

LAND DIVISION

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION
Honolulu, Hawaii

BOARD OF LAND AND NATURAL RESOURCES

Dawn N.S. Chang
Chairperson

CONTRACT SPECIFICATIONS AND PLANS

Job No. E00BO99A
DLNR LAND DIVISION OFFICE IMPROVEMENTS
KALANIMOKU BUILDING ROOM 220
HONOLULU, OAHU, HAWAII


Architect: Omizu Architecture, Inc.

April 2024


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Approved: 

RUSSELL Y. TSUJI
Administrator
Land Division

Approved: 

CARTY S. CHANG, P.E.
Chief Engineer
Engineering Division

April 2024

NOTICE TO BIDDERS	iii
INFORMATION AND INSTRUCTIONS TO BIDDERS	I-1
PROPOSAL	P-1
SPECIAL PROVISIONS	SP-1
DETAILED SPECIFICATIONS	S-1

PLANS (Bound Separately)

DEPARTMENT OF LAND AND NATURAL RESOURCES INTERIM GENERAL
CONDITIONS, DATED OCTOBER 1994 (Bound Separately)

NOTICE TO BIDDERS
(Chapter 103D, HRS)

COMPETITIVE BIDS for Job No. **E00BO99A, DLNR Land Division Office Improvements**, Honolulu, Oahu, Hawaii shall be submitted to the Department of Land and Natural Resources, Engineering Division on the specified date and time through the Hawaii State e-Procurement (HIePRO). HIePRO is accessible through the State Procurement Office website at www.spo.hawaii.gov.

The Department of Land and Natural Resources Interim General Condition, dated October 1994, as amended, and the General Conditions –AG008, latest revision shall be made part of the specifications.

The project is located at Kalanimoku Building Room 220, 1151 Punchbowl Street Honolulu, Oahu, Hawaii.

The work shall generally consist of replacement of flooring and wall base, in the Land Division Office on the second floor of the Kalanimoku Building, Room 220. In addition, abatement of hazardous materials, testing and monitoring will be required during removal work. Repainting of existing walls, new manual window shades, temporary relocation of office furniture prior to flooring work and reinstallation of office furniture.

To be eligible to submit a bid, the Bidder must possess a valid State of Hawaii Contractor's license classification "B".

A voluntary pre-bid conference and site visit will be held at the project site, on the second floor in the conference room of the Kalanimoku Building, Room 220 on May 3, 2024 at 1:30 pm. In order to protect public health and safety, interested bidders must wear a mask and follow social distancing practices by maintaining a distance of 6 feet from each other.

The estimated cost of construction is \$360,000.00.

The award of the contract, if it be awarded, will be subject to the availability of funds.

Since the estimated value of the cost of construction is more than \$250,000, the apprenticeship agreement preference pursuant to Hawaii Revised Statutes §103-55.6 (ACT 17, SLH 2009) shall apply.

Should there be any questions, please refer to the HIePRO solicitation.

INFORMATION AND INSTRUCTIONS TO BIDDERS

CONTENTS

	<u>Page</u>
A	Project Location and Scope of Work I-2
B	Proposals I-2
C	General Conditions I-2
D	Proposal Form I-2
E	Omissions or Erasures I-2
F	Notice of Intent to Bid and Questionnaire..... I-2
G	Bid Security I-2
H	Contractor’s License RequiredI-2 – I-3
I	Irregular Bids I-3
J	Withdrawal of Bids I-3
K	Successful Bidder to File Performance and Payment Bonds I-3
L	Number of Executed Original Counterparts of Contract Documents I-3
M	Change Orders I-3
N	Wages and Hours I-3
O	PermitsI-3 – I-4
P	Property Damage I-4
Q	Time I-4
R	Bidder's Responsibility to Provide Proper Superintendence I-4
S	Liquidated Damages I-4
T	Hiring of Hawaii ResidentsI-4 – I-5
U	Water and Electricity I-5
V	Public Convenience and Safety I-5
W	Work to be Done Without Direct Payment I-5
X	As-Built Drawings I-5
Y	Asbestos Containing Materials I-5
Z	Worker SafetyI-5 – I-6
AA	Quantities I-6
BB	Other Health Measures I-6
CC	Hawaii Business Requirement I-6
DD	Compliance With §3-122-112 HAR I-6 - I-7

INFORMATION AND INSTRUCTIONS TO BIDDERS

- A. PROJECT LOCATION AND SCOPE OF WORK: The project location and scope of work shall be as generally described in the Notice to Bidders.
- B. PROPOSALS: Bidders shall submit their bid, including the completed proposal form, bid bond, and any other documents required by the solicitation as part of their bid through the State of Hawaii e-Procurement System (HIePRO). See Item D, PROPOSAL FORM.
- C. GENERAL CONDITIONS: The Department of Land and Natural Resources Interim General Conditions dated October 1994, as amended, shall be made a part of these contract specifications and are referred to hereafter as the General Conditions.
- D. PROPOSAL FORM: **The Bidders shall fill out and upload the electronic copy of the proposal form to the HIePRO website when submitting the bid. Bid Proposals shall not be mailed, faxed or delivered to the State, unless requested to do so after the designated closing date. The successful Bidder shall fill out and print a hard copy of the proposal form, sign and submit the form with the contract award package.**
- E. OMISSIONS OR ERASURES: Any proposal which contains any omission or erasure or alteration not properly initialed, or conditional bid, or other irregularity may be rejected by the Board of Land and Natural Resources (Board).
- F. NOTICE OF INTENT TO BID AND QUESTIONNAIRE:
A Notice of Intent to Bid is not required for this project. In compliance with HRS Section 103D-310, the lowest responsive and responsible bidder may be required to complete a questionnaire. When requested by the State, the completed questionnaire shall be submitted to the Chief Engineer for evaluation. Failure to furnish the requested information within the time allowed may be grounds for a determination of non-responsibility, in accordance with HRS Section 103D-310 and HAR Section 3-122-108.
- G. BID SECURITY: A bid security will be furnished by each bidder as provided in sub-section 2.7 of the General Conditions. The successful bidder's bid security will be retained until Contract execution and furnished a performance and payment bond in an amount equal to one hundred percent (100%) of the total Contract price, including an amount estimated to be required for extra work, is furnished.
- The Board reserves the right to hold the bid securities of the four lowest bidders until the successful bidder has entered into a contract and has furnished the required performance bond. All bid securities will be returned in accordance with sub-section 3.5 of the General Conditions.
- Should the successful bidder fail to enter into a contract and furnish a satisfactory performance bond within the time stated in the proposal, the bid security shall be forfeited as required by law.
- H. CONTRACTOR'S LICENSE REQUIRED: The Board will reject all bids received from contractors who have not been licensed by the State Contractors License Board in accordance

with Chapter 444, HRS; Title 16, Chapter 77, Hawaii Administrative Rules; and statutes amendatory thereto.

- I. IRREGULAR BIDS: No irregular bids or propositions for doing the work will be considered by the Board.
- J. WITHDRAWAL OF BIDS: No bidder may withdraw his bid between the time of the opening thereof and the award of contract.
- K. SUCCESSFUL BIDDER TO FILE PERFORMANCE AND PAYMENT BONDS: The successful bidder will be required to file performance and payment bonds each; in the amount equal to the total contract price, including amounts estimated to be required for extra work, as provided in sub-section 3.6 of the General Conditions.
- L. NUMBER OF EXECUTED ORIGINAL COUNTERPARTS OF CONTRACT DOCUMENTS: If requested by the Board, six copies of the Contract, performance and payment bonds shall be executed.
- M. CHANGE ORDERS: No work of any kind in connection with the work covered by the plans and specifications shall be considered as change order work, or entitle the Contractor to extra compensation, except when the work has been ordered in writing by the Chief Engineer (Engineer) and in accordance with sub-section 4.2 of the General Conditions.

The Contractor shall clearly identify and inform the Engineer in writing of any deviations from the contract documents at the time of submission and shall obtain the Engineer's written approval to the specified deviation prior to proceeding with any work.

- N. WAGES AND HOURS: In accordance with sub-sections 7.3 to 7.9 of the General Conditions relative to hours of labor, minimum wages and overtime pay, the current minimum wage rates promulgated by the Department of Labor and Industrial Relations (DLIR) shall be paid to the various classes of laborers and mechanics engaged in the performance of this contract on the job site. The minimum wages shall be increased during the performance of the contract in an amount equal to the increase in the prevailing wages for those kinds of work as periodically determined by the DLIR.

The Department of Land and Natural Resources will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the said minimum wage rates. The possibility of wage increase is one of the elements to be considered by the Contractor in determining his bid, and will not, under any circumstances, be considered as the basis of a claim against the Department under this Contract.

Work shall only be allowed within the hours between 7:45 am to 4:45 pm on working days. No work shall be done on Saturdays, Sundays, legal State holidays, and/or in excess of eight (8) hours each day without the written consent of the Engineer. Should permission be granted to work at such times, the Contractor shall pay for all inspection administrative costs thereof. No work shall be done at night unless authorized by the Engineer.

- O. PERMITS: The State will process permit applications whenever possible, and the Contractor shall procure the pre-processed permits and pay the required fees. If permit applications are

not processed by the State, the Contractor shall process the permit applications, permits and licenses, and pay all charges and fees. In all cases, the Contractor shall give all notices necessary and incident to the due and lawful prosecution of the work.

- P. PROPERTY DAMAGE: It shall be the responsibility of the contractor to respect State property and to prevent damage to existing improvements. The Contractor will be responsible for damages resulting from construction operations. Immediately upon discovery, the Contractor shall repair such damage to the satisfaction of the Engineer.

All trees and shrubbery outside the excavation, embankment or construction limits shall be fully protected from injury. All areas damaged by construction activities including the laydown area shall be seeded and regressed upon completion of the project.

- Q. TIME: The time of completion is specified in the Proposal. It is the Board's intention to insist the Contractor diligently prosecute the work to completion within the specified time.

Prospective bidders are reminded that the State has the option to proceed with or abandon a project depending on whether the project can be completed for occupancy in the specified time.

It is the bidder's responsibility to check the availability of all materials before bidding. The bidder shall select sub-contractors and suppliers who can warrant availability and delivery of all specified or qualified materials to assure project completion within the specified time.

The successful bidder must assume all risks for completing the project by the specified date. There shall be no extension of time for any reason except for delays caused by acts of God, labor disputes involving unions, or actions of the State. If for any reason the project falls behind schedule, the Contractor shall at its own cost, take necessary remedial measures to get the project back on schedule, i.e., working overtime, air freighting all materials, etc. In addition, if the Contractor fails to fully complete the project by the completion date, Contractor will be required to make the facility usable at its own cost.

- R. BIDDER'S RESPONSIBILITY TO PROVIDE PROPER SUPERINTENDENCE: The successful low bidder shall designate in writing to the Engineer the name of its authorized superintendent (Superintendent), who will be present at the job site whenever any work is in progress. The Superintendent shall be responsible for all work, receiving and implementing instructions from the Engineer in a timely manner. The cost for superintendence shall be considered incidental to the project.

If the Superintendent is not present at the site of work, the Engineer shall have the right to suspend the work as described under sub-section 5.5 c. and 7.20 - Suspension of Work of the General Conditions.

- S. LIQUIDATED DAMAGES: Liquidated damages in the amount specified in the Proposal will be assessed for each and every calendar day from and after the expiration of the time period stated in the Contract for the completion of the project.

- T. HIRING OF HAWAII RESIDENTS: The Contractor shall comply with Act 68, SLH 2010, in the performance and for the duration of this contract. The Contractor shall ensure that

Hawaii residents compose not less than eighty percent of the workforce employed to perform the contract work on the project. The eighty percent 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 with shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

The requirements shall apply to any subcontract of \$50,000 or more in connection with the Contractor, that is, such Subcontractors must also ensure that Hawaii residents compose not less than eighty percent of the Subcontractor's workforce used to perform the subcontract.

- U. WATER AND ELECTRICITY: The Contractor shall make all necessary arrangements and pay all expenses for water and electricity used in the construction of this project.
- V. PUBLIC CONVENIENCE AND SAFETY: The Contractor shall conduct construction operations with due regard to the convenience and safety of the public at all times. No materials or equipment shall be stored where it will interfere with the safe passage of public traffic. The Contractor shall provide, install, and maintain in satisfactory condition, all necessary signs, flares and other protective facilities and shall take all necessary precautions for the protection of the work and the convenience and safety of the public. The Engineer shall have the right to suspend the performance of the work in accordance with sub-section 7.20 - Suspension of Work of the General Conditions.
- W. WORK TO BE DONE WITHOUT DIRECT PAYMENT: Whenever the contract that the Contractor is to perform work or furnish materials of any kind for which no price is fixed in the contract, it shall be understood that the Contractor shall perform such work or furnish said materials without extra charge or allowance or direct payment of any sort. The cost of performing such work or furnishing said material is to be included by the Contractor in a unit price for the appropriate item unless it is expressly specified that such work or material is to be paid for as extra work.
- X. AS-BUILT DRAWINGS: As-built drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be required. All authorizations given by the Engineer to deviate from the plans shall be drawn on the job site plans. All deviations from alignments, elevations and dimensions which are stipulated on the plans shall be recorded on the as-built drawings. Final as-built drawings shall be submitted to the Engineer for review and approval. After the Engineer approves the as-built drawings, the contractor shall submit an electronic copy in Adobe PDF format on CD ROM.
- Y. ASBESTOS CONTAINING MATERIALS: The use of asbestos containing materials or equipment is prohibited. The Contractor shall insure that all materials and equipment incorporated in the project are asbestos-free
- Z. WORKER SAFETY: The Contractor shall provide, install and maintain in satisfactory condition all necessary protective facilities and shall take all necessary precautions for the protection and safety of its workers in accordance with the Occupational Safety and Health

Standards for the State of Hawaii. The Engineer shall have the right to suspend the performance of the work in accordance with sub-section 7.20 - Suspension of Work of the General Conditions.

- AA. QUANTITIES: All bids will be compared on the basis of quantities of work to be done as shown in the Proposal; the quantities shown in the Unit Price items are estimated, being given as a basis for comparison of bids. The Board reserves the right to increase or decrease the quantities given under the items or delete items entirely as may be required during the progress of the work.
- BB. OTHER HEALTH MEASURES: Forms of work site exposure or conditions which may be detrimental to the health or welfare of workers or of the general public shall be eliminated or reduced to safe levels as required by the DOH codes, standards, and regulations. Suitable first aid kits and a person qualified to render first aid, as specified in the DOH regulations, shall be provided at all times when work is scheduled.
- CC. HAWAII BUSINESS OR COMPLIANT NON-HAWAII BUSINESS REQUIREMENT: Bidders (Contractors) shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract, as stipulated in §3-122-112 HAR.
- DD. COMPLIANCE WITH §3-122-112 HAR:
As a condition for award of the contract and as proof of compliance with the requirements of 103D-310(c) HRS, the apparent low bidder shall furnish the required documents to the Department. If the valid required certificates are not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. Bidder is responsible to apply for and submit the following documents to the Department.
- A. TAX CLEARANCE REQUIREMENTS (HRS Chapter 237): Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by the Department.
- B. Department of Labor (DLIR) “**Certificate of Compliance**”. (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers’ Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by the Department.
- C. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) “**Certificate of Good Standing**”. Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue; certificates must be valid on the date received by the Department.

Alternately, instead of separately applying for these certificates at the various state agencies,

bidder may choose to use the Hawaii Compliance Express (HCE), which allows businesses to register online through a simple wizard interface at <http://vendors.ehawaii.gov> to acquire a “Certificate of Vendor Compliance” indicating the bidder’s status is compliant with the requirements of §103D-310(c), HRS, and shall be accepted for contracting and final payment purposes. Bidders that elect to use the new HCE services will be required to pay an annual fee of \$15.00 to the Hawaii Information Consortium, LLC (HIC). Bidders choosing not to participate in the HCE program will be required to provide the paper certificates as instructed in the previous paragraphs.

P R O P O S A L

FOR

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION
State of Hawaii

Job No. E00BO99A
DLNR LAND DIVISION OFFICE IMPROVEMENTS
KALANIMOKU BUILDING, ROOM 220
HONOLULU, OAHU, HAWAII

Chief Engineer _____, 20__
Engineering Division
Department of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Dear Sir:

The undersigned, having carefully examined the local conditions and all available records and information covering conditions which may affect the cost of the work to be performed, and having carefully examined the Plans and Specifications, and other contract documents, hereby proposes to furnish and pay for all materials, tools, equipment, labor and other incidental work necessary to provide Base Bid selective demolition of existing carpeting, wall base, hazardous material remediation w/ air monitoring / testing of existing subfloor tile, moisture testing of concrete substrate, and existing drapery / drapery track within the Land Division Office, Room 220 on the second floor level of the Kalanimoku building. Relocation, salvage, itemizing / photo documentation of furniture pieces, on-site storage and moving back to original locations of existing modular systems furniture and furnishings is within the scope of work. New resilient tile flooring, wall base, repainting of all interior walls, and new manual window roller shades will be included as required or called for in this Proposal, all according to the true intent and meaning of the Notice to Bidders, Information and Instructions to Bidders, Proposal, Detailed Specifications, Interim General Conditions, Plans, and any and all addenda for:

Job No. E00BO99A
DLNR LAND DIVISION OFFICE IMPROVEMENTS
KALANIMOKU BUILDING, ROOM 220
HONOLULU, OAHU, HAWAII

on file in the office of the Engineering Division for the TOTAL BASE BID (Items 1 to 8) of:

_____ Dollars (\$ _____)
and will fully complete all work under this contract within 180 consecutive calendar days of which, Thirty-five (35) consecutive days on-site construction shall be included in the 180 consecutive days, from the date of written notice to proceed, including date of said order, said total sum being itemized on the following pages.

PROPOSAL

Item No.	Quantity	Unit	Description	Unit Price	Total
<u>BASE BID</u>					
1.		LS	Selective Demolition Work; to include demolition, hauling & disposal as required to construct new improvements. Relocation of Salvageable Furnitures for reinstallation and temporary storage of items indicated for reinstallation.		\$
2.		LS	Resilient tile flooring and substrate moisture testing.		\$
3.		LS	Repainting of all walls.		\$
4.		LS	Shades.		\$
5.		LS	Asbestos Abatement of existing VCT flooring beneath carpeting.		\$
6.		LS	Testing and Air Monitoring associated w/ existing flooring abatement.		\$
7.		LS	Re-installation of office furniture as indicated on plans.		\$
Subtotal Base Bid (Items 1-7)					\$ _____
8.		LS	Mobilization and Demobilization (not to exceed 10% of the Subtotal Base Bid)		\$
Total Base Bid (Items 1-8)					\$ _____

RECYCLED PRODUCTS PREFERENCE

This project allows a 10% price preference for recycled products in accordance with HRS 103D-1005. Please indicate your selection of recycled or non-recycled product by indicating its cost FOB jobsite unloaded in the schedule below, including applicable General Excise & Use Taxes.

<u>DESCRIPTION</u>	<u>RECYCLED PRODUCT COST</u>	<u>NONRECYCLED PRODUCT COST</u>
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____

The bidder requesting a recycled product preference shall also complete and submit the form “CERTIFICATION OF RECYCLED CONTENT” as shown in the Interim General Conditions and provide all supporting information with this proposal. Additional information may be requested to qualify a product.

The following definitions are applicable to the CERTIFICATION OF RECYCLED CONTENT form:

"Post-consumer recovered material" means any product used by a consumer, including a business that purchases the material, that has served its intended end use, and that has been separated or diverted from the solid waste stream for the purpose of use, reuse, or recycling.

"Product" includes materials, manufactures, supplies, merchandise, goods, wares, and foodstuffs.

"Recovered material" means waste material and by-products that have been separated, diverted, or removed from the solid waste stream after a manufacturing process for the purpose of use, reuse, or recycling. Recovered material does not include those materials and by-products that are generated and normally reused on-site or within original manufacturing processes (such as mill broke, in the case of paper products).

"Recycled content" means the percentage of a product composed of recovered material, or post-consumer recovered material, or both.

"Recycled product" means a product containing recovered material, or post-consumer recovered material, or both.

The bidder agrees that preference for recycled products shall be taken into consideration to determine the low bidder in accordance with said Section and the rules promulgated, however, the award of contract will be in the amount of the bid offered exclusive any preference.

APPRENTICESHIP AGREEMENT PREFERENCE

1. If applicable to this project, any bidder seeking the preference must be a party to an apprenticeship agreement registered with the State Department of Labor and Industrial Relations (DLIR) at the time the bid is submitted for each apprenticeable trade the bidder will employ to construct the project. “Employ” means the employment of a person in an employer-employee relationship.
 - a. The apprenticeship agreement shall be registered with the DLIR and conform to the requirements of Hawaii Revised Statutes Chapter 372.
 - b. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain 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.
2. A bidder seeking the preference must state the apprenticeable trade the bidder will employ for each trade to be employed to perform the work by submitting a completed signed original Certification Form 1 verifying participation in an apprenticeship program registered with DLIR. “Apprenticeable trade” shall have the same meaning as “apprenticeable occupation” pursuant to Hawaii Administrative Rules (HAR) §12-30-5.
 - a. The *Certification Form 1* shall be authorized by an apprenticeship sponsor listed on the DLIR list of registered apprenticeship programs. “Sponsor” means an operator of an apprenticeship program and in whose name the program is approved and registered with the DLIR pursuant to HAR §12-30-1.
 - b. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor.
 - c. The completed signed original Certification Form 1 for each trade must be submitted with the bid. Previous certifications shall not apply.
 - d. When filling out the *Certification Form 1*, the 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 DLIR website. “Registered apprenticeship program” means a construction trade program approved by the DLIR pursuant to HAR §12-301 and §12-30-4.
 - e. The *Certificate Form 1* and the List of Construction Trades in Registered Apprenticeship Programs is available on the DLIR website at: <http://hawaii.gov/labor/wdd>.
3. Upon receiving the *Certification Form 1*, the Procurement Officer will verify that the apprenticeship program is on the List of Construction Trades in Registered Apprenticeship Programs and that the form is signed by an authorized official of the Apprenticeship Program Sponsor. If the programs and signature are not confirmed by the DLIR, the bidder will not qualify for the preference.

4. 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 bid amount by five percent (5%) for evaluation purposes.
5. Should the bidder qualify for other preferences, all applicable preferences shall be applied to the bid price.

CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS PROHIBITED

Contractors are hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions are prohibited 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.

CONDITION OF AWARD

It is understood that the award of the contract will be made on the basis of the lowest responsible Total Base Bid (Items 1 to 8) selected by the Board of Land and Natural Resources. Write the total of bid items 1 to 8 on page P-1.

It is understood and agreed that the Board of Land and Natural Resources reserves the right to reject any and/or all bids and waive any defects when, in the Board's opinion, such rejection or waiver will be for the best interest of the State of Hawaii.

In the event all bids exceed available funds certified by the appropriate fiscal officer, the head of the purchasing agency responsible for the procurement in question is authorized in situations where time or economic considerations preclude resolicitation of work of a reduced scope to negotiate an adjustment of the bid price, including changes in the bid requirements, with the low responsible and responsive bidder, in order to bring the bid within the amount of available funds. It is understood and agreed upon that the head of the purchasing agency may delete a portion or all of any item(s) in the proposal at the stated unit or lump sum price as necessary to stay within the available funding. The bidder is responsible to make an earnest effort to represent the actual cost of each item, including all materials, labor, equipment, overhead and profit in their bid proposal to preclude claims of anticipated profit or loss of profit because of an unbalanced bid proposal.

It is also understood that if a mutually agreeable cost for the reduced scope of work necessitated by a lack of available funds cannot be agreed upon between the bidder and the head of the purchasing agency within 14 calendar days after the bid opening, then the bid may be rejected in the best interest of the purchasing agency, and the head of the purchasing agency may negotiate in progressive order (lowest to highest) with the next lowest responsible and responsive bidder.

It is also understood and agreed that the award of the contract shall be conditioned upon funds being made available for this project and further upon the right of the Board of Land and Natural Resources to hold all bids received for a period of one hundred eighty (180) days from the date of the opening thereof, unless otherwise required by law, during which time no bid may be withdrawn.

It is also understood that Notice to Proceed may be delayed up to one (1) year after the bid opening date, and that no additional compensation will be provided for any claim for escalation or delay for issuance of Notice to Proceed on or before that date.

It is also understood and agreed that the quantities given herewith are approximate only and are subject to increase or decrease, and that the undersigned will perform all quantities of work as either increased or decreased, in accordance with the provisions of the Contract Specifications.

