landscape Architect.

O'Brien & Company, Inc., of Bainbridge Island, Washington ([www.obrienandco.com](http://www.obrienandco.com)), led program development and produced this User Guide.

Finally, we would like to acknowledge the green building programs that have laid the foundation for our excellent program: to the Home Builders Association of Metropolitan Denver's BUILT GREEN™ Program, the first such program in the county, for leading the way and for permission to use the trademarked name, BUILT GREEN™.

## DISCLAIMER

The Building Industry Association of Hawaii (BIA-Hawaii) has provided this User Guide as part of the Hawaii BuiltGreen™ Program. It is intended for use by licensed building industry professionals as an aid to participating in the program. It assumes a certain level of experience and familiarity with building technology and should not be used by untrained builders, do-it-yourselfers, or consumers.

The User Guide is not intended to eliminate or substitute for the builder's own judgment or accepted engineering and construction practices. Each project may have characteristics that could make any one or more of the Action Items suggested in the User Guide inappropriate. It is the responsibility of the building professional to choose Action Items that are appropriate in each case. Furthermore, any product information provided in the User Guide is not intended to act as or imply a recommendation for using a particular product in a specific application. Where appropriate, products should be tested before installation. All products should be used according to the manufacturer's recommendations.

In addition, local, state, and federal regulations must be followed and are not to be superseded by any recommendations made in this User Guide. Every effort was made to ensure consistency with the standards of the State of Hawaii at the time of this writing.

Health and safety-related measures described in the Handbook are not intended to offer medical advice or to substitute for professional medical consultation.

At this time, the Hawaii BuiltGreen™ Program is a self-certification program. The BIA-Hawaii does not warrant whether or not a builder has taken a specific action. The builder warrants their actions by signing the appropriate Self-Certification Checklist, which is available separately from the BIA-Hawaii.

*The User Guide for the Hawaii BuiltGreen™ Home Builder Checklist was prepared with support of the U.S. Department of Energy, Grant No. DE-FG51-02R021337. However, any opinions, findings, conclusions, or recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of, nor constitute an endorsement by, the USDOE, the State of Hawaii, the Building Industry Association of Hawaii, or any of their agents.*

# Table Of Contents

INTRODUCTION .....	I
WHY BUILD HAWAII BUILTGREEN™? .....	I
PURPOSE OF THIS USER GUIDE .....	I
HOW TO USE THE CHECKLIST .....	II
HOW TO QUALIFY YOUR PROJECT .....	II
Star Ratings .....	III
QUICK REFERENCES .....	IV
<b>Section 1: Protecting Your Site's Features and Functions .....</b>	<b>1</b>
DESIGN CHOICES .....	3
JOB SITE OPERATIONS .....	4
OUTDOOR WATER CONSERVATION .....	8
Bonus Points for Custom Homes .....	10
<b>Section 2: Energy Performance and Comfort .....</b>	<b>11</b>
DESIGN CHOICES .....	13
Site .....	13
Shell .....	14
Openings .....	15
Interior Layout and Finishes .....	18
Mechanical Venting and Cooling .....	18
AIR CONDITIONING (A/C) HOMES ONLY .....	19
WATER HEATING .....	21
Distribution .....	21
INDOOR WATER CONSERVATION .....	23
ELECTRIC LIGHTING .....	24
APPLIANCES .....	25
Bonus Points for Custom Homes .....	26
<b>Section 3: Health and Indoor Air Quality .....</b>	<b>27</b>
DESIGN .....	29
FLOORS .....	29
CABINETRY AND TRIM .....	31
INTERIOR WALLS .....	32
MECHANICAL AND OTHER CONTROLS .....	33
AIR CONDITIONED (A/C) HOMES ONLY .....	34
JOB SITE OPERATIONS .....	35
<b>Section 4: Durability and Materials Conservation .....</b>	<b>37</b>
DESIGN CHOICES .....	39
TERMITE DETAILS .....	39
FRAMING .....	43
FOUNDATION .....	45
SUB-FLOOR .....	46
WINDOWS AND DOORS .....	46
INSULATION .....	47
INTERIOR WALLS .....	48
FINISH FLOOR .....	48

CABINETRY AND TRIM.....	50
ROOF.....	51
EXTERIOR FINISH .....	51
OUTDOOR FEATURES .....	52
JOB SITE OPERATIONS .....	54
BONUS POINTS .....	58

## **Section 5: Environmentally-Friendly Home Operations ..... 59**

### **Sidebars**

Soil Amendment .....	7
Drought-Resistant Native Hawaiian Species for the Landscape.....	9
What does “Low VOC” mean?.....	29
Wood Treatment Products.....	40
Forest Certification .....	44
Waste Management Plan .....	54
Working with your Subs to Reduce Job-Site Waste .....	55
Homeowner Kits .....	60

## INTRODUCTION

This User Guide is a reference for building industry professionals enrolled in the Hawaii BuiltGreen™ Program of the Building Industry Association of Hawaii. It is designed to support the Self-Certification Checklist used to certify Hawaii BuiltGreen™ Home Builder projects. The Checklist functions as a menu of environmentally friendly features and strategies to include in your residential construction project and has more than 250 Action Items to choose from.

BuiltGreen™ is a market-driven program. Consumer education and outreach is critical to using it successfully. Please contact the BIA-Hawaii office about marketing tools you can use to promote your BuiltGreen™ homes. The BIA-Hawaii will also provide support through marketing seminars and a public marketing campaign.

## WHY BUILD HAWAII BUILTGREEN™?

Your customers will get more home for their money. Homes built using the Hawaii BuiltGreen™ Program incorporate environmentally friendly features that can add value and reduce the lifecycle cost of the home. Often these features add little or nothing to the first cost of the home. At the highest level of the program, additional costs to achieve a 3-star rating are far outweighed by the added value that results.

**Hawaii BuiltGreen™ adds Quality** - Many environmentally friendly products provide multiple benefits that translate to improved performance of the home and increased customer satisfaction. For example, Hawaii Built Green™ promotes use of more durable building products. This not only saves resources, but also reduces maintenance and replacement costs and saves the owner valuable time.

**Hawaii BuiltGreen™ adds Affordability** - Buyers save money because energy efficient homes generate lower utility bills and maintenance costs. It may be possible to qualify for a higher loan amount and buy a better home for a lower monthly cost.

## PURPOSE OF THIS USER GUIDE

The User Guide describes what is required to score points for each Action Item in the Self Certification Checklist.

The Guide is divided into Sections, similar to the Checklist. At the beginning of each Section, there is a list of “Top Picks,” recommended by local technical experts. These strategies offer a combination of environmental and economic benefits in the Hawaii housing market. Top Picks also lists the specific Action Items required to make up each strategy.

Also, throughout the User Guide you will find informative sidebars that provide additional information on technical topics, such as “Forest Certification” and “What does ‘Low-VOC’ mean?” to help you with your project.

Additional information about BuiltGreen™ HomeBuilder Action Items is provided through technical seminars and other resources. For further information about BuiltGreen™ resources, contact the BIA-Hawaii office:

Phone (808) 847-4666, ext 210; E-mail [RTC@bia-hawaii.com](mailto:RTC@bia-hawaii.com); or visit [www.bia-hawaii.com](http://www.bia-hawaii.com).

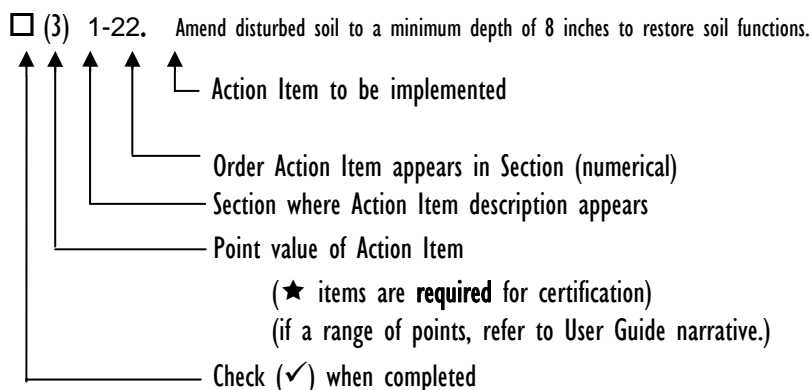


## HOW TO USE THE CHECKLIST

For ease of use, the User Guide coordinates directly with the Home Builder Self-Certification Checklist sections.

The checklist is “key-coded” to help you find information about each measure. The first number indicates what section to look in, and the following numbers indicate the order in which it appears. Here’s how it works, using an example Action Item from the Checklist:

In this example, the action *Amend disturbed soil to a minimum depth of 8 inches to restore soil functions* is assigned 3 points and is described in Section **One (1)** (*Site & Water*), Action Item **22**.



## HOW TO QUALIFY YOUR PROJECT

Review the checklist prior to starting your project, and note Action Items you are interested in investigating. Refer to the information in the applicable section of the User Guide for discussion of these Action Items.

When your project is completed:

- Check the boxes for all the Action Items you have included and subtotal the points scored for each Section;
- Add the subtotals to come up with your total points and fill out the Rating Information box on the back of the checklist;
- Send a signed copy of the checklist to the BIA-Hawaii, certifying that the home identified in the checklist contains the identified features.

Based upon the information you provide in the checklist, and after reviewing the application, the BIA-Hawaii will award the appropriate Certificate of Merit indicating that the home has received a 1-, 2-, or 3-star rating.

This Certificate can be an important part of your marketing effort. It should be given to your client/homeowner as part of the handover package, along with the Homeowner Information Kit (see Section Five). You might refer to the Checklist when doing your final walkthrough.

## STAR RATINGS

### Requirements to Qualify at 1-Star Level

- Program Orientation (one time only)
- Complete all ★'d items
- Earn minimum of points:
  - For Naturally Ventilated (NV) homes, 35 pts.
  - For Air-Conditioned (A/C) homes, 45 pts.(Also see ★'d requirements under "A/C homes only" sections.)

### Requirements to Qualify at 2-Star Level (minimum 115 points NV; 125 points A/C)

- Meet 1-Star requirements
- Earn 85 additional points; at least 5 points to come from each section.

### Requirements to Qualify at 3-Star Level (minimum 210 points NV; 220 points A/C)

- Meet 2-Star requirements plus 95 additional points.
- Attend a workshop on green building topic within past 12 months (e.g., Green Building Conference or construction waste management seminar)

*Air-Conditioned (A/C) homes require more energy to operate and add cost to the consumer's energy bill. Hawaii BUILTGREEN™ strongly encourages well-designed Naturally Ventilated (NV), energy-efficient homes. The Program recognizes, however, special circumstances where A/C may be warranted, such as areas where microclimates require greater heat or humidity control, when occupants have special needs, or existing conditions include environmental noise, dust, and pollution. To create equivalency between NV and A/C homes, there are some requirements that apply to A/C homes only. These are the ★'d items in the A/C-only sections. In addition, because there are additional items that are applicable only to A/C homes there are more points available to those homes; hence the higher thresholds for A/C homes.*

## QUICK REFERENCES

### General

- HABiT Guide to Resource Efficient Building in Hawaii (copies available at BIA-Hawaii and DBEDT)

### Section 2: Energy Efficiency

- Field Guide for Energy Performance, Comfort, and Value in Hawaii Homes: available at <<http://www.hawaii.gov/dbedt/info/energy/efficiency/fieldguide>> or contact Department of Business, Economic Development and Tourism, phone (808) 587-3807, E-mail [ertd@dbedt.hawaii.gov](mailto:ertd@dbedt.hawaii.gov)
- For information on Model Energy Code see <[http://www.co.honolulu.hi.us/refs/roh/32a1\\_3.htm](http://www.co.honolulu.hi.us/refs/roh/32a1_3.htm)>
- For information about Energy Star® Mortgage Program and other financial incentives call Hawaii Electric Company (Oahu) (808) 947-6937; Hawaii Electric Light Company (Big Island) (808) 969-0127; Kauai Electric Company (808) 246-8280; or Maui Electric Company 1-888-632-6786.

### Section 4: Durability and Materials Conservation

- Contractor's Waste Management Guide: Best Management Practices and Tools for Job Site Recycling and Waste Reduction in Hawaii (copies available at BIA-Hawaii and DBEDT), and <<http://www.hawaii.gov/dbedt/info/energy/publications/cwmng.pdf>>
- DBEDT Buy Recycled in Hawaii Directory, <<http://www.hawaii.gov/dbedt/info/energy/publications/brg02.pdf>>

### Section 5: Environmentally-Friendly Home Operations

- For information on Energy Star® products, see [http://www.energystar.gov/index.cfm?c=products.pr\\_index](http://www.energystar.gov/index.cfm?c=products.pr_index), e-mail [labeling@energystar.gov](mailto:labeling@energystar.gov) or call the ENERGY STAR® hotline at 1-888-STAR-YES

## Section 1:

### Protecting Your Site's Features and Functions

#### Top Picks

Strategy	Direct Benefits to Sell	Action Item
Maintain natural water drainage	Clean water for families and wildlife; healthy soil for healthy plants; community stewardship	1-2
Minimize impervious surfaces	Clean water for families and wildlife; healthy soil for healthy plants; community stewardship	1-5;1-6
Flag and protect sensitive areas during construction	Clean water for families and wildlife; healthy soil for healthy plants; community stewardship	1-9
Separate and properly dispose hazardous wastes	Clean water for families and wildlife; community stewardship	1-11
Stockpile topsoil and protect with mulch during excavation for post-construction use	Healthy soil for healthy plants	1-18
No significant change to topography	Clean water for families and wildlife; healthy soil for healthy plants	1-19
Amend disturbed soils to depth of 4" / 8"	Clean water for families and wildlife; more water for potable uses	1-21;1-22
Use mulch for landscaping to minimize evaporation	More water for potable uses; healthy soil for healthy plants	1-24
Install drought-resistant native plants for 50% of landscaped area	More water for potable uses; water savings	1-26; 5-2
Install irrigation system with water saving features	More water for potable uses; water savings	1-27



## DESIGN CHOICES

- |            |  |                |
|------------|--|----------------|
| <b>1-1</b> | Use plastic, low toxic wood preservatives (no CCA), or naturally rot-resistant wood for landscaping. | <b>1 Point</b> |
|------------|--|----------------|

Use non- or low-toxic materials in the landscape to help preserve soil and water quality. Examples include low-toxic wood preservatives, naturally rot-resistant woods, and plastic lumber (preferably with recycled content).

Beginning in December 2003, CCA-treated wood will be phased out of production. By January 2004, the Environmental Protection Agency will no longer allow CCA products to be used in any residential applications. (See sidebar on CCA Phase Out in Section 4: Durability and Materials Conservation)

- |            |                                    |                 |
|------------|------------------------------------|-----------------|
| <b>1-2</b> | Natural water drainage maintained. | <b>3 Points</b> |
|------------|------------------------------------|-----------------|

Minimize scraping, grading and backfilling of site. Preserving the natural topography and water drainage patterns of the site will result in more effective management and infiltration of surface water, and minimize impact on areas “downstream.”

- |            |   |                 |
|------------|---|-----------------|
| <b>1-3</b> | Surface water managed with detention ponds, grassy swales and drywells. | <b>3 Points</b> |
|------------|---|-----------------|

Where natural water drainage is not maintained, use a range of strategies to micro-manage surface water, improving the site's ability to catch, hold, and absorb water. In addition to those mentioned, other strategies include mulching, contour trenches, terraces, check dams, and sand traps. These strategies can be used alone or in combination to put runoff back in the ground through infiltration or dispersion through natural vegetation. Avoid directing runoff directly to a natural or constructed drainage system and keep your runoff and sediment on site.

- |            |   |                 |
|------------|---|-----------------|
| <b>1-4</b> | Water management system allows groundwater to be recharged. | <b>3 Points</b> |
|------------|---|-----------------|

Preserve and maintain groundwater recharge zones. There are a range of strategies to achieve this, including: Maintaining natural water drainages; managing surface water with infiltration ponds, grassy swales and drywells; and minimizing and disconnecting impervious surfaces. To implement these strategies effectively it is important to understand the hydrology of your site.

- |            |  |                 |
|------------|--|-----------------|
| <b>1-5</b> | Minimum impervious surfaces on the site (no more than 15% of site, excluding house and garage). (See Porous Pavers in Energy Section.) | <b>5 Points</b> |
|------------|--|-----------------|

Keep impervious area of driveways, paths and patios to a minimum. For example, install a “Hollywood” driveway, consisting of two long strips of pavement where the car wheels need support, with the area between vegetated (preferably with a low-grow turf, such as Zoysia, Bermuda, St. Augustine, or Seashore Paspalum) or filled with gravel. Other alternatives include using “no fines” porous concrete, porous pavers and cellular gravel containments (e.g. Gravelpave) to minimize gravel compaction.

15% impervious surface is a moderate improvement over standard practice. See also Action Item 1-6 below

## SECTION 1: SITE

- |     |   |           |
|-----|---|-----------|
| 1-6 | Minimum impervious surfaces on the site (no more than 10% of site excluding house and garage). (See Porous Pavers in Energy Section.) | 10 Points |
|-----|---|-----------|

As with Action Item 1-5 above. 10% impervious surfaces is a significant improvement over standard practice.

## JOB SITE OPERATIONS

- |     |  |   |
|-----|--|---|
| 1-7 | No soil exposed during job (protected with mulch). | ★ |
|-----|--|---|

Protect exposed or stockpiled topsoil from erosion by covering with mulch (preferred) or plastic (less preferred because it can cause rapid runoff and becomes waste after use) until ready for reuse. Surround all stockpiles with a compost berm or silt fence and inspect regularly for proper coverage or signs of erosion, especially after a large storm. Screen soil to remove debris before redistributing for final grading and landscaping.

Absolutely no topsoil should be disposed of in low areas or wetlands. See Action Item 1-8, *No fill in sensitive areas* and 1-9, *Sensitive areas flagged and protected during construction*.

- |     |                             |   |
|-----|-----------------------------|---|
| 1-8 | No fill in sensitive areas. | ★ |
|-----|-----------------------------|---|

Disposing of topsoil in lowlands or wetlands threatens water quality and quantity and endangers wildlife habitat. See Action Item 1-9, *Sensitive areas flagged and protected during construction*.

- |     |  |   |
|-----|--|---|
| 1-9 | Sensitive areas flagged and protected during construction. | ★ |
|-----|--|---|

Sensitive areas include wetlands, riparian zones bordering water bodies, areas of special natural interest and root zones of trees. These areas should be flagged and protected, using silt fences, compost berms and other best management practices to ensure they are not damaged by heavy vehicles, hazardous and other waste materials and sediment in stormwater runoff.

Numerous federal, state and local laws affect the use and protection of wetlands and other critical areas. Because of the considerable variation in local regulations, contact your local planning department.

- |      |                                     |   |
|------|-------------------------------------|---|
| 1-10 | Post cleanup procedures for spills. | ★ |
|------|-------------------------------------|---|

Post procedures prominently in a central location and refer to them regularly during safety meetings. Requirements for cleaning spills or releases vary with the material. As part of your safety program, make sure your field crews and subs are familiar with cleanup procedures for the materials you use regularly.

- |      |  |   |
|------|--|---|
| 1-11 | Hazardous wastes separated and properly disposed of. | ★ |
|------|--|---|

Most builders qualify as a Conditionally Exempt Small Quantity Generator (CESQG) under the State definitions. A small quantity generator produces less than 220 pounds of hazardous waste per month (about half of a 55-gallon drum), or less than 2.2 pounds of extremely hazardous waste, and never accumulates more than 2,200 pounds. CESQGs must send their wastes to a site permitted to manage hazardous wastes. There are fewer regulations and less paperwork required for CESQGs.

## SECTION 1: SITE

If you generate more than 2,200 pounds, you are classified as a Small or Large Quantity Generator (SQG or LQG) and must contract to have your hazardous waste sent to a site permitted to manage hazardous waste. There are more regulations that SQGs and LQGs must follow, including obtaining an EPA ID number and tracking of waste from “cradle to grave.”

### 1-12 Sediment traps installed for construction. ★

Sediment traps help prevent non point source pollution by allowing sediment to settle out of stormwater before the water leaves the site. Such traps usually consist of a small pond with overflow spilling over a washed gravel outlet. Additional measures, such as compost berms, strawbale check dams, or gravel bag barriers can also help trap sediment (although these are typically used in combination with a sediment trap or other sediment filtration measure). Locate traps anywhere stormwater runoff may leave the site. Consult an engineer to calculate pond size if higher level of protection is needed due to sensitive downstream conditions. Provide extra traps as backups.

### 1-13 No adverse impacts on adjoining properties or critical areas during construction. ★

Take steps to ensure activities and materials on your project site do not adversely impact adjoining properties. Control dust and stormwater movement, keep noise to acceptable levels and during normal working hours, do not allow equipment or materials to block access. If some impact is unavoidable (temporary location of a crane, load but temporary noise, etc.), contact the property owner in advance to discuss and get their approval.

### 1-14 Water quality monitored during construction. ★

Establish water quality monitoring stations where natural surface drainage leaves the project site. Establish a monitoring schedule with qualified personnel or subcontractor to ensure that water leaving the site is within acceptable limits for sediment, etc.

### 1-15 Concrete trucks and pumps washed in designated areas (not in planned pervious areas). ★

Wash out concrete trucks and pumps in slab or pavement subbase areas, such as driveways, where slurry can be contained and will be useful. Over the life of a project one to three yards of concrete slurry and lime can be generated from washing out concrete trucks. Cementitious runoff can contaminate the site, harm local waterways and fish, reduce conveyance capacity of surrounding stormwater systems, plug infiltration facilities, and contaminate treatment facilities.

### 1-16 Slopes stabilized with mulch. 1 Point

Soil left exposed on slopes will erode. Use organic mulches (compost is recommended), organic textiles or hydroseeding to protect and stabilize slopes. Research has shown that use of compost as a mulch can often outperform conventional slope stabilization methods. While most of these materials will provide food for termites, it is unlikely that they will lead to an increase in the numbers of termites inhabiting a site. As long as adequate steps to protect structures from termite damage, the use of mulches and compost have a positive impact.

### 1-17 Balance cut and fill. 1 Point

Minimizing or balancing cut and fill avoids expensive exporting or importing of topsoil. If you need to import fill to the site, use only approved materials for filling and grading. Avoid radically altering the basic topography of the site, which will affect existing water functions.



## SECTION 1: SITE

- 1-18 Topsoil stockpiled and protected with mulch during excavation for post-construction use.

1 Point

Stockpile topsoil removed during grading for use during final landscaping. The top layer of soil is the most valuable, and should be separated and used again on site as a top layer in grading planting areas. Protect stockpiled topsoil from erosion by covering with mulch (preferred) or plastic (less preferred because it can cause rapid runoff and becomes waste after use) until ready for reuse. Locate the pile out of the wind if possible and moisten regularly to preserve mulch cover. Surround all stockpiles with a compost berm or silt fence and inspect regularly for proper coverage or sign of erosion, especially after a large storm. Screen soil to remove debris before redistributing for final grading and landscaping.

Absolutely no topsoil should be disposed of in low areas or wetlands. See Action Item 1-8, *No fill in sensitive areas*.

- 1-19 No significant change to topography.

2 Points

To preserve the existing water functions, avoid radically altering the basic topography of the site.

- 1-20 Least-toxic form releases used.

2 Points

Forms are commonly coated with fuel oil to prevent the concrete from sticking to the form. Runoff, incidental drips, and spills contaminate soils and may enter storm drains thereby contaminating surface water. Use less toxic form releasers or strategies, such as vegetable oil spray, or waxing or painting the forms prior to use.

- 1-21 Amend disturbed soil to minimum depth of 4" to restore soil functions.  
(See 1-22 as alternate)

2 Points

Amend with compost to improve soil biology, nutrient availability and water-holding capacity. Use sand or gravel for improved drainage, and lime or other pH modifiers. Preferably, have the soil tested by a reputable soil lab to get data about the soil's chemical and physical condition, as well as its biological health. turf aesthetics

Amending soil to a depth of 4" will give moderate improvement in soil function. For best results, thoroughly mix 4 cubic yards per 1,000 sqft (approx 1 ¼" layer application) of well-degraded compost into the top four inches of topsoil. If topsoil has been removed and stockpiled, scarify sub-soil surface before replacing and amending topsoil. See Soil Amendment sidebar.

- 1-22 Amend disturbed soil to min. depth of 8" to restore soil functions.  
(See 1-21 as alternate)

3 Points

See 1-21 above.

Amending soil to a depth of 8" will give optimum improvement in soil function. For best results, thoroughly mix 8 cubic yards per 1,000 sq.ft. (approx 2 ½" layer application) of well-degraded compost into the top eight inches of topsoil. If topsoil has been removed and stockpiled, scarify sub-soil surface before replacing and amending topsoil. See Soil Amendment sidebar.

## Soil Amendment

Compost as a soil amendment improves aeration of the soil, reduces the need for chemical fertilizers, moderates the temperature of the soil, and can lower the acidity. You should do a thorough soil analysis before adding amendments. A sample of each distinctively different soil type on site should be submitted to a reputable soil laboratory.

Special blends of compost are locally available to amend specific deficiencies of the disturbed soil. Locally-produced materials add microorganisms that are part of the local ecosystem and are beneficial to the native plants. Using locally produced compost also helps divert green waste from local landfills.

Other amendments may include pH modifiers to adjust the acidity (using calcium carbonate, calcium hydroxide, or dolomite) or the alkalinity (using soil sulfur or iron sulfate) of the soil, dune sand, volcanic cinders, silica sand, and blue rock to improve drainage (although dune sand and volcanic cinders will compact and break down over time), and gypsum (see Action Item 4-69).

Chemical fertilizers may also be used to amend soil nutrient deficiencies. This program *does not recommend them* because they are generally made from non-renewable resources, do not deliver as many benefits as organic amendments, and often leach out of the soil, resulting in surface and groundwater pollution.

**Specifications for Organic Soil Conditioning Compost:** Nitrogen (organic or ammoniacal: 0.5%; C:N ratio: 25:1 to 20:1; pH less than 6.8; salinity: 2.5; ash content not to exceed 10%; iron (expressed as metallic): 0.08%; organic matter: 35%; particle size: 95% passes through a screen of 1/2" or smaller.

**Execution of Soil Amendments:** Soil amendments should be applied only in areas that will be planted promptly after preparation.

Grade planting areas specification, then evenly apply soil amendments. Till soil to a homogenous, fine texture free of lumps, clods, and extraneous matter to the specified 4" or 8" depth. Make a minimum of two alternating passes.

Screen stockpiled topsoil to remove stones over 1 1/2 inches, sticks, roots, rubbish, etc. Rip subsoil of planting areas to a minimum 6 inches. Spread topsoil to minimum depth required (taking into consideration compaction from light rolling and settlement), add soil amendments and thoroughly mix them into the top 4 inches of topsoil. OR Spread half of the topsoil and work into the loosened subgrade; then spread the remaining topsoil. Apply the specified soil amendments and mix thoroughly into the top 4 inches of topsoil.

### 1-23 Native vegetation saved and reused or donated.

3 Points

Native vegetation is adapted to the local climate. Retaining native vegetation in a landscape (rather than removing them and then replanting) also provides excellent erosion, sediment, dust, and pollution control. Desirable native plants and trees to be removed due to construction can often be reused on site or elsewhere. Replant as soon as possible and make sure you follow appropriate procedures so plants survive. If you can't replant immediately, protect the root ball while waiting to replant.

## SECTION 1: SITE

### OUTDOOR WATER CONSERVATION

#### 1-24 Mulch used in landscaping to minimize evaporation.

1 Point

Use a two inch layer of mulch wherever the landscape is not densely planted. Mulching provides additional soil nutrients and enhances structure, increasing the capacity of the soil to retain moisture and resist compaction, moderating soil temperature, and limiting soil erosion. It is the next best solution to dense groundcovers to reduce the number of weeds and make weed removal easier, which in turn, helps to minimize herbicide use.

Non-woody mulches, compost, cut grass clippings, or leaves, and woody mulches, wood chips or bark, can be used for different applications. However, limit the use of bark mulch as much as possible, and never use in areas that drain directly into storm sewers or open water. Bark produces a toxic leachate that can end up in water supplies.

Mulch should be placed at least 24 inches from building foundations and at least 6 inches below wood elements of buildings. Generally, mulch does not come with termites nor does it attract termites from other areas than directly adjacent to where it is installed. (See Action Item 4-68, *Compost or mulch used in landscaping*)

#### 1-25 Rainwater recovery from roof for irrigation.

2 Points

Rainwater collected from the roof is a free source of landscape irrigation water. This Action Item covers only systems used for irrigation. A rooftop rainwater collection system consists of a suitable roof and guttering system, a storage tank(s), and a simple filtration system. The irrigation system can be supplied using the tank(s) and a small-scale pressurized pump system. Let the homeowner know that rainwater supply is not intended for drinking.

#### 1-26 Drought-resistant, native plants (site-appropriate) used for 50% of landscaped area.

3 Points

Use drought-resistant, native vegetation over at least 50% of the landscaped area. These species are adapted to the local climate. Although most of the drought-tolerant species of native plants grow naturally in the coastal and lowland areas, they are adaptable to the inland and upland, cooler and wetter areas, where they can reduce water needs.

Do not remove native plants from the wild. There are many local growers that supply native plants. Retaining native vegetation in a landscape (rather than removing them and then replanting) also provides excellent erosion, sediment, dust, and pollution control. Finally, native plants are more resistant to naturally occurring disease, insects, and low levels of nutrients, thus reducing the need for fertilizer or pesticides.

#### 1-27 Irrigation system has water-saving features, such as drip irrigation, electronic timer, valves with manual flow control, and rain shut-off device.

3 Points

Water is a vital and limited resource, particularly in Hawaii. Conventional sprinkler systems often waste large volumes of water through over spraying and evaporation.

Use low-trajectory nozzles on automatic sprinkler heads whenever possible, and use smaller-radius nozzles in windier areas, or install drip irrigation systems. Group plants with similar watering needs in each irrigation zone to reduce the demand on water. Use timers and soil moisture detectors or rain shut-off devices that ensure irrigation only when it is needed, at optimal times of day to minimize evaporation and in the ideal quantities for deep hydration of the soil profile.

## Drought-Resistant Native Hawaiian Species for the Landscape

### BOTANICAL NAME

### HAWAIIAN NAME

#### Ground Covers

<i>Dianella sandwicensis</i>	‘Uki’uki (Lily Family)
<i>Heliotropium anomalum</i> var. <i>argenteum</i>	Hinahina (Borage Family)
<i>Jaquemontia ovalifolium</i> subsp. <i>sandwicensis</i>	Pa’uohi’iaka (Morning Glory Family)
<i>Lipochaeta integrifolia</i>	Nehe (Sunflower Family)
<i>Plumbago zeylanica</i>	Ilie’e (Plumbago Family)
<i>Sida fallax</i> (creeping form)	‘Ilima papa (Hibiscus Family)
<i>Vitex rotundifolia</i>	Pohinahina (Verbena Family)

#### Small Shrubs

<i>Achyranthes splendens</i>	‘Ewa Hinahina (Amaranth Family)
<i>Artemisia mauiensis</i>	‘Ahinahina (Sunflower Family)
<i>Wikstroemia uva-ursa</i>	‘Akia (‘Akia Family)

#### Medium Shrubs

<i>Abutilon menziesii</i>	Ko’olua ‘ula (Hibiscus Family)
<i>Capparis sandwichiana</i>	Maiapilo, Pilo (Caper Family)
<i>Gossypium tomentosum</i>	Ma’o (Hibiscus Family)
<i>Hibiscus brackenridgei</i> (state flower of Hawai’i)	Ma’o hau hele (Hibiscus Family)
<i>Nototrichium sandwicense</i>	Kului (Amaranth Family)
<i>Osteomeles anthyllidifolia</i>	‘Ulei (Rose Family)
<i>Scaevola taccada</i>	Naupaka kahakai (Naupaka Family)
<i>Sida fallax</i>	‘Ilima (Hibiscus Family)

#### Large Shrubs/Small Trees

<i>Chenopodium oahuensis</i>	‘Aheahea, ‘Ahea (Goosefoot Fam.)
<i>Dodonaea viscosa</i>	‘A’alii (Soapberry Family)
<i>Gardenia brighamii</i>	Nanu, Na’u (Coffee Family)
<i>Hibiscus waimaea</i>	Koki’o ke’oke’o (Hibiscus Family)
<i>Myoporum sandwicensis</i>	Naio, Bastard Sandalwood (Naio Family)
<i>Psychotria odorata</i>	Alahe’e (Coffee Family)

#### Medium Trees

<i>Erythrina sandwicensis</i>	Wiliwili (Bean Family)
<i>Reynoldsia sandwicensis</i>	‘Ohe (Ginseng Family)
<i>Sapindus saponaria</i>	Manele, A’e (Soapberry Family)

#### Vines

<i>Canavalia galeata</i>	‘Awikiwiki, Puakauhi (Pea Family)
--------------------------	-----------------------------------

Sources: Fred D. Rauch and Paul R. Weissich, Plants for Tropical Landscapes: A Gardener’s Guide (Honolulu, HI: University of Hawai’i Press, 2000); City and County of Honolulu, Board of Water Supply, “List of Plants at Halawa Xeriscape Garden” ([www.hbws.org](http://www.hbws.org)).

## SECTION 1: SITE

### Bonus Points for Custom Homes

1-28	Set aside 20% of site to be left undisturbed.	5 Points
------	---	----------

Set aside undisturbed areas to preserve soil, water, and vegetation. Coordinate with the grading designer and equipment operators to let them know about this goal and to help you come up with creative solutions. Review the set aside plans with subs, especially grading and excavation crews.

Undisturbed areas stabilize soils and filter sediments from stormwater runoff before they enter waterways. They also allow rainwater to stay on site and soak into the ground, recharging groundwater, instead of running off site.

1-29	Limit grading to 20 ft. outside building footprint.	5 Points
------	---	----------

Soil that is compacted or contaminated by construction activity may become lifeless. Design for minimal grading to help retain healthy soil and natural water infiltration. Where grading is unavoidable, carefully remove and stockpile existing topsoil, replacing it after rough grading.

## Section 2:

## Energy Performance and Comfort

**Top Picks**

Strategy	Benefits to Sell	Action Item
Minimize energy required for water heating	Energy and water savings; community stewardship	2-56 to 2-65
Minimize A/C where possible	Energy savings; healthier indoor environment; community stewardship	2-46 to 2-55; 5-1
Control heat gain with: building orientation insulation/radiant barrier high performance windows light-colored roofing shading devices	Energy savings; greater thermal comfort; healthier indoor environment; community stewardship	2-3; 2-6 2-15; 2-16 2-21 2-9 2-4; 2-14; 2-31; 2-32
Naturally ventilate with ample fresh air	Energy savings; connection to outdoors; greater range of comfort; healthier indoor environment	2-1; 2-17 to 2-25; 2-35/2-36; 2-41; 2-44
Use energy efficient appliances	Energy and water savings; community stewardship	2-78 to 2-83; 5-3
Minimize electrical lighting energy	Energy savings; a cooler, more comfortable house; better indoor visual quality; community stewardship	2-71 to 2-77; 5-7



## DESIGN CHOICES

## Site

- 2-1 Space and arrange (stagger) buildings so all structures have good air flow. 1 Point

Energy-conscious layout of a development can reduce energy costs for the homeowner, and offer enhanced comfort and aesthetics.

Stagger and space buildings so that they all present windowed, exterior walls to prevailing air flow.

- 2-2 Porous paving materials installed to reduce thermal mass, heat gain, and glare. 1 Point

Solid paved areas (poured concrete, stone or concrete pavers, etc.) can reflect solar radiation (glare) towards the house and absorb and hold thermal energy. This energy is released at night, reducing the potential for night-time cooling of the structure and the air surrounding it.

Use porous/no fines concrete – poured in place or pre-poured pavers for exterior paving areas. Paving that can handle foot and auto traffic while allowing grass to grow through it (such as GrassPave) is a better alternative.

- 2-3 Longer sides of home oriented to face north and south to reduce heat build-up. 2 Points

The long walls of a home absorb the most heat from solar radiation. Orient buildings so that longer walls face north and south, so that they can be protected from the high angle sun using roof overhangs. The east and west walls are exposed to lower angle sun, which can be blocked with vertical shading, fences and plantings.

- 2-4 Existing or new landscape elements (trees) shade buildings and paved areas. 2 Points

Preserve existing trees and/or add new plantings that will effectively shade east and west sides of buildings and paved areas to reduce solar heating. They block the heat before it gets to the window or pavements.

- 2-5 Built elements (e.g., trellises, carports) shade paved areas. 2 Points

Shade paved areas from direct sunlight using built elements such as trellises and carports. Solid paved areas (poured concrete, stone or concrete pavers, etc.) can reflect solar radiation (glare) towards the house and absorb and hold solar energy. This energy is released at night, reducing the potential for night-time cooling of the structure and the surrounding air.

- 2-6 Buildings oriented to maximize cooling potential of prevailing winds. 2 Points

Orient buildings at about 45° to the prevailing wind and stagger them so that buildings all present windowed, exterior walls to prevailing air flow.

- 2-7 Landscaping elements used to improve air flow around structure. 2 Points

Use appropriate plantings to channel breezes towards homes for cooling effect. For example, if a home is sheltered from the prevailing wind by another structure, a “hedge” line of dense trees or



## SECTION 2: ENERGY

shrubs, extended out beyond the shelter can be used to redirect airflow towards windows or doors in the home.

- |     |   |          |
|-----|---|----------|
| 2-8 | Generous areas of planting and ground cover (less hardscape) included to reduce site temperature. | 3 Points |
|-----|---|----------|

Minimize hardscape around the home by using plantings and groundcovers rather than large paved areas. Unfinished or gravel pathways are preferable to concrete. Vegetated areas reflect less solar radiation than hardscape surfaces, and have little thermal mass for storage and subsequent release of heat. In addition, natural living processes actively cool the air around plants.

### Shell

- |     |                                  |         |
|-----|----------------------------------|---------|
| 2-9 | Light colored roofing installed. | 1 Point |
|-----|----------------------------------|---------|

Light colored roofing materials absorb less solar radiation than dark colors, keeping the roof space cooler and reducing radiant heating of the surroundings.

- |      |  |          |
|------|--|----------|
| 2-10 | Light colored exterior wall surfaces included. | 2 Points |
|------|--|----------|

Light colored exterior wall surfaces absorb less solar radiation than dark colors. Not only will this keep the house cooler, it will also result in less heat radiating from your walls, which would otherwise heat the surroundings.

- |      |   |          |
|------|---|----------|
| 2-11 | Attic or roof cavity vented with continuous ridge and eave vents. | 2 Points |
|------|---|----------|

Install baffled continuous ridge vents to exhaust hot air from the roof, and eave or soffit vents to allow cooler outside air to be drawn in to replace the hot air.

Keeping the attic or roof cavity well ventilated will make it easier to maintain comfortable temperatures in the living space, while also increasing the lifespan of roofing materials.

- |      |   |          |
|------|---|----------|
| 2-12 | Attic or roof cavity vented with gable end vents. | 2 Points |
|------|---|----------|

Gable end vents can be effective if located on both windward and leeward sides of the house. Total vent area should be at least 1 square inch per 1 square foot of attic space.

- |      |  |          |
|------|--|----------|
| 2-13 | Sill vents, floor vents, and venting skylights used to allow hot air to escape the building by thermal convection. | 2 Points |
|------|--|----------|

Install floor vents and trickle vents at ground floor window sill level, and venting skylights high up in the open core of the house. This setup employs thermal convection or stack effect to draw cool air into the lower levels of the house while exhausting warm air at roof level, even when windows are closed.

- |      |   |          |
|------|---|----------|
| 2-14 | Shading on at least 50% of east and west wall surfaces. | 5 Points |
|------|---|----------|

Use trees and other natural landscaping to effectively shade at least 50% of east and west sides of buildings from low elevation solar radiation in the mornings and afternoons. This will make it significantly easier to maintain a comfortable temperature inside the home.

- |             |   |                 |
|-------------|---|-----------------|
| <b>2-15</b> | Radiant barriers and/or insulation installed in walls exposed to the sun, beyond any applicable local codes and ordinances. | <b>5 Points</b> |
|-------------|---|-----------------|

Where exterior walls cannot be shaded from direct solar radiation, install radiant barriers and/or extra insulation to reduce the rate of heat transfer from the exterior of the envelope to the interior of the home. Radiant barriers should be attached to the exterior face of framing if possible, although the interior face is also acceptable. The shiny face should face the air gap in either case, i.e., shiny face to the studs.

If local jurisdiction requires insulation and/or radiant barriers (example: City & County of Honolulu's R-19 roof insulation or equivalent ordinance), points are awarded **ONLY IF** the installation **EXCEEDS** the local requirement.

- |             |  |                 |
|-------------|--|-----------------|
| <b>2-16</b> | Radiant barriers and/or insulation installed in ceilings and attic spaces, beyond any applicable local codes and ordinances. | <b>5 Points</b> |
|-------------|--|-----------------|

Even well ventilated attic spaces will gain some heat from direct solar radiation. Install radiant barriers and extra insulation in ceilings and attic spaces to reduce the rate of heat transfer from these spaces to the interior of the home. Radiant barrier should be attached to the exterior face of framing if possible, although the interior face is also acceptable. The shiny face should face the studs and a  $\frac{3}{4}$ " gap should be maintained between the radiant barrier and other insulating materials if possible.

If local jurisdiction requires insulation and/or radiant barriers (example: City & County of Honolulu's R-19 roof insulation or equivalent ordinance), points are awarded **ONLY IF** the installation **EXCEEDS** the local requirement.

## Openings

- |             |  |                |
|-------------|--|----------------|
| <b>2-17</b> | Orient to minimize heat build-up through openings. | <b>1 Point</b> |
|-------------|--|----------------|

Locate largest windows on north and south walls so they can be more easily shaded from direct sun penetration using overhangs.

- |             |  |                 |
|-------------|--|-----------------|
| <b>2-18</b> | Inlet openings (air comes in) slightly larger than outlet openings (air goes out) to enhance air flow. | <b>2 Points</b> |
|-------------|--|-----------------|

Ensure that the operable area of windows on the sides of the house that face the prevailing wind direction is slightly larger than on the leeward side. Effective operable area depends on window type: Casement – 90% of operable area, Awning & Jalousie – 75%, Sliding – 45% to 50%, Single hung & Hopper – 45%

- |             |                                |                 |
|-------------|--------------------------------|-----------------|
| <b>2-19</b> | Windows located at body level. | <b>2 Points</b> |
|-------------|--------------------------------|-----------------|

Natural ventilation provides the greatest cooling effect when occupants feel direct air movement. Place windows at body height for maximum effectiveness.

- |             |   |                 |
|-------------|---|-----------------|
| <b>2-20</b> | Generous screened openings protected from rain. | <b>2 Points</b> |
|-------------|---|-----------------|

Living areas contained by screened openings (screened porches, sleeping porches and lanais) provide comfortable living space with good ventilation and no insect problems. Screened areas

## SECTION 2: ENERGY

should be protected from rain penetration by adequate roof overhangs, guttering, etc., particularly on the windward side of the house.

- |      |  |          |
|------|--|----------|
| 2-21 | High performance glazing used on windows exposed to the sun (SHGC = .65 or less; U-value - .45 or less; VLTC of .7 or more; designed to keep heat out but let light in). | 2 Points |
|------|--|----------|

Where window openings cannot be shaded from direct sunlight, install windows that minimize both solar heat gain (SGHC) and heat transmittance (U-value). The higher visible light transfer (VLTC) ensures sufficient light passes through the window to provide natural light, rather than making supplemental electric light necessary.

- |      |  |          |
|------|--|----------|
| 2-22 | For spaces with openings on adjacent walls, windows located far apart and at diagonal. | 2 Points |
|------|--|----------|

Orient openings to ensure airflow across the greatest part of the space. Windows placed close together will tend to “short-circuit,” leaving most of the room without effective air movement.

- |      |  |          |
|------|--|----------|
| 2-23 | For spaces with openings on same wall, appropriately spaced casement windows or wing walls used. | 2 Points |
|------|--|----------|

Casement windows can be used to effectively catch airflow. For windows on same wall, select opening direction so that upwind windows open to scoop air in, and downwind windows open so that they shelter the opening from wind, creating low pressure that will help draw air out of the window. This generally means placing hinged edges towards each other rather than away from each other.

Wing walls are vertical exterior wall partitions placed perpendicular to adjoining windows to enhance ventilation through non-casement windows. Located to leeward of upwind windows and to windward of downwind windows, they will promote air flow into and out of those windows.

- |      |  |          |
|------|--|----------|
| 2-24 | Operable openings equal to at least 12% of floor area. | 2 Points |
|------|--|----------|

Calculate using effective area of openings, not total window area. (See Action Item 2-18 for Effective Openings)

- |      |  |          |
|------|--|----------|
| 2-25 | At least two operable windows to the outside included in each space. | 2 Points |
|------|--|----------|

Enhance natural ventilation by locating separate inlet and exhaust openings in each space. There is relatively little movement of air in and out of a single opening in a space.

- |      |  |          |
|------|--|----------|
| 2-26 | Diffuse glare from skylights through baffles, splaying, or use of translucent glazing. | 2 Points |
|------|--|----------|

Avoid direct sunlight through skylights, which can result in increased inside temperatures. Glare creates light “hotspots” which can make nearby areas of a house seem dark and gloomy.

- |      |  |          |
|------|--|----------|
| 2-27 | All skylights used have SHGC of 0.5 or less. | 3 Points |
|------|--|----------|

Skylights with low SHGC ratings will help prevent solar gain inside the house.

## SECTION 2: ENERGY

- 2-28 Operable skylights or skylights with built-in vents (on leeward side of skylight) installed. 3 Points**

Install operable or vented skylights to vent warm air from living spaces. Vented skylights allow venting even during rainfall, when an operable skylight might have to be closed.

- 2-29 Casement or jalousie windows used for best air flow. 3 Points**

Use windows that offer the greatest opening area as a percentage of total window area - casement (90%) and jalousie (75%). They offer the best trade off of ventilation versus solar heat gain. By comparison, sliding and single-hung windows offer only about 50% operable area.

Jalousie windows are best on walls that are near perpendicular to the prevailing wind direction. Casement windows are preferred on walls that are angled or near parallel to the prevailing wind direction.

- 2-30 No more than 25% of total glass area is located on east and west walls combined. 3 Points**

Minimize windows on the east and west walls. They are the hardest to protect from the lower elevations of direct sunlight during the mornings and afternoons.

- 2-31 Exterior horizontal shading installed for north and south windows (sufficient to protect completely from direct sun). 3 Points**

Use a 45° angle for overhangs on south side, 70° angle for overhangs on north side. Angle is measured between horizontal, and a line connecting bottom of window and outer edge of overhang.

- 2-32 Exterior vertical shading installed for east and west windows (sufficient to protect completely from direct sun). 3 Points**

Exterior shades can be permanent (landscape features, fences, screens, etc.) or retractable blinds or shutters. Exterior shading on east and west walls intercepts sunlight before it enters the envelope, and is therefore more effective at reducing heat gain than interior blinds or curtains.

- 2-33 Light shelves used for sidelighting. 3 Points**

A light shelf is a horizontal surface installed on the outside of a window. It is used to bounce daylight deeper into an interior space for lighting purposes. The shelf is installed about 20% down from the top of the glass. The shelf blocks sunlight from the lower area of glass, but bounces light into the room through the upper area. Direct sunlight is blocked from the upper area of glass by an overhang.

- 2-34 For toplighting, roof monitors or clerestories used. (No skylights.) 3 Points**

Install clerestories and roof monitors to bring daylight deeper into the home. Clerestories are vertical openings located high in the wall. Roof monitors are vertical glazed openings located in the roof or in the roof plane. Because they are vertical, they are much easier to shade and much less likely than skylights to produce excessive heat gain.

## SECTION 2: ENERGY

### Interior Layout and Finishes

- 2-35 For spaces with openings on opposite walls, orient rooms at approximately 45 degrees from wind direction. 1 Point

Locate window openings to avoid a direct cross-ventilation path from one opening of the space to the other (wind flow perpendicular to the openings and parallel to the path between them. This Action Item will provide 20% better internal airflow than if the window walls are perpendicular to the wind.

- 2-36 Design floor plans to provide effective cross ventilation and air flow at body level. 2 Points

Create spaces that have body-level windows on opposite or adjacent walls, oriented 45° to the prevailing wind. Use partial height partition walls in the interior to facilitate air flow.

- 2-37 Layout designed so activities with highest illumination needs are daylighted. 2 Points

Provide adequate windows and skylights for kitchen, home office and other rooms requiring good lighting. Consider light shelves, clerestories or light tubes to bring daylight deeper into these spaces.

- 2-38 Floor plan allows deep daylight penetration. 2 Points

Narrow floor plans with high ceilings and few internal walls on the long axis of the building allow deeper penetration of daylight. Rooms should be no more than 2.5 times deeper than the height of the window wall. Also consider clerestories, light shelves and roof monitors to bring daylight further into core of building.

- 2-39 Use light colored interior finishes to enhance daylight (but avoid glare). 3 Points

Light colored walls optimize daylight in an interior. Pastel colors and satin or flat finishes produce less glare than bright whites and gloss finishes.

### Mechanical Venting and Cooling

- 2-40 Timers installed on bathroom fans. 1 Point

Install crank or electronic timers to ensure effective use of bathroom fans without wasting energy. Alternately, wire a humidistat into the fan circuit. The fan will automatically shut off when the desired humidity is reached.

- 2-41 All bedrooms and family room wired for ceiling fans. 2 Points

Provide wiring and switching needed for a ceiling fan in the original electrical plan. A ceiling fan can be used as a low-energy option to provide cooling on hot summer days.

**2-42 Solar powered attic vent installed.**
**2 Points**

Install a solar powered attic vent that uses a small photovoltaic array to power the fan motor. The fan will operate whenever there is adequate sunlight ensuring good attic ventilation whenever there is a significant heating load, without using grid electricity.

**2-43 Whole house fan installed.**
**3 Points**

Install a whole house fan system that exhausts interior air from the house, drawing fresh air in from the outside. Such a system should have a control with the capability of continuous, manual or automatic, timed operation. For best results, the fan should be run for at least 8 hours per day, preferably on a 10 minutes on, 20 minutes off cycle.

**2-44 Ceiling fans installed in all bedrooms and family room.**
**3 Points**

Install ceiling fans in rooms that have the most frequent occupancy. They should be installed and wired so that they can be switched off when a room is unoccupied. Fans must be sized correctly for the room size and installed with adequate clearance from the walls, roof and floor to ensure effective operation.

Ceiling fans create gentle breezes that can greatly enhance comfort in a naturally ventilated house on still days. They may also be a preferable source of air movement where external conditions (noise, dust, etc.) make keeping windows open impractical.

**2-45 No air conditioning.**
**10 Points**

By employing a combination of strategies to reduce heat transmission through the roof, walls and windows, to maximize natural ventilation, and to reduce ambient and radiant heat on the exterior of the house, it is quite possible to keep a home comfortable without air conditioning.

This can free up to \$18,000 in construction costs to be applied to other detail features of the home, while reducing the operating costs of the home by up to \$400 per year.

## AIR CONDITIONING (A/C) HOMES ONLY

**2-46 House meets Hawaii Model Energy Code standards for A/C buildings. (See Quick References for further details.)**


The requirements include:

- SEER must be greater than 10 for split systems and 9.7 for packaged systems;
- Ducts in unconditioned space must be insulated;
- Windows must be shaded or tinted;
- Doors and windows must be tight fitting;
- Walls must be insulated or shaded;
- Skylight size limited

For more information, see the Quick References.

## SECTION 2: ENERGY

### 2-47 A/C system sized for efficient operation (not oversized). ★

Perform detailed load calculations to ensure that the installed system is appropriately sized for the home. Oversized systems are more expensive to install and are less energy efficient in operation, since they tend to cycle on and off more frequently than a correctly sized system. Short run cycles prevent the system from effectively removing humidity from the air, leaving the air feeling damp and possibly leading to mold and mildew problems.

### 2-48 Programmable thermostats provided. ★

Install programmable thermostats to control the air conditioning system. These allow the homeowner to establish different set-points for different times of the day, depending on occupancy and activity (e.g., less conditioning at night and during day if the house is unoccupied).

### 2-49 Provide alternate means to balance air flow (e.g., undercut doors, return air ducts). 2 Points

Forced air systems require free flow of air from outlet ducts to returns to ensure optimum operating efficiency. Rooms should either have both outlet and return ducts, suitably positioned for maximum flow across the room, or else ample provision should be made to ensure free airflow to central returns, even when the room is closed. This is typically done by undercutting doors or installing passive registers in partition walls.

### 2-50 Duct unions and joints sealed with low-toxic mastic and fibrous tape. 2 Points

Efficiency of the cooling distribution system can be improved by 15% if the ducts located in the crawlspace or attic are sealed better than standard practice. Use mastic and fibrous tape to seal commonly-used fittings or use improved duct fittings with gaskets.

### 2-51 Ducts in conditioned space OR insulated to R-11. 3 Points

Locate the air conditioning system and ducts within the conditioned space to significantly increase the system's energy efficiency. Ducts that must be located outside the conditioned space should be insulated to R-11. In many cases this will be a no-cost measure. For forced air systems, moving the ducts inside usually increases the cost of framing and drywall. But the HVAC bid will be lower, offsetting these costs. Even if the total cost increases some, the energy savings will more than pay for the change in construction details.

### 2-52 Insure easy access to A/C system for maintenance and repair. 3 Points

Ensure easy and convenient access to major components of the A/C system for maintenance and repair. From regular replacement or cleaning of filters to proper maintenance and repair, an easily accessible system is much more likely to continue to operate at its design efficiency than a system that is difficult and inconvenient to get to and work on.

### 2-53 Minimum SEER 12 A/C system. 3 Points

Specify an A/C system with a seasonal energy efficiency rating (SEER) that goes beyond code. This will reduce the overall energy consumption of the home. A SEER of 12 is a moderate improvement (Code is currently 10 for split systems, 9.7 for packaged units). Units with a SEER of 14, 16 or more are available.

**2-54 Duct Blaster Test conducted.****5 Points**

Duct performance tests prove the airtight integrity of the ducting and provide third-party certification that you can show your customers. Performance tests for ducting can be accomplished by the same contractor who performs blower door tests. Contact your local energy utility for further information.

**2-55 House is Energy Star® compliant (Hawaii MEC for A/C, PLUS options defined by EPA; see Quick References for further details).****5 Points**

In addition to the requirements of the Hawaii MEC, Energy Star® compliance for Hawaii requires specific performance levels, depending on window configuration and duct placement:

Homes with:	1) Std Windows, ducts in unconditioned space	2) Std Windows, ducts in conditioned space	3) High Performance windows, ducts in unconditioned space
Window Spec (SHGC)	0.55	0.55	0.40
Window Area (% of floor area)	18%	22%	25%
Window Location (Max % on south & west walls)	62.5%	62.5%	62.5%
Programmable Thermostat	Yes	Yes	Yes
A/C SEER $\geq$ 12	Yes	Yes	Yes
Ducts and Unions sealed with mastic or fibrous tape and visually verified	Yes	No	Yes

For further information, see Quick References: DBEDT Field Guide for Energy Performance, Comfort, and Value in Hawaii Homes, Appendix F: Equivalencies for Energy Star® Homes in Hawaii

## WATER HEATING

### Distribution

**2-56 Electric water heater upgrade w/min .93 EF (energy factor).****1 Point**

Current code requires domestic hot water systems meet the requirements of the 1987 National Appliance Energy Conservation Act (NAECA). Upgrading electric water heater efficiency from an Energy Factor (EF) of .88 to .93 will save 225 kWh per year. Household operational savings will support an additional cost of about \$50. Be careful to avoid heat loss (through heat traps) when you have a hot water tank on lower floors feeding upper stories.

**2-57 Water heater timer installed.****1 Point**

Install a timer that can be set to heat the tank only during times of high demand, usually in the early morning and evening, perhaps longer during the weekend. Without a timer, a conventional tank water heater operates to maintain the set-point temperature in the water tank at all times, whether the water is being used or not. This can result in wasted energy even in a well insulated tank.



## SECTION 2: ENERGY

### 2-58 Gas water heater upgrade w/min .60 EF.

1 Point

Current code requires domestic hot water systems meet the requirements of the 1987 National Appliance Energy Conservation Act (NAECA). Upgrading a propane water heater from an EF of .55 to .60 will save 16 gallons of propane per year. Be careful to avoid heat loss (through heat traps) when you have a hot water tank on lower floors feeding upper stories. EF is a combined measure of thermal efficiency and standby loss.

### 2-59 Heat trap installed or 1-inch pipe insulation on at least first 8' of outlet pipe from water heater (Required (★) for A/C homes as part of meeting MEC).

1 Point

This measure reduces standby heat loss from the water tank. The piping and the water in it are continuously heated by the tank even when no water is being used. It acts as a "cooling rod." Insulating it reduces the rate of heat loss.

### 2-60 Solar water heater or heat pump for swimming pool heaters. (Required (★) for A/C homes as part of meeting MEC)

1 Point

Water heating for a swimming pool requires a significant amount of energy. In Hawaii, because of the large thermal mass of the pool and the reliable frequency of direct sunlight available, a relatively small, solar heater installation is adequate to maintain suitable pool temperatures year round. Flat, poolside matt-type or roof mounted models are available.

### 2-61 Water heater located within 20' pipe length of bathroom fixtures.

1 Point

Locating the hot water heater near the point of highest use minimizes pipeline energy loss. Typically, the point of highest demand is the shower.

### 2-62 Heat pump water heater w/min. 1.9 EF.

2 Points

An exhaust air heat pump is a good option for large families requiring lots of hot water. A unit with an EF of 1.9 will yield 50% savings in energy use compared to a conventional system.

### 2-63 Hot water lines insulated to min. R-3 throughout house.

2 Points

A significant amount of heat is lost from hot water standing in uninsulated pipes, particularly on long runs. Once that water has cooled somewhat, it tends to be run out down the drain, waiting for hotter water. The result of this is wasted energy and wasted water. R-3 insulation will maintain temperature of water standing in the lines for significant time

### 2-64 South-facing roof area designed for future solar collector (min. 80 sq. ft within 30° of south) and plumbing necessary for solar water heating system roughed in. 5 Points

Solar energy can meet part or all of a home's domestic hot water needs in Hawaii. Geographic location, system design, collector orientation, size and storage capacity will determine how much energy can be provided for domestic water heating.

Include an appropriate location (within 30° of true – not magnetic – south) for solar water panels, rough in the plumbing, and perform other services required for installation. By doing this during construction, you greatly reduce the cost of post-completion installation of a system when market conditions or owner finances facilitate it. (See also Action Item 2-65, *Solar water heater installed*)

## 2-65 Solar water heater installed.

10 Points

Solar energy can meet part or all of a home's domestic hot water needs in Hawaii. Geographic location, system design, collector orientation, and collector size will determine how much energy can be provided for domestic water heating. A solar water heating system may result in immediate positive cash flow if the monthly cost of financing the system is less than the net savings. The State of Hawaii and local electrical utilities offer financial incentives.

Check local building codes to determine requirements for the installation of solar water heaters. The Solar Ratings and Certification Corporation certifies solar water heating systems. Hawaiian Electric Company (HECO) has a list of approved solar water heating contractors available on their website, [www.heco.com](http://www.heco.com), in the Residential Services menu under Energy Solutions. Neighbor Island resources are also listed.

## INDOOR WATER CONSERVATION

## 2-66 Low flow shower heads &amp; sink faucets used (2.5 gpm).



Federal law requires that faucets and shower heads have flow rates no greater than 2.5 gpm. Faucets typically use 11.4 gallons per person per day.

## 2-67 Low flow bath faucets used (2.0 gpm).



Selecting low flow faucets (less than 2.5 gpm) can help reduce overall water usage. Faucets with flow rates of 2.0 or 1.5 gpm are available. Faucets with flow rates less than 2.5 gpm that have the "feel" of higher flow and that are guaranteed against clogging are now available. Ask your supplier.

## 2-68 Front-loading, horizontal axis, or equal clothes washer provided.

2 Points

Horizontal-axis (H-axis) clothes washers offer significant water and energy efficiencies (up to 30% less) compared to vertical-axis machines. Additionally, clothes coming out of the H-axis washer at the end of the wash cycle contain less water compared to conventional washers. This reduces *dryer* energy use as well. Finally, H-axis washers are gentler on clothes so they last longer. All these benefits are features you can "sell" to your clients.

## 2-69 Rainwater collection for potable use (with filtration as required).

\*Double points in locations that have municipal supply.

5 Points

Install a rainwater collection system, taking steps to ensure water quality that is adequate for potable use. This includes careful selection of inert materials for collector system, screens to keep guttering clear, first flush diverters to exclude initial, pollutant-loaded catchment runoff from collection, and effective filtration systems.

Information about the operations and maintenance of a rainwater catchment system, whether for potable or irrigation use, should be included in the Homeowners kit at move in.

Refer to the University of Hawaii, College of Tropical Agriculture's "Guidelines on Rainwater Catchment Systems for Hawaii," by Patricia Macomber of the Department of Natural Resources and Environmental Management.

<http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs/FreePubs09.asp#Water>

## SECTION 2: ENERGY

### ELECTRIC LIGHTING

- 2-70** Reflectors in can fixtures to maximize available light. **1 Point**

Install parabolic reflectors in recessed can fixtures, behind the bulb, to significantly increase the available light from a fixture. This can result in installing fewer fixtures and/or using lower energy consumption bulbs.

- 2-71** Dimmers for spaces where low-level lighting is appropriate. **1 Point**

Where incandescent lamps are used, dimmers can reduce energy consumption by tailoring the amount of light used to the task at hand. Dimmable compact fluorescent bulbs are also available.

- 2-72** Light tubes installed to reduce need for electric lighting. **2 Points**

Install light tubes as an alternative to skylights for delivering daylight to spaces that do not get adequate light from windows. These devices are tested to be effective at transmitting light, generally do not suffer condensation problems, and when compared to conventional skylights, allow less heat loss during winter and less solar heat gain in summer. They also provide significant location flexibility and are fairly easy to install. Basic components include a clear plastic dome on the roof that admits sunlight; a reflective tube that carries light down into the home; and a ceiling-mounted light diffuser that distributes light into the target room. Also available are light tube options with a vent (for bath) or recessed can (for supplemental illumination at night).

- 2-73** Compact fluorescent lamps (CFLs) used in three high-use locations (including kitchen and entry light). **3 Points**

Install CFLs in the kitchen, porch and living room. Fluorescent lighting uses about 75% less electrical energy, produces less heat than incandescent lighting, and bulbs can last up to ten times longer. Because they are more expensive, fluorescent fixtures should be installed in the locations that get the greatest use to be cost-effective.

Dedicated CFL fixtures with built-in ballasts are more cost effective in the long-term than using screw-in CFLs in conventional fixtures, where you replace the ballast with every new bulb.

- 2-74** Fluorescent lamps (T-8 or T-5) used in service areas of the home. (Bulbs with CRI > than 80 and CCT of 3000K) **3 Points**

T-8 and T-5 fluorescent tubes (smaller diameter than old T-12 standard tubes) optimize the performance of light fixtures and give better quality light with sharper focus and less flicker. T-8 tubes are a direct retrofit into T-12 fixtures, offer better color quality and are about 30% more energy efficient. T-5 tubes usually require dedicated fixtures, which are smaller, and are significantly more energy efficient. The quoted Color Rendering Index (CRI) and Color Temperature (CCT) suggested for this Action Item offer light and color quality similar to incandescent.

- 2-75** Electronic ballasts for all fluorescents installed. **3 Points**

Specify electronic ballasts when selecting fluorescent lighting fixtures. Electronic ballasts eliminate the hum, flicker, heat and delayed illumination time often associated with older models, while offering better energy efficiency than magnetic ballasts.

**2-76 CFLs substituted for incandescent down lights.****3 Points**

Install CFL bulbs in incandescent downlights or select dedicated CFL fixtures. New styles of compact fluorescent are specifically designed for use in down light fixtures originally designed for incandescents. CFLs use about 75% less energy than incandescent for similar light output, producing much less heat in the process. In addition to the energy saving from the light fixture, the reduced heat output can have a significant impact on comfort in a naturally ventilated home.

**APPLIANCES****2-77 Provide a microwave oven to reduce reliance on range.****2 Points**

Microwave cooking consumes a fraction of the amount of energy used by a conventional range/oven using radiant elements or gas combustion. In addition to the direct energy savings, the reduced heat output can have a significant impact on comfort in a naturally ventilated home.

**2-78 Energy efficient range provided.****2 Points**

Install an energy efficient range. Although Energy Star® does not currently certify ovens and ranges, there are plenty of choices in the marketplace. The U.S. Department of Energy offers guidance on purchasing energy efficient ovens and ranges at [http://www.eere.energy.gov/buildings/consumer\\_information/ovens/](http://www.eere.energy.gov/buildings/consumer_information/ovens/).

**2-79 Energy Star® clothes dryer provided.****2 Points**

Install an Energy Star® clothes dryer. The EPA lists online products that currently qualify for the ENERGY STAR® label and a store locator, see Quick References. The ENERGY STAR® database provides a calculation of the annual energy use based on the number of loads dried per week. Savings to the homeowner depend on the cost of energy and the number of loads dried per week. (See Action Item 5-4 *Provide a laundry line*).

**2-80 Energy Star® clothes washer provided.****3 Points**

Install an ENERGY STAR® clothes washer. The EPA lists online products that currently qualify for the ENERGY STAR® label and a store locator, see Quick References. The ENERGY STAR® database provides a calculation of the annual energy use based on the number of loads washed per week. Savings to the homeowner depend on the cost of heating hot water and the number of loads washed per week.

**2-81 Energy Star® dishwasher provided.****3 Points**

Install an ENERGY STAR® dishwasher. Dishwashers with increased efficiency are most easily identified by the ENERGY STAR® label. The EPA lists online products that currently qualify for the ENERGY STAR® label and a store locator, see Quick References.

**2-82 Energy Star® refrigerator provided.****5 Points**

Install an ENERGY STAR® refrigerator. The EPA lists online products that currently qualify for the ENERGY STAR® label and a store locator; see Quick References. The refrigerator is typically the second biggest energy user in Hawaii homes.

## SECTION 2: ENERGY

### Bonus Points for Custom Homes

2-83 Photovoltaic or other renewable source for electricity (>10% of electric load) installed.

10 Points

Photovoltaic (PV) modules convert sunlight directly into electricity. Newer PV modules can be integrated into roofing materials such as shingles. These installations replace conventional roofing, enhancing visual appearance and reducing overall installation cost.

Once installed, PV roofing produces free electricity from sunlight that can power certain home functions or supply the entire electrical needs of a home, reducing dependence on, or completely eliminating the need to connect to the utility grid.

Net Metering, available through the electric utility, can replace the need to install batteries. Net Metering allows the homeowner to feed surplus energy from PVs back into the electric grid, literally running their meter backwards, while still using grid-supplied electricity when needed, e.g., at night. Billing is based on the “net” difference between energy consumed from the grid and energy pumped into it. However, there are no rebates if you produce more surplus than you consume.

## Section 3:

### Health and Indoor Air Quality

#### Top Picks

Strategy	Benefits to Sell	Action Item
Design termite protection in with a focus on health	Reduced health risk; healthier indoor and outdoor environment	4-5 to 4-18
Provide airflow & cross ventilation	Energy savings; healthier indoor environment; community stewardship	2-1; 2-17 to 2-25; 2-29; 2-35; 2-36; 2-41; 2-44
Design for moisture control	Reduced health risk; more durable structure	3-21; 3-24; 3-25; 3-26; 3-29; 3-32; 4-37
Seal against moisture & air leaks in A/C homes	Reduced health risk; energy savings; more durable structured	3-29; 2-50
Size A/C for good moisture control	Reduced health risk; energy savings; a cooler, more comfortable house; more durable structure; community stewardship	2-47
Control particulates in A/C homes	Reduced health risk	3-28; 3-30
Use Low-VOC Finishes	Reduced health risk	3-1; 3-3 to 3-9; 3-14 to 3-16; 3-18 to 3-20
Use hard surface floor treatments in place of carpet	Reduced health risk; lower maintenance; more durable finish	3-10; 3-11; 3-12



## What does “Low-VOC” mean?

VOC stands for Volatile Organic Compounds; a name given to organic chemicals which evaporate readily into the air. Once airborne, these chemicals are easily breathed, with potentially negative effects on human health.

An accepted industry standard for “low-VOC,” is the State of California, South Coast Air Quality Management District Rule #1168. Based on these guidelines, Table 4-1 provides recommended limits for VOCs in adhesives and paints.

**Table 4-1—Recommended Limits for VOCs in Adhesives, Paints, etc.  
(in grams per liter, less water and example compounds)**

*(Source: State of California, South Coast Air Quality Management District)*

Application	VOC Limits
Non-vinyl backed indoor carpet installation Carpet pad installation Wood flooring installation VCT and asphalt tile installation	150
Ceramic tile installation	130
Subfloor installation	200
All other	250
Flat Paint	100
Non-Flat Paint	150

## DESIGN

See Section 2: Energy and Comfort, for several Action Items that enhance airflow and cross ventilation naturally, an important aspect of achieving and maintaining good Indoor Air Quality.

## FLOORS

- 3-1 If using carpet, specify with Carpet and Rug Industry (CRI) Indoor Air Quality (IAQ) label.

1 Point

Ensure the carpets you select have, as a minimum, the CRI IAQ label, which certifies that samples of that carpet type have been tested by an independent laboratory and do not exceed maximum allowable levels for Total VOCs, Styrene, 4-PC and formaldehyde. For more strict specifications, look for carpets with total VOCs below 100 micrograms/m<sup>3</sup>/hour (Washington State University).





### SECTION 3: HEALTH & IAQ

- |   |   |          |
|---|---|----------|
| 3-2   | Ceramic tile grout seams sealed to control mold growth.                           | 1 Point  |
| <p>Seal grout between ceramic tiles to prevent the establishment and growth of mold. Conventional sealers may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants from both mold spores and VOCs, and reduce installers' exposure to the VOCs.</p>  |   |          |
| 3-3   | Water-based finishes used on wood floors.   | 2 Points |
| <p>Use water-based varnishes, polyurethane, and other finishes for hardwood floors are durable and much safer to handle than traditional products. Low-toxic solvents, water-based strippers, and all-natural thinners are also locally available.</p>  |   |          |
| 3-4   | If using carpet, install by tacking (no glue).                                    | 2 Points |
| <p>Use tack strips to install carpet instead of adhesives, which can be a significant source of odor and air pollution. Tack strips eliminate this problem. As a last resort, choose a low-odor, water-based adhesive. Never use solvent-based carpet adhesive. See VOC Limits sidebar.</p>   |   |          |
| 3-5   | Use plywood and composites of exterior grade or formaldehyde-free.                | 2 Points |
| <p>Particleboard, interior grade medium density fiberboard (MDF), and similar interior use products use urea-formaldehyde glue as a binder. With an off-gassing half-life of about 10 years, urea-formaldehyde continues to off-gas formaldehyde for a long time after application.</p> <p>Use materials containing no formaldehyde, such as Medex grade MDF, whenever possible. Alternately, exterior grade products use phenoformaldehyde glue, which off-gases quickly. Therefore, most formaldehyde is gone before the product reaches the jobsite. Exterior grade products include most plywood and OSB currently available.</p> |   |          |
| 3-6   | Low toxicity, low solvent mastics, sealants, and adhesives used for flooring.     | 2 Points |
| <p>Conventional construction adhesives, grouts, and mortars used to bond structural components, install flooring, etc., may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants as well as installers.</p>  |   |          |
| 3-7   | Formaldehyde-free subfloor and underlayment material used.                        | 2 Points |
| <p>Use materials containing no formaldehyde, such as Medex grade MDF, whenever possible. Alternately, exterior grade products use phenoformaldehyde glue, which off-gases quickly. Therefore, most formaldehyde is gone before the product reaches the jobsite. Exterior grade products include most plywood and OSB currently available.</p>   |   |          |
| 3-8   | Low-pile or less allergen-attracting carpet and pad (w/ CRI IAQ label) installed. | 3 Points |
| <p>If you do select carpet for the home, protect air quality by choosing a low pile type and installing it with urethane padding. Preferably, select a carpet made from natural fibers or an all-nylon carpet, which is less attractive to dust mites and mold. Also look for recycled-content carpets; the processed materials used in them tend to be less toxic than virgin synthetics.</p>  |   |          |

## SECTION 3: HEALTH & IAQ

Carpet should never be applied to a concrete slab unless provisions for a moisture/vapor retarder or insulation have been incorporated in the slab that will allow the carpet to remain warm and dry. If not, moisture can migrate through the floor and cause mold growth under the carpet.

3-9	Natural linoleum with low-toxic adhesive or backing used.	3 Points
-----	---	----------

Linoleum is made from all-natural materials and is a durable, low-maintenance flooring made of linseed oil, pine resin, sawdust, cork dust, limestone, natural pigments, and a jute backing. Linoleum does not contain significant petroleum-based products or chlorinated chemicals, as does vinyl flooring, which is often mistakenly referred to as linoleum.

Many linoleum manufacturers offer low-toxic adhesives and backing for their products (See also VOC Limit sidebar).

3-10	Hardwood or tile floors installed in 50% of living area.	5 Points
------	--	----------

Install hardwood or tile floors in at least 50% of the living area, using low-toxic, low VOC adhesives for installation (See VOC limit sidebar). Use measured square footage of living areas, excluding garages, etc. as the basis for calculation. Although their first cost is a little higher than carpet, hard surface floors such as hardwood or tile are more durable and last longer. Also, they are easier to clean and maintain than carpets, and do not require vacuuming, which tends to stir up dust, pollen and other allergens into the air. Hardwood and tile do not contain volatile compounds that will off-gas after installation. .

3-11	Carpet limited to one-third of home-square footage.	5 Points
------	---	----------

Use measured square footage of living areas, excluding garages, etc., as the basis for calculation. The program recognizes carpet's popularity and function, but suggests limiting the amount of carpeting because of its tendency to capture dust and other allergens. The healthiest floor choices are smooth surfaces, such as tile, linoleum, and wood, which do not harbor allergy-causing particles. Solid surfaces are easier to clean than carpet and they keep vacuuming to a minimum. (Vacuuming stirs up dust, even under ideal conditions.) Wood and tile floors are also more durable than carpet, so they cost less per year of use.

3-12	No carpet.	10 Points
------	------------	-----------

Install hardwood, tile or other hard-surface floors throughout the house. Carpet off-gases when it is new. In addition, carpeting acts as a highly effective reservoir for allergens such as dirt, pollen, mold spores, dust mites and other microbes. Moreover, as carpet wears out, the surface yarn breaks down and becomes house dust.

## CABINETRY AND TRIM

3-13	Ceramic tile grout seams sealed to control mold growth.	1 Point
------	---	---------

Seal grout between ceramic tiles on cabinetry, splashbacks, etc., to prevent the establishment and growth of mold. Conventional sealers may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants from both mold spores and VOCs, and reduce installers' exposure to the VOCs

### SECTION 3: HEALTH & IAQ

- |      |   |          |
|------|---|----------|
| 3-14 | Water-based finishes applied on woodwork. | 2 Points |
|------|---|----------|

Water-based varnishes, polyurethane, and other finishes for woodwork are durable and much safer to handle than traditional products. Low-toxic solvents, water-based strippers, and all-natural thinners are also locally available.

- |      |   |          |
|------|---|----------|
| 3-15 | Low-toxicity, low solvent mastics, sealants, and adhesives used for cabinetry, trim, and countertops. | 2 Points |
|------|---|----------|

Conventional mastics, sealants and adhesives used to fabricate cabinetry, lay countertops, etc., may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants as well as installers.

- |      |   |          |
|------|---|----------|
| 3-16 | Cabinets and trim made with formaldehyde-free board and low-VOC finish. | 3 Points |
|------|---|----------|

Cabinets are often built from particleboard, which off-gasses formaldehyde for a long time. Instead, purchase cabinets made from a formaldehyde free material, such as Medex grade MDF, solid wood, or plywood, which adds little additional cost to the overall cabinet budget. Cabinets should be finished with a low toxic finish.

### INTERIOR WALLS

- |      |   |         |
|------|---|---------|
| 3-17 | Ceramic tile grout seams sealed to control mold growth. | 1 Point |
|------|---|---------|

Grout between ceramic tiles should be sealed to prevent the establishment and growth of mold. Conventional sealers may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants from both mold spores and VOCs, and reduce installers' exposure to the VOCs

- |      |  |         |
|------|--|---------|
| 3-18 | Formaldehyde-free fiberglass insulation (available with BIBs or spec'd. Not standard batts). | 1 Point |
|------|--|---------|

Standard fiberglass batt insulation, the most common for new houses, has up to 14% formaldehyde, which can contribute to poor indoor air quality. Look for formaldehyde-free fiberglass insulation, preferably one with recycled content. If you use rigid insulation, make sure it is formaldehyde-free, CFC-free, and HCFC-free. CFCs and HCFCs are not an indoor air quality problem, but should be avoided because they are believed to cause deterioration of the earth's ozone layer, certainly a general threat to the environment and human safety.

- |      |  |          |
|------|--|----------|
| 3-19 | Low-VOC/low-toxic interior paints and finishes for large surface areas (VOCs no more than 50 g/l). | 3 Points |
|------|--|----------|

Solvent-based paints are traditionally considered the most durable, but they produce toxic emissions when curing and require the use of hazardous solvents for cleanup. In addition, they off-gas trace amounts of volatiles (gases) for months following application, which can cause upper respiratory irritation to the occupants.

### SECTION 3: HEALTH & IAQ

“Zero-VOC” or low-VOC, water-based paints are generally safer to handle, can be cleaned up with water, and produce little or no off-gassing (See VOC Limit sidebar). For most indoor applications, there is almost no difference in performance between solvent-based and water-based paints. Many low-VOC paints are comparable in price to conventional paint.

- 3-20 Low toxicity, low solvent mastics, sealants and adhesives used for wallcoverings.

3 Points

Conventional mastics, sealants and adhesives used for wall coverings may off-gas large amounts of toxic VOCs (including solvents and aromatic hydrocarbons). Choose healthier low-VOC options (See VOC Limit sidebar). This will reduce potential harmful impacts on the health of the occupants as well as installers.

### MECHANICAL AND OTHER CONTROLS

- 3-21 Clothes dryer vented to outdoors.



Vent clothes dryer exhaust to the outdoors and ensure outlet is well clear of any ventilation air intake. Do not locate dryer exhaust immediately upwind (prevailing direction) of operable windows. Clothes dryer exhaust contains moisture, lint and other allergens. If not vented to the outdoors, the moisture can lead to mold growth and the lint and dust particles will degrade IAQ and comfort in the home.

- 3-22 Exhaust fans installed in home office areas.

1 Point

Office equipment and the supplies associated with it can emit VOCs and gases, including ozone, which is carcinogenic in high concentrations.

Install a spot fan in home office areas to reduce health risks by dealing with the pollution at its source. Locate exhaust to the outdoors, well clear of any ventilation intakes and not immediately upwind of operable windows. Make sure you allow for fresh air intake elsewhere in the building to balance the system and ensure adequate ventilation. Look for a quiet fan rated 1.5 sones or less.

- 3-23 Polyethylene piping used for supply plumbing.

1 Point

Use polyethylene piping for plumbing. Some studies indicate that increased incidence of bronchial obstruction (asthma) in children is related to the use of PVC plastics (flooring and wall coverings) in the home (source: American Journal of Public Health 1999 Vol. 89: pg188-192). Also, in the event of a fire, PVC can release toxic smoke. If the water is slightly acidic or alkaline, copper plumbing can release copper ions into drinking water, which is potentially harmful to health.

- 3-24 Crawl and attic spaces ventilated to prevent moisture accumulation.

3 Points

Venting of crawl and attic spaces beyond code requirements is an effective way to reduce moisture buildup in the home. Take care to make sure venting “communicates” with “dead” spaces in the crawl and attic spaces.

### SECTION 3: HEALTH & IAQ

- |      |  |          |
|------|--|----------|
| 3-25 | Quiet fans (1.5 sones or less) installed in baths and kitchens to encourage use. (Include 60-minute timer) | 3 Points |
|------|--|----------|

Spot ventilation, exhausted outside the building envelope and away from any ventilation intakes, is an effective way to deal with significant moisture sources (such as showers, stoves, etc.).

Ensure consistent use by selecting quiet fans, rated below 1.5 sones. Crank or electronic timers ensure effective use of bathroom fans without wasting energy. It can take 60 minutes of continuous running for a fan to fully dry out a bathroom after use. A timer ensures adequate drying, but prevents the fan from running unnecessarily. Alternately, a humidistat control in the fan circuit will switch the fan on and off automatically as humidity rises and falls.

- |      |   |          |
|------|---|----------|
| 3-26 | Moisture barriers sealed prior to installation of flooring. | 3 Points |
|------|---|----------|

Ensure that subfloor or slab moisture content is below 12% before installing flooring and make sure moisture barriers are sealed to prevent moisture intrusion, which might promote mold growth beneath flooring.

- |      |                                     |          |
|------|-------------------------------------|----------|
| 3-27 | No electronic filters used in home. | 3 Points |
|------|-------------------------------------|----------|

Electronic filters are a high maintenance item. Unless the filter elements are cleaned frequently, and in practice this is rarely done, the result will be air quality that is degraded, rather than improved.

### AIR CONDITIONED (A/C) HOMES ONLY

- |      |   |          |
|------|---|----------|
| 3-28 | Use construction filters and replace just prior to move-in. | 3 Points |
|------|---|----------|

During construction, once the A/C system has been installed, seal it to prevent build up of construction dust inside ducts and air handling unit. If the unit is to be run prior to move-in, install "construction" filters to keep dust in the system to a minimum. Replace these filters with fresh ones at move in.

- |      |   |          |
|------|---|----------|
| 3-29 | Seal at doors, windows and all penetrations against moisture and air leaks. | 3 Points |
|------|---|----------|

Caulk all windows and doorframes, and caulk or gasket electrical, plumbing or mechanical penetrations in the drywall.

Make sure you use good quality, durable materials for sealing and use the proper type of sealing material for the size of gap. Install quality, self-closing dampers on vents to prevent backdrafts on windy days.

Ensure all weather stripping on doors and windows is effective.

- |      |  |          |
|------|--|----------|
| 3-30 | A/C systems provide fresh air at 0.35 air changes per hour or 15 CFM per person (whichever is higher). | 5 Points |
|------|--|----------|

To ensure adequate ventilation with fresh, outside air in a tight, air conditioned house, the A/C system intakes must be designed to deliver fresh air at a rate of 0.35 air changes per hour, or 15 CFM per person.

## JOB SITE OPERATIONS

### 3-31 Use “green” cleaners for final cleanup. 1 Point

Cleaners and solvents can be sources of hundreds of potentially harmful chemicals. Use environmentally friendly alternatives, including biodegradable products and those that are zero-VOC or low-VOC (no- to low-volatile organic compounds).

Review manufacturer’s Material Safety Data Sheets (MSDS) before you buy. Avoid products that are given a health hazards rating higher than “1.” In addition, avoid as much as possible products with ingredients that the MSDS classifies as toxic (poisonous), flammable, caustic (causes burns), or chemically reactive. Leftovers of these products will be hazardous waste.

### 3-32 Protect building materials from moisture damage. 1 Point

Keep stored materials dry with tarps or in a protected place, or use just-in-time delivery to avoid problems with stored materials. Use a moisture meter to make sure moisture content of underlayment, sheathing, and framing materials does not exceed 15%. If readings exceed 15%, dehumidify before installing insulation and drywall. Protect woodwork from moisture damage during transit, delivery, storage, and handling.

### 3-33 Vacuum stud bays before drywalling. 2 Points

Remove construction dust and debris from the structure before closing in to reduce the risk of air quality problems once the home is occupied.

### 3-34 Vacuum floors before final flooring installation. 2 Points

Remove construction dust and debris from the structure before closing in to reduce the risk of air quality problems once the home is occupied.

### 3-35 Ventilate after each new finish is applied. 3 Points

Each new finish (for example, paints, stains, and floor finishes) will off-gas for a time after it is applied. Emissions are highest immediately after application.

Ventilate the house with fans (several box fans in windows work best) so that gases will be exhausted outside. Venting out should continue for at least two and up to seven days after each application, depending on the amount of surface covered and the toxicity of the finish. (For toxic finishes applied over large areas, vent for seven days.) Use construction filters and change them out before occupancy. If the house is not properly ventilated during this phase, the emitted gases will adhere to surfaces in the house, as well as A/C filters and later be re-released into the indoor environment.

### 3-36 No pollen-bearing shrubs and trees (e.g. mock orange, pikake, plumeria, and mango) or allergenic grasses (e.g. rye) planted next to operable windows. 3 Points

Pollen is a significant allergen. It will be carried in through windows by air currents with potentially negative health and comfort implications for the building occupants.

Keep pollen-bearing plants away from operable windows, to minimize this impact.



## Section 4:

## Durability and Materials Conservation

*Top Picks*

Strategy	Benefits to Sell	Action Item
Use standard dimensions	Construction savings; community stewardship	4-1
Use materials with longer life cycles	Less maintenance, reduced replacement costs; better retained value for resale	4-2
Design termite protection in with a focus on durability, through Termite-impervious or resistant materials Easy access for homeowner inspections Termite elimination system	Easier maintenance, reduced replacement costs; better retained value for resale	4-5 to 4-18
Install wood/composite windows	Reduced replacement costs; better retained value for resale; community stewardship	4-37
Use recycled content insulation	Community stewardship	4-39
Choose “Green” flooring, meaning recycled content sustainably sourced non-chlorine	Community stewardship	4-42 to 4-51
Offer construction waste management education	Safer, cleaner site; community stewardship	4-74; 4-76
Manage excess materials by Selling Donating to non-profit Giving away	Community stewardship	4-83; 4-84





## DESIGN CHOICES

### 4-1 Standardize dimensions used to reduce waste. 2 Points

Incorporating standard sizes in the design will result in less wasted framing, sheathing, drywall, and other materials. It also requires less cutting—which ends up saving you time and labor. For example:

- Use increments in floor and wall layout to correspond with the standard two- and four-foot increments of most materials.
- Pay close attention to door and window placement to avoid the need for extra studs or cutting materials to special sizes.
- Incorporate standard finish dimensions in design. For example, keep standard carpet sizes in mind when creating floor dimensions.

