



STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

PAPAKOLEA
2312 AND 2316 KAPAHU ST.
STRUCTURE STABILIZATION

HONOLULU, OAHU, HAWAII

INVITATION FOR BIDS
IFB-22-HHL-011



August 2021

William J. Aila, Jr., Chairman

TABLE OF CONTENTS

<u>INVITATION FOR BIDS (IFB)</u>	<u>PAGE</u>
NOTICE TO BIDDERS (IFB)	5-6
<u>CONTRACTOR'S BID SUBMITTAL</u>	
INSTRUCTIONS FOR BID SUBMITTAL	7-20
BID OFFER FORM.....	21-35
<u>WAGE RATES & MISCELLANEOUS NOTICES</u>	
REQUIREMENT OF CHAPTER 104, HRS.....	36-37
WAGE RATE SCHEDULE BULLETIN NO. 499 (02-15-21)	38-46
APPRENTICE SCHEDULE NO. 499 (02-15-21)	47-58
LIST OF CONSTRUCTION TRADES IN REGISTERED APPRENTICESHIP PROGRAMS	59-72
STATE OF HAWAII, STATE PROCUREMENT OFFICE (SPO) PROCUREMENT CIRCULAR NO. 2007-05 (07-24-07)	73-74
STATE HOLIDAYS - YEARS 2021 & 2022	75
<u>SAMPLE DHHL CONTRACT</u>	
CONTRACT FOR GOODS OR SERVICES (FORM AG-003 r06/22/09).....	76-77
CONTRACTOR'S STANDARDS OF CONDUCT (FORM AG-010 r11/15/05).....	78
SCOPE OF SERVICES (FORM AG-011 r07/28/05).....	79-80
COMPENSATION AND PAYMENT SCHEDULE (FORM AG-012 r11/15/05).....	81-83
TIME OF PERFORMANCE (FORM AG-013 r11/15/05)	84
CERTIFICATE OF EXEMPTION FROM CIVIL SERVICE (FORM AG-014 r06/26/06).....	85
SPECIAL CONDITIONS (FORM AG-015 r11/15/05)	86-99
103D GENERAL CONDITIONS (FORM AG-008 103D)	100-115
DHHL CONSTRUCTION GENERAL CONDITIONS.....	116-183

TABLE OF CONTENTS

SAMPLE FORMS

NOTICE OF INTENTION TO BID.....	184
STANDARD QUALIFICATION QUESTIONNAIRE (06-16-03).....	185-201
CORPORATE RESOLUTION	202
EXHIBIT A – SURETY BOND (11-17-98).....	203-204
EXHIBIT B – PERFORMANCE BOND (SURETY) (06-21-07)	205-206
EXHIBIT C – PERFORMANCE BOND (11-17-98)	207-210
EXHIBIT D – LABOR AND MATERIAL PAYMENT BOND (SURETY) (06-21-07)	211-212
EXHIBIT E – LABOR AND MATERIAL PAYMENT BOND (11-17-98)	213-216
EXHIBIT G – PERFORMANCE BOND (SURETY) FOR SUPPLEMENTAL AGREEMENT FOR GOODS AND SERVICES (11-17-98)	217-218
EXHIBIT H – PERFORMANCE BOND FOR SUPPLEMENTAL AGREEMENT FOR GOODS AND SERVICES (11-17-98).....	219-221
EXHIBIT I – CONTRACTOR ACKNOWLEDGEMENT (11-12-97).....	222
EXHIBIT J – SURETY ACKNOWLEDGEMENT (11-12-97).....	223
FORM 1 – CERTIFICATION OF BIDDERS PARTICIPATION (08-25-10)	224
FORM 2 – MONTHLY REPORT OF CONTRACTOR’S PARTICIPATION (08-25-10)	225
EXHIBIT 2 – CERTIFICATION OF COMPLIANCE FOR EMPLOYMENT OF STATE RESIDENTS	226

CIVIL AND STRUCTURAL TECHNICAL SPECIFICATIONS.....

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01570 – SOIL EROSION CONTROL.....	228-232
---	---------

DIVISION 2 - SITE WORK

SECTION 02100 – SITE PREPARATION	233-236
SECTION 02200 – EARTHWORK	237-240
SECTION 02222 – EXCAVATION, BACKFILLING & COMPACTING FOR UTILITIES	241-244
SECTION 02227 – AGGREGATE MATERIALS	245-246

TABLE OF CONTENTS

SECTION 02630 – STORM DRAINAGE SYSTEM.....	247-248
SECTION 02770 – CONCRETE CURBS, HEADERS, WALKWAYS AND RAMPS.....	249
DIVISION 3 – CONCRETE	
SECTION 03300 – CONCRETE	250-264
SECTION 03465 – MICROPILES.....	265-279
SECTION 03470 – HELICAL PILES.....	280-294
DIVISION 4 – MASONRY	(NOT USED)
DIVISION 5 – METALS.....	(NOT USED)
DIVISION 6 – WOOD AND PLASTICS	(NOT USED)
DIVISION 7 – THERMAL AND MOISTURE PROTECTION.....	(NOT USED)
DIVISION 8 – DOORS, WINDOWS, GLASS.....	(NOT USED)
DIVISION 9 – FINISHES	(NOT USED)
DIVISION 10 – SPECIALTIES	(NOT USED)
DIVISION 11 – EQUIPMENT	(NOT USED)
DIVISION 12 – FURNISHINGS	(NOT USED)
DIVISION 13 – SPECIAL CONSTRUCTION.....	(NOT USED)
DIVISION 14 – CONVEYING SYSTEMS	(NOT USED)
DIVISION 15 – MECHANICAL.....	(NOT USED)
DIVISION 16 – ELECTRICAL	(NOT USED)
<u>CONSTRUCTION PLANS</u>	295-307
<u>GEOTECHNICAL REPORT</u>.....	308-354
<u>2316 KAPAHU ST INTERIOR PHOTOS</u>	355-358

**NOTICE TO BIDDERS
INVITATION FOR BID (IFB)
Department of Hawaiian Home Lands
Land Development Division**

IFB NO.: IFB-22-HHL-011

BID OFFERS for IFB No.: IFB-22-HHL-011, PAPA KOLEA 2312 AND 2316 KAPAHU STRUCTURE STABILIZATION, Papakolea, Island of Oahu, State of Hawaii, shall be electronically submitted via HiePRO no later than **2:00 p.m., Hawaii Standard Time (H.S.T.) September 22, 2021**. The Bid Offer Form must be submitted, as an attachment, when submitting the offer via HiePRO. Bids received after the time fixed for opening or submitted anywhere other than as specified above will not be considered.

This project consists of furnishing all labor, equipment, materials, and supervision to provide all grading and infrastructure work as indicated in the plans and specifications to satisfactorily complete the Papakolea 2312 and 2316 Kapahu St. Structure Stabilization, Honolulu, Oahu, Hawaii.

To be eligible to submit a bid, the Bidder and/or his subcontractors shall possess all required valid State of Hawaii licenses and specialty licenses needed to perform the work for this project. A surety bid bond will be required for this Invitation for Bids (IFB).

This project is subject to Section 103D, Hawaii Revised Statutes, and to the payment of not less than the prevailing salaries and wages promulgated by the State of Hawaii, Department of Labor and Industrial Relations.

Bid documents may be examined at or obtained from the State of Hawaii eProcurement system (HiePRO):

<https://hiepro.ehawaii.gov/sav-search.html>

It is the responsibility of Interested Bidders to check the HiePRO website for any addenda issued by DHHL.

All prospective bidders/offerors are invited to attend a PRE-BID CONFERENCE to be held at 9:00 a.m., H.S.T, on August 19, 2021 at the project site at 2312/2316 Kapahu Street, Papakolea, Island of Oahu, Hawaii. Subcontractors and union representatives are also invited to attend. The conference is to provide bidders/offerors with an opportunity to ask questions about the contractual requirements and technical aspects of the project. Attendance of the pre-bid conference and/or site visit is not a condition for submitting a bid, but strongly recommended. Persons needing special accommodations due to a disability may submit such requests to Mitchell Kawamura, Project Manager, Land Development Division, via facsimile at (808) 620-9299, or e-mail to mitchell.h.kawamura@hawaii.gov.

A written NOTICE OF INTENTION TO BID is required and shall be received by the DHHL, Land Development Division, at 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707, no later than September 1, 2021. Submittal of a NOTICE OF INTENTION TO BID via facsimile at (808) 620-9299, or e-mail to mitchell.h.kawamura@hawaii.gov is acceptable.

A properly executed and notarized STANDARD QUALIFICATION QUESTIONNAIRE FOR OFFERORS, SPO Form-21 ("Questionnaire") is required and shall be submitted to the DHHL Land Development Division, at 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707 no later than 4:30 P.M., September 1, 2021. Submittal of the Questionnaire via e-mail is acceptable. The Questionnaire can be downloaded at the State Procurement Office website:

<http://spo.hawaii.gov/wp-content/uploads/2013/12/spo-021.pdf>

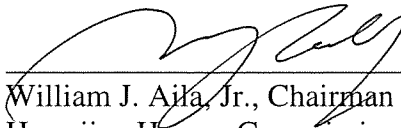
Bids shall comply with the requirements of the IFB. Bids that do not comply with the IFB may be subject to disqualification. DHHL reserves the right to amend the IFB by written addenda, to reject any and all bids, or to waive any defects in said bids where DHHL deems it is in the best interest of the State.

CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS PROHIBITED. If awarded a contract in response to this solicitation, offeror agrees to comply with HRS §11-355, 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 the legislative body between the execution of the contract through the completion of the contract.

Questions regarding this project may be directed in writing to Mitchell Kawamura, Project Manager, Land Development Division, DHHL, 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707, via facsimile at (808) 620-9299, or e-mail to mitchell.h.kawamura@hawaii.gov, or via HIePRO, no later than September 6, 2021.

Dated at Honolulu, Hawaii, this 2nd day of August 2021.

DEPARTMENT OF HAWAIIAN HOME LANDS



William J. Aila, Jr., Chairman
Hawaiian Homes Commission

Posted on the internet at: <https://hands.ehawaii.gov/hands/opportunities>

Instructions for Bid Submittal

General Instructions for Bid Submittal

The Bid Offer form must be completed and submitted to DHHL by the required due date and time, and in the form prescribed by DHHL.

For your convenience, an “IFB Checklist for Bidders” is included in this section for your use.

No supplemental literature, brochures or other unsolicited information should be included in the bid packet.

A written response is required for each item unless indicated otherwise.

Bid documents and all certifications should be written legibly or typed and completed with black ink.

I. PROPOSAL REQUIREMENTS AND CONDITIONS

A. QUALIFICATION OF BIDDERS.

Prospective Bidders must be capable of performing the work for which bids are invited and must be capable of entering into a public contract of \$25,000 (twenty-five thousand dollars) or more.

B. NOTICE OF INTENTION TO BID

1. In accordance with Section 103D-310, Hawaii Revised Statutes (HRS), and Section 3-122-108, Hawaii Administrative Rules (HAR), a written Notice of Intention to Bid, herein after “Notice” must be submitted to the Chairman, the Head of the Purchasing Agency (HOPA) who is the officer responsible for this procurement. The Notice may be faxed, hand carried, mailed, or e-mailed to the office indicated in the Notice.
2. The written Notice must be received by the DHHL no later than the date and time specified in the Notice to Bidders. The written Notice will be time stamped when received by DHHL. The time designated by the time stamping device in DHHL shall be official. If the written Notice is hand carried, then the bearer is responsible to ensure that the Notice is time stamped by DHHL. If the Notice is delivered through facsimile (fax) machine, the time of receipt by DHHL’s fax machine shall be official. If the Notice is sent by email, the time indicated in the date and time field of the email as received by DHHL shall be official.
3. It is the responsibility of the prospective Bidder to ensure that the written Notice is received in time and the Department assumes no responsibility for failure of timely delivery caused by the prospective Bidder or by any method of conveyance chosen by the prospective Bidder. DHHL shall use best efforts to return a signed acknowledgement of receipt of Notice from Bidder(s).

4. If two (2) or more prospective Bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture with their Notice. Such affidavit of joint venture will be valid only for the specific project for which it is filed. No further license is required when all parties to the joint venture possess current and appropriate contractor's licenses. Joint ventures are required to be licensed in accordance with Chapter 444 HRS, and the rules and regulations of the Contractor's License Board when any party to the joint venture agreement does not hold a current or appropriate contractor's license. The joint venture must be registered with the office of the Director of Commerce and Consumer Affairs in accordance with Chapter 425 HRS.
5. No persons, firm or corporation may bid where (1) the person, firm, or corporation, or (2) a corporation owned substantially by the person, firm, or corporation, or (3) a substantial stockholder or an officer of the corporation, or (4) a partner or substantial investor in the firm is in arrears in any payment owed to the State of Hawaii or any of its political subdivisions or is in default of any obligation to the State of Hawaii or to all or to any of its political subdivisions, including default as a surety or failure to perform faithfully and diligently any previous contract with DHHL.

C. STANDARD QUALIFICATION QUESTIONNAIRE FOR OFFERORS

1. Prospective Bidders shall submit answers to questions contained in the STANDARD QUALIFICATION QUESTIONNAIRE FOR OFFERORS (SPO Form-021), hereinafter "Questionnaire" properly executed and notarized, setting forth a complete statement of the experience of such prospective Bidder and its organization in performing similar work and a statement of the equipment proposed to be used, together with adequate proof of the availability of such equipment. The Questionnaire shall be submitted to the location on or prior to the date and time set forth in the Notice to Bidders. The Questionnaire will be time stamped when received by DHHL. The time designated by the time stamping device in DHHL shall be official. If the Questionnaire is hand carried, then the bearer is responsible to ensure that the notice is time stamped by DHHL. If the information in the Questionnaire proves satisfactory, the Bidder's proposal will be received. All information contained in the answers to the Questionnaire shall be kept confidential. The Questionnaire will be returned to the Bidder after it has served its purpose. Prior Questionnaires submitted for other Notice to Bidders are not acceptable.
2. If upon review of the Questionnaire, or otherwise, the Bidder appears not fully qualified or able to perform the intended work, the HOPA shall, after affording the Bidder an opportunity to be heard and if still of the opinion that the Bidder is not fully qualified to perform the work, refuse to receive or to consider any bid offered by the prospective Bidder.

D. PROPOSAL FORM

1. Prospective Bidders are being furnished with the Bid Offer Form, hereinafter "Proposal" giving the location, description, and the contract time of the work contemplated for which a Total Sum bid price is asked, containing a schedule of items, together with estimated quantities of work to be performed and materials to be furnished, for which unit bid prices and/or lump sum bid prices are asked.
2. All papers bound with or attached to the Proposal shall be considered a part thereof and shall not be detached or altered when the Proposal is submitted.
3. The drawings, specifications and other documents designated in the Proposal will also be considered a part thereof whether attached or not.
4. When quantities for individual items of work are listed in the Proposal for which respective unit prices are asked, said quantities are estimated or approximate and are to be used by DHHL only for the purpose of comparing on a uniform basis bids offered for the work. DHHL does not, expressly or by implication agree that the actual quantity of work will correspond therewith.
5. Earthwork quantities shown on plans are for permit purposes only and shall not be used by the contractor for bidding purposes. The contractor shall determine his own quantities for the work and base his bid accordingly.
6. On unit price bids, payment will be made only for the actual number of units incorporated into the finished project at the unit price bid, subject to DHHL Construction General Conditions (CGC), Section 4.7, VARIATIONS IN ESTIMATED QUANTITIES.
7. The Bidder's proposal must be submitted on the proposal form furnished by DHHL. The Bidder's Offer/Bid must be prepared in full accordance with the instructions herein. The Bidder must state, both in words and numerals, the lump sum price or total sum bid at which the work contemplated is proposed to be done. These prices must be written in ink or typed. In case of a discrepancy between the prices written in words and those written in figures, the words shall govern over the figures. The Bidder shall sign the Proposal in the spaces provided with ink.

8. If the Proposal is made by an individual, the person's name and post office address must be shown in the space provided. If made by a partnership, the name and post office address of each member of the partnership must be shown and the Proposal signed by all partners or evidence in the form of a partnership agreement must be submitted showing the authority of the partner to enter, on behalf of said partnership, into contract with the Department. If made by a corporation the Proposal must show the name, title and business address of the president, secretary and treasurer and also evidence in the form of a Corporate Resolution must be submitted showing the authority of the particular corporate representative to enter on behalf of said corporation into contract with DHHL. If made by a joint-venture the name and post office address of each member of the individual firm, partnership or corporation comprising the joint-venture must be shown with other pertinent information required of individuals, partnerships or corporations as the case may be. The Proposal must be signed by all parties to the joint-venture or evidence in the form of a Joint-Venture Agreement must be submitted showing the authority of the joint-venture's representative to enter on behalf of said joint-venture into contract with the Department. If made by a Limited Liability Corporation (LLC), the Proposal must identify all of its members and show the authority of its member to enter on behalf of said LLC.
9. Pursuant to the requirements of Section 103D-302, HRS, each Bidder shall include in its bid the name of each person or firm to be engaged by the Bidder on the project as joint contractor or subcontractor indicating also the nature and scope of work to be performed by such joint contractor and/or subcontractor and their respective contractor's license number. A joint contractor or subcontractor performing less than or equal to one percent of the total bid amount is not required to be listed in the proposal. The Bidder shall be solely responsible for verifying that their joint contractor or subcontractor has the proper license at the time of the submitted bid.
10. It is understood and agreed that the Contractor shall make no claim for anticipated profit, loss of profit or unabsorbed field, branch or home office overhead and impact losses due to the exercise of the Departments right to eliminate entire portions of the work or to increase or decrease any or all the quantities shown in the proposal form.
11. By submitting an offer/bid on the Proposal, a Bidder accepts the language therein as its own.

E. BID SECURITY

1. Subject to the exceptions in Section 3-122-223(d) HAR, all lump sum bids of \$50,000 (fifty thousand dollars) and higher, or lump sum base bids including alternates of \$50,000 (fifty thousand dollars) and higher, that are not accompanied by bid security are non-responsive. Bid security shall be one of the following, in conformance with §3-122-222(a) HAR:
 - a. Surety bid bond underwritten by a company licensed to issue bonds in this State; 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. Company or personal checks are not considered "official checks" and will not be accepted.
 - (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 - Bidders 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 DHHL.
- 2. Unless otherwise stated, the bid security shall be in an amount equal to at least five percent (5%) of the lump sum bid or lump sum base bid including all additive alternates or in an amount required by the terms of the federal funding, where applicable.
 - 3. If the Bidder 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 Bidder 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.
 - 4. If the Bidder 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.
 - 5. In the case where the award will be made on a group or item basis, the amount of bid security shall be based on the total bid for all groups or items submitted.

6. Bidders are cautioned that surety bid bonds which place a limit in value to the difference between the bid amount and the next acceptable bid, such value not to exceed the purported amount of the bond, are not acceptable. Also, surety bid bonds which place a time limit on the right of the State to make claim other than allowed by statutes or the GENERAL CONDITIONS are not acceptable. Bidders are hereby notified that a surety bid bond containing such limitation(s) is not acceptable and a bid accompanied by such surety bid bond will be automatically rejected.

F. **BIDDER'S RESPONSIBILITY FOR EXAMINATION OF CONTRACT DOCUMENTS, SITE OF WORK, ETC.**

The Bidder shall carefully examine the project site and study all Contract Documents (as defined in the DHHL Construction General Conditions) and any documents or items referenced therein and contract and bond forms, therefore. The submission of an Offer/Bid shall be considered as a warranty that the Bidder has made such examination and is informed of the conditions to be encountered in performing the Work and of the requirements of the Contract Documents and any documents and items referenced therein, and contract and bonds.

G. **ADDENDA AND BID CLARIFICATIONS**

1. The terms and requirements of the bid documents (i.e. drawings, specifications and other bid and contract documents) cannot be changed prior to the bid opening except by a duly issued Addendum.
2. DHHL may alter, increase or decrease the scope of the work or the contract time, provisions and conditions by issuing a written addendum which sets forth such alterations, increase or decrease.
3. If a Bidder discovers what it considers to be a discrepancy, ambiguity, omission or doubt as to the meaning of drawings, specifications and any other bid or contract documents, the Bidder shall request in writing an interpretation from the HOPA.
4. If DHHL agrees that a discrepancy, ambiguity, omission or doubt exists, it shall issue a written addendum to the bid documents on the HiePRO website no later than eight (8) days before the bids are opened. DHHL may extend the bid opening to allow at least eight (8) days from the notification date of the last issued Addendum. Upon issuance of Addenda by DHHL on the HiePRO website, all Bidders shall be deemed to be on notice of the information therein whether or not the Addendum is actually received. Bidders are responsible to check the HiePRO website for any Addenda issued. All addenda so issued shall become part of the contract documents.
5. No claim for additional compensation and/or time for performance will be allowed if the Bidder discovered, or in the exercise of reasonable care, should have discovered a discrepancy, ambiguity, omission or doubt for which an interpretation was not requested.

H. SUBSTITUTION OF MATERIALS AND EQUIPMENT BEFORE BID OPENING

1. Brand names of materials or equipment are specified or shown on the drawings to indicate a quality, style, appearance or performance and not to limit competition. The Bidder shall base its bid on one of the specified brand names unless alternate brands are qualified as equal or better in an addendum. Qualifications of such proposed alternate brands shall be submitted in writing and addressed to the Project Manager. The face of the envelope containing the request must be clearly marked "SUBSTITUTION REQUEST". The request may be hand carried or mailed to DHHL, 91-5420 Kapolei Parkway, Kapolei, Hawaii, 96707. In either case, the written request must be received by DHHL no later than fourteen (14) days before the bid opening date and time specified in the Notice to Bidders. The written request will be time stamped by DHHL. For the purpose of this section, the time designated by the time stamping device in DHHL shall be official. If the written request is hand carried, the bearer is responsible to ensure that the request is time stamped by DHHL.
2. Submit three (3) sets of the written request, technical brochures, and a statement of variances.
3. A statement of variances must list all features of the proposed substitution which differ from the drawings, specifications and/or product(s) specified and must further certify that the substitution has no other variant features. The brochure and information submitted shall be clearly marked showing make, model, size, options, etc., and must include sufficient evidence to evaluate each feature listed as a variance. A request will be denied if submitted without sufficient evidence. If after installing the substituted product, an unlisted variance is discovered, Contractor shall immediately replace the product with a specified product at no cost to the Department.
4. Any substitution request not complying with the above requirements will be denied. Substitution requests sent to other agencies and received by Project Manager after the deadline above will be denied.
5. An addendum shall be issued to inform all prospective Bidders of any accepted substitution.

I. DELIVERY OF PROPOSALS.

The entire proposal shall be submitted through HiePRO as indicated in the Notice to Bidders. Proposals which do not comply with this requirement may not be considered. Proposals will be received up to the time fixed in the Notice to Bidders. The time designated by the HiePRO system shall be official.

J. WITHDRAWAL OR REVISION OF PROPOSAL.

Proposal may be modified prior to the deadline to submit through the HiePRO system.

K. PUBLIC OPENING OF PROPOSALS.

Proposals will be opened at the time indicated in the Notice to Bidders, and results shared through the HiePRO system. There will be no physical bid opening.

L. DISQUALIFICATION OF BIDDERS. Any one or more of the following causes will be considered as sufficient for the disqualification of a Bidder and the rejection of its proposal or proposals:

1. Non-compliance with Section I.A. QUALIFICATION OF BIDDERS;
2. Evidence of collusion among Bidders;
3. Lack of responsibility and cooperation as shown by past work such as failing to complete all of the requirements to close the project within a reasonable time or engaging in a pattern of unreasonable or frivolous claims for extra compensation;
4. Being in arrears on existing contracts with the State of Hawaii, or having defaulted on a previous contract with the State of Hawaii;
5. Lack of proper equipment and/or sufficient experience to perform the work contemplated, as revealed by the Standard Qualification Questionnaire and Financial Statement for Bidders;
6. No contractor's license or a contractor's license which does not cover type of work contemplated;
7. More than one proposal for the same work from an individual, firm, partnership, corporation or joint venture under the same or different name;
8. Delivery of bids after the deadline specified in the advertisement calling for bids;
9. Failure to pay, or satisfactorily settle, all bills overdue for labor and materials of former contracts in force at the time of issuance of proposal forms; and/or
10. Debarment or suspension pursuant to the provisions of Chapters 103D, 104 and 444, HRS.

M. PROTESTS

1. Protests shall be governed by Section 103D-701, HRS, and its implementing rules set forth in Title 3, Chapter 126, Subchapter 1, HAR.
2. The Chairman is the Department's Head of Procurement Agency (HOPA), to whom protests shall be addressed unless specified otherwise in the solicitation.

N. **WRONGFUL REFUSAL TO ACCEPT A BID.**

In the event the HOPA, or designee, for any reason, wrongfully refuses to accept what would otherwise be a responsive and responsible lowest bid, the exclusive remedy for such lowest Bidder shall be the recovery of the reasonable actual costs of preparing the bid. No other Bidder shall have any claim for damages.

II. **AWARD AND EXECUTION OF CONTRACT**

A. **CONSIDERATION OF PROPOSALS; CANCELLATION.**

After the proposals are opened, the figures will be extended and/or totaled in accordance with the bid prices of the acceptable proposals and the totals will be compared and the results of such comparison shall be made public.

In the event of a tie bid, the low Bidder shall be determined in accordance with Section 3-122-34 HAR.

In the comparison of bids, words written in the proposals will govern over figures and unit prices will govern over totals.

Until the award of the contract, DHHL may cancel the solicitation, reject any and all bids/proposals in whole or part and may waive any defects or technicalities whenever such action is deemed to be in the best interest of DHHL.

B. **IRREGULAR PROPOSALS.**

Proposals will be considered irregular and may be rejected for the following reasons:

1. If the proposal is unsigned.
2. If bid security is not in accordance with Section I.E. BID SECURITY.
3. If proposal is on a form other than that furnished by the Department; or if the form is altered or any part thereof detached.
4. If the proposal shows any non-compliance with applicable law, alteration of form, additions not called for, conditional bids, incomplete bids, non-initialed erasures, other defects, or if the prices are obviously unbalanced.
5. If the Bidder adds any provisions reserving the right to accept or reject an award.
6. If the Bidder adds any provisions reserving the right to enter into a contract pursuant to an award.
7. When a proposal is signed by an officer or officers of a corporation and a currently certified corporate resolution authorizing such signer(s) to submit such proposal is not submitted with the proposal or when the proposal is signed by an agent other than the officer or officers of a corporation or a member of a partnership and a power of attorney is not submitted with the proposal.

8. Where there is an incomplete or ambiguous listing of joint contractors and/or subcontractors the proposal may be rejected. All work which is not listed as being performed by joint contractors and/or subcontractors must be performed by the Bidder with its own employees. Additions to the list of joint contractors or subcontractors will not be allowed. Whenever there is a doubt as to the completeness of the list, the Bidder will be required to submit within five (5) working days, a written confirmation that the work in question will be performed with its own work force. Whenever there is more than one joint contractor and/or subcontractor listed for the same item of work, the Bidder will be required to either confirm in writing within five (5) working days that all joint contractors or subcontractors listed will actually be engaged on the project or obtain within five (5) working days written releases from those joint contractors and/or subcontractors who will not be engaged.
9. If in the opinion of the HOPA, the Bidder and/or its listed subcontractors do not have the contractor's licenses or combination of contractor's licenses necessary to complete all of the work.

C. CORRECTION OF BIDS AND WITHDRAWAL OF BIDS (§3-122-31 HAR)

1. Corrections to bids after bid openings but prior to award may be made under the following conditions:
 - (a) If the mistake is attributable to an arithmetical error, the HOPA shall so correct the mistake. In case of error in extension of bid price, the unit price shall govern.
 - (b) If the mistake is a minor informality which shall not affect price, quantity, quality, delivery, or contractual conditions, the Bidder shall request correction by submitting proof of evidentiary value which demonstrates that a mistake was made. The HOPA shall prepare a written approval or denial in response to this request. Examples of such mistakes include:
 - (1) Typographical errors;
 - (2) Transposition errors;
 - (3) Failure of a Bidder to sign the bid, but only if the unsigned bid is accompanied by other material indicating the Bidder's intent to be bound.
 - (c) For reasons not allowable under Subsections II.C.1.(a) and II.C.1.(b) when the HOPA determines that the correction or waiver of an obvious mistake is in the best interest of DHHL or is warranted for the fair treatment of other Bidders.

2. Withdrawal of bids after bid opening but prior to award may be made when the bid contains a mistake attributable to an obvious error which affects price, quantity, quality, delivery, or contractual conditions, and the Bidder requests withdrawal by submitting proof of evidentiary value which demonstrates that a mistake was made. The HOPA shall prepare a written approval or denial in response to this request.
3. Correction or withdrawal of bids after award is not permissible except in response to a written withdrawal or correction request by the Contractor, and the HOPA makes a written determination that DHHL's procurement practices and policies would not be materially affected by such correction or withdrawal.

D. AWARD OF CONTRACT

1. The award of contract, if it be awarded, will be made within one hundred twenty (120) consecutive calendar days after the opening of the proposals to the lowest responsible and responsive Bidder (including the alternate or alternates which may be selected by the HOPA in the case of alternate bids) whose proposal complies with all the requirements prescribed, but in no case will an award be made until all necessary investigations are made. The successful Bidder will be notified, by letter mailed to the address shown on the proposal, that its bid has been accepted and that it has been awarded the contract.
2. If the contract is not awarded within the one hundred twenty (120) days noted in Subsection II.D.1 above, DHHL may request the successful Bidder to extend the time for the acceptance of its bid. The Bidder may reject such a request without penalty; and in such case, DHHL may at its sole discretion make a similar offer to the next lowest responsive and responsible Bidder and so on until a bid is duly accepted or until the DHHL elects to stop making such requests.
3. No contract will be awarded to any person or firm suspended or debarred under the provisions of Chapters 103D, 104 and Chapter 444, HRS.
4. The contract will be drawn on the forms furnished by the HOPA. The contract will not be binding on DHHL until all required signatures have been affixed thereto and written certification that funds are available for the work has been made.
5. Prior to award of the contract, DHHL shall verify compliance with Sections 103D-310 and 103D-328 HRS via Hawaii Compliance Express (HCE). Firms who decline to participate in HCE shall submit paper certificates in a timely manner, as prescribed by the HOPA, or its designee, or risk determination that the bid is non-responsive.

E. CANCELLATION OF AWARD.

After procurement posting of award of contract, DHHL reserves the right to cancel the award of any contract at any time before the execution of said contract by all parties. The exclusive remedy to the awardee for such cancellation shall be payment of the reasonable bid preparation costs and the reimbursement of any direct expenses incurred as directed in the Notice of Award. Such cancellation will not incur any liability by DHHL to any other Bidder.

F. SUBMITTAL OF BID SECURITY.

Bid securities shall be scanned and uploaded with offer to HiePRO. The four (4) lowest Bidders shall mail in their bid security, following the opening and checking of the proposals. The retained bid securities of the four lowest Bidders will be returned within five (5) working days following the complete execution of the contract.

G. REQUIREMENT OF PERFORMANCE AND PAYMENT BONDS

1. Performance bond and Payment Bond shall be required for contracts \$50,000 (fifty thousand dollars) and higher. At the time of the execution of the contract, the successful Bidder shall file good and sufficient performance bond and payment bond on the form furnished by the Department, **each** in an amount equal to one hundred percent (100%) of the amount of the contract price unless otherwise stated in the solicitation of bids. Bidders may use its own form, which complies with similar content in DHHL's bond forms.

Acceptable performance and payment bonds shall be limited to the following:

- (a) Surety bonds underwritten by a company licensed to issue bonds in this State and listed on the U.S. Department of the Treasury's Listing of Certified Companies:

https://www.fiscal.treasury.gov/fsreports/ref/suretyBnd/c570_a-z.htm; or

- (b) A 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 Department by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.

- (1) These instruments may be utilized only a maximum of \$100,000 (one hundred thousand dollars).

- (2) 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 acceptable.

2. If the Contractor fails to deliver the required performance and payment bonds, the Contractor's award shall be canceled; DHHL shall have the remedies provided below under Section II., I. FAILURE TO EXECUTE THE CONTRACT and award of the contract shall be made to the next lowest responsible and responsive Bidder.

H. EXECUTION OF THE CONTRACT

1. The contract shall be signed by the successful Bidder and returned, together with satisfactory performance and payment bonds, within ten (10) calendar days after the Bidder is awarded the contract for execution or within such further time as the HOPA may allow. No proposal or contract shall be considered binding upon the DHHL until the contract has been fully and properly executed by all parties thereto. For projects funded with State Capital Improvement Project (CIP) funds, the HOPA shall also endorse thereon its certificate, as required by Section 103D-309, HRS, that there is an available unexpended appropriation or balance of an appropriation over and above all outstanding contracts sufficient to cover DHHL's amount required by such contract.
2. On any individual award totaling less than \$25,000 (twenty-five thousand dollars), the DHHL reserves the right to execute the contract by the issuance of a Purchase Order. Issuance of a Purchase Order shall result in a binding contract between the parties without further action by DHHL. The issuance of a Purchase Order shall not be deemed a waiver of the General Conditions, and Contract Document requirements.

I. FAILURE TO EXECUTE THE CONTRACT

1. Before the Award. If a low Bidder without legal justification withdraws its bid after the opening of bids but before the award of the contract, DHHL shall be entitled to retain as damages the amount established as bid security, and may take all appropriate actions to recover the damages sum from the property or third-party obligations deposited as bid security.
2. After the Award. If the Bidder to which a contract is awarded shall fail or neglect to enter into the contract and to furnish satisfactory security within ten (10) calendar days after such award or within such further time as the HOPA may allow, DHHL shall be entitled to recover from such Bidder its actual damages, including but not limited to the difference between the bid and the next lowest responsive bid, as well as personnel and administrative costs, consulting and legal fees and other expenses incurred in arranging a contract with the next low responsible and responsive Bidder or calling for new bids. DHHL may apply all or part of the amount of the bid security to reduce its damages. If upon determination by DHHL that the bid security exceeds the amount of its damages, it shall release or return the excess to the Bidder who provided same.
3. HOPA's Options. Upon a withdrawal of the lowest responsive bid, or upon a refusal or failure of the lowest Bidder to execute the contract, the Chairman may thereupon award the contract to the next lowest responsible and responsive Bidder or may call for new bids, whichever method the HOPA may deem to be in the best interests of DHHL.

J. PRE-CONSTRUCTION CONFERENCE

A pre-construction conference will be conducted prior to the issuance of a Notice to Proceed.

IFB Checklist for Bidders
IFB-22- HHL-011
2312 and 2316 Kapahu Street Structure Stabilization

Items required prior to Bid Opening:

- ☐ Notice of Intention to Bid, no later than 2:00 p.m., September 1, 2021.
- ☐ SPO Form 21 (Standard Qualification Questionnaire), submitted to DHHL, Land Development Division by 2:00 p.m., September 1, 2021.
- ☐ Questions due on September 6, 2021.

Items required with Bid Offer via HlePRO:

- ☐ Bid Offer Form (included with this IFB)
The total sum bid amount must be typed or clearly written in both numbers and words in the appropriate space on the Bid Offer Form. Illegible writing on any portion of the Bid Offer Form, except for the signee's signature, may be grounds for considering a Bid "non-responsive".
- ☐ Corporate Resolution (Indicating who is authorized to sign bid documents and contracts), Or other authorizations required for partnerships, joint ventures, and Limited Liability Corporations.
- ☐ Bid Security (Surety companies executing bonds must appear on the U.S. Department of the Treasury's Listing of Certified Companies:
https://www.fiscal.treasury.gov/fsreports/ref/suretyBnd/c570_a-z.htm)
- ☐ Form 1 – Certification of Bidder's Participation in Approved Apprenticeship Program Under Act 17 (Apprenticeship Agreement Preference, if any).

**STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS**

BID OFFER FORM FOR

PAPAKOLEA 2312 AND 2316 KAPAHU ST. STRUCTURE STABILIZATION

HONOLULU, OAHU, HAWAII

**TAX MAP KEYS:
(1) 2-4-043:033, (1) 2-4-043:034**

IFB No.: IFB-22-HHL-011

Chairman
Hawaiian Homes Commission
Department of Hawaiian Home Lands
91-5420 Kapolei Parkway
Kapolei, Hawai'i 96707

The undersigned has carefully examined, read, and understands the terms and conditions in the Plans and Specifications, Special Conditions attached hereto, DHHL Construction General Conditions, and General Conditions specified in the Invitation for Bids (IFB) No. IFB-22-HHL-011. The State of Hawai'i's (State) Contract for Goods and Services Based on Competitive Sealed Bids AG-003 Rev. 6/22/2009, AG-008 103D General Conditions, are included by reference and made part hereof and available upon written request to the Procurement Officer. The undersigned hereby submits the following offer to perform the work for IFB No. IFB-22-HHL-011 as specified herein, all in accordance with the true intent and meaning thereof.

The undersigned understands and agrees that:

1. The State reserves the right to reject any and all offers and to waive any items that are defective when, in the State's opinion, such rejection or waiver will be in the best interest of the State. A solicitation may be rejected in whole or part when in the best interest of the State.
2. If awarded the contract, all services will be in accordance with Hawai'i Revised Statutes (HRS) § 103-55.5.
3. In submitting this offer, the Offeror is not in violation of HRS Chapter 84, concerning prohibited State contracts.
4. By submitting this offer, the Offeror certifies that the offer was independently arrived at without collusion and the Offeror did not participate in any practices to restrict competition.
5. It is understood that the failure to receive any addendum shall not relieve the Offeror from any obligation under this IFB.

Date: _____

The undersigned represents that it is: **(Check ✓ one only)**

- ☐ A **Hawai'i business** incorporated or organized under the laws of the State of Hawai'i; **OR**
☐ A **Compliant Non-Hawai'i business** not incorporated or organized under the laws of the State of Hawai'i, is or shall be registered at the State of Hawai'i Department of Commerce and Consumer Affairs Business Registration Division (DCCA-BREG) to do business in the State of Hawai'i.

State of incorporation: _____

Offeror is:

☐ Sole Proprietor ☐ Partnership ☐ Corporation ☐ Joint Venture ☐ Other: _____

Federal ID No.: _____

Hawai'i General Excise Tax ID No.: _____

Telephone No.: _____

Fax No.: _____

E-Mail Address.: _____

Payment address (other than street address below)

(Street Address, City, State, Zip Code)

Business address

(Street Address, City, State, Zip Code)

Respectfully submitted:

Authorized (Original) Signature

Name and Title (Please Type or Print)

* _____
Exact Legal Name of Company (Offeror)

*If Offeror shown above 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:

The following bid is hereby submitted for the Papakolea 2312 and 2316 Kapahu St. Structure Stabilization to the Department of Hawaiian Home Lands.

DEMOLITION AND RESTORATION

1. L.S. Clearing and grubbing for site preparation.
Lump Sum \$ _____

2. L.S. Demolition of concrete driveway aprons at 2312 and 2316 Kapahu St.
Lump Sum \$ _____

3. L.S. Demolition of concrete walkway at 2312 and 2316 Kapahu St.
Lump Sum \$ _____

4. L.S. Alternative construction access and restoration, including demolition/removal and restoration of sidewalk, curb, gutter, curb ramp, wall, and vegetation (at TMK: 2-4-034:008).
Lump Sum \$ _____

GRADING

5. L.S. Excavation/embankment for downspouts and sidewalks.
Lump Sum \$ _____

ON-SITE DRAIN

6. L.S. Install 4" KlassikDrain K100 trench drain and 4" pipe outlet through weep hole in CMU in place complete.
Lump Sum \$ _____

7. 2 Extend downspouts from roof gutter to discharge horizontally 5' from building foundation/wall, at grade. Provide splash block.
Per Each \$ _____

CONCRETE

8. L.S. Concrete repair at 2312 and 2316 Kapahu St. walkways.

Lump Sum \$ _____

9. L.S. New concrete sidewalks, including subgrade preparation, base and concrete in place complete.

Lump Sum \$ _____

10. L.S. Replace concrete driveway aprons at 2312 and 2316 Kapahu St.

Lump Sum \$ _____

BMPs

11. L.S. Install filter socks.

Lump Sum \$ _____

12. L.S. Install temporary silt fences.

Lump Sum \$ _____

13. L.S. Install temporary curb inlet protection.

Lump Sum \$ _____

14. L.S. Install stabilized construction entrance.

Lump Sum \$ _____

15. L.S. Provide dust control.

Lump Sum \$ _____

TRAFFIC CONTROL

16. L.S. Provide traffic control.

Lump Sum \$ _____

LANDSCAPING

17. L.S. Landscaping/gravel restoration for areas disturbed by construction work.

Lump Sum \$ _____

STRUCTURAL

18. L.S. Mobilization and Demobilization

Lump Sum \$ _____

19. C.Y. Excavation (7 C.Y.)

Unit Price \$ _____

20. L.F. Pile Installation (510 L.F.)

Unit Price \$ _____

21. C.Y. Concrete (7 C.Y.)

Unit Price \$ _____

22. L.S. Floor Surveys to Document Acceptance of Tolerance and Correction of Floor Level

Lump Sum \$ _____

23. 12 Floor Opening

Per Each \$ _____

24. 12 Floor Restoration

Per Each \$ _____

TOTAL BID AMOUNT = _____

_____ Dollars (\$ _____).

The prices herein for the above items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary, inclusive of general excise tax to install or to construct these items in place complete and in accordance with the plans and specifications

contained in this IFB.

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before **Sixty (60)** calendar days after receiving written Notice to Proceed, subject to extensions, as may be granted.

APPRENTICESHIP AGREEMENT PREFERENCE

Hawai'i 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% bid adjustment applied to the Bidder's amount for bidders 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 Bidder shall:

1. Be a party to an apprenticeship agreement registered with the DLIR at the time the bid is made for each apprenticeable trade the Bidder will employ to construct the public works project for which the bid 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 Bidder is not required to have apprentices in its employ at the time the bid is submitted to qualify for the preference.
 - d. If a Bidder'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 Bidder 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 Bidder 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 Bidder'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 Bidder only employs carpenters to perform work in the carpentry and labor trades, then the Bidder 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 Bidder employs both

carpenters and laborers, then the Bidder will not qualify for the preference if the Bidder is only a party to the carpenter's apprenticeship agreement and not the laborer's apprenticeship agreement.

2. State the trades the Bidder will employ to perform the work;
3. For each trade to be employed to perform the work, the Bidder 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 Bidder 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 Bidder 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://labor.hawaii.gov/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 Bidder will not qualify for the preference.

If the Bidder 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 Bidder's total bid amount by five per cent (5%) for evaluation purposes.

Should the Bidder qualify for other preferences, all applicable preferences shall be applied to the bid amount.

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

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

<u>LIST OF APPRENTICEABLE TRADES TO BE EMPLOYED</u>

<u>TRADE</u>	<u>APPRENTICESHIP PROGRAM SPONSOR</u>

(Add additional sheets if necessary)

ALL JOINT CONTRACTORS OR SUBCONTRACTORS TO BE ENGAGED ON THIS PROJECT

The Bidder certifies that the following is a complete listing of all joint Contractors or Subcontractors covered under Chapter 444, Hawai‘i Revised Statutes, who will be engaged by the Bidder on this project to perform the nature and scope of work indicated pursuant to Section 103D-302, Hawai‘i Revised Statutes, and understands that failure to comply with this requirement shall be just cause for rejection of the bid.

The Bidder further understands that only those joint Contractors or Subcontractors listed shall be allowed to perform work on this project and that all other work necessary shall be performed by the Bidder with his own employees. If no joint Contractor or Subcontractor is listed, it shall be construed that all of the work shall be performed by the Bidder with his own employees.

The Bidders must be sure that they possess and that the Subcontractors listed in the bid possess all the necessary licenses needed to perform the work for this project. The Bidder shall be solely responsible for assuring that all the specialty licenses required to perform the work are covered in his bid.

The Bidder shall include the license number of the joint Contractors or Subcontractors listed below. Failure to provide the correct names and license numbers as registered with the Contractor’s Licensing Board may cause rejection of the bid submitted.

Complete Firm Name of Joint Contractor or Subcontractor	License Number	Hawai‘i Tax ID Number	Nature and Scope of Work to be Performed

(Add additional sheets if necessary)

METHOD OF AWARD

The Bidder is required to bid on the entire project. The low Bidder shall be determined by the procedures outlined in items 1) through 4) below:

1. Prior to opening of bids, the State will determine the amount of funds available for the project. This amount will be designated the "control amount". The control amount shall be announced at, and prior to the opening of bids.
2. The Base Bid and Alternate, if any, of each Bidder will be adjusted to reflect the applicable preferences in accordance with Chapter 103D, HRS. The Alternate, if any, will then be added to the Base Bid and compared with the control amount.
3. The low Bidder shall be the Bidder having the lowest aggregate amount, within the control amount (after application of the various preferences), for the Base Bid plus the Alternate, if any.
4. If adding the Alternate, if any, would make the aggregate amount exceed the control amount for all Bidders, the low Bidder shall be the Bidder having the lowest Base Bid after application of the various preferences.

It is further understood and agreed that:

5. The Chairman reserves the right to reject any and/or all bids and waive any defects when, in his opinion, such rejection or waiver will be in the best interest of the State.
6. After determining the low Bidder, an award may be made either on the amount of the Base Bid alone, or including the Alternate (exclusive of preferences), if:
 - a. It is in the best interest of the State;
 - b. Funds are available at time of the award; and
 - c. The combination of the Base Bid plus Alternate does not change the apparent low Bidder.
7. In the event the Base Bid for all Bidders exceed the control amount, the Chairman reserves the right to negotiate with the lowest responsible and responsive Bidder to award a contract within available funds.
8. In the event the award is made for the Base Bid alone, the Chairman reserves the right to amend the contract at a later date to include the Alternate should funds subsequently become available.

OTHER CONDITIONS

1. The liquidated damages per working day for failure to complete the work on time have been determined and are noted in the Special Conditions of the sample contract.
2. By submitting this bid, the undersigned is declaring that his firm has not been assisted or represented on this matter by an individual who has, in a State capacity, been involved in the subject matter of this contract in the past one (1) year.
3. By submitting this bid, the undersigned is declaring that Bidder's own organization will perform at least 20% of the contractor's work. 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.
4. Upon the acceptance of the bid by the Chairman, the undersigned must enter into and execute a contract for the same and furnish a Performance and Payment Bond, as required by law. These bonds shall conform to the provisions of Sections 103D-324 and 325, Hawai'i Revised Statutes, and any law applicable thereto.
5. The quantities given herewith are approximate only and are subject to increase or decrease.
6. The estimated quantities shown for items for which a UNIT PRICE is asked in this bid are only for the purpose of comparing on a uniform basis bids offered for the work under this contract. No claim shall be filed for anticipated profit or loss because of any difference between the quantities of the various classes of work done or the materials and equipment actually installed and the said estimated quantities. Payment on UNIT PRICE items will be made only for the actual number of units incorporated into the finished project at the contract UNIT PRICE.
7. If the product of the UNIT PRICE BID and the number of units does not equal the total amount stated by the undersigned in the Bid for any item, it will be assumed that the error was made in computing the total amount. For the purpose of determining the lowest Bidder, the stated UNIT PRICE alone will be considered as representing the Bidder's intention and the total amount bid on such items shall be considered to be the amount arrived at by multiplying the UNIT PRICE by the number of units.
8. Certification for Safety and Health Programs for Bids in Excess of \$100,000. In accordance with Sections 103D-327 and 396-18, Hawai'i Revised Statutes, by submitting this bid, the undersigned certifies that his firm will have a written Safety and Health Plan for this project that will be available and implemented by the Notice to Proceed date of this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational, Safety and Health Division.

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

Receipt of the following addenda issued by the Department is acknowledged by the date(s) of receipt indicated below:

	Date		Date
Addendum No. 1	_____	Addendum No. 5	_____
Addendum No. 2	_____	Addendum No. 6	_____
Addendum No. 3	_____	Addendum No. 7	_____
Addendum No. 4	_____	Addendum No. 8	_____

It is understood that failure to receive any such addendum shall not relieve the Contractor from any obligation under this IFB as submitted.

Bid Security in the amount of: _____

_____ DOLLARS (\$_____)

as required by law, is enclosed herewith in the form of:

<input type="checkbox"/> Surety Bond (*1)	<input type="checkbox"/> Official Check (*3)
<input type="checkbox"/> Legal Tender (*2)	<input type="checkbox"/> Share Certificate (*3)
<input type="checkbox"/> Cashier's Check (*3)	<input type="checkbox"/> Teller's Check (*3)
<input type="checkbox"/> Certificate of Deposit (*3)	<input type="checkbox"/> Treasurer's Check (*3)
<input type="checkbox"/> Certified Check (*3)	

Respectfully submitted,

Name of Company, Joint Venture or Partnership

License No.

By _____
Signature (*4)

Title: _____

Date: _____

Address: _____

Telephone No.: _____

(IF A CORPORATION, AFFIX CORPORATE SEAL TO SIGNATURE, BE SURE TO FILL IN ATTACHED LIST OF SUBCONTRACTORS. THIS BID FORM MAY NOT BE ALTERED AND BIDDERS MAY NOT QUALIFY OR CONDITION THEIR BIDS IN ANY WAY.)

PLEASE FILL OUT THE ATTACHED CERTIFICATE OF RESOLUTION GIVING EVIDENCE OF THE AUTHORITY OF THIS OFFICER TO SUBMIT BIDS ON BEHALF OF THE COMPANY.

NOTES:

- *1. Surety bond underwritten by a company licensed to issue bonds in this State;
- *2. Legal tender; or
- *3. A certificate of deposit; share certificate; or cashier's, treasurer's, teller's, or official 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 of the National Credit Union Administration.
 - a. These instruments may be utilized only to a maximum of \$100,000.

- b. If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.
- *4. Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.
- *5. Fill in all blank spaces with information asked for or bid may be invalidated. BID MUST BE INTACT; MISSING PAGES MAY INVALIDATE YOUR BID.

CERTIFICATE OF RESOLUTION

I, _____, Secretary of _____, a Hawai'i Corporation, do hereby certify that the following is a full, true and correct copy of a resolution duly adopted by the Board of Directors of said Corporation, at its meeting duly called and held at the office of the Corporation _____, Hawai'i, on _____ day of _____, 20_____, at which a quorum was present and acting throughout; and that said resolution has not been modified, amended or rescinded and continues in full force and effect.

“RESOLVED that any individual at the time holding the position(s) of _____, be, and each of them hereby is, authorized to execute on behalf of the Corporation any bid, proposal or contract for the sale or rental of the products of the Corporation or for the services to be performed by the Corporation and to execute any bond required by any such bid, proposal or contract with the United States Government or the State of Hawai'i or the City and County of Honolulu, or any County of Municipal Government of said State, or any department or subdivision of any of them.”

IN WITNESS THEREOF, I have hereunto set my hand and affixed the corporate seal of said

_____ this _____ day of _____, 20____.

Secretary

END OF BID

Requirements of Chapter 104, HRS

Wages and Hours of Employees on Public Works Law

Chapter 104, HRS, applies to every public works construction project over \$2,000, regardless of the method of procurement or financing (purchase order, voucher, bid, contract, lease arrangement, warranty, SPRB).

Rate of Wages for Laborers and Mechanics

- Minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the Director of Labor and Industrial Relations and published in wage rate schedules, shall be paid to the various classes of laborers and mechanics working on the job site. [§104-2(a), (b), Hawaii Revised Statutes (HRS)]
- If the Director of Labor determines that prevailing wages have increased during the performance of a public works contract, the rate of pay of laborers and mechanics shall be raised accordingly. [§104-2(a) and (b), HRS; §12-22-3(d) Hawaii Administrative Rules (HAR)]

Overtime

- Laborers and mechanics working on a Saturday, Sunday, or a legal holiday of the State or more than eight hours a day on any other day shall be paid overtime compensation at not less than one and one-half times the basic hourly rate plus the cost of fringe benefits for all hours worked. If the Director of Labor determines that a prevailing wage is defined by a collective bargaining agreement, the overtime compensation shall be at the rates set by the applicable collective bargaining agreement [§§104-1, 104-2(c), HRS]

Weekly Pay

- Laborers and mechanics employed on the job site shall be paid their full wages at least once a week, without deduction or rebate, except for legal deductions, within five working days after the cutoff date. [§104-2(d), HRS]

Posting of Wage Rate Schedules

- Wage rate schedules with the notes for prevailing wages and special overtime rates, shall be posted by the contractor in a prominent and easily accessible place at the job site. A copy of the entire wage rate schedule shall be given to each laborer and mechanic employed under the contract, except when the employee is covered by a collective bargaining agreement. [§104-2(d), HRS]

Withholding of Accrued Payments

- If necessary, the contracting agency may withhold accrued payments to the contractor to pay to laborers and mechanics employed by the contractor or subcontractor on the job site any difference between the wages required by the public works contract or specifications and the wages received. [§104-2(e), HRS]

Certified Weekly Payrolls and Payroll Records

- A certified copy of all payrolls shall be submitted weekly to the contracting agency.
- The contractor is responsible for the submission of certified copies of the payrolls of all subcontractors. The certification shall affirm that the payrolls are correct and complete, that the wage rates listed are not less than the applicable rates contained in the applicable wage rate schedule, and that the classifications for each laborer or mechanic conform with the work the laborer or mechanic performed. [§104-3(a), HRS]
- Payroll records shall be maintained by the contractor and subcontractors for three years after completion of construction. The records shall contain: [HAR §12-22-10]
 - the name and home address of each employee
 - the employee's correct classification
 - rate of pay (basic hourly rate + fringe benefits)
 - itemized list of fringe benefits paid
 - daily and weekly hours worked
 - weekly straight time and overtime earnings
 - amount and type of deductions
 - actual wages paid
 - date of payment
- Records shall be made available for inspection by the contracting agency, the Department of Labor and Industrial Relations, and any of its authorized representatives, who may also interview employees during working hours on the job. [§104-3(b), HRS]

Termination of Work on Failure to Pay Wages

- If the contracting agency finds that any laborer or mechanic employed on the job site by the contractor or any subcontractor has not been paid prevailing wages or overtime, the contracting agency may, by written notice to the contractor, terminate the contractor's or subcontractor's right to proceed with the work or with the part of the work in which the required wages or overtime compensation have not been paid. The contracting agency may complete this work by contract or otherwise, and the contractor or contractor's sureties shall be liable to the contracting agency for any excess costs incurred. [§104-4, HRS]

Apprentices and Trainees

- In order to be paid apprentice or trainee rates, apprentices and trainees must be parties to an agreement either registered with or recognized as a USDOL nationally approved apprenticeship program by the Department of Labor and Industrial Relations, Workforce Development Division, (808) 586-8877. [§12-22-6(1), HAR]
- The number of apprentices or trainees on any public work in relation to the number of journeyworkers in the same craft classification as the apprentices or trainees employed by the same employer on the same public work may not exceed the ratio allowed under the apprenticeship or trainee standards registered with or recognized by the Department of Labor and Industrial Relations. A registered or recognized apprentice receiving the journeyworker rate will not be considered a journeyworker for the purpose of meeting the ratio requirement. [§12-22-6(2), HAR]

Enforcement

- To ensure compliance with the law, DLIR and the contracting agency will conduct investigations of contractors and subcontractors. If a contractor or subcontractor violates the law, the penalties are:
 - First Violation Equal to 25% of back wages found due or \$250 per offense up to \$2,500, whichever is greater.
 - Second Violation Equal to amount of back wages found due or \$500 for each offense up to \$5,000, whichever is greater.
 - Third Violation Equal to two times the amount of back wages found due or \$1,000 for each offense up to \$10,000, whichever is greater; and
Suspension from doing any new work on any public work of a governmental contracting agency for three years.
- A violation would be deemed a second violation if it occurs within two years of the **first notification of violation**, and a third violation if it occurs within three years of **the second notification of violation**.
- **Suspension:** For a first or second violation, the department shall immediately suspend a contractor who fails to pay wages or penalties until all wages and penalties are paid in full. For a third violation, the department shall penalize and suspend the contractor as described above, **except that if the contractor continues to violate the law, then the department shall immediately suspend the contractor for a mandatory three years. The contractor shall remain suspended until all wages and penalties are paid in full.** [§§104-24, 104-25]
- **Suspension:** Any contractor who fails to make payroll records accessible or provide requested information within 10 days, or fails to keep or falsifies any required record, shall be assessed a penalty including suspension as provided in Section 104-22(b) and 104-25(a)(3), HRS. [§104-3(c)]
- If any contractor interferes with or delays any investigation, the contracting agency shall withhold further payments until the delay has ceased. Interference or delay includes failure to provide requested records or information within ten days, failure to allow employees to be interviewed during working hours on the job, and falsification of payroll records. The department shall assess a penalty of \$10,000 per project, and \$1,000 per day thereafter, for interference or delay. [§104-22(b)]
- Failure by the contracting agency to include in the provisions of the contract or specifications the requirements of Chapter 104, HRS, relating to coverage and the payment of prevailing wages and overtime, is not a defense of the contractor or subcontractor for noncompliance with the requirements of this chapter. [§104-2(f)]

For additional information, visit the department's website at <http://labor.hawaii.gov/wsd> or contact any of the following DLIR offices:



Oahu (Wage Standards Division).....	(808) 586-8777
Hawaii Island	(808) 322-4808
Kauai	(808) 274-3351
Maui	(808) 243-5322

State of Hawai'i
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS
Princess Ruth Ke'elikolani Building
830 Punchbowl Street
Honolulu, Hawai'i 96813

February 15, 2021
WAGE RATE SCHEDULE BULLETIN NO. 499


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) 586-9005.

The next regular schedule will be issued on or about September 15, 2021.