It is also understood and agreed that the estimated quantities shown for the items for which a UNIT PRICE is asked in this Proposal are only for the purpose of comparing on a uniform basis, bids offered for the work under this contract, and the undersigned agrees that he is satisfied with and will at no time, dispute said estimated quantities as a means of claims for anticipated profit or loss of profit, because of a difference between the quantities of the various classes of work done or the materials and equipment installed, and the said estimated quantities. On UNIT PRICE bids, payment will be made only for the actual number of units incorporated into the finished project at the contract UNIT PRICE.

After the HIePRO bid due date and time, the figures will be extended and/or totaled in accordance with the bid prices of the acceptable proposals and the totals will be compared. In the comparison of bids, words written in the proposal shall govern over figures and unit prices will govern over totals. Until the award of the contract, however, the right will be reserved to reject any and all proposals and to

waive any defects or technicalities as may be deemed best for the interest of the State.

It is also understood and agreed that liquidated damages in the amount of ONE HUNDRED FIFTY AND NO/100 DOLLARS (\$150.00) for each and every calendar day in excess thereof prior to completion of the contract shall be withheld from payments due to the Contractor.

It is also understood and agreed that if this bid is accepted, the successful bidder must enter into and execute a contract with the Board of Land and Natural Resources and furnish a Performance and Payment Bond, as required by law. These bonds shall conform to provisions of Section 103D-324 and 325, Hawaii Revised Statutes and any law applicable hereto.

It is also understood and agreed that the successful bidder will provide all necessary labor, materials, tools, equipment, and other incidentals necessary to do all the work and furnish all the materials specified in the contract in the manner and time herein prescribed, and according to the requirements of the Engineer as therein set forth.

It is understood that by submitting this proposal, 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 two years.

It is understood that by submitting this proposal in accordance with HAR 3-122-192, the undersigned is declaring that the price submitted is independently arrived without collusion.

It is also understood that by submitting this proposal, a Certification for Safety and Health Programs for bids in excess of \$100,000 (in accordance with HRS 396-18), the undersigned certifies that his organization 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 (HIOSH).

It is further understood and agreed that the successful bidder shall comply with paragraph 3.1.a "SUBCONTRACTING" of the General Provisions which requires that the contractor shall perform with his own organization and with the assistance of workmen under his immediate superintendence, work of a value not less than twenty percent (20%) of the value of all work embraced in the Contract, except that certain contract items of work, if specifically referred to in the special provisions, will be exempted from said twenty percent requirement.

Compliance with §103-310 HRS. As a condition of award all bidders shall comply with all laws governing entities doing business in the State, including Chapter 237 HRS (general excise tax); Chapter 383 HRS (employment security – unemployment insurance); Chapter 386 HRS (workers compensation); Chapter 392 HRS (temporary disability insurance); and Chapter 393 HRS (pre-paid health care), and shall produce all documents to the State (DLNR, Engineering Division) required to demonstrate compliance with these subsections. Any bidder making a false affirmation or certification under this subsection shall be suspended and may be debarred from further offerings or awards pursuant to §103D-702 HRS.

RECEIPT OF ADDENDA

The bidder also acknowledges receipt of any and all addenda issued by the Engineering Division, by recording the date of receipt of the respective addenda in the space provided below:

<u>Addendum</u>	<u>Date Received</u>	<u>Addendum</u>	<u>Date Received</u>
No. 1	_____	No. 5	_____
No. 2	_____	No. 6	_____
No. 3	_____	No. 7	_____
No. 4	_____	No. 8	_____

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

It is also understood and agreed that if this Proposal is accepted and the undersigned should fail or neglect to contract as aforesaid, the Board may determine that the bidder has abandoned the Contract, and thereupon, forfeiture of the security accompanying his proposal shall operate and the same shall become the property of the Board.

JOINT CONTRACTORS OR SUBCONTRACTORS
TO BE ENGAGED ON THIS PROJECT

The Bidder agrees that the following is a complete listing of all joint contractors or subcontractors covered under Chapter 444, Hawaii Revised Statutes (HRS), who will be engaged by the Bidder on this project to perform the required work indicated pursuant to Section 103D-302, HRS. It is the sole responsibility of the contractor to review the requirements of this Project and determine the appropriate licenses that are required to complete the Project. The Bidder certifies that the completed listing of joint contractors or subcontractors fulfills the requirements for the project and the Bidder, together with the listed subcontractors or joint contractors have all the specialty contractor's licenses to complete the work, except as provided for in HRS §103D-302(b). Failure of the Bidder to comply with this requirement may be just cause for rejection of the bid.

“A” General Engineering Contractors and “B” General Building Contractors are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the general contractor to act as a specialty contractor in any area in which the general contractor has no license. Although the “A” and “B” contractor may still bid on and act as the “prime” contractor on an “A” or “B” project (See, HRS §444-7 for the definitions of an “A” and “B” project.), respectively, the “A” and “B” contractor may only perform work in the areas in which they have the appropriate contractor's license (*An “A” or “B” contractor obtains “C” specialty contractor's licenses either on its own, or automatically under HAR § 16-77-32*). The remaining work must be performed by appropriately licensed entities.

General Engineering “A” Contractors automatically have these “C” specialty contractor's licenses: C-3, C-9, C-10, C-17, C-24, C-31a, C-32, C-35, C-37a, C-37b, C-38, C-43, C-49, C-56, C-57a, C-57b and C-61.

General Building “B” Contractors automatically have these “C” specialty contractor's licenses: C-5, C-6, C-10, C-12, C-24, C-25, C-31a, C-32a, C-42a and C-42b.

In completing the Joint Contractors or Subcontractors List, describe the specialty contractor's nature and scope of work to be performed for this project and provide the complete firm name of the joint contractor or subcontractor in the respective columns. If the Bidder is a general contractor and providing the work of the required specialty contractor, whose license is not automatically held pursuant to HAR 16-77-32, fill in the Bidder's (general contractor's) name and nature and scope of work to be performed on this project.

List only one joint contractor or subcontractor per required specialty contractor's classification, unless within the same specialty, the work of each joint contractor or subcontractor can be described so that there is no overlap in work descriptions.

If a contractor's license is required by law for the performance of the work which is called for in this bid, the bidder and all subcontractors must have the required license before the submission of the bidder's proposal in the case of a non-federal aid project, and for federal-aid projects, the bidder must have the required license prior to the award of the project and all subcontractors prior to the start of the subcontracted work.

COMPLETE FIRM NAME OF JOINT CONTRACTOR OR SUBCONTRACTOR	NATURE AND SCOPE OF WORK TO BE PERFORMED

Enclosed herewith is a:

- 1. Surety Bond (*1))
- 2. Legal Tender (*2))
- 3. Cashier's Check (*3))
- 4. Certificate of Deposit (*3)) in the
- 5. Certified Check (*3)) amount
- 6. Official Check (*3)) of
- 7. Share Certificate (*3))
- 8. Teller's Check (*3))
- 9. Treasurer's Check (*3))

(Cross Out Those Not Applicable)

Dollars (\$ _____)

as required by law.

Respectfully submitted,

Name of Company, Joint Venture
or Partnership

Contractor's License No.

By _____
Signature (*4)

Title _____

Print Name _____

Date _____

Address _____

Telephone No. _____

E-Mail Address _____

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 drawn by, or a certified check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration.
 - A. These instruments may be utilized only to a maximum of \$100,000.
 - 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. PROPOSAL MUST BE INTACT, MISSING PAGES MAY INVALIDATE YOUR BID.

End of Proposal

SPECIAL PROVISIONS

Amend INTERIM GENERAL CONDITIONS, dated October 1994, as follows:

Section 1 – Definitions

AMEND the definition of “Bidder” with the following:

Bidder or Offeror: Any individual, partnership, firm, corporation, joint venture, design-build entity, or other legal entity submitting, directly or through a duly authorized representative or agent, a proposal for the work contemplated.

Section 2 – Proposal Requirements and Conditions

1. **AMEND** Section 2.1 Qualification of Bidder with the following:

Written Notice of Intent to Bid or Offer: A written Notice of Intent to Bid is not required for the Solicitation.

Standard Qualification Questionnaire: Bidders may be required to complete a standard qualifications questionnaire. When requested, the information shall be furnished within two working days or longer at the discretion of the Engineer. Failure to furnish the requested information within the time allowed may be grounds for a determination of non-responsibility, in accordance with HRS Section 103D-310 and HAR Section 3-122-108.

Hawaii Business or Compliant Non-Hawaii Business Requirement: Bidders shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract, as stipulated in §3-122-112 HAR. A certified letter is not required prior to bid opening.

Compliance with §3-122-112 HAR: As a condition for award of the contract and as proof of compliance with the requirements of 103D-310(c) HRS, the apparent low bidder shall furnish the required documents to the Department. If the valid required certificates are not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. Bidder is responsible to apply for and submit the following documents to the Department.

- A. Tax Clearance (HRS Chapter 237): Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by the Department.
- B. Department of Labor (DLIR) “Certificate of Compliance”. (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers’ Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by the Department.
- C. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) “Certificate of Good Standing”. Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue;

certificates must be valid on the date received by the Department.

Hawaii Compliance Express. Alternately, instead of separately applying for these certificates at the various state agencies, bidder may choose to use the Hawaii Compliance Express (HCE), which allows businesses to register online through a simple wizard interface at <http://vendors.ehawaii.gov> to acquire a “Certificate of Vendor compliance” indicating that bidder’s status is compliant with requirements of §103D-310(c), HRS, shall be accepted for contracting and final payment purposes.

Bidders that elect to use the new HCE services will be required to pay an annual fee of \$15.00 to the Hawaii Information Consortium, LLC (HIC). Bidders choosing not to participate in the HCE program will be required to provide the paper certificates as instructed in the previous paragraphs.

2. **ADD** Section 2.4a, Pre-Bid Conferences

Required Pre-bid Conferences: For construction and design-build projects with an estimated value of \$500,000 or more and solicited under the competitive sealed bid method (103D-302 HRS); and for construction and design-build projects with an estimated value of \$100,000 or more and solicited under the competitive sealed proposal method (103D-303 HRS); a pre-bid conference is required.

Other Pre-Bid Conferences: The Department may require a pre-bid conference for construction or design-build projects that are below the dollar threshold listed in above or when projects have special or unusual requirements.

Other Conditions: The Department may require the prospective Bidders to make a physical inspection of the project site and make attendance at the pre-bid conference a condition for submitting an offer.

Nothing stated at the pre-bid conference shall change the solicitation unless a change is made by written addendum.

3. **DELETE** Section 2.5, Addenda and Interpretations, in its entirety and replace with the following:

“Discrepancies, omissions, or doubts as to the meaning of drawings and specifications should be communicated using the question and answer section on the HIePRO solicitation for interpretation and must be received in the time frame set in the HIePRO solicitation. Any interpretation, if made and any supplemental instructions will be in the form of written addenda to the plans and specifications and made available prior to the offer due date. It shall be the prospective bidder’s sole responsibility to verify and obtain any said addenda. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.”

Section 3 – Award and Execution of Contract

1. **AMEND** Section 3.3, Award of Contract, by deleting “sixty (60)” and replacing with “one hundred eighty (180)” in the first paragraph.

2. **AMEND** Section 3.3, Award of Contract, by adding the following after the first paragraph:

“If the contract is not awarded within the one hundred eighty (180) days, the Department 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, the Department 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

Department elects to stop making such requests.”

3. **AMEND** Section 3.9, Notice to Proceed, by replacing the last paragraph with the following:

In the event the Notice to Proceed is not issued within three hundred and sixty-five (365) calendar days after the date of bid opening, the Contractor may submit a claim for increased labor and materials costs (but not overhead costs). The claim shall be for labor and material costs incurred after 365 days and the full duration of the contract time allowed for the performance of the work (as specified on Page 1 of the Request for Proposals) have elapsed. Such claims shall be accompanied with the necessary documentation to justify the claim. No payments will be made for escalation costs that are not fully justified as determined by the State.

4. **ADD** Section 3.10, Protests:

“3.10 PROTESTS—Pursuant to Section 103D-701, Hawaii Revised Statutes, an actual or prospective offeror who is aggrieved in connection with the solicitation or award may submit a protest. Any protest shall be submitting in writing to the Chairperson, Department of Land and Natural Resources, 1151 Punchbowl Street, Honolulu, Hawaii 96813, or designee as specified in the solicitation.

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

The notice of award, if any, resulting from this solicitation shall be posted on the HIePRO website.

Section 5 – Control of Work

AMEND Section 5.8 Value Engineering Incentive by deleting “\$100,000” and replacing with “\$250,000” in the first paragraph.

Section 6 – Substitution of Materials and Equipment

ADD the following to Section 6.3 Sub-paragraph b:

4. If the substitution meets all the requirements of the specifications and plans.

Section 7 – Prosecution and Progress

1. **DELETE** Section 7.2d in its entirety and replace with the following:

“d. Proof of Insurance Coverage

A Certificate of Insurance or other documentary evidence, to the satisfaction of the Engineer, that the Contractor has in place all insurance coverage required by the contract. The Certificate of Insurance shall contain wording which identifies the Project number and Project title for which the certificate of insurance is issued. Refer to the following for insurance requirements:

1. Insurance Requirements

- (a) **Obligation of Contractor** - Contractor shall not commence any work until it obtains, at its own expense, all required herein insurance. Such insurance must have the approval of the Department as to limit, form and amount and must be maintained with a company authorized by 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 AM Best’s Rating of “A-VII” or better.
- (b) 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.
- (c) Certificate(s) of Insurance acceptable to the Department shall be filed with the Engineer 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 coverages afforded under the policies will not be canceled or changed until at least thirty (30) days written notice has been given to the Engineer by registered mail. The insurance policies shall name the State of Hawaii, its officers and employees as an additional insured and such coverage shall be noted on the certificate. Should any policy be canceled 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.
- (d) 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.
- (e) 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.
- (f) The Contractor shall, from time to time, furnish the Engineer, when requested, satisfactory proof of coverage of each type of insurance required or a copy of the actual policies covering the work. Failure to comply with the Engineer’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.
- (g) If the Contractor is self-insured, it shall furnish, upon the request and the satisfaction of the Engineer, any documentation to demonstrate the ability to self-insure itself. The Engineer, from time to time, can conduct an audit to determine the ability of the Contractor to be self-insured. Failure to comply with the Engineer’s request will be considered a material breach of the contract, and at the discretion of the Engineer, may be sufficient grounds to terminate

the contract, suspend any work or withhold future payments.

(h) It is the responsibility of the Contractor to notify the Department of any changes to its insurance policies or if the Contractor receives a notice of cancellation of any of its insurance policies. The Contractor will immediately provide written notice to the Department should the insurance policies evidenced on its Certificate of Insurance form be cancelled, limited in scope, or not renewed upon expiration.

2. Types of Insurance - The 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 the subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

(a) **Worker's Compensation.** The Contractor and all subcontractors shall obtain worker's compensation insurance for all persons whom they employ or may 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.

(b) **Commercial General Liability.** The Contractor shall obtain General Liability insurance with a limit of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate. The insurance policy shall contain the following clauses: 1) "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."; and 2) "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contributed with, insurance provided by this policy." The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies."

(c) **Comprehensive Automobile Liability.** The Contractor shall obtain Auto Liability insurance covering all owned, non-owned and hired autos with a combined single Limit of not less than \$1,000,000 per accident for bodily injury and property damage. The insurance policy shall contain the following clauses: 1) "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."; and 2) "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contributed with, insurance provided by this policy." The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

Furthermore, the Contractor's commercial general liability insurance and automobile liability insurance shall include coverage for bodily injury, sickness, disease or death of any person, arising directly or indirectly out of, or in connection with, the performance of work under this contract.

The Contractor's property damage liability insurance shall provide for all damages arising out of injury to or destruction of property of others including the Department's, arising directly or indirectly out of or in connection with the performance of the work under this contract including explosion or collapse.

The Contractor shall either:

- i. Require each of its subcontractors to procure and to maintain during the life of its subcontract, subcontractors' comprehensive general liability, automobile liability and property damage liability insurance of the type and in the same amounts specified herein; or
- ii. Insure the activities of its subcontractors in its own policy.

The Contractor will be permitted, in cooperation with insurers, to maintain a self-insured retention for up to 25% of the per occurrence combined single limits of the commercial general liability and the automobile liability policies. The existence of the self-insured retention must be noted on the certificate of insurance coverage submitted to the Department or else it will be understood that the insurer is providing first dollar coverage for all claims. For all claims within the self-insured retention amount, the rights, duties and obligations between the Contractor and the Department shall be identical to that between a liability insurer and the Department, as an additional insured, as if there was no self-insured retention.

- (d) **Builder's Risk Insurance.** Unless included in the Specifications of this project, the Contractor shall not be required to provide builder's risk insurance. If required as noted in the Specifications, builder's risk insurance shall be provided during the progress of 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 additional name insured. The insurance policy shall contain the following clauses: 1) "The State of Hawaii is added as an additional insured as respects to operations performed for the State of Hawaii."; and 2) "It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contributed with, insurance provided by this policy." The required limit of insurance may be provided by a single policy or with a combination of primary and excess policies.

The Contractor shall submit to the Engineer for its approval all items deemed to be uninsurable. The policy may provide for a deductible in an amount of up to 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 additional insured as if no deductible existed".

2. DELETE Section 7.16 in its entirety and replace with the following:

“RESPONSIBILITY FOR DAMAGE CLAIMS; INDEMNITY – The Contractor shall indemnify the State and the Department against all loss of or damage to the State’s or the Department’s existing property and facilities arising out of any act or omission committed in the performance of the work by the Contractor, any subcontractor or their employees and agents. Contractor shall defend, hold harmless and indemnify the Department and the State, their employees, officers and agents against all losses, claims, suits, liability and expense, including but not limited to attorneys’ fees, arising out of injury to or death of persons (including employees of the State and the Department, the Contractor or any subcontractor) or damage to property resulting from or in connection with performance of the work and not caused solely by the negligence of the State or the Department, their agents, officers and employees. The State or the

Department may participate in the defense of any claim or suit without relieving the Contractor of any obligation hereunder. The purchase of liability insurance shall not relieve the Contractor of the obligations described herein.

The Contractor agrees that it will not attempt to hold the State and its Departments and Agencies and 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 specifications or from any unforeseen obstructions, acts of God, vandalism, fires or encumbrances which may be encountered in the prosecution of the work.

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 Engineer to cover such just claims until satisfactory proof of payment or the establishment of a payment plan is presented.

The Contractor shall defend, indemnify and hold harmless the State and its Departments and Agencies and their officers, representatives, employees or agents from all suits, actions or claims of any character brought on account of any claims or amounts arising or recovered under the Worker's Compensation Laws or any other law, by-law, ordinance, order or decree.

Section 8 – Measurement and Payment

1. **DELETE** Section 8.7a in its entirety and replace with the following:

- a. Tax Clearances from the State of Hawaii Department of Taxation and Internal Revenue Service, subject to section 103D-328, HRS, current within two months of issuance date indicating that all delinquent taxes levied or accrued under State Statutes against the contractor have been paid.

2. **ADD** Section 8.7d, Certificate of Compliance:

- d. A Certification from the Contractor affirming that the Contractor has, as applicable, remained in compliance with all laws as required by Section 103D-310, HRS, and Section 3-122-112, HAR. A contractor making a false affirmation shall be suspended and may be debarred pursuant to section 103D-702, HRS.

1. Certification of Compliance for Final Payment, State Procurement Office Form-22. Must be Signed Original.

3. **ADD** Section 8.7e, Hawaii Compliance Express:

- e. In lieu of submitting the tax clearances from Taxation and IRS, and SPO Form -22, the Contractor may choose to use the Hawaii Compliance Express as described on page SP-1 of this Special Provisions.

TABLE OF CONTENTS

TECHNICAL SPECIFICATIONS	SECTION NO.
<i>DIVISION 1 – GENERAL REQUIREMENTS</i>	
General Specifications	01019
Standard References	01090
Submittals	01300
Mobilization and Demobilization	01505
Barricades	01530
Pollution Control	01567
Existing Conditions - Asbestos / Lead / Hazardous Material Survey Hazardous Material Survey March 2024	01715 01715-ATTCH
<i>DIVISION 2 – SITEWORK</i>	
Selective Demolition	02070
<i>DIVISION 3 – CONCRETE</i>	
NOT INCLUDED	
<i>DIVISION 4 – MASONRY</i>	
NOT INCLUDED	
<i>DIVISION 5 – METALS</i>	
NOT INCLUDED	
<i>DIVISION 6 – WOODS AND PLASTICS</i>	
NOT INCLUDED	
<i>DIVISION 7 – THERMAL AND MOISTURE PROTECTION</i>	
NOT INCLUDED	
<i>DIVISION 8 – DOORS AND WINDOWS</i>	
NOT INCLUDED	
<i>DIVISION 9 – FINISHES</i>	
Resilient Tile Floor	09650
Repainting	09902
<i>DIVISION 10 – SPECIALTIES</i>	
NOT INCLUDED	
<i>DIVISION 12 – FURNISHINGS</i>	
Shades	12490

DIVISION 13 – SPECIAL CONSTRUCTION

Asbestos Abatement

13281

Asbestos Testing and Monitoring

13288

DIVISION 14 – CONVEYING SYSTEMS

NOT INCLUDED

DIVISION 15 – MECHANICAL

NOT INCLUDED

DIVISION 16 – ELECTRICAL

NOT INCLUDED

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01019

GENERAL SPECIFICATIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

Work shall consist of furnishing all labor, tools, materials and equipment necessary and required to construct in place complete all work as indicated on the drawings and as specified herein.

1.2 GENERAL

- A. Examination of Premises: The Contractor shall contact the Engineer and obtain permission before visiting the site.
- B. All lines and grades shall be established by a licensed surveyor, or licensed Civil Engineer, registered in the State of Hawaii. The Contractor shall submit evidence of current and valid registration.
- C. Notices: The Contractor shall notify the Engineer and give at least three (3) working days notice before starting any work.
- D. Disruption of Utility Services: All work related to the temporary disconnection of electrical system shall be pre-arranged with the Engineer so that any disruption of such services will be kept to a minimum. In the event temporary power hook-up is required, the Contractor shall provide the necessary services.
- E. Contractor's Operations
 - 1. The Contractor must employ, insofar as possible, such methods and means of carrying out the work so as not to cause any interruption or interference to the facility's operations. Where the Contractor's operations would result in interruptions which would hamper the operations of the facilities, the Contractor shall rearrange the schedule of work accordingly.
 - 2. The Contractor shall maintain safe passageway to and from the facility for the user agency personnel and the public at all times.
- F. Lead Paint
 - 1. When the project includes paint to be disturbed that was applied prior to 1980, it shall be assumed to contain lead. The Contractor shall inform its employees, subcontractors, and all other persons engaged in the project that lead containing

paints are present in the existing buildings at the job site and to follow the requirements of the Department of Labor and Industrial Relations, Division of Occupational Safety and Health, Title 12, Subtitle 8, Chapter 148, Lead Exposure in Construction, Hawaii Administrative Rules (Chapter 12-148, HAR).

G. Parking Policy for Contractor

1. The DLNR is a tenant in the Kalanimoku building that is owned and operated by DAGS. Therefore, DLNR cannot provide parking. The Contractor shall be responsible for the parking coordination and costs. Below are some parking options:
 - a. Obtain a parking permit from DAGS by contacting (Fees will apply):
Richard F. Hung
Operations Supervisor, DAGS AMD
Work: (808) 586-0351
Mobile: (808) 282-6694
Email: richard.f.hung@hawaii.gov.
 - b. Pay the public parking meter in the Kalanimoku parking lot which is on a first-come basis. The rate is \$2.00 per hour at 2 hour maximum increments. Parking is enforced Monday to Sunday, 5:45 AM to 5:00 PM including holidays.
 - c. The Contractor may make their own parking arrangements, if parking is deemed necessary.

H. Toilet Accommodations: The Contractor may use the existing toilet facilities if so designated by the Engineer; however, it is the Contractor's responsibility to keep same clean and in a sanitary condition at all times.

I. Protection of Property: The Contractor shall continually maintain adequate protection of all its work from damage and shall protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. The Contractor shall repair, replace or pay the expense of repair of damages resulting from its operations.

J. Use of Power Driven Equipment: The Contractor is cautioned to take all necessary safety precautions to protect the facility personnel, and the public whenever power driven equipment is used.

K. Safety: The Contractor shall carefully read and strictly comply with the requirements of the Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, as amended, is applicable and made a part of the Contract.

L. Clean Up Premises: The Contractor shall clean up and remove from premises all debris accumulated from operations as necessary or as directed. See also Section 7.25 of the General Conditions.