### 4-2 Install materials with longer life cycles. 2 Points

Choose materials that offer durability over lowest first cost. Durable products naturally have longer life cycles. When making your materials selections, consider:

- Life Cycle Assessment (LCA) - Simply put, LCA evaluates a material based on its “cradle-to-grave,” or “life-cycle” environmental impact.
- Life cycle costs - pro-rate the cost over the life of the product. Your supplier or manufacturer should be able to supply life cycle costing for materials they provide.
- Manufacturer warranties - provide some indication of how long the product is expected to last. For any given item, select the longest warranty product feasible for your project.

### 4-3 Use stacked floor plans. 2 Points

Reduce the building size and materials use by stacking floor plans. Wet spaces can be located over mechanical areas, minimizing piping, vents, and chases. By building up versus out, efficiency of land use preserves open space, and tight floor plans reduce material consumption. Stacked plans also reduce construction costs for site and foundation work.

### 4-4 Install materials produced in Hawaii. 2 Points

Using local materials is a key component of sustainable design, incorporating a sense of place. Construction materials tend to be heavy and bulky, resulting in high energy consumption and cost to transport them from any significant distance. Furthermore, buying local materials helps to support the local economy, the health of which has a direct impact on your own business.

## TERMITE DETAILS

### 4-5 Ensure that all wood used has EPA-approved chemical treatment. ★

Specify and use only treated wood in all areas of construction (interior, exterior and landscaping) to ensure adequate resistance to pests.

## SECTION 4: MATERIALS

Specify and use lumber that is treated with EPA-approved chemicals. There are several types of pressure treated wood products available that are approved by EPA and City & County of Honolulu building codes.

- ACQ (Ammoniacal Copper Quaternary) and CBA (Copper Boron Azole) preservatives may be preferred where continuous wetting or ground contact is anticipated and protection from termites and other pests is required. However, the copper in them may have toxic impacts on the surrounding ecosystem.
- Borate preservatives are non-toxic to humans and the environment, but they can leach out of wood in exposed and continuous wetting conditions. They are effective for treatment against termites and decay when used in accordance with approved use specifications.

(See Sidebar on Wood Treatment Products – Page 57)

Alternately, recycled-content plastic lumber may be used for decking and landscaping applications.

### Wood treatment products

Since January 2004 the U.S. Environmental Protection Agency has not allowed the use of Chromated Copper Arsenate (CCA) in residential applications.

There are several alternative pressure-treated wood products available:

**ACQ** (Ammoniacal Copper Quaternary) preservative may be preferred where long-term weather resistance is required in addition to protection from termites and other pests. Use only fasteners approved for use with ACQ treated lumber; it will corrode non-approved fasteners, resulting in potential structural failure. Check with your supplier for details.

**CBA** (Copper Boron Azole) provides long-term resistance to termites and fungal decay in ground contact and aboveground applications. Also can be used in fresh water, but not salt water applications.

**Borate** preservatives are much less toxic than copper-based preservatives, and may be more effective in deterring termites from “tubing over” treated lumber (borate is water-soluble, and will migrate into the moist termite tubes). Because it is water-soluble, borate treatment is not suitable for ground contact or continuous wetting conditions, but is an effective treatment against termites and decay when wood will not be exposed to weather.

**Recycled plastic lumber** and wood polymer lumber are other alternatives that are cost-effective, durable, and can be used in low-load structural applications, including decks and docks, playground equipment, benches, and tables.

#### 4-6 Field treat all cuts and drill holes in treated wood. ★

Ensure that all cuts and drill holes in treated wood framing are field treated to ensure termite and decay resistance is maintained.

## SECTION 4: MATERIALS

- |     |   |         |
|-----|---|---------|
| 4-7 | All plantings at least 24 inches from the building perimeter. | 1 Point |
|-----|---|---------|

Plantings adjacent to the building perimeter can provide pathways for termites to gain access to the structure, bypassing ground level treatments. Also, a clear area around the perimeter will facilitate regular inspection for indications of termite ingress into the building.

Install a minimum 24" maintenance strip around the perimeter of the building foundation composed of the following elements: 3-4 inches of blue rock with geotextile fabric below and bordered on the outside by a landscape header. The maintenance strip physically and visually creates a buffer and allows for easy visual access for regular insect infestation inspections.

- |     |   |         |
|-----|---|---------|
| 4-8 | All roots thoroughly removed when vegetation cleared. | 1 Point |
|-----|---|---------|

Dig and pull stumps and root systems. Screen woody materials out of top- and sub- soils. Termites feed on cellulose materials. Leaving dead roots and other woody materials in the soil of a site will not attract new termites, but it will provide additional food to support a growing termite colony over time, increasing the risk of damage to structures on the site.

- |     |  |         |
|-----|--|---------|
| 4-9 | Regular inspection for termites during construction (post schedule). | 1 Point |
|-----|--|---------|

Post and follow a regular inspection schedule around building perimeter to ensure that termites do not find access into a building during construction, when woody debris can be left lying adjacent to the structure. Termites are much more easily dealt with if they are spotted early, and treated before building completion.

- |      |   |         |
|------|---|---------|
| 4-10 | Easy access provided for termite inspection by homeowner. | 1 Point |
|------|---|---------|

Provide and maintain easy access to crawl-space, foundations, footings, etc., to facilitate regular, thorough inspections for signs of termite damage. Whatever termite treatments and barriers are installed in and around the home, regular inspection may provide early warning of infestation.

- |      |   |         |
|------|---|---------|
| 4-11 | Use only materials impervious or highly resistant to termites (pressure-treated lumber, concrete, masonry, galvanized steel, plastic lumber). | 1 Point |
|------|---|---------|

Do not use untreated or field treated wood. While pressure treated lumber has good resistance to termites, it is still more vulnerable to attack than materials that do not represent any food for termites. Non-cellulose alternatives offer greater resistance to termites, but other sources of degradation must also be considered. For example, steel must be galvanized to protect against corrosion where moisture may be present. Steel and pressure-treated lumber should not be used in continuous wetting conditions.

- |      |   |         |
|------|---|---------|
| 4-12 | Poured concrete in place of wood or CMU for building foundations. | 1 Point |
|------|---|---------|

Poured concrete offers a continuous barrier to termite entry, except for penetrations. Care should also be taken during preparation, pouring and drying to avoid cracking. Even treated and termite resistant woods are vulnerable to attack, and CMUs have joints which can, over time, open up and allow termite entry into the structure.

## SECTION 4: MATERIALS

- |      |  |         |
|------|--|---------|
| 4-13 | All slab penetrations sealed with epoxy or non-shrink grout. | 1 Point |
|------|--|---------|

There are a variety of effective solutions to ensure effective sealing of slab penetrations against termite entry. In addition to epoxy and non-shrink grout, a 4 inch basalt termite barrier can provide another effective alternative, if installed to specifications.

- |      |  |         |
|------|--|---------|
| 4-14 | Galvanized termite pans separate foundations from wood structures. | 1 Point |
|------|--|---------|

Galvanized metal termite pans represent a barrier to termites. While termites can navigate around pans using mud tubes, this activity is easily spotted during inspections, facilitating treatment. Care should be taken to ensure that pans are not compromised (penetrated) during the installation of hurricane ties.

- |      |  |          |
|------|--|----------|
| 4-15 | Install termite colony elimination system. | 2 Points |
|------|--|----------|

A “termite colony elimination system” starts with a monitoring system that is placed around the perimeter of a building. If termite activity is detected, bait is added to the system, which the termites will carry back to their colonies, eventually eliminating the colony. The monitoring system also checks for reinfestation. This and other similar systems are proving effective at eliminating termite damage to homes, although it is quite costly and does use chemicals that are toxic to some life forms.

- |      |  |          |
|------|--|----------|
| 4-16 | Install 4-inch basalt termite barrier (BTB) around footings and beneath slabs (protect during construction). | 3 Points |
|------|--|----------|

Basalt termite barrier is a granular material with particles too large for a termite to move with its mouth, but with void spaces too small for termites to squeeze through. Properly applied, it can provide an effective, non-toxic barrier to termites entering a home.

Take care during installation and afterwards to ensure that the barrier is not contaminated with soil or other materials that might allow passage of termites. Clean equipment and meticulous workmanship are required.

- |      |  |          |
|------|--|----------|
| 4-17 | Install a non chemical ground treatment termite control system installed (steel mesh or equivalent). | 3 Points |
|------|--|----------|

Install steel mesh or equivalent product during the early stages of constructions at all potential points of entry to the structure. Steel mesh is a physical mesh barrier to termites, which is too hard for termites to eat through and with spaces too small for them to squeeze through. This is a non-chemical barrier solution.

- |      |   |          |
|------|---|----------|
| 4-18 | Use copper termite pans to separate foundations from wood structures. | 3 Points |
|------|---|----------|

See Action Item 4-14 above. Copper termite pans will last longer than galvanized steel pans.

## FRAMING

4-19 Use two-stud corners.

1 Points

Construct all framing corners using two instead of three studs, reducing amount of lumber used and leaving space for additional insulation. Drywall clips spaced two feet apart can provide back-up for interior finish materials. Place the clips where one wall abuts another, or where two walls intersect at corners.

4-20 Deleted

4-21 Deleted

4-22 Deleted

4-23 Install recycled content fascia, soffits, or trim.

1 Point

Use structural fiberboard or other recycled-content board, molding and trim for fascia, soffits and trim. These items carry small structural loads and are therefore ideal locations for using recycled materials which might not meet code for structural uses. By choosing products made with a minimum of 50% pre- or post-consumer recycled content, you can have a significant impact on resource conservation. Refer to the DBEDT Buy Recycled in Hawaii Directory, <http://www.state.hi.us/dbedt/ert/chc/brg02.html>. Also consider specifying products made from certified sustainable wood (See "Forest Certification" sidebar).

## SECTION 4: MATERIALS

### Forest Certification

Forest certification is a voluntary, market-based approach to help conserve, protect and restore the world's forests. There are currently four Forest certification systems in operation and certifying wood products that are for sale in the USA: Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), CSA International, and American Tree Farm System.

According to the Certified Forest Products Council (CFPC) (see website at [www.certifiedwood.org](http://www.certifiedwood.org)), “an effective system should lead to continued improvement in forest management standards and integrate environmental, social and economic interests.”

CFPC uses the following key concepts as a basis for evaluating the effectiveness of certification systems:

- Openness and transparency of its standards development and governance
- Objectives of its standards for evaluating forest management
- Rigor of its operating procedures.

Of the four systems, in terms of transparency, objectivity and rigor, FSC is currently considered the most effective system. CSA International, run by the Canadian Standards Association, is somewhat less rigorous and transparent. While SFI and the American Tree Farm System have many strengths they do not demonstrate the key concepts outlined above to the same extent as the other programs.

Use of wood certified under these systems will score points as follows:

Forest Stewardship Council (FSC)	3 Points
CSA International	2 Points
Sustainable Forestry Initiative (SFI)	1 Point
American Tree Farms System	1 Point

For further information and comparison of certification systems, see <http://www.metafore.org/index.php?p=About+Certification&s=153>.

- 4-24 Use Intermediate Framing System (16" O.C. studs, with 2-stud corners, ladder partitions, let-in headers).

2 Point

With Intermediate Framing, studs are placed at 16-inch on-center as in conventional framing. However, it differs from conventional framing in that it includes insulated headers, corners, and intersections. Although this approach is primarily considered an energy efficiency strategy, this method contributes significantly to minimizing material use as well.

- 4-25 Use recycled-content sheathing.

2 Points

Use sheathing material with recycled content, such as structural fiberboard. Sheathing comprises a significant portion of the material use of a building project. Therefore, choosing a sheathing product made with a minimum of 50% pre- or post-consumer recycled content can have a significant impact

## SECTION 4: MATERIALS

on resource conservation. Refer to the DBEDT Buy Recycled in Hawaii Directory, <http://www.hawaii.gov/dbedt/info/energy/publications/brg02.pdf>. Also consider specifying products made from certified sustainable wood (See “Forest Certification” sidebar).

4-26 Deleted

4-27 Deleted

4-28 Deleted – Covered in 4-5

Using lumber with EPA-approved chemicals is covered in 4-5.

4-29 Use Advanced Framing System when permitted (24” O.C. studs, 2-stud corners), ladder partitions, let-in headers, etc.

3 Points

This Action Item incorporates 24-inch on-center studs and other materially-efficient framing techniques with increased insulation. Other features include two-stud corners and intersections, insulated headers, oversized or raised heel trusses to allow full depth of attic insulation, and full insulation where interior partition walls meet exterior walls. (see Action Item 4-19, Intermediate Framing System – the primary difference being 16” versus 24” O.C. stud walls and raised heel trusses).

Tip: To eliminate concerns about “wavy walls,” install exterior sheathing horizontally rather than vertically.

## FOUNDATION

4-30 Non-asphalt based damp proofing used for foundation and basement walls.

3 Points

Asphalt is derived from non-renewable resources, and represents a risk of petroleum-based chemicals leaching into the soil and groundwater.

Use modified EPDM “peel and stick” membranes or one of the liquid applied membranes for the damp-proofing treatment.

4-31 Use concrete with fly ash content.

3 Points

Fly ash is a byproduct of burning coal for electricity production. It can be added to concrete slabs and foundations mixes as a substitute for up to 60% of the Portland cement mixture. The general rule of thumb recommends 15% to 30%. It has been shown to improve the strength of concrete as well as increase its workability. Note: concrete with fly ash content sets up somewhat more slowly; it is easy to work with and has a slightly smoother finish. See Quick References: DBEDT Buy Recycled in Hawaii Directory.



## SECTION 4: MATERIALS

- |      |   |          |
|------|---|----------|
| 4-32 | Use recycled aggregate containing crushed concrete, brick, concrete block, asphalt, or glass cullet for base or fill. | 3 Points |
|------|---|----------|

If you choose to do this, make sure concrete, asphalt, or glass cullet is ground properly to meet base or fill specification. When ground to specs, the materials compact nicely to form a stable base. See Quick References: DBEDT Buy Recycled in Hawaii Directory.

### SUB-FLOOR

- |      |                                    |          |
|------|------------------------------------|----------|
| 4-33 | Use recycled-content underlayment. | 2 Points |
|------|------------------------------------|----------|

Use exterior grade plywood or formaldehyde-free wood fiberboard with recycled-content for underlayment. Other environmentally preferable materials for flooring underlayment include natural cork and options made with recycled rubber, paper, jute hemp and/or agricultural fiber. Standard particleboards are traditionally used for the purpose of underlayment, even though they are known to be the primary source of formaldehyde gas in new homes.

See Quick References: DBEDT Buy Recycled in Hawaii Directory. Also consider specifying products made from certified sustainable wood (See “Forest Certification” sidebar).

### WINDOWS AND DOORS

- |      |                     |         |
|------|---------------------|---------|
| 4-34 | No luan doors used. | 1 Point |
|------|---------------------|---------|

Use doors made from domestic hardwoods or steel. Luan doors are made from limited and endangered tropical hardwoods.

- |      |  |            |
|------|--|------------|
| 4-35 | Use window frames and doors made of wood certified as “sustainably-produced” (See “Forest Certification” sidebar for recognized certifiers). | 1-3 Points |
|------|--|------------|

Specify and use wood window frames and doors containing materials sourced from forests certified by a third party as sustainably managed (See “Forest Certification” sidebar). This material will generally carry a certifiers mark of some description.

- |      |  |          |
|------|--|----------|
| 4-36 | Flashing to seal above doors, windows, and other openings. | 2 Points |
|------|--|----------|

Use flashing rather than caulking to seal doors, windows and other openings against moisture. Although flashing takes longer to install, it lengthens the useful life of the components it protects.

- |      |  |          |
|------|--|----------|
| 4-37 | Frames are wood/composite with recycled content. | 3 Points |
|------|--|----------|

Install windows with frames made of a composite of recycled polyvinyl chloride (PVC) or high-density polyethylene (HPDE) plastics and waste wood fiber. This composite material has the dimensional stability and thermal performance of wood, and the uniformity and decay resistance of plastics. The cost of wood/plastic composite windows is often less than that of wood or vinyl.

According to recent tests, the frames have roughly the same energy performance as solid wood, but perform slightly better than vinyl window frames.

## 4-38 Interior doors reclaimed.

3 Points

Older doors that have been reclaimed from demolition/deconstruction projects can be used in interior locations. They are often less expensive than new doors and can be made of better quality materials.

## INSULATION

## 4-39 Use insulation with recycled content, including cellulose, fiberglass, expanded polystyrene (EPS), and mineral wool.

2 Points

Three commonly available types of insulation include recycled content: cellulose, fiberglass, and mineral wool.

- Cellulose insulation is made from 100% post-consumer recycled newspapers or telephone books. The insulation can be dry-blown or poured loose-fill into enclosed cavities, but is most commonly wet-sprayed. When sprayed, the product leaves few voids, reducing problems with air infiltration. Cellulose is usually mixed with boric acid or sodium borate as a fire retardant. An additional benefit of boric acid is that it kills carpenter ants and termites.
- Several brands of fiberglass insulation batts are manufactured using recycled glass, including post-consumer glass collected in curbside recycling programs.
- Mineral wool insulation is another option and is available in loose-fill or batts. It has, on average, 75% post-industrial recycled content.

See Quick References: DBEDT Buy Recycled in Hawaii Directory, <http://www.hawaii.gov/dbedt/info/energy/publications/brg02.pdf>.

## 4-40 Use environmentally-preferable foam insulation (formaldehyde-free, CFC-free, HCFC-free).

2 Points

Foam building materials that are manufactured using chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs) are damaging to the environment and therefore to human health.

CFCs are known to contribute significantly to ozone depletion and global warming, two of our most serious environmental concerns. HCFCs are considerably less damaging than CFCs, but should also be avoided if at all possible. In addition, avoid products that include formaldehyde, because indoor formaldehyde is gaining recognition as a severe health hazard causing reactions ranging from flu-like symptoms to death in individuals that become sensitized through exposure.

Options to consider include:

- Beadboard or EPS (expanded polystyrene) rigid foam insulation has an insulating value of (R-3.6 to R-4.4 per inch) and can be used for interior or below grade uses. It is less damaging to the environment because pentane is used in its production rather than HCFC.
- Polyurethane insulation (e.g. polyisocyanurate) made with pentane instead of HCFCs as the blowing agent is now available.
- Blown-in cellulose (100% recycled newspaper content) or formaldehyde-free fiberglass.

See Quick References: DBEDT Buy Recycled in Hawaii Directory, <http://www.hawaii.gov/dbedt/info/energy/publications/brg02.pdf>.

## SECTION 4: MATERIALS

### INTERIOR WALLS

- |      |   |         |
|------|---|---------|
| 4-41 | Use drywall with recycled-content gypsum. | 1 Point |
|------|---|---------|

Specify and use drywall manufactured with recycled gypsum, which is commonly available at most building material suppliers and is cost-competitive with conventional drywall. However, it must be specified if you want to use it (in other words, it is not automatic).

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

### FINISH FLOOR

- |      |  |            |
|------|--|------------|
| 4-42 | Use wood flooring certified as “sustainably-produced”<br>(See “Forest Certification” sidebar for recognized certifiers). | 1-3 Points |
|------|--|------------|

Specify and use wood flooring containing materials sourced from forests certified by a third party as sustainably managed (See “Forest Certification” sidebar). This material will generally carry a certifiers mark of some description.

- |      |  |         |
|------|--|---------|
| 4-43 | If installing vinyl flooring, use product with post-industrial recycled content. | 1 Point |
|------|--|---------|

If you use vinyl flooring, specify vinyl composite tile (VCT) with recycled content. Vinyl sheet flooring is discouraged because of concern about negative environmental impacts of its manufacturing and its limited recycling options.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

- |      |                                      |         |
|------|--------------------------------------|---------|
| 4-44 | Install recycled-content carpet pad. | 1 Point |
|------|--------------------------------------|---------|

A variety of cost-competitive resource-efficient carpet padding options are available. In general, these products have been found to be resilient and possess good performance characteristics.

Carpet padding may be made from several recycled-content materials, including nylon and polypropylene waste from carpet manufacturing, and recycled tire rubber and rebound urethane, reprocessed from virgin prime urethane products.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

- |      |   |          |
|------|---|----------|
| 4-45 | Use recycled-content or renewed carpet. | 2 Points |
|------|---|----------|

A variety of cost-competitive resource-efficient carpet options are available. In general, these products have been found to be resilient and possess good performance characteristics.

Recycled-content carpets may include plastic yarns produced from recycled pop bottles or recovered fibers from recycled textiles. Wool carpet is another resource-efficient option that is renewable, biodegradable, naturally fire- and stain-resistant, and colorfast.

Renewed carpet is used carpet that has been cleaned and restamped. A variety of attractive renewed styles are available. Ask your supplier. See Quick References: DBEDT Buy Recycled in Hawaii Directory.

**4-46 Use reclaimed wood.**

**3 Points**

Use reclaimed wood flooring from deconstructed buildings and salvaged construction materials suppliers. Hardwood flooring is a valuable material, and if properly removed and refinished, can be reused.

**4-47 Install cork or bamboo flooring.**

**3 Points**

Install cork or bamboo flooring. Both are more rapidly renewable resources than conventional hardwoods and are preferred to synthetic materials. Cork flooring is durable, sound absorbing, and naturally moisture-, mold-, and rot-resistant. Bamboo flooring is also a very durable and dimensionally stable material. There are also indoor air quality advantages to using natural materials – less off-gassing due to fewer or no chemicals used in the manufacturing process.

**4-48 Install laminated or veneered wood floor.**

**1 Point**

Laminated or veneered wood flooring offers the appearance of solid wood while using less wood in fabrication. Look for products made from certified wood (see Action Item 4-24) and those which do not contain urea formaldehyde-based adhesives.

Also, consider laminated bamboo flooring (see Action Item 4-47).

**4-49 Use concrete or indigenous stone flooring.**

**3 Points**

Use poured concrete tiles and flagstones or poured-in-place floors featuring stains and other surface treatments.

Few types of indigenous stone are appropriate for flooring, but might form the basis for some innovative flooring solutions.

Use of regional materials helps keep material transport costs down, reinforce a regional aesthetic, and support the local economy.

**4-50 Install recycled-content ceramic tile.**

**3 Points**

Several manufacturers make ceramic, glass or porcelain tiles with recycled-content. These tend to be more costly, but are durable and offer an attractive opportunity to highlight (and market) the use of an environmentally-friendly material to your client or market.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

**4-51 Use resilient flooring with no chlorine used during manufacturing.**

**1 Point**

Install resilient flooring alternatives to vinyl flooring, such as linoleum or Vinyl Composition Tile (VCT).

Linoleum is made from all-natural materials and is a durable, low-maintenance flooring made of linseed oil, pine resin, sawdust, cork dust, limestone, natural pigments, and a jute backing. Linoleum does not contain significant petroleum-based products or chlorinated chemicals, as does vinyl flooring, which is often mistakenly referred to as linoleum.

VCT is a hard surface composite floor tile containing approximately 85% limestone and 15% plastic resins, some of which may be recycled vinyls including PVC.

## SECTION 4: MATERIALS

### CABINETRY AND TRIM

- 4-52 Cabinets made with medium density fiberboard or wheatboard. 3 Points**

Install cabinets made with medium density fiberboard (MDF) or wheatboard. MDF is an engineered wood product made from small sized wood fiber which is either the by-product of other manufacturing, or comes from fast growing, small diameter trees. Wheatboard is made from wheat straw which might otherwise be burned or disposed of.

Both these materials offer resource efficiency benefits over solid timber.

- 4-53 Finger-jointed or engineered wood trim (including MDF). 2 Points**

Since the availability of stable, clear, mature wood has declined, any application, which requires straight, knot-free wood is affected. As a result, the industry has responded by developing finger-jointed wood products - taking smaller scraps of lower value wood and edge-gluing them together, covered by top-quality wood veneers on the finish surface.

Trim boards and molding made from MDF are also widely available.

Interior trim is an excellent application for these products; it offers improved product consistency and durability, while at the same time uses harvested wood fiber more efficiently.

- 4-54 Use countertops with recycled content. 3 Points**

Use countertops of recycled glass embedded in cement, or recycled glass or ceramic tile, or other proven recycled content product. Countertop substrate, such as Gridcore and countertops such as Environ may also be available locally.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

- 4-55 Install concrete or indigenous stone countertops. 3 Points**

Use poured concrete countertops featuring stains and other surface treatments.

Few types of indigenous stone are appropriate for countertops, but might form the basis for some innovative flooring solutions.

Use of regional materials helps keep material transport costs down, reinforce a regional aesthetic, and support the local economy.

- 4-56 Use refurbished cabinets. 3 Points**

Install cabinets that have been reclaimed and refurbished from building deconstruction or renovation projects. Check with dealers of salvaged construction materials and reuse centers. Cabinets can be successfully refurbished by adding new doors and details.

- 4-57 All hardwood trim or casework from wood certified as "sustainably-produced" (See "Forest Certification" sidebar for recognized certifiers). 1-3 Points**

Specify and use hardwood trim sourced from forests certified by a third party as sustainably managed (See "Forest Certification" sidebar). These materials generally carry a certifiers mark of some description.

## ROOF

- 4-58 Flash all roof-to-wall intersections. 1 Point

Protect all framing materials and wall cavities from potential moisture penetration by flashing all roof-to-wall intersections. Moisture penetration may lead to decay and potential failure of structural components.

- 4-59 Use resource-efficient roofing such as metal panels or composite shingles with recycled content. 1 Point

Several new composite options are available that provide low maintenance along with durability. Many of these options include recycled-content or reclaimed materials: asphalt shingles, plastic shakes, ridged sheet material made with fiber and asphalt, and metal shingles or panels.

Asphalt shingles contain recycled “mixed” waste paper or reclaimed mineral slag resulting in 20% to 25% recycled content. Roof panels made from recycled plastic resins provide a lightweight roofing alternative in addition to recycled aluminum shingles which may contain up to 100% recycled content.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

- 4-60 Install 30-year roofing material. 2 Points

Varieties of organic felt-based shingles are available with up to 30 year warranties. Talk to your local supplier about other options which provide a 30-year warranty.

- 4-61 Install 40-year roofing material. 3 Points

Use durable 40-year roofing materials. Some brands of aluminum or steel shingles have a 40-year or longer, limited warranty and in addition, come with a coating approved by the U.S. Department of Housing & Urban Development, which allows the roof to be used for collecting rain water.

## EXTERIOR FINISH

- 4-62 Use resource-efficient siding such as metal, vinyl, cement fiberboard, and stucco. 1 Point

Use durable, low maintenance siding, preferably with recycled content.

The following products offer durable and low-maintenance alternatives to wood siding.

- Aluminum or steel siding products may contain high percentages of recycled metal—up to 100%. The scrap is also recyclable. Always ask your supplier for a statement of the recycled content of your materials – look for a minimum of 25%.
- Vinyl siding can include a small percentage of post-industrial scrap in the manufacturing process. However, PVC is difficult to recycle, and there are no vinyl siding products with post-consumer vinyl at this time.
- Fiber-cement composites are also resource-efficient, and in addition to durability and low maintenance, offer a good fire rating when compared to wood or metal siding.

## SECTION 4: MATERIALS

- Stucco is another resource efficient alternative.

### 4-63 Use 50-year siding product.

1 Point

Minimizing the need to replace any siding product offers a maximum consumer benefit to the homeowner, in addition to the obvious environmental impact. Many of the fiber-cement composites offer a 50-year warranty. Ask your local supplier for this and other options.

### 4-64 Use reworked paint.

1 Point

Use reworked or reprocessed paint. Reprocessed paint is post consumer latex paint that has been sorted by a variety of characteristics, including type (i.e., interior or exterior), light and dark colors, and finish (e.g., high-gloss versus flat). Reprocessed paint may contain significant percentages of post-consumer recycled paint. See Quick References: DBEDT Buy Recycled in Hawaii Directory.

### 4-65 Exterior coatings and paints have recycled content.

2 Points

Use exterior paint with recycled content, often called consolidated paint. Consolidated paint consists of 100% post consumer latex paint with similar characteristics (e.g., type, color family, and finish) that is consolidated at the point of collection. Consolidated paint is typically used for exterior applications or as an undercoat.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

### 4-66 Materials are factory finished.

2 Points

Specify and use materials with factory-applied finishes (doors, windows, trim, etc.). They are generally more durable than job site applied finishes because they are applied in ideal, controlled conditions. They also reduce operator health and environmental impacts by capturing and recycling over spray and off-gassing.

## OUTDOOR FEATURES

### 4-67 Item Deleted – Covered in 4-5

Using EPA-approved pressure treated wood is covered in 4-5.

### 4-68 Compost or mulch used in landscaping.

1 Point

Use compost or mulch from local sources, preferably composts that are produced from green waste. Local materials add microorganisms that are part of the local ecosystem and are beneficial to the native plants. Using locally produced compost also helps divert green waste from local landfills. Mulching controls weeds, provides additional soil nutrients, increases the capacity of the soil to retain moisture, moderates soil temperature, and limits soil erosion. See Soil Amendment sidebar in Section 1.

Using mulches in moderate amounts (2" depth) for landscaping does not increase the risk of termite damage as long as the mulch is kept at least two feet from the house perimeter to ensure it does not provide a bridge over treated ground and other termite control measures. (See Action Item 1-24, *Mulch used in landscaping to minimize evaporation.*)

<b>4-69</b>	<b>Use crushed/ground gypboard as a soil amendment.</b>	<b>1 Point</b>
-------------	---	----------------

Scrap gypboard (sheetrock) can be ground up and used as a soil amendment, as long as it does not contain fiberglass. Application should be according to recommendations contained in a reputable soil analysis. It offers the following benefits:

- Improves water penetration and workability of an impermeable alkali soil.
- Softens soil with a high clay content.
- Helps neutralize soil acidity.
- Adds plant nutrients calcium and sulfur.

Also, Boron, which is added to gypboard as a fire retardant, is a valuable nutrient for plants in small quantities.

<b>4-70</b>	<b>Reclaimed or salvaged material used for landscaping walls.</b>	<b>2 Points</b>
-------------	---	-----------------

Use discarded stone, brick, masonry, or wood materials to construct the landscaping walls to conserve resources, and provide a unique appearance to match the style of the home.

<b>4-71</b>	<b>Recycled content materials used for fences, benches, decking, docks, retaining walls, picnic tables, and landscape borders.</b>	<b>2 Points</b>
-------------	--	-----------------

Use recycled plastic lumber or plastic/wood composite lumber, which provide durable alternatives to solid wood for exterior applications such as fences, benches, decking, docks, retaining walls, picnic tables, and landscape borders. Due to its weather- and insect-resistant nature, plastic lumber can readily substitute for treated wood in non-structural applications. Plastic lumber is also rot and corrosion-proof, and is unlikely to crack, splinter, or chip. Most products have a long life expectancy in exposed, sub-grade or marine applications, and do not leach chemicals into ground or surface water or soil, as treated wood may do.

See Quick References: DBEDT Buy Recycled in Hawaii Directory.

<b>4-72</b>	<b>Create functional outdoor living spaces while limiting overall square footage of structure.</b>	<b>5 Points</b>
-------------	--	-----------------

The climate in Hawaii is ideal for outdoor living year round. Traditional building styles reflect this. Lanais and porches provide comfortable, spacious and healthy living spaces while consuming much less materials than a similar, enclosed space.



## SECTION 4: MATERIALS

### Waste Management Plan

Some key points to keep in mind when developing your plan include:

- Minimize hazardous material disposal by limiting their use on site as much as possible.
- Target only high-potential materials for recycling and reuse. Phase recycling based on construction activities.
- Decide how and where you are going to collect materials you are targeting. For example you may want to stockpile cardboard in a garage, use a roped-off area for metal, and use containers for wood and drywall.
- Make recycling on the jobsite as convenient as disposal. For example, place wood collection container near to the central cutting area.
- Rely on good quality, easily accessible recycling and salvage service providers and facilities.
- “Sell” program benefits — savings, safety, marketing benefit — to jobsite crews (including subs).

## JOB SITE OPERATIONS

*(For custom homes, triple points for each item in the Jobs Site Operations category, due to increased difficulty.)*

**4-73** Post job-site waste management plan (including reduce, reuse, recycle goals/actions). **1 Point**

Post your plan in a prominent location. Sidebar is what a plan should include. Develop a job-specific waste management plan.

**4-74** Waste management education conducted on site for field personnel. **1 Point**

Make sure that your field personnel are fully aware of the waste management requirements, and include them in developing your waste management plan. If your team is fully aware of the savings available from reducing hazardous materials use, reusing materials and recycling, it will greatly enhance the effectiveness of your efforts.

**4-75** Detailed take-off provided as cut list to framer. **1 Point**

Create a piece-by-piece take-off that can be used as a cut list for framers and an order list for your supplier. This list increases accountability of framers and suppliers, minimizes the erroneous cutting of large pieces, reduces the overall volumes of material used, and can result in significant savings.

**4-76 Recycling areas or containers well-signed.****1 Point**

Make recycling facilities as convenient as disposal in order to get maximum participation in your program. Clearly mark containers or areas for stockpiling recyclables to avoid having to re-sort materials prior to recycling, reducing costs.

**4-77 Central cutting area or cut packs.****1 Point**

Designate a centralized cutting area to reduce waste, reduce the total amount of material that must be supplied to the site, and save time by making it convenient for carpenters to reuse cutoffs and scrap. This also makes the cutting process itself more efficient. Studies of construction sites with a centralized cutting area showed total waste reduction of as much as 15%.

A central cutting area also creates an ideal location for the scraps bin or pile, convenient for subcontractors so they will reuse leftover materials. Cut packs greatly reduce on-site waste since they are pre-measured and cut at the supply yard.

**4-78 Subcontractors required to participate in waste reduction efforts.****1 Point**

Sub-contractor contract includes language that requires them to participate in waste reduction efforts. (See sidebar)

### **Working with your Subs to Reduce Job-Site Waste**

Part of successfully achieving subcontractor participation is clearly communicating your intentions to reduce waste on the jobsite. Here are some tips:

- Require waste reduction in written agreements with your subcontractors (see sample language below).
- Communicate your waste reduction goals at a jobsite kick-off meeting and during safety meetings.
- Give examples of types of materials that can be reused.
- Clearly indicate materials you will be targeting for recycling on this job and explain how you will be collecting recyclable materials.
- Highlight special considerations and answer waste management questions.
- Provide incentives to encourage subs to participate.

**4-79 Use suppliers offering reusable, recyclable or U-turn packaging.****1 Point**

Cardboard, plastic shrink wrap, kraft paper, wood pallets or frames, and metal bands comprise a significant portion of the typical construction waste stream and in this way add to your project costs.

To make sure unnecessary and excessive packaging is avoided, inform your suppliers that you want packaging that is minimized and reusable for both economic and environmental reasons.

## SECTION 4: MATERIALS

### 4-80 Reuse building materials.

1 Point

Reuse materials wherever possible to reduce project costs by avoiding disposal costs and the need to purchase new materials. To make temporary structures reusable, apply methods such as fastening with screws rather than nails to make dismantling convenient. If you have the storage space available, you may be able to store used materials for future projects.

When reusing structural materials, check with your local building authority regarding strength reductions or limits. They may be able to assist in determining the strength of various materials, such as reclaimed I-beams. Code may require some downgrading of structural capacity. In other cases, such as old timbers, structural capacity may actually be increased.

### 4-81 Reuse dimensional framing materials.

1 Point

Find applications for framing material cut offs.

Blocking, bracing, shims, back framing, and forming stakes can be fabricated from small pieces of framing material that would otherwise be wasted. Make this extra material available in a central area so everyone on site knows it can be reused (see Action Item 4-77, *Central cutting area or cut packs used*).

### 4-82 Use recyclable supplies, e.g., construction fences, tarps, etc.

1 Point

Use reusable and recyclable supplies, such as construction fences and tarps, which can be reused at the next jobsite, and refillable propane tanks can be reused again and again.

### 4-83 Excess materials donated to a non-profit organization (e.g., Hawaii Materials Exchange).

1 Point

Leftover materials will be costly to dispose of and may be difficult to inventory and store for a future project. Many non-profits that focus on affordable housing and reuse of building supplies will welcome your donation of these products.

Contact Hawaii Materials Exchange, [www.himex.org](http://www.himex.org) or check the DBEDT Environmental Directory at <http://www.state.hi.us/dbedt/ert/chc/00envdir.html>

### 4-84 Wood scraps sold or given away.

1 Point

Sell or give away logs not used as timber, or wood scraps that are less than one foot long since they are unlikely to be reused on the job. This can be as simple as placing a container of scraps at a safe, accessible location on the site and putting a "Free Wood" sign on it.

### 4-85 Reusable items sold or donated.

1 Point

Rising raw materials costs and landfill tipping fees are making it more economical for builders to salvage materials for reuse than to pay for new materials and/or disposal costs. Prior to the start of a demolition or a renovation project, the builder, designer, and owner should schedule a walk-through to identify materials that might be salvaged. If you intend to sell salvaged materials, a representative from the salvage business should be included in the initial walk-through to help identify salvageable materials that are in demand.

Products with consistent demand include:

- Hardwood flooring
- Windows that are in good condition (matching sets preferable)

## SECTION 4: MATERIALS

- Kitchen cabinets and solid wood doors
- Architectural detailing and window and door hardware.

Contact Hawaii Materials Exchange, [www.himex.org](http://www.himex.org) or check the DBEDT Environmental Directory at <http://www.state.hi.us/dbedt/ert/chc/00envdir.html>

### 4-86 Use reusable forms.

1 Point

Use forms made from steel or aluminum for concrete pours. These forms are readily available. Besides providing a better finish, metal forms help to prevent unnecessary wood waste. On small projects, dimensional lumber forms for foundations, footings, etc., can be cleaned and reused many times.

### 4-87 Recycle cardboard.

1 Point

Cardboard waste is generated throughout most homebuilding and remodeling projects, but the largest volume occurs during the finish phase of the project, when electrical and mechanical fixtures are being installed. Cardboard can often be recycled for free, either at drop-off sites or picked up by a hauler who may provide a bin. Wax, moisture, and metal banding can be considered contaminants. Check with cardboard recycler to identify any restrictions on the cardboard they accept.

### 4-88 Recycle metal scraps.

1 Point

Recycle offcuts from steel framing, copper and aluminum scraps from flashing, and other metals. Metal may be collected or accepted for free, with higher value metals providing revenues. Rebates available for recycled metals vary with market value.

Separated metals have a higher value than mixed metals. Some recyclers will pay for sorted metals. Check with recycler for their specifications.

### 4-89 Recycle clean wood (borate-treated or untreated scrap), i.e., for composting.

1 Point

Any borate-treated or untreated wood and green waste can be recycled. Other types of treated wood waste must be disposed of through a certified landfill.

Many wood recyclers also accept pallets as part of their wood waste stream. Consult the Quick References and contact your wood recycler first.

### 4-90 Recycle packaging.

1 Point

Material packaging makes up a substantial percentage of construction material waste. Recycle packaging or have subcontractors make arrangements to take the packaging back to the supplier.

### 4-91 Recycle drywall.

1 Point

Drywall generally makes up 11% by volume and 26% by weight of a residential home's waste stream or roughly 1-1.2 lbs. per square foot. Drywall can be recycled in Hawaii and fees are slightly less than disposal fees at local landfill facilities.

## SECTION 4: MATERIALS

- |      |   |         |
|------|---|---------|
| 4-92 | Recycle concrete/asphalt rubble, rock, and brick. | 1 Point |
|------|---|---------|

Concrete, brick, and asphalt rubble can be collected on site and recycled for less money than it costs to be landfilled. On large demolition projects, where a significant amount of asphalt or concrete is being demolished as part of site preparation, the material can be ground to meet base or fill specifications and reused on site.

- |      |  |         |
|------|--|---------|
| 4-93 | Least toxic materials selected to reduce disposal requirements (e.g., paints, termite treatments). | 1 Point |
|------|--|---------|

Specify non-toxic materials for your project, to reduce hazardous waste disposal requirements which can be costly and onerous.

## BONUS POINTS

- |      |  |          |
|------|--|----------|
| 4-94 | Track and prominently post waste reduction results on site (similar to safety record signs). | 5 Points |
|------|--|----------|

By giving feedback to your personnel and sub-contractors on the effectiveness of their waste reduction efforts, you communicate how important it is to you, and give them a greater sense of achievement and incentive to do more.

- |      |                                      |          |
|------|--------------------------------------|----------|
| 4-95 | Home no larger than 1,800 square ft. | 5 Points |
|------|--------------------------------------|----------|

Large homes are more expensive to condition, maintain and furnish but do not necessarily offer greater comfort and usability. Through careful layout and design, you can create functional, multi-purpose spaces that reduce materials usage and direct more of the budget to comfort, detail and/or energy efficiency features. Smaller homes inherently reduce the embodied energy of a home (the total amount of energy used to extract, refine, produce, and distribute materials from their point of origin to installation and then ultimately to disposal).

- |      |                                      |           |
|------|--------------------------------------|-----------|
| 4-96 | Home no larger than 1,400 square ft. | 10 Points |
|------|--------------------------------------|-----------|

A well designed home of this size can provide ample accommodation for a family of four, particularly if outdoor living spaces are optimized. The reduction in materials used to build and furnish such a home and the ease of naturally lighting and ventilating it will result in substantial savings for the homeowner. These savings may be used to add more detail and quality features into the home.

- |      |  |           |
|------|--|-----------|
| 4-97 | More than 50% of wood used in home is certified as “sustainably-produced.” | 10 Points |
|------|--|-----------|

Specify and use wood sourced from forests certified by a third party as sustainably managed for 50% or more of the wood used on the project. Calculate percentage based on cost. (See “Forest Certification” sidebar.) Points are awarded for any combination of the available certification systems.

## Section 5:

### Environmentally-Friendly Home Operations

- 5-1 Owners provided with information on operating and maintaining their “green” home for optimum performance. If A/C, must include instructions about efficient O&M for A/C systems and operation of programmable thermostats. ★

Provide a personalized Home Operation and Maintenance Kit with information for the homeowner on how to maintain the green performance of their home (See sidebar for minimum requirements). Obtain owner’s signature on a “sign-off” sheet indicating the information has been received.

- 5-2 Owners provided with information about maintaining their landscaping using “green” techniques. (Must include a list of native and drought-resistant plants.) ★

Provide a personalized Landscape Operation and Maintenance kit with information for the homeowner on how to protect and maintain their landscaping (See sidebar for minimum requirements). Obtain owner’s signature on a “sign-off” sheet indicating the information has been received.

- 5-3 Provide a list of Energy Star® appliances for those not installed. 2 Points

For any common appliances that are not installed prior to move-in, provide a list of Energy Star® approved models (available from your local utility or [www.energystar.gov](http://www.energystar.gov)).

## SECTION 5: HOME OPERATION

### Homeowner Kits

*The Home Operation and Maintenance Kit must contain:*

- A copy of the completed Self-Certification Checklist;
- Warranties and operating instructions for equipment or landscaping you have installed;
- Underground maintenance information – as-built drawings of utilities and drain lines, and operation and maintenance (O&M) procedures for on-site drainage systems (include details such as how and when to clean screens, catch basins, drain lines, and clean-outs), and sewage/septic systems (include details such as how and when to inspect the system, pump the tank, and check settings), if applicable;
- Information on operating and maintaining a whole house fan system, Action Item 2-43, if applicable;
- If A/C, information about operation and maintenance of the system, any installed air filter systems, and directions on programming the thermostat with desirable set-points for optimum comfort and efficiency.

*Landscaping Operations and Maintenance Kit must include:*

- Warranties and operating instructions for any irrigation system, other equipment or landscaping you have installed;
- A list of native and drought-resistant plants recommended for use in landscaping (See page 12; also, contact BIA-Hawaii and Honolulu Board of Water Supply);
- Information on mulching and other landscaping techniques that will not increase risk of termite damage to the home;
- Information on site-critical areas, such as buffer zones, that should be protected;
- Information on protecting and caring for major landscape features, such as mature trees, particularly if they contribute to the energy performance and comfort of the home.

#### 5-4 Provide a laundry line. (If indoors, e.g., garage, provide adequate ventilation.) 2 Points

Install a laundry line – rotary or linear, permanent or retractable – preferably in a convenient outdoor location. If the line must be in a garage or utility room, **you must ensure adequate ventilation** to avoid moisture problems in the home, **and educate the homeowner** on the importance of using the ventilation. Using only a clothesline, instead of electric or gas dryer, saves an average of 1,000 kWh of electricity a year.

#### 5-5 Recycling center with two or more bins included in or near kitchen (can be outdoors). 2 Points

Provide a convenient, dry location for recycling bins near the kitchen where 80% of household waste is generated. Check with your municipality first to see whether the bins offered by the program are suitable to meet the daily collection needs of the family in the home. If not, most millwork manufacturers include recycling centers within their cabinetry line, allowing the homeowner

## SECTION 5: HOME OPERATION

convenient pre-sorting, while keeping municipal containers outside for weekly or bi-weekly collection.

- |     |  |          |
|-----|--|----------|
| 5-6 | Build a lockable storage closet for hazardous cleaning and maintenance products, separate from occupied space. | 2 Points |
|-----|--|----------|

Provide a lockable storage closet in the garage (vented to the outside away from fresh air intakes such as windows), or a detached storage unit for toxic or otherwise dangerous chemicals and materials. Keep the storage closet small, to discourage homeowner from accumulating too many hazardous products, and locate it away from any source of ignition, such as a water heater. Provide a note in the Operations & Maintenance Kit advising that all hazardous materials should be stored in original containers.

- |     |  |          |
|-----|--|----------|
| 5-7 | Furnish three Energy Star® compact fluorescent light bulbs to owners (encouraged if installing screw-in compacts). | 3 Points |
|-----|--|----------|

Provide replacement CFLs for all styles installed in the home at move-in (minimum of three bulbs). This is a convenience to the homeowner, and, for conventional screw-in fixtures, will reduce the likelihood of the homeowner going back to incandescent bulbs when the CFLs wear out.

- |     |  |          |
|-----|--|----------|
| 5-8 | Conduct consumer orientation during final walk-through (point out BuiltGreen™ features, how to maintain them, operate them). | 3 Points |
|-----|--|----------|

Draw the homeowner's attention to the green features of their new home during final walk-through, explaining the benefits and how to operate them for best effect. This will reinforce the value and importance of these features, as well as the quality of their new home, and help ensure that they take steps to maintain its performance.

- |     |   |          |
|-----|---|----------|
| 5-9 | Builder's own idea for education and encouraging consumers to take care of their home in an environmentally friendly way. | 3 Points |
|-----|---|----------|

This Action Item encourages your creativity in finding ways to educate and encourage the homeowner to maintain the "green" performance of their home. Providing additional information on green living, video instructions, or signing them up for attendance to a workshop or seminar on some aspect of environmentally-friendly living are some suggestions. The action must be a significant step beyond the other Action Items in Section 5.

###



General Decision Number: HI150001 09/04/2015 HI1

Superseded General Decision Number: HI20140001

State: Hawaii

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

Counties: Hawaii Statewide.

BUILDING CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories); HEAVY AND HIGHWAY CONSTRUCTION PROJECTS AND DREDGING

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/02/2015
1	01/16/2015
2	01/23/2015
3	02/06/2015
4	02/27/2015
5	03/06/2015
6	03/13/2015
7	03/27/2015
8	05/29/2015
9	07/03/2015
10	07/10/2015
11	08/07/2015
12	08/21/2015
13	08/28/2015
14	09/04/2015

ASBE0132-001 08/29/2010

	Rates	Fringes
Asbestos Workers/Insulator		
Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems. Also the application of firestopping material for wall openings and penetrations in walls, floors, ceilings and		

curtain walls.....	\$ 36.65	22.24
-----		
BOIL0627-005 01/01/2013		
	Rates	Fringes
BOILERMAKER.....	\$ 35.20	27.35
-----		
BRHI0001-001 09/03/2012		
	Rates	Fringes
BRICKLAYER		
Bricklayers and Stonemasons.....	\$ 35.35	22.92
Pointers, Caulkers and		
Weatherproofers.....	\$ 35.60	22.92
-----		
BRHI0001-002 09/02/2013		
	Rates	Fringes
Tile, Marble & Terrazzo Worker		
Terrazzo Base Grinders.....	\$ 35.29	23.22
Terrazzo Floor Grinders		
and Tenders.....	\$ 32.24	23.22
Tile, Marble and Terrazzo		
Workers.....	\$ 37.10	23.22
-----		
CARP0745-001 09/01/2014		
	Rates	Fringes
Carpenters:		
Carpenters; Hardwood Floor		
Layers; Patent Scaffold		
Erectors (14 ft. and		
over); Piledrivers;		
Pneumatic Nailers; Wood		
Shinglers and Transit		
and/or Layout Man.....	\$ 42.25	20.71
Millwrights and Machine		
Erectors.....	\$ 42.50	20.71
Power Saw Operators (2		
h.p. and over).....	\$ 42.40	20.71
-----		
CARP0745-002 09/01/2014		
	Rates	Fringes
Drywall and Acoustical		
Workers and Lathers.....	\$ 42.50	20.71
-----		
ELEC1186-001 08/22/2015		
	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 47.36	28.53
Electricians.....	\$ 43.05	27.22
Telecommunication worker....	\$ 26.30	11.58
-----		
ELEC1186-002 08/22/2015		

	Rates	Fringes
Line Construction:		
Cable Splicers.....	\$ 47.36	28.53
Groundmen/Truck Drivers.....	\$ 32.29	23.93
Heavy Equipment Operators...	\$ 38.75	25.91
Linemen.....	\$ 43.05	27.22
Telecommunication worker....	\$ 26.30	11.58

-----  
ELEV0126-001 01/01/2015

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 53.07	28.38

a. VACATION: Employer contributes 8% of basic hourly rate for 5 years service and 6% of basic hourly rate for 6 months to 5 years service as vacation pay credit.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day and Christmas Day.

-----  
ENGI0003-002 09/01/2014

	Rates	Fringes
Diver (Aqua Lung) (Scuba))		
Diver (Aqua Lung) (Scuba) (over a depth of 30 feet)...	\$ 61.50	27.06
Diver (Aqua Lung) (Scuba) (up to a depth of 30 feet)..	\$ 52.13	27.06
Stand-by Diver (Aqua Lung) (Scuba).....	\$ 42.75	27.06
Diver (Other than Aqua Lung)		
Diver (Other than Aqua Lung).....	\$ 61.50	27.06
Diver Tender (Other than Aqua Lung).....	\$ 39.72	27.06
Stand-by Diver (Other than Aqua Lung).....	\$ 42.75	27.06
Helicopter Work		
Airborne Hoist Operator for Helicopter.....	\$ 41.30	27.06
Co-Pilot of Helicopter.....	\$ 41.44	27.06
Pilot of Helicopter.....	\$ 41.61	27.06
Power equipment operator - tunnel work		
GROUP 1.....	\$ 37.74	27.06
GROUP 2.....	\$ 37.85	27.06
GROUP 3.....	\$ 38.02	27.06
GROUP 4.....	\$ 38.29	27.06
GROUP 5.....	\$ 38.60	27.06
GROUP 6.....	\$ 39.25	27.06
GROUP 7.....	\$ 39.57	27.06
GROUP 8.....	\$ 39.68	27.06
GROUP 9.....	\$ 39.79	27.06
GROUP 9A.....	\$ 40.02	27.06
GROUP 10.....	\$ 40.08	27.06
GROUP 10A.....	\$ 40.23	27.06
GROUP 11.....	\$ 40.38	27.06
GROUP 12.....	\$ 40.74	27.06

GROUP 12A.....	\$ 41.10	27.06
Power equipment operators:		
GROUP 1.....	\$ 37.44	27.06
GROUP 2.....	\$ 37.55	27.06
GROUP 3.....	\$ 37.72	27.06
GROUP 4.....	\$ 37.99	27.06
GROUP 5.....	\$ 38.30	27.06
GROUP 6.....	\$ 38.95	27.06
GROUP 7.....	\$ 39.27	27.06
GROUP 8.....	\$ 39.38	27.06
GROUP 9.....	\$ 39.49	27.06
GROUP 9A.....	\$ 39.72	27.06
GROUP 10.....	\$ 39.78	27.06
GROUP 10A.....	\$ 39.93	27.06
GROUP 11.....	\$ 40.08	27.06
GROUP 12.....	\$ 40.44	27.06
GROUP 12A.....	\$ 40.80	27.06
GROUP 13.....	\$ 37.72	27.06
GROUP 13A.....	\$ 37.99	27.06
GROUP 13B.....	\$ 38.30	27.06
GROUP 13C.....	\$ 38.95	27.06
GROUP 13D.....	\$ 39.27	27.06
GROUP 13E.....	\$ 39.38	27.06

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Fork Lift (up to and including 10 tons); Partsman (heavy duty repair shop parts room when needed).

GROUP 2: Conveyor Operator (Handling building material); Hydraulic Monitor; Mixer Box Operator (Concrete Plant).

GROUP 3: Brakeman; Deckhand; Fireman; Oiler; Oiler/Gradechecker; Signalman; Switchman; Highline Cableway Signalman; Bargeman; Bunkerman; Concrete Curing Machine (self-propelled, automatically applied unit on streets, highways, airports and canals); Leveeman; Roller (5 tons and under); Tugger Hoist.

GROUP 4: Boom Truck or dual purpose "A" Frame Truck (5 tons or less); Concrete Placing Boom (Building Construction); Dinky Operator; Elevator Operator; Hoist and/or Winch (one drum); Straddle Truck (Ross Carrier, Hyster and similar).

GROUP 5: Asphalt Plant Fireman; Compressors, Pumps, Generators and Welding Machines ("Bank" of 9 or more, individually or collectively); Concrete Pumps or Pumpcrete Guns; Lubrication and Service Engineer (Grease Rack); Screedman.

GROUP 6: Boom Truck or Dual Purpose "A"Frame Truck (over 5 tons); Combination Loader/Backhoe (up to and including 3/4 cu. yd.); Concrete Batch Plants (wet or dry); Concrete Cutter, Groover and/or Grinder (self-propelled unit on streets, highways, airports, and canals); Conveyor or Concrete Pump (Truck or Equipment Mounted); Drilling Machinery (not to apply to waterliners, wagon drills or jack hammers); Fork Lift (over 10 tons); Loader (up to and including 3 and 1/2 cu. yds); Lull High Lift (under 40 feet); Lubrication and Service Engineer (Mobile); Maginnis Internal Full Slab Vibrator (on airports, highways, canals and warehouses); Man or Material Hoist; Mechanical Concrete Finisher (Large Clary, Johnson Bidwell, Bridge Deck and

similar); Mobile Truck Crane Driver; Portable Shotblast Concrete Cleaning Machine; Portable Boring Machine (under streets, highways, etc.); Portable Crusher; Power Jumbo Operator (setting slip forms, etc., in tunnels); Rollers (over 5 tons); Self-propelled Compactor (single engine); Self-propelled Pavement Breaker; Skidsteer Loader with attachments; Slip Form Pumps (Power driven by hydraulic, electric, air, gas, etc., lifting device for concrete forms); Small Rubber Tired Tractors; Trencher (up to and including 6 feet); Underbridge Personnel Aerial Platform (50 feet of platform or less).

GROUP 7: Crusher Plant Engineer, Dozer (D-4, Case 450, John Deere 450, and similar); Dual Drum Mixer, Extend Lift; Hoist and/or Winch (2 drums); Loader (over 3 and 1/2 cu. yds. up to and including 6 yards.); Mechanical Finisher or Spreader Machine (asphalt), (Barber Greene and similar) (Screedman required); Mine or Shaft Hoist; Mobile Concrete Mixer (over 5 tons); Pipe Bending Machine (pipelines only); Pipe Cleaning Machine (tractor propelled and supported); Pipe Wrapping Machine (tractor propelled and supported); Roller Operator (Asphalt); Self-Propelled Elevating Grade Plane; Slusher Operator; Tractor (with boom) (D-6, or similar); Trencher (over 6 feet and less than 200 h.p.); Water Tanker (pulled by Euclids, T-Pulls, DW-10, 20 or 21, or similar); Winchman (Stern Winch on Dredge).

GROUP 8: Asphalt Plant Operator; Barge Mate (Seagoing); Cast-in-Place Pipe Laying Machine; Concrete Batch Plant (multiple units); Conveyor Operator (tunnel); Deckmate; Dozer (D-6 and similar); Finishing Machine Operator (airports and highways); Gradesetter; Kolman Loader (and similar); Mucking Machine (Crawler-type); Mucking Machine (Conveyor-type); No-Joint Pipe Laying Machine; Portable Crushing and Screening Plant; Power Blade Operator (under 12); Saurman Type Dragline (up to and including 5 yds.); Stationary Pipe Wrapping, Cleaning and Bending Machine; Surface Heater and Planer Operator, Tractor (D-6 and similar); Tri-Batch Paver; Tunnel Badger; Tunnel Mole and/or Boring Machine Operator Underbridge Personnel Aerial Platform (over 50 feet of platform).

GROUP 9: Combination Mixer and Compressor (gunite); Do-Mor Loader and Adams Elegrader; Dozer (D-7 or equal); Wheel and/or Ladder Trencher (over 6 feet and 200 to 749 h.p.).

GROUP 9A: Dozer (D-8 and similar); Gradesetter (when required by the Contractor to work from drawings, plans or specifications without the direct supervision of a foreman or superintendent); Push Cat; Scrapers (up to and including 20 cu. yds); Self-propelled Compactor with Dozer; Self-Propelled, Rubber-Tired Earthmoving Equipment (up to and including 20 cu. yds) (621 Band and similar); Sheep's Foot; Tractor (D-8 and similar); Tractors with boom (larger than D-6, and similar).

GROUP 10: Chicago Boom; Cold Planers; Heavy Duty Repairman or Welder; Hoist and/or Winch (3 drums); Hydraulic Skooper (Koehring and similar); Loader (over 6 cu. yds. up to and including 12 cu. yds.); Saurman type Dragline (over 5 cu. yds.); Self-propelled, rubber-tired Earthmoving Equipment (over 20 cu. yds. up to and including 31 cu. yds.) (637D and similar); Soil Stabilizer (P & H or equal); Sub-Grader

(Gurries or other automatic type); Tractors (D-9 or equivalent, all attachments); Tractor (Tandem Scraper); Watch Engineer.

GROUP 10A: Boat Operator; Cable-operated Crawler Crane (up to and including 25 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (up to and including 1 cu. yd.); Dozer D9-L; Dozer (D-10, HD41 and similar) (all attachments); Gradall (up to and including 1 cu. yd.); Hydraulic Backhoe (over 3/4 cu. yds. up to and including 2 cu. yds.); Mobile Truck Crane Operator (up to and including 25 tons) (Mobile Truck Crane Driver Required); Self-propelled Boom Type Lifting Device (Center Mount) (up to and including 25 tons) (Grove, Drott, P&H, Pettibone and similar; Trencher (over 6 feet and 750 h.p. or more); Watch Engineer (steam or electric).

GROUP 11: Automatic Slip Form Paver (concrete or asphalt); Band Wagon (in conjunction with Wheel Excavator); Cable-operated Crawler Cranes (over 25 tons but less than 50 tons); Cable-operated Power Shovel, Clamshell, Dragline and Backhoe (over 1 cu. yd. up to 7 cu. yds.); Gradall (over 1 cu. yds. up to 7 cu. yds.); DW-10, 20, etc. (Tandem); Earthmoving Machines (multiple propulsion power units and 2 or more Scrapers) (up to and including 35 cu. yds., "struck" m.r.c.); Highline Cableway; Hydraulic Backhoe (over 2 cu. yds. up to and including 4 cu. yds.); Leverman; Lift Slab Machine; Loader (over 12 cu. yds); Master Boat Operator; Mobile Truck Crane Operator (over 25 tons but less than 50 tons); (Mobile Truck Crane Driver required); Pre-stress Wire Wrapping Machine; Self-propelled Boom-type Lifting Device (Center Mount) (over 25 tons m.r.c); Self-propelled Compactor (with multiple-propulsion power units); Single Engine Rubber Tired Earthmoving Machine (with Tandem Scraper); Tandem Cats; Trencher (pulling attached shield).

GROUP 12: Clamshell or Dipper Operator; Derricks; Drill Rigs; Multi-Propulsion Earthmoving Machines (2 or more Scrapers) (over 35 cu. yds "struck"m.r.c.); Operators (Derricks, Piledrivers and Cranes); Power Shovels and Draglines (7 cu. yds. m.r.c. and over); Self-propelled rubber-tired Earthmoving equipment (over 31 cu. yds.) (657B and similar); Wheel Excavator (up to and including 750 cu. yds. per hour); Wheel Excavator (over 750 cu. yds. per hour).

GROUP 12A: Dozer (D-11 or similar or larger); Hydraulic Excavators (over 4 cu. yds.); Lifting cranes (50 tons and over); Pioneering Dozer/Backhoe (initial clearing and excavation for the purpose of providing access for other equipment where the terrain worked involves 1-to-1 slopes that are 50 feet in height or depth, the scope of this work does not include normal clearing and grubbing on usual hilly terrain nor the excavation work once the access is provided); Power Blade Operator (Cat 12 or equivalent or over); Straddle Lifts (over 50 tons); Tower Crane, Mobile; Traveling Truss Cranes; Universal, Liebherr, Linden, and similar types of Tower Cranes (in the erection, dismantling, and moving of equipment there shall be an additional Operating Engineer or Heavy Duty Repairman); Yo-Yo Cat or Dozer.

GROUP 13: Truck Driver (Utility, Flatbed, etc.)

GROUP 13A: Dump Truck, 8 cu.yds. and under (water level);  
Water Truck (up to and including 2,000 gallons).

GROUP 13B: Water Truck (over 2,000 gallons); Tandem Dump  
Truck, over 8 cu. yds. (water level).

GROUP 13C: Truck Driver (Semi-trailer. Rock Cans, Semi-Dump  
or Roll-Offs).

GROUP 13D: Truck Driver (Slip-In or Pup).

GROUP 13E: End Dumps, Unlicensed (Euclid, Mack, Caterpillar  
or similar); Tractor Trailer (Hauling Equipment); Tandem  
Trucks hooked up to Trailer (Hauling Equipment)

BOOMS AND/OR LEADS (HOURLY PREMIUMS):

The Operator of a crane (under 50 tons) with a boom of 80  
feet or more (including jib), or of a crane (under 50 tons)  
with leads of 100 feet or more, shall receive a per hour  
premium for each hour worked on said crane (under 50 tons)  
in accordance with the following schedule:

Booms of 80 feet up to but not including 130 feet or Leads of 100 feet up to but not including 130 feet	0.50
Booms and/or Leads of 130 feet up to but not including 180 feet	0.75
Booms and/or Leads of 180 feet up to and including 250 feet	1.15
Booms and/or Leads over 250 feet	1.50

The Operator of a crane (50 tons and over) with a boom of 180  
feet or more (including jib) shall receive a per hour  
premium for each hour worked on said crane (50 tons and  
over) in accordance with the following schedule:

Booms of 180 feet up to and including 250 feet	1.25
Booms over 250 feet	1.75

-----  
ENGI0003-004 09/01/2014

	Rates	Fringes
Dredging: (Boat Operators)		
Boat Deckhand.....	\$ 37.72	27.06
Boat Operator.....	\$ 39.93	27.06
Master Boat Operator.....	\$ 40.08	27.06
Dredging: (Clamshell or Dipper Dredging)		
GROUP 1.....	\$ 40.44	27.06
GROUP 2.....	\$ 39.78	27.06
GROUP 3.....	\$ 39.38	27.06
GROUP 4.....	\$ 37.72	27.06
Dredging: (Derricks)		
GROUP 1.....	\$ 40.44	27.06
GROUP 2.....	\$ 39.78	27.06
GROUP 3.....	\$ 39.38	27.06

GROUP 4.....	\$ 37.72	27.06
Dredging: (Hydraulic Suction Dredges)		
GROUP 1.....	\$ 40.08	27.06
GROUP 2.....	\$ 39.93	27.06
GROUP 3.....	\$ 39.78	27.06
GROUP 4.....	\$ 39.72	27.06
GROUP 5.....	\$ 37.88	26.76
Group 5.....	\$ 39.38	27.06
GROUP 6.....	\$ 37.77	26.76
Group 6.....	\$ 39.27	27.06
GROUP 7.....	\$ 36.22	26.76
Group 7.....	\$ 37.72	27.06

CLAMSHELL OR DIPPER DREDGING CLASSIFICATIONS

- GROUP 1: Clamshell or Dipper Operator.
- GROUP 2: Mechanic or Welder; Watch Engineer.
- GROUP 3: Barge Mate; Deckmate.
- GROUP 4: Bargeman; Deckhand; Fireman; Oiler.

HYDRAULIC SUCTION DREDGING CLASSIFICATIONS

- GROUP 1: Leverman.
- GROUP 2: Watch Engineer (steam or electric).
- GROUP 3: Mechanic or Welder.
- GROUP 4: Dozer Operator.
- GROUP 5: Deckmate.
- GROUP 6: Winchman (Stern Winch on Dredge)
- GROUP 7: Deckhand (can operate anchor scow under direction of Deckmate); Fireman; Leveeman; Oiler.

DERRICK CLASSIFICATIONS

- GROUP 1: Operators (Derricks, Piledrivers and Cranes).
- GROUP 2: Saurman Type Dragline (over 5 cubic yards).
- GROUP 3: Deckmate; Saurman Type Dragline (up to and including 5 yards).
- GROUP 4: Deckhand, Fireman, Oiler.

-----  
ENGI0003-044 09/02/2013

	Rates	Fringes
Power Equipment Operators (PAVING)		
(10) Cold Planer.....	\$ 38.25	26.98
(10)Loader (2 1/2 cu. yds. and under).....	\$ 37.42	26.98
(10)Soil Stabilizer.....	\$ 38.25	26.98
(11)Loader (over 2 1/2 cu. yds. to and including 5 cu. yds.).....	\$ 37.74	26.98
(3)Roller Operator (five tons and under).....	\$ 36.19	26.98
(5)Screed Person.....	\$ 37.42	26.98
(6)Combination Loader/Backhoe (up to 3/4 cu.yd.).....	\$ 35.48	26.98
(6)Concrete Saws and/or Grinder (self-propelled unit on streets, highways,		



airports and canals).....\$ 37.42	26.98
(6)Roller Operator (over five tons).....\$ 37.62	26.98
(7)Combination Loader/Backhoe (over 3/4 cu.yd.).....\$ 36.46	26.98
(8) Asphalt Plant Operator..\$ 37.89	26.98
Asphalt Concrete Material Transfer.....\$ 37.42	26.98
Asphalt Raker.....\$ 36.46	26.98
Asphalt Spreader Operator...\$ 37.94	26.98
Grader.....\$ 38.25	26.98
Laborer, Hand Roller.....\$ 35.96	26.98

-----  
IRON0625-001 09/01/2014

Rates	Fringes
-------	---------

Ironworkers:.....\$ 35.75	29.01
---------------------------	-------

a. Employees will be paid \$.50 per hour more while working in tunnels and coffer dams; \$1.00 per hour more when required to work under or are covered with water (submerged) and when they are required to work on the summit of Mauna Kea, Mauna Loa or Haleakala.

-----  
\* LAB00368-001 08/31/2015

Rates	Fringes
-------	---------

Laborers:

Driller.....\$ 35.35	17.51
Final Clean Up.....\$ 25.75	13.34
Gunite/Shotcrete Operator and High Scaler.....\$ 34.85	17.51
Laborer I.....\$ 34.35	17.51
Laborer II.....\$ 31.75	17.51
Mason Tender/Hod Carrier....\$ 34.85	17.51
Powderman.....\$ 35.35	17.51
Window Washer (bosun chair).\$ 33.85	17.51

# LABORERS CLASSIFICATIONS

Laborer I: Air Blasting run by electric or pneumatic compressor; Asphalt Laborer, Ironer, Raker, Luteman, and Handroller, and all types of Asphalt Spreader Boxes; Asphalt Shoveler; Assembly and Installation of Multiplates, Liner Plates, Rings, Mesh, Mats; Batching Plant (portable and temporary); Boring Machine Operator (under streets and sidewalks); Buggymobile; Burning and Welding; Chainsaw, Faller, Logloader, and Bucker; Compactors (Jackson Jumping Jack and similar); Concrete Bucket Dumpman; Concrete Chipping; Concrete Chuteman/Hoseman (pouring concrete) (the handling of the chute from ready-mix trucks for such jobs as walls, slabs, decks, floors, foundations, footings, curbs, gutters, and sidewalks); Concrete Core Cutter (Walls, Floors, and Ceiling); Concrete Grinding or Sanding; Concrete: Hooking on, signaling, dumping of concrete for treme work over water on caissons, pilings, abutments, etc.; Concrete: Mixing, handling, conveying, pouring, vibrating, otherwise placing of concrete or aggregates or by any other process; Concrete: Operation of motorized wheelbarrows or buggies or machines of similar character, whether run by gas, diesel, or electric power; Concrete

Placement Machine Operator: operation of Somero Hammerhead, Copperheads, or similar machines; Concrete Pump Machine (laying, coupling, uncoupling of all connections and cleaning of equipment); Concrete and/or Asphalt Saw (Walking or Handtype) (cutting walls or flatwork) (scoring old or new concrete and/or asphalt) (cutting for expansion joints) (streets and ways for laying of pipe, cable or conduit for all purposes); Concrete Shovelers/Laborers (Wet or Dry); Concrete Screeding for Rough Strike-Off: Rodding or striking-off, by hand or mechanical means prior to finishing; Concrete Vibrator Operator; Coring Holes: Walls, footings, piers or other obstructions for passage of pipes or conduits for any purpose and the pouring of concrete to secure the hole; Cribbers, Shorer, Lagging, Sheeting, and Trench Jacking and Bracing, Hand-Guided Lagging Hammer Whaling Bracing; Curbing (Concrete and Asphalt); Curing of Concrete (impervious membrane and form oiler) mortar and other materials by any mode or method; Cut Granite Curb Setter (setting, leveling and grouting of all precast concrete or stone curbs); Cutting and Burning Torch (demolition); Dri Pak-It Machine; Environmental Abatement: removal of asbestos, lead, and bio hazardous materials (EPA and/or OSHA certified); Falling, bucking, yarding, loading or burning of all trees or timber on construction site; Forklift (9 ft. and under); Gas, Pneumatic, and Electric tools; Grating and Grill work for drains or other purposes; Green Cutter of concrete or aggregate in any form, by hand, mechanical means, grindstone or air and/or water; Grout: Spreading for any purpose; Guinea Chaser (Grade Checker) for general utility trenches, sitework, and excavation; Headerboard Man (Asphalt or Concrete); Heat Welder of Plastic (Laborers' AGC certified workers) (when work involves waterproofing for waterponds, artificial lakes and reservoir) heat welding for sewer pipes and fusion of HDPE pipes; Heavy Highway Laborer (Rigging, signaling, handling, and installation of pre-cast catch basins, manholes, curbs and gutters); High Pressure Nozzleman - Hydraulic Monitor (over 100# pressure); Jackhammer Operator; Jacking of slip forms: All semi and unskilled work connected therewithin; Laying of all multi-cell conduit or multi-purpose pipe; Magnesite and Mastic Workers (Wet or Dry)(including mixer operator);Mortar Man; Mortar Mixer (Block, Brick, Masonry, and Plastering); Nozzleman (Sandblasting and/or Water Blasting): handling, placing and operation of nozzle; Operation, Manual or Hydraulic jacking of shields and the use of such other mechanical equipment as may be necessary; Pavement Breakers; Paving, curbing and surfacing of streets, ways, courts, under and overpasses, bridges, approaches, slope walls, and all other labor connected therewith; Pilecutters; Pipe Accessment in place, bolting and lining up of sectional metal or other pipe including corrugated pipe; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, HDPE, metallic or non-metallic, conduit, and any other stationary-type of tubular device used for conveying of any substance or element, whether water, sewage, solid, gas, air, or other product whatsoever and without regard to the nature of material from which tubular material is fabricated; No-joint pipe and stripping of same, Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, treating Creosote and similar-type

materials (6-inch) pipe and over); Piping: resurfacing and paving of all ditches in preparation for laying of all pipes; Pipe laying of lateral sewer pipe from main or side sewer to buildings or structure (except Contactor may direct work be done under proper supervision); Pipe laying, leveling and marking of the joint used for main or side sewers and storm sewers; Laying of all clay, terra cotta, ironstone, vitrified concrete, HDPE or other pipe for drainage; Placing and setting of water mains, gas mains and all pipe including removal of skids; Plaster Mortar Mixer/Pump; Pneumatic Impact Wrench; Portable Sawmill Operation; Choker setters, off bearers, and lumber handlers connected with clearing; Posthole Digger (Hand Held, Gas, Air and Electric); Powderman's Tender; Power Broom Sweepers (Small); Preparation and Compaction of roadbeds for railroad track laying, highway construction, and the preparation of trenches, footings, etc., for cross-country transmission by pipelines, electrical transmission or underground lines or cables (by mechanical means); Raising of structure by manual or hydraulic jacks or other methods and resetting of structure in new locations, including all concrete work; Ramming or compaction; Rigging in connection with Laborers' work (except demolition), Signaling (including the use of walkie talkie) Choke Setting, tag line usage; Tagging and Signaling of building materials into high rise units; Riprap, Stonepaver, and Rock Slinger (includes placement of stacked concrete, wet or dry and loading, unloading, signaling, slinging and setting of other similar materials); Rotary Scarifier (including multiple head concrete chipping Scarifier); Salamander Heater, Drying of plaster, concrete mortar or other aggregate; Scaffold Erector Leadman; Scaffolds: (Swing and hanging) including maintenance thereof; Scaler; Septic Tank/Cesspool and Drain Fields Digger and Installer; Shredder/Chipper (tree branches, brush, etc.); Stripping and Setting Forms; Stripping of Forms: Other than panel forms which are to be re-used in their original form, and stripping of forms on all flat arch work; Tampers (Barko, Wacker, and similar type); Tank Scaler and Cleaners; Tarman; Tree Climbers and Trimmers; Trencher (includes hand-held, Davis T-66 and similar type); Trucks (flatbed up to and including 2 1/2 tons when used in connection with on-site Laborers' work; Trucks (Refuse and Garbage Disposal) (from job site to dump); Vibra-Screed (Bull Float in connection with Laborers' work); Well Points, Installation of or any other dewatering system.

Laborer II: Asphalt Plant Laborer; Boring Machine Tender; Bridge Laborer; Burning of all debris (crates, boxes, packaging waste materials); Chainman, Rodmen, and Grade Markers; Cleaning, clearing, grading and/or removal for streets, highways, roadways, aprons, runways, sidewalks, parking areas, airports, approaches, and other similar installations; Cleaning or reconditioning of streets, ways, sewers and waterlines, all maintenance work and work of an unskilled and semi-skilled nature; Concrete Bucket Tender (Groundman) hooking and unhooking of bucket; Concrete Forms; moving, cleaning, oiling and carrying to the next point of erection of all forms; Concrete Products Plant Laborers; Conveyor Tender (conveying of building materials); Crushed Stone Yards and Gravel and Sand Pit Laborers and all other similar plants; Demolition, Wrecking and Salvage Laborers: Wrecking and dismantling of buildings

and all structures, with use of cutting or wrecking tools, breaking away, cleaning and removal of all fixtures, All hooking, unhooking, signaling of materials for salvage or scrap removed by crane or derrick; Digging under streets, roadways, aprons or other paved surfaces; Driller's Tender; Chuck Tender, Outside Nipper; Dry-packing of concrete (plugging and filling of she-bolt holes); Fence and/or Guardrail Erector: Dismantling and/or re-installation of all fence; Finegrader; Firewatcher; Flagman (Coning, preparing, establishing and removing portable roadway barricade devices); Signal Men on all construction work defined herein, including Traffic Control Signal Men at construction site; General Excavation; Backfilling, Grading and all other labor connected therewith; Digging of trenches, ditches and manholes and the leveling, grading and other preparation prior to laying pipe or conduit for any purpose; Excavations and foundations for buildings, piers, foundations and holes, and all other construction. Preparation of street ways and bridges; General Laborer: Cleaning and Clearing of all debris and surplus material. Clean-up of right-of-way. Clearing and slashing of brush or trees by hand or mechanical cutting. General Clean up: sweeping, cleaning, wash-down, wiping of construction facility and equipment (other than "Light Clean up (Janitorial) Laborer. Garbage and Debris Handlers and Cleaners. Appliance Handling (job site) (after delivery unloading in storage area); Ground and Soil Treatment Work (Pest Control); Guniting/Shotcrete Operator Tender; Junk Yard Laborers (same as Salvage Yard); Laser Beam "Target Man" in connection with Laborers' work; Layout Person for Plastic (when work involves waterproofing for waterpools, artificial lakes and reservoirs); Limbers, Brush Loaders, and Pilers; Loading, Unloading, carrying, distributing and handling of all rods and material for use in reinforcing concrete construction (except when a derrick or outrigger operated by other than hand power is used); Loading, unloading, sorting, stockpiling, handling and distribution of water mains, gas mains and all pipes; Loading and unloading of all materials, fixtures, furnishings and appliances from point of delivery to stockpile to point of installation; hooking and signaling from truck, conveyance or stockpile; Material Yard Laborers; Pipelayer Tender; Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, Creosote, and similar-type materials (pipe under 6 inches); Plasterer Laborer; Preparation, construction and maintenance of roadbeds and sub-grade for all paving, including excavation, dumping, and spreading of sub-grade material; Prestressed or precast concrete slabs, walls, or sections: all loading, unloading, stockpiling, hooking on of such slabs, walls or sections; Quarry Laborers; Railroad, Streetcar, and Rail Transit Maintenance and Repair; Roustabout; Rubbish Trucks in connection with Building Construction Projects (excluding clearing, grubbing, and excavating); Salvage Yard: All work connected with cutting, cleaning, storing, stockpiling or handling of materials, all cleanup, removal of debris, burning, back-filling and landscaping of the site; Sandblasting Tender (Pot Tender): Hoses and pots or markers; Scaffolds: Erection, planking and removal of all scaffolds used for support for lathers, plasters, brick layers, masons, and other construction trades crafts; Scaffolds: (Specially designed by carpenters) laborers shall tend said carpenter on erection and dismantling thereof, preparation for

foundation or mudsills, maintenance; Scraping of floors; Screeds: Handling of all screeds to be reused; handling, dismantling and conveyance of screeds; Setting, leveling and securing or bracing of metal or other road forms and expansion joints; Sheet piling/trench shoring (handling and placing of skip sheet or wood plank trench shoring); Ship Scalers; Shipwright Tender; Sign Erector (subdivision traffic, regulatory, and street-name signs); Sloper; Slurry Seal Crews (Mixer Operator, Applicator, Squeegee Man, Shuttle Man, Top Man); Snapping of wall ties and removal of tie rods; Soil Test operations of semi and unskilled labor such as filling sand bags; Stripper (Asphalt, Concrete or other Paved Surfaces); Tool Room Attendant (Job Site); Traffic Delineating Device Applicator; Underpinning, lagging, bracing, propping and shoring, loading, signaling, right-of-way clearance along the route of movement, The clearance of new site, excavation of foundation when moving a house or structure from old site to new site; Utilities employees; Water Man; Waterscape/Hardscape Laborers; Wire Mesh Pulling (all concrete pouring operations); Wrecking, stripping, dismantling and handling concrete forms and false work.

-----  
LAB00368-002 09/01/2014

	Rates	Fringes
Landscape & Irrigation Laborers		
GROUP 1.....	\$ 23.20	10.11
GROUP 2.....	\$ 23.70	10.11
GROUP 3.....	\$ 19.70	10.11

LABORERS CLASSIFICATIONS

GROUP 1: Installation of non-potable permanent or temporary irrigation water systems performed for the purposes of Landscaping and Irrigation architectural horticultural work; the installation of drinking fountains and permanent or temporary irrigation systems using potable water for Landscaping and Irrigation architectural horticultural purposes only. This work includes (a) the installation of all heads, risers, valves, valve boxes, vacuum breakers (pressure and non-pressure), low voltage electrical lines and, provided such work involves electrical wiring that will carry 24 volts or less, the installation of sensors, master control panels, display boards, junction boxes, conductors, including all other components for controllers, (b) and metallic (copper, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe including all work incidental thereto, i.e., unloading, handling and distribution of all pipes fittings, tools, materials and equipment, (c) all soldering work in connection with the above whether done by torch, soldering iron, or other means; (d) tie-in to main lines, thrust blocks (both precast and poured in place), pipe hangers and supports incidental to installation of the entire irrigation system, (e) making of pressure tests, start-up testing, flushing, purging, water balancing, placing into operation all irrigation equipment, fixtures and appurtenances installed under this agreement, and (f) the fabrication, replacement, repair and servicing of landscaping and irrigation systems.

Operation of hand-held gas, air, electric, or self-powered tools and equipment used in the performance of Landscape and Irrigation work in connection with architectural horticulture; Choke-setting, signaling, and rigging for equipment operators on job-site in the performance of such Landscaping and Irrigation work; Concrete work (wet or dry) performed in connection with such Landscaping and Irrigation work. This work shall also include the setting of rock, stone, or riprap in connection with such Landscape, Waterscape, Rockscape, and Irrigation work; Grubbing, pick and shovel excavation, and hand rolling or tamping in connection with the performance of such Landscaping and Irrigation work; Sprigging, handseeding, and planting of trees, shrubs, ground covers, and other plantings and the performance of all types of gardening and horticultural work relating to said planting; Operation of flat bed trucks (up to and including 2 1/2 tons).:

GROUP 2. Layout of irrigation and other non-potable irrigation water systems and the layout of drinking fountains and other potable irrigation water systems in connection with such Landscaping and Irrigation work. This includes the layout of all heads, risers, valves, valve boxes, vacuum breakers, low voltage electrical lines, hydraulic and electrical controllers, and metallic (coppers, brass, galvanized, or similar) pipe, as well as PVC or other plastic pipe. This work also includes the reading and interpretation of plans and specifications in connection with the layout of Landscaping, Rockscape, Waterscape, and Irrigation work; Operation of Hydro-Mulching machines (sprayman and driver), Drillers, Trenchers (riding type, Davis T-66, and similar) and fork lifts used in connection with the performance of such Landscaping and Irrigation work; Tree climbers and chain saw tree trimmers, Sporadic operation (when used in connection with Landscaping, Rockscape, Waterscape, and Irrigation work) of Skid-Steer Loaders (Bobcat and similar), Cranes (Bantam, Grove, and similar), Hoptos, Backhoes, Loaders, Rollers, and Dozers (Case, John Deere, and similar), Water Trucks, Trucks requiring a State of Hawaii Public Utilities Commission Type 5 and/or type 7 license, sit-down type and "gang" mowers, and other self-propelled, sit-down operated machines not listed under Landscape & Irrigation Maintenance Laborer; Chemical spraying using self-propelled power spraying equipment (200 gallon capacity or more).

GROUP 3: Maintenance of trees, shrubs, ground covers, lawns and other planted areas, including the replanting of trees, shrubs, ground covers, and other plantings that did not "take" or which are damaged; provided, however, that re-planting that requires the use of equipment, machinery, or power tools shall be paid for at the rate of pay specified under Landscape and Irrigation Laborer, Group 1; Raking, mowing, trimming, and runing, including the use of "weed eaters", hedge trimmers, vacuums, blowers, and other hand-held gas, air, electric, or self-powered tools, and the operation of lawn mowers (Note: The operation of sit-down type and "gang" mowers shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer, Group 2); Guywiring, staking, propping, and supporting trees; Fertilizing, Chemical spraying using spray equipment with less than 200 gallon capacity, Maintaining irrigation

and sprinkler systems, including the staking, clamping, and adjustment of risers, and the adjustment and/or replacement of sprinkler heads, (Note: the cleaning and gluing of pipe and fittings shall be paid for at the rate of pay specified under Landscape & Irrigation Laborer(Group 1); Watering by hand or sprinkler system and the performance of other types of gardening, yardman, and horticultural-related work.

-----

\* LAB00368-003 08/31/2015

	Rates	Fringes
Underground Laborer		
GROUP 1.....	\$ 34.95	17.51
GROUP 2.....	\$ 36.45	17.51
GROUP 3.....	\$ 36.95	17.51
GROUP 4.....	\$ 37.95	17.51
GROUP 5.....	\$ 38.30	17.51
GROUP 6.....	\$ 38.55	17.51
GROUP 7.....	\$ 39.00	17.51

GROUP 1: Watchmen; Change House Attendant.