ANNE EUSTAQUIO
Director



STATE OF HAWAII
DAVID Y. IGE, Governor

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS
ANNE EUSTAQUIO, Director
JOANN A. VIDINHAR, Deputy Director

RESEARCH AND STATISTICS OFFICE
JERI SATO, Acting Research & Statistics Officer

OPERATIONS MANAGEMENT INFORMATION STAFF
Mirasol Valdez, Acting Supervisor
Jarrett Ku, Research Statistician

In cooperation with:
WAGE STANDARDS DIVISION
SHERYL LEE, Administrator

WAGE RATE SCHEDULE BULLETIN NO. 499

Classification	Current			2021			2022			2023			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	
ASPHALT PAVING GROUP:	9/21/20												
Asphalt Concrete Material Transfer	\$80.32	\$46.45	\$33.87	-	-	-	-	-	-	-	-	-	13
Asphalt Raker	\$79.36	\$45.49	\$33.87	-	-	-	-	-	-	-	-	-	13
Asphalt Spreader Operator	\$80.84	\$46.97	\$33.87	-	-	-	-	-	-	-	-	-	13
Laborer, Hand Roller	\$76.59	\$42.72	\$33.87	-	-	-	-	-	-	-	-	-	13
Roller Operator (5 tons and under)	\$79.09	\$45.22	\$33.87	-	-	-	-	-	-	-	-	-	13
Roller Operator (over 5 tons)	\$80.52	\$46.65	\$33.87	-	-	-	-	-	-	-	-	-	13
Screed Person	\$80.32	\$46.45	\$33.87	-	-	-	-	-	-	-	-	-	13
EQUIPMENT OPERATOR:													
Combination Loader/Backhoe (over 3/4 cu. yd.)	\$79.36	\$45.49	\$33.87	-	-	-	-	-	-	-	-	-	13
Combination Loader/Backhoe (up to 3/4 cu. yd.)	\$78.38	\$44.51	\$33.87	-	-	-	-	-	-	-	-	-	13
Concrete saws and/or Grinder (self-propelled unit on streets, highways, airports and canals)	\$80.32	\$46.45	\$33.87	-	-	-	-	-	-	-	-	-	13
Grader, Soil Stabilizer, Cold Planer	\$81.15	\$47.28	\$33.87	-	-	-	-	-	-	-	-	-	13
Loader (2-1/2 cu. yds. and under)	\$80.32	\$46.45	\$33.87	-	-	-	-	-	-	-	-	-	13
Loader (over 2-1/2 cu. yds. to and including 5 cu. yds.)	\$80.64	\$46.77	\$33.87	-	-	-	-	-	-	-	-	-	13
TRUCK DRIVER:													
Assistant to Engineer	\$79.09	\$45.22	\$33.87	-	-	-	-	-	-	-	-	-	13
Oil Tanker (double), Hot Liquid Asphalt Tanker	\$80.64	\$46.77	\$33.87	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Semi-Dump, Asphalt Distributor	\$80.32	\$46.45	\$33.87	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$80.64	\$46.77	\$33.87	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (8 cu. yds. & under, water level)	\$79.36	\$45.49	\$33.87	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (over 8 cu. yds., water level)	\$79.67	\$45.80	\$33.87	-	-	-	-	-	-	-	-	-	13
Tractor Trailer (hauling equipment)	\$80.75	\$46.88	\$33.87	-	-	-	-	-	-	-	-	-	13
Utility, Flatbed	\$79.09	\$45.22	\$33.87	-	-	-	-	-	-	-	-	-	13
BOILERMAKER	2/17/20												
	\$67.58	\$36.29	\$31.29	-	-	-	-	-	-	-	-	-	13
CARPENTER:	9/21/20			8/30/21			9/5/22			9/4/23			
Carpenter; Patent Scaffold Erector (14 feet and over); Piledriver; Pneumatic Nailer	\$74.09	\$50.50	\$23.59	\$75.84	\$51.25	\$24.59	\$77.59	\$52.00	\$25.59	\$79.59	\$53.00	\$26.59	1,12,13
Millwright	\$74.34	\$50.75	\$23.59	\$76.09	\$51.50	\$24.59	\$77.84	\$52.25	\$25.59	\$79.84	\$53.25	\$26.59	1,12,13
Power Saw Operator (2 h.p. & above)	\$74.24	\$50.65	\$23.59	\$75.99	\$51.40	\$24.59	\$77.74	\$52.15	\$25.59	\$79.74	\$53.15	\$26.59	1,12,13
CEMENT FINISHER:	9/21/20			8/30/21			9/5/22			9/4/23			
Cement Finisher; Curb Setter; Precast Panel Setter; Manhole Builder	\$73.93	\$42.10	\$31.83	\$75.28	\$42.60	\$32.68	\$76.76	\$43.33	\$33.43	\$78.15	\$44.12	\$34.03	2,12,13
Trowel Machine Operator	\$74.08	\$42.25	\$31.83	\$75.43	\$42.75	\$32.68	\$76.91	\$43.48	\$33.43	\$78.30	\$44.27	\$34.03	2,12,13
* CHAIN-LINK FENCE ERECTOR	10/4/20			10/3/21			10/2/22			10/1/23			
	\$42.45	\$25.50	\$16.95	\$43.90	\$26.25	\$17.65	\$45.35	\$27.00	\$18.35	\$46.80	\$27.75	\$19.05	10,13

WAGE RATE SCHEDULE BULLETIN NO. 499

Classification	Current			2021			2022			2023			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	
CHLORINATOR	9/16/19												
	\$28.84	\$28.84	-	-	-	-	-	-	-	-	-	-	
DIVER:	9/21/20												
Diver (Aqua Lung) (Scuba) - Up to a depth of 30 feet	\$93.52	\$60.21	\$33.31	-	-	-	-	-	-	-	-	-	13
Diver (Aqua Lung) (Scuba) - Over a depth of 30 feet	\$102.89	\$69.58	\$33.31	-	-	-	-	-	-	-	-	-	13
Stand-By Diver (Aqua Lung) (Scuba)	\$84.14	\$50.83	\$33.31	-	-	-	-	-	-	-	-	-	13
Diver (Other than Aqua Lung)	\$102.89	\$69.58	\$33.31	-	-	-	-	-	-	-	-	-	3,13
Stand-By Diver (Other than Aqua Lung)	\$84.14	\$50.83	\$33.31	-	-	-	-	-	-	-	-	-	3,13
Tender (Other than Aqua Lung)	\$81.11	\$47.80	\$33.31	-	-	-	-	-	-	-	-	-	13
DRAPERY INSTALLER	9/16/19												
	\$33.11	\$31.00	\$2.11	-	-	-	-	-	-	-	-	-	
DRYWALL INSTALLER	9/21/20			8/30/21			9/5/22			9/4/23			
	\$74.34	\$50.75	\$23.59	\$76.09	\$51.50	\$24.59	\$77.84	\$52.25	\$25.59	\$79.84	\$53.25	\$26.59	12,13
* DRYWALL TAPERS/FINISHERS	1/3/21						1/2/22			1/1/23			
	\$74.75	\$43.10	\$31.65	-	-	-	\$76.50	\$43.85	\$32.65	\$78.25	\$44.60	\$33.65	
ELECTRICIAN	9/21/20												
Cable Splicer (inside/outside)	\$87.87	\$56.71	\$31.16	-	-	-	-	-	-	-	-	-	4,13
Ground Worker (outside)	\$64.29	\$38.66	\$25.63	-	-	-	-	-	-	-	-	-	4,13
Heavy Equipment Operator (outside)	\$74.40	\$46.40	\$28.00	-	-	-	-	-	-	-	-	-	4,13
Line Installer (outside); Wire Installer (inside)	\$81.13	\$51.55	\$29.58	-	-	-	-	-	-	-	-	-	4,13
Telecommunication Worker	8/23/20			8/22/21			8/21/22						
Licensed Technician	\$45.65	\$32.69	\$12.96	\$46.82	\$33.69	\$13.13	\$48.63	\$34.94	\$13.69	-	-	-	13
Technician I / Splicer	\$43.74	\$31.06	\$12.68	\$44.85	\$32.01	\$12.84	\$46.57	\$33.19	\$13.38	-	-	-	13
* ELEVATOR CONSTRUCTOR MECHANIC	2/15/21												
	\$99.005	\$63.18	\$35.825	-	-	-	-	-	-	-	-	-	13
EQUIPMENT OPERATOR:	9/21/20												
Group 1	\$78.83	\$45.52	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 2	\$78.94	\$45.63	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 3	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 4	\$79.38	\$46.07	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 5	\$79.69	\$46.38	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 6	\$80.34	\$47.03	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 7	\$80.66	\$47.35	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 8	\$80.77	\$47.46	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 9	\$80.88	\$47.57	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 9A	\$81.11	\$47.80	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 10	\$81.17	\$47.86	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 10A	\$81.32	\$48.01	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 11	\$81.47	\$48.16	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 12	\$81.83	\$48.52	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 12A	\$82.19	\$48.88	\$33.31	-	-	-	-	-	-	-	-	-	5,13

WAGE RATE SCHEDULE BULLETIN NO. 499

Classification	Current			2021			2022			2023			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	
FENCE ERECTOR (CHAIN-LINK TYPE)													
See Chain-Link Fence Erector	-	-	-	-	-	-	-	-	-	-	-	-	
FLOOR LAYER (CARPET, LINOLEUM & SOFT TILE)	9/21/20			2/28/21			2/27/22			3/5/23			
	\$67.70	\$36.77	\$30.93	\$69.69	\$38.02	\$31.67	\$71.93	\$39.27	\$32.66	\$73.42	\$40.52	\$32.90	12,13
GLAZIER	9/21/20												
	\$74.35	\$39.50	\$34.85	-	-	-	-	-	-	-	-	-	6,13
HELICOPTER WORK:	9/21/20												
Airborne Hoist Operator	\$82.69	\$49.38	\$33.31	-	-	-	-	-	-	-	-	-	13
Co-Pilot	\$82.83	\$49.52	\$33.31	-	-	-	-	-	-	-	-	-	13
Pilot	\$83.00	\$49.69	\$33.31	-	-	-	-	-	-	-	-	-	13
INSULATOR	8/30/20												
	\$67.55	\$41.90	\$25.65	-	-	-	-	-	-	-	-	-	7,13
IRONWORKER:	9/21/20			9/1/21									
Reinforcing, Structural	\$79.34	\$42.50	\$36.84	\$80.34	\$43.50	\$36.84	-	-	-	-	-	-	8,12,13
* LABORER:	9/21/20			8/30/21			9/5/22			9/4/23			
Driller	\$62.38	\$39.70	\$22.68	\$63.84	\$40.35	\$23.49	\$65.25	\$41.00	\$24.25	\$66.66	\$41.65	\$25.01	1,13
Gunite Operator or Shotcrete Operator	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	\$66.16	\$41.15	\$25.01	1,13
High Scaler (Working Suspended)	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	\$66.16	\$41.15	\$25.01	13
Laborer I	\$61.38	\$38.70	\$22.68	\$62.84	\$39.35	\$23.49	\$64.25	\$40.00	\$24.25	\$65.66	\$40.65	\$25.01	1,13
Laborer II	\$58.78	\$36.10	\$22.68	\$60.24	\$36.75	\$23.49	\$61.65	\$37.40	\$24.25	\$63.06	\$38.05	\$25.01	1,13
Light/Final Clean-up (Janitorial) Laborer	\$47.82	\$29.65	\$18.17	\$48.92	\$30.05	\$18.87	\$50.02	\$30.45	\$19.57	\$51.12	\$30.85	\$20.27	1,13
Mason Tender/Hod Carrier	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	\$66.16	\$41.15	\$25.01	1,13
Powder Blaster	\$62.38	\$39.70	\$22.68	\$63.84	\$40.35	\$23.49	\$65.25	\$41.00	\$24.25	\$66.66	\$41.65	\$25.01	1,13
Window Washer (Outside) (On bosun's chair, cable-suspended scaffold or work platform)	\$60.88	\$38.20	\$22.68	\$62.34	\$38.85	\$23.49	\$63.75	\$39.50	\$24.25	\$65.16	\$40.15	\$25.01	13
* LANDSCAPER:	2/15/21			8/30/21			9/5/22			9/4/23			
Landscape & Irrigation Laborer A	\$40.65	\$26.40	\$14.25	\$41.80	\$26.75	\$15.05	\$43.05	\$27.25	\$15.80	\$44.30	\$27.85	\$16.45	
Landscape & Irrigation Laborer B	\$41.65	\$27.40	\$14.25	\$42.80	\$27.75	\$15.05	\$44.05	\$28.25	\$15.80	\$45.30	\$28.85	\$16.45	
Landscape & Irrigation Maintenance Laborer	\$35.95	\$21.70	\$14.25	\$36.95	\$21.90	\$15.05	\$37.95	\$22.15	\$15.80	\$39.00	\$22.55	\$16.45	
LATHER	9/21/20			8/30/21			9/5/22			9/4/23			
	\$74.34	\$50.75	\$23.59	\$76.09	\$51.50	\$24.59	\$77.84	\$52.25	\$25.59	\$79.84	\$53.25	\$26.59	12,13
MASON; Bricklayer;	9/21/20			8/30/21			9/5/22			9/4/23			
Cement Blocklayer; Stone Mason; Precast Sill Setter	\$75.09	\$45.96	\$29.13	\$76.44	\$46.46	\$29.98	\$77.97	\$47.24	\$30.73	\$79.36	\$48.03	\$31.33	2,12,13
Pointer-Caulker-Weatherproofer	\$75.34	\$46.21	\$29.13	\$76.69	\$46.71	\$29.98	\$78.22	\$47.49	\$30.73	\$79.61	\$48.28	\$31.33	2,12,13
* PAINTER:	1/1/21			7/1/21									
Painter; Spray Painter; Sandblaster or Waterblaster; Thermoplastic Striper; Paper Hanger	\$68.99	\$38.90	\$30.09	\$68.99	\$38.90	\$30.09	-	-	-	-	-	-	12

WAGE RATE SCHEDULE BULLETIN NO. 499

Classification	Current			2021			2022			2023			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	
PLASTERER:	9/21/20			8/30/21			9/5/22			9/4/23			
	\$75.52	\$43.69	\$31.83	\$76.89	\$44.21	\$32.68	\$78.43	\$45.00	\$33.43	\$79.85	\$45.82	\$34.03	2,12,13
* PLUMBER:	1/3/21												
Plumber; Pipefitter; Refrigeration Fitter; Heating & Air Conditioning Fitter; Sprinkler Fitter; Steamfitter	\$73.60	\$45.35	\$28.25				-	-	-	-	-	-	9,13
ROOFER:	9/21/20			9/5/21									
Shingle, Tile, Built-up Roofing	\$61.65	\$41.80	\$19.85	\$62.50	\$42.55	\$19.95	-	-	-	-	-	-	12
Coal Tar Pitch	\$103.45	\$83.60	\$19.85	\$105.05	\$85.10	\$19.95	-	-	-	-	-	-	
SANDBLASTER OR WATERBLASTER:													
Use wages of craft to which sand or water blasting is incidental.													
SHEETMETAL WORKER:	9/21/20			2/28/21			2/27/22			3/5/23			
(Note: 2 increases for 2021, 2022, & 2023)	\$73.89	\$44.39	\$29.50	\$74.85	\$44.93	\$29.92	\$76.86	\$46.22	\$30.64	\$78.73	\$47.37	\$31.36	13
				8/29/21			9/4/22			9/23/23			
				\$75.95	\$45.63	\$30.32	\$77.76	\$46.78	\$30.98	\$79.78	\$47.95	\$31.83	13
TERMITE TREATER	9/16/19												
	\$20.53	\$18.60	\$1.93	-	-	-	-	-	-	-	-	-	
TERRAZZO:	9/21/20			8/30/21			9/5/22			9/4/23			
Terrazzo Setter	\$74.77	\$43.50	\$31.27	\$76.52	\$44.40	\$32.12	\$78.10	\$45.30	\$32.80	\$79.60	\$46.20	\$33.40	2,12,13
Terrazzo Base Grinder	\$72.96	\$41.69	\$31.27	\$74.71	\$42.59	\$32.12	\$76.29	\$43.49	\$32.80	\$77.79	\$44.39	\$33.40	2,12,13
Certified Terrazzo Floor Grinder and Tender	\$71.41	\$40.14	\$31.27	\$73.16	\$41.04	\$32.12	\$74.74	\$41.94	\$32.80	\$76.24	\$42.84	\$33.40	2,12,13
Terrazzo Floor Grinder	\$68.41	\$37.14	\$31.27	\$70.16	\$38.04	\$32.12	\$71.74	\$38.94	\$32.80	\$73.24	\$39.84	\$33.40	2,12,13
TILE SETTER:	9/21/20			8/30/21			9/5/22			9/4/23			
Ceramic Hard Tile; Marble Setter	\$74.77	\$43.50	\$31.27	\$76.52	\$44.40	\$32.12	\$78.10	\$45.30	\$32.80	\$79.60	\$46.20	\$33.40	2,12,13
Certified Ceramic Tile & Marble Helper	\$71.41	\$40.14	\$31.27	\$73.16	\$41.04	\$32.12	\$74.74	\$41.94	\$32.80	\$76.24	\$42.84	\$33.40	2,12,13
TRUCK DRIVER:	9/16/19												
Concrete Mixer	\$36.37	\$30.95	\$5.42	-	-	-	-	-	-	-	-	-	
Concrete Mixer/Booster	\$48.63	\$34.53	\$14.10	-	-	-	-	-	-	-	-	-	
Dump Truck, 8 cu. yds. & under (water level); Water Truck (up to & including 2,000 gallons)	9/21/20												
Flatbed, Utility, etc.	\$79.38	\$46.07	\$33.31	-	-	-	-	-	-	-	-	-	13
End Dump, Unlicensed (Euclid, Mack, Caterpillar, or similar); Tractor Trailer (hauling equipment)	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Rock Cans, or Semi-Dump	\$80.77	\$47.46	\$33.31	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$80.34	\$47.03	\$33.31	-	-	-	-	-	-	-	-	-	13
Tandem Dump Truck, over 8 cu. yds. (water level); Water Truck (over 2,000 gallons)	\$80.66	\$47.35	\$33.31	-	-	-	-	-	-	-	-	-	13
	\$79.69	\$46.38	\$33.31	-	-	-	-	-	-	-	-	-	13

WAGE RATE SCHEDULE BULLETIN NO. 499

Classification	Current			2021			2022			2023			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	
UNDERGROUND LABORER:	8/31/20			8/30/21			9/5/22			9/4/23			
Worker in a raise, shaft, or tunnel.													
Group 1	\$61.98	\$39.30	\$22.68	\$63.44	\$39.95	\$23.49	\$64.85	\$40.60	\$24.25	\$66.26	\$41.25	\$25.01	13
Group 2	\$63.48	\$40.80	\$22.68	\$64.94	\$41.45	\$23.49	\$67.00	\$42.75	\$24.25	\$67.76	\$42.75	\$25.01	13
Group 3	\$63.98	\$41.30	\$22.68	\$65.44	\$41.95	\$23.49	\$66.85	\$42.60	\$24.25	\$68.26	\$43.25	\$25.01	13
Group 4	\$64.98	\$42.30	\$22.68	\$66.44	\$42.95	\$23.49	\$67.85	\$43.60	\$24.25	\$69.26	\$44.25	\$25.01	13
Group 5	\$65.23	\$42.55	\$22.68	\$66.69	\$43.20	\$23.49	\$68.10	\$43.85	\$24.25	\$69.51	\$44.50	\$25.01	13
Group 6	\$65.33	\$42.65	\$22.68	\$66.79	\$43.30	\$23.49	\$68.20	\$43.95	\$24.25	\$69.61	\$44.60	\$25.01	13
Group 7	\$65.58	\$42.90	\$22.68	\$67.04	\$43.55	\$23.49	\$68.45	\$44.20	\$24.25	\$69.86	\$44.85	\$25.01	13
Group 8	\$66.03	\$43.35	\$22.68	\$67.49	\$44.00	\$23.49	\$68.90	\$44.65	\$24.25	\$70.31	\$45.30	\$25.01	13
WATER FRONT CONSTRUCTION (DREDGING):	9/21/20												
CLAMSHELL OR DIPPER DREDGES:													
Clamshell or Dipper Operator	\$81.83	\$48.52	\$33.31	-	-	-	-	-	-	-	-	-	11,13
Mechanic; Welder; Watch Engineer	\$81.17	\$47.86	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate; Bargemate	\$80.77	\$47.46	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand; Barge Worker	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	13
HYDRAULIC SUCTION DREDGES:													
Lever Operator	\$81.47	\$48.16	\$33.31	-	-	-	-	-	-	-	-	-	13
Mechanic; Welder	\$81.17	\$47.86	\$33.31	-	-	-	-	-	-	-	-	-	13
Watch Engineer (steam or electric)	\$81.32	\$48.01	\$33.31	-	-	-	-	-	-	-	-	-	13
Dozer Operator	\$81.11	\$47.80	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate	\$80.77	\$47.46	\$33.31	-	-	-	-	-	-	-	-	-	13
Winch Operator (stern winch on dredge)	\$80.66	\$47.35	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand (can operate anchor scow under direction of deckmate); Levee Operator	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	13
DERRICKS:													
Operator: Derrick, Piledriver, Crane	\$81.83	\$48.52	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate; Saurman Type Dragline (up to & including 5 yds.)	\$80.77	\$47.46	\$33.31	-	-	-	-	-	-	-	-	-	13
Saurman Type Dragline (over 5 cu. yds.)	\$81.17	\$47.86	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	13
BOAT OPERATORS:													
Master Boat Operator	\$81.47	\$48.16	\$33.31	-	-	-	-	-	-	-	-	-	13
Boat Operator	\$81.32	\$48.01	\$33.31	-	-	-	-	-	-	-	-	-	13
Boat Deckhand	\$79.11	\$45.80	\$33.31	-	-	-	-	-	-	-	-	-	13
WATER WELL DRILLER:	9/16/19												
Water Well Driller	\$46.40	\$35.00	\$11.40	-	-	-	-	-	-	-	-	-	
Water Well Driller Helper	\$32.38	\$22.00	\$10.38	-	-	-	-	-	-	-	-	-	
WELDER:													
Use wages of craft to which welding is incidental, except for Chain-Link Fence Erector. See remark.													10
WINDOW FILM INSTALLER	9/16/19												
	\$23.38	\$22.62	\$0.76	-	-	-	-	-	-	-	-	-	

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: \$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 Installer, Lather: Effective WRS #500 - \$0.25; 9/5/22 - \$0.50; 9/4/23 - \$0.50
 Cement Finisher & Plasterer: Effective: WRS #500 - \$0.30; 9/5/22 - \$0.30; 9/4/23 - \$0.30
 Floor Layer: Effective WRS: 3/5/23 - \$0.29
 Ironworker: Effective WRS #500 - \$1.36
 Mason; Bricklayer, Cement Blocklayer; Stone Mason; Precast Sill Setter Pointer-Caulker-Weatherproofer: Effective WRS #500 - \$0.30; 9/5/22 - \$0.30; 9/4/23 - \$0.30
 Painter: Effective WRS #500 - \$0.48
 Roofer: Effective WRS #500 - \$0.80
 Terrazzo, Tile Setter: Effective WRS #500- \$0.30; 9/5/22 - \$0.30; 9/4/23 - \$0.10

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, Presidents' 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, Martin Luther King 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, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

Floor Layer: Labor Day.

Glazier: Sunday.

Helicopter Worker: 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.

Ironworker: Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

Plumber: Sunday, New Year's Day, Martin Luther King Jr. 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, Martin Luther King 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, Martin Luther King 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 Installer
Insulator
Laborer
Lather
Mason
Plasterer
Terrazzo
Tile Setter
Underground Laborer

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
BOILERMAKER	1000	\$25.40	\$27.22	\$29.03	\$30.85	\$32.66	\$34.48					\$31.29	10
CARPENTER													
Indentured After 9/1/02	1000	\$20.20										\$8.67	1,10
"	1000		\$22.73									\$12.99	1,10
"	1000			\$25.25	\$30.30							\$17.09	1,10
"	1000					\$35.35	\$40.40					\$19.09	1,10
"	1000							\$45.45	\$47.98			\$21.09	1,10
(Effective date 8/30/21)													
* CARPENTER													
Indentured After 9/1/02	1000	\$20.50										\$8.67	1,10
"	1000		\$23.06									\$12.99	1,10
"	1000			\$25.63	\$30.75							\$17.09	1,10
"	1000					\$35.88	\$41.00					\$19.09	1,10
"	1000							\$46.13	\$48.69			\$21.09	1,10
CEMENT FINISHER													
Indentured Prior to 9/1/03	1000	\$21.05										\$10.87	2,10
"	1000		\$23.16	\$25.26	\$29.47	\$31.58	\$33.68	\$35.79	\$37.89			\$31.83	2,10
Indentured On or After 9/1/03	1000	\$21.05	\$23.16	\$25.26	\$29.47	\$31.58	\$33.68	\$35.79	\$37.89			\$19.63	2,10
(Effective date 8/30/21)													
* CEMENT FINISHER													
Indentured Prior to 9/1/03	1000	\$21.30										\$10.87	2,10
"	1000		\$23.43	\$25.56	\$29.82	\$31.95	\$34.08	\$36.21	\$38.34			\$31.83	2,10
Indentured On or After 9/1/03	1000	\$21.30	\$23.43	\$25.56	\$29.82	\$31.95	\$34.08	\$36.21	\$38.34			\$19.63	2,10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
CONSTRUCTION EQUIPMENT OPERATOR													
Indentured On or After 9/1/02	1000	\$23.90										\$9.25	3,10
"	1000		\$26.29									\$20.34	3,10
"	1000			\$28.68								\$21.35	3,10
"	1000				\$33.46							\$23.37	3,10
"	1000					\$38.24						\$25.38	3,10
"	1000						\$43.02					\$27.40	3,10
DRYWALL INSTALLER													
Indentured After 9/1/02	1000	\$20.30										\$8.67	10
"	1000		\$22.84									\$12.99	10
"	1000			\$25.38	\$30.45							\$17.09	10
"	1000					\$35.53	\$40.60					\$19.09	10
"	1000							\$45.68	\$48.21			\$21.09	10
(Effective date 8/30/21)													
* DRYWALL INSTALLER													
Indentured After 9/1/02	1000	\$20.60										\$8.67	10
"	1000		\$23.18									\$12.99	10
"	1000			\$25.75	\$30.90							\$17.09	10
"	1000					\$36.05	\$41.20					\$19.09	10
"	1000							\$46.35	\$48.93			\$21.09	10
DRYWALL TAPERS/FINISHERS													
	1000	\$17.24	\$19.40	\$21.55	\$23.71							\$12.45	
	1000					\$25.86						\$14.45	
	1000						\$28.02					\$14.95	
	1000							\$32.33	\$36.64			\$17.45	
ELECTRICIAN (WIRE & LINE INSTALLER)													
"	1000	\$18.04										\$10.18	10
"	1000		\$20.62									\$10.56	10
"	1000			\$23.20								\$17.46	4,10
"	1000				\$25.78							\$18.56	4,10
"	1000					\$28.35						\$19.66	4,10
"	1000						\$30.93					\$20.77	4,10
"	1000							\$33.51				\$21.87	4,10
"	1000								\$36.09			\$22.97	4,10
"	1000									\$41.24		\$25.17	4,10
"	1000										\$46.40	\$27.38	4,10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
* ELEVATOR CONSTRUCTOR													
"	850	\$31.59										-	10
"	850		\$34.75									\$34.765	10
"	1700			\$41.07	\$44.23	\$50.54						\$34.765	10
FLOOR LAYER													
Indentured after 2/27/94	1000	\$16.55	\$18.39									\$19.81	10
" "	1000			\$20.22	\$22.06							\$25.31	10
" "	1000					\$23.90	\$25.74	\$29.42	\$33.09			\$30.93	10
(Effective: 2/28/21)													
FLOOR LAYER													
Indentured after 2/27/94	1000	\$17.11	\$19.01									\$20.05	10
" "	1000			\$20.91	\$22.81							\$25.55	10
" "	1000					\$24.71	\$26.61	\$30.42	\$34.22			\$31.67	10
GLAZIER													
Indentured On or After 7/1/99	1000	\$17.78										\$32.21	5,10
"	1000		\$19.75									\$32.45	5,10
"	1000			\$21.73								\$32.69	5,10
"	1000				\$23.70							\$32.93	5,10
"	1000					\$27.65						\$33.41	5,10
"	1000						\$29.63					\$33.65	5,10
"	1000							\$31.60				\$33.89	5,10
"	1000								\$33.58			\$34.13	5,10
"	1000									\$35.55		\$34.37	5,10
"	1000										\$37.53	\$34.61	5,10
HEAVY DUTY REPAIRER & WELDER													
Indentured on or after 9/1/02	1000	\$23.90										\$9.25	3,10
"	1000		\$26.29									\$20.34	3,10
"	1000			\$28.68								\$21.35	3,10
"	1000				\$33.46							\$23.37	3,10
"	1000					\$38.24						\$25.38	3,10
"	1000						\$40.63					\$26.40	3,10
"	1000							\$43.02				\$27.40	3,10
"	1000								\$45.41			\$28.42	3,10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
INSULATOR													
Indentured After 5/3/95	2000	\$20.95										\$8.15	6,10
"	2000		\$20.95									\$19.16	6,10
"	2000			\$25.14								\$19.50	6,10
"	2000				\$29.33							\$19.85	6,10
"	2000					\$33.52						\$20.19	6,10
IRONWORKER (REINFORCING & STRUCTURAL)													
Indentured After 10/31/93	1000	\$21.25										\$30.72	7,10
"	1000		\$23.38									\$31.33	7,10
"	1000			\$25.50								\$31.94	7,10
"	1000				\$29.75							\$33.16	7,10
"	1000					\$34.00						\$34.38	7,10
"	1000						\$38.25					\$34.70	7,10
(Effective Date 9/1/21)													
* IRONWORKER (REINFORCING & STRUCTURAL)													
Indentured After 10/31/93	1000	\$21.75										\$30.72	7,10
"	1000		\$23.93									\$31.33	7,10
"	1000			\$26.10								\$31.94	7,10
"	1000				\$30.45							\$33.16	7,10
"	1000					\$34.80						\$34.38	7,10
"	1000						\$39.15					\$34.70	7,10
LABORER I													
CONSTRUCTION CRAFT													
Indentured On or After 9/3/02	1000	\$19.35										\$9.10	1,10
"	1000		\$23.22	\$27.09	\$30.96							\$16.90	1,10
HAZARDOUS WASTE MATERIAL TECHNICIAN													
"	1000	\$19.35										\$7.80	1,10
"	1000		\$23.22	\$27.09	\$30.96							\$15.10	1,10

CONTINUED On the Next Page

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
(Effective Date 8/30/21)													
LABORER I													
CONSTRUCTION CRAFT													
Indentured On or After 9/3/02	1000	\$19.68										\$9.10	1,10
"	1000		\$23.61	\$27.55	\$31.48							\$16.90	1,10
HAZARDOUS WASTE MATERIAL TECHNICIAN													
"	1000	\$19.68										\$7.80	1,10
"	1000		\$23.61	\$27.55	\$31.48							\$15.10	1,10
* LANDSCAPER	1000	\$17.16										\$7.75	
"	1000		\$18.48	\$19.80	\$21.12							\$11.85	
MASON													
BRICKLAYER													
Indentured prior to 9/1/03	1000	\$22.98										\$10.62	2,10
Indentured On or After 9/1/03	1000	\$22.98	\$25.28	\$27.58	\$32.17	\$34.47	\$36.77	\$39.07	\$41.36			\$19.58	2,10
STONE MASON													
Indentured On or After 9/1/03	1000	\$25.28	\$27.58	\$29.87	\$32.17	\$34.47	\$36.77	\$39.07	\$41.36			\$19.58	2,10
POINTER-CAULKER-WEATHERPROOFER													
Indentured On or After 9/1/03	1000	\$23.11	\$25.42	\$27.73	\$32.35	\$36.97	\$41.59					\$19.58	2,10
(Effective Date 8/30/21)													
* MASON													
BRICKLAYER													
Indentured prior to 9/1/03	1000	\$23.23										\$10.92	2,10
Indentured On or After 9/1/03	1000	\$23.23	\$25.55	\$27.88	\$32.52	\$34.85	\$37.17	\$39.49	\$41.81			\$20.13	2,10
STONE MASON													
Indentured On or After 9/1/03	1000	\$25.55	\$27.88	\$30.20	\$32.52	\$34.85	\$37.17	\$39.49	\$41.81			\$20.13	2,10
POINTER-CAULKER-WEATHERPROOFER													
Indentured On or After 9/1/03	1000	\$23.36	\$25.69	\$28.03	\$32.70	\$37.37	\$42.04					\$20.13	2,10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
MILLWRIGHT Indentured After 10/14/19	1000	\$20.30										\$8.67	10
	1000		\$22.84									\$12.99	10
	1000			\$25.38	\$30.45							\$17.09	10
	1000					\$35.53	\$40.60					\$19.09	10
	1000							\$45.68	\$48.21			\$21.09	10
(Effective Date 8/30/21)													
* MILLWRIGHT Indentured After 10/14/19	1000	\$20.60										\$8.67	10
	1000		\$23.18									\$12.99	10
	1000			\$25.75	\$30.90							\$17.09	10
	1000					\$36.05	\$41.20					\$19.09	10
	1000							\$46.35	\$48.93			\$21.09	10
(Effective 1/1/21)													
PAINTER	1000	\$17.51										\$9.50	
"	1000		\$19.45	\$21.40	\$23.34	\$25.29						\$13.00	
"	1000						\$27.23					\$14.00	
"	1000							\$29.18	\$33.07			\$14.75	
* (Effective 7/1/21)													
PAINTER	1000	\$17.51										\$9.50	
"	1000		\$19.45	\$21.40	\$23.34	\$25.29						\$13.00	
"	1000						\$27.23					\$14.00	
"	1000							\$29.18	\$33.07			\$14.75	
(Effective 1/1/21)													
PAVING EQUIPMENT OPERATOR	1000	\$25.55										\$9.25	10
"	1000		\$32.52									\$20.79	10
"	1000			\$37.16								\$23.94	10
"	1000				\$41.81							\$28.15	10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
PLASTERER													
Indentured On or After 9/1/03	1000	\$17.48	\$19.66	\$21.85	\$24.03	\$26.21	\$30.58	\$34.95	\$39.32			\$19.63	2,10
(Effective 8/30/21)													
* PLASTERER													
Indentured On or After 9/1/03	1000	\$17.68	\$19.89	\$22.11	\$24.32	\$26.53	\$30.95	\$35.37	\$39.79			\$19.63	2,10
(Effective 1/3/21)													
PLUMBER:													
PLUMBER; FIRE SPRINKLER FITTER; REFRIGERATION													
AIR CONDITIONING; STEAMFITTER-WELDER													
Indentured On or After 9/2/85	1000	\$18.23										\$10.63	8,10
"	1000		\$18.23									\$10.68	8,10
"	1000			\$21.54								\$13.44	8,10
"	1000				\$21.54							\$13.44	8,10
"	1000					\$24.94						\$14.19	8,10
"	1000						\$24.94					\$14.19	8,10
"	1000							\$29.48				\$15.15	8,10
"	1000								\$29.48			\$15.15	8,10
"	1000									\$34.01		\$15.84	8,10
"	1000										\$34.01	\$15.84	8,10
ROOFER													
Indentured Prior to 11/1/98	1000	\$18.81	\$20.90	\$25.08								\$15.60	9
"	1000				\$29.26	\$33.44	\$37.62	\$39.71				\$19.85	
Indentured On or After 11/1/98 and Prior to 11/4/12	1000	\$18.81	\$20.90	\$25.08								\$15.60	9
"	1000				\$29.26	\$33.44	\$35.53	\$37.62	\$39.71			\$19.85	
Indentured On or After 11/4/12	2000	\$18.81	\$25.08									\$15.60	9
"	2000			\$33.44	\$37.62							\$19.85	9

CONTINUED On the Next Page

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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		BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
(Effective 9/5/21)													
* ROOFER													
Indentured Prior to 11/1/98	1000	\$19.15	\$21.28	\$25.53								\$15.60	9
"	1000				\$29.79	\$34.04	\$38.30	\$40.42				\$19.85	
Indentured On or After 11/1/98 and Prior to 11/4/12	1000	\$19.15	\$21.28	\$25.53								\$15.60	9
"	1000				\$29.79	\$34.04	\$36.17	\$38.30	\$40.42			\$19.85	
Indentured On or After 11/4/12	2000	\$19.15	\$25.53									\$15.60	9
"	2000			\$34.04	\$38.30							\$19.85	9
SHEETMETAL WORKER													
"	1000	\$17.76										\$12.96	10
"	1000		\$19.98									\$13.21	10
"	1000			\$22.20								\$23.58	10
"	1000				\$24.41							\$24.18	10
"	1000					\$26.63						\$24.76	10
"	1000						\$28.85					\$25.37	10
"	1000							\$31.07				\$25.95	10
"	1000								\$33.29			\$26.55	10
"	1000									\$35.51		\$27.13	10
"	1000										\$37.73	\$27.73	10
(Effective: 2/28/21)													
SHEETMETAL WORKER													
"	1000	\$17.97										\$13.15	10
"	1000		\$20.22									\$13.40	10
"	1000			\$22.47								\$23.93	10
"	1000				\$24.71							\$24.51	10
"	1000					\$26.96						\$25.11	10
"	1000						\$29.20					\$25.72	10
"	1000							\$31.45				\$26.32	10
"	1000								\$33.70			\$26.91	10
"	1000									\$35.94		\$27.52	10
"	1000										\$38.19	\$28.12	10
CONTINUED On the Next Page													

CONTINUED On the Next Page

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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		BASIC HOURLY RATE										FRINGE BENEFIT HOURLY RATE	Remarks See Pg 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
(Effective: 8/29/21) * SHEETMETAL WORKER													
"	1000	\$18.25										\$13.15	10
"	1000		\$20.53									\$13.40	10
"	1000			\$22.06								\$23.93	10
"	1000				\$25.10							\$24.51	10
"	1000					\$27.38						\$25.11	10
"	1000						\$29.66					\$25.72	10
"	1000							\$31.94				\$26.32	10
"	1000								\$34.22			\$26.91	10
"	1000									\$36.50		\$27.52	10
"	1000										\$38.79	\$28.12	10
TELECOMMUNICATION WORKER (TECHNICIAN I / SPLICER)		1000	\$18.64									\$10.58	10
"	"	1000		\$20.19								\$10.84	10
"	"	1000			\$21.74							\$11.10	10
(Effective: 8/22/21) TELECOMMUNICATION WORKER (TECHNICIAN I / SPLICER)													
"	"	1000				\$23.30						\$11.36	10
"	"	1000					\$24.85					\$11.62	10
"	"	1000						\$27.95				\$12.16	10
(Effective: 8/22/21) * TELECOMMUNICATION WORKER (TECHNICIAN I / SPLICER)		1000	\$19.21									\$10.67	10
"	"	1000		\$20.81								\$10.93	10
"	"	1000			\$22.41							\$11.22	10
"	"	1000				\$24.01						\$11.48	10
"	"	1000					\$25.61					\$11.74	10
"	"	1000						\$28.81				\$12.29	10

APPRENTICE SCHEDULE BULLETIN NO. 499 February 15, 2021

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 9-10
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total	
TILE SETTER													
CERAMIC & HARD TILE													
Indentured Prior to 9/1/03	1000	\$21.75										\$10.62	2,10
"	1000		\$23.93	\$26.10	\$30.45	\$32.63	\$34.80	\$36.98	\$39.15			\$31.27	2,10
Indentured On or After 9/1/03	1000	\$21.75	\$23.93	\$26.10	\$30.45	\$32.63	\$34.80	\$36.98	\$39.15			\$19.92	2,10
(Effective: 8/30/21)													
* TILE SETTER													
CERAMIC & HARD TILE													
Indentured Prior to 9/1/03	1000	\$22.20										\$10.62	2,10
"	1000		\$24.42	\$26.64	\$31.08	\$33.30	\$35.52	\$37.74	\$39.96			\$31.27	2,10
Indentured On or After 9/1/03	1000	\$22.20	\$24.42	\$26.64	\$31.08	\$33.30	\$35.52	\$37.74	\$39.96			\$19.92	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: \$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.
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, Presidents' 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, Martin Luther King 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.

Glazier: Sunday.

Heavy Duty Repairer & Welder: 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.

Ironworker: Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and 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, Martin Luther King Jr. 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

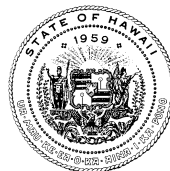
Insulator

Construction Craft Laborer

Mason

Plasterer

Tile Setter



STATE OF HAWAII
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

List of Construction Trades in Registered Apprenticeship Programs

Apprenticeship programs for the following construction trades were approved and registered by the State Department of Labor and Industrial Relations in accordance with Chapter 372, Hawaii Revised Statutes, and Title 12, Chapter 30, Hawaii Administrative Rules. Union and non-union programs are listed separately. The minimum requirements are not exclusive as a program sponsor may add other requirements in their selection procedures.

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Boilermaker	Western States Area Joint Apprenticeship Committee (International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmith, Forgers, and Helpers and Subordinate, Lodge No. 627, AFL-CIO, and the Western States Joint Apprenticeship Committee, and Association of Boilermaker Employers)	x		03/18/1991	6,000	<ul style="list-style-type: none"> At least 18 years old High school graduate or GED equivalent 	Coordinator Address: PO Box 1612 Page, Arizona 86040 Phone: (928)645-0277 Website: http://www.westernstatesjac.org/ *No training staff currently based in Hawaii
Bricklayer-Mason	Joint Apprenticeship Committee for Bricklayer-Mason (Masonry Contractors Association of Hawaii and Other Signatory Employers and Local 1 of Hawaii of the Bricklayers and Allied Craftsmen International Union, AFL-CIO)	x		02/10/1964	8,000	<ul style="list-style-type: none"> At least 16 years old High school graduate or GED equivalent Physically able to perform duties of the trade 	Director of Training or Training Coordinator Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819 Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.bacweb.org

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Carpenter	<p>Carpenters Joint Apprenticeship Committee aka Hawaii Carpenters Apprenticeship and Training Program</p> <p>(General Contractors Association of Hawaii and Building Industry Labor Association and Other Signatory Contractors and the United Brotherhood of Carpenters and Joiners of America, Local 745 AFL-CIO)</p>	x		04/01/1964	8,000	<ul style="list-style-type: none"> At least 17 years old High school diploma or equivalent education, or equivalent work experience Pass basic math test Complete questionnaire Able to lift 75 lbs. 	<p>Director of Training</p> <p>Address: 1311 Houghtailing Street Room 201 Honolulu, HI 96817</p> <p>Phone: (808) 848-0794 Ext. 5 Fax: (808) 841-5961 (808) 841-0300 Website: http://www.carpenters.org/</p>
Carpenter	Associated Builders and Contractors Apprenticeship Committee		x	02/08/1990	8,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Full-time employee of a member company for a period of not less than six continuous weeks Legally able to work Physically able to perform duties of the trade 	<p>Director of Training</p> <p>Address: 1375 Dillingham Blvd. Suite 200 Honolulu, HI 96817</p> <p>Phone: (808) 845-4887 Fax: (808) 847-7876 Website: http://www.abchawaii.org/</p>
Cement Finisher	<p>Joint Apprenticeship Committee for Cement Finishers</p> <p>(Operative Plasterers and Cement Finishers International Association, Local 630, AFL-CIO, and Local 1 of the International Union of Bricklayers and Allied Craftsmen, AFL-CIO)</p>	x		04/01/1961	8,000	<ul style="list-style-type: none"> At least 16 years old Physically able to perform duties of the trade 	<p>Director of Training or Training Coordinator</p> <p>Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819</p> <p>Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.opcmia.org/ http://www.bacweb.org</p>

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Construction Craft Laborer	Hawaii Laborers' Joint Apprenticeship Committee (International Union of North America, Local 368, and Signatory Contractors Association)	x		02/11/2000	4,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Driver's license Successfully complete Pre-Construction Apprentice Evaluation Course 	<p>Director of Training</p> <p>Address: 96-138 Farrington Hwy. Pearl City, HI 96782</p> <p>Phone: (808) 455-7979 Fax: (808) 456-8689 Website: http://www.liuna.org/</p>
Construction Equipment Operator	Hawaii Joint Apprenticeship Committee for Operating Engineers (General Contractors Labor Association and the Building Industry Labor Association and International Union of Operating Engineers, Local Union #3, AFL-CIO)	x		11/14/1967	6,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED or C-based test Physically able to perform duties of the trade School transcripts Driver's license Current State DOT PUC physical Pass industry or general knowledge test Have reliable transportation 	<p>State Administrator</p> <p>Address: P.O. Box 428 Kahuku, HI 96731-0428</p> <p>Phone: (808) 232-2001 Fax: (808) 232-2217 Website: http://oe3.org/training/</p>
Drywall, Acoustic and Lather Installer	Carpenters Joint Apprenticeship Committee aka Hawaii Carpenters Apprenticeship and Training Program (General Contractors Association of Hawaii and Building Industry Labor Association and Other Signatory Contractors and the United Brotherhood of Carpenters and Joiners of America, Local 745, AFL-CIO)	x		04/06/1988	8,000	<ul style="list-style-type: none"> At least 17 years old High school diploma or GED Complete questionnaire Pass basic math test Able to lift 100 lbs. 	<p>Director of Training</p> <p>Address: 1311 Houghtailing Street Room 201 Honolulu, HI 96817</p> <p>Phone: (808) 848-0794 Ext. 5 Fax: (808) 848-5961 (808) 841-0300 Website: http://www.carpenters.org/</p>

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Electrical Wireperson	PECA-HEW Joint Apprenticeship Committee (Pacific Electrical Contractors Association and the Hawaii Electrical Workers Division of Laborers International, Local 368)	x		11/20/1991	10,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Pass color code test Pass aptitude test Transcript of high school or post high school courses Pass one-year high school Algebra 1 (not pre-Algebra) or higher Valid driver's license 	<p>Training Coordinator</p> <p>Address: 1617 Palama Street Honolulu, HI 96817</p> <p>Phone: (808) 841-5877 Ext 234 Fax: (808) 847-7829 Website: N/A</p>
Electrician	Associated Builders and Contractors Apprenticeship Committee		x	02/08/1990	10,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Full-time employee of a member company for a period of not less than six continuous weeks Legally able to work Physically able to perform duties of the trade Pass eye examination for color blindness Completed one-year high school algebra (not pre-algebra) 	<p>Director of Training</p> <p>Address: 1375 Dillingham Blvd. Suite 200 Honolulu, HI 96817</p> <p>Phone: (808) 845-4887 Fax: (808) 847-7876 Website: http://www.abchawaii.org/</p>
(Electrician) Wireperson	Hawaii Electricians Joint Apprenticeship Committee (International Brotherhood of Electrical Workers (IBEW) Local 1186, AFL-CIO, and Signatory Employers)	x		04/08/1947	10,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Complete the National Joint Apprenticeship and Training Committee Math Course or one-year high school Algebra 1 Transcript of high school or post high school 	<p>Apprenticeship or Training Coordinator</p> <p>Address: 1935 Hau Street Room 301 Honolulu, HI 96819</p> <p>Phone: (808) 847-0629 Fax: (808) 843-8818 Website: http://www.njatc.org/</p>

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
						courses <ul style="list-style-type: none"> • Pass industry aptitude test to qualify for oral interview • Application fee (non-refundable) 	
Elevator Constructor	International Union of Elevator Constructors Local 126 Joint Apprenticeship Committee (International Union of Elevator Constructors, Local 126 and Signatory Employers)	x		03/27/2003	6,800	<ul style="list-style-type: none"> • At least 18 years old • High school diploma or GED • School transcripts • Pass aptitude test (math, reading) • Pass medical exam • Physically able to perform duties of the trade 	Business Representative Address: 707 Alakea Street Room 314 Honolulu, HI 96813 Phone: (808) 536-8653 Fax: (808) 537-3779 Website: http://iuec.org/
Fire Sprinkler Fitter	Honolulu Joint Apprenticeship and Training Committee for the Plumbing and Pipefitting Industry <i>aka</i> JATC of UA Plumbers and Fitters, Local 675, AFL-CIO, and PAMCAH (Plumbing and Mechanical Contractors Association of Hawaii and United Association of Plumbers and Pipefitters Local 675, AFL-CIO)	x		10/19/1992	10,000	<ul style="list-style-type: none"> • At least 17 years old • High school diploma or GED • School transcripts • Pass placement evaluation with minimum score of 70% • Driver's license 	Training Coordinator Address: 720 Iwilei Road, Suite 222 Honolulu, HI 96817 Phone: (808) 456-0585 Fax: (808) 456-7131 Website: http://www.ua.org/
Floor Layer	Joint Apprenticeship and Training Committee for Floor Layers (Hawaii Floor Covering Association and Carpet, Linoleum, and Soft Tile Union Local 1926, AFL-CIO)	x		02/17/1966	8,000	<ul style="list-style-type: none"> • At least 18 years old • Driver's license • Distinguish colors • High school diploma or equivalent • Physically able to perform duties 	Training Coordinator Address: 2240 Young Street Honolulu, HI 96826 Phone: (808) 942-3988 Fax: (808) 946-6667 Website: http://www.iupat.org/
Glazier	Joint Apprenticeship Committee for Glaziers, Architectural Metal and Glassworkers Industry <i>aka</i> Glaziers, Architectural Metal and Glassworkers JATC (Glass/Metal Contractors Association of Hawaii and	x		04/01/2001	10,000	<ul style="list-style-type: none"> • At least 18 years old • High school diploma or GED • Driver's license • Physically able to perform duties of the trade 	Training Coordinator Address: 2240 Young Street Honolulu, HI 96826 Phone: (808) 942-3988 Fax: (808) 946-6667 Website: http://www.iupat.org/

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
	Other Signatory Contractors and the Glaziers, Architectural Metal and Glassworkers Union Local 1889, AFL-CIO)						
Hazardous Waste Material Technician	Hawaii Laborers; Union Local 368	x		9/19/2017	4000	<ul style="list-style-type: none"> At least 18 years old High School Diploma or GED Possess a Valid Driver's License Pass a Pre-Evaluation course Physical abilities to perform duties of the trade 	96-138 Farrington Highway Pearl City, Hawaii 96782 Phone (808) 455-7979
Heat and Frost Insulator	Honolulu Joint Apprenticeship Committee for the Heat and Frost Asbestos Insulator Trade (Heat and Frost Insulators and Asbestos Workers, Local 132, and Signatory Participating Employers)	x		07/23/1971	10,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Physically able to perform duties of the trade 	Training Coordinator Address: 1019 Lauia Street Bay #4 Kapolei, HI 96707 Phone: (808) 521-6405 Fax: (808) 523-9861 Website: http://www.insulators.org/
Heavy Duty Repairman and Welder	Hawaii Joint Apprenticeship Committee for Operating Engineers (General Contractors Labor Association and the Building Industry Labor Association and International Union of Operating Engineers, Local Union #3, AFL-CIO)	x		11/14/1967	8,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED or C-based test Physically able to perform duties of the trade School transcripts Driver's license Current State DOT PUC physical Ranked on general knowledge and hands on test Have reliable transportation 	State Administrator Address: P.O. Box 428 Kahuku, HI 96731-0428 Phone: (808) 232-2001 Fax: (808) 232-2217 Website: http://oe3.org/training/
Ironworker Shop Fabricator / Welder	Hawaii Shopmen's Local 803 Joint Apprenticeship and Training Committee (International Association of Bridge,	x		12/31/1963	8,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Physically able to perform duties of the trade 	Training Coordinator Address: 94-497 Ukee Street Waipahu, HI 96797 Phone: (808) 671-4344

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
	Structural and Ornamental Ironworkers, Local 803, AFL-CIO, and Participating Employers)					<ul style="list-style-type: none"> Must be sponsored by employer who is signatory to the Shopmen's Local 803 collective bargaining agreement 	Fax: (808) 676-1144 Website: http://www.ironworkers.org/
Ironworker (Reinforcing)	Joint Apprenticeship Committee for Ironworker (Reinforcing) <i>aka</i> Ironworkers Joint Apprenticeship Committee (Reinforcing) (International Association of Bridge, Structural and Ornamental Ironworkers, Local 625, AFL-CIO and Participating Employers)	x		06/26/1953	6,000	<ul style="list-style-type: none"> At least 16 years old Physically able to perform duties of the trade 	Training Coordinator Address: 94-497 Ukee Street Waipahu, HI 96797 Phone: (808) 671-8225 Fax: (808) 676-1144 Website: http://www.ironworkers.org/

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Ironworker (Structural)	Joint Apprenticeship Committee for Ironworker (Structural) aka Ironworkers Joint Apprenticeship Committee (Structural) (International Association of Bridge, Structural and Ornamental Ironworkers, Local 625, AFL-CIO and Participating Employers)	x		03/01/1961	6,000	<ul style="list-style-type: none"> At least 16 years old Physically able to perform duties of the trade 	Training Coordinator Address: 94-497 Ukee Street Waipahu, HI 96797 Phone: (808) 671-8225 Fax: (808) 676-1144 Website: http://www.ironworkers.org/
Landscape and Irrigation Laborer	Hawaii Laborers Union Local 368	x		03/30/2016	4,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED or 10th grade education Valid driver's license Complete and pass the Pre-Landscape and Irrigation Apprentice Evaluation Course 	Director of Training Address: 96-138 Farrington Hwy. Pearl City, HI 96782 Phone: (808) 455-7979 Fax: (808) 456-8689 Website: http://www.liuna.org/
Painter	Joint Apprenticeship and Training Committee for Painters (Painting and Decorating Contractors of Hawaii (PDCA) and the International Union of Painters and Allied Trades (IUPAT) Local 1791, AFL-CIO)	x		09/01/1961	8,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Driver's license Physically able to perform the duties of the trade Pass color code vision test Pass entry level test of math and vocabulary 	Training Coordinator Address: 2240 Young Street Honolulu, HI 96826 Phone: (808) 947-6606 Fax: (808) 942-0195 Websites: http://www.dc50.org/ http://www.iupat.org/
Painter	Associated Builders and Contractors Apprenticeship Committee		x	05/02/1990	8,000	<ul style="list-style-type: none"> At least 18 years old Full-time employee of a member company for a period of not less than six continuous weeks Legally able to work Physically able to perform duties of the trade Pass physical examination if required by Committee 	Director of Training Address: 1375 Dillingham Blvd. Suite 200 Honolulu, HI 96817 Phone: (808) 845-4887 Fax: (808) 847-7876 Website: http://www.abchawaii.org/

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Painter	Color Dynamics, Inc.		x	12/01/1989	8,000	<ul style="list-style-type: none"> At least 16 years old Physically fit to perform duties of the trade Must not be color blind 	President Address: 816 Gulick Avenue Honolulu, HI 96819 Phone: (808) 848-7000 Fax: (808) 842-0800 Website: http://www.colordynamics.com
Painter	Kawika's Painting		x	10/01/1984	8,000	<ul style="list-style-type: none"> At least 16 years old Physically fit to perform duties of the trade Must not be color blind 	President Address: 2147 Eluwene Street Honolulu, HI 96819 Phone: (808) 848-0003 Fax: (808) 842-1908 Website: http://www.kawikaspainting.com
Paving Equipment Operator	Hawaii Joint Apprenticeship Committee for Operating Engineers (General Contractors Labor Association and the Building Industry Labor Association and International Union of Operating Engineers, Local Union #3, AFL-CIO)	x		04/29/2010	4,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED or C-based test Physically able to perform duties of the trade School transcripts Driver's license showing address in HI Current State DOT PUC physical Ranked on general knowledge and hands on test Have reliable transportation 	State Administrator Address: P.O. Box 428 Kahuku, HI 96731-0428 Phone: (808) 232-2001 Fax: (808) 232-2217 Website: http://oe3.org/training/
Plasterer	Joint Apprenticeship Committee for Plasterers (Pacific Bureau for Lathing and Plastering and the Operative Plasterers and Cement Finishers Association of the U.S. and	x		06/30/1959	8,000	<ul style="list-style-type: none"> At least 16 years old Physically able to perform duties of the trade 	Director of Training or Training Coordinator Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
	Canada, Local 630, AFL-CIO)						Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.opcmia.org/ http://www.bacweb.org
Plumber	Honolulu Joint Apprenticeship and Training Committee for the Plumbing and Pipefitting Industry aka JATC of UA Plumbers and Fitters, Local 675, AFL-CIO, and PAMCAH (Plumbing and Mechanical Contractors Association of Hawaii and United Association of Plumbers and Pipefitters Local 675, AFL-CIO)	x		11/14/1952	10,000	<ul style="list-style-type: none"> • At least 17 years old • High school diploma or GED • School transcripts • Pass placement evaluation with a minimum score of 70% • Driver's license 	Training Coordinator Address: 720 Iwilei Road, Suite 222 Honolulu, HI 96817 Phone: (808) 456-0585 Fax: (808) 456-7131 Website: http://www.ua.org/
Plumber	Associated Builders and Contractors Apprenticeship Committee		x	02/02/1999	10,000	<ul style="list-style-type: none"> • At least 18 years old • Full-time employee of a member company for a period of not less than six continuous weeks • Legally able to work • Physically able to perform duties of the trade • Pass physical examination if required by Committee 	Director of Training Address: 1375 Dillingham Blvd. Suite 200 Honolulu, HI 96817 Phone: (808) 845-4887 Fax: (808) 847-7876 Website: http://www.abchawaii.org/
Pointer-Caulker-Weatherproofer	Joint Apprenticeship Committee for Pointer-Caulker-Weatherproofer (Pointing, Caulking and Weatherproofing Contractors and the International Union of Bricklayers and Allied Crafts, Local 1, AFL-CIO)	x		08/23/1995	6,000	<ul style="list-style-type: none"> • At least 16 years old • High school graduate or GED equivalent • Physically able to perform duties of the trade 	Director of Training or Training Coordinator Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
							Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.bacweb.org
Refrigeration Air-Conditioning	Honolulu Joint Apprenticeship and Training Committee for the Plumbing and Pipefitting Industry <i>aka</i> JATC of UA Plumbers and Fitters, Local 675, AFL-CIO, and PAMCAH (Plumbing and Mechanical Contractors Association of Hawaii and United Association of Plumbers and Pipefitters Local 675, AFL-CIO)	x		09/04/1962	10,000	<ul style="list-style-type: none"> • At least 17 years old • High school diploma or GED • School transcripts • Pass placement evaluation with a minimum score of 70% • Driver's license 	Training Coordinator Address: 720 Iwilei Road, Suite 222 Honolulu, HI 96817 Phone: (808) 456-0585 Fax: (808) 456-7131 Website: http://www.ua.org/
Roofer	Joint Apprenticeship and Training Committee for Roofers (United Union of Roofers, Waterproofers and Allied Workers, AFL-CIO, Local 221, and All Participating Employers)	x		01/13/1968	8,000	<ul style="list-style-type: none"> • At least 16 years old • High school diploma or GED • Driver's license • Physically able to perform duties of the trade • Able to lift 100 lbs. 	Training Director Address: 2045 Kamehameha IV Rd. Room 203 Honolulu, HI 96819 Phone: (808) 847-5757 Fax: (808) 848-8707 Website: http://www.unionroofers.com

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Roofer	Associated Builders and Contractors Apprenticeship Committee		x	01/09/1996	7,000	<ul style="list-style-type: none"> At least 18 years old Full-time employee of a member company for a period of not less than six continuous weeks Legally able to work Physically able to perform duties of the trade Pass physical examination if required by Committee 	<p>Director of Training</p> <p>Address: 1375 Dillingham Blvd. Suite 200 Honolulu, HI 96817</p> <p>Phone: (808) 845-4887</p> <p>Fax: (808) 847-7876</p> <p>Website: http://www.abchawaii.org/</p>
Sheet Metal Worker	<p>Hawaii Joint Apprenticeship Committee for the Sheet Metal Industry</p> <p>(Sheet Metal Contractor's Association and Sheet Metal Workers' International Association, Local 293)</p>	x		01/02/1958	10,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Complete industry test Driver's license Physically able to perform work 	<p>Apprenticeship Coordinator</p> <p>Address: 1405 North King Street Room 403 Honolulu, HI 96817</p> <p>Phone: (808) 841-6106</p> <p>Fax: (808) 841-1842</p> <p>Website: http://www.smwia.org/</p>
Steamfitter/Welder	<p>Honolulu Joint Apprenticeship and Training Committee for the Plumbing and Pipefitting Industry aka JATC of UA Plumbers and Fitters, Local 675, AFL-CIO, and PAMCAH</p> <p>(Plumbing and Mechanical Contractors Association of Hawaii and United Association of Plumbers and Pipefitters Local 675, AFL-CIO)</p>	x		02/05/2002	10,000	<ul style="list-style-type: none"> At least 17 years old High school diploma or GED School transcripts Pass placement evaluation with a minimum score of 70% Driver's license 	<p>Training Coordinator</p> <p>Address: 720 Iwilei Road, Suite 222 Honolulu, HI 96817</p> <p>Phone: (808) 456-0585</p> <p>Fax: (808) 456-7131</p> <p>Website: http://www.ua.org/</p>
Stone Mason	<p>Joint Apprenticeship Committee for Stone Mason Industry</p> <p>(Masonry Contractors Association of Hawaii and Local 1 of Hawaii of the Bricklayers and Allied Craftsmen International Union, AFL-CIO, and Other Signatory Employers)</p>	x		02/10/1964	8,000	<ul style="list-style-type: none"> At least 16 years old High school graduate or GED equivalent Physically able to perform duties of the trade 	<p>Director of Training or Training Coordinator</p> <p>Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819</p>

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
							Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.bacweb.org
Taper	Joint Apprenticeship Committee for Tapers (Gypsum Drywall Contractors Association of Hawaii and the International Brotherhood of Painters and Allied Trades Tapers Local Union 1944, AFL-CIO)	x		09/01/1967	8,000	<ul style="list-style-type: none"> At least 18 years old Physically able to perform duties of the trade Driver's license High school diploma or equivalent 	Training Coordinator Address: 2240 Young Street Honolulu, HI 96826 Phone: (808) 941-0991 Fax: (808) 946-6623 Website: http://www.dc50.org/
Telecommunication / CATV Installer Technician	Hawaii Electricians Joint Apprenticeship Committee aka Joint Apprenticeship Committee for Telecommunications (International Brotherhood of Electrical Workers Local Union 1186, AFL-CIO, and Signatory Employers)	x		09/16/1998	6,000	<ul style="list-style-type: none"> At least 18 years old High school diploma or GED Complete the National Joint Apprenticeship and Training Committee Math Course or one-year high school Algebra 1 Transcript of high school or post high school courses Pass industry aptitude test to qualify for oral interview Application fee (non-refundable) 	Apprenticeship or Training Coordinator Address: 1935 Hau Street Room 301 Honolulu, HI 96819 Phone: (808) 847-0629 Fax: (808) 843-8818 Website: http://www.njatc.org/
Tile Setter	Joint Apprenticeship Committee for Tile Setters (Tile, Marble and Terrazo Contractors Association of Hawaii and Local 1 of Hawaii of the Bricklayers, and Allied Craftsmen International Union of America, AFL-CIO)	x		06/24/1958	8,000	<ul style="list-style-type: none"> At least 16 years old High school graduate or GED equivalent Physically able to perform duties of the trade 	Director of Training or Training Coordinator Address: Hawaii Masons & Plasterers Training 1188 Sand Island Parkway Honolulu, HI 96819 Phone: (808) 848-0565 Fax: (808) 847-7068 Website: http://www.bacweb.org

Trade	Sponsor	Union	Non-Union	Date of Approval/Registration	No. of Hours of On-the-Job Training	Minimum Requirements	Contact Information
Truck Operator and Driver	<p>Hawaii Joint Apprenticeship Committee for Operating Engineers</p> <p>(General Contractors Labor Association and the Building Industry Labor Association and International Union of Operating Engineers, Local Union #3, AFL-CIO)</p>	x		03/01/91	2,000	<ul style="list-style-type: none"> • At least 18 years old • High school diploma or GED or C-based test • Physically able to perform duties of the trade • School transcripts • Driver's license • Current State DOT PUC physical • Ranked on general knowledge and hands on test • Have reliable transportation 	<p>State Administrator</p> <p>Address: P.O. Box 428 Kahuku, HI 96731-0428</p> <p>Phone: (808) 232-2001 Fax: (808) 232-2217 Website: http://oe3.org/training/</p>

LINDA LINGLE
GOVERNOR



AARON S. FUJIOKA
ADMINISTRATOR

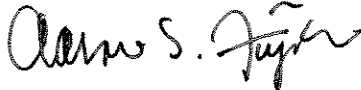
PROCUREMENT POLICY BOARD
LESLIE S. CHINEN
DARYLE ANN HO
GREGORY L. KING
RUSS K. SAITO
PAMELA A. TORRES

**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

July 24, 2007

PROCUREMENT CIRCULAR NO. 2007-05

TO: Executive Department Heads
FROM: 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, 2nd paragraph, is amended to read: "WHEREAS, the above-bound Principal has ~~[entered into]~~ signed a Contract with Obligee ~~[dated]~~ on _____ for ~~the following project:~~ _____."