M. Responsibility

1. The State will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the prime Contractor in matters pertaining to other trades employed on the job. The Contractor shall be responsible for coordinating the work of all trades on the job.
2. Should the Contractor discover any discrepancy in the plans or specifications, 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 correction of work placed due to such discrepancy.

N. Cooperation With Other Contractors: The State reserves the right at any time to contract for or otherwise perform other or additional work within the contract zone limits of this Contract. The Contractor of this project shall, to the extent ordered by the State, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by other contractors.

O. Division of the Work: The Divisions and Sections into which these Specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to all work specified within each Section.

P. Drawings and Specifications

1. The Contractor shall not make alterations in the drawings and specifications. In the event the contractor discovers any errors or discrepancies, the Contractor shall immediately notify the Engineer in accordance with the General Conditions.
2. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the work.
3. Specifications and drawings are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as "the Contractor shall", "as shown on the drawings", "a", "an", and "the" are intentional. Omitted words and phrases shall be provided by inference to form complete sentences.

Q. Required Submittals

1. Required submittals as specified in the Technical Sections of these specifications include one or more of the following: Shop drawings; color samples; material samples; technical data; schedules of materials; schedules of operations; guarantees; operating and maintenance manuals; and as-built drawings.
2. The Contractor shall make a comprehensive list of the required submittals, by Specification Section, and submit this list to the Engineer within 15 days after notice

to proceed.

3. As-Built Drawings: When as-built drawings are required for submittal, the following shall apply:
 - a. As-built drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be required.
 - b. All deviations from alignments, elevations and dimensions which are stipulated on the plans shall be recorded in red on the as-built drawings.
 - c. The following procedure shall be followed:
 - 1) Immediately after these changes are constructed in place, the Contractor shall record them on the field office plans.
 - 2) Within two weeks after final inspection of the project, the Contractor shall transfer the changes marked on the field office plans onto a clean copy of plans using a red pencil. Any deletions shall be so noted and redrawn as necessary. The Contractor shall stamp or mark the tracings "AS-BUILT", and also sign and date each drawing so marked.
 - 3) The Contractor shall submit the as-built drawings to the Engineer for review and approval. After the Engineer approves the as-built drawings, the Contractor shall submit an electronic copy in Adobe PDF format on CD ROM.
 - 4) Any as-built drawing which the Engineer determines does not accurately record the deviation shall be corrected by the State, and the Contractor shall be charged for the services.

END OF SECTION

SECTION 01090

STANDARD REFERENCES

PART 1 - GENERAL

Wherever used in the project, the following abbreviations will have the meanings listed:

<u>Abbreviation</u>	<u>Company</u>
AA	Aluminum Association Incorporated 818 Connecticut Avenue, N.W. Washington, D.C. 20006
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W., Suite 225 Washington, D.C. 20001
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI
AEIC	Association of Edison Illuminating Companies 51 East 42nd Street New York, NY 10017
AFBMA	Anti-Friction Bearing Manufacturer's Association 60 East 42nd Street New York, NY 10017
AGA	American Gas Association 8501 East Pleasant Valley Road Cleveland, OH 44131
AGMA	American Gear Manufacturer's Association 1330 Massachusetts Avenue, N.W. Washington, D.C.
AISC	American Institute of Steel Construction 101 Park Avenue New York, NY 10017
AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, D.C. 20036

<u>Abbreviation</u>	<u>Company</u>
AITC	American Institute of Timber Construction 333 West Hampden Avenue Englewood, CO 80110
AMCA	Air Moving and Conditioning Association, Inc. 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute, Inc. 1430 Broadway New York, NY 10018
APA	American Plywood Association 1119 A Street Tacoma, WA 98401
API	American Petroleum Institute 1801 K Street N.W. Washington, DC 20006
ARI	Air-Conditioning and Refrigeration Institute 1814 North Fort Myer Drive Arlington, VA 22209
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017
ASCII	American Standard Code for Information Interchange United States of America Standards Institute 1430 Broadway New York, NY 10018
ASE Code	American Standard Safety Code for Elevators, Dumbwaiter and Escalators American National Standards Institute 1430 Broadway New York, NY 10018
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers United Engineering Center 345 East 47th Street New York, NY 10017

<u>Abbreviation</u>	<u>Company</u>
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWPA	American Wood Preservers Association 1625 Eye Street Washington, DC 20006
AWS	American Welding Society 2501 N.W. 7th Street Miami, FL 33125
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
CBM	Certified Ballast Manufacturers 2120 Keith Building Cleveland, OH 44115
CMAA	Crane Manufacturers Association of America, Inc. (Formerly called: Overhead Electrical Crane Institute - OEI) 1326 Freeport Road Pittsburgh, PA 15238
CRSI	Concrete Reinforcing Steel Institute 180 North La Salle Street Chicago, IL 60601
CSA	Canadian Standards Association 178 Rexdale Boulevard Rexdale, Ontario, M9W IR3, Canada
DEMA	Diesel Engine Manufacturer's Association 122 East 42nd Street New York, NY 10017

<u>Abbreviation</u>	<u>Company</u>
DIS	Division of Industrial Safety California Department of Industrial Relations 2422 Arden Way Sacramento, CA 95825
EI	Edison Electric Institute 90 Park Avenue New York, NY 10016
EIA	Electronic Industries Association 2001 Eye Street N.W. Washington, DC 20006
EJMA	Expansion Joint Manufacturer's Association 331 Madison Avenue New York, NY 10017
ESO	Electrical Safety Orders, California Administrative Code, Title 8, Chap. 4, Subarticle 5 Office of Procurement, Publications Section P.O. Box 20191 8141 Elder Creek Road Sacramento, CA 95820
FEDSPEC	Federal Specifications General Services Administration Specification and Consumer Information Distribution Branch Washington Navy Yard, Bldg. 197 Washington, DC 20407
FEDSTDS	Federal Standards (see FEDSPECS)
FM	Factory Mutual Research 1151 Boston-Providence Turnpike Norwood, MA 02062
HEI	Heat Exchange Institute 122 East 42nd Street New York, NY 10017
HI	Hydraulic Institute 1230 Keith Building Cleveland, OH 44115

<u>Abbreviation</u>	<u>Company</u>
IAPMO	International Association of Plumbing and Mechanical Officials 5032 Alhambra Avenue Los Angeles, CA 90032
ICBO	International Conference of Building Officials 5360 South Workman Mill Road Whittier, CA 90601
ICEA	Insulated Cable Engineers Association P.O. Box P South Yarmouth, MA 02664
IEEE	Institute of Electrical and Electronics Engineers, Inc. 345 East 47th Street New York, NY 10017
IES	Illuminating Engineering Society C/O United Engineering Center 345 East 47th Street New York, NY 10017
ISA	Instrument Society of America 400 Stanwix Street Pittsburgh, PA 15222
JIC	Joint Industrial Council 7901 Westpark Drive McLean, VA 22101
MILSPEC	Military Specifications Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. 127 Park Street, N.E. Vienna, VA 22180

<u>Abbreviation</u>	<u>Company</u>
NAAMM	National Association of Architectural Metal Manufacturers 100 South Marion Street Oak Park, IL 60302
NACE	National Association of Corrosion Engineers P.O. Box 986 Katy, TX 77450
NEC	National Electric Code National Fire Protection Association 470 Atlantic Avenue Boston, MA 02210
NEMA	National Electrical Manufacturer's Association 155 East 44th Street New York, NY 10017
NESC	National Electric Safety Code American National Standards Institute 1430 Broadway New York, NY 10018
NFPA	National Forest Products Association (Formerly called: National Lumber Manufacturer's Association) 1619 Massachusetts Avenue, N.W. Washington, DC 20036
OSHA	Occupational Safety and Health Act U.S. Department of Labor San Francisco Regional Office 450 Golden Gate Avenue, Box 36017 San Francisco, CA 94102
PPIC	The Plumbing & Piping Industry Council, Inc. Suite 402 510 Shatto Place Los Angeles, CA 90020
SAE	Society of Automotive Engineers 2 Pennsylvania Street New York, NY 10001

<u>Abbreviation</u>	<u>Company</u>
SAMA	Scientific Apparatus Makers Association One Thomas Circle Washington, DC 20005
SBCC	Southern Building Code Congress 1116 Brown-Marx Building Birmingham, AL 35203
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc. 8224 Old Courthouse Road Tysons Corner Vienna, VA 22180
SSPWC	Standard Specifications for Public Works Construction Building News, Inc. 3055 Overland Avenue Los Angeles, CA 90034
TEMA	Tubular Exchanger Manufacturer's Association 331 Madison Avenue New York, NY 10017
UBC	Uniform Building Code Published by ICBO
UL	Underwriters Laboratories Inc. 207 East Ohio Street Chicago, IL 60611
UMC	Uniform Mechanical Code Published by ICBO
UPC	Uniform Plumbing Code Published by IAPMO
USBR	Bureau of Reclamation U.S. Department of Interior Engineering and Research Center Denver Federal Center, Building 67 Denver, CO 80225
WWPA	Western Wood Products Association (Formerly called: West Coast Lumberman's Association - WCLA) Yeon Building Portland, CA 97204

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

- END OF SECTION -

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Schedule of Work – Critical Path Method (CPM): Submit Schedule of Work – CPM.
- B. Shop drawings shall be required for:
 - 1. Division 2 – Selective Demolition
 - 2. Division 9 – Resilient Tile Flooring
 - 3. Division 12 – Shades
 - 4. Any others as called for in the plans, specifications or by the Engineer.
- C. Other required submittals shall include:
 - 1. Samples, Product Data, and MSDS documents.
 - 2. Manufacturer's Data.
 - 3. Certificates of Warranty.
 - 4. Any others as called for in the plans, specifications, or by the Engineer.

1.2 SCHEDULE OF WORK – CRITICAL PATH METHOD (CPM)

- A. The Contractor shall submit Schedule of Work within 2 weeks from the effective date noted in the “Notice to Proceed” letter, identifying first workday of each week. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Show submittal dates required for shop drawings, product data, samples and product delivery dates.
- B. The Schedule of Work shall follow the Critical Path Method (CPM). The project shall not commence until the CPM schedule is submitted and approved. No claims for extensions shall be granted if the CPM schedule is not submitted in accordance with this Section.
 - 1. The Construction Schedule shall address the entire project, to the extent required by the Contract Documents, and shall show an expedient and practical execution of work. If requested by the Engineer, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submitting the schedule.

2. The Construction Schedule shall indicate the following:
 - a. Elements of the project in detail time scaled by month or by week, and the project summary.
 - b. The order and interdependence of activities and the sequence in which the work is to be accomplished.
 - c. How the start of a given activity is dependent upon the completion of preceding activities and how its completion restricts the start of following activities.
 - d. The submittal and approval of shop drawings, samples, procurement of critical materials and equipment, receipt of materials with estimated costs of major items for which payment will be requested in advance of installation, fabrication of special materials and equipment, and their installation and testing.
 - e. Activities of the State that have an effect on the progress schedule, such as the required delivery dates for State furnished materials and equipment and other similar items.
 - f. The description of the activity and the duration of time in calendar days.
 - g. For each activity indicate the start, finish, and total time.
 - h. The party responsible for the accomplishment of the activity. At a minimum, indicated responsibility for each listed subcontractor and major vendor.
 - i. Contract-required dates for completion of all parts of the Work.
 - j. Non-work days such as holidays, or exclusionary non-work days.
3. Upon completion of the Engineer's review, the Contractor shall mend the schedule to reflect the comments. If necessary, the Contractor shall participate in a meeting with the Engineer to discuss the proposed schedule and changes required. Submit the revised schedule for review within 7 calendar days after receipt of the comments.
4. Use the reviewed schedule for planning, organizing and directing the work, for reporting progress, and for requesting payment for work completed. Unless providing an update, do not make changes to the reviewed schedule without the Engineer's approval.

1.3 BIDDER'S SPECIAL RESPONSIBILITY FOR COORDINATING CONTRACTUAL WORK AND SUBMITTALS:

- A. The Contractor is responsible for the coordination of all contractual work and submittals.
- B. The Contractor shall have a rubber stamp made up in the following format:

CONTRACTOR NAME

PROJECT: _____

JOB NO: _____

THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL INTEGRATE THIS SUBMITTAL INTO THEIR OWN WORK.

DATE RECEIVED _____

SPECIFICATION SECTION _____

SPECIFICATION PARAGRAPH _____

DRAWING NUMBER _____

SUBCONTRACTOR NAME _____

SUPPLIER NAME _____

MANUFACTURER NAME _____

CERTIFIED BY: _____

- C. This stamp, "filled in", should appear on the title sheet of each shop drawing, on a cover sheet of submittals in an 8-1/2" x 11" format, or on one face of a cardstock tag (min. 3" x 6") tied to each sample. The tag on the samples should state what the sample is so that, if the tag is accidentally separated from the sample, it can be matched up again. The back of this tag will be used by the Engineer for his receipt, review, and log stamp and for any comments that relate to the sample.
- D. All submittals for material, equipment, and shop drawings listed in the contract documents, including dimensioned plumbing shop drawings, shall be required and shall be reviewed by the Engineer, prior to any ordering of materials and equipment.
- E. Unless otherwise noted, the Contractor shall submit to the Engineer for his review eight copies of all shop drawings, piping layout, and/or catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for the construction. Drawings shall be submitted in sufficient time to allow the Engineer not less than twenty regular working days for examining the drawings.

- F. The drawing shall be accurate, distinct, and complete and shall contain all required information, including satisfactory identification of items, units and assemblies in relation to the contract drawings and specifications.
- G. Unless otherwise approved by the Engineer, shop drawings shall be submitted only by the Contractor, who shall indicate by a signed stamp on the drawings or other approved means that the Contractor has checked the shop drawings and that the work or equipment shown is in accordance with contract requirements and has been checked for dimensions and relationship with work of all other trades involved. All deviations from the plans and specifications shall be listed. The practice of submitting incomplete or unchecked shop drawings for the Engineer to correct or finish will not be acceptable, and shop drawings which, in the opinion of the Engineer, clearly indicate that they have not been checked by the Contractor will be considered as not complying with the intent of the contract documents and will be returned to the Contractor for resubmission in the proper form.
- H. When the shop drawings have been reviewed by the Engineer, two sets of submittals will be returned to the Contractor appropriately stamped. If major changes or corrections are necessary, the drawing may be rejected and one set will be returned to the Contractor with such changes or corrections indicated, and the Contractor shall correct and resubmit eight copies of the drawings, unless otherwise directed by the Engineer. No changes shall be made by the Contractor to the resubmitted shop drawings other than those changes indicated by the Engineer. The resubmittal shall be so indicated on the shop drawing.
- I. The review of such drawings and catalog cuts by the Engineer shall not relieve the Contractor from responsibility for correctness of the dimensions, fabrication details, and space requirements or for deviations from the contract drawings and specifications, unless the Contractor has called attention to such deviations, in writing, by a letter accompanying the drawings and the Engineer approved the change or deviations, in writing, at the time of submission; nor shall review by the Engineer relieve the Contractor from the responsibility for errors in the shop drawings. When the Contractor does call such deviations to the attention of the Engineer, he shall state in his letter whether or not such deviations involve any deduction or extra cost adjustment.
- J. The approval of the above drawings, lists, prints, specifications, or other data shall in no way release the Contractor from his responsibility for the proper fulfillment of the requirements of this contract nor for fulfilling the purpose of the installation nor from his liability to replace the same should it prove defective or fail to meet the specified requirements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

Submittals
01300-4

Job No. E00BO99A

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Description: This section covers the requirements for mobilization and demobilization.
- 1.2 MOBILIZATION: Mobilization shall consist of the transporting, assembling, constructing, installing, and making ready for use at the job site, all the equipment, machinery, structures, utilities, materials, labor, and incidentals necessary to do the work covered by this contract.
- 1.3 DEMOBILIZATION: Demobilization shall consist of the dismantling and removal of the above-mentioned equipment, machinery, structures, utilities, materials, and incidentals, and the cleaning up of the site.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 3.1 GUIDELINES: If the Contractor utilizes private lands other than the sites provided by the Department for mobilization purposes, the provisions of this section shall apply, and the mobilization and demobilization work on said private lands shall be in accordance with the agreement between the Contractor and the land owner.

Any and all additional mobilization or demobilization costs in excess of the maximum amounts specified in the Proposal shall be included in the appropriate unit prices bid in the Proposal. The Contractor shall not receive any compensation for mobilization and demobilization in addition to those specified in the Proposal.

All equipment, machinery, buildings, utilities and incidentals mobilized and demobilized under this section shall remain the property of the Contractor.

END OF SECTION

SECTION 01530

BARRICADES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Description. This work shall consist of furnishing, installing and maintaining barricades in accordance with the requirements of the contract.

Barricade application shall be provided for in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), and as amended.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Lumber: Lumber for rails, frames and braces shall be dry, sound, undamaged, well seasoned, and free from any defect which may impair their strength and durability.
- B. Hardware: Nails shall be galvanized wire nails. As many and as large a size as is practicable shall be used.
- C. Paints: Paints shall be exterior enamel paint of the best grade or first line as made by approved manufacturers.
- D. Sheet Reflecting Material: Sheet reflecting material shall conform to the applicable requirements of Subsection 712.20(C) of the "Standard Specifications for Road and Bridge Construction".
- E. Alternate Designs: Alternate barricade designs such as plastic molded barricades may be used subject to the Engineer's approval. The Contractor shall submit shop drawings or catalog cuts for approval.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

- A. General: Barricades shall be constructed in a first class, workmanlike manner in accordance with details shown on the plans and as specified herein. Barricades shall be in good condition and approved by the Engineer for use within the project limits. Barricade application and installation shall be as shown on the and as directed plans by the Engineer in accordance with the guidelines provided in the latest edition of the FHWA publication, Manual on Uniform Traffic Control Devices for Streets

and Highways (MUTCD), and any amendments or revisions thereof as may be made from time to time.

Sand bags or other approved weights shall be provided where required or as directed by the Engineer. Sand bags or other approved weights shall not be placed on any striped barricade rail.

Steady burn and/or flashing lamps shall be required on selected barricades used during hours of darkness. Locations shall be as shown on the plans and as directed by the Engineer. Lamps shall be attached on the barricade ends closest to the traveled way and shall be visible to the motorist.

Barricades furnished and paid for as provided for as provided herein may be used for temporary detours, construction phasing, or other temporary traffic control work.

Barricades furnished and paid for use in temporary detours or construction phasing may be used for permanent location called for on the plans.

Upon completion of the construction work, barricades shall be left in place, relocated, or removed and disposed of as shown on the plans or as directed by the Engineer. Barricades left in place, or relocated to new permanent locations shall become the property of the State. Barricades directed to be removed and disposed of shall become the property of the Contractor.

- B. Painting: Wooden rails, frames and braces shall be given a prime coat and 2 finish coats of new white exterior enamel paint. Rail faces to be reflectorized may be left unpainted unless otherwise specified or directed.
- C. Reflectorization: Reflectorization of barricade rails shall be done in a first class, workmanlike manner and the attachment of reflective sheeting shall be as shown on the plans, specified herein, or as directed and approved by the Engineer.

Both vertical faces of each barricade rail shall be reflectorized as shown on the plans.

Wooden rails shall be reflectorized with one of the following:

1. Reflective sheeting specified in Subsection 712.20(C)(4) of the "Standard Specifications for Road and Bridge Construction" and backed with a 26 gage galvanized steel sheet, or
 2. a hardened aluminum backed reflective sheeting as specified in Subsection 712.20(C)(5) of the "Standard Specifications for Road and Bridge Construction."
- D. Color: Rails, frames and braces shall be white.

The front and back faces of barricade rails shall have 6-inch wide alternative colored and white striped sloping downward toward the traveled way at an angle of 45 degrees with the

vertical. The colored stripes shall be either orange or red in accordance with the following requirements:

1. Orange and white stripes shall be used in the following conditions:
 - a. Construction work.
 - b. Detours.
 - c. Maintenance work.
 2. Red and white stripes shall be used in the following conditions:
 - a. On roadways with no outlet (ie. dead-ends, cul-de-sacs).
 - b. Ramps or lanes closed for operational purposes.
 - c. Permanent or semipermanent closure or termination of a roadway.
- E. Maintenance: Barricades shall be kept in good condition throughout their usage during construction until the end of the contract.
- F. The Contractor shall repair, repaint, clean or replace the barricades as required and as directed by the Engineer to maintain their effectiveness and appearance.

The Constructor shall immediately replace all lost, stolen or damaged barricades, lamps, sand bags and other approved weights.

Barricades used during construction phasing, temporary detours or other temporary traffic control work shall be cleaned and repaired as necessary, prior to being relocated to a permanent location shown on the plans or as directed.

No extra payment will be made for any repair work, repainting, or cleaning of barricades. The Engineer shall determine the suitable condition of each barricade and shall determine when each barricade shall be repaired, repainted or cleaned.

END OF SECTION

SECTION 01567

POLLUTION CONTROL

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Rubbish Disposal

1. No burning of debris and/or waste materials shall be permitted on the project site.
2. No burying of debris and/or waste material except for materials which are specifically indicated elsewhere in these specifications as suitable for backfill shall be permitted on the project site.
3. All unusable debris and waste material shall be hauled away to an appropriate off-site dump area. During loading operations, debris and waste materials shall be watered down to allay dust.
4. No dry sweeping shall be permitted in cleaning rubbish and fines which can become airborne from floors or other paved areas. Vacuuming, wet mopping or wet or damp sweeping is permissible.
5. Enclosed chutes and/or containers shall be used for conveying debris from above to ground floor level.
6. Clean-up shall include the collection of all waste paper and wrapping materials, cans, bottles, construction waste materials and other objectionable materials, and removal as required. Frequency of clean-up shall coincide with rubbish producing events.

B. Dust

1. The Contractor shall prevent dust from becoming airborne at all times including non-working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60 - Air Pollution Control.
2. The method of dust control and costs shall be the responsibility of the Contractor. Methods of dust control shall include the use of water, chemicals or asphalt over surfaces which may create airborne dust.
3. The Contractor shall be responsible for all damage claims in accordance with Section 7.16 - "Responsibility for Damage Claims" of the GENERAL CONDITIONS.

C. Noise

1. Noise shall be kept within acceptable levels at all times in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 46 - Community Noise Control for Oahu. The Contractor shall obtain and pay for the Community Noise Permit from the State Department of Health when the construction equipment or other devices emit noise at levels exceeding the allowable limits.
2. All internal combustion engine-powered equipment shall have mufflers to minimize noise and shall be properly maintained to reduce noise to acceptable levels.
3. Pile driving operations shall be confined to the period between 9:00 a.m. and 5:30 p.m., Monday through Friday. Pile driving will not be permitted on weekends and legal State and Federal holidays.
4. Starting-up of construction equipment meeting allowable noise limits shall not be done prior to 6:45 a.m. without prior approval of the Engineer. Equipment exceeding allowable noise levels shall not be started-up prior to 7:00 a.m.

D. Erosion

1. During interim grading operations, the grade shall be maintained so as to preclude any damage to adjoining property from water and eroding soil.
2. Temporary berms, cut-off ditches and other provisions which may be required because of the Contractor's method of operations shall be installed at no cost to the State.
3. Drainage outlets and silting basing shall be constructed and maintained as shown on the plans to minimize erosion and pollution of waterways during construction.

E. Others

1. Wherever trucks and/or vehicles leave the site and enter surrounding paved streets, the Contractor shall prevent any material from being carried onto the pavement. Waste water shall not be discharged into existing streams, waterways, or drainage systems such as gutters and catch basins unless treated to comply with the State Department of Health water pollution regulations.
2. Trucks hauling debris shall be covered as required by PUC Regulation. Trucks hauling fine materials shall be covered.
3. No dumping of waste concrete will be permitted at the job-site.

4. Except for rinsing of the hopper and delivery chute, and for wheel washing where required, concrete trucks shall not be cleaned on the job-site.
5. Except in an emergency, such as a mechanical breakdown, all vehicle fueling and maintenance shall be done in a designated area. A temporary berm shall be constructed around the area when runoff can cause a problem.
6. When spray painting is allowed such spray painting shall be done by the "airless spray" process. Other types of spray painting will not be allowed.