GROUP 2: Swamper; Brakeman; Bull Gang-Muckers, Trackmen; Dumpmen (any method); Concrete Crew (includes rodding and spreading); Grout Crew; Reboundmen

GROUP 3: Chucktenders and Cabletenders; Powderman (Prime House); Vibratorman, Pavement Breakers

GROUP 4: Miners - Tunnel (including top and bottom man on shaft and raise work); Timberman, Retimberman (wood or steel or substitute materials thereof); Blasters, Drillers, Powderman (in heading); Microtunnel Laborer; Headman; Cherry Pickerman (where car is lifted); Nipper; Grout Gunmen; Grout Pumpman & Potman; Gunite, Shotcrete Gunmen & Potmen; Concrete Finisher (in tunnel); Concrete Screed Man; Bit Grinder; Steel Form Raisers & Setters; High Pressure Nozzleman; Nozzleman (on slick line); Sandblaster-Potman (combination work assignment interchangeable); Tugger

GROUP 5: Shaft Work & Raise (below actual or excavated ground level); Diamond Driller; Gunite or Shotcrete Nozzleman; Rodman; Groundman

GROUP 6: Shifter

GROUP 7: Shifter (Shaft Work & Raiser)

-----

PAIN1791-001 07/01/2015

	Rates	Fringes
Painters:		
Brush.....	\$ 34.85	26.45
Sandblaster; Spray.....	\$ 34.85	26.45

-----

PAIN1889-001 07/01/2015

	Rates	Fringes
--	-------	---------

Glaziers.....	\$ 34.78	27.37
-----		
PAIN1926-001 03/01/2015		
	Rates	Fringes
Soft Floor Layers.....	\$ 31.15	25.75
-----		
PAIN1944-001 01/01/2015		
	Rates	Fringes
Taper.....	\$ 41.00	20.50
-----		
* PLAS0630-001 08/31/2015		
	Rates	Fringes
PLASTERER.....	\$ 37.90	25.33
-----		
* PLAS0630-002 08/31/2015		
	Rates	Fringes
Cement Masons:		
Cement Masons.....	\$ 37.90	25.33
Trowel Machine Operators....	\$ 38.05	25.33
-----		
PLUM0675-001 07/05/2015		
	Rates	Fringes
Plumber, Pipefitter, Steamfitter & Sprinkler Fitter...	\$ 39.85	24.46
-----		
ROOF0221-001 09/07/2014		
	Rates	Fringes
Roofers (Including Built Up, Composition and Single Ply).....	\$ 38.10	17.13
-----		
SHEE0293-001 08/01/2015		
	Rates	Fringes
Sheet metal worker.....	\$ 42.96	20.58
-----		
SUHI1997-002 09/15/1997		
	Rates	Fringes
Drapery Installer.....	\$ 13.60	1.20
FENCE ERECTOR (Chain Link Fence).....		
	\$ 9.33	1.65
-----		
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.		
=====		



Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those

classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

-----

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative

Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

**APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015**

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* BOILERMAKER	1000	\$23.93	\$25.64	\$27.34	\$29.05	\$30.76	\$32.47					\$29.45	10
* CARPENTER													
Indentured Prior to 9/1/02	1000	\$17.56										\$12.27	1,10
"	1000		\$19.76	\$21.95	\$26.34	\$30.73	\$35.12	\$39.51	\$41.71			\$20.96	1,10
Indentured After 9/1/02	1000	\$17.56										\$8.27	1,10
"	1000		\$19.76									\$12.26	1,10
"	1000			\$21.95	\$26.34							\$14.76	1,10
"	1000					\$30.73	\$35.12					\$16.76	1,10
"	1000							\$39.51	\$41.71			\$18.76	1,10
* CEMENT FINISHER													
Indentured Prior to 9/1/03	1000	\$18.95										\$8.37	2,10
"	1000		\$20.85	\$22.74	\$26.53	\$28.43	\$30.32	\$32.22	\$34.11			\$25.83	2,10
Indentured On or After 9/1/03	1000	\$18.95	\$20.85	\$22.74	\$26.53	\$28.43	\$30.32	\$32.22	\$34.11			\$13.02	2,10
* CONSTRUCTION CRAFT LABORER (LABORER I)													
Indentured On or After 9/3/02	1000	\$17.18										\$6.55	1,10
"	1000		\$20.61	\$24.05	\$27.48							\$12.95	1,10
* CONSTRUCTION EQUIPMENT OPERATOR													
Indentured On or After 9/1/02	1000	\$20.36										\$7.05	3,10
"	1000		\$22.40									\$17.37	3,10
"	1000			\$24.43								\$18.31	3,10
"	1000				\$28.50							\$20.19	3,10
"	1000					\$32.58						\$22.06	3,10
"	1000						\$36.65					\$23.94	3,10
* DRYWALL INSTALLER													
Indentured Prior to 9/1/02	1000	\$17.66										\$12.27	10
"	1000		\$19.87	\$22.08	\$26.49	\$30.91	\$35.32	\$39.74	\$41.94			\$20.96	10
Indentured After 9/1/02	1000	\$17.66										\$8.27	10
"	1000		\$19.87									\$12.26	10
"	1000			\$22.08	\$26.49							\$14.76	10
"	1000					\$30.91	\$35.32					\$16.76	10
"	1000							\$39.74	\$41.94			\$18.76	10

**APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015**

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* ELECTRICIAN (WIRE & LINE INSTALLER)	1000	\$15.07										\$10.10	10
" "	1000		\$17.22									\$10.42	10
" "	1000			\$19.37								\$16.59	4,10
" "	1000				\$21.53							\$17.57	4,10
" "	1000					\$23.68						\$18.53	4,10
" "	1000						\$25.83					\$19.49	4,10
" "	1000							\$27.98				\$20.47	4,10
" "	1000								\$30.14			\$21.46	4,10
" "	1000									\$34.44		\$23.36	4,10
" "	1000										\$38.75	\$25.30	4,10
<b>(Effective 2/21/16)</b>													
* ELECTRICIAN (WIRE & LINE INSTALLER)	1000	\$15.19										\$10.37	10
" "	1000		\$17.36									\$10.68	10
" "	1000			\$19.53								\$16.90	4,10
" "	1000				\$21.70							\$17.87	4,10
" "	1000					\$23.87						\$18.83	4,10
" "	1000						\$26.04					\$19.80	4,10
" "	1000							\$28.21				\$20.79	4,10
" "	1000								\$30.38			\$21.76	4,10
" "	1000									\$34.72		\$23.70	4,10
" "	1000										\$39.06	\$25.64	4,10
* ELEVATOR CONSTRUCTOR	850	\$26.54										-	10
" "	850		\$29.19									\$28.385	10
" "	1700			\$34.50	\$37.15	\$42.46						\$28.385	10
* FLOOR LAYER													
Indentured After 2/27/94	1000	\$12.46	\$14.02									\$16.75	10
" "	1000			\$15.58	\$17.13							\$21.75	10
" "	1000					\$18.69	\$20.25	\$23.36	\$26.48			\$25.75	10

APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* GLAZIER													
Indentured On or After 7/1/99	1000	\$15.65										\$25.73	5,10
"	1000		\$17.39									\$25.97	5,10
"	1000			\$19.13								\$26.21	5,10
"	1000				\$20.87							\$26.45	5,10
"	1000					\$24.35						\$26.93	5,10
"	1000						\$26.09					\$27.17	5,10
"	1000							\$27.82				\$27.41	5,10
"	1000								\$29.56			\$27.65	5,10
"	1000									\$31.30		\$27.89	5,10
"	1000										\$33.04	\$28.13	5,10
* HEAVY DUTY REPAIRER & WELDER (EQUIP. OPR 9A)													
Indentured On or After 9/1/02	1000	\$20.36										\$7.05	3,10
"	1000		\$22.40									\$17.37	3,10
"	1000			\$24.43								\$18.31	3,10
"	1000				\$28.50							\$20.19	3,10
"	1000					\$32.58						\$22.06	3,10
"	1000						\$34.61					\$23.01	3,10
"	1000							\$36.65				\$23.94	3,10
"	1000								\$38.68			\$24.89	3,10
* INSULATOR													
Hired After 5/3/95	2000	\$19.83										\$7.70	6,10
"	2000		\$19.83									\$17.31	6,10
"	2000			\$23.79								\$17.59	6,10
"	2000				\$27.76							\$17.88	6,10
"	2000					\$31.72						\$18.16	6,10
* IRONWORKER (REINFORCING & STRUCTURAL)													
Indentured After 10/31/93	1000	\$18.38										\$24.67	7,10
"	1000		\$20.21									\$25.19	7,10
"	1000			\$22.05								\$25.71	7,10
"	1000				\$25.73							\$26.76	7,10
"	1000					\$29.40						\$27.81	7,10
"	1000						\$33.08					\$28.86	7,10

**APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015**

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* MASON													
BRICKLAYER													
Indentured On or After 9/1/03	1000	\$18.43	\$20.27	\$22.11	\$25.80	\$27.64	\$29.48	\$31.32	\$33.17			\$10.87	2,10
STONE MASON													
Indentured On or After 9/1/03	1000	\$20.27	\$22.11	\$23.95	\$25.80	\$27.64	\$29.48	\$31.32	\$33.17			\$10.87	2,10
POINTER-CAULKER-WEATHERPROOFER													
Indentured On or After 9/1/03	1000	\$18.55	\$20.41	\$22.26	\$25.97	\$29.68	\$33.39					\$10.87	2,10
* PAINTER	1000	\$15.68										\$8.22	
"	1000		\$17.43	\$19.17	\$20.91	\$22.65						\$11.72	
"	1000						\$24.40					\$12.72	
"	1000							\$27.88	\$31.37			\$13.47	
* PAVING EQUIPMENT OPERATOR	1000	\$21.68										\$7.05	10
"	1000		\$27.59									\$20.77	10
"	1000			\$31.54								\$22.72	10
"	1000				\$35.48							\$24.69	10
* PLASTERER													
Indentured On or After 9/1/03	1000	\$15.62	\$17.57	\$19.52	\$21.47	\$23.42	\$27.33	\$31.23	\$35.14			\$13.02	2,10
* PLUMBER:													
PLUMBER; FIRE SPRINKLER FITTER; REFRIGERATION													
AIR CONDITIONING; STEAMFITTER-WELDER													
Indentured Prior to 9/2/85	1000	\$13.95										\$18.45	8,10
"	1000		\$15.94									\$18.90	8,10
"	1000			\$17.93								\$19.37	8,10
"	1000				\$19.93							\$19.83	8,10
"	1000					\$21.92						\$20.30	8,10
"	1000						\$23.91					\$20.76	8,10
"	1000							\$25.90				\$21.22	8,10
"	1000								\$27.90			\$21.68	8,10
"	1000									\$29.89		\$22.15	8,10
"	1000										\$31.88	\$22.61	8,10

**PLUMBER: Continued on Next Page**

**APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015**

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
<b>PLUMBER:</b> PLUMBER; FIRE SPRINKLER FITTER; REFRIGERATION AIR CONDITIONING; STEAMFITTER-WELDER Indentured On or After 9/2/85	1000	\$16.02										\$4.06	8,10
"	1000		\$16.02									\$4.11	8,10
"	1000			\$18.93								\$5.67	8,10
"	1000				\$18.93							\$5.67	8,10
"	1000					\$21.92						\$6.36	8,10
"	1000						\$21.92					\$6.36	8,10
"	1000							\$25.90				\$7.19	8,10
"	1000								\$25.90			\$7.19	8,10
"	1000									\$29.89		\$7.82	8,10
"	1000										\$29.89	\$7.82	8,10
<b>(Effective 1/3/16)</b>													
<b>* PLUMBER:</b> PLUMBER; FIRE SPRINKLER FITTER; REFRIGERATION AIR CONDITIONING; STEAMFITTER-WELDER Indentured Prior to 9/2/85	1000	\$14.12										\$18.63	8,10
"	1000		\$16.14									\$19.10	8,10
"	1000			\$18.16								\$19.57	8,10
"	1000				\$20.18							\$20.04	8,10
"	1000					\$22.19						\$20.51	8,10
"	1000						\$24.21					\$20.98	8,10
"	1000							\$26.23				\$21.45	8,10
"	1000								\$28.25			\$21.92	8,10
"	1000									\$30.26		\$22.39	8,10
"	1000										\$32.28	\$22.85	8,10
Indentured On or After 9/2/85	1000	\$16.22										\$5.00	8,10
"	1000		\$16.22									\$5.05	8,10
"	1000			\$19.17								\$6.61	8,10
"	1000				\$19.17							\$6.61	8,10
"	1000					\$22.19						\$7.30	8,10
"	1000						\$22.19					\$7.30	8,10
"	1000							\$26.23				\$8.13	8,10
"	1000								\$26.23			\$8.13	8,10
"	1000									\$30.26		\$8.76	8,10
"	1000										\$30.26	\$8.76	8,10



**APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015**

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* ROOFER													
Indentured Prior to 11/1/98	1000	\$17.48	\$19.43	\$23.31								\$13.28	9
"	1000				\$27.20	\$31.08	\$34.97	\$36.91				\$17.53	
Indentured On or After 11/1/98 and Prior to 11/4/12	1000	\$17.48	\$19.43	\$23.31								\$13.28	9
"	1000				\$27.20	\$31.08	\$33.02	\$34.97	\$36.91			\$17.53	
Indentured On or After 11/4/12	2000	\$17.48	\$23.31									\$13.28	9
"	2000			\$31.08	\$34.97							\$17.53	9
* SHEETMETAL WORKER													
"	1000	\$15.76										\$11.40	10
"	1000		\$17.73									\$11.58	10
"	1000			\$19.70								\$19.29	10
"	1000				\$21.67							\$19.78	10
"	1000					\$23.64						\$20.26	10
"	1000						\$25.61					\$20.75	10
"	1000							\$27.58				\$21.23	10
"	1000								\$29.55			\$21.72	10
"	1000									\$31.52		\$22.20	10
"	1000										\$33.49	\$22.69	10
* TAPER													
	1000	\$16.40	\$18.45	\$20.50	\$22.55	\$24.60						\$7.75	
	1000						\$26.65					\$8.25	
	1000							\$30.75	\$34.85			\$10.60	
<b>(Effective 1/1/16)</b>													
* TAPER													
	1000	\$16.60	\$18.68	\$20.75	\$22.83	\$24.90						\$8.25	
	1000						\$26.98					\$8.75	
	1000							\$31.13	\$35.28			\$11.80	
* TELECOMMUNICATION WORKER (TECHNICIAN I / SPLICER)													
"	1000	\$15.78										\$9.78	10
"	1000		\$17.10									\$10.00	10
"	1000			\$18.41								\$10.24	10
"	1000				\$19.73							\$10.46	10
"	1000					\$21.04						\$10.67	10
"	1000						\$23.67					\$11.13	10

APPRENTICE SCHEDULE BULLETIN NO. 486 September 21, 2015

Rates are applicable only to apprentices who are parties to agreements registered with the Department of Labor  
and where the journeyworker to apprentice ratio is met.

Apprentice Classifications	Interval Hrs	BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 8-9
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* TILE SETTER													
CERAMIC & HARD TILE													
Indentured Prior to 9/1/03	1000	\$18.55										\$7.12	2,10
"	1000		\$20.41	\$22.26	\$25.97	\$27.83	\$29.68	\$31.54	\$33.39			\$23.47	2,10
Indentured On or After 9/1/03	1000	\$18.55	\$20.41	\$22.26	\$25.97	\$27.83	\$29.68	\$31.54	\$33.39			\$10.87	2,10

\* Indicates a wage, fringe benefit, remark, or title change from the previous bulletin.

REMARKS:

1. Carpenter, Construction Craft Laborer: \$.50 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
2. Cement Finisher, Mason, Plasterer, Tile Setter: \$1.00 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
3. Construction Equipment Operator, Heavy Duty Repairer & Welder: \$1.25 per hour shall be added to the hourly wage while operating a rig suspended by ropes or cables or to perform work on a Yo-Yo Cat.
4. Electrician:
  - A. One and one-half times the straight-time rate while working in a tunnel under construction; under water with aqualung equipment; in a completed tunnel which has only one entrance or exit providing access to safety and where no other personnel are working; or in an underground structure having no access to safety or where no other personnel are working.
  - B. Double the straight-time rate shall be paid for the following types of hazardous work regardless if fall prevention devices are used:
    - 1) While working from poles, trusses, stacks, towers, tanks, bosun's chairs, swinging or rolling scaffolds, supporting structures, and open platforms, over 70 feet from the ground where the employee is subject to a free fall; provided, however, that when work is performed on stacks, towers or permanent platforms where the employees are on a firm footing within an enclosure, a hazardous condition does not exist regardless of height;
    - 2) While working outside of a railing or enclosure, or temporary platforms extending outside of a building, or from scaffolding or ladder within an enclosure where an employee's footing is within one foot of the top of such railing, and the employee is subject to a free fall of over 70 feet;
    - 3) Working on buildings while leaning over the railing or edge of the building, and is subject to a free fall of 70 feet; or
    - 4) Two hours minimum hazardous pay per day shall be paid while climbing to a stack, tower or permanent platform which exceeds 70 feet from the ground but where the employee is on a firm footing within an enclosure.
  - C. Five percent per hour shall be added to the hourly wage for height pay while working above 9,000 feet elevation.
5. Glazier: Effective 9/16/13 - \$1.00 per hour shall be added to the hourly wage for height pay for exterior glazing work performed in a walking/working surface with an unprotected side or edge 10 feet or more above a lower level which requires protection from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, position device systems, fall restraint systems, perimeter safety cables or controlled decking zones.
6. Insulator: Six percent per hour shall be added to the hourly wage for hazardous pay while working from a boatswain chair, staging or free standing scaffolding erected from ground up or mezzanine floor subject to a free fall and skyclimber suspended from a permanent structure and when working above 40 feet.
7. Ironworker: \$.50 per hour shall be added to the hourly wage while working in tunnels or coffer dams. \$1.00 per hour shall be added to the hourly wage while working under or covered with water (submerged), or on the summits of Mauna Kea, Mauna Loa or Haleakala.
8. Plumber: One and one-half times the straight-time rate for height pay while working from OSHA approved trusses, stacks, towers, tanks, bosun's chair, swinging or rolling scaffolding, supporting structures or on open platforms where the employee is subject to a direct fall of 40 feet or more. Provided, however, that when said work is performed where the employee is on a firm footing within an enclosure, a hazardous condition does not exist regardless of height. \$1.00 per hour shall be added to the straight-time rate while working with flame cutting or any type of welding equipment on any galvanized material or product for at least an hour.
9. Roofer: When an apprentice has accumulated 2500 hours, \$4.25 will be added to his/her pension/annuity plan.  
The apprenticeship program for apprentices indentured on or after November 4, 2012, consists of four steps with 2,000 hours for each step.

REMARKS:

10. Overtime/Holiday must be paid at one and one-half times the basic hourly rate plus the hourly cost of required fringe, with the following exceptions:

A. **Two times the basic hourly rate plus the hourly cost of required fringe.**

**Boilermaker:** Sunday, New Year's Day, President's Day, Memorial Day, Kamehameha Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Construction Equipment Operator:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Electrician:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

**Elevator Constructor:** Saturday, Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Floor Layer:** Labor Day.

**Glaziers:** Sunday.

**Heavy Duty Repairer & Welder:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Ironworker:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day.

**Paving Equipment Operator:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Plumber:** Sunday, New Year's Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Sheetmetal Worker:** Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Telecommunication Worker:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

B. **Three times the basic hourly wage plus the hourly cost of required fringe on Labor Day.**

Carpenter

Cement Finisher

Drywall Installer

Insulator

Construction Craft Laborer

Mason

Plasterer

Tile Setter

State of Hawai'i  
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS  
Princess Ruth Ke'elikolani Building  
830 Punchbowl Street  
Honolulu, Hawai'i 96813

September 21, 2015  
WAGE RATE SCHEDULE BULLETIN NO. 486

This schedule of wage rates contained herein is recognized by the Director of Labor and Industrial Relations to be prevailing on public construction work for the purposes of Chapter 104, Hawai'i Revised Statutes. The schedule of wage rates determines the applicable wage determination for each classification and does not impose any staffing requirements for any classification. The schedule of wage rates is applicable only to those laborers and mechanics employed at the site of work.

As required by law, future wage rates for laborers and mechanics are incorporated into this bulletin based on available information and are subject to change. Whenever the Director determines that the prevailing wage has increased as shown in the wage rate schedule, the contractor must increase the wages accordingly during the performance of the contract. For addenda or additional wage rate schedules, please consult the Internet at <http://labor.hawaii.gov/rs>.

The Apprentice Schedule is available on the Internet or upon request from the Research and Statistics Office. Pursuant to Section 12-22-6 (1), Hawai'i Administrative Rules, the Apprentice Schedule is applicable only to apprentices who are parties to apprenticeship agreements registered with or recognized by the Department of Labor and Industrial Relations.

Questions on the schedule should be referred to the Research and Statistics Office at (808) 586-9019.

The next regular schedule will be issued on or about February 15, 2016.

LINDA CHU TAKAYAMA  
Director



STATE OF HAWAII  
DAVID Y. IGE, Governor

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS  
LINDA CHU TAKAYAMA, Director

RESEARCH AND STATISTICS OFFICE  
PHYLLIS DAYAO, Research & Statistics Officer

OPERATIONS MANAGEMENT INFORMATION STAFF  
Janet Kaya, Supervisor

In cooperation with:  
WAGE STANDARDS DIVISION  
PAMELA MARTIN, Administrator

WAGE RATE SCHEDULE BULLETIN NO. 486

Classification	Current			2016			2017			2018			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>* ASPHALT PAVING GROUP:</b>	<b>9/21/15</b>												
Asphalt Concrete Material Transfer	\$69.34	\$39.42	\$29.92	-	-	-	-	-	-	-	-	-	13
Asphalt Raker	\$68.38	\$38.46	\$29.92	-	-	-	-	-	-	-	-	-	13
Asphalt Spreader Operator	\$69.86	\$39.94	\$29.92	-	-	-	-	-	-	-	-	-	13
Laborer, Hand Roller	\$65.61	\$35.69	\$29.92	-	-	-	-	-	-	-	-	-	13
Roller Operator (5 tons and under)	\$68.11	\$38.19	\$29.92	-	-	-	-	-	-	-	-	-	13
Roller Operator (over 5 tons)	\$69.54	\$39.62	\$29.92	-	-	-	-	-	-	-	-	-	13
Screed Person	\$69.34	\$39.42	\$29.92	-	-	-	-	-	-	-	-	-	13
EQUIPMENT OPERATOR:													
Combination Loader/Backhoe (over 3/4 cu. yd.)	\$68.38	\$38.46	\$29.92	-	-	-	-	-	-	-	-	-	13
Combination Loader/Backhoe (up to 3/4 cu. yd.)	\$67.40	\$37.48	\$29.92	-	-	-	-	-	-	-	-	-	13
Concrete saws and/or Grinder (self-propelled unit on streets, highways, airports and canals)	\$69.34	\$39.42	\$29.92	-	-	-	-	-	-	-	-	-	13
Grader, Soil Stabilizer, Cold Planer	\$70.17	\$40.25	\$29.92	-	-	-	-	-	-	-	-	-	13
Loader (2-1/2 cu. yds. and under)	\$69.34	\$39.42	\$29.92	-	-	-	-	-	-	-	-	-	13
Loader (over 2-1/2 cu. yds. to and including 5 cu. yds.)	\$69.66	\$39.74	\$29.92	-	-	-	-	-	-	-	-	-	13
TRUCK DRIVER:													
Assistant to Engineer	\$68.11	\$38.19	\$29.92	-	-	-	-	-	-	-	-	-	13
Oil Tanker (double), Hot Liquid Asphalt Tanker	\$69.66	\$39.74	\$29.92	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Semi-Dump, Asphalt Distributor	\$69.34	\$39.42	\$29.92	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$69.66	\$39.74	\$29.92	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (8 cu. yds. & under, water level)	\$68.38	\$38.46	\$29.92	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (over 8 cu. yds., water level)	\$68.69	\$38.77	\$29.92	-	-	-	-	-	-	-	-	-	13
Tractor Trailer (hauling equipment)	\$69.77	\$39.85	\$29.92	-	-	-	-	-	-	-	-	-	13
Utility, Flatbed	\$68.11	\$38.19	\$29.92	-	-	-	-	-	-	-	-	-	13
<b>* BOILERMAKER</b>	<b>2/16/15</b>												
	\$63.63	\$34.18	\$29.45	-	-	-	-	-	-	-	-	-	13
<b>* CARPENTER:</b>	<b>9/21/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
Carpenter; Patent Scaffold Erector (Over 14 feet);													
Piledriver; Pneumatic Nailer	\$64.86	\$43.90	\$20.96	\$66.86	\$45.65	\$21.21	\$68.91	\$47.45	\$21.46	\$71.16	\$49.45	\$21.71	1,12,13
Millwright	\$65.11	\$44.15	\$20.96	\$67.11	\$45.90	\$21.21	\$69.16	\$47.70	\$21.46	\$71.41	\$49.70	\$21.71	1,12,13
Power Saw Operator (2 h.p. & above)	\$65.01	\$44.05	\$20.96	\$67.01	\$45.80	\$21.21	\$69.06	\$47.60	\$21.46	\$71.31	\$49.60	\$21.71	1,12,13
<b>* CEMENT FINISHER:</b>	<b>9/21/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
Cement Finisher; Curb Setter; Precast Panel Setter;													
Manhole Builder	\$63.73	\$37.90	\$25.83	\$65.34	\$38.50	\$26.84	\$66.98	\$39.10	\$27.88	\$68.53	\$39.80	\$28.73	2,12,13
Trowel Machine Operator	\$63.88	\$38.05	\$25.83	\$65.49	\$38.65	\$26.84	\$67.13	\$39.25	\$27.88	\$68.68	\$39.95	\$28.73	2,12,13
<b>* CHAIN-LINK FENCE ERECTOR (Note: increase on 10/5/15)</b>	<b>10/1/14</b>			<b>10/3/16</b>			<b>10/2/17</b>			<b>10/1/18</b>			
	\$30.55	\$19.00	\$11.55	\$34.45	\$21.30	\$13.15	\$36.55	\$22.60	\$13.95	\$38.75	\$24.00	\$14.75	10,13
	<b>10/5/15</b>												
	\$32.40	\$20.10	\$12.30										10,13
<b>* CHLORINATOR</b>	<b>9/21/15</b>												
	\$23.00	\$23.00	\$0.00	-	-	-	-	-	-	-	-	-	

WAGE RATE SCHEDULE BULLETIN NO. 486

Classification	Current			2016			2017			2018			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>* DIVER:</b>	<b>9/21/15</b>												
Diver (Aqua Lung) (Scuba) - Up to a depth of 30 feet	\$82.49	\$53.13	\$29.36	-	-	-	-	-	-	-	-	-	13
Diver (Aqua Lung) (Scuba) - Over a depth of 30 feet	\$91.86	\$62.50	\$29.36	-	-	-	-	-	-	-	-	-	13
Stand-By Diver (Aqua Lung) (Scuba)	\$73.11	\$43.75	\$29.36	-	-	-	-	-	-	-	-	-	13
Diver (Other than Aqua Lung)	\$91.86	\$62.50	\$29.36	-	-	-	-	-	-	-	-	-	3,13
Stand-By Diver (Other than Aqua Lung)	\$73.11	\$43.75	\$29.36	-	-	-	-	-	-	-	-	-	3,13
Tender (Other than Aqua Lung)	\$70.08	\$40.72	\$29.36	-	-	-	-	-	-	-	-	-	13
<b>* DRAPERY INSTALLER</b>	<b>9/21/15</b>												
	\$19.68	\$16.82	\$2.86	-	-	-	-	-	-	-	-	-	
<b>* DRYWALL INSTALLER</b>	<b>9/21/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
	\$65.11	\$44.15	\$20.96	\$67.11	\$45.90	\$21.21	\$69.16	\$47.70	\$21.46	\$71.41	\$49.70	\$21.71	12,13
<b>* ELECTRICIAN</b>	<b>8/23/15</b>			<b>2/21/16</b>									
Cable Splicer (inside/outside)	\$75.89	\$47.36	\$28.53	\$76.65	\$47.74	\$28.91	-	-	-	-	-	-	4,13
Ground Worker (outside)	\$66.22	\$32.29	\$23.93	\$66.82	\$32.55	\$24.27	-	-	-	-	-	-	4,13
Heavy Equipment Operator (outside)	\$64.66	\$38.75	\$25.91	\$65.31	\$39.06	\$26.25	-	-	-	-	-	-	4,13
Line Installer (outside); Wire Installer (inside)	\$70.27	\$43.05	\$27.22	\$70.98	\$43.40	\$27.58	-	-	-	-	-	-	4,13
Technician (inside/outside)	\$71.95	\$44.34	\$27.61	\$72.68	\$44.70	\$27.98	-	-	-	-	-	-	4,13
Telecommunication Worker	<b>9/21/15</b>			<b>8/28/16</b>			<b>9/3/17</b>						
Licensed Technician	\$39.49	\$27.68	\$11.81	\$40.78	\$28.79	\$11.99	\$42.13	\$29.94	\$12.19	-	-	-	13
Technician I / Splicer	\$37.87	\$26.30	\$11.57	\$39.09	\$27.35	\$11.74	\$40.38	\$28.44	\$11.94	-	-	-	13
<b>* ELEVATOR CONSTRUCTOR MECHANIC</b>	<b>2/16/15</b>												
	\$81.455	\$53.07	\$28.385	-	-	-	-	-	-	-	-	-	13
<b>* EQUIPMENT OPERATOR:</b>	<b>9/21/15</b>												
Group 1	\$67.80	\$38.44	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 2	\$67.91	\$38.55	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 3	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 4	\$68.35	\$38.99	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 5	\$68.66	\$39.30	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 6	\$69.31	\$39.95	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 7	\$69.63	\$40.27	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 8	\$69.74	\$40.38	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 9	\$69.85	\$40.49	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 9A	\$70.08	\$40.72	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 10	\$70.14	\$40.78	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 10A	\$70.29	\$40.93	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 11	\$70.44	\$41.08	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 12	\$70.80	\$41.44	\$29.36	-	-	-	-	-	-	-	-	-	5,13
Group 12A	\$71.16	\$41.80	\$29.36	-	-	-	-	-	-	-	-	-	5,13
<b>FENCE ERECTOR (CHAIN-LINK TYPE)</b>													
See Chain-Link Fence Erector	-	-	-	-	-	-	-	-	-	-	-	-	
<b>* FLOOR LAYER (CARPET, LINOLEUM &amp; SOFT TILE)</b>	<b>3/1/15</b>												
	\$56.90	\$31.15	\$25.75	-	-	-	-	-	-	-	-	-	13

WAGE RATE SCHEDULE BULLETIN NO. 486

Classification	Current			2016			2017			2018			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
* <b>GLAZIER</b>	<b>9/21/15</b>												
	\$63.15	\$34.78	\$28.37	-	-	-	-	-	-	-	-	-	6,13
* <b>HELICOPTER WORK:</b>	<b>9/21/15</b>												
Airborne Hoist Operator	\$71.66	\$42.30	\$29.36	-	-	-	-	-	-	-	-	-	13
Co-Pilot	\$71.80	\$42.44	\$29.36	-	-	-	-	-	-	-	-	-	13
Pilot	\$71.97	\$42.61	\$29.36	-	-	-	-	-	-	-	-	-	13
* <b>INSULATOR</b>	<b>9/21/15</b>						<b>9/3/17</b>			<b>9/2/18</b>			
	\$63.15	\$39.65	\$23.50	-	-	-	\$64.40	\$40.50	\$23.90	\$65.10	\$41.00	\$24.10	7,13
* <b>IRONWORKER:</b>	<b>9/21/15</b>			<b>9/1/16</b>									
Reinforcing, Structural	\$66.66	\$36.75	\$29.91	\$67.66	\$37.75	\$29.91	-	-	-	-	-	-	8,12,13
* <b>LABORER:</b>	<b>8/31/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
Driller	\$52.86	\$35.35	\$17.51	\$54.76	\$36.35	\$18.41	\$56.66	\$37.40	\$19.26	\$58.66	\$38.40	\$20.26	1,13
Guniting Operator or Shotcrete Operator	\$52.36	\$34.85	\$17.51	\$54.26	\$35.85	\$18.41	\$56.16	\$36.90	\$19.26	\$58.16	\$37.90	\$20.26	1,13
High Scaler (Working Suspended)	\$52.36	\$34.85	\$17.51	\$54.26	\$35.85	\$18.41	\$56.16	\$36.90	\$19.26	\$58.16	\$37.90	\$20.26	13
Laborer I	\$51.86	\$34.35	\$17.51	\$53.76	\$35.35	\$18.41	\$55.66	\$36.40	\$19.26	\$57.66	\$37.40	\$20.26	1,13
Laborer II	\$49.26	\$31.75	\$17.51	\$51.16	\$32.75	\$18.41	\$53.06	\$33.80	\$19.26	\$55.06	\$34.80	\$20.26	1,13
Light/Final Clean-up (Janitorial) Laborer	\$39.09	\$25.75	\$13.34	\$41.04	\$26.75	\$14.29	\$42.94	\$27.80	\$15.14	\$44.92	\$28.80	\$16.12	1,13
Mason Tender/Hod Carrier	\$52.36	\$34.85	\$17.51	\$54.26	\$35.85	\$18.41	\$56.16	\$36.90	\$19.26	\$58.16	\$37.90	\$20.26	1,13
Powder Blaster	\$52.86	\$35.35	\$17.51	\$54.76	\$36.35	\$18.41	\$56.66	\$37.40	\$19.26	\$58.66	\$38.40	\$20.26	1,13
Window Washer (Outside) (On bosun's chair, cable-suspended scaffold or work platform)	\$51.36	\$33.85	\$17.51	\$53.26	\$34.85	\$18.41	\$55.16	\$35.90	\$19.26	\$57.16	\$36.90	\$20.26	13
* <b>LANDSCAPER:</b>	<b>9/1/14</b>												
Landscape & Irrigation Laborer A	\$33.31	\$23.20	\$10.11	-	-	-	-	-	-	-	-	-	
Landscape & Irrigation Laborer B	\$33.81	\$23.70	\$10.11	-	-	-	-	-	-	-	-	-	
Landscape & Irrigation Maintenance Laborer	\$29.81	\$19.70	\$10.11	-	-	-	-	-	-	-	-	-	
* <b>LATHER</b>	<b>9/21/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
	\$65.11	\$44.15	\$20.96	\$67.11	\$45.90	\$21.21	\$69.16	\$47.70	\$21.46	\$71.41	\$49.70	\$21.71	12,13
* <b>MASON; Bricklayer;</b>	<b>9/16/13</b>												
Cement Blocklayer; Stone Mason; Precast Sill Setter	\$60.32	\$36.85	\$23.47	-	-	-	-	-	-	-	-	-	2,13
Pointer-Caulker-Weatherproofer	\$60.57	\$37.10	\$23.47	-	-	-	-	-	-	-	-	-	2,13
* <b>PAINTER:</b>	<b>9/21/15</b>			<b>1/1/16</b>									
Painter; Spray Painter; Sandblaster or Waterblaster	\$62.02	\$34.85	\$27.17	\$62.42	\$34.85	\$27.57	-	-	-	-	-	-	12
* <b>PLASTERER:</b>	<b>9/21/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
	\$64.87	\$39.04	\$25.83	\$66.63	\$39.79	\$26.84	\$68.42	\$40.54	\$27.88	\$70.07	\$41.34	\$28.73	2,12,13
* <b>PLUMBER: (Note: 2 increases per year starting in 2016)</b>	<b>7/5/15</b>			<b>1/3/16</b>			<b>1/1/17</b>			<b>1/7/18</b>			
Plumber; Pipefitter; Refrigeration Fitter; Heating & Air Conditioning Fitter; Sprinkler Fitter; Steamfitter	\$64.31	\$39.85	\$24.46	\$65.08	\$40.35	\$24.73	\$66.60	\$41.35	\$25.25	\$68.12	\$42.35	\$25.77	9,13
				<b>7/3/16</b>			<b>7/2/17</b>			<b>7/1/18</b>			
Plumber; Pipefitter; Refrigeration Fitter; Heating & Air Conditioning Fitter; Sprinkler Fitter; Steamfitter	-	-	-	\$65.83	\$40.85	\$24.98	\$67.35	\$41.85	\$25.50	\$68.87	\$42.85	\$26.02	9,13



WAGE RATE SCHEDULE BULLETIN NO. 486

Classification	Current			2016			2017			2018			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>* ROOFER:</b>	<b>9/21/15</b>			<b>9/4/16</b>									
Shingle, Tile, Built-up Roofing	\$56.38	\$38.85	\$17.53	\$57.38	\$39.85	\$17.53	-	-	-	-	-	-	12
Coal Tar Pitch	\$95.23	\$77.70	\$17.53	\$97.23	\$79.70	\$17.53	-	-	-	-	-	-	12
<b>SANDBLASTER OR WATERBLASTER:</b>													
Use wages of craft to which sand or water blasting is incidental.													
<b>* SHEETMETAL WORKER (Note: 2 increases per year)</b>	<b>9/21/15</b>			<b>2/28/16</b>			<b>2/26/17</b>			<b>3/4/18</b>			
	\$63.54	\$39.40	\$24.14	\$64.68	\$39.99	\$24.69	\$67.20	\$41.29	\$25.91	\$69.23	\$42.20	\$27.03	13
				<b>8/28/16</b>			<b>9/3/17</b>			<b>9/2/18</b>			
				\$65.91	\$40.59	\$25.32	\$68.33	\$41.80	\$26.53	\$69.99	\$42.55	\$27.44	13
<b>* TAPER</b>	<b>9/21/15</b>			<b>1/1/16</b>			<b>1/1/17</b>						
	\$62.00	\$41.00	\$21.00	\$63.80	\$41.50	\$22.30	\$65.90	\$42.00	\$23.90	-	-	-	
<b>* TERMITE TREATER</b>	<b>9/21/15</b>												
	\$18.99	\$14.74	\$4.25	-	-	-	-	-	-	-	-	-	
<b>* TERRAZZO:</b>	<b>9/16/13</b>												
Terrazzo Setter	\$60.57	\$37.10	\$23.47	-	-	-	-	-	-	-	-	-	2,13
Terrazzo Base Grinder	\$58.76	\$35.29	\$23.47	-	-	-	-	-	-	-	-	-	2,13
Certified Terrazzo Floor Grinder and Tender	\$57.21	\$33.74	\$23.47	-	-	-	-	-	-	-	-	-	2,13
Terrazzo Floor Grinder	\$55.71	\$32.24	\$23.47	-	-	-	-	-	-	-	-	-	2,13
<b>* TILE SETTER:</b>	<b>9/16/13</b>												
Ceramic Hard Tile; Marble Setter	\$60.57	\$37.10	\$23.47	-	-	-	-	-	-	-	-	-	2,13
Certified Ceramic Tile & Marble Helper	\$57.21	\$33.74	\$23.47	-	-	-	-	-	-	-	-	-	2,13
<b>* TRUCK DRIVER:</b>	<b>9/21/15</b>												
Concrete Mixer	\$36.12	\$32.50	\$3.62	-	-	-	-	-	-	-	-	-	
Concrete Mixer/Booster	\$45.76	\$31.93	\$13.83	-	-	-	-	-	-	-	-	-	
Dump Truck, 8 cu. yds. & under (water level); Water Truck (up to & including 2,000 gallons)	\$68.35	\$38.99	\$29.36	-	-	-	-	-	-	-	-	-	13
Flatbed, Utility, etc.	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	13
End Dump, Unlicensed (Euclid, Mack, Caterpillar, or similar); Tractor Trailer (hauling equipment)	\$69.74	\$40.38	\$29.36	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Rock Cans, or Semi-Dump	\$69.31	\$39.95	\$29.36	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$69.63	\$40.27	\$29.36	-	-	-	-	-	-	-	-	-	13
Tandem Dump Truck, over 8 cu. yds. (water level); Water Truck (over 2,000 gallons)	\$68.66	\$39.30	\$29.36	-	-	-	-	-	-	-	-	-	13

WAGE RATE SCHEDULE BULLETIN NO. 486

Classification	Current			2016			2017			2018			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>* UNDERGROUND LABORER:</b>	<b>8/31/15</b>			<b>8/29/16</b>			<b>9/4/17</b>			<b>9/3/18</b>			
Worker in a raise, shaft, or tunnel.													
Group 1	\$52.46	\$34.95	\$17.51	\$54.36	\$35.95	\$18.41	\$56.26	\$37.00	\$19.26	\$58.26	\$38.00	\$20.26	13
Group 2	\$53.96	\$36.45	\$17.51	\$55.86	\$37.45	\$18.41	\$57.76	\$38.50	\$19.26	\$59.76	\$39.50	\$20.26	13
Group 3	\$54.46	\$36.95	\$17.51	\$56.36	\$37.95	\$18.41	\$58.26	\$39.00	\$19.26	\$60.26	\$40.00	\$20.26	13
Group 4	\$55.46	\$37.95	\$17.51	\$57.36	\$38.95	\$18.41	\$59.26	\$40.00	\$19.26	\$61.26	\$41.00	\$20.26	13
Group 5	\$55.71	\$38.20	\$17.51	\$57.61	\$39.20	\$18.41	\$59.51	\$40.25	\$19.26	\$61.51	\$41.25	\$20.26	13
Group 6	\$55.81	\$38.30	\$17.51	\$57.71	\$39.30	\$18.41	\$59.61	\$40.35	\$19.26	\$61.61	\$41.35	\$20.26	13
Group 7	\$56.06	\$38.55	\$17.51	\$57.96	\$39.55	\$18.41	\$59.86	\$40.60	\$19.26	\$61.86	\$41.60	\$20.26	13
Group 8	\$56.51	\$39.00	\$17.51	\$58.41	\$40.00	\$18.41	\$60.31	\$41.05	\$19.26	\$62.31	\$42.05	\$20.26	13
<b>* WATER FRONT CONSTRUCTION (DREDGING):</b>	<b>9/21/15</b>												
CLAMSHELL OR DIPPER DREDGES:													
Clamshell or Dipper Operator	\$70.80	\$41.44	\$29.36	-	-	-	-	-	-	-	-	-	11,13
Mechanic; Welder; Watch Engineer	\$70.14	\$40.78	\$29.36	-	-	-	-	-	-	-	-	-	13
Deckmate; Bargemate	\$69.74	\$40.38	\$29.36	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand; Barge Worker	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	13
HYDRAULIC SUCTION DREDGES:													
Lever Operator	\$70.44	\$41.08	\$29.36	-	-	-	-	-	-	-	-	-	13
Mechanic; Welder	\$70.14	\$40.78	\$29.36	-	-	-	-	-	-	-	-	-	13
Watch Engineer (steam or electric)	\$70.29	\$40.93	\$29.36	-	-	-	-	-	-	-	-	-	13
Dozer Operator	\$70.08	\$40.72	\$29.36	-	-	-	-	-	-	-	-	-	13
Deckmate	\$69.74	\$40.38	\$29.36	-	-	-	-	-	-	-	-	-	13
Winch Operator (stern winch on dredge)	\$69.63	\$40.27	\$29.36	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand (can operate anchor scow under direction of deckmate); Levee Operator	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	13
DERRICKS:													
Operator: Derrick, Piledriver, Crane	\$70.80	\$41.44	\$29.36	-	-	-	-	-	-	-	-	-	13
Deckmate; Saurman Type Dragline (up to & including 5 yds.)	\$69.74	\$40.38	\$29.36	-	-	-	-	-	-	-	-	-	13
Saurman Type Dragline (over 5 cu. yds.)	\$70.14	\$40.78	\$29.36	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	13
BOAT OPERATORS:													
Master Boat Operator	\$70.44	\$41.08	\$29.36	-	-	-	-	-	-	-	-	-	13
Boat Operator	\$70.29	\$40.93	\$29.36	-	-	-	-	-	-	-	-	-	13
Boat Deckhand	\$68.08	\$38.72	\$29.36	-	-	-	-	-	-	-	-	-	13
<b>* WATER WELL DRILLER:</b>	<b>9/21/15</b>												
Water Well Driller	\$38.47	\$31.00	\$7.47	-	-	-	-	-	-	-	-	-	
Water Well Driller Helper	\$24.37	\$18.00	\$6.37	-	-	-	-	-	-	-	-	-	
<b>WELDER:</b>													
Use wages of craft to which welding is incidental, except for Chain-Link Fence Erector. See remark.													10

**Comments: Overtime must be paid at one and one-half times the basic hourly rate plus the hourly cost of required fringe benefits.**

**\* Indicates a wage, fringe benefit, remark, or title change from the previous bulletin.**

## REMARKS

1. Carpenter, Laborer (excluding High Scaler, Window Washer): \$.50 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
2. Cement Finisher, Mason, Plasterer, Terrazzo, Tile Setter: \$1.00 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
3. Diver (Other than Aqua Lung), Stand-By Diver (Other than Aqua Lung):
  - A. On any dive exceeding 50 feet, the diver shall, in addition, be paid the following amount of "depth money":
 

50 feet to 100 feet	\$1.50 per foot in excess of 50 feet
100 feet to 150 feet	\$100.00 plus \$2.00 per foot in excess of 100 feet
150 feet to 200 feet	\$200.00 plus \$3.00 per foot in excess of 150 feet
  - B. When it is necessary for a Diver to enter any pipe, tunnel or other enclosure, the said Diver shall, in addition to the hourly rate, receive a premium in accordance with the following schedule for distance traveled from the entrance of the pipe, tunnel or other enclosure:
    - 1) When able to stand erect, but in which there is no vertical ascent:
 

5 feet to 50 feet	\$5.00 per day
50 feet to 100 feet	\$7.50 per day
100 feet to 150 feet	\$12.50 per day
Greater than 150 feet	The premium shall be increased an additional \$7.50 for each succeeding 50 feet.
    - 2) When unable to stand erect and in which there is no vertical ascent:
 

5 feet to 50 feet	\$5.00 per day
50 feet to 100 feet	\$7.50 per day
100 feet to 150 feet	\$12.50 per day
150 feet to 200 feet	\$36.75 per day
200 feet to 300 feet	\$1.00 per foot
300 feet to 450 feet	\$1.50 per foot
450 feet to 600 feet	\$2.50 per foot
4. Electrician:
  - A. One and one-half times the straight-time rate while working in a tunnel under construction; under water with aqualung equipment; in a completed tunnel which has only one entrance or exit providing access to safety and where no other personnel are working; or in an underground structure having no access to safety or where no other personnel are working.
  - B. Double the straight-time rate shall be paid for the following types of hazardous work regardless if fall prevention devices are used:
    - 1) While working from poles, trusses, stacks, towers, tanks, bosun's chairs, swinging or rolling scaffolds, supporting structures, and open platforms, over 70 feet from the ground where the employee is subject to a free fall; provided, however, that when work is performed on stacks, towers or permanent platforms where the employees are on a firm footing within an enclosure, a hazardous condition does not exist regardless of height;
    - 2) While working outside of a railing or enclosure, or temporary platforms extending outside of a building, or from scaffolding or ladder within an enclosure where an employee's footing is within one foot of the top of such railing, and the employee is subject to a free fall of over 70 feet;
    - 3) Working on buildings while leaning over the railing or edge of the building, and is subject to a free fall of 70 feet; or
    - 4) Two hours minimum hazardous pay per day shall be paid while climbing to a stack, tower or permanent platform which exceeds 70 feet from the ground but where the employee is on a firm footing within an enclosure.
  - C. Five percent per hour shall be added to the hourly wage for height pay while working above 9,000 feet elevation.

## REMARKS

## 5. Equipment Operator:

- A. Operators and Assistants to Engineer (climbing a boom) of cranes (under 50 tons) with booms of eighty feet or more (including jib) or of cranes (under 50 tons) with leads of one hundred feet or more, shall receive additional premium according to the following schedule:

	Per Hour
Booms of 80 feet up to, or leads of 100 feet up to, but not including 130 feet	\$0.50
Booms and/or leads of 130 feet up to, but not including 180 feet	\$0.75
Booms and/or leads of 180 feet up to and including 250 feet	\$1.15
Booms and/or leads over 250 feet	\$1.50

Operators and Assistants to Engineer (climbing a boom) of cranes (50 tons and over) with booms of 180 feet or more (including jib) shall receive additional premium according to the following schedule:

	Per Hour
Booms of 180 feet up to and including 250 feet	\$1.25
Booms over 250 feet	\$1.75

Note: The boom shall be measured from the center of the heel pin to the center of the boom or jib point sheave.

- B. \$1.25 per hour shall be added to the hourly wage while operating a rig suspended by ropes or cables or to perform work on a Yo-Yo Cat.
- C. In a raise or shaft, a premium of \$.40 per hour will be paid in addition to the regular straight time wage.  
A raise is defined to be an underground excavation (lined or unlined) whose length exceeds its width and the inclination of the grade from the excavation is greater than 20 degrees from the horizontal.  
A shaft is defined to be an excavation (lined or unlined) made from the surface of the earth, generally vertical in nature, but may decline up to 75 degrees from the vertical, and whose depth is greater than 15 feet and its largest horizontal dimension. Includes an underground silo.
- D. In a tunnel, a premium of \$.30 per hour will be paid in addition to the regular straight time wages.  
A tunnel is defined to be an underground excavation (lined or unlined) whose length exceeds its width and the inclination of the grade from the excavation is no greater than 20 degrees from the horizontal.
6. Glazier: Effective 9/16/13 - \$1.00 per hour shall be added to the hourly wage for height pay for exterior glazing work performed in a walking/working surface with an unprotected side or edge 10 feet or more above a lower level which requires protection from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, position devise systems, fall restraint systems, perimeter safety cables or controlled decking zones.
7. Insulator: Six percent per hour shall be added to the hourly wage for hazardous pay while working from a boatswain chair, staging or free standing scaffolding erected from the ground up or mezzanine floor subject to a free fall and skyclimber suspended from a permanent structure and when working above 40 feet.
8. Ironworker: \$.50 per hour shall be added to the hourly wage while working in tunnels or coffer dams. \$1.00 per hour shall be added to the hourly wage while working under or covered with water (submerged), or on the summits of Mauna Kea, Mauna Loa or Haleakala.
9. Plumber: One and one-half times the straight-time rate for height pay while working from OSHA approved trusses, stacks, towers, tanks, bosun's chair, swinging or rolling scaffolding, supporting structures or on open platforms where the employee is subject to a direct fall of 40 feet or more. Provided, however, that when said work is performed where the employee is on a firm footing within an enclosure, a hazardous condition does not exist regardless of height. \$1.00 per hour shall be added to the straight-time rate while working with flame cutting or any type of welding equipment on any galvanized material or product for at least an hour.
10. Chain-Link Fence Erector: \$1.00 per hour shall be added to the hourly wage while performing welding services.
11. Water Front Construction: Clamshell or Dipper Operator: \$.50 per hour shall be added to the straight-time rate while working with boom (including jib) over 130 feet.
12. Possible wage/fringe option increases:  
Carpenter, Drywall and Lather: Effective 9/4/17 - \$.20; 9/3/18 - \$.25  
Cement Finisher, Plasterer: 8/29/16 - \$.30; 9/4/17 - \$.30; 9/3/18 - \$.30  
Ironworker: Effective 9/1/16 - \$1.00  
Painter: Effective WRS 487 - \$.25  
Roofer: Effective 9/4/16 - \$.40

## REMARKS

13. Overtime/Holiday must be paid at one and one-half times the basic hourly rate plus the hourly cost of required fringe, with the following exceptions:

A. Two times the basic hourly rate plus the hourly cost of required fringe.

**Asphalt Paving:** Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Boilermaker:** Sunday, New Year's Day, President's Day, Memorial Day, Kamehameha Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Diver:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Electrician:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

**Elevator Constructor:** Saturday, Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Equipment Operator:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Floor Layer:** Labor Day.

**Glaziers:** Sunday.

**Helicopter Work:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Ironworker:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day.

**Plumber:** Sunday, New Year's Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Sheetmetal Worker:** Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Telecommunication:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

**Truck Driver, except Concrete Mixer & Concrete Mixer/Booster:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Water Front Construction (Dredging):** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

B. Three times the basic hourly wage plus the hourly cost of required fringe on Labor Day.

**Carpenter**

**Cement Finisher**

**Chain Link Fence Erector**

**Drywall**

**Insulator**

**Laborer**

**Lather**

**Mason**

**Plasterer**

**Terrazzo**

**Tile Setter**

**Underground Laborer**



**FEWELL  
GEOTECHNICAL  
ENGINEERING, LTD.**

**Oahu Office**  
96-1416 Waihona Place  
Pearl City, Hawaii 96782-1973  
(808) 455-6569  
FAX (808) 456-7062  
E-mail: fge@fgeltd.com

**Maui Office**  
360 Papa Place, Suite 103  
Kahului, Hawaii 96732-2464  
(808) 873-0110  
FAX (808) 873-0906

**SUBSURFACE INVESTIGATION REPORT**

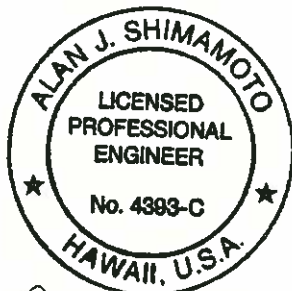
**KAKAINA SUBDIVISION  
WAIMANALO, OAHU, HAWAII**

for

**AKINAKA & ASSOCIATES, LTD.**

by

**FEWELL GEOTECHNICAL ENGINEERING, LTD.**



By

  
Alan J. Shimamoto, P.E.

July 9, 2007

## **TABLE OF CONTENTS**

	<b><u>Page</u></b>
Introduction .....	1
Purpose and Scope .....	1
Project Considerations .....	2
Subsurface Investigation .....	3
Laboratory Testing .....	4
General Subsurface Conditions .....	5
Discussion .....	6
Recommendations .....	12
General .....	12
Site Preparation .....	12
Grading .....	13
Utilities .....	17
Foundations .....	18
Concrete Slabs-on-Grades .....	19
Pavements .....	20
Quality Control .....	21
Miscellaneous .....	22
Limitations .....	22

## **Appendices**

### **Figure**

### **Appendix A**

Project Location Map .....	1
Boring Location Plan .....	2
Boring Logs .....	3 thru 9
Boring Log Legend .....	10

### **Appendix B**

Consolidation Curves .....	11 thru 14
California Bearing Ratio .....	15 thru 16
Gradation Curves .....	17 thru 21
Plasticity Chart .....	22
Summary of Laboratory Test Results .....	Table I
Summary of Laboratory CBR Test Tests .....	Table II

### **Appendix C**

Limitations

# **SUBSURFACE INVESTIGATION REPORT**

**Kakaina Subdivision**  
**Waimanalo, Oahu, Hawaii**

## **INTRODUCTION**

A subsurface investigation has been completed for the proposed site of the Kakaina Subdivision in Waimanalo, Oahu, Hawaii. This report summarizes our findings and conclusions and presents geotechnical recommendations for the design and construction of the subdivision and its related infrastructure improvements. This work was completed in general accordance with our May 31, 2006 Proposal and your March 2007 verbal authorization to proceed.

## **PURPOSE AND SCOPE**

The subsurface investigation was undertaken to assist Akinaka & Associates, Ltd. (AAL) with the geotechnical aspects of the design and construction of the subdivision and its related site improvements. Our work included drilling a total of 7 test borings, performing laboratory tests on the recovered samples to determine their general soil characteristics, evaluating the subsurface conditions as they impact the planned construction, and presenting our findings in this report.

The drilling work originally was planned with borings drilled to depths of 20 feet below the existing ground surface. However, 3 of the borings were extended to a depth of 30 feet due to unanticipated conditions found in the borings, and additional laboratory testing was completed to better evaluate the conditions encountered.

The subsurface exploration, including the Boring Location Plan and the Boring Logs are summarized in Appendix A. The laboratory test results are presented on the logs where



appropriate, and selected results are graphically illustrated in Appendix B. The limitations of this investigation and report are presented in Appendix C.

### **PROJECT CONSIDERATIONS**

The preliminary information provided by AAL indicates that an 8-acre parcel in Waimanalo will be developed to support a residential subdivision by the Department of Hawaiian Home Lands (DHHL). The parcel is on the southern side of an existing residential subdivision, which is accessed by Poalimu Street. The remainder of the site is bordered by Kakaina Street on its southern side, Mekia Street on its western end, and Hihimanu Street on its eastern end. The general area of the site is shown on the Project Location Map, Figure 1, in Appendix A.

The site consists of 4 separate but contiguous parcels, which are designated as Parcels 91, 92, 10 and 81. Together, they form a long narrow site, which is irregularly shaped due to the different sizes of the lots, which extend into its northern side. The site is generally oriented in the east-west direction along its longitudinal axis, and is about 1,100 to 1,300 feet long by between 200 and 400 feet wide.

At the time of the subsurface exploration, the site was vacant and much of it had been cleared of vegetation. Piles of cleared materials were stockpiled in scattered areas of the site. The site is relatively level, with a slight slope down toward the east and north. Ground surface elevations range from about Elev. 42 at the southwestern corner of the site down to about Elev. 32 at the northeastern corner of the site. Much of the northern edge of the site is between Elev. 32 and Elev. 36.

A portion of the channelized Kahawai Stream passes about 45 feet to the west of the western end of the subdivision and the proposed re-alignment of the western end of Mekia Street. The stream generally passes beneath Mekia Street and Kakaina Street via a culvert, but a portion of the culvert is open to the ground surface about 20 feet west of the right-of-way for Mekia Street. The opening to the culvert is about 50 feet long by up to

25 feet wide and is lined with CRM. The bottom of the culvert appears to be about 10 feet below the adjacent ground surface in this area.

The June 7, 2007 Preliminary Grading Plan provided by AAL indicates that the parcel will be developed by DHHL to support a 50-lot residential subdivision accessed from Poalimu Street, Kakaina Street and Hihimanu Street. The lots will be served by approximately 1,340 feet of interior streets with a right-of-way of 44 feet. We understand that the streets will be asphalt concrete paved and will include standard concrete curbs, gutters and sidewalks.

The plans indicate that typical residential improvements will be included in the subdivision construction, such as underground utility lines for electrical/telephone, sewer, water and drainage. No dwelling information is available at this time. We have assumed that the residential dwellings will be 1- to 2-story, wood- or steel-framed structures using concrete slabs-on-grades, with carports. Maximum column and wall loads of 50 kips and 2 kips per foot of wall have been assumed for the dwellings.

The preliminary grading plan indicates the subdivision will generally be graded with cuts of 1 to 2 feet in depth and fills of less than 4 feet in thickness. An excavation of about 8 feet deep will be necessary for a detention basin planned for the southeastern corner of the site, adjacent to the intersection of Kakaina and Hihimanu Streets. In general, it appears that most of the fills will be placed along the site perimeters, while most of the site excavations are planned for the central portions of the site. Graded slopes are planned to support the grade differences.

### **SUBSURFACE INVESTIGATION**

A total of 7 test borings were drilled during the period of April 18 through 24, 2007 at the approximate locations shown on the Site and Boring Location Plan, Figure 2, in Appendix A. The borings were extended to depths of 20 to 30 feet below the existing

ground surface with a truck-mounted Simco 2400SK drilling rig advancing 4-inch diameter continuous flight augers.

Relatively undisturbed samples of the subsurface soils were obtained at selected depths using a 3.0-inch O.D. split-spoon sampler driven by a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler the final 12 inches into the underlying soil mass was recorded and is shown on the Boring Logs, Figure 3 through 9, in Appendix A. A Boring Log Legend is included as Figure 10.

Two bulk samples, designated as Bag A and Bag B, were obtained along the approximate alignment of the interior subdivision streets to determine the pavement support characteristics of the predominant near-surface soils. Their approximate locations are shown on Figure 2 in Appendix A.

### **LABORATORY TESTING**

Laboratory tests were performed on selected samples of the subsurface soils to determine their pertinent engineering characteristics, including in-situ moisture content, density, shear strength, consolidation, and swell under their in-situ moisture conditions. Bags A and B were tested in general accordance with ASTM D1883 to determine their California Bearing Ratio (CBR) and swell when compacted for the support of pavements. Atterberg Limits and gradation tests were performed on visually representative samples to aid in the classification of the soils.

The results of the laboratory tests are shown on the Boring Logs, where appropriate. Additional test results are graphically exhibited as Figures 11 through 23 in Appendix B. Table I at the end of Appendix B summarizes the results of the tests completed on the undisturbed subsurface samples, while Table II presents the CBR test results.

## **GENERAL SUBSURFACE CONDITIONS**

The test borings have revealed that the site of the Kakaina Subdivision is generally underlain by a surface mantle of fill, over natural alluvial (water-deposited) soils, which extend to the bottom of the borings at depths of 20 to 30 feet below the existing ground surface. The alluvial materials generally consist of highly plastic clays with occasional layers of clayey sand and gravel found at depths of 18 to 20 feet.

The fill varied from ½ to 4 feet in thickness at the boring locations and is generally 2½ to 3 feet thick in most of the borings. The existing fills exhibit consistencies ranging from stiff to hard and relatively low in-situ densities of 68 to 76 pounds per cubic foot (p.c.f.). These densities correspond to about 76 to 85 percent relative compaction, based on Laboratory Compaction Test ASTM D1557 performed on Bags A and B. The fill appears uncompacted based on the current compaction standard of 90 percent relative compaction.

Both the surface fills and most of the natural alluvium generally consist of highly plastic fat clays and silty clays, which are designated as CH under the Unified Soil Classification (USC) system. The alluvial clays and the fill exhibit moderate to high shrink-swell characteristics with swells of up to 7.9 percent under their relatively wet in-situ moisture conditions and up to 11.5 percent when compacted at their optimum moisture contents.

Most of the undisturbed samples exhibit moisture contents of 10 to 18 percent over their estimated optimum moisture contents but still showed significant swells of 3.5 to 7.9 percent at these high moisture contents. Laboratory tests indicate that a load in excess of 2,000 pounds per square foot (p.s.f.) would be necessary to reduce the swelling of the soils to less than 3 percent when compacted near their optimum moisture content.

The natural alluvial soils below the surface fills exhibit low to moderate in-situ densities, relatively high in-situ moisture contents, and low shear strengths, with friction angles of 3

to 12 degrees and cohesion of 640 to 1,050 p.s.f. when saturated. They generally exhibit consistencies of very stiff to hard, although the consistencies generally appear to decrease with increasing depth.

Occasional layers of medium stiff alluvial clays and loose to very loose alluvial clayey sands and gravel were found starting at depths of 17 to 20 feet below the existing ground surface. Three borings, which were extended through these layers, indicate that they are generally 5 to 6 feet in thickness. Consolidation tests indicate that the alluvial clays, including those which showed the lower consistencies, are pre-consolidated, likely due to prior desiccation and shrinkage, and should not significantly consolidate under the relatively light anticipated loads and fills of the subdivision.

Groundwater was encountered in all of the test borings at depths of 13.1 to 16.9 feet below the existing ground surface. Based on the estimated elevations of the test borings from the topographic plan provided by AAL, the depths of the groundwater in the borings correspond to between about Elev. 17 and Elev. 28.

### **DISCUSSION**

The subsurface investigation has revealed that the site of the Kakaina Subdivision is generally underlain by about 2½ to 3 feet of uncompacted and expansive clay fill over relatively competent, albeit expansive natural alluvial clays. The presence of the uncompacted fill and the moderately to highly expansive clays will necessitate special considerations in the design and construction of the subdivision and its appurtenances, and will likely result in higher than normal costs.

The most significant geotechnical concerns regarding the development of the site are the uncompacted fills found throughout the site and the moderately to highly expansive characteristics of both the fill and the natural clays. The existing uncompacted fills will not provide adequate support for the new construction and should be removed and

replaced with fill compacted in accordance with the recommendations of this report prior to additional construction.

The moderate to high shrink-swell characteristics of both the existing fills and the natural clays introduce significant risks into the construction. These risks can be reduced but not entirely eliminated without the complete removal and replacement of the expansive soils beneath the site. This is not economically feasible due to the depth of the expansive soils and the difficulties in obtaining large quantities of low-expansion soils to replace the expansive clay.

Methods to reduce the risks of potential problems with the expansive soils on the new construction include selective grading to partially remove and replace the expansive soils during the site grading, or the use of special foundations and slabs to reduce the effects of the expansive soils on the construction. Both of these methods will necessitate higher than normal costs for the construction and more than the typical observation and testing during construction.

The costs associated with each alternative depend on the availability and costs associated with the various materials necessary for each. The actual method selected will depend on the preferences of the developer and the comparative costs of each alternative to the project. Each of these alternatives is described separately below:

Special Structure Design - The site could be graded with the expansive soils using typical grading procedures, which would result in earthwork costs similar to those incurred with low-expansion soils. However, provisions must be included in the design of the structures to minimize the effects of the expansive soils on the structures, which results in significantly higher structure costs.

Since the resulting graded lots would consist of expansive soils capable of significantly lifting the dwellings, this method entails designing the dwellings with a deepened foundation system and a structure floor slab over the expansive soils such that vertical movements of the soils will have little impact on the dwellings. The foundations must be extended a sufficient depth into the expansive clays such that vertical movements of the near-surface clays resulting from seasonal moisture changes are resisted by the friction on the deeper parts of the foundations.

We believe that deep pier foundations, such as drilled piers or helical piers, are the most suitable to limit vertical movements to the structures due to seasonal moisture changes to the expansive clays. Our analysis indicates that 12-inch diameter drilled piers extending to a depth of 12 feet into the expansive soils should provide sufficient vertical resistance to the uplift pressures of the near surface soils and should provide an allowable vertical capacity of 20 kips. The drilled piers should provide a lateral resistance of 2 kips with a deflection of less than  $\frac{1}{4}$  inch at the ground surface.

The structural concrete slabs-on-grades over the piers must be designed with a sufficient clear space between the bottom of the slabs and the soil subgrades to allow for some vertical movements of the expansive soils without heaving of the slabs. Special forms will be necessary to construct the slabs and their grade beams. Styrofoam forms are manufactured for different swelling heights and different swelling pressures for expansive clays. For the characteristics for the expansive clays found at this site, we believe that 4-inch high forms, which crush when pressures exceed 250 p.s.f. should be sufficient. A Dynavoid 40142 Slab Cushion, or its equivalent, should provide these characteristics.

Utilities must be designed to accommodate differential movements between themselves and the dwellings and other similar "fixed" structures. The utilities must be fitted with flexible couplings, or other similar devices, at the points of transition between the

expansive soils and the structures to allow for abrupt differential movements at these locations. Additionally, gutter downspouts, landscaping and other items, which involve water, must be designed such that water cannot access the area within 5 feet of the dwellings or their related attachments.

Exterior items such as sidewalks would still be subjected to potential vertical movements of the soils, but are typically not considered "critical" structures. Hence, they are designed to allow for some movement provided cracking is controlled to minimize the potential for hazardous conditions arising from abrupt differential movements. Sidewalks for the dwellings should be designed such that they are founded over at least 6 inches of non-expansive select borrow material with a thickened edge extending at least 3 inches below the bottom of the select borrow layer.

The poor pavement support characteristics of the expansive soils will require a special design under the pavement design criteria of the City and County of Honolulu, and relatively thick pavements. Based on our CBR test results, pavements over the expansive soils should consist of 2 inches of Asphalt Concrete Paving (ACP), over 4 inches of Asphalt Concrete Base Course (ACB), over 12 to 18 inches of Aggregate Base Course, placed over the expansive soil subgrades.

Additionally, due to the expansion of the soils exceeding 3 percent, 6 inches of Select Borrow subbase must be placed beneath the street sidewalks, curbs and gutters under the design requirements of the City and County of Honolulu. Drainage provisions should be included in the design to minimize the accumulation of water within the pavement subgrades, which can result in heave to the sidewalks, curbs and gutters.

Selective Grading or Partial Removal and Replacement - Selective grading to partially remove the expansive soils and replace them with a low-expansion fill is typically used to reduce the risks of the expansive soils lifting the concrete slabs-on-grades and lightly



loaded foundations of the dwellings. Although the weight of the replacement soil would not be sufficient to completely restrict the swelling of the expansive clays below, the mat of low-expansion fill beneath the structure generally acts to reduce the moisture content changes to the underlying clays and tends to reduce abrupt differential movements to the dwelling resulting from expansion of the clays.

A relatively impermeable low-expansion fill is preferable over a pervious material since pervious materials, such as granular materials, can allow significant moisture to seep into the subsurface and promote swelling of the underlying expansive clays. Where a pervious material must be used, subdrains should be provided to reduce the potential of water accumulating within the granular material and infiltrating the expansive clays below.

Provided a relatively impermeable low-expansion fill is used to replace the expansive soils, we believe that a 3-foot thick layer of low-expansion soils beneath the dwellings should be sufficient to limit differential movements of the structures to within tolerable levels of less than ½ inch. Although there is still some risk of “hot spots” where soil expansion will occur, the thickness of the mat should minimize the abrupt differential vertical movements to the structures.

This method would necessitate removing a sufficient thickness of the expansive soils in each lot such that the finish lot subgrades below the concrete slabs-on-grades, including the lot driveways and dwelling sidewalks, are underlain by at least 3 feet of low-expansion, impervious fills, as measured from the bottom of the slabs. Since there is little low-expansion soil at the site, and the on-site soils are visually nearly identical, it is anticipated that the low-expansion impermeable fills will have to be imported.

Once the lots have been “capped” with the low-expansion impermeable fills, the dwelling construction could proceed using relatively typical building construction designs and

methods. Judicious raising of the site through the site grading can result in reduced undercutting costs for the removal of the expansive clays.

Removal and replacement of the expansive soils within the roadways would also result in significantly reduced pavement sections for the roads under the design criteria of the City and County of Honolulu for residential streets. We believe that provided the subgrades beneath the streets consist of at least 2 feet of low-expansion impermeable soils, the pavements for the streets can be reduced to the minimum pavement requirement of 2 inches of ACP, over 3 inches of ACB, over 6 inches of Aggregate Base Course, placed on the compacted subgrade. No Select Borrow subbase would be necessary beneath the sidewalks, curbs and gutters for the streets.

It should be realized that any future structures added to the lots by the future lot owners, which are founded below the existing ground surface could be affected by the expansive soils below the low-expansion fills. The buyers of the lots and dwellings should be advised of the soil conditions at their lots and also that any improvements or additions to their lots and dwellings should be completed through consultation with their own geotechnical engineers.

The remainder of this report provides detailed recommendations for selectively grading the entire site, including the road right-of-ways, using partial removal of the on-site clays and their replacement with a low-expansion, impermeable imported fill. Fewell Geotechnical Engineering, Ltd. (FGE) should be notified should it be more desirable to use a special structure design, or other methods, to mitigate the effects of the on-site expansive clays so that additional detailed recommendations can be provided for the selected method.

## **RECOMMENDATIONS**

### **General**

1. We believe that the site for the Kakaina Subdivision can be satisfactorily developed to support the planned subdivision and its improvements provided the recommendations of this report are closely followed. The presence of uncompacted fills over the site and moderately to highly expansive clays throughout the site will necessitate special design and construction considerations.

2. The problems associated with the uncompacted fills and the on-site expansive clays can be reduced by removing the uncompacted fills and sufficient thicknesses of the expansive clays such that the concrete slabs-on-grades and other similarly lightly loaded structures and foundations are underlain by a layer of well-compacted low-expansion, relatively impermeable fill.

3. Groundwater was found in all of the borings drilled throughout the site during this investigation at depths of 13.1 feet to 16.9 feet, or between about Elev. 17 and Elev. 28. At these levels, groundwater is not anticipated to affect most of the construction. However, provisions should be included for dewatering where utility excavations or other similar deep site excavations approach the above-indicated groundwater levels.

### **Site Preparation**

4. Prior to the start of the actual grading operations, the site should be cleared and grubbed in accordance with Section 10 of the Standard Specifications for Public Works Construction of the City and County of Honolulu (Standard Specifications).

- a. All vegetation, boulders, rubbish and other deleterious materials should be removed and wasted off-site. Stockpiles of cleared and grubbed materials were observed at the site during this investigation. Should any these remain, they should be removed and wasted off-site.

- b. The depth of the grubbing operations can best be determined in the field, but it is likely that 2 to 4 inches should suffice. Deeper grubbing should be anticipated where trees or large shrubs exist.
  - c. The organically contaminated grubbed materials are not suitable for use as fill and should be removed from the site. They may be stockpiled for future use as topsoil provided they meet the requirements of the Project Landscape Architect.
5. Where the existing ground to receive fill slopes in excess of 5 Horizontal and 1 Vertical (5H:1V), the ground surface should be benched with a series of horizontal terraces prior to the placement of the fill. The benches should extend through any loose materials into the very stiff to hard natural ground or properly compacted fills.

### **Grading**

6. Once the site has been cleared and grubbed, site grading may commence to generate the planned finish grades. The graded building pads of the lots should extend at least 5 feet beyond the perimeter of the structures and their related structural attachments. Where this criteria cannot be met, deeper than normal foundations will be necessary.
7. The existing uncompacted fills over the site will not provide adequate support for the new construction and should be removed throughout the area of the new construction and down to the very stiff to hard natural alluvial clays prior to additional grading. Sediments and other loose materials found in ditches or swales on the site should similarly be removed.
- a. The actual depth and lateral extent of the removal of these materials must be determined in the field during construction. The boring information indicates that the uncompacted fills extend to depths ranging from ½ to 4 feet below the existing ground surface and generally down to depths of 2½ to 3 feet.

- b. The excavated material may be re-used as fill in the grading provided it meets the material recommendations for fill and is selectively placed, moisture-conditioned, and compacted as recommended herein.

8. Care must be taken by the contractor to minimize the potential for undermining the existing structures along the property lines of the site during the excavation to remove the uncompacted fills. Temporary underpinning of these existing structures should be anticipated to allow the removal of the uncompacted fills and their replacement with compacted fill.

9. Once the uncompacted fills have been removed the then-exposed ground surface in the areas to receive fill or new construction should be proof-rolled to detect any soft spots or remaining uncompacted fills. The proof-rolling should consist of no less than 5 passes with a Caterpillar 825B compactor, or its equivalent, weighing at least 40,000 pounds.

10. Soft spots or any remaining uncompacted fills should be removed down to very stiff to hard natural ground and the resulting depression backfilled in accordance with the recommendations herein.

11. The expansive on-site clays should then be removed a sufficient depth beneath the proposed concrete slabs-on-grades and pavements such that the slabs and pavements are underlain by low-expansion imported fill.

- a. The expansive soils should be removed throughout the areas of the lots, roadways and other areas designated for new construction, except for areas designated for landscaping.
- b. The depth of the undercutting and removal of the expansive soils should extend a sufficient depth below the concrete slabs-on-grades to allow the placement of at least 3 feet of low-expansion imported fill beneath the slabs, as measured from the bottom of the concrete slab.

- c. The depth of the undercutting should extend a sufficient depth below the pavement sections (as measured from the bottom of the Aggregate Base Course layer) to allow the placement of at least 2 feet of low-expansion imported fills beneath these items.

12. Once the expansive soils have been removed, the then-existing expansive clay subgrade to receive fill or new construction should be scarified, moisture-conditioned to at least 3 percent above its optimum moisture content, and uniformly compacted to at least 90 percent relative compaction as determined by Laboratory Compaction Test ASTM D1557.

13. The expansive clay subgrades should be kept moist and not be allowed to dry excessively during the intervening period between its compaction and subsequent placement of additional fill or new construction. Where significant drying occurs, such that shrinkage cracks exceeding 1/8 inch, the subgrade should be scarified, moisture-conditioned and compacted as recommended above.

14. The excavated expansive soils may be used as fill in the site grading provided they are used below the above-recommended thicknesses of low-expansion imported fill, and they are placed, moisture-conditioned and compacted as recommended herein.

15. Fill placed within 3 feet of the bottom of the concrete slabs-on-grades and within 2 feet of the foundations and pavement sections should consist of a low-expansion, relatively impervious imported material.

16. Low-expansion imported fill should be free of organics, rocks or soil clods larger than 2 inches in maximum dimension and meet the following additional requirements.

- a. The low-expansion imported fill should exhibit a Liquid Limit of less than 60 and a PI of less than 20.

- b. The low-expansion imported fill should exhibit a CBR in excess of 10 and a swell of no more than 2½ percent when tested in accordance with Laboratory CBR Test ASTM 1883 under a 51-pound per square foot surcharge and 96 hours of soaking.
- c. When compacted to 90 percent relative compaction, the low-expansion imported fill should also exhibit a permeability,  $k$ , of less than  $1 \times 10^{-4}$  cm/sec when tested in accordance with ASTM D5084.

17. Fill and backfill should be placed in horizontal lifts of no more than 8 inches in loose thickness, moisture-conditioned as indicated below and uniformly compacted to at least 90 percent relative compaction as determined by ASTM D1557. Fill placed within 2 feet of the pavement subgrades should be compacted to at least 95 percent relative compaction.

- a. The on-site expansive clays should be moisture-conditioned to at least 3 percent above their optimum moisture contents.
- b. Imported low-expansion fill should be moisture-conditioned to within 3 percent of its optimum moisture content.

18. Should excessive drying of the low-expansion soil subgrades occur during the intervening period between the construction of the lots and the dwelling construction, the subgrade should be scarified for a depth of at least 8-inches, moisture-conditioned and re-compacted as recommended above.

19. Cut and fill slopes should be limited to no steeper than 2H:1V for heights of up to 10 feet. Slopes exceeding this height are not anticipated on this project and should be individually evaluated should they occur.

## Utilities

20. The installation of the utilities should be in accordance with Section 11 of the Standard Specifications and the appropriate section of the Standard Specifications pertaining to each utility.

21. Backfills for the utilities should be selectively placed, moisture-conditioned and compacted in accordance with the Grading Recommendations above, using the appropriate mechanical compactors around and above the pipes. Flooding, jetting and/or ponding with water are not acceptable methods of compaction.

22. The utilities may be founded in compacted fills or the natural expansive soils. Where the utilities are founded within 3 feet of the finish grades, flexible couplings should be provided where they pass between the natural expansive soils and the low-expansion fills, or where they connect to a structure from the expansive soils.

23. Utilities should be designed such that they are not within the supportive prism of soil beneath the foundations of the dwellings or structures. This is delineated by an imaginary line extending down from the outside edges of the foundations at a slope of 1½H:1V. FGE should be notified should this occur such that it can be evaluated and additional recommendations provided.

24. The utility excavations and other deep site excavations should be shored and braced in accordance with the HIOSH and other applicable governmental regulations to safeguard the workers in the trench. The design of the shoring and bracing system should be the responsibility of the contractor.

25. Groundwater was encountered at depths corresponding to between Elev. 17 and Elev. 28 during this investigation. Dewatering should be anticipated for utility



excavations or other deep excavations approaching these levels. The design of the dewatering system should be the responsibility of the contractor.

### **Foundations**

26. Provided the Grading Recommendations are followed, we believe that the dwellings may be satisfactorily supported by a shallow foundation system. This will assure that the concrete slabs for the dwellings are underlain by at least 3 feet of low-expansion fill and the foundations are underlain by at least 2 feet of low-expansion fill.

27. We believe that the dwellings can be adequately supported on individual spread foundations, thickened edge continuous perimeter footings, or a combination of these types. Although other foundation systems are available, we believe the above foundations should perform satisfactorily and should prove the most economical.

28. Foundations should maintain a minimum base width of at least 12 inches and should be founded at least 12 inches below the lowest adjacent compacted subgrade on level ground. Foundations on slopes or within 5 feet of the top of slopes, should be embedded a sufficient depth such that there is at least 5 feet of horizontal set-back from the lower outside edge of the footing to the compacted slope face.

29. The bottom of the foundation excavations should be cleaned of loose materials, moisture-conditioned to within 3 percent of their optimum moisture content, and uniformly compacted to at least 90 percent relative compaction as determined by ASTM D1557 prior to the placement of the reinforcing steel and concrete. Any soft spots encountered should be removed and the resulting depression backfilled with low-expansion impermeable fill in accordance with the Grading Recommendations.

30. The foundations should bear on the imported low-expansion impermeable fill where they may be designed for an allowable bearing pressure of 3,000 p.s.f. This value may be increased by 1/3 for short-term transient loads.

31. Steel reinforcement of the foundations should be provided as recommended by the Project Structural Engineer. Total and differential vertical movements exceeding ½ inch are not anticipated provided the Grading Recommendations have been followed and the loads do not exceed 50 kips and 2 kips per foot for the columns and walls, respectively. FGE should be notified for additional recommendations should the actual loads exceed those assumed above.

#### **Concrete Slabs-on-Grades**

32. Concrete slabs-on-grades may be used provided the Grading Recommendations are followed. This will assure that the slabs are underlain by at least 3 feet of low-expansion impermeable fill which has been uniformly compacted to at least 90 percent relative compaction, and has not been allowed to dry excessively prior to the construction of the slabs.

33. The on-site soils and recommended imported fills are susceptible to the capillary rise of moisture. The concrete slabs-on-grade should be underlain by at least 4 inches of lightly compacted slab cushion material consisting of ASTM C-33 No. 67 aggregate (3B Fine) to act as a capillary break beneath the slabs. A vapor barrier, if desirable, should be placed between the slab and the slab cushion.

34. Where the concrete slabs will support vehicular traffic, such as in driveways, carports or garages, the slab cushion should be replaced with either 6 inches of Select Borrow subbase or 4 inches of Aggregate Base Course. The Select Borrow and Aggregate Base Course should conform to Sections 30 and 31, respectively, of the

Standard Specifications and should be compacted to at least 95 percent relative compaction.

35. Steel reinforcement of the concrete slabs should be provided as recommended by the Project Structural Engineer. Differential movements between the concrete slabs and foundations exceeding  $\frac{1}{4}$  inch are not anticipated provided the Grading Recommendations have been followed.

### **Pavements**

36. Provided the Grading Recommendations are followed, the subgrades beneath the interior residential streets should consist of at least 2 feet of low-expansion, imported impermeable fill with a CBR in excess of 10 and a CBR swell of less than 2.5 percent.

37. For these conditions we believe that a minimum pavement section consisting of 2 inches of Asphalt Concrete Paving (ACP), over 3 inches of Asphalt Concrete Base Course (ACB), over 6 inches of untreated Aggregate Base Course, placed on the compacted subgrade will be necessary for the interior streets under the pavement design criteria of the City and County of Honolulu.

38. Weepholes should be provided at the catch basins along the roads to minimize the build up of water in the pavements. A 1-cubic foot prism of filter gravel, or ASTM C-33 No. 67 aggregate wrapped in a geotextile filter fabric, should be placed in front of the weepholes to facilitate drainage. Care must be taken during construction to ensure that the weepholes and their filter materials are hydraulically connected to the base course layers of the pavements of the roads.

39. For the extension of Mekia Street on the western end of the site, it is anticipated that the excavation for the road prism will likely encounter subgrade soils which will be

similar to the expansive clays of Bag A, with a CBR of 4 and a swell of 5 percent.

- a. For this section of Mekia Street, we believe that a pavement section consisting of 2 inches of ACP, over 4 inches of ACB, over 12 inches of Aggregate Base Course, placed on the compacted subgrade will be required.
- b. Due to the anticipated expansion of the subgrade soils exceeding 3 percent, at least 6 inches of Select Borrow Subbase should be provided beneath the sidewalks, curbs and gutters for this section of Mekia Street.
- c. A longitudinal subdrain should be provided beneath the concrete curb and gutter to minimize the potential for the accumulation of water within the pavement subgrade. The subdrain should be hydraulically connected to the Aggregate Base Course layer of the pavement and the Select Borrow layer under the sidewalks.

40. The composition, placement and compaction of the Select Borrow subbase and Aggregate Base Course should be in accordance with Sections 30 and 31, respectively, of the Standard Specifications.

41. The subgrade should be shaped to drain and compacted to at least 95 percent relative compaction as determined by ASTM D1557 for a minimum depth of 6 inches in accordance with Section 29 of the Standard Specifications.

42. The above pavement recommendations are given for preliminary design and cost-estimating purposes. The actual pavements constructed will be dependent on the CBR and swell values of the soils found at the pavement subgrade levels during construction.

#### **Quality Control**

43. The site preparation and site grading, including the proof-rolling operations should be observed by FGE to determine whether the anticipated materials are encountered.

44. Intermittent field density tests should be taken on the fills and backfills to determine whether the specified levels of compaction are consistently obtained.

45. Samples of the proposed fill materials should be submitted to FGE no less than 7 working days prior to their intended job-site delivery to allow adequate time for testing, evaluation, and approval.

46. Foundation excavation should be observed by FGE to determine whether the anticipated bearing materials are encountered. The recommendations provided herein are contingent on adequate construction observations and testing of the geotechnical aspects of the construction by FGE.

47. Due to the presence of uncompacted fill and expansive soils at the site, more than the normal earthwork observation and testing will be necessary. The construction budget for the project should be adjusted to accommodate these costs.

#### **Miscellaneous**

48. Adequate drainage should be included in the design of the project to direct water away from the slopes and to preclude the ponding of water adjacent to or beneath the dwellings, pavement and structures.

49. The graded slopes should be grassed or mulched as soon as practical after grading to minimize the erosion.

#### **Limitations**

50. This report has been completed for the exclusive use of **Akinaka & Associates, Ltd.** for the site of the **Kakaina Subdivision** in Waimanalo, Oahu, Hawaii. The limitation of this investigation and report are presented in Appendix C.

