

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION
Honolulu, Hawaii

BOARD OF LAND AND NATURAL RESOURCES

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Acting Chairperson

CONTRACT SPECIFICATIONS AND PLANS


Job No. B81CO71A
Pokai Bay Jetty Wall Improvements
Waianae, Oahu, Hawaii


May 2026

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Approved: 
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May 2026

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NOTICE TO BIDDERS

(Chapter 103D, HRS)

COMPETITIVE SEALED BIDS for Job No. B81CO71A, Pokai Bay Jetty Wall Improvements, Waianae, Oahu, Hawaii may be submitted to the Department of Land and Natural Resources, Division of Boating and Ocean Recreation, Engineering Branch on the specified date and time through the State of Hawaii e-Procurement System (HIePRO).

The Department of Land and Natural Resources Interim General Conditions dated October 1994, as amended is available on request; and the General Conditions – AG008, latest revision shall be made a part of the specifications. Electronic copies of the General Conditions is available on the HIePRO site.

The project is located at Pokai Bay, Waianae, Oahu, Hawaii.

The purpose of this Invitation for Bids (IFB) is to award to a Contractor work that shall consist of repair and improvement to the existing jetty wall at Pokai Bay, Waianae, Oahu, Hawaii and appurtenant work as show in the plans, specifications, and bidding documents issued with this solicitation.

Due to the nature of work contemplated, bidders must possess a valid State Contractor's license, Classification "A".

The estimated cost of construction is \$4,500,000.

As a condition for award of the contract and final payment, the vendor shall provide proof of compliance with the requirements of 103D-310(c) HRS. Proof of compliance/documentation is obtained through Hawaii Compliance Express (HCE). Vendors shall register in Hawaii Compliance Express (HCE), a program separate from HIePRO. The annual subscription fee to utilize the HCE service is currently \$12.00. Allow 2 weeks to obtain complete compliance status after initial registration. It is highly recommended that vendors subscribe to HCE prior to responding to a solicitation. The vendor is responsible for maintaining compliance. If the vendor does not maintain timely compliance in HCE, an offer otherwise deemed responsive and responsible may not be awarded.

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

The Engineering Branch Head is responsible for administering and overseeing the Contract, including monitoring and assessing contractor performance.

The job is subject to preference for Hawaii Products established by Section 103D, Hawaii Revised Statutes. The Hawaii Product List may be examined at the State Procurement Office.

Should there be any questions, please use the question and answer section of the HIePRO solicitation.

INFORMATION AND INSTRUCTIONS TO BIDDERS

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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. SEALED PROPOSALS: **Not applicable. See 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 standard questionnaire. When required, 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. **No bid security is required for bids less than \$50,000.**
- 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. This project will require a Class "A" contractor's license.

- 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. **Performance and payment bonds are not required for bids less than \$50,000.**
- 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. **For contracts less than \$50,000, the State reserves the right to contract the work under a purchase order.**
- 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.

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 Contractor shall procure all required project permits and pay the required

fees, including hiring consultants and payment thereto for services related to obtaining required permits if required. 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.

- 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 LOCAL LABOR: The Contractor shall hire local labor whenever practicable.

- 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 by the Contractor at the end of the project in both hard copy and 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. TOILET FACILITIES: All toilet facilities constructed at the project site shall be in accordance with the Public Health Regulations of the State Department of Health (DOH). All necessary precautions shall be observed at the project site. The use of sanitary facilities shall be strictly enforced and workers violating these provisions shall be promptly discharged.

- BB. SIGNS: Whenever the project involves closing or obstructing any public thoroughfare, the Contractor shall provide traffic signs conforming to the applicable provisions of the current edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways", published by the Federal Highway Administration as directed by the Engineer for the purpose of diverting or warning traffic prior to the construction area. All traffic signs shall bear

proper wording stating thereon the necessary information as to diverting or warning traffic.

- CC. FIELD OFFICE AREA FOR DEPARTMENT: **Not required for this project.**
- DD. 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.
- EE. 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.
- FF. 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.
- GG. COMPLIANCE WITH §3-122-112 HAR:
As a condition for award of the contract the contactor shall be in compliance with the following requirements:
- 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.

COMPLIANCE, DOCUMENTATION AND HAWAII COMPLIANCE EXPRESS

As a condition for award of the contract and as proof of compliance with the following requirements of 103D-310(c) HRS:

Vendors are required to be compliant with all appropriate state and federal statutes. Proof of compliance (compliance documentation) is required. See the HIePRO Buyer FAQ on the State Procurement website for more information.