F. Suspension of Work

1. Violations of any of the above requirements or any other pollution control requirements which may be specified in the Technical Specifications herein shall be cause for suspension of the work creating such violation. No additional compensation shall be due the Contractor for remedial measures to correct the offense. Also, no extension of time will be granted for delays caused by such suspensions.
2. If no corrective action is taken by the Contractor within 72 hours after a suspension is ordered by the Engineer, the State reserves the right to take whatever action is necessary to correct the situation and to deduct all costs incurred by the State in taking such action from monies due the Contractor.
3. The Engineer may also suspend any operations which he feels are creating pollution problems although they may not be in violation of the above-mentioned requirements. In this instance, the work shall be done by force account as described in Subsection 4.2b -"Additional Work" of the GENERAL CONDITIONS and paid for in accordance with Subsection 8.4b - "Force - Account Work" therein. The count of elapsed working days to be charged against the contract in this situation shall be computed in accordance with Subsection 7.18 - "Contract Time" of the GENERAL CONDITIONS.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01715

EXISTING CONDITIONS - ASBESTOS / LEAD / HAZARDOUS MATERIAL SURVEY

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

1.2 DESCRIPTION OF WORK

Accomplish all demolition and removal indicated on or required by the drawings, and as specified herein.

1.3 GENERAL REQUIREMENTS

A. This section includes the results of the State's surveys for Asbestos Containing Materials, Lead-Containing Paint, and other hazardous materials; and is provided for the Contractor's information.

B. Related Sections include the following:

1. SECTION 13281 - ASBESTOS ABATEMENT; and
2. SECTION 13288 - TESTING AND AIR MONITORING

1.4 ASBESTOS

A. The structure or structures to be renovated or modified under this contract were surveyed for the presence of asbestos containing material (ACM), using NESHAP requirements. ACM was identified in the areas to be renovated or modified. A copy of the initial survey report, as well as any subsequent supplemental survey report(s) if performed, is included in this Section.

1. The report(s) are included for the Contractor's information. Review the attached report(s) for other materials to be disturbed. The Contractor may perform further surveys at its own expense, if ACBM not shown in the report(s) is suspected in the areas of the building(s) in which work will be performed. If ACBM is found, notify the Engineer immediately. The Engineer will reimburse the Contractor for the testing cost if ACBM is found.
2. If there is ACBM outside of the area in which work will be performed, this ACBM shall not be disturbed in any way.

B. If applicable, notify employees, Subcontractors and all other persons engaged on the project of the presence of asbestos in the existing buildings in accordance with the requirements of

State of Hawaii: Occupational Safety and Health Administration 29 CFR 1926.1101,
Asbestos.

- C. In the event that work is required in any building or buildings on the site other than the one(s) designated within this project scope, request copies of the asbestos survey report(s) for such building(s) from the Engineer. Based on the information contained in the additional survey(s), notify affected personnel.

1.5 LEAD

- A. Review the attached lead testing data which was for design purposes only, and the results do not satisfy any of the requirements of 29 CFR 1926.62 Lead.
- B. Lead was not identified in the project areas.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SURVEY ATTACHED

Limited Hazardous Material Survey, DLNR LD Office Improvements, Room 220,
Kalanimoku Building, 25 pages, dated March 2024, prepared by EnviroQuest, Inc.

END OF SECTION



SERVICES

- HAZMAT Inspections
- Remediation Design
- Asbestos Management
- Lead Management
- Lead Risk Assessment
- Industrial Hygiene
- Indoor Air Quality
- Mold Assessment
- Environmental Site Assessments
- Subsurface Investigation
- Water Sampling
- Asbestos Training
- Lead Training
- OSHA Training
- OSHA Compliance

LIMITED HAZARDOUS MATERIAL SURVEY

DLNR LD OFFICE IMPROVEMENTS
ROOM 220, KALANIMOKU BUILDING
HONOLULU, HAWAII

EnviroQuest Project: 303564

March 2024

Prepared for:

Omizu Architecture, Inc.
826 Kaheka Street, #305
Honolulu, Hawaii 96814

Prepared by:

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea, Hawaii 96701
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David Leigh
PM/CIH



TABLE OF CONTENTS

1	INTRODUCTION	2
1.1	SITE LOCATION	2
2	ASBESTOS	3
2.1	METHODOLOGY.....	3
2.2	RESULTS.....	3
3	LEAD	4
3.1	METHODOLOGY.....	4
3.2	RESULTS.....	4
4	SUMMARY	5
4.1	ASBESTOS.....	5
4.2	LEAD.....	5
5	LIMITATIONS	6

TABLES

TABLE 1:	ASBESTOS SAMPLING SUMMARY.....	7
TABLE 2:	LEAD PAINT SAMPLING SUMMARY	7

APPENDICES

- A. REFERENCE PHOTOGRAPHS
- B. ASBESTOS
LABORATORY ANALYTICAL REPORT
- C. LEAD
LABORATORY ANALYTICAL REPORT



1 INTRODUCTION

A limited hazardous material survey (HMS) was conducted on March 19, 2024, at Room 220, Kalanimoku Building, 1151 Punchbowl Street, Honolulu, Hawaii 96813.

The purpose of the activities under this project was to perform sampling for asbestos-containing materials (ACMs) and lead-based paint (LBP) that may be encountered during the renovation work.

1.1 SITE LOCATION

The listed area was included in our inspection:

- Room 220



2 ASBESTOS

Nine samples were collected from suspect asbestos-containing materials.

2.1 METHODOLOGY

A visual inspection for suspect ACM and homogeneous areas (areas that have uniform color, texture, and appearance) was conducted. Suspect materials were divided into three Environmental Protection Agency (EPA) categories:

- Surfacing Materials (sprayed or troweled-on materials)
- Thermal Systems Insulations (materials generally applied to various mechanical systems)
- Miscellaneous Materials (any materials which do not fit in the above categories)

Sampling methodology generally followed the procedures presented in EPA 40 CFR 763 *Asbestos Subpart E Asbestos Containing Materials in Schools* and Hawaii Department of Health (HDOH), Hawaii Administrative Rules (HAR) Titles 11-501 *Asbestos Requirements* and 11-502 *Asbestos Containing Materials in Schools*.

2.2 RESULTS

Samples were submitted to Hawaii Analytical Laboratory (HAL), LLC, in Honolulu, Hawaii, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory. The samples were analyzed by polarized-light microscopy (PLM) using EPA Method 40 CFR, Part 763, Appendix E to Subpart E *Interim Method of the Determination of Asbestos in Bulk Insulation Samples* and EPA 600/R-93-116, *Method for the Determination of Asbestos in Bulk Building Materials*. HAL is also registered to provide asbestos laboratory services in Hawaii under HDOH 11-504 *Asbestos Abatement Certification Program*.

Based on the laboratory analytical results, asbestos was identified in three of the 9 samples. All three samples were determined to be asbestos-containing material (ACM), materials containing more than 1% asbestos. In accordance with the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61 Part M, samples consisting of distinct layers of materials were analyzed and reported separately by the laboratory. A summary of the data is presented in Table 1.

Refer to the accompanying appendices for the laboratory results and photographs.



3 LEAD

Three paint film samples were collected from painted or coated materials.

3.1 METHODOLOGY

A visual inspection for painted or coated building surfaces was conducted. Sampling methodology generally followed the procedures presented in the U.S. Department of Housing and Urban Development's document *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* and EPA 40 CFR 745 *Lead-Based Paint Poisoning Prevention in Certain Residential Structures*.

3.2 RESULTS

Samples were submitted to HAL, an American Industrial Hygiene Association (AIHA) accredited laboratory with a specific accreditation for lead analysis under AIHA Environmental Lead Laboratory Accreditation Program. The paint film samples were analyzed by NIOSH Method 7082m, *Flame Atomic Absorption Spectrophotometry*.

Based on the laboratory analytical results, none of the samples had lead concentrations at/or above the laboratory detection limits. The EPA defines lead-based paint as paint or other coatings containing lead equal to, or in excess of, 0.5% lead by weight. A summary of the data is presented in Table 2.

Refer to the accompanying appendices for laboratory analytical results and photographs.



4 SUMMARY

The areas and materials sampled in this inspection were specific to this project.

4.1 ASBESTOS

The listed material was identified as asbestos-containing material.

Area	ACM	Location
Room 220	Tan floor tiles and associated black mastic	Entire floor under carpet

If the material is likely to be disturbed during the renovation work, the materials must be removed by a certified asbestos abatement contractor under controlled conditions in accordance with EPA and HDOH regulations. Work should also be monitored by an independent HDOH accredited Asbestos Project Monitor.

4.2 LEAD

Lead was not detected at/or above the laboratory detection limits in the samples.



5 LIMITATIONS

The information set forth is based solely on the agreed upon scope of services, personal observation, laboratory data, and information provided by Omizu Architecture, Inc.

Although this inspection provides information on the relative presence or absence of asbestos-containing material and lead paint, it should not be construed as a final statement that all hazardous materials have been identified.

Given the often obscure and elusive nature of hazardous materials, it is never possible to absolutely dismiss the possibility of additional hazardous materials. EnviroQuest, Inc. expressly disclaims any and all liability, representations, expressed or implied, contained in, or for omission from this report, or any other written or oral communication which might be interpreted as establishing the total extent of all liability present at the subject property.

Our services have been performed with usual thoroughness and competence of the consulting profession, in accordance with the standard of professional services at this time. No other warranty or representation, either expressed or implied is included or intended.

Any question regarding our work and this report, the presentation of the information, and the interpretation of the data are welcome and should be referred to the undersigned. EQI greatly appreciates the opportunity to assist you with your industrial hygiene needs. We look forward to working with you again in the future.



TABLE 1: ASBESTOS SAMPLING SUMMARY

Homogenous Material	ACM ₁ (Y/N)	Location	Sample ID	Friable (Y/N)	Est Qty (ACM) (ft ²)	Condition ₂	Photo No.
Tan cove base with tan/yellow mastic	N	Interior wall base	220-01A 220-02A 220-03A	N	--	G	8
Gypsum board with joint compound	N	Interior wall	220-04A 220-05A 220-06A	N	--	G	7
Tan floor tiles with black mastic	Y	Interior floor (under carpet)	220-07A 220-08A 220-09A	N	5,500	G	2, 3, 4, 5, 6

1. ACM=>1% asbestos content

2. Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD), >10% distributed or 25% localized

TABLE 2: LEAD PAINT SAMPLING SUMMARY

Paint Color	Int/Ext	LBP ₁ (Y/N)	PWL ₂ (Y/N)	Paint Location	Sample ID	Results (% Wt)	Condition _{3,4}	Photo No.
White	Int	N	N	Interior partition gypsum wall	220-01P	<0.004	Intact	7
White/beige	Int	N	N	Metal door frame	220-02P	<0.004	Intact	10
White	Int	N	N	Concrete column	220-03P	<0.004	Intact	9

1. LBP = >0.5% lead by weight

2. PWL = >laboratory analytical detection limit but <0.5%

3. Exterior: Intact – Entire surface is intact; Fair - ≤ 10ft²; Poor - >10 ft²

4. Interior: Intact – Entire surface is intact; Fair - ≤ 2ft² or ≤ 10%; Poor - >2 ft² or >10%



APPENDIX A

REFERENCE PHOTOGRAPHS

REFERENCE PHOTOGRAPHS

Photo 1: Kalanimoku Building



Photo 2: Kalanimoku Building
Room 220.



Photo 3: Kalanimoku Building
Room 220.

Asbestos containing tan floor tiles and black mastic under carpet.



REFERENCE PHOTOGRAPHS

Photo 4: Kalanimoku Building

Room 220.

Asbestos containing tan floor tiles and black mastic under carpet.



Photo 5: Kalanimoku Building

Room 220.

Asbestos containing tan floor tiles and black mastic under carpet.



Photo 6: Kalanimoku Building

Room 220.

Asbestos containing tan floor tiles and black mastic under carpet.



REFERENCE PHOTOGRAPHS

Photo 7: Kalanimoku Building

Room 220.

Non-asbestos containing gypsum wallboard.

Lead was not detected in the white paint on the gypsum wallboard .



Photo 8: Kalanimoku Building

Room 220.

Non-asbestos containing cove base and mastic.

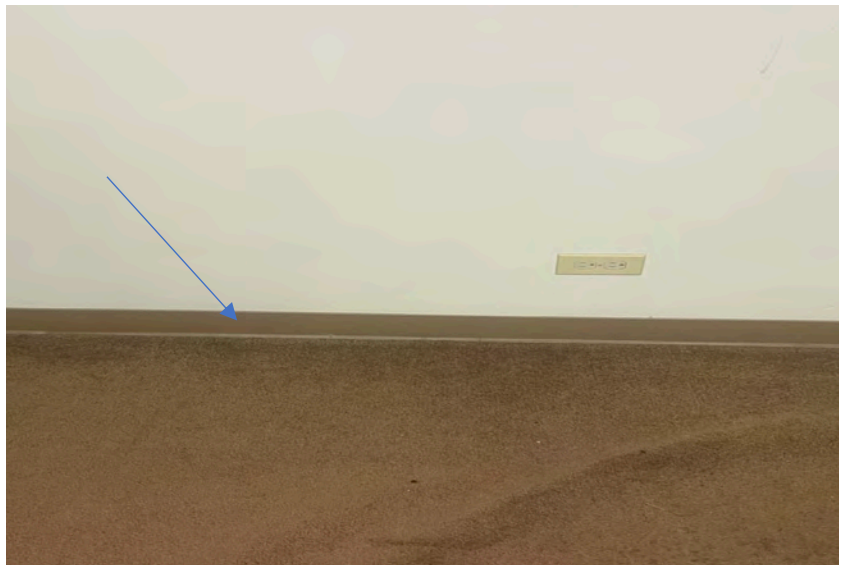


Photo 9 : Kalanimoku Building

Room 220.

Lead was not detected in the white paint on the concrete column.



REFERENCE PHOTOGRAPHS

Photo 10: Kalanimoku Building
Room 220.

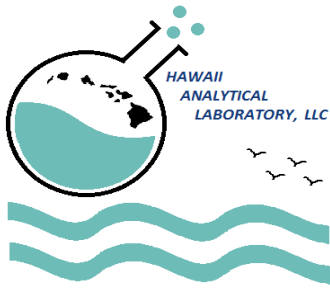
Lead was not detected in the white over off-white paint on the metal door frame.





APPENDIX B

ASBESTOS
LABORATORY ANALYTICAL REPORT



Hawaii Analytical Laboratory ANALYTICAL REPORT

Friday, March 22, 2024

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98-029 Hekaha Street, Suite 21
Aiea HI 96701

Phone Number: (808)486-5881
Facsimile: (808) 486-5889
Email: eqi@enviroquestinc.com

Lab Job No: 202403121
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202422525	220-01A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> <u>Beige mastic</u>						
	Comments						
202422525	220-01A		NONE DETECTED		None detected	Vinyl	3/22/2024
	<u>Layer</u> <u>Tan cove base</u>						
	Comments						
202422525	220-01A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> <u>Tan mastic</u>						
	Comments						
202422525	220-01A		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	3/22/2024
	<u>Layer</u> <u>White drywall</u>						
	Comments						
202422525	220-01A		NONE DETECTED		None detected	Calcite	3/22/2024
	<u>Layer</u> <u>White joint compound</u>						
	Comments						
202422525	220-01A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						

Hawaii Analytical Laboratory is a NIST NVLAP accredited laboratory (NVLAP Lab Code 200655-0) and is accredited in accordance with the recognized ISO/ IEC 17025:2017. Controlled doc.: Asbestos Report, rev. 4 – 20240311

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Lab Job No: 202403121
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202422526	220-02A		NONE DETECTED		None detected	Vinyl	3/22/2024
	<u>Layer</u> Tan cove base						
	Comments						
202422526	220-02A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> Tan mastic						
	Comments						
202422527	220-03A		NONE DETECTED		None detected	Vinyl	3/22/2024
	<u>Layer</u> Tan cove base						
	Comments						
202422527	220-03A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> Tan mastic						
	Comments						
202422527	220-03A		NONE DETECTED		None detected	Calcite	3/22/2024
	<u>Layer</u> White joint compound						
	Comments						
202422528	220-04A		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	3/22/2024
	<u>Layer</u> White drywall						
	Comments						
202422528	220-04A		NONE DETECTED		None detected	Calcite + paint	3/22/2024
	<u>Layer</u> White joint compound / white paint						
	Comments						
202422529	220-05A		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	3/22/2024
	<u>Layer</u> White drywall						
	Comments						

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Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202422529	220-05A		NONE DETECTED		None detected	Calcite + paint	3/22/2024
	<u>Layer</u> <u>White joint compound / white paint</u>						
	Comments						
202422530	220-06A		NONE DETECTED		Fibrous glass (amorphous) + cellulose (undulose)	15 Gypsum	3/22/2024
	<u>Layer</u> <u>White drywall</u>						
	Comments						
202422530	220-06A		NONE DETECTED		None detected	Calcite + paint	3/22/2024
	<u>Layer</u> <u>White joint compound / beige paint</u>						
	Comments						
202422531	220-07A	Yes	Chrysotile	6	None detected	Tar	3/22/2024
	<u>Layer</u> <u>Black mastic</u>						
	Comments						
202422531	220-07A	Yes	Chrysotile	2	None detected	Vinyl	3/22/2024
	<u>Layer</u> <u>Tan vinyl floor tile</u>						
	Comments						
202422531	220-07A		NONE DETECTED		None detected	Calcite	3/22/2024
	<u>Layer</u> <u>White/gray leveling material</u>						
	Comments						
202422531	220-07A		NONE DETECTED		None detected	Binder	3/22/2024
	<u>Layer</u> <u>Yellow mastic</u>						
	Comments						
202422532	220-08A	Yes	Chrysotile	6	None detected	Tar	3/22/2024
	<u>Layer</u> <u>Black mastic</u>						
	Comments						
202422532	220-08A		NONE DETECTED		None detected	Calcite + quartz	3/22/2024
	<u>Layer</u> <u>Gray cementitious material</u>						
	Comments						

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Lab Job No: 202403121
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

Bulk Asbestos Determination

Sample No.	Your Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v Matrix	Date Analyzed
202422532	220-08A <u>Layer</u> Tan vinyl floor tile Comments	Yes	Chrysotile	2	None detected	Vinyl	3/22/2024
202422533	220-09A <u>Layer</u> Black mastic Comments	Yes	Chrysotile	6	None detected	Tar	3/22/2024
202422533	220-09A <u>Layer</u> Gray cementitious material Comments		NONE DETECTED		None detected	Calcite + quartz	3/22/2024
202422533	220-09A <u>Layer</u> Tan vinyl floor tile Comments	Yes	Chrysotile	2	None detected	Vinyl	3/22/2024
202422533	220-09A <u>Layer</u> Yellow mastic Comments		NONE DETECTED		None detected	Binder	3/22/2024

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Email: eqi@enviroquestinc.com

Lab Job No: 202403121
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

General Comments

The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Gravimetric treatment, which HAL does not offer, may also be appropriate for certain NOB (non-friable organically bound) materials. Unless specifically requested by clients, NOB samples can be subcontracted to a NVLAP accredited lab, or else, they will be analyzed by HAL using regular PLM technique. In addition, alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (1 to 2%), 50% relative (3 to 5%); 25% relative (6 to 25%) and 20% (>26% v/v). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

> This testing result is greater than the numerical value listed.

< This testing result is less than the numerical value listed.

None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy.



Jennifer Hsu Liao
Laboratory Manager

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EnviroQuest

202403121

PLM DATA SHEET

Project No.: 303564 Project Name: Kalanimo'oku - #1220

Date: 3/19/24

Page: of

Material Description: <u>tan covr base/mastic</u>		Friable Non-friable
Sample No.	Location	
220-01A	#1220, wall base	202422525
02A	" " " "	202422526
03A	" " " "	202422527
CONDITION: % Damaged: _____ % Localized: _____ % Distributed: _____ Total Material Quantity: _____		
Surfacing Material		TSI
<input type="checkbox"/> Sig. Damage	<input type="checkbox"/> % Crumbling - _____	<input type="checkbox"/> Sig. Damage
<input type="checkbox"/> Damaged	<input type="checkbox"/> % Delaminating - _____	<input type="checkbox"/> Damaged
<input type="checkbox"/> Good Cond.	<input type="checkbox"/> % H ₂ O/Gouges - _____	<input type="checkbox"/> Good Cond.
		<input type="checkbox"/> % Gouge/Punct - _____
		<input type="checkbox"/> % Crushed - _____
		<input type="checkbox"/> % H ₂ O Stains - _____
Contact Potential	<input type="checkbox"/> High	<input type="checkbox"/> Moderate
Vibration Potential	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Low
Air Erosion	<input type="checkbox"/> High	<input type="checkbox"/> Moderate
OVERALL POTENTIAL RATING	<input type="checkbox"/> Significant Damage	<input type="checkbox"/> Damage
		<input type="checkbox"/> Minimal Damage

Material Description: <u>dry wall</u>		Friable Non-friable
Sample No.	Location	
220-04A	#1220, Partition walls	202422528
05A	" " " "	202422529
06A	" " " "	202422530
CONDITION: % Damaged: _____ % Localized: _____ % Distributed: _____ Total Material Quantity: _____		
Surfacing Material		TSI
<input type="checkbox"/> Sig. Damage	<input type="checkbox"/> % Crumbling - _____	<input type="checkbox"/> Sig. Damage
<input type="checkbox"/> Damaged	<input type="checkbox"/> % Delaminating - _____	<input type="checkbox"/> Damaged
<input type="checkbox"/> Good Cond.	<input type="checkbox"/> % H ₂ O/Gouges - _____	<input checked="" type="checkbox"/> Good Cond.
		<input type="checkbox"/> % Gouge/Punct - _____
		<input type="checkbox"/> % Crushed - _____
		<input type="checkbox"/> % H ₂ O Stains - _____
Contact Potential	<input type="checkbox"/> High	<input type="checkbox"/> Moderate
Vibration Potential	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Low
Air Erosion	<input type="checkbox"/> High	<input type="checkbox"/> Moderate
OVERALL POTENTIAL RATING	<input type="checkbox"/> Significant Damage	<input type="checkbox"/> Damage
		<input type="checkbox"/> Minimal Damage

Sampled By: <u>J. Sacramento</u> DOH Cert No.: _____ Delivered to Lab By: _____	Relinquished By/Date/Time: <u>J. Sacramento</u> 3/20/24	Relinquished By/Date/Time: _____
Samples picked up at EQI office by Hawaii Analytical Laboratory	Received By/Date/Time: <u>Thinidad Shutt</u>	Received By/Date/Time: 03-20-24 10:13 RCVD
TURNAROUND TIME: <input type="checkbox"/> < 12 Hours <input checked="" type="checkbox"/> 24 Hours <input checked="" type="checkbox"/> 3 Days <input type="checkbox"/> 5 Days <input type="checkbox"/> _____		

Surfacing	<1,000 ft ² = 3 Samples	1,000 - 5,000 ft ² = 5 Samples	>5,000 ft ² = 7 Samples
TSI	Minimum of 3 Samples (Run) UNLESS	<6 in. or ft ² = 1 Sample	Minimum of 3 Samples (Elbow & 'T')
Misc.	Minimum of 3 Samples (Hawaii)		
Surfacing	Sig. Damage = > 10% Dist. or 25% Local	Damaged = < 10% Dist. or 25% Local	Good = Very Limited Damage
TSI	Sig. Damage = 10% Missing Jacket OR > 10% Dist. or 25% Local	Damaged = < 10% Missing Jacket OR < 10% Dist. or 25% Local	Good = Very Limited Damage
Misc.	Sig. Damage = > 10% Dist. or 25% Local	Damaged = < 10% Dist. or 25% Local	Good = Very Limited Damage



202403121

EnviroQuest

PLM DATA SHEET

Project No.: // Project Name: // Date: //

Page: 2 of 2

Material Description:		Friable Non-friable	
Sample No.	Location	% Asb.	Asb. Type
220-07A	#1220, floor	2024	22531
08A	cc (under carpet)	2024	22532
09A	cc	2024	22533

CONDITION: % Damaged: _____ % Localized: _____ % Distributed: _____ Total Material Quantity: _____	
Surfacing Material <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.	TSI <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.
<input type="checkbox"/> % Crumbling - _____ <input type="checkbox"/> % Delaminating - _____ <input type="checkbox"/> % H ₂ O/Gouges - _____	<input type="checkbox"/> % Gouge/Punct - _____ <input type="checkbox"/> % Crushed - _____ <input type="checkbox"/> % H ₂ O Stains - _____
<input type="checkbox"/> Contact Potential <input type="checkbox"/> Vibration Potential <input type="checkbox"/> Air Erosion	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
OVERALL POTENTIAL RATING <input type="checkbox"/> Significant Damage <input type="checkbox"/> Damage <input type="checkbox"/> Minimal Damage	

Material Description:		Friable Non-friable	
Sample No.	Location	% Asb.	Asb. Type

CONDITION: % Damaged: _____ % Localized: _____ % Distributed: _____ Total Material Quantity: _____	
Surfacing Material <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.	TSI <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.
<input type="checkbox"/> % Crumbling - _____ <input type="checkbox"/> % Delaminating - _____ <input type="checkbox"/> % H ₂ O/Gouges - _____	<input type="checkbox"/> % Gouge/Punct - _____ <input type="checkbox"/> % Crushed - _____ <input type="checkbox"/> % H ₂ O Stains - _____
<input type="checkbox"/> Contact Potential <input type="checkbox"/> Vibration Potential <input type="checkbox"/> Air Erosion	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
OVERALL POTENTIAL RATING <input type="checkbox"/> Significant Damage <input type="checkbox"/> Damage <input type="checkbox"/> Minimal Damage	

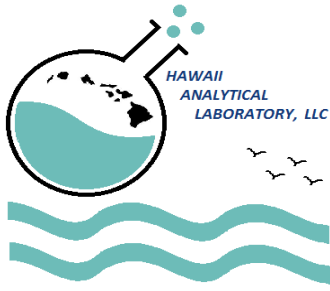
Material Description:		Friable Non-friable	
Sample No.	Location	% Asb.	Asb. Type

CONDITION: % Damaged: _____ % Localized: _____ % Distributed: _____ Total Material Quantity: _____	
Surfacing Material <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.	TSI <input type="checkbox"/> Sig. Damage <input type="checkbox"/> Damaged <input type="checkbox"/> Good Cond.
<input type="checkbox"/> % Crumbling - _____ <input type="checkbox"/> % Delaminating - _____ <input type="checkbox"/> % H ₂ O/Gouges - _____	<input type="checkbox"/> % Gouge/Punct - _____ <input type="checkbox"/> % Crushed - _____ <input type="checkbox"/> % H ₂ O Stains - _____
<input type="checkbox"/> Contact Potential <input type="checkbox"/> Vibration Potential <input type="checkbox"/> Air Erosion	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
OVERALL POTENTIAL RATING <input type="checkbox"/> Significant Damage <input type="checkbox"/> Damage <input type="checkbox"/> Minimal Damage	



APPENDIX C

LEAD
LABORATORY ANALYTICAL REPORT



Hawaii Analytical Laboratory ANALYTICAL REPORT

Friday, March 22, 2024

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea HI 96701

Phone Number: (808)486-5881
Facsimile: (808) 486-5889
Email: eqi@enviroquestinc.com

Lab Job No: 202403122
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202422534	220-01P	< 0.004	wt %	3/20/2024
Comments				
202422535	220-02P	< 0.004	wt %	3/20/2024
Comments				
202422536	220-03P	< 0.004	wt %	3/20/2024
Comments				

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015

EnviroQuest, Inc.
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Phone Number: (808)486-5881
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Lab Job No: 202403122
Date Submitted: 3/20/2024
Your Project: 303564, Kalanimoku - #220, 3/19/24

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments

The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document proficiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions

> This testing result is greater than the numerical value listed.