2) **Exhibit F:**

- a. Page 1, 2nd paragraph, is amended to read: "WHEREAS: The Principal has by written agreement dated _____ ~~[entered into]~~ signed a contract with Obligee for the following Project: . . ."
- b. Page 2, 5th 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, 1st 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."

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 "*Combination 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.

The exhibit bond and related forms are available on the SPO homepage at 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.

Years 2021 and 2022

Holidays to be observed by the HAWAII STATE GOVERNMENT

www.dhrd.hawaii.gov

Website where State Holiday Schedule posted

Year 2021 HAWAII STATE HOLIDAYS

(Hawaii Rev. Statutes, Sec. 8-1) Day Observed in 2021 Official Date Designated in Statute/Constitution

New Year's Day.....	Jan. 1, Friday	The first day in January
Dr. Martin Luther King, Jr. Day.....	Jan. 18 Monday	The third Monday in January
Presidents' Day.....	Feb. 15 Monday	The third Monday in February
Prince Jonah Kuhio Kalaniana'ole Day.....	Mar. 26 Friday	The twenty-sixth day in March
Good Friday.....	April 2 Friday.....	The Friday preceding Easter Sunday
Memorial Day.....	May 31 Monday	The last Monday in May
King Kamehameha I Day.....	June 11 Friday.....	The eleventh day in June
Independence Day.....	July 5 Monday	The fourth day in July
Statehood Day.....	Aug. 20 Friday.....	The third Friday in August
Labor Day.....	Sept. 6 Monday	The first Monday in September
Veterans' Day.....	Nov 11 Thursday	The eleventh day in November
Thanksgiving.....	Nov. 25 Thursday	The fourth Thursday in November
Christmas.....	Dec. 24 Friday	The twenty-fifth day in December

Year 2022 HAWAII STATE HOLIDAYS

(Hawaii Rev. Statutes, Sec. 8-1) Day Observed in 2022 Official Date Designated in Statute/Constitution

New Year's Day.....	Dec. 31, Friday	The first day in January
Dr. Martin Luther King, Jr. Day.....	Jan. 17 Monday	The third Monday in January
Presidents' Day.....	Feb. 21 Monday	The third Monday in February
Prince Jonah Kuhio Kalaniana'ole Day.....	Mar. 25 Friday	The twenty-sixth day in March
Good Friday.....	April 15 Friday	The Friday preceding Easter Sunday
Memorial Day.....	May 30 Monday	The last Monday in May
King Kamehameha I Day.....	June 10 Friday.....	The eleventh day in June
Independence Day.....	July 4 Monday	The fourth day in July
Statehood Day.....	Aug. 19 Friday	The third Friday in August
Labor Day.....	Sept. 5 Monday	The first Monday in September
Election Day.....	Nov. 8 Tuesday	The first Tuesday in November following the first Monday of even numbered years (<i>Hawaii State Constitution, Article 2-Section 8</i>)
Veterans' Day.....	Nov 11 Friday	The eleventh day in November
Thanksgiving.....	Nov. 24 Thursday	The fourth Thursday in November
Christmas.....	Dec. 26 Monday	The twenty-fifth day in December

FOOTNOTES: For use solely by State government agencies. Federal government and local banking holidays may differ. For State agencies that operate on other than Monday-Friday 7:45 AM to 4:30 PM schedules, also refer to appropriate collective bargaining agreements. Created by the Department of Human Resources Development 5/20/2020 subject to change.



STATE OF HAWAII
CONTRACT FOR GOODS OR SERVICES
BASED UPON
COMPETITIVE SEALED BIDS

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 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707 _____
_____ 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 an invitation for competitive sealed bids, and has received and reviewed bids submitted in response to the invitation.

C. The solicitation for bids and the selection of the CONTRACTOR were made in accordance with section 103D-302, Hawaii Revised Statutes ("HRS"), Hawaii Administrative Rules, Title 3, Department of Accounting and General Services, Subtitle 11 ("HAR"), Chapter 122, Subchapter 5, and applicable procedures established by the appropriate Chief Procurement Officer ("CPO").

D. The CONTRACTOR has been identified as the lowest responsible and responsive bidder whose bid meets the requirements and criteria set forth in the invitation.

E. Pursuant to _____ HHCA of 1920, as amended _____, 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 Invitation for Bids number IFB-22-HHL-011 ("IFB") * and the CONTRACTOR'S accepted bid ("Bid"), 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 _____
* and summarized in Attachment S-1

TBD _____ DOLLARS

(\$ TBD), including approved costs incurred and taxes, at the time and in the manner set forth in the IFB and CONTRACTOR'S Bid. And generally described in Attachment S-2.

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, Construction 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, Construction 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 IFB, including all attachments and addenda; and (3) the CONTRACTOR'S Bid.

7. Liquidated Damages. Liquidated damages shall be assessed in the amount of One Thousand and 00/100 _____ DOLLARS (\$ 1,000.00) 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)

William J. Aila Jr.

(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 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: Papakolea 2312 and 2316 Kapahu St. Structure Stabilization
Location: Honolulu, Island of Oahu, Hawaii
Contractor: TBD
IFB No.: IFB-22-HHL-011

Pursuant to 103D, Hawaii Revised Statutes, the CONTRACTOR shall perform and provide the Scope of Services listed below and detailed in Invitation for Bids IFB-22-HHL-011 and in CONTRACTOR's proposal submitted on **September 22, 2021**, in a proper and satisfactory manner as determined by the STATE and in accordance with all Federal, STATE AND LOCAL LAWS, BOTH OF WHICH ARE INCORPORATED BY REFERENCE.

DEMOLITION AND RESTORATION

1. Clearing and grubbing for site preparation.
2. Demolition of concrete driveway aprons at 2312 and 2316 Kapahu St.
3. Demolition of concrete walkway at 2312 and 2316 Kapahu St.
4. Alternative construction access and restoration, including demolition/removal and restoration of sidewalk, curb, gutter, curb ramp, wall, and vegetation (at TMK: 2-4-034:008).

GRADING

5. Excavation/embankment for downspouts and sidewalks.

ON-SITE DRAIN

6. Install 4" KlassikDrain K100 trench drain and 4" pipe outlet through weep hole in CMU in place complete.
7. Extend downspouts from roof gutter to discharge horizontally 5' from building foundation/wall, at grade. Provide splash block.

CONCRETE

8. Concrete repair at 2312 and 2316 Kapahu St. walkways.
9. New concrete sidewalks, including subgrade preparation, base and concrete in place complete.
10. Replace concrete driveway aprons at 2312 and 2316 Kapahu St.

BMPs

11. Install filter socks.
12. Install temporary silt fences.



STATE OF HAWAII

SCOPE OF SERVICES

- 13. Install temporary curb inlet protection.
- 14. Install stabilized construction entrance.
- 15. Provide dust control.

TRAFFIC CONTROL

- 16. Provide traffic control.

LANDSCAPING

- 17. Landscaping/gravel restoration for areas disturbed by construction work.

STRUCTURAL

- 18. Mobilization and demobilization
- 19. Excavation (7 C.Y.)
- 20. Pile installation (510 L.F.)
- 21. Concrete (7 C.Y.)
- 22. Floor surveys to document acceptance of tolerance and correction of floor level
- 23. Floor opening
- 24. Floor restoration

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before 60 calendar days after receiving written Notice to proceed, subject to extensions, as may be granted.



STATE OF HAWAII

COMPENSATION AND PAYMENT SCHEDULE**Project:** Papakolea 2312 and 2316 Kapahu St. Structure Stabilization**Location:** Honolulu, Island of Oahu, Hawaii**Contractor:** TBD**IFB No.:** IFB-22-HHL-011

The State shall pay the CONTRACTOR a sum not to exceed _____ AND ___/100 DOLLARS (\$_____) for the satisfactory completion of the work under this contract.

DEMOLITION AND RESTORATION

- | | | | | |
|----|------|---|----------|----------|
| 1. | L.S. | Clearing and grubbing for site preparation. | Lump Sum | \$ _____ |
| | | | | |
| 2. | L.S. | Demolition of concrete driveway aprons at 2312 and 2316 Kapahu St. | Lump Sum | \$ _____ |
| | | | | |
| 3. | L.S. | Demolition of concrete walkway at 2312 and 2316 Kapahu St. | Lump Sum | \$ _____ |
| | | | | |
| 4. | L.S. | Alternative construction access and restoration, including demolition/removal and restoration of sidewalk, curb, gutter, curb ramp, wall, and vegetation (at TMK: 2-4-034:008). | Lump Sum | \$ _____ |

GRADING

- | | | | | |
|----|------|---|----------|----------|
| 5. | L.S. | Excavation/embankment for downspouts and sidewalks. | Lump Sum | \$ _____ |
|----|------|---|----------|----------|

ON-SITE DRAIN

- | | | | | |
|----|------|--|----------|----------|
| 6. | L.S. | Install 4" KlassikDrain K100 trench drain and 4" pipe outlet through weep hole in CMU in place complete. | Lump Sum | \$ _____ |
|----|------|--|----------|----------|



STATE OF HAWAII

COMPENSATION AND PAYMENT SCHEDULE

7. 2 Extend downspouts from roof gutter to discharge horizontally 5' from building foundation/wall, at grade. Provide splash block.
- Per Each \$ _____
- CONCRETE**
8. L.S. Concrete repair at 2312 and 2316 Kapahu St. walkways.
- Lump Sum \$ _____
9. L.S. New concrete sidewalks, including subgrade preparation, base and concrete in place complete.
- Lump Sum \$ _____
10. L.S. Replace concrete driveway aprons at 2312 and 2316 Kapahu St.
- Lump Sum \$ _____
- BMPs**
11. L.S. Install filter socks.
- Lump Sum \$ _____
12. L.S. Install temporary silt fences.
- Lump Sum \$ _____
13. L.S. Install temporary curb inlet protection.
- Lump Sum \$ _____
14. L.S. Install stabilized construction entrance.
- Lump Sum \$ _____
15. L.S. Provide dust control.
- Lump Sum \$ _____



STATE OF HAWAII

COMPENSATION AND PAYMENT SCHEDULE

16.	L.S.	<u>TRAFFIC CONTROL</u> Provide traffic control.	Lump Sum	\$ _____
17.	L.S.	<u>LANDSCAPING</u> Landscaping/gravel restoration for areas disturbed by construction work.	Lump Sum	\$ _____
18.	L.S.	<u>STRUCTURAL</u> Mobilization and Demobilization	Lump Sum	\$ _____
19.	C.Y.	Excavation (7 C.Y.)	Unit Price	\$ _____
20.	L.F.	Pile Installation (510 L.F.)	Unit Price	\$ _____
21.	C.Y.	Concrete (7 C.Y.)	Unit Price	\$ _____
22.	L.S.	Floor Surveys to Document Acceptance of Tolerance and Correction of Floor Level	Lump Sum	\$ _____
23.	12	Floor Opening	Per Each	\$ _____
24.	12	Floor Restoration	Per Each	\$ _____
TOTAL SUM BID				\$ _____



STATE OF HAWAII

TIME OF PERFORMANCE

Project: Papakolea 2312 and 2316 Kapahu St. Structure Stabilization
Location: Honolulu, Island of Oahu, Hawaii
Contractor: TBD
IFB No.: IFB-22-HHL-011

1. The Time of Performance for this Contract shall be **Sixty (60)** 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.



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)**William J. Aila Jr.**

(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)

(Date)

(Print Name)

(Print Title, if designee of the Director of DHRD)



STATE OF HAWAII
SPECIAL CONDITIONS

Project: Papakolea 2312 and 2316 Kapahu St. Structure Stabilization
Location: Honolulu, Oahu, Hawaii
Contractor: TBD
IFB No.: IFB-22-HHL-011

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. “Project Manager” and “DHHL Project Manager”

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>
General Liability Insurance (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
Automobile Insurance (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> .
Workers Compensation (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.
Builder’s Risk covering the CONTRACTOR and all subcontractors	100% Replacement Value
Fire and extended coverage	100% Replacement Value



STATE OF HAWAII

SPECIAL CONDITIONS

Malicious Mischief

100% Replacement Value

Flood Insurance, 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 **Sixty (60)** calendar days after receiving written Notice to Proceed, 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



STATE OF HAWAII

SPECIAL CONDITIONS

incomplete.

SC-04 PROCESS THROUGH DHHL

Until Notice to Proceed (NTP) is issued, any and all submittals, reports, request claims, and notices under the contract pertaining to work for this project shall be processed through the Land Development Division Project Manager, at Hale Kalanianaʻole, 91-5420 Kapolei Parkway, Kapolei, Hawaii 96707.

After Notice to Proceed has been issued, any and all submittals, reports, requests, claims, and notices under the contract that pertain to this project shall be processed through the Construction Manager (CM) with copies submitted to DHHL and the above Consultant as applicable. The CM contract person and number will be identified at the pre-construction meeting.

SC-05 SURVEYING SERVICES

Refer to DHHL Interim General Condition 5.9.3.

The CONTRACTOR shall submit the name of the surveyor, who shall be licensed in the State of Hawaii and will be doing this work for it throughout the course of the project, to DHHL prior to beginning work at the site.

Upon request, DHHL shall provide subdivision plat maps to the CONTRACTOR to enable its surveyor to stake out the various work.

Property pins for the existing lots adjacent to the project site may remain intact and may be visible. However, DHHL makes no warranty that these existing pins are accurate or have not been disturbed.

The CONTRACTOR shall not disturb any existing property pins and is solely responsible for their replacement. The CONTRACTOR shall accurately replace any existing property pins disturbed or removed by it and shall certify that they have been re-installed in the correct locations at no cost to DHHL.

The CONTRACTOR and CONTRACTOR's Licensed Professional Land Surveyor shall provide a letter jointly certifying that all work, including the grading, were built to the lines and grades shown on the record drawings.

Except where specifically provided for in the proposal, all work necessary for, or related to surveying services shall be considered incidental to the various contract items.

Any surveying services required shall be the responsibility of the CONTRACTOR and considered incidental to the scope of work under this contract and therefore covered under the terms of this Contract. No separate payment shall be made.

Upon completion, the CONTRACTOR shall prepare an as-built plan for the project site in which the finished grades are certified by a Hawaii Licensed Professional Land Surveyor. Six (6) copies of the as-built plan shall be submitted to the Construction Manager and Project Manager. The cost of the as-built plan shall be incidental to the Contract. No separate payment shall be made.



STATE OF HAWAII

SPECIAL CONDITIONS

SC-06 ALLOWANCES

The proposal may contain payment items designated as allowances (i.e. mitigation of any inadvertent discovery of human remains). Funds listed in allowance items are to be spent at the direction of DHHL. The allowance is an estimate only and is subject to increase or decrease depending on the actual cost of the item. The funds are for the direct costs of an item and all pricing, submittal and review, overhead, installation, profit, insurance, surety, processing of the issuance of checks for payment to other parties, and all other costs will be included. No payment will be made for incidental costs.

Allowances specifically set aside for construction work and materials will be negotiated when the scope of work is determined. Any unspent allowance costs will be deducted from the Contract by change order prior to final payment.

SC-07 SCHEDULE OF PRICES

The CONTRACTOR shall submit a schedule of values in accordance with DHHL Construction General Conditions, Article 7.2.4 Schedule of Prices within 14 calendar days of the Notice to Proceed. The format and breakdown of the schedule of values shall be acceptable to DHHL.

The schedule of values shall show the work of each subcontractor and shall be based on installed work. No payment will be made until the CONTRACTOR has presented an acceptable schedule of values to DHHL. Performance and Payment Bonds costs shall be a separate line item and the cost shall be authenticated by surety invoice. All overhead and profit shall be prorated across all payment line items.

SC-08 PERMITS AND FEES

The CONTRACTOR shall apply and pay for all permits and inspection fees as required by all governmental agencies having jurisdiction over this project.

All work necessary to comply with this item will not be paid for separately but shall be considered incidental to the various contract items. No separate payment will be made.

SC-09 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 State Department of Transportation, the State Department of Health, the City and County of Honolulu (County), Hawaiian Electric Company (HECO), and sandwich Isle Communications (SIC).

The CONTRACTOR shall coordinate all the necessary work for maintaining water service to include disruption or restriction to water service, temporary utility services, permanent service and appurtenances with the Project Manager and appropriate agencies, including but not limited to DHHL for potable water, and the Honolulu Fire Department for fire protection.



STATE OF HAWAII

SPECIAL CONDITIONS

The CONTRACTOR shall request, coordinate and schedule all inspections during construction, including but not limited to preliminary, pre-final, and final inspections, by all necessary government agencies having jurisdiction or vested interests over or in any and all elements of the project.

All work necessary to comply with this item shall be considered incidental to the various contract items. No separate payment will be made.

SC-10 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. If the CONTRACTOR does not hold all of the licenses required to perform a particular item of work on this project with its own workers, when bidding, he must list subcontractors that hold the appropriate licenses in its proposal.

SC-11 WATER CHARGES AND REQUIREMENTS

Contractor shall provide their own potable water required for Contractor's use.

SC-12 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.

The CONTRACTOR shall re-designate the project's erosion and sediment control plan (ESCP) Coordinator and provide ESCP Coordinator duties required for the appropriate project category and City and County of Honolulu Department of Planning and Permitting (DPP) requirements.

SC-13 NPDES PERMITS

An NPDES is not required for this project. If an NPDES becomes required, then DHHL will submit an NPDES Permit Application to the Department of Health.

The CONTRACTOR agrees to schedule and sequence his operations to take all of the foregoing into account along with the requirements of DHHL General Condition 7.21.4 shall govern in the event of any delay(s) in DHHL obtaining approvals for these NPDES permits.

The CONTRACTOR shall provide the Consultant with the additional pertinent information required for preparation of the site-specific Best Management Practices (BMPs) Plan, and the Solid Waste Disclosure Form for Construction Sites for this project.



STATE OF HAWAII

SPECIAL CONDITIONS

SC-14 NOTIFICATION OF WORK

The CONTRACTOR shall notify the Project Manager, and give a minimum of five (5) working days' notice before starting any work. The CONTRACTOR shall notify the Project Manager a minimum of five (5) working days prior to start of any critical activities including, but not limited to, activities impacting noise, access, and air quality.

SC-15 EXISTING OCCUPIED LOTS

The CONTRACTOR shall provide and maintain continuous vehicular access and utility service (water, telephone and electrical) to the various occupied lots within and surrounding the project for the duration of construction and to the satisfaction of the Project Manager. The CONTRACTOR shall identify, locate and protect all utility services to these lots prior to any construction activity.

The CONTRACTOR shall provide safe and convenient access to these lots at all times to the satisfaction of the Project Manager. The CONTRACTOR shall also coordinate any temporary utility services with the proper utility companies. The CONTRACTOR shall pay all utility installation charges and fees to any utility company for any temporary utility connections.

SC-16 FINAL INSPECTION

Throughout the construction period, the work may be subject to periodic inspection by DHHL, the Construction Management (CM) Inspector, the Department of Health, the County and other applicable government agencies. Once work has been satisfactorily completed, the County, accompanied by DHHL and CM Inspector, will make the final inspection of the work to determine whether all work has been done in complete compliance with the requirements of the plans and these specifications.

The CONTRACTOR shall therefore schedule the final inspection with the County, Department of Health, Department of Transportation and the CM Inspector, and notify the DHHL Project Manager one week prior to the final inspection.

Neither the scheduling nor the conduct of the aforementioned final inspection shall be deemed a waiver of DHHL's right to subsequently require CONTRACTOR to complete all unfinished or defective work to the satisfaction of DHHL.

SC-17 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).



STATE OF HAWAII

SPECIAL CONDITIONS

SC-18 CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS

CONTRACTORS are 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-19 CONTRACTOR'S DAILY REPORT

The CONTRACTOR shall submit a daily report electronically, for DHHL review. The report shall include:

1. Date
2. Weather
3. Activity at the site for the CONTRACTOR
 - a. Labor – who and what classification, i.e., carpenter, laborer, supervisor, etc.
 - b. Equipment
 - c. Materials delivered
 - d. Work performed
4. Activity at the site for subcontractors
 - a. Labor – who and what classification, i.e., carpenter, laborer, supervisor, etc.
 - b. Equipment
 - c. Materials delivered
 - d. Work performed
5. Visitors to the site – Construction Manager, Inspectors, etc.
6. Problems or Questions (including suggested resolutions, if any)
7. Safety report status
8. Quality control report status

SC-20 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



STATE OF HAWAII

SPECIAL CONDITIONS

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
 - 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-21 ENERGY EFFICIENCY

The CONTRACTOR and its subcontractors shall comply with the Energy Policy and Conservation Act (P.L. 94-163) and all mandatory State and County standards and policies relating to energy efficiency.

SC-22 CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

Developer and its subcontractors shall to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387).

SC-23 CONTRACT WORK HOURS AND SAFETY STANDARDS

Developer and its subcontractors shall comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

SC-24 INADVERTENT DISCOVERY OF HUMAN BURIALS

Although not expected, in the event human burials are inadvertently discovered, the CONTRACTOR shall immediately stop work in the vicinity of the burial and contact the following parties and agencies immediately: State Historic Preservation Division (SHPD), DHHL, Office of Hawaiian Affairs (OHA) and the Oahu Island Burial Council.

The discovery of human remains should not prevent the contractor from working on other areas at the work site.

DHHL may provide the CONTRACTOR with a Supplemental Agreement for additional time added to the CONTRACTOR’s performance schedule for the mitigation of any inadvertent discovery of human remains per the DHHL Construction General Conditions, sections 7.21.5 through 7.21.5.4.

The CONTRACTOR shall provide unit cost prices for the mitigation work, and time and materials will be negotiated when the scope of work is determined. No work shall be



STATE OF HAWAII

SPECIAL CONDITIONS

performed by the CONTRACTOR without prior written authorization from DHHL. Any unspent allowance costs will be deducted from the Contract by change order prior to final payment.

SC-25 CERTIFICATION

The CONTRACTOR and CONTRACTOR's Hawaii Licensed Professional Land Surveyor shall jointly certify the finish elevation(s) of any new work, referenced to mean sea level (MSL).

SC-26 GEOTECHNICAL ENGINEER

The services of a geotechnical engineering firm will be retained by CONTRACTOR. The CONTRACTOR shall notify the Project Manager and the Construction Manager whenever the geotechnical engineering firm's presence is needed at the site. The geotechnical engineer shall be present to observe site grading and other work concerning excavation, placing and compacting soil materials, to take field density tests, and installation of structural piles, helical piles, etc. Also, the geotechnical engineer shall perform laboratory testing of all imported soils or on-site soils to determine its acceptability for its intended use as select material or general fill material. Inspections and verification costs shall be borne by the CONTRACTOR. The geotechnical engineer shall compile the daily observations, test data, test results and recommendations into a weekly submittal to the Construction Manager. The geotechnical engineer shall ensure that the geotechnical work complies with the specifications and drawings.

Upon completion of the grading operation, the geotechnical engineer shall provide the information needed to complete the "Report After Grading" as required by the Revised Ordinances of Honolulu, if required. As a minimum, six (6) copies of compaction data with 11"x17" location map, moisture content at the time of compaction, and certification letter (stamped and signed by a licensed engineer in the State of Hawaii) that the work was done in conformity to the specifications.

The DHHL reserves the right to obtain the services of a geotechnical engineer to provide ownership review of the services provided by the contractor's geotechnical engineer, and may provide comments to the Contractor that the Contractor shall address at no additional cost to the DHHL.

SC-27 SAMPLING AND TESTING

The CONTRACTOR shall retain the services of a geotechnical engineering firm and/or certified testing laboratory to perform sampling and testing as called for by this Contract. Sampling and testing shall include materials testing and field testing as required. Cost for this work shall be considered included in the contract bid amount. No separate payment shall be made.

SC-28 STANDARD SPECIFICATIONS

The "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, September 1986", as amended of the Departments of Public Works, County of Kauai,



STATE OF HAWAII

SPECIAL CONDITIONS

County of Maui, County of Hawaii and City and County of Honolulu, of the State of Hawaii, is by reference incorporated herein and made a part of these specifications. The term "Standard Specifications" used hereinafter refers to this "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, September 1986."

The "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005, State of Hawaii and all applicable updates is by reference incorporated herein and made a part of these specifications. Copies of the Standard Specifications are available for purchase from State of Hawaii, Department of Transportation, Highways Division.

SC-29 STANDARD DETAILS

The "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, September 1984", as amended of the Departments of Public Works, County of Kauai, County of Maui, County of Hawaii and City and County of Honolulu, of the State of Hawaii, is by reference incorporated herein and made a part of these specifications. The term "Standard Details" used hereinafter refers to this "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, September 1984." Copies of the Standard Details are on file and may be inspected at the Division of Purchasing during regular business hours of the City and County of Honolulu.

The work embraced herein shall be done in accordance with the Standard Details insofar as they may apply.

SC-30 WATER SYSTEM SPECIFICATIONS

The "WATER SYSTEM STANDARDS," State of Hawaii, dated 2002, and all subsequent amendments and additions, are by reference incorporated herein and made a part of these contract documents. The work embraced herein shall be performed by the CONTRACTOR in accordance with the "WATER SYSTEM STANDARDS," and the various sections of the Special Conditions.

The term "Water System Standards" used in these contract documents refers to the "WATER SYSTEM STANDARDS" State of Hawaii, dated 2002, and all subsequent amendments and additions.

SC-31 EARTHWORK QUANTITIES

Prior to any grading operations, the CONTRACTOR shall submit to the Project Manager a list of estimated quantities for excavation and embankment. The CONTRACTOR shall also estimate a reasonable percentage for loss/shrinkage and percentage of unsuitable excavated materials. The percentages shall be updated as the grading work progresses. The CONTRACTOR is responsible for disposal of all excavated material offsite. Borrow material shall not be imported until all excavation work is completed and authorized by the Project Manager.



STATE OF HAWAII

SPECIAL CONDITIONS

SC-32 CONSTRUCTION YARD AND RIGHT-OF-ENTRY

CONTRACTOR'S staging area may be located on-site, within the designated project area, and within the DHHL Right-of-Way, as approved by the Construction Manager. Should the staging area, in addition to the project area, measure more than 1 acre, the CONTRACTOR will be responsible to apply for and obtain a National General Permit Coverage (NGPC) for Storm Water Associated with Construction Activities from the State Department of Health, Clean Water Branch, including associated fees, before starting any work.

Access to the project site will be specified by the DHHL Project Manager and the Construction Manager.

SC-33 CITY AND COUNTY OF HONOLULU INSPECTION

All work within the project site and any County maintained easements and right-of-way shall be inspected and approved by the applicable agencies of the County. The CONTRACTOR shall make arrangements directly with the appropriate agencies to arrange for inspection of work. All work and/or fees necessary to comply with this item shall be considered incidental to the various Contract items. No separate payment shall be made. Special Inspections shall be the responsibility of the Contractor to fulfill building permit requirements.

SC-34 STATE GENERAL EXCISE TAX

This project is not exempt from the State of Hawaii General Excise Tax. The CONTRACTOR's prices shall include the General Excise Tax for all work.

SC-35 CONSTRUCTION PHASING

The CONTRACTOR shall prepare and submit to the Project Manager, prior to start of field construction work, a construction phasing plan that outlines and describes the work scope and sequence, in order to maintain public and individual lessee access with minimal interruption and restriction to usage. Plan shall describe all planned phases of work and is to include estimated times and durations. Measures to maintain access may include and are not limited to: creating separate areas of work and sequencing and phasing work on specific areas in lieu of closing off the entire site, temporary accommodations for the impacted lessees and construction fencing.

Notification to include lead times for notification to public and governmental service agencies shall be identified and scheduled.

DHHL will not provide additional time to the CONTRACTOR or the CONTRACTOR's performance schedule should land disturbing activities exceed the time duration identified in this condition.

The CONTRACTOR shall coordinate the construction plans as well as the development of the construction phasing plan with the Project Manager.



STATE OF HAWAII

SPECIAL CONDITIONS

The CONTRACTOR shall ensure that all materials, equipment, labor and incidentals are on-site as needed to ensure rapid and continuous work to minimize or avoid disruptions to the impacted lessees and neighboring properties.

SC-36 DELETED ITEMS

Depending on the site conditions, soil conditions and other factors, the Project Manager may decide to delete a portion or all of a proposal item in its entirety. A change order shall be issued to delete the work and the contract amount shall be reduced by subtracting the corresponding proposal item amount.

No claim shall be filed for anticipated profit or loss resulting from deletion of all or part of the proposal item except as indicated in DHHL Construction General Condition 4.6.

SC-37 RESTORATION OF DHHL PROPERTY

Any areas cleared or graded by the CONTRACTOR for field office(s), staging or storage operations located in DHHL lots shall be backfilled to the original (or finished) elevations, slopes and grades (shown on the plans) and/or graded to provide proper drainage prior to the completion of the project. The backfilled areas shall be covered with a 2-inch layer of topsoil and immediately grassed.

In addition, any adjustments to homeowner's/ lessee's property including but not limited to access, slope improvements, or erosion control measures shall be repaired and restored to the original condition. Existing conditions shall be documented prior to start of construction with DHHL project manager and Construction Manager.

SC-38 FINAL SETTLEMENT OF CONTRACT

The following shall be made additional conditions of compliance with DHHL Construction General Condition 7.33:

1. The CONTRACTOR shall coordinate with all government agencies and utility companies on behalf of DHHL to obtain letter(s) from each respective government agency or utility company indicating that acceptance of the contract work for the project has been granted to DHHL. Copies of the letters shall be submitted to DHHL.
2. Signature, execution, and return of the "Record Drawing" Title tracings.

Payment for all work required to comply with the above items will not be paid for separately but shall be considered incidental to the various contract items.

SC-39 SHOP DRAWINGS AND OTHER SUBMITTALS

The CONTRACTOR is required to submit a complete list of shop drawings and other submittals to the Construction Manager, for DHHL and the consultant team's review, by one week after the notice to proceed (NTP) is given, or at the pre-construction meeting, whichever comes first.

The CONTRACTOR is then required to submit all submittals and shop drawings that are listed within ONE MONTH after the notice to proceed is given. The CONTRACTOR will



STATE OF HAWAII

SPECIAL CONDITIONS

not be given schedule or cost considerations for delay of materials if shop drawings or submittals are not submitted by this time.

SC-40 AS-BUILT DRAWINGS / RECORD DRAWINGS

As-Built Drawings:

The CONTRACTOR shall provide as-built drawings. The As-Built drawings shall show the actual construction so that any future renovations or tie-ins can be anticipated accurately.

The CONTRACTOR shall record all deviations from the drawings that were authorized by the Project Manager onto the copy of the field plans. The changes shall be recorded immediately after they have been constructed in place to assure they are recorded before they are forgotten.

The CONTRACTOR shall record the changes onto the field office plans using a red pencil. The CONTRACTOR shall stamp, sign and date each sheet of the field office plans. The stamp shall contain the words: “AS-BUILT DRAWINGS” and include a statement signed by the CONTRACTOR certifying that the drawings on the sheet accurately and completely reflect and show the actual as-built construction. The stamp format and wording shall be submitted to the Project Manager for prior approval.

The CONTRACTOR shall submit the marked-up field office plans for the project, stamped, signed and dated, to the Project Manager after the improvements for each respective portion of the project have been completed.

Record Drawings:

All changes shown on the As-Built drawings will be recorded on the original tracings, which will then become the Record Drawings. The Consultant(s) shall be responsible for preparing the Record Drawings. The Consultant(s) shall stamp, sign and date the Title Sheet tracing of the Record Drawings. The stamp shall contain the words “Record Drawings.”

The CONTRACTOR shall review the changes made and certify the Record Drawings by signing and dating the Record Drawing Title Sheet tracing where indicated. Any deviations from the plans determined by the Project Manager to be missing from, incomplete, or inaccurately drawn on the As-Built Drawings shall be corrected on the Record Drawing tracings by the State and the CONTRACTOR shall be charged for the services. The State will keep a record of the associated cost impacts and deduct them from the Contract price.

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.



STATE OF HAWAII
SPECIAL CONDITIONS

SC-41 COMPENSATION FOR REMOVAL OF ABANDONED VEHICLES, TRASH OR DUMPED ITEMS

Any and all abandoned vehicles, boats or other means of transportation and all appliances and discards of every description found within 5-feet of the actual work limits during the duration of this contract shall be promptly and totally removed from the site. The cost shall be considered incidental to the various Contract items.

The CONTRACTOR is solely responsible for taking precautions to prevent unauthorized access during working and non-working hours to eliminate illegal dumping within these areas during the entire duration of the project. Refer to DHHL Construction General Conditions 4.9.1.2, 7.30 and 7.34.

SC-42 DISRUPTIONS TO LESSEE’S USE OF STRUCTURE

Work within the structure to provide the leveling shall not significantly disrupt the living condition of the lessees and the lessees shall be allowed to have overnight access to their residences. Costs related to the disruption to the lessee and inability to utilize their homes, and any relocation costs shall be borne by the contractor and should be factored into the bid costs. The contractor shall work with the lessees and CM to find adequate access and parking accommodations for the individual lessees, at no cost to the DHHL.

The contractor shall limit the amount and duration of work within the lessee’s structures to the maximum extent practicable and the disruption shall not exceed 14 days. The contractor shall phase the work to allow for this minimal duration and accomplish exterior work prior to and after work within the structures to allow for the construction to be limited to 14 days within the lessee’s structure.

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.

Department of Hawaiian Home Lands
CONSTRUCTION GENERAL CONDITIONS
Dated March 2014

TABLE OF CONTENTS

<u>ARTICLE/SECTION</u>	<u>PAGE</u>
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

DHHL	Department of Hawaiian Home Lands.
HAR	Hawaii Administrative Rules
HRS	Hawaii Revised Statutes
VECP	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 Department 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~

NOTICE OF INTENTION TO BID

Date: _____

Mr. William J. Aila, Jr., Chairman
Hawaiian Homes Commission
DEPARTMENT OF HAWAIIAN HOME LANDS
91-5420 Kapolei Parkway
Kapolei, Hawaii 96707

Attention: Mr. Mitchell H. Kawamura, Land Development Division
Notice of Intention to Bid due 4:30 P.M., September 1, 2021

Gentlemen:

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 bid on IFB No. IFB-22-HHL-011, Papakolea 2312 and 2316 Kapahu St. Structure Stabilization, Honolulu, Oahu, State of Hawaii, for which bids will be opened on **4:30 P.M., September 1, 2021**.

_____ 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: _____

Gentlemen:

The Department of Hawaiian Home Lands acknowledges on this date above, your Notice of Intention to Bid on IFB-22-HHL-011.

Mitchell H. Kawamura, Project Manager, for
William J. Aila, Jr., Chairman
Hawaiian Homes Commission

SAMPLE

STATE OF HAWAII
STANDARD
QUALIFICATION QUESTIONNAIRE
FOR
OFFERORS

issued by the
PROCUREMENT POLICY BOARD
STATE OF HAWAII

June 16, 2003

To be filed with the procurement officer calling for offers
in accordance with Section 103D-310, HRS, as amended.

Submitted By _____

Address _____

Date _____

STANDARD QUALIFICATION QUESTIONNAIRE

COVERING EXPERIENCE, EQUIPMENT AND FINANCIAL STATEMENT OF OFFERORS. THE OFFICER CALLING FOR OFFERS MAY REQUIRE THE OFFEROR TO FURNISH ADDITIONAL INFORMATION NOT SPECIFICALLY COVERED HEREIN. ALL ITEMS MUST BE ANSWERED AND OMISSIONS MAY BE CONSIDERED GOOD CAUSE FOR UNFAVORABLE CONSIDERATION.

GENERAL INFORMATION

1. The statements contained in this Questionnaire are being furnished for consideration in submitting an offer for the following project:

(a) Project Title _____

(b) Location _____

(c) Bid Opening Date _____

2. The Questionnaire is being submitted in behalf of:

(a) Name of Offeror _____

- ☐ A Corporation
☐ A Partnership
☐ An Individual
☐ A Joint-Venture

(b) Address _____

(c) Telephone No. _____

(d) Date Submitted _____

3. If the bid is submitted by a joint venture, composed of two or more individual firms, then each member firm comprising the joint venture must submit all information listed on pages 3 through 16, inclusive, of the Questionnaire and, in addition, answer the following:

(a) Members of joint Venture _____

(b) Date of Joint Venture Agreement _____

(c) Is agreement between members comprising the joint venture joint and several liability? _____

If not, state the terms of agreement in this respect: _____

EXPERIENCE QUESTIONNAIRE

Submitted by _____

☐ A Corporation

☐ A Partnership

☐ An Individual

Principal Office _____

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made

1. How many years has your organization been in business as a [General Contractor] under your present business name? _____
2. How many years experience in [construction] _____ has your organization had: (A) as a [General Contractor] _____; (B) as a [Sub-Contractor] _____
3. Show what [construction] projects your organization has completed in the past five (5) years in the following tabulation:

Contract Amt.	Class of Work	When Completed	Name and Address of Owner

4. Have you ever failed to complete any work awarded to you? _____ If so, state when, where and why? _____

5. Has any officer or partner of your organization in the past five (5) years been an officer or partner of some other organization that failed to complete a contract? If so, state name of individual, other organization and reason therefore _____

6. Has any officer or partner of your organization in the past five (5) years failed to complete a contract handled in his own name? _____ If so, state name of individual, name of Owner and reason therefore.

7. In what other lines of business are you financially interested? _____

8. For what corporations or individuals in the past five (5) years have you performed work, and to whom do you refer? _____

9. For what counties within the State of Hawaii have you performed work and to whom do you refer?

10. For what Bureaus or Departments of the State government have you performed work and to whom do you refer?

11. Have you performed work for the U. S. Government? _____ If so, when and to whom do you refer?

12. Have you ever performed any work for any other governmental agencies outside the State of Hawaii? _____ If so, when and to whom do you refer? _____

13. What is the [construction] experience of the principal individuals of your organization?

Individual's Name	Present Position or Office	Years of Work Experience	Magnitude and Type of Work	In What Capacity?

EQUIPMENT QUESTIONNAIRE

Submitted by _____

Principal Office _____

- ☐ A Corporation
☐ A Partnership
☐ An Individual

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made

1. In what manner have you inspected this proposed work? Explain in detail. _____
2. Explain your plan or layout for performing the proposed work. _____
3. The work, if awarded to you, will have the personal supervision of whom?
4. Do you intend to do the hauling on the proposed work with your own force? _____ If so, give amount and type of equipment to be used.
5. If you intend to sublet the hauling or perform it through an agent, state amount of sub-contract or agent's contract, and, if known, the name and address of sub-contractor or agent, amount and type of his equipment and financial responsibility _____
6. Do you intend to do grading on the proposed work with your own forces? _____ If so, give type of equipment to be used _____

7. If you intend to sublet the grading or perform it through an agent, state amount of sub-contract or agent's contract, and, if known, the name and address of sub-contractor or agent, amount and type of his equipment and financial responsibility _____

8. Do you intend to sublet any other portions of the work? _____ If so, state -amount of sub-contract, and, if known, the name and address of the sub-contractor, amount and type of his equipment and financial responsibility _____

9. From which sub-contractors or agents do you expect to require a bond? _____

10. What equipment do you own that is available for the proposed work?

Quantity	Item	Description, Size, Capacity, Etc.	Condition	Years of Service	Present Location

11. What equipment do you intend to purchase for use on the proposed work, should the contract be awarded to you?

Quantity	Item	Description, Size, Capacity, Etc.	Approximate Cost

12. How and when will you pay for the equipment to be purchased? _____

13. Do you propose to rent any equipment for this work? _____ If so, state type, quantity
 and reasons for renting _____

FINANCIAL STATEMENT

Submitted by _____

Principal Office _____

- ☐ A Corporation
☐ A Partnership
☐ An Individual

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made

BALANCE SHEET

As of _____, 20____

Assets

Current assets:

Cash and cash equivalents (1)	\$ _____
Short-term investments (2)	_____
Accounts receivable, net (3)	_____
Inventories (4)	_____
Costs and estimated earnings in excess of billings on uncompleted contracts (5)	_____
Prepaid expenses and other (6)	_____
Sub-Total Current Assets	_____

Property and equipment:

Land (7)	_____
Buildings (8)	_____
Vehicles, machinery and equipment (9)	_____
Furniture and fixtures (10)	_____
Less accumulated depreciation	(_____)
Sub-Total Net Property and Equipment	_____

Other assets:

Cash surrender value of life insurance policies (11)	_____
Deposits and other (12)	_____
Sub-Total Other Assets	_____

Total Assets: \$ _____

BALANCE SHEET (Continued)

Liabilities and Stockholder's Equity

Current liabilities:

Current portion of long-term debt (1)	\$ _____
Accounts payable (2)	_____
Billings in excess of costs and estimated earnings on uncompleted contracts (3)	_____
Accrued liabilities and other (4)	_____
Sub-Total Current Liabilities	_____

Long-term debt, net of current portion (5)	_____
--	-------

Sub-Total Liabilities & Long-term Debt:	\$ _____
---	----------

Stockholder's equity:

Capital stock (6)	_____
Additional paid-in capital (7)	_____
Retained earnings	_____
Treasury stock (8)	(_____)
Sub-Total Stockholder's Equity	\$ _____

Total Liabilities and Stockholder's Equity	\$ _____
--	----------

DETAILS RELATIVE TO ASSETS

(1) Cash and cash equivalents:

<u>Financial Institution</u>	<u>Type of Account</u>	<u>Amount</u>
		\$ _____

		\$ _____

(2) Short-term investments:

<u>Type of Security</u>	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Estimated Fair Value</u>
	\$ _____	\$ _____	\$ _____	\$ _____
	_____	_____	_____	_____
	_____	_____	_____	_____
	\$ _____	\$ _____	\$ _____	\$ _____

(3) Accounts receivable (list major debtors):

Completed contracts

<u>Name</u>	<u>Description</u>	<u>Completion Date</u>	<u>Contract Amount</u>	<u>Amount Receivable</u>
		\$ _____	\$ _____	\$ _____
		_____	_____	_____
		_____	_____	_____
		\$ _____	\$ _____	\$ _____

Other than completed contracts

<u>Name</u>	<u>Description</u>	<u>Due Date</u>	<u>Amount Receivable</u>
Less allowance for doubtful accounts			(_____)
			\$ _____

(4) Inventories

<u>Description</u>	<u>Cost</u>	<u>Market Value</u>	<u>Lower of Cost or Market Value</u>
	\$ _____	\$ _____	\$ _____
	_____	_____	_____
	_____	_____	_____
	\$ _____	\$ _____	\$ _____

DETAILS RELATIVE TO ASSETS (Continued)

(5) Costs and estimated earnings in excess of billings on uncompleted contracts

<u>Name</u>	<u>Description</u>	<u>Completion Date</u>	<u>Contract Amount</u>	<u>Costs and Estimated Earnings to Date</u>	<u>Billings to Date</u>	<u>Costs and Estimated Earnings in Excess of Billings</u>
		\$	\$	\$	\$	
			\$	\$	\$	\$

(6) Prepaid expenses and other

<u>Description</u>	<u>Amount</u>
	\$
	\$

(7) Land

<u>Description</u>	<u>Location</u>	<u>Amount</u>
		\$
		\$

(8) Buildings

<u>Description</u>	<u>Location</u>	<u>Amount</u>
		\$
		\$

(9) Vehicles, machinery and equipment

<u>Description</u>	<u>Amount</u>
	\$
	\$

(10) Furniture and fixtures

<u>Description</u>	<u>Amount</u>
	\$
	\$

DETAILS RELATIVE TO ASSETS (Continued)

(11) Cash surrender value of life insurance policies

<u>Key Employee</u>	<u>Insurance Company</u>	<u>Policy Amount</u>	<u>Paid-Up Additional Insurance</u>	<u>CSV Amount</u>
_____	_____	\$ _____	\$ _____	\$ _____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Less loans payable		_____	_____	(_____)
		\$ _____	\$ _____	\$ _____

(12) Deposits and other

<u>Description</u>	<u>Amount</u>
_____	\$ _____
_____	_____
_____	_____
	\$ _____

DETAILS RELATIVE TO LIABILITIES AND STOCKHOLDER'S EQUITY

(1) Current portion of long-term debt (maturing within 12 months)

<u>Lender</u>	<u>Description</u>	<u>Security Pledged</u>	<u>Due Date</u>	<u>Amount</u>
				\$
				\$

(2) Accounts payable (list major creditors)

<u>Name</u>	<u>Past Due Amount</u>	<u>Amount</u>
	\$	\$
	\$	\$

(3) Billings in excess of costs and estimated earnings on uncompleted contracts

<u>Name</u>	<u>Description</u>	<u>Completion Date</u>	<u>Contract Amount</u>	<u>Costs and Estimated Earnings to Date</u>	<u>Billings to Date</u>	<u>Billings in excess of costs and Estimated Earnings</u>
			\$	\$	\$	\$
			\$	\$	\$	\$

(4) Accrued liabilities and other

<u>Description</u>	<u>Amount</u>
	\$
	\$

(5) Long-term debt, net of current portion

<u>Lender</u>	<u>Description</u>	<u>Security Pledged</u>	<u>Due Date</u>	<u>Amount</u>
				\$
				\$

DETAILS RELATIVE TO LIABILITIES AND STOCKHOLDER'S EQUITY (Continued)

(6) Capital stock

<u>Type of Stock</u>	<u>Class</u>	<u>No. of Shares Authorized</u>	<u>No. of Shares Issued and Outstanding</u>	<u>Par Value</u>	<u>Amount</u>
				\$	\$
					\$

(7) Additional paid-in capital

<u>Description</u>	<u>Amount</u>
	\$
	\$

(8) Treasury stock

<u>Type of Stock</u>	<u>Class</u>	<u>No. of Shares</u>	<u>Cost</u>
			\$
			\$

STATEMENTS OF INCOME AND RETAINED EARNINGS

For the Years Ended _____, 20____ and 20____

	20____ _____	20____ _____
Contract revenues	\$ _____	\$ _____
Costs of contracts	_____	_____
Gross income from contracts		
General and administrative expenses	_____	_____
Income from operations		
Other income (expense)	_____	_____
Income before income taxes		
Income taxes	_____	_____
Net income		
Retained earnings, beginning of the year	_____	_____
Retained earnings, end of the year	\$ _____	\$ _____

If a corporation, answer this: Capital paid in cash, \$ _____ When Incorporated _____ In what State _____ Date registered in Hawaii _____ President's name _____ Vice-President's name _____ Secretary's name _____ Treasurer's name _____	If a partnership, answer this: Date of organization _____ Date registered in Hawaii _____ State whether partnership is general or limited _____ _____ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 80%;">Name and address of partners:</th> <th style="width: 20%;">Age</th> </tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> </table>	Name and address of partners:	Age	_____	_____	_____	_____	_____	_____	_____	_____
Name and address of partners:	Age										
_____	_____										
_____	_____										
_____	_____										
_____	_____										

The undersigned hereby declares: that the foregoing is a true statement of the financial condition of the individual, partnership or corporation herein first named, as of the date herein first given; that this statement is for the express purpose of inducing the party to whom it is submitted to award the offeror a contract; and that any depository, vendor or other agency herein named is hereby authorized to supply such party with any information necessary to verify this statement.

NOTE: A partnership must give firm name and signatures of all partners. A corporation must give full corporate name, signature of official, and affix corporate seal.

Affidavit for Individual

STATE OF HAWAII

COUNTY OF _____

_____ being duly sworn, deposes and says that the foregoing financial statement, taken from his books, is a true and accurate statement of his financial condition as of the date thereof and that the answers to the foregoing interrogatories are true.

Sworn to before me this _____ day of _____ 20____

 (Applicant must also sign here)

 Notary Public

Affidavit for Partnership

STATE OF HAWAII

COUNTY OF _____

_____ being duly sworn, deposes and says that he is a member of the firm of _____; and that he is familiar with the books of the said firm showing its financial condition; that the foregoing financial statement, taken from the books of the said firm, is a true and accurate statement of the financial condition of the said firm as of the date thereof and that the answers to the foregoing interrogatories are true.

Sworn to before me this _____ day of _____ 20____

 (Members of firm must also sign here)

 Notary Public

Affidavit for Corporation

STATE OF HAWAII

COUNTY OF _____

_____ being duly sworn, deposes and says that he is _____ of the _____, the corporation described in and which executed the foregoing statement; that he is familiar with the books of the said corporation showing its financial condition; that the foregoing financial statement, taken from the books of the said corporation, is a true and accurate statement of the financial condition of said corporation as of the date thereof and that the answers to the foregoing interrogatories are true.

Sworn to before me this _____ day of _____ 20____

 (Officer must also sign here)

 Notary Public

Corporate Resolution Form

CORPORATE RESOLUTION
(Name of Corporation - Use Letterhead)

I, _____, Secretary of _____
Corporation, a _____ corporation, do hereby certify that the following is a full,
true and correct copy of a resolution duly adopted by the Board of Directors of said Corporation,
at its meeting duly called and held at the office of the Corporation located at
_____,
(address)

on the _____ day of _____, 20____, at which a quorum was present
and acting throughout; and that said resolution has not been modified, amended or rescinded and
continues in full force and effect:

"RESOLVED that any individual at the time holding the position of
President or Vice President, be, and each of them hereby is, authorized to
execute on behalf of the Corporation any bid, proposal or contract for the
sale or rental of the products of the Corporation or for services to be
performed by the Corporation and to execute any bond required by any
such bid proposal or contract with the United States Government or the
State of Hawaii or the City and County of Honolulu, or any County or
Municipal Government of said State, or any department or subdivision of
any of them."

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of
said _____ Corporation this _____ day of
_____, 20_____.

Secretary

(Names and Addresses of)
President
Vice President
Secretary

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 Obligee 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 Obligee 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 Obligee 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 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 Contract with the 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 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 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, 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 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 Obligee 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 Obligee, hereinafter called Obligee,
(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 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 _____, 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 Obligee 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 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

CONTRACTOR ACKNOWLEDGMENT

CONTRACTOR ACKNOWLEDGMENT:

On this _____ day of _____, 19____, 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 in behalf of the Contractor, and acknowledges that he/she/they executed said instrument as the free act and deed of the Contractor.

My commission expires:

SURETY ACKNOWLEDGMENT

SURETY ACKNOWLEDGMENT:

On this _____ day of _____, 19____, before me personally came _____ to me known to be the person described in _____ and, who, being by me, did depose and say that _____ resides in _____; that _____ is the Attorney-in-Fact of _____ the corporation described in and which executed the attached instrument; that _____ knows corporate seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; and that it was so affixed by order of the Board of Directors of the said corporation; and that _____ signed _____ name thereto by like order.

My commission expires: _____

FORM 1

CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17

I. Bidder's Identifying Information			
A. Legal Business Name: _____			
B. Project Bid Title & Reference No.: _____			
C. Contact Person's Name: _____			
1. Phone No.: _____		2. E-Mail: _____	
II. Apprenticeable Trades To Be Employed*	B. Apprenticeship Sponsor*	C. No. Enrolled	D. No. Completed
A. (List)	(One Sponsor Per Form)	(# of apprentices currently enrolled as of bidder's request date)	(# of apprentices who completed the apprenticeship program in the 12 months prior to request date)
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
III. Bidder's Certification			
I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the preference under Act 17 and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference.			
A. Name (Type) _____		B. Title _____	
C. Signature (original signature required) _____		D. Date _____	
IV. Apprenticeship Sponsor's Contact Information			
A. Training Coordinator's Name: _____			
B. Address: _____			
C. Phone No.: _____		D. E-Mail: _____	E. Fax No: _____
V. Apprenticeship Program Sponsor's Certification			
I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the bidder's preference and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference under Act 17.			
A. Name of Authorized Official _____		B. Title _____	
C. Signature (original signature required) _____		D. Date _____	

* Name of Apprenticeable Trade and Apprenticeship Sponsor must be the **same** as recorded in the List of Construction Trades in Registered Apprenticeship Programs that is posted on the State Department of Labor and Industrial Relations website.

FORM 2

MONTHLY REPORT OF CONTRACTOR'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17

I. Contractor's Identifying Information		II. Reporting Period	
A. Legal Business Name:		A. Month:	B. Year:
B. Project Contract Title & Reference No.:			
C. Contact Person's Name:			
1. Phone No.:		2. E-Mail:	
III. Apprenticeship Program (Complete a separate form for <i>each</i> apprenticeship program in which workers are employed on the project.)			
A. Contractor was a party to an apprenticeship program or programs with the following sponsor: (Give sponsor's name.)*		B. Was the contractor a party to the program during the <i>entire</i> report month?	
		1. Yes <input type="checkbox"/>	
		2. No <input type="checkbox"/> If NO, state applicable period and why (may be subject to sanctions.)	
IV. Contractor's Certification			
I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the preference under Act 17 and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference.			
A. Name (Type)		B. Title	
C. Signature (original signature required)		D. Date	
V. Apprenticeship Sponsor's Contact Information			
A. Training Coordinator's Name:			
B. Address:			
C. Phone No.:		D. E-Mail:	
		E. Fax No:	
VI. Apprenticeship Program Sponsor's Certification			
I certify that the above information is accurate to the best of my knowledge. I understand that my willful misstatement of facts may cause forfeiture of the bidder's preference and may result in criminal action. I give permission for outside sources to be contacted and for them to disclose any information necessary to verify the bidder's preference under Act 17.			
A. Name of Authorized Official		B. Title	
C. Signature (original signature required)		D. Date	

* Name of Apprenticeship Sponsor must be the **same** as recorded in the List of Construction Trades in Registered Apprenticeship Programs that is posted on the State Department of Labor and Industrial Relations website.

**CERTIFICATION OF COMPLIANCE
FOR
EMPLOYMENT OF STATE RESIDENTS
HRS CHAPTER 103B, AS AMENDED BY ACT 192, SLH 2011**

Project Title: _____

Agency Project No: _____

Contract No.: _____

As required by Hawai'i Revised Statutes Chapter 103B, as amended by Act 192, Session Laws of Hawaii 2011—Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of _____ and
(Name of Contractor or Subcontractor Company)

for the Project Contract indicated above, _____ was in
(Name of Contractor or Subcontractor Company)

compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawai'i residents, as calculated according to the formula in the solicitation, to perform this Contract.

☐ I am an officer of the **Contractor** for this contract.

☐ I am an officer of a **Subcontractor** for this contract.

CORPORATE SEAL

(Name of Company)

(Signature)

(Print Name)

(Print Title)

Subscribed and sworn to me before this
_____ day of _____, 2011.

Doc. Date: _____ # of Pages _____ 1st Circuit

Notary Name: _____

Doc. Description: _____

Notary Public, 1st Circuit, State of Hawai'i
My commission expires: _____

Notary Signature

Date

NOTARY CERTIFICATION

Papakolea 2312 and 2316 Kapahu St. Structure Stabilization Technical Specifications – Table of Contents
--

Civil Specifications

Division	Description
01570	Soil Erosion Control
02100	Site Preparation
02200	Earthwork
02222	Excavation, Backfilling & Compacting for Utilities
02227	Aggregate Materials
02630	Storm Drainage System
02770	Concrete Curbs Walkways and Ramps

Structural Specifications

Division	Description
03300	Concrete
03465	Micropiles
03470	Helical Piles

SECTION 01570 – SOIL EROSION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work under this section consists of furnishing all labor, materials and equipment required to complete the approved Erosion and Sediment Control Plan per Federal, State and County Code requirements and as shown in the Drawings, the temporary control measures as required by these Specifications, or as ordered by the Project Manager during the life of the Contract to control dust and water pollution. Control of dust and sediment shall be through the use of silt fences, stabilized construction entrance/exit, filter socks, and/or other erosion control devices or methods.
- B. Temporary erosion and sedimentation control measures as described herein shall be applied to any erodible material within this project, including local material sources, stockpiles and work areas.
- C. The Contractor shall be responsible for removing all silt and debris resulting from his work and deposited in drainage facilities, roadways, neighboring lands, and other areas.
- D. All costs incurred in complying with the provisions of this Section shall be borne by the Contractor.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, DHHL general and construction general conditions, and geotechnical engineer report prepared by DHHL for the design, by Hart Crowser, etc., apply to this section. Furnish all labor, materials and equipment necessary for this work.
- B. Related Work Described Elsewhere:
 - 1. Section 02100 – Site Preparation
 - 2. Section 02200 – Earthwork
 - 3. Specific sections of the County's Standard Specifications for Public Works Construction of the Department of Public Works, dated September 1986, as amended hereafter referred to as the County's Specifications.
 - a. Clearing and Grubbing Section 10

1.03 SUBMITTALS

- A. Best Management Practice (BMP) Plan: The Contractor shall provide a letter indicating conformance to the Erosion and Sediment Control Plan as shown in the Drawings or provide a written, site-specific BMP describing activities to minimize water pollution and soil erosion into City and State waters and/or drainage systems.

The BMP shall conform to the requirements of the "Rules Relating to Water Quality of the Administrative Rules, Title 20, Department of Planning and Permitting," for the City and County of Honolulu, and the "National Pollutant Discharge Elimination System Permit" as part of HAR Chapter 11-55, and inclusive of all references.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The following are standard traditionally provided approaches that the contractor is to provide at a minimum to comply with the standards and codes. Runoff to adjacent properties shall be strictly prohibited and controlled.

1. Silt fences shall be constructed with an ultraviolet (UV) resistant geotechnical filter fabric, stapled or secured to wood or metal posts embedded into the ground.
2. Filter socks shall be constructed with a UV resistant geotechnical filter fabric, filled with an Environmental Protection Agency (EPA) or State Department of Health (DOH) acceptable compost material.
3. Stabilized construction entrance/exit shall be constructed with 3-inch to 6-inch course aggregate (7" max), 12-inches minimum thickness over a geotechnical filter fabric.
4. Mulches may be bagasse, hay, straw, fiber mats, netting, wood cellulose, bark, wood chips, or other suitable material acceptable to the Project Manager and shall be reasonably clean and free of noxious weed and deleterious materials.

Mulch shall be specially processed fiber containing no growth or germination inhibiting factors. It shall be such that after addition and agitation in the hydraulic equipment with seed, fertilizer, water and other additives not detrimental to plant growth, the fibers will form a homogeneous slurry. When hydraulically sprayed on the soil, the fibers shall form a blotter-like ground cover which readily absorbs water and allows infiltration to the underlying soil. In every application, complete coverage of the soil shall be attained. Mulch shall be applied at the minimum rate of 1,500 pounds per acre.

- B. Slope drains may be constructed of pipe, fiber mats, rubble, Portland cement concrete, bituminous concrete, plastic sheets, or other material acceptable to the Project Manager.
- C. Grass shall be a quick growing species (such as rye grass, Italian rye grass, or cereal grasses) suitable to the area and which provide a temporary cover that does not later compete with the permanent cover.
1. The grass shall be obtained by digging up luxuriant growths from areas that are free of seeds, roots, plants, and grasses that are foreign to the specified grass. The grass will not be acceptable unless it is planted and watered within 24 hours after being dug out from its original growing position.

2. Seed for hydro-mulching, unless otherwise specified, shall be Bermuda (Cynodon Dactylon) except giant varieties, certified, meeting the following requirements:

Pure Seed	95% minimum
Crop Seed	1% maximum
Weed	0.5% maximum
Inert Material	5% maximum
Germination	85% minimum

The seeds shall be applied at the rate of 100 pounds per acre (minimum) and within twelve (12) months of the date of the certified germination test.

D. Fertilizer

1. Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the Project Manager.
2. The Contractor shall be responsible to determine the proper fertilizer required in the hydro-mulch mix for the existing soil condition. He shall be responsible to decide the quantity and the analysis and ratio to insure sufficient nutrients for the sustained growth of the grass.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. The Contractor shall install all erosion control measures shown in the Drawings, including stabilized construction entrance/exit, silt fences, before any clearing, grubbing or earth moving work is initiated. The erosion control measures may be modified as necessary to adjust to field conditions that develop as the construction work progresses.
- B. The temporary erosion and sediment control measures outlined in these specifications are minimum requirements and shall not preclude the provision of any additional measures which the Contractor may deem necessary. Except for specified erosion control measures shown in the Drawings, the Contractor shall determine additional erosion control measures to use as the construction work progresses. Such measures may involve scheduling of the construction activities to minimize the erosion potential, the construction of temporary berms, dikes, dams, sediment basins, and slope drains, and the use of temporary mulches, mats, and grassing, or the construction and use of other control devices or methods as necessary to control erosion.
- C. All erosion control measures shall be checked, maintained, cleaned and repaired throughout the duration of the construction period. As a minimum, erosion control measures should be checked weekly in dry periods and within twenty-four hours after any rainfall of 0.5 inches or greater within a 24-hour period. During prolonged rainfall, the erosion control measures should be checked daily. If heavy rains are projected, all erosion control measures should be inspected immediately and reinforced as necessary.