Proof of compliance/documentation is obtained through Hawaii Compliance Express (HCE). Vendors shall register in Hawaii Compliance Express (HCE), a program separate from HIePRO. The annual subscription fee to utilize the HCE service is currently \$12.00.

Allow 2 weeks to obtain complete compliance status after initial registration. It is highly recommended that vendors subscribe to HCE prior to responding to a solicitation.

The vendor is responsible for maintaining compliance. If the vendor does not maintain timely compliance in HCE, an offer otherwise deemed responsive and responsible may not be awarded.

SPECIAL PROVISIONS

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

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.hawaii.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 “ninety (90)” 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 ninety (90) 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) days after the date of bid opening, the Contractor may submit a claim for increased labor and materials costs (but not overhead costs) that will be incurred after 365 days after the date of bid opening plus the contract time allowed for performance of the work. 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. INSURANCE REQUIREMENTS

1. **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.
2. All insurance described herein will be maintained by the Contractor for the full period of the contract and in no event will be terminated or otherwise allowed to lapse prior to written certification of final acceptance of the work by the Department.
3. 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.

4. Nothing contained in these insurance requirements is to be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from its operations under this contract, including the Contractor's obligation to pay liquidated damages, nor shall it affect the Contractor's separate and independent duty to defend, indemnify and hold the Department harmless pursuant to other provisions of this contract. In no instance will the Department's exercise of an option to occupy and use completed portions of the work relieve the Contractor of its obligation to maintain the required insurance until the date of final acceptance of the work.
5. All insurance described herein shall 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.
6. 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.
7. 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.
8. 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.
9. In addition, the Contractor's insurance policies shall contain the following clauses:
 - (a) The State of Hawaii is added as an additional insured with respect to operations performed for the State of Hawaii.
 - (b) It is agreed that any insurance maintained by the State of Hawaii will apply in excess of, and not contribute with, insurance provided by this policy.
- 10. 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 commercial general liability insurance shall include the State as an additional insured. 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 State shall be named as additional insured. 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 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.

**TECHNICAL SPECIFICATIONS
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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. Construction Lines, Levels and Grades: The Contractor shall verify all lines, levels and elevations indicated on the drawings before any clearing, excavation or construction begins. Any discrepancy shall be immediately brought to the attention of the Engineer, and any change shall be made in accordance with the Engineer's instruction. The Contractor shall not be entitled to extra payment for failing to report the discrepancies before proceeding with any work whether within the area affected or not.
 - B. Examination of Premises: The Contractor shall contact the Engineer and obtain permission before visiting the site.
 - 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 or the operations of the facilities in the adjacent areas. Where the Contractor's operations would result in interruptions which would hamper the operations of the facilities or its adjacent areas, the Contractor shall rearrange the schedule of work accordingly.
 2. The Contractor shall maintain safe passageway to and from the facility's occupied areas and other occupied spaces for the user agency personnel and the public at all times.
 - F. Contractor Use of Premise

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).

1. If lead testing was done and the data is appended to this Section, the Contractor shall review the data to insure understanding of lead containing paint identification and location, that the testing was for design purposes only, and that the results do not satisfy any of the requirements of the Chapter 12-148, HAR.

G. Parking Policy for Contractor

1. The Contractor and its employees will not be allowed to park in zones assigned to facility personnel and public parking.
2. Areas to be used by the Contractor shall be as designated by the Engineer. Any lawn or existing sites damaged by the Contractor shall be restored as instructed by the Engineer at no cost to the State.

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 together with the marked-up field office plans to the Engineer.
 - 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.

R. Permits

1. The following permits have been obtained and paid for by the State.
 - a. U.S. Army Corps of Engineer Rivers and Harbors Section 10/CWA Section 404 NWP 3 and 33
 - b. State Department of Health, Section 401 Water Quality Certification
 - c. Department of Land and Natural Resources Office of Conservation and Coastal Lands Conservation District Use
 - d. National Pollutant Discharge Elimination System Form C for Construction
2. The project is exempt from obtaining a grading permit from the City and County of Honolulu.