< This testing result is less than the numerical value listed.

= Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.

MRL = Method Reporting Limit.



Jennifer Hsu Liao
Laboratory Manager

Hawaii Analytical Laboratory (101812) is accredited by the AIHA LAP, LLC in the EMLAP, IHLAP, and ELLAP programs for the scope of work listed on www.aihaaccreditedlabs.org, in accordance with the recognized ISO/ IEC 17025:2005. AIHA is a NLLAP recognized accrediting body. Controlled doc.: Lead Report, rev. 3 – 20181015



EnviroQuest

202403122

MISCELLANEOUS BULK DATA SHEET

Project Name: Kalani moku - #1220

Page: 1

Location: _____

Date: 3/19/24

Project No.: 303564

Turnaround Time: <12 Hrs 24 Hrs 48 Hrs 3 Days 5 Days Other: _____

Analysis:

- TCLP Lead
- TCLP RCRA 8
- Total Lead
- Micro ID (spore)
- _____
- _____

Sampling Media:

- Bulk
- Soil
- Swab
- Tape
- Vacuum
- Water
- Wipe
- _____
- _____

Sample #	Building	Int/Ext	Flr.	Room	Component	Substrate	Color	% of Waste Stream	Area / Vol	Result
1	220-01P	#1220,								202422534
2	02P	rr								202422535
3	03P	rr								202422536
4										
5										
6										
7										

Sampled By: J. S. ...
 Delivered to Lab By: _____

Relinquished By/Date/Time: [Signature] 3/20/24
 Received By/Date/Time: [Signature]

Relinquished By/Date/Time: _____
 Received By/Date/Time: 3/20/2024 10:14 am RCVB

Analyzed By: _____
 Date Analyzed: _____

Samples picked up at EQI office by Hawaii Analytical Laboratory

FAX: 808.486.5889 E-mail: eqi@enviroquestinc.com

DIVISION 2 - SITEWORK

SECTION 02070

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

1.2 DESCRIPTION OF WORK

Accomplish all demolition, removal, patching and related work indicated on or required by the drawings, and as specified herein.

1.3 GENERAL REQUIREMENTS

- A. The Contractor shall visit the project site, examine the premises and note all existing conditions and the extent involved for the complete and proper execution of all work as called for on the plans and as hereinafter specified.
- B. Extent of selective demolition work is indicated on the drawings. Selective Demolition work includes but not limited to, selective demolition, removal, and subsequent disposal of all materials indicated or required to be removed.
- C. Execute all work in an orderly and careful manner with due consideration for all items of work to remain.
- D. Obvious conditions which exist on the site shall be accepted as part of the work, even though they may not be clearly indicated on the Drawings and/or described herein, or may vary there from.
- E. All debris of any kind accumulated from the work of this Section shall be disposed off the site.
- F. Permits, Notice, Etc. The Contractor shall serve proper notice and consult with the State regarding any temporary disconnections of electrical or other utility lines in the area which may interfere with the removal work, and all such lines where necessary shall be properly disconnected or relocated before commencing with the work.
 - 1. Contractor shall procure and pay for all necessary permits or certificates that may be required in connection with this work.

- G. Protection: Throughout the work, protection shall be provided for walks, property, etc., scheduled to remain. Safe working conditions shall be maintained at all times for all personnel, and temporary lights and barricades shall be provided and maintained.
- H. Any damage as a result of demolition, relocation, or temporary on-site storage work and any neglect to provide protection shall be fixed new at Contractor's own expense.
- I. Carefully remove, salvage, provide photo documentation, itemize in list format and label existing items indicated for re-installation in new work and as indicated in drawings.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01300 – SUBMITTALS.
- B. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work for review prior to commencement of work. Include coordination for temporary shut-off and continuation of utility services as required, together with details for dust and noise control protection.
- C. Salvageable Work for Owner (DLNR): Wall and surface mounted items included but limited to signage, fire extinguishers, fire extinguisher cabinets, AED cabinets, clocks, bulletin boards, white boards, and other items indicated on drawings.

1.5 JOB CONDITIONS

- A. Utility Services:
 - 1. The existence of utility lines other than those shown on the drawings is not definitely known. Should any utility lines be encountered, the Contractor shall immediately notify the Engineer and follow his direction as to procedure. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied building or facilities, except when authorized in writing by the Engineer.
 - 2. The existence of above and below ground or exposed and concealed utility lines other than those shown on the drawings is not definitely known. Should any other utility lines be encountered, the Contractor shall immediately notify the Engineer and follow his direction as to procedure. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied building or facilities, except when authorized in writing by the Engineer. Outages and interruptions must be accepted in advance by the Engineer. Submit written notice of outages and interruptions not less than 14 days in advance of intended outage. Report damage, however slight, immediately. Do not repair or reconstruct any pipe, conduit, or installation without authorization, except perform emergency repairs immediately.

- B. Salvageable Work – For the Owner (DLNR)
 - 1. Work for Reuse in Project: In addition to any other indicated work, salvageable work includes the following:
 - a. Existing Furniture: Existing Furnitures indicated on the drawings but not limited to workstations, signage, fire extinguishers, fire extinguisher cabinets, AED cabinets, clocks, tables, chairs, file cabinets, shelving, copy machines, fans, carts, and safes, appliances, trash receptacles and First Aid Kit/Panel boxes.
- C. Outages and interruptions must be approved in advance by the Engineer. Submit written notice of outages and interruptions not less than fourteen days in advance of intended outage. Report damage, immediately. Do not repair or reconstruct any pipe, conduit, or installation without authorization, except perform emergency repairs immediately.
- D. Occupied Spaces: Do not interfere with used of adjacent occupied spaces. Maintain free and safe passage to and from occupied space.
- E. Dust Control: Keep dust within acceptable levels at all times, including non-working hours, weekends and holidays, in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 60.1, Air Pollution Control, latest edition as amended. The method of dust control and all costs incurred thereof shall be the responsibility of the Contractor.
- F. Noise Control: Noise shall be kept within acceptable levels at all times in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 46 – Community Noise Control, latest edition as needed. The Contractor shall obtain and pay for community noise permit from the State Department of Health when the construction equipment or other devices emit noise at level exceeding the allowable limits. Conform to noise control related to events at the project site or adjoining facilities directed by the Engineer.

PART 2: PRODUCTS

2.1 MATERIALS

Asbestos Prohibition: No asbestos containing materials or equipment shall be used under this section. The Contractor shall ensure that all materials and equipment incorporated in the project are asbestos-free.

2.2 SALVAGEABLE WORK – FOR THE OWNER:

- A. For Return to the Owner: Refer to the “Execution” (Part 3) paragraphs herein for requirements.
- B. For Reuse in the Project – General:
 - 1. Replacement Components and Materials: For any damaged, deteriorated and non-functioning components and materials, that is a result of damage and deterioration

from the Contractor's removal operations, provide replacement components and materials as follows.

- a. Specific to the Manufacturer's Product: Provide the same Manufacturer's replacement components and materials. If no longer available, the Manufacturer's recommended replacement part and material may be used when acceptable to the State.
 - b. Related Materials: Provide components and materials matching or exceeding the quality of the original components and materials.
2. New Components and Materials: Provide new components and materials as required to accommodate the new Project conditions that match or exceed the quality of the original components and materials as acceptable to the Engineer.

PART 3: EXECUTION

3.1 EXECUTION OF WORK

- A. Methods: Perform selective demolition work in a systematic manner. Use such methods as required to complete the work indicated and to result in the Engineer's final intended finish. Implement surgical level type procedures over gross destruction methods when appropriate, inclusive of relocating furnitures indicated in drawings.
- B. Maintaining Existing Structural Integrity:
 1. Imposed Loads: Where the Contractor's operations will impose unusual static or impact loads to structures, ensure that structure will be capable of sustaining applied loads by proper location and application of operations and equipment.
- C. Every precaution must be taken at all times for the protection and safety of State staff, employees, and the public.

3.2 BARRICADE

Erect temporary barricades as required, to prevent people from entering into project area to the extent as approved by the State. The extent of barricade may be adjusted as necessary with the approval of the State. This work shall be accomplished at no extra cost to the State.

3.3 CONTRACT ZONE LIMITS

The Contract Zone Limits shall generally be as indicated on the plan; however, work outside the Zone Limits necessary to complete the project shall be included.

3.4 MAINTAINING LIFE SAFETY SYSTEMS

The Contractor shall maintain the existing life safety systems in proper operation, such as fire alarm systems, exits, lighting, and other necessary aspects of life safety.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

Remove debris, rubbish, and other materials resulting from demolition operations from building site daily. Transport and legally dispose of materials off site.

- A. If additional hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
- B. Burning of removed materials is not permitted on project site.

3.6 DEMOLITION OPERATIONS – SALVAGEABLE WORK:

- A. Salvageable for the Owner: Bubble wrap, tape, and place each product and each product related materials into heavy duty card board boxes that can efficiently fit each boxed product. Label each box with contents. Label each furniture item, protecting all following but not limited to corners panels, operable components, finish surfaces, electronic equipment, and attachments. Label to indicate general product type, Manufacturer, Model No., at minimum. Other packing methods and labeling when acceptable to the Engineer.
- B. Carefully relocate furnitures as indicated on Drawings to indicated temporary storage area, within Room 220 OR on 4th floor, Room 431 if needed, taped-off by Contractor at all times, until furnitures are moved back to original locations on Drawings. Protect all furnitures throughout the duration of the scope of work from damage and theft.
- C. For Reinstallation in the Project:
 - 1. Remove work, relocate, and reinstall all related components without damage.
 - 2. Store and protect from damage and deterioration, until required for reinstallation.
 - 3. Prior to reinstallation, perform the following, unless otherwise indicated in the Report submitted and successfully reviewed and accepted by the Engineer:
 - a. Fully clean and polish each stored item.
 - b. Replace damaged and deteriorated components caused by Contractor.
 - c. If any touchup painting or total repaint required, such painting to match the original “like-new” paint coating.
 - d. Reinstall each stored item to provide a fully functioning product.

3.7 MATERIAL STORAGE

Removed items to be re-installed by the Contractor shall be stored in a secured location as indicated on Drawings or per Engineer. The Contractor shall be responsible for all items and shall replace any missing or damaged items at his own expense.

3.6 CLEAN UP

Debris and rubbish shall be removed from the site daily. Debris and rubbish shall not be allowed to accumulate on site. Debris shall be removed and transported in a manner that will prevent spillage on streets or adjacent areas.

END OF SECTION

DIVISION 9 - FINISHES
SECTION 09650
RESILIENT TILE FLOOR

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide resilient tile flooring and cove base as scheduled.

1.2 QUALITY ASSURANCE

- A. Right of Rejection: The Engineer shall have the right to reject all work that is not in compliance with the plans and specifications. Rejected work shall be redone at no cost to the State.
- B. It may sometimes be desirable to apply the mastic for the floor tiles the day before the actual laying of the tiles. If the Contractor decides to do so, care must be taken to prevent particles of rubbish to settle on the adhesive and cause a bumpy appearance on the tiles.
- C. Floor Finish (Waxing) Requirements: All work to prepare, seal, finish (wax) and buff new flooring shall be accomplished by a professional floor cleaning company with 3 or more years of commercial experience in accomplishing the work as specified herein.
- D. At completion of first finished floors, Contractor shall meet with Engineer to review finishing procedures, results of work performed, and corrective action to produce acceptable finish.

1.3 SUBMITTALS

- A. Submit in accordance with SECTION 01300 - SUBMITTALS.
- B. Manufacturer's Data: Submit manufacturer's technical data and installation instructions for resilient flooring, wax, MVT or pH coatings (as required), and accessories.
- C. Test Results: Submit moisture testing result of existing concrete substrate and Contractor confirmation letter that substrate moisture levels will be in compliance with resilient floor manufacturer requirements.
- D. Samples: Samples of all flooring, bases, and accessories shall be submitted to the Engineer for color and/or pattern selection.
- E. Maintenance Instructions: Submit manufacturer's recommended cleaning and maintenance practices for resilient flooring and accessories.

- F. Material Safety Data Sheets (MSDS): Submit MSDS for adhesives, patching and leveling compounds, and sealers.
- G. Floor Finish (Waxing) Experience: Submit documentation of floor finish (waxing) company's professional experience in accomplishing the work as specified herein for acceptance by the Engineer. Include contact names, company name, and telephone numbers of individuals who can verify quality of previous work.

1.4 DELIVERY AND STORAGE

- A. Materials shall be delivered to the jobsite in original unopened containers marked with grade and manufacturer's brand name. Handle and store materials carefully.

PART 2- PRODUCTS

2.1 MATERIALS

- A. Vinyl composition tile shall be 12-inches x 12-inches x 1/8-inch thick, conforming to ASTM F 1066, Composition 1 (non-asbestos formulated), Class 2 (through pattern tile), marbled design with a smooth wearing surface, factory waxed with a minimum light reflectance of 30 percent. Provide Armstrong Commercial Standard Excelon Vinyl Composition Tile Imperial Texture, Congoleum Commercial Floor Tile Alternatives and Choices, or approved equal.
- B. Resilient base shall be rubber or vinyl, 4-inches high, top-set cove and straight carpet type, 1/8-inch thick, with a smooth exposed surface and textured bonding surface on its unexposed face. The rubber material shall be free from offensive odor and its color shall be uniform throughout the thickness of the base. Provide Manington Commercial Burke Rubber Cove Base, Johnsonite, Roppe, or approved equal.
- C. Flooring Adhesives shall be brush-on, roll-on, or trowel-on water-resistant type, as recommended by the manufacturer for the specific materials used. Material shall be cream colored, latex-resin formula that dries to a clear film. Adhesives shall be solvent free with zero VOC content, low odor, no ammonia and non-flammable in wet state. Do not use adhesive not intended for its purpose. Provide material equal to Henry 430 Tile Adhesive, clear thin spread or approved equal.
- D. Base adhesive shall be acrylic latex water-resistant type, as recommended by the manufacturer for the specific materials used. Material shall be white, solvent free with zero VOC content, low odor, no ammonia and non-flammable in wet state. Do not use adhesive not intended for its purpose. Provide material equal to Henry 595 White Acrylic Cove Base Adhesive, Acrylic Latex Bright White Color or approved equal.
- E. Edging:
 - 1. Transitions from resilient tile to substrate shall be beveled vinyl strip, one-inch wide, same thickness as tile.

2. Transitions from carpet to resilient tile shall be vinyl carpet to tile adaptor.
 3. Metal edge strips shall not be used.
- F. Patching and leveling compounds shall be latex-modified, Portland cement based formulation unless otherwise required by the flooring manufacturer for the applications indicated. Gypsum based compounds shall not be used.
- G. Floor Sealers: Provide one of the following by the same manufacturer as the floor finish (wax):
1. Armstrong S-480 Polish
 2. Betco Floor Sealer
 3. Hillyard Seal 341 Sealer
 4. SC Johnsons Over and Under Sealer
- H. Floor Finish or wax): Provide one of the following by the same manufacturer as the sealer:
1. Armstrong S-480 Polish
 2. Betco Hybrid 25
 3. Hillyard North Star
 4. SC Johnsons Vectra

PART 3 - EXECUTION

3.1 EXAMINATION

- A. The Installer shall examine substrates where resilient tile flooring will be installed for compliance with the flooring manufacturer's requirements. Installation shall not proceed until unsatisfactory conditions have been corrected. Proceeding with installation will indicate acceptance of the substrate conditions by the Installer.
- B. Review asbestos reports under SECTION 01715 - EXISTING CONDITIONS- ASBESTOS/LEAD/HAZARDOUS MATERIAL SURVEY and do not disturb or make friable any existing asbestos-containing flooring, base, or adhesive/mastic. When in doubt assume material is asbestos-containing and take samples for testing by the Contractor.

3.2 PREPARATION OF SUBFLOORS

- A. General: Comply with the flooring material manufacturer's installation instructions for the preparation of substrates to receive resilient flooring.

- B. Unless otherwise required by the flooring manufacturer, the subfloor shall be broomed, damp mopped and scrubbed until it is free from dust, dirt, grease or other foreign material. It shall also be scraped to make the surface smooth and level.
- C. The concrete subfloor shall be free of materials that may interfere with adhesive bond and shall be clean, dry and smooth before tiles are laid. Defects such as ridges, holes, cracks and depressions shall be corrected and filled with patching/leveling compound approved by the manufacturer.
- D. Moisture Testing: Moisture Testing shall be performed to determine suitability of concrete slab to receive flooring and comply with 90% RH per ASTM F2170 and ASTM F1869 6 lbs MVER.
 - 1. Calcium Chloride Testing: For all substrate types, ≤ 3 lbs / 1000 sf / 24 hrs maximum.
 - 2. Relative Humidity Testing: 75% maximum.
- E. Alkalinity: For cementitious substrates, surface alkalinity of pH 8 minimum to 9 maximum.
- F. If testing indicates unacceptable levels of MVT and pH, install each Resilient Manufacturer's approved MVT or pH coatings confirming to flooring manufacturer's requirement, which is capable of reducing MVT or pH, or both to acceptable levels at no cost to the State.
- G. If floor tile is laid on defective subfloors, such tile shall be removed and replaced at the Contractor's expense.

3.3 PROJECT CONDITIONS

- A. Flooring materials and the spaces to receive flooring materials shall be conditioned in accordance with the flooring manufacturer's recommendation and instructions.
- B. Provide adequate ventilation to remove moisture and fumes from the areas where floor tiles are being installed.
- C. Where new flooring is scheduled to be installed over existing resilient flooring the Contractor shall conform to the following:
 - 1. Contractor shall replace broken tiles, reset loose tiles and fill voids and depressions to form a solid, level and smooth substrate for the new tiles.
 - 2. The sub-floor shall be broom dusted, wet mopped and scrubbed until it is free from dust, dirt, grease or other foreign materials.
 - 3. Existing flooring shall have all wax stripped to a clean surface.

3.4 INSTALLATION OF MATERIALS

- A. See Schedules for locations and types of flooring required. Flooring and cove base shall continue, respectively, under and behind removable and/or portable cabinets, cases, etc. Flooring shall continue into closets where the floor of the closets and adjacent floor are at the same level. Installation shall not begin until the work of other trades, including painting, has been completed.
- B. All work shall be done by experienced tradesmen in strict accordance with the recommended specifications of the respective manufacturer. Where not contrary to the manufacturer's recommendations, flooring adhesive shall be applied with a notched trowel in a thin and even coat. Tiles shall be laid with tight joints in true alignment both ways. They shall be cut to fit accurately at joining with other materials and at vertical surfaces. The under side of the tiles shall be heated if necessary to obtain satisfactory bond to the subfloor.
- C. Tiles shall be laid symmetrically about the center lines of the room in both directions, starting at the center of the room and working toward the wall so that border tiles shall not be less than half the width of the field tiles. Grain shall be reversed in alternate tiles. Metal edging shall be installed at all marginal edges of flooring not stopped by raised thresholds or other vertical surfaces. When tiles are installed over existing tiles, joints shall be offset over existing tile joints.
- D. Resilient base shall be applied onto thoroughly-dried walls with base adhesive only. Because of the thermoplastic character of base, care shall be taken not to stretch it during installation since it will shrink and leave a gap at joints. The top and bottom edges shall be in firm contact with the wall and floor. Pre-molded interior and exterior corners shall be used unless otherwise approved by the Engineer. If corners are formed on the job, the wrap around from the corner shall be not less than 12-inches long. Otherwise, the resilient base shall be continuous around the corners. Installation of resilient base at carpet shall occur only after installation of the carpet.
- E. Adjust height of electrical floor receptacles to be flush with new flooring.
- F. Remove obstructions such as pipe stub-ups that are no longer required. Verify with Engineer before removal.
- G. Undercut doors if the additional height of flooring impairs proper operation of the door.

3.5 CLEANING AND PROTECTION

- A. Begin initial maintenance only after the adhesive has been allowed to dry fully. At least 48 hours is usually required. During this period there should be no furniture or other heavy traffic movement on the floor. Do not wash the tile during this period since any moisture or cleaning liquid allowed to get under the tile while bonding can affect the tackiness of the adhesive. This could lead to the unnecessary expense of replacement.

- B. All cleaning, sealing, and waxing operations shall be conducted by an approved professional cleaning company as specified.
- C. The Contractor shall prepare the new Vinyl Composite Tile (VCT) floors as follows:
1. Clean floors: Dust mop entire floor area and remove gum, tar, glue, adhesive, etc. from the floor.
 2. Sweep and pick up rubbish using a dustpan and broom.
 3. Apply properly diluted neutral cleaner onto new VCT and clean the floor tiles using a floor machine with a blue pad or an Auto scrubber. Remove all soil, manufacturer's factory coating if coating exists, and residue to assure proper performance of the finish.
 4. If using a floor machine, vacuum up cleaning solution using a wet and dry vacuum. Note: Auto scrubber will pick up material after scrubbing.
 5. Rinse floor by mopping entire floor area twice with clean mop and fresh water and allow floor to thoroughly dry at least one hour before applying floor sealer.
 6. Apply Sealer: Use clean mop buckets and new (at start of project) clean mop heads for applying floor sealer. Replace mop heads as necessary as work progresses. Pour floor Sealer into lined mop bucket. Dip clean mop into sealer bucket. Place mop in the wringer and tamp lightly. The mop should be full of sealer but not dripping. Apply coats of sealer to floor using a side to side (figure eight) movement. Overlap the strokes of the mop head. Turn mop head often and redip in sealer before the mop head dries out and streaks the floor. Avoid splashing sealer on the floor. Apply coat of sealer evenly and cover all areas. Allow a minimum of 45 minutes drying between coats. Apply a total of 2 coats of sealer.
 7. Apply Floor Finish (Wax): Pour floor finish wax into lined mop bucket. Dip clean mop head into the floor finish wax bucket. Place mop in the wringer and tamp lightly. The mop should be full of wax but not dripping. Apply coats of floor finish wax to floor using a side to side (figure eight) movement. Overlap the strokes of the mop head. Turn mop head often and redip in the floor finish wax before the mop head dries out and streaks the floor. Avoid splashing floor finish wax onto the floor. Apply coat of floor finish wax evenly and cover all areas. Allow a minimum of 45 minutes drying time between coats. Apply a total of 4 coats of floor finish wax. Prior experience has shown that 4 coats of approved wax results in a finish that is acceptable to the State. The Engineer and school representative will inspect the first floors finished by the Contractor. Contractor shall alter procedures as required to produce an acceptable finish, including additional coats of wax if finish is unacceptable.
 8. Allow floor finish wax to cure 24 hours before buffing and moving furnishings and equipment back into room.