- D. The maximum surface area of earth material exposed by clearing, grubbing, borrow and fill operations at any time is 1.5 acres. The Project Manager has the authority to limit the surface area exposed by clearing and grubbing and to limit the surface area exposed by excavation, borrow and fill operations. The Project Manager may also direct the Contractor to provide immediate, permanent, or temporary pollution control measures to prevent contamination of drainage channels and pipes, roads, neighboring lands, and other areas.
- E. The Contractor shall limit the surface area exposed by grubbing, stripping of topsoil, and grading to that which is necessary for to perform the next operation and which is within his capability and progress in keeping the finish grading, mulching, grassing, and other such pollution control measures current.
- F. The Contractor shall conduct his operations so that excavation, embankment and imported materials shall be dampened with water on a continual basis to prevent dust problems. The Contractor shall limit the amount of water sprayed for dust control to ensure that the water evaporates or infiltrates with no runoff.
- G. The Contractor shall, at the end of each work operation in any one day, shape the earthwork in such a manner as to control and direct the runoff of rainwater to minimize the erosion of soils. He shall construct earth berms along the top edges of embankments or along any critical area within the project, such as along the property line with adjacent properties, streams, and water channels, to intercept any runoff. Temporary slope drains shall be provided to carry runoff from the top of cuts and fills. Temporary facilities for controlled discharges shall be provided for runoff impounded, directed, or controlled by project activities or by any erosion control measure employed.
- H. Cut and fill slopes shall be shaped, topsoiled and planted, if necessary or shown on the Drawings, as the work progresses. Whenever major earthwork is suspended or halted and the slope is bared, the exposed surfaces shall be hydro-mulch seeded or protected as directed by the Project Manager at the Contractor's expense without cost to the Owner.
- I. Construction of berms, cofferdams, or other such construction in or near the vicinity of waterways, or other bodies of water shall be of approved materials.
- J. Damages caused by the erosion of soils and the pollution of downstream areas shall be the responsibility of the Contractor and all costs for repairing, correcting, replacing, and cleaning such damaged or polluted facilities shall be borne by the Contractor.
- K. Grassing for erosion control of erodible areas can be undertaken by sprigging, matting or hydro-mulch seeding.

1. Sprigging or Matting

- a. Ground Preparation: Prior to planting, the areas to be grassed shall be cleared of all unwanted plants (including their root systems), stones over three (3) inches in diameter, papers, trash and debris.

If the existing soil in the areas to be grassed is suitable for use as topsoil, the soil shall be scarified to a depth of six (6) inches from the finished surface and worked until it is of a uniform and loose texture.

Areas unsuitable for planting shall be finished with a 4-inch layer of topsoil, spread and graded to conform to the finish grade shown on the Drawings.

- b. Planting: Planting shall be by sprigging, matting, or other methods at the option of the Contractor. If planting is by sprigging or matting, the surface shall be rolled with a suitable lawn roller after planting has been completed.
- c. Water shall be applied within the same day of planting in such quantities as to moisten the soil to the depth of the planted grass. Additional application shall be made so that the planted areas are continually kept damp to the grass depth and until the commencement of plant establishment work.
- d. Fertilizer shall be applied at not less than the rate of 300 pounds per acre, 23 to 30 days after the grass has been planted.

2. Hydro-Mulch Seeding

- a. The Contractor shall begin hydro-mulch seeding operations after the areas prepared or designated for seeding have been approved by the Project Manager. Approval shall include inspection of slopes to insure provision has been made for the collection and disposal of surface water to protect planted areas from erosion. Approval shall not relieve the Contractor of his responsibility to restore any damage to the slope or planted areas not yet accepted by the State.
- b. The hydro-mulch equipment shall be capable of mixing all the necessary ingredients to a uniform mixture and of applying the slurry to provide uniform coverage. Seed, fertilizer, and mulch mix shall be applied in one operation by approved hydraulic equipment.
- c. Areas inaccessible to hydro-mulching application shall be seeded, fertilized and mulched by hand methods.
- d. Water shall be applied immediately following mulching in such quantities as to moisten the soil and mulch. Watering shall be continued in such manner, quantity, and frequency to ensure proper germination and growth and shall be done in a way that will prevent erosion and will not cause damage to the planted areas.

END OF SECTION

DIVISION 2 – SITE CONSTRUCTION

SECTION 02100 – SITE PREPARATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work to be performed under this section shall include clearing the premises of all obstacles and obstructions, the removal of which will be necessary for the proper reception, construction, execution and completion of the other work included in this contract.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, DHHL general and construction general conditions, and geotechnical engineer report prepared by DHHL for the design, by Hart Crowser, etc., apply to this section. Furnish all labor, materials and equipment necessary for this work.
- B. Related Work Described Elsewhere:
 - 1. Section 01570 – Soil Erosion Control
 - 2. County's Standard Specifications for Public Works Construction of the Department of Public Works, dated September 1986, as amended hereafter referred to as the County's Specifications.

1.03 QUALITY ASSURANCE

- A. The contractor shall provide and pay for all necessary permits or certificates that may be required in connection with this work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

- A. Maintenance of Traffic: The Contractor shall conduct operations with minimum interference to streets, driveways, sidewalks, passageways, etc. When necessary, the Contractor shall provide and erect barriers, etc., with special attention to protection of personnel.
- B. Protection: Throughout the progress of the work, protection shall be provided for all property and equipment, and temporary barricades shall be provided as necessary. Work shall be done in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and the State of Hawaii's Occupational Safety and Health Standards, Rules and Regulations.

- C. Fires: No burning of fires of any kind will be allowed.
- D. Reference Points: Benchmarks, etc., shall be carefully maintained, but if disturbed or destroyed, shall be replaced as directed, at the Contractor's expense.
- E. Disposal: All materials resultant from operations under this Section shall become the property of the Contractor and shall be removed from the site. Loads of materials shall be trimmed to prevent droppings. No materials shall be dumped on private or public property without proper authority. All materials resulting from clearing and grubbing shall be disposed off of the site at an approved disposal site.

3.02 DEMOLITION AND REMOVAL

- A. All work shall be executed in an orderly and careful manner, with due consideration for all items to remain, and the Contractor shall be strictly responsible for any damage thereto.
- B. Water facilities shall be made available and kept in operating condition at all times, except as agreed to approved in advance by the Project Manager.
- C. Dust shall be suppressed by accepted method(s)
- D. Maintain all benchmarks, monuments, and other reference points; if disturbed or destroyed, replace as directed at the Contractor's expense.
- E. The Contractor shall document all existing signs, posts, pavement markings, and other improvements that may be disturbed by this project. The Contractor shall repair or replace the disturbed items at his own expense to the satisfaction of Project Manager.
- F. Protect existing asphaltic concrete pavement and other structures which are indicated to remain from damage; if any damage is caused by this work, the contractor shall repair damage at contractor's expense.
- G. Existing utility lines indicated, or locations of which are made known to the contractor prior to the start of work, and that are indicated to be retained, shall be protected from damage during clearing and grubbing work, and if damaged, shall be repaired at the contractor's expense. If utility lines are not indicated, or that the contractor is not aware of, are encountered or damaged, the Project Manager shall be notified immediately.

3.03 EXISTING UTILITY LINES

- A. The existence of active underground utility lines within the construction area is not definitely known other than those indicated in their approximate locations on the Drawings. Should any unknown line be encountered during excavation, the Contractor shall immediately notify the Project Manager of such discovery. The Project Manager shall then investigate and issue instructions for the preservation or disposition of the unknown line. Authorization for extra work shall be issued by the Project Manager only as he deems necessary.

3.04 CLEARING AND GRUBBING

- A. The Contractor shall clear the premises of all obstacles and obstructions, the removal of which will be necessary for the proper reception, construction, execution and completion of work included in this contract. The area below the natural ground, within the limits of the grading work indicated on the grading plans shall be grubbed of all stumps, roots, buried logs, decayed vegetable matter, and other objectionable materials, as is necessary for the proper reception, construction, execution, and completion of work included in this contract.
- B. The Contractor shall protect from injury and damage all surrounding (including adjacent property lines of the project site) trees, plants, etc., and shall leave all in as good as condition as at present. Any damage to existing improvement shall be repaired or replaced by the Contractor to the satisfaction of the Project Manager.
- C. Debris from clearing and grubbing operations shall not be placed in streams, water courses or at locations that will impede flow of the natural drainage pattern.

3.05 TOPSOIL EXCAVATION

- A. Strip topsoil from areas that are to be filled, excavated, landscaped or re-graded to such a depth that it prevents intermingling with underlying subsoil or questionable material.
- B. Cut heavy growths of grass from areas before stripping and remove with the rest of the cleared vegetative material.
- C. Topsoil shall consist of organic surficial soil found in depth of not less than 6". Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2" in diameter, weeds, roots, and other objectionable material.
- D. Stockpile topsoil in storage piles in areas shown or where directed. Construct storage piles to freely drain surface water. Cover storage piles as required to prevent windblown dust. Dispose of unsuitable topsoil as specified for waste material, unless otherwise specified by owner. Excess topsoil shall be removed from the site by the Contractor unless specifically noted otherwise on the Drawings.

3.06 CLEANUP OF PREMISES

- A. Clean up and remove all debris accumulated from construction operations from time-to-time as directed. Upon completion of the construction work and before final acceptance of the contract work, remove all surplus materials, equipment, scaffoldings, etc., and leave entire job site raked clean and neat to the satisfaction of the Project Manager.

3.07 DUST CONTROL

- A. Dust shall be controlled in accordance with the air pollution control rules of the State Department of Health and avoid creating of a nuisance to the surrounding areas. Use of water will be permitted provided it does not result in, or create, a hazardous condition such as flooding or pollution.

The Contractor shall coordinate the use of water for construction activities with the Project Manager. DHHL will make water available to the Contractor for quantities as approved by the Project Manager. Contractor Monitoring shall be as accepted or

directed by the Project Manager

3.08 TRAFFIC CONTROL AND ACCESS

- A. The Contractor shall provide traffic control in accordance with MUTCD requirements and conduct operations with minimum interference to streets, driveways, sidewalks, etc.
- B. When necessary, the Contractor shall provide temporary access, erect and maintain lights, barriers, flagmen, etc. as required by traffic and safety regulations with special attention to protection of life.
- C. The Contractor shall provide continuous access to all private properties.

3.09 LAYING OUT

- A. The laying out of base lines, establishment of grades and staking out the entire work shall be done by a surveyor (licensed in the State of Hawaii) hired by the Contractor.
- B. Should any discrepancies be discovered in the dimensions given in the plans, the contractor shall immediately notify the Construction Manager before proceeding any further with the work, otherwise, he will be held responsible for any costs involved in correction of construction placed due to such discrepancies.

3.10 CONTRACT AREA LIMITS

- A. The contract area limits extending throughout the peripheral boundary indicate only in general the limits of the work involved. The Contractor, however, is required to perform any and all necessary and incidental work which may fall outside of these demarcation lines. The Contractor is also expected to confine all of his construction activities within the contract area limits and repair all disturbed areas.

END OF SECTION

SECTION 02200 – EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish all labor, materials, services, equipment and related items necessary to excavate, fill, remove, transport, stockpile and dispose of all materials within the limits of the project required to construct the site work improvements in accordance with these specifications, dimensions, sections and details shown on the plans, and the approval of the Owner.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, DHHL general and construction general conditions, and geotechnical engineer report prepared by DHHL for the design, by Hart Crowser, etc., apply to this section.
- B. Related Work Described Elsewhere:
 - 1. Section 01570 – Soil Erosion Control
 - 2. Section 02100 – Site Preparation
 - 3. Section 02222 – Excavation, Backfilling and Compacting for Utilities
 - 4. Section 02227 – Aggregate Materials
 - 5. Specific sections of the County's Standard Specifications for Public Works Construction of the Department of Public Works, dated September 1986, as amended hereafter referred to as the County's Specifications.
 - a. Borrow Section 15
 - b. Embankment Section 16

1.03 QUALITY ASSURANCE

- A. Grading Requirement: All grading work shall be in conformance with the requirements specified in the County's Specifications and the geotechnical engineer report prepared by DHHL for the design, by Hart Crowser.
 - 1. Construction Monitoring: The Contractor shall provide and pay for the services of a Soils Engineer. The Soils Engineer shall be a professional engineer registered in the State of Hawaii, possessing knowledge of soils evaluation. The Soils Engineer shall observe the work, perform field and laboratory tests, and evaluate and approve material quality and compaction. The Soils Engineer shall perform additional field tests and shall be available to observe the earthwork operations as requested by the Owner. The Soils Engineer shall be notified in advance, by the

Contractor, as to the date grading operations are scheduled to start so that he may make the necessary preparations for carrying out of field density tests to determine appropriate corrective measures, when needed.

2. Field density tests shall be made by the Soils Engineer for each layer of fill to be compacted. When these readings indicate that the density of any layer of fill or portion thereof is below the required density, the particular layer or portion shall be reworked until the required density has been obtained to the satisfaction of the Soils Engineer.
3. The Soils Engineer shall also observe footing excavations prior to the placement of reinforcing steel to confirm the competency of the bearing materials and embedment depths, as recommended in the Soils Report.

1.04 PROTECTION

- A. Provide all shoring, bracing, trench jacks, shield and similar devices required to comply with current Federal, State and Local requirements and required to provide safe working conditions.
- B. Blasting not permitted.
- C. Protect and carefully maintain all benchmarks, monuments, and other controls from damage or dislocation.

1.05 SUBMITTALS

- A. Submit gradation and material test results for granular materials.
- B. Submit the name of each material supplier and specific type and source of each material. Any change in source throughout the job requires approval of the Owner or Engineer.
- C. Submit compaction test results.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials shall be in accordance with the County's Specifications.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum
- B. Locate and identify existing utilities that are to remain and protect them from damage.

- C. Notify utility companies to remove and/or relocate any utilities that are in conflict with the proposed improvements.
- D. Protect plant life, lawns, fences, existing structures, sidewalks, paving and concrete swales from excavating equipment and vehicular traffic.
- E. Protect benchmarks, property corners and all other survey monuments from damage or displacement. If a marker needs to be removed it shall be referenced by a licensed land surveyor and replaced, as necessary, by the same.
- F. Remove from site material encountered in grading operations that is unsuitable or undesirable for backfilling, subgrade or foundation purposes. Dispose of in a legal manner. Backfill areas with layers of suitable material and compact as specified.
- G. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find. The Contractor shall immediately contact the Department of Planning and Permitting and the State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary.
- H. Should any discrepancies be discovered in the elevations given in the drawings, the contractor shall immediately notify the engineer before proceeding any further with the work, otherwise, the contractor will be held responsible for any cost involved in the correction of construction placed due to such discrepancies.

3.02 EXCAVATION

- A. Classification of Excavation: Contractor acknowledges that he has investigated the site to determine type, quantity, quality, and character of excavation work to be performed. Excavation shall be considered unclassified excavation.
- B. Excavate to the required elevations including allowances for base course and imported borrow. Suitable excavated material shall be stockpiled on site for reuse. Unsuitable and excess material shall become the property of the Contractor and shall be removed from the site. Excavate sufficient working space to permit installation and removal of forms. Cut slopes shall be planted with grass and temporarily irrigated, as soon as practical to minimize the effect of erosion and weathering.
- C. Perform excavation using capable, well maintained equipment and methods acceptable to governing agencies.
- D. When performing grading operations during periods of wet weather, provide adequate drainage and ground water management to control moisture of soils.
- E. Shore, brace, and drain excavations as necessary to maintain safe, secure, and free of water at all times.

- F. Excavated material containing rock or stone greater than 6" in largest dimension is unacceptable as fill to within the proposed paving and trenching area.
- G. Rock or stone less than 6" in largest dimension is acceptable as fill to within 24" of surface of proposed subgrade when mixed with suitable material, but not within trenching or building pad limits. The cost to mix, blend and/or screen fill material shall be considered as incidental work to the contract. The Engineer and Owner will not make additional or separate payment.
- H. Rock or stone less than 3" in largest dimension and mixed with suitable material is acceptable as fill within the upper 24" of proposed subgrade. The cost to mix, blend and/or screen fill material shall be considered as incidental work to the contract. The Engineer and Owner will not make additional or separate payment.

3.03 FINISH GRADING

- A. Grade all areas where finish grade elevations or contours are indicated on Drawings, including excavated areas, filled and transition areas, and paved areas. Graded areas shall be uniform and smooth, free from rock, debris, or irregular surface changes. Finished subgrade surface shall not be more than 0.10 foot above or below established finished subgrade elevation, and all ground surfaces shall vary uniformly between indicated elevations except as noted in drawings with grade breaks. Finish grades shall allow for proper drainage without ponding and in a manner that will minimize erosion potential.
- B. Correct all settlement and eroded areas due to any defects in material or workmanship within one year after date of completion at no additional expense to Owner. Bring grades to proper elevation. Replant or replace any grass, shrubs, bushes, or other vegetation that appears dead, dying, or disturbed by the Contractor's construction activities and/or due to materials or workmanship that are defective, inferior, or not in accordance with the drawings and specifications.

3.04 COMPACTION TESTING

- A. Compaction tests for each lift will be performed as follows:
- B. Subgrade – 1 test per 2,000 square feet
Fill – 1 test per 2,000 square feet
Trench Backfill – 1 test per 100 linear feet of trench.
Provide a minimum of 3 tests per lift for areas under structures.

END OF SECTION

SECTION 02222 - EXCAVATION, BACKFILLING AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Excavation, backfilling, and compaction for utilities and their appurtenances complete.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions, DHHL general and construction general conditions, and geotechnical engineer report prepared by DHHL for the design, by Hart Crowser, etc., apply to this section.

- B. Related Work Described Elsewhere

- 1. Section 01570 – Soil Erosion Control
- 2. Section 02200 – Earthwork
- 3. Section 02227 – Aggregate Materials
- 4. Section 02740 – Asphaltic Concrete Paving
- 5. City and County of Honolulu, Board of Water Supply's Water System Standards, dated 2002, and Water System External Corrosion Control Standards, Volume 3, dated 1991, and all subsequent amendments and additions hereafter referred to as the Water System Standards.
- 6. City and County of Honolulu Wastewater System Design Standards, Volume 1, July 2017, including any amendments hereafter referred to as the Wastewater System Design Standards.
- 7. Standard Details For Public Works Construction, Department of Public Works, City and County of Honolulu, September 1984, including any amendments.
- 8. Specific sections of the County's Standard Specifications for Public Works Construction of the Department of Public Works, dated September 1986, as amended hereafter referred to as the County's Specifications.
 - a. Trench Excavation and Backfill Section 11
 - b. Rock for Fill Section 14

1.03 SUBMITTALS

- A. Shop Drawings or details pertaining to utilities are not required unless required by regulatory authorities or specified elsewhere, or unless use of materials, methods, equipment, or procedures are contrary to Drawings or these specifications are proposed. Do not perform work until required shop drawings have been accepted by the Owner's representative.
- B. The Contractor shall contact all utility companies and determine if additional easements will be required to complete the project. Contractor shall provide written confirmation of the status of all easements to the Owner's Construction Manager at the time of the preconstruction conference or no later than 90 days prior to the project possession date.

1.04 PROJECT RECORD DOCUMENTS

Accurately record actual locations of all subsurface utilities, structures, and obstructions encountered.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials shall be in accordance with the County's Specifications, Water System Standards, and the Wastewater System Design Standards.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Set all lines, elevations, and grades for utility work and control system for duration of work, including careful maintenance of bench marks, property corners, monuments, or other reference points.
- B. Maintain in operating condition all existing utilities, active utilities, and drainage systems encountered in utility installation. Repair any surface or subsurface improvements shown on Drawings. Verify location, size, elevation, and other pertinent data required to make connections to existing utilities and drainage systems as indicated on Drawings. Contractor shall comply with local codes and regulations. The location shown on the Drawings of the various existing utility lines which the new lines are to cross over or under or connect to were determined on the basis of the best information available; however, no assurance can be provided that the actual locations will be precisely as shown on the Drawings.
- C. Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find. The Contractor shall immediately contact the Department of Planning and Permitting and the State Historic Preservation Division at (808) 692-8015, which will assess the

significance of the find and recommend the appropriate mitigation measures, if necessary.

3.02 EXCAVATION

- A. The local utility companies shall be contacted before excavation shall begin. Dig trench at proper width and depth for laying pipe, conduit, or cable. Cut trench banks vertical if possible and remove stones from bottom of trench as necessary to avoid point bearing. Over excavate wet or unstable soil, if encountered, from trench bottom as necessary to provide suitable base for continuous and uniform bedding.
- B. All trench excavation side walls greater than 5 feet in depth shall be sloped, shored, sheeted, braced, or otherwise supported by means of sufficient strength to protect the workmen in or around the trench in accordance with the applicable rules and regulations established for construction by the Department of Labor, Occupational Safety and Health Administration (OSHA), and by local ordinances. Lateral travel distance to an exit ladder or steps shall not be greater than 25 feet in trenches 4 feet or deeper.
- C. Perform excavation as indicated for specified depths. During excavation, stockpile materials suitable for backfilling in orderly manner far enough from bank of trench to avoid overloading, slides, or cave ins.
- D. Remove excavated materials not required or not suitable for backfill or embankments and waste as specified. Any structures discovered during excavation(s) shall be removed and disposed of as specified.
- E. Prevent surface water from flowing into trenches or other excavations by temporary grading or other methods, as required. Remove accumulated water in trenches or other excavations by pumping or other acceptable methods.
- F. Accurately grade trench bottom to provide uniform bearing and support for each section of pipe on bedding material at every point along entire length, except where necessary to excavate for bell holes, proper sealing of pipe joints, or other required connections. Dig bell holes and depressions for joints after trench bottom has been graded. Dig no deeper, longer, or wider than needed to make joint connection properly.
- G. Trench width requirements below the top of the pipe shall not be less than 12" nor more than 18" wider than outside surface of any pipe or conduit that is to be installed to designated elevations and grades. All other trench width requirements for pipe, conduit, or cable shall be the practical least width that will allow for proper compaction of trench backfill.
- H. Provide sheeting and bracing, when necessary, in trenches and other excavations where protection of workmen required. Sheeting must be removed after sufficient backfilling.

3.03 PIPE BEDDING

- A. Accurately cut trenches for pipe or conduit that are installed to designated elevations below bottom of pipe and to width as specified. Place bedding material compact in bottom of trench, and accurately shape to conform to lower portion of pipe barrel. After pipe installation, place backfill as specified and compact in maximum 8" layers measured loose to the top of the trench.

3.04 BACKFILLING

- A. Criteria: Trenches shall not be backfilled until required tests are performed and the utility systems comply with and are accepted by applicable governing authorities. Backfill trenches as specified. If improperly backfilled, reopen to depth required to obtain proper compaction, and backfill and compact, as specified, to properly correct condition in an acceptable manner.
- B. Backfilling: After pipe or conduit has been installed, bedded, and tested as specified, backfill trench excavation with specified material placed in 8" maximum loose lifts.
- C. Backfill trenches to the contours and elevations shown on the plans.
- D. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.

3.05 RESTORATION OF EXISTING PAVEMENT AND OTHER IMPROVEMENTS

- A. All restoration work shall conform to the requirements of the jurisdictional government agencies and under these specifications. Unless specified otherwise in the proposal, restoration work shall be considered as incidental to the various related items of work.

END OF SECTION

SECTION 02227 – AGGREGATE MATERIALS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Placement and compaction of aggregate material on prepared subgrade for pavement base and subbase course.

1.02 RELATED WORK

- A. Drawings and general provisions of the contract, including general and supplementary conditions, DHHL general and construction general conditions, and geotechnical engineer report prepared by DHHL for the design, by Hart Crowser, etc., apply to this section.

- B. Related Work Described Elsewhere:

- 1. Section 02100 – Site Preparation
- 2. Section 02200 – Earthwork
- 3. Section 02222 - Excavation, Backfilling and Compaction for Utilities
- 4. Section 02770 – Concrete Curbs, Headers, Walkways and Ramps
- 5. Standard Details For Public Works Construction, Department of Public Works, City and County of Honolulu, September 1984, including any amendments.
- 6. Specific sections of the County's Standard Specifications for Public Works Construction of the Department of Public Works, dated September 1986, as amended hereafter referred to as the County's Specifications.
 - a. Crushed Rock Section 15
 - b. Subgrade Section 29
 - c. Select Borrow for Subbase Course Section 30
 - d. Aggregate Base Course Section 31

1.03 SUBMITTALS

- A. Submit the name of each material supplier and specific type and source of each material. Any change in source throughout the job requires approval of the Soils engineer.

PART 2 - PRODUCT MATERIALS

2.01 MATERIALS

- A. All materials shall be in accordance with the County's Specifications.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify all lines, elevations, and grades necessary to construct pavement base and subbase course as shown in the plans and specifications.

3.02 PLACEMENT

- A. Place the base and subbase material on the prepared surface without segregation. Remix the segregated materials until a uniform distribution is obtained. Do not dump the material in piles on the prepared surface.
- B. Depositing and spreading shall commence at that part of the work farthest from the point of loading the material and shall progress continuously without breaks.
- C. When the required compacted depth of the base and subbase course exceeds 6 inches, construct the base and subbase in two or more layers of approximately equal thickness. The maximum compacted thickness in one layer shall not exceed 6 inches. When using a vibratory roller weighing 9 tons or more, the Contractor may increase lift thickness to 7 inches.
- D. Spreading of filler material over the surface of the compacted base and subbase is not permitted. Incorporate the additional material, if required, uniformly throughout the thickness of the compacted material by scarifying and blading. The combined material shall meet quality requirements specified.

3.03 SHAPING AND COMPACTING

- A. The finished base and subbase shall conform to the required grade and cross-section. The Contractor shall provide shaping as necessary. The finished base and subbase shall not vary more than 0.04 foot above or below the theoretical grade.
- B. Compact each layer until a density of not less than 95 percent of the maximum density has been achieved in accordance with ASTM D1557. The Contractor shall maintain the surface of each layer during the compaction operations so that a uniform texture is produced and the aggregate is firmly keyed.
- C. When high or low spots develop during rolling operations, the Contractor shall smooth out such spots by blading with a self-propelled and pneumatic-tired motor grader. The grader shall have a wheel base not less than 15 feet long and a blade not less than 10 feet long. Use 3-wheel rollers to initially compact each layer. Followed by pneumatic-tired rollers for intermediate rolling. Use 3-wheel rollers for final rolling. The Contractor may submit alternate methods or equipment for compacting the aggregate base and subbase course for acceptance by the Engineer.

END OF SECTION

B. Installation of Joints:

1. Joints in tongues-and-groove concrete pipe: Tongue-and-grooved ends of abutting pipe shall be cleaned with a wet brush before placing mortar. Mortar shall be placed in sufficient quantities so that when the pipe is inserted into the line, the joint space will be completely filled and a collar of mortar will be formed on the outside. The interior of each joint shall be cleaned of surplus mortar and finished flush with the interior surfaces of pipe. The outside of each joint shall be kept damp until just prior to backfilling.
2. Joint for pipe using flexible, water-tight, rubber-type gaskets: Installation of joints shall be in accordance with the recommendations of the manufacturer of the joint material, as approved by the Engineer.

3.02 PROTECTION OF PIPING & STRUCTURES

- A. All work shall be protected from damage or improper alignment. Open ends of unfinished work shall be plugged, capped, and covered to prevent the entrance of foreign materials.

3.03 FINAL INSPECTION

- A. Before Final Inspection, ensure storm drain lines and manholes are free from sand, silt or other obstructions.

END OF SECTION

DIVISION 3 - CONCRETE

SECTION 03300 – CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

- 1. Micropiles

- 2. Pile Caps

- B. Related Sections:

- 1. Section 03465 - Micropiles

1.03 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Qualification Data: For Installer.
- E. Welding certificates.
- F. Material Certificates: For each of the following, signed by manufacturers:
1. Cementitious materials.
 2. Admixtures.
 3. Form materials and form-release agents.
 4. Steel reinforcement and accessories.
 5. Curing compounds.
 6. Bonding agents.
 7. Adhesives.
 8. Vapor retarders.
 9. Repair materials.
- G. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
1. Aggregates.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.
- C. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- E. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4/D 1.4M, "Structural Welding Code - Reinforcing Steel."
- F. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301, "Specifications for Structural Concrete," [Sections 1 through 5.] [Sections 1 through 5 and Section 7, "Lightweight Concrete."]
 - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- G. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 – PRODUCTS

2.01 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other approved panel materials.
 - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - a. High-density overlay, Class 1 or better.
 - b. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.
 - c. Structural 1, B-B or better; mill oiled and edge sealed.
 - d. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.
- B. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.
- C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- D. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - 1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
 - 2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.
 - 3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

2.02 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.
- B. Plain-Steel Wire: ASTM A 82, galvanized.
- C. Deformed-Steel Wire: ASTM A 496.

2.03 REINFORCEMENT ACCESSORIES

- A. Zinc Repair Material: ASTM A 780, zinc-based solder, paint containing zinc dust, or sprayed zinc.
- B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - 1. For concrete surfaces exposed to view where legs or wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar.

2.04 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I/II
- B. Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Micropile Grout: Neat cement or sand/cement mixture with a minimum 28-day compressive strength of 4,000 psi per ASTM C109 and a water cement ratio (by weight) of 0.45 or less. Suitable admixtures shall be used to control bleeding, improve flowability, and reduce the potential for washout.

1. Admixtures for grout shall conform to the requirements of ASTM C494 and be subject to the review and acceptance of the Engineer and shall be mixed in accordance with manufacturer's recommendations.

D. Water: ASTM C 94 and potable.

2.05 ADMIXTURES

A. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.

2.06 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Ground Granulated Blast-Furnace Slag: 50 percent.
4. Combined Fly Ash or Pozzolan and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.
5. Silica Fume: 10 percent.
6. Combined Fly Ash, Pozzolans, and Silica Fume: 35 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.

7. Combined Fly Ash or Pozzolans, Ground Granulated Blast-Furnace Slag, and Silica Fume: 50 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
 2. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
 3. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

2.07 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.08 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/ C 94 M, and furnish batch ticket information.
1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 – EXECUTION

3.01 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Construct forms tight enough to prevent loss of concrete mortar.

- D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 - 1. Install keyways, reglets, recesses, and the like, for easy removal.
 - 2. Do not use rust-stained steel form-facing material.
- E. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- F. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- G. Chamfer exterior corners and edges of permanently exposed concrete.
- H. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- I. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- J. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- K. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."
2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
3. Install dovetail anchor slots in concrete structures as indicated.

3.03 SHORES AND RESHORES

- A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.
 1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.
- B. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
- C. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.04 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
 1. Weld reinforcing bars according to AWS D1.4, where indicated.

- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.05 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer.
- C. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 2. Maintain reinforcement in position on chairs during concrete placement.
 - 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 - 4. Slope surfaces uniformly to drains where required.
 - 5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.06 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
- B. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.07 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

3.08 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - 2. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.09 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Engineer.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 2. After concrete has cured at least 14 days, correct high areas by grinding.
 3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.

4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
 5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
 6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs of concrete, subject to Engineer's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Engineer's approval.

3.10 FIELD QUALITY CONTROL

- A. Testing and Inspecting: The contractor will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing and Inspecting: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
- C. Inspections:

1. Steel reinforcement placement.
 2. Verification of use of required design mixture.
 3. Concrete placement, including conveying and depositing.
 4. Curing procedures and maintenance of curing temperature.
- D. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain at least one composite sample for each 5 cu. yd. or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 3. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
 4. Compression Test Specimens: ASTM C 31.
 5. Compressive-Strength Tests: ASTM C 39; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

6. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
8. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Engineer.
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 03300

SECTION 03465 – MICROPILES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section shall govern constructing micropiles to the required locations, capacity and dimensions, in place complete, as indicated on the plans and as specified herein. The work shall consist of installing pre-production micropiles, installing production micropiles, welding steel plates to the top of the micropiles, constructing the reinforced concrete pile caps specified herein and shown on the plans. The Contractor shall furnish all labor, materials, and equipment required for completing the work.

- B. Related Sections:

- 1. Division 3 Section “Cast-In-Place Concrete”

1.03 DEFINITIONS

- A. Micropiles: Small diameter, high capacity drilled and grouted micropiles. Each micropile shall consist of a permanent steel casing (unbonded zone), cement grout-to-ground contact area (bonded zone), inner steel reinforcement (central reinforcing bar), centralizers, and cement grout that is tremmied into the drilled holes as the steel casing is withdrawn and/or injected during post grouting. The micropiles shall be of Type B, C, or D classification as defined in FHWA-SA-97-070.

1.04 REFERENCES

- A. The latest publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
 - 1. American Society for Testing and Materials (ASTM)

- a. ASTM A 615 - Deformed and Plain Billet-Steel for Concrete Reinforcement.
- b. ASTM C 109 – Compressive Strength of Hydraulic Cement Mortars (Using 2-inch or 50 mm Cube Specimens)
- c. ASTM C 150 - Portland Cement
- d. ASTM C 476 - Grout for Masonry

1.05 DESIGN REQUIREMENTS

- A. Micropiles shall have an ultimate axial capacity (single micropile) of at least 40 kips per micropile.
- B. The Micropile Subcontractor shall select the drilling, installation, and grouting methods needed to satisfy or exceed the ultimate axial capacity of the micropile in compression and with a total pile settlement at the present existing ground surface of 1.0 inch or less at the end of the holding period at the maximum test load.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Because of the expertise required to successfully complete the micropile according to the contract, a qualified Micropile Subcontractor shall install the micropiles. The Micropile Subcontractor shall have installed cased permanent micropiles, mini-piles, or pin piles for at least five (5) years and have successfully completed at least five (5) projects (each project shall have at least 20 micropiles per project) in the last five (5) years. The Micropile Subcontractor shall have successfully completed at least three (3) projects (at least 20 cased micropiles each at least 7 inches in diameter for each project) in the last five (5) years.

1.07 SUBMITTALS

- A. General: All required submittals shall be submitted not less than 15 workdays prior to initiating the work unless otherwise noted. No micropiles shall be installed until the Engineer has accepted, in writing, submittals for micropiling.
- B. Installer Qualifications:
 - 1. The Engineer may suspend the micropile construction if the Micropile Subcontractor substitutes unqualified personnel for approved personnel

during construction. If work is suspended due to substitution of unqualified personnel, the Micropile Subcontractor shall be fully liable for additional costs resulting from the suspension of work and no adjustment in contract time resulting for the suspension of work will be allowed.

2. The use of consultants and/or manufacturer's representatives does not satisfy the following qualification requirements. Micropile work shall not start or materials shall not be ordered until the Engineer has approved the Micropile Subcontractor's qualifications.
 - a. List containing at least five (5) projects on which they have installed micropiles, mini-piles, or pin piles (each project shall involve a minimum of 20 micropiles). A description of each project including a reference shall be included in the list. The references shall include the individual's name, company name, and current phone number. At least three (3) projects shall involve cased micropiles of 7 inches minimum diameter.
 - b. Detailed narrative with his proposal describing the construction means and methods to be used and all aspects of this work.
 - c. List identifying the drill operators and on-site supervisors who will be assigned to this project. The list shall contain a summary of each individual's experience in sufficient detail such that the Engineer could determine if the individual has satisfied at least three (3) years of experience in installing micropiles, mini-piles, or pin piles and direct experience on at least two (2) micropiling projects similar to the scope of work as this project.
- C. Shop Drawings: Submit shop drawings for micropiles not less than 15 workdays prior to initiating the work. Indicate placement of reinforcement including centralizers.
 1. The Engineer will notify the Contractor in writing when the submitted shop drawings and supplement have been determined to be complete. The Contractor shall allow the Engineer 20 working days to review the shop drawing submittal after a complete set has been received.
- D. Reinforcing Steel Test Results: Submit certified mill test reports for the reinforcing steel. The ultimate strength, yield strength, elongation, and material properties composition shall be included in the mill test reports.
- E. Grout Mix Design: Submit a grout mix design as specified.

1. Test Report: Submit certified test reports for grout strength in accordance with ASTM E 109.
 2. Certificates: Certification identifying cement, brand name, type, mill location, and quantity to be used.
- F. Manufacturers Instructions: Submit installation instructions for placement of micropiles, including detailed narrative describing the drilling equipment, drilling procedures, placement of rebar and grout, and methods to be used and all aspects of this work.
- G. Load Test and Proof Tests: Submit detailed test procedures, including equipment and instrumentation required for the work.
- H. Micropile Records:
1. Prior to the start of the micropile construction, the Contractor shall submit the following to the Owner for review:
 - a. Mill test reports of the piling steel components (reinforcement, bearing plates, etc).
 - b. Proposed load test frame and associated equipment including calibration data for each jack pressure gauge and load cell to be used for the pre-production micropile load test. The calibration tests shall be performed on the jack and pressure gauge as a unit by an independent testing laboratory within 180 calendar days of the static load testing.
 - c. Proof test equipment including instrumentation and calibration data for hydraulic jack, pump pressure gauge, and load cell to be used for proof testing. The calibration tests shall be performed on the jack and pressure gauge as a unit by an independent testing laboratory. Perform and submit calibration of jack and pressure gauge, and load cell within one hundred and eighty (180) calendar days of the proof testing.
 2. During micropile installations, the Contractor shall maintain and submit to the Owner the following information within two workdays after the completion of each micropile:
 - a. Detailed drilling records and logs of the date of drilling, equipment used, driller's name, actual hole sizes and depths, drilling rates and any unusual conditions.

- b. Grouting records indicating the grouting dates, cement type, quantity injected, and grout pressures at the point of injection, including any post grouting performed. The grout pump or pump line shall be equipped with a metering device to measure the flow rate of the grout pumped into the micropile. The metering device shall be working properly at all times. Micropile installation shall be suspended if the metering device is not working properly.
 - c. As-built drawings showing the micropile locations, elevations of top and bottom of the reinforcing steel, total pile length, and bond length.
- 3. Immediately report to the Owner any unusual conditions encountered during the micropile construction.

PART 2 – PRODUCTS

2.01 STEEL REINFORCEMENT

- A. Reinforcing steel shall be #11 Grade 75 all-thread rebar conforming to ASTM A615, and shall be Hot Dip Galvanized.

2.02 REINFORCEMENT ACCESSORIES

- A. Centralizers: Centralizers and spacers shall be fabricated from Schedule 40 PVC pipe or tube, steel, or material non-detrimental to the reinforcing steel. Wood shall not be used. Centralizers and spacers shall be securely attached to the reinforcement; sized to position the reinforcement within 0.5 inches of plan location from center of micropile and soil/rock anchor; sized to allow grout tremie pipe insertion to the bottom of the drillhole if tremie pipe is used; and sized to allow grout to freely flow up the drilled hole and along the length of the reinforcing bars

2.03 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I or II.
- B. Grout: Neat cement or sand/cement mixture with a minimum 28-day compressive strength of 4,000 psi per ASTM C109 and a water cement ratio (by weight) of 0.45 or less. Suitable admixtures shall be used to control bleeding, improve flowability, and reduce the potential for washout.

1. Admixtures for grout shall conform to the requirements of ASTM C494 and be subject to the review and acceptance of the Engineer and shall be mixed in accordance with manufacturer's recommendations
- C. Water: Clean, fresh, potable, and free from injurious amounts of mineral and organic substances.

2.04 OTHER MATERIALS

- A. All other materials, not specifically described but may be required for a complete and proper installation of all micropiles shall be selected by the Contractor, subject to the approval of the Owner.

PART 3 – EXECUTION

3.01 SITE CONDITIONS

- A. Verify locations of existing underground utilities and structures prior to micropile work. If obstructions are encountered in the drilling work, the Contractor shall stop operations in such areas and immediately notify the Owner. The Contractor shall take care to ensure the safety of underground utility services and adjacent properties during the installation of micropiles. The Contractor shall be liable to any claims of damage caused by the piling operations.
- B. Protection of Existing Structures: The Contractor shall control his operations to prevent damage to existing structures and utilities. Preventive measures shall include, but are not limited to, selecting construction methods and procedures that will reduce the amount of cave-ins, over-cuts, and excessive grout losses, and monitoring and controlling the vibrations from construction activities such as drilling or the driving of micropiles.

3.02 SPECIAL INSPECTION

- A. In accordance with the local Building Code, Special Inspections shall be provided by the Geotechnical Engineer, Licensed in State of Hawaii and retained by the Contractor, to observe the installation of the micropiles and to observe the performance of the load and proof tests by the Contractor. The Contractor shall notify the Geotechnical Engineer a minimum 5 days prior to starting work. Micropile installation, including the performance of the load and proof tests shall not be conducted without the presence of the Geotechnical Engineer.

3.03 CONSTRUCTION

- A. General: The micropile installation shall be in accordance with the contract plans and these specifications. The drilling equipment and methods shall be suitable for drilling through the subsurface conditions to be encountered, without causing ground heave and subsidence, and damage to the existing adjacent slope. During construction, the Contractor shall observe the conditions in the vicinity of the micropile construction site on a daily basis for signs of ground heave or subsidence. Immediately notify the Engineer if signs of movements are observed. The Contractor shall immediately suspend or modify drilling or grouting operations if ground heave or subsidence is observed. Immediately report to the Engineer any unusual conditions encountered during the micropile construction.
- B. Drilling Equipment: Drilling is expected to encounter cobbles and boulders and is expected to be hard and difficult. The drilling equipment for the micropiles may consist of rotary drilling, core drilling, percussion drilling, hollow stem auger drilling, or driven casing and shall be capable of drilling through hard cobbles, hard boulders, hard basaltic rock, loose submerged sand and gravel, stiff silts and clays, and other subsurface conditions as indicated on the boring logs. It shall have suitable drilling bits and other appropriate equipment to drill into the various subsurface materials anticipated at this site. The use of bentonite or drilling mud will not be allowed.
- C. Grouting equipment: Grout shall be produced with high-speed, high-shear mixers. The grouting equipment shall be equipped with a pressure gauge to monitor grout pressures. An additional in-line pressure gauge shall be installed at the point of injection. Both pressure gauges shall be capable of measuring pressures of at least twice the actual grout pressures anticipated by the Contractor. The grouting equipment shall be capable of thoroughly mixing and producing a grout free of lumps and undispersed cement, and shall be able to pump the grout in a continuous operation.
- D. Work Platform: Temporary work platform and associated support system construction, if necessary, shall be compatible with the site conditions. Design each member or support element to support the maximum loads that can occur during construction with appropriate safety factors.
- E. Drilling Method: A temporary casing shall be installed to permit the micropile shaft to be formed to the minimum design diameter. The casing shall be extended down to the bottom of each drilled hole then backed out to the specified depth. The Micropile Subcontractor's proposed method(s) to provide drill hole support and to prevent detrimental ground movements shall be reviewed and accepted by the Engineer.
 - 1. The Micropile Subcontractor shall utilize a "Down-the-hole" hammer method, which extends the drill hole while lowering the casing, to advance

the micropile to the full depth specified. The cement grout is then tremmied into the drilled hole from the bottom up as the steel casing is withdrawn while maintaining an adequate head of grout (minimum 5 feet) above the bottom of the casing.

- F. The Micropile Subcontractor shall select the construction means and methods, for micropiles, drilling method, the grouting procedure, and the grouting pressure used for the proper installation of the micropiles and soil/rock anchors, if used. The Micropile Subcontractor shall also be responsible for estimating the grout take.
- G. Construction safety measures shall be implemented during all work and must be closely monitored by the Contractor's on-site representative. Construction safety is the sole responsibility of the Contractor, who must strictly comply with all applicable government safety regulations.
- H. Perform all work in accordance with applicable regulations, permits, and codes of all Federal, State, and City agencies. Methods of construction selected by the Contractor shall ensure the safety of the work, Contractor's employees, Government property and improvements, and the public.

3.04 SOIL CUTTING AND FLUIDS

- A. Suitable equipment and approved methods shall be used to contain and treat the soil cuttings and fluids from the drilling and grouting in accordance with City, State and Federal environmental pollution regulations and requirements to prevent environmental impacts to existing structures. The soil cuttings and fluids from the drilling shall be disposed of by the Contractor in accordance with City, State and Federal environmental pollution regulations and requirements. Reinforcing Steel: Reinforcement surface shall be free of deleterious substances such as soil, mud, grease, or oil that might contaminate the grout or coat the reinforcement and impair bond. Lengths of reinforcing bars to be spliced shall be secured in proper alignment and in a manner to avoid eccentricity or angle between the axes of the two lengths to be spliced.

3.05 REINFORCEING STEEL PLACEMENT

- A. Reinforcing steel shall only be spliced with mechanical couplers specifically manufactured for splicing bars and capable of achieving the full compressive strength of the bar. The coupler shall also be corrosion resistant. Micropile Subcontractor shall submit the mechanical coupler data to the Engineer for review and acceptance.

- B. Non-corrosive centralizers shall be used for the reinforcing bars. The centralizers shall be placed at a spacing not exceeding 10 feet. In addition, the top centralizer shall be located within 5 feet of the top of the micropile and the lower centralizer shall be located not more than one foot above the bottom of the reinforcing bar.

3.06 GROUTING

- A. Grouting: Micropiles shall be primary grouted the same day the load transfer bond length is drilled and shall be placed within one hour of mixing. The grouting equipment shall be sized to enable each micropile to be grouted in one continuous operation.
- B. Grouting Equipment: The Micropile Subcontractor shall have the appropriate means and methods of measuring the grout quantity and pumping pressure during the grouting operations. The grout pump shall be equipped with a pressure gauge to monitor grout pressures. A second pressure gauge shall be placed at the point of injection into the micropile. The pressure gauges shall be capable of measuring pressures of at least 150 psi or twice the actual grout pressures used, whichever is greater.
- C. The grouting equipment used shall produce a grout free of lumps and undispersed cement. The grout shall be kept in agitation prior to mixing. The grout shall be injected from the lowest point of the drilled hole and injection shall continue until uncontaminated grout flows from the top of the micropile. The grout may be pumped through grout tubes, casing, hollow-stem augers, or drill rods. Temporary casing, if used, shall be extracted in stages ensuring that, after each length of temporary casing is removed the grout level is brought back up to the ground level before the next length is removed. The tremie pipe or temporary casing shall always extend at least 5 feet below the level of the existing grout in the drilled hole.

3.07 GROUT QUALITY CONTROL

- A. The grout pressures and grout takes shall be controlled to prevent excessive heave or fracturing of rock or soil formations. The Engineer shall be provided full access to observe all micropile installation equipment, controls, instrumentation, and operations.
- B. The Contractor shall check micropile top elevations and adjust all installed micropiles to the planned elevations. The Contractor shall take one set of grout specimens for every micropile installed. Each set shall consist of at least 6 cubes. Grout specimens shall be cured under laboratory conditions. Cubes shall be tested in accordance with ASTM C109. Strength tests shall be made for 3 cubes at 7 days and for 3 cubes at 28 days.

- C. If the strength tests of one or more cubes of a set from a micropile are at 10 percent or more below the required compressive strength required at 28 days, the micropile shall be abandoned and replaced by a micropile placed adjacent to the abandoned micropile as directed by the Engineer at the Contractor's expense. All tests shall be made by an independent testing laboratory approved by the Engineer and paid for by the Contractor. The Engineer will take independent grout samples for quality assurance and acceptance purposes. The Engineer will not use the results of the grout specimens taken by the Contractor for acceptance of the work.

3.08 CONSTRUCTION TOLERANCES

- A. The following construction tolerances apply to micropiles:
 - 1. The micropile shall be within two (2) inches of plan position in the horizontal plane at the plan elevation for the top of the pile.
 - 2. The vertical alignment of the micropile shall not deviate from plumb by more than one-quarter ($\frac{1}{4}$) of an inch per foot of depth. The alignment of a battered micropile shall not vary by more than one-half ($\frac{1}{2}$) of an inch per foot of depth from the prescribed batter.
 - 3. After grouting, the top of the central reinforcing steel bar shall be no more than six (6) inches above and no more than three (3) inches below plan position.
 - 4. The top elevation of the micropile shall have a tolerance of + one-half ($\frac{1}{2}$) inch from the plan top of pile elevation.
 - 5. The dimensions of casings are subject to American Pipe Institute tolerances applicable to regular steel pipe.
- B. Micropiles not constructed within the required tolerances are unacceptable. Submit correction plan of replacement micropiles to the Engineer for review and acceptance. Corrections may be made to an unacceptable micropile by any approved combination of the following methods:
- C. The approval of correction procedures is dependent on analysis of the effect of the degree of misalignment, improper positioning, and/or mis location of the unacceptable micropile. Correction methods may be approved as design analyses indicate. Redesign drawings and computations shall be signed by a Structural Engineer licensed in the State of Hawaii. Materials and work necessary, including engineering analysis and redesign and construction, to

effect corrections for unacceptable micropiles shall be furnished at no cost to the Owner.

3.09 CLEAN UP

- A. Upon completion of work, remove all materials, tools, scaffolding, refuse and debris generated by the work from premises, leaving premises in clean and satisfactory condition.
- B. Daily Clean Up: Remove rubbish and debris from the buildings or site daily, unless otherwise directed. Do not allow accumulations inside or outside the building. Store materials that cannot be disposed of daily in areas specified by the Owner.

3.10 PRE-PRODUCTION MICROPILE LOAD TEST

- A. Before the installation of the production micropiles, one (1) sacrificial pre-production micropile shall be installed using the equipment and methods proposed by the Contractor. The location of the pre-production micropile shall be approved by the Geotechnical Engineer. The Contractor shall load test the pre-production pile in compression to at least twice its allowable design load in accordance with ASTM D1143-81 (Re-approved 1994), "Quick Load Test Method for Individual Piles" and as modified herein. The Contractor shall install additional reaction piles or anchors for the load test, and shall provide all necessary load test equipment, hydraulic jack, pump, load cell, and instrumentation in accordance with ASTM D1143 and as specified herein.
- B. The Contractor shall furnish all materials, equipment and tools necessary to perform the load test. The Geotechnical Engineer retained by the Owner will be present only to observe the performance of the load test by the Contractor.
- C. The load test micropile shall be loaded gradually to at least 200 percent of the allowable design load in compression. Each load increment shall be held until the rate of movement is not greater than 0.01 inches per hour, but each load increment does not need to be held longer than 2 hours. The load test pile shall be held for a minimum of 4 hours at the design load and the maximum test load (200 percent of the design load) to evaluate the potential for creep effects. Micropile movements shall be recorded at 1, 2, 3, 4, 5, 6, 10, 20, 30, 40, 50, 60, 120, and 240 minutes. Deflection readings on the pile top shall be referenced to a constant elevation benchmark sufficiently far away from the test.
- D. The pre-production test pile may not be used as the permanent production micropile and shall be abandoned in-place after the performance of the load test.

- E. Perform load test not earlier than 7 days after the completion of the pre-production pile construction.
- F. Within one week after completion of the micropile load test, the Contractor shall submit detailed test results, including graphs of load versus deflection.

3.11 REVISED INSTALLATION PROCEDURE

- A. Should the pre-production load test pile fail to produce acceptable test results, the Contractor shall modify his installation procedures and install a replacement pile or piles and perform additional compression load tests at his expense until acceptable results are obtained.
- B. Contractor shall submit a revised installation procedure to the Owner for review and approval. Installation of the micropiles will not be permitted to continue until the revised procedure is accepted by the Owner.
- C. Installation of production micropiles shall follow the same installation methods and procedures as those used in the successful pre-production micropile and load test. Modifications to the installation methods and procedures may require installation of additional sacrificial micropile(s) and performance of additional load test(s) at no additional cost to the Owner.

3.12 PROOF TESTS

- A. Proof test a minimum 10 percent of the total number of production micropiles (minimum 5 micropiles) in addition to the pre-production micropiles. Production micropiles to be proof tested will be selected by the Geotechnical Engineer after the installation of all production micropiles.
- B. The Contractor shall furnish all materials, equipment and tools necessary to perform the proof tests. The Geotechnical Engineer retained by the Owner will be present only to observe the performance of the proof tests by the Contractor.
- C. Perform the proof tests by incrementally loading the micropile to be tested in accordance with the following loading schedule:

Proof Test Schedule

0.05P
0.25P
0.50P
0.75P
1.00P
1.25P

1.60P

Where P = allowable micropile vertical capacity of 40 kips.

- D. Except at the maximum proof test load, increase the loads from one increment to the next immediately after recording the micropile movement. Measure and record the micropile movement at the top of the pile for each load increment to the nearest 0.001 inches with respect to a constant elevation benchmark located sufficiently far away from the pile being tested so as not to be affected by the test. Monitor the load with a load cell. At load increments other than the maximum test load, hold the load just long enough to measure the micropile movement, but the hold time does not need to be more than one minute. Hold the maximum test load for fifteen (15) minutes. Periodically pump the jack as necessary to maintain a constant load. Start the load-holding period as soon as the maximum load has been applied and record the micropile movements at 1, 2, 3, 4, 5, 6, 10 and 15 minutes.
- E. If the micropile movements between the one minute and ten (10) minute readings exceeds 0.04 inches, hold the maximum test load for an additional 50 minutes and continue to record micropile movements at 20, 25, 30, 40, 50 and 60 minutes (from the commencement of the proof test).
- F. Submit the results of micropile proof testing within two (2) workdays of the completion of each test. Include a plot of micropile movements versus load with the test data.
- G. Proof testing of micropiles with fifteen (15) minute load-holding periods is acceptable if the total movement measured between one minute and ten (10) minutes is less than 0.04 inches, and the total movement at the maximum test load exceeds 80 percent of the theoretical elongation of the unbonded length of the micropile being tested.
- H. Proof testing of micropiles with sixty (60) minutes load-holding periods is acceptable if the creep rate does not exceed 0.08 inches per log cycle of time and the total movement at the maximum test load exceeds 80 percent of the theoretical elastic elongation of the unbonded length of the pile being tested.
- I. If a micropile fails the proof testing, the Contractor shall modify his design and/or installation procedures to provide micropiles with acceptable results. Any modifications to the micropile design and construction will be at the Contractor's expense. Additional micropile(s) and/or proof tests required due to failed proof tests will be at the Contractor's expense.

3.13 METHOD OF MEASUREMENT

- A. Furnishing Micropile Installation Equipment. The Owner will not measure furnishing micropile installation equipment for payment.
- B. Load Test. The Owner will pay for load test per each.
- C. Production Micropiles. The Owner will measure production micropiles per linear foot. The length shall be the elevation difference between the plan top of the micropile and the authorized bottom elevation of micropile. The Geotechnical Engineer will maintain a micropile installation log for payment.
- D. Proof Tests. The Owner will measure proof testing of production micropiles per each.
- E. Grout Testing. The Owner will measure laboratory compression testing of each set of grout specimens. Each set shall consist of 6 cubes. Strength tests shall be made for 3 cubes at 7 days and for 3 cubes at 28 days, as specified.

PART 4 – BILLING AND PAYMENT

4.01 BASIS OF PAYMENT:

- A. Furnishing Micropile Installation Equipment. The Owner will pay for the accepted furnishing micropile installation equipment on a lump sum basis complete in place.
- B. The price includes full compensation for furnishing and moving the equipment and necessary tools to the project, setting the equipment up at the locations and removing the equipment from the project.
- C. The Owner will make payment of 60% of the contract amount for this item when all equipment is ready to drill the pre-production micropile.
- D. The Owner will make payment for the remaining 40% of the contract amount when all micropiles have been installed and accepted.
- E. Load Test. The Owner will pay for the accepted load test at the contract unit price per each complete in place.
- F. The price includes full compensation for drilling, reinforcing and grouting the pre-production micropiles, placing grout, furnishing and installing load cells, instrumentation, collecting data, keeping records and furnishing labor, materials, equipment, tools and incidentals necessary to complete the work.

- G. Production Micropiles. The Owner will pay for the accepted production micropiles at the contract unit price per linear foot complete in place.
- H. The price includes full compensation for drilling, reinforcing and grouting the production micropiles and furnishing labor, materials, equipment, tools and incidentals necessary to complete the work.
- I. Proof Tests. The Owner will pay for the accepted proof tests at the contract unit price per each complete in place.
- J. The price includes full compensation for proof testing the micropiles and furnishing labor, materials, equipment, tools and incidentals necessary to complete the work.
- K. Grout Testing. The Owner will pay for the accepted laboratory compression tests of grout specimens at the contract unit price per set complete in place. The Owner will not pay for laboratory tests performed on grout samples that failed to meet the specified strength requirements.
- L. The price includes full compensation for casting the cubes, curing, and laboratory testing the grout specimens and furnishing labor, materials, equipment, tools and incidentals necessary to complete the work.
- M. The Owner will make payment under the following as listed in the Proposal Schedule:

<u>Pay Item</u>	<u>Pay Unit</u>
Furnishing MicroPile Installation Equipment	Lump Sum
Load Test	Each
Production MicroPile	Linear Foot
Proof Tests	Each
Grout Testing	Set

END OF SECTION

SECTION 03470 – HELICAL PILES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. The purpose of this specification is to detail the furnishing of all designs, materials, tools, equipment, labor and supervision, and installation techniques necessary to install Helical Piles as detailed on the drawings, including connection details. This shall include provisions for load testing that may be part of the scope of work

1.03 DEFINITIONS

- A. Helical Pile: A bearing type foundation element consisting of a lead or starter section, helical extension (if so required by site conditions), plain extension section(s), and a pile cap. A.k.a. helical screw pile, screw pile, helical screw foundation.
- B. Pile Cap: Connection means by which structural loads are transferred to the Helical Pile. The type of connection varies depending upon the requirements of the project and type of Helical Pile material used.

1.04 INSTALLER QUALIFICATIONS

- A. The Helical Pile Contractor shall be experienced in performing design and construction of Helical Piles and shall furnish all materials, labor, and supervision to perform the work. The Contractor shall be trained and authorized by the helical pile manufacturer in the proper methods of design and installation of Helical Piles.
 - 1. The Contractor shall provide names of on-site personnel materially involved with the work, including those who carry documented certification from the helical pile manufacturer. At a minimum, these personnel shall include foreman, machine operator, and project manager.

1.05 QUALITY ASSURANCE

- A. Helical Piles shall be installed by authorized contractor of the helical pile manufacturer. These Contractors shall have satisfied the requirements relative to the technical aspects of the product and installation procedures as therein specified. Authorization documents shall be provided upon request to the Owner.
- B. The Contractor shall employ an adequate number of skilled workers who are experienced in the necessary crafts and who are familiar with the specified requirements and methods needed for proper performance of the work of this specification.
- C. All Helical Piles shall be installed in the presence of a designated representative of the Owner unless said representative informs the Contractor otherwise. The designated representative shall have the right of access to any and all field installation records and test reports.
- D. Helical Pile components as specified therein shall be manufactured by a facility whose quality systems comply with ISO (International Organization of Standards) 9001 requirements. Certificates of Registration denoting ISO Standards Number shall be presented upon request to the Owner.
- E. Design of Helical Piles shall be performed by an entity as required in accordance with existing local code requirements or established local practices. This design work may be performed by a licensed professional Engineer in the State of Hawaii.

1.06 DESIGN CRITERIA

- A. Helical Piles shall be designed to meet the specified loads and acceptance criteria as shown on the drawings.
- B. The allowable working load on the Helical Piles shall not exceed the following mechanical strength values:

1. For compression loads: $P_{allowec} = 0.6 * f_{yshaft} * A_{shaft}$

Where: $P_{allowec}$ = Allowable working load in compression (kip)
 f_{yshaft} = Minimum yield strength of central steel shaft (ksi)
 A_{shaft} = area of central steel shaft (with corrosion allowance) (in²)

2. For tension loads: $P_{allowt} = S_{ut}/FS$

Where: P_{allowt} = allowable working load in tension (kip)

S_{ut} = Min. ultimate tensile strength of central steel shaft segment
(at coupling joint) (kip)

FS = Factor of safety suitable for application, i.e. permanent
structures.

- C. Except where noted otherwise on the project plans, all helical piles shall be designed and installed to provide a minimum safety factor for ultimate applied load of 2.0, and a maximum axial displacement at working load of 1 inch. The Owner shall determine the allowable response to axial loads based on serviceability requirements.

1.07 ALLOWABLE TOLERANCES

- A. Centerline of helical pile shall not be more than 3 inches from indicated plan location.
- B. Helical plumbness shall be within 2 deg of design alignment
- C. Top elevation of helical pile shall be determined by the contractor in order to achieve a floor level tolerance of 0.2 inches.

1.08 SUBMITTALS

- A. Work shall not begin until all pre-construction submittals have been received and approved by the Owner. The Contractor shall allow the Owner a reasonable time to review, comment, and return the submittal package after a complete set has been received. All costs associated with incomplete or unacceptable submittals shall be the responsibility of the Contractor
- B. Construction Procedures: Submit a detailed description of the construction procedures proposed for use. This shall include a list of major equipment to be used.
- C. Working Drawings: Submit working drawings and design calculations for the Helical Piles intended for use at least 15 work days prior to planned start of construction. All design submittals shall be signed and sealed by a Registered Professional Engineer currently licensed in the State of Hawaii.