## **APPENDIX A**

### **Subsurface Exploration Summary**

**Project Designation:** Kakaina Subdivision **File:** 2760.01

**Location:** Waimanalo, Oahu, Hawaii

**Project Location Map:** Figure 1

**Boring Location Plan:** Figure 2

**Drilling Contractor:** Hawaii Test Borings, Inc.

**Drilling Equipment:** Simco 2400SK

**Drilling Method:** /x/ 4-inch Auger // Wash  
// 5-inch Auger // HQ Core

#### **Boring Summary**

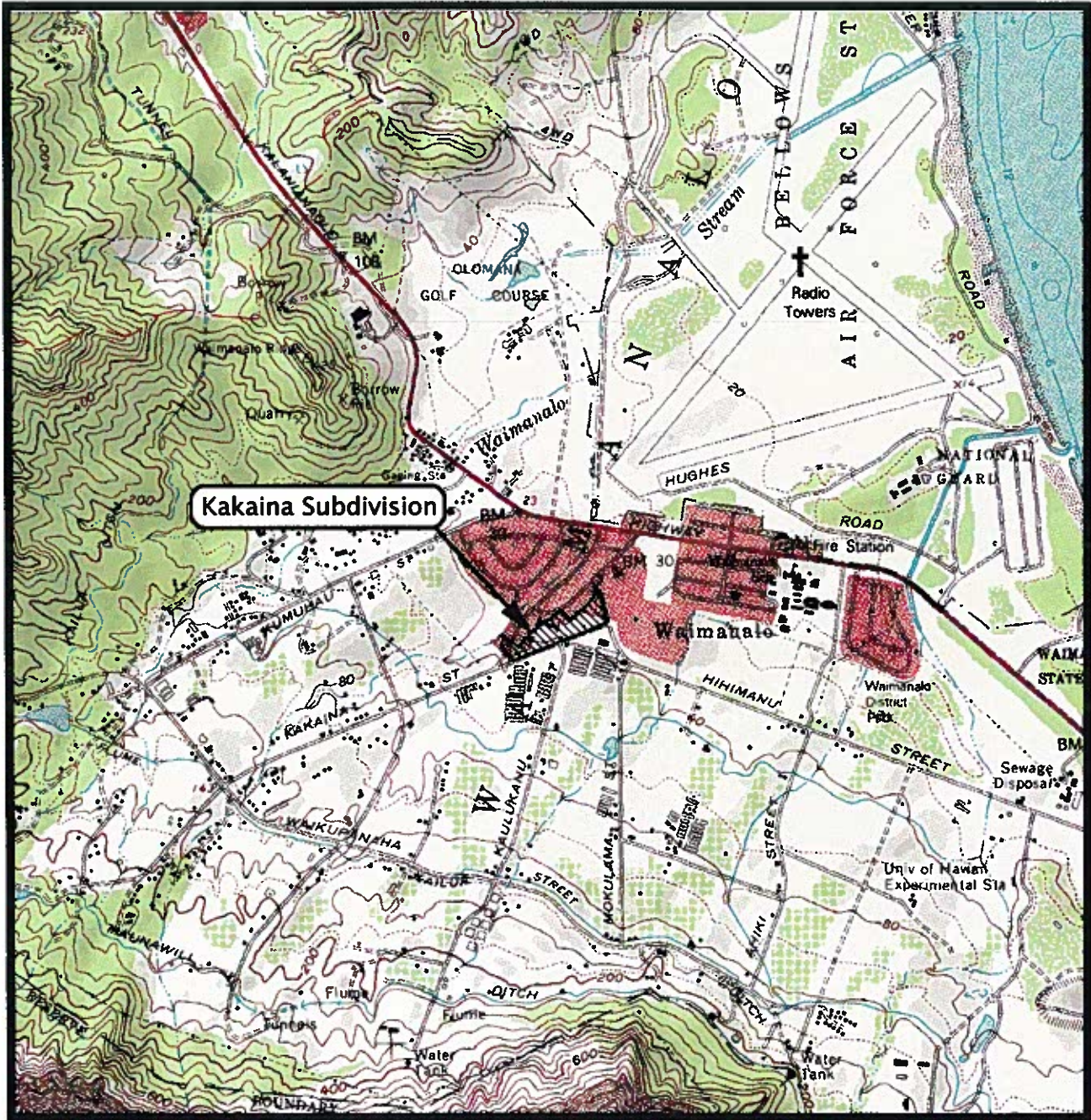
<u>Boring</u>	<u>Depth</u>	<u>Number of Samples</u>	<u>Depth to Water Table</u>	<u>Elev. of Water Table</u>	<u>Boring Log Figure No.</u>
1	30.0'	8	13.6'	Elev. 28±	3
2	20.0'	6	16.9'	Elev. 25±	4
3	30.0'	8	13.1'	Elev. 21±	5
4	20.0'	6	14.1'	Elev. 23±	6
5	30.0'	8	14.5'	Elev. 20±	7
6	20.0'	6	14.6'	Elev. 17±	8
7	<u>20.0'</u>	<u>6</u>	14.3'	Elev. 20±	9
Total	170.0'	48			

**Date Started:** 4-18-07 **Date Completed:** 4-24-07

**Boring Log Legend:**

Figure 10





**LEGEND:**



PROJECT LOCATION

SCALE: 1:24000

**GENERAL AREA:**

WAIMANALO, OAHU, HAWAII

**REFERENCE:**

WAIMANALO QUADRANGLE  
U.S.G.S. TOPOGRAPHIC MAP



F.G.E. Ltd.

**PROJECT LOCATION MAP**

Kakaina Subdivision

Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

**Figure 1**









F.G.E. Ltd.  
96-1416 Waiihona Place  
Pearl City, Hawaii

**Boring:** 1  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 42'  $\pm$   
**Depth to Water:** 13.6'  
**Date Completed:** 4-24-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
7.9% Swell SI=0.51 Torv. >5,000psf Direct Shear: C=800psf $\phi=4.0^\circ$ 3.7% Swell SI=0.21 Torv. >5,000psf LL=110, PI=73 Torv. =4,500psf  Torv. =4,800psf  Torv. =2,000psf  Torv. =720psf Gradation: 0% Gravel 34% Sand 66% Silt/Clay  Torv. =2,950psf			28	1	0	Dark Brown Silty CLAY (CH) with some gravel, very stiff to hard, moist (FILL)
	41	79	35	2	1	Gray/Brown Multi-Colored Silty CLAY (CH), hard, moist
	43	78	33	3	2	
	45	73	32	4	3	At 7', grades with trace of sand
	45	74	31	5	4	
	57	67	13	6	5	(ALLUVIUM)
	62	64	11	7	6	Gray CLAY (CH), stiff, saturated (ALLUVIUM)
	54	69	26	8	7	Brown Multi-Colored Sandy CLAY (CH) with trace Gravel, medium stiff, saturated (ALLUVIUM)
					8	Gray CLAY (CH), very stiff, saturated (ALLUVIUM)
					9	
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	
					26	
					27	
					28	
					29	
					30	
					31	
					32	
					33	
					34	
					35	
					36	
					37	
					38	
					39	
					40	
					41	
					42	
					43	
					44	
					45	
					46	
					47	
					48	
					49	
					50	
					51	
					52	
					53	
					54	
					55	
					56	
					57	
					58	
					59	
					60	
					61	
					62	
					63	
					64	
					65	
					66	
					67	
					68	
					69	
					70	
					71	
					72	
					73	
					74	
					75	
					76	
					77	
					78	
					79	
					80	
					81	
					82	
					83	
					84	
					85	
					86	
					87	
					88	
					89	
					90	
					91	
					92	
					93	
					94	
					95	
					96	
					97	
					98	
					99	
					100	

Figure 3



F.G.E. Ltd.  
96-1416 Waihona Place  
Pearl City, Hawaii

Boring: 2  
Project: Kakaina Subdivision  
Location: Waimanalo, Oahu, Hawaii  
Surface Elevation: 42' ±  
Depth to Water: 16.9'  
Date Completed: 4-19-07

File: 2760.01

Project Engineer: AS  
Field Engineer: MA  
Drafted by: MA/SW  
Date of Drawing: July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
LL=105, PI=66 Torv.=4,950psf 1.5% Swell SI=0.40 Torv.=4,000psf	46	75	29	1	0	Dark Brown Clayey SILT (MH) with fine Sand, very stiff, damp (FILL)
			49	2	1	Dark Brown Silty CLAY (CH) with some fine Sand, hard, moist (FILL)
			67	3	2	Dark Brown Silty CLAY (CH) with some fine Sand, hard, moist (ALLUVIUM)
Torv.>5,000psf	40	76	27	4	3	Brown Multi-Colored Silty CLAY (CH) with highly weathered Gravel and trace fine Sand, hard, moist (ALLUVIUM)
					4	
Torv.=4,100psf	47	74	37	5	5	Gray/Brown Silty CLAY (CH), hard, wet (ALLUVIUM)
					6	
Gradation: 0% Gravel 56% Sand 44% Silt/Clay	66	62	14	6	7	Brown Multi-Colored Clayey SAND (SC), loose, saturated (ALLUVIUM)  BOH @ 20.0'
					8	

Figure 4



F.G.E. Ltd.  
96-1416 Waiihona Place  
Pearl City, Hawaii

**Boring:** 3  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 34' ±  
**Depth to Water:** 13.1'  
**Date Completed:** 4-24-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
Torv.=4,200psf	42	76	32	1	0	Brown Clayey SILT (MH) with trace fine Sand, hard, damp (FILL)
LL=62%, PI=26			23	2	5	Light Brown Clayey SILT (MH) with weathered Gravel and Sand, hard, damp (ALLUVIUM)
Torv.=2,500psf Direct Shear: C=640psf Ø=11° 6.8% Swell SI=0.77 Torv.=3,850psf	52	69	19	3	10	Gray CLAY (CH), very stiff, moist (ALLUVIUM)
	52	70	23	4	15	Gray/Brown Multi-Colored Silty CLAY (CH), very stiff to hard, moist
Torv.=2,800psf	55	70	27	5	20	
Torv.=2,200psf	54	64	19	6	25	(ALLUVIUM)
Torv.=860psf	59	67	10	7	30	Brown Silty CLAY (CH) with seams of loose weathered Gravel trace Sand, medium stiff, saturated (ALLUVIUM)
Torv.=2,450psf	58	66	20	8	35	Gray Silty CLAY (CH) with trace Sand, very stiff, moist (ALLUVIUM)
						BOH @ 30.0'

Figure 5



F.G.E. Ltd.  
96-1416 Waiihona Place  
Pearl City, Hawaii

**Boring:** 4  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 37' ±  
**Depth to Water:** 14.1'  
**Date Completed:** 4-19-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
			16	1	0	Brown Sandy SILT (MH) with trace Asphalt Concrete fragments, stiff, damp (FILL)
Torv.=2,900psf	49	72	20	2	5	Brown Silty CLAY (CH) with trace roots and Sand, very stiff, moist (ALLUVIUM)
Torv.=4,100psf 5.9%Swell SI=0.38	49	69	22	3	10	Gray Silty CLAY (CH), very stiff to hard, wet At 5.5', grades to Brown
Torv.=4,900psf LL=138,PI=100	60	64	23	4	15	
Torv.=2,700psf	62	63	15	5	20	(ALLUVIUM)
	67	62	11	6	25	Brown Clayey weathered GRAVEL (GC) with coarse Sand, loose, saturated (ALLUVIUM)
					30	BOH @ 20.0'
					35	

Figure 6



F.G.E. Ltd.  
96-1416 Waihona Place  
Pearl City, Hawaii

**Boring:** 5  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 34' ±  
**Depth to Water:** 14.5'  
**Date Completed:** 4-24-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
Torv.=2,550psf 3.5%Swell SI=0.39	48	68	11	1	0	Brown Silty CLAY (CH) with trace of decayed organics, stiff to very stiff, moist (FILL)
Torv.=2,650psf LL=111,PI=78	48	72	18	2	1	Gray Multi-Colored Silty CLAY (CH), very stiff, moist
			18	3	2	
Direct Shear: C=1,050psf Ø=12° 3.0%Swell SI=0.48	61	62	17	4	3	
Torv.=3,250psf	52	73	28	5	4	
					5	(ALLUVIUM)
Torv.=1,950psf	64	63	12	6	6	Brown Multi-Colored Silty CLAY (CH) with weathered Gravel and trace Sand, stiff to very stiff, saturated (ALLUVIUM)
					7	Multi-Colored Sandy CLAY (CH), stiff, saturated (ALLUVIUM)
Torv.=1,500psf Gradation: 0%Gravel 25%Sand 75%Silt/Clay	61	66	14	7	8	
Torv.=1,700psf	65	61	14	8	9	Gray CLAY (CH), stiff, saturated (ALLUVIUM)
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	
					26	
					27	
					28	
					29	
					30	
					31	
					32	
					33	
					34	
					35	
						BOH @ 30.0'

Figure 7



F.G.E. Ltd.  
96-1416 Waiihona Place  
Pearl City, Hawaii

**Boring:** 6  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 32' ±  
**Depth to Water:** 14.6'  
**Date Completed:** 4-18-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
LL=91, PI=64 Torv.=1,850psf			12	1		Brown Silty CLAY (CH), stiff, damp (FILL)
0.9% Swell SI=0.25 Torv.>5,000psf	52	69	10	2		
Torv.=3,750psf			36	3		Brown Multi-Colored Silty CLAY (CH), hard, wet
						(ALLUVIUM)
Direct Shear: C=960psf Ø=3° 7.3% Swell SI=0.77	58	66	19	4		Gray CLAY (CH), very stiff, wet
						(ALLUVIUM)
Torv.=2,860psf	50	72	18	5		Brown/Gray Silty CLAY (CH), very stiff, wet
						(ALLUVIUM)
						Multi-Colored Sandy CLAY (CH), stiff, saturated
Gradation: 0% Gravel 35% Sand 65% Silt/Clay	76		7	6		(ALLUVIUM)
						BOH @ 20.0'

Figure 8



F.G.E. Ltd.  
96-1416 Waihona Place  
Pearl City, Hawaii

**Boring:** 7  
**Project:** Kakaina Subdivision  
**Location:** Waimanalo, Oahu, Hawaii  
**Surface Elevation:** 33' ±  
**Depth to Water:** 14.3'  
**Date Completed:** 4-19-07

**File:** 2760.01

**Project Engineer:** AS  
**Field Engineer:** MA  
**Drafted by:** MA/SW  
**Date of Drawing:** July 2007

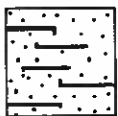
LAB TEST RESULTS	MOIST CONT. %	DRY DEN. PCF	BLOWS PER FT.	SAMPLE	DEPTH	CLASSIFICATION
Gradation: 12% Gravel 50% Sand 38% Silt/Clay  LL=117, PI=83 1.3% Swell SI=0.12  Torv.=5,000psf   Torv.=4,750psf   Torv.=840psf	18		42/6"	1	0	Brown Silty SAND (SM) with some Asphalt Concrete fragments, medium dense to dense, damp (FILL)
			28	2	5	Brown Multi-Colored Silty CLAY (CH), hard, wet
	38	85	49	3		
	44	75	26	4	10	
	55	67	23	5	15	(ALLUVIUM) Gray CLAY (CH) with trace yellowish brown Silt, hard, wet
	60	66	9	6	20	(ALLUVIUM) Brown Sandy CLAY (CH), medium stiff to stiff, wet (ALLUVIUM)
					20.0	Brown/Gray Silty CLAY (CH) with Sand, very stiff, wet
						BOH @ 20.0'
					25	
					30	
					35	

Figure 9

## MAJOR ROCK TYPES



BASALT



TUFF



DECOMPOSED ROCK

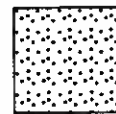


CORAL

## MAJOR SOIL TYPES



GRAVEL



SAND



SILT

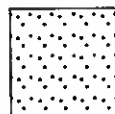


CLAY

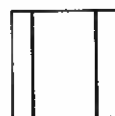
## SECONDARY CLASSIFICATION



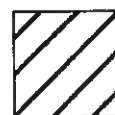
GRAVELLY



SANDY



SILTY



CLAYEY



PEAT/ORGANICS

## SAMPLING SYMBOLS



3" O.D.  
Undisturbed  
Sample

3" O.D.  
Disturbed  
Sample

2" O.D. Standard  
Penetration Sample

No  
Recovery

Shelby  
Tube

Bag  
Sample

Core



Water  
Level



F.G.E. Ltd.

**BORING LOG LEGEND**  
Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 10



## **APPENDIX B**

### **Laboratory Testing Summary**

**Project Designation:** Kakaina Subdivision

**File:** 2760.01

**Location:** Waimanalo, Oahu, Hawaii

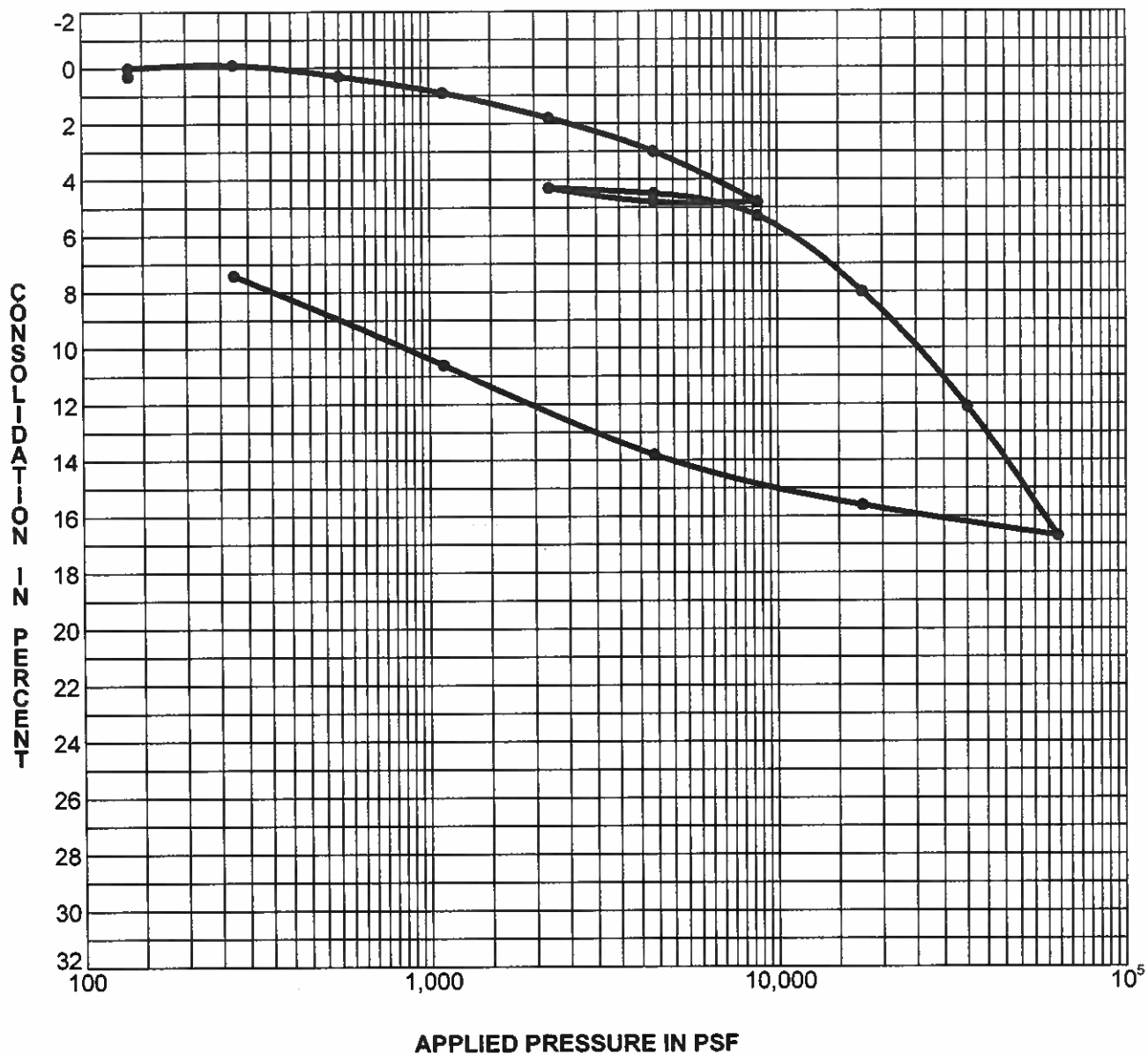
	<u>Sample No.</u>	<u>Figure Designation</u>
<b><u>Consolidation Curves:</u></b>	1-6	11
	5-2	12
	6-2	13
	7-6	14
<b><u>California Bearing Ratio:</u></b>	Bag A	15
	Bag B	16
<b><u>Gradation:</u></b>	1-7	17
	2-6	18
	5-7	19
	6-6	20
	7-1	21
<b><u>Plasticity Charts:</u></b>	1-4	22
	2-2	22
	3-2	22
	4-4	22
	5-2	22
	6-1	22
	7-3	22
	Bag A	23
	Bag B	23

**Summary of Laboratory Test Results**

Table I

**Summary of Laboratory CBR Test Results**

Table II



Sample Identification	Depth (feet)	Classification	LL	PI
1 - 6	18.5	Gray CLAY (CH)		



F.G.E. Ltd.

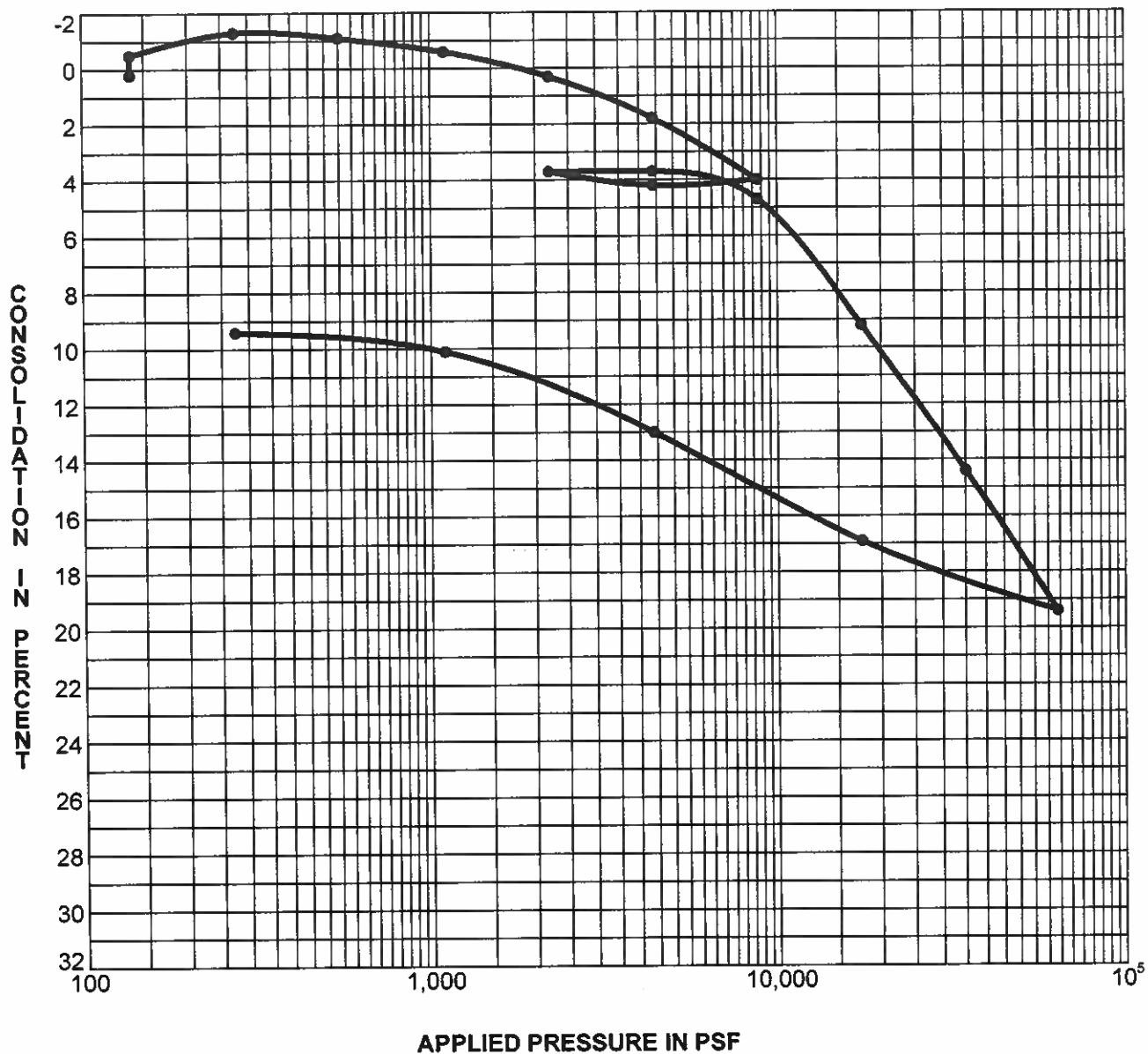
## CONSOLIDATION CURVE

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 11



Sample Identification	Depth (feet)	Classification	LL	PI
5 - 2	3.0	Gray Multi-Colored Silty CLAY (CH)	111	78



F.G.E. Ltd.

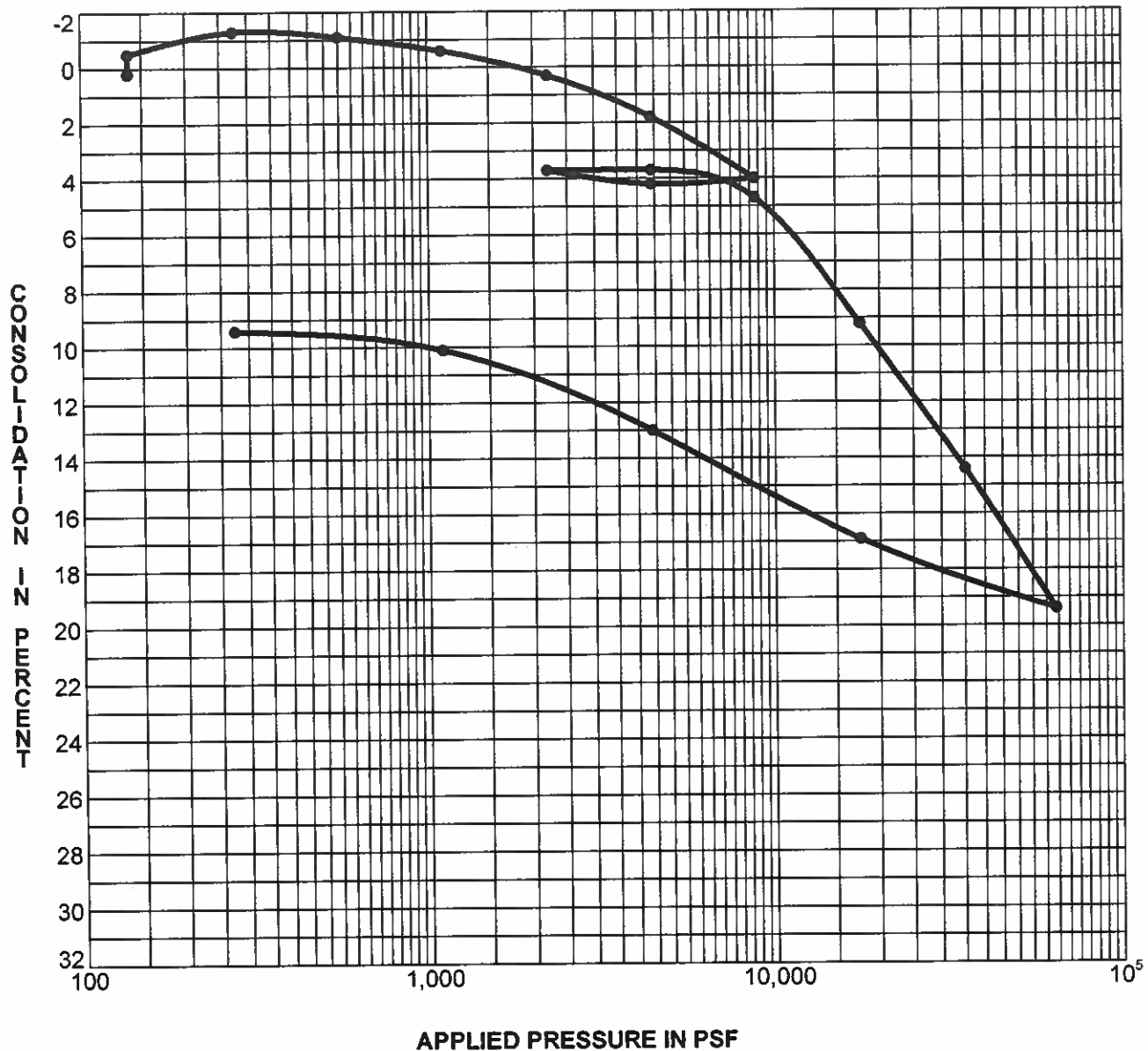
## CONSOLIDATION CURVE

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 12



Sample Identification	Depth (feet)	Classification	LL	PI
6 - 2	3.0	Brown Multi-Colored Silty CLAY (CH)		



F.G.E. Ltd.

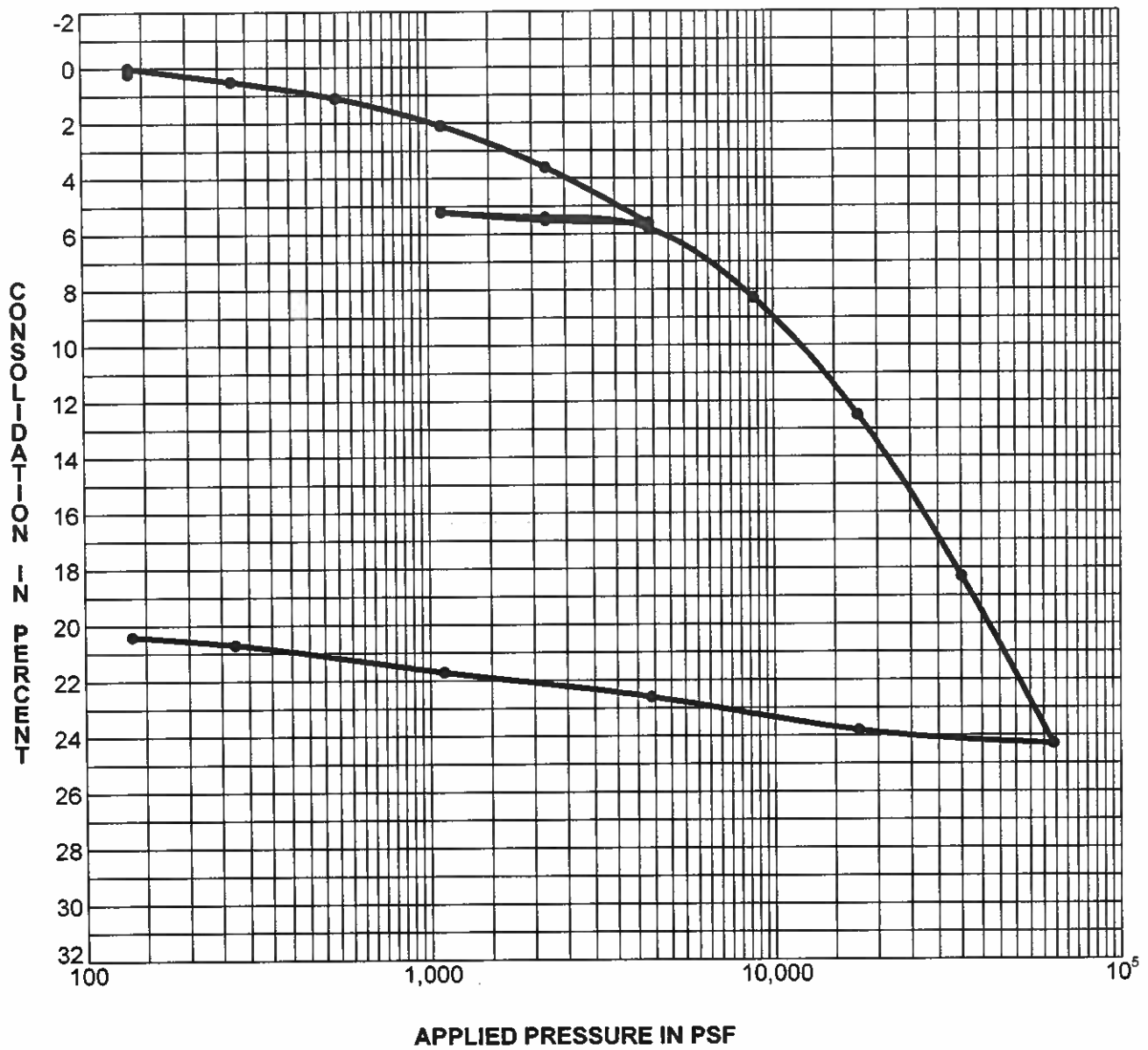
## CONSOLIDATION CURVE

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 13



Sample Identification	Depth (feet)	Classification	LL	PI
7 - 6	18.5	Brown Sandy CLAY (CH)		



F.G.E. Ltd.

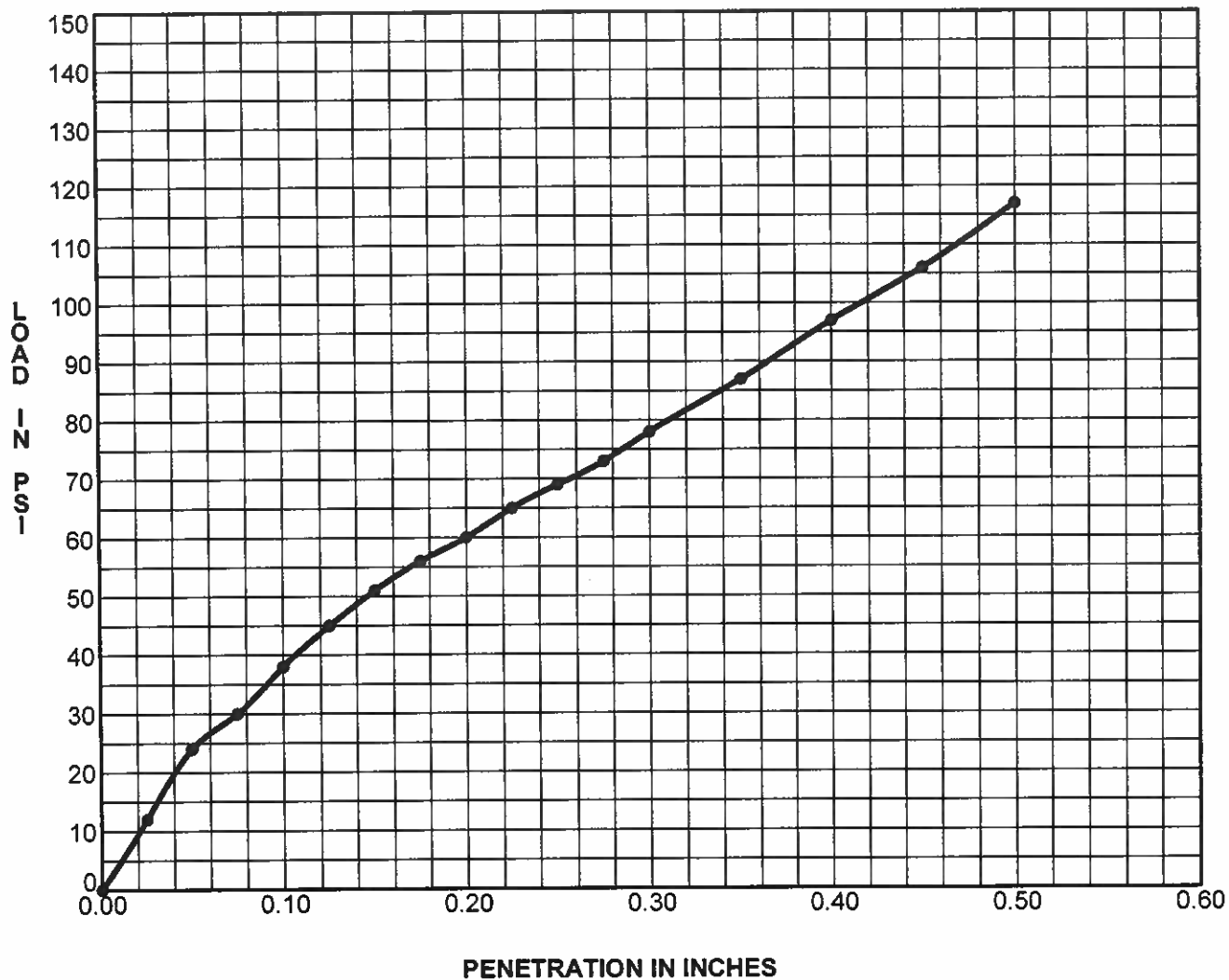
## CONSOLIDATION CURVE

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

**Figure 14**



Sample Identification	Classification	CBR	% Comp	Max Den.	Opt. % MC	% Swell	LL	PI
● BAG A	Brown CLAY (CH)	4.0	99	89.0	32.0	5.0	70	36



F.G.E. Ltd.

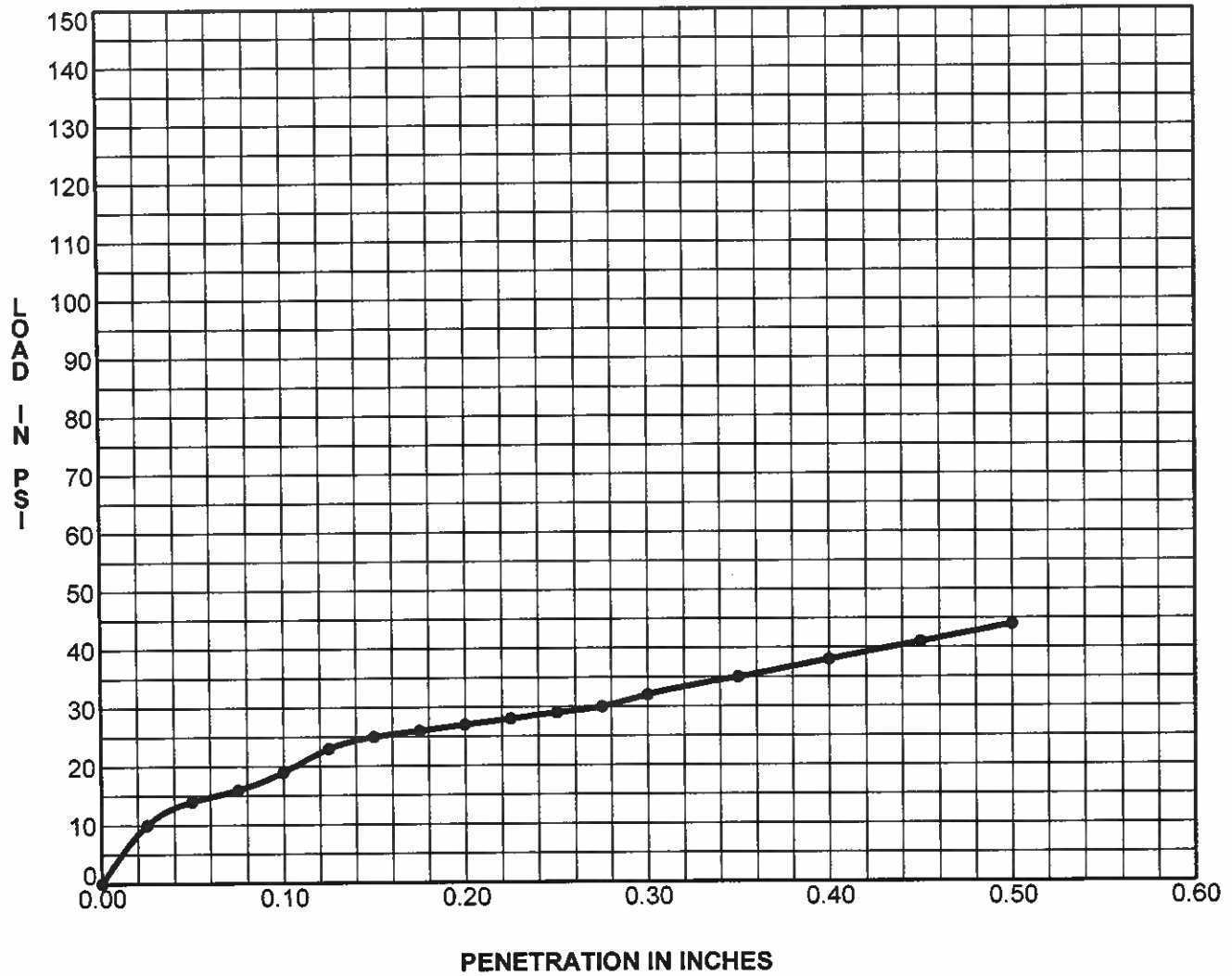
## CALIFORNIA BEARING RATIO

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 15



Sample Identification	Classification	CBR	% Comp.	Max. Den.	Opt. % MC	% Swell	LL	PI
● BAG B	Brown CLAY (CH) with Sand	2.0	97	91.0	28.0	11.5	83	51



F.G.E. Ltd.

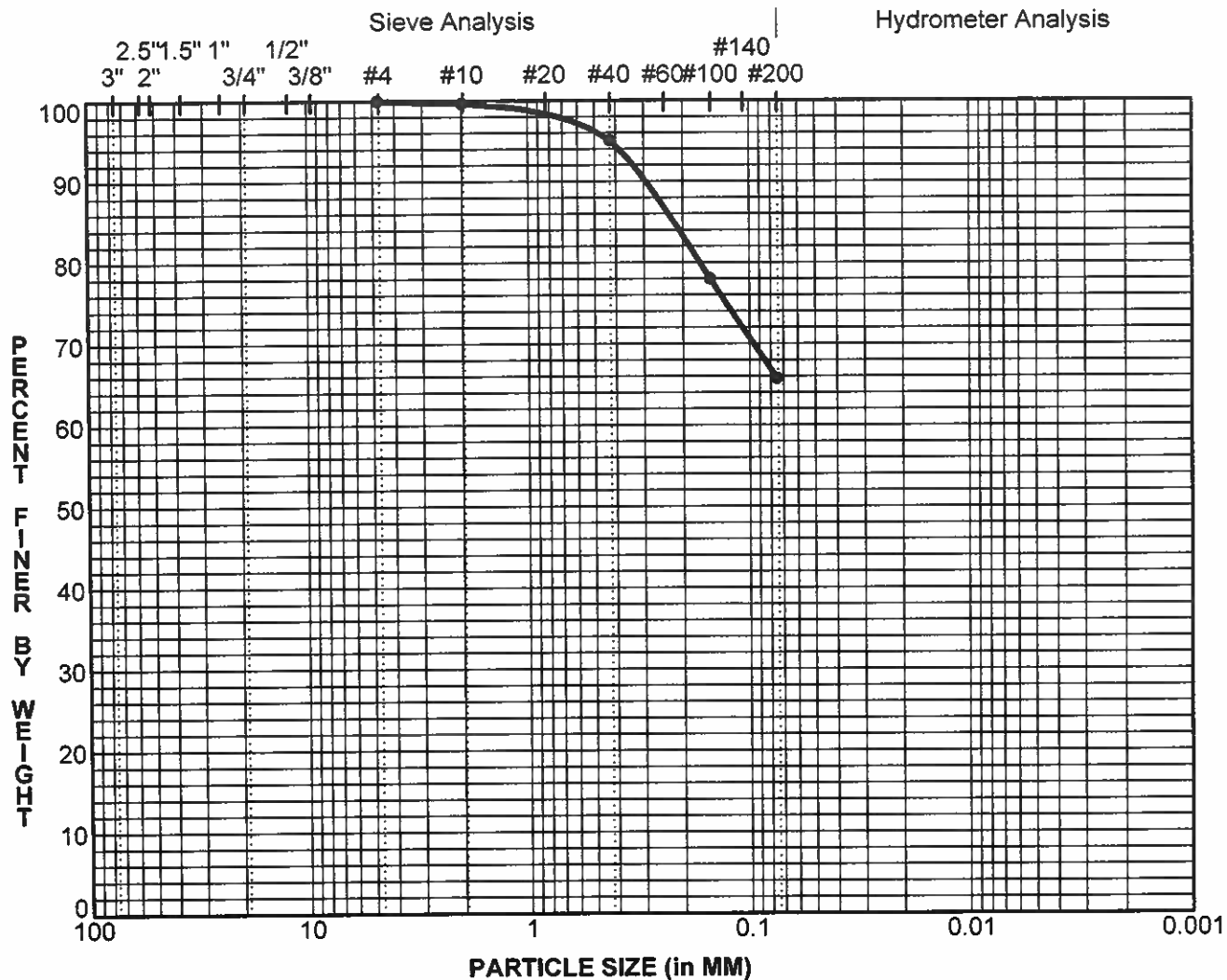
## CALIFORNIA BEARING RATIO

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 16



Gravel		Sand			Silt and Clay
coarse	fine	coarse	medium	fine	

Sample ID	Depth	Classification	MC%	LL	PL	PI	Cc	Cu
● 1 - 7	23.5	Brown Multi-Colored Brown Sandy CLAY (CH)	62					

Sample ID	Depth	D100	D50	D30	D10	%Gravel	%Sand	%Silt & Clay
● 1 - 7	23.5	4.8				0	34	66



F.G.E. Ltd.

## GRAIN SIZE DISTRIBUTION

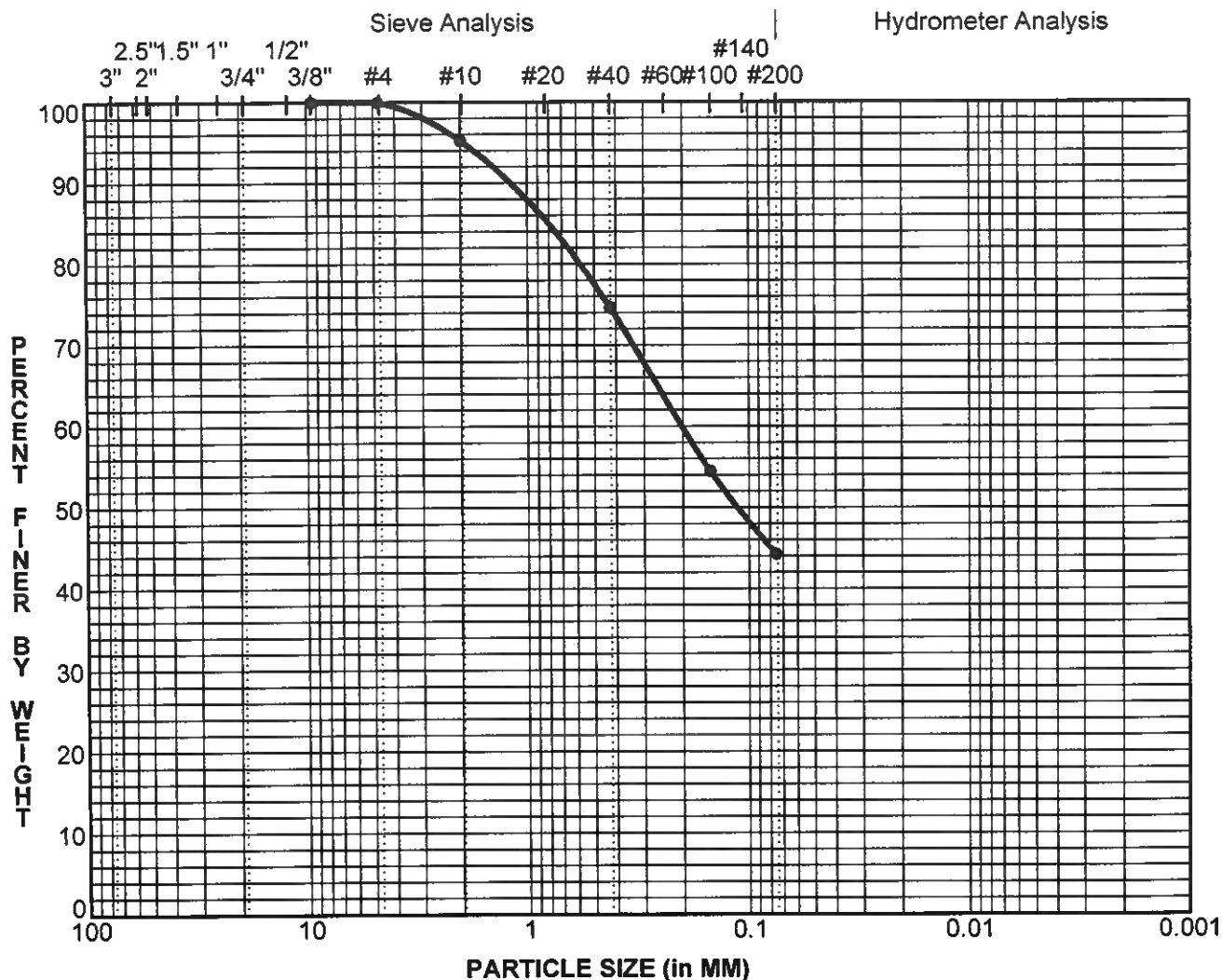
Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 17





Gravel		Sand			Silt and Clay
coarse	fine	coarse	medium	fine	

Sample ID	Depth	Classification	MC%	LL	PL	PI	Cc	Cu
● 2 - 6	18.5	Brown Multi-Colored Clayey SAND (SC)	66					

Sample ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt & Clay
● 2 - 6	18.5	9.5	0.2			0	56	44



F.G.E. Ltd.

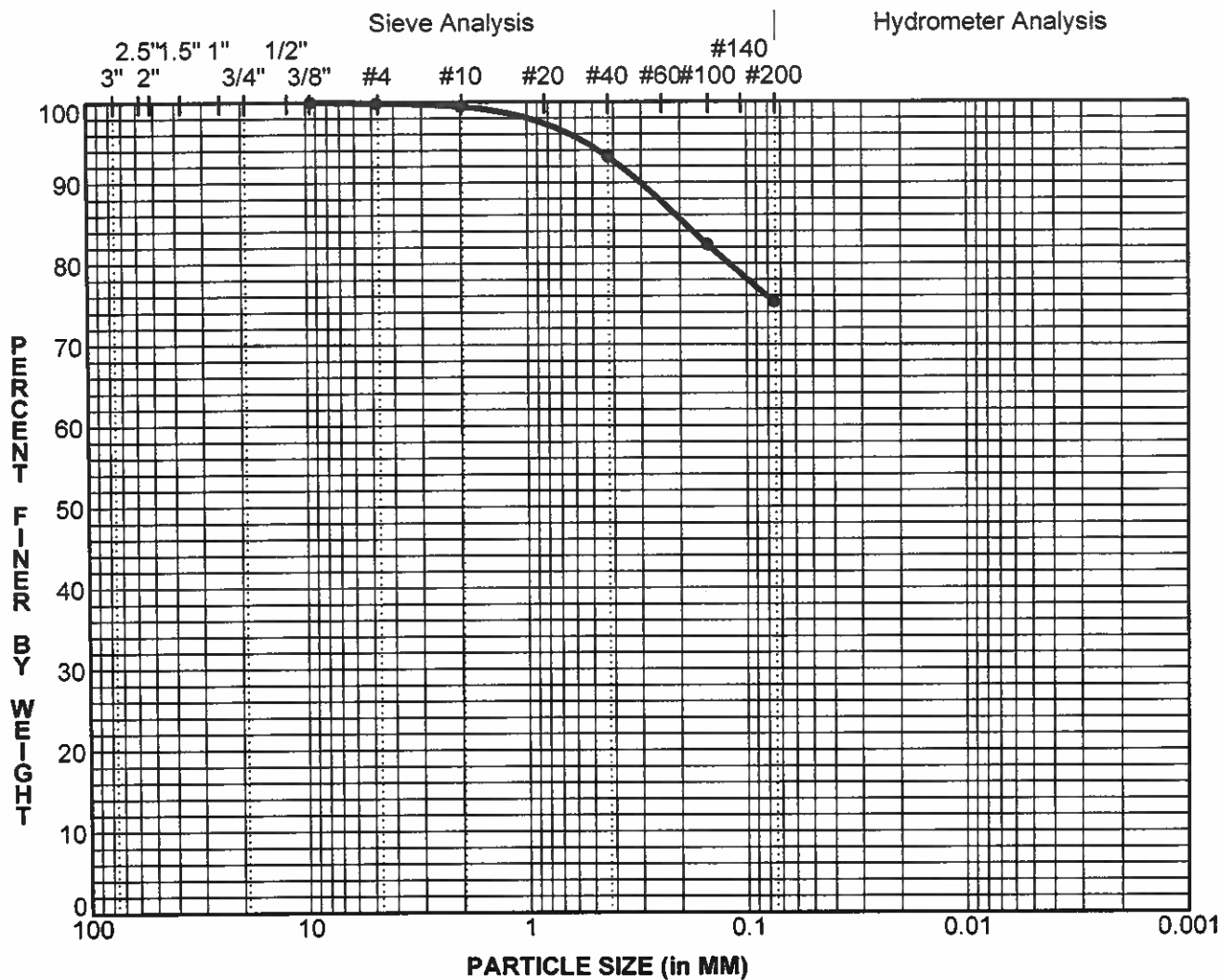
## GRAIN SIZE DISTRIBUTION

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 18



Gravel		Sand			Silt and Clay
coarse	fine	coarse	medium	fine	

Sample ID	Depth	Classification	MC%	LL	PL	PI	Cc	Cu
● 5 - 7	23.5	Multi-Colored CLAY (CH) with Sand	61					

Sample ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt & Clay
● 5 - 7	23.5	9.5				0	25	75



F.G.E. Ltd.

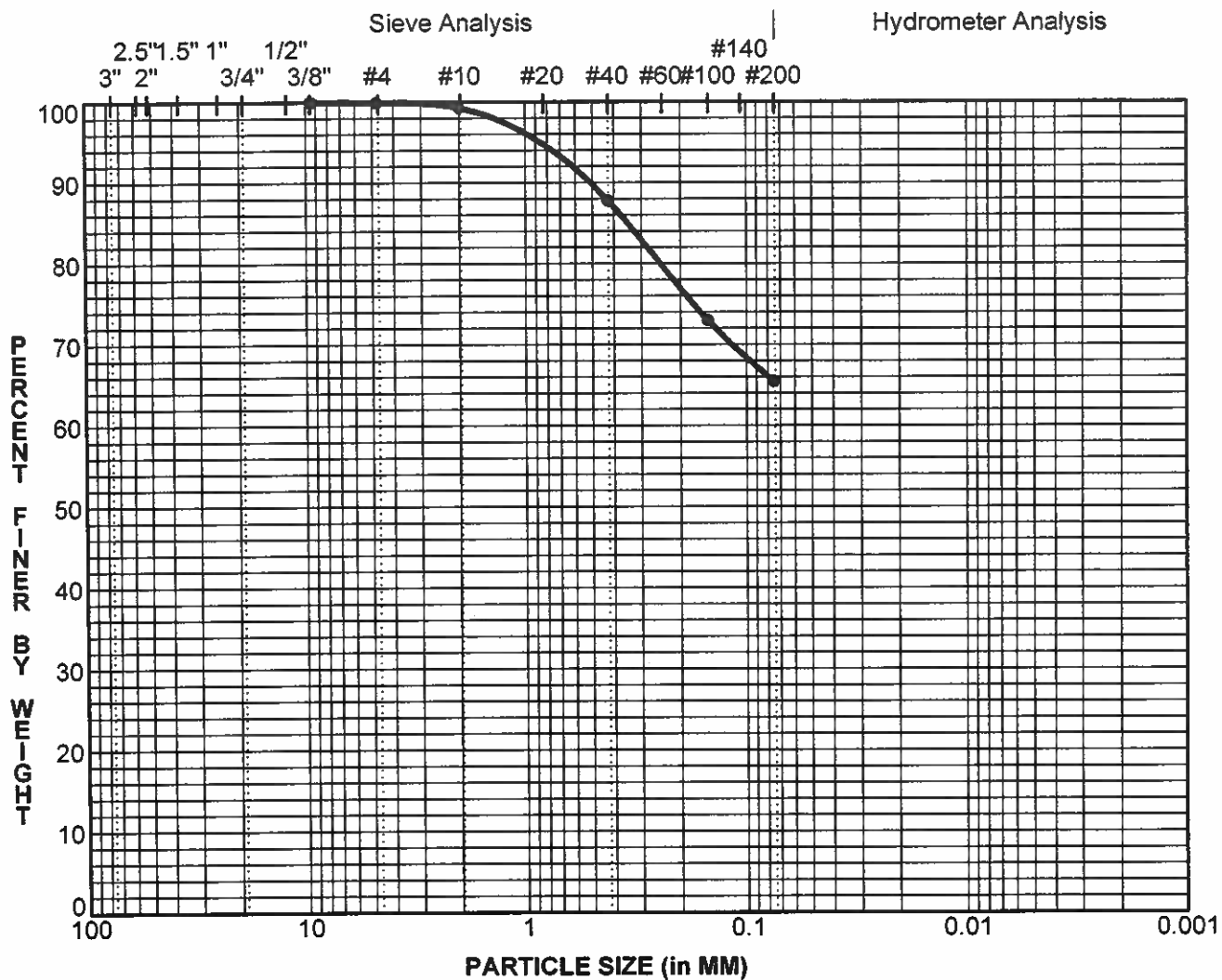
## GRAIN SIZE DISTRIBUTION

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

**Figure 19**



Gravel		Sand			Silt and Clay
coarse	fine	coarse	medium	fine	

Sample ID	Depth	Classification	MC%	LL	PL	PI	Cc	Cu
● 6 - 6	18.5	Multi-Color Brown Sandy CLAY (CH)	76					

Sample ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt & Clay
● 6 - 6	18.5	9.5				0	35	65



F.G.E. Ltd.

## GRAIN SIZE DISTRIBUTION

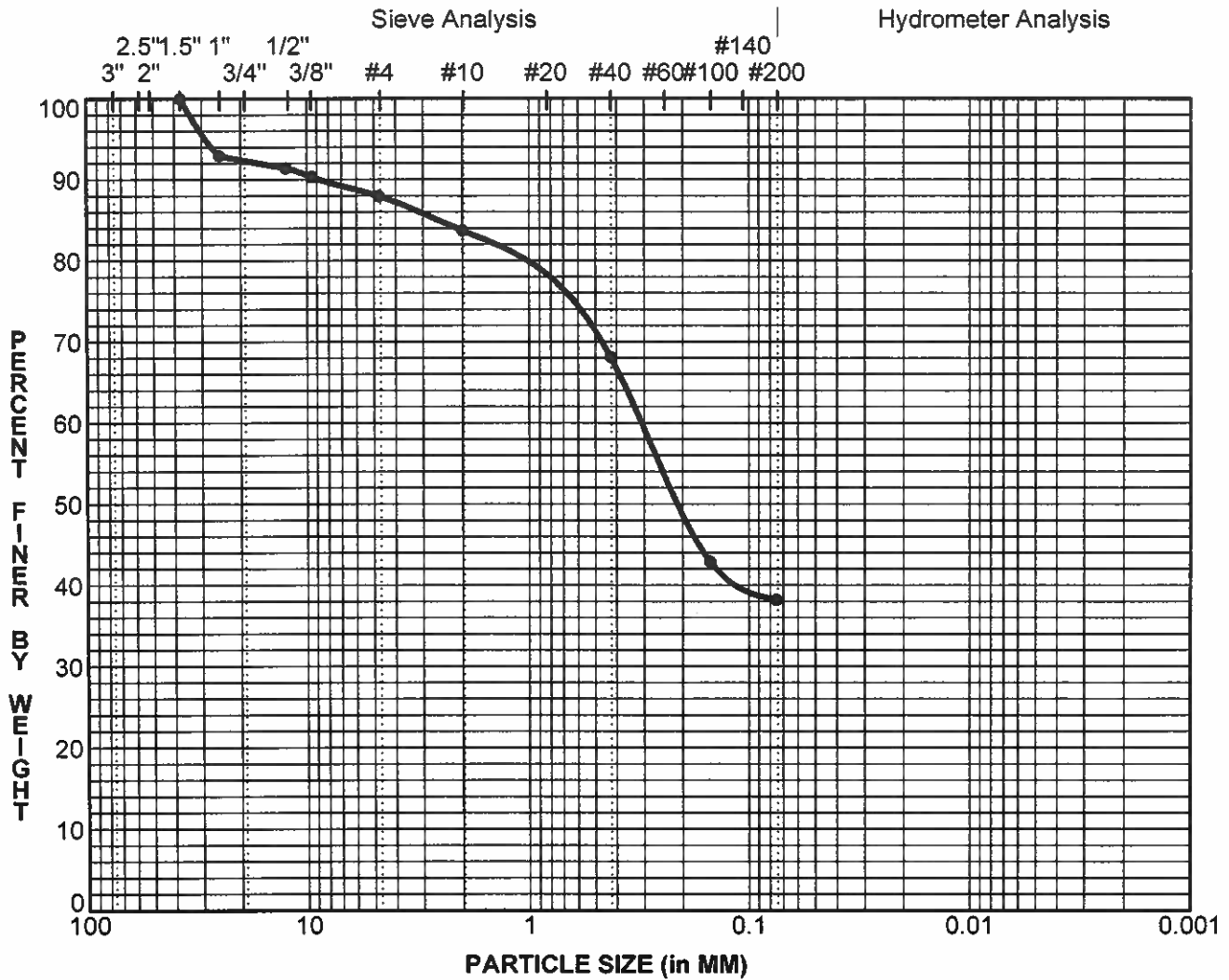
Kakaina Subdivision

Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 20



Gravel		Sand			Silt and Clay
coarse	fine	coarse	medium	fine	

Sample ID	Depth	Classification	MC%	LL	PL	PI	Cc	Cu
● 7 - 1	1.0	Brown Silty SAND (SM) with Gravel	18					

Sample ID	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt & Clay
● 7 - 1	1.0	37.5	0.3			12	50	38



F.G.E. Ltd.

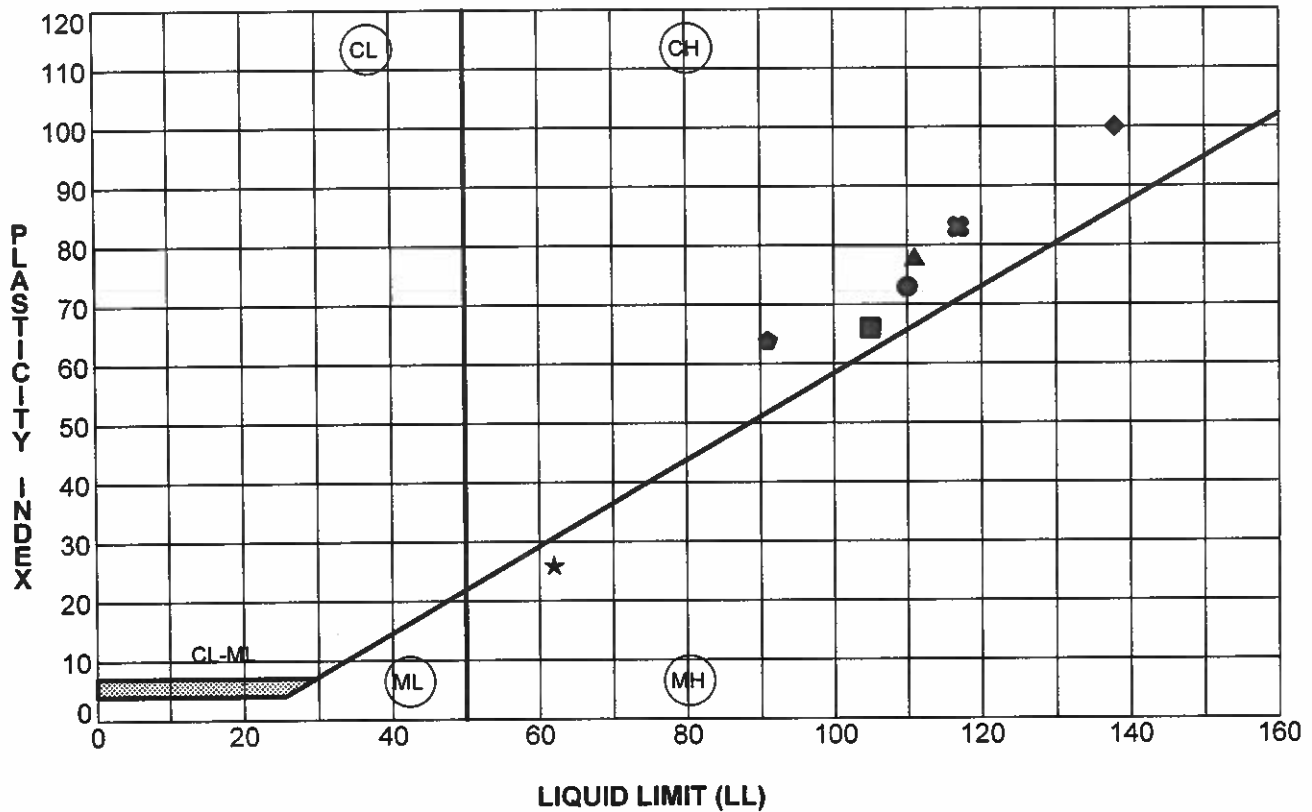
## GRAIN SIZE DISTRIBUTION

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

**Figure 21**



F.G.E. Ltd.

## PLASTICITY INDEX CHART

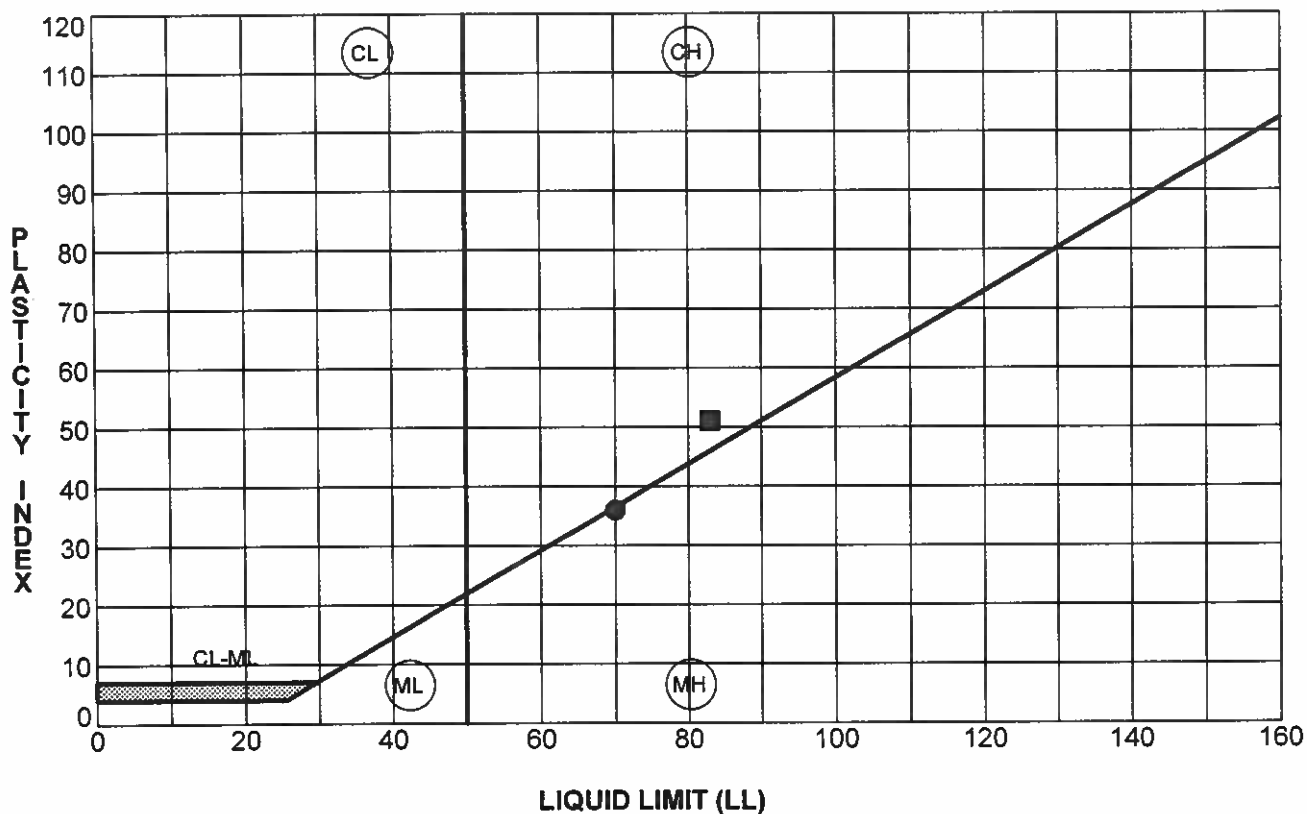
Kakaina Subdivision

Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 22



Sample ID	Depth (ft)	LL	PL	PI	Classification
● BAG A	0.0	70	34	36	Brown CLAY (CH)
■ BAG B	0.0	83	32	51	Brown CLAY (CH) with Sand



F.G.E. Ltd.

## PLASTICITY INDEX CHART

Kakaina Subdivision  
Waimanalo, Oahu, Hawaii

File: 2760.01

July 2007

Figure 23

TABLE I

Summary of Laboratory Test Results

Sample No.	Depth (ft)	Moisture Contents (%)	Dry Density (pcf)	Direct Shear		Liquid Limit	Plasticity Index	Gradation			Torv. (psf)	% Swell (Surch.)	Swell Index
				C (psf)	Ø (Degrees)			Gravel (%)	Sand (%)	Silt/Clay (%)			
1-2	3.0	41	79									7.9 (100)	0.51
1-3	5.5	43	78	800	4°						>5,000	3.7 (100)	0.21
1-4	8.5	45	73			110	73				>5,000		
1-5	13.5	45	74								4,800		
1-6	18.5	57	67								2,000		
1-7	23.5	62	64					0	34	66	720		
1-8	28.5	54	69								2,950		
2-2	3.0	46	76			105	66				4,950	1.5 (100)	0.40
2-3	5.5	40	76								4,000		
2-4	8.5	40	79								>5,000		
2-5	13.5	47	74								4,100		
2-6	18.5	66	62					0	56	44			
3-1	1.0	42	76								4,200		
3-2	3.0					62	26						
3-3	5.5	52	69	640	11°						2,500	6.8 (100)	0.77
3-4	8.5	52	70								3,850		
3-5	13.5	55	70								2,800		
3-6	18.5	54	64								2,200		
3-7	23.5	59	67								860		
3-8	28.5	58	66								2,450		

TABLE I (Continued)

Summary of Laboratory Test Results

Sample No.	Depth (ft)	Moisture Contents (%)	Dry Density (pcf)	Direct Shear		Liquid Limit	Plasticity Index	Gradation			Torv. (psf)	% Swell (Surch.)	Swell Index
				C (psf)	Ø (Degrees)			Gravel (%)	Sand (%)	Silt/Clay (%)			
4-2	3.0	49	72								2,900		
4-3	5.5	50	72								4,100	5.9 (100)	0.38
4-4	8.5	60	64			138	100				4,900		
4-5	13.5	62	63								2,700		
4-6	18.5	67	62										
5-1	1.0	51	68								2,550	3.5 (100)	0.39
5-2	3.0	48	72			111	78				2,650		
5-4	8.5	62	63	1,050	12°						3,250	3.0 (100)	0.48
5-5	13.5	52	73								1,950		
5-6	18.5	64	63								1,500		
5-7	23.5	61	66					0	25	75	1,700		
5-8	28.5	65	61										
6-1	1.0					91	64						
6-2	3.0	52	69								1,850	0.9 (100)	0.25
6-3	5.5	---	---								>5,000		
6-4	8.5	58	66	960	3°						3,750	7.3 (100)	0.77
6-5	13.5	50	72								2,800		
6-6	18.5							0	35	65			
7-1	1.0												
7-3	5.5	38	85			117	83	12	50	38		1.3 (100)	0.12



TABLE I (Continued)

Summary of Laboratory Test Results

Sample No.	Depth (ft)	Moisture Contents (%)	Dry Density (pcf)	<u>Direct Shear</u>		Liquid Limit	Plasticity Index	<u>Gradation</u>			Torv. (psf)	% Swell (Surch.)	Swell Index
				C (psf)	Ø (Degrees)			Gravel (%)	Sand (%)	Silt/Clay (%)			
7-4	8.5	44	75								5,000		
7-5	13.5	55	67								4,750		
7-6	18.5	60	66								840		

TABLE II

Summary of Laboratory CBR Test Results

Sample No.	Depth in feet	In-Situ Moisture Cont. (%)	Max. Dry Density (pcf)	Opt. Moist. Cont. (%)	Liquid Limit	Plasticity Index	USC	Comp. Moist. (%)	Relative Compaction (%)	CBR	CBR Swell (%)
Bag A	0-1.0	35	89	32	78	44	CH	32	99	4.0	5.0
Bag B	0-1.0	33	91	28	83	51	CH	28	97	1.9	11.5

## **APPENDIX C**

### **Limitations**

This report has been prepared for the exclusive use of **Akinaka & Associates, Ltd.** for the site of the **Kakaina Subdivision** in Waimanalo, Oahu, Hawaii. In the performance of the investigation and the preparation of this report, we have strived to perform our services in a manner consistent with that level of care and skill ordinarily exercised by members of the geotechnical profession practicing under similar conditions in Hawaii. No other warranty, either expressed or implied, is made.

The analysis, conclusions, and recommendations submitted in this report are based in part upon the data obtained in the test borings and upon the assumption that the soil conditions do not deviate from those observed. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the present time, Fewell Geotechnical Engineering, Ltd. (FGE) should be notified so that supplemental recommendations can be given. The conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing.

Unanticipated soil conditions are commonly encountered and cannot be fully determined by soil samples, test borings, or test pits. Such unexpected conditions frequently require that additional expenditures be made to attain a properly constructed project. Some contingency funds are recommended to accommodate such potential extra costs.

The site investigation may not have disclosed the presence of underground structures, such as cesspools, drywells, storage tanks, etc. that may be present at the site. Should these items be encountered during construction, FGE should be notified to provide recommendations for their disposition. The cost for these services was not included within the fee for this investigation.

The scope of work for this investigation was limited to conventional geotechnical services and did not include botanical, environmental or archeological assessments or

evaluations. Silence in the report regarding any archeological, environmental or botanical aspects of the site does not indicate the absence of potential botanical environmental or archeological problems.

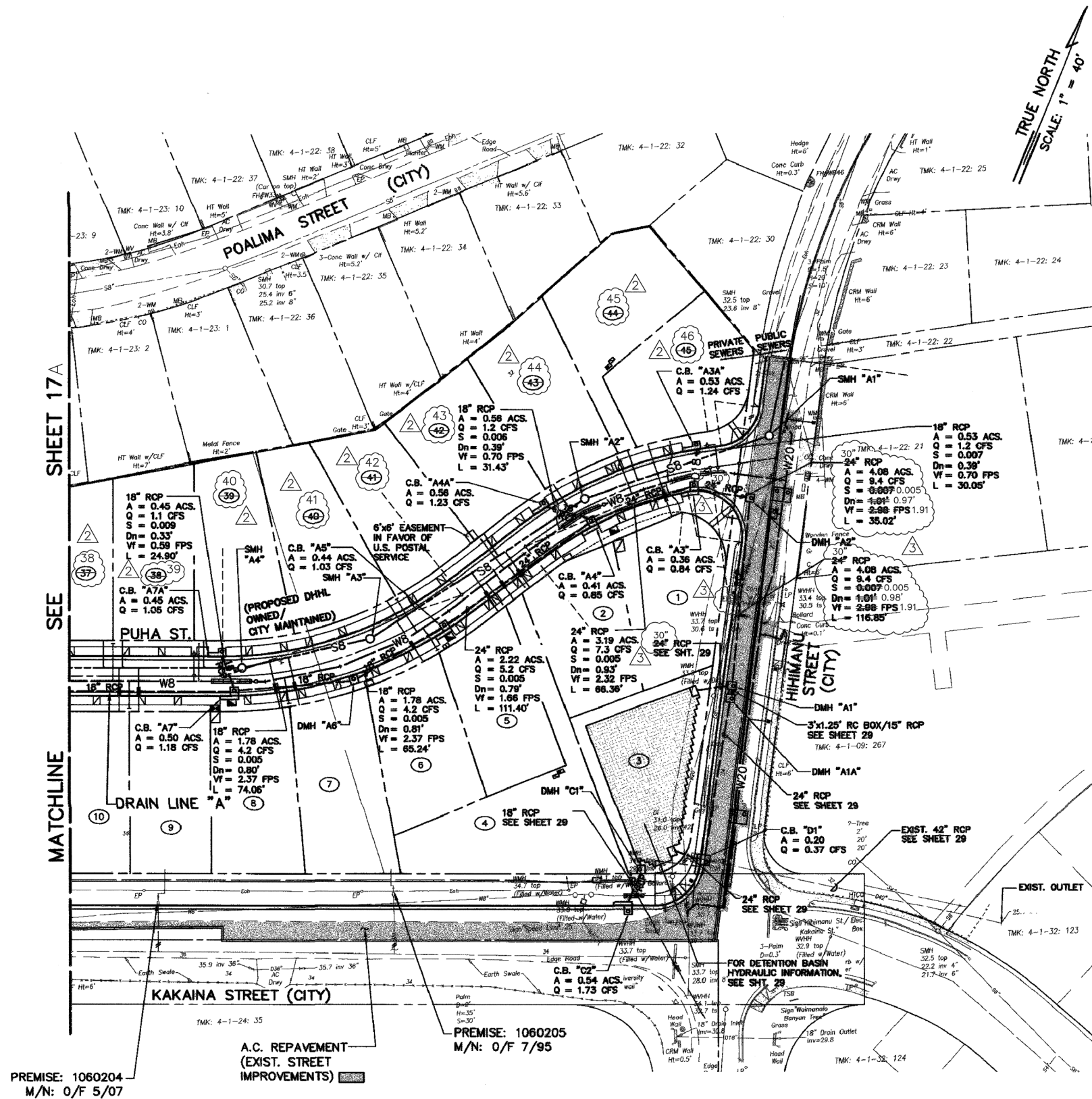
The boring locations were staked out in the field using tape measurements from the visible physical features shown on the April 13, 2007 Preliminary Plan provided by AAL. Ground surface elevations were estimated from the Preliminary Plan. The locations and elevations of the borings should be considered accurate only to the degree implied by the methods used.

Groundwater or seepage was encountered in all of the borings at the dates and times indicated on the Boring Logs. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors not present at the time the measurements were made.

FGE should be provided the opportunity for general review of the final design drawings and specifications to verify that the earthwork and foundation recommendations have been properly interpreted and implemented in the design and specification. If FGE is not accorded the privilege of making this recommended review, it can assume no responsibility for misinterpretations of the recommendations.

FGE should also be retained to provide periodic soil engineering services during construction. This is to observe compliance of the design concepts, specifications, and recommendations and to allow design changes in the event the subsurface conditions differ from that anticipated prior to construction. The recommendations contained herein are contingent upon adequate construction monitoring of the geotechnical phases of the construction by FGE.

HYDROLOGIC DATA					
AREA	AREA "A"	AREA "B"	AREA "C"	AREA "D"	AREA "E"
(acres)	0.53	10.50	4.10	0.54	0.20
COEFF "C"	0.55	0.53	0.55	0.55	0.44
Tc (min.)	7.37	27.79	22.59	6.24	15.93
INTENSITY (in/hr)	5.54	3.31	3.63	5.83	4.21
Q=CIA (cfs)	1.63	18.42	8.19	1.73	0.37
Q10/A	3.08	1.75	2.00	3.20	1.85



LEGEND	
W8	EXIST. WATER LINE
WB	NEW WATER LINE
D24	EXIST. DRAIN LINE
D24	NEW DRAIN LINE
EOH	EXIST. UTILITY/ELECT. LINE
S8	EXIST. SEWER LINE
S8	NEW SEWER LINE
	SINGLE SERVICE WATER LATERAL
	FIRE HYDRANT
	DOUBLE SERVICE WATER LATERAL "C-1"
	SINGLE SERVICE WATER LATERAL "A"
	TRANSFORMER PADS
5	LOT NUMBER
18" RCP	PIPE DIAMETER & TYPE
A = 11.99 AC.	DRAINAGE AREA, ACRES
Q = 55.64 CFS	FLOW IN CFS, CUBIC FEET PER SECOND
S = 0.260	SLOPE, FEET PER FOOT
Dn = 0.79'	NORMAL DEPTH, FEET
Vf = 6.78 FPS	VELOCITY, FEET PER SECOND AT FULL FLOW
	A.C. REPAVEMENT

6/25/2013	REVISE DRAINLINE "A"	A&A	CEB
REVISION DATE	DESCRIPTION	MADE BY	APP

APPROVED:

*Dennis M. Nishimura* 6/20/13  
 CHIEF, WASTEWATER BRANCH, DPP  
 (FOR CONFORMANCE WITH CITY STANDARDS AND WORK IN CITY R/W ONLY)

*[Signature]* 7/10/13  
 CHIEF, TRAFFIC REVIEW BRANCH, DPP

*[Signature]* 6/12/13  
 MANAGER AND CHIEF ENGINEER, BWS  
 (FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R/W AND BWS EASEMENTS ONLY)  
 CITY & COUNTY OF HONOLULU

5/6/2013	REVISE LOT NOS & GRADES	A&A	CEB
REVISION DATE	DESCRIPTION	MADE BY	APP

DEPARTMENT OF HAWAIIAN HOME LANDS  
 KAKAINA SUBDIVISION  
 TAX MAP KEY: 4-1-08: 10, 81, 91 & 92  
 WAIMANALO, KOOLAUPOKO, OAHU, HAWAII

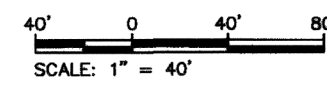
UTILITY PLAN

APPROVED: *M. Taniguchi* 9/18/13  
 CHIEF, CIVIL ENGINEERING BRANCH, DPP

AKINAKA & ASSOCIATES, LTD.  
 CONSULTING ENGINEERS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  
 LICENSE EXPIRES 4/30/14



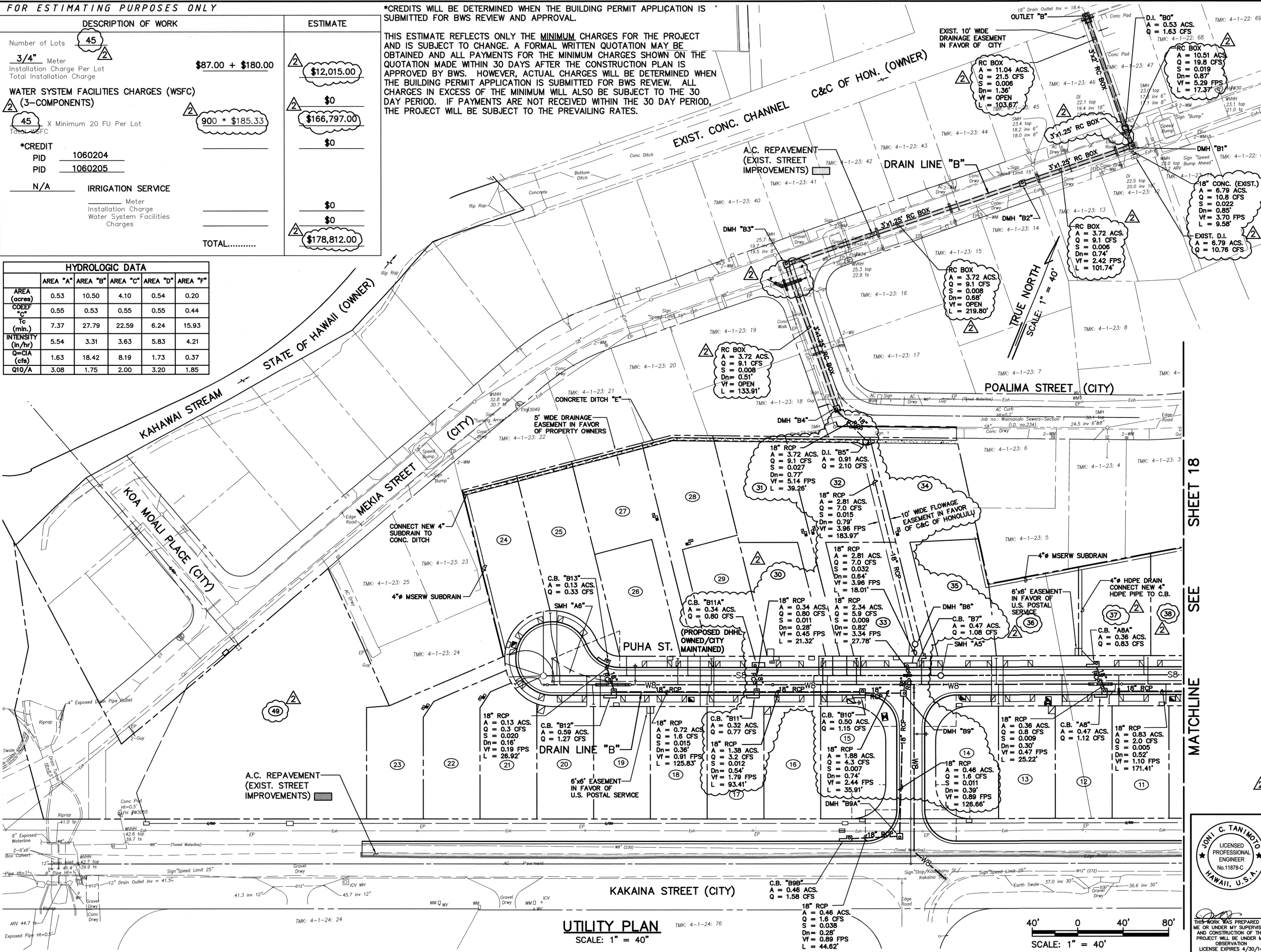
FOR ESTIMATING PURPOSES ONLY

DESCRIPTION OF WORK		ESTIMATE
Number of Lots	45	
3/4" Meter		
Installation Charge Per Lot	\$87.00 + \$180.00	
Total Installation Charge		\$12,015.00
WATER SYSTEM FACILITIES CHARGES (WSFC)		
(3-COMPONENTS)		\$0
45 X Minimum 20 FU Per Lot	900 * \$185.33	\$166,797.00
TOTAL WSFC		\$0
*CREDIT		\$0
PID	1060204	
PID	1060205	
N/A IRRIGATION SERVICE		
Meter		\$0
Installation Charge		\$0
Water System Facilities Charges		\$0
TOTAL.....		\$178,812.00

HYDROLOGIC DATA					
AREA	AREA "A"	AREA "B"	AREA "C"	AREA "D"	AREA "E"
AREA (acres)	0.53	10.50	4.10	0.54	0.20
COEFF "C"	0.55	0.53	0.55	0.55	0.44
Tc (min.)	7.37	27.79	22.59	6.24	15.93
INTENSITY (in/hr)	5.54	3.31	3.63	5.83	4.21
Q=CIA (cfs)	1.63	18.42	8.19	1.73	0.37
Q10/A	3.08	1.75	2.00	3.20	1.85

\*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

THIS ESTIMATE REFLECTS ONLY THE MINIMUM CHARGES FOR THE PROJECT AND IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE MINIMUM CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. HOWEVER, ACTUAL CHARGES WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW. ALL CHARGES IN EXCESS OF THE MINIMUM WILL ALSO BE SUBJECT TO THE 30 DAY PERIOD. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.