9. Buff Floors: Dust mop entire floor area, wet mop with plain water to pick up any dirt, etc. and let floor dry before buffing. Using specified hi-speed burnisher with white polishing pad, buff entire floor to a smooth, shiny finish. Dust mop entire floor to remove any dust or residue left behind after buffing. The floor's appearance shall be clean and acceptable to the Engineer.
- D. Contractor shall submit its proposed sealer and wax products for review and approval by the Engineer and the DAGS Custodial Services Representative or designee prior to start of work.
 - E. Contractor shall limit traffic on waxed floors until acceptance by DAGS Custodial Services or designee.
 - F. Clean bases but don't polish them.

END OF SECTION

SECTION 09902

REPAINTING

PART 1 - GENERAL

1.1. GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

1.2 SUMMARY

A. Surface preparation and field application of paints and coatings to new and existing surfaces. Areas (Surfaces) to be Painted:

1. Interior Surfaces to be Painted: All existing interior painted surfaces disturbed by removal and replacement of wall base, and new surfaces shall be painted unless otherwise indicated on the plans and/or specifically deleted in these specifications. Interior surfaces to be painted shall be those surfaces not exposed to weather in an area enclosed by 4 walls.

Also, a surface shall be considered an interior surface and painted as such whenever the color is that of the existing interior color. Extent of treatment for special items is as follows:

- a. Interior surfaces inclusive of wall bases / trims, etc.
 - b. Interior surfaces shall not be treated unless specifically noted otherwise.
 - c. Gypsum board wall partitions at wall base.
 - d. Interior wall bases following existing wall base removal.
 - e. PVC pipes, G.I. Pipes and conduits, and similar appurtenances.
 - f. Stain wood to match existing adjacent finish where indicated or required.
2. Surfaces Not to be Painted:
 - a. Metal surfaces of anodized aluminum, copper and similar finished metal surfaces shall not require painting unless previously painted or otherwise scheduled.
 - b. Factory/Pre-finished Items: When factory finishing or installer-finishing is specified, such items shall not require painting unless otherwise scheduled.

- c. Labels: Do not paint over any code-required labels, such as Underwriters' Laboratories, or any equipment identification, performance rating, name, or nomenclature plates.
 - d. Data equipment cable connection.
3. "Paint" as used herein means all coating system materials, including primers, enamels, sealers, stains, varnish, and fillers, and other applied materials whether used as prime, intermediate or finish coats, except as specifically noted herein.

1.3 RELATED SECTIONS

- A. Division 2, Selective Demolition.

1.4 REFERENCES

- A. ASTM D 16 - Definition of terms relating to Paint, Varnish, Lacquer and Related Products.
- B. ASTM D 2016- Test Method for Moisture Content of Wood.
- C. PCA (Portland Cement Association) - Painting Concrete.
- D. PCDA (Painting and Decorating Contractors of America - Painting –Architectural Specification Manual.
- E. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual.

1.5 DEFINITIONS

- A. Conform to ASTM D 16 for interpretation of terms used in this section.

1.6 SUBMITTALS

- A. Submit in accordance with SECTION 01300 - SUBMITTALS.
- B. Product Data:
 - 1. Materials List: Provide an inclusive list of required patching and coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - a. For products with premixed colors, provide manufacturer's standard color chips for selection by Engineer.
 - 2. Manufacturer's Information: Provide data on all listed materials, including:
 - a. Thinning and mixing instructions.

- b. Application instructions and required mil film thicknesses.
 - c. Manufacturer's Material Safety Data Sheets.
- C. Certifications: Provide a letter certifying paints and coatings are free of asbestos, lead, zinc-chromate, strontium chromate, cadmium, mercury, crystalline silica (except for chalkboard resurfacing paint) and other EPA regulated and hazard materials. Provide a letter certifying the amounts of mildewcide added by both the paint manufacturer and paint supplier.
- D. Schedule of Finishes: Provide finish schedule including paint spread rates required to achieve final dry film thickness indicated in the schedule.
- E. Schedule of Operations: Provide a work schedule showing sequence of operation and installation dates.
- F. Samples:
 - 1. Submit color and finish samples, at manufacturers normal paint chip size illustrating range of colors and textures available for each surface finishing product scheduled.
 - 2. After color and finish sample are returned, submit paint finish samples, 8.5- inches x 11-inches in size illustrating selected colors and textures for each selection. Divide sample in horizontal strips showing prime and overlapping second and finish coats. Show coat tinting. Prepare transparent finish samples on same material as that on which coating will be applied. Identify each sample.
- G. Manufacturer's Instructions: Indicate special surface preparation procedures, and substrate conditions requiring special attention. Refer to paragraph entitled "EXAMINATION" hereinbelow.
- H. Provide a Comprehensive Spray Plan when airless spraying is proposed.
- I. Qualification Data: For Applicator.
- J. Delivery Receipts: Provide 3 copies of the delivery receipt, signed by the user's representative, attesting to delivery of extra paint as required under paragraph entitled "EXTRA MATERIAL" hereinbelow.
- K. Guaranty: Submit written guaranty as specified in paragraph entitled "GUARANTY" hereinbelow.

1.7 REGULATORY REQUIREMENTS

- A. Comply with State OSHL (Occupancy Safety and Health Law) and pollution controls regulations of the State Department of Health and EPA.

1.08 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
 - 1. Exception: Alkali resistant primers if compatible with the intermediate coat paint products.
- C. Field Samples (Mockups): Provide a full-coat field sample panel for each type of coating and substrate scheduled in Part 3. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample Submittals.
 - 1. Engineer will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
 - a. Wall Surfaces: Provide samples at least 4-feet long by 8-feet high unless indicated otherwise on drawings.
 - b. Small Areas and Items: Engineer will designate items or areas required.
 - 2. Apply benchmark samples, according to requirements for the completed Work. Provide temporary lighting levels similar to permanent lighting conditions for Engineer's evaluation.
 - a. After finishes are accepted, Engineer will use the room or surface to evaluate coating systems of a similar nature.
- D. Comprehensive Spray Plan for Airless Spraying: Where airless spraying is proposed, provide a comprehensive spray plan to include:
 - 1. Documentation that the individual spray applicator(s) on the project have completed an approved spray applicator certification program conducted by the Painting Industry of Hawaii. The certification program shall include material and equipment selection, use and maintenance, hands-on application and safety training.
 - 2. Proposed overspray protection methods.
 - 3. Paint Manufacturer's spray application instructions and recommendations for products to be used.
 - 4. Proposed schedule to shut-down or covering existing air-conditioning and ventilation equipment and existing air intake, return and diffuser grilles.
- E. In addition, the Engineer shall have the right to require the immediate removal of any paint applicator who demonstrates negligence, lack of competence or repeated non-compliance with the contract requirements.

1.9 DELIVERY STORAGE AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
1. Product name or title of material.
 2. Product description (generic classification or binder type).
 3. Manufacturer's brand name and lot number and date of manufacture.
 4. Contents by volume, for pigment and vehicle constituents.
 5. Thinning instructions.
 6. Application instructions and coverage.
 7. Color name and number.
 8. VOC content.
- B. Storage:
1. Non-flammable Materials: Store materials not in use in tightly covered containers in a well-ventilated area. Maintain storage containers in a clean condition, free of foreign materials.
 2. Flammable Materials: Store in such a manner as to prevent damage. No paint material, empty cans, paint brushes and rollers may be stored in the building(s). Store these items in separate storage facilities away from the building(s). Contractor may furnish a separate job site storage structure, if the structure complies with the requirements of the local Fire Department. Keep the storage area shall clean. Lock any storage structures when not in use or when no visual supervision is possible.
- C. All rejected materials shall be removed from the job site immediately.

1.10 PROJECT CONDITIONS

- A. Do not apply materials when surfaces and ambient temperatures are outside the ranges required by the paint product manufacturer. Do not apply exterior coatings during rain or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- B. Protect public, pedestrians and tenants from injury. Provided, erect and maintain safety barricades around scaffolds, hoists and where construction operations create hazardous conditions.

- C. Completed Work: Provide necessary protection for wet paint surfaces.
- D. Protective Covering and Enclosures: Provide and install clean sanitary drop cloth or plastic sheets to protect furniture, equipment, floor and other areas that are not scheduled for treatment. Remove any paint applied to surfaces not scheduled for treatment.
- E. Fire Safety: Contractor and its employees shall not to smoke in the vicinity of the paint storage area. Exercise precautions against fire at all times and remove waste rags, plastic (polyester sheets), empty cans, and other similar items from the site at the end of each day.
- F. Where airless spraying is used, ensure that protective enclosures are erected to prevent the escape of overspray from the work area.
- G. Safeguarding Property: Safeguard the work and also the property of the State and other individuals in the vicinity of Contractor's work. Make good on any damages and for losses to work or property caused by Contractor or its employee's negligence. Where damaged property cannot be cleaned and restored to its original condition (i.e. prior to being damaged) replace it with a new product of equal quality. No proration or use of "used" products will be permitted.
 - 1. For painting and spray painting operation, assume that cars will not be temporarily relocated from parking areas during the painting operations.
 - 2. Paint overspray shall not carry more than 5 lineal feet beyond the building eave line nor within 10 lineal feet of pedestrians or property and surfaces not scheduled to be painted. Immediately cease spray painting when overspray carries beyond these specified limits. Do not continue until protective barriers are erected to properly contain the overspray and damages caused by the overspray have been corrected.
 - 3. The Contractor shall be assessed \$1,000.00 for each incidence of property or personal damage caused by overspray until such time that a satisfactory settlement has been agreed upon by the damaged party and corrective action has been completed. All corrective action shall be settled within 24 hours from the time the damage is discovered. Should the Contractor fail to take corrective action in a timely and expeditious manner, the Engineer shall contact the Contractor's Insurance company to seek resolution on the matter.
- H. Other Incidental Work to be Performed by Contractor:
 - 1. Unless otherwise specified, the Contractor is responsible for moving about all furniture and equipment to provide himself with sufficient working space.

The Contractor shall protect these items and make good any damage to them at no cost to the State. After the painting of the room is completed, the Contractor shall replace all furniture and equipment to their original locations.

2. The Contractor shall carefully remove and neatly store away or properly protect in-place curtains, blinds and miscellaneous items. Removed items shall be reinstalled at the completion of the work.
 3. All items on shelving and in cabinets to be painted will be removed by the user personnel prior to painting work.
- I. Areas inaccessible to Normal Painting: The Contractor shall remove and reinstall in order to paint complete.
 - J. Remove all existing signages and reinstall after completion of painting.
- 1.11 COMPATIBILITY OF PAINTING SYSTEMS AND SUBSTRATES
- A. The Contractor shall ensure that painting systems specified are compatible with existing painted surfaces. Alkyd paints shall not be applied over existing latex coating. Alkyd paints shall not be used over cementitious surfaces. Latex paints shall not be applied directly over alkyd paints without proper conditioner and approval by the Engineer.
 - B. Field Tests for Alkyd or Latex Paints: The Contractor shall perform the following field tests for compatibility of substrates to new paint systems prior to ordering paint:
 1. Latex films will dissolve when wiped with rubbing alcohol; alkyd films will not.
 2. When sanded, latex films will "clog" sandpaper; alkyd films will sand clean.
 3. Alkyds will soften after applying a 10 percent solution of Drano in water; latex films will not soften.
 4. Alkyds will burn when exposed to a flame; latex film will not burn.
 5. Paints which do not respond to 2 or more of these tests are probably epoxy, urethane, or other type of coating.
 6. Provide a packaged swab test in accordance with the package directions.
 7. Existing paint identified or suspect of having lead-containing paint shall be tested in a manner that does not produce airborne or uncontrolled lead debris.
 - C. Should there be any discrepancies between the specified Schedule of Finishes and the existing paint systems, the Contractor shall notify the Engineer in writing of any incompatible systems specified and submit a revised Schedule of Finishes for approval when necessary. With the approval of the revised Schedule of Finishes, the Contractor shall make any corrections and/or revisions necessary to resolve the discrepancies and/or inconsistencies. The Contractor shall not proceed with any painting systems that are incompatible, although specified otherwise, until all incompatible conditions detrimental for the proper application and performance of the painting systems have been corrected. The

failures due to the application of the incompatible paint systems shall be corrected at no additional cost to the State. Proceeding with the work shall imply acceptance of the specified Schedule of Finishes and the compatibility with the existing painted surfaces by the Contractor.

1.12 MINIMUM PAINTING WORK

- A. Unless noted otherwise, minimum interior painting work area shall be the complete inside surfaces of one room.

1.13 GUARANTY

- A. Contractor shall provide a 2 year guaranty that the work performed under this section conforms to the contract requirements and is free of any defect of material or workmanship.

1.14 EXTRA MATERIAL

- A. Provide extra paint in each of the different colors, types and surface textures of interior paint to the user upon completion of the project. Paint shall be in unopened one gallon containers and labeled with color, type, texture, room locations, and date in addition to manufacturer's label.
 - 1. Provide 5 gallons of each color for paint used over large areas, such as the building interior office space.
 - 2. Provide one gallon of each color for all other areas.

PART 2- PRODUCTS

2.1 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, patching materials, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names in the color schedule to designate colors or materials, is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed products to be used.

- C. EPA Regulated and Hazard Materials: Do not use paint or paint products containing asbestos, lead, mercury, zinc chromates, strontium-chromate, cadmium mercury, crystalline silica (except for chalkboard resurfacing paint) or the EPA regulated or hazard materials.
- D. Mildew and Water Stains: Provide spot priming of product equal to Bulls Eye Odorless or Cover Stain, as required for existing stains.
- E. Interior Paints: Provide low odor solvent free paints, semi-gloss unless scheduled otherwise.
 - 1. Interior Acrylic Semi-Gloss Paint complete with tint bases to color as scheduled or to match existing including dark and specialty colors (not limited to green, blue, red, yellow, and brown), products must meet or exceed the following:
 - a. Acrylic semi-gloss, interior finish for wood, masonry, metal, plaster, and drywall.
 - b. Semi-gloss/satin finish: Gloss at 60 degrees 55-70.
 - c. Resin: 100 percent acrylic.
 - d. Pigment: Minimum 90 percent titanium dioxide.
 - e. Viscosity: 90- 100 K.U.
 - f. Percent Solids by Volume: 34 percent minimum.
 - g. Weight per Gallon: 10.3 pounds minimum.
 - h. To be as scheduled, except Sherwin Williams Metalatex Semi-Gloss with accepted deviations of above performance requirements is accepted as an equal.
- F. Primers: Provide universal type that is capable of being used over existing alkyd and latex substrates or primers that are specifically compatible with each existing substrate.
 - 1. Typical Primer/Sealer including tinting to match color of finish paint:
 - a. Primer, interior/exterior, oil base, all purpose for wood, concrete, clean galvanized metal, aluminum, plaster, drywall, and hardboard.
 - b. Undercoat for gloss latex or alkyd enamels.
 - c. Able to sand and recoat in one hour.
 - d. Virtually VOC free product.
 - e. Tinting: Light to mid-tone.
 - f. Stain killer.

- g. To be Zinsser Cover Stain, Sherwin Williams PrepRite Quick Seal Y24W980, or equal.
2. Odorless Interior Primer/Sealer including tinting to match color of finish paint.
- a. Primer, interior, oil base, for wood, plaster, drywall, hardboard, paneling, stucco, and metal.
 - b. Odorless.
 - c. Undercoat for gloss latex or alkyd enamels.
 - d. Able to sand and recoat in 2 hours.
 - e. Virtually VOC free product.
 - f. Tinting: Light to mid-tone.
 - g. Stain killer.
 - h. To be Zinsser Bulls Eye Odorless, Sherwin Williams PrepRite ProBlock Odorless B49W20, or equal.
- G. Paints shall be as manufactured by Ace, Benjamin Moore, Cabot's, Carboline, Dupont, Dutch Boy, Fine Line Paint Corp., ICI Ameritone, ICI Decratrend, ICI Devoe, ICI Dulux, ICI Fuller-O'Brien, ICI Glidden, ICI Sinclair, Martin Senour, Olympic Stain, Pervo, Pittsburg, Porter Inti., Pratt & Lambert, Rust-Oleum, Sherwin-Williams, Smiland (Styletone), Spectra-Tone, Thoro Systems, Tnemec, United Paint and Coatings, Zinsser, or approved equal.
- H. Except for metal primers all paint shall contain the maximum amount of mildewcide per gallon of paint permitted by the mildewcide manufacturer without adversely affecting the quality of the paint. Contractor shall pre-mix mildewcide into all interior and exterior paints and primers except as specified otherwise. Mercurial fungicide shall not be used.
- 2.2 MISCELLANEOUS MATERIALS
- A. Provide patching and repair materials. Compatible with paint finishes and substrates. Use weather resistant materials for exterior surfaces and surfaces exposed to moisture.
 - B. Accessories:
 - 1. General: Provide other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

2. Thinners: Thinning of paint shall be done using material recommended by the manufacturer. Mix proprietary products according to manufacturer's requirements. Do not use compound thinner, mineral oil, kerosene, refined linseed oil, or gasoline for thinning.

PART 3 -EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - a. Ensure that concrete and masonry surfaces are cured, are within acceptable alkalinity and dried to meet paint manufacturer's recommendations.
 - b. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1) Plaster and Gypsum Wallboard: 12 percent.
 - 2) Masonry, Concrete and Concrete masonry units: 12 percent.
 - 3) Interior Wood: 15 percent, measured in accordance with ASTM D 2016.
 - c. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.

3.2 COORDINATION OF WORK

- A. Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
- B. Notify Engineer about anticipated problems when using the materials specified over substrates primed by others.

3.3 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is

impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. General: Correct defects and clean surfaces which affect work of this section. Remove existing coatings that exhibit loose surface defects.
 - a. Provide barrier coats over marks, patches, and other imperfections which may bleed through surface finish.
 - b. Remove from surfaces to be repainted all foreign matter such as nails, screws, staples, tape and gum.
 - c. Remove all loose, blistered, scaled, crazed or chalky finish to an existing tight and firm finish.
 - d. Remove mildew as noted in paragraph entitled "Mildew Removal Preparation" hereinbelow.
 - e. Spot prime areas where bare wood, concrete, masonry, plaster, fill, seal or patched material is exposed with the specified primer and feather out onto adjacent paint.
 - f. Remove all loose or cracked caulking.
 2. Wash all surfaces with a solution of tri-sodium phosphate and water or other appropriate solution to remove any accumulated film of wax, oil, grease, smoke, dust, dirt, chalking or other foreign matter which would impair the bond of, or bleed through the new paint finish. After washing, rinse the surface with potable water and allow to thoroughly dry.
 - a. Surfaces shall dry a minimum of 24 hours before the application of primers. For wood surfaces drying shall continue until the moisture content of the wood is less than 15 percent. For concrete and concrete masonry surfaces test for alkali and moisture.

3. Lightly sand the surface where existing finish remains tight and firm. Where the paint has been removed, sand the edges of scarred areas to a smooth feathered edge.
4. Fill holes (nail, tack, staple, and other similar items), cracks, open joints and other imperfections with appropriate compound and allow to set (door and trim included). Reseal all joints where loose or cracked caulking was removed. Seal all openings which will permit the entrance of water. Sealing compounds shall be compatible with the substrate, primer and paint. Apply and allow sealants to set in accordance with the manufacturer's recommendations.
5. Cementitious Materials: Seal all cracks hairline to 1/8-inch in width with concrete patching compound. All cracks over 1/8-inch in width and holes 1/4- inch diameter or greater shall be sealed with a latex modified or epoxy modified reinforced patching system before paint application. All patching shall be done in accordance with the patching manufacturer's recommendations and instructions. All patching shall be done in accordance with the manufacturer's recommendations and instructions. Apply texture, if required, to match existing textured surfaces.
 - a. Concrete Floors: Remove contamination, efflorescence, acid etch, neutralize and rinse floors with clean water. Verify required acid-alkalal balance is achieved. Allow to dry.
6. Plaster Surfaces: Scarred plaster areas shall be patched with appropriate plaster materials. Fill holes, cracks, open joints and damaged areas with vinyl base or latex modified patching system. Apply texture, if required, to match existing textured surfaces.
7. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.
8. Wood:
 - a. Interior: Wipe off dust and grit prior to sealing.
 - b. Exterior: Wash glu-laminated wood with solvent to remove grease and dirt prior to sealing.
 - c. Seal knots, pitch streaks, and sappy sections with sealer. Fill fastener holes and cracks after priming has dried; sand between coats.
9. Ferrous and Galvanized Metal Surfaces:
 - a. Comply with preparation requirements of the Steel Structures Painting Council (SSPC) Standard SP3.
 - b. Remove rust, loose mill scale and blistering /loose paint by power tool chipping, de-scaling, sanding, wire brushing and grinding down to bare metal. Only tightly

adhering surface rust, mill scale and paint which cannot be removed with a dull putty knife may remaining. Do not burnish the surfaces during cleaning.

- c. Completely wipe surfaces with mineral spirits or other appropriate solution to remove accumulated film of wax, oil, grease, smoke, dust, dirt, chalky or other foreign matter which would impair the bond of, or bleed through the new paint finish. Patch imperfections, holes, dents to form a smooth surface.
- d. Lightly sand the surface where existing finish remains tight and firm. Where the paint has been removed, sand the edges of scarred areas to a smooth feathered edge. Allow the surfaces to thoroughly dry and immediately spot prime bare metal areas with the specified primer and feather out onto adjacent paint.

10. Aluminum Surfaces Scheduled for Paint Finish:

- a. Remove surface contamination by steam or high pressure wash.
- b. Remove oxidation with acid etch and solvent washing.
- c. Apply etching primer immediately following cleaning.

11. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish:

- a. Remove foreign particles to permit adhesion of finishing material.
- b. Apply compatible sealer or primer.

12. Insulated Coverings: Remove dirt, grease, and oil from covering material.

13. Copper Surfaces Scheduled for Paint Finish:

- a. Remove contamination by steam, high pressure wash, or solvent clean.
- b. Apply vinyl etch primer immediately following cleaning.

14. Copper Surfaces Scheduled for Natural Oxidized Finish:

- a. Remove contamination by applying oxidizing solution of copper acetate and ammonium chloride in acetic acid.
- b. Rub on repeatedly for required effect. Once attained, rinse surface with clear water and allow to dry.

D. Mildew Removal Preparation:

1. Remove mildew and sterilize the surface to be painted using one of the following methods:

- a. Apply a commercial mildew remover applied per manufacturer's instructions.
 2. Following treatment, clean the surface with potable water and allow to thoroughly dry before priming, painting or applying sealing and caulking compounds.
- E. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 3. Use only thinners approved by paint manufacturer and only within recommended limits.
 4. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.4 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 3. Provide finish coats that are compatible with primers used.
 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, covers, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
 5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only, unless otherwise noted.
 6. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.

7. Finish interior of wall and base cabinets and similar field-finished casework to match exterior.
 8. Sand lightly between each succeeding enamel or varnish coat.
 9. Ensure primers are top coated within the times required by the paint manufacturers. Top coats not applied within the recoating window may be rejected.
 10. Exterior wood decking treated with oil-borne preservatives shall be primed with oil base primer prior to painting.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 2. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 3. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
 4. Be aware of the requirements and restrictions of paragraph entitled "PROJECT CONDITIONS" hereinabove on spray painting.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
 2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.

- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.
- F. Mechanical items to be painted include, but are not limited to, the following:
 - 1. Uninsulated metal piping.
 - 2. Uninsulated plastic piping.
 - 3. Pipe hangers and supports.
 - 4. Tanks that do not have factory-applied final finishes.
 - 5. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
 - 6. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.
 - 7. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
- G. Electrical items to be painted include, but are not limited to, the following:
 - 1. Panelboards.
 - 2. Electrical equipment that is indicated to have a factory-primed finish for field painting.
- H. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- I. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- J. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

- K. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
 - 1. Provide satin finish for final coats.
 - 2. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.
- L. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.5 FIELD QUALITY CONTROL TESTING

- A. Inspection and Approvals: Unless directed otherwise by the Engineer, obtain written approval upon completion of each phase of work (phases of work are: surface preparation and spot prime, prime, first finish coat, second finish coat) before proceeding into the next phase or work. For any particular area of work that deviates from the submitted work schedule, notify the Engineer one day in advance when completing any phase of work. Provide access to areas to be inspected.
- B. Failure to obtain approval of any phase of work for a work area may result in redoing the operation at no cost to the State.
- C. Right of Rejection: Non conforming work will be rejected by the Engineer. Remove rejected material from the job site immediately. Redo rejected work at no cost to the State.
 - 1. Where the required paint thickness is deficient, provide additional coats to the affected surface(s) to meet the required paint thickness.