END OF SECTION

SECTION 01090

STANDARD REFERENCES

PART 1 – GENERAL

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

listed: Abbreviation Company

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
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

Standard References

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ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers United Engineering Center 345 East 47th Street New York, NY 10017
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 American, Inc. (Formerly called: Overhead Electrical Crane Institute - OECI) 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

Standard References

DEMA	Diesel Engine Manufacturer's Association 122 East 42nd Street New York, NY 10017
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

Standard References

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HEI	Heat Exchange Institute 122 East 42nd Street New York, NY 10017
HI	Hydraulic Institute 1230 Keith Building Cleveland, OH 44115
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

Standard References

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MSS	Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. 127 Park Street, N.E. Vienna, VA 22180
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

Standard References

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	Engineers 2 Pennsylvania Street New York, NY 10001
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

Standard References

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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

END OF SECTION

Standard References

01090-8

SECTION 01100

ARCHAEOLOGICAL PROTECTION

PART 1 – GENERAL

- 1.1 This section covers the requirements for the protection and preservation of historical sites and values.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 CONSTRUCTION METHOD

- A. In the event that any previously unknown archaeological properties (such as artifacts; subsurface deposits of bone, shell or charcoal; or rock or coral alignments, paving or walls) or human remains are encountered, the Contractor shall suspend all work immediately and notify the Engineer and the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD) at (808) 243-5169 as soon as possible. If human remains are discovered, the Police Department shall be notified in addition to the Engineer and SHPD. No work in the area of the find shall proceed until SHPD has been able to assess the discovery, has made all applicable determinations regarding treatment of the discovery as required under chapters 13-275 and 13-300, HAR, and concurs that work can continue. Subsequently, if the State requires it, the Contractor shall engage the services of a professional archaeologist to assist the State in meeting historic preservations requirements and in coordinating with SHPD.
- B. Representatives of the State will from time to time examine the area as work proceeds. If historical values are noted, the State may order a halt to the work in the vicinity of the historical values until the State can examine further. The Contractor shall notify the State if he finds anything he suspects to be of historic significance and shall discontinue further work in the vicinity of the find until the State can examine the area. In either case, further work in the vicinity of such historical or suspected historical values may proceed only upon approval by the State. Such approval can be normally expected within one week and shall in no case require more than one month.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 – GENERAL

1.1 SUBMITTALS

- A. The following submittals are required to be provided in accordance with the specific requirements of each section. This list does not relieve the Contractor from providing the comprehensive list required by Section 01019 – GENERAL SPECIFICATIONS.

1. Section 01019 – GENERAL SPECIFICATIONS

- a. A comprehensive list of the required submittals.

2. Section 01581 – PROJECT SIGN

- a. Shop drawings.

3. Section 02274 – JETTY WALL

- a. Name, Location, and Historical Quality Reports from Quarry
- b. Qualifications/Certifications for Sampling/Testing Agency
- c. New Armor Stone Delivery, Staging, and Schedule
- d. New Armor Stone Quality Test Report
- e. New Armor Stone Gradation Test Report
- f. New Armor Stone Gradation Test Methodology Description
- g. Jetty Wall Repair Workplan
- h. Daily Activities Report

1.2 SUBMITTAL PROCEDURE

- 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 shall be required and shall be reviewed with No Exceptions Taken by the Engineer, prior to any ordering of materials and equipment.
- E. Unless otherwise noted, (excepting for physical samples and documents requiring wet signatures, all submittals shall be provided to the Engineer in electronic (.pdf) format) the Contractor shall submit to the Engineer for his review eight copies of all shop drawings 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.

1.3 REVIEW PROCEDURE

- A. When the shop drawings have been reviewed by the Engineer, (the drawing(s), in pdf format, will be returned to the Contractor appropriately stamped. If major changes or corrections are necessary the drawing(s) will be returned to the Contractor with such changes or corrections indicated. The Contractor shall correct and resubmit the drawing(s) in electronic (.pdf) format unless otherwise directed 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.
- B. Returned submittals will indicate one of the following actions:
 - 1. No Exceptions Taken
 - a. This response indicates that the material, or work method is in general conformance with the design concept and complies with the drawings and specifications. In this event the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
 - 2. Reviewed – See Remarks
 - a. This response indicates limited corrections are required. The Contractor may begin implementing the work method or incorporating the material and

Submittals

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equipment covered by the submittal in accordance with the noted corrections. A corrected copy of the submittal shall be provided with the post-construction submittal package.

3. Amend & Submit
 - a. This response indicates that the submittal is insufficient or contains incorrect data. Copies will be marked accordingly and will be required to be resubmitted. Except at his own risk, the Contractor shall not undertake work covered by this submittal.
 - b. The Contractor shall resubmit the corrected package until the submittal is returned and marked either "No Exceptions Taken" or "Reviewed – See Remarks".
4. Rejected
 - a. This response indicates that the material, equipment, or work method is not in general conformance with the design concept or incompliance with the drawings and specifications. Except at its own risk, the Contractor shall not undertake work covered by such submittals.
 - b. The Contractor shall resubmit the corrected package until the submittal is returned and marked either "No Exceptions Taken" or "Reviewed – See Remarks".
- C. 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.
- D. 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.