1. Working drawings shall include:

- a. Helical Pile number, location and pattern by assigned identification number

- b. Helical Pile design load and required safety factor
 - c. Type and minimum size of central steel shaft
 - d. Minimum number of helix plates
 - e. Minimum effective installation torque
 - f. Minimum overall depth
 - g. Inclination angle of Helical Pile
 - h. Cut-off elevation
 - i. Helical Pile attachment to structure relative to grade beam, column pad, pile cap, etc.
- D. Shop Drawings: The Contractor shall submit shop drawings for all Helical Pile components, including corrosion protection and pile top attachment to the Owner for review and approval. This includes Helical Pile manufacturer's catalog numbers.
- E. Certified Mill Test Reports: Submit certified mill test reports for the central steel shaft, as the material is delivered, to the Owner for record purposes. The ultimate strength, yield strength, % elongation, and chemistry composition shall be provided.
- F. Pre-Production and Production Testing: Submit plans for pre-production and production testing for the Helical Piles to the Engineer for review and acceptance prior to beginning load tests. The purpose of the test is to determine the load versus displacement response of the Helical Pile and provide an estimation of ultimate capacity.
- G. Calibration Reports: Submit copies of calibration reports for each torque indicator or torque motor, and all load test equipment to be used on the project. The calibration tests shall have been performed within 6 months of the date submitted. Helical Pile installation and testing shall not proceed until the Owner has received the calibration reports. These calibration reports shall include, but are not limited to, the following information:
- 1. Name of project and Contractor
 - 2. Name of testing agency

3. Identification (serial number) of device calibrated
4. Description of calibrated testing equipment
5. Date of calibration
6. Calibration data

H. Installation Records:

1. The Contractor shall provide the Owner copies of Helical Pile installation records within 24 hours after each installation is completed. Records shall be prepared in accordance with the specified division of responsibilities as noted in Table-1. Formal copies shall be submitted on a weekly basis. These installation records shall include, but are not limited to, the following information.
 - a. Name of project and Contractor
 - b. Name of Contractor's supervisor during installation
 - c. Date and time of installation
 - d. Name and model of installation equipment
 - e. Type of torque indicator used
 - f. Location of Helical Pile by assigned identification number
 - g. Actual Helical Pile type and configuration – including lead section (number and size of helix plates), number and type of extension sections (manufacturer's SKU numbers)
 - h. Helical Pile installation duration and observations
 - i. Total length of installed Helical Pile
 - j. Cut-off elevation
 - k. Inclination of Helical Pile
 - l. Installation torque at one-foot intervals for the final 10 feet
 - m. Comments pertaining to interruptions, obstructions, or other relevant information
 - n. Rated load capacities

I. Test Reports:

1. The Contractor shall provide the Owner copies of field test reports within 24 hours after completion of the load tests. Records shall be prepared in accordance with the specified division of responsibilities as noted in Table-1. Formal copies shall be submitted within a reasonable amount of time following test completion. These test reports shall include, but are not limited to, the following information:

- a. Name of project and Contractor
- b. Name of Contractor's supervisor during installation
- c. Name of third-party test agency, if required
- d. Date, time, and duration of test
- e. Location of Helical Pile by assigned identification number
- f. Type of test (i.e. tension or compression)
- g. Description of calibrated testing equipment and test set-up
- h. Actual Helical Pile type and configuration – including lead section, number and type of extension sections (manufacturer's SKU numbers)
- i. Steps and duration of each load increment
- j. Cumulative pile-head movement at each load step
- k. Comments pertaining to test procedure, equipment adjustments, or other relevant information
- l. Signed by third party test agency rep., registered professional engineer, or as required by local jurisdiction

- J. Manufacturer's Warranty: Submit, for Owner's Acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights the Owner may have under Contract Document

PART 2 – PRODUCTS

2.01 HELICAL PILE ASSEMBLY

- A. Helical pile assembly and accessories shall be supplied by one manufacturer for the entirety of the project. All components of the helical pile system shall be approved by the manufacturer for use as an assembly. Parts include but are not limited to:
 1. Central Steel Shaft
 2. Helix Bearing Plate

3. Bolts
4. Carbide Tip
5. Couplings
6. Plates, Shapes, or Pile caps

2.02 CORROSION PROTECTION

- A. Galvanization: component shall be hot-dipped galvanized in accordance with ASTM A153 or A123 after fabrication.
- B. The following components require corrosion protection of the following:
 1. Central Shaft: Galvanization
 2. Central Steel Shaft: Galvanization
 3. Steel Pile Cap: Galvanization

PART 3 – EXECUTION

3.01 SITE CONDITIONS

- A. Prior to commencing Helical Pile installation, the Contractor shall inspect the work of all other trades and verify that all said work is completed to the point where Helical Piles may commence without restriction. Protection of Existing Structures: The Contractor shall control his operations to prevent damage to existing structures and utilities. Preventive measures shall include, but are not limited to, selecting construction methods and procedures that will reduce the amount of cave-ins, over-cuts, and excessive grout losses, and monitoring and controlling the vibrations from construction activities such as drilling or the driving of micropiles.
- B. The Contractor shall verify that all Helical Piles may be installed in accordance with all pertinent codes and regulations regarding such items as underground obstructions, right-of-way limitations, utilities, etc.
- C. In the event of a discrepancy, the Contractor shall notify the Owner. The Contractor shall not proceed with Helical Pile installation in areas of discrepancies until said discrepancies have been resolved. All costs associated with unresolved discrepancies shall be the responsibility of the Owner.

3.02 INSTALLATION EQUIPMENT

- A. Shall be rotary type, hydraulic power driven torque motor with clockwise and counter-clockwise rotation capabilities. The torque motor shall be capable of continuous adjustment to revolutions per minute (RPM's) during installation. Percussion drilling equipment shall not be permitted. The torque motor shall have torque capacity 15% greater than the torsional strength rating of the central steel shaft to be installed
- B. Equipment shall be capable of applying adequate down pressure (crowd) and torque simultaneously to suit project soil conditions and load requirements. The equipment shall be capable of continuous position adjustment to maintain proper Helical Pile alignment.

3.03 INSTALLATION TOOLING

- A. Installation tooling should be maintained in good working order and safe to operate at all times. Flange bolts and nuts should be regularly inspected for proper tightening torque. Bolts, connecting pins, and retainers should be periodically inspected for wear and/or damage and replaced with identical items provided by the manufacturer. Heed all warning labels. Worn or damaged tooling should be replaced.
- B. A torque indicator shall be used during Helical Pile installation. The torque indicator can be an integral part of the installation equipment or externally mounted in-line with the installation tooling. Torque indicator shall be:
 - 1. Capable of providing continuous measurement of applied torque throughout the installation.
 - 2. Capable of torque measurements in increments of at least 500 ft-lb
 - 3. Calibrated prior to pre-production testing or start of work. Torque indicators which are an integral part of the installation equipment, shall be calibrated on-site. Torque indicators which are mounted in-line with the installation tooling, shall be calibrated either on-site or at an appropriately equipped test facility. Indicators that measure torque as a function of hydraulic pressure shall be calibrated at normal operating temperatures.
 - 4. Re-calibrated, if in the opinion of the Owner and/or Contractor reasonable doubt exists as to the accuracy of the torque measurements.

3.04 INSTALLATION PROCEDURES

A. Central Steel Shaft:

1. The Helical Pile installation technique shall be such that it is consistent with the geotechnical, logistical, environmental, and load carrying conditions of the project.
2. The lead section shall be positioned at the location as shown on the working drawings. Battered Helical Piles can be positioned perpendicular to the ground to assist in initial advancement into the soil before the required batter angle shall be established. The Helical Pile sections shall be engaged and advanced into the soil in a smooth, continuous manner at a rate of rotation of 5 to 20 RPM's. Extension sections shall be provided to obtain the required minimum overall length and installation torque as shown on the working drawings. Connect sections together using coupling bolt(s) and nut torqued to 40 ft-lb.
3. Sufficient down pressure shall be applied to uniformly advance the Helical Pile sections approximately 3 inches per revolution. The rate of rotation and magnitude of down pressure shall be adjusted for different soil conditions and depths.

3.05 TERMINATION CRITERIA

- A. The torque as measured during the installation shall not exceed the torsional strength rating of the central steel shaft.
- B. The minimum installation torque and minimum overall depth criteria as shown on the working drawings shall be satisfied prior to terminating the Helical Pile installation.
- C. If the torsional strength rating of the central steel shaft and/or installation equipment has been reached prior to achieving the minimum overall length required, the Contractor shall have the following options:
 1. Terminate the installation at the depth obtained subject to the review and acceptance of the Owner, or:
 2. Remove the existing Helical Pile and install a new one with fewer and/or smaller diameter helix plates. The new helix configuration shall be subject to review and acceptance of the Owner. If re-installing in the same location, the top-most helix of the new Helical Pile shall be terminated at least (3) three feet beyond the terminating depth of the original Helical Pile.

- D. If the minimum installation torque as shown on the working drawings is not achieved at the minimum overall length, and there is no maximum length constraint, the Contractor shall have the following options:
1. Install the Helical Pile deeper using additional extension sections, or:
 2. Remove the existing Helical Pile and install a new one with additional and/or larger diameter helix plates. The new helix configuration shall be subject to review and acceptance of the Owner. If re-installing in the same location, the top-most helix of the new Helical Pile shall be terminated at least (3) three feet beyond the terminating depth of the original Helical Pile.
 3. De-rate the load capacity of the Helical Pile and install additional Helical Pile(s). The de-rated capacity and additional Helical Pile location shall be subject to the review and acceptance of the Owner.
- E. If the Helical Pile is refused or deflected by a subsurface obstruction, the installation shall be terminated and the pile removed. The obstruction shall be removed, if feasible, and the Helical Pile re-installed. If the obstruction can't be removed, the Helical Pile shall be installed at an adjacent location, subject to review and acceptance of the Owner.
- F. If the torsional strength rating of the central steel shaft and/or installation equipment has been reached prior to proper positioning of the last plain extension section relative to the final elevation, the Contractor may remove the last plain extension and replace it with a shorter length extension. If it is not feasible to remove the last plain extension, the Contractor may cut said extension shaft to the correct elevation. The Contractor shall not reverse (back-out) the Helical Pile to facilitate extension removal.
- G. The average torque for the last two feet of penetration shall be used as the basis of comparison with the minimum installation torque as shown on the working drawings. The average torque shall be defined as the average of the last three readings recorded at one-foot intervals.

3.06 HELICAL PILE LOAD TESTS

- A. Load tests shall be performed to verify the suitability and capacity of the proposed Helical Pile, and the proposed installation procedures prior to installation of production helical piles. One (1) sacrificial test helical piles shall be constructed immediately prior to the start of work on the production piles. The Engineer shall determine the number of pre-production tests, their location, acceptable load and movement criteria, and the type(s) of load direction (i.e., tension, compression, or both). Additional purpose of pre-production tests is to

empirically verify the ultimate capacity to the average installing torque of the Helical Pile for the project site.

- B. Pre-production Helical Pile installation methods, procedures, equipment, and overall length shall be identical to the production Helical Piles to the extent practical except where approved otherwise by the Engineer.
- C. The Contractor shall submit for review and acceptance the proposed Helical Pile load testing procedure. The pre-production test proposal shall be in general conformance with ASTM D1143 and/or D-3689, and shall provide the minimum following information:
 - 1. Type and accuracy of load equipment
 - 2. Type and accuracy of load measuring equipment
 - 3. Type and accuracy of pile-head deflection equipment
 - 4. General description of load reaction system, including description of reaction anchors
 - 5. Calibration report for complete load equipment, including hydraulic jack, pump, pressure gauge, hoses, and fittings.
- D. If the pre-production test fails to meet the design requirements, the Contractor shall modify the Helical Pile design and/or installation methods and retest the modified anchor, as directed by the Engineer.

3.07 LOAD TEST EQUIPMENT

- A. The load test equipment shall be capable of increasing or decreasing the applied load incrementally. The incremental control shall allow for small adjustments, which may be necessary to maintain the applied load for a sustained, hold period.
- B. The reaction system shall be designed so as to have sufficient strength and capacity to distribute the test loads to the ground. It should also be designed to minimize its movement under load and to prevent applying an eccentric load to the pile head. Test loads are normally higher than the design loads on the structure. The direction of the applied load shall be collinear with the Helical Pile at all times.

- C. Dial gauge(s) shall be used to measure Helical Pile movement. The dial gauge shall have an accuracy of at least ± 0.001 -in. and a minimum travel sufficient to measure all Helical Pile movements without requiring resetting the gauge. The dial gauge shall be positioned so its stem is parallel with the axis of the Helical Pile. The stem may rest on a smooth plate located at the pile head. Said plate shall be positioned perpendicular to the axis of the Helical Pile. The dial gauge shall be supported by a reference apparatus to provide an independent fixed reference point. Said reference apparatus shall be independent of the reaction system and shall not be affected by any movement of the reaction system.
- D. The load test equipment shall be re-calibrated, if in the opinion of the Engineer and/or Contractor reasonable doubt exists as to the accuracy of the load or deflection measurements.

3.08 TESTING PROGRAM

- A. The hydraulic jack shall be positioned at the beginning of the test such that the unloading and repositioning of the jack during the test shall not be required. The jack shall also be positioned co-axial with respect to the pile-head so as to minimize eccentric loading. The hydraulic jack shall be capable of applying a load not less than two times the proposed design load (DL). The pressure gauge shall be graduated in 100 psi increments or less. The stroke of the jack shall not be less than the theoretical elastic shortening of the total Helical Pile length at the maximum test load.
- B. An alignment load (AL) shall be applied to the Helical Pile prior to setting the deflection measuring equipment to zero or a reference position. The AL shall be no more than 10% of the design load (i.e., 0.1 DL). After AL is applied, the test set-up shall be inspected carefully to ensure it is safe to proceed.
- C. Axial compression or tension load tests shall be conducted by loading the Helical Pile in step-wise fashion as shown in Table-3 to the extent practical. Pile-head deflection shall be recorded at the beginning of each step and after the end of the hold time. The beginning of the hold time shall be defined as the moment when the load equipment achieves the required load step.
- D. Test loads shall be applied until continuous jacking is required to maintain the load step or until the test load increment equals 200% of the design load (DL) (i.e., 2.0 DL), whichever occurs first. The observation period for this last load increment shall be 4 minutes. Displacement readings shall be recorded at 0 and 4 minutes (load increment maxima only).
- E. The applied test load shall be removed in four approximately equal decrements per the schedule in Table-1. The hold time for these load decrements shall be 1 minute, except for the last decrement, which shall be held for 5 minutes.

LOAD STEP	HOLD TIME (MINUTES)
AL	1.0 Min.
0.20 DL	4.0 Min.
0.40 DL	4.0 Min.
0.60 DL	4.0 Min.
0.80 DL	4.0 Min.
1.0DL	4.0 Min.
0.75 DL	1.0 Min.
0.50 DL	1.0 Min.
0.25 DL	1.0 Min.
AL	1.0 Min.
0.5 DL	1.0 Min.
1.0 DL	1.0 Min.
1.2 DL	4.0 Min.
1.4 DL	4.0 Min.
1.6 DL	4.0 Min.
1.8 DL	4.0 Min.

Table-1

3.09 ACCEPTANCE CRITERIA FOR HELICAL PILE VERIFICATION LOAD TESTS

A. Both of the following criteria must be met for approval:

1. The Helical Pile shall sustain the compression and tension design capacities with no more than 0.2 in. total vertical movement of the pile-head as measured relative to the top of the Helical Pile prior to the start of testing.
2. Failure does not occur at the 2.0 DL maximum compression and tension test loads. The failure load shall be defined by one of the following definitions – whichever results in the lesser load:
 - a. The point at which the movement of the Helical Pile tip exceeds the elastic compression/tension of the pile shaft by $0.1B$, where B is defined as the average helix diameter. (Note that tension loads are limited to the minimum ultimate tensile strength of the coupling joint(s) of the central steel shaft. It is recommended to use the minimum ultimate tensile strengths as published by Hubbell Power Systems, Inc. (shown in Section 7 of the Technical Design Manual – 4th Edition).
 - b. The point at which the slope of the load versus deflection (at end of increment) curve exceeds 0.05 inches/kip.

- B. The Contractor shall provide the Owner copies of field test reports confirming Helical Pile configuration and construction details within 24 hours after completion of the load tests. Formal copies shall be submitted as per section SUBMITTALS. This written documentation will either confirm the load capacity as required on the working drawings or propose changes based upon the results of the pre-production tests.
- C. When a Helical Pile fails to meet the acceptance criteria, modifications shall be made to the design, the construction procedures, or both. These modifications include, but are not limited to, de-rating the Helical Pile load capacity, modifying the installation methods and equipment, increasing the minimum effective installation torque, changing the helix configuration, or changing the Helical Pile material. Modifications that require changes to the structure shall have prior review and acceptance of the Owner. The cause for any modifications of design or construction procedures shall be decided in order to determine any additional cost implications.

3.10 PRODUCTION HELICAL PILE TESTING

- A. The Helical Piles to be tested will be selected by the Engineer. At the Contractor's suggestion, but with the Owner's permission, tension tests may be performed in lieu of compression tests up to 1.00 DL for Helical Piles with sufficient structural tension capacity.
- B. The test sequence shall be as shown in Table-2 to the extent practical.

LOAD STEP	HOLD TIME (MINUTES)
AL	0 Min.
0.20 DL	4.0 Min.
0.40 DL	4.0 Min.
0.60 DL	4.0 Min.
0.80 DL	4.0 Min.
1.00 DL	4.0 Min.
0.60 DL	1 Min.
0.40 DL	1 Min.
0.20 DL	1 Min.
AL	5 Min.

AL = Alignment Load; DL = Design Load

Table-2

- C. The acceptance criteria for production Helical Piles shall be per Section 3.09

- D. If a production Helical Pile that is tested fails to meet the acceptance criteria, the Contractor shall be directed to proof test another Helical Pile in the vicinity. For failed Helical Piles and further construction of other foundations, the Contractor shall modify the design, the construction procedure, or both. These modifications include, but are not limited to, installing replacement Helical Piles, modifying the installation methods and equipment, increasing the minimum effective installation torque, changing the helix configuration, or changing the Helical Pile material (i.e., central steel shaft). Modifications that require changes to the structure shall have prior review and acceptance of the Owner. Any modifications of design or construction procedures shall be at the Contractor's expense.

END OF SECTION

CONSTRUCTION NOTES:

1. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986 AND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND THE COUNTIES OF KAUAI, MAUI, AND HAWAII.
2. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
3. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
4. THE GENERAL CONTRACTOR OF THE PROJECT SHALL BE RESPONSIBLE FOR CONFORMANCE WITH APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS," AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
5. THE GENERAL CONTRACTOR OF THE PROJECT SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE(S) FOR THE FOLLOWING:
- STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND
 - DISCHARGES OF HYDROTESTING EFFLUENT, DEWATERING EFFLUENT, AND WELL DRILLING EFFLUENT TO STATE WATERS.

IN ACCORDANCE WITH STATE LAW, ALL DISCHARGES RELATED TO PROJECT CONSTRUCTION OR OPERATIONS ARE REQUIRED TO COMPLY WITH STATE WATER QUALITY STANDARDS (HAWAII ADMINISTRATIVE RULES, CHAPTER 11-54). BEST MANAGEMENT PRACTICES SHALL BE USED TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENT, DEBRIS, AND OTHER POLLUTANTS TO STATE WATERS. PERMIT COVERAGE IS AVAILABLE FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH AT <http://health.hawaii.gov/cwb>. THE OWNER/DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING OTHER FEDERAL, STATE OR LOCAL AUTHORIZATIONS AS REQUIRED BY LAW.

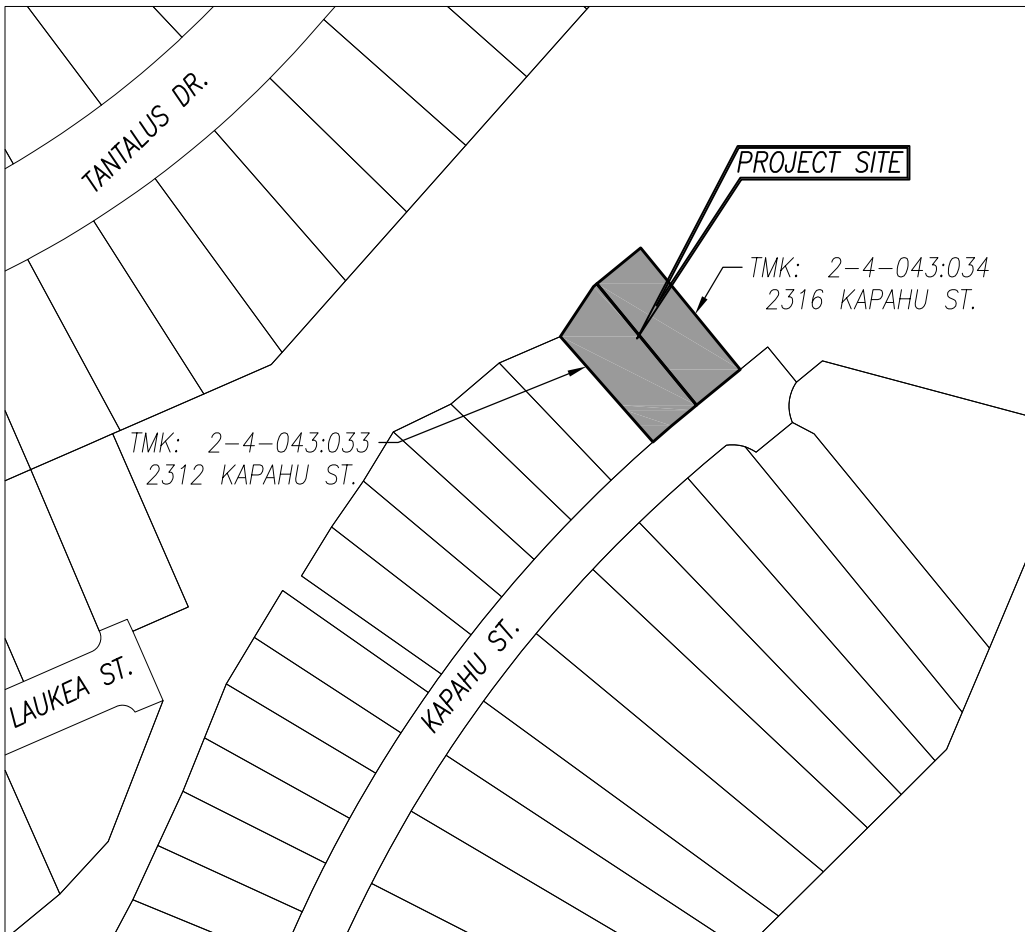
6. FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, D.P.P. AT 768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT TWO (2) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK. FOR CITY PROJECTS, THE CONTRACTOR SHALL COORDINATE INSPECTIONAL SERVICES WITH THE RESPONSIBLE CITY AGENCY.
7. CONFINED SPACE
FOR ENTRY BY CITY PERSONNEL, INCLUDING INSPECTORS, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(b), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING:
- ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
 - FULL BODY HARNESSSES FOR UP TO TWO PERSONNEL.
 - LIFELINE AND ASSOCIATED CLIPS.
 - INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION).
 - CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20-FEET AWAY).
 - PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
 - CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
 - ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).
8. PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT, THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL INFORM THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING (768-8084); AND FOR CITY PROJECTS, NOTIFY THE RESPONSIBLE CITY AGENCY.
9. FOR PROJECTS ABUTTING STATE HIGHWAY'S RIGHTS-OF WAY, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL NOTIFY THE STATE DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, OAHU DISTRICT, DRAINAGE DISCHARGE UNIT AT 631- 6793 FOR AN ASSESSMENT OF STATE HIGHWAYS PERMIT REQUIREMENTS.

PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL NOTES

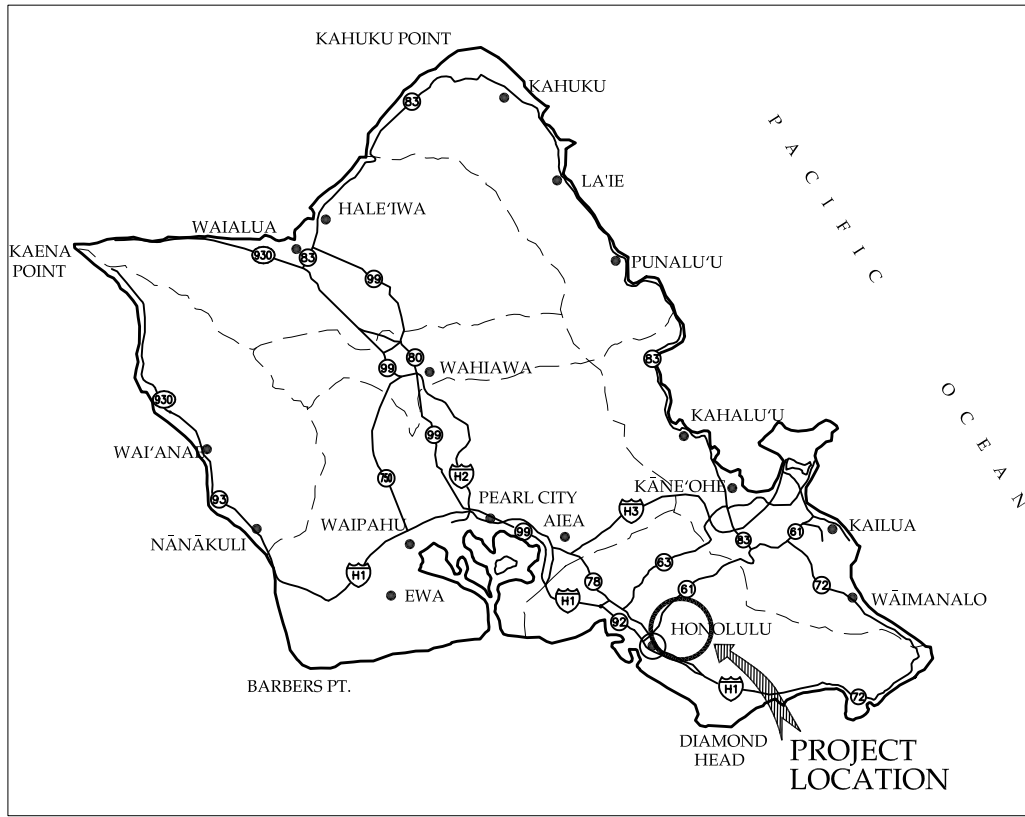
1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
2. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
3. THE CONTRACTOR, AT HIS/HER OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY SHALL REQUIRE SUPPLEMENTARY MEASURES AS REQUIRED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS" AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU 1990, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL" IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT WILL EXCEED THE ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 46 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES. APPLICATION AND INFORMATION ON VARIANCES ARE AVAILABLE AT THE ENVIRONMENTAL HEALTH SERVICES DIVISION, 591 ALA MOANA BOULEVARD, HONOLULU, HAWAII 96813 OR BY TELEPHONE (586-4700).

GRADING NOTES

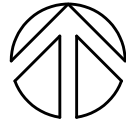
1. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED, AND "GEOTECHNICAL ENGINEERING REPORT, 2312/2316 KAPAHU STREET", DATED APRIL 28, 2021, PREPARED BY HART CROWSER.
2. NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
3. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".
4. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS/HER SEARCH OF AVAILABLE RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
5. ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
6. ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
7. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
8. WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
9. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
10. TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING/BUILDING PERMIT.
11. IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
12. PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT, THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL INFORM THE CIVIL ENGINEERING BRANCH, D.P.P. (768-8084); AND FOR CITY PROJECTS, NOTIFY THE RESPONSIBLE CITY AGENCY.
13. FOR ALL PROJECTS, WHICH WILL DISTURB ONE (1) ACRE OR MORE OF LAND, THE CONTRACTOR SHALL NOT START CONSTRUCTION UNTIL A NOTICE OF GENERAL PERMIT COVERAGE (NGPC) IS RECEIVED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND HAS SATISFIED ANY OTHER APPLICABLE REQUIREMENTS OF THE NPDES PERMIT PROGRAM. ALSO, FOR NON-CITY AND OTHER NON-GOVERNMENTAL AGENCY PROJECTS, THE CONTRACTOR SHALL PROVIDE A WRITTEN COPY OF THE NGPC TO THE PERMITTING AND INSPECTION SECTION, CIVIL ENGINEERING BRANCH, D.P.P., AT LEAST SEVEN (7) CALENDAR DAYS BEFORE THE START OF THE CONSTRUCTION. FOR CITY OR OTHER GOVERNMENTAL PROJECTS, THE CONTRACTOR SHOULD PROVIDE A WRITTEN COPY OF THE NGPC TO THE APPROPRIATE CITY DEPARTMENT OR GOVERNMENTAL AGENCY PER THEIR REQUIREMENTS.
14. ALL GRADING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
15. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECTED TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



APPROVED:

CHAIRMAN, HAWAII HOME COMMISSION
STATE OF HAWAII

DATE

DIRECTOR, DEPARTMENT OF PLANNING AND PERMITTING,
CITY AND COUNTY OF HONOLULU
(FOR CONSTRUCTION WITHIN CITY MAINTAINED ROW ONLY)

DATE

DWG. NO.
001
SHEET 1 OF 13

CONSTRUCTION PLANS FOR

DHHL PAPAKOLEA
2312 AND 2316 KAPAHU ST
STRUCTURE STABILIZATION
(DPP CONSTRUCTION FILE NO. XXXX/XX-XXX)

TMK: 2-4-043:033 & 2-4-043:034

INDEX TO DRAWINGS

DRAWING NO	DESCRIPTION
CIVIL	
001	TITLE SHEET, LOCATION AND VICINITY MAP, NOTES, INDEX TO DRAWINGS
C002	NOTES
C100	EXISTING CONDITIONS AND DEMOLITION PLAN
C200	SITE AND ACCESS PLAN
C300	EROSION CONTROL PLAN AND DETAILS
C400	DETAILS
STRUCTURAL	
S001	STRUCTURAL NOTES
S002	FOUNDATION PLAN
S003	BUILDING SECTION AND DETAILS
S004	LOWER LEVEL PLAN
S005	MAIN LEVEL PLAN
S006	UPPER LEVEL PLAN
S007	MICROPILE DETAIL

REVISION	DATE	BRIEF	MADE BY	APPROVED

DEPARTMENT OF HAWAIIAN HOME LANDS
STATE OF HAWAII
DHHL PAPAKOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION
2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813
TMK: 2-4-043:033, 2-4-043:034
JOB NO.

TITLE SHEET, LOCATION & VICINITY
MAP, NOTES, INDEX TO DRAWINGS

DESIGNED BY: G70 CHECKED BY: RC DRAWN BY: SFT

G70 111 S. KING STREET, SUITE 170
HONOLULU, HAWAII 96813
808.523.3599
WWW.G70DESIGN.HI

2021

FILE	POCKET	FOLDER	NO.
------	--------	--------	-----

EROSION PREVENTION/SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE CITY AND COUNTY OF HONOLULU'S RULES RELATING TO WATER QUALITY."

2. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTHWORK IS INITIATED.

3. SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THAN 15% AND ON AREAS OF MODERATE SLOPE THAT ARE PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES, SLOPE DRAINS) TO DIVERT WATER AROUND SLOPE. PROVIDE A 10-FT BUFFER AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANYTIME ON SLOPES GREATER THAN 15%.

4. TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE.

5. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVERING, PAVEMENT, OR EQUIVALENT, PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES. TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY AND PERMANENTLY STABILIZED.

6. PRESERVE EXISTING VEGETATION CLEARLY MARK THE AREAS TO BE PRESERVED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

7. MINIMIZE SOIL COMPACTION AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOILS TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS THAT HAVE BEEN COMPACTED AND ARE DESIGNATED TO REMAIN VEGETATIVE OR POST-CONSTRUCTION INFILTRATION AREAS. CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

8. PERIMETER CONTROLS ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED BUFFER AREA.

9. SEDIMENT BARRIERS AND FENCES SHALL BE USED DOWN SLOPE OF ALL DISTURBED AREAS. UNTIL SLOPES ARE STABILIZED A SEDIMENT FENCE OR BARRIER SHALL BE INSTALLED AT THE TOE OF THE SLOPE AND ON CONTOURS AT THE FOLLOWING SPACING:

SLOPE > 2:1 10 FEET SPACING
SLOPE > 4:1 AND < 2:1 15 FEET SPACING
SLOPE < 4:1 20 FEET SPACING

10. ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT TRAP. SEDIMENT LEVELS MAY NOT EXCEED ONE-THIRD OF THE HEIGHT OF AN INLET PROTECTION DEVICE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE. SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED. TORN, WEATHERED OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE PREPARED OR REPLACED IMMEDIATELY.

11. MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREET, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE. VEHICLE PARKING AND MOVEMENTS ON PROTECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING. ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING. WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND THE INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.

12. BEST MANAGEMENT PRACTICES (BMPS) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE.

13. REFER TO CITY AND COUNTY OF HONOLULU BEST MANAGEMENT PRACTICES MANUAL – CONSTRUCTION, FOR MORE INFORMATION ON BMPS.

14. A COMPREHENSIVE LIST OF BMPS BASED ON THE DPP RULES RELATING TO WATER QUALITY AND OCH CONSTRUCTION BMP MANUAL WERE REVIEWED TO COMPLETE THE ESCP. AS CONSTRUCTION PROGRESSES, REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.

17. AN ESCP COORDINATOR FOR THE PROJECT MUST BE DESIGNATED TO DPP AT LEAST TWO WEEKS PRIOR TO STARTING WORK.

18. NOTIFY DPP IN WRITING TWO WEEKS PRIOR TO STARTING WORK.

19. WRITTEN APPROVAL FROM DPP IS REQUIRED BEFORE PROCEEDING TO EACH NEXT PHASE OF DEVELOPMENT SHOWN ON THE SITE PLAN.

20. PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.

21. REGULARLY INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROLS TO ENSURE CONTINUED PERFORMANCE.

22. CONTRACTOR SHALL COMPLY WITH THE PROJECT SCHEDULING REQUIREMENTS.

GOOD HOUSEKEEPING BMP:

1. STREET SWEEPING AND VACUUMING: ALL POLLUTANTS DISCHARGED FROM CONSTRUCTION SITE TO OFF-SITE AREAS MUST BE SWEEP OR VACUUMED EACH DAY BEFORE LEAVING THE JOB SITE.

2. MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT: PREVENT, REDUCE, OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM MATERIAL DELIVERY, STORAGE, AND USE TO THE STORM WATER SYSTEM OR WATERCOURSES BY MINIMIZING THE STORAGE OF HAZARDOUS MATERIALS ONSITE, STORING MATERIALS IN A DESIGNATED AREA, INSTALLING SECONDARY CONTAINMENT. CONSTRUCTION MATERIALS, WASTE, TOXIC AND HAZARDOUS SUBSTANCES, STOCKPILES AND OTHER SOURCES OF POLLUTION SHALL NOT BE STORED IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE MS4, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE. PRIMARY AND SECONDARY CONTAINMENT CONTROLS AND COVERS SHALL BE IMPLEMENTED TO THE MEP.

3. SPILL PREVENTION AND CONTROL: CREATE AND IMPLEMENT SPILL PREVENTION AND RESPONSE PLANS TO ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO THE MS4 AND RECEIVING WATERS FROM LEAKS AND SPILLS BY REDUCING THE CHANCE FOR SPILLS, ABSORBING, CONTAINING, AND CLEANING UP SPILLS AND PROPERLY DISPOSING OF SPILL MATERIALS. AT A MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND SPILLS IMMEDIATELY.

4. HAZARDOUS MATERIALS: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE AND WASTE DISPOSAL. IN THE EVENT THAT HAZARDOUS MATERIAL ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF FACILITIES MAINTENANCE, HONOLULU FIRE DEPARTMENT, AND HONOLULU POLICE DEPARTMENT OF THE DISCHARGE BY TELEPHONE. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

5. NONHAZARDOUS MATERIALS: IN THE EVENT THAT NONHAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL NOTIFY THE CITY DEPARTMENT OF FACILITIES MAINTENANCE BY TELEPHONE NO LATER THAN THE NEXT BUSINESS DAY. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

6. VEHICLE AND EQUIPMENT CLEANING: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, WASHING IN DESIGNATED, CONTAINED AREAS ONLY, AND ELIMINATING DISCHARGES TO THE STORM DRAIN SYSTEM BY EVAPORATING AND/OR TREATING WASH WATER, AS APPROPRIATE OR INFILTRATING WASH WATER FOR EXTERIOR CLEANING ACTIVITIES THAT USE WATER ONLY.

7. VEHICLE AND EQUIPMENT FUELING: PREVENT FUEL SPILLS AND LEAKS BY USING OFF-SITE FACILITIES. FUELING ONLY IN DESIGNATED AREAS, ENCLOSING OR COVERING STORED FUEL, AND IMPLEMENTING SPILL CONTROLS SUCH AS SECONDARY CONTAINMENT AND ACTIVE MEASURES USING SPILL RESPONSE KITS.

8. VEHICLE AND EQUIPMENT MAINTENANCE: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT MAINTENANCE OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.

9. SOLID WASTE MANAGEMENT: PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS.

10. SANITARY/SEPTIC WASTE MANAGEMENT: TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE STORED NEAR THE MS4 OR RECEIVING WATERS.

11. STOCKPILE MANAGEMENT: STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE CITY RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCES SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8 FOOT WIDE BENCHING IN ACCORDANCE WITH ROH CHAPTER 14, ARTICLE 15. STOCKPILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL IF THEY WILL NOT BE ACTIVELY USED WITHIN 7 DAYS.

12. LIQUID WASTE MANAGEMENT: LIQUID WASTE SHALL BE CONTAINED IN A CONTROLLED AREA SUCH AS A HOLDING PIT, SEDIMENT BASIN, ROLL-OFF BIN, OR PORTABLE TANK OF SUFFICIENT VOLUME AND TO CONTAIN THE LIQUID WASTES GENERATED. CONTAINMENT AREAS OR DEVICES MUST BE IMPERMEABLE AND LEAK FREE AND SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS.

13. CONCRETE WASTE MANAGEMENT: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN BE DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTE.

14. CONTAMINATED SOIL MANAGEMENT: AT MINIMUM CONTAIN CONTAMINATED MATERIAL SOIL BY SURROUNDING WITH IMPERMEABLE LINED BERM OR COVER EXPOSED CONTAMINATED MATERIAL WITH PLASTIC SHEETING. CONTAMINATED SOIL SHOULD BE DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

15. INSPECT BMPS AND SITE WEEKLY: MAINTAIN BMPS AND SITE AS REQUIRED TO ENSURE CONTINUED PERFORMANCE

16. DUST CONTROL: WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS CONTAINED IN THE "HAWAII ADMINISTRATIVE RULES" TITLE 11, CHAPTER 60.1 "AIR QUALITY CONTROL." THE STOCKPILE OR PROJECT SITE THAT IS CLEARED OF VEGETATION SHALL BE KEPT DAMP WITH WATER CONTINUOUSLY FOR SEVEN (7) DAYS A WEEK. AT THE END OF EACH DAY, THE SITE SHALL BE SUFFICIENTLY DAMPENED WITH WATER ON A CONTINUAL BASIS SO THAT THE SITE WILL REMAIN MOISTENED DURING THE NIGHT. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO THAT EXCAVATION, EMBANKMENT, AND IMPORTED MATERIAL SHALL BE DAMPENED WITH WATER ON A CONTINUAL BASIS TO PREVENT DUST PROBLEMS. IN APPLYING FOR A STOCKPILE PERMIT, THE CONTRACTOR SHALL SUBMIT PLANS, SCHEDULES AND/OR WRITTEN MEASURES WHICH PROVIDES FOR DUST CONTROL. THE DUST CONTROL MEASURES SHALL CONTAIN POSITIVE STATEMENTS WHICH REQUIRE ACTIONS OR WORK THAT PREVENT DUST PROBLEMS. NO PERMITS WILL BE ISSUED UNLESS THE COUNTY IS ASSURED THAT DUST AND EROSION PROBLEMS WILL BE MINIMIZED.

17. TRACKING CONTROL: MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE. VEHICULAR PARKING AND MOVEMENTS ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING. ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING. WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND THE INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.

18. A STABILIZED CONSTRUCTION ENTRANCE AND EXIT SHALL BE PROVIDED BASED ON EROSION AND SEDIMENT CONTROL PLAN DETAILS, AND SHALL BE REGULARLY INSPECTED/MAINTAINED TO ENSURE CONTINUED PERFORMANCE.

19. DEWATERING NON-STORM WATER CANNOT BE DISCHARGED FROM THE SITE WITHOUT PRIOR NOTICE AND APPROVAL FROM THE DPP AND DEPARTMENT OF HEALTH. DEWATERING DISCHARGES SHALL BE KEPT ONSITE USING A SEDIMENT BASIN, SEDIMENT TRAP, WEIR TANK, DEWATERING TANK, FILTRATION SYSTEM OR OTHER MANUFACTURED SYSTEM.

EROSION AND SEDIMENT CONTROL PLAN SCHEDULE:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES, PERIMETER CONTROLS, INLET PROTECTION, AND TEMPORARY FENCING FOR PROTECTED AREAS. CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THESE BMP.

2. PROCEED WITH CONSTRUCTION WITH LEAST POSSIBLE DISTURBANCE OF VEGETATIVE AREAS AND TEMPORARY STRUCTURES.

3. REMOVE OR DISMANTLE TEMPORARY EROSION CONTROL STRUCTURES AFTER FULL ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

4. PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.

5. PROJECT IS CLASSIFIED AS CATEGORY 1B.

6. INSPECTIONS WILL BE PERFORMED ONCE EVERY 30 DAYS. IF THE PROJECT WILL BE COMPLETED IN LESS THAN 30 DAYS, INSPECTION SHALL OCCUR MIDWAY THROUGH THE PROJECT.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN HEAVY RAINS, TROPICAL STORM OR HURRICANE IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:

1. TEMPORARY SUSPENSION OF ACTIVE GRADING, GRUBBING AND TRENCHING.

2. INSPECT ALL SEDIMENT BASINS, PERIMETER CONTROLS, AND INLET PROTECTION DEVICES, AND MAINTAIN AS NEEDED. REINSTALL ANY PERIMETER CONTROLS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AREA. IF SEVERE STORM IS EXPECTED, REMOVE INLET PROTECTION DEVICES TO PREVENT FLOODING ON SURROUNDING STREETS.

3. COVER OR RELOCATE MATERIAL STOCKPILES AND LIQUID MATERIAL CONTAINERS TO AVOID CONTACT WITH RAINWATER.

4. PLACE SPILL PANS OR OIL-ONLY SPILL PADS UNDER CONSTRUCTION VEHICLES TO PREVENT RUNOFF FROM CONTACTING ANY SPILLED PETROLEUM PRODUCTS. PROPERLY DISPOSE OF ANY ACCUMULATED OILY WATER AFTER THE RAIN EVENT.

5. RE-INSPECT AFTER THE APPROACHING HEAVY RAINS, TROPICAL STORM OR HURRICANE AND REPLACE OR MAINTAIN BMPS AS NEEDED.

HISTORIC PRESERVATION

1. SHOULD HISTORIC REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATIONS OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE PLANNING DEPARTMENT, THE STATE HISTORIC PRESERVATION DIVISION AT (808) 742-7033, WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND THE APPROPRIATE MITIGATION MEASURES, IF NECESSARY.

ENVIRONMENTAL PROTECTION NOTES

1. IN ACCORDANCE WITH CHAPTER 11-60.1, AIR POLLUTION CONTROL, TITLE 11, STATE ADMINISTRATIVE RULES, CONTRACTOR/ DHHL SHALL BE RESPONSIBLE FOR ENSURING THAT EFFECTIVE CONTROL MEASURES ARE PROVIDED TO MINIMIZE OR PREVENT ANY VISIBLE DUST EMISSION CAUSED BY THE CONSTRUCTION WORK FROM IMPACTING THE SURROUNDING AREAS INCLUDING THE OFF-SITE ROADWAYS USED TO ENTER/EXIT THE PROJECT. MEASURES INCLUDE BUT ARE NOT LIMITED TO THE USE OF WATER WAGONS, SPRINKLER SYSTEMS, DUST FENCES, ETC.

2. IN ACCORDANCE WITH CHAPTER 11-55, WATER POLLUTION CONTROL AND CHAPTER 11-54, WATER QUALITY STANDARDS, TITLE 11, STATE ADMINISTRATIVE RULES, THE CONTRACTOR/ DHHL SHALL BE RESPONSIBLE FOR ENSURING THAT THE BEST MANAGEMENT PRACTICE (BMP) TO MINIMIZE OR PREVENT THE DISCHARGE SEDIMENTS, DEBRIS, AND OTHER WATER POLLUTANT INTO STATE WATERS IS PROVIDED AT ALL TIMES.

3. IN ACCORDANCE WITH CHAPTER 11-58.1, SOLID WASTE MANAGEMENT CONTROL, TITLE 11, STATE ADMINISTRATIVE RULES, THE CONTRACTOR/ DHHL SHALL BE RESPONSIBLE FOR ENSURING THAT CRUB MATERIAL, DEMOLITION WASTES, AND CONSTRUCTION WASTES GENERATED BY THE PROJECT ARE DISPOSED OF IN A MANNER OR AT A SITE APPROVED BY THE STATE DEPARTMENT OF HEALTH. DISPOSAL OF ANY OF THESE WASTES BY BURNING IS PROHIBITED. THE CONTRACTOR SHALL INFORM THE COUNTY ENGINEER AS TO THE LOCATION OF THE DISPOSAL SITE(S). THE DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL ORDINANCE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS FROM THE DEPARTMENT OF HEALTH INCLUDING BUT NOT LIMITED TO NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS FOR STORM WATER, HYDROSTATIC TEST AND DEWATERING DISCHARGES PRIOR TO COMMENCING CONSTRUCTION.

5. IN ACCORDANCE WITH CHAPTER 11-46, COMMUNITY NOISE CONTROL, STATE ADMINISTRATIVE RULES, THE CONTRACTOR/ DHHL SHALL BE RESPONSIBLE FOR PROVIDING EFFECTIVE CONTROL MEASURES TO MINIMIZE OR PREVENT CONSTRUCTION RELATED NOISE FROM IMPACTING THE RESIDENTS IN THE IMMEDIATE AREA. IF REQUIRED, NOISE REDUCTION MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING THE CONSTRUCTION WORK.

6. BEST MANAGEMENT PRACTICES (BMP) SHALL BE EMPLOYED AT ALL TIMES TO THE MAXIMUM EXTENT PRACTICABLE TO PREVENT DAMAGE BY SEDIMENTATION, EROSION OR DUST TO STREAMS, WATER COURSES, NATURAL AREAS AND THE PROPERTY OF OTHERS.

7. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM THIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS IMMEDIATELY AFTER EACH RAINFALL EVENT. THE COST INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE COUNTY ENGINEER SHALL BY PAYABLE BY THE CONTRACTOR.



REVISION	DATE	BRIEF	MADE BY/APPROVED

DEPARTMENT OF HAWAIIAN HOME LANDS

STATE OF HAWAII

DHHL PAPAIOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION

2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813

TMK: 2-4-043:033, 2-4-043:034

JOB NO.

NOTES

DESIGNED BY:	G70	CHECKED BY:	RC	DRAWN BY:	SFT
--------------	-----	-------------	----	-----------	-----

G70

111 S. KING STREET, SUITE 170
HONOLULU, HAWAII 96813
(808) 521-3599
WWW.G70DESIGN

2021

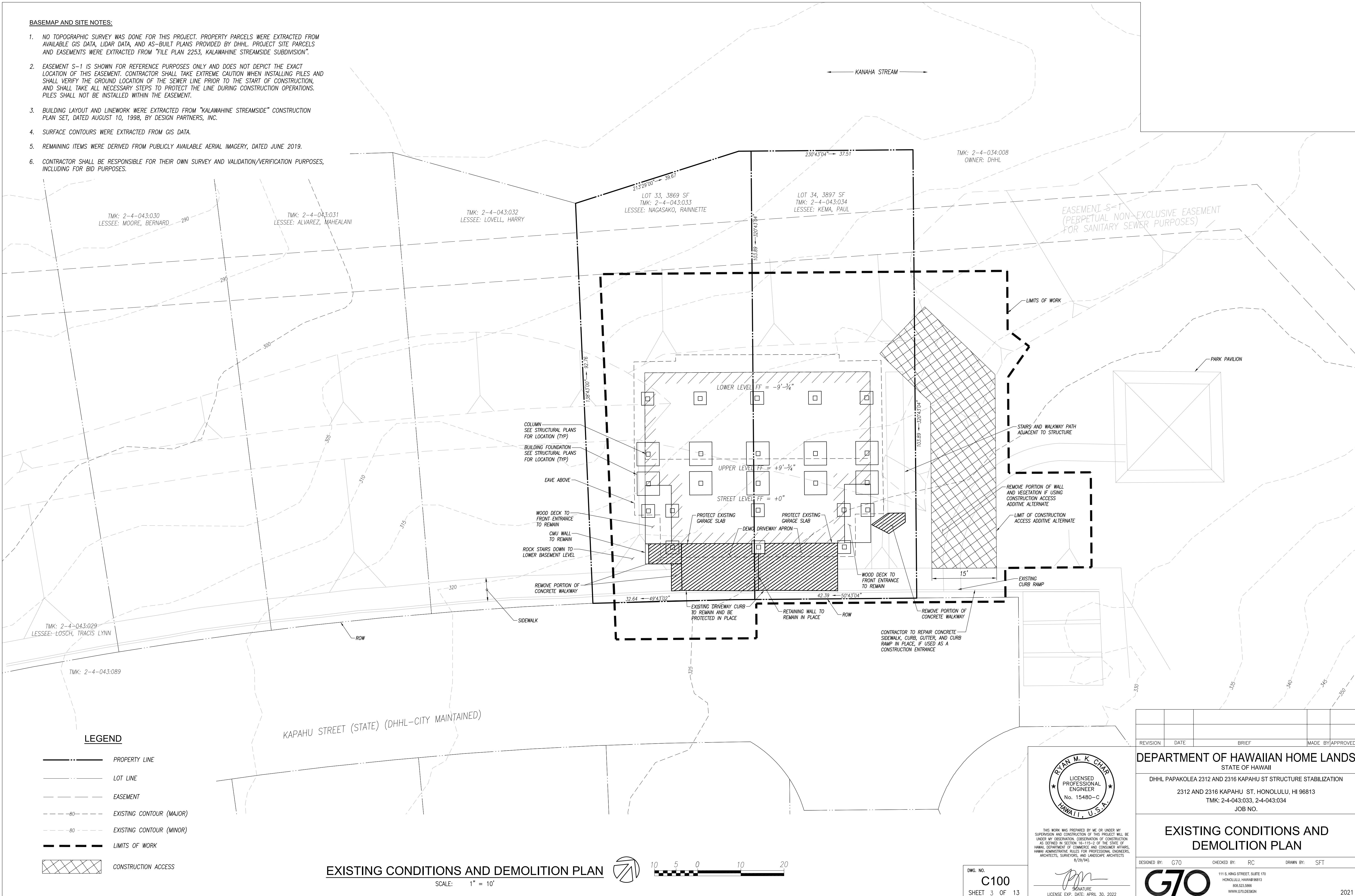
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 6/29/194.


SIGNATURE
LICENSE EXP. DATE: APRIL 30, 2022

DWG. NO.
C002
SHEET 2 OF 13

BASEMAP AND SITE NOTES:

- NO TOPOGRAPHIC SURVEY WAS DONE FOR THIS PROJECT. PROPERTY PARCELS WERE EXTRACTED FROM AVAILABLE GIS DATA, LIDAR DATA, AND AS-BUILT PLANS PROVIDED BY DHHL. PROJECT SITE PARCELS AND EASEMENTS WERE EXTRACTED FROM "FILE PLAN 2253, KALAWAHINE STREAMSIDE SUBDIVISION".
- EASEMENT S-1 IS SHOWN FOR REFERENCE PURPOSES ONLY AND DOES NOT DEPICT THE EXACT LOCATION OF THIS EASEMENT. CONTRACTOR SHALL TAKE EXTREME CAUTION WHEN INSTALLING PILES AND SHALL VERIFY THE GROUND LOCATION OF THE SEWER LINE PRIOR TO THE START OF CONSTRUCTION, AND SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE LINE DURING CONSTRUCTION OPERATIONS. PILES SHALL NOT BE INSTALLED WITHIN THE EASEMENT.
- BUILDING LAYOUT AND LINEWORK WERE EXTRACTED FROM "KALAWAHINE STREAMSIDE" CONSTRUCTION PLAN SET, DATED AUGUST 10, 1998, BY DESIGN PARTNERS, INC.
- SURFACE CONTOURS WERE EXTRACTED FROM GIS DATA.
- REMAINING ITEMS WERE DERIVED FROM PUBLICLY AVAILABLE AERIAL IMAGERY, DATED JUNE 2019.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN SURVEY AND VALIDATION/VERIFICATION PURPOSES, INCLUDING FOR BID PURPOSES.

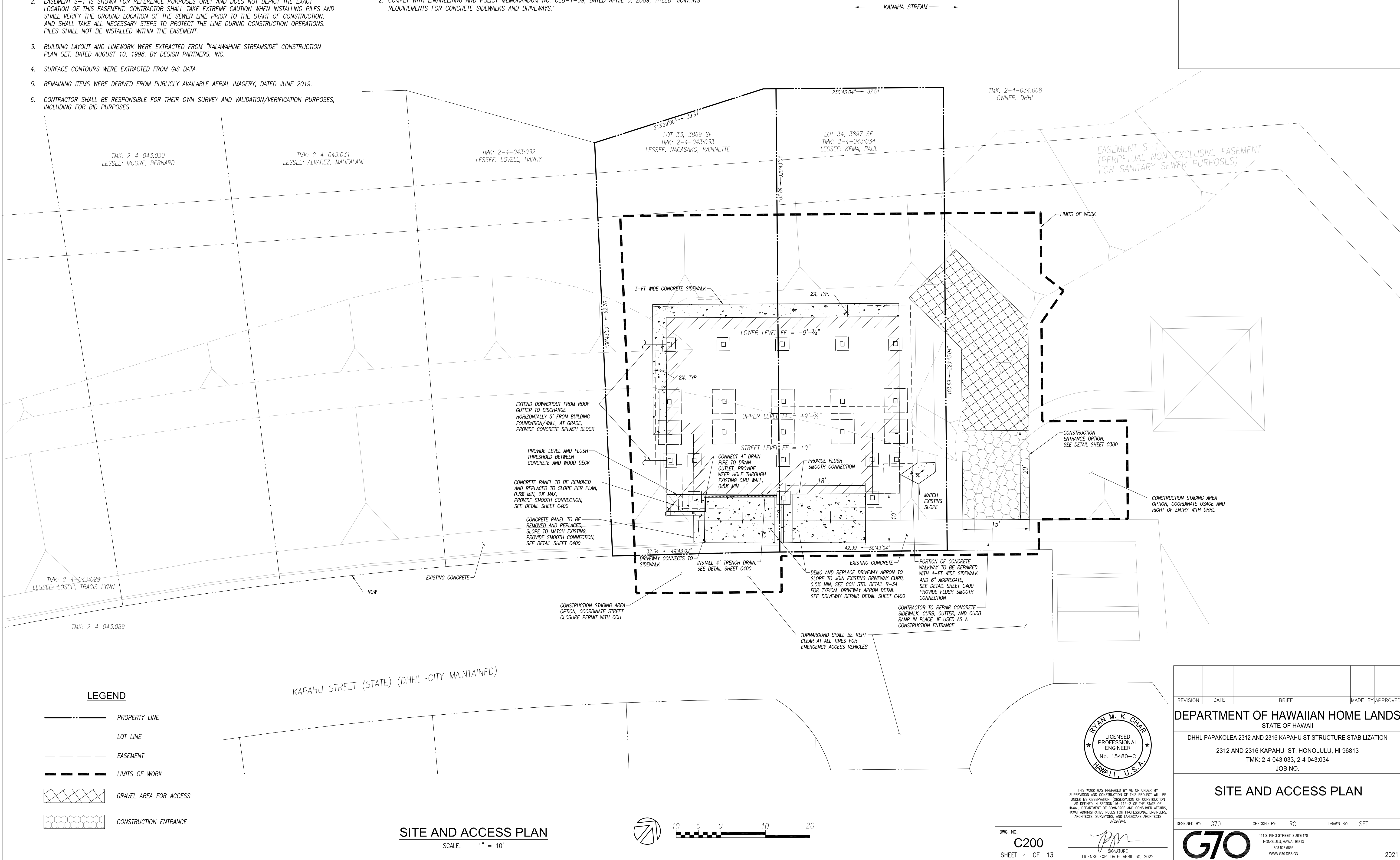


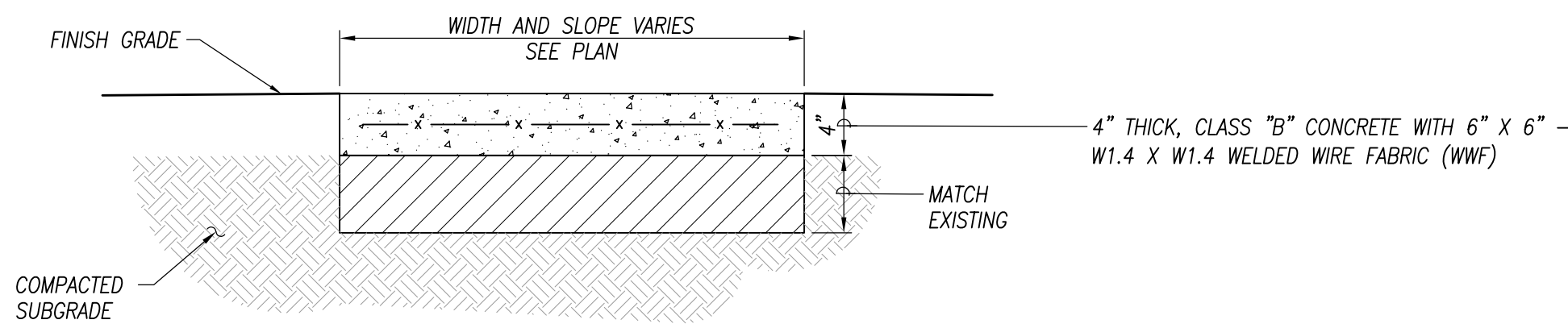
BASEMAP AND SITE NOTES:

- NO TOPOGRAPHIC SURVEY WAS DONE FOR THIS PROJECT. PROPERTY PARCELS WERE EXTRACTED FROM AVAILABLE GIS DATA, LIDAR DATA, AND AS-BUILT PLANS PROVIDED BY DHHL. PROJECT SITE PARCELS AND EASEMENTS WERE EXTRACTED FROM "FILE PLAN 2253, KALAWAHINE STREAMSIDE SUBDIVISION".
- EASEMENT S-1 IS SHOWN FOR REFERENCE PURPOSES ONLY AND DOES NOT DEPICT THE EXACT LOCATION OF THIS EASEMENT. CONTRACTOR SHALL TAKE EXTREME CAUTION WHEN INSTALLING PILES AND SHALL VERIFY THE GROUND LOCATION OF THE SEWER LINE PRIOR TO THE START OF CONSTRUCTION, AND SHALL TAKE ALL NECESSARY STEPS TO PROTECT THE LINE DURING CONSTRUCTION OPERATIONS. PILES SHALL NOT BE INSTALLED WITHIN THE EASEMENT.
- BUILDING LAYOUT AND LINEWORK WERE EXTRACTED FROM "KALAWAHINE STREAMSIDE" CONSTRUCTION PLAN SET, DATED AUGUST 10, 1998, BY DESIGN PARTNERS, INC.
- SURFACE CONTOURS WERE EXTRACTED FROM GIS DATA.
- REMAINING ITEMS WERE DERIVED FROM PUBLICLY AVAILABLE AERIAL IMAGERY, DATED JUNE 2019.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN SURVEY AND VALIDATION/VERIFICATION PURPOSES, INCLUDING FOR BID PURPOSES.

CONCRETE JOINT NOTES:

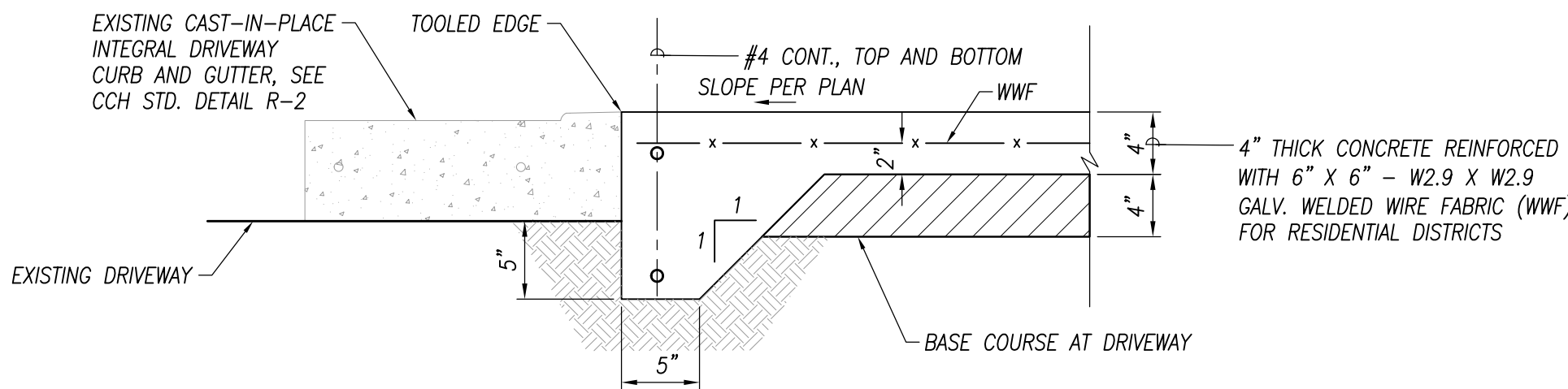
- UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
- COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."