LEGEND

W8	EXIST. WATER LINE
W8	NEW WATER LINE
D24	EXIST. DRAIN LINE
D24	NEW DRAIN LINE
EoH	EXIST. UTILITY/ELECT. LINE
S8	EXIST. SEWER LINE
S8	NEW SEWER LINE
	SINGLE SERVICE SEWER LATERAL
	FIRE HYDRANT
	DOUBLE SERVICE WATER LATERAL "C-1"
	SINGLE SERVICE WATER LATERAL "A"
	TRANSFORMER PADS
5	LOT NUMBER
18" RCP	PIPE DIAMETER & TYPE
A = 11.99 AC.	DRAINAGE AREA, ACRES
Q10 = 55.64 CFS	FLOW IN CFS, CUBIC FEET PER SECOND
S = 0.260	SLOPE, FEET PER FOOT
Dn = 0.79'	NORMAL DEPTH, FEET
Vf = 6.78 FPS	VELOCITY, FEET PER SECOND AT FULL FLOW
	A.C. REPAVEMENT

APPROVED:

12/13/13  
DA  
CHIEF, WASTEWATER BRANCH, DPP  
(FOR CONFORMANCE WITH CITY STANDARDS AND WORK IN CITY R/W ONLY)

12/17/13  
DA  
CHIEF, TRAFFIC REVIEW BRANCH, DPP

12-14-10  
DA  
MANAGER AND CHIEF ENGINEER, BWS  
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R/W AND BWS EASEMENTS ONLY)  
CITY & COUNTY OF HONOLULU

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
---------------	-------------	---------	----------

5/6/2013  
ADDED SHT. DELETE PORTION OF KAILUAKU ST.

DEPARTMENT OF HAWAIIAN HOME LANDS  
KAKAIA SUBDIVISION  
TAX MAP KEY: 4-1-08: 10, 81, 91 & 92  
WAIMANALO, KOOLAUPOKO, OAHU, HAWAII

UTILITY PLAN

APPROVED:

12/17/2013  
CHIEF, CIVIL ENGINEERING BRANCH, DPP

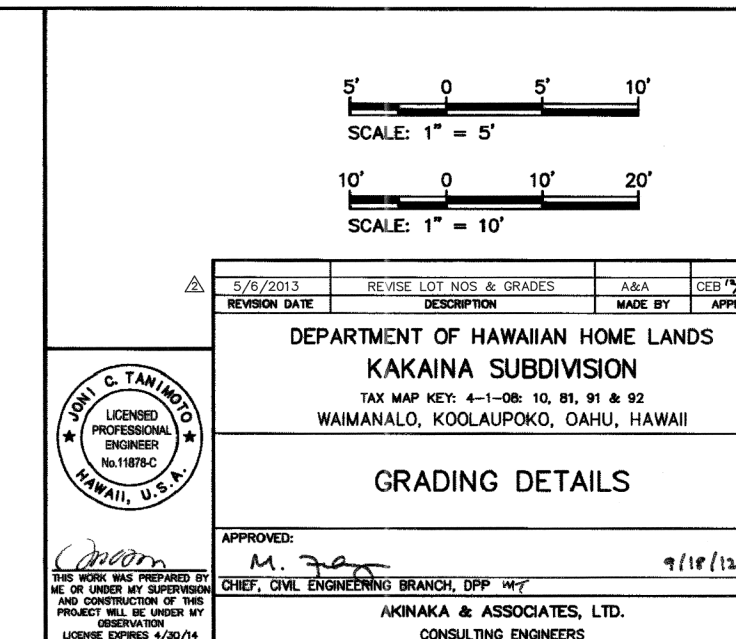
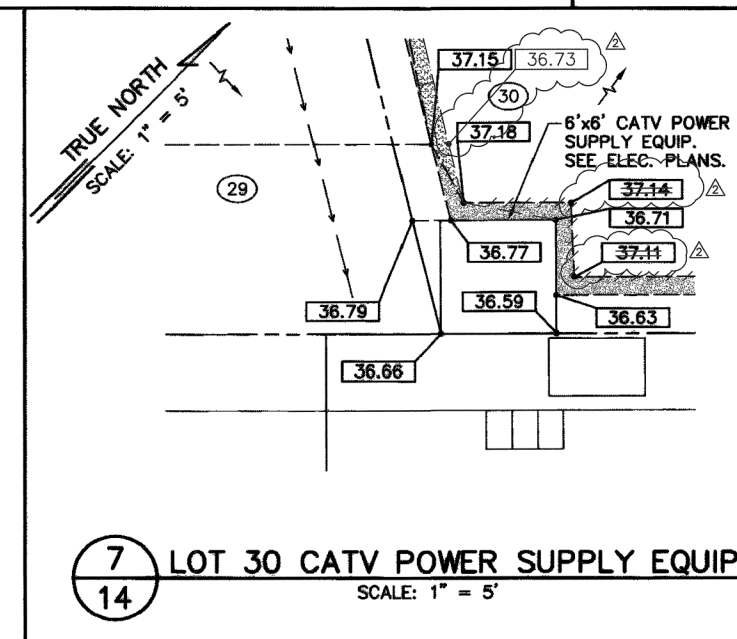
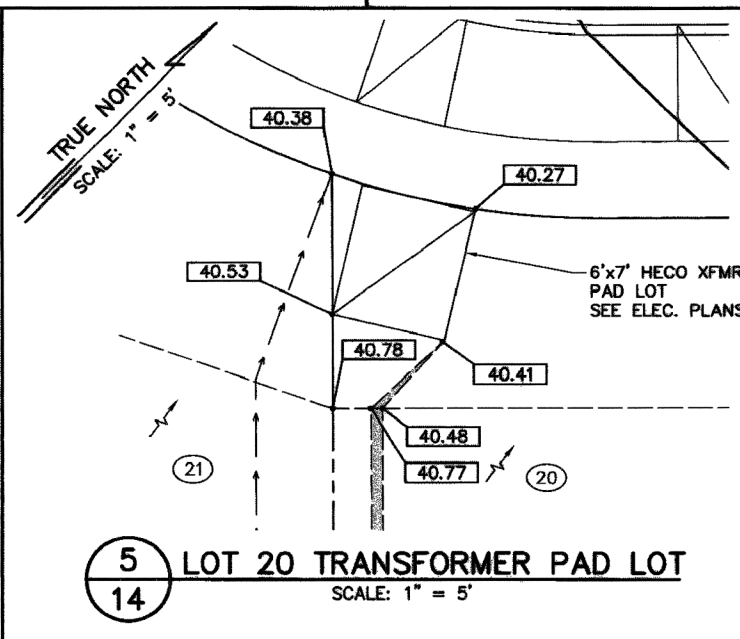
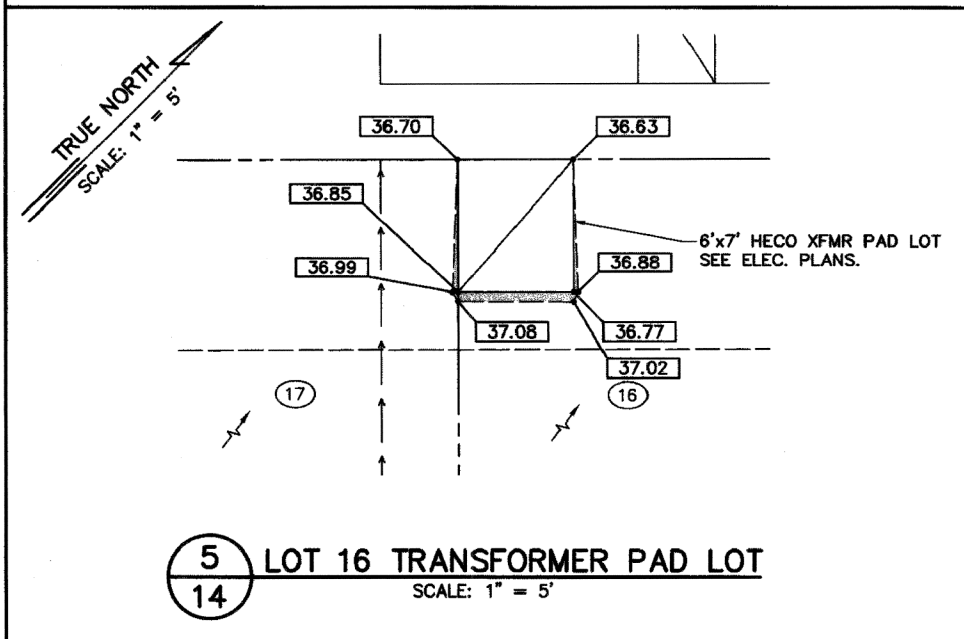
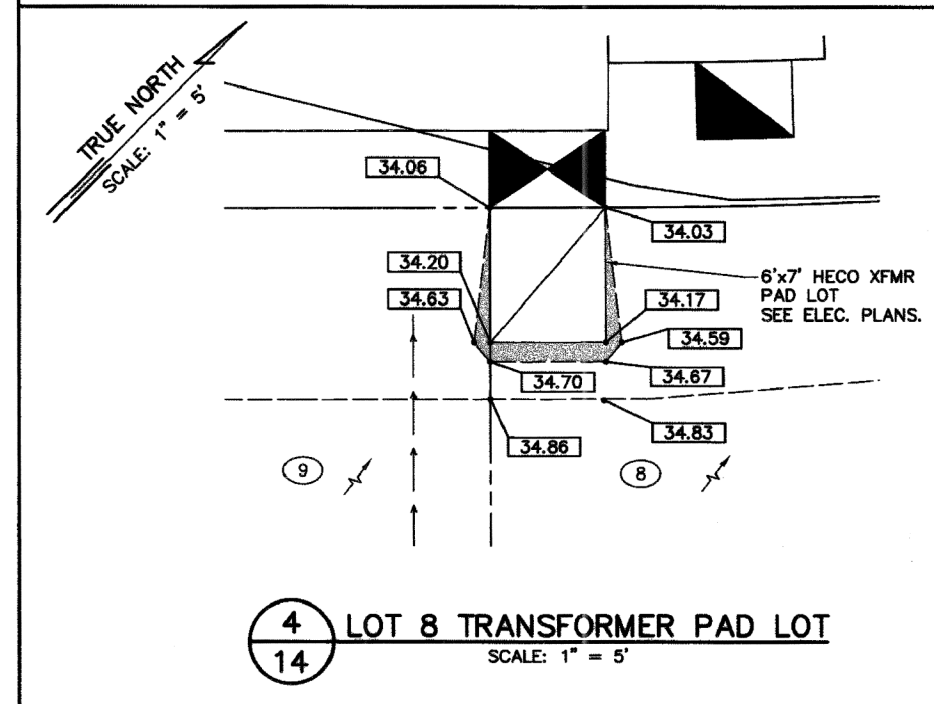
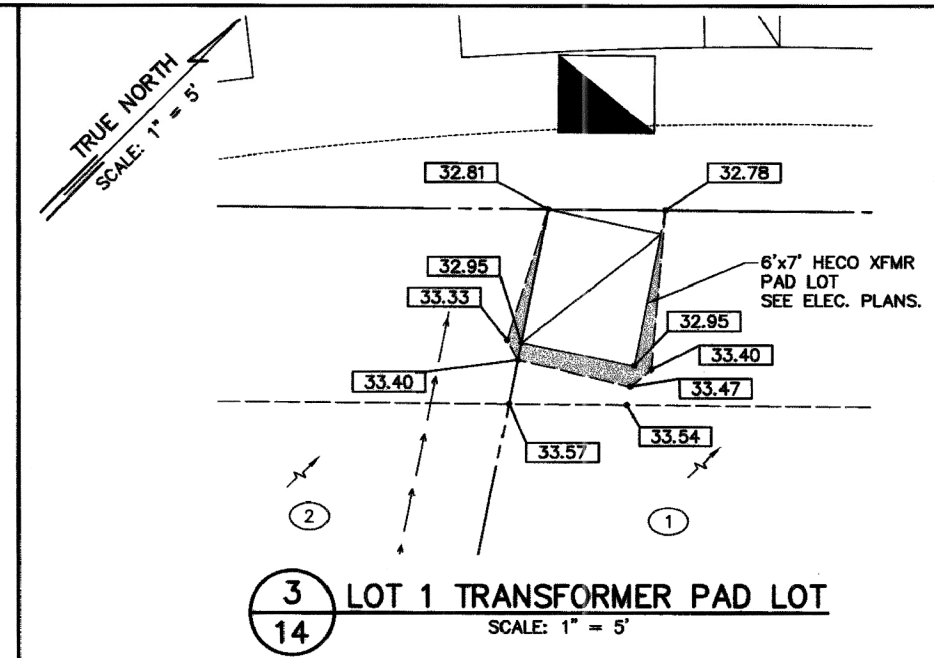
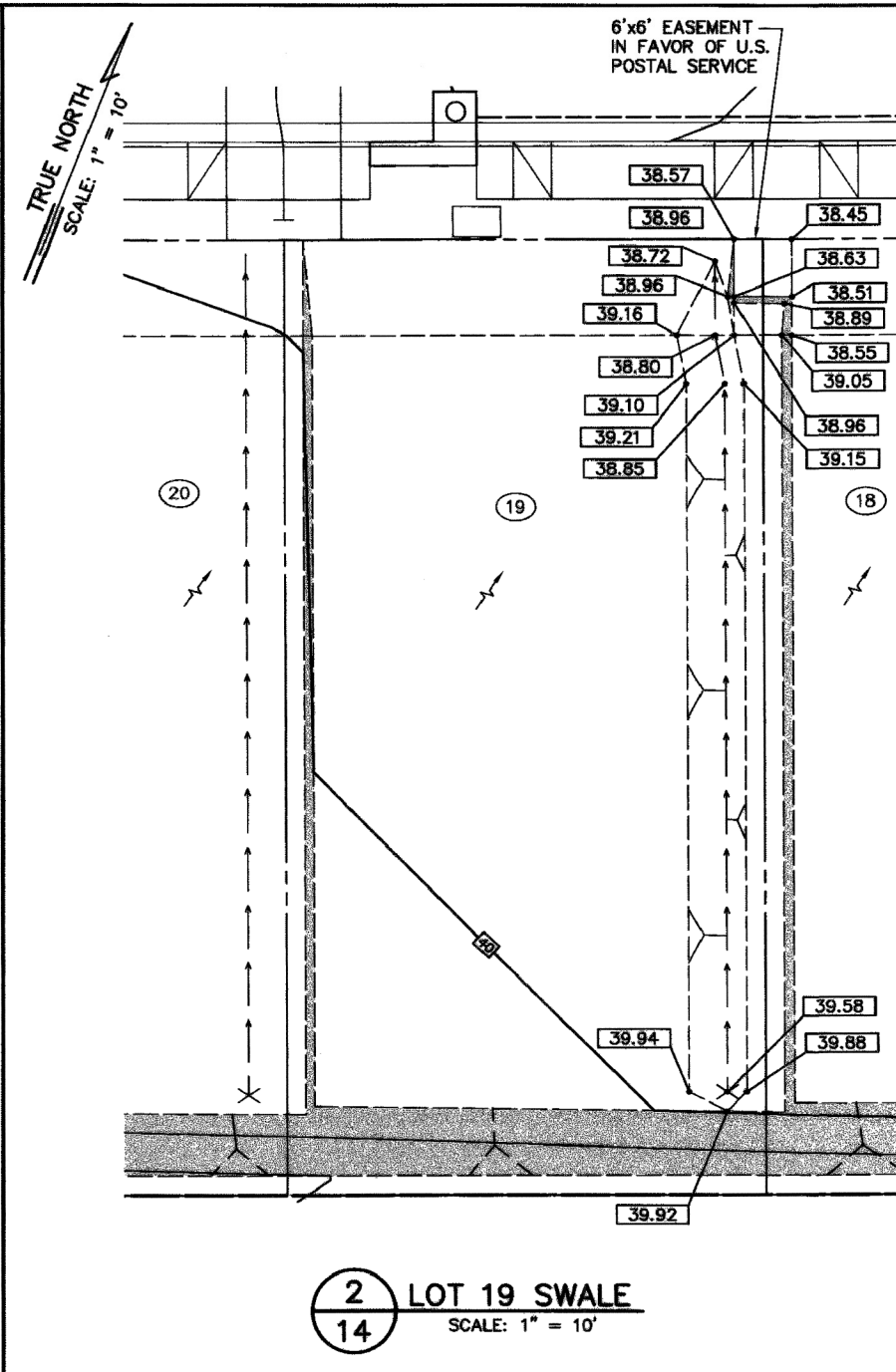
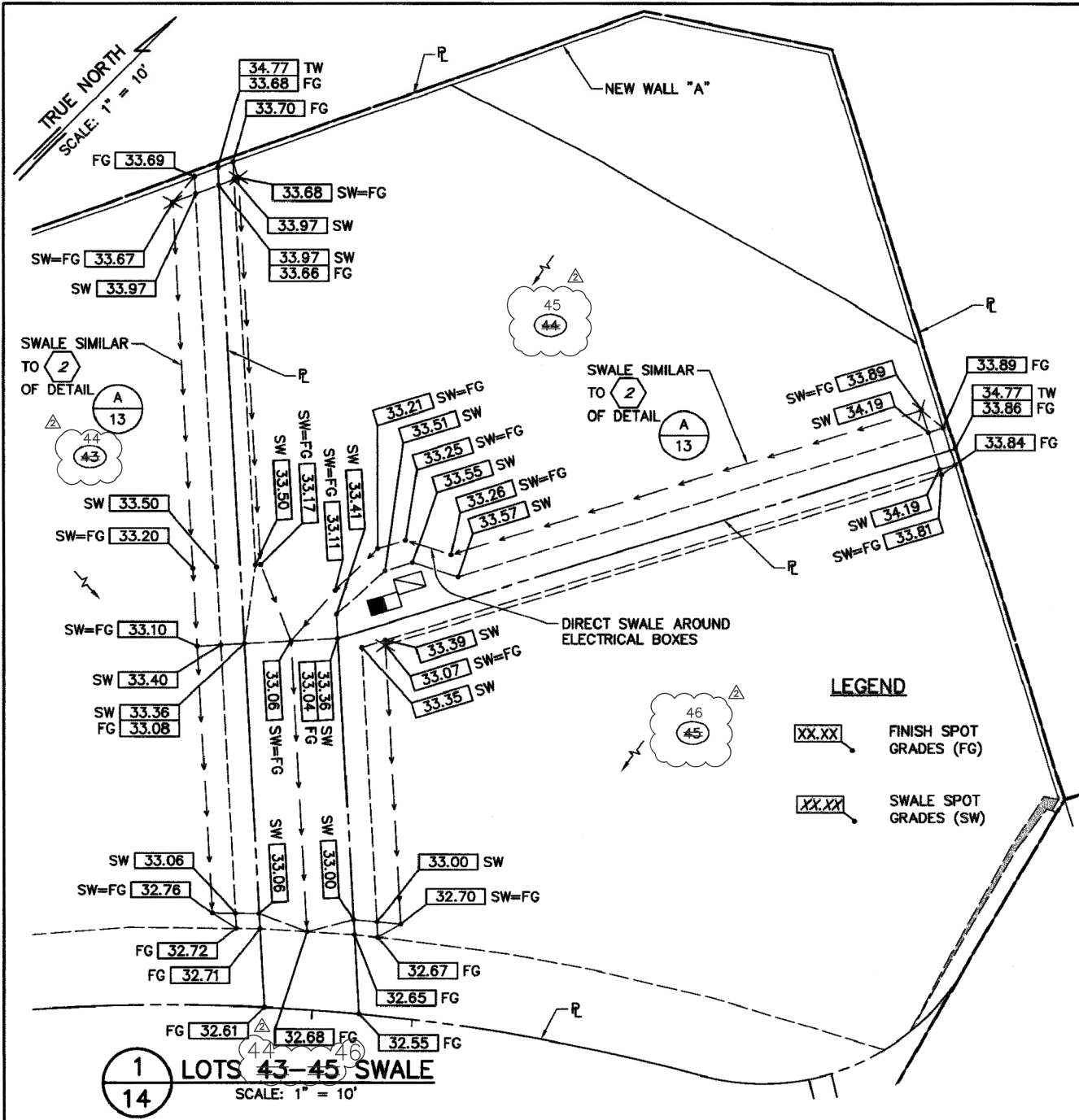
AKINAKA & ASSOCIATES, LTD.  
CONSULTING ENGINEERS

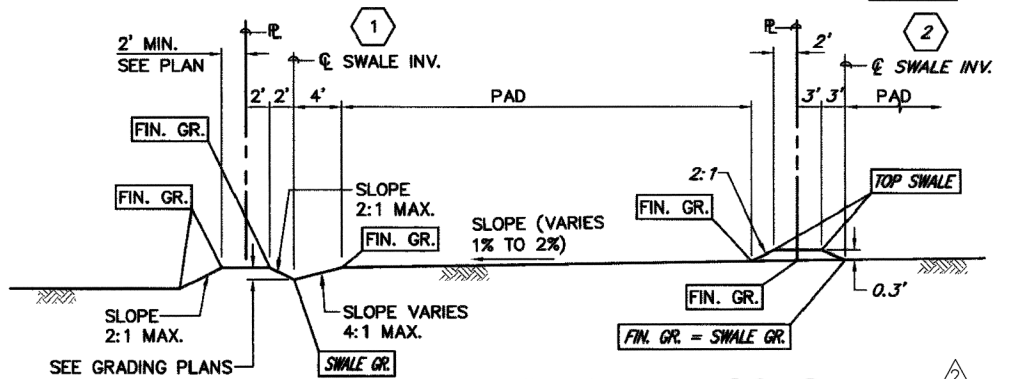
FILE	POCKET	FOLDER	NO.
------	--------	--------	-----

THIS SHEET SUPERSEDES SHEET 17

SHEET 17A OF 88 SHEETS







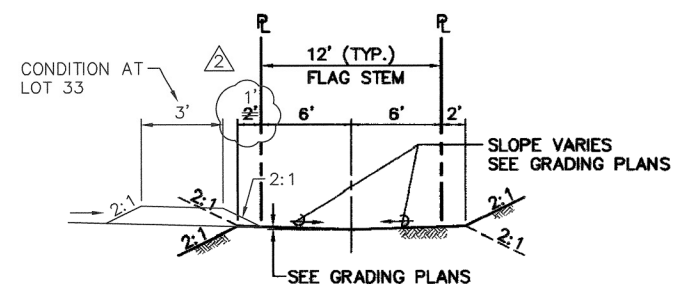
SECTION "A-A"

1 SWALES FOR LOTS 2, 4-12,  
14, 16-~~30 & 34~~ 25

2 SWALES FOR LOTS <sup>36-43</sup>~~35-42~~

\* LOTS 13, 19, 31 & ~~43~~<sup>30</sup>~~45~~<sup>44-46</sup>  
REQUIRE SPECIAL SWALE GRADING  
FOR SWALE DETAILS,  
SEE THIS SHEET AND SHEET 14

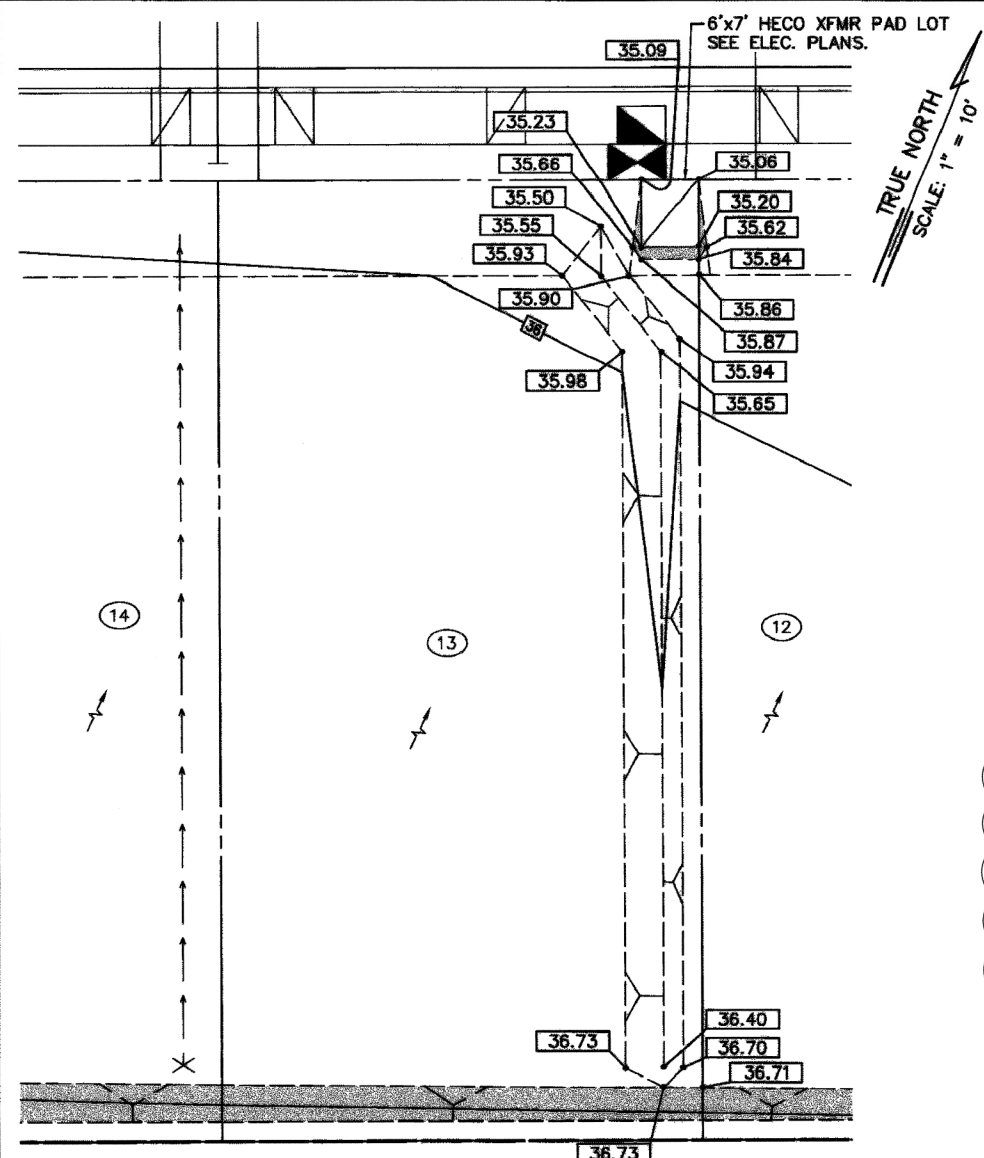
**A** TYPICAL LOT GRADING DETAIL  
13 NOT TO SCALE



CONDITION AT FLAG LOT STEM

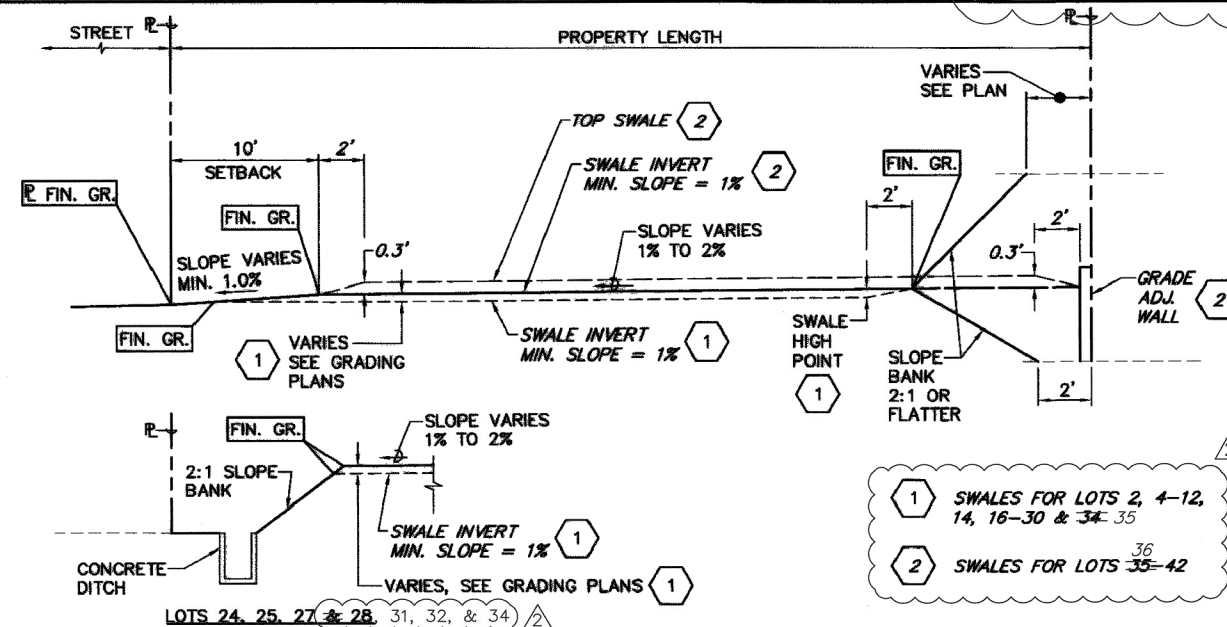
LOTS 4, 22, 23, 27 & 28, 31, 32, 33

NOT TO SCALE



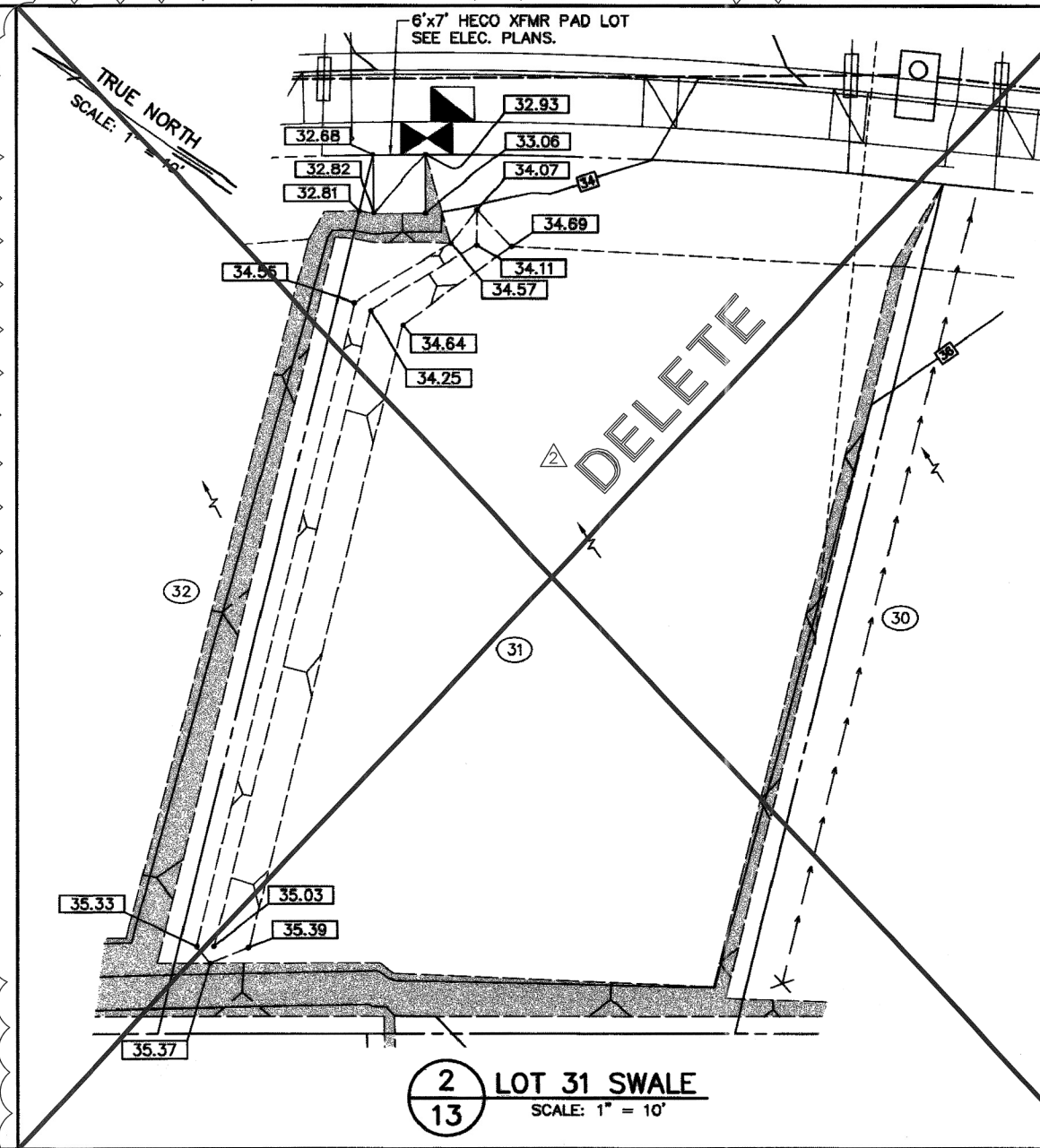
1 LOT 13 SWALE  
13 SCALE: 1" = 10'

SCALE: 1" = 10'



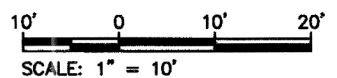
**C** TYPICAL LONGITUDINAL SECTION OF PROPERTY  
**13** NOT TO SCALE

NOT TO SCALE



2 LOT 31 SWALE  
13 SCALE: 1" = 10'

SCALE: 1" = 10'



5/6/2013	REV LOT, CALLOUTS, DEL LOT 31 SWL DET	A&A	CEB
<b>REVISION DATE</b>	<b>DESCRIPTION</b>	<b>MADE BY</b>	<b>APPROVED BY</b>

DEPARTMENT OF HAWAIIAN HOME LANDS

### KAKAINA SUBDIVISION

TAX MAP KEY: 4-1-08: 10, 81, 91 & 92  
WAIMANALO, KOOLAUPOKO, OAHU, HAWAII

## GRADING DETAILS

APPROVED:

BY M. 70  
CHIEF, CIVIL ENGINEERING BRANCH, DPP MT

**AKINAKA & ASSOCIATES, LTD.**

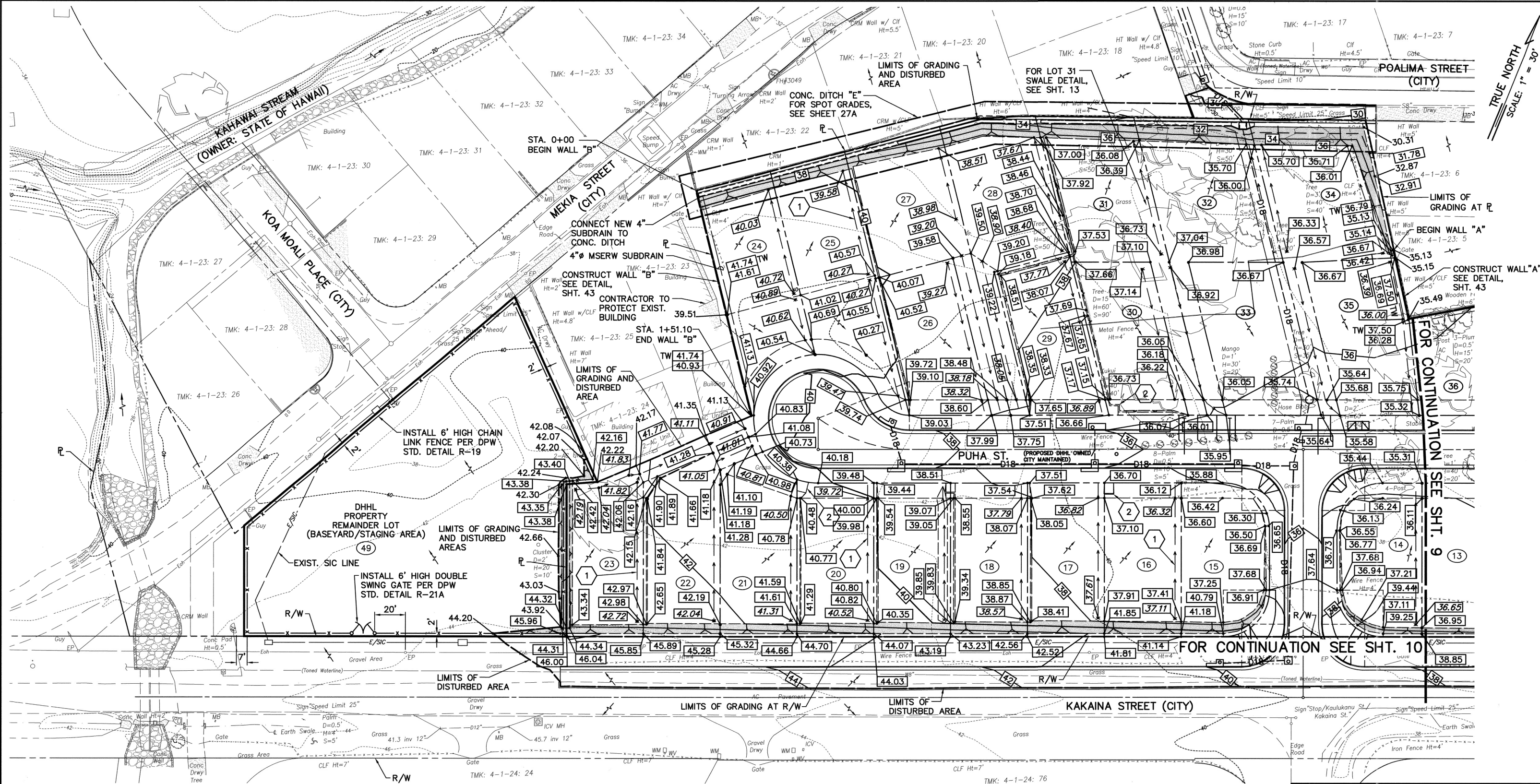


THIS WORK WAS PREPARED  
ME OR UNDER MY SUPERVISOR  
AND CONSTRUCTION OF THIS  
PROJECT WILL BE UNDER MY  
OBSERVATION  
LICENSE EXPIRES 4/30/14

FILE	POCKET	FOLDER	NO.



Plotted on: 12/11/2013 #2\DHHL0602KA06.dwg



#### LEGEND

- LIMITS OF GRADING
- 50--- EXISTING CONTOUR
- 50— FINISH CONTOUR
- RUN-OFF FLOW DIRECTION
- XX.XX FINISH SPOT GRADES
- XX.XX EXISTING GRADES

⑩ LOT NUMBER

NEW 2:1 SLOPE

EXIST. LOT  
LIMITS OF GRADING AT R

NEW LOT  
TOP OF WALL ELEV.  
41.74 TW  
41.61  
FINISH GROUND ELEV. AT FACE OF WALL  
39.51  
EXIST. GROUND ELEV. AT FACE OF WALL

— HIGH PT. EARTH SWALE  
SEE DETAIL, SHEET 13

XX.XX SWALE SPOT GRADES

- 1 SWALES FOR LOTS 2, 4-12, 14, 16-29, 31, 32, 34 & 35 SEE DETAIL, SHEET 13
- 2 SEE SHEET 14 FOR GRADING AT TRANSFORMER PADS & CATV POWER SUPPLY EQUIP.

\* LOTS 13, 19, & 44-46 REQUIRE SPECIAL SWALE GRADING FOR SWALE DETAILS. SEE SHEETS 13 AND 14

#### EARTHWORK QUANTITIES

AREA TO BE GRADED = 7.32 ACS.  
EXC. = 7,890 C.Y.  
EMB. = 10,458 C.Y.

AREA TO BE DISTURBED = 8.46 ACS.

#### NOTES:

- EARTHWORK QUANTITIES ARE FOR GRADING PERMIT PURPOSES.
- QUANTITIES DOES NOT INCLUDE SHRINKAGE AND GRUBBING LOSSES.
- CONTRACTOR SHALL DEMOLISH AND REMOVE EXIST. STRUCTURES, CONC. SLABS, A.C. PAVEMENTS, FENCE AND TREES WITHIN THE LIMITS OF GRADING UNLESS OTHERWISE NOTED.
- CONTRACTOR TO VERIFY EXIST. SITE CONDITIONS PRIOR TO BID.

30' 0 30' 60'  
SCALE: 1" = 30'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  
LICENSE EXPIRES 4/30/14

5/6/2013	ADDED SHEET, DELETE PORTION KAUUKANU ST. & REV. GRADING	A&A	APPR
REVISION DATE	DESCRIPTION	MADE BY	

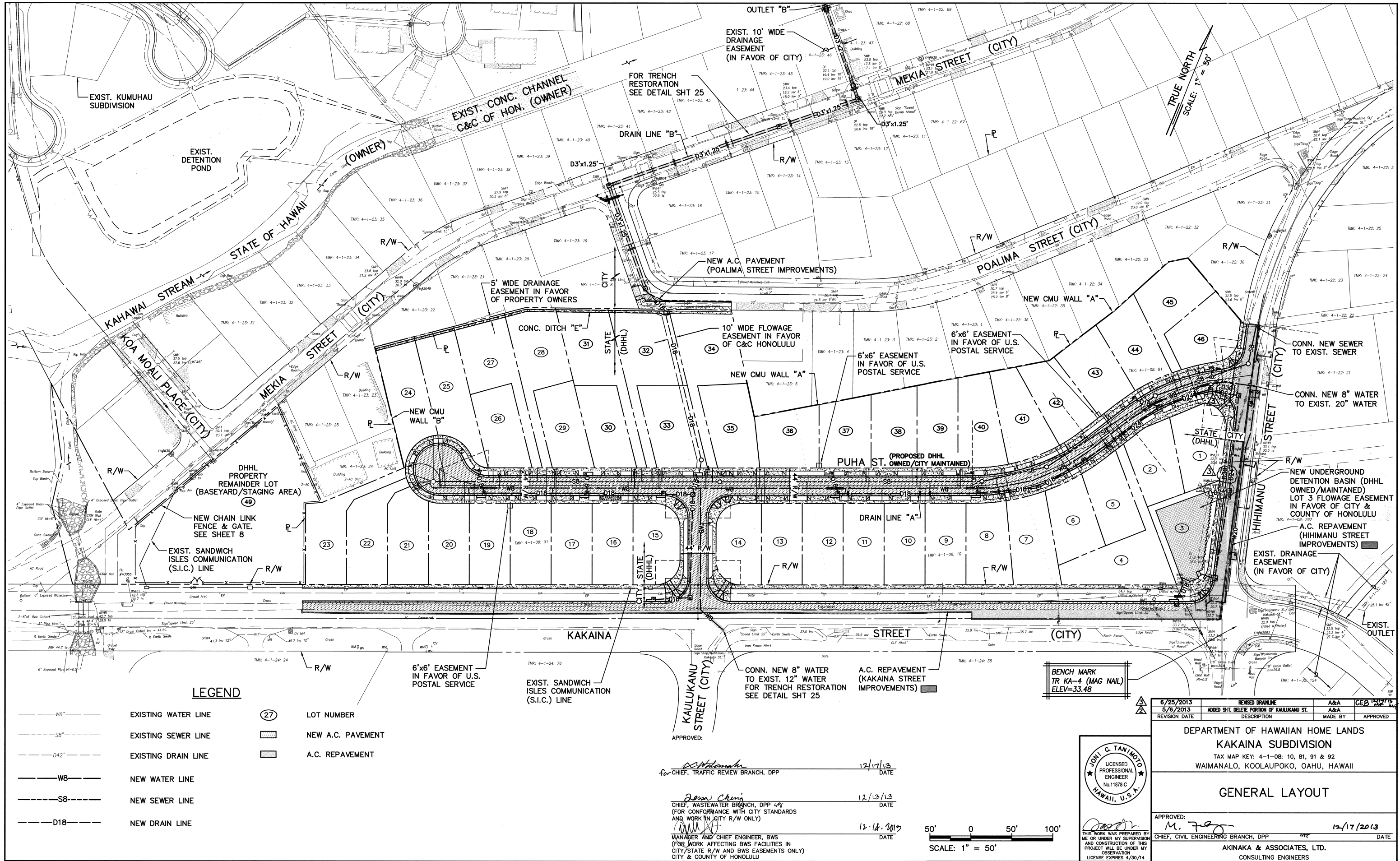
DEPARTMENT OF HAWAIIAN HOME LANDS  
KAKAINA SUBDIVISION  
TAX MAP KEY: 4-1-08: 10, 81, 91 & 92  
WAIMANALO, KOOLAUPOKO, OAHU, HAWAII

#### GRADING PLAN

APPROVED: M. 72  
CHIEF, CIVIL ENGINEERING BRANCH, DPP  
AKINAKA & ASSOCIATES, LTD.  
CONSULTING ENGINEERS  
12/17/2013

THIS SHEET SUPERSEDES SHEET 8 SHEET 8A OF 88 SHEETS

Last Save by: JSK  
Last Saved: 10/29/2013  
Plotted on: 12/11/2013  
G:\DHL06-02 Kumuhau & Kakaina  
Subd\ACAD\KAKAINA\PCD  
#2\DHHL0602KA05A.dwg



# LEGEND

WB	EXISTING WATER LINE	27	LOT NUMBER
S8	EXISTING SEWER LINE		NEW A.C. PAVEMENT
D42	EXISTING DRAIN LINE		A.C. REPAVEMENT
WB	NEW WATER LINE		
S8	NEW SEWER LINE		
D18	NEW DRAIN LINE		

APPROVED:

for *[Signature]*  
CHIEF, TRAFFIC REVIEW BRANCH, DPP

12/17/13  
DATE

*[Signature]*  
CHIEF, WASTEWATER BRANCH, DPP  
(FOR CONFORMANCE WITH CITY STANDARDS  
AND WORK IN CITY R/W ONLY)

12/13/13  
DATE

*[Signature]*  
MANAGER AND CHIEF ENGINEER, BWS  
(FOR WORK AFFECTING BWS FACILITIES IN  
CITY/STATE R/W AND BWS EASEMENTS ONLY)  
CITY & COUNTY OF HONOLULU

12-18-2013  
DATE

50' 0 50' 100'  
SCALE: 1" = 50'

BENCH MARK  
TR KA-4 (MAG NAIL)  
ELEV=33.48



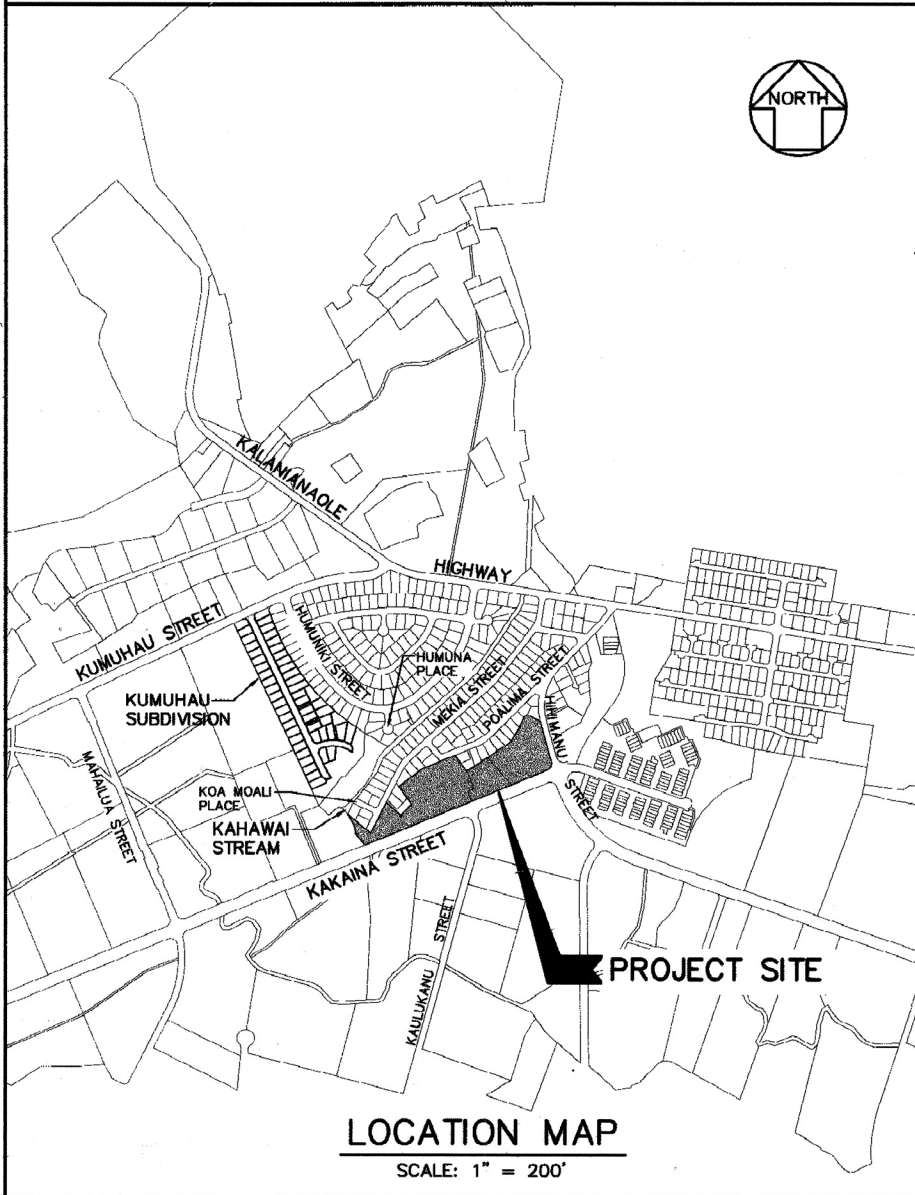
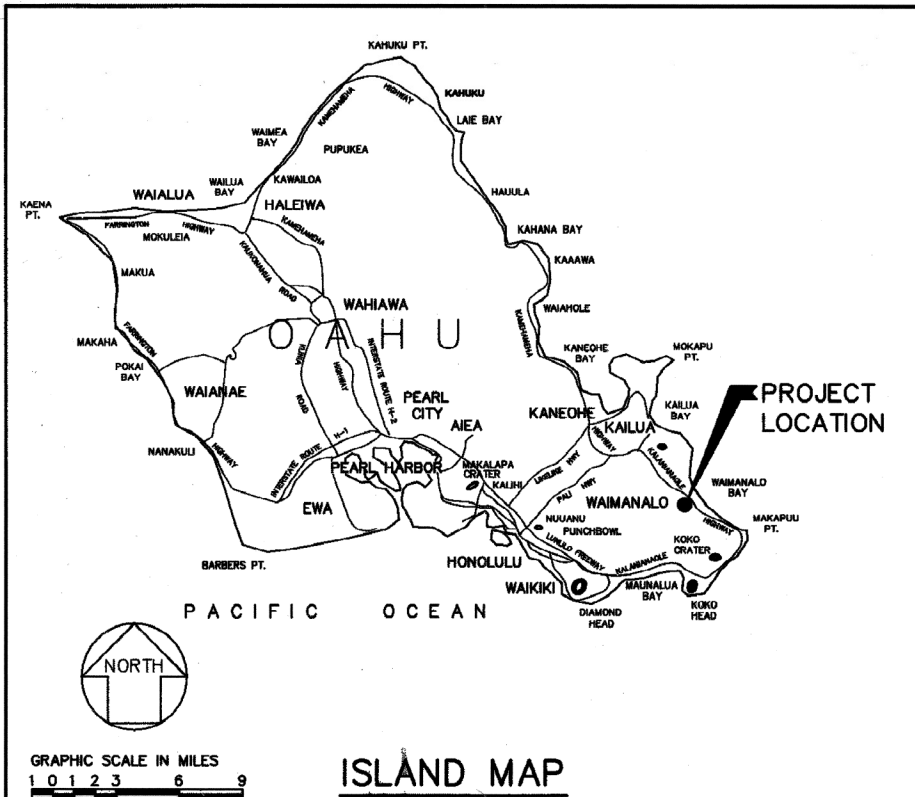
THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION  
AND CONSTRUCTION OF THIS  
PROJECT WILL BE UNDER MY  
OBSERVATION  
LICENSE EXPIRES 4/30/14

6/25/2013 5/6/2013	REVISION ADDED SHT. DELETE PORTION OF KAKAIKANU ST.	A&A A&A	CEB CEB
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS KAKAINA SUBDIVISION TAX MAP KEY: 4-1-08: 10, 81, 91 & 92 WAIMANALO, KOOLAUPOKO, OAHU, HAWAII			
GENERAL LAYOUT			
APPROVED: <i>[Signature]</i> CHIEF, CIVIL ENGINEERING BRANCH, DPP			
AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS			
12/17/2013 DATE			
FILE	POCKET	FOLDER	NO.

THIS SHEET SUPERSEDES SHEET 7

SHEET 7A OF 88 SHEETS





STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

# KAKAINA SUBDIVISION

DEVELOPED UNDER THE HAWAIIAN HOMES COMMISSION ACT  
WAIMANALO, KOOLAUPOKO, OAHU, HAWAII  
TAX MAP KEY: 4-1-08: 10, 81, 91 & 92  
(SUB'D. FILE NO. 2011/SUB-23)

PREPARED BY  
AKINAKA & ASSOCIATES, LTD.  
CONSULTING ENGINEERS  
HONOLULU, HAWAII



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  
LICENSE EXPIRES 4/30/14

### APPROVED:

*[Signature]* 6/28/12  
CHAIRMAN, DEPARTMENT OF HAWAIIAN HOME LANDS  
STATE OF HAWAII DATE

*[Signature]* 10/3/12  
DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING  
CITY & COUNTY OF HONOLULU DATE

*[Signature]* 6/12/12  
MANAGER AND CHIEF ENGINEER, BOARD OF WATER SUPPLY  
(FOR WORK AFFECTING BWS FACILITIES IN CITY/STATE R/W AND BWS  
EASEMENTS ONLY)  
CITY & COUNTY OF HONOLULU DATE

*[Signature]* 06/14/2012  
CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION, DEPARTMENT OF HEALTH  
STATE OF HAWAII DATE

### INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
1	TITLE SHEET, LOCATION MAP AND INDEX TO DRAWINGS	47 - 48, 48A	CURB RETURN GRADES
2 - 6	GENERAL NOTES	49 - 52, 51A, 52	CURB RAMP DETAILS
7A - 7	GENERAL LAYOUT	53A - 53	TRAFFIC SIGNING & STRIPING PLAN
8A - 8 - 9	GRADING PLAN	54A - 54	TRAFFIC STRIPING DETAILS
10	ELEVATION PLAN - KAKAINA STREET	55 - 61, 60A, 61A	TRAFFIC CONTROL PLANS & NOTES
11	ELEVATION PLAN - HIHIMANU STREET	62A, 63, 64, 65A, 66A, 67, 62 - 67	CROSS SECTIONS
12A - 12	ELEVATION PLAN - POALIMA STREET	E1 - E18	ELECTRICAL SHEETS
13 - 14	GRADING DETAILS	L-1A, L1 - L3, L-3A	LANDSCAPE PLAN
15A - 15	EROSION CONTROL PLAN		
16	EROSION CONTROL DETAILS		
17A - 17 - 18	UTILITY PLAN		
19	TYPICAL ROAD SECTIONS		
20 - 21, 21A	PLAN & PROFILE: PUHA STREET		
22A - 22	PLAN & PROFILE: KAULUKANU STREET		
23	PLAN & PROFILE: HIHIMANU STREET		
24	PLAN - KAKAINA STREET & MISCELLANEOUS PROFILES		
25A - 25	PLAN - POALIMA & MEKIA STREET		
26A - 26	MISCELLANEOUS PROFILES - POALIMA & MEKIA STREET		
27A - 27	CONCRETE DITCH PLAN & PROFILE		
28 - 35	DRAINAGE DETAILS		
36	GENERAL NOTES AND TYPICAL DETAILS		
37A - 37	CONCRETE DITCH DETAILS		
38	SPECIAL CATCH BASIN B8 DETAILS		
39	SPECIAL CATCH BASIN D1 DETAILS		
40	SPECIAL GRATED INLET & CONCRETE BOX CULVERT DETAILS		
41 - 42	WATER DETAILS		
43 - 44	WALL DETAILS		
45	MISCELLANEOUS DETAILS		
46	MAILBOX DETAILS		

5/6/2013	FOR REV LOT LAYOUT, DEL. FOR KAULUKANU	AKA LTD.	SUB 12/11
5/6/2013	REVISE INDEX	AKA LTD.	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED

FILE	PROJECT	FOLDER	NO.



**STATE OF HAWAII  
STATE PROCUREMENT OFFICE**

P.O. Box 119  
Honolulu, Hawaii 96810-0119  
Telephone: (808) 587-4700  
e-mail: [state.procurement.office@hawaii.gov](mailto:state.procurement.office@hawaii.gov)  
<http://spo.hawaii.gov>

May 27, 2014

**PROCUREMENT CIRCULAR NO. 2014-08**

TO: Office of the Governor, Chief of Staff  
Office of the Lieutenant Governor, Chief of Staff  
Executive Department Heads  
Hawaii State Public Library System, State Librarian

Chief Procurement Officers (CPOs):  
Department of Education, Superintendent  
University of Hawaii, President  
Office of Hawaiian Affairs, Chairperson of the Board  
Hawaii Health Systems Corporation, President and Chief Executive Officer  
Judiciary, Administrative Director of the Courts  
Senate, President  
House of Representatives, Speaker

Counties of Hawaii, Kauai, Maui, and City & County of Honolulu  
Executive Branch, Finance Director  
Legislative Branch, Chairperson of the County Council  
Board/Departments of Water Supply, Manager/Chief Engineer  
Honolulu Authority for Rapid Transportation, Executive Director

FROM: Sarah Allen, Administrator

SUBJECT: Combination Performance and Payment Bond

Effective immediately, "Bond Exhibit F: Combination Performance and Payment Bond," is not available for use in solicitations as it allows for confusion in respect of the total percentage bond the State is requesting. This form has been removed from [www.spo.hawaii.gov](http://www.spo.hawaii.gov). The SPO is conducting research to determine more suitable verbiage for a combined form.

If you have any questions, please contact me via e-mail at [Sarah.Allen@hawaii.gov](mailto:Sarah.Allen@hawaii.gov) or phone at 587-4700.

LINDA LINGLE  
GOVERNOR

AARON S. FUJIOKA  
ADMINISTRATOR



STATE OF HAWAII  
STATE PROCUREMENT OFFICE  
P.O. Box 119  
Honolulu, Hawaii 96810-0119  
Tel: (808) 587-4700 Fax: (808) 587-4703  
www.spo.hawaii.gov

PROCUREMENT POLICY BOARD  
LESLIE S. CHINEN  
DARYLE ANN MO  
GREGORY L. KING  
RUSS K. SAITO  
PAMELA A. TORRES

July 24, 2007

PROCUREMENT CIRCULAR NO. 2007-05

TO: Executive Department Heads  
FROM: Aaron S. Fujioka *Aaron S. Fujioka*  
SUBJECT: Bid Security, Contract Performance and Payment Bonds

This circular is issued to:

- 1) Rescind Procurement Circular No. 1998-09, dated November 23, 1998; and
- 2) Reissue amended bond forms Exhibits B, D, F, and includes the bond and acknowledgment forms Exhibits A, C, E, G, H, I, J, which did not require any changes. The forms are as required by HAR Subchapter 24, Chapter 3-122, and in accordance with HRS §§103D-323 to 103D-328.

Bonds are to protect against the failure or refusal of the offeror to proceed with the performance of the contract, secure the faithful performance of contract requirements, and payment of suppliers or subcontractors. Exemptions on the use of these bond forms are allowed, with the prior approval of the Administrator.

Changes made to the bond forms, effective June 21, 2007, are as follows:

- 1) Exhibits B & D:

Page 1, 2<sup>nd</sup> paragraph, is amended to read: "WHEREAS, the above-bound Principal has [entered-into] signed a Contract with Oblige [dated] on \_\_\_\_\_ for the following project: \_\_\_\_\_."

- ~~2) Exhibit F:~~

Not available for use in solicitations  
(Procurement Circular 2014-08)

- ~~a. Page 1, 2<sup>nd</sup> paragraph, is amended to read: "WHEREAS: The Principal has by \_\_\_\_\_ dated \_\_\_\_\_ [entered-into] signed a contract with \_\_\_\_\_ following Project: \_\_\_\_\_."~~

- ~~b. Page 2, 5<sup>th</sup> paragraph, is amended to read: "...the performance of the Contract who has not been paid in full therefor after [two-months] ninety days from the completion...."~~

- ~~c. Page 3, 1<sup>st</sup> sentence, is amended to read: "The amount of this bond may be reduced in accordance with and subject to section [3-122-226] 3-122-225, Hawaii Administrative Rules."~~

PROCUREMENT CIRCULAR NO. 2007-05

July 24, 2007

Page 2

- 3) Exhibits A, C, E, G, H, I, J: No changes were made to these exhibits.

Purchasing agencies shall utilize bond and acknowledgment forms as provided in the exhibits listed below:

- EXHIBIT A: Surety bid security titled "*Surety [Bid] [Proposal] Bond*", dated 11/17/98.
- EXHIBIT B: Surety contract performance bond titled "*Performance Bond (Surety)*", dated 6/21/07.
- EXHIBIT C: Contract performance bond for types of security pursuant to HAR §3-122-222(2) and (3), titled "*Performance Bond*", dated 11/17/98.
- EXHIBIT D: Surety contract labor and material payment bond titled "*Labor and Material Payment Bond (Surety)*", dated 6/21/07.
- EXHIBIT E: Contract labor and material payment bond for types of security pursuant to HAR §3-122-222(2) and (3), titled "*Labor and Material Payment Bond*", dated 11/17/98.
- ~~EXHIBIT F: Surety combination contract performance and payment bond titled "*Performance and Payment Bond*", dated 6/21/07.~~
- EXHIBIT G: Surety contract performance bond for goods and services supplemental agreement titled "*Performance Bond (Surety) for Supplemental Agreement for Goods and Services*", dated 11/17/98.
- EXHIBIT H: Contract performance bond for goods and services supplemental agreement for types of security pursuant to HAR §3-122-222(2) and (3), titled "*Performance Bond for Supplemental Agreement for Goods and Services*", dated 11/17/98.
- EXHIBIT I: Contractor acknowledgement form for use with contract performance and payment bonds titled "*Contractor Acknowledgment*", dated 11/12/97.
- EXHIBIT J: Surety acknowledgement form for use with contract performance and payment bonds titled "*Surety Acknowledgment*", dated 11/12/97.

Not available for use in solicitations (Procurement Circular 2014-08)
--

The exhibit bond and related forms are available on the SPO homepage at [www.spo.hawaii.gov](http://www.spo.hawaii.gov), under the "Quick Links" section, click on "Forms for State Agencies". To view the complete listing of all current Procurement Circulars, click on "Procurement Circulars".

Questions may be directed to Justin Fo at 586-0577 or Colin Tanaka at 586-0558, or call me at 587-4700.

EXHIBIT A

**SURETY [BID] [PROPOSAL] BOND**  
(11/17/98)

Bond No. \_\_\_\_\_

**KNOW TO ALL BY THESE PRESENTS:**

That we, \_\_\_\_\_,  
(Full Name or Legal Title of Offeror)

as Offeror, hereinafter called Principal, and \_\_\_\_\_,  
(Name of Bonding Company)

as Surety, hereinafter called Surety, a corporation authorized to transact business as a Surety  
in the State of Hawaii, are held and firmly bound unto \_\_\_\_\_,  
(State/County Entity)

as Owner, hereinafter called Owner, in the penal sum of \_\_\_\_\_

\_\_\_\_\_  
(Required Amount of Bid Security)

Dollars (\$\_\_\_\_\_), lawful money of the United States of America, for the payment of  
which sum well and truly to be made, the said Principal and the said Surety bind ourselves, our  
heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these  
presents.

**WHEREAS:**

The Principal has submitted an offer for \_\_\_\_\_

\_\_\_\_\_  
(Project by Number and Brief Description)

**NOW, THEREFORE:**

The condition of this obligation is such that if the Owner shall reject said offer, or in the  
alternate, accept the offer of the Principal and the Principal shall enter into a Contract with the  
Owner in accordance with the terms of such offer, and give such bond or bonds as may be  
specified in the solicitation or Contract Documents with good and sufficient surety for the faithful  
performance of such Contract and for the prompt payment of labor and material furnished in the  
prosecution thereof as specified in the solicitation then this obligation shall be null and void,  
otherwise to remain in full force and effect.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Offeror)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title



EXHIBIT B

PERFORMANCE BOND (SURETY)  
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and \_\_\_\_\_

\_\_\_\_\_  
(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a  
surety in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,  
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of \_\_\_\_\_

\_\_\_\_\_  
DOLLARS (\$ \_\_\_\_\_), to which payment Principal and Surety bind themselves,  
their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by  
these presents.

**WHEREAS**, the above-bound Principal has signed a Contract with Obligee on  
\_\_\_\_\_, for the following project: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
hereinafter called Contract, which Contract is incorporated herein by reference and made a part  
hereof.

**NOW THEREFORE**, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in  
strict accordance with the terms of the Contract as said Contract may be modified or amended  
from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Obligor to the Surety and the Principal and subject to the limitation of the penal sum of this bond, Surety shall remedy the Default, or take over the work to be performed under the Contract and complete such work, or pay moneys to the Obligor in satisfaction of the surety's performance obligation on this bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC

EXHIBIT C

PERFORMANCE BOND

(11/17/98)

KNOW TO ALL BY THESE PRESENTS:

That we, \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

\_\_\_\_\_, its successors and assigns, as Obligee, hereinafter called  
(State/County Entity)  
Obligee, in the amount of \_\_\_\_\_

\_\_\_\_\_  
(Dollar Amount of Contract)

DOLLARS (\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heirs, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ☐ Legal tender;
- ☐ Share Certificate unconditionally assigned to or made payable at sight to  
Description \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Certificate of Deposit, No. \_\_\_\_\_, dated \_\_\_\_\_, issued by  
\_\_\_\_\_;  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Cashier's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued  
by \_\_\_\_\_;  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;

- ☐ Teller's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by \_\_\_\_\_, drawn on \_\_\_\_\_, a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- ☐ Treasurer's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by \_\_\_\_\_, drawn on \_\_\_\_\_, a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- ☐ Official Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by \_\_\_\_\_, drawn on \_\_\_\_\_, a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- ☐ Certified Check No. \_\_\_\_\_, dated \_\_\_\_\_, accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned \_\_\_\_\_;

WHEREAS:

The Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Obligor for the following Project: \_\_\_\_\_

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW, THEREFORE,

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligee, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, the covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Contractor

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC**

EXHIBIT D

LABOR AND MATERIAL PAYMENT BOND (SURETY)  
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and \_\_\_\_\_

\_\_\_\_\_  
(Name and Street Address of Bonding Company)  
as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety  
in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,  
(State/County Entity)

its successors and assigns, hereinafter called Oblige, in the amount of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), to which payment Principal and Surety bind themselves,  
their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by  
these presents.

WHEREAS, the above-bound Principal has signed Contract with the Oblige on  
\_\_\_\_\_ for the following project: \_\_\_\_\_

\_\_\_\_\_  
hereinafter called Contract, which Contract is incorporated herein by reference and made a part  
hereof.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall  
promptly make payment to any Claimant, as hereinafter defined, for all labor and materials  
supplied to the Principal for use in the performance of the Contract, then this obligation shall be  
void; otherwise to remain in full force and effect.

1. Surety to this Bond hereby stipulates and agrees that no changes, extensions of  
time, alterations, or additions to the terms of the Contract, including the work to be performed  
thereunder, and the specifications or drawings accompanying same, shall in any way affect its  
obligation on this bond, and it does hereby waive notice of any such changes, extensions of  
time, alterations, or additions, and agrees that they shall become part of the Contract.

2. A "Claimant" shall be defined herein as any person who has furnished labor or materials  
to the Principal for the work provided in the Contract.

Every Claimant who has not been paid amounts due for labor and materials furnished for work provided in the Contract may institute an action against the Principal and its Surety on this bond at the time and in the manner prescribed in Section 103D-324, Hawaii Revised Statutes, and have the rights and claims adjudicated in the action, and judgment rendered thereon; subject to the Obligee's priority on this bond. If the full amount of the liability of the Surety on this bond is insufficient to pay the full amount of the claims, then after paying the full amount due the Obligee, the remainder shall be distributed pro rata among the claimants.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC

EXHIBIT E  
LABOR AND MATERIAL PAYMENT BOND  
(11/17/98)

KNOW TO ALL BY THESE PRESENTS:

That we, \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

\_\_\_\_\_, its successors and assigns, as Obligee, hereinafter called  
(State/County Entity)

Obligee, in the amount of \_\_\_\_\_

\_\_\_\_\_  
(Dollar Amount of Contract)

DOLLARS (\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heirs, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ☐ Legal tender;
- ☐ Share Certificate unconditionally assigned to or made payable at sight to  
Description \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Certificate of Deposit, No. \_\_\_\_\_, dated \_\_\_\_\_, issued by  
\_\_\_\_\_;  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Cashier's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by  
\_\_\_\_\_;  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Teller's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by  
\_\_\_\_\_;  
drawn on \_\_\_\_\_;



a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

☐ Treasurer's Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by \_\_\_\_\_,  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

☐ Official Check No. \_\_\_\_\_, dated \_\_\_\_\_, issued by \_\_\_\_\_,  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

☐ Certified Check No. \_\_\_\_\_, dated \_\_\_\_\_, accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

**WHEREAS:**

The Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Obligor for the following Project: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

**NOW, THEREFORE,**

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, free from all liens and claims and without further cost, expense or charge to the Obligor, its officers, agents, successors or assigns, free and harmless from all suits or actions of every

nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, and shall promptly pay all persons supplying labor and materials for the performance of the Contract, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, the covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

**AND IT IS HEREBY STIPULATED AND AGREED** that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment of mechanics' liens which may be filed of record against the Project, whether or not claim for the amount of such lien be presented under and against this bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Contractor

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC

EXHIBIT F

COMBINATION PERFORMANCE AND PAYMENT BOND  
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That we, \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and \_\_\_\_\_,  
(Name and Street Address of Bonding Company)

as surety, hereinafter called Surety, a corporation(s) authorized to transact business as a  
surety in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,  
(State/County Entity)  
its successors and assigns, as Obligees, hereinafter called Obligees, in the amount of

\_\_\_\_\_  
(Twice the Dollar Amount of Contract)

DOLLARS (\$\_\_\_\_\_) (being \_\_\_\_\_)  
DOLLARS as performance bond and \_\_\_\_\_  
DOLLARS as payment bond, each in the amount of one hundred percent of the contract price  
as required by 103D-324, Haw. Rev. Stat.), lawful money of the United States of America, for  
the payment of which to the said Obligees, well and truly to be made, Contractor and Surety bind  
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally,  
firmly by these presents.

WHEREAS:

The Principal has by written agreement dated \_\_\_\_\_ signed a contract with  
Obligees for the following Project: \_\_\_\_\_

\_\_\_\_\_  
hereinafter called Contract, which Contract is incorporated herein by reference and made a part  
hereof.

NOW, THEREFORE,

The condition of this obligation is such that, if Principal perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Oblige, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Oblige, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Principal or its agents or servants or the improper performance of the Contract by the Principal or its agents or servants or from any other cause, and shall promptly pay all persons supplying labor and materials for the performance of the Contract, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that no change, extension, alteration, deduction or addition, permitted by the Contract, in or to the terms of the Contract, or the plans or specifications pertaining thereto, shall in any way affect the obligation of the Surety on this bond; and the Surety does hereby waive notice of any such change, extension, alteration, deduction or addition in or to the terms of the Contract, or the plans or specifications pertaining thereto, or in or to the said Project.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Oblige, its successors or assigns, in the event of a breach of any, or all, or any part of, the covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

**AND IT IS HEREBY STIPULATED AND AGREED** that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The above-named Principal and Surety hereby jointly and severally agree with the Oblige that every person who has furnished labor or material to the Principal for the performance of the Contract who has not been paid in full therefor after ninety days from the completion and final settlement of any contract, may institute an action against the Principal and its sureties, and have their rights and claims adjudicated in the action, and judgment rendered thereon. If the full amount of the liability of the sureties on the bond is insufficient to pay the full amount of the claims, then, after paying the full amount due the Oblige, the remainder shall be distributed pro rata among the claimants. The Oblige shall not be liable for the payment of any costs or expenses of any such suit.

The amount of this bond may be reduced in accordance with and subject to section 3-122-225, Hawaii Administrative Rules.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Not available for use in solicitations  
(Procurement Circular 2014-08)

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\* \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\* \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC

EXHIBIT G

PERFORMANCE BOND (SURETY)  
FOR SUPPLEMENTAL AGREEMENT  
FOR GOODS AND SERVICES

(11/17/98)

KNOW TO ALL BY THESE PRESENTS:

That \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and \_\_\_\_\_

\_\_\_\_\_  
(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety  
in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,

(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_), to which payment Principal and Surety bind themselves, their  
heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these  
presents.

WHEREAS, the above-bound Principal has entered into a Contract with Obligee dated  
\_\_\_\_\_ for \_\_\_\_\_

\_\_\_\_\_;  
and entered into Supplemental Agreement No. \_\_\_\_\_, dated \_\_\_\_\_ for the period

\_\_\_\_\_  
hereinafter collectively called Contract, which Contract is incorporated herein by reference and  
made a part hereof.

NOW THEREFORE, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in  
strict accordance with the terms of the Contract as said Contract may be modified or amended  
from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time,  
alterations, or additions to the terms of the Contract, including the work to be performed  
thereunder, and the specifications or drawings accompanying same, shall in any way affect its

obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Obligor to the Surety and the Principal, Surety shall either remedy the Default, or take over the work to be performed under the Contract and complete such work, subject, however, to the limitation of the penal sum of this bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC

EXHIBIT H

PERFORMANCE BOND  
FOR SUPPLEMENTAL AGREEMENT  
FOR GOODS AND SERVICES  
(11/17/98)

KNOW TO ALL BY THESE PRESENTS:

That we, \_\_\_\_\_,  
(Full Legal Name and Street Address of Contractor)  
as Contractor, hereinafter called Contractor, is held and firmly bound unto the

\_\_\_\_\_, its successors and assigns, as Oblige, hereinafter called Oblige,  
(State/County Entity)  
in the amount of \_\_\_\_\_  
(Dollar Amount of Contract)

DOLLARS (\$ \_\_\_\_\_), lawful money of the United States of America, for the  
payment of which to the said Oblige, well and truly to be made, Contractor binds itself, its  
heirs, executors, administrators, successors and assigns, firmly by these presents. Said  
amount is evidenced by:

- ☐ Legal tender;
- ☐ Share Certificate unconditionally assigned to or made payable at sight to \_\_\_\_\_;  
Description \_\_\_\_\_;
- ☐ Certificate of Deposit, No. \_\_\_\_\_, dated \_\_\_\_\_ issued  
by \_\_\_\_\_,  
drawn on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Cashier's Check No. \_\_\_\_\_, dated \_\_\_\_\_, drawn  
on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;
- ☐ Teller's Check No. \_\_\_\_\_, dated \_\_\_\_\_, drawn  
on \_\_\_\_\_,  
a bank, savings institution or credit union insured by the Federal Deposit  
Insurance Corporation or the National Credit Union Administration, payable at  
sight or unconditionally assigned to \_\_\_\_\_;  
\_\_\_\_\_;



- ☐ Treasurer's Check No. \_\_\_\_\_, dated \_\_\_\_\_, drawn on \_\_\_\_\_, a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- ☐ Official Check No. \_\_\_\_\_, dated \_\_\_\_\_, drawn on \_\_\_\_\_, a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- ☐ Certified Check No. \_\_\_\_\_, dated \_\_\_\_\_, accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

**WHEREAS:**

The Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Obligea for the following Project: \_\_\_\_\_

and entered into Supplemental Agreement No. \_\_\_\_\_, dated \_\_\_\_\_ for the period \_\_\_\_\_; hereinafter collectively called Contract, which Contract is incorporated herein by reference and made a part hereof.

**NOW, THEREFORE,**

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligea, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligea, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligea, its successors or assigns, in the event of a breach of any, or all, or any part of, the covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Contractor

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC





Department of Hawaiian Home Lands  
CONSTRUCTION GENERAL CONDITIONS  
Dated March 2014

**TABLE OF CONTENTS**

<b><u>ARTICLE/SECTION</u></b>	<b><u>PAGE</u></b>
ARTICLE 1: DEFINITIONS AND ABBREVIATIONS	
1.1 DEFINITIONS.....	4
1.2 ABBREVIATIONS .....	8
ARTICLE 2 (reserved)	
ARTICLE 3: CONTRACT	
3.1 NOTICE TO PROCEED .....	9
3.2 RELATIONSHIP OF PARTIES.....	9
3.3 PERSONNEL REQUIREMENTS.....	10
3.4 NON-DISCRIMINATION .....	10
3.5 CONFLICTS OF INTEREST.....	10
3.6 EMPLOYMENT OF STATE RESIDENTS (§103B-3 HRS) .....	10
ARTICLE 4: SCOPE OF WORK	
4.1 INTENT OF CONTRACT, DUTY OF CONTRACTOR .....	11
4.2 CHANGES.....	11
4.3 DUTY OF CONTRACTOR TO PROVIDE PROPOSAL FOR CHANGES .....	12
4.4 PRICE ADJUSTMENT (§3-125-13 HAR) .....	13
4.5 ALLOWANCES FOR OVERHEAD AND PROFIT (§3-125-13 HAR).....	13
4.6 PAYMENT FOR DELETED MATERIAL.....	14
4.7 VARIATIONS IN ESTIMATED QUANTITIES (§3-125-10 HAR).....	14
4.8 VARIATIONS IN BOTTOM ELEVATIONS .....	14
4.9 DIFFERING SITE CONDITIONS (§3-125-11 HAR) .....	15
4.10 COSTS AND EXPENSES.....	15
ARTICLE 5: CONTROL OF WORK	
5.1 AUTHORITY OF THE CHAIRMAN, HAWAIIAN HOMES COMMISSION .....	16
5.2 AUTHORITY OF THE PROJECT MANAGER .....	16
5.3 AUTHORITY OF THE INSPECTOR.....	16
5.4 AUTHORITY OF CONSULTANT(S).....	16
5.5 SHOP DRAWINGS AND OTHER SUBMITTALS.....	16
5.6 COORDINATION OF CONTRACT DOCUMENTS .....	19
5.7 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS .....	21
5.8 EXAMINATION OF DRAWINGS, SPECIFICATIONS, PROJECT SITE .....	21

5.9	COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT .....	21
5.10	INSPECTION .....	23
5.11	REMOVAL OF DEFECTIVE, NON-CONFORMING AND UNAUTHORIZED WORK.....	23
5.12	VALUE ENGINEERING INCENTIVE.....	24
5.13	SUBCONTRACTS .....	26

## ARTICLE 6: CONTROL OF MATERIALS AND EQUIPMENT

6.1	MATERIALS AND EQUIPMENT .....	28
6.2	SOURCE OF SUPPLY AND QUALITY OF MATERIALS .....	28
6.3	SUBSTITUTION OF MATERIALS AND EQUIPMENT AFTER BID OPENING .....	28
6.4	ASBESTOS CONTAINING MATERIALS.....	29
6.5	TEST SAMPLES .....	29
6.6	MATERIAL SAMPLES .....	29
6.7	NON-CONFORMING MATERIALS .....	30
6.8	HANDLING MATERIALS .....	30
6.9	STORAGE OF MATERIALS .....	30
6.10	PROPERTY RIGHTS IN MATERIALS.....	30
6.11	ANTI-TRUST CLAIMS .....	30

## ARTICLE 7: PROSECUTION AND PROGRESS

7.1	PROSECUTION OF THE WORK.....	31
7.2	COMMENCEMENT REQUIREMENTS .....	31
7.3	INSURANCE REQUIREMENTS.....	32
7.4	PERMITS AND LICENSES .....	34
7.5	NORMAL WORKING HOURS .....	34
7.6	HOURS OF LABOR (§104-2 HRS).....	34
7.7	PREVAILING WAGES (§104-2 HRS & FEDERAL DAVIS-BACON).....	35
7.8	FAILURE TO PAY REQUIRED WAGES (§104-4 HRS OR FEDERAL DAVIS-BACON).....	36
7.9	PAYROLLS AND PAYROLL RECORDS (§104-3 HRS) .....	36
7.10	OVERTIME AND NIGHT WORK.....	36
7.11	OVERTIME AND NIGHT PAYMENT FOR DEPARTMENT INSPECTION SERVICE.....	37
7.12	LIMITATIONS OF OPERATIONS.....	37
7.13	ASSIGNMENT OR CHANGE OF NAME (§3-125-14 HAR).....	38
7.14	LAWS TO BE OBSERVED.....	39
7.15	PATENTED DEVICES, MATERIALS AND PROCESSES .....	39
7.16	SANITARY, HEALTH AND SAFETY PROVISIONS .....	40
7.17	PROTECTION OF PERSONS AND PROPERTY .....	40
7.18	ARCHAEOLOGICAL SITES .....	41
7.19	RESPONSIBILITY FOR DAMAGE CLAIMS; INDEMNITY .....	41
7.20	CHARACTER OF WORKERS OR EQUIPMENT .....	42
7.21	CONTRACT TIME .....	43
7.22	CONSTRUCTION SCHEDULE.....	46
7.23	STATEMENT OF WORKING DAYS .....	46

7.24	SUSPENSION OF WORK (§3-125-7 HAR)	46
7.25	DISPUTES AND CLAIMS (§3-126-3 HAR)	48
7.26	FAILURE TO COMPLETE THE WORK ON TIME	50
7.27	TERMINATION OF CONTRACTOR FOR CAUSE (§3-125-18 HAR)	51
7.28	TERMINATION FOR CONVENIENCE (§3-125-22 HAR)	52
7.29	CORRECTING DEFECTS	53
7.30	FINAL CLEANING	53
7.31	SUBSTANTIAL COMPLETION AND FINAL INSPECTION	53
7.32	PROJECT ACCEPTANCE DATE	54
7.33	FINAL SETTLEMENT OF CONTRACT	55
7.34	CONTRACTOR'S RESPONSIBILITY FOR WORK; RISK OF LOSS	56
7.35	GUARANTEE OF WORK	56
7.36	WORK OF AND CHARGES BY UTILITIES	57
7.37	RIGHT TO AUDIT RECORDS	57
7.38	RECORDS MAINTENANCE, RETENTION AND ACCESS	58
7.39	COST OR PRICING DATA	58
7.40	CONFIDENTIALITY OF MATERIAL	58
7.41	PUBLICITY	59
7.42	OWNERSHIP RIGHTS AND COPYRIGHT	59
7.43	GOVERNING LAW	59
7.44	SEVERABILITY	59
7.45	WAIVER	59
7.46	UTILITIES AND SERVICES	59

#### ARTICLE 8: MEASUREMENT AND PAYMENT

8.1	MEASUREMENT OF QUANTITIES	61
8.2	NO WAIVER OF LEGAL RIGHTS	61
8.3	PAYMENT FOR ADDITIONAL WORK	61
8.4	PROGRESS AND/OR PARTIAL PAYMENTS	65
8.5	PROMPT PAYMENT (§3-125-23 HAR)	66
8.6	RETAINAGE	67
8.7	WARRANTY OF CLEAR TITLE	67
8.8	FINAL PAYMENT	68
8.9	STATE'S RIGHT TO OFFSET	68

## ARTICLE 1: DEFINITIONS AND ABBREVIATIONS

---

- 1.1 DEFINITIONS.** Whenever the following terms or pronouns are used in these Construction General Conditions, or in any contract documents or instruments where these Construction General Conditions govern, the intent and meaning shall be interpreted as follows:

**ADDENDUM** (*plural - Addenda*). A written or graphic document, including Drawings and Specifications, issued by the Chairman during the bidding period which modifies or interprets the bidding documents, by additions, deletions, clarifications or corrections, which shall be considered and made a part of the bid proposal and the contract.

**ADDITION** (*to the contract sum*). Amount added to the contract sum by Change Order.

**ADMINISTRATIVE RULES.** Hawaii Administrative Rules for Chapter 103-D of the Hawaii Revised Statutes.

**ADVERTISEMENT.** A public announcement inviting bids for work to be performed or materials to be furnished.

**BAD WEATHER DAY.** When weather or other conditions prevent a minimum of four hours of work with the Contractor's normal work force on controlling items of work at the site. (See excess bad weather day.)

**BENEFICIAL OCCUPANCY.** The point of project completion when the Department can use the constructed facility in whole or in part for its intended purpose even though substantial completion may not be achieved.

**BID.** See PROPOSAL.

**BID SECURITY.** The security furnished by the Bidder from which the Department may recover its damages in the event the Bidder breaches its promise to enter into a contract with the Department and fails to execute the required bonds covering the work contemplated, if its proposal is accepted.

**BIDDER.** Any individual, partnership, firm, corporation, joint venture, or other legal entity submitting, directly or through a duly authorized representative or agent, a proposal for the work contemplated.