3.6 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
 - 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.7 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Engineer.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.8 SCHEDULE OF FINISHES

- A. The Schedule of Finishes is made for the convenience of the Contractor and indicates the types and quality of finishes to be applied to the surfaces. Provide additional systems for surfaces to be painted not listed hereinafter.
- B. The Schedule of Finishes is as follows: Provide prime coat and one finish coat unless otherwise noted/scheduled or specified herein.
 1. Provide primer and 2 finish coats over existing paint surfaces in poor condition; where color of existing paint is darker than new paint color; where one finish coat will not hide differences in color and shows streaking; where existing paint is peeling and flaking; and where there is rust and scaling on ferrous metal surfaces.
 2. Provide primer and 2 finish coats on all new surfaces.
 3. Paint with appropriate primer for the material being painted as per the manufacturer's recommendations.
 4. Paint with appropriate finish coats for material being painted to match existing sheen and color unless otherwise noted/scheduled or directed by the Engineer.
 5. Touch up paint with appropriate paint where noted/scheduled or directed by the Engineer.
- C. Any existing painted surface not specifically noted in the finish schedule shall be finished to match adjoining work.

END OF SECTION

DIVISION 12 - FURNISHINGS

SECTION 12490

SHADES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Manually operated roller shades with single rollers.

1.2 PREINSTALLATION MEETINGS

- ###### A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

- ###### B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.

- ###### C. Samples: For each exposed product and for each color and texture specified.

- ###### D. Roller-Shade Schedule: Use same designations indicated on Drawings.

1.4 CLOSEOUT SUBMITTALS

Operation and Maintenance Data: For roller shades to include in maintenance manuals.

1.5 QUALITY ASSURANCE

Installer Qualifications: Fabricator of products.

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, or pre-approved equal:
 - 1. MechoShade Systems, Inc.
 - 2. Draper Inc.
 - 3. Hunter Douglas Contract.
- B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

- A. Basis-of-Design: Basis of Design: Design is based on products indicated on the Drawings. Subject to compliance with requirements, provide; named product or a comparable product approved by Architect by one of the following or pre-approved equal:
 - 1. MechoShade Systems, Inc.
 - 2. Draper Inc.
 - 3. Hunter Douglas Contract.
- B. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.
 - 1. Bead Chains: Nickel-plated metal.

- a. Loop Length: Full length of roller shade.
 - b. Limit Stops: Provide upper and lower ball stops.
 - c. Chain-Retainer Type: Chain tensioner, sill mounted.
- C. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.
- 1. Roller Drive-End Location: Right side of interior face of shade.
 - 2. Direction of Shadeband Roll: Regular, from back (exterior face) of roller.
 - 3. Shadeband-to-Roller Attachment: Manufacturer's standard method.
- D. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.
- E. Shadebands:
- 1. Shadeband Material: Light-blocking fabric unless indicated otherwise.
 - 2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.
 - a. Type: Enclosed in sealed pocket of shadeband material.
 - b. Color and Finish: As selected by Architect from manufacturer's full range.
- F. Installation Accessories:
- 1. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, endcaps, and removable bottom closure.
 - a. Height: Manufacturer's standard height required to enclose roller and shadeband assembly when shade is fully open, but not less than 3 inches.
 - b. Endcap Covers: To cover exposed endcaps.
 - 2. Side Channels: With light seals and designed to eliminate light gaps at sides of shades as shades are drawn down. Provide side channels with shadeband guides or other means of aligning shadebands with channels at tops.
 - 3. Methods of sealing light gaps at bottoms of shades vary among manufacturers.

Shadeband bottom bars fit into bottom channels or butt against bottom angles to seal light leaks.

4. Bottom (Sill) Channel or Angle: With light seals and designed to eliminate light gaps at bottoms of shades when shades are closed.
5. Installation Accessories Color and Finish: As selected from manufacturer's full range.

2.3 SHADEBAND MATERIALS

- A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- B. Light-Filtering Fabric: Woven fabric, stain and fade resistant.
 1. Source: Roller-shade manufacturer.
 2. Type: Vinyl-coated polyester.
 3. Roll Width: As indicated.
 4. Thickness: 30 mils.
 5. Orientation on Shadeband: Up the bolt.
 6. Openness Factor: 1 percent maximum.
 7. Color: As selected by Architect from manufacturer's full range.
- C. Light-Blocking Fabric: Opaque fabric, stain and fade resistant.
 1. Source: Roller-shade manufacturer.
 2. Type: Vinyl-coated polyester.
 3. Roll Width: As indicated.
 4. Thickness: 14 mils.
 5. Orientation on Shadeband: Up the bolt.
 6. Color: As selected by Architect from manufacturer's full range.

2.4 ROLLER-SHADE FABRICATION

- A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, metal chain-loop devices; lead content of components; and warning labels.
- B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F:
 - 1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch per side or 1/2-inch total, plus or minus 1/8 inch. Length equal to head- to-sill or -floor dimension of opening in which shade is installed less 1/4 inch, plus or minus 1/8 inch.
 - 2. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.
- C. Shadeband Fabrication: Fabricate shadebands without battens or seams to extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, locations of connections to building electrical system, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER SHADE INSTALLATION

- A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.
 - 1. Opaque Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.
- B. Roller Shade Locations: As indicated on Drawings.

3.3 ADJUSTING

- A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

- A. Clean roller shade surfaces, after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of project acceptance.
- C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Project Acceptance.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain roller shades.

END OF SECTION

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13281

ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

1.2 SUMMARY

A. Furnish all labor, materials, equipment, and services, necessary to carry out the safe removal and disposal of asbestos containing material in compliance with these specifications, EPA, OSHA, State of Hawaii regulations, and any other applicable Federal and State regulations. Whenever there is a conflict or overlap of the above references, the most stringent shall apply. The asbestos work at Room 220 in Kalanimoku Building shall generally include:

1. Removal and disposal of tan floor tiles and/or black mastic (under carpet) located in room 220 as identified in the Hazardous Material Inspection Report and/or Project Drawings. The black mastic shall be completely removed from the concrete floor substrate.
2. Work is to be completed when the room is vacant.
3. Contractor to coordinate all work with the Contractor hired Qualified Consultant. Contractor is responsible to satisfy himself as to the total extent of all work, including to but not limited to the quantity, location, thickness, layers, accessibility, etc. of all material prior to commencement of any work.

B. In general, the principal items of the asbestos removal work shall be as follows:

1. Worker Protection.
2. Decontamination Enclosure System.
3. Preparation of Work Area.
4. Removal of asbestos containing materials.
5. Removal of protective sheeting.
6. Disposal.

7. Cleaning shall include areas within and immediately around the work area affected by the abatement work and all areas contaminated by the Contractor's work.
8. The asbestos abatement work shall include removal of all asbestos containing materials within the work area as specified herein and noted on the drawing.
9. Contractor shall comply with all regulations pertaining to asbestos removal. If there is a conflict with the specifications, the more stringent requirement shall apply.

1.3 COORDINATION WITH OTHER SECTIONS

Prior to commencement of work, an annotated description of all existing damaged and missing items shall be submitted to the State. It will be the Contractor's responsibility to repair and/or replace to the State's satisfaction all items identified as damaged and/or missing that cannot be proven to have been in this condition prior to the commencement of this project.

1.4 SUBMITTALS PRIOR TO WORK

- A. Payment: Final payment will not be made until copies of all submittals have been furnished to and accepted by the State. Submit one electronic copy of the submittal package, no later than 10 consecutive working days from award notice, which will include the items listed below.
- B. Notices: As early as possible but prior to commencement of work, as regulated by each agency and before commencement of any on-site project activity, send a courtesy 10-day notice in accordance with 40 CFR Part 61.145 of Subpart M, of the proposed asbestos abatement work with copies to the State and to the following agencies:
 1. The Administrator of the Environmental Protection Agency (EPA) Regional Office having jurisdiction over the project.
 2. State of Hawaii, Department of Health, "Notification of Demolition and Renovation" form. Send to: State of Department of Health, Indoor and Radiological Health Branch, 99-945 Halawa Valley Street, Aiea, Hawaii 96701.
- C. Permits and Licenses: Copies of all permits, licenses (C-19) and arrangements for removal, transportation and disposal of asbestos containing materials and waste water.
- D. Insurance: Proof of insurance for Workman's Compensation and General Liability which covers asbestos, lead, and pollution.
- E. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to asbestos handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.

- F. Samples: Samples of the following items for approval prior to ordering materials:
1. Surfactant: Copies of manufacturer's literature including all laboratory data, mixing and application instructions.
 2. Tapes and Adhesives: Copies of manufacturer's literature including all laboratory data.
 3. Warning Labels and Signs: Copies of examples of all required signage.
 4. Protective Clothing: Copies of manufacturer's literature on all protective clothing and one sample of each item which will be returned to the Contractor.
 5. Respirator Equipment: Copies of manufacturer's literature on all respirator equipment and one sample of each item which will be returned to the Contractor.
 6. Asbestos Encapsulant(s): Copies of manufacturer's literature including all laboratory data, application instructions.
- G. Work Plan: Submit a project Work Plan for the asbestos containing material disturbance work written and signed by the Contractor's State of Hawaii, Department of Health certified Asbestos Project Designer. The Contractor shall also provide detailed information concerning:
1. Preparation of the work area.
 2. Personal protective equipment including respiratory protection, protective clothing and fall protection.
 3. Decontamination procedures for the personnel who may be exposed to asbestos.
 4. Handling and disposal methods and procedures to be used.
 5. Required air monitoring procedures and sampling protocols.
 6. Procedures for final cleanup.
 7. A sequence of work and performance schedule in coordination with other trades.
 8. Emergency procedures.
- H. Shop Drawings: Submit shop drawings for the following items as a minimum:
1. Descriptions of any equipment to be employed not discussed in this section.
 2. Security provisions, if any, in and around the project area.
 3. Outline of work procedures to be employed.

4. Location of construction barriers.
 5. Location of waste dumpster.
 6. Staging of the work, the sequence.
 7. Entrances and exits to the work place.
 8. Location and construction of worker decontamination units.
- I. Documentation for Instruction: Submit documentation that each and every individual, including foremen, supervisors, and other company personnel or agents and any other individual who may be exposed to airborne asbestos fibers, who may be responsible for any aspect of abatement activities, or who is allowed or permitted to enter areas where such exposure may occur has currently attended and passed the Abatement Worker and/or Abatement Contractor/Supervisor course whichever is relevant to that workers responsibilities as specified in 40 CFR Part 763, "Asbestos Materials in Schools". These courses shall be EPA approved or approved by a State Accreditation Program in the most current listing of the Federal Register. No worker shall be allowed on site if they are found to have either an expired accreditation certificate or States not comply with the requirements set forth in 40 CFR Part 763 on training. All workers shall be certified for asbestos related work in accordance with Department of Health, Chapter 11-504, Hawaii Administrative Rules, *Asbestos Abatement Certification Program*. The Contractor shall be responsible for keeping the documentation up to date and subsequent submittals to the State before any additional employee or individual, not currently on the list, is allowed within the project site. Submit completed and signed "Employee Acknowledgment of Instruction and Release" forms. A sample "Employee Acknowledgment of Instruction and Release" form is provided at the end of this section.
- J. Documentation from Physician: Submit documentation from a physician that all employees or agents who may be exposed to airborne asbestos have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that all individuals permitted within the project site have received medical monitoring or had such monitoring made available to them as required in OSHA 29 CFR 1926.1101. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities. The Contractor shall keep and make available to all affected individuals a record and the results of such examinations.
- K. HEPA Vacuums: Submit manufacturer's certification that vacuums conform to ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems as applicable to this project.
- L. Rental Equipment: When rental equipment is to be used in abatement areas or to transport asbestos contaminated waste, a written notification concerning intended use of the rental equipment must be provided to the rental agency with a copy submitted to the State.

- M. Emergency Planning Procedures: Contractor shall submit for review and acceptance by the State, an emergency plan prior to abatement initiation.
1. Emergency procedures shall be in written form and prominently posted adjacent to the Worker Protection Notices specified hereinafter. Everyone prior to entering the work area must read and sign these procedures to acknowledge receipt of emergency exits and emergency procedures.
 2. Emergency planning shall include notification of police, fire, and emergency medical personnel of planned abatement activities work schedule, and layout of the work area, particularly barriers that may affect response capabilities.
 3. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury. Written procedures shall be developed and employee training procedures shall be provided in Contractor's plan.

1.5 SUBMITTAL AFTER WORK IS COMPLETED

- A. Report: At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the State. One electronic copy of the report shall be submitted and shall include the items listed below.
1. The project name, Abatement Contractor, Abatement Contractor license number, notification form to the Hawaii Department of Health and EPA, work duration, material removed, respiratory protection employed, asbestos waste manifest, total quantity of waste, employee exposure air sample results, and results of the most current PAT round results for the laboratory or laboratories conducting the employee exposure air sample analysis.
 2. Certification of the Abatement Contractor's employees.
 3. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while asbestos abatement operations are in progress, until final clearance is received that the work area is asbestos free. The log shall contain the listed information as a minimum and shall be certified by the Qualified Consultant.
 - a. Date of visit/worker entry.
 - b. Visitor/Worker's name, employer, business address and telephone number.
 - c. Time of entry and exit from work area.
 - d. Purpose of visit.
 - e. Type of protective clothing and respirator worn.

- f. Certificate of release signed and filed with the Contractor.
- 4. Certification Statement: A statement signed by the Asbestos Abatement Contractor that all asbestos abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

1.6 PRODUCT HANDLING

Delivery and Storage of Materials: Deliver materials to the site in original packages, containers or bags fully identified with manufacturer's name, brand and lot number. Store materials in a dry well-ventilated space, under cover, off the ground and away from surfaces subject to dampness or condensation as approved by the State. Material that becomes contaminated with asbestos shall be disposed of in accordance with applicable regulations. Replacement materials shall be stored outside the contaminated work area until abatement is completed.

1.7 PROTECTION

- A. Site Security: The work area is to be restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, employee's of subcontractors, the State and its representatives, State and local inspectors and any other designated individuals. A list of authorized personnel shall be established prior to job start.
 - 1. Entry to the work area by unauthorized individuals shall not be permitted without the express approval of the State and any such entry shall be reported immediately to the State by the Contractor.
 - 2. A Visitor/Worker Entry Log shall be maintained.
 - 3. The Contractor shall have control, subject to approval of the State, of security in the work area and in proximity of Contractor's equipment and materials.
- B. Site Protection and Safety: As a minimum follow the requirements of EPA, HIOSH (State of Hawaii), OSHA and NIOSH. Take all necessary precaution to ensure there is no asbestos contamination to those areas not included in the work schedule.
- C. Protective Covering: The Contractor shall provide and install protective covering on an "as required" or "upon request" by the Qualified Consultant. Protective covering shall be clean plastic sheets minimum thickness of 6-mil.
- D. Safeguarding of Property: The Contractor shall take whatever steps necessary to safeguard his work and also the property of the State and other individuals in the vicinity of his work area during the execution of this Contract. He shall be responsible for and make good on any and all damages by his employees negligence. Do not load structure with weight that will endanger the structure.
- E. Completed Work: The Contractor shall provide all necessary protection for surfaces encapsulated under this section.

1.8 ABBREVIATIONS

- A. ANSI: American National Standards Institute, Inc.
- B. CFR: Code of Federal Regulations.
- C. HIOSH: Division of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii.
- D. EPA: U.S. Environmental Protection Agency.
- E. NESHAP: National Emission Standards for Hazardous Air pollutants.
- F. NIOSH: National Institute for Occupation Safety and Health.
- G. OSHA: Occupational Safety and Health Administration.

1.9 GENERAL REQUIREMENTS

- A. Contractor shall examine and have at all times in his possession at his office (one copy) and in view at each job site office (one copy) a current issue of the following publications:
 - 1. State of Hawaii, Department of Health, Title 11, Chapter 501-1, Asbestos Requirements.
 - 2. State of Hawaii, Department of Health, Title 11, Chapter 501-2, Asbestos Containing Materials in Schools.
 - 3. State of Hawaii, Department of Health, Title 11, Chapter 501-4, Asbestos Abatement Certification Program.
 - 4. Title 29, Code of Federal Regulations, Section 1910.134 - General Industry Standard for Respiratory Protection, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.
 - 5. Title 29, Code of Federal Regulations, Section 1926.1101 - Asbestos, Construction Industry, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.
 - 6. Title 29, Code of Federal Regulations, Section 1910.2 - Access to Employee Exposure and Medical Records, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.
 - 7. Title 29, Code of Federal Regulations, Section 1910.1200 - Hazard Communication, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

8. Title 40, Code of Federal Regulations, Part 61, Subparts A and M (Revised Subpart B), National Emission of Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA).
 9. Guidance for Controlling Asbestos Containing Materials in Buildings, EPA 560/5-85-024 (Purple Book), U.S. Environmental Protection Agency (EPA).
 10. Title 34, Code of Federal Regulations, Part 231, Appendix C, Procedures For Containing and Removing Building Materials Containing Asbestos, U.S. Environmental Protection Agency (EPA).
 11. Title 29, Code of Federal Regulations, Section 1910.145 Specifications for Accident Prevention, Signs and Tags, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.
 12. ANSI Z88.2-80 Practice for Respiratory Protection.
 13. EPA, Final Response to the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E.
- B. The Contractor shall comply with the above requirements and any applicable State and City and County of Honolulu regulations. Where conflict or any inconsistency among requirements or with this specification exists, the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City and County of Honolulu regulations resulting in additional cost to the Contractor shall be solely the Contractor's responsibility.
- C. All regulations shall govern over these specifications, except that any more stringent specification or specification providing greater protection against asbestos exposure, injury, loss or liability, shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specification and/or regulations should be directed to the State.
- D. Whenever approval of the State is required prior to proceeding with other work, the following shall be complied with:
1. The Contractor shall allow the State 72 hours from notification to respond to the request for inspection.
 2. The Contractor shall designate one person (either a foreman or superintendent) who will be authorized to request for inspections. The name of the designated person shall be submitted in writing to the State prior to commencing with the work. Request from any other person will not be considered an official request.

1.10 DEFINITIONS

- A. Abatement: Procedure to control fiber release from asbestos containing building materials.
 - 1. Removal: All herein specified procedures necessary to remove asbestos containing materials at an approved site in an acceptable manner.
 - 2. Post-Removal Surface Encapsulation: Procedures necessary to coat surfaces from which asbestos containing materials have been removed and where designated on the drawings to control any residual fiber release.
- B. Air Monitoring: The process of measuring the fiber content of a specific, known, volume of air in a stated period of time.
- C. Amended Water: Water to which a surfactant has been added to reduce water surface tension and thereby provide a more rapid penetration.
- D. Authorized Visitor: The State, the General Contractor hired Qualified Consultant, his representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.
- E. Holding Area: A secure area used for the storage of double-bagged asbestos containing material before removal from the project site to an approved disposal site.
- F. Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area without dismantling.
- G. Friable Asbestos: Asbestos containing material which can be crumbled to dust, when dry, under hand pressure.
- H. HEPA Filter: A High Efficiency Particulate Absolute filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 micron in length.
- I. HEPA Vacuum Equipment: Vacuuming equipment that utilizes a High Efficiency Particulate Absolute (HEPA) filter.
- J. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.
- K. Post-Removal Encapsulation: A liquid material which can be applied to surfaces from which asbestos containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating in to the material and binding its components (penetrating encapsulant). Selected product shall be compatible with the existing finishes including wood, metal, and plastic.
- L. Qualified Consultant: Consultant hired by the General Contractor who will perform air monitoring and inspection during abatement work and shall have the authority to initiate

engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Project Monitor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Plastic Sheeting: Minimum thickness is 6-mil polyethylene film.
- B. Plastic Bags: Minimum thickness 6-mil polyethylene film labeled as specified hereinafter.
- C. Tapes: Tape shall be capable of sealing joints of adjacent sheets of polyethylene and for attaching polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including the use of amended water. Silver cloth duct tape, minimum 2-inches wide; red or NATO orange tape, minimum 2-inches wide for exit arrows; and double faced foam tapes, by Nashua, 3-M, Arno, or accepted equivalent.
- D. Adhesives: Adhesives (3-M #76, #77, or accepted equivalent) shall be capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.
- E. Warning Labels and Signs: As required by OSHA regulations 29 CFR 1926.1101. Permanent signage for access panels and areas with encapsulated asbestos containing materials shall be as specified hereinafter. Signage shall be as approved by the State.
- F. Protective Clothing: As specified hereinafter. The Contractor shall have all the required sets of coveralls required for this project on island prior to the start of work. There will be no time extension for the unavailability of coveralls or related equipment.
- G. Post-Removal Encapsulation: The encapsulant shall be applied to surfaces from which asbestos containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating in to the material and binding its components (penetrating encapsulant) and shall be compatible with the existing finishes including wood, metal, and plastic.
- H. Other Materials: Provide all other materials, such as, but not limited to lumber, plywood, nails, fasteners, metal studs, hardware, foam sealants, and caulking which may be required to properly prepare and complete this project.

2.2 TOOLS AND EQUIPMENT

- A. General: Provide and fabricate suitable tools for the asbestos abatement procedures.
- B. Water Sprayer: Airless or a pressure sprayer for amended water application as applicable.
- C. Air Purification Equipment: High Efficiency Particulate Absolute (HEPA) filtration systems.

- D. Paint/Encapsulant Sprayer: Airless type.
- E. Other tools and equipment as necessary.

2.3 PERSONNEL PROTECTION REQUIREMENTS

- A. The Contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.
- B. Provide workers with sufficient sets of disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear. Provide hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate and shall be disposed of as asbestos contaminated waste. Protective clothing shall be worn by all personnel within the work area from the start of the removal and post-removal encapsulation work until the work area has received its final clearance.
- C. Insulated non-skid rubber boots or an accepted equivalent shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided full body protective clothing.
- D. No visitors shall be allowed in work areas, except as authorized by the State. Visitors must supply their own respiratory protection and show proof training in accordance with DOH 11-501-504. Provide authorized visitors with suitable disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear including hard hat when required and insulated rubber boots or equal. The Contractor shall include in his Bid the expense of a total of 4 changes of clothing per day for each day of asbestos abatement work for visitor's use. The quantity shall accumulate and may be used at any time during asbestos abatement work at the discretion of the State.
- E. All electrical systems used for asbestos abatement operations shall as a minimum be protected with "Ground Fault Circuit Interrupters" selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.
- F. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI Z-89.1-2009, eye protection meeting the requirements of ANSI Z87.1-2015, safety shoes meeting the requirements of ANSI Z41.1-1991, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

PART 3 - EXECUTION

3.1 SEPARATION OF WORK AREAS FROM NON WORK AREAS

- A. Penetrations: Windows and doors and any other openings to the work area, shall be sealed with 2 layers of 6-mil poly sheeting and secured with duct tape.
- B. Emergency Exits: Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations. Provide knockout/cut away panels in the barriers in the direction of emergency egress. Properly mark the knockout/cut away panels, seal them airtight, and on a continuing basis instruct workers and authorized personnel as to their locations. Post a diagram in each Clean Room and Equipment Room locating the emergency exits. In case of fire while doing work in the work areas, emergency exit procedures have priority over normal work exiting procedures.
- C. Inspection: The Contractor shall inspect all barriers at least twice a day (once prior to the start of each day's abatement operations and following the day's abatement operations). Document the inspections and observations in a daily project log.
- D. Emergency Exits: Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations.

3.2 DECONTAMINATION ENCLOSURE SYSTEMS

- A. General: The Contractor shall construct the decontamination enclosure system or use portable units acceptable to the Qualified Consultant and as described in the approved Work Plan.
- B. Personnel Decontamination Area: At a minimum provide a personnel decontamination area consisting of a Dirty Area, Wipe Down Area, and Clean Area.
- C. Maintenance of Decontamination Area: At the beginning of each work shift and throughout abatement operations all areas shall be kept clean at all times.
 - 1. Personnel Decontamination Area:
 - a. The Contractor shall maintain Clean Area and shall repair and sanitize respirator equipment after each use.
 - b. Disposable sanitary hand wipes shall be available at all times.
 - c. Provide a disposal bag for contaminated filters in the Wipe Down area at all times.
- D. Worker Protection Notice: Post the following notice in each Clean Area:
 - 1. Workers and authorized personnel, in order to enter the work area, shall:
 - a. Remove all clothing, unless it is to remain in the Dirty Area for eventual disposal.