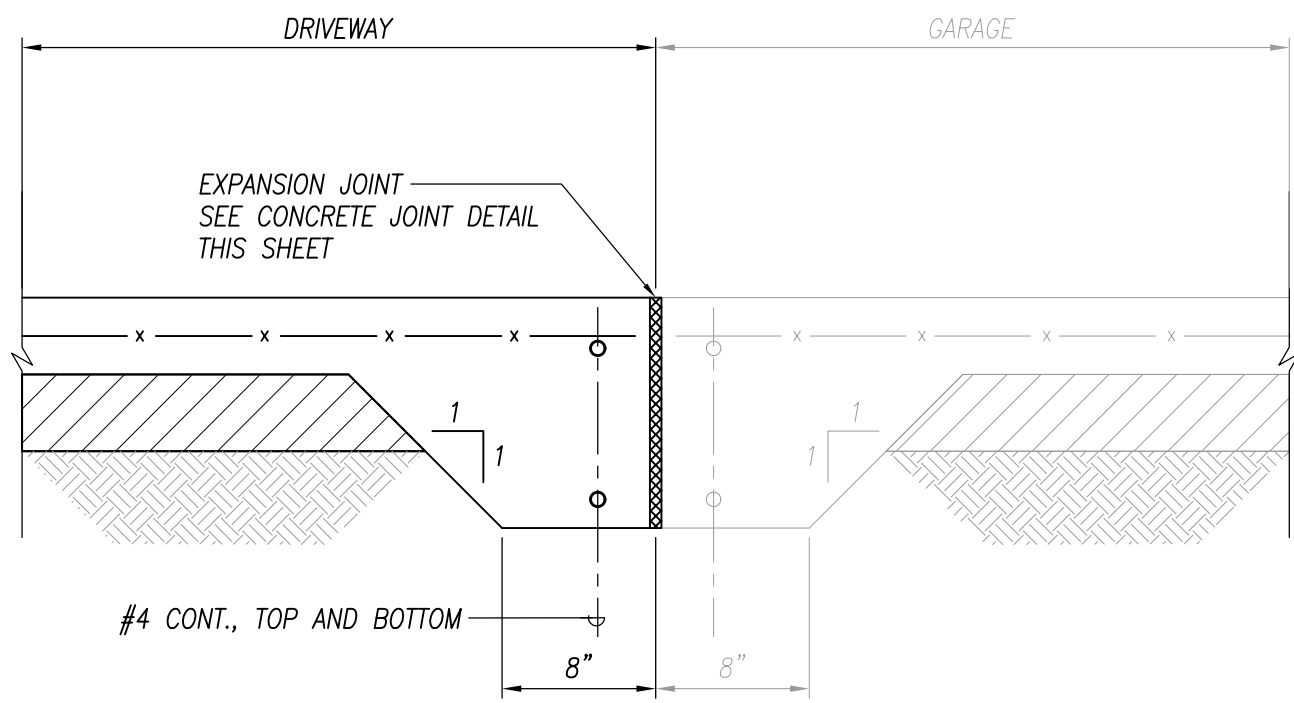
1. REFER TO CONCRETE WALKWAY CONNECTION WITH DOWELS DETAIL THIS SHEET.
2. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
3. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

WALKWAY DETAIL AT 2312 KAPAHU STREET
NOT TO SCALE



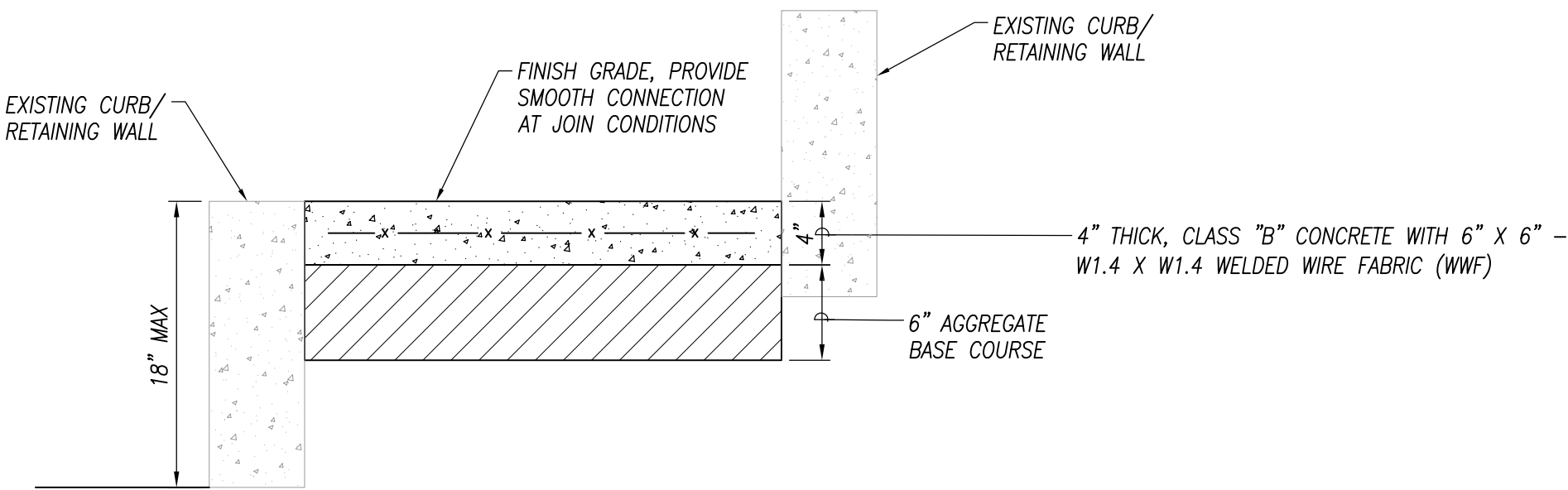
1. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
2. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

DRIVEWAY REPAIR DETAIL
NOT TO SCALE



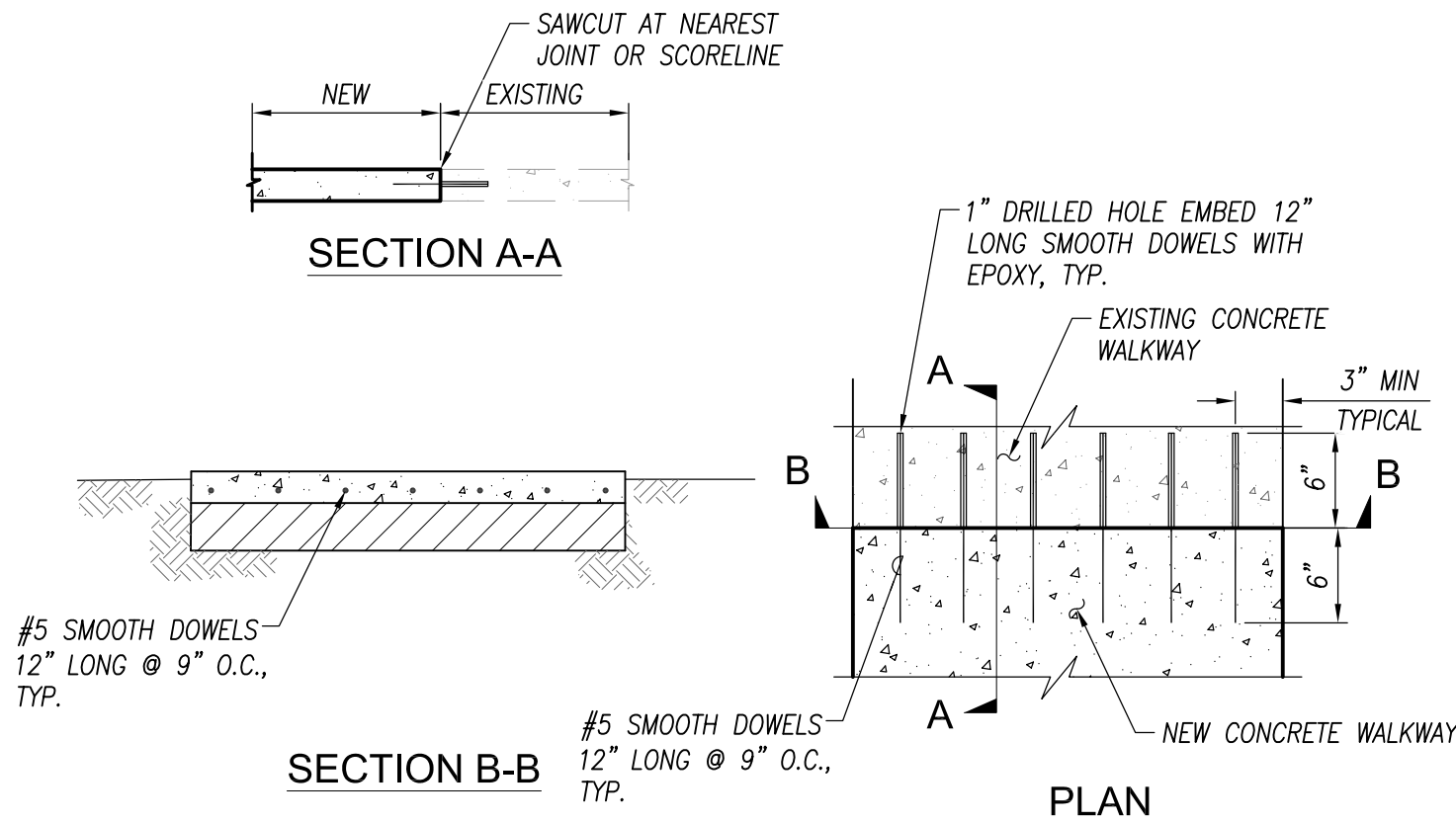
1. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
2. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

DRIVEWAY REPAIR AT GARAGE ENTRY
NOT TO SCALE



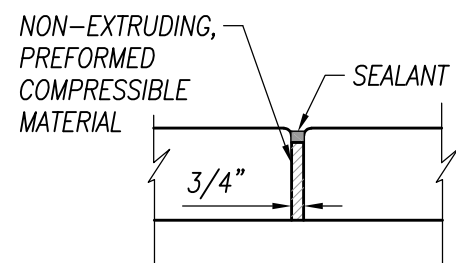
1. REFER TO CONCRETE WALKWAY CONNECTION WITH DOWELS DETAIL THIS SHEET.
2. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
3. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

WALKWAY REPAIR DETAIL AT 2316 KAPAHU STREET
NOT TO SCALE



1. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
2. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."
3. REINFORCING STEEL SHALL BE PURSUANT TO "SECTION 48-REINFORCING STEEL" OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU. SEE ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-93, DATED APRIL 14, 1993, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

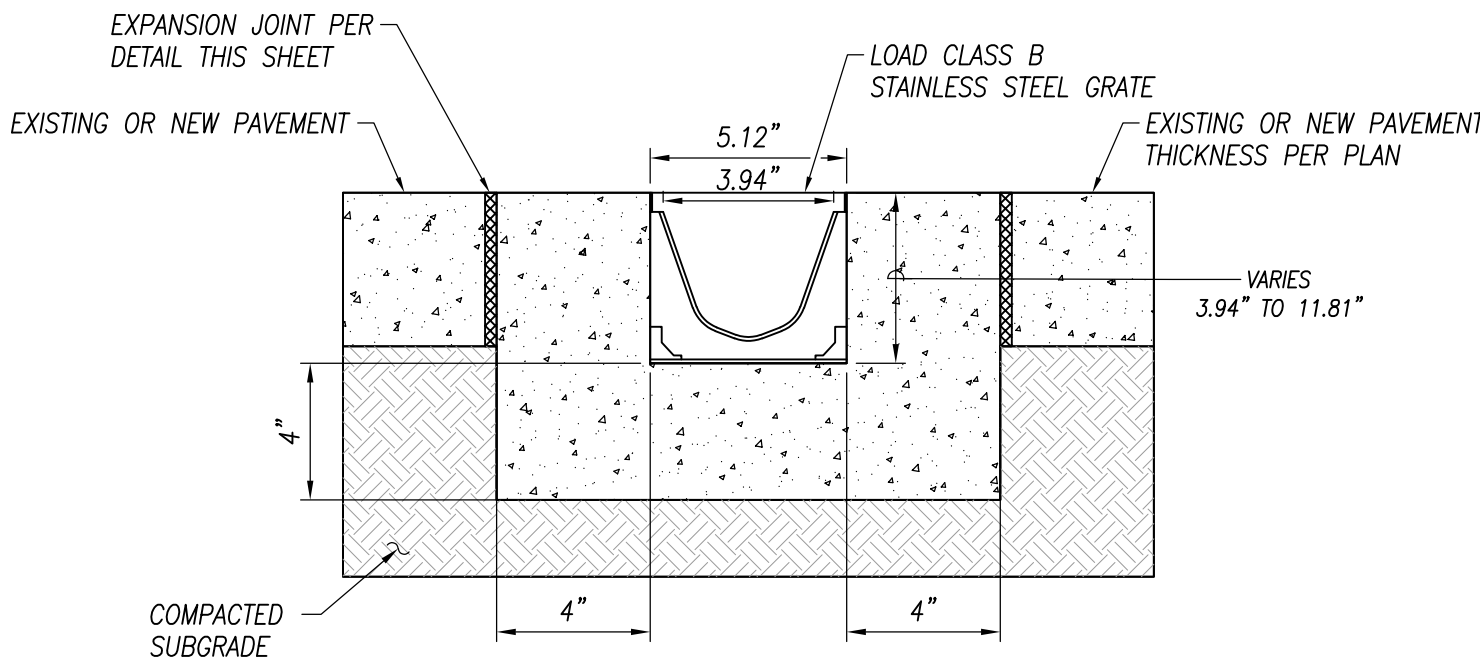
CONCRETE WALKWAY CONNECTION WITH DOWELS
NOT TO SCALE



TYPE D - EXPANSION JOINT

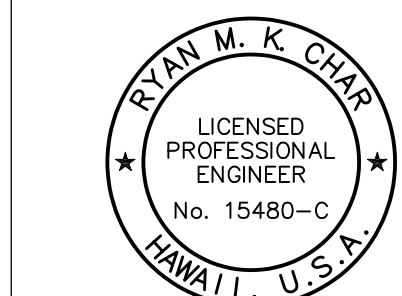
1. TYPE D - EXPANSION JOINTS SHALL BE USED AT INTERSECTIONS, DRAINAGE STRUCTURES, BUILDINGS, AND OTHER STRUCTURES. THE JOINTS SHALL BE CONSTRUCTED WITH 3/4" THICK PRE-MOLDED EXPANSION-TYPE FILLER, EXTENDING FROM THE BOTTOM OF PAVEMENT TO APPROXIMATELY 1/2" BELOW THE TOP OF PAVEMENT, THEN FILLED WITH JOINT SEALER.
2. UNLESS SPECIFIED OTHERWISE, ALL CONSTRUCTION SHALL BE PURSUANT TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS REVISED BY THE CITY AND COUNTY OF HONOLULU.
3. COMPLY WITH ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09, DATED APRIL 6, 2009, TITLED "JOINTING REQUIREMENTS FOR CONCRETE SIDEWALKS AND DRIVEWAYS."

CONCRETE EXPANSION JOINT
NOT TO SCALE



1. INSTALL PER K100 - KLASSIKDRAIN - LOAD CLASS B INSTALLATION DETAILS PER THE MANUFACTURER.

4" TRENCH DRAIN KLASSIKDRAIN K100 DETAIL
NOT TO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/1941.

[Signature]
SIGNATURE
LICENSE EXP. DATE: APRIL 30, 2022

DWG. NO.
C400
SHEET 6 OF 13

REVISION	DATE	BRIEF	MADE BY	APPROVED

DEPARTMENT OF HAWAIIAN HOME LANDS
STATE OF HAWAII
DHHL PAKAKOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION
2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813
TMK: 2-4-043:033, 2-4-043:034
JOB NO.

DETAILS

DESIGNED BY: G70 CHECKED BY: RC DRAWN BY: SFT

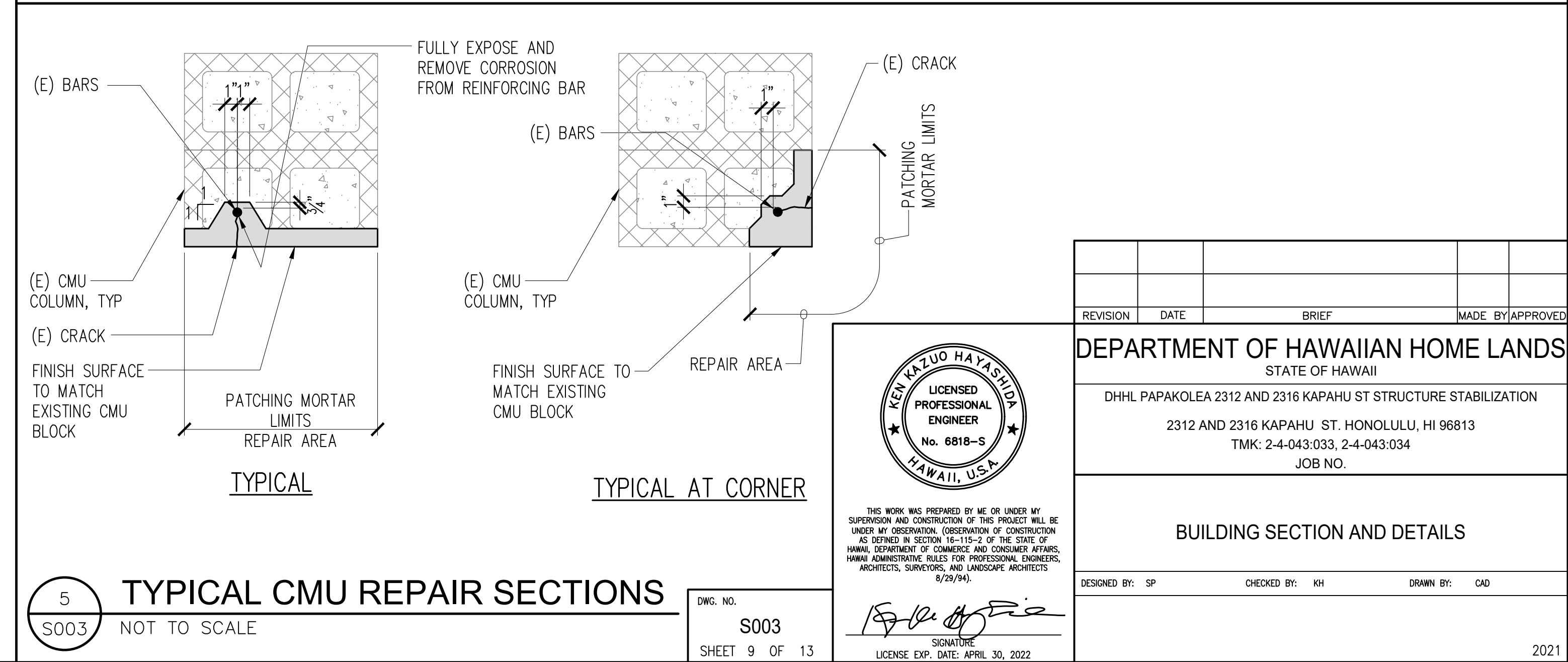
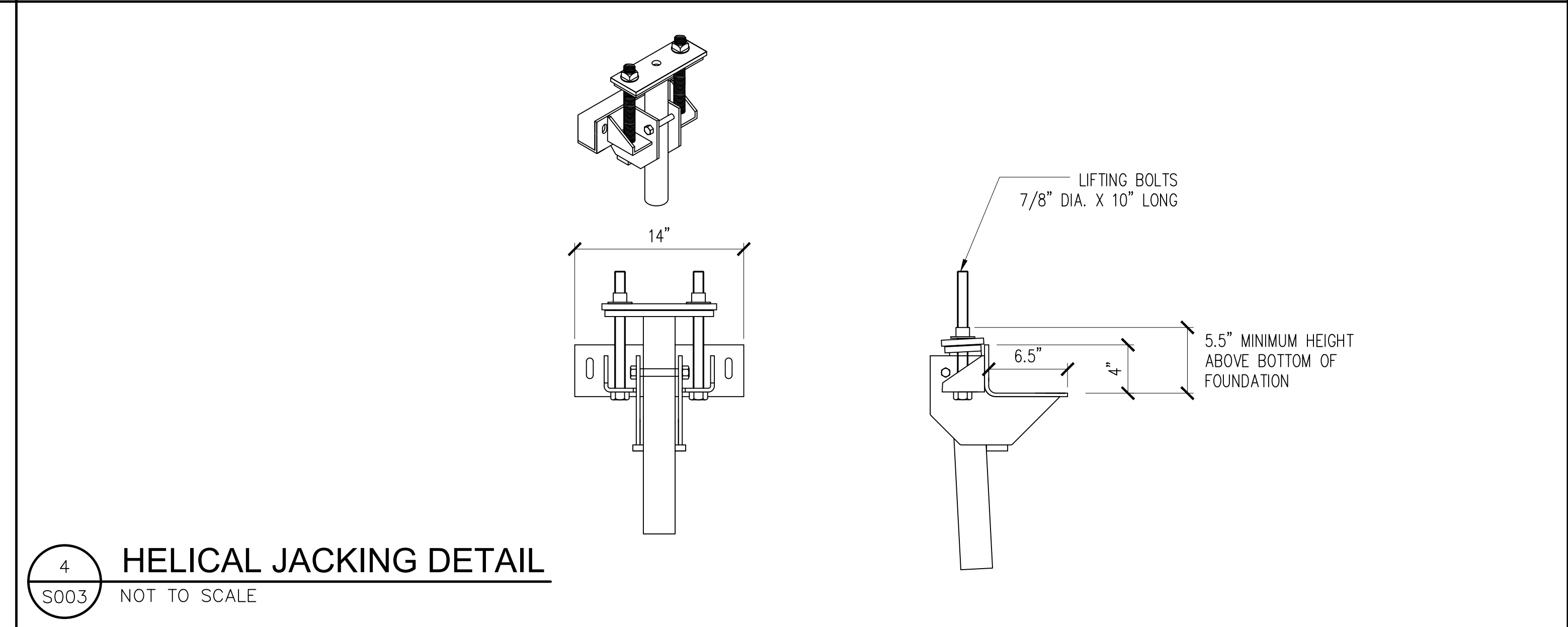
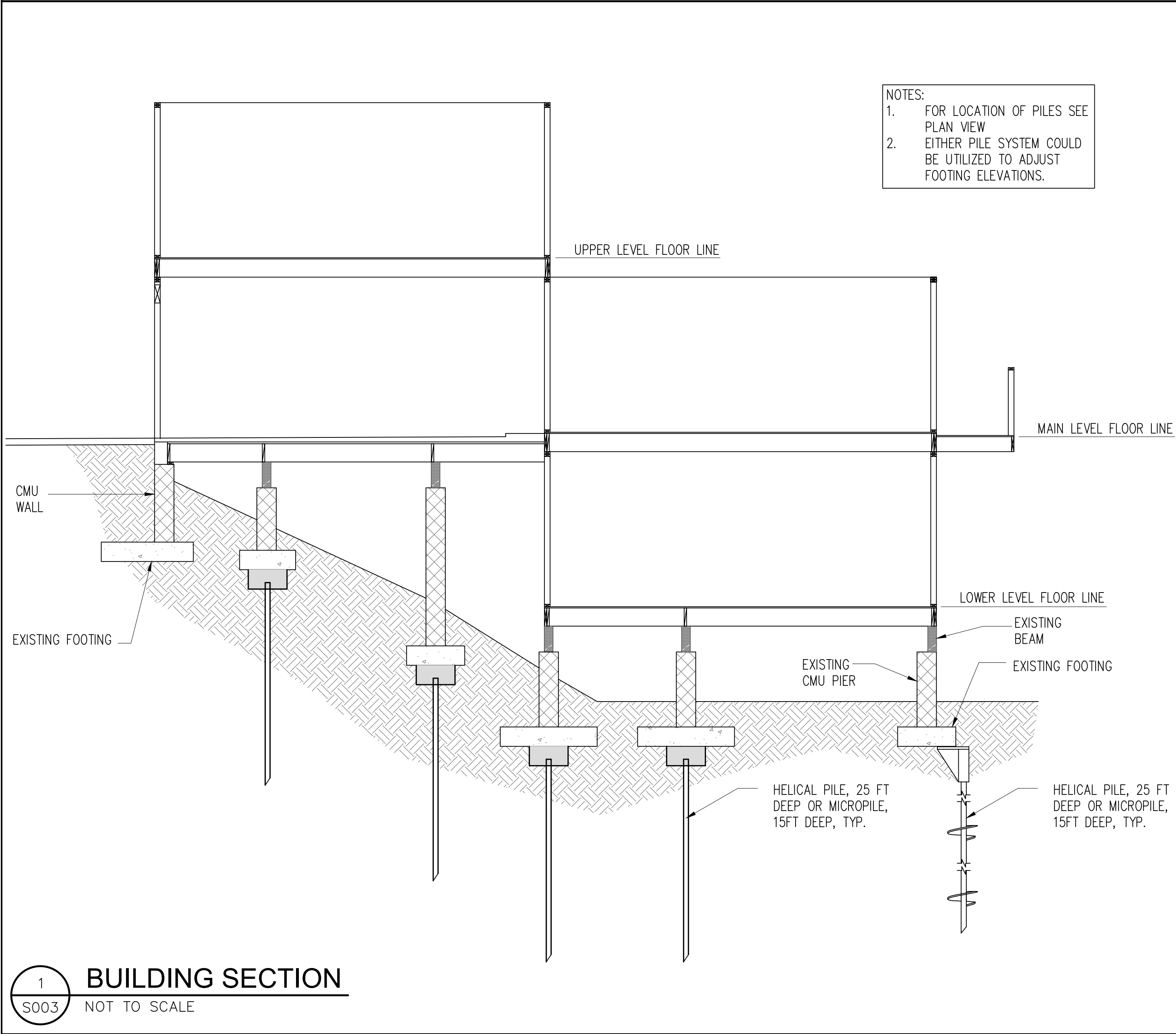
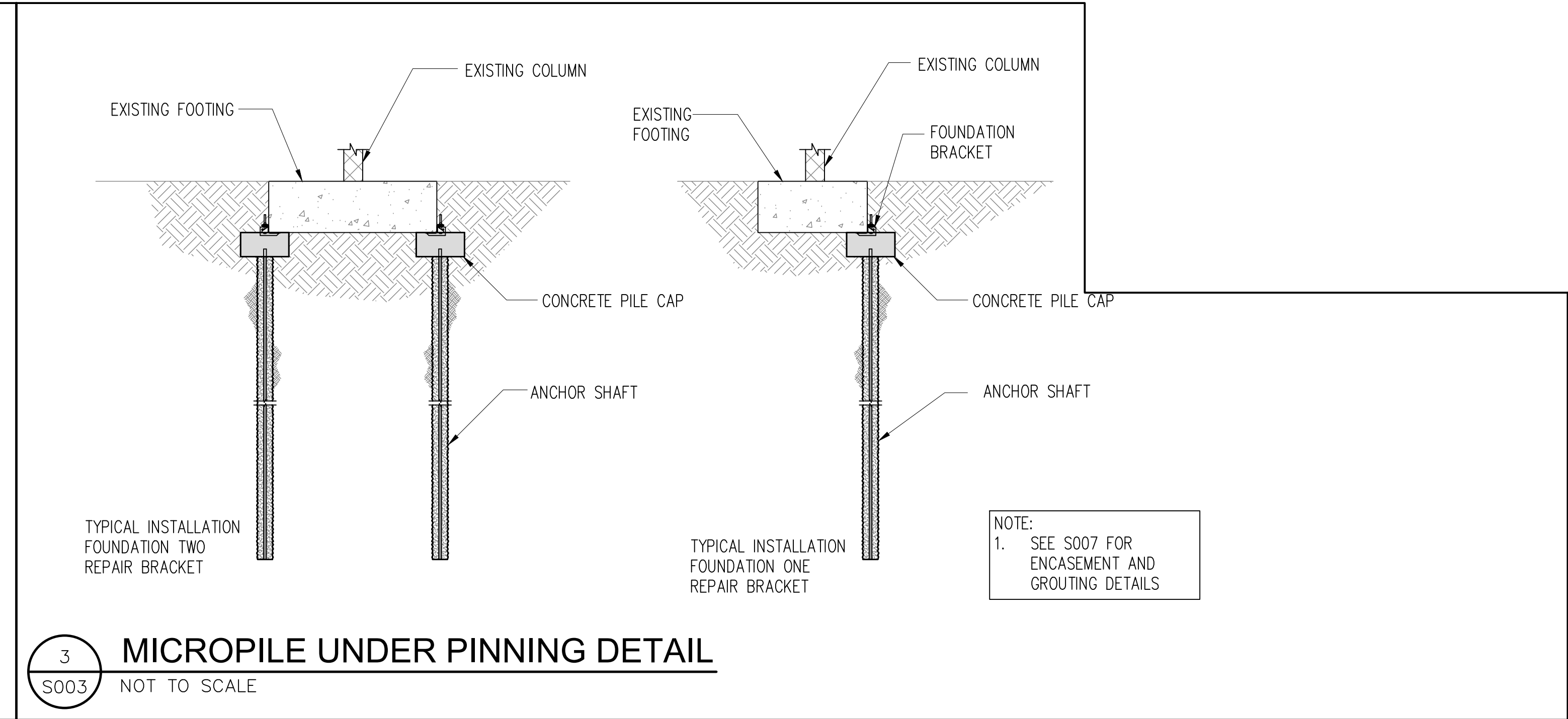
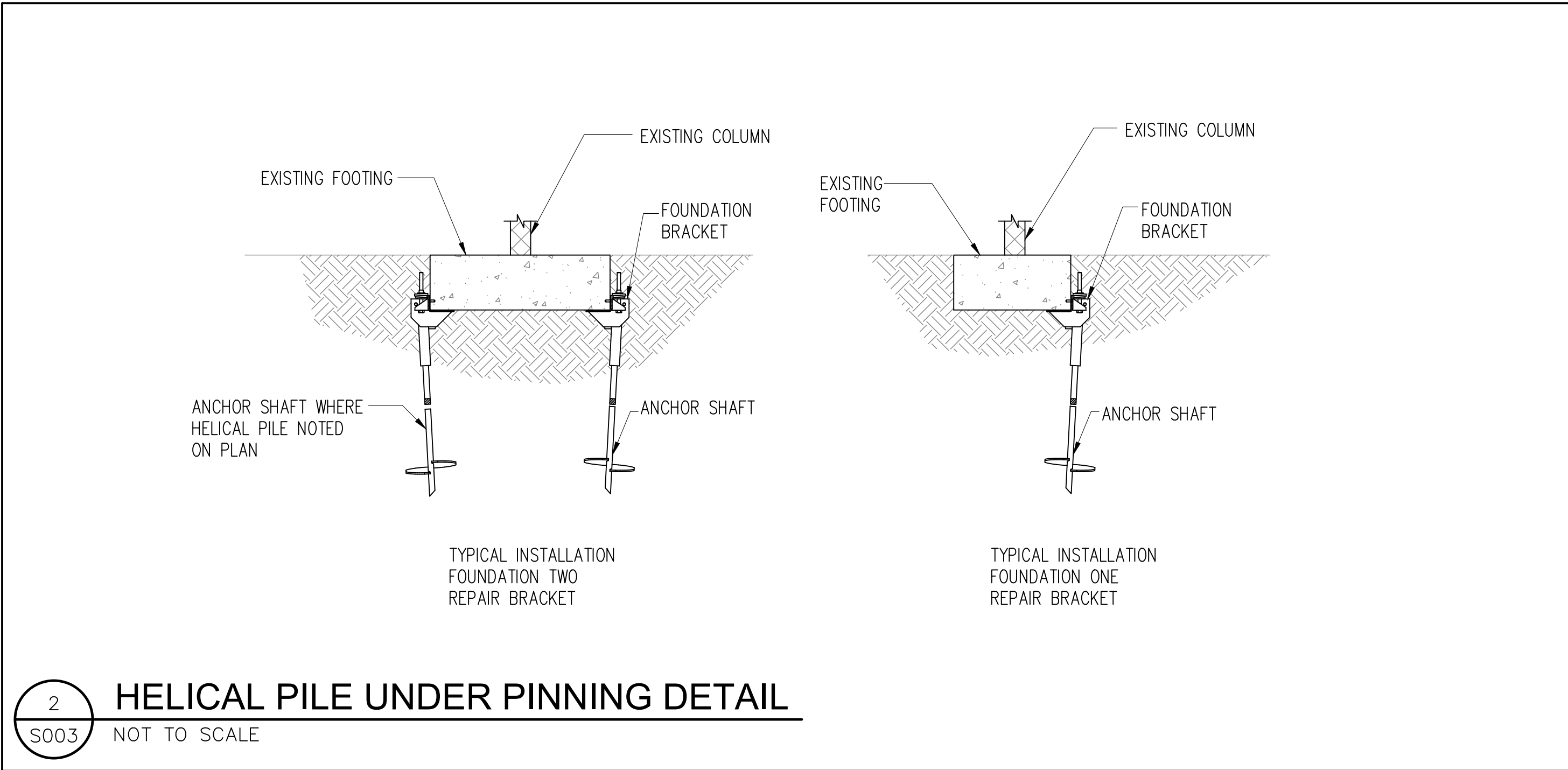
G70
111 S. KING STREET, SUITE 170
HONOLULU, HAWAII 96813
808.523.5555
WWW.G70DESIGN.HI

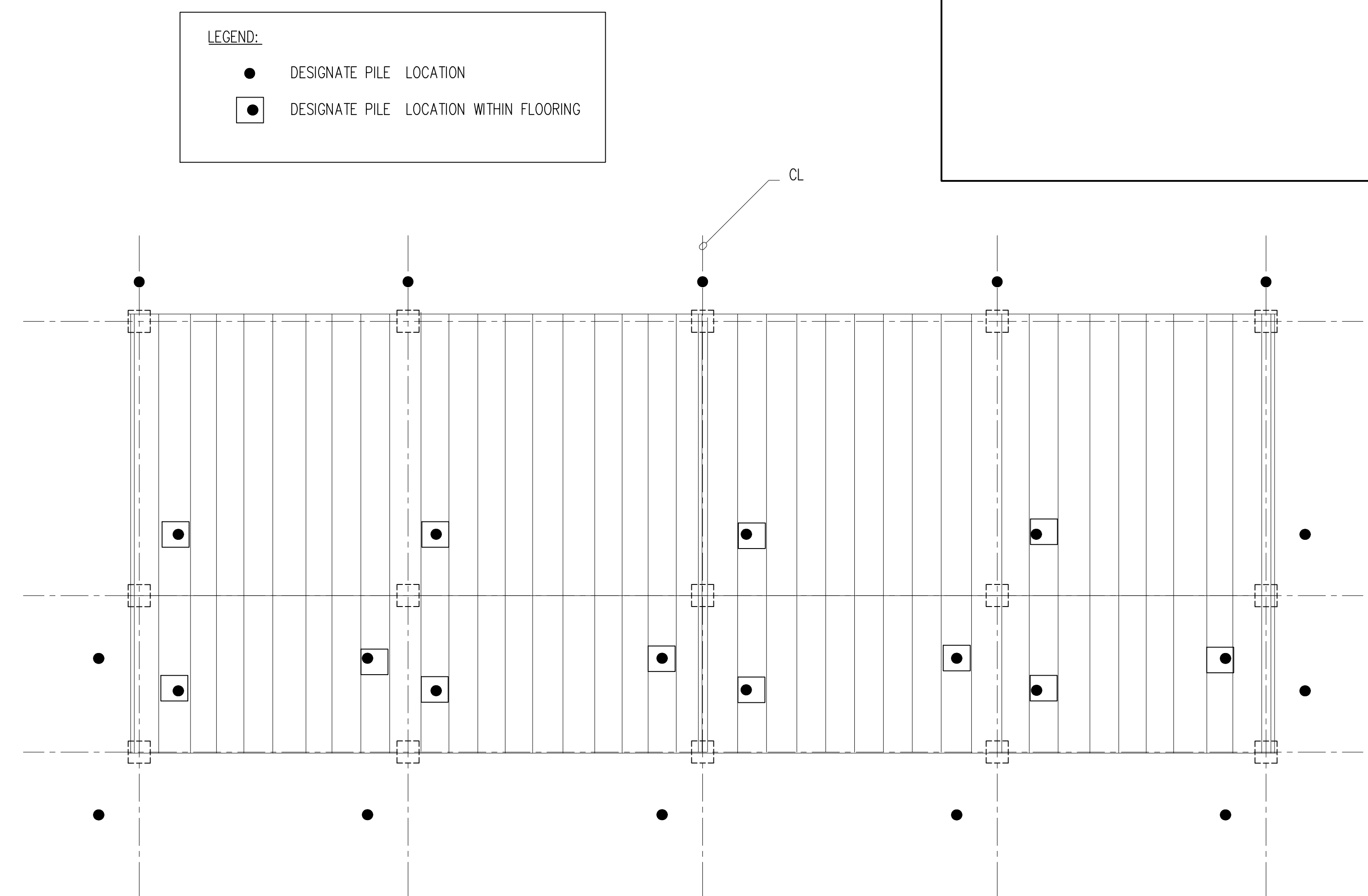
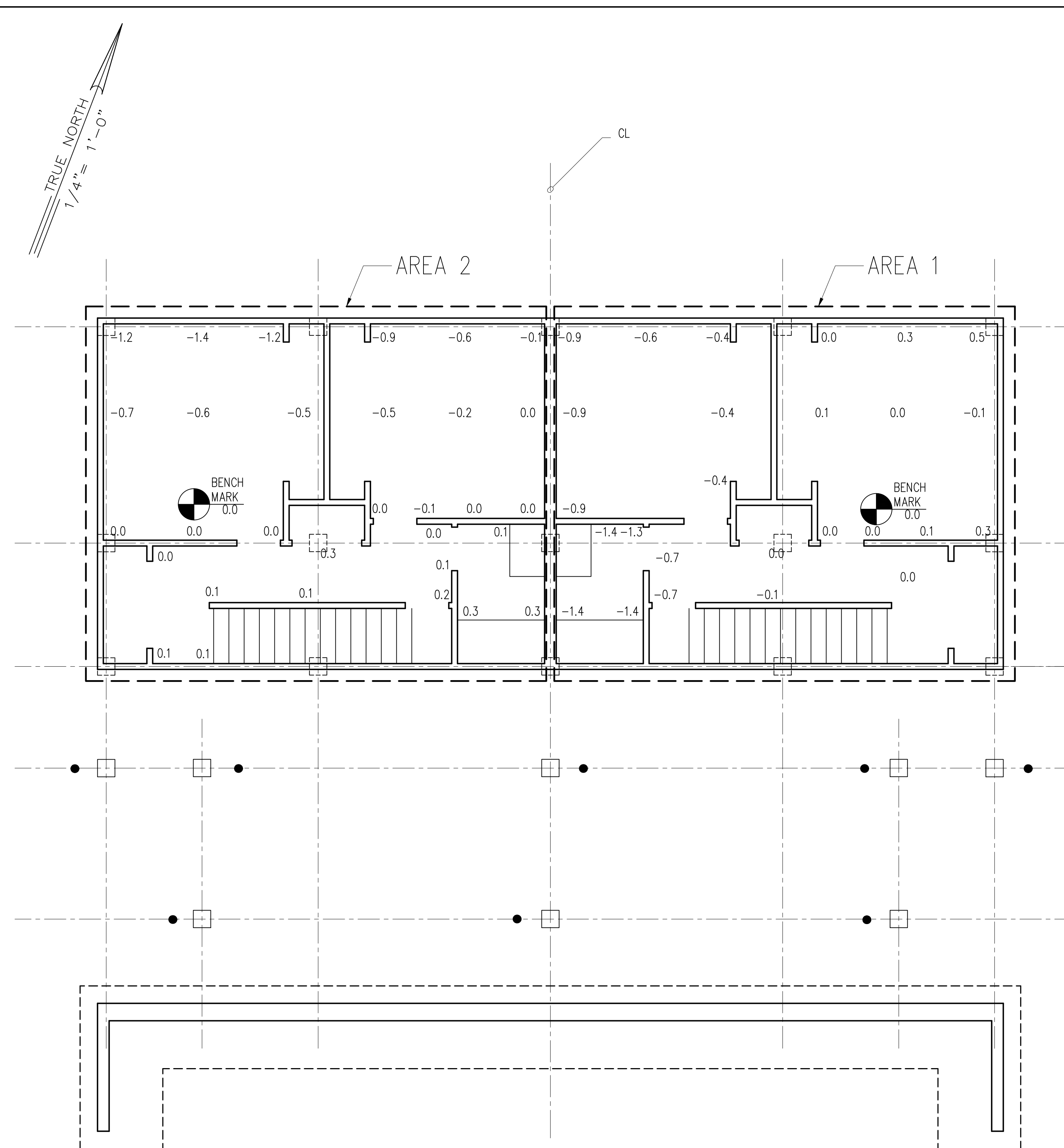
2021


FILE	POCKET	FOLDER	NO.
------	--------	--------	-----

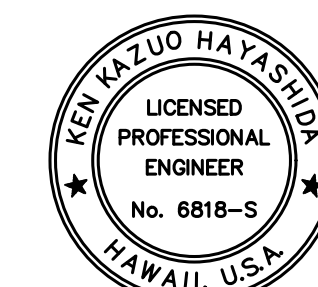
[illegible]

P:\5301-5350\5326 DHHL-Kalahathine Streamside Subdivision, Lot 33 & 34 Duplex Repairs\050 Drawings\Structural\AutoCAD_format\2021-06-25_5326 DHHL - Border Update\5326_S-3.dwg, 6/25/2021 4:51:23 PM, mgo






- NOTES:**
1. SHOWN ELEVATIONS ON EACH FLOOR OF UNITS ARE RELATIVE ELEVATIONS (IN INCHES) TO A REFERENCE POINT DESIGNATED BY  AT THAT FLOOR AND THE LIMIT SHOWN BY _____
 2. CONTRACTOR TO CONDUCT A SURVEY PRIOR TO ADJUSTING THE FOUNDATION HEIGHTS.
 3. SHOULD ANY OF FLOORING BE REMOVED TO INSTALL THE PILES FROM THE INSIDE OF THE UNITS, THE STRUCTURE SHALL NOT BE ALTERED, AND THE REMOVED AREAS SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL CONDITION. FINISHED FLOOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION USING SALVAGED FLOOR COVERINGS, WHEN POSSIBLE.



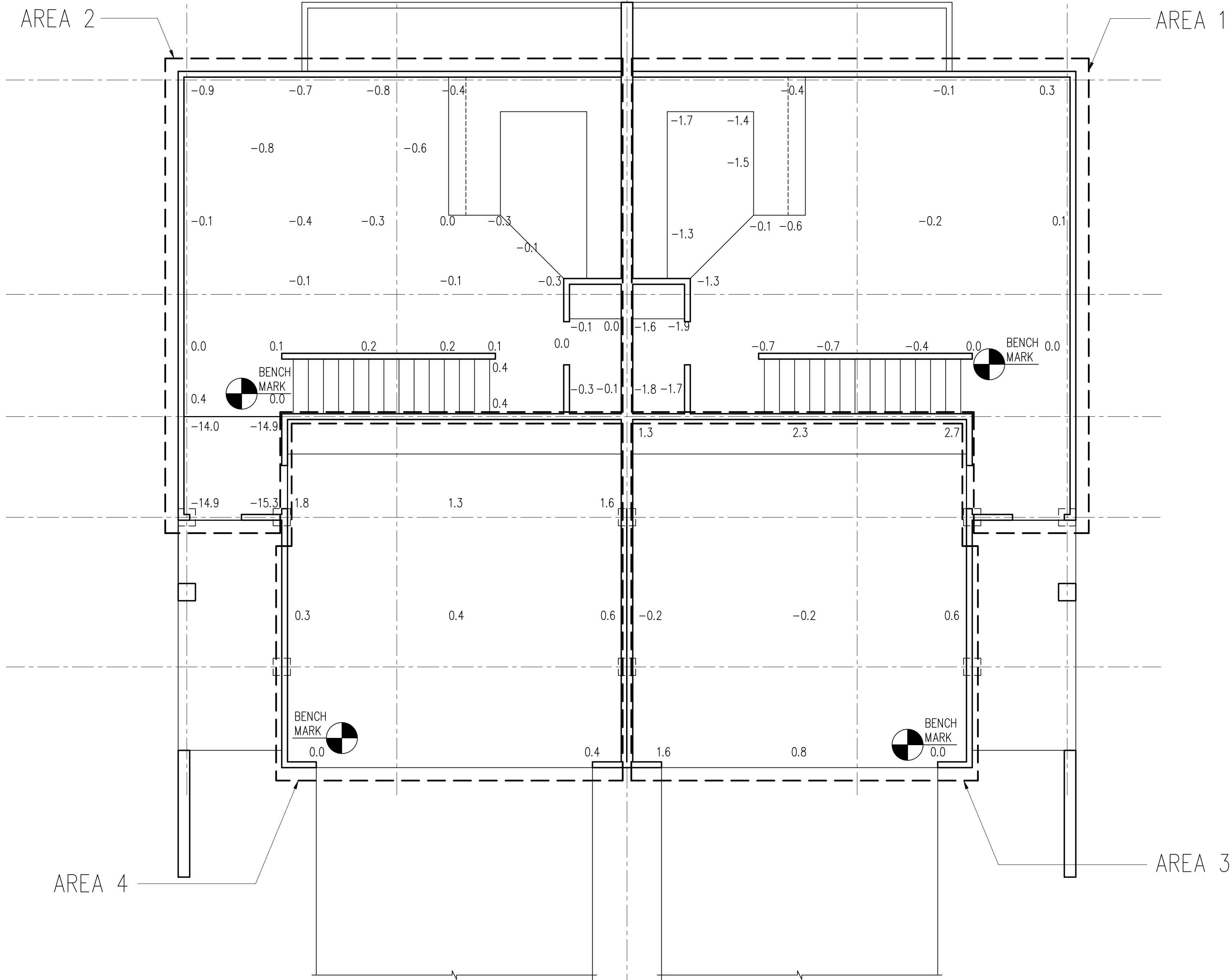
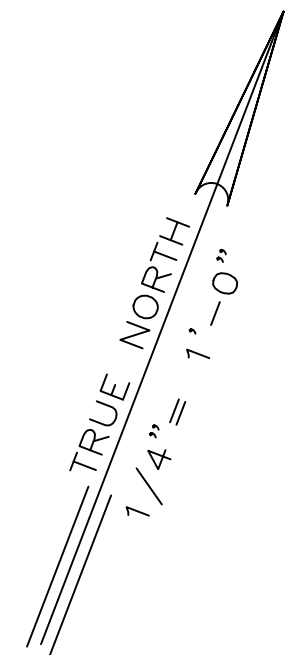
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS)



8/29/94).


SIGNATURE

LICENSE EXP. DATE: APRIL 30, 2022


REVISION	DATE	BRIEF	MADE BY APPROV		
DEPARTMENT OF HAWAIIAN HOME LANDS STATE OF HAWAII					
DHHL PAKAPOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION					
2312 AND 2316 KAPAHU ST, HONOLULU, HI 96813					
TMK: 2-4-043.033, 2-4-043.034					
JOB NO.					
LOWER LEVEL PLAN					
DESIGNED BY: SP		CHECKED BY: KH		DRAWN BY: CAD	
2020					
FILE		POCKET		FOLDER	
NO.					




- NOTES:
1. SHOWN ELEVATIONS ON EACH FLOOR OF UNITS ARE RELATIVE ELEVATIONS (IN INCHES) TO A REFERENCE POINT DESIGNATED BY  AT THAT FLOOR AND THE LIMIT SHOWN BY 
 2. CONTRACTOR TO CONDUCT A SURVEY PRIOR TO ADJUSTING THE FOUNDATION HEIGHTS.

1 MAIN LEVEL FLOOR PLAN
S005 SCALE: 1/4" = 1'-0"

DWG. NO. S005
SHEET 11 OF 13

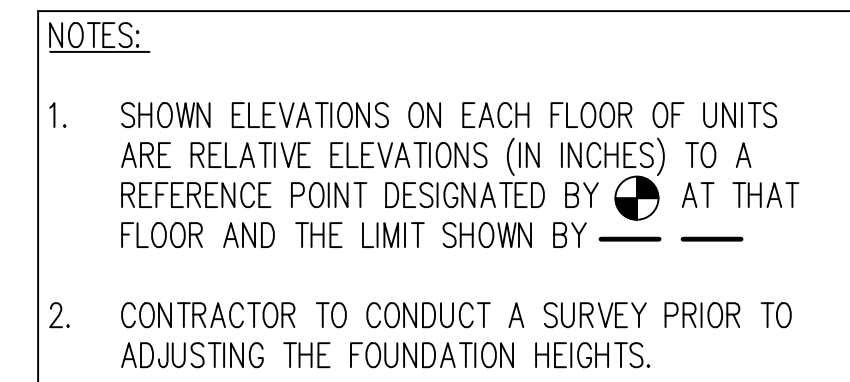


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION, OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS 8/29/14.


SIGNATURE
LICENSE EXP. DATE: APRIL 30, 2022


REVISION	DATE	BRIEF	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS STATE OF HAWAII DHHL PAPA KOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION 2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813 TMK: 2-4-043:033, 2-4-043:034 JOB NO.				
MAIN LEVEL PLAN				
DESIGNED BY: SP	CHECKED BY: KH	DRAWN BY: CAD		
2021				

FILE	POCKET	FOLDER	NO.
------	--------	--------	-----



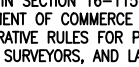
AREA 2 _____ | _____ AREA 1

DWG. NO.
S006
SHEET 12 OF 13



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, HAWAII ADMINISTRATIVE RULES FOR PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS

8/29/94.



SIGNATURE

LICENSE EXP. DATE: APRIL 30, 2022

REVISION	DATE	BRIEF				MADE BY	APPROVED					
DEPARTMENT OF HAWAIIAN HOME LANDS												
STATE OF HAWAII												
DHHL PAPAKOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION												
2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813												
TMK: 2-4-043:033, 2-4-043:034												
JOB NO.												
UPPER LEVEL PLAN												
DESIGNED BY: SP			CHECKED BY: KH			DRAWN BY: CAD						
2021												
		<table><tr><td>FILE</td><td>POCKET</td><td>FOLDER</td><td>NO.</td></tr></table>							FILE	POCKET	FOLDER	NO.
FILE	POCKET	FOLDER	NO.									

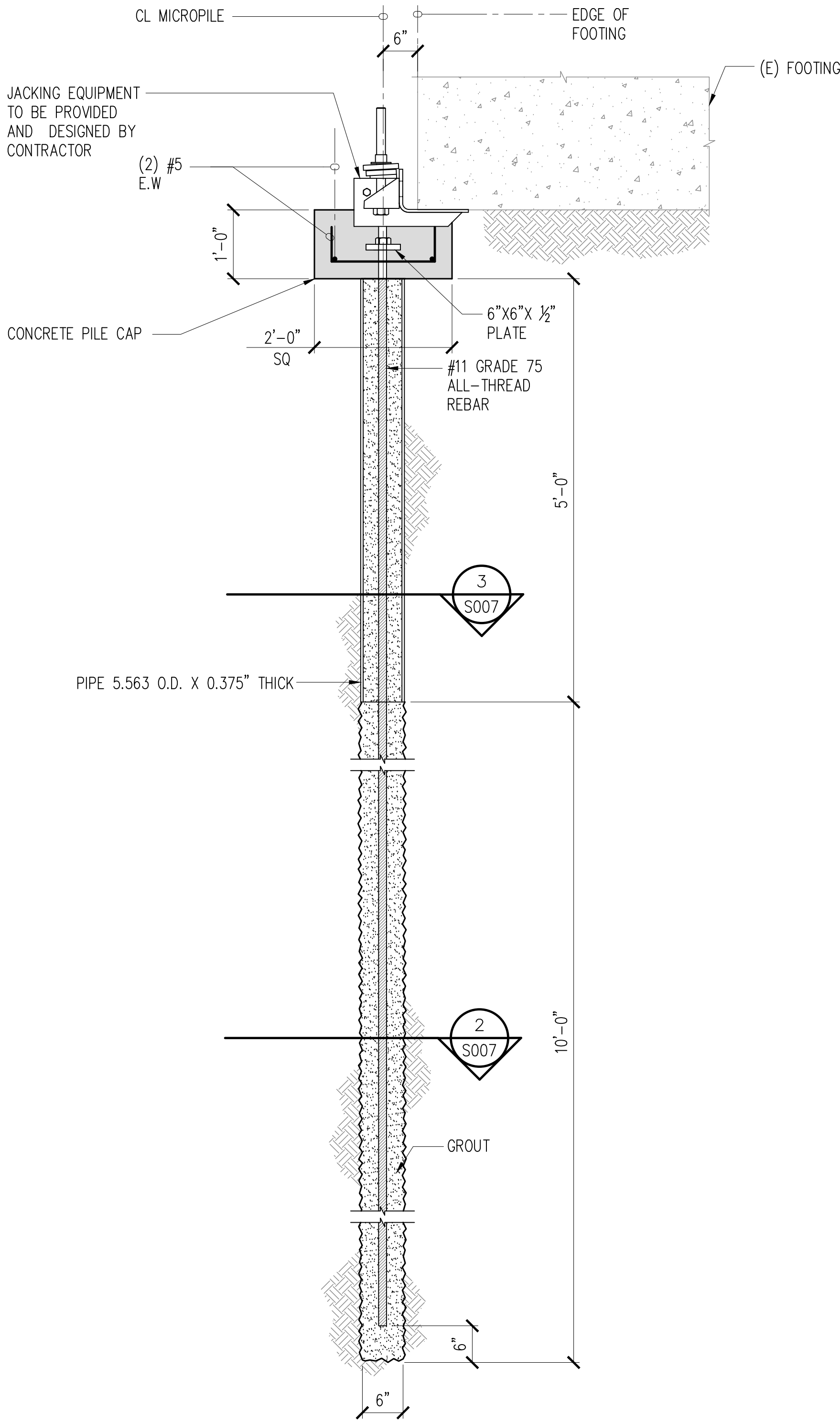
NOTES:

- ALL-THREAD REBAR SHALL CONFORM TO ASTM A615, GRADE 75.
- GROUT FOR MICROPILES SHALL BE A NEAT CEMENT, TYPE I OR II AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. NO TESTING OR ANY OTHER TYPE OF LOADING SHALL BE APPLIED TO THE MICROPILES UNTIL THE GROUT HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- BEFORE THE INSTALLATION OF THE PRODUCTION MICROPILES, ONE (1) SACRIFICIAL PRE-PRODUCTION MICROPILE SHALL BE INSTALLED USING THE EQUIPMENT AND METHODS PROPOSED BY THE CONTRACTOR. THE LOCATION OF THE PRE-PRODUCTION MICROPILE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL LOAD TEST THE PRE-PRODUCTION PILE IN COMPRESSION TO AT LEAST 200 PERCENT OF THE DESIGN LOAD FOR EXTREME EVENT LIMIT STATES TWICE ITS ALLOWABLE DESIGN LOAD IN ACCORDANCE WITH ASTM D1143-81. CONTRACTOR MAY CHOOSE A MICROPILE AT A PRODUCTION LOCATION TO TEST AT HIS OWN RISK.
- PROOF TESTS
 - PROOF TEST A MINIMUM 5 PERCENT OF THE TOTAL NUMBER OF PRODUCTION MICROPILES (MINIMUM 2 MICROPILES) IN ADDITION TO THE PRE-PRODUCTION MICROPILES. PRODUCTION MICROPILES TO BE PROOF TESTED WILL BE SELECTED BY THE GEOTECHNICAL ENGINEER AFTER THE INSTALLATION OF ALL PRODUCTION MICROPILES.
 - THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT AND TOOLS NECESSARY TO PERFORM THE PROOF TESTS. THE GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR WILL BE PRESENT TO OBSERVE THE PERFORMANCE OF THE PROOF TESTS BY THE CONTRACTOR AND TO OBSERVE THE INSTALLATION OF ALL PILES FOR THIS PROJECT.
 - PERFORM THE PROOF TESTS BY INCREMENTALLY LOADING THE MICROPILE TO BE TESTED IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE:

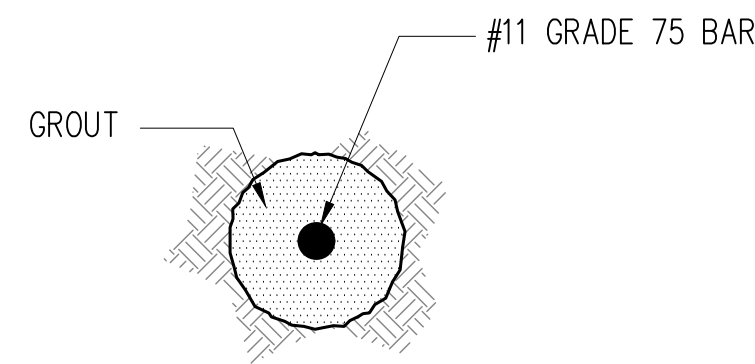
PROOF TEST SCHEDULE

0.05P
0.25P
0.50P
0.75P
1.00P
1.25P
1.60P

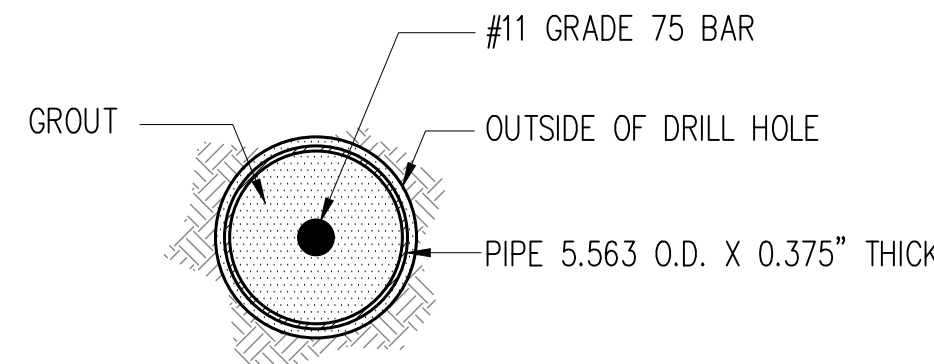
WHERE P = ALLOWABLE MICROPILE CAPACITY OF 40 KIPS IN COMPRESSION FOR STRENGTH LIMIT STATES.
- HARD BOULDERS MIGHT BE ENCOUNTERED NEAR OR AT THE MICROPILE LOCATIONS. THEREFORE APPROPRIATE TOOLS FOR PRE-DRILLING THROUGH THE HARD BOULDERS AND HARD BASALT ROCK SHALL BE REQUIRED.
- INSTALL FOUNDATION BRACKET PER MANUFACTURER'S INSTRUCTIONS.



1 TYPICAL MICROPILE DETAIL
S007 NOT TO SCALE



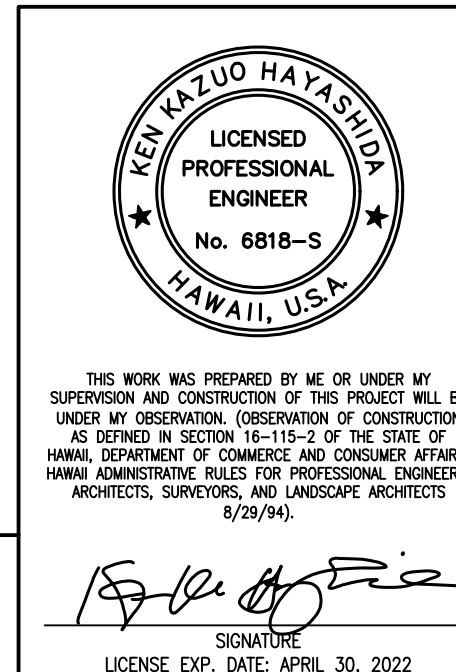
2 SECTION
S007 NOT TO SCALE



NOTE:
THE ANNULAR SPACE BETWEEN THE DRILL HOLE AND THE O.D. OF THE PIPE CASING SHALL BE GROUTED THROUGHOUT THE CASED LENGTH IN ORDER TO PROVIDE LATERAL SUPPORT OF THE MICROPILE.