**BIDDING DOCUMENTS.** The advertisement "Notice to Contractors", or invitation to bid, instructions to Bidders, proposal requirements, the bid form and the proposed Contract Documents including all addenda issued prior to receipt of Bids.

**BULLETIN.** A written notice to the Contractor requesting a price and / or time proposal for contemplated changes preparatory to the issuance of a field order or change order.

**BY OR TO THE PROJECT MANAGER.** To avoid cumbersome and confusing repetition of expressions in these General Conditions, it is provided that whenever the following words or words of like import are used, they shall be understood as if they were followed by the words "by the Project Manager" or "to the Project Manager", unless the context clearly indicates another meaning: contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected or condemned.



**CALENDAR DAY.** Any day shown on the calendar beginning at midnight and ending at midnight the following day. If no designation of calendar or working day is made, “day” shall mean calendar day.

**CHAIRMAN.** The Chairman of the Hawaiian Homes Commission, Department of Hawaiian Home Lands.

**CHANGE ORDER.** A written order signed by the Chairman that establishes the full payment and final settlement of all claims for direct, indirect and consequential costs, including costs of delays, and establishes any adjustments to contract time related to the work covered and affected by one or more field orders, or for change work done or agreed to be done without issuance of a separate field order. A change order signed by all the parties to the contract constitutes a supplemental agreement.

**COMPLETION.** See SUBSTANTIAL COMPLETION and FINAL COMPLETION.

**CONSULTANT.** A person, firm or corporation having a contract with the Department to furnish services with respect to the project.

**CONTRACT.** The written agreement between the Contractor and the Department by its Chairman, by which the Contractor is bound to furnish all labor, equipment, and materials and to perform the specified work within the contract time stipulated, and by which DHHL is obligated to compensate the Contractor therefor at the prices set forth therein. The contract shall include the Contract Documents, also any and all amendments, and change orders, which are required to complete the construction in an acceptable manner.

**CONTRACT COMPLETION DATE.** The calendar day on which all work on the project, required by the contract, must be completed. See CONTRACT TIME and FINAL COMPLETION.

**CONTRACT DOCUMENTS.** The Contract, Addenda (which pertain to the Contract Documents, Contractor’s Proposal (including Wage Schedule, List of Subcontractors and other documentation accompanying the Bid and any post bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the contract, the Notice to Proceed, the Bonds, these General Conditions, the SPECIAL CONDITIONS, the Specifications and the Drawings as the same are more specifically identified in the contract together with all written Amendments, Change Orders, Field Orders, any written order for minor changes in the work and Project Manager’s written interpretations and clarifications issued on or after the effective date of the contract.

**CONTRACT PRICE.** The amount designated on the face of the contract for the performance of work including allowances, if any.

**CONTRACT TIME.** The number of working or calendar days provided in the contract for completion of the contract, exclusive of authorized time extensions. The number of days shall begin running on the effective date in the Notice to Proceed. If in lieu of providing a number of working or calendar days, the contract requires completion by a certain date, the work shall be completed by that date.

**CONTRACTOR.** Any individual, partnership, firm, corporation, joint venture, or other legal entity undertaking the execution of the work under the terms of the contract with the State of Hawaii, and acting directly or through its agents, or employees.

**DEPARTMENT.** The Department of Hawaiian Home Lands (abbreviated DHHL).

**DRAWINGS (or Plans).** The contract drawings in graphic or pictorial form, which show the design, location, character, dimensions and details of the work to be done and which shall be a part of the Contract Documents.

**EQUAL OR APPROVED EQUAL.** Whenever this term is used in the drawings or specifications, it shall be interpreted to mean a brand or article, prequalified in accordance with Section 6.3 SUBSTITUTION OF MATERIALS AND EQUIPMENT AFTER BID OPENING, that may be used in place of the one specified.

**EXCESS BAD WEATHER DAY.** A working day on which inclement weather prevents work on the contract and is beyond the average weather for the location of the project and the time of the year.

**FIELD ORDER.** A written order issued by the Project Manager to the Contractor requiring the contract work to be performed in accordance with a change or changes in the work. A field order may (1) establish a price adjustment and/or time adjustment in an amount the Project Manager believes is reasonable for the change; or (2) may declare that the Project Manager does not intend to adjust contract time or price for the work; or (3) may request the Contractor to submit a proposal for an adjustment to the contract time and/or price by a certain date.

**FINAL COMPLETION.** The date set by the Chairman that all work required by the contract and any amendments or changes thereto is in full compliance with the contract.

**FORCE ACCOUNT.** Term used when work is ordered to be done at the sole option of the Department and is to be billed for at cost of labor, materials and equipment, insurance(s), taxes, etc., plus a percentage for overhead and profit.

**GUARANTEE.** Legally enforceable assurance of the duration of satisfactory performance of quality of a product or work.

**HAZARDOUS MATERIALS.** Any and all radioactive materials, asbestos, polychlorinated biphenyls, petroleum, crude oil, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, toxic substances or materials cited in Hazardous Material Laws. Abandoned motor vehicles or parts thereof are not hazardous material.

**HOLIDAYS.** The days of each year which are set apart and established as State holidays pursuant to Chapter 8, Hawaii Revised Statutes.

**INSPECTOR.** The person assigned by the Department to make detailed inspections of contract performance and materials supplied for the work.

**LAWS.** All Federal, State, City and County Laws, ordinances, rules and regulations, and standard specifications, including any amendments thereto effective as of the date of the call for sealed bids.

**LETTER OF AWARD.** A written notice from the Chairman to the successful Bidder(s) stating that the Department has accepted its proposal.

**LIQUIDATED DAMAGES.** The amount prescribed in the Special Conditions, LIQUIDATED DAMAGES to be paid to the Department or to be deducted from any payments due or to become due the Contractor for each working day or calendar day (as applicable) delay in completing the whole or any specified portion of the work beyond the Contract Time.

**MAJOR UNIT PRICE ITEM.** A unit price item which, when extended on its estimated quantities in the proposal form, exceeds five percent (5%) of the total base bid proposal less any allowance and contingent items included in the proposal.

**NON-CONFORMING WORK.** Work that does not meet the requirements of the Contract Documents.

**NOTICE TO PROCEED.** A written notice from the Project Manager to the Contractor advising it of the date on which it is to begin the prosecution of the work, which date shall also be the beginning of Contract Time.

**POST CONTRACT DRAWINGS.** Drawings issued after the award of the contract for the purpose of clarification and / or changes to the work indicated in the original drawings and which may be made a part of the contract.

**PROJECT ACCEPTANCE DATE.** The calendar day on which the Project Manager accepts the project as sufficiently completed in compliance with the contract so that the Department can occupy or utilize the work for its intended use. See SUBSTANTIAL COMPLETION.

**PROJECT CONTRACT LIMITS (or CONTRACT ZONE).** The portion of the site as delineated on the drawings which define the Contractor's primary area of operation for the prosecution of the work. It does not define the exact limits of all construction that may be required under the contract.

**PROJECT MANAGER.** The Department's Contract Administrator as described in ARTICLE 5, CONTROL OF WORK.

**PROJECT GUARANTEE.** A guarantee issued by the Contractor to the Department. See GUARANTEE.

**PROPOSAL (BID).** The executed document submitted by a Bidder in the prescribed manner, in response to a request for proposals or invitation to Bid, to perform at the prices quoted, for the work specified under the contract, within the time prescribed for performance.

**PROPOSAL FORM.** The form prepared by the Department on which the written offer or formal bid for the work to be done is submitted by the Bidder. By submitting a bid on the proposal form, a Bidder adopts the language therein as its own.

**PUNCHLIST.** A list compiled by the Project Manager (or Contractor) stating work yet to be completed or corrected by the Contractor in order to substantially complete or finally complete the contract requirements.

**SHOP DRAWINGS/SUBMITTALS.** All drawings, diagrams illustrations, schedules and other data or information which are prepared or assembled by the Contractor and submitted by Contractor to illustrate some portion of the work.

**SPECIAL CONDITIONS.** The specific clauses that supplements or modify the standard clauses of the GENERAL CONDITIONS setting forth conditions or requirements peculiar to the individual project under consideration, which are not thoroughly or satisfactorily covered, described or explained in these GENERAL CONDITIONS.

**SPECIFICATIONS.** That portion of the Contract Documents consisting of written descriptions for materials, equipment, construction systems, standards, workmanship, directions, provisions and

requirements that pertain to the method and manner of performing the work and certain administrative requirements applicable thereto.

**STATE.** The State of Hawaii acting through its authorized representative.

**SUBCONTRACT.** Any written agreement between the Contractor and its subcontractors which contains the conditions under which the subcontractor is to perform a portion of the work for the Contractor.

**SUBCONTRACTOR.** An individual, partnership, firm, corporation, joint venture or other legal entity, as covered in Chapter 444, Hawaii Revised Statutes, which enters into an agreement with the Contractor to perform a portion of the work for the Contractor.

**SUBSTANTIAL COMPLETION.** The status of the project when the Contractor has completed all the work and (1) all utilities and services are connected and working; (2) all equipment is in acceptable working condition; (3) additional activity by the Contractor to correct punchlist items as described herein will not prevent or disrupt use of the work or the facility in which the work is located; and 4) the building, structure, improvement or facility can be used for its intended purpose.

**SUPERINTENDENT.** The employee of the Contractor, authorized to receive and fulfill instructions from the Project Manager, who is charged with the responsibility of all the work.

**SURETY.** The qualified individual, firm or corporation other than the Contractor, which executes a bond with and for the Contractor to ensure its acceptable performance of the contract.

**UNUSUALLY SEVERE WEATHER.** Uncommonly harsh weather including but not limited to hurricanes, tornadoes, tropical storms and tropical depressions.

**WORK.** The furnishing of all labor, materials, equipment, and other incidentals necessary or convenient for the successful completion of the project and the execution of all the duties and obligations imposed by the contract.

**WORKING DAY.** A calendar day, exclusive of Saturdays, Sundays and State-recognized legal holidays for the month in question.

## 1.2 ABBREVIATIONS

<b>DHHL</b>	Department of Hawaiian Home Lands.
<b>HAR</b>	Hawaii Administrative Rules
<b>HRS</b>	Hawaii Revised Statutes
<b>VECP</b>	Value Engineering Cost Proposal

~ END OF ARTICLE 1~

ARTICLE 2: [reserved]

---

ARTICLE 3: CONTRACT

3.1 NOTICE TO PROCEED

3.1.1 After the contract is fully executed and signed by the Chairman, the Contractor will be sent a formal Notice to Proceed letter advising the Contractor of the date on which it may proceed with the work. The Contractor shall be allowed ten (10) consecutive working days from said date to begin its work. In the event that the Contractor refuses or neglects to start the work, the Chairman may terminate the contract in accordance with Section 7.27, TERMINATION OF CONTRACT FOR CAUSE.

3.1.2 The Contractor may commence its operations strictly at its own risk prior to receipt of the formal notice to proceed, provided it makes a written request and has received approval from the Chairman in writing. All work performed shall be conducted in accordance with Section 7.1, PROSECUTION OF THE WORK.

3.1.3 In certain cases, the Department, with agreement of the Contractor, may issue a Notice to Proceed before full execution of the contract by the Chairman and it may further issue a Notice to Proceed concurrently with the Notice of Award.

3.1.4 In the event the Notice to Proceed is not issued within one hundred eighty (180) days after (1) the date the contract is executed by all parties; or (2) for projects funded with State Capital Improvement Project (CIP) funds, the date that the written certificate that funds are available is issued, whichever is later, the Contractor may submit a claim for increased labor and material costs (but not overhead costs) which are directly attributable to the delay beyond the first one hundred eighty (180) days. Such claims shall be accompanied with the necessary documentation to justify the claim. No payment will be made for assumed escalation costs.

3.2 RELATIONSHIP OF PARTIES. Independent Contractor Status and Responsibilities, including Tax Responsibilities.

3.2.1 In the performance of services required under this Contract, the CONTRACTOR is an “independent contractor,” with the authority and responsibility to control and direct the performance and details of the work and services required under this Contract; however, the STATE shall have a general right to inspect work in progress to determine whether, in the STATE’s opinion, the services are being performed by the CONTRACTOR in compliance with this Contract. Unless otherwise provided by special condition, it is understood that the STATE does not agree to use the CONTRACTOR exclusively, and that the CONTRACTOR is free to contract to provide services to other individuals or entities while under contract with the STATE.

3.2.2 The CONTRACTOR and the CONTRACTOR’s employees and agents are not by reason of this Contract, agents or employees of the State for any purpose, and the CONTRACTOR and the CONTRACTOR’s employees and agents shall not be entitled to claim or receive from the STATE any vacation, sick leave, retirement, workers’ compensation, unemployment insurance, or other benefits provided to state employees.

3.2.3 The CONTRACTOR shall be responsible for the accuracy, completeness, and adequacy of the CONTRACTOR’s performance under this Contract. Furthermore, the CONTRACTOR intentionally, voluntarily, and knowingly assumes the sole and entire liability to the CONTRACTOR’s employees

DHHL Construction General Conditions  
March 2014

and agents, and to any individual not a party to this Contract, for all loss, damage, or injury caused by the CONTRACTOR, or the CONTRACTOR's employees or agents in the course of their employment.

- 3.2.4 The CONTRACTOR shall be responsible for payment of all applicable federal, state, and county taxes and fees which may become due and owing by the CONTRACTOR by reason of this Contract, including but not limited to (i) income taxes, (ii) employment related fees, assessments, and taxes, and (iii) general excise taxes. The CONTRACTOR also is responsible for obtaining all licenses, permits, and certificates that may be required in order to perform this Contract.
- 3.2.5 The CONTRACTOR shall obtain a general excise tax license from the Department of Taxation, State of Hawaii, in accordance with Section 237-9, HRS, and shall comply with all requirements thereof.
- 2.2.6 The CONTRACTOR is responsible for securing all employee-related insurance coverage for the CONTRACTOR and the CONTRACTOR's employees and agents that is or may be required by law, and for payment of all premiums, costs, and other liabilities associated with securing the insurance coverage.
- 3.3 PERSONNEL REQUIREMENTS:
- 3.3.1 The CONTRACTOR shall secure, at the CONTRACTOR's own expense, all personnel required to perform this Contract.
- 3.3.2 The CONTRACTOR shall ensure that the CONTRACTOR's employees or agents are experienced and fully qualified to engage in the activities and perform the services required under this Contract, and that all applicable licensing and operating requirements imposed or required under federal, state, or county law, and all applicable accreditation and other standards of quality generally accepted in the field of the activities of such employees and agents are complied with and satisfied.
- 3.4 NONDISCRIMINATION. No person performing work under this Contract, including any subcontractor, employee, or agent of the Contractor, shall engage in any discrimination that is prohibited by any applicable federal, state, or county law.
- 3.5 CONFLICTS OF INTEREST. The CONTRACTOR represents that neither the CONTRACTOR, nor any employee or agent of the CONTRACTOR, presently has any interest, and promises that no such interest, direct or indirect, shall be acquired, that would or might conflict in any manner or degree with the CONTRACTOR's performance under this Contract.
- 3.6 EMPLOYMENT OF STATE RESIDENTS (§103B-3 HRS). The Contractor shall ensure that Hawaii residents comprise not less than eighty per cent of the workforce employed to perform the contract work on the project. The 80% requirement shall be determined by dividing the total number of hours worked on the contract by Hawaii residents, by the total number of hours worked on the contract by all employees of the Contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

*~END OF ARTICLE 3~*

## **ARTICLE 4: SCOPE OF WORK**

---

- 4.1 INTENT OF CONTRACT, DUTY OF CONTRACTOR. The intent of the Contract is to provide for the construction, complete in every detail, of the work described at the accepted bid price and within the time established by the contract. The Contractor has the duty to furnish all labor, materials, equipment, tools, transportation, incidentals and supplies and to determine the means, methods and schedules required to complete the work in accordance with the drawings, specifications and terms of the contract.
- 4.1.1 ENTIRE CONTRACT. This Contract sets forth all of the Contract, conditions, understandings, promises, warranties, and representations between the STATE and the CONTRACTOR relative to this Contract. This Contract supersedes all prior Contracts, conditions, understandings, promises, warranties and representations, which shall have no further force or effect. There are no Contracts, conditions, understandings, promises, warranties, or representations, oral or written, express or implied, between the STATE and the CONTRACTOR other than as set forth or as referred to herein.
- 4.2 CHANGES. The Project Manager may at any time, during the progress of the work, by written order, and without notice to the sureties, make changes in the work as may be found to be necessary or desirable. Such changes shall not invalidate the Contract nor release the Surety, and the Contractor will perform the work as changed, as though it had been a part of the original Contract.
- 4.2.1 MINOR CHANGES. Minor changes in the work may be directed by the Project Manager with no change in contract price or time of performance. Minor changes are consistent with the intent of the Contract Documents and do not substantially alter the type of work to be performed or involve any adjustment to the contract sum or extension of the contract time.
- 4.2.2 ORAL ORDERS
- 4.2.2.1 Any oral order, direction, instruction, interpretation or determination from the Chairman or any other person which in the opinion of the Contractor causes any change, shall be considered as a change only if the Contractor gives the Chairman written notice of its intent to treat such oral order, direction, instruction, interpretation or determination as a change directive. Such written notice must be delivered to both the Chairman and the Project Manager before the Contractor acts in conformity with the oral order, direction, instruction, interpretation or determination, but not more than five (5) days after delivery of the oral order to the Contractor. The written notice shall state the date, circumstances, whether a time extension will be requested, and source of the order that the Contractor regards as a change. Such written notice may not be waived and shall be a condition precedent to the filing of any claim by the Contractor. Unless the Contractor acts in accordance with this procedure, any such oral order shall not be treated as a change for which the Contractor may make a claim for an increase in the contract time or contract price related to such work.
- 4.2.2.2 No more than five (5) days after receipt of the written notice from the Contractor, a Field Order shall be issued for the subject work if the Department agrees that it constitutes a change. If no Field Order is issued in the time established, it shall be deemed a rejection of Contractor's claim for a change. If the Contractor objects to the failure to issue a Field Order, it shall file a written protest with the Chairman within thirty (30) days after delivery to the Chairman of the Contractor's written notice of its intention to treat the oral order as a change. In all cases, the Contractor shall proceed with the work. The protest shall be determined as provided in Section 7.25, DISPUTES AND CLAIMS.
- 4.2.3 FIELD ORDERS. All changes will be set forth in a field order or change order. Upon receipt of a field order, the Contractor shall proceed with the changes as ordered. If the Contractor does not agree

with any of the terms or conditions or in the adjustment or non-adjustment to the contract time and/or contract price set forth therein, it shall file with the Chairman a written protest setting forth its reasons in detail within thirty (30) days after receipt of the field order. In all cases, the Contractor shall proceed with the work as changed. The protest shall be determined as provided in Section 7.25, DISPUTES AND CLAIMS. Failure to file such a protest within the time specified shall constitute agreement on the part of the Contractor with the terms, conditions, amounts and adjustments or non-adjustment to the contract price and/or contract time set forth in the field order.

#### 4.2.4 CHANGE ORDERS

4.2.4.1 The Department will issue sequentially numbered change orders at times it deems appropriate during the contract period. A change order may contain the adjustment in contract price and / or time for a number of Field Orders. No payment for any change will be made until the change order is issued.

4.2.4.2 The penal sum of the Surety Performance and Payment Bonds will be adjusted by the amount of each and every change order.

#### 4.3 DUTY OF CONTRACTOR TO PROVIDE PROPOSAL FOR CHANGES

4.3.1 A Field Order may request the Contractor to supply the Department with a proposal for an adjustment to the contract time or contract price for the work described therein. Any such request for a proposal shall not affect the duty of the Contractor to proceed as ordered with the work described in the Field Order.

4.3.2 The Project Manager from time to time may issue a Bulletin to the Contractor requesting price and / or time adjustment proposals for contemplated changes in the work. A Bulletin is not a directive for the Contractor to perform the work described therein.

4.3.3 Within seven (7) days after receipt of a Bulletin or Field Order containing a request for proposal, the Contractor shall submit to the Project Manager a detailed written statement setting forth all charges the Contractor proposes for the change and the proposed adjustment of the contract time, all properly itemized and supported by sufficient substantiating data to permit evaluation. No time extension will be granted for delays caused by late Contractor pricing of changes or proposed changes. If the project is delayed because Contractor failed to submit the cost proposal within the seven (7) days, or longer as allowed by the Project Manager, liquidated damages will be assessed in accordance with Section 7.26, FAILURE TO COMPLETE THE WORK ON TIME.

4.3.4 No payment shall be allowed to the Contractor for pricing or negotiating proposed or actual changes. No time extension will be granted for delay caused by late Contractor pricing of changes or proposed changes.

4.3.5 The Chairman may accept the entire proposal, or any discreet cost item contained within the proposal or the proposed adjustment to contract time by a notice in writing to the Contractor delivered to the Contractor within thirty (30) days after receipt of the proposal. The written acceptance by the Chairman of all or part of the Contractor's proposal shall create a binding agreement between the parties for that aspect of the change.

4.3.6 If the Department refuses to accept the Contractor's entire proposal, the Chairman may issue a Field Order for the work; or if a Field Order has already been issued, the Department may issue a supplemental Field Order establishing the remaining adjustments to contract price and/or contract time for the ordered changes. If the Contractor disagrees with any term, condition or adjustment



contained in such Field Order or supplemental Field Order, it shall follow the protest procedures set forth in and be subject to the other terms of Subsection 4.2.3, FIELD ORDERS.

4.4 PRICE ADJUSTMENT (§3-125-13 HAR)

4.4.1 Any adjustment in the contract price pursuant to a change or claim in this contract shall be made in one or more of the following ways:

4.4.1.1 By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

4.4.1.2 By unit prices specified in the contract or subsequently agreed upon;

4.4.1.3 Whenever there is a variation in quantity for any work covered by any line item in the schedule of costs submitted as required by Section 7.2, COMMENCEMENT REQUIREMENTS, by the Department at its discretion, adjusting the lump sum price proportionately;

4.4.1.4 In such other manner as the parties may mutually agree;

4.4.1.5 At the sole option of the Project Manager, by the costs attributable to the event or situation covered by the change, plus appropriate profit or fee, all as specified in Section 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT and the force account provision of Section 8.3, PAYMENT FOR ADDITIONAL WORK; or

4.4.1.6 In the absence of an agreement between the two parties, by a unilateral determination by the Department of the reasonable and necessary costs attributable to the event or situation covered by the change, plus appropriate profit or fee, all as computed in accordance with applicable Sections of Chapters 3-123 and 3-126 of the Hawaii Administrative Rules and Regulations, and Section 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT.

4.5 ALLOWANCES FOR OVERHEAD AND PROFIT (§3-125-13 HAR)

4.5.1 In determining the cost or credit to the Department resulting from a change, the allowances for all overhead, including, extended overhead resulting from adjustments to contract time (including home office, branch office and field overhead, and related delay impact costs) and profit combined, shall not exceed the percentages set forth below:

4.5.1.1 For the Contractor, for any work performed by its own labor forces, twenty percent (20%) of the direct cost;

4.5.1.2 For each subcontractor involved, for any work performed by its own forces, twenty percent (20%) of the direct cost;

4.5.1.3 For the Contractor or any subcontractor, for work performed by their subcontractors, ten percent (10%) of the amount due the performing subcontractor.

4.5.1.4 Field overhead includes, but is not limited to all costs of supervision, engineering, clerical, layout, temporary facilities, improvements and structures, all general condition expenditures, storage, transport and travel, housing, small tools (as defined in 8.3.4.5(h)), pickup trucks and automobiles.

- 4.5.2 Not more than three markup allowance line item additions not exceeding the maximum percentage shown above will be allowed for profit and overhead, regardless of the number of tier subcontractors.
- 4.5.3 The allowance percentages will be applied to all credits and to the net increase of direct costs where work is added and deleted by the changes.
- 4.6 PAYMENT FOR DELETED MATERIAL
- 4.6.1 CANCELED ORDERS. If acceptable material was ordered by the Contractor for any item deleted by an ordered change in the work prior to the date of notification of such deletion by the Project Manager, the Contractor shall use its best efforts to cancel the order. The Department shall pay reasonable cancellation charges required by the supplier excluding any markup for overhead and profit to the Contractor.
- 4.6.2 RETURNED MATERIALS - If acceptable deleted material is in the possession of the Contractor or is ultimately received by the Contractor, if such material is returnable to the supplier and the Project Manager so directs, the material shall be returned and the Contractor will be paid for the reasonable charges made by the supplier for the return of the material, excluding any markup for overhead and profit to the Contractor. The cost to the Contractor for handling the returned material will be paid for as provided in Section 4.4, PRICE ADJUSTMENT.
- 4.6.3 UNCANCELLED MATERIALS. If orders for acceptable deleted material cannot be canceled at a reasonable cost, it will be paid for at the actual cost to the Contractor including an appropriate markup for overhead and profit as set forth in Section 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT. In such case, the material paid for shall become the property of the Department and the cost of further storage and handling shall be paid for as provided in Section 4.4, PRICE ADJUSTMENT.
- 4.7 VARIATIONS IN ESTIMATED QUANTITIES (§3-125-10 HAR)
- 4.7.1 Where the quantity of a major unit price item in this contract is estimated on the proposal form and where the actual quantity of such pay item varies more than fifteen percent (15%) above or below the estimated quantity stated in this contract, an adjustment in the contract price shall be made upon demand of either party. The adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred fifteen percent (115%) or below eighty-five percent (85%) of the estimated quantity. The adjustment shall be subject to Section 4.4 PRICE ADJUSTMENT and Section 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT. If the quantity variation is such as to cause an increase in the time necessary for completion, the Chairman shall, upon receipt of a written request for an extension of time within thirty (30) days of the item's completion, ascertain the facts and make such adjustment to the completion date as the Chairman finds justified.
- 4.8 VARIATIONS IN BOTTOM ELEVATIONS. The Contractor shall plan and construct to the bottom elevations of footings, piles, drilled shafts, or cofferdams as shown on the drawings. When the bottom of a footing, pile, drilled shaft, or cofferdam is shown as an estimated or approximate elevation, the Contractor shall plan and construct to that elevation or to any deeper elevation required by the drawings or direction of the Project Manager. In the event the bottom elevation is lowered, the Contractor shall be entitled to additional payment in accordance with Sections 4.4 PRICE ADJUSTMENT and 4.5 ALLOWANCES FOR OVERHEAD AND PROFIT. In the event the bottom elevation is raised, the Department shall be entitled to a credit in accordance with Sections 4.2 CHANGES, 4.4, PRICE ADJUSTMENT and 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT.

- 4.9 DIFFERING SITE CONDITIONS (§3-125-11 HAR)
- 4.9.1 During the progress of the work, if the Contractor encounters conditions at the site differing materially from those shown in the drawings and specifications, Contractor shall promptly, and before any such conditions are disturbed or damaged (except in an emergency as required by Subsection 7.17.8. EMERGENCIES), notify the Project Manager in writing of:
- 4.9.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the contract; or
- 4.9.1.2 Unknown physical conditions at the site, of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract. Unclaimed motor vehicles or parts thereof and discarded materials or unclaimed items are not unknown or unforeseen physical conditions. (See also Section 5.8, EXAMINATION OF DRAWINGS, SPECIFICATIONS, PROJECT SITE).
- 4.9.2 After receipt of written notice, the Chairman shall promptly investigate the site, and if it is found that such conditions do materially differ and cause an increase in the Contractor's cost of, or the time required to, perform any part of the work, whether or not changed as a result of such conditions, an adjustment shall be made and the contract modified accordingly. Any adjustment in contract price made pursuant to this Section 4.9. DIFFERING SITE CONDITIONS (§3-125-11 HAR) shall be determined in accordance with Sections 4.4, PRICE ADJUSTMENT and 7.25, DISPUTES AND CLAIMS.
- 4.9.3 Nothing contained in this Section 4.9, DIFFERING SITE CONDITONS shall be grounds for an adjustment in compensation if the Contractor had actual knowledge or should have known of the existence of such conditions prior to the submission of bids.
- 4.10 COSTS AND EXPENSES. Any reimbursement due the CONTRACTOR for per diem and transportation expenses under this Contract shall be subject to Chapter 3-123 (Cost Principles) of the Procurement Rules and the following guidelines:
- 4.10.1 Reimbursement for air transportation shall be actual cost or coach class air fare, whichever is less.
- 4.10.2 Reimbursement for ground transportation costs shall not exceed the actual cost of renting an intermediate-sized vehicle.
- 4.10.3 Unless prior written approval of the CHAIRMAN is obtained, reimbursement for subsistence allowance (i.e., hotel and meals, etc.) shall not exceed the applicable daily authorized rates for interisland or out-of-state travel that are set forth in the current Governor's Executive Order authorizing adjustments in salaries and benefits for state officers and employees in the Chairman branch who are excluded from collective bargaining coverage.

~END OF ARTICLE 4~

## ARTICLE 5: CONTROL OF WORK

---

- 5.1        **AUTHORITY OF THE CHAIRMAN** - The Chairman shall make final and conclusive decisions on all questions which may arise relating to the quality and acceptability of the materials furnished and work performed, the manner of performance and the rate of progress of the work, the interpretation of the plans and specifications, the acceptable fulfillment of the contract on the part of the Contractor, the compensation under the contract and the mutual rights of the parties to the contract. The Chairman shall have the authority to enforce and make effective such decisions and orders at the Contractor's expense when the Contractor fails to carry such decisions and orders out promptly and diligently. The Chairman shall have the authority to suspend the work wholly or in part as provided in Section 7.24, SUSPENSION OF WORK.
- 5.2        **AUTHORITY OF THE PROJECT MANAGER.** The Project Manager has the authority to act on behalf of the Department on all matters regarding the contract and the work that are not reserved for the Chairman. The Project Manager's authority is vested exclusively in the Project Manager except when specific authority to act for the Project Manager has been delegated to a specific person or persons. Such delegation of authority may be established by the Contract Documents; otherwise, it is not effective or binding upon the Department until such written notification of the delegation is received by the Contractor. The Administrator of the Land Development Division of the Department, or his designee, shall also have authority to act on behalf of the Department on all matters regarding the contract that are not reserved for the Chairman.
- 5.3        **AUTHORITY OF THE INSPECTOR**
- 5.3.1      The Inspector shall observe and inspect the contract performance and materials. The Inspector does not have any authority vested in the Project Manager unless specifically delegated in writing.
- 5.3.2      The Inspector may offer advice and recommendations to the Contractor, but any such advice or recommendations are not directives from the Project Manager.
- 5.3.3      The Inspector has no authority to allow deviations from the Contract Documents and may reject any and all work that the Inspector deems is not in conformity with the contract requirements. Failure of an Inspector at any time to reject non-conforming work shall not be considered a waiver of the Department's right to require work in strict conformity with the Contract Documents as a condition of final acceptance.
- 5.4        **AUTHORITY OF CONSULTANT(S).** The Department may engage Consultant(s) for limited or full observation to supplement the inspections performed by the Department and respective Counties. Unless otherwise specified in writing to the Contractor, such retained Consultant(s) will have the authority of an Inspector.
- 5.5        **SHOP DRAWINGS AND OTHER SUBMITTALS.** The following documents shall be submitted where required by the Contract Documents:
- 5.5.1      **SHOP DRAWING**
- (a)        The Contractor shall prepare, thoroughly check, and approve all shop drawings, including those prepared by subcontractors or any other persons. The Contractor shall indicate its approval by stamping and signing each drawing. Any shop drawing submitted without being reviewed, stamped and signed will be considered as not having been submitted, and any delay caused thereby shall be the Contractor's responsibility.

- (b) Shop drawings shall indicate in detail all parts of an item of work, including erection and setting instructions and engagements with work of other trades or other separate contractors. Shop drawings for structural steel, millwork and pre-cast concrete shall consist of calculations, fabrication details, erection drawings and other working drawings to show the details, dimensions, sizes of members, anchor bolt plans, insert locations and other information for the complete fabrication and erection of the structure to be constructed.
- (c) The Contractor shall be responsible for the design of all structural curtain walls, all connections and fasteners for structural steel and architectural and structural precast concrete. Curtain walls, connections and fasteners shall be designed by a licensed professional engineer to carry the indicated or necessary loads. The precast concrete pieces shall be designed to withstand erection, transportation and final loading stresses. All calculations shall be performed by a licensed professional engineer and submitted to the Project Manager for review.
- (d) The cost of shop drawings or any other submittal shall not be a separate or individual pay item. All costs of furnishing shop drawings required by the contract shall be included in the price agreed to be paid for the various contract items of work, and no additional allowances will be made therefor.
- (e) All shop drawings as required by the contract, or as determined by the Project Manager to be necessary to illustrate details of the work shall be submitted to the Project Manager with such promptness as to cause no delay in the work or in that of any other Contractor. Delay caused by the failure of the Contractor to submit shop drawings on a timely basis to allow for review, possible resubmittal and acceptance will not be considered as a justifiable reason for a contract time extension. Contractor, at its own risk, may proceed with the work affected by the shop drawings before receiving acceptance; however the Department shall not be liable for any costs or time required for the correction of work done without the benefit of accepted shop drawings.
- (f) It is the Contractor's obligation and responsibility to check all of its and its subcontractor's shop drawings and be fully responsible for them and for coordination with connecting and other related work. The Contractor shall prepare, and submit to the Project Manager coordination drawings showing the installation locations of all plumbing, piping, duct and electrical work including equipment throughout the project. By approving and submitting shop drawings, the Contractor thereby represents that it has determined and verified all field measurements and field construction criteria, or will do so, and that it has checked and coordinated each shop drawing with the requirements of the work and the contract documents. When shop drawings are prepared and processed before field measurements and field construction criteria can be or have been determined or verified, the Contractor shall make all necessary adjustments in the work or resubmit further shop drawings, all at no change in contract price or time.

5.5.1.1 SHOP DRAWING FORM. Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and number of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:

- (a) Date of Submission
- (b) Name of Project
- (c) Project Number
- (d) Location of Project
- (e) Name of submitting Contractor and Subcontractor
- (f) Revision Number
- (g) Specification and/or any drawing reference by article or sheet number.

- 5.5.1.2 No shop drawing shall be smaller than 24" x 36" nor larger than 28" x 42". At the determination of the Project Manager, each sheet of drawings for the submittal shall consist of either (1) reproducible transparency and three ozalid prints; or (2) six ozalid prints.
- 5.5.1.3 The Department will not be responsible for any cost of modifying/adjusting precast structures to fit the final as-built design, actual field conditions and finished work. To this end, the Contractor shall follow the following procedures:
- (a) Submit shop drawings for general design conformity for approval. Delay precasting operations.
  - (b) Start infrastructure work. Expose, check grade and install improvements requiring precast structures. Resubmit shop drawings with schedule for all structures indicating required deviations, correct and final inverts, depths, openings, special reinforcing and details, alignments, correct configurations, tops, grating, etc. The Contractor shall submit a schedule for the precasting work. Precast operations may commence based on approved shop drawings. During precast operations, the Project Manager may inspect the operations at least once per differing group of structures. The Contractor shall assume all risks and costs associated with modifying/adjusting the precast structures due to incomplete field verification, premature analysis and shop drawings.
- 5.5.2 **DESCRIPTIVE SHEETS AND OTHER SUBMITTALS.** When a submittal is required by the contract, the Contractor shall submit to the Project Manager eight (8) complete sets of descriptive sheets such as brochures, catalogs, illustrations, etc., which will completely describe the material, product, equipment, furniture or appliances to be used in the project as shown in the drawings and specifications. Prior to the submittal, the Contractor will review and check all descriptive sheets for conformity to the contract requirements and indicate such conformity by marking or stamping and signing each sheet. It is the responsibility of the Contractor to submit descriptive sheets for review and acceptance by the Project Manager as required at the earliest possible date after the date of award in order to meet the construction schedule. Delays caused by the failure of the Contractor to submit descriptive sheets as required will not be considered as justifiable reasons for contract time extension. The submittal shall list the seven (7) items of information as listed in Subsection 5.5.1, Shop Drawing.
- 5.5.3 **MATERIAL SAMPLES AND COLOR SAMPLES.** Prior to their submittal, all color samples and material shall be assembled and presented as required by the Department. When sample submittals are required by the contract, the Contractor shall review, approve, indicate its approval and submit to the Project Manager samples of the materials to be used in the project and color selection samples. It is the responsibility of the Contractor to submit material and color samples for review as required at the earliest possible date after the date of award in order to meet the construction schedule. Delays caused by the failure of the Contractor to submit material and color samples will not be considered as justifiable reasons for contract time extension. The submittal shall list the seven (7) items of information as listed in Subsection 5.5.1, Shop Drawing.
- 5.5.4 **SUBMITTAL VARIANCES.** The Contractor shall include with the submittal, written notification clearly identifying all deviations or variances from the contract drawings, specifications and other Contract Documents. The notice shall be in a written form separate from the submittal. The variances shall also be clearly indicated on the shop drawing, descriptive sheet, material sample or color sample. Failure to so notify of and identify such variances shall be grounds for the subsequent rejection of the related work or materials, notwithstanding that the submittal was accepted by the Project Manager. If the variances are not acceptable to the Project Manager, the Contractor will be

required to furnish the item as specified or indicated on the Contract Documents at no additional cost or time.

- 5.5.5 **REVIEW AND ACCEPTANCE PROCESS.** The Project Manager shall check shop drawings and within forty-five (45) days of receipt return them to the Contractor unless otherwise agreed between the Contractor and the Department. Submittals required for work to be installed within the first sixty days after the notice to proceed shall be returned by the Project Manager within twenty (20) days. If the volume of shop drawings submitted at any time for review is unusually large, the Contractor may inform the Project Manager of its preferred order for review and the Project Manager shall use reasonable efforts to accommodate the Contractor's priorities.
- 5.5.5.1 The acceptance by the Project Manager of the Contractor's submittal relates only to their sufficiency and compliance with the intention of the contract. Acceptance by the Project Manager of the Contractor's submittal does not relieve the Contractor of any responsibility for accuracy of dimensions, details, and proper fit, and for agreement and conformity of submittal with the Contract Drawings and Specifications. Nor will the Project Manager's acceptance relieve the Contractor of responsibility for variance from the Contract Documents unless the Contractor, at the time of submittal, has provided notice and identification of such variances required by this section. Acceptance of a variance shall not justify a contract price or time adjustment unless the Contractor requests such an adjustment at the time of submittal and the adjustment are explicitly agreed to in writing by the Department. Any such request shall include price details and proposed scheduling modifications. Acceptance of a variance is subject to all contract terms, stipulations and covenants, and is without prejudice to any and all rights under the surety bond.
- 5.5.5.2 If the Project Manager returns a submittal to the Contractor that has been rejected, the Contractor, so as not to delay the work, shall promptly make a resubmittal conforming to the requirements of the Contract Documents and indicating in writing on the transmittal and the subject submittal what portions of the resubmittal has been altered in order to meet the acceptance of the Project Manager. Any other differences between the resubmittal and the prior submittal shall also be specifically described in the transmittal.
- 5.5.5.3 No mark or notation made by the Project Manager or Consultant(s) on or accompanying the return of any submittal to the Contractor shall be considered a request or order for a change in work. If the Contractor believes any such mark or notation constitutes a request for a change in the work for which it is entitled to an adjustment in contract price and/or time, the Contractor must follow the same procedures established in Section 4.2, CHANGES for oral orders, directions, instructions, interpretations or determinations from the Project Manager or else lose its right to claim for an adjustment.
- 5.6 **COORDINATION OF CONTRACT DOCUMENTS.** It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. The Contract Documents are complementary: any requirement occurring in one document is as binding as though occurring in all. In the event of conflict or discrepancy the priorities stated in the following Subsections shall govern:
- 5.6.1 Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda only to the extent specified.
- 5.6.2 Special Conditions and Proposal shall govern over the General Conditions and Specifications.
- 5.6.3 Specifications shall govern over drawings.

- 5.6.4 Specification Error - Should an error or conflict appear within the specification, the Contractor shall immediately notify the Project Manager. The Project Manager shall promptly issue instructions as to procedure. Any requirement occurring in one or more parts of the specification is as binding as though occurring in all applicable parts.
- 5.6.4.1 Should an error or conflict appear within a specification section, between a listed manufacturer / product and the performance requirements of the specification section, the performance requirements shall govern.
- 5.6.4.2: In the event of a conflict between AG-008 103D General Conditions (the “General Conditions”) and these DHHL Construction General Conditions, the requirements of these DHHL Construction General Conditions will apply to the extent provided by and as allowed under law.
- 5.6.5 DRAWINGS
- 5.6.5.1 Schedules shall govern over all other notes and drawings.
- 5.6.5.2 Bottom elevations of footings shown on drawings shall govern over a general note such as: “All footings shall rest on firm, undisturbed soil and extend a minimum of a certain number of feet into natural or finish grade, whichever is lower.” In the event the footing must be lowered below the bottom elevation shown, the Contractor shall be entitled to additional payment as provided in Section 4.2, CHANGES. In the event the footing is raised above the bottom elevation shown, the Department shall be entitled to a credit as provided in Section 4.2, CHANGES.
- 5.6.5.3 When a bottom of pile, drilled shaft, piling or cofferdam is shown as an estimated or approximate elevation, the Contractor shall plan and construct to that elevation or to any deeper elevation required by the plans or the direction by the Project Manager. The Project Manager, at the Project Manager’s sole discretion, may order in writing termination of all or part of the work above the estimated or approximate elevation.
- 5.6.5.4 Except for drawing schedules and bottom elevations as noted above, general notes shall govern over all other portions of the drawings:
- 5.6.5.5 Larger scale drawings shall govern over smaller scale drawings.
- 5.6.5.6 Figured or numerical dimensions shall govern over dimensions obtained by scaling. Measurements from the drawings when scaled shall be subject to the approval of the Project Manager.
- 5.6.5.7 In cases of discrepancies in the figures or drawings, the discrepancies shall be immediately referred to the Project Manager without whose decision said discrepancy shall not be corrected by the Contractor save at its own risk and in the settlement of any complications arising from such adjustment without the knowledge and consent of the Project Manager, the Contractor shall bear all extra expense involved.
- 5.6.5.8 Items shown on the drawings that are completely void in terms of description, details, quality and / or performance standards in both the Drawings and Specifications to make a price determination shall be considered an omission and the Contractor shall immediately refer same to the Project Manager for a decision.



- 5.6.5.9 Where there is a conflict between the architectural sheets and the civil or landscaping or electrical sheets, etc., the conflict shall be considered a discrepancy and the Contractor shall immediately refer same to the Project Manager for a decision.
- 5.6.5.10 Any requirement occurring in one or more of the sheets is as binding as though occurring in all applicable sheets.
- 5.7 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS. The Contractor shall carefully study and compare the Contract Documents with each other, with field conditions and with the information furnished by the Department and shall at once report to the Project Manager errors, conflicts, ambiguities, inconsistencies or omissions discovered. Should an item not be sufficiently detailed or explained in the Contract Documents, Contractor shall report and request the Project Manager's clarification and interpretation. The Project Manager will issue a final clarification or final interpretation.
- 5.8 EXAMINATION OF DRAWINGS, SPECIFICATIONS, PROJECT SITE
- 5.8.1 The Contractor shall examine carefully the Project Site to become familiar with the conditions to be encountered in performing the work and the requirements of the Contract Documents.
- 5.8.1.1 No extra compensation will be given by reason of the Contractor's misunderstanding or lack of knowledge of the requirements of the work to be accomplished or the conditions to be encountered in performing the project.
- 5.8.1.2 No extra compensation will be given by reason of the Contractor's misunderstanding or lack of knowledge when the existence of differing site, subsurface or physical conditions could have been reasonably discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the bidding requirements or contract documents to be conducted by or for the Contractor.
- 5.8.2 When the contract drawings include a log of test borings showing a record of the data obtained by the Department's investigation of subsurface conditions, said log represents only the opinion of the Department as to the character of material encountered in its test borings and at only the location of each boring. The Contractor acknowledges that underground site conditions in Hawaii vary widely. There is no warranty, either expressed or implied, that the conditions indicated are representative of those existing throughout the work or any part of it, or that other conditions may not occur.
- 5.8.3 Reference is made to the Special Conditions for identification of subsurface investigations, reports, explorations and tests utilized by the Department in preparation the Contract Documents. Such reports, drawings, boring logs etc., if any, are not part of the Contract Documents.
- 5.9 COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT
- 5.9.1 FURNISHING DRAWINGS AND SPECIFICATIONS. Contractor will be supplied copies of the Contract Drawings and Specifications as specified in the Special Conditions. Contractor shall have and maintain at least one unmarked copy of the Contract Drawings and Specifications on the work site, at all times. Contractor shall cooperate with the Project Manager, the Inspector(s), and other contractors in every possible way.
- 5.9.2 SUPERINTENDENT. The Contractor shall have a competent superintendent on the work site as its designated agent. The superintendent shall be able to read and understand the project plans and

specifications and shall be experienced in the type of project being undertaken and the work being performed. The superintendent shall receive instructions from the Project Manager or its authorized representative. The Contractor shall authorize the superintendent to (a) execute the orders and directions of the Project Manager or its authorized representative without delay and (b) promptly supply such materials, equipment, tools, labor and incidentals as may be required to complete the project within the prescribed contract time. The Contractor shall furnish a superintendent regardless of the amount of project work sublet.

- 5.9.2.1 If the superintendent or agent is not present at the work site, the Project Manager shall have the right to suspend the work as described under Section 7.24, SUSPENSION OF WORK.
- 5.9.2.2 The Contractor shall file with the Project Manager a written statement giving the name of the superintendent or agent assigned to the project. The Contractor shall be responsible for notifying the Project Manager in writing of any change in the superintendent or agent.
- 5.9.2.3 The requirements of this Subsection 5.9.2, SUPERINTENDENT may be waived by the Project Manager.
- 5.9.3 **ENGINEERING WORK.** The Contractor shall properly and accurately lay out the work, perform all engineering work, and furnish all engineering materials and equipment required to establish and maintain all lines, grades, dimensions and elevations called for in the drawings or required in the progress of construction, unless otherwise noted in the contract documents. The Contractor will be held definitely and absolutely responsible for any errors in lines, grades, dimensions and elevations and shall at once, on instruction from the Project Manager, correct and make good such errors or any errors, or faults in the work resulting from errors in engineering performed under the requirements of its contract to the entire satisfaction of the Project Manager. Full compensation for the work shall be included in the prices paid for contract items of work. No additional allowance will be made for the correction of incorrect engineering work.
  - 5.9.3.1 The Project Manager shall furnish the requisite bench elevations.
  - 5.9.3.2 The Contractor shall locate and verify all lines, grades, dimensions and elevations indicated on the drawings before any excavation, or construction begins. Any discrepancy shall be immediately brought to the attention of the Project Manager; any change shall be made in accordance with the Project Manager's instruction.
  - 5.9.3.3 The Contractor shall verify all street survey monuments (horizontal and vertical alignment) prior to final acceptance by the Project Manager in accordance with any governmental requirements.
  - 5.9.3.4 The Contractor shall provide a surveyor or Civil Engineer licensed in the State of Hawaii to verify and establish all lines, grades, dimensions and elevations.
- 5.9.4 **USE OF STRUCTURE OR IMPROVEMENT.** The Department shall have the right, at any time during construction of the structure or improvements, to enter same for the purpose of installing by government labor or by any other Contractor or utility any necessary work in connection with the installation of facilities, it being mutually understood and agreed, however, that the Contractors, utilities and the Department will, so far as possible work to the mutual advantage of all, where their several works in the above mentioned or in unforeseen instances touch upon or interfere with each other. As a convenience to those involved, the Project Manager shall allocate the work and designate the sequence of construction in case of controversy between Contractors on separate projects under Department jurisdiction.

- 5.9.4.1 The Department shall also have the right to use the structure, equipment, improvement or any part thereof, at any time after it is considered by the Project Manager as available. In the event that the structure, equipment or any part thereof is so used, the Department shall be responsible for all expenses incidental to such use and any damages resulting from the Department's use.
- 5.9.4.2 Equipment warranty will commence to run before the work is complete when and if the Department begins actual use of the equipment for the purpose for which the equipment was designed and installed.
- 5.9.4.3 If the Department enters the structure for construction and/or occupancy and the Contractor is delayed because of interference by the Department or by extra work resulting from damage which the Contractor is not responsible for, or by extraordinary measures the Contractor must take to accommodate the Department, the Contractor shall be granted an extension of time in accordance with Section 7.21, CONTRACT TIME. However, if such use increases the cost or delays the completion of the remaining portions of work, the Contractor shall be entitled to such extra compensation or extension of time or both, as the Department may determine to be proper. Any additional work necessary will be paid in accordance with Section 8.3, PAYMENT FOR ADDITIONAL WORK.
- 5.10 INSPECTION. The Project Manager, the Department's consultants, inspectors employed by the Department and other representatives duly authorized by the Department shall at all times have access to the work during its construction and shall be furnished with every reasonable facility for ascertaining at any time that the materials and the workmanship are in accordance with the requirements and intentions of the contract. All work done and all materials furnished shall be subject to inspection and acceptance.
- 5.10.1 Such inspection and approval may extend to all or part of the work, and to the preparation, fabrication or manufacture of the materials to be used. By entering into a contract for the supply of materials, equipment or performance of labor in connection with the work, such material and equipment supplier or labor contractor consents to and is subject to the terms of Section 5.9, COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT to the same extent as the Contractor.
- 5.10.2 AUTHORITY TO SUSPEND OPERATIONS. The Project Manager shall have the authority to suspend operations of any work being improperly performed by issuing a written order giving the reason for shutting down the work. Should the Contractor disregard such written order, the work done thereafter will not be accepted nor paid for.
- 5.10.3 The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill the contract as prescribed. Notwithstanding prior payment and acceptance by the Project Manager, any defective and nonconforming work shall be corrected to comply with the contract requirements. Unsuitable, unspecified or unapproved materials may be rejected.
- 5.10.4 FEDERAL AGENCY INSPECTION. Projects financed in whole or in part with Federal funds shall be subject to inspection and corrective requirements at all times by the Federal Agency involved at no cost to the Department.
- 5.11 REMOVAL OF DEFECTIVE, NON-CONFORMING AND UNAUTHORIZED WORK
- 5.11.1 All work which has been rejected as not conforming to the requirements of the Contract shall be remedied or removed and replaced by the Contractor in an acceptable manner and no compensation

will be allowed for such removal or replacement. Any work done beyond the work limits shown on the drawings and specifications or established by the Project Manager or any additional work done without written authority will be considered as unauthorized and will not be paid for. work so done may be ordered removed at the Contractor's expense.

- 5.11.2 SCHEDULING CORRECTIVE WORK. The Contractor shall perform its corrective or remedial work at the convenience of the Department and shall obtain the Project Manager's approval of its schedule.
- 5.11.3 FAILURE TO CORRECT WORK. Upon failure on the part of the Contractor to comply promptly with any order of the Project Manager made under the provisions of Section 5.10, the Project Manager shall have authority to cause defective work to be remedied or removed and replaced, and unauthorized work to be removed, at the Contractor's expense, and to deduct the costs from any monies due or to become due the Contractor.
- 5.12 VALUE ENGINEERING INCENTIVE (§3-132 HAR amended by Act 149 SLH 1999). On projects with contract amounts in excess of \$250,000 (two hundred fifty thousand dollars), the following Value Engineering Incentive Clause shall apply to allow the Contractor to share in cost savings that ensue from cost reduction proposals it submits.
  - 5.12.1 The Value Engineering Incentive Clause applies to all Value Engineering Change Proposals (cost reduction proposals, hereinafter referred to as (VECP) initiated and developed by the Contractor for changing the drawings, designs, specifications or other requirements of this contract. This clause does not however, apply to any VECP unless it is identified as such by the Contractor at the time of its submission to the Project Manager.
  - 5.12.2 VALUE ENGINEERING CHANGE PROPOSAL (VECP). All VECP must:
    - 5.12.2.1 Result in a savings to the Department of at least \$4000 (four thousand dollars) by providing less costly items and without impairing any essential functions and characteristics such as service life, reliability, economy of operation, ease of maintenance and all necessary features of the completed work;
    - 5.12.2.2 Require, in order to be applied to this Contract, a change order to this Contract; and
    - 5.12.2.3 Not adversely impact on the schedule of performance or the Contract completion date.
  - 5.12.3 VECP REQUIRED INFORMATION. The VECP will be processed expeditiously and in the same manner as prescribed for any other change order proposal. As a minimum, the following information will be submitted by the Contractor with each proposal:
    - 5.12.3.1 A description of the difference between the existing contract requirements and the VECP, and the comparative advantages and disadvantages of each including durability, service life, reliability, economy of operation, ease of maintenance, design safety standards, desired appearance, impacts due to construction and other essential or desirable functions and characteristics as appropriate;
    - 5.12.3.2 An itemization of the requirements of the contract which must be changed if the VECP is adopted and a recommendation as to how to make each such change;

- 5.12.3.3 An estimate of the reduction in performance costs that will result from adoption of the VECP taking into account the costs of implementation by the Contractor, including any amounts attributable to subcontracts, and the basis for the estimate;
- 5.12.3.4 A prediction of any effects the VECP would have on other costs to the Department, such as Department furnished property costs, costs of related items, and costs of maintenance and operation over the anticipated life of the material, equipment, or facilities as appropriate; the construction schedule, sequence and time; and bid item totals used for evaluation and payment purposes;
- 5.12.3.5 A statement of the time by which a change order adopting the VECP must be issued so as to obtain the maximum cost reduction during the remainder of this contract noting any effect on the contract time; and 5.12.3.6 The dates of any previous submissions of the VECP, the numbers of any Government contracts under which submitted and the previous actions by the Government, if known.
- 5.12.4 **REQUIRED USE OF LICENSED ARCHITECT OR ENGINEER.** When, in the judgment of the Project Manager, a VECP alters the design prepared by a registered professional architect or engineer, the Contractor shall ensure the changes to be prepared are by or under the supervision of a licensed professional architect or engineer, and stamped and so certified.
- 5.12.5 Unless and until a change order applies a VECP to a contract, the Contractor shall remain obligated to perform in accordance with the terms of the contract and the Department shall not be liable for delays incurred by the Contractor resulting from the time required for the Department's determination of the acceptability of the VECP.
- 5.12.5.1 The determination of the Project Manager as to the acceptance of any VECP under a contract shall be final.
- 5.12.6 **ACCEPTANCE OF VECP.** The Project Manager may accept in whole or in part any VECP submitted pursuant to this section by issuing a change order to the Contract. Prior to issuance of the change order, the Contractor shall submit complete final contract documents similar to those of the original Contract showing the accepted changes and the new design and features as well as the following:
  - 5.12.6.1 Design calculations;
  - 5.12.6.2 The design criteria used; and
  - 5.12.6.3 A detailed breakdown of costs and expenses to construct or implement such revisions.
  - 5.12.6.4 The change order will identify the final VECP on which it is based.
- 5.12.7 **VECP PRICE ADJUSTMENTS.** When a VECP is accepted under a contract, an adjustment in the contract price shall be made in accordance with Section 4.4, PRICE ADJUSTMENT. The adjustment shall first be established by determining the effect on the Contractor's cost of implementing the change, including any amount attributable to subcontractors and to the Department's charges to the Contractor for architectural, engineering, or other consultant services, and the staff time required to examine and review the proposal. The contract price shall then be reduced by fifty percent (50%) of the net estimated decrease in the cost of performance.

- 5.12.8 The Contractor may restrict the Department's right to use the data or information or both, on any sheet of a VECP or of the supporting data, submitted pursuant to this Subsection, if it is stated on that sheet as follows:
- 5.12.8.1 "This data or information or both shall not be disclosed outside the Department or be duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate this VECP. This restriction shall not limit the Department's right to use this data or information or both if obtained from another source, or is otherwise available, without limitations. If this VECP is accepted by the Department by issuance of a change order after the use of this data or information or both in such an evaluation, the Department shall have the right to duplicate, use and disclose any data or information or both pertinent to the proposal as accepted in any manner and for any purpose whatsoever and have others so do."
- 5.12.9 In the event of acceptance of a VECP, the Department shall have all rights to use, duplicate or disclose in whole or in part in any manner and for any purpose whatsoever, and to have or permit others to do so, any data or information or both reasonably necessary to fully utilize such proposal.
- 5.12.10 The Contractor shall submit with each VECP all required information and provide all additional information as may be required by the Project Manager to evaluate and implement the VECP. The cost for preparing the VECP shall be the Contractor's responsibility, and any part of the Contractor's cost for implementing the change shall be due only when the proposal is accepted and a change order is issued.
- 5.12.11 If the service of the Department's architect, Project Manager or consultant is necessary to review and evaluate a VECP, the cost therefor shall be paid for by the Contractor.
- 5.12.12 Each VECP shall be evaluated as applicable to this contract, and past acceptance on another Department project for a similar item shall not be automatic grounds for approval.
- 5.12.13 The method by which the Contractor will share a portion of the cost savings from an accepted VECP shall be for this contract only, and no consideration shall be made for future acquisition, royalty type payment or collateral savings.
- 5.12.13.1 The Department may accept the proposed VECP in whole or in part. The Chairman shall issue a contract change order to identify and describe the accepted VECP.
- 5.13 SUBCONTRACTS. Nothing contained in the contract documents shall create a contractual relationship between the Department and any subcontractor.
- 5.13.1 SUBSTITUTING SUBCONTRACTORS. Contractors may enter into subcontracts only with subcontractors listed in the proposal. No subcontractor may be added or deleted and substitutions will be allowed only if the subcontractor:
- 5.13.1.1 Fails, refuses or is unable to enter into a subcontract; or
- 5.13.1.2 Becomes insolvent; or
- 5.13.1.3 Has its subcontractor's license suspended or revoked; or
- 5.13.1.4 Has defaulted or has otherwise breached the subcontract in connection with the subcontracted work; or

- 5.13.1.5 Is unable to comply with other requirements of law applicable to contractors, subcontractors and public works projects.
- 5.13.2 Requesting Approval to Substitute a Subcontractor. Requests to substitute a subcontractor shall be submitted to the Project Manager for approval. Contractor agrees to hold the Department harmless and indemnify the Department for all claims, liabilities, or damages whatsoever, including attorney's fees arising out of or related to the approval or disapproval of the substitution.
- 5.13.3 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and the other contract documents insofar as applicable to the work of the subcontractor and to give the Contractor the same rights regarding the termination of a subcontractor as the Department may exercise over the Contractor.
- 5.13.4 The Contractor shall not sponsor any unliquidated subcontractor's claim against the Department and shall defend, indemnify and hold the Department harmless against any direct claims by its subcontractors. Any claim for additional compensation by a subcontractor in connection with the work shall be made only against the Contractor. The Contractor may not assert any such claim against the Department until the liability of the Contractor has been unconditionally established by negotiation, arbitration or litigation, and the amount due the subcontractor has been determined, save for interest due.
- 5.13.5 Once a subcontractor's claim is established, should the Contractor intend to make the claim against the Department, it shall follow the procedure set forth under Section 7.25, DISPUTES AND CLAIMS.
- 5.13.6 SUBCONTRACTING. Contractor shall perform with its own organization, work amounting to not less than twenty percent (20%) of the total contract cost, exclusive of costs for materials and equipment the Contractor purchases for installation by its subcontractors, except that any items designated by the Department in the contract as "specialty items" may be performed by a subcontractor and the cost of any such specialty items so performed by the subcontractor may be deducted from the total contract cost before computing the amount of work required to be performed by the Contractor with its own organization. For the purposes of this section, the Contractor's work is defined as: direct cost labor for contractor's forces; direct cost materials installed by the contractor's direct cost labor force; direct cost equipment, either owned or leased, used by the contractor's direct cost labor force; and field overhead cost to include: field supervision, field office trailer (if any), field office equipment and supplies, etc.

*~END OF ARTICLE 5~*

---

## **ARTICLE 6: CONTROL OF MATERIALS AND EQUIPMENT**

---

- 6.1 MATERIALS AND EQUIPMENT. Contractor shall furnish, pay for and install all material and equipment as called for in the drawings and specifications. Materials and equipment shall be new and the most suitable for the purpose intended unless otherwise specified. The Department does not guarantee that the specified or pre-qualified product listed in the drawings and specifications are available at the time of bid or during the contract period.
- 6.2 SOURCE OF SUPPLY AND QUALITY OF MATERIALS
- 6.2.1 Only materials conforming to the drawings and specifications and, when required by the contract have been accepted by the Project Manager, shall be used. In order to expedite the inspection and testing of materials, at the request of the Project Manager, the Contractor shall identify its proposed sources of materials within ten (10) days after notification by the Project Manager.
- 6.2.2 At the option of the Project Manager, the materials may be accepted by the Project Manager at the source of supply before delivery is started. Representative preliminary samples of the character and quantity prescribed shall be submitted by the Contractor or producer for examination and tested in accordance with the methods referred to under samples and tests.
- 6.2.3 PROJECT MANAGER'S AUTHORIZATION TO TEST MATERIALS. Materials proposed to be used may be inspected and tested whenever the Project Manager deems necessary to determine conformance to the specified requirements. The cost of testing shall be borne by the Contractor. However, should test results show that the material(s) is in compliance with the specified requirements; the cost of the testing will be borne by the Department.
- 6.2.4 UNACCEPTABLE MATERIALS. In the event material(s) are found to be unacceptable, the Contractor shall cease their use, remove the unacceptable material(s) that have already been installed or applied, and furnish acceptable materials all at no additional cost to the Department. No material which is in any way unfit for use shall be used.
- 6.3 SUBSTITUTION OF MATERIALS AND EQUIPMENT
- 6.3.1 SUBSTITUTION OF MATERIALS AND EQUIPMENT BEFORE BID OPENING For materials and equipment submitted in compliance with Instructions to Bidders, if after installing the substituted product, an unlisted variance is discovered the Contractor shall immediately replace the product with a specified product at no cost to the Department.
- 6.3.2 SUBSTITUTION AFTER CONTRACT AWARD. Subject to the Project Manager's determination if the material or equipment is equal to the one specified or prequalified, substitution of material or equipment may be allowed after the Letter of Award is issued only:
- 6.3.2.1 If the specified or prequalified item is delayed by unforeseeable contingencies beyond the control of the Contractor which would cause a delay in the project completion; or
- 6.3.2.2 If any specified or prequalified item is found to be unusable or unavailable due to a change by the manufacturer or other circumstances; or
- 6.3.2.3 If the Contractor desires to provide a more recently developed material, equipment, or manufactured model from the same named manufacturer than the one specified or prequalified; or
- 6.3.2.4 If the specified material and / or equipment inadvertently lists only a single manufacturer.



- 6.3.3 A substitution request after the Contract is awarded shall be fully explained in writing. Contractor shall provide brochures showing that the substitute material and / or equipment is equal or better in essential features and also provide a matrix showing comparison of the essential features. Contractor shall justify its request and include quantities and unit prices involved, respective supplier's price quotations and such other documents necessary to fully support the request. Any savings in cost will be credited to the Department. Contractor shall absorb any additional cost for the substitute item(s) or for its installation. Submitting a substitution request, does not imply that substitutions, for brand name specified materials and equipment will be allowed. The Project Manager may reject and deny any request deemed irregular or not in the best interest of the Department. A request for substitution shall not in any way be grounds for an extension of contract time. At the discretion of the Project Manager, a time extension may be granted for an approved substitution.
- 6.4 ASBESTOS CONTAINING MATERIALS. The use of materials or equipment containing asbestos is prohibited under this contract. Contractor warrants that all materials and equipment incorporated in the project are asbestos-free.
- 6.5 TEST SAMPLES
- 6.5.1 The Project Manager may require any or all materials to be tested by means of samples or otherwise. Contractor shall collect and forward samples requested by the Project Manager. Contractor shall not use or incorporate any material represented by the samples until all required tests have been made and the material has been accepted. In all cases, the Contractor shall furnish the required samples without charge. Where samples are required from the completed work, the Contractor shall cut and furnish samples from the completed work. Samples so removed shall be replaced with identical material and refinished. No additional compensation will be allowed for furnishing test samples and their replacement with new materials.
- 6.5.2 Tests of the material samples will be made in accordance with the latest standards of the American Society for Testing and Materials (ASTM), as amended prior to the contract date unless otherwise provided. In cases where a particular test method is necessary or specifications and serial numbers are stipulated, the test shall be made by the method stated in the above-mentioned publication. Where the test reference is the American Association of State Highway and Transportation Officials (AASHTO), it means the specifications and serial numbers of the latest edition and amendments prior to the bid date.
- 6.5.3 The Project Manager may, at no extra cost to the Department retest any materials which have been tested and accepted at the source of supply after the same has been delivered to the work site. The Project Manager shall reject all materials which, when retested, do not meet the requirements of the Contract.
- 6.6 MATERIAL SAMPLES
- 6.6.1 The Contractor shall furnish all samples required by the drawings and specifications or that may be requested by the Project Manager of any and all materials or equipment it proposes to use. Unless specifically required, samples are not to be submitted with the bid.
- 6.6.2 No materials or equipment of which samples are required shall be used on the work until the Project Manager has received and accepted the samples. If the Contractor proceeds to use such materials before the Project Manager accepts the samples, the Contractor shall bear the risk.

- 6.6.3 Contractor shall furnish two (2) copies of a transmittal letter with each shipment of samples. The letter shall provide a list of the samples, the name of the building or work for which the materials are intended and the brands of the materials and names of the manufacturers. Also, each sample submitted shall have a label indicating the material represented, its place of origin, the names of the producer, the Contractor and the building or work for which the material is intended. Samples of finished materials shall be marked to indicate where the materials represented are required by the drawings or specifications.
- 6.6.4 Acceptance of any sample(s) shall be only for the characteristics or for the uses named in such acceptance and for no other purpose. Acceptance of samples shall not change or modify any contract requirement. All samples will be provided by the Contractor at no extra cost to the Department. See also Section 5.5, SHOP DRAWINGS AND OTHER SUBMITTALS.
- 6.7 NON-CONFORMING MATERIALS. All materials not conforming to the requirements of this contract documents, whether in place or not, shall be rejected and removed immediately from the site of work unless otherwise permitted by the Project Manager in writing. No rejected material which has subsequently been made to conform shall be used unless and until written acceptance has been given by the Project Manager. If the Contractor fails to comply forthwith with any order of the Project Manager made under the provisions of this Section 6.7, NON-CONFORMING MATERIALS the Project Manager shall have the authority to remove and replace non-conforming materials and charge the cost of removal and replacement to the Contractor.
- 6.8 HANDLING MATERIALS. Contractor shall handle all materials to preserve their quality and fitness for work. Transport aggregates from the source or storage site to the work in tight vehicles to prevent loss or segregation of materials after loading and measuring.
- 6.9 STORAGE OF MATERIALS. Contractor shall store all materials to preserve their quality and fitness for the work. Unless otherwise provided, any portion of the project site within the Project Contract Limit not required for public travel may be used for storage purposes and for the Contractor's plant and equipment. Any additional space required shall be provided by the Contractor at its expense subject to the Project Manager's acceptance. Contractor shall store materials on wooden platforms or other hard, clean surfaces and covered to protect it from the weather and damage. Stored materials shall be located to allow prompt inspection.
- 6.10 PROPERTY RIGHTS IN MATERIALS. Nothing in the contract shall be construed to vest in the Contractor any right to any materials and equipment after such materials and equipment have been attached, affixed to, or placed in the work.
- 6.11 ANTITRUST CLAIMS. The STATE and the CONTRACTOR recognized that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, the CONTRACTOR hereby assigns to STATE any and all claims for overcharges as to goods and material purchased in connection with this Contract, except as to overcharges which result from violations commencing after the price is established under this Contract and which are not passed on to the STATE under an escalation clause.

*~END OF SECTION 6~*

---

## **ARTICLE 7: PROSECUTION AND PROGRESS (Including Legal Relations and Responsibility)**

---

### **7.1 PROSECUTION OF THE WORK**

- 7.1.1 After approval of the Contract by the Chairman, a Notice to Proceed will be given to the Contractor as described in Section 3.10, NOTICE TO PROCEED. The Notice to Proceed will indicate the date the Contractor is expected to begin the construction and from which date contract time will be charged.
- 7.1.2 The Contractor shall begin work no later than ten (10) working days from the date in the Notice to Proceed and shall diligently prosecute the same to completion within the contract time allowed. The Contractor shall notify the Project Manager at least three (3) working days before beginning work.
- 7.1.3 If any subsequent suspension and resumption of work occurs, the Contractor shall notify the Project Manager at least twenty-four (24) hours before stopping or restarting actual field operations.
- 7.1.4 **WORKING PRIOR TO NOTICE TO PROCEED.** The Contractor shall not begin work before the date in the Notice to Proceed. Should the Contractor begin work before receiving the Notice to Proceed, any work performed in advance of the specified date will be considered as having been done at the Contractor's risk and as a volunteer and subject to the following conditions:
  - 7.1.4.1 Under no circumstances shall the Contractor commence work on site until it has notified the Project Manager of its intentions and has been advised by the Project Manager in writing that the project site is available to the Contractor. The project site will not be made available until the Contractor has complied with commencement requirements under Section 7.2, COMMENCEMENT REQUIREMENTS.
  - 7.1.4.2 In the event the contract is not executed, the Contractor shall, at its own expense, do such work as is necessary to leave the site in a neat condition to the satisfaction of the Project Manager. The Contractor shall not be reimbursed for any work performed.
  - 7.1.4.3 All work done prior to the Notice to Proceed shall be performed in accordance with the Contract Documents, but will only be considered authorized work and be paid for as provided in the Contract after the Notice to Proceed is issued.
- 7.1.5 For repairs and/or renovations of existing buildings, unless otherwise permitted by the Project Manager, the Contractor shall not commence with the physical construction unless all or sufficient amount of materials are available for either continuous construction or completion of a specified portion of the work. When construction is started, the Contractor shall work expeditiously and pursue the work diligently until it is complete. If only a portion of the work is to be done in stages, the Contractor shall leave the area safe and usable for the user agency at the end of each stage.
- 7.2 **COMMENCEMENT REQUIREMENTS.** Prior to beginning work on site, the Contractor shall submit the following to the Project Manager:
  - 7.2.1 Identification of the Superintendent or authorized representative on the job site. Refer to Section 5.9, COOPERATION BETWEEN THE CONTRACTOR AND THE DEPARTMENT;
    - 7.2.1.1 Identification of the surveyor who shall be licensed in the State of Hawaii and will work for it throughout the course of the project. Refer to Section 5.9.3.4.

- 7.2.2 Proposed Working Hours on the job. Refer to Section 7.5, NORMAL WORKING HOURS;
- 7.2.3 Permits and Licenses. Refer to Section 7.4, PERMITS AND LICENSES;
- 7.2.4 Schedule of Prices to be accepted for the agreed Monthly Payment Application. Unless the proposal provides unit price bids on all items in this project, the successful Bidder will be required, after the award of contract, to submit a schedule of prices for the various items of construction included in the contract. For projects involving more than a single building and / or facility, the breakdown cost shall reflect a separate schedule of prices for the various items of work for each building and/or facility. The sum of the prices submitted for the various items must equal the lump sum bid in the Bidder's proposal. This schedule will be subject to acceptance by the Project Manager who may reject same and require the Bidder to submit another or several other schedules if in the Project Manager's opinion the prices are unbalanced or not sufficiently detailed. This schedule of prices shall be used for the purpose of determining the value of monthly payments due the Contractor for work installed complete in place; and may be used as the basis for determining cost and credit of added or deleted items of work, respectively;
- 7.2.4.1 The Contractor shall estimate at the close of each month the percentage of work completed under each of the various construction items during such month and submit the Monthly Payment Application to the Project Manager for review and approval. The Contractor shall be paid the approved percentage of the price established for each item less the retention provided in Section 8.4, PROGRESS AND/OR PARTIAL PAYMENTS; and
- 7.2.5 PROOF OF INSURANCE COVERAGE. Certificate of Insurance or other documentary evidence satisfactory to the Project Manager that the Contractor has in place all insurance coverage required by the contract. Refer to Section 7.3, INSURANCE REQUIREMENTS.
- 7.2.6 Until such time as the above items are processed and approved, the Contractor shall not be allowed to commence on any operations unless authorized by the Project Manager.
- 7.3 INSURANCE REQUIREMENTS
- 7.3.1 OBLIGATION OF CONTRACTOR. Contractor shall not commence any work until it obtains, at its own expense, all required herein insurance. Such insurance shall be provided by an insurance company authorized by the laws of the State to issue such insurance in the State of Hawaii. Coverage by a "Non-Admitted" carrier is permissible provided the carrier has a Best's Rating of "A-VII" or better.
- 7.3.2 All insurance described herein will be maintained by the Contractor for the full period of the contract and in no event will be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the Department.
- 7.3.3 Certificate(s) of Insurance acceptable to the Department shall be filed with the Project Manager prior to commencement of the work. Certificates shall identify if the insurance company is a "captive" insurance company or a "Non-Admitted" carrier to the State of Hawaii. The Best's rating must be stated for the "Non-Admitted" carrier. Certificates shall contain a provision that coverage(s) being certified will not be cancelled or materially changed without giving the Project Manager at least thirty (30) days prior written notice. The Department is to be named as Additional Insured on any of the required insurance and it shall be so noted on the certificate. Should any policy be cancelled before final acceptance of the work by the Department, and the Contractor fails to immediately procure replacement insurance as specified, the Department, in addition to all other remedies it may have for

such breach, reserves the right to procure such insurance and deduct the cost thereof from any money due to the Contractor.

- 7.3.4 Nothing contained in these insurance requirements is to be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from its operations under this Contract, including the Contractor's obligation to pay liquidated damages, nor shall it affect the Contractor's separate and independent duty to defend, indemnify and hold the Department harmless pursuant to other provisions of this Contract. In no instance will the Department's exercise of an option to occupy and use completed portions of the work relieve the Contractor of its obligation to maintain the required insurance until the date of final acceptance of the work.
- 7.3.5 All insurance described herein shall be primary and cover the insured for all work to be performed under the Contract, all work performed incidental thereto or directly or indirectly connected therewith, including traffic detour work or other work performed outside the work area and all change order work.
- 7.3.6 The Contractor shall, from time to time, furnish the Project Manager, when requested, satisfactory proof of coverage of each type of insurance required covering the work. Failure to comply with the Project Manager's request may result in suspension of the work, and shall be sufficient grounds to withhold future payments due the Contractor and to terminate the contract for Contractor's default.
- 7.3.7 TYPES OF INSURANCE. Contractor shall purchase and maintain insurance described below which shall provide coverage against claims arising out of the Contractor's operations under the Contract, whether such operations be by the Contractor itself or by any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.
- 7.3.7.1 WORKER'S COMPENSATION. The Contractor shall obtain worker's compensation insurance for all persons whom they employ in carrying out the work under this contract. This insurance shall be in strict conformity with the requirements of the most current and applicable State of Hawaii Worker's Compensation Insurance laws in effect on the date of the execution of this contract and as modified during the duration of the contract.
- 7.3.7.2 COMMERCIAL GENERAL LIABILITY INSURANCE AND AUTOMOBILE INSURANCE. Contractor's commercial general liability insurance and automobile liability insurance shall both be obtained in a combined, single limit of not less than \$1,000,000 (one million dollars) unless otherwise indicated in the Special Conditions per occurrence that shall include coverage for bodily injury, sickness, disease or death of any person, arising directly or indirectly out of, in connection with, the performance of work under this contract.
- 7.3.7.3 "General Liability and Automobile Insurance. CONTRACTOR shall maintain, at its own expense, the minimum insurance coverage specified below, or as amended in the Special Conditions, throughout the term of this Contract.
- a. General Liability insurance providing coverage of no less than ONE MILLION DOLLARS (\$1,000,000.00) per occurrence and TWO MILLION DOLLARS (\$2,000,000.00) in the aggregate.
  - b. Automobile insurance providing coverage of no less than ONE MILLION DOLLARS (\$1,000,000.00) per accident."
- 7.3.7.4 The Contractor shall either (a) Require each of its subcontractors to procure and to maintain during the life of its subcontract, subcontractor's comprehensive general liability, automobile liability and

property damage liability insurance of the type and in the same amounts specified herein; or (b) Insure the activities of its subcontractors in its own policy.

- 7.3.7.5 **BUILDERS RISK INSURANCE.** Unless excluded by the Special Conditions of this contract, the Contractor shall provide builder's risk insurance during the progress of the work and until final acceptance by the Department upon completion of the contract. It shall be "All Risk" (including but not limited to earthquake, windstorm and flood damage) completed value insurance coverage on all completed work and work in progress to the full replacement value thereof. Such insurance shall include the Department as an additional named insured. The Contractor shall submit to the Project Manager for its approval all items deemed to be uninsurable. The policy may provide for a deductible in an amount of up to twenty five percent (25%) of the amount insured by the policy. With respect to all losses up to any deductible amount, the relationship between the Contractor and the Department shall be that of insurer and the additional insured respectively as if no deductible existed. The Contractor is responsible for theft, if any item of the contract is stolen prior to, or after installation, until the work is accepted by the Department. Progress payment does not constitute acceptance.

#### 7.4 PERMITS AND LICENSES

- 7.4.1 The Department or its representative may process Federal (e.g. Army Corps of Engineers), State and county permit applications. The Contractor shall pick up the preprocessed Permits at the appropriate governmental agency and pay the required fees. Other permits necessary for the proper execution of the work such as utility connection permits, elevator installation permits etc., unless processed by the Department and paid for by the Contractor, shall be obtained and paid for by the Contractor.

- 7.4.2 Until such time as the above permits are approved, the Contractor shall not be allowed to commence any operations without written approval of the Project Manager.

- 7.4.3 The Project Manager reserves the right to waive application and processing of the building permit.

- 7.5 **NORMAL WORKING HOURS.** Prior to beginning operations, unless otherwise established by the Department, the Contractor shall notify the Project Manager in writing of the time in hours and minutes, A.M. and P.M. respectively, at which it desires to begin and end the day's work. If the Contractor desires to change the working hours, it shall request the Project Manager's approval three (3) consecutive working days prior to the date of the change.

#### 7.6 HOURS OF LABOR (§104-2 HRS)

- 7.6.1 No laborer or mechanic employed on the job site of any public work of the Department or any political sub-division thereof shall be permitted or required to work on Saturday, Sunday or a legal holiday of the State or in excess of eight (8) hours on any other day unless the laborer or mechanic receives overtime compensation for all hours worked on Saturday, Sunday and a legal holiday of the State or in excess of eight (8) hours on any other day. For the purposes of determining overtime compensation under this Section 7.6, HOURS OF LABOR (§104-2 HRS) the basic hourly rate of any laborer or mechanic shall not be less than the basic hourly rate determined by the Department of Labor and Industrial Relations to be the prevailing basic hourly rate for corresponding classes of laborers and mechanics on projects of similar character in the Department.

- 7.6.2 Overtime compensation means compensation based on one and one-half times the laborers or mechanics basic hourly rate of pay plus the cost to an employer of furnishing a laborer or mechanic with fringe benefits.

7.7 PREVAILING WAGES (State §104-2 HRS & Federal Davis-Bacon)

7.7.1 The Contractor shall at all time observe and comply with all provisions of Chapter 104, HRS, the significant requirements of which are emphasized in the Department of Labor and Industrial Relations Publication No. H104-3 entitled "Requirements of Chapter 104, Hawaii Revised Statutes, Wages and Hours of Employees on Public Works Law". The Contractor must also comply with all provisions of Federal Davis-Bacon Act (40 U.S.C. 276-276a-5 and Code of Federal Regulation (CFR) Title 29 and related Acts.

7.7.2 WAGE RATE SCHEDULE. The wage rate schedule may not be physically enclosed in the bid documents. However, the wage rate schedule is incorporated herein by reference and made a part of the Bid and Contract Documents. The bidder must obtain and use the latest minimum rates ten (10) days prior to the date set for the bid opening of bids. The wage rate schedule may be obtained from the DHHL, Labor Compliance Specialist, Hale Kalanianaʻole, 91-5420 Kapolei Parkway, Kapolei, Hawaii, 96707 or, State Department of Labor and Industrial Relations web site:

<http://labor.hawaii.gov/rs/home/wages/72-2/>

or the Federal Department of Labor (Davis- Bacon) wage rate schedule web site:

<http://www.wdol.gov>.

7.7.3 The Contractor or its subcontractor(s) shall pay all laborers and mechanics employed on the job site, unconditionally and not less often than once a week, and without deduction or rebate on any account except as allowed by law, the full amounts of their wages including overtime, accrued to not more than five (5) working days prior to the time of payment, at wage rates not less than those stated in the contract, regardless of any contractual relationship which may be alleged to exist between the Contractor and subcontractor and such laborers and mechanics. The wages stated in the contract shall not be less than the minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the of Labor and Industrial Relations and published in wage rate schedules. Any increase in wage rates, as determined by the of Labor and Industrial Relations and issued in the wage rate schedule, shall be applicable during the performance of the contract, in accordance with Section 104-2(a) and (b), Hawaii Revised Statutes. Notwithstanding the provisions of the original contract, if the of Labor and Industrial Relations determines that prevailing wages have increased during the performance of the contract, the rate of pay of laborers and mechanics shall be raised accordingly.

7.7.4 The applicable wage rate schedule shall be physically included in the Contract Documents executed by the successful Bidder.

7.7.5 POSTING WAGE RATE SCHEDULE. The rates of wages to be paid shall be posted by the Contractor in a prominent and easily accessible place at the job site and a copy of such wages required to be posted shall be given to each laborer and mechanic employed under the contract by the Contractor at the time the person is employed thereunder, provided that where there is a collective bargaining agreement, the Contractor does not have to provide its employees the wage rate schedules. Any revisions to the schedule of wages issued by the Department of Labor and Industrial Relations during the course of the Contract shall also be posted by the Contractor and a copy provided to each laborer and mechanic employed under the Contract as required above.

7.7.6 The Chairman may withhold from the Contractor so much of the accrued payments as the Chairman may consider necessary to pay to laborers and mechanics employed by the Contractor or any

subcontractor on the job site. The accrued payments withheld shall be the difference between the wages required by this Contract and the wages actually received by such laborers or mechanics.

7.8 FAILURE TO PAY REQUIRED WAGES (§104-4, HRS or Federal Davis-Bacon). If the Department finds that any laborer or mechanic employed on the job site by the Contractor or any subcontractor has been or is being paid wages at a rate less than the required rate by the Contract, or has not received their full overtime compensation, the Department may, by written notice to the Contractor, terminate its right, or the right of any subcontractor, to proceed with the work or with the part of the work on which the required wages or overtime compensation have not been paid and may complete such work or part by contract or otherwise, and the Contractor and its sureties shall be liable to the Department for any excess costs occasioned thereby.

7.9 PAYROLLS AND PAYROLL RECORDS (§104-3 HRS)

7.9.1 A certified copy of each weekly payroll shall be submitted to the Chairman within seven (7) calendar days after the end of each weekly payroll period. Failure to do so on a timely basis shall be cause for withholding of payments, termination of the contract, and/or debarment. The Contractor shall be responsible for the timely submission of certified copies of payrolls of all subcontractors. The certification shall affirm that payrolls are correct and complete, that the wage rates contained therein are not less than the applicable rates contained in the wage determination decision, any amendments thereto during the period of the contract, and that the classifications set forth for each laborer and mechanic conform with the work they performed.

7.9.2 Payroll records for all laborers and mechanics working at the site of the work shall be maintained by the General Contractor and its subcontractors, if any, during the course of the work and preserved for a period of four (4) years thereafter. Such records shall contain the name of each employee, their address, their correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. Such records shall be made available for inspection at a place designated by the Chairman, the U.S. Department of Labor and any authorized persons who may also interview employees during working hours on the job site.

7.9.3 Note that the falsification of certifications noted in this Section 7.9, PAYROLLS AND PAYROLL RECORDS (§104-3 HRS) may subject the Contractor or subcontractor to penalties and debarment under the laws referenced in Section 7.14, LAWS TO BE OBSERVED and / or criminal prosecution.

7.10 OVERTIME AND NIGHT WORK

7.10.1 Overtime work shall be considered as work performed in excess of eight (8) hours in any one (1) day or work performed on Saturday, Sunday or legal holiday of the State. Overtime and night work are permissible when approved by the Project Manager in writing, or as called for elsewhere within these Contract Documents.

7.10.2 OVERTIME NOTIFICATION. Contractor shall inform the Project Manager in writing at least two (2) working days in advance as to exactly what specific work is to be done during any overtime and night period to ensure that proper inspection will be available.

7.10.3 In the event that work other than that contained in the above notification is performed and for which the Project Manager determines Department inspection services were necessary but not available because of the lack of notification, the Contractor may be required to remove all such work and perform the work over again in the presence of Department inspection personnel.