- b. Don the appropriate respiratory protection, follow all training procedures and manufacturer's instructions.
 - c. Don protective clothing (full body coveralls, gloves, boots, headgear etc.) after donning respirator.
2. All workers and authorized personnel, in order to leave the work area, shall:
- a. Remove gross (visible) contamination from themselves and their equipment. Brush off dust with a fine bristle brush and leave the brush outside the Equipment Room in the work area.
 - b. Enter the Dirty Area and keeping your respirator in place, remove all protective clothing, including full body coveralls, gloves, boots, and headgear. Place contaminated clothing in the bag(s) provided. Store reusable gloves and boots in their respective areas in the Dirty Area.
 - c. Respirator still in place, move into the Wipe Down area and wipe off thoroughly.
 - d. Proceed to the Clean Area: Get dressed and return respirator to its proper place.
 - e. No smoking, eating, drinking shall be allowed inside the work area or the decontamination enclosures.

3.3 COMMUNICATIONS

Provide a communications system suitable to monitor all activities within the work area and to readily transfer messages from one location to another.

3.4 WORK AREA PREPARATION

A. Work by the Asbestos Abatement Contractor:

- 1. Step 1:
 - a. Posting of Danger Signs: Post danger signs in and around the work area to comply with 29 CFR 1926.1101 and all other Federal, State and local requirements. Signs shall be posted at a distance sufficiently far enough away from the work area to permit a person to read the sign and take the necessary protective measures to avoid exposure.
 - b. Critical Seals (Barriers): Seal all windows, doors, and openings to the regulated work area including ducts, vents, electrical penetrations, and any other penetrations of the work areas with plastic sheeting. Plastic sheeting is to remain in place for the duration of the asbestos abatement or until specified by the QC.
 - c. Install another barrier or isolation method which prevents the migration of airborne asbestos and debris from the regulated work area.

- d. Inspect the Building Openings: At the beginning of each work day, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and all surrounding buildings are closed and locked (as applicable).
 - e. Sealing Openings: Seal all penetrations with plastic sheeting sealed with tape.
2. Step 2:
- a. Provide Decontamination Units/Areas where appropriate: Personnel Decontamination Unit(s) specified hereinafter shall be required.
 - b. Pre-Cleaning/Wet-Wiping: Pre-clean fixed objects within the work area, first using HEPA vacuum equipment and then wet cleaning methods as appropriate and separately enclose with minimum 6-mil plastic sheeting sealed with tape. Fixed objects shall include, but not be limited to, exposed electrical conduits and all other permanently fixed items.
 - c. Air Filtration Units (Interior Work): Install sufficient number of HEPA air filtration units to create a minimum of four air changes per hour and create a negative pressure differential of 0.02 inches of water. Contractor to monitor the pressure differential for the duration of the project using a portable manometer. Contractor will keep one spare unit at the job site for the duration of the work.
3. Step 3:
- a. Plasticizing: Objects which may be contaminated during abatement or difficult to clean shall be taped and sealed in a minimum of 6-mil polyethylene plastic sheeting. A minimum of 2 layers of 6-mil polyethylene plastic sheeting shall be used for preparation of critical barriers and containments.
 - b. When sealing (plasticizing), plastic sheet shall be protected against damages by sharp edges, projections, etc. Provide 2-inch squares of duct tape at all sharp projections prior to applying plastic sheet to prevent puncture and tearing.
 - c. Floor Covering Removal - Install a poly sheeting splashguard covering all walls within the work area, extending from the floor to four feet.
 - d. NOTE: Combining lower mil thickness sheets to total the minimum mil thickness is not acceptable.
 - e. Marking Exits: Maintain and mark both normal and emergency exits from the work areas to include large tape or spray painted orange arrows in the direction of egress and at curtained doorways which side of plastic sheeting to access first. One arrow marking shall be visible from every work location. Establish a color or designation system to distinguish normal exiting to the personnel decontamination unit and emergency exiting when life safety conditions prevail.

4. Step 4: After the sealing work is completed, notify the Qualified Consultant and get his approval prior to proceeding with abatement.

3.5 REMOVAL OF FLOOR TILES/MASTIC

- A. Thoroughly wet the affected flooring material with the amended water before starting the removal.
- B. Prevent contamination spreading to the surrounding public area. A fine spray of the amended water shall be applied in small sections to reduce fiber release preceding the removal of the asbestos-containing material. Spray the asbestos-containing material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. The Qualified Consultant shall have the authority to stop all work due to improper removal techniques.
- C. The asbestos-containing material shall be removed in small sections. Before beginning the next section, the material shall be packed while still moist into sealable 6-mil double polyethylene bags and sealed airtight. No removed material, whether bagged or unbagged, shall be allowed to dry, fall to the ground, be crumbled into small pieces, pulverized, or made friable.
- D. It shall be the responsibility of the Contractor to verify the thickness of the material and satisfy himself as to the total work and/or effort to remove said material.
- E. The Contractor is prohibited from using methods of removal that create excessive amounts of dust and debris. No mechanical methods will be utilized for the removal work.

3.6 EQUIPMENT CLEANING

All contaminated equipment and tools used for removal work shall be washed and cleaned in the work area prior to removing them from the work area. No washing of contaminated equipment and tools will be allowed outside the work area.

3.7 ASBESTOS CONTAINING WASTE HANDLING

- A. Collect and bag all asbestos debris and any other contaminated debris found in the work area. Clean the visible residual by wet wiping.
- B. Debris shall be bagged and sealed in 6-mil plastic bags immediately after removal. All gross debris created by the removal process shall be bagged and sealed at the end of each removal day.
- C. The bags containing the asbestos waste material shall be checked for evidence of waste material attached to the outside of the bags. If dirty, the bags shall be washed down in the work area. The bags are then moved to the Holding bin. Bags and containers shall be marked with OSHA label prescribed by the Hawaii OSHA regulations referenced in this Section. Label shall state, "DANGER - CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD." Additionally, label

bags in accordance with OSHA 40 CFR 61.150; or EPA 40 CFR 763 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.

- D. Asbestos contaminated waste with sharp edges (e.g. nails, screws, metal lath, etc.) will tear the polyethylene bags and sheeting and therefore shall be placed in drums or enclosed with cardboard and double wrapped and sealed with plastic.

3.8 CLEANING AND CLEARANCE OF THE WORK AREA

- A. Should the Contractor fail to commence work to clean-up and make the work area asbestos free within one working day after the clean-up thereof has been requested by the State, and thereafter to expeditiously complete the said clean-up, State may without further notice and without termination of contract, have the clean-up done and deduct the cost thereof from the contract.
- B. Visual Clearance of Removal Work Areas: Remove all visible accumulation of asbestos containing materials and debris by HEPA vacuums, sponging, and wet-wiping. The work areas shall be totally visibly clean and remaining material encapsulated. The Contractor, in the presence of the Qualified Consultant, shall make a complete visual inspection of the work area to ensure dust-free conditions.
- C. Once the Qualified Consultant certifies that the work areas are essentially clean of asbestos containing debris and the clearance level of less than 0.01 f/cc is achieved, the other Contractors may proceed with their work. The removal of signage required by the Asbestos removal work shall be allowed after all asbestos containing material designated to be removed is removed. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

3.9 DISPOSAL OF ASBESTOS CONTAINING MATERIAL

- A. THE CONTRACTOR SHALL CONDUCT ANY ADDITIONAL TESTING AS REQUIRED BY THE WAIMANALO GULCH LANDFILL.
- B. As the work progresses asbestos containing waste is generated the Contractor shall transport all waste generated on a pre-scheduled day to the State of Hawaii, Department of Health's AUTHORIZED disposal site, or as specifically approved by the State to delay a disposal operation. Transport all waste to the predesignated disposal site in accordance with EPA regulations and specific landfill requirements. Contaminated material shall be double-bagged in bags with OSHA label prescribed by the HIOSH regulations referenced in these specifications. Label shall state, "DANGER - CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA requirement 29 CFR 1926.1101 or EPA 40 CFR 61.150 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.
- C. Mark vehicles used to transport asbestos containing waste material during the loading and UNLOADING of the waste so that the signs are visible. The marking must be displayed in

such a manner and location that a person can easily read the legend. Refer to 40 CFR Part 61.149 for lettering size, fonts and wording of sign requirements. For all loading and unloading activities, the sign referred to in 40 CFR Part 61.150 (b) (3) shall be displayed prominently.

- D. Vehicles used for transporting waste to the disposal sites shall have a completely enclosed, LOCKABLE storage compartment. Storage compartments shall be plasticized and sealed with a minimum of one layer of 6 mil polyethylene sheeting on the sides and top and 2 layers of 6 mil polyethylene on the floor (bed). Waste materials, except those with sharp edges (metal lath, screws, nails, metal suspension system, etc.), properly double bagged may be transported to the disposal site without being placed in drums if the transporting vehicle is prepared as specified above in addition to any more stringent requirements by HIOSH. The compartments shall be thoroughly wet-cleaned and/or HEPA vacuumed following the disposal of each load at the disposal sites at an approved location with electrical power as required. At the conclusion of the asbestos abatement, or before transport vehicles are used for other purposes, the polyethylene sheeting shall be properly removed and disposed of as contaminated waste. After this has been accomplished, compartments shall once again be wet cleaned and HEPA vacuumed in order to eliminate all debris.
- E. At the landfill, upon delivery of the waste for disposal, the Contractor shall notify the Scale ATTENDANT and Landfill Spotter that the waste to be disposed of is asbestos material.
- F. Workers unloading bags at the disposal sites shall be dressed in full body protective clothing and DUAL cartridge respirators.
- G. Waste disposal manifest forms shall be properly completed to assure custody and disposal of all asbestos containing material and asbestos contaminated waste at approved disposal sites. Forms shall be kept on file as directed by the State with copies submitted to the Qualified Consultant the next working day after each trip. NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ANY LANDFILL USED FOR DISPOSAL OF ASBESTOS-CONTAINING OR ASBESTOS CONTAMINATED WASTE IS APPROVED FOR THAT PURPOSE.
- H. Bags must be placed in the hole for burial. Dumping of bags from the containers will not be allowed. However, if a bag is torn and if acceptable by the landfill, the entire container may be buried.
- I. Liquid waste for disposal shall be filtered as specified herein.
- J. The Contractor shall pay the waste disposal charge and any special handling charges at the landfills. All expenses for landfills shall be the complete responsibility of the Contractor. The bagged material shall be loaded in drums except as noted previously and transported to a landfill authorized by the State Department of Health to accept material containing asbestos. In the event the bag is torn, the tear shall be immediately mended with duct tape and the bag placed into another bag and sealed, and the wrapped material covered with another wrap and sealed. The Contractor shall make all prior arrangements with the landfill.

3.10 LOCK DOWN

After clean-up of gross contamination and final visual inspection, a compatible post removal (lockdown) encapsulant shall then be spray applied to all surfaces. The removal area shall include but not to be limited to constructed enclosures, barriers, polyethylene sheeting that covers any equipment articles to be discarded, critical barriers, air locks, load out units for bag removal, and on-site constructed decontamination unit.

3.11 CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA (29 CFR 1926.1101) and all other applicable laws and as required in these specifications. The Contractor shall provide all required documentation to the State. Contractor shall collect daily personal air samples on at least 25 percent of the personnel performing removal work with the most exposure for the duration of the project.
- B. The Contractor shall procure legally required reports for air monitoring as part of the contract. All air monitoring reports shall include all field data, laboratory reports, test results and other pertinent information about the daily work activities.

TEN DAY NOTICE FORM
(sample)
page 1

**Asbestos Notification of Demolition & Renovation
(Ref. HAR Chapter 11-501)**

SEND TO: STATE DEPARTMENT OF HEALTH
INDOOR AND RADIOLOGICAL HEALTH BRANCH
99-945 HALAWA VALLEY STREET
AIEA, HAWAII 96701
Phone (808) 586-5800 Fax (808) 586-5811



I. Type of notification: O=original R=revised C=cancelled		
II. Type of operation: D=Demolition R=Renovation OD=Ordered Demolition ER=Emergency Renovation		
III. Facility information		
Owner name:		
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
Removal contractor:		License #:
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
Other operator:		
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
IV. Is asbestos present (y/n):		
Inspector's name:	Certification #:	State of certification:
V. Facility description (Include building number, floor and room number)		
Building name:		
Address:		
City:	State:	Zip code:
Location(s) on site:		
Building size (sq. ft.):	# Floors:	Age:
Present use:	Prior use:	
Official Use Only		
Postmark Date:	Received by:	State Record Number:

TEN DAY NOTICE FORM
(sample)
page 2

VI. Procedure used to detect the presence of asbestos			
Laboratory name:		Analytical method:	
VII. Specify the nature of the asbestos material (TSI, surfacing, VAT, miscellaneous):			
Amount of asbestos, including: 1. RACM to be removed 2. CAT I left in place, and 3. CAT II left in place	RACM to be removed	Nonfriable ACM (not) to be removed	
		Category I	Category II
Pipes (linear ft.)			
Surfacing (square ft.)			
Facility components (cu. ft.)			
Scheduled asbestos abatement dates			
Start (mm/dd/yy):		Finish (mm/dd/yy)	
Circle	workdays and times:	weekdays:	daytime nighttime
		weekends:	daytime nighttime
Scheduled renovation/demolition dates			
Start (mm/dd/yy):		Finish (mm/dd/yy)	
Circle	workdays and times:	weekdays:	daytime nighttime
		weekends:	daytime nighttime
Description of the planned renovation/demolition work and methods to be used:			
Description of the work practices and engineering controls to be used to prevent emissions of asbestos from the work-site:			
Project designer name:		Certification #:	State:
XII. Waste transporter #1			
Name:			
Address:			
City:	State:	Zip code:	
Contact Person:		Telephone:	
Waste transporter #2			
Name:			
Address:			
City:	State:	Zip code:	
Contact Person:		Telephone:	
XIII. Waste disposal site			
Facility Name:		Telephone:	
Address:			
City:	State:	Zip code:	

TEN DAY NOTICE FORM
 (sample)
 page 3

XIV. For demolition ordered by a government agency, please identify	
Name:	Title:
Authority (Agency):	
Date of order (mm/dd/yy):	Date ordered to begin (mm/dd/yy):
XV. For emergency renovations (Please call 808-586-5800 for additional instructions)	
Date and time of emergency	
Date (mm/dd/yy):	Time: (a.m./p.m.)
Description of sudden, unexpected event and the damage caused:	
Explanation of how the event caused an unsafe condition or would cause equipment damage or an unreasonable financial burden:	
Person contacted for approval at the Indoor and Radiological Health Branch:	
Name:	Date (mm/dd/yy):
	Time: (a.m./p.m.)
XVI. Description of procedures to be followed in the event that unexpected asbestos is found or previously nonfriable asbestos material becomes crumbled, pulverized or reduced to powder:	
XVII. I certify that an individual trained in the provisions of Hawaii administrative rules chapter 11-501, and certified as a contractor/supervisor, will be on-site during the entire renovation and/or demolition and evidence that the required training has been accomplished for this and all workers will be available at the work-site.	
Signature of owner/operator	Date (mm/dd/yy):
XVIII. I certify that the information on this notification is correct.	
Signature of owner/operator	Date (mm/dd/yy):
XIX. Additional Comments:	

VISITOR/WORKER ENTRY LOG
(Sample)

DATE

PROJECT

ALL PERSONNEL MUST SIGN-IN AND SIGN-OUT EVERY TIME THEY ENTER/EXIT THE WORK AREA. PLEASE PRINT CLEARLY. ATTACH EMPLOYEE RELEASE FORM FOR ALL VISITORS.

NAME	EMPLOYER Name, *Address, *Phone	TIM E IN	TIM E OUT	*PURPOSE OF VISIT	**TYPE OF PPE ISSUED

*NOT required of Contractor's employees

** Type of PPE (Personal Protective Equipment) Issued to include list of protective clothing worn and type of respirator used (Type "C", half-face dual cartridge, etc.

EMPLOYEE ACKNOWLEDGMENT OF INSTRUCTION AND RELEASE FORM
(sample)

Employee Name: _____

Employee Address: _____

Employee Telephone No.: _____

DOH Asbestos Certification Number: _____

Classification of Worker: _____

Have you had in the past, or present, any respiratory problems?

Yes: _____ No: _____

Have you worked in the past with asbestos or fiberglass type materials?

Yes: _____ No: _____

The project you will be working on involves the use of asbestos and the removal of the asbestos from the building. Asbestos is considered a health hazard.

The company is supplying all necessary safety clothing and working conditions required and necessary for your protection from asbestos hazard.

You shall be instructed a commencement of the job on the required use of safety equipment, clothing, working conditions and procedures. These must be rigidly adhered to. Smoking is not permitted in the work areas. Disregarding of safety instructions shall result in instant dismissal.

I acknowledge that safety instructions have been given to me by the company at my work commencement and I am thoroughly conversant with them and have answered the above questions truthfully.

Signed: _____
Employee

Date: _____

ASBESTOS DISPOSAL FORM
(sample)

Date: _____

Owner or Operator of Landfill: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Name of Landfill: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Hauler: _____

Approximate Volume of Asbestos Received: _____

Type of Container Asbestos is in: _____

Asbestos Container Labeled? YES: _____ NO: _____

I certify that the above statements are true and that the landfill has been approved for the disposal of asbestos. The delivered material will be covered within 6 inches (15 cm.) of non-asbestos material within 24 hours.

Signed: _____

Landfill Owner-Operator: _____

END OF SECTION

SECTION 13288

ASBESTOS TESTING AND MONITORING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

As specified in Section 01019 - GENERAL SPECIFICATIONS, Special Provisions, and the General Conditions of the Contract.

1.2 SUMMARY

- A. General Contractor's Responsibilities for project air monitoring and inspectional services for the purposes of:
 - 1. Verifying compliance with the specifications listed in SECTION 13281 - ASBESTOS ABATEMENT.
 - 2. Ensuring that the State's legally required documentation is collected.
 - 3. Providing engineering control during the project.

1.3 DEFINITIONS

- A. ACM: Asbestos containing materials.
- B. ASCM: Arsenic containing materials.
- C. Building Representative(s): The person or persons designated by the users of the building to act on their behalf.
- D. Contractor: The construction firm engaged to remove, encapsulate and/or dispose of the ACM.
- E. Industrial Hygienist: A Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene who shall direct all air monitoring and project supervision.
- F. Competent Person: The Contractor shall employ Competent Person who is educated and trained in recognizing and evaluating work place hazards and stress (in this instance, asbestos abatement and related work in accordance with 29 CFR 1926.1101) and providing guidance on the methods and means of removing or correcting such hazards and stresses within the work environment.
- G. Project Designer: The person of firm who prepared the plans and specifications to remove, encapsulate and dispose of the ACM.

- H. Project Manager: The State's employee responsible for administering the construction contract and ensuring that the work of the Contractor is conducted according to the contract documents and in compliance with applicable laws, regulations, ordinance, etc.
- I. Project Monitor: A member of the construction management team who enters the work area to set up the air monitoring device and then collects the various air samples to be sent to the laboratory for analysis.
- J. Qualified Consultant: Consultant hired by the General Contractor who will perform asbestos air monitoring and inspection during the asbestos abatement work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Project Monitor.

1.4 COORDINATION WITH OTHER SECTIONS

Coordinate with the State's Inspector for the testing/air monitoring requirements included in SECTION 13281 - ASBESTOS ABATEMENT.

1.5 PRE-CONSTRUCTION CONFERENCE

- A. Hold conference prior to construction and shall be conducted by the Engineer assisted by the consultant's construction manager.
 - 1. Attendance: Present also shall be the Contractor, project designer, user agency and/or building representative(s), industrial hygienist, and the Qualified Consultant.
 - 2. Agenda:
 - a. Review final schedule for project.
 - b. Verify legal requirements and special conditions.
 - c. Verify compliance with pre-construction requirement.
 - d. Obtain copies of all mandatory notifications.
 - e. Inspect sample respiratory equipment and other abatement equipment.
 - f. Review procedures and responsibilities.
 - g. Clarify the scope of work and its best impact on the users of the building.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GENERAL CONTRACTOR'S RESPONSIBILITIES

Ambient and clearance air monitoring and inspection services will be supplied by the General Contractor.

3.2 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall be responsible for providing the daily personal air monitoring and necessary records for all of the Contractor's employees for the duration of the project as required by OSHA (29 CFR 1926.1101), and all other applicable laws.
- B. The Contractor shall obtain the OSHA required reports for personnel air monitoring as part of the contract.
- C. The Contractor shall be responsible for daily personal air samples that shall be collected on at least 25% of the personnel performing removal work on similar tasks and for the duration of the project. Submit within 1 working day to the Engineer.
- D. The Contractor is solely responsible for protecting his workers, other personnel, and the public from any of his work activities at the work site regardless of the testing and monitoring conducted by the State.
- E. Monitoring information developed by the Qualified Consultants activities while under contract with the General Contractor will be for the use of the State. The information will be available and offered to the Contractor when developed, but not thereafter, and shall not waive the Contractor's obligations stated elsewhere in this section.
- F. Air monitoring and testing becomes necessary to follow up on work by the Contractor which is rejected as not conforming to the requirements shall be the responsibility of the State. However, the full cost of such additional monitoring and testing shall be borne by the Contractor and shall be deducted from the final contract payment.

3.3 TESTING AND AIR MONITORING

- A. Duties of the Qualified Consultant:
 - 1. Photographic Record of Project: Record the asbestos abatement project with representative photos. All photos shall become the property of the State and are to be accompanied by a detailed log.
 - 2. Project Log: Maintain daily field reports detailing all key activities during abatement and make a summary of project activities to the project designer and the State's project manager. Incorporate the contents of the daily field reports with other project data into a final project report.

3. Visual Inspection of Containment Areas: Perform regular inspection of all containment areas. Conduct inspections during the actual work performance of the Contractor to document the work practices employed by the Contractor and prior to air testing in each area to verify that all materials scheduled for abatement were removed and the area was properly cleaned.
- B. Air Monitoring: The on-site air monitoring specialists and industrial hygienists shall perform the following activities associated with this portion of the project:
1. On-site environmental and personnel air monitoring as required by EPA, OSHA, and the project specifications.
 2. Laboratory analysis by PCM analysis using NIOSH 7400 method.
 3. Monitoring of decontamination procedures at site entry/exit.
 4. Monitoring of containment maintenance by visual and instrumental inspection.
 5. Interface with project inspectors, building representatives, representatives of regulatory agencies, and project designers during site visits.
 6. Ensure that proper respiratory protection is utilized by all persons at the project site.
 7. Relay to the State's Project Manager any discrepancies in Contractor's action with provisions of project specifications.
 8. Act quickly in case of emergencies with appropriate response.

3.4 SAMPLING DESIGN

- A. The following is a typical sampling design during the actual construction. The number of samples and volume quantities may vary, depending on each project's specifications.
1. Work Area Samples: Low volume samples of 480 liters each shall be taken in the work area. Ambient air samples shall be taken at the inside and outside of the asbestos control area and that the persons entering the work area are wearing proper respiratory protection. If monitoring inside and outside the asbestos abatement work area shows airborne concentrations have reached the predetermined specified TWA, the consultant shall stop all work, notify the Engineer immediately, have the Contractor correct the condition(s) causing the increase and ensure that the Contractor obtains the Engineer's approval prior to restarting the removal work.
 2. Final Clearance Samples: Upon completion of all asbestos work, the Qualified Consultant shall conduct visual inspection of the asbestos work area and post abatement clearance sampling. The post abatement clearance sampling shall be conducted for all interior asbestos work areas.

3.5 LABORATORY ANALYSIS

The Qualified Consultant shall maintain testing facilities in the vicinity of the project site. An industrial hygiene monitoring setup with high-volume and low-volume pumps, calibrators and all filtering needs, in addition to a fully-equipped laboratory for rapid sample analyses to the field, shall be included in this facility. This is vital because it increases the efficiency of the Contractor and allows immediate readings of air samples, rather than mailing them to a laboratory, which sometimes delays the release of containment area.

3.6 DAILY TESTING RECORDS

At the conclusion of every day's testing, the Qualified Consultant shall provide copies of all air monitoring records of each containment area to the Engineer and the Contractor.

END OF SECTION