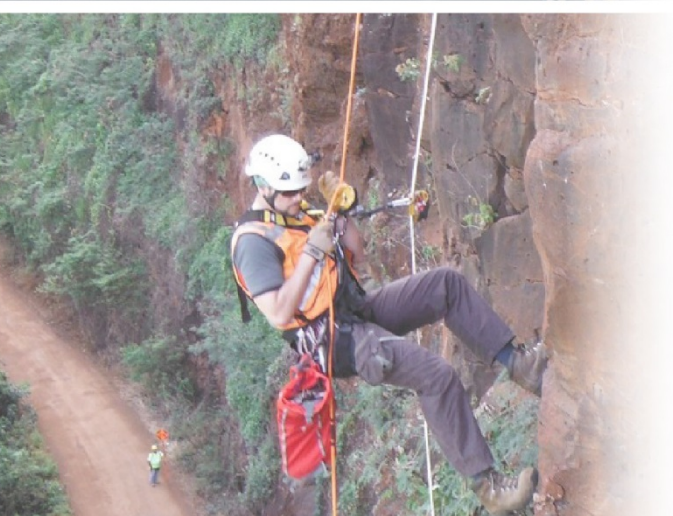
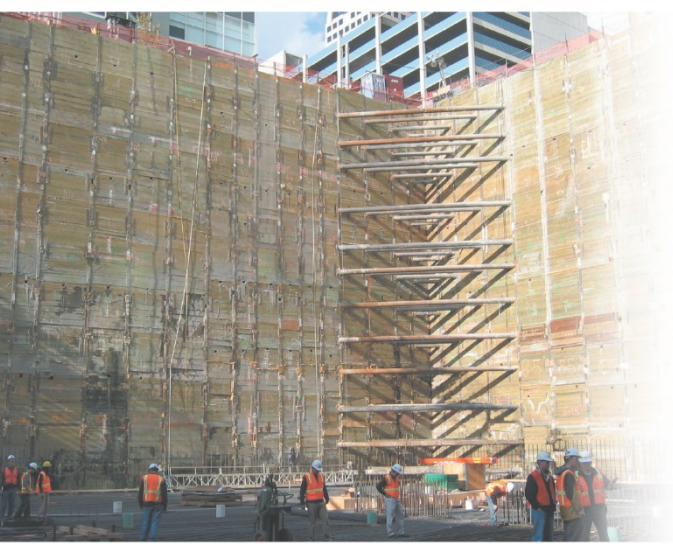
3 SECTION
S007 NOT TO SCALE

DWG. NO.
S007
SHEET 13 OF 13



REVISION	DATE	BRIEF	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS STATE OF HAWAII DHHL PAPAIOLEA 2312 AND 2316 KAPAHU ST STRUCTURE STABILIZATION 2312 AND 2316 KAPAHU ST. HONOLULU, HI 96813 TMK: 2-4-043:033, 2-4-043:034 JOB NO.				
MICROPILE DETAIL				
DESIGNED BY: SP	CHECKED BY: KH	DRAWN BY: CAD		
				2021

FILE	POCKET	FOLDER	NO.



Geotechnical Engineering Report

2312/2316 Kapahu Street
Papakōlea, Honolulu, Hawai'i

Prepared for
Group 70 International Inc.

April 28, 2021
3140-024-001



A division of Haley & Aldrich

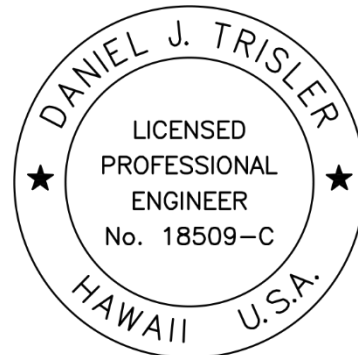
Geotechnical Engineering Report

**2312/2316 Kapahu Street
Papakōlea, Honolulu, Hawai'i**

**Prepared for
Group 70 International Inc.**

**April 28, 2021
3140-024-001**

**Prepared by
Hart Crowser, a division of Haley & Aldrich**



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
LICENSE EXPIRES 4-30-22

A blue ink signature of JoDee Taylor, consisting of a stylized 'J' and 'T'.

JoDee Taylor, PE
Senior Associate

A blue ink signature of Daniel J. Trisler, featuring a stylized 'D' and 'T'.

Daniel J. Trisler, PE
Principal

Contents

1.0 INTRODUCTION	1
1.1 Project Description	1
2.0 SCOPE OF SERVICES	2
3.0 SITE CONDITIONS	2
3.1 March 12, 2020 Field Visit	3
3.2 Geologic and Soil Maps	3
3.3 Subsurface Conditions	4
3.3.1 General	4
3.3.2 Fill	5
3.3.3 Tuff Rock	5
3.3.4 Basalt	5
3.3.5 Engineering Soil Units (ESUs)	6
3.3.6 Groundwater	6
4.0 SLOPE STABILITY	7
5.0 CONCLUSIONS	7
6.0 DESIGN RECOMMENDATIONS	8
6.1 Chemical Stabilization for Expansive Soil	9
6.2 Foundation Underpinning	9
6.2.1 Micropile Foundations	10
6.3 Alternative Foundation Underpinning Systems	12
6.4 Vertical Pile Shifting	12
6.5 Seismic Design Parameters	13
6.5.1 Seismic Hazards	13
7.0 EARTHWORK AND CONSTRUCTION RECOMMENDATIONS	13
7.1 Excavation and Dewatering	14
7.1.1 Open Cuts and Footing Excavations	14
7.1.2 Dewatering	14
7.2 Structural Fill and Backfill	15
7.2.1 Native Soils	15
7.2.2 Imported Select Structural Fill	15
7.3 Fill Placement and Compaction	15
8.0 DRAINAGE DESIGN RECOMMENDATIONS	17
8.1 Temporary Drainage	17

8.2 Surface Drainage	17
9.0 FOUNDATION REVIEW, CONSTRUCTION, AND POST-CONSTRUCTION OBSERVATIONS	17
10.0 LIMITATIONS	18
11.0 REFERENCES	18

TABLES

1 Boring Information	6
2 Summary of ESU and Engineering Properties	6
3 Groundwater Data from Nearby Wells	7
4 2012 IBC Seismic Design Parameters	13
5 Guidelines for Uncompacted Lift Thickness	16
6 Fill Compaction Criteria	16

FIGURES

1 Vicinity Map
2 Site Plan
3 Lot Map
4 Generalized Subsurface Profile A-A'

APPENDIX A

Field Explorations

APPENDIX B

Laboratory Testing

APPENDIX C

Appendix C: Global Geophysics Seismic Refraction Survey Report (October 30, 2020)

2312/2316 Kapahu Street

Papakōlea, Honolulu, Hawai'i

1.0 INTRODUCTION

This report provides Hart Crowser's geotechnical engineering evaluation and recommendations for the distress occurring at the duplex of 2312 and 2316 Kapahu Street, in the neighborhood of Papakōlea, Honolulu, Hawai'i. The general location of the site is shown on Figure 1.

1.1 Project Description

The Kalawahine Streamside subdivision was constructed by Kamehameha Investment Corporation (KIC) in 2000. In 2004 and 2006, several homeowners complained of water intrusion issues after prolonged rainy periods. Since 2009, the homeowners of 2312 Kapahu Street have reported damage to their residence possibly related to settlement and/or instability (DHHL 2011). In 2011, Department of Hawaiian Home Lands (DHHL) hired AECOM to do a study of the duplex along with other lots that had also reported building damage. AECOM conducted a site visit in late 2011, and the findings were reported in AECOM's "Kalawahine Streamside Subdivision, Water Infiltration Concerns" report issued May 31, 2012 (AECOM 2012). The home of 2316 Kapahu Street, which had also reported damage, is within the same duplex and was also evaluated at that time. Within the report, 2312 and 2316 Kapahu Street are referred to as Lot 33 and Lot 34, respectively; however, they share a building pad and backyard.

AECOM's geotechnical consultant provided an overview of soil conditions based on a site visit and review of available information, but no drilling or soil sampling was performed. The consultant's recommendations were to underpin the building or use chemical stabilization to strengthen the soil, and conduct a 12-month monitoring program (AECOM 2012). It is our understanding that remedial measures or monitoring recommended in the AECOM report for Lot 33 and Lot 34 were **not** implemented.

Group 70 (G70) has been providing design professional services for DHHL in other capacities. On March 12, 2020, Hart Crowser joined representatives from G70 to perform a site walk, around and inside the duplex, to observe the current conditions. After that visit, we provided a proposal to G70 to perform a field investigation around the duplex, perform geotechnical analyses, and provide geotechnical recommendations for design options to mitigate possible further geotechnical issues. The contents of this report summarize our findings from our field investigation and analyses and provides recommendations.

Attachments included in this report are:

- Appendix A: Field Explorations;
- Appendix B: Laboratory Testing; and
- Appendix C: Global Geophysics Seismic Refraction Survey Report.

2.0 SCOPE OF SERVICES

Our Scope of Services included:

- Conduct a preliminary site reconnaissance.
- Review existing available subsurface soil and groundwater information, including reports, geologic maps, and other information pertinent to the site.
- Subcontract drilling of one geotechnical boring to 39.5 feet below ground surface (bgs).
- Perform two dynamic cone penetrometer (DCP) tests to depths approximately 3 feet bgs in the backyard.
- Excavate two hand auger borings to depths of approximately 5 feet bgs and collect two bulk samples of soil for lab testing in the backyard.
- Procure the services of a geophysical subconsultant (Global Geophysics, LLC) to perform a seismic refraction survey along the side yards and backyard of the duplex to collect subsurface geophysical data for use in our evaluations.
- Conduct laboratory testing on representative soil samples obtained from the borings. Tests include moisture content, particle size distribution, plasticity, and California Bearing Ratio (CBR) on representative soil samples.
- Perform engineering analyses to evaluate slope stability and foundation stabilization alternatives and determine the depth to a competent bearing stratum.
- Prepare this geotechnical report summarizing our findings and providing recommendations.

3.0 SITE CONDITIONS

The project area is in the Papakōlea neighborhood, which was built mauka and southeast of the Kanahā Stream in Honolulu, Hawai'i. The subject building is bounded by Kapahu Street, a small local community park at the end of Kapahu Street, Kanahā Stream, and a similar duplex building (2306 and 2308 Kapahu Street).

The subject property has an elevation difference from Kapahu Street to the main building pad of approximately 15 feet which creates an approximate 1.2 horizontal to 1 vertical (1.2H:1V) slope down to the building pad. From the building pad, the yard slopes to Kanahā Stream at approximately 2H:1V. The entire development is built on a slope leading to Kanahā Stream. The neighborhood development has paved roads, hardscape (driveways, walkways, and drainage features), and mature trees, grass, and plants.

3.1 March 12, 2020 Field Visit

Our observations and conversations with homeowners during our March 12, 2020 site visit are noted below. There are a few possible new developments and observations since the AECOM performed their November 2011 inspection.

■ 2312 Kapahu Street:

- Owner reported separation of vertical pipe housing at the common garage wall between the homes (not listed in 2011 inspection).
- In the side yard, the daylight distance between the edge of the south footings and the face of the slope may not be adequate for passive lateral resistance. Field measurement from face of column to top of slope is approximately 2 feet (it is important to note that this measurement is not the same as measuring from the edge of footing to daylight at the slope).

■ 2316 Kapahu Street:

- Since the 2011 inspection, the homeowner has built concrete masonry unit (CMU) retaining walls in the space underneath the garage to increase his storage space. The uppermost CMU wall shows some active earth pressure failure (i.e., leaning outwards/pushed outward) and a crack in the joining wall. This does not appear to have an adverse impact on the duplex as there are no structural elements being supported or retained by the walls.
- Possible settlement (approximately 0.25 to 0.5 inches) where the driveway apron connects to the garage floor slab. The driveway is constructed on soil retained by a CMU wall (built by KIC), but the home is otherwise elevated.
- Efflorescence was noted on the face of all the CMU walls.
- A vertical shear crack running down the visible portion of an interior CMU column that goes down to a footing. No other columns show damage and no obvious signs of distress were observed in immediate vicinity of the cracked column. There was no obvious correlating damage in the room directly above the column, but an interior survey was not performed to verify this.

3.2 Geologic and Soil Maps

The site geology is mapped by the U.S. Geological Survey (USGS) Open-File Report 2007-1089; *Geologic Map of the State of Hawai'i* (Sherrod et al. 2007). Mapped geologic units within the project area consist of one unit: Ko'olau basalt (Pliocene and Pleistocene) Geologic Symbol (QTKl), rock type consisting of lava flows that are described as "'A'ā and lesser pāhoehoe; portions estimated to be 60 percent 'a'ā" (Sherrod et al. 2007).

These flows are typically composed of a series of layers of hard lava rock with residual soil weathered from such rock at the surface. Between individual flows are zones of broken lava rock or "clinker" zones that developed as the bottom of the flow cooled and fragmented, while the overlying hot lava continued to flow and eventually hardened into thin solid rock layers.

Approximately 500 feet east of the project (outside of the mapped margin of error) is a mapped boundary with Honolulu Volcanics, Geologic Symbol (Qott), rock type consisting of tuff deposits.

Several publications map the geologic hazards for Honolulu including debris-flow hazards (Ellen et al. 1993); deep-seated landslide hazards (Ellen et al. 1995); faults mapped within the Koʻolau Range (Sherrod et al. 2007); and active Quaternary faults are mapped for Honolulu (Cannon and Burgmann 2006). The site classification for deep-seated landslide hazard was “moderate.” However, our cursory survey over the general development area did not note obvious signs of movement to indicate a deep-seated landslide may be the cause of the issue for the site. No other concerns for geologic hazards were noted during review of the above documents.

A review of nearby water well and geotechnical boring logs generally indicates regional groundwater levels range from approximately 12.9 feet mean sea level (MSL) to 73.8 feet MSL. The two wells closest to the site are downslope from the site with groundwater levels measured to be approximately 31 feet MSL and 20 feet MSL. Using the groundwater data from the nearest wells, depth to groundwater at the site may be between 290 feet bgs and 300 bgs. However, perched water zones may be encountered before the basal aquifer at that depth is reached.

The near surface soils at the site are mapped by the U.S. Department of Agriculture (USDA) in the *Web Soil Survey* (USDA 2017) as Kaena *very stony clay* (to the north) and *Rough mountainous land* (to the south). The Kaena very stony clay is classified as a high-plasticity clay that may exhibit shrink-swell behavior. The Rough mountainous land is noted to have high-plasticity silty clay in the matrix that also exhibits a sensitivity to shrink-swell behavior.

3.3 Subsurface Conditions

3.3.1 General

Field work for subsurface explorations was conducted on September 2, 2020. One geotechnical boring (B-1) with Standard Penetration Test (SPT) sampling and rock coring was advanced between the driveway apron and Kapahu Street to a depth of approximately 39.5 feet below ground surface (bgs). The boring was advanced using a track-mounted drill rig subcontracted with GeoTek Hawaii. Hand auger explorations (HA-1 and HA-2) and dynamic cone penetrometer tests were conducted in the backyard of the duplex.

Figures 2 and 3 show the exploration locations. Appendix A summarizes our exploration methods and presents our exploration logs. Results of soil laboratory testing are provided in Appendix B and references where appropriate on the exploration logs.

In order to perform slope stability evaluations, a cross section was developed as shown on Figures 3 and 4. No topographic survey has been done at the site, the ground surface is an inference from open-source Lidar and measurements taken by field personnel on-site. It is important to note that subsurface conditions are generalized interpolations inferred between borings and other available information. Variations and conditions may exist between these profiles and the actual conditions encountered during any mitigation efforts.

The following sections provide general descriptions of the soil conditions encountered from the ground surface downwards. This information incorporates some of the findings noted in Global Geophysics, LLC's "Report for Seismic Refraction at 2312/2316 Kapahu Street, Honolulu, Hawaii" dated October 30, 2020. This report is located in Appendix C of this report.

3.3.2 Fill

All explorations encountered imported fill or re-worked native soil fill from the ground surface to depths of 5 feet to 12.5 feet bgs. HA-1 and HA-2 terminated in this unit. From approximately 5 to 7.5 feet bgs, the fill consists of a medium dense clayey sand (SC). In B-1, from 5 feet to 7.5 feet bgs, the fill graded to a well-graded sand with gravel (SW). From 7.5 feet to 12.5 feet bgs, the fill transitioned to a loose to medium dense clayey sand, similar to the uppermost fill layer. The clayey sand is likely native soil excavated during the initial grading of the development and reused for final grading. It is possible that the well-graded sand with gravel may have been imported fill used for construction pads or haul routes. Blow counts (N-values) in the fill ranged from 10 to 29 blows per foot (bpf) with an average of approximately 20.4 bpf and a median of 13.5 bpf.

Atterberg Limits testing on the fill soils showed plasticity indices between 28 and 44 percent, indicating the fines portion of the soils have high plasticity. Additionally, California Bearing Ratio (CBR) testing showed expansion (swell) ranging from 0.20% to 10.8%.

DCP testing was performed to determine if a contact between soil (fill or native) and bedrock could be ascertained through an increase in resistance. The tests were terminated within 30-inches of the ground surface due to high resistance.

The geophysical survey detected unconsolidated soils coinciding with fill at depths of approximately 1 to 5 feet along the slope leading down to the building pad and in the backyard. The thinnest layer was mainly on the slope leading to the building pad.

3.3.3 Tuff Rock

Tuff rock was encountered underlying the fill in B-1, occurring from 12 feet to 17 feet bgs. The seismic profile interpretation indicates that this layer likely ranges from 4.5 to 12 feet thick across the site.

SPT sampling in the boring resulted in "refusal" (defined as more than 50 blows to advance the sampler) for both samples collected in this unit. Hard drilling was noted at approximately 14.5 feet bgs. The tuff rock likely consists of the Honolulu Volcanic unit that is mapped approximately 500 feet to the east of the subject site.

3.3.4 Basalt

Basalt was encountered underlying the tuff rock at 17 feet in B-1. Rock coring was conducted from approximately 19 feet to 38 feet bgs. B-1 was terminated in basalt and a final SPT was performed from 38 feet bgs to 39.5 feet bgs. Final boring depth for B-1 was 39.5 feet bgs. The seismic profile interpretation indicates the top of the basalt layer may be approximately 8.5 to 15 feet bgs across the site.

Table 1 – Boring Information

ID	Top of Exploration Elevation ^b (MSL, feet)	Depth to Hard Conditions/ Refusal ^a from Existing Grade (feet)	Hard Conditions/ Refusal Elevation ^b (MSL, feet)	Possible Underlying Hard Stratum
B-1	320	12	308	Tuff and basalt
HA-1	300	Not encountered	295.1 ^c	Tuff and basalt ^c
HA-2	300	Not encountered	296.3 ^c	Tuff and basalt ^c

Note:

- Refusal is defined as 50 blows or greater to penetrate 6 inches (boring) or when equipment capacity is exceeded (hand augers)
- All elevations are approximate
- Interpolated from the seismic refraction survey

3.3.5 Engineering Soil Units (ESUs)

Representative (N₁)₆₀ value ranges for each soil unit were developed using the SPT blow count data from B-1. The SPT blow count data was then corrected for overburden stress and used to estimate representative friction angles for granular materials using the average of published correlations, the seismic refraction results and our experience and engineering judgement. Table 2 summarizes the results of our interpretation and estimate of appropriate engineering properties of various ESUs adopted for developing our geotechnical engineering design recommendations.

Table 2 – Summary of ESU and Engineering Properties

ESU	Soil Description	Design Total Unit Weight (pcf ^a)	Design Friction Angle, ϕ' (degree)	Design Cohesion, c' (psf ^b)
1	Loose to medium dense clayey sand with gravel (Fill)	120	32	100
2	Medium dense sand with gravel (Fill)	125	35	0
3	Slightly weathered hard tuff ^c	120	32	3,000
4	Highly to slightly weathered basalt ^d	140	32	10,000

Notes:

- pcf = pounds per cubic foot
- psf = pounds per square foot
- Asniar, et. al (June 2019)
- DeLan, T. and X. QiaoLin (2014)

3.3.6 Groundwater

Groundwater was not encountered during field activities in the drilled boring or in the hand auger explorations.

Review of available field measurements of groundwater data for nearby USGS wells (USGS 2020) notes regional groundwater levels ranging from an elevation of 12.96 feet MSL to an elevation of 73.80 feet MSL (see Table 3). Because the regional groundwater levels are so deep, it is unlikely that groundwater would be encountered at the site; however, perched groundwater could be encountered.

Table 3 – Groundwater Data from Nearby Wells

Well ID	Highest Recorded Groundwater Elevation (MSL) in Feet
3-2050-01 Alewa Heights OCC Irr	12.96
3-1959-01 W111 P HT	31.00
3-1850-30 Punchbowl Deep Mon Well	20.34
3-1948-01 Manoa II	73.80

4.0 SLOPE STABILITY

We performed a slope stability analysis of a cross-section (Figure 4) encompassing the street level to the lower backyard slope using Slide2 (2019). The slope surface and subsurface profile are based on publicly available lidar data (2005), on-site slope measurements, geophysical survey data, and boring B-1.

The soil parameters noted in Table 2 were used in the evaluation of steady-state (long-term) and seismic stability. To be conservative, we based the ground surface topography on the measurement taken by our geophysical subconsultant (which indicated the steepest slopes), and made some adjustments based on Lidar and site visit information. The house foundation loads are unknown, so a conservative value of 350 psf was modeled as a distributed load for the entire length of the duplex and up the slope. Surface options were set so that the minimum depth of slip surfaces is 3 feet. Groundwater was modeled as perched along the tuff. The factor of safety for long-term stability was greater than 1.5, and for seismic was greater than 1.1. However, the evaluation has a sensitivity to the topography of the area. We recommend that a topographic survey be performed.

5.0 CONCLUSIONS

Based on our explorations, testing and analyses, we have formulated recommendations in this report for use in the design and construction of the building repair. We provide the following general summary of our conclusions.

- During our site visit on March 12, 2020, we did not observe significant damage at 2312 Kapahu that was not already reported in AECOM's 2012 report. However, we did note that an exterior column under the 2316 Kapahu Street unit was cracked vertically. This damage was not reported in the 2012 report, so it has likely occurred sometime in the last 8 years. However, the homeowners of 2316 Kapahu Street have not noticed any additional interior issues (cracks, doors not shutting, etc.) from what was documented in the 2012 report.

- Tension cracks are noted in some areas of the pavement parallel to the duplex. However, there is no record of when these may have developed, and the edges of the cracks indicate they are not fresh (i.e., crumbling, weathered).
- Slope stability was evaluated using the subsurface profile generated in Figure 4. The results do not indicate that there could be a stability problem, which is in line with the visual observations in AECOM's report (2012) and our recent visual assessment. However, the stability results are sensitive to topography, and we could reevaluate the results if a topographic survey is performed at the site.
- Laboratory tests done on the fill soils collected in the backyard (HA-1 and HA-2) indicate that they are susceptible to shrink-swell behavior. This aligns with other open-source information on the soils in the area. Post-construction settlement could possibly have instigated the damage that has been noted since 2009 and caused the most noticeable signs of distress. Post-construction settlement generally stabilizes after a few years; however, it is possible that cyclic movement from shrink-swell behavior of soils underneath the footings could be stressing the footing and column. However, there has been no monitoring done of the duplex, so it is uncertain whether the entire duplex could be influenced by shrink-swell behavior.
- There is no information on the levelness of the interior of the building. A manometer survey or other interior survey should be performed to determine if releveling is necessary.
- The foundations are likely constructed on soil that is susceptible to shrink-swell behavior that is occurring after post-construction settlement. Either the soil can be treated to minimize those effects on the foundation by using chemical or grout injection, or the foundation can be underpinned to a non-expansive and competent stratum. We believe the tuff and basalt should be considered suitable bearing strata for any stabilization method.
- We do not anticipate mass grading operations at the site. Excavations (if they occur) may encounter perched water in some locations, and sump pumps or other methods may be needed to remove such water during construction.

6.0 DESIGN RECOMMENDATIONS

This section presents our conclusions and recommendations for the geotechnical aspects of design and construction on the project site. We have developed our recommendations based on our current understanding of the project and the subsurface conditions encountered in our explorations. If during construction, the nature of the soil conditions is different than we have assumed, then we should be notified so we can change or confirm our recommendations.

Based on our subsurface investigation and the geophysical survey performed around the duplex, a suitable bearing layer is found from 5 to 14 feet bgs. Along the side yards and backyard of the duplex, the bearing layer is within 10 feet bgs or shallower. Although the actual elevation of the bottom of the foundation elements is unknown, it is likely that they terminate within 3 to 4 feet bgs.

6.1 Chemical Stabilization for Expansive Soil

The foundations could be stabilized using a polymer, lime slurry, cement slurry, or other aqueous solutions to reduce the clayey sand fill's propensity for expansion, while also strengthening the soil. The process is to drill small-diameter holes into the ground and pressure-inject the stabilizing agent into the soil in a bottom-up fashion using a handheld wand. This is applied around all foundation elements. Soil samples are collected after a few days to verify if the treatment has stabilized the soils or if further applications are necessary. By treating the soils this way, the shrink-swell movement of the soil underlying the foundations will be reduced while also reducing creep movements and settlement. However, it is possible that some structural adjustments of beams and girders may also be necessary if there are interior low spots or some unevenness of the floors.

Injection treatment is generally done by a specialty contractor. Soil samples may be necessary to determine the correct solution for the project, and post-injection samples should be taken for verification testing. We recommend that DHHL procure an experienced contractor who can provide project references for at least three successful projects in similar conditions and for similar loadings.

6.2 Foundation Underpinning

At the relatively shallow depths to competent bearing layers and the typical lighter loading for residential construction, micropiles are suitable foundation underpinning options. These types of foundations are all smaller-diameter foundation elements and can be installed with lightweight and more portable equipment than standard deep foundation installation methodologies (e.g., driven piles, drilled piers, etc.).

Based on the seismic refraction survey, the depth to tuff is approximately 5 to 6 feet bgs and to basalt is approximately 8 to 14 feet bgs. The weathering of the basalt varies from highly weathered to moderately weathered. These underpinning foundation elements should derive their support from the more stable and competent tuff and basalt bedrock materials beneath the expansive fill soils. We recommend foundation elements extend at least 3 feet into bedrock materials to help resist expansive soil uplift forces. Additionally, the underpinning system should be designed to resist an uplift force of 0.4 kips per square feet (ksf) acting against the bases of the existing footings.

Micropiles are replacement piles and are constructed by drilling a hole to the bearing layer and adding reinforcement and concrete. With this option, as with chemical injection, some structural adjustments of beams and girders may be needed to address interior low spots or some unevenness of the floors.

Specialty contractors generally perform in-house design of plans and specifications as well as installation (design/build). But the underpinning could also be done as a design/bid/build by having a structural engineer develop the plans and specifications and then providing it to contractors for bid. In either case, the underpinning should be designed by a civil engineer licensed in the state of Hawai'i. DHHL should provide the design engineer a copy of this report and any as-built information available for their use.

We recommend that DHHL procure an experienced contractor who can provide project references for at least three successful projects installing underpinning in similar conditions and for similar loadings.

Specific design and construction recommendations for micropiles are provided below.

6.2.1 Micropile Foundations

Micropiles consist of small-diameter, drilled and grouted (non-displacement) piles that are typically reinforced with a single high-strength reinforcing bar. Diameters typically range from 6 to 12 inches. A micropile is installed by drilling a borehole, placing reinforcement, and grouting from the bottom up (gravity or pressure). Often the micropiles are partially cased during construction, with casing sometimes left in place to increase the micropile strength. Alternatively, if the soil is stable, the micropile can be drilled with an open hole and the reinforcing bar as the drilling lead. A drilling method suited to local conditions may be selected from several options. For example, rotary percussive or rotary duplex techniques may be used to penetrate obstructions or bedrock.

Micropiles can withstand relatively significant axial loads and moderate lateral loads. Advantages of micropiles are that they can be installed in most soil types and ground conditions and where limited access can restrict the use of other deep foundation support systems.

The end-bearing resistance of a relatively small-diameter micropile is minor compared with the grout-to-ground bond resistance along its shaft and is typically neglected. The soil conditions and installation procedure strongly influence the grout-to-ground bond strength. In general, micropiles are classified into four types (A to D) depending on the construction method used (FHWA 2005), ranging from gravity-placed grout to secondary pressure grouting (with or without casing). Because the installation method is integral to the grout-to-ground bond resistance developed, micropiles are typically incorporated into the contract documents as a contractor design-build component (deferred submittal). This way, the contractor is responsible for providing the most suitable (and typically most cost-effective) micropile design and installation method that will meet the required structural design loads, based on their experience on similar sites.

6.2.1.1 Micropile Design Parameters

As discussed above, micropile capacity is largely a function of the means and methods of installation selected by the contractor. The contractor should choose appropriate means and methods to achieve the design bond strength required for the project.

We provide the following design recommendations for micropiles:

- The micropiles should have a minimum unbonded length of 5-feet below the existing grade and a minimum bonded length of 10-feet into the tuff and/or basalt bedrock materials.
- For frictional compressive or uplift micropile capacity, we anticipate that an ultimate grout-to-ground bond strength value ranging from **4.0 to 7.0 ksf** can be achieved in the tuff and basalt bedrock materials, depending on which Federal Highway Administration (FHWA) installation method is used. We anticipate that secondary pressure grouting will be required to achieve these bond strengths. An appropriate factor of safety (FS) should be applied to the ultimate micropile bond strength value used for design. For permanent support, we recommend a minimum FS of 2, assuming appropriate load testing during construction. For transient uplift loads, a minimum FS of 1.5 is commonly used.

- Though micropiles generally get most of their capacity from friction, end-bearing resistance from the bedrock can also be considered in the design. We recommend an allowable end bearing capacity of 60 ksf for a minimum 3-foot embedment (in tuff and basalt).
- The upper 5 to 6 feet of soil is expected to be within the zone of seasonal moisture fluctuations where uplift on the shaft can occur due to swelling soils.
 - The underpinning elements should be structurally designed to resist an uplift adhesion of **0.7 ksf** along the length of the shaft within this soil zone, or a permanent bond breaker can be installed on the micropile within this zone and no design for resistance to uplift adhesion is required.
 - An uplift pressure of **0.4 ksf** should also be applied to the bases of the existing footings.
 - Secondary or pressure grouting should not be employed within this soil zone, or increased uplift adhesion values may be required.
- Require a verification test (200 percent of the design load) on a non-production, "sacrificial" micropile following standard procedures and criteria (FHWA 2005) before construction of the production piles. This test is intended to ensure that the design capacities can be achieved with the soil and construction equipment used by the contractor at the site.
- Require proof tests (to 160 percent of the design load) on 5 percent of the production piles, including a minimum of one pile.
- Allow Hart Crowser to review the final foundation plan to confirm that our micropile recommendations have been adequately incorporated.
- If the foundation layout requires a micropile spacing closer than 3 pile diameters apart, contact Hart Crowser to adjust pile capacity for group effects.

6.2.1.2 Micropile Installation

It is important to select an experienced micropile contractor. The completed pile is below the ground surface and cannot be inspected following construction, so judgment and experience must be used during installation to determine its acceptability. We recommend continuous monitoring of installation procedures to document installation sequence, soil drilling conditions, casing withdrawal rate, grouting pressure, and quantity of grout used per pile. Variations from the installation pattern established based on the verification test pile conditions may reduce the pile capacity and make the pile susceptible to rejection.

Based on our explorations and information from review of past reports, it is possible that construction debris, cobbles, and boulders (basalt fragments), may be present within the fill. Therefore, the contractor should anticipate difficult drilling conditions and be prepared to deal with potential large obstructions within the overburden soil. Additionally, the final embedment of the piles will be into dense bedrock materials. Perched groundwater seepage may be encountered in coarse-grained soils and along the interface of fill and tuff, which may require the use of a drilling casing to control sloughing or caving of the borehole side walls. Provisions should be made in contract documents to account for the possibility of these conditions.

We make the following additional micropile installation recommendations.

- Hart Crowser should observe micropile installation to evaluate the contractor's operation and to collect and interpret the installation data.
- To prevent interconnection of grout between piles, no two micropiles should be installed within five pile diameters of each other (center-to-center) in a single 12-hour period.
- For pressure-grouted micropiles, the casing should be withdrawn from the hole slowly to maintain pressure on the grout column within the bonding zone.

6.3 Alternative Foundation Underpinning Systems

There are other alternative underpinning systems that may also be considered for the project, such as helical anchors or pin/push piles. These are also smaller-diameter foundation elements (like micropiles) and can be installed with lightweight equipment and in areas with challenging access.

Helical anchors are like wood screws, except that there are smooth shaft sections between the screw plates. Capacity is generally related to the torque or can be calculated by individual bearing capacity method. If this system is chosen for the foundations, then a specialty contractor will be able to provide capacity correlations relative to the specific installation equipment.

Pin piles are small-diameter pipe piles (≤ 12 -inch diameter) that are driven into the ground using hydraulic hammers mounted on small excavators. Pin piles work mainly in compression (axial load) but can be designed to support lateral loads if installed at a batter angle. These capacities are achieved by reaching "refusal" criteria generally (typically provided by the Contractor based on their experience in similar soils) and assume a reasonable factor of safety.

Both pin piles and helical anchors are systems that are designed by specialty contractors. If they are proposed, then we recommend that the project Structural Engineer provide this report to the contractor for their use in the design. The tuff unit may make installation difficult, and we recommend that pile load test(s) be required to verify the capacity of the element. The foundation elements must achieve sufficient embedment to resist uplift forces due to the expansive soils. We recommend Hart Crowser be retained for observation of load testing of the chosen system.

6.4 Vertical Pile Shifting

The total pile settlement is made up of elastic settlement, which includes compression of the residual soil/basalt beneath the pile tip, as well as elastic shortening of the pile. We estimate that pile settlement and pile elastic deformation will be less than 1 inch, but this would need to be revised once actual load information is available. If the piles are not designed to resist footing uplift forces, then it is estimated that there could be 1.0 to 3.5 inches of uplift due to swelling soils.

6.5 Seismic Design Parameters

Seismic design is assumed to be governed by the 2012 International Building Code (IBC), adopted by the State of Hawai'i in November 2018. The parameters provided in Table 4 are appropriate for 2012 IBC code-level seismic design.

The soil site class is based on the soil characteristics and a weighted average of the blow counts observed to a depth of 100 feet bgs. Since our explorations were drilled less than 100 feet bgs, we conservatively assumed a constant material density from below the deepest sample to 100 feet bgs. Based on the soil characteristics, the seismic designation is Site Class D.

Table 4 provides seismic design parameters for the site latitude and longitude and the site class. The parameters were obtained from the ASCE 7 Hazard Tool web application (<https://asce7hazardtool.online/>).

Table 4 – 2012 IBC Seismic Design Parameters

Parameter	Value
Latitude	21.316721
Longitude	- 157.835989
Site Class	D
Spectral Response Acceleration, S_s	0.58 g
Spectral Response Acceleration, S_1	0.17 g
Site Coefficient, F_a	1.336
Site Coefficient, F_v	2.121
Spectral Response Acceleration (Short Period), SDS	0.516 g
Spectral Response Acceleration (1-Second Period), $SD1$	0.24 g
PGA	0.267 g
PGA_M	0.338 g
F_{PGA}	1.266 g

6.5.1 Seismic Hazards

Based on the subsurface soil conditions, groundwater level, and site topography, the risk at the site for liquefaction, lateral spread, and flow failure are very low.

7.0 EARTHWORK AND CONSTRUCTION RECOMMENDATIONS

We do not anticipate extensive earthwork at the site. However, all earthwork should be conducted in accordance with the 1986 Standard Specifications (SS) for Public Works Construction for the four counties in the State of Hawai'i (Counties 1986). Specific earthwork recommendations are provided in the following sections.

7.1 Excavation and Dewatering

7.1.1 Open Cuts and Footing Excavations

All excavations should be made in accordance with the State of Hawai'i Occupational Safety and Health (HIOSH) and Occupational Safety and Health Administration (OSHA) guidelines, which require temporary sloping or shoring for excavations greater than 4 feet deep. The site soils overlying the tuff and basalt would be considered Type C soil based on the OSHA soil type classification system. Generally, the regulations allow a temporary cut slope of 1.5H:1V for Type C Soils. However, excavations proximate to existing building footings may need to be shored to reduce the potential for foundation instability.

The stability and safety of cut slopes depend on a number of factors, including:

- The type and density of the soil and/or rock;
- Presence and amount of any seepage;
- Depth of cut;
- Proximity and magnitude of the cut to any surcharge loads, such as stockpiled material, traffic loads, or structures;
- Duration of the open excavation; and
- Care and methods used by the contractor.

Because of the variables involved, actual slope angles required for stability in temporary cut areas can only be estimated before construction. Appropriate temporary slope inclinations will ultimately depend on the actual soil and groundwater seepage conditions exposed in the cuts at the time of construction. It is the responsibility of the contractor to ensure that all excavations are properly sloped or braced for worker protection, in accordance with HIOSH and OSHA guidelines. If shoring is required, then shoring design is the responsibility of the contractor and should be designed by a professional engineer registered in the State of Hawai'i. Further, the shoring design engineer should be provided with a copy of this report.

While this report describes certain approaches to excavation and shoring, the contractor is responsible for selecting and designing the specific methods, monitoring the excavations for safety, and providing shoring required to protect personnel and adjacent structural elements.

If the excavations are left open for extended periods of time, then caving of the sidewalls may occur. The presence of caved material will limit the ability to properly backfill and compact the excavations after underpinning is completed.

7.1.2 Dewatering

Groundwater is not expected within the anticipated depths of excavations but is important to note that after periods of heavy precipitation, surface water and perched water may be encountered in excavations

and should be removed. Pumping from sumps located within the excavation will likely be effective in removing water resulting from seepage; though sump pumps may require closer spacing in areas of perched water. However, this will not prevent or reduce the greater risk of unsupported trench wall caving and sloughing caused by seepage. If groundwater is present at the base of excavations and sensitive subgrade conditions exist, we recommend placing stabilization material at the base of the excavation as a working platform. Stabilization material should be placed to a minimum thickness of 12 inches and should meet the criteria discussed in *Section 7.2 Structural Fill and Backfill*.

The project specifications should affirm that the contractor is responsible for temporary drainage of surface water and groundwater as necessary to prevent standing water and/or erosion at the working surface or in excavations.

7.2 Structural Fill and Backfill

Structural fill should be considered to include any fill that is placed beneath buildings, foundations, slabs, pavements, and other areas intended to support structural elements or within their influence zone. A variety of material may be used as structural fill at the site. However, all structural fill should be free of debris, clay balls, roots, organic matter, man-made contaminants, particles with greatest dimension exceeding 4 inches, and other deleterious materials, and should meet the appropriate specification provided in the SS (Counties 1986).

Fill and backfill materials should be placed and compacted in lifts with maximum uncompacted thicknesses and relative densities as recommended in *Section 7.3 – Fill Placement and Compaction* of this report.

7.2.1 Native Soils

The near-surface, on-site soils are clayey sand that exhibit expansive behavior and would require additional efforts to separate the stockpile, moisture conditioning, and/or possibly blend the near-surface soils with non-expansive granular import soil prior to being used as structural fill. Therefore, it is unlikely that the on-site soils will be suitable for use as structural fill. However, they may be suitable for reuse in restoring the lawn and landscaping at the site after construction.

7.2.2 Imported Select Structural Fill

Imported granular material used as structural fill should be pit or quarry run rock, crushed rock, crushed gravel, and sand or coral and should meet the specifications of No. 10 or better material provided in SS Section 15 – Crushed Rock (Counties 1986).

7.3 Fill Placement and Compaction

Structural fill should be placed and compacted in accordance with SS Sections 11 and 13 (Counties 1986) and the following guidelines.

- Place fill and backfill on a prepared subgrade that consists of firm, inorganic native soils or approved structural fill.

- Place fill or backfill in uniform horizontal lifts with a thickness appropriate for the material type and compaction equipment. Table 5 provides general guidance for uncompacted lift thicknesses.

Table 5 – Guidelines for Uncompacted Lift Thickness

Compaction Equipment	Fine-Grained Soil	Granular and Crushed Rock Maximum Particle Size $\leq 1\frac{1}{2}$ inch	Crushed Rock Maximum Particle Size $> 1\frac{1}{2}$ inch
Jumping Jack	4 - 6	4 – 8	Not Recommended
Rubber-Tire Equipment	6 - 8	10 – 12	6 – 8
Light Roller	8 - 10	10 – 12	8 – 10
Heavy Roller	10 – 12	12 – 18	12 – 16
Hoe Pack Equipment	12 - 16	18 – 24	12 – 16

Note: The above table is based on our experience and is intended to serve as a guideline. The information provided in this table should not be included in the project specifications.

- Do not place fill and backfill until the required tests and evaluation of the underlying materials have been made and the appropriate approvals have been obtained.
- Limit the maximum particle size within the fill to two-thirds of the loose lift thickness.
- Control the moisture content of the fill to within 2 percent of the optimum moisture content based on laboratory modified Proctor tests (ASTM D1557). The optimum moisture content corresponds to the maximum attainable modified Proctor dry density.
- Perform a representative number of in-place density tests on structural fill in the field to verify adequate compaction.
- Compact fill soils to the percentages of maximum dry density as shown in Table 6.

Table 6 – Fill Compaction Criteria

Fill Type	Percent of Maximum Dry Density Determined in Accordance with ASTM D1557		
	0 – 2 Feet Below Subgrade	>2 Feet Below Subgrade	Pipe Bedding and Pipe Zone
General Structural Fill (fine-grained materials)	92	92	-----
General Structural Fill (granular materials)	95	92	-----
Aggregate Base	95	95	-----
Trench Backfill	95	92	90
Nonstructural Trench Backfill	88	88	-----
Nonstructural Zones	88	88	90

Note: Structural fill with more than 30 percent retained on the 3/4-inch sieve should be compacted to a well-keyed dense state within 3 percent of optimum moisture content. Compaction should be verified by qualified personnel through performance testing, such as a proof roll or other practical means.

During structural fill placement and compaction, a sufficient number of in-place density tests should be completed by Hart Crowser or their representative to verify that the specified degree of compaction is being achieved.

8.0 DRAINAGE DESIGN RECOMMENDATIONS

8.1 Temporary Drainage

During retrofit work, the contractor should be responsible for temporary drainage of surface runoff and groundwater as necessary to prevent standing water and/or erosion at the working surface. During rough and finished grading of the building site, the contractor should keep all excavations free of water.

8.2 Surface Drainage

As noted herein, the soils at the site are prone to shrinkage and swelling. Shrink-swell is caused by excess moisture seeping into the soils around and underlying the footings. Final grading should be designed to divert water flow away from structural elements at a minimum 2 percent gradient for a distance of at least 5 feet.

Downspouts or roof scuppers should discharge into a storm drain system that carries the collected water away from the building.

9.0 FOUNDATION REVIEW, CONSTRUCTION, AND POST-CONSTRUCTION OBSERVATIONS

DHHL should allow Hart Crowser to review any foundation plan to confirm that our foundation recommendations have been adequately incorporated.

Satisfactory foundation and earthwork performance depend to a large degree on quality of construction. Sufficient monitoring of the contractor's activities is a key part of determining that the work is completed in accordance with the construction drawings and specifications. We recommend retaining Hart Crowser to monitor construction at the site to confirm that subsurface conditions are consistent with the site explorations and that the intent of project plans and specifications related to earthwork and foundation construction is being met. We recommend that Hart Crowser observe structural subgrades, installation and testing of piles, and placement/compaction of fill.

Once the remedial measures have been constructed, we recommend that a monthly survey over a continuous 12-month period be performed with the baseline reading occurring right after construction is complete. Ideally, 6 to 10 survey points would be placed strategically around the duplex and on some footing columns. The readings would provide information to verify that either the remedial measures have been successful or additional work would be necessary.

10.0 LIMITATIONS

We have prepared this report for the exclusive use of G70 and in accordance with our approved scope of services. Our report is intended to provide our opinion of geotechnical parameters for design and construction of the proposed project based on exploration locations that are believed to be representative of site conditions. However, conditions can vary significantly, and our conclusions should not be construed as a warranty or guarantee of subsurface conditions or future site performance.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in the field of geotechnical engineering in this area at the time this report was prepared. No warranty, express or implied, should be understood.

Any electronic form, facsimile, or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by Hart Crowser and will serve as the official document of record.

11.0 REFERENCES

AECOM, 2012. Kalawahine Streamside Subdivision, Water Infiltration Concerns. Prepared for Department of Hawaiian Homelands, May 31, 2012.

Asniar, N., Purwana, Y.M., and N.S. Surjandari, 2019. Tuff as rock and soil: Review of the literature on tuff geotechnical, chemical, and mineralogical properties around the world and in Indonesia. AIP Conference Proceedings 2114, 050022 (2019), June 26, 2019.

Blessen, J.B., D. Deardoff, R. Dikeman, J. Kortan, J. Malone, K. Olsen, and N. Waltz, 2017. Supportworks Technical Manual. Supportworks, Inc., March 2017.

Cannon, E.C. and R.R. Burgmann, compilers, 2006. Fault number 2610I, Hilina fault system, Holei Pali section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, <http://earthquakes.usgs.gov/hazards/qfaults>, accessed 10/01/2014 01:23 PM.

Counties 1986. Standard Specifications for Public Works Construction. County of Kaua'i, City and County of Honolulu, County of Maui, County of Hawai'i of the State of Hawai'i, September 1986.

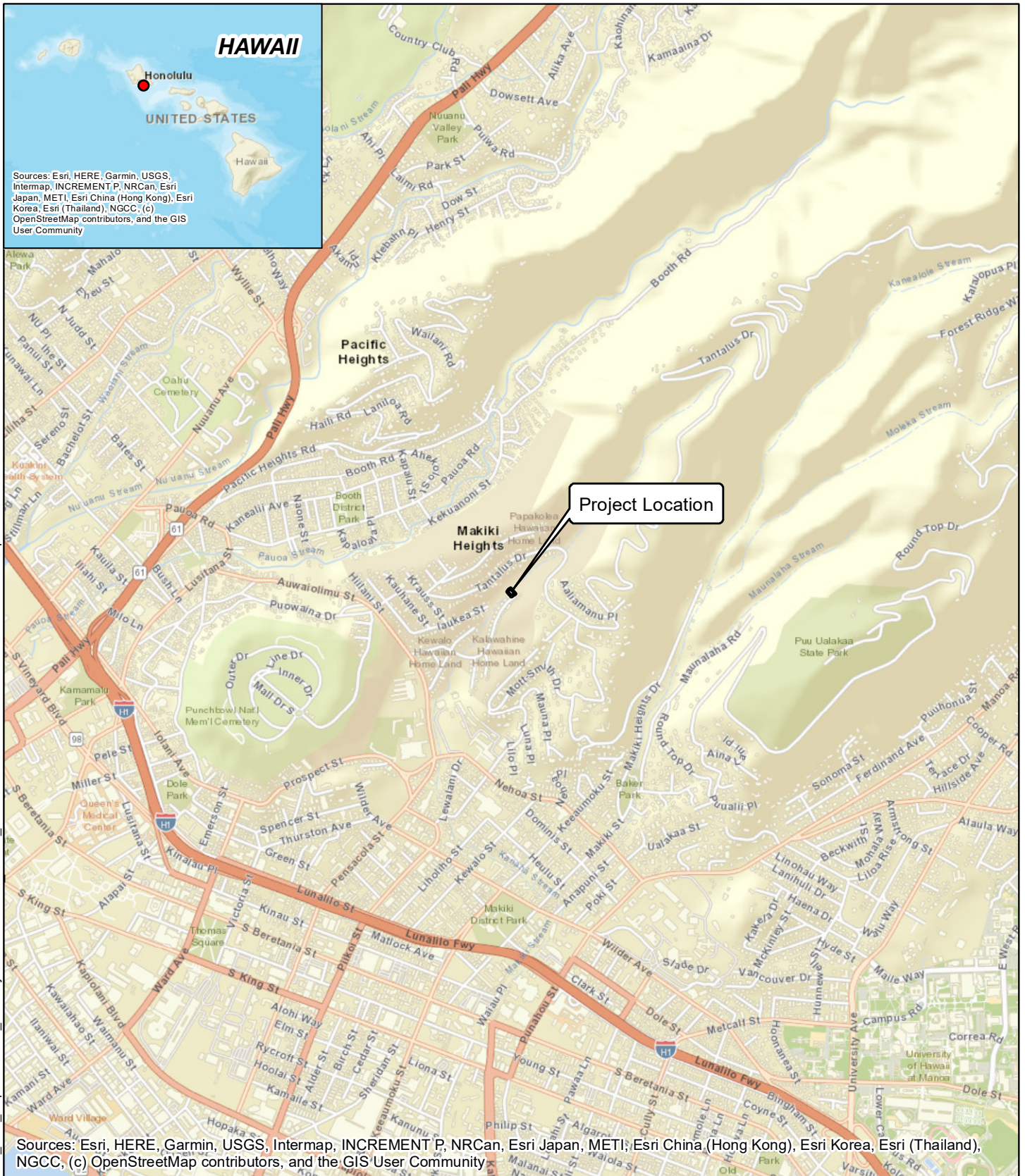
DHHL, 2011. Correspondence from Senator Daniel K. Akaka to DHHL Acting Chairman, February 7, 2011 and June 17, 2011.

DeLan, T. and X. QiaoLin, 2014. Mechanical Properties Research Base on Porous Basalt. Electronic Journal of Geotechnical Engineering, Volume 19, pp. 8295 – 8304, 2014.

Ellen, S.D., R.K. Mark, S.H. Cannon, and D.L. Knifong 1993. Map of the debris flow hazard in the Honolulu district of Oahu, Hawai'i: U.S. Geological Survey Open File Report 93-213, 28p., 1 plate, 1:100,000 scale.

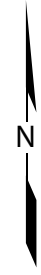
- Ellen, S.D., L.S.M. Liu, R.W. Fleming, M.E. Reid, and M.J. Johnson 1995. Relation of slow-moving landslides to earth materials and other factors in valleys of the Honolulu district of O'ahu, Hawai'i: U.S. Geological Survey Open-File Report 95-218, 51p. 1 plate, 1:100,000 scale.
- Federal Highway Administration (FHWA) 2005. Publication No. NHI-05-039 Micropile Design and Construction, US Department of Transportation, December 2005.
- FHWA 2010. Publication No. NHI-10-016 Drilled Shafts: Construction Procedures and LRFD Design Methods, US Department of Transportation, May 2010
- International Code Council (ICC) 2012. International Building Code.
- Nichols, W.D., P.M. Shade, and C.D. Hunt, Jr. 1996. Regional Aquifer-System Analysis – O'ahu , Hawai'i, U.S. Geological Survey Professional Paper 1412-A.
- Sherrod, D.R., J.M. Sinton, S.E. Watkins, and K.M. Brunt, 2007. Geologic Map of the State of Hawai'i: U.S. Geological Survey Open File Report 2007-1089, 85 p., 1 plate, 1:100,000 scale
- State of Hawai'i Department of Transportation 2005, Standard Specifications.
- United States Army Corps of Engineers (USACE), 1994. Engineering Manual (EM) 1110-1-2908 Rock Foundations, Department of the Army, November 1994.
- U.S. Department of Agriculture (USDA) 2017. National Resources Conservation Service. *Web Soil Survey*. <http://websoilsurvey.nrcs.usda.gov/>.
- U.S. Geologic Survey (USGS) 2018. U.S. Seismic Design Maps <http://earthquake.usgs.gov/designmaps/us/application.php>.
- United States Geologic Survey (USGS), 2020. National Water Information System. <https://maps.waterdata.usgs.gov/mapper>
- Yamada, M.T. 2016. Unconfined Compression Tests on Basalt Rocks from Hawaii, Master of Science in Civil Engineering (MSCE) Thesis submitted to University of Hawaii at Manoa, March 2016.

Document Path: F:\Notebooks\3140024001_G70_Kapahu Street_Stability\GIS\MGIS\3140024001_VM.mxd Date: 11/11/2020 User Name: ericindquist



0 1,000 2,000 4,000 Feet

Note: Feature locations are approximate.



2312/2316 Kapahu Street
Honolulu, Hawaii

Vicinity Map

3140-024-001

04/21






Figure

1

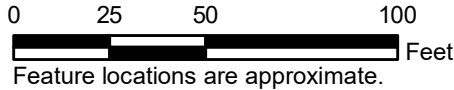



Source: Aerial photograph provided by Hexagon Imagery Program Data.

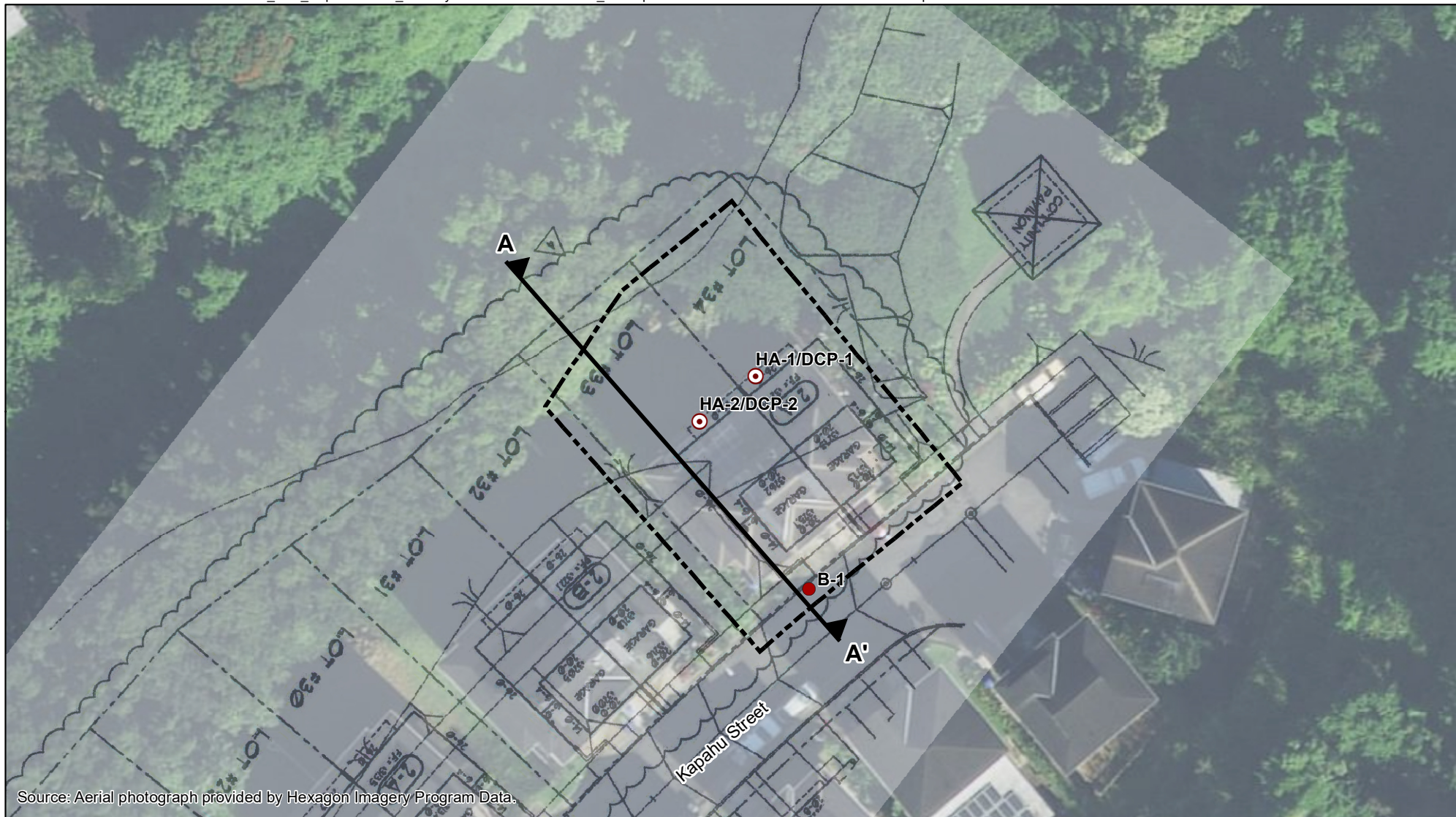
Legend

-  Hand Auger/Dynamic Cone Penetrometer
-  Boring
-  Site Boundary

Note: See Appendix C for alignment of seismic refraction lines.



2312/2316 Kapahu Street Honolulu, Hawaii	
Site Plan	
3140-024-001	04/21
 <small>A division of Haley & Aldrich</small>	Figure 2

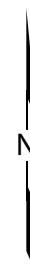
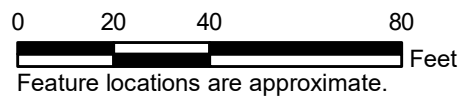


Source: Aerial photograph provided by Hexagon Imagery Program Data.

Legend

- Hand Auger/Dynamic Cone Penetrometer
- Boring
- Site Boundary

Note: Lot overlay from "Kalawahine Steamside Subdivision" (AECOM 2012)



2312/2316 Kapahu Street
Honolulu, Hawaii

Lot Map

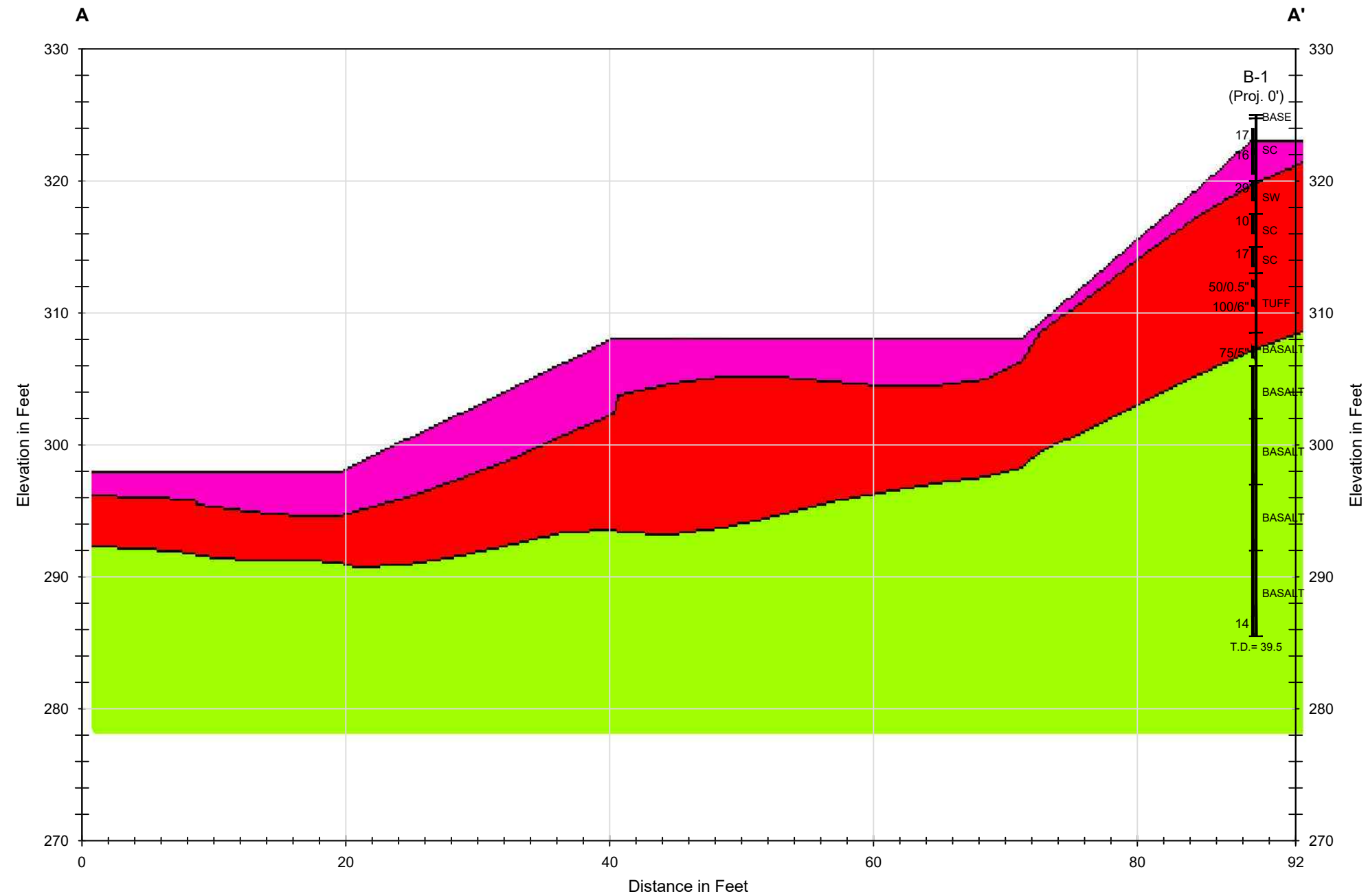
3140-024-001

04/21



Figure

3



Legend

- Layer 1: Unconsolidated soil (Vs from 1000 - 1500 fps)
- Layer 2: Very stiff soil, tuff (Vs from 2300 - 2500 fps)
- Layer 3: Basalt (Vs > 6000 fps)

NOTE

This subsurface profile is generalized from materials observed in soil borings and seismic survey information. Variations may exist between profile and actual conditions.