- 7.10.4 Any hours worked in excess of the normal eight (8) working hours per day or on Saturdays, Sundays or legal State holidays will not be considered a working day.
- 7.10.5 The Department hereby reserves the right to cancel the overtime, night, Saturday, Sunday or legal State holiday work when it is found that work during these periods is detrimental to the public welfare or the user agency.
- 7.11 OVERTIME AND NIGHT PAYMENT FOR DEPARTMENT INSPECTION SERVICE
- 7.11.1 Whenever the Contractor's operations require the Department's inspection and staff personnel to work overtime or at night, the Contractor shall reimburse the Department for the cost of such services unless otherwise instructed in the Contract. The Project Manager will notify the Contractor of the minimum number of required Department employees and other personnel engaged by the Department prior to the start of any such work. The costs chargeable to the Contractor shall include but not be limited to the following:
- 7.11.1.1 The cost of salaries which are determined by the Department and includes overtime and night time differential for the Department's staff and inspection personnel. In addition to the cost of the salaries, the Contractor shall reimburse the Department's share of contributions to the employee's retirement, medical plan, social security, vacation, sick leave, worker's compensation funds, per diem, and other applicable fringe benefits and overhead expenses;
- 7.11.1.2 The transportation cost incurred by the Department's staff and inspection personnel which are based on established rental rates or mileage allowance in use by the Department for the particular equipment or vehicle; and/or
- 7.11.1.3 Fees and other costs billed the Department by Consultants engaged on the project for overtime and/or night time work.
- 7.11.2 PAYMENT FOR INSPECTION SERVICES. The monies due the Department for staff and inspection work and use of vehicles and equipment as determined in Subsection 7.11.1, OVERTIME AND NIGHT PAYMENT FOR DEPARTMENT INSPECTION SERVICE shall be deducted from the monies due or to become due the Contractor. In any and all events, the Contractor shall not pay the Department's employees directly.
- 7.12 LIMITATIONS OF OPERATIONS
- 7.12.1 Contractor shall at all times conduct the work in such manner and in such sequence as will ensure the least practicable interference with pedestrian and motor traffic passageways. The Contractor shall furnish convenient detours and provide and plan other appropriate signs, flashers, personnel, warnings, barricades and other devices for handling pedestrian and motor traffic.
- 7.12.2 In the event that other contractors are also employed on the job site, the Contractor shall arrange its work and dispose of materials so as not to interfere with the operations of the other contractors engaged upon adjacent work. The Contractor shall join its work to that of others and existing buildings in a proper manner, and in accordance with the drawings and specifications, and perform its work in the proper sequence in relation to that of others, all as may be directed by the Project Manager.

- 7.12.3 Each Contractor shall be responsible for any damage done by it to work performed by another contractor. Each Contractor shall conduct its operations and maintain the work in such condition that no fugitive dust shall be created and adequate drainage shall be in effect at all times.
- 7.12.4 In the event that the Contractor fails to prosecute its work as provided in this Section 7.12, LIMITATIONS OF OPERATIONS or disregards the directions of the Project Manager, the Project Manager may suspend the work until such time as the Contractor provides for the prosecution of the work with minimum interference to traffic and passageways or other contractors, dust control, adequate drainage, the repair of damage and complies with the direction of the Project Manager. No payment will be made to the Contractor for the costs of such suspension.
- 7.13 ASSIGNMENT OR CHANGE OF NAME (§3-125-14 HAR)
- 7.13.1 SUBCONTRACTS AND ASSIGNMENT. The CONTRACTOR shall not assign or subcontract any of the CONTRACTOR's duties, obligations, or interests under this Contract and no such assignment or subcontract shall be effective unless (i) the CONTRACTOR obtains the prior written consent of the STATE and (ii) the CONTRACTOR's assignee or subcontractor submits to the STATE a tax clearance certificate from the of Taxation, State of Hawaii, showing that all delinquent taxes, if any, levied or accrued under state law against the CONTRACTOR's assignee or subcontractor have been paid. Additionally, no assignment by the CONTRACTOR of the CONTRACTOR's right to compensation under this Contract shall be effective unless and until the assignment is approved by the Comptroller of the State of Hawaii, as provided in Section 40-58, HRS.
- 7.13.2 RECOGNITION OF A SUCCESSOR IN INTEREST. When in the best interest of the State, a successor in interest may be recognized in an assignment Contract in which the STATE, the CONTRACTOR and the assignee or transferee (hereinafter referred to as the "Assignee") agree that:
- 7.13.2.1 The Assignee assumes all of the CONTRACTOR's obligations;
- 7.13.2.2 The CONTRACTOR remains liable for all obligations under this Contract but waives all rights under this Contract as against the STATE; and
- 7.13.2.3 The CONTRACTOR shall continue to furnish, and the Assignee shall also furnish, all required bonds.
- 7.13.3 CHANGE OF NAME. When the CONTRACTOR asks to change the name in which it holds this Contract with the STATE, the procurement officer of the purchasing agency (hereinafter referred to as the "Agency procurement officer") shall, upon receipt of a document acceptable or satisfactory to the Agency procurement officer indicating change of name (for example, an amendment to the CONTRACTOR's articles of incorporation), enter into an amendment to this Contract with the CONTRACTOR to effect such a change of name. The amendment to this Contract changing the CONTRACTOR's name shall specifically indicate that no other terms and conditions of this Contract are thereby changed.
- 7.13.4 REPORTS. All assignment Contracts and amendments to this Contract effecting changes of the CONTRACTOR's name or novations hereunder shall be reported to the CPO within thirty days of the date that the assignment Contract or amendment becomes effective.
- 7.13.5 ACTIONS AFFECTING MORE THAN ONE PURCHASING AGENCY. Notwithstanding the provisions of Subsections 7.13.2 through 7.13.4 herein, when the CONTRACTOR holds Contracts

with more than one purchasing agency of the State, the assignment Contracts and the novation and change of name amendments herein authorized shall be processed only through the CPO's office.

- 7.14 LAWS TO BE OBSERVED. The CONTRACTOR shall comply with all federal, state, and county laws, ordinances, codes, rules, and regulations, as the same may be amended from time to time, that in any way affect the CONTRACTOR's performance of this Contract.
- 7.14.1 The Contractor at all times shall observe and comply with all Federal, State and local laws or ordinances, rules and regulations which in any manner affect those engaged or employed in the work, the materials used in the work, and the conduct of the work. The Contractor shall also comply with all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the work. Any reference to such laws, ordinances, rules and regulations shall include any amendments thereto before and after the date of this Contract.
- 7.14.2 The Contractor shall defend, protect, hold harmless and indemnify the State and its departments and agencies and all their officers, representatives, employees or agents against any claim or liability arising from or based on the violation of any such laws, ordinances, rules and regulations, orders or decrees, whether such violation is committed by the Contractor or its Subcontractor(s) or any employee of either or both. If any discrepancy or inconsistency is discovered in the contract for the work in relation to any such laws, ordinances, rules and regulations, orders or decrees, the Contractor shall forthwith report the same to the Project Manager in writing.
- 7.14.3 While the Contractor must comply with all applicable laws, attention is directed to: Wage and Hours of Employees on Public Works, Chapter 104, Hawaii Revised Statutes (HRS); Hawaii Public Procurement Code, Authority to debar or suspend, Section 103D-702, HRS; Hawaii Employment Relations Act, Chapter 377, HRS; Hawaii Employment Security Law, Chapter 383, HRS; Worker's Compensation Law, Chapter 386, HRS; Wage and Hour Law, Chapter 387, HRS; Occupational Safety and Health, Chapter 396, HRS; and Authority to Debar or Suspend, Chapter 126, subchapter 2, Hawaii Administrative Rules (HAR).
- 7.14.4 CONFLICT BETWEEN GENERAL CONDITIONS AND PROCUREMENT RULES. In the event of a conflict between the General Conditions and the Procurement Rules, the Procurement Rules in effect on the date this Contract became effective shall control and are hereby incorporated by reference.
- 7.15 PATENTED DEVICES, MATERIALS AND PROCESSES. If the Contractor desires to use any design, device, material, or process covered by letters of patent or copyright, the right for such use shall be procured by the Contractor from the patentee or owner. The Contractor shall defend, protect, indemnify and hold harmless the State of Hawaii, the contracting agency, and their officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including attorney' fees, and all claims, suits, and demands arising out of or resulting from any claims, demands, or actions by the patent holder for infringement or other improper or unauthorized use of any patented article, patented design, patented device, patented process, patented appliance or patented material in connection with this Contract. The Contractor shall be solely responsible for correcting or curing to the satisfaction of the DHHL any such infringement or improper or unauthorized use, including, without limitation: (a) furnishing at no cost to the DHHL a substitute article, design, device, process, appliance or material acceptable to the DHHL; (b) paying royalties or other required payments to the patent holder; (c) obtaining proper authorizations or releases from the patent holder; and (d) furnishing such security to or making such arrangement with the patent holder as may be necessary to correct or cure any such infringement or improper or unauthorized use. This

section shall not apply to any article, design, device, material, appliance or process covered by letters of patent or copyright, which the Contractor is required to use by the Drawings or Specifications.

## 7.16 SANITARY, HEALTH AND SAFETY PROVISIONS

7.16.1 The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees as may be necessary to comply with the requirements of the State and local boards of health, or other bodies or tribunals having jurisdiction. Unless otherwise stated in the drawings or specifications, the Contractor shall install toilet facilities conveniently located at the job site and maintain same in a neat and sanitary condition for the use of the employees on the job site for the duration of the Contract. The toilet facilities shall conform to the requirements of the State Department of Health. The cost of installing, maintaining and removing the toilet facilities shall be considered incidental to and paid for under various contract pay items for work or under the lump sum bids as the case may be, and no additional compensation will be made therefor. These requirements shall not modify or abrogate in any way the requirements or regulations of the State Department of Health.

7.16.2 Attention is directed to Federal, State and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to their health or safety.

## 7.17 PROTECTION OF PERSONS AND PROPERTY

7.17.1 SAFETY PRECAUTIONS AND PROGRAMS. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

7.17.1.1 All persons on the work site or who may be affected by the work;

7.17.1.2 All the work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor and its subcontractors; and

7.17.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavement, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

7.17.2 Contractor shall give notices and comply with applicable laws, ordinances, regulations, rules, and lawful orders of any public body having jurisdiction for the safety of persons or property or their protection from damage, injury or loss; and the Contractor shall erect and maintain reasonable safeguards for safety and protection, including posting danger signs, or other warnings against hazards.

7.17.3 The Contractor shall notify owners of adjacent properties and of underground (or overhead) utilities when performing work which may affect the owners; and shall cooperate with the owners in the protection, removal and replacement of their property.

7.17.4 All damage, injury or loss to any property referred to in Subsections 7.17.1.2 and 7.17.1.3 caused by the fault or negligence or damage or loss attributable to acts or omissions directly or indirectly in whole or part by the Contractor a subcontractor or any one directly or indirectly employed by them, or by anyone for whose acts they might be liable, shall be remedied promptly by the Contractor.

- 7.17.5 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the protection of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor.
- 7.17.6 The Contractor shall not load or permit any part of the construction to be loaded so as to endanger its safety. The Contractor shall not injure or destroy trees or shrubs nor remove or cut them without permission of the Project Manager. Contractor shall protect all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.
- 7.17.7 In the event the Contractor encounters on the site, material reasonably believed to be asbestos or other hazard material that has not been rendered harmless, the Contractor shall stop work in the area and notify the Project Manager promptly. The work in the affected area shall be resumed in the absence of hazard materials or when the hazard has been rendered harmless.
- 7.17.8 EMERGENCIES. In an emergency affecting the safety and protection of persons or the work or property at the site or adjacent thereto, Contractor without special instructions or authorization from the Project Manager, shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Contractor shall give the Project Manager prompt written notice of the emergency and actions taken. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined under the provisions of Section 7.25, DISPUTES AND CLAIMS.
- 7.18 ARCHAEOLOGICAL SITES
- 7.18.1 Should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentration of charcoal or shells be encountered during construction, work shall cease in the immediate vicinity of the find and the find shall be protected from further damage. The Contractor shall immediately notify the Project Manager and contact the State Historic Preservation Division which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary.
- 7.18.2 When required, the Contractor shall provide and install any temporary fencing to protect archaeological sites within the project. The fencing shall be installed prior to any construction activity and shall be maintained by the Contractor for the duration of the project. Fence installation and maintenance shall be to the satisfaction of the Project Manager. The Contractor shall remove the fencing upon completion of construction, or as directed by the Project Manager.
- 7.18.3 No work shall be done within the temporary fencing area. If any construction work is done within the temporary fencing, the Contractor shall notify the Project Manager immediately; and if the Contractor entered the archaeological site area without permission, it shall stop work in this area immediately. The Project Manager shall notify the archaeologist to assess any damage to the area. The Contractor shall allow the archaeologist sufficient time to perform the field investigation.
- 7.18.4 Any site requiring data recovery within the project shall not be disturbed until data recovery is completed.
- 7.19 RESPONSIBILITY FOR DAMAGE CLAIMS; INDEMNITY
- 7.19.1 The CONTRACTOR shall defend, indemnify, and hold harmless the State of Hawaii, the contracting agency, and their officers, employees, and agents from and against all liability, loss, damage, cost,

and expense, including all attorneys' fees, and all claims, suits, and demands therefor, arising out of or resulting from the acts or omissions of the CONTRACTOR or the CONTRACTOR's employees, officers, agents, or subcontractors under this Contract. The provisions of this Subsection shall remain in full force and effect notwithstanding the expiration or early termination of this Contract.

- 7.19.2 The Contractor agrees that it will not attempt to hold the State and the Department, their officers, representatives, employees or agents, liable or responsible for any losses or damages to third parties from the action of the elements, the nature of the work to be done under these Contract Documents or from any unforeseen obstructions, acts of God, vandalism, fires or encumbrances which may be encountered in the prosecution of the work.
- 7.19.3 The Contractor shall pay all just claims for materials, supplies, tools, labor and other just claims against the Contractor or any subcontractor in connection with this contract and the surety bond will not be released by final acceptance and payment by the Department unless all such claims are paid or released. The Department may, but is not obligated to, withhold or retain as much of the monies due or to become due the Contractor under this contract considered necessary by the Project Manager to cover such just claims until satisfactory proof of payment or the establishment of a payment plan is presented.
- 7.19.4 The Contractor shall defend, indemnify and hold harmless the State and the Department, their officers, representatives, employees or agents from all suits, actions or claims of any character brought on account of any claims or amounts arising out of or recovered under the Workers' Compensation Laws or violation of any other law, by-law, ordinance, order or decree.
- 7.19.5 COST OF LITIGATION. In case the STATE shall, without any fault on its part, be made a party to any litigation commenced by or against the CONTRACTOR in connection with this Contract, the CONTRACTOR shall pay all costs and expenses incurred by or imposed on the STATE, including attorneys' fees.
- 7.20 CHARACTER OF WORKERS OR EQUIPMENT
  - 7.20.1 The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the work to full completion in the manner and within the time required by the contract.
  - 7.20.2 Character and Proficiency of Workers - All workers shall possess the proper license and/or certification, job classification, skill and experience necessary to properly perform the work assigned to them. All workmen engaged in special work or skilled work, such as bituminous courses or mixtures, concrete pavement or structures, electrical installation, plumbing installation, or in any trade shall have sufficient experience in such work and in the operation of the equipment required to properly and satisfactorily perform all work. All workers shall make due and proper effort to execute the work in the manner prescribed in these Contract Documents, otherwise, the Project Manager may take action as prescribed herein.
    - 7.20.2.1 Any worker employed on the project by the Contractor or by any subcontractor who, in the opinion of the Project Manager, is not careful and competent, does not perform its work in a proper and skillful manner or is disrespectful, intemperate, disorderly or neglects or refuses to comply with directions given, or is otherwise objectionable shall at the written request of the Project Manager, be removed forthwith by the Contractor or subcontractor employing such worker and shall not be employed again in any portion of the work without the written consent of the Project Manager. Should the Contractor or subcontractor continue to employ, or again employ such person or persons on the project, the

Project Manager may withhold all payments which are or may become due, or the Project Manager may suspend the work until the Project Manager's orders are followed, or both.

- 7.20.3 **INSUFFICIENT WORKERS.** A sufficient number of workers shall be present to ensure the work is accomplished at an acceptable rate. In addition, the proper ratio of apprentice to journey worker shall be maintained to ensure the work is properly supervised and performed. In the event that the Project Manager finds insufficient workers are present to accomplish the work at an acceptable rate of progress or if a adequate number of journey workers are not present and no corrective action is taken by the Contractor after being informed in writing, the Chairman may terminate the Contract as provided for under Section 7.27, **TERMINATION OF CONTRACT FOR CAUSE.**
- 7.20.4 **EQUIPMENT REQUIREMENTS.** All equipment furnished by the Contractor and used on the work shall be of such size and of such mechanical condition that the work can be performed in an acceptable manner at a satisfactory rate of progress and the quality of work produced will be satisfactory.
- 7.20.4.1 Equipment used on any portion of the project shall be such that no injury to the work, persons at or near the site, adjacent property or other objects will result from its use.
- 7.20.4.2 If the Contractor fails to provide adequate equipment for the work, the contract may be terminated as provided under Section 7.27, **TERMINATION OF CONTRACT FOR CAUSE.**
- 7.20.4.3 In the event that the Contractor furnishes and operates equipment on a force account basis, it shall be operated to obtain maximum production under the prevailing conditions.
- 7.21 **CONTRACT TIME**
- 7.21.1 Time is of the essence for this Contract.
- 7.21.2 **CALCULATION OF CONTRACT TIME.** When the contract time is on a working day basis, the total contract time allowed for the performance of the work shall be the number of working days shown in the contract plus any additional working days authorized in writing as provided hereinafter. Refer to **ARTICLE 1, DEFINITIONS** for the definition of Working Day. The count of elapsed working days to be charged against contract time shall begin from the date of the Notice to Proceed and shall continue consecutively to the date of Project Acceptance determined by the Project Manager. When the contract completion time is a fixed calendar date, it shall be the date on which all work on the project shall be completed. Maintenance periods are not included within the contract time unless specifically noted in the Contract Documents. Failure to complete the work by contract completion date shall not terminate the Contract.
- 7.21.3 **MODIFICATIONS OF CONTRACT TIME (§3-125-4 HAR)**
- 7.21.3.1 **EXTENSIONS.** For increases in the scope for work caused by alterations and additional work made under Section 4.2, **CHANGES**, the Contractor will be granted a time extension only if the changes increase the time of performance for the Contract. If the Contractor believes an extension of time is justified and is not adequately provided for in a Field Order, it must request the additional time sought in writing when the detailed cost breakdown required by Section 4.2, **CHANGES**, is submitted. The Contractor must show how the time of performance for the critical path will be affected and must also support the time extension request with schedules and statements from its subcontractors, suppliers, and/or manufacturers. Compensation for any altered or additional work will be paid as provided in Section 4.2, **CHANGES.**

- 7.21.3.2 The Department may direct changes to the work at any time until the work is finally accepted. The issuance of a Field Order at any time may alter or modify the contract duration only by the days specified therein; or if not specified therein, for the days the critical path must be extended for the change. Additional time to perform the extra work will be added to the time allowed in the contract without regard to the date the change directive was issued, even if the contract completion date has passed. A change requiring time will not constitute a waiver of pre-existing Contractor delay.
- 7.21.4 DELAY FOR PERMITS. For delays beyond the control of the Contractor in obtaining necessary permits, one day extension for each day delay may be granted by the Project Manager, provided the Contractor notifies the Project Manager that the permits are not available, as soon as the delay occurs. Time extensions shall be the exclusive relief granted on account of such delays. No additional compensation will be paid for these time extensions.
- 7.21.5 DELAYS BEYOND CONTRACTOR'S CONTROL. For delays affecting the critical path caused by acts of God, or the public enemy, fire, unusually severe weather, earthquakes, floods, epidemics, quarantine restrictions, labor disputes, freight embargoes and other reasons beyond the Contractor's control, the Contractor may be granted an extension of time provided that:
- 7.21.5.1 The Contractor notifies the Project Manager in writing within five (5) work days after the occurrence of the circumstances described above and states the possible effects on the completion date of the contract.
- 7.21.5.2 No time extension will be granted for weather conditions other than unusually severe weather occurrences, and floods.
- 7.21.5.3 The Contractor, if requested, submits to the Project Manager within ten (10) work days after the request, a written statement describing the delay to the project. The extent of delay must be substantiated as follows:
- (a) State specifically the reason or reasons for the delay and fully explain in a detailed chronology the effect of this delay to the work and/or the completion date;
  - (b) Submit copies of purchase order, delivery tag, and any other pertinent documentation to support the time extension request;
  - (c) Cite the period of delay and the time extension requested; and
  - (d) A statement either that the above circumstances have been cleared and normal working conditions restored as of a certain day or that the above circumstances will continue to prevent completion of the project.
- 7.21.5.4 Time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor for such delays.
- 7.21.6 DELAYS IN DELIVERY OF MATERIALS. For delays in delivery of materials and/or equipment which occur as a result of unforeseeable causes beyond the control and without fault or negligence of the Contractor, its subcontractor(s) or supplier(s), the Contractor may be granted an extension of time provided it complies with the following procedures:
- 7.21.6.1 The Contractor must notify the Project Manager in writing within five (5) consecutive working days after it first has any knowledge of delays or anticipated delays and state the effects such delays may have on the completion date of the Contract.



- 7.21.6.2 The Contractor, if requested, must submit to the Project Manager within ten (10) working days after a firm delivery date for the material and equipment is established, a written statement as to the delay to the progress of the project. The delay must be substantiated as follows:
- (a) State specifically the reason or reasons for the delay. Explain in a detailed chronology the effect of this delay to the other work and / or the completion date;
  - (b) Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s) and any other pertinent correspondence to support the time extension request; and
  - (c) Cite the start and end date of the delay and the days requested therefore. The delay shall not exceed the difference between the originally scheduled delivery date versus the actual delivery date.
- 7.21.6.3 Time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor on account of such delay.
- 7.21.7 DELAYS FOR SUSPENSION OF WORK. Delay during periods of suspension of the work by the Project Manager shall be computed as follows:
- 7.21.7.1 When the performance of the work is totally suspended for one (1) or more days (calendar or working days, as appropriate) by order of the Project Manager in accordance with Subsections 7.24.1.1, 7.24.1.2, 7.24.1.4 or 7.24.1.6 the number of days from the effective date of the Project Manager's order to suspend operations to the effective date of the Project Manager's order to resume operations shall not be counted as contract time and the contract completion date will be adjusted. Should the Contractor claim for additional days in excess of the suspension period, Contractor shall provide evidence justifying the additional time. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five (5) working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim, if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.
- 7.21.8 CONTRACTOR CAUSED DELAYS - No time extension will be considered for the following:
- 7.21.8.1 Delays in performing the work caused by the Contractor, subcontractor and/or supplier;
  - 7.21.8.2 Delays in arrival of materials and equipment caused by the Contractor, subcontractor and / or supplier in ordering, fabricating, delivery, etc.;
  - 7.21.8.3 Delays requested for changes which the Project Manager determines unjustifiable due to the lack of supporting evidence or because the change is not on the critical path;
  - 7.21.8.4 Delays caused by the failure of the Contractor to submit for review and acceptance by the Project Manager, on a timely basis, pricing proposals, shop drawings, descriptive sheets, material samples, color samples, etc. except as covered in Subsection 7.21.5 and 7.21.6;
  - 7.21.8.5 Failure to follow the procedure within the time allowed to qualify for a time extension; and
  - 7.21.8.6 Days the Contractor is unable to work due to normal rainfall or other normal bad weather day conditions.

- 7.21.9 REDUCTION IN TIME - If the Department deletes any portion of the work, an appropriate reduction of contract time may be made in accordance with Section 4.2, CHANGES.
- 7.22 CONSTRUCTION SCHEDULE
- 7.22.1 The Contractor shall submit its detailed construction schedule to the Project Manager prior to the start of the work. The purpose of the schedule is to allow the Project Manager to monitor the Contractor's progress on the work. The schedule shall account for normal inclement weather, unusual soil or other conditions that may influence the progress of the work, schedules and coordination required by any utility, off or on site fabrications, and all other pertinent factors that relate to progress.
- 7.22.2 Submittal of and the Project Manager's receipt of the construction schedule shall not imply the Department's approval of the schedule's breakdown, its individual elements, and any critical path that may be shown. Any acceptance or approval of the schedule: (1) shall be for general format only and not for sequences or durations thereon; and (2) shall not be deemed an agreement by the Department that the construction means, methods and resources shown on the schedule will result in work that conforms to the contract requirements. The Contractor has the risk of all elements (whether or not shown) of the schedule and its execution.
- 7.22.3 In the event the Contractor submits and the Department receives an accelerated schedule (shorter than the contract time), such will not constitute an agreement to modify the contract time or completion date, nor will the receipt, acceptance or approval of such a schedule incur any obligation by the Department. The Contractor shall be solely responsible for and shall accept all risks and any delays that may materialize during the construction work until the contract completion date is reached. The contract time or completion date is established for the benefit of the Department and cannot be changed without an appropriate change order issued by the Department. All float on an accelerated schedule belongs exclusively to the Department. The Department will not be responsible for or obligated to accept the work before the completion date established by the Contract.
- 7.23 STATEMENT OF WORKING DAYS - For all contracts on a working day basis, the Contractor will submit a statement of the number of working days for each month together with the Monthly Payment Application. The Monthly Payment Application will not be processed without the statement of working days.
- 7.24 SUSPENSION OF WORK (§3-125-7 HAR)
- 7.24.1 PROCEDURE TO BE FOLLOWED. The Chairman may, by written order to the Contractor, at any time and without notice to any surety, suspend the performance of the work either in whole or in part for any cause, including but not limited to:
- 7.24.1.1 Weather or excess bad weather days, considered unsuitable by the Project Manager for prosecution of the work; or
- 7.24.1.2 Soil Conditions considered unsuitable by the Project Manager for prosecution of the work; or 7.24.1.3 Failure of the Contractor to:
- (a) Correct conditions unsafe for the general public or for the workers;
  - (b) Carry out orders given by the Project Manager;
  - (c) Perform the work in strict compliance with the provisions of the contract; or
  - (d) Provide a qualified Superintendent on the jobsite as described under Subsection 5.9.2, SUPERINTENDENT.

- 7.24.1.4 When any redesign is deemed necessary by the Project Manager; or
- 7.24.1.5 Disturbance due to noise, odors or dust arising from the construction even if such disturbance does not violate the section on Environmental Protection contained in the Contract Documents; or
- 7.24.1.6 The convenience of the Department.
- 7.24.2 PARTIAL OR TOTAL SUSPENSION OF WORK. Suspension of work on some but not all items of work shall be considered a partial suspension. Suspension of work on the entire work at the job site shall be considered total suspension. The period of suspension shall be computed as set forth in Subsection 7.21.7, Delays for Suspension of Work.
- 7.24.3 PAYMENT
- 7.24.3.1 In the event that the Contractor is ordered by the Chairman in writing as provided herein to suspend all work under the contract in accordance with Subsections 7.24.1.4 or 7.24.1.6, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Chairman, including costs expended for the protection of the work. Payment for equipment which must standby during such suspension of work shall be made as described in clause 8.3.4.5.(e). No payment will be made for profit on any suspension costs. An allowance of five percent (5%) will be paid on any reimbursed actual costs for indirect categories of delay costs, including extended branch and home-office overhead and delay impact costs.
- 7.24.3.2 However, no adjustment to the contract amount or time shall be made under this Section 7.24, SUSPENSION OF WORK (§3-125-7 HAR) for any suspension, delay, or interruption:
- (a) To the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor; or
  - (b) For which an adjustment is provided for or excluded under any other provision of this Contract.
- 7.24.3.3 Any adjustment in contract price made pursuant to this subsection shall be determined in accordance with this Section 7.24, SUSPENSION OF WORK (§3-125-7 HAR) and Section 4.2, CHANGES.
- 7.24.3.4 Claims for such compensation shall be filed with the Project Manager within ten (10) calendar days after the date of the order to resume work or such claims will be waived by the Contractor. Together with the claim, the Contractor shall submit substantiating documents supporting the entire amount shown on the claim. The Chairman may make such investigations as are deemed necessary and shall be the sole judge of the claim and the Chairman's decision shall be final.
- 7.24.4 CLAIMS NOT ALLOWED. No claim under this Section 7.24, SUSPENSION OF WORK (§3-125-7 HAR) shall be allowed:
- 7.24.4.1 For any direct costs incurred more than twenty (20) days before the Contractor shall have notified the Project Manager in writing of any suspension that the Contractor considers compensable. This requirement shall not apply as to a claim resulting from a suspension order under Subsections 7.24.1.4 or 7.24.1.6; and 7.24.4.2 Unless the claim is asserted in writing within ten (10) calendar days after the termination of such suspension, delay, or interruption, but in no case not later than the date of final payment under the contract.
- 7.24.4.2 No provision of this Section 7.24, SUSPENSION OF WORK (§3-125-7 HAR) shall be construed as entitling the Contractor to compensation for delays due to failure of surety, for suspensions made at

the request of the Contractor, for any delay required under the Contract, for partial suspension of work or for suspensions made by the Project Manager under the provisions of Subsections 7.24.1.1, 7.24.1.2, 7.24.1.3 and 7.24.1.5.

- 7.25 DISPUTES AND CLAIMS (§3-126-31 HAR). Disputes shall be resolved in accordance with Section 103D-703, HRS, and chapter 126, Procurement Rules, as the same may be amended from time to time.
- 7.25.1 REQUIRED NOTIFICATION. As a condition precedent for any claim, the Contractor must give notice in writing to the Project Manager in the manner and within the time periods stated in Section 4.2, CHANGES for claims for extra compensation, damages, or an extension of time due for one or more of the following reasons:
  - 7.25.1.1 Requirements not clearly covered in the Contract, or not ordered by the Project Manager as an extra;
  - 7.25.1.2 Failure by the Department and Contractor to agree to an Oral Order or an adjustment in price or contract time for a Field Order or a Change Order (which was not previously agreed on by a Field Order), issued by the Department;
  - 7.25.1.3 An action or omission by the Project Manager requiring performance changes beyond the scope of the Contract; and/or
  - 7.25.1.4 Failure of the Department to issue a Field Order for controversies within the scope of Section 4.2, CHANGES.
  - 7.25.1.5 For any other type of claim, the Contractor shall give notice within the time periods set forth in contract provisions pertaining to that event. If no specific contract provisions pertain to the claim, then the written notice of claim must be submitted within fifteen (15) days of the event giving rise to the claim.
- 7.25.2 CONTINUED PERFORMANCE OF WORK. The Contractor shall at all times continue with performance of the contract in full compliance with the directions of the Project Manager. Continued performance by the Contractor shall not be deemed a waiver of any claim for additional compensation, damages, or an extension of time for completion, provided that the written notice of claim is submitted in accordance with Subsection 7.25.1, REQUIRED NOTIFICATION.
- 7.25.3 The requirement for timely written notice shall be a condition precedent to the assertion of a claim.
- 7.25.4 REQUIREMENTS FOR NOTICE OF CLAIM. The notice of claim shall clearly state the Contractor's intention to make claim and the reasons why the Contractor believes that additional compensation, changes or an extension of time may be remedies to which it is entitled. At a minimum, it shall provide the following:
  - 7.25.4.1 Date of the protested order, decision or action;
  - 7.25.4.2 The nature and circumstances which caused the claim;
  - 7.25.4.3 The contract provision(s) that support the claim;
  - 7.25.4.4 The estimated dollar cost, if any, of the protested work and how that estimate was determined; and

- 7.25.4.5 An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption.
- 7.25.5 If the protest or claim is continuing, the information required in Subsection 7.25.4 REQUIREMENTS FOR NOTICE OF CLAIMS above shall be supplemented as requested by the Project Manager.
- 7.25.6 FINAL STATEMENT FOR CLAIM. The Contractor shall provide a final written statement of the actual adjustment in contract price and/or contract time requested for each notice of claim. Such statement shall clearly set forth that it is the final statement for that notice of claim. All such final statements shall be submitted within thirty (30) days after completion of the work that is the subject of the claim, but in no event no later than thirty (30) days after the Project Acceptance Date or the date of termination of the Contractor, whichever comes first.
- 7.25.7 All claims of any nature are barred if asserted after final payment under this Contract has been made.
- 7.25.8 Contractor may protest the assessment or determination by the Project Manager of amounts due the Department from the Contractor by providing a written notice to the Chairman within thirty (30) days of the date of the written assessment or determination. Said notice shall comply with all requirements of Subsections 7.25.4, REQUIREMENTS FOR NOTICE OF CLAIM and 7.25.6, FINAL STATEMENT FOR CLAIM above. The requirement of such notice cannot be waived and it is a condition precedent to any claim by the Contractor. Failure to comply with these notice provisions constitutes a waiver of any claim.
- 7.25.9 In addition to the requirements of Subsections 7.25.4, 7.25.6, and 7.25.8, all final written statements of claim shall be certified. This certification requirement applies to the Contractor without exception, including, but not limited to, situations involving claims of subcontractors or suppliers which meet the requirements of Subsection 5.13.4. The certification must be executed by a person duly authorized to bind the Contractor with respect to the claim. The certification shall state as follows:
- “I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Department is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.”
- 7.25.10 DECISION ON CLAIM/APPEAL. The decision of the Chairman on the claim shall be final and conclusive, unless fraudulent, or unless the Contractor delivers to the Chairman a written appeal of the Chairman’s decision. Said appeal shall be delivered to the Chairman no later than thirty (30) days after the date of the Chairman’s decision.
- 7.25.10.1 In that event, the decision of the Chairman shall be final and conclusive, unless fraudulent or unless the Contractor brings an action seeking judicial review of the Chairman’s decision in an appropriate circuit court of this State within six (6) months from the date of the Chairman’s decision.
- 7.25.11 PAYMENT AND INTEREST. The amount determined payable pursuant to the decision, less any portion already paid, normally should be paid without awaiting Contractor action concerning appeal. Such payments shall be without prejudice to the rights of either party. Interest on amounts ultimately determined to be due to a Contractor shall be payable at the Statutory rate applicable to judgments against the State under Chapter 662, HRS from the date of receipt of a properly certified final written statement of actual adjustment required until the date of decision; except, however, that if an action is initiated in circuit court, interest under this Section 7.25, DISPUTES AND CLAIMS (§3-126-31 HAR) shall only be calculated until the time such action is initiated. Interest on amounts due the

Department from the Contractor shall be payable at the same rate from the date of issuance of the Project Manager's notice to the Contractor. Where such payments are required to be returned by a subsequent decision, interest on such payments shall be paid at the statutory rate from the date of payment.

7.25.12 Contractor shall comply with any decision of the Chairman and proceed diligently with performance of this contract pending final resolution by a circuit court of this State of any controversy arising under, or by virtue of, this Contract, except where there has been a material breach of contract by the Department; provided that in any event the Contractor shall proceed diligently with the performance of the Contract where the Project Manager has made a written determination that continuation of work under the Contract is essential to the public health and safety.

7.25.13 **WAIVER OF ATTORNEY'S FEES.** In the event of any litigation arising under, or by virtue of, this Contract, the Contractor and the Department agree to waive all claims against each other for attorney's fees and agree to refrain from seeking attorney's fees as part of any award or relief from any court.

#### 7.26 **FAILURE TO COMPLETE THE WORK ON TIME**

7.26.1 Completion of the work within the required time is important because delay in the prosecution of the work will inconvenience the public and interfere with the Department's business. In addition, the Department will be damaged by the inability to obtain full use of the completed work and by increased engineering, inspection, superintendence, and administrative services in connection with the work. Furthermore, delay may detrimentally impact the financing, planning, or completion of other Department projects because of the need to devote Department resources to the project after the required completion date. The monetary amount of such public inconvenience, interference with Department business, and damages, is difficult, if not impossible, to accurately determine and precisely prove. Therefore, it is hereby agreed that the amount of such damages shall be the appropriate sum of liquidated damages.

7.26.1.1 When the Contractor fails to complete the work or any portion of the work within the time or times fixed in the contract or any extension thereof, it is agreed the Contractor shall pay liquidated damages to the Department in the amount of \$1,000 (one thousand dollars) per calendar day, unless otherwise indicated in the Special Conditions.

7.26.1.2 If the Contractor fails to correct Punchlist deficiencies as required by Section 7.32, **PROJECT ACCEPTANCE DATE**, the Department will be inconvenienced and damaged, therefore, it is agreed that the Contractor shall pay liquidated damages to the Department based upon the amount stated in Section 7.26.1.1. Liquidated damages shall accrue for all days after the Contract Completion Date or any extension thereof, until the date the Punchlist items are corrected and accepted by the Project Manager.

7.26.1.3 If the Contractor fails to submit final documents as required by Section 7.33, **FINAL SETTLEMENT OF CONTRACT**, the Department will be inconvenienced and damaged, therefore, it is agreed that the Contractor shall pay liquidated damages to the Department in the amount stated in the Section 7.26.1.1. Liquidated damages shall accrue for all days after the Contract Completion Date or any extension thereof, until the date the final documents are received by the Project Manager.

7.26.1.4 The Project Manager shall assess the total amount of liquidated damages in accordance with the amount of \$1,000 (one thousand dollars) per day, unless otherwise indicated in the Special Conditions, and provide written notice of such assessment to the Contractor.

- 7.26.2 ACCEPTANCE OF LIQUIDATED DAMAGES. The assessment of liquidated damages by the Project Manager shall be accepted by the parties hereto as final, unless the Contractor delivers a written appeal of the Project Manager's decision in accordance with Subsection 7.25.10, DECISION ON CLAIM/APPEAL REQUIREMENTS. Any allowance of time or remission of charges or liquidated damages shall in no other manner affect the rights or obligations of the parties under this contract nor be construed to prevent action under Section 7.27, TERMINATION OF CONTRACT FOR CAUSE. If the Department terminates the Contractor's right to proceed, the resulting damage will include such liquidated damages for such time as may be required for final completion of the work after the required contract completion date.
- 7.26.3 PAYMENTS FOR LIQUIDATED DAMAGES. Liquidated damages shall be deducted from monies due or that may become due to the Contractor under the contract or from other monies that may be due or become due to the Contractor from the Department.
- 7.26.4 If the Contractor contests the per diem liquidated charge, the Department may elect to recover the actual damages caused by the Contractor's delay. Should the Department claim liquidated damages for delay and if such liquidated damages are disallowed for any reason, the Department shall recover the actual damages to which it is legally entitled as a result of the Contractor's delay or other breach.
- 7.27 TERMINATION OF CONTRACT FOR CAUSE (§3-125-18 HAR)
- 7.27.1 DEFAULT. If the Contractor refuses or fails to perform the work, or any separable part thereof, with such diligence as will assure its completion within the time specified in this contract, or any extension thereof, fails to complete the work within such time, or commits any other material breach of this contract, and further fails within seven (7) days after receipt of written notice from the Project Manager to commence and continue correction of the refusal or failure with diligence and promptness, the Chairman may, by written notice to the Contractor, declare the Contractor in breach and terminate the Contractor's right to proceed with the work or the part of the work as to which there has been delay or other breach of contract. In such event, the Department may take over the work and perform the same to completion, by contract or otherwise, and may take possession of, and utilize in completing the work, the materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, the Contractor and the Contractor's sureties shall be liable for any damage to the Department resulting from the Contractor's refusal or failure to complete the work within the specified time.
- 7.27.2 ADDITIONAL RIGHTS AND REMEDIES. The rights and remedies of the Department provided in this contract are in addition to any other rights and remedies provided by law.
- 7.27.3 COSTS AND CHARGES
- 7.27.3.1 All costs and charges incurred by the Department, together with the cost of completing the work under contract, will be deducted from any monies due or which would or might have become due to the Contractor had it been allowed to complete the work under the contract. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay the Department the amount of the excess.
- 7.27.3.2 In case of termination, the Chairman shall limit any payment to the Contractor to the part of the contract satisfactorily completed at the time of termination. Payment will not be made until the work has satisfactorily been completed and the tax clearance required by Section 8.8, FINAL PAYMENT

is submitted by the Contractor. Termination shall not relieve the Contractor or Surety from liability for liquidated damages.

- 7.27.4 **ERRONEOUS TERMINATION FOR CAUSE.** If, after notice of termination of the Contractor's right to proceed under this Section 7.27, **TERMINATION OF CONTRACT FOR CAUSE** (§3-125-18 HAR) it is determined for any reason that good cause did not exist to allow the Department to terminate as provided herein, the rights and obligations of the parties shall be the same as, and the relief afforded the Contractor shall be limited to, the provisions contained in Section 7.28, **TERMINATION FOR CONVENIENCE**.
- 7.28 **TERMINATION FOR CONVENIENCE** (§3-125-22 HAR)
- 7.28.1 **TERMINATION.** The Chairman may, when the interests of the Department so require, terminate this contract in whole or in part, for the convenience of the Department. The Chairman shall give written notice of the termination to the Contractor specifying the part of the contract terminated and when termination becomes effective.
- 7.28.2 **CONTRACTOR'S OBLIGATIONS.** The Contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the Contractor will stop work to the extent specified. The Contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work subject to the Department's approval. The Chairman may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the Department. The Contractor must still complete the work not terminated by the notice of termination and may incur obligations as necessary to do so.
- 7.28.3 **RIGHT TO CONSTRUCTION AND GOODS.** The Chairman may require the Contractor to transfer title and delivery to the Department in the manner and to the extent directed by the Chairman, the following:
- 7.28.3.1 Any completed work; and
- 7.28.3.2 Any partially completed construction, goods, materials, parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction material") that the Contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.
- 7.28.3.3 The Contractor shall protect and preserve all property in the possession of the Contractor in which the Department has an interest. If the Chairman does not elect to retain any such property, the Contractor shall use its best efforts to sell such property and construction material for the Department's account in accordance with the standards of Section 490:2-706, HRS.
- 7.28.4 **COMPENSATION**
- 7.28.4.1 Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by subchapter 15, chapter 3-122, HAR. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the Chairman may pay the Contractor, if at all, an amount set in accordance with Subsection 7.28.4.3.



- 7.28.4.2 The Chairman and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the Department, the proceeds of any sales of construction, supplies, and construction materials under Subsection 7.28.3.3 of this Section, and the contract price of the work not terminated.
- 7.28.4.3 Absent complete agreement, the Chairman shall pay the Contractor the following amounts, less any payments previously made under the Contract.
- (a) The cost of all contract work performed prior to the effective date of the notice of termination work plus a five percent (5%) markup on the actual direct costs, including amounts paid to subcontractor(s), less amounts previously paid or to be paid for completed portions of such work; provided, however, that if it appears that the Contractor would have sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss. No anticipated profit or consequential damage will be due or paid.
  - (b) Subcontractors shall be paid a markup of ten percent (10%) on their direct job costs incurred to the date of termination. No anticipated profit or consequential damage will be due or paid to any subcontractor. These costs must not include payments made to the Contractor for subcontract work during the contract period.
  - (c) In any case, the total sum to be paid the Contractor shall not exceed the total contract price reduced by the amount of any sales of construction supplies, and construction materials.
- 7.28.4.4 Costs claimed, agreed to, or established by the Department shall be in accordance with chapter 3-123, HAR.
- 7.29 **CORRECTING DEFECTS.** If the Contractor fails to commence to correct any defects of any nature, within ten (10) working days after the correction thereof has been requested in writing by the Department, and thereafter to expeditiously complete the correction of said defects, the Project Manager may without further notice to the Contractor or surety and without termination of contract, correct the defects and deduct the cost thereof from the contract price.
- 7.30 **FINAL CLEANING.** Before final inspection of the work, the Contractor shall clean all ground occupied by the Contractor in connection with the work of all rubbish, excess materials, temporary structures and equipment, and all parts of the work must be left in a neat and presentable condition to the satisfaction of the Project Manager. However, the Contractor shall not remove any warning and directional signs prior to the formal acceptance by the Project Manager. Full compensation for final cleaning will be included in the prices paid for the various items of work or lump sum bid, as the case may be, and no separate payment will be made therefor.
- 7.31 **SUBSTANTIAL COMPLETION AND FINAL INSPECTION.** Before the Department accepts the project as being completed, unless otherwise stipulated by the Project Manager the following procedure shall be followed:
- 7.31.1 **SUBSTANTIAL COMPLETION**
- 7.31.1.1 The Contractor and its subcontractors shall inspect the project to confirm whether the Project is Substantially Complete. This inspection effort shall include the testing of all equipment and providing a Punchlist that identifies deficiencies which must be corrected. Contractor shall make the corrections and if required repeat the procedure. Also, the Contractor shall schedule final Building, Plumbing, Electrical, Elevator, Fire and other required inspections and obtain final approvals.

- (a) When in compliance with the above requirements, the Contractor shall notify the Project Manager in writing that project is Substantially Complete and ready for a Final Inspection. Along with the Substantial Completion notification, the Contractor shall provide its Punchlist(s) with the status of the deficiencies and dates when the deficiencies were corrected. The Project Inspector and / or the Project Manager shall make a preliminary determination whether project is Substantially Complete.
- (b) If the Project is not Substantially Complete, the Project Manager shall inform the Contractor. The Contractor shall identify deficiencies which must be corrected, update its Punchlist, make the necessary corrections and repeat the previous step. After completing the necessary work, the Contractor shall notify the Project Manager in writing that Punchlist deficiencies have been corrected and the project is ready for a Final Inspection.
- (c) If the Project is Substantially Complete, the Project Manager shall schedule a Final Inspection within fifteen (15) days of the Contractor's notification letter or as otherwise determined by the Project Manager.

7.31.1.2 In addition, and to facilitate closing of the project, the Contractor shall also proceed to obtain the following closing documents (where applicable) prior to the Final Inspection:

- (a) Field-Posted As-Built Drawings;
- (b) Maintenance Service Contract and two (2) copies of a list of all equipment;
- (c) Five (5) sets of operating and maintenance manuals;
- (d) Air conditioning test and balance reports; and
- (e) Any other final submittal required by the Contract.

7.31.2 **FINAL INSPECTION.** If at the Final Inspection the Project Manager determines that all work is completed, the Project Manager shall notify the Contractor in accordance with Section 7.32, **PROJECT ACCEPTANCE DATE**. Should there be remaining deficiencies which must be corrected the Contractor shall provide an updated Punchlist to the Project Manager, within five (5) days from the Final Inspection Date. The Contractor shall make the necessary corrections.

7.31.2.1 The Project Manager shall confirm the list of deficiencies noted by the Contractor's punchlist(s) and will notify the Contractor of any other deficiencies that must be corrected before final settlement.

7.31.3 The Project Manager may add to or otherwise modify the Punchlist from time to time. The Contractor shall take immediate action to correct the deficiencies.

7.31.4 **REVOKING SUBSTANTIAL COMPLETION.** At any time before final Project Acceptance is issued the Project Manager may revoke the determination of Substantial Completion if the Project Manager finds it was not warranted. The Project Manager shall notify the Contractor in writing with the reasons and outstanding deficiencies negating the declaration. Once notified, the Contractor shall make the necessary corrections and repeat the required steps noted in Subsections 7.31.1 and 7.31.2.

7.32 **PROJECT ACCEPTANCE DATE**

7.32.1 If upon Final Inspection, the Project Manager finds that the project has been satisfactorily completed in compliance with the contract, the Project Manager shall declare the project completed and accepted and will notify the Contractor in writing of the acceptance by way of the Project Acceptance Notice.

7.32.2 **PROTECTION AND MAINTENANCE.** After the Project Acceptance Date, the Contractor shall be relieved of maintaining and protecting the work except that this does not hold true for those portions of the work which have not been accepted, including Punchlist deficiencies. The Department shall be responsible for the protection and maintenance of the accepted facility.

- 7.32.3 The date of Project Acceptance shall determine:
- 7.32.3.1 End of Contract Time;
- 7.32.3.2 Commencement of all guaranty periods except as noted in Section 7.34, CONTRACTOR'S RESPONSIBILITY FOR WORK: RISK OF LOSS; and
- 7.32.3.3 Commencement of all maintenance services except as noted in Section 7.34, CONTRACTOR'S RESPONSIBILITY FOR WORK: RISK OF LOSS.
- 7.32.4 PUNCHLIST REQUIREMENTS. If a Punchlist is required under Section 7.31, SUBSTANTIAL COMPLETION AND FINAL INSPECTION, the Project Acceptance Notice will include the Project Manager's Punchlist and the date when correction of the deficiencies must be completed.
- 7.32.5 Upon receiving the Punchlist, the Contractor shall promptly devote the required time, labor, equipment, materials and incidentals necessary to correct the deficiencies expeditiously.
- 7.32.6 For those items of work that cannot be completed by the established date, the Contractor shall submit a schedule in writing to the Project Manager for approval along with documentation to justify the time required, no later than five (5) working days before the date stipulated for completion of the Punchlist work. A Proposed schedule submitted after the five (5) day period will not be considered.
- 7.32.7 FAILURE TO CORRECT DEFICIENCIES. After the Contract Completion Date, or any extension thereof, if the Contractor fails to correct the deficiencies within the established date or agreed to Punchlist completion date, the Project Manager shall assess liquidated damages as required by Section 7.26, FAILURE TO COMPLETE THE WORK ON TIME.
- 7.32.8 If the Contractor fails to correct the deficiencies and complete the work by the established or agreed to date, the Department also reserves the right to correct the deficiencies by whatever method it deems necessary and deduct the cost from the final payment due the Contractor.
- 7.32.9 The Contractor may further be prohibited from bidding in accordance with Section 2.12, DISQUALIFICATION OF BIDDERS. In addition, assessment of damages shall not prevent action under Section 7.27, TERMINATION OF CONTRACT FOR CAUSE.
- 7.33 FINAL SETTLEMENT OF CONTRACT
- 7.33.1 The contract will be considered settled after the project acceptance date and when the following items have been satisfactorily submitted, where applicable:
- 7.33.1.1 Necessary Submissions in addition to the items noted under Subsection 7.31.1.2.
- 7.33.1.2 All written guarantees required by the contract.
- 7.33.1.3 Complete and certified weekly payrolls for the Contractor and its Subcontractor(s).
- 7.33.1.4 Certificate of Plumbing and Electrical Inspection.
- 7.33.1.5 Certificate of Building Occupancy.

- 7.33.1.6 Certificate for Soil Treatment and Wood Treatment.
- 7.33.1.7 Certificate of Water System Chlorination.
- 7.33.1.8 Certificate of Elevator Inspection, Boiler and Pressure Pipe installation.
- 7.33.1.9 Certification of compliance with §103B-3 HRS, Employment of State Residents.
- 7.33.1.10 All other documents required by the Contract.
- 7.33.2 FAILURE TO SUBMIT CLOSING DOCUMENTS. The Contractor shall submit the final Payment Application and the above applicable closing documents within sixty (60) days from the date of Project Acceptance or the agreed to Punchlist completion date. Should the Contractor fail to comply with these requirements, the Chairman may terminate the Contract for cause. The pertinent provisions of Section 7.27, TERMINATION OF CONTRACT FOR CAUSE shall be applicable.
- 7.33.3 In addition, should the Contractor fail to furnish final closing documents within the required time period, the Project Manager shall assess liquidated damages as required by Section 7.26, FAILURE TO COMPLETE THE WORK ON TIME.
- 7.34 CONTRACTOR'S RESPONSIBILITY FOR WORK; RISK OF LOSS
  - 7.34.1 Until the establishment of the Project Acceptance Date or Beneficial Occupancy, whichever is sooner, the Contractor shall take every necessary precaution against injury or damage to any part of the work caused by the perils insured by an All Risk policy, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damage to any portion of the work occasioned by the perils insured by an All Risk policy before the date of final acceptance and shall bear the risk and expense thereof.
  - 7.34.2 After the Project Acceptance Date or Beneficial Occupancy, whichever is sooner, the Contractor shall be relieved of maintaining and protecting the work except for those portions of the work which have not been accepted including Punchlist deficiencies.
  - 7.34.3 The risk of damage to the work from any hazard or occurrence that may be covered by a required Property Insurance policy is that of the Contractor, unless such risk of loss is placed elsewhere by express language in the Contract Documents. No claims for any loss or damage shall be recognized by the Department, nor will any such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.
- 7.35 GUARANTEE OF WORK
  - 7.35.1 In addition to any required manufacturers warranties, all work and equipment shall be guaranteed by the Contractor against defects in materials, equipment or workmanship for one year from the Project Acceptance Date or as otherwise specified in the Contract Documents.
  - 7.35.2 REPAIR OF WORK. If, within any guarantee period, repairs or changes are required in connection with the guaranteed work, which in the opinion of the Project Manager is necessary due to materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract, the Contractor shall within five (5) working days and without expense to the Department commence to:

- 7.35.2.1 Place in satisfactory condition in every instance all such guaranteed work and correct all defects therein; and
- 7.35.2.2 Make good and repair or replace to new or pre-existing condition all damages to the building, facility, work or equipment or contents thereof, resulting from such defective materials, equipment or installation thereof.
- 7.35.3 MANUFACTURER'S AND INSTALLER'S GUARANTEE. Whenever a manufacturer's or installer's guarantee on any product specified in the respective Specification sections, exceeds one year, this guarantee shall become part of this contract in addition to the Contractor's guarantee. Contractor shall complete the guarantee forms in the name of the Department and submit such forms to the manufacturer within such time required to validate the guarantee. Contractor shall submit to the Department a photocopy of the completed guarantee form for the Department's record as evidence that such guarantee form was executed by the manufacturer.
- 7.35.4 If a defect is discovered during a guarantee period, all repairs and corrections to the defective items when corrected shall again be guaranteed for the original full guarantee period. The guarantee period shall be tolled and suspended for all work affected by the defect. The guarantee period for work affected by the defect shall restart for its remaining duration upon confirmation by the Project Manager that the deficiencies have been repaired or remedied.
- 7.36 WORK OF AND CHARGES BY UTILITIES
- 7.36.1 The Contractor shall be responsible for scheduling and coordinating the work with the utility companies and applicable governmental agencies for permanent service installation and connections or modifications to existing utilities. The Contractor shall make available all portions of the work necessary for the utility companies to do their work. The Department shall not bear the risk of any damage to the contract work caused by any utility company, and work of repairing such damage and delay costs must be resolved between the Contractor, the utility company, and their insurers.
- 7.36.2 Unless stated as an allowance item to be paid by the Contractor, the Department will pay the utility companies and applicable governmental agencies directly for necessary modifications and connections. Contractor charges for overhead, supervision, coordination, profit, insurance and any other incidental expenses shall be included in the Contractor's Bid whether the utility is paid directly by the Department or by an allowance item in the Contract.
- 7.37 RIGHT TO AUDIT RECORDS
- 7.37.1 The STATE may, at reasonable times and places, audit the books and records of the CONTRACTOR, prospective contractor, subcontractor or prospective subcontractor which are related to the cost or pricing data, and a State contract, including subcontracts, other than a firm fixed-price contract. The Contractor and subcontractor(s) shall maintain the books and records for a period of four (4) years from the date of final payment under the Contract.
- 7.37.2 The Contractor shall ensure that its subcontractors comply with this requirement and shall bear all costs (including attorney's fees) of enforcement in the event of its subcontractor's failure or refusal to fully cooperate.
- 7.37.3 Additionally, Sections 231-7, 235-108, 237-39 and other HRS chapters through reference, authorize the Department of Taxation to audit all taxpayers conducting business within the State. Contractors

must make available to the Department of Taxation all books and records necessary to verify compliance with the tax laws.

7.38 RECORDS MAINTENANCE, RETENTION AND ACCESS

7.38.1 The Contractor and any subcontractor whose contract for services is valued at \$25,000 (twenty five thousand) or more shall, in accordance with generally acceptable accounting practices, maintain fiscal records and supporting documents and related files, papers, and reports that adequately reflect all direct and indirect expenditures and management and fiscal practices related to the Contractor and subcontractor's performance of services under this Contract.

7.38.2 The representative of the Department, the Chairman, the Attorney General, (the Federal granting agency, the Comptroller General of the United States, and any of their authorized representatives when federal funds are utilized), and the Legislative Auditor of the State of Hawaii shall have the right of access to any book, document, paper, file, or other record of the Contractor and any subcontractor that is related to the performance of services under this Contract in order to conduct an audit or other examination and /or to make copies, excerpts and transcripts for the purposes of monitoring and evaluating the Contractor and subcontractor's performance of services and the Contractor and subcontractor's program, management, and fiscal practices to assure the proper and effective expenditure of funds and to verify all costs associated with any claims made under this Contract.

7.38.3 The right of access shall not be limited to the required retention period but shall last as long as the records are retained. The Contractor and subcontractor shall maintain and retain all books and records related to the Contractor and subcontractor's performance of services under this Contract, including any cost or pricing data for three (3) years from the date of final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the books and records has been started before the expiration of the three (3) year period, the Contractor and subcontractors shall retain the books and records until completion of the action and resolution of all issues that arise from it, or until the end of the three (3) year retention period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any subcontractor.

7.39 COST OR PRICING DATA. Cost or pricing data must be submitted to the Agency purchasing officer and timely certified as accurate for contracts over \$100,000 unless the contract is for a multiple-term or as otherwise specified by the procurement officer. Unless otherwise required by the Agency procurement officer, cost or pricing data submission is not required for Contracts awarded pursuant to competitive sealed bid procedures. If certified cost or pricing data are subsequently found to have been inaccurate, incomplete, or noncurrent as of the date stated in the certificate, the STATE is entitled to an adjustment of the contract price, including profit or fee, to exclude any significant sum by which the price, including profit or fee, was increased because of the defective data. It is presumed that overstated cost or pricing data increased the contract price in the amount of the defect plus related overhead and profit or fee. Therefore, unless there is a clear indication that the defective data was not used or relied upon, the price will be reduced in such amount.

7.39.1 AUDIT OF COST OR PRICING DATA. When cost or pricing principles are applicable, the STATE may require an audit of cost or pricing data.

7.40 CONFIDENTIALITY OF MATERIAL

7.40.1 All material given to or made available to the CONTRACTOR by virtue of this Contract, which is identified as proprietary or confidential information, will be safeguarded by the CONTRACTOR and

shall not be disclosed to any individual or organization without the prior written approval of the STATE.

- 7.40.2 All information, data, or other material provided by the CONTRACTOR to the STATE shall be subject to the Uniform Information Practices Act, chapter 92F, HRS.
- 7.41 **PUBLICITY.** The CONTRACTOR shall not refer to the STATE, or any office, agency, or officer thereof, or any State employee, including the head of the purchasing agency, the Chief Procurement Officer, the Director, the Agency procurement officer, or to the services or goods, or both, provided under this Contract, in any of the CONTRACTOR's brochures, advertisements, or other publicity of the CONTRACTOR. All media contacts with the CONTRACTOR about the subject matter of this Contract shall be referred to the Agency procurement officer.
- 7.42 **OWNERSHIP RIGHTS AND COPYRIGHT.** The STATE shall have complete ownership of all material, both finished and unfinished which is developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract, and all such material shall be considered "works made for hire." All such material shall be delivered to the STATE upon expiration or termination of this Contract. The STATE, in its sole discretion, shall have the exclusive right to copyright any product, concept, or material developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract.
- 7.43 **GOVERNING LAW.** The validity of this Contract and any of its terms or provisions, as well as the rights and duties of the parties to this Contract, shall be governed by the laws of the State of Hawaii. Any action at law or in equity to enforce or interpret the provisions of this Contract shall be brought in a state court of competent jurisdiction in Honolulu, Hawaii.
- 7.44 **SEVERABILITY.** In the event that a court declares any provision of this Contract invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining terms of this Contract.
- 7.45 **WAIVER.** The failure of the STATE to insist upon the strict compliance with any term, provision, or condition of this Contract, shall not constitute or be deemed to constitute a waiver or relinquishment of the STATE's right to enforce the same in accordance with this Contract. The fact that the STATE specifically refers to one provision of the Procurement Rules or one section of the Hawaii Revised Statutes, and does not include other provisions or statutory sections in this Contract shall not constitute a waiver or relinquishment of the STATE's rights or the CONTRACTOR's obligations under the Procurement Rules or statutes.
- 7.46 **UTILITIES AND SERVICES**
- 7.46.1 Where its operations are next to or near properties of utility companies or other property, the CONTRACTOR shall not start work until the CONTRACTOR makes arrangements necessary for the protection of said property.
- 7.46.2 The CONTRACTOR shall cooperate, coordinate and schedule its work to suit the owners of underground or overhead utility lines or other property in removing or altering such lines or providing new services in order for the work to progress according to the contract. Cooperation includes rearranging the CONTRACTOR's operations and normal work schedules and realignment of work as approved by the Department in order to accommodate the operations and work of the utilities and/or other property in and around the work site at no additional cost to the Department.

- 7.46.3 The CONTRACTOR shall contact all the various utility companies before the start of the work to ascertain any existing utilities and to develop a full understanding of the utility requirements with respect to this project. The CONTRACTOR shall furnish the Project Manager with evidence that the CONTRACTOR has contacted the utility companies.
- 7.46.4 If the CONTRACTOR discovers that the existence and location of utilities in the contract plans are not correct, the CONTRACTOR shall not disturb the utilities and immediately notify the Project Manager. The Project Manager will advise the CONTRACTOR regarding actions to take.
- 7.46.5 The CONTRACTOR shall ascertain the exact location and depth of utilities within the project area. The CONTRACTOR shall mark such locations to warn workers or equipment operators of their existence and location. The CONTRACTOR shall be responsible to acquaint personnel working near utilities with the type, size, location and depth of the utilities and the consequences that might result from disturbances. The CONTRACTOR shall not start trenching or start similar operations until the CONTRACTOR has taken reasonable and appropriate precautions to protect the utilities.
- 7.46.6 Any utilities or other property that the CONTRACTOR encounters during the progress of the work, such as telephone ducts, electric ducts, water lines, sewer lines, electric lines and drainage pipes, whether shown or not on the contract plans, shall not be disturbed or damaged unless otherwise instructed in the plans and specifications.
- 7.46.7 In the event the utilities or other property are damaged or disturbed by the CONTRACTOR, the CONTRACTOR shall be liable for all such damage where the utilities or other property are:
- (a) Shown on the plan in its actual or approximate location; or
  - (b) Exposed on the job as it progresses; or
  - (c) Pointed out to the CONTRACTOR in the field.
- 7.46.8 Such utilities or other property as described above shall be "known utilities or other property." If the CONTRACTOR encounters an unknown utility or other property, it shall not proceed until it has notified the Project Manager and receives instructions. If the Project Manager directs additional work, it shall be paid for under Section 4.2, CHANGES.
- 7.46.9 The CONTRACTOR shall repair and restore to pre-damaged condition any utilities or any other property it may damage, and it shall be liable for any and all resulting damage at no cost to the Department, the work or utility owner or property owner. Any damage claim due to the disruption of service caused by the utilities being damaged shall be paid by the CONTRACTOR who shall defend, indemnify and hold harmless the Department from all suits, actions or claims of any character brought on account of such damages, whether or not the Department may have been partially at fault. Public liability and property damage insurance to be obtained by the CONTRACTOR pursuant to Section 7.3 INSURANCE REQUIREMENTS shall cover such risk of damage.
- 7.46.10 In the event the CONTRACTOR simultaneously with the discovery of an unknown utility or other property damages that utility or other property, the CONTRACTOR shall not be held liable beyond the extent of the CONTRACTOR's liability insurance but shall immediately notify the Project Manager. Upon instruction from the Project Manager, the CONTRACTOR shall repair all damages and execute a plan for dealing with the damaged utility or other property. This repair work shall be considered additional work as covered in Section 4.2, CHANGES.

*~END OF ARTICLE 7~*



## **ARTICLE 8: MEASUREMENT AND PAYMENT**

---

### **8.1 MEASUREMENT OF QUANTITIES**

8.1.1 All work completed under the Contract shall be measured by the Project Manager according to United States standard measures, or as stated in this Contract. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract shall conform to good Managing practice. These measurements shall be considered correct and final unless the Contractor has protested same to the Project Manager and has demonstrated the existence of an error by actual physical measurement before the work has progressed in a manner, which would prohibit a proper check.

8.1.2 All measurements of the area of the various surfaces, pavement and base courses will be made in the horizontal projection of the actual surface and no deductions will be made for fixtures or structures having an area of nine (9) square feet or less. All measurements of headers, curbs, fences and any other type of construction which is to be paid for by its length will be made in the horizontal projection of the actual driven length from toe to top of cutoff, and for piles, which will be by actual length. All materials which are specified for measurement by the cubic yard "Loose Measurement" or "Measured in the Vehicle" shall be hauled in approved vehicles and measured therein at the point of delivery. Approved vehicles for this purpose may be of any type or size satisfactory to the Project Manager, provided that the body is of such type that the actual contents may be readily and accurately determined. Unless all approved vehicles on a job are of a uniform capacity each approved vehicle must bear a plainly legible identification mark indicating the specific approved capacity. The Inspector may reject all loads not hauled in such approved vehicles.

8.2 **NO WAIVER OF LEGAL RIGHTS.** The Project Manager shall not be precluded or estopped by any measurements, estimate or certificate made either before or after the completion and acceptance of the work and payment therefor, from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any such measurement estimate or certificate is untrue or incorrectly made, or rejecting the work or materials that do not conform in fact to the contract. The Project Manager shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and its sureties such damages as the Department may sustain by reason of the Contractor's failure to comply with the terms of the Contract. Neither the acceptance by the Project Manager or any representative of the Project Manager, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, or any possession taken by the Project Manager, shall operate as a waiver of any portion of the contract, or of any power herein reserved, or any right to damage herein provided. A waiver of any notice requirement or breach of the contract shall not be held to be a waiver of any other notice requirement or subsequent breach.

### **8.3 PAYMENT FOR ADDITIONAL WORK**

8.3.1 Additional work as defined in Section 4.2, **CHANGES**, when ordered, shall be paid for as defined in Section 4.4, **PRICE ADJUSTMENT** by a duly issued change order in accordance with the terms provided therein.

8.3.2 On credit proposals and proposals covering both increases and decreases, the application of overhead and profit shall be on the net change in direct costs for the performance of the work.

8.3.3 When payment is to be made for additional work directed by a Field Order, the total price adjustment as specified in the Field Order or if not specified therein for the work contained in the related change

order shall be considered full compensation for all materials, labor, insurance, taxes, equipment use or rental and overheads, both field and home office including extended home and branch office overhead and other related delay impact costs.

- 8.3.4 **FORCE ACCOUNT METHOD.** When, for the convenience of the Department, payment is to be made by the Force Account method, all work performed or labor and materials and equipment furnished shall be paid for as described below. Payment by the Force Account method will not alter any rights, duties and obligations under the contract.
- 8.3.4.1 **LABOR.** For all hourly workers, the Contractor will receive the rate of wage including fringe benefits when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work, which shall be agreed upon in writing before beginning work for each and every hour that said labor is actually engaged in said work.
- (a) All markups for overhead and profit shall be added subject to limitations established in Section 4.5, **ALLOWANCES FOR OVERHEAD AND PROFIT.**
  - (b) No allowance for overtime compensation will be given without the written approval of the Project Manager prior to performance of such work.
- 8.3.4.2 **INSURANCE AND TAXES.** The Contractor and subcontractor(s) will also receive the actual additional costs paid for property damage, liability, worker's compensation insurance premiums, State unemployment contributions, Federal unemployment taxes, social security and Medicare taxes.
- 8.3.4.3 **MATERIALS.** For materials accepted by the Project Manager and used, the Contractor and subcontractor(s) shall receive the actual cost of such materials delivered and incorporated into work, plus a markup allowed under Section 4.5, **ALLOWANCES FOR OVERHEAD AND PROFIT.**
- 8.3.4.4 **SUBCONTRACTORS.** Subcontractor costs shall be the actual costs of the subcontractor marked up as defined in this Section 8.3, **PAYMENT FOR ADDITIONAL WORK** plus a markup allowed under Section 4.5, **ALLOWANCES FOR OVERHEAD AND PROFIT.**
- 8.3.4.5 **EQUIPMENT**
- (a) For machinery or special equipment (other than small tools as herein defined in Subsection 8.3.4.5.(h) owned or leased by the Contractor or a related entity, the use of which has been authorized by the Project Manager:
    - (1) The Contractor will be paid at the per-hour rental rates based on the monthly rate established for said machinery or equipment in the then-current edition of the Rental Rate Blue Book for Construction Equipment including the estimated operating cost per hour and regional correction provided therein.
    - (2) If no rate is listed for a particular kind, type or size of machinery or equipment, then the monthly, hourly rates shall be as agreed upon in writing by the Contractor and the Project Manager prior to the use of said machinery or equipment. If there is no agreement, the Project Manager will set a rate. The Contractor may contest the rate pursuant to Section 7.25, **DISPUTES AND CLAIMS.**
    - (3) Rental rates which are higher than those specified in the aforesaid Rental Rate Blue Book publication may be allowed where such higher rates can be justified by job conditions such as work in water and work on lava, etc. Request for such higher rates shall be submitted in writing to the Project Manager for approval prior to the use of the machinery or equipment in question.

- (b) For machinery or special equipment [other than small tools as herein defined in clause 8.3.4.5 (h)] rented by the Contractor or a related entity specifically for the Force Account work, the use of which has been authorized by the Project Manager, the Contractor will be paid the actual rental cost for the machinery or equipment, including mobilization and demobilization costs. A receipt from the equipment supplier shall be submitted to the Project Manager.
- (c) For machinery or special equipment [other than small tools as herein defined in clause 8.3.4.5 (h)] rented by the Contractor or a related entity for use in the project, but which will also be used for the Force Account work, the use of which has been authorized by the Project Manager, the Contractor will be paid the actual rental cost for the machinery or equipment. No additional mobilization and demobilization costs will be paid. A receipt from the equipment supplier shall be submitted to the Project Manager.
- (d) The rental rate for trucks not owned by the Contractor shall be those as established under the Hawaii State Public Utilities Commission, which will be paid for as an equipment item pursuant to Subsection 8.3.4.5, EQUIPMENT. Rental rates for Contractor owned trucks not listed in the Rental Rate Blue Book shall be agreed upon in writing by the Contractor and Project Manager prior to the use of said trucks. If there is no agreement, the Project Manager shall set the rate. The Contractor may contest the rate pursuant to Section 7.25, DISPUTES AND CLAIMS.
- (e) The rental period shall begin at the time equipment reaches the site of work, shall include each day that the machinery or equipment is at the site of the work and shall terminate at the end of the day on which the equipment is no longer needed. In the event the equipment must standby due to work being delayed or halted by reason of design, traffic, or other related problems uncontrollable by the Contractor, excluding Saturdays, Sundays and Legal Holidays, unless the equipment is used to perform work on such days, the rental shall be two (2) hours per day until the equipment is no longer needed.
  - (1) The rental time to be paid will be for the time actually used. The Project Manager prior to the performance of such work must approve any hours or operation in excess of eight (8) hours in any one (1) day.
  - (2) Rental time will not be allowed or credited for any day on which machinery or equipment is inoperative due to its breakdown. On such days, the Contractor will be paid only for the actual hours, if any, that the machinery or equipment was in operation.
  - (3) In the event the Force Account work is completed in less than eight (8) hours, equipment rental shall nevertheless be paid for a minimum eight (8) hours.
  - (4) For the purpose of determining the rental period the continuous and consecutive days shall be the normal eight (8) hour shift work day, Monday through Friday excluding legal holidays. Any work day to be paid less than eight (8) hours shall not be considered as continuous, except for equipment removed from rental for fuel and lubrication.
  - (5) No additional premium beyond the normal rates used will be paid for equipment over eight (8) hours per day or forty (40) hours per week.
- (f) All rental rates for machinery and equipment shall include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs, maintenance, tire wear, depreciation, storage, and all other incidentals.

- (g) All machinery and equipment shall be in good working condition and suitable for the purpose for which the machinery and equipment is to be used.
- (h) Individual pieces of equipment or tools having a replacement value of \$2,000 (two thousand dollars) or less, whether or not consumed by use, shall be considered to be small tools and included in the allowed markup for overhead and profit and no separate payment will be made therefor.
- (i) The total of all Force Account rental charges accrued over the duration of the contract for a specific item of equipment shall not exceed the replacement cost of that equipment.
  - (1) The Contractor shall provide the cost of replacement to the Project Manager prior to using the equipment. If the Project Manager does not agree with the replacement cost, the Project Manager shall set the replacement cost. The Contractor may contest the replacement cost pursuant to Section 7.25, DISPUTES AND CLAIMS.
- (j) Should the item of equipment be rented from an unrelated entity, the rental cost will be treated as equipment cost under Subsection 8.3.4.5, EQUIPMENT.
- (k) Transportation and/or Mobilization: The following provisions shall govern in determining the compensation to be paid to the Contractor for use of equipment or machinery on the Force Account method:
  - (1) The Project Manager shall approve the location from which the equipment is to be moved or transported.
  - (2) Where the equipment must be transported to the site of the Force Account work, the Department will pay the reasonable cost of mobilizing and transporting the equipment, including its loading and unloading, from its original location to the site of Force Account work. Upon completion of the work the Department will pay the reasonable cost of mobilizing and transporting the equipment back to its original location or to another location, whichever cost is less.
  - (3) The cost of transporting the equipment shall not exceed the rates established by the Hawaii State Public Utilities Commission. If such rates are nonexistent, then the rates will be determined by the Project Manager based upon the prevailing rates charged by established haulers within the locale.
  - (4) Where the equipment is self-propelled, the Department will pay the cost of moving the equipment by its own power from its original location to the site of the Force Account work. Upon completion of the work the Department will pay the reasonable cost of moving of the Equipment back to its original or another location, whichever cost is less.
  - (5) At the discretion of the Project Manager, when the Contractor desires to use such equipment for other than Force Account work, the costs of mobilization and transportation shall be prorated between the Force Account and non- Force Account work.
- (l) Pickup trucks, vans, storage trailers, unless specifically rented for the Force Account work, shall be considered incidental to the Force Account work and the costs therefor are included in the markup allowed under Section 4.5, ALLOWANCES FOR OVERHEAD AND PROFIT.

- 8.3.4.6 **STATE EXCISE (GROSS INCOME) TAX AND BOND.** A sum equal to the current percentage rate for the State excise (Gross Income) tax on the total sum determined in Subsections 8.3.4.1, 8.3.4.2, 8.3.4.3 and 8.3.4.4 above, and the bond premium shall be added as compensation to the Contractor. The actual bond premium not to exceed one percent (1%) shall be added to items covered by Subsections 8.3.4.1, 8.3.4.2, 8.3.4.3 and 8.3.4.4 when applicable.
- (a) The compensation as determined in Subsections 8.3.4.1, 8.3.4.2, 8.3.4.3, 8.3.4.4 and 8.3.4.5 above shall be deemed to be payment in full for work paid on a Force Account basis.
- 8.3.4.7 **RECORDS.** The Contractor and the Project Manager shall compare records of the labor, materials and equipment rentals paid by the Force Account basis at the end of each day. These daily records, if signed by both parties, shall thereafter be the basis for the quantities to be paid for by the Force Account method. The Contractor shall not be entitled to payment for Force Account records not signed by the Project Manager.
- 8.3.4.8 **STATEMENTS.** No payment will be made for work on a Force Account basis until the Contractor has submitted to the Project Manager, duplicate itemized statements of the cost of such Force Account work detailed as follows:
- (a) **Laborers.** Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman and also the amount of fringe benefits payable if any.
- (b) **Equipment.** Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- (c) **Materials:**
- (1) Quantities of materials, prices and extensions.
- (2) Costs of transporting materials, if such cost is not reflected in the prices of the materials.
- (3) Statements shall be accompanied and supported by receipted invoices for all materials used and transportation charges. However, if materials used on the Force Account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractors shall submit an affidavit certifying that such materials were taken from stock and that the amount claimed represents the actual cost to the Contractor.
- (d) **Insurance.** Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions, and social security tax.
- 8.4 **PROGRESS AND/OR PARTIAL PAYMENTS**
- 8.4.1 **PROGRESS PAYMENTS.** The Contractor will be allowed progress payments on a monthly basis upon preparing the Monthly Payment Application forms and submitting the originals to the Project Manager. The monthly payment shall be based on the items of work satisfactorily completed and the value thereof at unit prices and/or lump sum prices set forth in the contract as determined by the Project Manager and will be subject to compliance with Section 7.9, PAYROLLS AND PAYROLL RECORDS.
- 8.4.1.1 **ORIGINAL INVOICES REQUIRED.** All payments under this Contract shall be made only upon submission by the CONTRACTOR of original invoices specifying the amount due and certifying that services requested under the Contract have been performed by the CONTRACTOR according to the Contract.
- 8.4.1.2 **SUBJECT TO AVAILABLE FUNDS.** Such payments are subject to availability of funds and allotment by the Director of Finance in accordance with chapter 37, HRS. Further, all payments shall be made in accordance with and subject to chapter 40, HRS.

- 8.4.2 In the event the Contractor or any Subcontractor fails to submit certified copies of payrolls in accordance with the requirements of Section 7.9, PAYROLLS AND PAYROLL RECORDS, the Project Manager may retain the amount due for items of work for which payroll affidavits have not been submitted on a timely basis notwithstanding satisfactory completion of the work until such records have been duly submitted. The Contractor shall not be due any interest payment for any amount thus withheld.
- 8.4.3 PARTIAL PAYMENT FOR MATERIALS. The Contractor will also be allowed partial payments to the extent of ninety percent (90%) of the manufacturer's, supplier's, distributor's or fabricator's invoice cost of accepted materials to be incorporated in the work on the following conditions:
- 8.4.3.1 The materials are delivered and properly stored at the site of the work; or
- 8.4.3.2 For special items of materials accepted by the Project Manager, the materials are delivered to the Contractor or subcontractor(s) and properly stored in an acceptable location within a reasonable distance to the site of the work.
- 8.4.4 Partial payments shall be made only if the Project Manager finds that:
- 8.4.4.1 The Contractor has submitted bills of sale for the materials or otherwise demonstrates clear title to such materials.
- 8.4.4.2 The materials are insured for their full replacement value to the benefit of the Department against theft, fire, damages incurred in transportation to the site, and other hazards.
- 8.4.4.3 The materials are not subject to deterioration.
- 8.4.4.4 In case of materials stored off the project site, the materials are not commingled with other materials not to be incorporated into the project.
- 8.4.5 FEDERAL FUNDS. If this Contract is payable in whole or in part from federal funds, Contractor agrees that, as to the portion of the compensation under this Contract to be payable from federal funds, the Contractor shall be paid only from such funds received from the federal government, and shall not be paid from any other funds.
- 8.4.6 Final Payment Requirements (§3-122-112, HAR). Upon receipt of the Contractor's invoice for final payment, the Department shall verify compliance with Section 103D-328 HRS via Hawaii Compliance Express (HCE).
- 8.5 PROMPT PAYMENT (§3-125-23 HAR)
- 8.5.1 Any money, other than retainage, paid to the CONTRACTOR shall be dispersed to subcontractors within ten days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and
- 8.5.2 BONA FIDE DISPUTES. The existence of a bona fide dispute with a subcontractor or material supplier shall not release the Contractor of its prompt payment obligations as to all sums due that are not directly affected by such dispute.

- 8.5.3 FILING NON-PAYMENT COMPLAINT. Subcontractors and material suppliers may file in writing a complaint with the Chairman regarding non-payment by the Contractor. Such complaint shall include:
- 8.5.3.1 The amount past due for work performed and already paid for by the Department;
- 8.5.3.2 That all the terms, conditions or requirements of its subcontract have been met; and
- 8.5.3.3 That no bona fide dispute over its performance exists. The Department will investigate the validity of the complaint.
- 8.5.4 The Department may withhold from future progress payments amounts to cover any sums paid to the Contractor for work performed by a subcontractor if the Department finds that the subcontractor complaint regarding non-payment by the Contractor has merit.
- 8.5.5 If the Project Manager determines that the Contractor failed to make prompt payment required to a subcontractor or material supplier with whom it has no bona fide dispute, the Project Manager shall inform the Contractor of the findings and request the Contractor make payment accordingly. If the Contractor does not act promptly, the Project Manager shall take appropriate action as allowed under this Contract and/or refer the matter to the Contractor Licensing Board for appropriate action under Section 444-17, Hawaii Revised Statutes regarding the Revocation, Suspension and Renewal of (Contractor) Licenses and/or initiate a petition for debarment of the Contractor from bidding on other Department jobs.
- 8.6 RETAINAGE
- 8.6.1 The Department will retain five percent (5%) of the total amount of progress and / or partial payments until after completion of the entire Contract in an acceptable manner at which time this balance, less any previous payments, will be certified and paid to the Contractor. After fifty percent (50%) of the work is completed and progress is satisfactory, no additional sum will be withheld. If progress is not satisfactory, the Department may continue to withhold retainage sums not exceeding five percent (5%) of the amount due the Contractor.
- 8.6.1.1 Contractor may withhold from amounts due its subcontractors, only the same percentage of retainage as that of the Contractor, and only if its subcontractors have provided valid performance and payments bonds or other bond or collateral acceptable to the Contractor.
- 8.6.1.2 Contractor or Subcontractor may negotiate with, and retain from its respective subcontractors, a different retainage percentage which cannot exceed ten percent (10%).
- 8.6.2 The retainage shall not include sums deducted as liquidated damages from monies due or that may become due the Contractor under the Contract.
- 8.7 WARRANTY OF CLEAR TITLE. The Contractor warrants and guarantees that all work and materials covered by progress or partial payments made thereon shall be free and clear of all liens, claims, security interests or encumbrances, and shall become the sole property of the Department. This provision shall not, however, be construed as an acceptance of the work nor shall it be construed as relieving the Contractor from the sole responsibility for all materials and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Department to require the fulfillment of all the items of the Contract.

- 8.7.1 LIENS AND WARRANTIES. Goods provided under this Contract shall be provided free of all liens and provided together with all applicable warranties, or with the warranties described in the Contract documents, whichever are greater.
- 8.8 FINAL PAYMENT
- 8.8.1 Upon final payment to the CONTRACTOR, full payment to the subcontractor, including retainage, shall be made within ten days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.
- 8.8.2 Sums necessary to meet any claims of any kind by the Department may be retained from the sums due the Contractor until said claims have been fully and completely discharged or otherwise satisfied.
- 8.9 STATE'S RIGHT TO OFFSET. The STATE may offset against any monies or other obligations the STATE owes to the CONTRACTOR under this Contract, any amounts owed to the State of Hawaii by the CONTRACTOR under this Contract or any other Contracts or pursuant to any law or other obligation owed to the State of Hawaii by the CONTRACTOR, including, without limitation, the payment of any taxes or levies of any kind or nature. The STATE will notify the CONTRACTOR in writing of any offset and the nature of such offset. For purposes of this Subsection, amounts owed to the State of Hawaii shall not include debts or obligations which have been liquidated, agreed to by the CONTRACTOR, and are covered by an installment payment or other settlement plan approved by the State of Hawaii, provided, however, that the CONTRACTOR shall be entitled to such exclusion only to the extent that the CONTRACTOR is current with, and not delinquent on, any payments or obligations owed to the State of Hawaii under such payment or other settlement plan.

*~END OF ARTICLE 8~*



## **OVERVIEW OF THE RFP PROCESS**

- 1. The RFP is issued pursuant to Subchapter 6 of HAR Chapter 3-122, implementing HRS §103D-303.**
- 2. The procurement process begins with the issuance of the RFP and the formal response to any written questions or inquiries regarding the RFP. Changes to the RFP will be made only by Addendum.**
- 3. Proposals shall be delivered to the Department of Hawaiian Home Lands per the RFP instructions. The register of proposals and Offerors' proposals shall be open to public inspection after posting of the award.**
- 4. All proposals and other material submitted by Offerors become the property of the State and may be returned only at the State's option.**
- 5. The Procurement Officer, or an evaluation committee approved by the Procurement Officer, shall evaluate the proposals in accordance with the evaluation criteria in Section Four.**
- 6. Proposals may be accepted on evaluation without discussion. However, if deemed necessary, prior to entering into discussions, a "priority list" of responsible Offerors submitting acceptable and potentially acceptable proposals shall be generated. The priority list may be limited to a minimum of three responsible Offerors who submitted the highest-ranked proposals. The objective of these discussions is to clarify issues regarding the Offeror's proposal before the BAFO is tendered.**
- 7. If during discussions there is a need for any substantial clarification or change in the RFP, the RFP shall be amended by an addendum to incorporate such clarification or change. Addenda to the RFP shall be distributed only to priority listed Offerors who submit acceptable or potentially acceptable proposals.**
- 8. Following any discussions, Priority Listed Offerors will be invited to submit their BAFO, if required. The Procurement Officer or an evaluation committee reserves the right to have additional rounds of discussions with the top three (3) Priority Listed Offerors prior to the submission of the BAFO.**
- 9. The date and time for Offerors to submit their BAFO, if any, is indicated in Section 1.4, RFP Schedule and Significant Dates. If Offeror does not submit a notice of withdrawal or a BAFO, the Offeror's immediate previous offer shall be construed as its BAFO.**
- 10. After receipt and evaluation of the BAFOs in accordance with the evaluation criteria in Section Four, the Procurement Officer or an evaluation committee will make its recommendation. The Procurement Officer will award the contract to the Offeror whose proposal is determined to be the most advantageous to the State taking into consideration price and the evaluation factors set forth in Section Four.**
- 11. The contents of any proposal shall not be disclosed during the review, evaluation, or discussion. Once award notice is posted, all proposals, successful and**

unsuccessful, become available for public inspection. Those sections that the Offeror and the State agree are confidential and/or proprietary should be identified by the Offerors and shall be excluded from access.

12. The Procurement Officer or an evaluation committee reserves the right to determine what is in the best interest of the State for purposes of reviewing and evaluating proposals submitted in response to the RFP. The Procurement Officer or an evaluation committee will conduct a comprehensive, fair and impartial evaluation of proposals received in response to the RFP.
13. The RFP, any addenda issued, and the successful Offeror's proposal shall become a part of the contract. All proposals shall become the property of the State of Hawaii.