0 10 20
Horizontal and Vertical Scale in Feet

Reference: Surface profile line created from LiDar data provided by Olsson Associates on November 5, 2005. Measured ground surface from Global Geophysics, LLC (October 30, 2020)

2312/2316 Kapahu Street
Honolulu, Hawaii

General Subsurface Profile A-A'

3140-024-001

04/21

HARTCROWSER
A Division of Healy & Aldrich

Figure

4

APPENDIX A

Field Explorations

APPENDIX A

Field Explorations

This appendix documents the processes Hart Crowser used to determine the nature (and quality) of the soil and bedrock underlying the project site addressed by this report. The discussion includes information on the following subjects:

- Explorations and Their Locations
- Hollow-Stem Auger and HQ Core Borings
- Standard Penetration Test (SPT) Procedures

Explorations and Their Locations

Subsurface explorations for this project included one mechanically drilled boring and two hand-augered borings. The exploration logs in this appendix show our interpretation of the explorations, sampling, and testing data. The logs indicate the depths where the soils change. Note that the change may be gradual. In the field, we classified the samples taken from the explorations according to the methods presented on Figure A-1 *Key to Exploration Logs*. This key also provides a legend explaining the symbols and abbreviations used in the exploration logs.

Hollow-Stem Auger and HPQ Core Borings

One boring designated B-1 was drilled on September 2, 2020, using a 4.5-inch-diameter hollow-stem auger and a 3.35-inch PQ core barrel (when basalt rock was encountered) advanced with a track-mounted drill rig subcontracted by Hart Crowser. The drilling was continuously observed by a geologic staff member from Hart Crowser and detailed field logs of the borings were prepared. Figures 3 to 4 of the report show the approximate locations of the borings.

Standard Penetration Test (SPT) Procedures (ASTM D 1586)

Using an SPT sampler, we obtained soil samples in 2.5-foot and 5-foot sampling intervals. The SPT test is an approximate measure of soil density and consistency. To be useful, the results must be used with engineering judgment in conjunction with other tests. The SPT employs a standard 2-inch outside-diameter split-spoon sampler to obtain disturbed samples. Using a 140-pound manual hammer, free-falling 30 inches, the sampler is driven into the soil for 18 inches. The number of blows required to drive the sampler the last 12 inches only is the Standard Penetration Resistance. This resistance (also referred to as blow count or N-value), measures the relative density of granular soils and the consistency of cohesive soils. The N-values are plotted on the boring logs at their respective sample depths.

Soil samples are recovered from the split-barrel samplers, field classified, and placed into watertight bags. They are then taken to a subcontracted soils laboratory for further testing.

Hand Auger Borings and DCP Testing

Two hand augured borings designated HA-1 and HA-2 were advanced on September 2, 2020 by a geologist from Hart Crowser. Detailed field logs were prepared of each hand auger. Disturbed (“grab”) samples were

collected from drill spoils during hand auger explorations. Sampling intervals are shown in the exploration logs in this attachment. Soil samples were field classified, and placed into watertight bags. They were then taken to a subcontracted laboratory for further testing

Dynamic Cone Penetration (DCP) Testing

US Army Corps of Engineers Dual Mass DCP testing was completed at HA-1 and HA-2. The DCP consists of a steel extension shaft assembly with a 60-degree hardened steel cone tip attached to one end which is driven into the subgrade by means of a sliding dual mass (10.1- or 17.6-pound) hammer. Testing was conducted in accordance with ASTM D 6951/D 6951M-09. Testing provides an evaluation of in-place California Bearing Ratio (CBR) and resilient modulus values for aggregate and soils. DCP testing was conducted by a member of Hart Crowser's geotechnical engineering staff.

KEY TO EXP LOGS (SOIL/ROCK 1) HAWAII - F:\GINTHC_LIBRARY\GLB - 11/11/20 11:57 - F:\NOTES\BOOKS\3140024001_G70_KAPAHU STREET_STABILITY\FIELD DATA\PERM_GINT FILES\3140024001-BL.GPJ - melissaschweitzer

Sample Description

Identification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. ASTM D 2488 visual-manual identification methods were used as a guide. Where laboratory testing confirmed visual-manual identifications, then ASTM D 2487 was used to classify the soils.

Relative Density/Consistency

Soil density/consistency in borings is related primarily to the standard penetration resistance (N). Soil density/consistency in test pits and probes is estimated based on visual observation and is presented parenthetically on the logs.

SAND or GRAVEL Relative Density	N (Blows/Foot)	SILT or CLAY Consistency	N (Blows/Foot)
Very loose	0 to 4	Very soft	0 to 1
Loose	5 to 10	Soft	2 to 4
Medium dense	11 to 30	Medium stiff	5 to 8
Dense	31 to 50	Stiff	9 to 15
Very dense	>50	Very stiff	16 to 30
		Hard	>30

Moisture

Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

USCS Soil Classification Chart (ASTM D 2487)

Major Divisions		Symbols		Typical Descriptions
		Graph	USCS	
Coarse Grained Soils More than 50% of Material Retained on No. 200 Sieve	Gravel and Gravelly Soils More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels (<5% fines)	GW	Well-Graded Gravel; Well-Graded Gravel with Sand
			GP	Poorly Graded Gravel; Poorly Graded Gravel with Sand
		Gravels (5-12% fines)	GW-GM	Well-Graded Gravel with Silt; Well-Graded Gravel with Silt and Sand
			GW-GC	Well-Graded Gravel with Clay; Well-Graded Gravel with Clay and Sand
			GP-GM	Poorly Graded Gravel with Silt; Poorly Graded Gravel with Silt and Sand
			GP-GC	Poorly Graded Gravel with Clay; Poorly Graded Gravel with Clay and Sand
	Sand and Sandy Soils More than 50% of Coarse Fraction Passing No. 4 Sieve	Gravels with Fines (>12% fines)	GM	Silty Gravel; Silty Gravel with Sand
			GC	Clayey Gravel; Clayey Gravel with Sand
		Sands with few Fines (<5% fines)	SW	Well-Graded Sand; Well-Graded Sand with Gravel
			SP	Poorly Graded Sand; Poorly Graded Sand with Gravel
			SW-SM	Well-Graded Sand with Silt; Well-Graded Sand with Silt and Gravel
			SW-SC	Well-Graded Sand with Clay; Well-Graded Sand with Clay and Gravel
Fine Grained Soils More than 50% of Material Passing No. 200 Sieve	Sands (5-12% fines)		SP-SM	Poorly Graded Sand with Silt; Poorly Graded Sand with Silt and Gravel
			SP-SC	Poorly Graded Sand with Clay; Poorly Graded Sand with Clay and Gravel
		Sands with Fines (>12% fines)	SM	Silty Sand; Silty Sand with Gravel
	Silts		SC	Clayey Sand; Clayey Sand with Gravel
			ML	Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
			MH	Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt
	Silty Clay (based on Atterberg Limits)		CL-ML	Silty Clay; Silty Clay with Sand or Gravel; Gravelly or Sandy Silty Clay
			CL	Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay
	Clays		CH	Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay
			OL/OH	Organic Soil; Organic Soil with Sand or Gravel; Sandy or Gravelly Organic Soil
	Organics		PT	Peat - Decomposing Vegetation - Fibrous to Amorphous Texture
	Highly Organic (>50% organic material)			

Minor Constituents

Estimated Percentage

Sand, Gravel	
Trace	<5
Few	5 - 15
Cobbles, Boulders	
Trace	<5
Few	5 - 10
Little	15 - 25
Some	30 - 45

Soil Test Symbols

%F	Percent Passing No. 200 Sieve
AL	Atterberg Limits (%)
	Liquid Limit (LL)
	Water Content (WC)
	Plastic Limit (PL)

CA	Chemical Analysis
CAUC	Consolidated Anisotropic Undrained Compression
CAUE	Consolidated Anisotropic Undrained Extension
CBR	California Bearing Ratio
CIDC	Consolidated Drained Isotropic Triaxial Compression
CIUC	Consolidated Isotropic Undrained Compression
CK0DC	Consolidated Drained k0 Triaxial Compression
CK0DSS	Consolidated k0 Undrained Direct Simple Shear
CK0UC	Consolidated k0 Undrained Compression
CK0UE	Consolidated k0 Undrained Extension
CRSCN	Constant Rate of Strain Consolidation
DS	Direct Shear
DSS	Direct Simple Shear
DT	In Situ Density
GS	Grain Size Classification
HYD	Hydrometer
ILCN	Incremental Load Consolidation
K0CN	k0 Consolidation
kc	Constant Head Permeability
kf	Falling Head Permeability
MD	Moisture Density Relationship
OC	Organic Content
OT	Tests by Others
P	Pressuremeter
PID	Photoionization Detector Reading
PP	Pocket Penetrometer
SG	Specific Gravity
TRS	Torsional Ring Shear
TV	Torvane
UC	Unconfined Compression
UUC	Unconsolidated Undrained Triaxial Compression
VS	Vane Shear
WC	Water Content (%)

Groundwater Indicators

▽	Groundwater Level on Date or At Time of Drilling (ATD)
▽	Groundwater Level on Date Measured in Piezometer
○	Groundwater Seepage (Test Pits)

Sample Symbols

☒	1.5" I.D. Split Spoon	■	Rock Core Run	☒	Grab
☒	3.25" O.D. Split Spoon	☒	Sonic Core	☒	Cuttings
☒	Modified California Sampler	☒	Thin-walled Sampler	☒	Push Probe

Well Symbols

Monument		Signal Cable
Surface Seal		
Bentonite Seal		
Well Casing		
Sand Pack		
Well Tip or Slotted Screen		
Slough		
		Vibrating Wire Piezometer (VP)

Rock Descriptions

	BASALT		FINGER CORAL
	BOULDERS		LIMESTONE
	BRECCIA		SANDSTONE
	CLINKER		SILTSTONE
	COBBLES		TUFF
	CORAL		VOID/CAVITY

Rock Fracture Characteristics

Term	Description
Massive	Greater than 24 inches apart
Slightly Fractured	12 to 24 inches apart
Moderately Fractured	6 to 12 inches apart
Closely Fractured	3 to 6 inches apart
Severely Fractured	Less than 3 inches apart

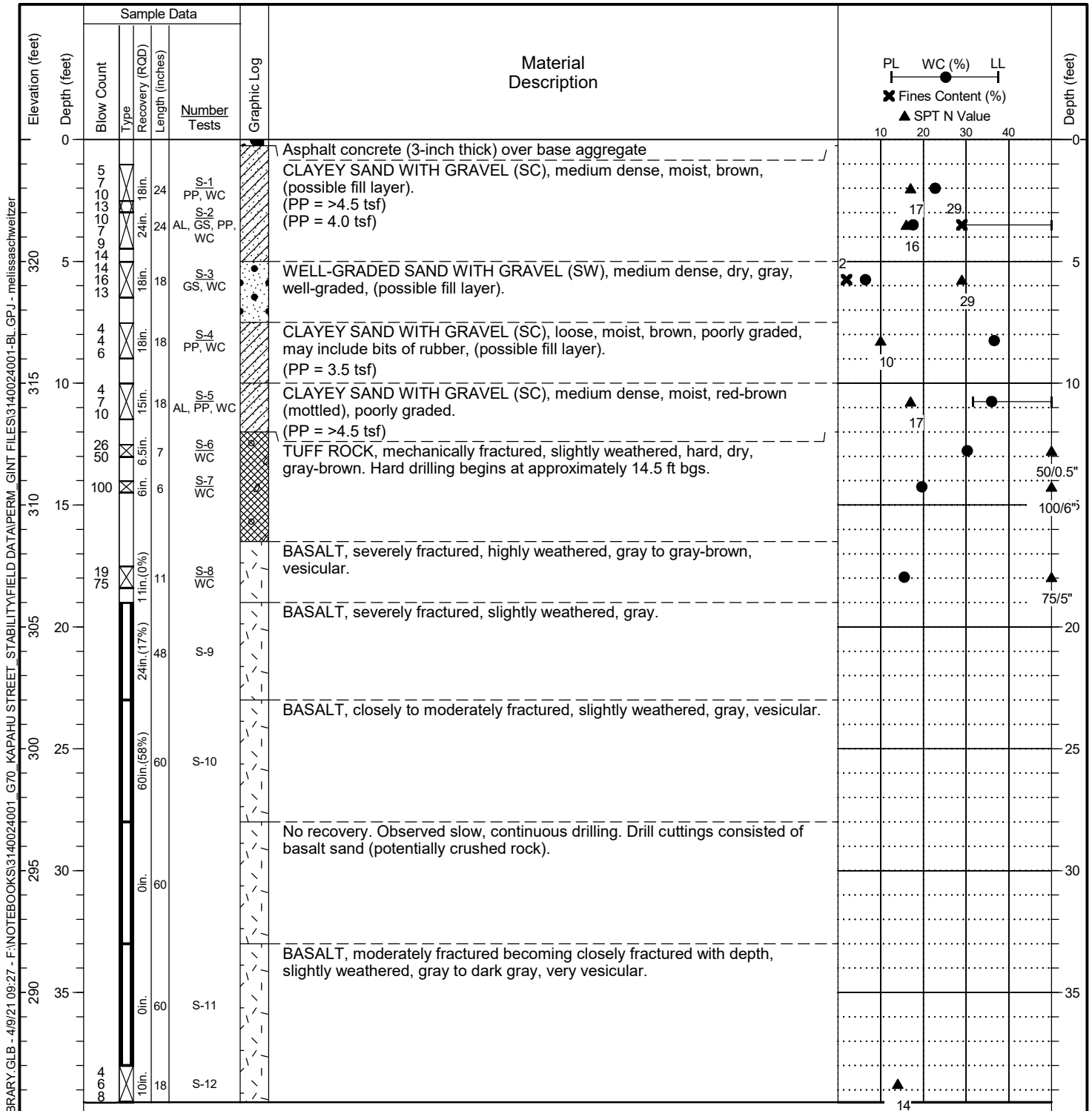
Scale of Relative Rock Weathering

Term	Description
Unweathered	Rock shows no sign of discoloration or loss of strength.
Slightly Weathered	Slight discoloration inwards from open fractures.
Moderately Weathered	Discoloration throughout and noticeably weakened though not able to break by hand.
Highly Weathered	Most minerals decomposed with some corestones present in residual soil mass. Can be broken by hand.
Extremely Weathered	Saprolite. Mineral residue completely decomposed to soil but fabric and structure preserved.

Scale of Relative Rock Hardness

Term	Field Identification
Very Soft	Crumbles under hammer blow. Can be peeled and carved by knife. Can be indented by finger pressure. Example: Saprolite
Soft	Can be indented by one hammer blow. Can be scraped or peeled by knife. SPT can penetrate by ~100 blows per foot. Example: Weathered rock, chalk-like coral reef
Medium Hard	Can be broken by one hammer blow. Cannot be scraped by knife. SPT may penetrate by ~25 blows per inch with bounce. Example: Porous rock such as clinker, cinder, and coral reef
Hard	Breaks with some difficulty after several hammer blows. Example: Vesicular, vugular, coarse-grained rock
Very Hard	Breaks with difficulty after several "pinging" hammer blows. Example: Dense, fine grain volcanic rock

Date Started: 9/2/20	Date Completed: 9/2/20	Drilling Contractor/Crew: GeoTek Hawaii, Inc.
Logged by: R. Hendrix	Checked by: J. Taylor	Drilling Method: Hollow Stem Auger
Location: Lat: 21.316644 Long: -157.835898 (WGS 84)		Rig Model/Type:
Ground Surface Elevation: 325.00 feet (NAVD 88)		Hammer Type: Auto-hammer
Comments:		Hammer Weight (pounds): 140 Hammer Drop Height (inches): 30
		Measured Hammer Efficiency (%): Not Available
		Hole Diameter: 6 inches Casing Diameter: NA
		Total Depth: 39.5 feet Depth to Groundwater: Not Identified



- General Notes:
- Refer to Figure A-1 for explanation of descriptions and symbols.
 - Material stratum lines are interpretive and actual changes may be gradual. Solid lines indicate distinct contacts and dashed lines indicate gradual or approximate contacts.
 - USCS designations are based on visual-manual identification (ASTM D 2488), unless otherwise supported by laboratory testing (ASTM D 2487).
 - Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.
 - Location and ground surface elevations are approximate.

Bottom of Borehole at 39.5 feet.



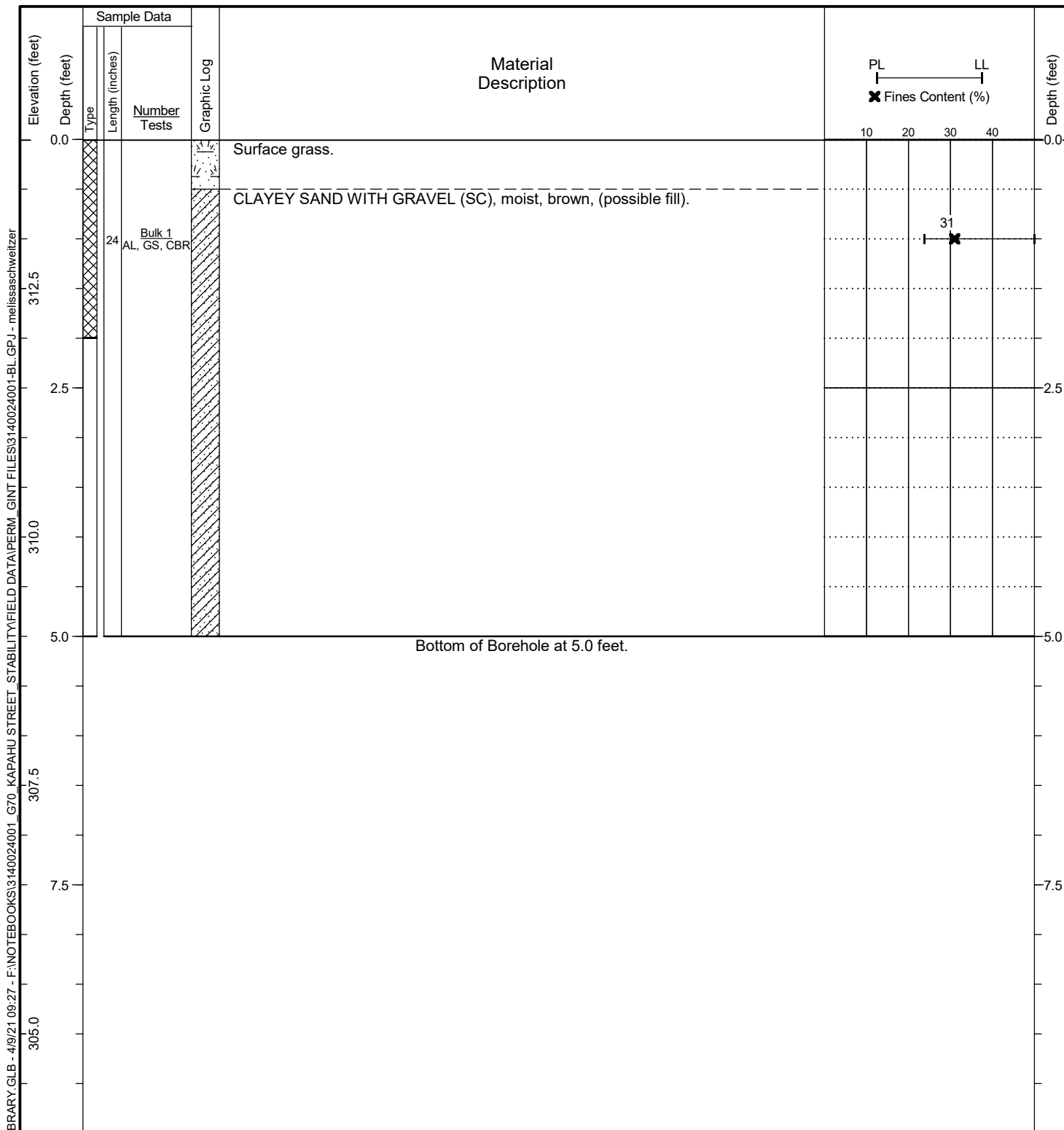
Project: 2312/2316 Kapahu Street
 Location: Honolulu, Hawaii
 Project No.: 3140-024-001

Boring Log
B-1

Figure **A-2**
 Sheet **1 of 1**

HC BORING LOG - F:\GINT\HC LIBRARY\GLB - 4/9/21 09:27 - F:\NOTEBOOKS\3140024001 - G70 KAPAHU STREET STABILITY\FIELD DATA\PERM - GINT FILES\3140024001-BL.GPJ - melissaschweitzer

Date Started: <u>9/2/20</u>	Date Completed: <u>9/2/20</u>	Contractor/Crew: <u>Hart Crowser</u>
Logged by: <u>R. Hendrix</u>	Checked by: <u>J. Taylor</u>	Rig Model/Type: _____
Location: <u>Lat: 21.316808 Long: -157.835928 (WGS 84)</u>		Hole Diameter: <u>inches</u> Casing Diameter: <u>NA</u>
Ground Surface Elevation: <u>314.00 feet (NAVD 88)</u>		Total Depth: <u>5 feet</u> Depth to Groundwater: <u>Not Identified</u>
Comments: _____		



General Notes:

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Material stratum lines are interpretive and actual changes may be gradual. Solid lines indicate distinct contacts and dashed lines indicate gradual or approximate contacts.
3. USCS designations are based on visual-manual identification (ASTM D 2488), unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.
5. Location and ground surface elevations are approximate.



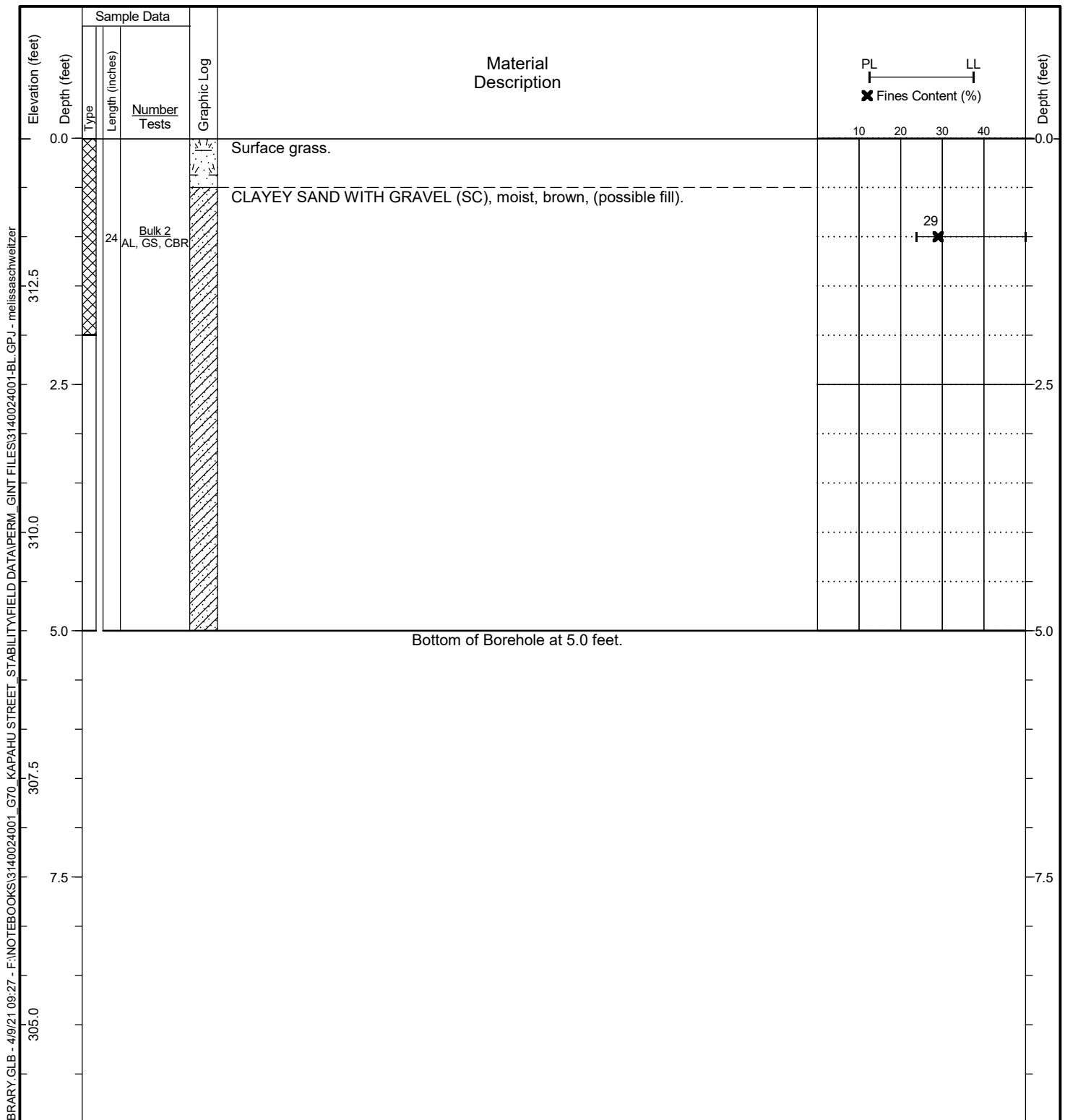
Project: 2312/2316 Kapahu Street
 Location: Honolulu, Hawaii
 Project No.: 3140-024-001

Hand-Auger Log
HA-1

Figure **A-3**
 Sheet **1 of 1**

HC PUSH PROBE - F:\GINT\HC LIBRARY\GLB - 4/9/21 09:27 - F:\NOTEBOOKS\3140024001_G70_KAPAHU STREET_STABILITY\FIELD DATA\PERM_GINT FILES\3140024001-BL.GPJ - melissaschwartz

Date Started: <u>9/2/20</u>	Date Completed: <u>9/2/20</u>	Contractor/Crew: <u>Hart Crowser</u>
Logged by: <u>R. Hendrix</u>	Checked by: <u>J. Taylor</u>	Rig Model/Type: _____
Location: <u>Lat: 21.316773 Long: -157.835975 (WGS 84)</u>		Hole Diameter: <u>inches</u> Casing Diameter: <u>NA</u>
Ground Surface Elevation: <u>314.00 feet (NAVD 88)</u>		Total Depth: <u>5 feet</u> Depth to Groundwater: <u>Not Identified</u>
Comments: _____		



General Notes:

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Material stratum lines are interpretive and actual changes may be gradual. Solid lines indicate distinct contacts and dashed lines indicate gradual or approximate contacts.
3. USCS designations are based on visual-manual identification (ASTM D 2488), unless otherwise supported by laboratory testing (ASTM D 2487).
4. Groundwater level, if indicated, is at time of drilling/excavation (ATD) or for date specified. Level may vary with time.
5. Location and ground surface elevations are approximate.

HC PUSH PROBE - F:\GINT\HC LIBRARY\GLB - 4/9/21 09:27 - F:\NOTEBOOKS\3140024001_G70_KAPAHU STREET_STABILITY\FIELD DATA\PERM_GINT FILES\3140024001-BL.GPJ - melissaschwartz

APPENDIX B

Laboratory Testing

APPENDIX B

Laboratory Testing

A geotechnical laboratory testing program was performed for this study by Hart Crowser to evaluate the basic index and geotechnical engineering properties of the site soil. Disturbed samples were tested. The tests performed and the procedures followed are outlined below.

Soil Classification

Soil samples from the explorations were visually classified in the field and classifications were verified in a controlled laboratory environment. Field and laboratory observations include density/consistency, moisture condition, and grain size and plasticity estimates.

The classifications of selected samples were checked by laboratory tests, such as water content determinations, plasticity indices, and grain size analyses. Classifications were made in general accordance with the Unified Soils Classification System (USCS) and ASTM Test Method D 2487.

Water Content Determinations

Water contents were determined for samples recovered in the explorations in general accordance with ASTM Test Method D 2216. The results of these tests are plotted at the respective sample depth on the exploration logs included in Appendix A and are also presented on Figure B-1 in this appendix.

Atterberg Limits

Atterberg limits (liquid limit, plastic limit, and plasticity index) of fine-grained soil samples were obtained in general accordance with ASTM Test Method D 4318. The results of the Atterberg limits tests completed on the samples from the explorations are presented on the exploration logs included in Appendix A and on Figure B-2 in this appendix.

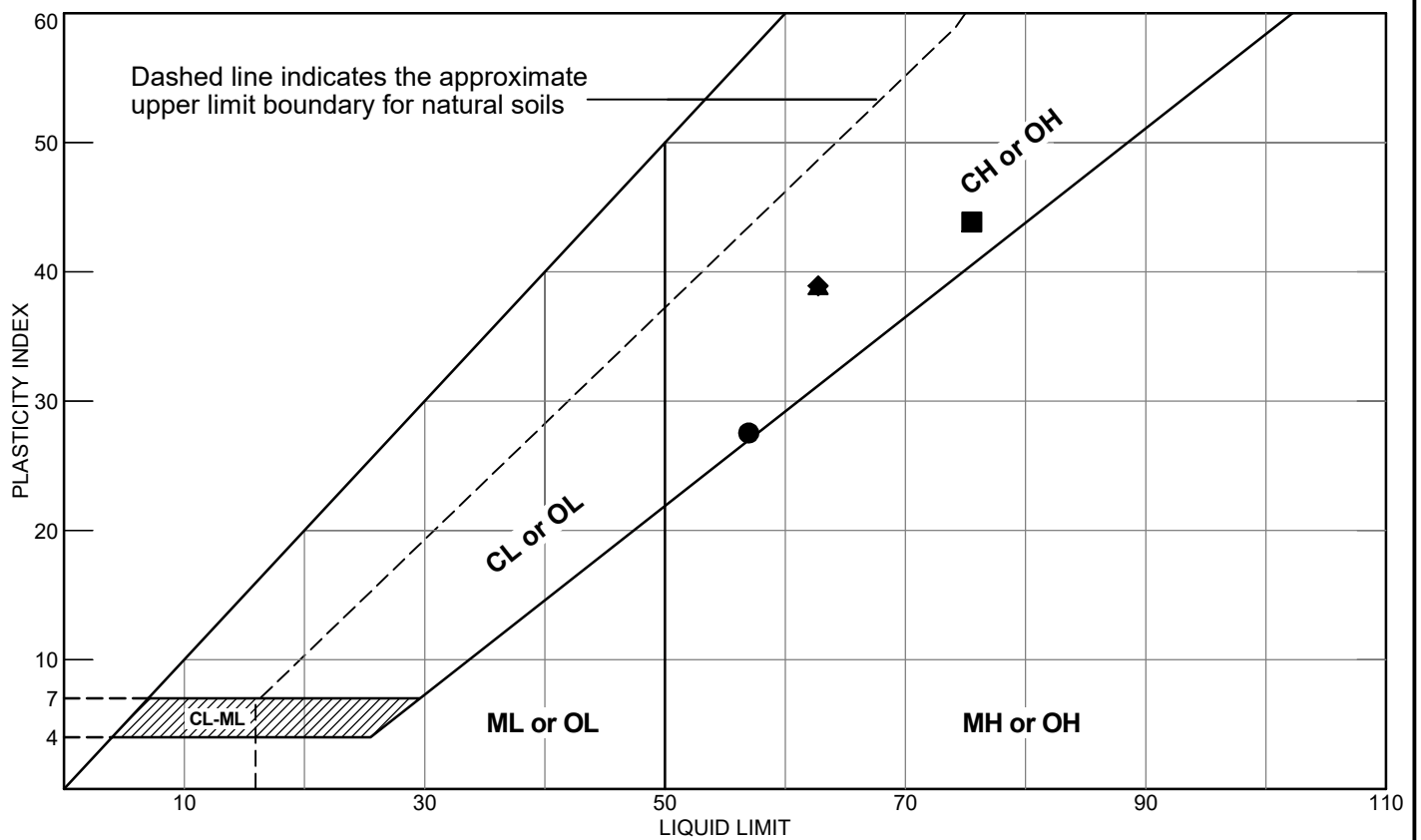
Grain Size Distribution Analyses

Grain size distribution analyses were conducted to determine the quantitative distribution of particle sizes in different soil samples. The tests were performed in general accordance with ASTM Test Methods C 136 and C 117. Test method C 117 was incorporated to determine the percentage of material finer than the 75- μm (No. 200) sieve. The results of the grain size tests completed on samples from the explorations are presented on the exploration logs included in Appendix A and on Figure B-3 in this appendix.

California Bearing Ratio (CBR) Analyses

California Bearing ratio (CBR) analyses were conducted to determine CBR values for selected soil samples. In addition to obtaining CBR values, the analysis was used to determine expansive potential for the selected soil samples. The tests were performed in general accordance with ASTM Test Method D1557. The results of the CBR tests completed on samples from the explorations are presented on the exploration logs included in Appendix A and on Figure B-4 in this appendix.

HC:ATTERBERG LIMITS - F:\GINTVHC_LIBRARY.GLB - 11/11/20 11:58 - F:\NOTEBOOKS\3140024001_G70_KAPAHU STREET_STABILITY\FIELD DATA\PERM_GINT FILES\3140024001-BL.GPJ - melissaschweitzer

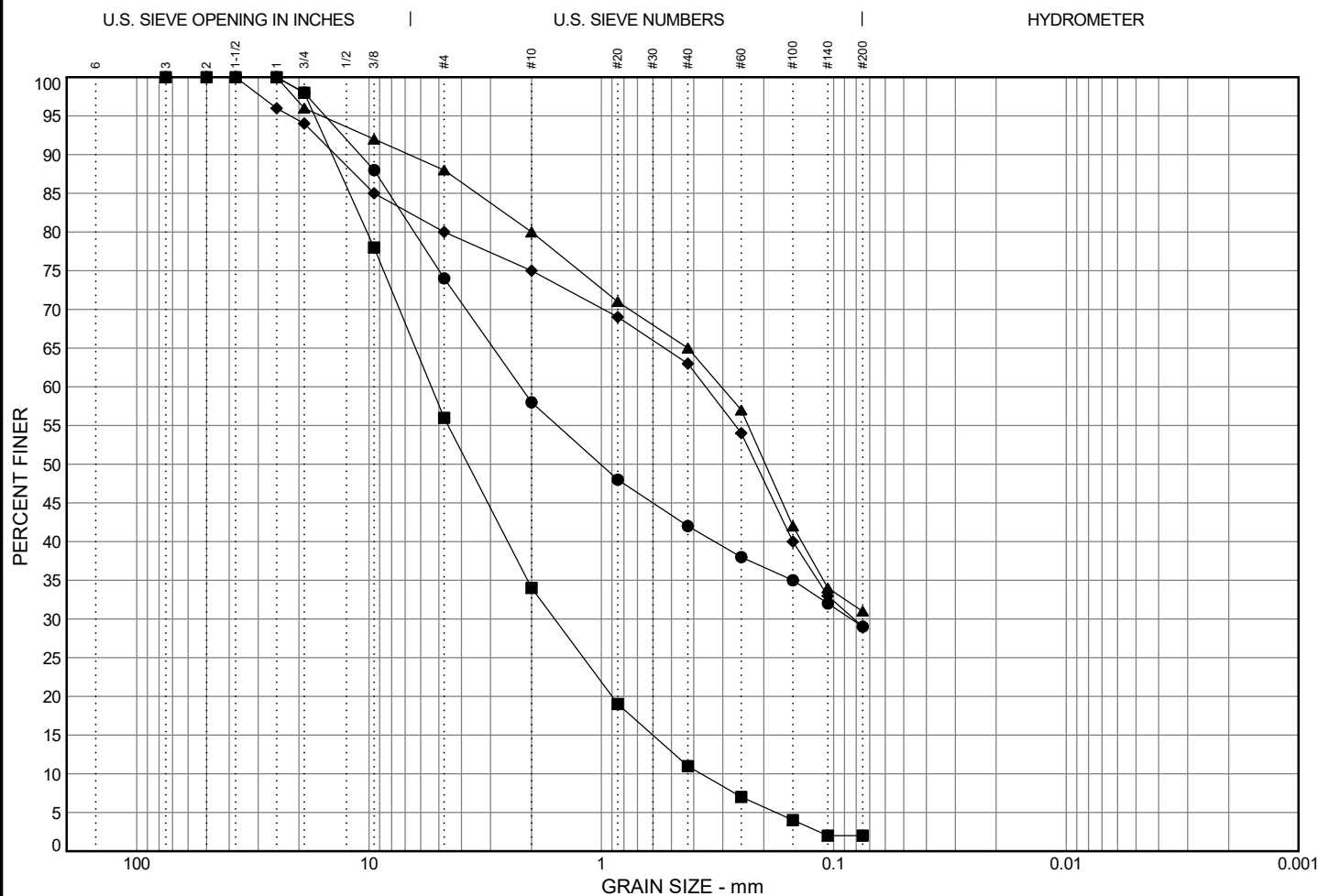


Location and Description			LL	PL	PI	#200	MC%	USCS
● Source: B-1	Sample No.: S-2	Depth: 2.5 to 4.5						
CLAYEY SAND WITH GRAVEL			57	29	28	29	18	SC
■ Source: B-1	Sample No.: S-5	Depth: 10.0 to 11.5						
CLAYEY SAND WITH GRAVEL			76	32	44	NT	36	SC
▲ Source: HA-1	Sample No.: Bulk 1	Depth: 0.0 to 2.0						
CLAYEY SAND			63	24	39	31	NT	SC
◆ Source: HA-2	Sample No.: Bulk 2	Depth: 0.0 to 2.0						
CLAYEY SAND WITH GRAVEL			63	24	39	29	NT	SC

Remarks:



HC GRAIN SIZE - F:\GINT\HC_LIBRARY\GLB - 11/11/20 11:59 - F:\NOTEBOOKS\3140024001 - G70_KAPAHU STREET STABILITY\FIELD DATA\PERM_GINT FILES\3140024001-BL_GPJ - melissaschweitzer



Project: 970 Kapuhu St.
Job No.: 669-006
Location: Honolulu, Oahu
Soil: As Received

Sample: Bulk 1

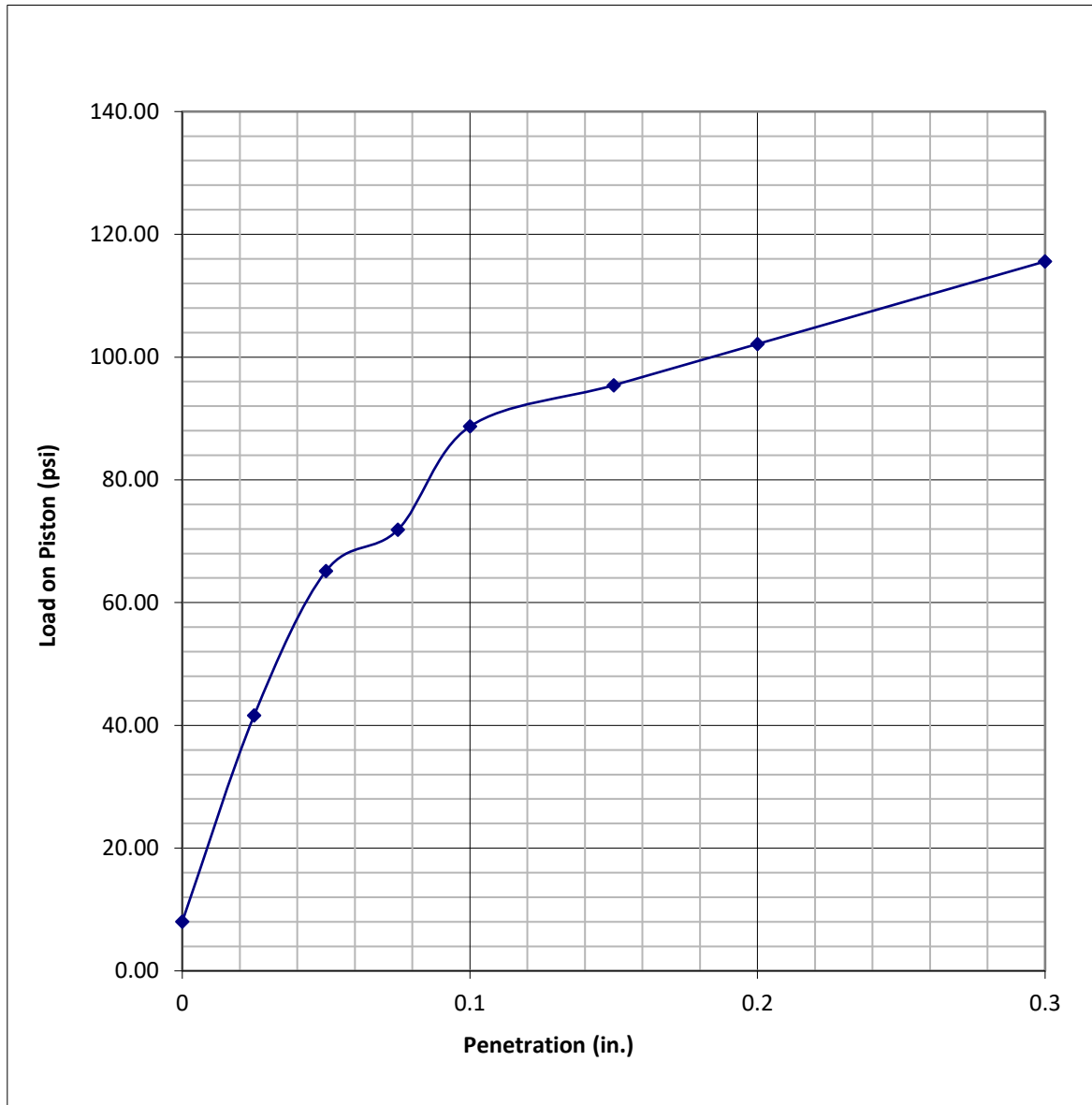
Depth: 0-2'

Method: ASTM D1557

Surcharge: 10 lbs

Condition of Sample: Soaked

Figure: n/a



CBR at 0.1: 8.9 %

at 0.2: 6.8 %

Linear expansion: 0.20 %

Dry unit weight before soak: 91.8 PCF

Dry unit weight after soak: 90.5 PCF

H2O before soak: 31.0 %

H2O top 1": 28.2 %

CBR 1883 Test Result

Date Received: 9/25/2020

Date(s) Tested: 9/25/2020-9/30/2020

Date Reported: 10/2/2020



Project: 970 Kapuhu St.
Job No.: 669-006
Location: Honolulu, Oahu
Soil: As Received

Sample: Bulk 2

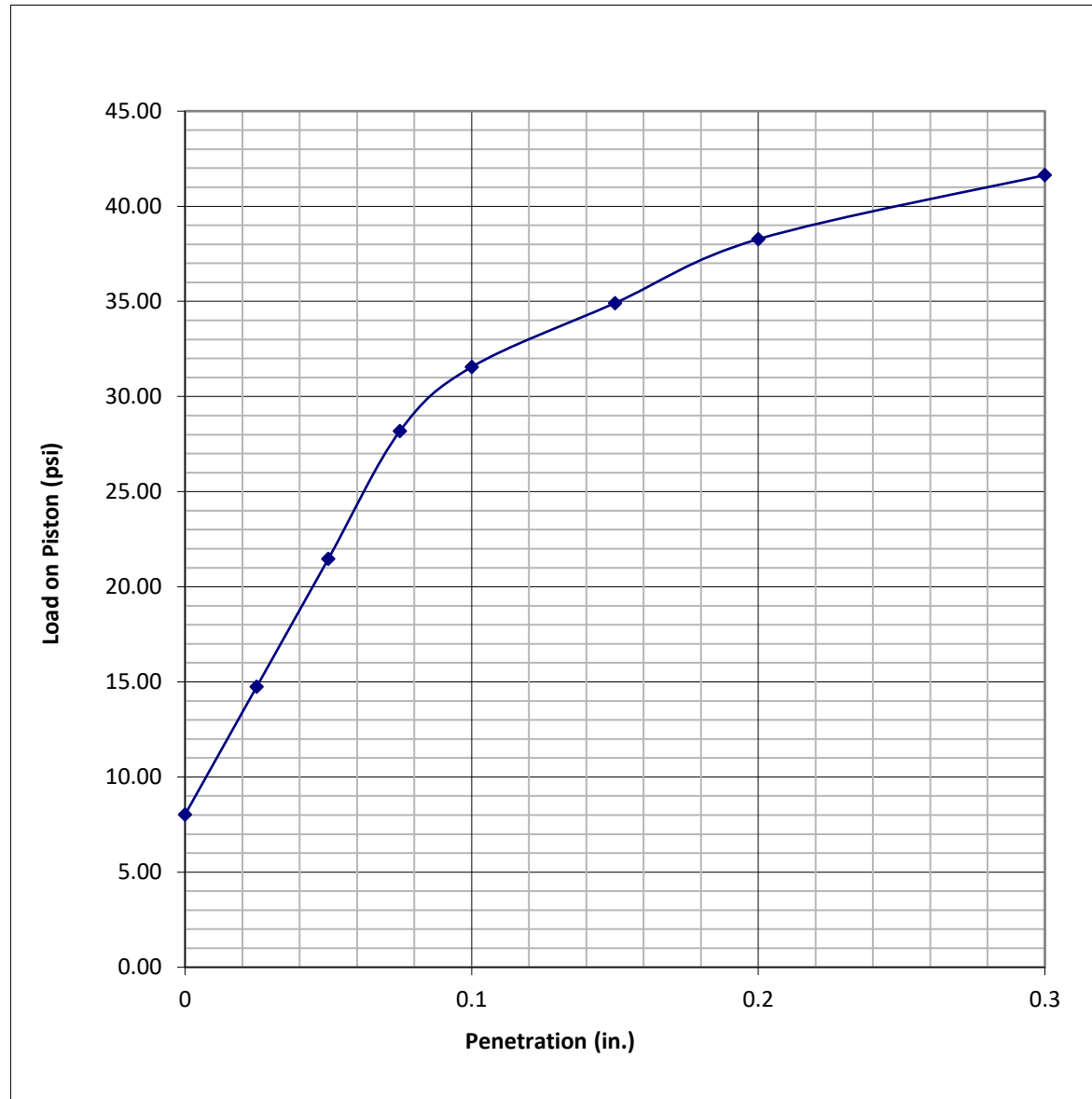
Depth: 0-2'

Method: ASTM D1557

Surcharge: 10 lbs

Condition of Sample: Soaked

Figure: n/a



CBR at 0.1: 3.2 %

at 0.2: 2.6 %

Linear expansion: 10.84 %

Dry unit weight before soak: 97.5 PCF

Dry unit weight after soak: 94.4 PCF

H2O before soak: 15.6 %

H2O top 1": 42.1 %

CBR 1883 Test Result

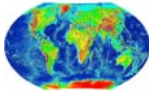
Date Received: 9/25/2020

Date(s) Tested: 9/25/2020-9/30/2020

Date Reported: 10/2/2020



APPENDIX C
Appendix C: Global Geophysics Seismic Refraction
Survey Report (October 30, 2020)



Global Geophysics

P.O. Box 2229
Redmond, WA 98073-2229

Tel: 425-890-4321
Fax: 206-5820-0838

October 30, 2020

Our ref: 110-1014.000

Hart Crowser. Inc.
500 Ala Moana Boulevard, Suite 60250
Honolulu, Hawaii 96813

Attention: Ms. JoDee Taylor

RE: REPORT FOR SEISMIC REFRACTION AT 2312/2316 KAPAHU STREET, HONOLULU, HAWAII

Dear Ms. Taylor:

Global Geophysics LLC. conducted seismic refraction survey along four transects at 2312/2316 Kapahu Street, Honolulu, Hawaii. The objective of the studies is to study the depth to bedrock.

GEOPHYSICAL METHODS AND FIELD PROCEDURES

Seismic refraction was used for this study. The following paragraphs describe the method and field procedure.

Seismic Refraction

Seismic refraction is the traditional method for determining the rock velocity for rock rippability using a controlled energy source (hammer, blank shotgun shells, or chemical explosives) to generate a seismic signal. The seismic signals are received by a series of geophones (24, for example) that are connected to a seismic cable laid on the surface in a linear manner. The geophones, evenly spaced along the geophone cable, are placed on the ground surface. The seismic energy source (sledge hammer) is used to pound on the ground at several places along the array and off both ends.

The seismic wavelets travel through the earth to the geophones that convert the acoustic energy in the ground to an electric signal in the geophone cable. The seismograph detects the arriving electric signals with respect to time and stores the records for future data processing. The seismic data is processed to determine the seismic velocity of the earth material through which the energy has traveled and to model the subsurface geology. This geophysical model depicts the earth in cross-section showing the velocity and thickness of the subsurface layers below the seismic line.

The seismic refraction survey was conducted using a Geometrics Geode 24-channel digital seismograph. The sensors used were Mark Products 4.5-Hz vertical geophones and the seismic energy source was a 20 lb. sledgehammer. The typical field procedure consisted of laying out the cables and planting the geophones at 4 ft intervals. The hammer stroke on the ground at seven locations along the geophone array. Data was collected and saved in digital format and a field record was produced on the computer screen to check the data quality in real time.

RESULTS

The line locations are presented in Figure 1. The seismic data are processed using SeisImager from Geometrics. The inverted p-wave velocity profiles are presented in Figure 2.

Three layers are interpreted:

1. Layer 1: velocity in the range of 1000-1500 ft/s; unconsolidated soil;
2. Layer 2: 2300 -2500 ft/s very still soil, tuff (based on boring B-1).
3. Basal layer: 6000 ft/s; basalt

LIMITATION OF GEOPHYSICAL METHOD

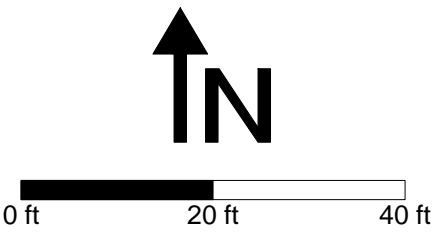
Global geophysics services are conducted in a manner consistent with the level of care and skill ordinarily exercised by other members of the geophysical community currently practicing under similar conditions subject to the time limits and financial and physical constraints applicable to the services. Seismic refraction is a remote sensing geophysical method that may not detect all subsurface conditions due to the limitations of the methods, soil conditions, size of the features and their depths.

Sincerely,

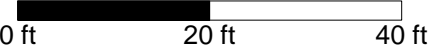
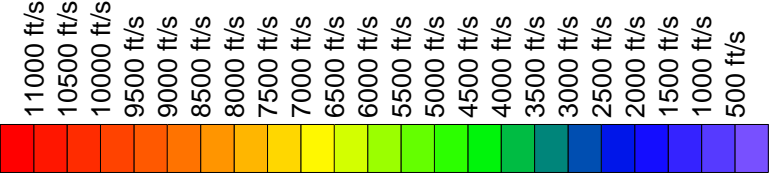
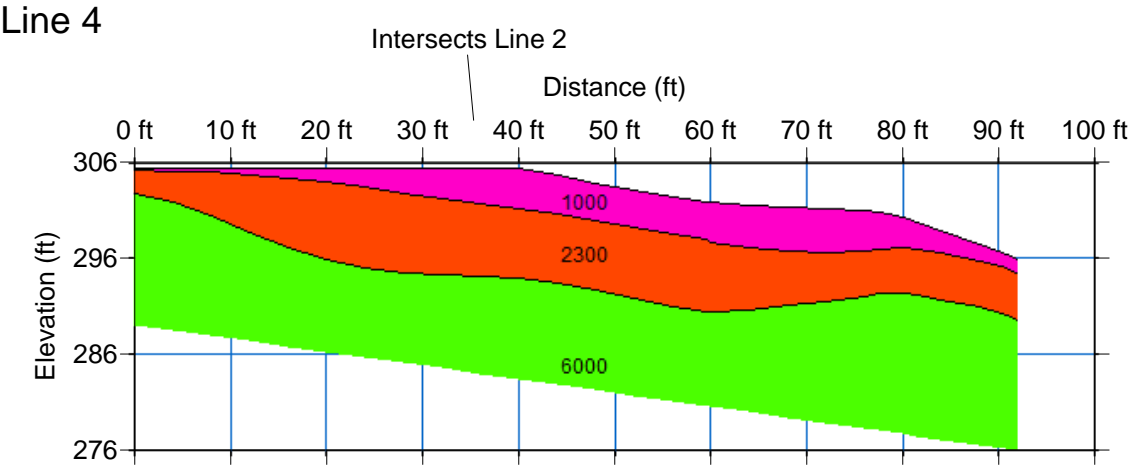
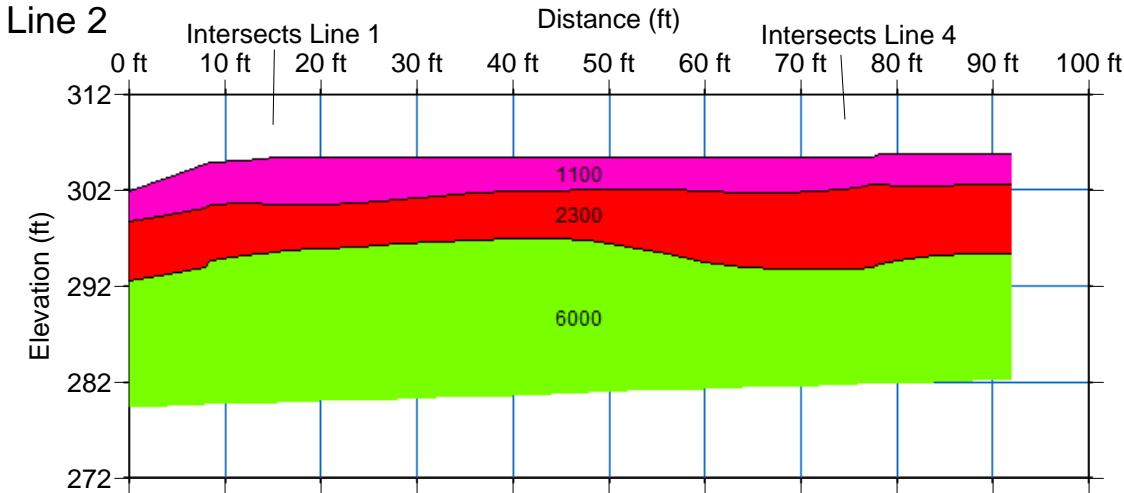
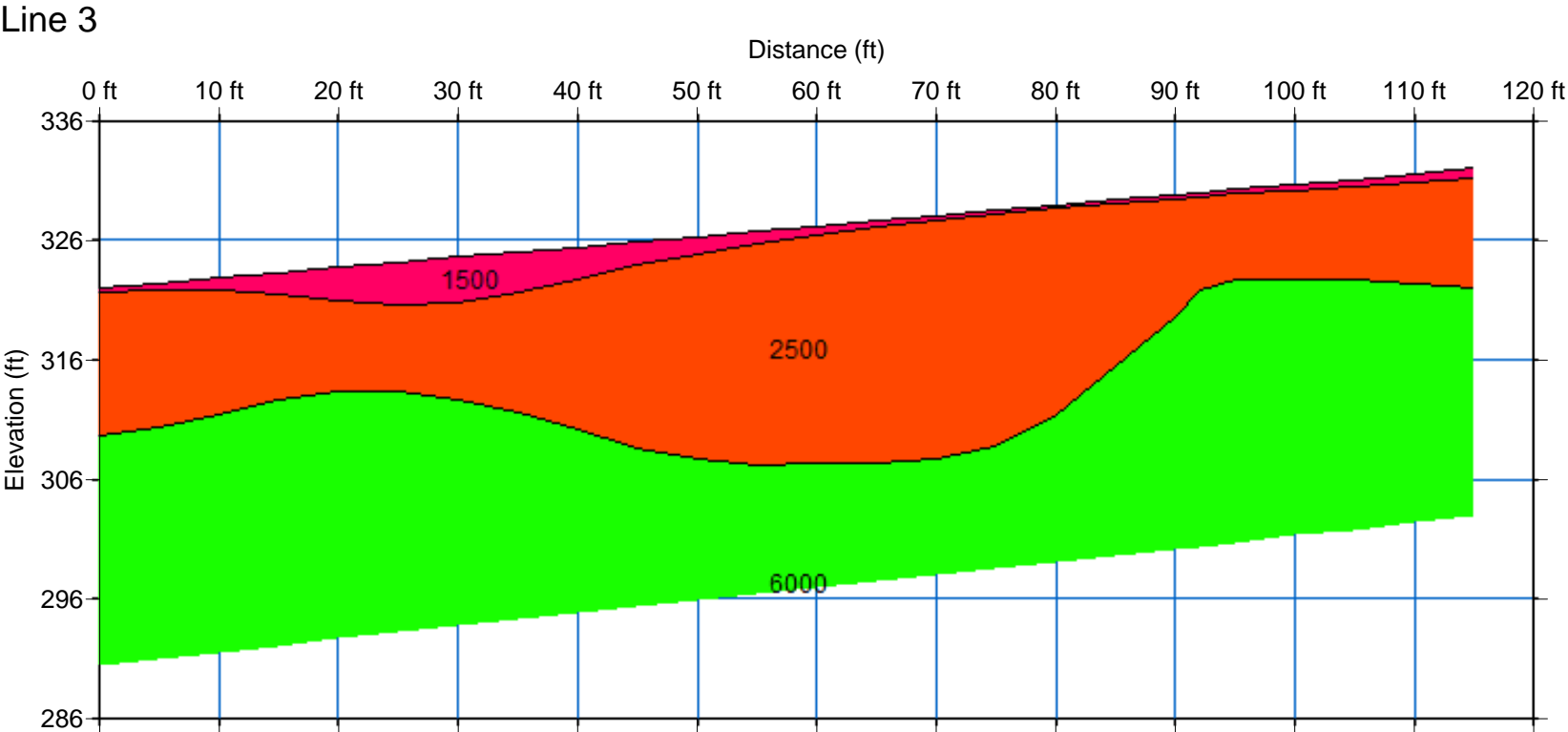
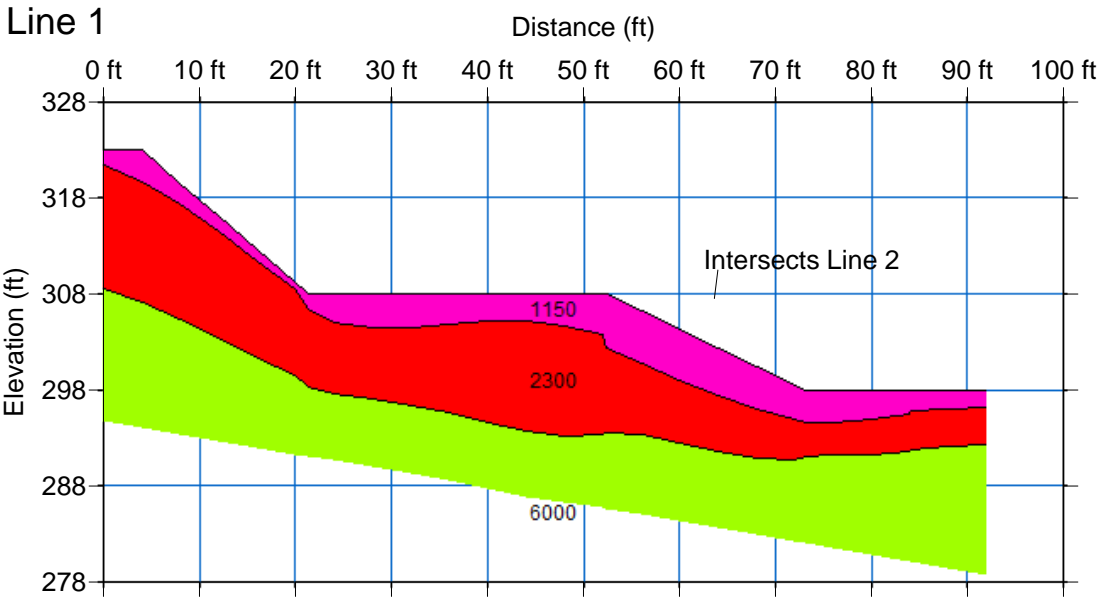
Global Geophysics



John Liu, Ph.D., R.G.
Principal Geophysicist



PROJECT			
Seismic Refraction Survey at 2312/2316 Kapahu St, Honolulu, Hawaii			
TITLE			
Site Map			
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321	Project #:	110-1014.000	FILE No.
	DESIGN	--	SCALE AS SHOWN
	CADD	EJ	REV.
	CHECK	JL	
	REVIEW	--	
FIGURE 1			



PROJECT		
Seismic Refraction Survey at 2312/2316 Kapahu St, Honolulu, Hawaii		
TITLE		
Refraction Profiles		
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321	Project # 110-1014.000	FILE No.
	DESIGN --	SCALE AS SHOWN
	CADD EJ	REV.
	CHECK JL	FIGURE 2
	REVIEW --	

2316 KAPAHU ST INTERIOR PHOTOS

Note: Photos are from Unit 2316's interior only as access for Unit 2312's interior was restricted. Assume both 2316 and 2312 units are comparable.



Crack on Lowest Level North Bedroom Closet



Ceiling Cracks on Lowest Level North Bedroom



Crack on Lowest Level South Bedroom Closet



Crack on Lowest Level Between Doorway
and Closet in South Bedroom



Ceiling and Drywall on Lowest Level Bathroom



Drywall on Lowest Level Bathroom



Uneven Gap and Cracked Door Moulding
Interior on Lowest Level