## GENERAL CONDITIONS

### Table of Contents

#### Page(s)

1.	Coordination of Services by the STATE.....	2
2.	Relationship of Parties: Independent Contractor Status and Responsibilities, Including Tax Responsibilities.....	2
3.	Personnel Requirements .....	3
4.	Nondiscrimination .....	3
5.	Conflicts of Interest .....	3
6.	Subcontracts and Assignments .....	3
7.	Indemnification and Defense.....	4
8.	Cost of Litigation.....	4
9.	Liquidated Damages .....	4
10.	STATE'S Right of Offset.....	4
11.	Disputes .....	4
12.	Suspension of Contract.....	4
13.	Termination for Default.....	5
14.	Termination for Convenience .....	6
15.	Claims Based on the Agency Procurement Officer's Actions or Omissions.....	8
16.	Costs and Expenses .....	8
17.	Payment Procedures; Final Payment; Tax Clearance .....	9
18.	Federal Funds .....	9
19.	Modifications of Contract.....	9
20.	Change Order.....	10
21.	Price Adjustment .....	11
22.	Variation in Quantity for Definite Quantity Contracts .....	11
23.	Changes in Cost-Reimbursement Contract.....	11
24.	Confidentiality of Material .....	12
25.	Publicity.....	12
26.	Ownership Rights and Copyright .....	12
27.	Liens and Warranties .....	12
28.	Audit of Books and Records of the CONTRACTOR.....	13
29.	Cost or Pricing Data .....	13
30.	Audit of Cost or Pricing Data .....	13
31.	Records Retention.....	13
32.	Antitrust Claims.....	13
33.	Patented Articles.....	13
34.	Governing Law .....	14
35.	Compliance with Laws .....	14
36.	Conflict between General Conditions and Procurement Rules .....	14
37.	Entire Contract.....	14
38.	Severability .....	14
39.	Waiver .....	14
40.	Pollution Control .....	14
41.	Campaign Contributions.....	14
42.	Confidentiality of Personal Information.....	14

## GENERAL CONDITIONS

1. Coordination of Services by the STATE. The head of the purchasing agency ("HOPA") (which term includes the designee of the HOPA) shall coordinate the services to be provided by the CONTRACTOR in order to complete the performance required in the Contract. The CONTRACTOR shall maintain communications with HOPA at all stages of the CONTRACTOR'S work, and submit to HOPA for resolution any questions which may arise as to the performance of this Contract. "Purchasing agency" as used in these General Conditions means and includes any governmental body which is authorized under chapter 103D, HRS, or its implementing rules and procedures, or by way of delegation, to enter into contracts for the procurement of goods or services or both.
2. Relationship of Parties: Independent Contractor Status and Responsibilities, Including Tax Responsibilities.
  - a. In the performance of services required under this Contract, the CONTRACTOR is an "independent contractor," with the authority and responsibility to control and direct the performance and details of the work and services required under this Contract; however, the STATE shall have a general right to inspect work in progress to determine whether, in the STATE'S opinion, the services are being performed by the CONTRACTOR in compliance with this Contract. Unless otherwise provided by special condition, it is understood that the STATE does not agree to use the CONTRACTOR exclusively, and that the CONTRACTOR is free to contract to provide services to other individuals or entities while under contract with the STATE.
  - b. The CONTRACTOR and the CONTRACTOR'S employees and agents are not by reason of this Contract, agents or employees of the State for any purpose, and the CONTRACTOR and the CONTRACTOR'S employees and agents shall not be entitled to claim or receive from the State any vacation, sick leave, retirement, workers' compensation, unemployment insurance, or other benefits provided to state employees.
  - c. The CONTRACTOR shall be responsible for the accuracy, completeness, and adequacy of the CONTRACTOR'S performance under this Contract. Furthermore, the CONTRACTOR intentionally, voluntarily, and knowingly assumes the sole and entire liability to the CONTRACTOR'S employees and agents, and to any individual not a party to this Contract, for all loss, damage, or injury caused by the CONTRACTOR, or the CONTRACTOR'S employees or agents in the course of their employment.
  - d. The CONTRACTOR shall be responsible for payment of all applicable federal, state, and county taxes and fees which may become due and owing by the CONTRACTOR by reason of this Contract, including but not limited to (i) income taxes, (ii) employment related fees, assessments, and taxes, and (iii) general excise taxes. The CONTRACTOR also is responsible for obtaining all licenses, permits, and certificates that may be required in order to perform this Contract.
  - e. The CONTRACTOR shall obtain a general excise tax license from the Department of Taxation, State of Hawaii, in accordance with section 237-9, HRS, and shall comply with all requirements thereof. The CONTRACTOR shall obtain a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of the Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid and submit the same to the STATE prior to commencing any performance under this Contract. The CONTRACTOR shall also be solely responsible for meeting all requirements necessary to obtain the tax clearance certificate required for final payment under sections 103-53 and 103D-328, HRS, and paragraph 17 of these General Conditions.
  - f. The CONTRACTOR is responsible for securing all employee-related insurance coverage for the CONTRACTOR and the CONTRACTOR'S employees and agents that is or may be required by law, and for payment of all premiums, costs, and other liabilities associated with securing the insurance coverage.

- g. The CONTRACTOR shall obtain a certificate of compliance issued by the Department of Labor and Industrial Relations, State of Hawaii, in accordance with section 103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.
- h. The CONTRACTOR shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs, State of Hawaii, in accordance with section 103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.
- i. In lieu of the above certificates from the Department of Taxation, Labor and Industrial Relations, and Commerce and Consumer Affairs, the CONTRACTOR may submit proof of compliance through the State Procurement Office's designated certification process.

3. Personnel Requirements.

- a. The CONTRACTOR shall secure, at the CONTRACTOR'S own expense, all personnel required to perform this Contract.
- b. The CONTRACTOR shall ensure that the CONTRACTOR'S employees or agents are experienced and fully qualified to engage in the activities and perform the services required under this Contract, and that all applicable licensing and operating requirements imposed or required under federal, state, or county law, and all applicable accreditation and other standards of quality generally accepted in the field of the activities of such employees and agents are complied with and satisfied.

4. Nondiscrimination. No person performing work under this Contract, including any subcontractor, employee, or agent of the CONTRACTOR, shall engage in any discrimination that is prohibited by any applicable federal, state, or county law.

5. Conflicts of Interest. The CONTRACTOR represents that neither the CONTRACTOR, nor any employee or agent of the CONTRACTOR, presently has any interest, and promises that no such interest, direct or indirect, shall be acquired, that would or might conflict in any manner or degree with the CONTRACTOR'S performance under this Contract.

6. Subcontracts and Assignments. The CONTRACTOR shall not assign or subcontract any of the CONTRACTOR'S duties, obligations, or interests under this Contract and no such assignment or subcontract shall be effective unless (i) the CONTRACTOR obtains the prior written consent of the STATE, and (ii) the CONTRACTOR'S assignee or subcontractor submits to the STATE a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR'S assignee or subcontractor have been paid. Additionally, no assignment by the CONTRACTOR of the CONTRACTOR'S right to compensation under this Contract shall be effective unless and until the assignment is approved by the Comptroller of the State of Hawaii, as provided in section 40-58, HRS.

- a. Recognition of a successor in interest. When in the best interest of the State, a successor in interest may be recognized in an assignment contract in which the STATE, the CONTRACTOR and the assignee or transferee (hereinafter referred to as the "Assignee") agree that:

- (1) The Assignee assumes all of the CONTRACTOR'S obligations;
- (2) The CONTRACTOR remains liable for all obligations under this Contract but waives all rights under this Contract as against the STATE; and
- (3) The CONTRACTOR shall continue to furnish, and the Assignee shall also furnish, all required bonds.

- b. Change of name. When the CONTRACTOR asks to change the name in which it holds this Contract with the STATE, the procurement officer of the purchasing agency (hereinafter referred to as the "Agency procurement officer") shall, upon receipt of a document acceptable or satisfactory to the

Agency procurement officer indicating such change of name (for example, an amendment to the CONTRACTOR'S articles of incorporation), enter into an amendment to this Contract with the CONTRACTOR to effect such a change of name. The amendment to this Contract changing the CONTRACTOR'S name shall specifically indicate that no other terms and conditions of this Contract are thereby changed.

- c. Reports. All assignment contracts and amendments to this Contract effecting changes of the CONTRACTOR'S name or novations hereunder shall be reported to the chief procurement officer (CPO) as defined in section 103D-203(a), HRS, within thirty days of the date that the assignment contract or amendment becomes effective.
  - d. Actions affecting more than one purchasing agency. Notwithstanding the provisions of subparagraphs 6a through 6c herein, when the CONTRACTOR holds contracts with more than one purchasing agency of the State, the assignment contracts and the novation and change of name amendments herein authorized shall be processed only through the CPO's office.
7. Indemnification and Defense. The CONTRACTOR shall defend, indemnify, and hold harmless the State of Hawaii, the contracting agency, and their officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys' fees, and all claims, suits, and demands therefore, arising out of or resulting from the acts or omissions of the CONTRACTOR or the CONTRACTOR'S employees, officers, agents, or subcontractors under this Contract. The provisions of this paragraph shall remain in full force and effect notwithstanding the expiration or early termination of this Contract.
  8. Cost of Litigation. In case the STATE shall, without any fault on its part, be made a party to any litigation commenced by or against the CONTRACTOR in connection with this Contract, the CONTRACTOR shall pay all costs and expenses incurred by or imposed on the STATE, including attorneys' fees.
  9. Liquidated Damages. When the CONTRACTOR is given notice of delay or nonperformance as specified in paragraph 13 (Termination for Default) and fails to cure in the time specified, it is agreed the CONTRACTOR shall pay to the STATE the amount, if any, set forth in this Contract per calendar day from the date set for cure until either (i) the STATE reasonably obtains similar goods or services, or both, if the CONTRACTOR is terminated for default, or (ii) until the CONTRACTOR provides the goods or services, or both, if the CONTRACTOR is not terminated for default. To the extent that the CONTRACTOR'S delay or nonperformance is excused under paragraph 13d (Excuse for Nonperformance or Delay Performance), liquidated damages shall not be assessable against the CONTRACTOR. The CONTRACTOR remains liable for damages caused other than by delay.
  10. STATE'S Right of Offset. The STATE may offset against any monies or other obligations the STATE owes to the CONTRACTOR under this Contract, any amounts owed to the State of Hawaii by the CONTRACTOR under this Contract or any other contracts, or pursuant to any law or other obligation owed to the State of Hawaii by the CONTRACTOR, including, without limitation, the payment of any taxes or levies of any kind or nature. The STATE will notify the CONTRACTOR in writing of any offset and the nature of such offset. For purposes of this paragraph, amounts owed to the State of Hawaii shall not include debts or obligations which have been liquidated, agreed to by the CONTRACTOR, and are covered by an installment payment or other settlement plan approved by the State of Hawaii, provided, however, that the CONTRACTOR shall be entitled to such exclusion only to the extent that the CONTRACTOR is current with, and not delinquent on, any payments or obligations owed to the State of Hawaii under such payment or other settlement plan.
  11. Disputes. Disputes shall be resolved in accordance with section 103D-703, HRS, and chapter 3-126, Hawaii Administrative Rules ("HAR"), as the same may be amended from time to time.
  12. Suspension of Contract. The STATE reserves the right at any time and for any reason to suspend this Contract for any reasonable period, upon written notice to the CONTRACTOR in accordance with the provisions herein.
    - a. Order to stop performance. The Agency procurement officer may, by written order to the CONTRACTOR, at any time, and without notice to any surety, require the CONTRACTOR to stop all or any part of the performance called for by this Contract. This order shall be for a specified

period not exceeding sixty (60) days after the order is delivered to the CONTRACTOR, unless the parties agree to any further period. Any such order shall be identified specifically as a stop performance order issued pursuant to this section. Stop performance orders shall include, as appropriate: (1) A clear description of the work to be suspended; (2) Instructions as to the issuance of further orders by the CONTRACTOR for material or services; (3) Guidance as to action to be taken on subcontracts; and (4) Other instructions and suggestions to the CONTRACTOR for minimizing costs. Upon receipt of such an order, the CONTRACTOR shall forthwith comply with its terms and suspend all performance under this Contract at the time stated, provided, however, the CONTRACTOR shall take all reasonable steps to minimize the occurrence of costs allocable to the performance covered by the order during the period of performance stoppage. Before the stop performance order expires, or within any further period to which the parties shall have agreed, the Agency procurement officer shall either:

- (1) Cancel the stop performance order; or
  - (2) Terminate the performance covered by such order as provided in the termination for default provision or the termination for convenience provision of this Contract.
- b. Cancellation or expiration of the order. If a stop performance order issued under this section is cancelled at any time during the period specified in the order, or if the period of the order or any extension thereof expires, the CONTRACTOR shall have the right to resume performance. An appropriate adjustment shall be made in the delivery schedule or contract price, or both, and the Contract shall be modified in writing accordingly, if:
- (1) The stop performance order results in an increase in the time required for, or in the CONTRACTOR'S cost properly allocable to, the performance of any part of this Contract; and
  - (2) The CONTRACTOR asserts a claim for such an adjustment within thirty (30) days after the end of the period of performance stoppage; provided that, if the Agency procurement officer decides that the facts justify such action, any such claim asserted may be received and acted upon at any time prior to final payment under this Contract.
- c. Termination of stopped performance. If a stop performance order is not cancelled and the performance covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop performance order shall be allowable by adjustment or otherwise.
- d. Adjustment of price. Any adjustment in contract price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

### 13. Termination for Default.

- a. Default. If the CONTRACTOR refuses or fails to perform any of the provisions of this Contract with such diligence as will ensure its completion within the time specified in this Contract, or any extension thereof, otherwise fails to timely satisfy the Contract provisions, or commits any other substantial breach of this Contract, the Agency procurement officer may notify the CONTRACTOR in writing of the delay or non-performance and if not cured in ten (10) days or any longer time specified in writing by the Agency procurement officer, such officer may terminate the CONTRACTOR'S right to proceed with the Contract or such part of the Contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part, the Agency procurement officer may procure similar goods or services in a manner and upon the terms deemed appropriate by the Agency procurement officer. The CONTRACTOR shall continue performance of the Contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar goods or services.
- b. CONTRACTOR'S duties. Notwithstanding termination of the Contract and subject to any directions from the Agency procurement officer, the CONTRACTOR shall take timely, reasonable, and

necessary action to protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest.

- c. Compensation. Payment for completed goods and services delivered and accepted by the STATE shall be at the price set forth in the Contract. Payment for the protection and preservation of property shall be in an amount agreed upon by the CONTRACTOR and the Agency procurement officer. If the parties fail to agree, the Agency procurement officer shall set an amount subject to the CONTRACTOR'S rights under chapter 3-126, HAR. The STATE may withhold from amounts due the CONTRACTOR such sums as the Agency procurement officer deems to be necessary to protect the STATE against loss because of outstanding liens or claims and to reimburse the STATE for the excess costs expected to be incurred by the STATE in procuring similar goods and services.
- d. Excuse for nonperformance or delayed performance. The CONTRACTOR shall not be in default by reason of any failure in performance of this Contract in accordance with its terms, including any failure by the CONTRACTOR to make progress in the prosecution of the performance hereunder which endangers such performance, if the CONTRACTOR has notified the Agency procurement officer within fifteen (15) days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of a public enemy; acts of the State and any other governmental body in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if such failure arises out of causes similar to those set forth above, the CONTRACTOR shall not be deemed to be in default, unless the goods and services to be furnished by the subcontractor were reasonably obtainable from other sources in sufficient time to permit the CONTRACTOR to meet the requirements of the Contract. Upon request of the CONTRACTOR, the Agency procurement officer shall ascertain the facts and extent of such failure, and, if such officer determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the CONTRACTOR'S progress and performance would have met the terms of the Contract, the delivery schedule shall be revised accordingly, subject to the rights of the STATE under this Contract. As used in this paragraph, the term "subcontractor" means subcontractor at any tier.
- e. Erroneous termination for default. If, after notice of termination of the CONTRACTOR'S right to proceed under this paragraph, it is determined for any reason that the CONTRACTOR was not in default under this paragraph, or that the delay was excusable under the provisions of subparagraph 13d, "Excuse for nonperformance or delayed performance," the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to paragraph 14.
- f. Additional rights and remedies. The rights and remedies provided in this paragraph are in addition to any other rights and remedies provided by law or under this Contract.

14. Termination for Convenience.

- a. Termination. The Agency procurement officer may, when the interests of the STATE so require, terminate this Contract in whole or in part, for the convenience of the STATE. The Agency procurement officer shall give written notice of the termination to the CONTRACTOR specifying the part of the Contract terminated and when termination becomes effective.
- b. CONTRACTOR'S obligations. The CONTRACTOR shall incur no further obligations in connection with the terminated performance and on the date(s) set in the notice of termination the CONTRACTOR will stop performance to the extent specified. The CONTRACTOR shall also terminate outstanding orders and subcontracts as they relate to the terminated performance. The CONTRACTOR shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated performance subject to the STATE'S approval. The Agency procurement officer may direct the CONTRACTOR to assign the CONTRACTOR'S right, title, and interest under terminated orders or subcontracts to the STATE. The CONTRACTOR must still complete the performance not terminated by the notice of termination and may incur obligations as necessary to do so.



- c. Right to goods and work product. The Agency procurement officer may require the CONTRACTOR to transfer title and deliver to the STATE in the manner and to the extent directed by the Agency procurement officer:

- (1) Any completed goods or work product; and
- (2) The partially completed goods and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the CONTRACTOR has specifically produced or specially acquired for the performance of the terminated part of this Contract.

The CONTRACTOR shall, upon direction of the Agency procurement officer, protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest. If the Agency procurement officer does not exercise this right, the CONTRACTOR shall use best efforts to sell such goods and manufacturing materials. Use of this paragraph in no way implies that the STATE has breached the Contract by exercise of the termination for convenience provision.

- d. Compensation.

- (1) The CONTRACTOR shall submit a termination claim specifying the amounts due because of the termination for convenience together with the cost or pricing data, submitted to the extent required by chapter 3-122, HAR, bearing on such claim. If the CONTRACTOR fails to file a termination claim within one year from the effective date of termination, the Agency procurement officer may pay the CONTRACTOR, if at all, an amount set in accordance with subparagraph 14d(3) below.
- (2) The Agency procurement officer and the CONTRACTOR may agree to a settlement provided the CONTRACTOR has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total Contract price plus settlement costs reduced by payments previously made by the STATE, the proceeds of any sales of goods and manufacturing materials under subparagraph 14c, and the Contract price of the performance not terminated.
- (3) Absent complete agreement under subparagraph 14d(2) the Agency procurement officer shall pay the CONTRACTOR the following amounts, provided payments agreed to under subparagraph 14d(2) shall not duplicate payments under this subparagraph for the following:
  - (A) Contract prices for goods or services accepted under the Contract;
  - (B) Costs incurred in preparing to perform and performing the terminated portion of the performance plus a fair and reasonable profit on such portion of the performance, such profit shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided, however, that if it appears that the CONTRACTOR would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;
  - (C) Costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to subparagraph 14b. These costs must not include costs paid in accordance with subparagraph 14d(3)(B);
  - (D) The reasonable settlement costs of the CONTRACTOR, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this Contract. The total sum to be paid the CONTRACTOR under this subparagraph shall not exceed the

total Contract price plus the reasonable settlement costs of the CONTRACTOR reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subparagraph 14d(2), and the contract price of performance not terminated.

- (4) Costs claimed, agreed to, or established under subparagraphs 14d(2) and 14d(3) shall be in accordance with Chapter 3-123 (Cost Principles) of the Procurement Rules.

15. Claims Based on the Agency Procurement Officer's Actions or Omissions.

- a. Changes in scope. If any action or omission on the part of the Agency procurement officer (which term includes the designee of such officer for purposes of this paragraph 15) requiring performance changes within the scope of the Contract constitutes the basis for a claim by the CONTRACTOR for additional compensation, damages, or an extension of time for completion, the CONTRACTOR shall continue with performance of the Contract in compliance with the directions or orders of such officials, but by so doing, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, damages, or an extension of time for completion; provided:

- (1) Written notice required. The CONTRACTOR shall give written notice to the Agency procurement officer:

- (A) Prior to the commencement of the performance involved, if at that time the CONTRACTOR knows of the occurrence of such action or omission;
- (B) Within thirty (30) days after the CONTRACTOR knows of the occurrence of such action or omission, if the CONTRACTOR did not have such knowledge prior to the commencement of the performance; or
- (C) Within such further time as may be allowed by the Agency procurement officer in writing.

- (2) Notice content. This notice shall state that the CONTRACTOR regards the act or omission as a reason which may entitle the CONTRACTOR to additional compensation, damages, or an extension of time. The Agency procurement officer, upon receipt of such notice, may rescind such action, remedy such omission, or take such other steps as may be deemed advisable in the discretion of the Agency procurement officer;

- (3) Basis must be explained. The notice required by subparagraph 15a(1) describes as clearly as practicable at the time the reasons why the CONTRACTOR believes that additional compensation, damages, or an extension of time may be remedies to which the CONTRACTOR is entitled; and

- (4) Claim must be justified. The CONTRACTOR must maintain and, upon request, make available to the Agency procurement officer within a reasonable time, detailed records to the extent practicable, and other documentation and evidence satisfactory to the STATE, justifying the claimed additional costs or an extension of time in connection with such changes.

- b. CONTRACTOR not excused. Nothing herein contained, however, shall excuse the CONTRACTOR from compliance with any rules or laws precluding any state officers and CONTRACTOR from acting in collusion or bad faith in issuing or performing change orders which are clearly not within the scope of the Contract.

- c. Price adjustment. Any adjustment in the price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

16. Costs and Expenses. Any reimbursement due the CONTRACTOR for per diem and transportation expenses under this Contract shall be subject to chapter 3-123 (Cost Principles), HAR, and the following guidelines:

- a. Reimbursement for air transportation shall be for actual cost or coach class air fare, whichever is less.
- b. Reimbursement for ground transportation costs shall not exceed the actual cost of renting an intermediate-sized vehicle.
- c. Unless prior written approval of the HOPA is obtained, reimbursement for subsistence allowance (i.e., hotel and meals, etc.) shall not exceed the applicable daily authorized rates for inter-island or out-of-state travel that are set forth in the current Governor's Executive Order authorizing adjustments in salaries and benefits for state officers and employees in the executive branch who are excluded from collective bargaining coverage.

17. Payment Procedures; Final Payment; Tax Clearance.

- a. Original invoices required. All payments under this Contract shall be made only upon submission by the CONTRACTOR of original invoices specifying the amount due and certifying that services requested under the Contract have been performed by the CONTRACTOR according to the Contract.
- b. Subject to available funds. Such payments are subject to availability of funds and allotment by the Director of Finance in accordance with chapter 37, HRS. Further, all payments shall be made in accordance with and subject to chapter 40, HRS.
- c. Prompt payment.
  - (1) Any money, other than retainage, paid to the CONTRACTOR shall be disbursed to subcontractors within ten (10) days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and
  - (2) Upon final payment to the CONTRACTOR, full payment to the subcontractor, including retainage, shall be made within ten (10) days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.
- d. Final payment. Final payment under this Contract shall be subject to sections 103-53 and 103D-328, HRS, which require a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid. Further, in accordance with section 3-122-112, HAR, CONTRACTOR shall provide a certificate affirming that the CONTRACTOR has remained in compliance with all applicable laws as required by this section.

18. Federal Funds. If this Contract is payable in whole or in part from federal funds, CONTRACTOR agrees that, as to the portion of the compensation under this Contract to be payable from federal funds, the CONTRACTOR shall be paid only from such funds received from the federal government, and shall not be paid from any other funds. Failure of the STATE to receive anticipated federal funds shall not be considered a breach by the STATE or an excuse for nonperformance by the CONTRACTOR.

19. Modifications of Contract.

- a. In writing. Any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract permitted by this Contract shall be made by written amendment to this Contract, signed by the CONTRACTOR and the STATE, provided that change orders shall be made in accordance with paragraph 20 herein.
- b. No oral modification. No oral modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract shall be permitted.

- c. Agency procurement officer. By written order, at any time, and without notice to any surety, the Agency procurement officer may unilaterally order of the CONTRACTOR:
    - (A) Changes in the work within the scope of the Contract; and
    - (B) Changes in the time of performance of the Contract that do not alter the scope of the Contract work.
  - d. Adjustments of price or time for performance. If any modification increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, an adjustment shall be made and this Contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with the price adjustment clause of this Contract or as negotiated.
  - e. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if written modification of the Contract is not made prior to final payment under this Contract.
  - f. Claims not barred. In the absence of a written contract modification, nothing in this clause shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under this Contract or for a breach of contract.
  - g. Head of the purchasing agency approval. If this is a professional services contract awarded pursuant to section 103D-303 or 103D-304, HRS, any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract which increases the amount payable to the CONTRACTOR by at least \$25,000.00 and ten per cent (10%) or more of the initial contract price, must receive the prior approval of the head of the purchasing agency.
  - h. Tax clearance. The STATE may, at its discretion, require the CONTRACTOR to submit to the STATE, prior to the STATE'S approval of any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract, a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid.
  - i. Sole source contracts. Amendments to sole source contracts that would change the original scope of the Contract may only be made with the approval of the CPO. Annual renewal of a sole source contract for services should not be submitted as an amendment.
20. Change Order. The Agency procurement officer may, by a written order signed only by the STATE, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following:
- (1) Drawings, designs, or specifications, if the goods or services to be furnished are to be specially provided to the STATE in accordance therewith;
  - (2) Method of delivery; or
  - (3) Place of delivery.
- a. Adjustments of price or time for performance. If any change order increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, whether or not changed by the order, an adjustment shall be made and the Contract modified in writing accordingly. Any adjustment in the Contract price made pursuant to this provision shall be determined in accordance with the price adjustment provision of this Contract. Failure of the parties to agree to an adjustment shall not excuse the CONTRACTOR from proceeding with the Contract as changed, provided that the Agency procurement officer promptly and duly makes the provisional adjustments in payment or time for performance as may be reasonable. By

proceeding with the work, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, or any extension of time for completion.

- b. Time period for claim. Within ten (10) days after receipt of a written change order under subparagraph 20a, unless the period is extended by the Agency procurement officer in writing, the CONTRACTOR shall respond with a claim for an adjustment. The requirement for a timely written response by CONTRACTOR cannot be waived and shall be a condition precedent to the assertion of a claim.
- c. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if a written response is not given prior to final payment under this Contract.
- d. Other claims not barred. In the absence of a change order, nothing in this paragraph 20 shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under the Contract or for breach of contract.

21. Price Adjustment.

- a. Price adjustment. Any adjustment in the contract price pursuant to a provision in this Contract shall be made in one or more of the following ways:
  - (1) By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;
  - (2) By unit prices specified in the Contract or subsequently agreed upon;
  - (3) By the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as specified in the Contract or subsequently agreed upon;
  - (4) In such other manner as the parties may mutually agree; or
  - (5) In the absence of agreement between the parties, by a unilateral determination by the Agency procurement officer of the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as computed by the Agency procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126, HAR.
- b. Submission of cost or pricing data. The CONTRACTOR shall provide cost or pricing data for any price adjustments subject to the provisions of chapter 3-122, HAR.

22. Variation in Quantity for Definite Quantity Contracts. Upon the agreement of the STATE and the CONTRACTOR, the quantity of goods or services, or both, if a definite quantity is specified in this Contract, may be increased by a maximum of ten per cent (10%); provided the unit prices will remain the same except for any price adjustments otherwise applicable; and the Agency procurement officer makes a written determination that such an increase will either be more economical than awarding another contract or that it would not be practical to award another contract.

23. Changes in Cost-Reimbursement Contract. If this Contract is a cost-reimbursement contract, the following provisions shall apply:

- a. The Agency procurement officer may at any time by written order, and without notice to the sureties, if any, make changes within the general scope of the Contract in any one or more of the following:
  - (1) Description of performance (Attachment 1);
  - (2) Time of performance (i.e., hours of the day, days of the week, etc.);
  - (3) Place of performance of services;

- (4) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the STATE in accordance with the drawings, designs, or specifications;
    - (5) Method of shipment or packing of supplies; or
    - (6) Place of delivery.
  - b. If any change causes an increase or decrease in the estimated cost of, or the time required for performance of, any part of the performance under this Contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this Contract, the Agency procurement officer shall make an equitable adjustment in the (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms and shall modify the Contract accordingly.
  - c. The CONTRACTOR must assert the CONTRACTOR'S rights to an adjustment under this provision within thirty (30) days from the day of receipt of the written order. However, if the Agency procurement officer decides that the facts justify it, the Agency procurement officer may receive and act upon a proposal submitted before final payment under the Contract.
  - d. Failure to agree to any adjustment shall be a dispute under paragraph 11 of this Contract. However, nothing in this provision shall excuse the CONTRACTOR from proceeding with the Contract as changed.
  - e. Notwithstanding the terms and conditions of subparagraphs 23a and 23b, the estimated cost of this Contract and, if this Contract is incrementally funded, the funds allotted for the performance of this Contract, shall not be increased or considered to be increased except by specific written modification of the Contract indicating the new contract estimated cost and, if this contract is incrementally funded, the new amount allotted to the contract.
24. Confidentiality of Material.
- a. All material given to or made available to the CONTRACTOR by virtue of this Contract, which is identified as proprietary or confidential information, will be safeguarded by the CONTRACTOR and shall not be disclosed to any individual or organization without the prior written approval of the STATE.
  - b. All information, data, or other material provided by the CONTRACTOR to the STATE shall be subject to the Uniform Information Practices Act, chapter 92F, HRS.
25. Publicity. The CONTRACTOR shall not refer to the STATE, or any office, agency, or officer thereof, or any state employee, including the HOPA, the CPO, the Agency procurement officer, or to the services or goods, or both, provided under this Contract, in any of the CONTRACTOR'S brochures, advertisements, or other publicity of the CONTRACTOR. All media contacts with the CONTRACTOR about the subject matter of this Contract shall be referred to the Agency procurement officer.
26. Ownership Rights and Copyright. The STATE shall have complete ownership of all material, both finished and unfinished, which is developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract, and all such material shall be considered "works made for hire." All such material shall be delivered to the STATE upon expiration or termination of this Contract. The STATE, in its sole discretion, shall have the exclusive right to copyright any product, concept, or material developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract.
27. Liens and Warranties. Goods provided under this Contract shall be provided free of all liens and provided together with all applicable warranties, or with the warranties described in the Contract documents, whichever are greater.

28. Audit of Books and Records of the CONTRACTOR. The STATE may, at reasonable times and places, audit the books and records of the CONTRACTOR, prospective contractor, subcontractor, or prospective subcontractor which are related to:
- a. The cost or pricing data, and
  - b. A state contract, including subcontracts, other than a firm fixed-price contract.
29. Cost or Pricing Data. Cost or pricing data must be submitted to the Agency procurement officer and timely certified as accurate for contracts over \$100,000 unless the contract is for a multiple-term or as otherwise specified by the Agency procurement officer. Unless otherwise required by the Agency procurement officer, cost or pricing data submission is not required for contracts awarded pursuant to competitive sealed bid procedures.
- If certified cost or pricing data are subsequently found to have been inaccurate, incomplete, or noncurrent as of the date stated in the certificate, the STATE is entitled to an adjustment of the contract price, including profit or fee, to exclude any significant sum by which the price, including profit or fee, was increased because of the defective data. It is presumed that overstated cost or pricing data increased the contract price in the amount of the defect plus related overhead and profit or fee. Therefore, unless there is a clear indication that the defective data was not used or relied upon, the price will be reduced in such amount.
30. Audit of Cost or Pricing Data. When cost or pricing principles are applicable, the STATE may require an audit of cost or pricing data.
31. Records Retention.
- (1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.
  - (2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.
32. Antitrust Claims. The STATE and the CONTRACTOR recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, the CONTRACTOR hereby assigns to STATE any and all claims for overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from violations commencing after the price is established under this Contract and which are not passed on to the STATE under an escalation clause.
33. Patented Articles. The CONTRACTOR shall defend, indemnify, and hold harmless the STATE, and its officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys fees, and all claims, suits, and demands arising out of or resulting from any claims, demands, or actions by the patent holder for infringement or other improper or unauthorized use of any patented article, patented process, or patented appliance in connection with this Contract. The CONTRACTOR shall be solely responsible for correcting or curing to the satisfaction of the STATE any such infringement or improper or unauthorized use, including, without limitation: (a) furnishing at no cost to the STATE a substitute article, process, or appliance acceptable to the STATE, (b) paying royalties or other required payments to the patent holder, (c) obtaining proper authorizations or releases from the patent holder, and (d) furnishing such security to or making such arrangements with the patent holder as may be necessary to correct or cure any such infringement or improper or unauthorized use.

34. Governing Law. The validity of this Contract and any of its terms or provisions, as well as the rights and duties of the parties to this Contract, shall be governed by the laws of the State of Hawaii. Any action at law or in equity to enforce or interpret the provisions of this Contract shall be brought in a state court of competent jurisdiction in Honolulu, Hawaii.
35. Compliance with Laws. The CONTRACTOR shall comply with all federal, state, and county laws, ordinances, codes, rules, and regulations, as the same may be amended from time to time, that in any way affect the CONTRACTOR'S performance of this Contract.
36. Conflict Between General Conditions and Procurement Rules. In the event of a conflict between the General Conditions and the procurement rules, the procurement rules in effect on the date this Contract became effective shall control and are hereby incorporated by reference.
37. Entire Contract. This Contract sets forth all of the agreements, conditions, understandings, promises, warranties, and representations between the STATE and the CONTRACTOR relative to this Contract. This Contract supersedes all prior agreements, conditions, understandings, promises, warranties, and representations, which shall have no further force or effect. There are no agreements, conditions, understandings, promises, warranties, or representations, oral or written, express or implied, between the STATE and the CONTRACTOR other than as set forth or as referred to herein.
38. Severability. In the event that any provision of this Contract is declared invalid or unenforceable by a court, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining terms of this Contract.
39. Waiver. The failure of the STATE to insist upon the strict compliance with any term, provision, or condition of this Contract shall not constitute or be deemed to constitute a waiver or relinquishment of the STATE'S right to enforce the same in accordance with this Contract. The fact that the STATE specifically refers to one provision of the procurement rules or one section of the Hawaii Revised Statutes, and does not include other provisions or statutory sections in this Contract shall not constitute a waiver or relinquishment of the STATE'S rights or the CONTRACTOR'S obligations under the procurement rules or statutes.
40. Pollution Control. If during the performance of this Contract, the CONTRACTOR encounters a "release" or a "threatened release" of a reportable quantity of a "hazardous substance," "pollutant," or "contaminant" as those terms are defined in section 128D-1, HRS, the CONTRACTOR shall immediately notify the STATE and all other appropriate state, county, or federal agencies as required by law. The Contractor shall take all necessary actions, including stopping work, to avoid causing, contributing to, or making worse a release of a hazardous substance, pollutant, or contaminant, and shall promptly obey any orders the Environmental Protection Agency or the state Department of Health issues in response to the release. In the event there is an ensuing cease-work period, and the STATE determines that this Contract requires an adjustment of the time for performance, the Contract shall be modified in writing accordingly.
41. Campaign Contributions. The CONTRACTOR is hereby notified of the applicability of 11-355, HRS, which states that campaign contributions are prohibited from specified state or county government contractors during the terms of their contracts if the contractors are paid with funds appropriated by a legislative body.
42. Confidentiality of Personal Information.
- a. Definitions.
- "Personal information" means an individual's first name or first initial and last name in combination with any one or more of the following data elements, when either name or data elements are not encrypted:
- (1) Social security number;
  - (2) Driver's license number or Hawaii identification card number; or



- (3) Account number, credit or debit card number, access code, or password that would permit access to an individual's financial information.

Personal information does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records.

"Technological safeguards" means the technology and the policy and procedures for use of the technology to protect and control access to personal information.

b. Confidentiality of Material.

- (1) All material given to or made available to the CONTRACTOR by the STATE by virtue of this Contract which is identified as personal information, shall be safeguarded by the CONTRACTOR and shall not be disclosed without the prior written approval of the STATE.
- (2) CONTRACTOR agrees not to retain, use, or disclose personal information for any purpose other than as permitted or required by this Contract.
- (3) CONTRACTOR agrees to implement appropriate "technological safeguards" that are acceptable to the STATE to reduce the risk of unauthorized access to personal information.
- (4) CONTRACTOR shall report to the STATE in a prompt and complete manner any security breaches involving personal information.
- (5) CONTRACTOR agrees to mitigate, to the extent practicable, any harmful effect that is known to CONTRACTOR because of a use or disclosure of personal information by CONTRACTOR in violation of the requirements of this paragraph.
- (6) CONTRACTOR shall complete and retain a log of all disclosures made of personal information received from the STATE, or personal information created or received by CONTRACTOR on behalf of the STATE.

c. Security Awareness Training and Confidentiality Agreements.

- (1) CONTRACTOR certifies that all of its employees who will have access to the personal information have completed training on security awareness topics relating to protecting personal information.
- (2) CONTRACTOR certifies that confidentiality agreements have been signed by all of its employees who will have access to the personal information acknowledging that:
  - (A) The personal information collected, used, or maintained by the CONTRACTOR will be treated as confidential;
  - (B) Access to the personal information will be allowed only as necessary to perform the Contract; and
  - (C) Use of the personal information will be restricted to uses consistent with the services subject to this Contract.

d. Termination for Cause. In addition to any other remedies provided for by this Contract, if the STATE learns of a material breach by CONTRACTOR of this paragraph by CONTRACTOR, the STATE may at its sole discretion:

- (1) Provide an opportunity for the CONTRACTOR to cure the breach or end the violation; or
- (2) Immediately terminate this Contract.

In either instance, the CONTRACTOR and the STATE shall follow chapter 487N, HRS, with respect to notification of a security breach of personal information.

e. Records Retention.

- (1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.
- (2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.



**STATE OF HAWAII**  
**CONTRACT FOR GOODS OR SERVICES**  
**BASED UPON**  
**COMPETITIVE SEALED PROPOSALS**

This Contract, executed on the respective dates indicated below, is effective as of \_\_\_\_\_, \_\_\_\_\_, between \_\_\_\_\_ Department of Hawaiian Home Lands \_\_\_\_\_,  
(Insert name of state department, agency, board or commission)  
State of Hawaii ("STATE"), by its \_\_\_\_\_ Chairman, Hawaiian Homes Commission \_\_\_\_\_,  
(Insert title of person signing for State)  
(hereafter also referred to as the HEAD OF THE PURCHASING AGENCY or designee ("HOPA")),  
whose address is \_\_\_\_\_ P.O. Box 1879, Honolulu, Hawaii 96805 \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_  
("CONTRACTOR"), a \_\_\_\_\_  
(Insert corporation, partnership, joint venture, sole proprietorship, or other legal form of the Contractor)  
under the laws of the State of \_\_\_\_\_, whose business address and federal  
and state taxpayer identification numbers are as follows: \_\_\_\_\_

**RECITALS**

A. The STATE desires to retain and engage the CONTRACTOR to provide the goods or services, or both, described in this Contract and its attachments, and the CONTRACTOR is agreeable to providing said goods or services or both.

B. The STATE has issued a request for competitive sealed proposals, and has received and reviewed proposals submitted in response to the request.

C. The solicitation for proposals and the selection of the CONTRACTOR were made in accordance with section 103D-303, Hawaii Revised Statutes ("HRS"), Hawaii Administrative Rules, Title 3, Department of Accounting and General Services, Subtitle 11 ("HAR"), Chapter 122, Subchapter 6, and applicable procedures established by the appropriate Chief Procurement Officer ("CPO").

D. The CONTRACTOR has been identified as the responsible and responsive offeror whose proposal is the most advantageous for the STATE, taking into consideration price and the evaluation factors set forth in the request.

E. Pursuant to \_\_\_\_\_ 103D-303, HRS \_\_\_\_\_, the STATE  
(Legal authority to enter into this Contract)  
is authorized to enter into this Contract.

F. Money is available to fund this Contract pursuant to:

(1) \_\_\_\_\_  
(Identify state sources)

or (2) \_\_\_\_\_  
(Identify federal sources)

or both, in the following amounts: State \$ \_\_\_\_\_  
Federal \$ \_\_\_\_\_

NOW, THEREFORE, in consideration of the promises contained in this Contract, the STATE and the CONTRACTOR agree as follows:

1. Scope of Services. The CONTRACTOR shall, in a proper and satisfactory manner as determined by the STATE, provide all the goods or services, or both, set forth in the request for competitive sealed proposals number \_\_\_\_\_ RFP-16-HHL-001 ("RFP") and the CONTRACTOR'S accepted proposal ("Proposal"), both of which, even if not physically attached to this Contract, are made a part of this Contract.

2. Compensation. The CONTRACTOR shall be compensated for goods supplied

or services performed, or both, under this Contract in a total amount not to exceed

DOLLARS

(\$ \_\_\_\_\_), including approved costs incurred and taxes, at the time and in the manner set forth in the RFP and CONTRACTOR'S Proposal.

3. Time of Performance. The services or goods required of the CONTRACTOR under this Contract shall be performed and completed in accordance with the Time of Performance set forth in Attachment-S3, which is made a part of this Contract.

4. Bonds. The CONTRACTOR ☒ is required to provide or ☐ is not required to provide: ☐ a performance bond, ☐ a payment bond, ☒ a performance and payment bond **each** in the amount of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_).

5. Standards of Conduct Declaration. The Standards of Conduct Declaration of the CONTRACTOR is attached to and made a part of this Contract.

6. Other Terms and Conditions. The General Conditions and any Special Conditions are attached to and made a part of this Contract. In the event of a conflict between the General Conditions and the Special Conditions, the Special Conditions shall control. In the event of a conflict among the documents, the order of precedence shall be as follows: (1) this Contract, including all attachments and addenda; (2) the RFP, including all attachments and addenda; and (3) the Proposal.

7. Liquidated Damages. Liquidated damages shall be assessed in the amount of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_) per day, in accordance with the terms of paragraph 9 of the General Conditions.

8. Notices. Any written notice required to be given by a party to this Contract shall be (a) delivered personally, or (b) sent by United States first class mail, postage prepaid. Notice to the STATE shall be sent to the HOPA'S address indicated in the Contract. Notice to the CONTRACTOR shall be sent to the CONTRACTOR'S address indicated in the Contract. A notice shall be deemed to have been received three (3) days after mailing or at the time of actual receipt, whichever is earlier. The CONTRACTOR is responsible for notifying the STATE in writing of any change of address.

IN VIEW OF THE ABOVE, the parties execute this Contract by their signatures, on the dates below, to be effective as of the date first above written.

### STATE

(Signature)

Jobie M. K. Masagatani

(Print Name)

Chairman, Hawaiian Homes Commission

(Print Title)

(Date)

### CONTRACTOR

(Name of Contractor)

(Signature)

(Print Name)

(Print Title)

(Date)

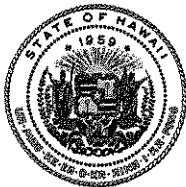
CORPORATE SEAL

(If available)

APPROVED AS TO FORM:

Deputy Attorney General

\* Evidence of authority of the CONTRACTOR'S representative to sign this Contract for the CONTRACTOR must be attached.



STATE OF HAWAII

CONTRACTOR'S ACKNOWLEDGMENT

STATE OF HAWAII )  
 ) SS.  
CITY AND COUNTY OF HONOLULU )

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ before me appeared  
\_\_\_\_\_ and \_\_\_\_\_, to me  
known, to be the person(s) described in and, who, being by me duly sworn, did say that he/~~she~~/they is/~~are~~  
\_\_\_\_\_ and \_\_\_\_\_ of  
\_\_\_\_\_, the  
CONTRACTOR named in the foregoing instrument, and that he/~~she~~/they is/~~are~~ authorized to sign said  
instrument on behalf of the CONTRACTOR, and acknowledges that he/~~she~~/they executed said instrument  
as the free act and deed of the CONTRACTOR.

(Notary Stamp or Seal)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

Notary Public, State of \_\_\_\_\_

My commission expires: \_\_\_\_\_

Doc. Date: \_\_\_\_\_ # Pages: \_\_\_\_\_

Notary Name: \_\_\_\_\_ Circuit \_\_\_\_\_

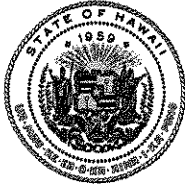
Doc. Description: Contract for Goods or Services

Based on Competitive Sealed Proposals

(Notary Stamp or Seal)

\_\_\_\_\_  
Notary Signature Date

NOTARY CERTIFICATION



**STATE OF HAWAII**  
**CONTRACTOR'S**  
**STANDARDS OF CONDUCT DECLARATION**

For the purposes of this declaration:

"Agency" means and includes the State, the legislature and its committees, all executive departments, boards, commissions, committees, bureaus, offices; and all independent commissions and other establishments of the state government but excluding the courts.

"Controlling interest" means an interest in a business or other undertaking which is sufficient in fact to control, whether the interest is greater or less than fifty per cent (50%).

"Employee" means any nominated, appointed, or elected officer or employee of the State, including members of boards, commissions, and committees, and employees under contract to the State or of the constitutional convention, but excluding legislators, delegates to the constitutional convention, justices, and judges. (Section 84-3, HRS).

On behalf of \_\_\_\_\_, CONTRACTOR, the undersigned does declare as follows:

1. CONTRACTOR ☐ is\* ☐ is not a legislator or an employee or a business in which a legislator or an employee has a controlling interest. (Section 84-15(a), HRS).
2. CONTRACTOR has not been represented or assisted personally in the matter by an individual who has been an employee of the agency awarding this Contract within the preceding two years and who participated while so employed in the matter with which the Contract is directly concerned. (Section 84-15(b), HRS).
3. CONTRACTOR has not been assisted or represented by a legislator or employee for a fee or other compensation to obtain this Contract and will not be assisted or represented by a legislator or employee for a fee or other compensation in the performance of this Contract, if the legislator or employee had been involved in the development or award of the Contract. (Section 84-14 (d), HRS).
4. CONTRACTOR has not been represented on matters related to this Contract, for a fee or other consideration by an individual who, within the past twelve (12) months, has been an agency employee, or in the case of the Legislature, a legislator, and participated while an employee or legislator on matters related to this Contract. (Sections 84-18(b) and (c), HRS).

CONTRACTOR understands that the Contract to which this document is attached is voidable on behalf of the STATE if this Contract was entered into in violation of any provision of chapter 84, Hawaii Revised Statutes, commonly referred to as the Code of Ethics, including the provisions which are the source of the declarations above. Additionally, any fee, compensation, gift, or profit received by any person as a result of a violation of the Code of Ethics may be recovered by the STATE.

\* Reminder to Agency: If the "is" block is checked and if the Contract involves goods or services of a value in excess of \$10,000, the Contract must be awarded by competitive sealed bidding under section 103D-302, HRS, or a competitive sealed proposal under section 103D-303, HRS. Otherwise, the Agency may not award the Contract unless it posts a notice of its intent to award it and files a copy of the notice with the State Ethics Commission. (Section 84-15(a), HRS).

**CONTRACTOR**

By \_\_\_\_\_  
(Signature)

Print Name \_\_\_\_\_

Print Title \_\_\_\_\_

Name of Contractor \_\_\_\_\_

Date \_\_\_\_\_



**STATE OF HAWAII**  
**SCOPE OF SERVICES**

**Project:** Kakaina Subdivision House Construction  
**Location:** Waimanalo, Oahu  
**Contractor:**

The CONTRACTOR shall design, construct, finance, and market 28 single-family houses in the Kakaina Subdivision, located in Waimanalo, Koolauloko, Oahu.

The scope of work required of the CONTRACTOR is more fully detailed in Request for Proposals RFP-16-HHL-001 and in CONTRACTOR's proposal submitted January 15, 2016, both of which are incorporated by reference.



## STATE OF HAWAII

## COMPENSATION AND PAYMENT SCHEDULE

**Project:** Kakaina Subdivision House Construction  
**Location:** Waimanalo, Oahu  
**Contractor:**

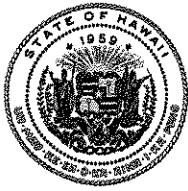
The CONTRACTOR shall be paid from the proceeds of the sales of turn-key homes through escrow. The STATE shall not be obligated to pay any compensation directly to the CONTRACTOR. CONTRACTOR's compensation for each home shall consist of the base price plus the price of any optional up-grades selected by the lessee, as indicated below:

Model	Bedrooms	Bathrooms	Price
A	2		\$
B	2		\$
C	3		\$
D	4		\$

Optional up-grade prices shall be:

Feature	Model	A	B	C	D
Enclosed Garage, including electronic roll-up door		\$	\$	\$	\$
Rain Gutters		\$	\$	\$	\$
Irrigation Catchment System		\$	\$	\$	\$
Fire-protection Sprinkler System		\$	\$	\$	\$
Ceiling Fans		\$	\$	\$	\$
Central air conditioning		\$	\$	\$	\$
Photovoltaic system		\$	\$	\$	\$
[other]					
		\$	\$	\$	\$

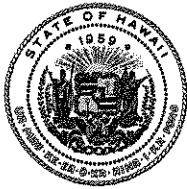




**STATE OF HAWAII**  
**TIME OF PERFORMANCE**

Project: Kakaina Subdivision House Construction  
Location: Waimanalo, Oahu  
Contractor:

1. The Time of Performance for this Contract shall be THREE HUNDRED SIXTY-FIVE (365) Calendar Days from the effective date specified in the Notice to Proceed, unless extended by delays excused by the STATE as documented in writing. The Notice to Proceed shall be issued by the STATE separately to the CONTRACTOR.
2. This Contract shall expire on the date on which the later of the following occurs:
  - (a) the STATE makes final payment to the CONTRACTOR in accordance with (1) paragraph 17(d) of the General Conditions (AG-008 103D General Conditions) and (2) no dispute between the parties hereto as to the Work or other obligations of the CONTRACTOR hereunder is outstanding, or
  - (b) the STATE issues a Final Acceptance letter to the CONTRACTOR.
3. The Contract expiration date is for administrative purposes only and not to be confused with the Time of Performance which refers to the time in which the CONTRACTOR is required to complete the work, or with any continuing obligations on the part of the CONTRACTOR.
4. Unless terminated, the STATE may extend the term of the contract for an additional period of up to one year or portions thereof without the necessity of re-bidding, upon mutual agreement in writing at least sixty (60) days prior to the expiration of the contract. The house prices for the extended period shall remain the same as described in the offer.
5. When interests of the State so require, the State may terminate the contract for convenience by providing six (6) weeks prior written notice to the CONTRACTOR.



## STATE OF HAWAII

**CERTIFICATE OF EXEMPTION  
FROM CIVIL SERVICE****1. By Heads of Departments Delegated by the Director of the Department of Human Resources Development ("DHRD").\***

Pursuant to a delegation of the authority by the Director of DHRD, I certify that the services to be provided under this Contract, and the person(s) providing the services under this Contract are exempt from the civil service, pursuant to § 76-16, Hawaii Revised Statutes (HRS).

(Signature)

Jobie M. K. Masagatani

(Print Name)

Chairman, Hawaiian Homes Commission

(Print Title)

(Date)

\* This part of the form may be used by all department heads and the heads of attached agencies to whom the Director of DHRD expressly has delegated authority to certify § 76-16, HRS, civil service exemptions. The specific paragraph(s) of § 76-16, HRS, upon which an exemption is based should be noted in the contract file. If an exemption is based on § 76-16(b)(15), the contract must meet the following conditions:

- (1) It involves the delivery of completed work or product by or during a specific time;
- (2) There is no employee-employer relationship; and
- (3) The authorized funding for the service is from other than the "A" or personal services cost element.

**NOTE:** Not all attached agencies have received a delegation under § 76-16(b)(15). If in doubt, attached agencies should check with the Director of DHRD prior to certifying an exemption under § 76-16(b)(15). Authority to certify exemptions under §§ 76-16(b)(2), and 76-16(b)(12), HRS, has not been delegated; only the Director of DHRD may certify §§ 76-16(b)(2), and 76-16(b)(12) exemptions.

**2. By the Director of DHRD, State of Hawaii.**

I certify that the services to be provided under this Contract, and the person(s) providing the services under this Contract are exempt from the civil service, pursuant to § 76-16, HRS.

(Signature)

(Print Name)

(Print Title, if designee of the Director of DHRD)

(Date)



STATE OF HAWAII  
SPECIAL CONDITIONS

**Project:** Kakaina Subdivision House Construction  
**Location:** Waimanalo, Oahu  
**Contractor:**

**SC-01 INTERCHANGEABLE TERMS**

The following terms are one and the same:

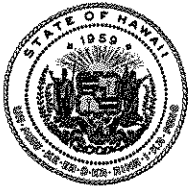
- a. "Contract" and "Agreement".
- b. "Department of Hawaiian Home Lands" "Department" "DHHL" and "STATE".
- c. "Contractor" and "Developer"

**SC-02 INSURANCE COVERAGE**

The CONTRACTOR shall obtain separate insurance coverage for this project that complies with the requirements set forth in the DHHL Construction General Conditions, Article 7, Section 7.3, as amended. Payment for all work required to comply with this item will not be paid for separately but shall be considered incidental to the various contract items.

CONTRACTOR shall maintain insurance acceptable to the STATE in full force and effect throughout the term of this Contract. The policies of insurance maintained by CONTRACTOR shall provide the following minimum coverage:

<u>Coverage</u>	<u>Limit</u>
<b>General Liability Insurance</b> (occurrence form)	Bodily Injury and Property Damage (combined single limit): <u>\$1,000,000</u> per occurrence and <u>\$2,000,000</u> aggregate  Personal Injury: <u>\$1,000,000</u> per occurrence and <u>\$2,000,000</u> aggregate
<b>Automobile Insurance</b> (covering all owned, non-owned and hired automobiles)	Bodily Injury: <u>\$1,000,000</u> per person and <u>\$1,000,000</u> per occurrence.  Property Damage: <u>\$1,000,000</u> per accident or combined single limit of <u>\$2,000,000</u> .
<b>Workers Compensation</b> (statutory limit is required by laws of the State of Hawaii)	Insurance to include Employer's Liability. Both such coverages shall apply to all employees of the CONTRACTOR and, in case any sub-contractor fails to provide adequate similar protection for all his employees, to all employees of subcontractors.
<b>Builder's Risk covering the CONTRACTOR and all subcontractors</b>	100% Replacement Value



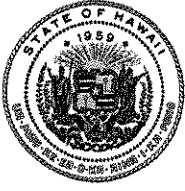
**STATE OF HAWAII**  
**SPECIAL CONDITIONS**

<b>Fire and extended coverage</b>	100% Replacement Value
<b>Malicious Mischief</b>	100% Replacement Value
<b>Flood Insurance</b> , if applicable	Maximum Coverage available

- a. The State of Hawaii, Department of Hawaiian Home Lands, its elected and appointed officials, officers, employees, and agents shall be named as additional insured with respect to operations, services or products provided to the State of Hawaii. CONTRACTOR agrees to provide to the DHHL, before the effective date of the Contract, certificate(s) of insurance necessary to evidence compliance with insurance provisions of this Contract. CONTRACTOR shall keep such insurance in effect and the certificate(s) on deposit with DHHL during the entire term of this Contract. Upon request by the STATE, CONTRACTOR shall furnish a copy of the policy or policies.
- b. Failure of CONTRACTOR to provide and keep in force such insurance shall be regarded as a material default under this Contract. The STATE shall be entitled to exercise any or all of the remedies provided in this Contract for default of CONTRACTOR.
- c. The procuring of such required policy or policies of insurance shall not be construed to limit CONTRACTOR's liability under this Contract or to fulfill the indemnification provisions and requirements of this Contract. Notwithstanding said policy or policies of insurance, CONTRACTOR shall be obliged for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with this Contract.
- d. CONTRACTOR shall immediately provide written notice to the contracting department or agency should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed upon expiration.
- e. DHHL is a self insured State agency. CONTRACTOR's insurance shall be primary. Any insurance maintained by the State of Hawaii shall apply in excess of, and shall not contribute with, insurance provided by CONTRACTOR.
- f. The CONTRACTOR shall require all subcontractors to have in full force and effect the same insurance coverage as required of the CONTRACTOR. Such insurance shall name the State of Hawaii, Department of Hawaiian Home Lands, its elected and appointed officials, officers, employees, and agents as additional insured with respect to operations, services or products provided to the State of Hawaii. The CONTRACTOR shall be responsible to enforce its subcontractors' compliance with these insurance requirements and CONTRACTOR shall, upon request, provide the STATE a copy of the policy or policies of insurance for any subcontractor.

**SC-03                    COMPLETION SCHEDULE AND LIQUIDATED DAMAGES**

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before 365 calendar days after receiving written Notice to Proceed,



## STATE OF HAWAII SPECIAL CONDITIONS

subject to extensions, as may be granted.

In case of failure on the part of the CONTRACTOR to complete the work within the time specified, the CONTRACTOR shall pay to DHHL as liquidated damages, and not as a penalty, \$1,000.00 per calendar day for each day that the project, in its entirety, remains incomplete.

### **SC-04 PROCESS THROUGH DHHL**

Any and all submittals, reports, requests, claims and notices under the contract shall be processed through Land Development Division Project Manager, at Hale Kalanianaʻole, 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707.

### **SC-06 PERMITS AND FEES**

Contractor shall apply and pay for all permits and inspection fees as required by all governmental agencies having jurisdiction over this project.

### **SC-07 COORDINATION WITH OTHER PARTIES**

The CONTRACTOR shall coordinate all the necessary work for temporary utility services, permanent service and appurtenances with the appropriate agencies, including but not limited to the Honolulu Board of Water Supply, Hawaiian Electric Company, and Sandwich Isles Communications.

### **SC-08 CONTRACTOR'S LICENSING**

It is the CONTRACTOR's sole responsibility to review the requirements of this project and determine the appropriate contractor's licenses that are required to complete the project.

### **SC-09 WATER CHARGES AND REQUIREMENTS**

The CONTRACTOR shall be solely responsible for obtaining water to meet any requirements of the contract. Unless otherwise indicated or provided for, any work, costs, charges and fees necessary to obtain water for this contract shall not be paid for separately but shall be considered incidental to the various contract items; no separate or additional payment will be made therefore.



## STATE OF HAWAII

# SPECIAL CONDITIONS

### SC-10 SOIL AND DUST CONTROL

To control the dust during construction, the CONTRACTOR shall have an adequate supply of water for dust control and if necessary, moisture conditioning of fill material at all times. The CONTRACTOR shall institute an erosion control program and dust control program to minimize soil erosion and wind erosion and airborne fugitive dust nuisance, respectively for the entire duration of this project.

### SC-11 GENERAL CONDITIONS

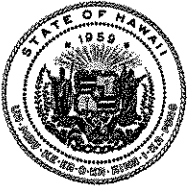
In the event of conflicts and/or discrepancies, the DHHL Construction General Conditions shall govern over Form AG-008, 103D General Conditions (eff. 10/17/13)

### SC-12 CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS

Contractor is hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions from specified State or County government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body.

### SC-13 APPRENTICESHIP AGREEMENT PREFERENCE – CONTRACTOR'S RESPONSIBILITY

1. For the duration of the contract awarded utilizing the Hawai'i Apprenticeship Preference, the CONTRACTOR shall certify each month that work is being conducted on the project, that it continues to be a participant in the relevant apprenticeship program for each trade it employs.
2. Monthly certification shall be made on *MONTHLY REPORT OF CONTRACTOR'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Monthly Certification Form 2)* prepared and made available by the DLIR. *Monthly Certification Form 2* shall be a signed original by the respective apprenticeship program sponsor's authorized official, and submitted by the Contractor with its monthly payment requests. *Monthly Certification Form 2* is available on the DLIR website at: <http://hawaii.gov/labor/wdd>
3. Should the Contractor fail or refuse to submit its monthly certification forms, or at any time during the construction of the project, cease to be a party to a registered apprenticeship agreement for each apprenticeable trade the Contractor employs, the Contractor will be subject to the following sanctions:
  - a. Withholding of the requested payment until the required form(s) are submitted;
  - b. Temporary or permanent cessation of work on the project, without recourse to breach of contract claims by the Contractor; provided the DHHL shall be entitled to restitution for nonperformance or liquidated damages claims; or



## STATE OF HAWAII

### SPECIAL CONDITIONS

- c. Proceed to debar pursuant to HRS §103D-702.
4. If events such as “acts of God,” acts of a public enemy, acts of the State or any other governmental body in its sovereign or contractual capacity, fires, floods, epidemics, freight embargoes, unusually severe weather, or strikes or other labor disputes prevent the Contractor from submitting the certification forms, the Contractor shall not be penalized as provided herein, provided the Contractor completely and expeditiously complies with the certification process when the event is over.

#### SC-29 FEDERAL LABOR STANDARDS

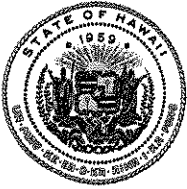
The CONTRACTOR shall comply with U.S. Department of Housing and Urban Development (HUD) Federal Labor Standards Provisions (form HUD -4010) attached as Exhibit A.

#### SC-15 ENERGY EFFICIENCY

The Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

#### 18. DEFAULT

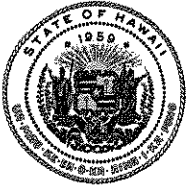
- A. Developer shall be in default under this Agreement if:
  - (1) Developer shall fail to timely pay, perform and/or complete Developer's obligations under this Agreement, which shall include the failure to build the Homes according to the Home Plans.
  - (2) Developer shall become insolvent, or shall become voluntarily or involuntarily dissolved or shall make any assignment for the benefit of creditors or shall generally fail to pay Developer's debts as they become due.
  - (3) Developer shall become the subject of an order for relief in an involuntary case under the bankruptcy laws as now or hereafter constituted and such order shall remain in effect and unstayed for a period of sixty (60) consecutive days.
  - (4) Developer shall commence a voluntary case under the bankruptcy laws as now or hereafter constituted, or shall file any petition or answer seeking for itself any arrangement, composition, adjustment, liquidation, dissolution or similar relief to which it may be entitled under any present or future statute, law, or regulation.
  - (5) Developer shall file any answer admitting the material allegations of any petition filed against Developer in any such proceedings.
  - (6) Developer shall seek or consent to or acquiesce in the appointment of or taking possession by, any custodian, trustee, receiver or liquidator of developer or of all or a substantial part of Developer's property(ies) or assets.
  - (7) Developer shall take action looking to Developer's dissolution or liquidation, or within sixty (60) days after commencement of any proceedings against Developer seeking any arrangement, composition, adjustment, liquidation, dissolution or



STATE OF HAWAII  
SPECIAL CONDITIONS

- similar relief to which Developer may be entitled under any present or future statute, law or regulation and such proceedings shall not have been dismissed.
- (8) Within sixty (60) days after the appointment of, or taking possession by, any custodian, trustee, receiver or liquidator of any or of all or a substantial part of the properties or assets of Developer, without DHHL's consent or acquiescence, any such appointment or possession shall not have been vacated or terminated.
  - (9) There shall be any attachment, execution or other judicial seizure of, or otherwise materially affecting all or any part of Developer's rights under this Agreement or the Homes, or any similar action on account of Developer's acts or failure to act, unless, in any such case, such attachment, execution or seizure is set aside, dissolved, bonded off or otherwise eliminated within thirty (30) days of its occurrence.
  - (10) Any third person shall obtain an order or decree in any court of competent jurisdiction enjoining or prohibiting Developer from performing this Agreement and such proceedings shall not be discontinued and such order or decree shall not be vacated within thirty (30) days after the granting thereof.
  - (11) There shall be a sale, transfer, hypothecation, assignment or conveyance of all or any part of this Agreement other than as allowed hereunder.
  - (12) Any representation or warranty made by or on behalf of Developer herein, shall prove to have been false or incorrect in any material respect on the date as of which such representation or warranty was made.
  - (13) A final judgment is entered which alone or with other outstanding final judgments against Developer would have a material adverse effect on its financial ability to perform its obligations in connection with this Agreement and (i) such judgment shall not be discharged, or (ii) within thirty (30) days after entry of such judgment the execution thereof shall not be stayed pending appeal, or (iii) such judgment shall not be discharged within thirty (30) days after the expiration of any such stay.
- B. Notice of Default. If Developer shall be in default, DHHL shall notify Developer of such default in writing to Developer's address shown above by any means, including without limitation personal delivery or certified or registered mail.
- No failure, forbearance or delay on the part of DHHL in exercising any power or right under this Agreement shall operate as a waiver of the same or any other power or right, and no single or partial exercise of any such power or right shall preclude any other or further exercise thereof or the exercise of any other such power or right. No action taken by DHHL pursuant to this Agreement to proceed with the development of the Project despite Developer's default shall constitute a waiver of any of the conditions precedent which Developer is required to perform to proceed with the development of the Project. If Developer fails, refuses, neglects or is unable to perform or satisfy any such condition, DHHL shall not be precluded from thereafter declaring such failure, refusal, neglect or inability to be an event of default as provided in this Agreement.
- C. Cure Period. Developer shall have thirty (30) calendar days to cure a default which can be remedied and cured by the payment of money.
- If a default cannot be remedied by the payment of money, Developer shall have sixty (60) calendar days in which to cure such default. Developer shall immediately proceed with





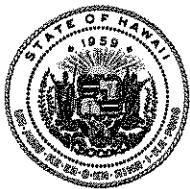
STATE OF HAWAII  
SPECIAL CONDITIONS

taking all action necessary to cure the default. During such period of default, Developer shall protect the Project from loss, damage, vandalism, waste or other destruction and shall maintain the Project Schedule to the extent that it is practicable to do so. Developer shall provide DHHL with progress reports upon reasonable request.

Upon the occurrence of such default, DHHL may, but shall not be required to, advance funds or agree to undertake to advance funds over and above any undisbursed loan proceeds to any third party or for any reason to eliminate or reduce the risk of loss resulting from such default. Such agreement or agreements by DHHL shall be in such form and have such content the funds advanced shall be in such amount, and such advances shall be made at such time or times and upon such terms and conditions as DHHL, in its judgment deems appropriate, necessary or useful to eliminate, reduce or indemnify DHHL or the Project against any such danger. All sums paid or agreed to be paid by DHHL pursuant to such agreements or undertakings shall be for the account of Developer. Developer shall reimburse DHHL upon demand, for any such sums paid by DHHL together with interest computed at seven and one-half percent (7.5%) until the date of reimbursement.

- D. DHHL's Rights. If Developer has been declared to be in default and fails to cure such default within the time period allowed hereunder, Developer agrees that DHHL shall have all legal and equitable rights to which DHHL may be entitled under the law including without limitation the following rights and remedies:

- (1) Terminate all of Developer's right, title and interest under this Agreement and take over the completion of the Project.  
Notwithstanding such termination, Developer shall not be released from the obligation to pay and perform all outstanding obligations under this Agreement, including payment of any unpaid Developer's Equity and damages arising out of delays and cost overruns incurred to complete the Project lien free.
- (2) Retain all deposits, funds or security that have been paid or delivered to DHHL or escrow.
- (3) Keep and use all Home Plans and other Project documents and work product over which Developer can exercise legal control and transfer, whether prepared by Developer or Developer's consultants and, in DHHL's sole discretion, negotiate with Developer's consultants and contractors to complete the Project.
- (4) Enter into negotiations with other developers and enter into a development agreement with another developer to complete the development of the Project pursuant to development rights afforded to such person under a development agreement.
- (5) Complete the development of the Project and use the Developer's Equity and any funds or security which Developer has paid or deposited with DHHL to complete the Project.
- (6) Require Developer to put up additional security in an amount necessary to pay for the completion of the Project lien-free and to repay the Interim Loan. DHHL may require such additional capital to be in the form of cash or a letter of credit (or equivalent) or bond.
- (7) Sue for damages including architectural and engineering fees and costs and attorney's fees and costs.



**STATE OF HAWAII**  
**SPECIAL CONDITIONS**

- (8) Seek specific performance.
- (9) Stop all disbursement of any interim loan.

All rights, powers and remedies herein given to DHHL are cumulative and not alternative and are in addition to all rights, powers and remedies afforded by statutes or rules of law and may be exercised concurrently, independently or successively in any order whatsoever.

- E. Limitation of Developer's Remedies in the Event of DHHL's Default. DHHL shall be in default under this Agreement if DHHL does not timely perform DHHL's respective obligations under this Agreement or any related agreements. In the event of DHHL's default, Developer, including any of Developer's successors or assigns, agrees that Developer's rights and remedies shall be expressly limited to (1) termination of this Agreement, (2) entitlement of Developer to complete and sell all Homes as to which, as of the date of termination, Developer had commenced work, and (3) payment to Developer of an amount, if any, equal to Developer's net Project costs that are not recovered within six (6) months after termination from the sale of Homes as to which, as of the date of termination, Developer had commenced work.

# **GENERAL PROVISIONS FOR GOODS AND SERVICES**

## **HAWAII REVISED STATUTES (HRS) CHAPTER 103D**

Attached are the General Provisions, dated April 2013 which are made a part of all offers in response to the solicitation for goods and services. These provisions are in addition to the special provisions provided in the individual solicitations.

Offerors are cautioned to read and understand all the terms and conditions contained in the General Provisions as these provisions will also be made part of the contract for goods and services.

**GENERAL PROVISIONS  
FOR  
GOODS AND SERVICES**

**TABLE OF CONTENTS**

	<b>PAGE NO.</b>
1. DEFINITION OF TERMS .....	3-5
2. COMPETENCY OF OFFEROR .....	5
3. OFFER INCORPORATES SOLICITATION .....	6
4. PREPARATION OF OFFER .....	6
5. LATE OFFERS, LATE WITHDRAWALS, AND LATE MODIFICATIONS.....	6
6. DISQUALIFICATION OF OFFERORS.....	6-7
7. IRREGULAR OFFERS .....	7
8. STANDARDS OF CONDUCT .....	7
9. CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS.....	7-8
10. ACCEPTANCE OF OFFER .....	8
11. EXECUTION OF CONTRACT .....	8-9
12. CONTRACT BOND .....	9
13. FAILURE TO EXECUTE CONTRACT .....	9
14. RETURN OF OFFER GUARANTIES.....	9

15. PAYMENT .....9-10

16. DELIVERY EXTENSIONS .....10

17. PERSONAL LIABILITY OF PUBLIC OFFICIALS .....10

**1. DEFINITIONS OF TERMS**

Terms as used in these General Provisions, unless the context requires otherwise, shall have the following meaning:

a. BID

Bid means any offer submitted in competitive sealed bidding or in the second phase of multi-step bidding.

b. BID PROPOSAL GUARANTY OR SECURITY

The security when required, furnished by an offeror with his offer to ensure that the offeror will enter into the contract with the STATE and execute the required contract and payment bonds covering the work contemplated, if his offer is accepted.

c. CONTRACT

Contract means the combination of the solicitation, including the instructions to offerors, the specifications or scope of work, the special provisions, and the general terms and conditions; the offer and any best and final offers; and any amendments to the solicitation or to the contract; and any terms implied by law.

d. CONTRACT BOND

The approved form of security furnished by the CONTRACTOR and his surety or sureties or by the CONTRACTOR alone, to ensure completion and satisfactory performance of the contract in accordance with the terms of the contract and to guarantee full payment of all claims for labor, materials and supplies furnished, used or incorporated in the work.

e. CONTRACTOR

An individual, partnership, firm, corporation, joint venture or other legal entity undertaking the execution of work under the terms of the contract with the STATE and acting directly or through his, their or its agents, employees or sub-contractors.

f. DAYS

Days mean calendar days unless otherwise specified.

g. GENERAL CONDITIONS

General Conditions issued by the Department of the Attorney General of the State of Hawaii, referred to as Form AG-008, as revised, and included in solicitations by reference. The applicable revised Form AG-008, which is included by reference, is the form dated and in effect at the date the solicitation is issued.

h. GENERAL PROVISIONS

General Provisions are standard terms and conditions.

i. HAR

Hawaii Administrative Rules

j. HEAD OF THE PURCHASING AGENCY

The head of any agency with delegated procurement authority by law or from a chief procurement officer of this STATE to enter into and, administer contracts.

k. HRS

Hawaii Revised Statutes

l. IFB

Invitation for Bids

m. OFFER

An offer means a bid or proposal as defined in sections 1a and 1p, in response to any solicitation.

n. OFFEROR

Any individual, partnership, firm, corporation, joint venture or other legal entity, submitting directly or through a duly authorized representative or agent, an offer for the work or services contemplated in response to a solicitation as defined in 1s.

o. PROCUREMENT OFFICER

Procurement officer means the person with procurement delegation duly authorized to enter into and administer contracts and make written determinations with respect to the contract. The term includes an authorized representative acting within the limits of authority. The delegated authority is received from the chief procurement officer directly or through the head of a purchasing agency or designee to the procurement officer.

p. PROPOSAL

A proposal means any offer submitted in response to any solicitation, except a bid as defined in section 1a.

q. PURCHASING AGENCY

Purchasing agency means any governmental body which is authorized by law or rules, or by way of delegation to enter into contracts for procurement of goods, services, or construction.

r. RFQ

Request for Quotes

s. RFP

Request for Proposals

t. SOLICITATION

Solicitation means an invitation for bids ("IFB"), used in the competitive sealed bidding process, a request for quotes ("RFQ") used in the small purchases process, or a request for proposals ("RFP"), used in the competitive sealed

proposal process for the purpose of obtaining quotes, bids or proposals to perform a STATE contract.

u. SPECIAL PROVISIONS

The terms and conditions pertaining to the specific solicitation in which they are contained and in addition to these General Provisions; including but not limited to terms and conditions describing the preparation of solicitations, evaluation of offers, determination of award, plus those applicable to performance by the CONTRACTOR.

Additions or revisions to the General Provisions, which shall be considered a part of the General Provisions, setting forth conditions or requirements applicable to the particular project or contract under consideration shall be included in the Special Provisions. Should any Special Provisions conflict with these General Provisions, said Special Provisions shall govern.

v. SPECIFICATIONS

A description of what the purchasing agency requires and, consequently, what an offeror must offer to be considered for award.

w. STATE

STATE means the remaining departments of the executive branch and all governmental bodies administratively attached to it, excluding the judiciary, the legislature, the department of education, University of Hawaii, the division of community hospitals, and the office of Hawaiian affairs, except where specifically included in any particular solicitation.

x. SURETY

The individual, firm, partnership or corporation other than the CONTRACTOR, which executes a bond with and for the CONTRACTOR to ensure the CONTRACTOR's acceptable performance of the contract.

y. WORK

The furnishing by the CONTRACTOR of all labor, services, materials, equipment, and other incidentals necessary for the satisfactory performance of the contract.

**2. COMPETENCY OF OFFEROR**

Prospective offeror must be capable of performing the work for which offers are being called. Either before or after the deadline for an offer, the purchasing agency may require offeror to submit answers to questions regarding facilities, equipment, experience, personnel, financial status or any other factors relating to the ability of the offeror to furnish satisfactorily the goods or services being solicited by the STATE. Any such inquiries shall be made and replied to in writing; replies shall be submitted over the signatures of the person who signs the offer. Any offeror who refuses to answer such inquiries will be considered non-responsive.

The purchasing agency reserves the right to visit an offeror's place of business to inspect its facilities and equipment and to observe its methods of operation in order to facilitate evaluation of performance capabilities.



**3. OFFER INCORPORATES SOLICITATION**

The solicitation, including the AG's General Conditions, Specifications, General Provisions and any Special Provisions, and other documents referenced in or attached to the solicitation shall be considered a part of the offer whether attached to the solicitation or not at the time of its submission. Such documents shall not be altered in any way when the proposal is submitted and any alterations so made by the offeror may be cause for rejection of the offer.

**4. PREPARATION OF OFFER**

An offeror may submit only one offer in response to a solicitation. If an offeror submits more than one offer in response to a solicitation, then all such offers shall be rejected. Similarly, an offeror may submit only one offer for each line item (if any) of a solicitation. If an offeror submits more than one offer per line item, then all offers for that line item shall be rejected.

Competing subsidiary or jointly-owned companies may submit bids or proposals and these may be accepted for evaluation and award if such companies submit with their bids or proposals a certificate of non-collusion, sworn to before a notary, which acknowledges that the offer is without collusion.

Unless otherwise specified in the solicitation, all prices shall include applicable Federal, state and local taxes. Any illegible or otherwise unrecognizable price offer shall cause automatic rejection of the offer.

Offers submitted in response to an IFB or RFP shall be signed in ink in the space provided on the bid or proposal page by (1) the owner of a sole proprietorship, (2) one or more members of a partnership, (3) one or more members or officers of each firm representing a joint venture, (4) one or more officers of a corporation, or (5) an agent of the offeror duly authorized to submit offers on the offeror's behalf.

**5. LATE OFFERS, LATE WITHDRAWALS, AND LATE MODIFICATIONS**

Any notice of withdrawal, notice of modification of an offer with the actual modification, or any offer received at the place designated for receipt and opening of an offer after the time and date set for receipt and opening of offers is late. A late offer, late modification, or late withdrawal shall not be considered late if received before contract award and would have been timely but for the action or inaction of personnel within the procurement activity. A late offer or late modification that will not be considered for award shall be returned to the bidder unopened as soon as practicable and accompanied by a letter from the procurement activity stating the reason for its return. A late withdrawal request shall be responded to with a statement of the reason for non-acceptance of the withdrawal.

**6. DISQUALIFICATION OF OFFERORS**

An offeror shall be disqualified and his offer automatically rejected for any one of the following reasons: proof of collusion, in which case, all offers involved in the collusive action will be rejected and any participant to such collusion will be barred from future solicitations until reinstated; or offeror's delivery of the offer after the deadline specified in the public notice calling for offers, or as amended, except as allowed in Section 3-122-29 (1), HAR.

An offeror may be disqualified and his offer rejected for any one or more of the following

reasons: offeror's lack of responsibility and cooperation as shown by past work or services; offeror's being in arrears on existing contracts with the STATE or having defaulted on previous contracts; offeror's lack of proper equipment and/or sufficient experience to perform the work contemplated; offeror does not possess proper license to cover the type of work contemplated, if required; or offeror's failure to pay, or satisfactorily settle, all bills overdue for labor and material on former STATE contracts at the time of issuance of solicitation.

**7. IRREGULAR OFFERS**

Offers will be considered irregular and shall be rejected for the following reasons including but not limited to the following: if the offer is unsigned by the offeror, unless otherwise specified in the solicitation; if the required offer guaranty received separately from the offer is not identifiable as guaranty for a specific offer, or is received after the date and time set for the opening; if the required offer guaranty is not in accordance with the solicitation; if the offeror or surety fails to sign the surety bond submitted as offer guaranty; if offeror fails to use the surety bond form furnished by the STATE or identical wording contained in the said form when submitting a surety bond as proposal guaranty; if the offer shows any non-compliance with applicable law or contains any unauthorized additions or deletions, conditioned, incomplete, or irregular or is in anyway making the proposal incomplete, indefinite, or ambiguous as to its meaning; or unbalanced offers in which the price for any item is obviously out of proportion to the prices for other items.

**8. STANDARDS OF CONDUCT**

All offerors should be certain that their offer is not in violation of HRS §84-15. This section provides as follows:

- a. A state agency shall not enter into any contract to procure or dispose of goods or services, or for construction, with a legislator, an employee, or a business in which a legislator or an employee has a controlling interest, involving services or property of a value in excess of \$10,000 unless:
  - (1) The contract is awarded by competitive sealed bidding pursuant to section 103D-302;
  - (2) The contract is awarded by competitive sealed proposal pursuant to section 103D-303; or
  - (3) The agency posts a notice of its intent to award the contract and files a copy of the notice with the state ethics commission at least ten days before the contract is awarded.
- b. A state agency shall not enter into a contract with any person or business which is represented or assisted personally in the matter by a person who has been an employee of the agency within the preceding two years and who participated while in state office or employment in the matter with which the contract is directly concerned.

**9. CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS**

Unless otherwise specified in the solicitation, a legislative body has appropriated the funds for this contract.

Therefore, if awarded a contract in response to this solicitation, offeror agrees to comply

with Section 11-205.5, HRS, which states that campaign contributions are prohibited from a State and county government contractor during the term of the contract if the contractor is paid with funds appropriated by a legislative body.

**10. ACCEPTANCE OF OFFER**

- a. Acceptance of offer, if any, will be made within sixty calendar days after the opening of offers, and the prices quoted by the offeror shall remain firm for the sixty-day period. Unless otherwise provided, each individual item or group of items will be awarded to the responsive and responsible offeror whose offer complies with all the solicitation requirements. In determining the responsive and responsible offeror, offers will be evaluated not only on the amounts thereof, but on all factors relating to the satisfactory performance of the contract. Products or servicing capabilities must be of a quality and nature that will meet the needs and purposes of the intended use and must conform to all requirements prescribed in the specifications. The offeror must have the ability to perform as called for in the contract terms. The STATE shall be the sole judge of product or vendor capability. The successful vendor will be notified by letter that the offer has been accepted and that the vendor is being awarded the contract.
- b. If the offer is rejected or if the vendor to whom the contract was awarded fails to enter into the contract and furnish satisfactory security, if applicable, the purchasing agency may, at their discretion, award the contract to the next lowest or remaining responsible offeror or may publish another call for offers; provided in the case of only one remaining responsible offeror, the head of a purchasing agency may negotiate with such bidder to reduce the scope of work, if available funds are exceeded, and to award the contract at a price which reflects the reduction in the scope of work.
- c. The head of a purchasing agency further reserves the right to cancel the contract award at any time prior to execution of said contract by all parties, without any liability to the awardee and to any other offeror.

**11. EXECUTION OF CONTRACT**

The following subsections shall not apply to any contract in which the total amount payable to the CONTRACTOR cannot be accurately estimated at the time the contract is to be awarded:

- a. In cases where the contract award equals or exceeds the dollar level specified in Section 103D-305, HRS, the STATE shall forward a formal contract to the successful offeror for execution. The contract shall be signed by the successful vendor and returned, together with a satisfactory contract bond if required, and other supporting documents, within ten days after receipt by the vendor or within such further time as the procurement officer may allow.
- b. No such contract shall be considered binding upon the STATE until the contract has been fully and properly executed by all the parties thereto and the State Comptroller has, in accordance with Section 103D-309, HRS, endorsed thereon a certificate that there is an appropriation or balance of an appropriation over and above all outstanding contracts, sufficient to cover the amount required by the contract; with the exception of a multi-term contract, whereby, the State Comptroller shall only be required to certify that there is an appropriation or balance of an appropriation over and above all outstanding contracts, that is sufficient to cover the amount required to be paid under the contract during the fiscal year or remaining portion of the fiscal year of each term of the multi-year contract.

- c. Pursuant to the Attorney General's General Conditions (AG-008, as revised), Section 18, in any contract involving not only STATE but supplemental funds from the Federal government, this section shall be applicable only to that portion of the contract price as is payable out of STATE. As to the portion of the contract price as is expressed in the contract to be payable out of Federal funds, the contract shall be construed to be an agreement to pay the portion to the CONTRACTOR, only out of Federal funds to be received from the Federal government. This subsection shall be liberally construed so as not to hinder or impede the STATE in contracting for any project involving financial aid from the Federal government.

**12. CONTRACT BOND**

- a. The requirement for contract performance and payment bonds, if any, shall be stated in the Special Provisions of the solicitation.
- b. When required by the Special Provisions, a performance bond and a payment bond shall be delivered by the CONTRACTOR to the STATE at the same time the executed contract is delivered. Each amount of the performance and payment bonds shall not exceed fifty per cent of the amount of the contract price; provided, for contracts where contract price cannot be determined at the time of award, the amounts of the bonds shall be as stated in the solicitation. ‘
- c. The acceptable performance and payment bonds are the same as the acceptable bid or proposal security deposit specified in Section 7. If a surety bond is submitted for either the performance or payment bond, in addition to the form prescribed, a power of attorney for the surety's attorney-in-fact executing the bond shall be provided.

**13. FAILURE TO EXECUTE CONTRACT**

If the offeror to whom a contract is awarded shall fail or neglect to enter into the contract, and to furnish satisfactory security as required by Section 30 within ten days after such award or within such further time as the procurement officer may allow, the purchasing agency shall pay the amount of offeror's proposal guaranty, as required under Section 7, into the State Treasury as a realization of the STATE. The procurement officer may thereupon award the contract to the next lowest responsible offeror or may call for new offers, whichever method he may deem is in the best interest of the STATE.

**14. RETURN OF OFFER GUARANTIES**

All offer guaranties submitted as required by subchapter 24, chapter 3-122, HAR, shall be retained until the successful offeror enters into contract and furnishes satisfactory security or if the contract is not awarded or entered into, until the procurement officer's determination is made to cancel the solicitation. At such time, all offer guaranties, except surety bonds, will be returned.

**15. PAYMENT**

Section 103-10, HRS, provides that the State shall have thirty (30) calendar days after receipt of invoice or satisfactory completion of contract to make payment. For this reason, the State will reject any bid submitted with a condition requiring payment within a shorter period. Further, the State will reject any bid submitted with a condition requiring interest

payments greater than that allowed by §103-10, HRS, as amended.

The State will not recognize any requirement established by the Contractor and communicated to the State after award of the contract, which requires payment within a shorter period or interest payment not in conformance with statute.

**16. DELIVERY EXTENSIONS**

In the case of contracts for the purchase of goods, the delivery date or the maximum number of days for delivery will be specified by the STATE in its solicitation requirements, and all goods must be delivered with the time specified. However, the CONTRACTOR will not be held responsible for delay due to fire, flood, riot, labor disturbances, war, shortage of transportation, act of God or other reason beyond his control, provided that he notifies the STATE of such delay and the reason therefore as soon as practicable after its occurrence and requests extension prior to the specified date of delivery. Requests for extension of time shall be accompanied by documents such as the CONTRACTOR's purchase order, manufacturer's acknowledgement, shipping manifest, and any other documents substantiating that the causes for delay were beyond the control of the CONTRACTOR. The STATE shall be the sole judge of whether such delay is truly beyond the control of the CONTRACTOR and whether extension will be granted. The STATE reserves the right to terminate the contract or to assess liquidated damages, if provided for in the contract, for delays not covered by specific authorized extension.

**17. PERSONAL LIABILITY OF PUBLIC OFFICIALS**

In carrying out any of the provisions of the contract or in exercising any power or authority granted to them by the contract, there shall be no liability upon the procurement officer or his authorized representatives, either personally or as officials of the STATE, it being understood that in such matters, they act solely as agents and representatives of the STATE.