END OF SECTION

Submittals

01300-4

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. 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

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

END OF SECTION

SECTION 01567

ENVIRONMENTAL PROTECTION AND 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. 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. 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. 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. Best Management Practices shall be implemented, constructed, and maintained as shown on the plans to minimize erosion and pollution of waterways during construction.

E. Silt and Debris Containment

1. Prior to any work over or near water, Contractor shall install floating silt curtains extending full depth to provide containment of silt debris from the construction activities. The limit of the silt curtains shall be changed from time-to-time to provide full containment of construction activities with minimum area of containment required.
2. Should there be any observed change in water quality (turbidity), construction activities shall immediately cease and corrective actions taken to prevent and contain any further discharge or pollution. Clean up to remove any contaminants shall be the Contractor's responsibility and shall commence immediately.
3. New armor stone must be cleaned prior to placement in the jetty. The armor stone must be free from soil, organic matter, chemical contaminants or any other potential pollutants. High-pressure water washing may be required. Any water generated from cleaning must not flow into adjacent waters.

F. 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.

2. Dirt, mud or debris that is tracked onto public roads must be cleaned immediately.
3. Waste water shall not be discharged into existing streams, waterways, the ocean waters, or drainage systems such as gutters and catch basins unless treated to comply with the State Department of Health water pollution regulations.
4. Trucks hauling debris shall be covered as required by PUC Regulation. Trucks hauling fine materials shall be covered.
5. No dumping of waste concrete will be permitted at the job site.
6. 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.
7. 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.
8. 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.

G. 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.

H. Environmental Permits

The Contractor shall comply with the conditions of all environmental permits and compliance documents associated with the project which include, but are not limited to, the following:

1. U.S. Army Corps of Engineer Rivers and Harbors Section 10/CWA Section 404 NWP 3 and 33
2. State Department of Health, Section 401 Water Quality Certification
3. Department of Land and Natural Resources Office of Conservation and Coastal Lands Conservation District Use
4. National Pollutant Discharge Elimination System Form C for Construction

These permits are pending approval. For bidding purposes, Appendix A includes the standard permit conditions that the Contractor must assume will be required for this project. The Contractor shall be required to apply for and obtain all other required permits.

PART 2

PART 3 – EXECUTION

3.1 MEASUREMENTS AND PAYMENT

- A. The implementation of environmental compliance, including all equipment, labor and material necessary to perform BMP measures will be paid by lump sum under each repair site proposal item.

END OF SECTION

SECTION 01581

PROJECT SIGN

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Furnish all labor, materials and equipment necessary to construct and install all project sign as specified hereinafter.

1.2 SUBMITTALS

- A. Submit the following items for review. Work may not begin until these submittals have been reviewed and an adequate response per Section 01300 – Submittals has been provided.

- 1. Shop drawings

1.3 LETTER STYLE

- A. Copy is centered and set in Adobe Type Futura Heavy. If this specific type is not available, Futura Demi Bold may be substituted. Copy should be set and spaced by a professional typesetter and enlarged photographically for photo stencil screen process.

1.4 ARTWORK

- A. Constant elements of the sign layout - frame, outline, stripe, and official state information - may be duplicated following drawing measurements, or be reproduced and enlarged photographically using a layout template if provided. The “STATE OF HAWAII” masthead should be reproduced and enlarged as specified, using the artwork provided.

1.5 TITLES

- A. The specific major work of the project under construction is emphasized by using 3-3/4” type, all capitals. Secondary information such as location or buildings uses 2-1/4” type, all capitals. Other related information of lesser importance uses letter heights as indicated on 01581-3, upper / lower case letters.

- B. Design should follow the example on page 01581-3.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. LUMBER

1. Panel is 3/4" exterior grade high density overlaid plywood, with resin-bonded surfaces on both sides.
2. 4"x4" sign posts shall be Douglas Fir No. 1 or better.

B. PAINTS AND INKS

1. Screen print inks are matte finish. Paints are satin finish, exterior grade. References to Ameritone Color Key Paint are for color match only.
2. Color:
 - a. 1BL10A Bohemian Blue
 - b. 2H16P Softly (White)
 - c. 2VR2A Hot Tango (Red)
 - d. 1M52E Tokay (Gray)

C. CONCRETE

1. Concrete shall be class B with a 2,500 psi 28-day compressive strength.

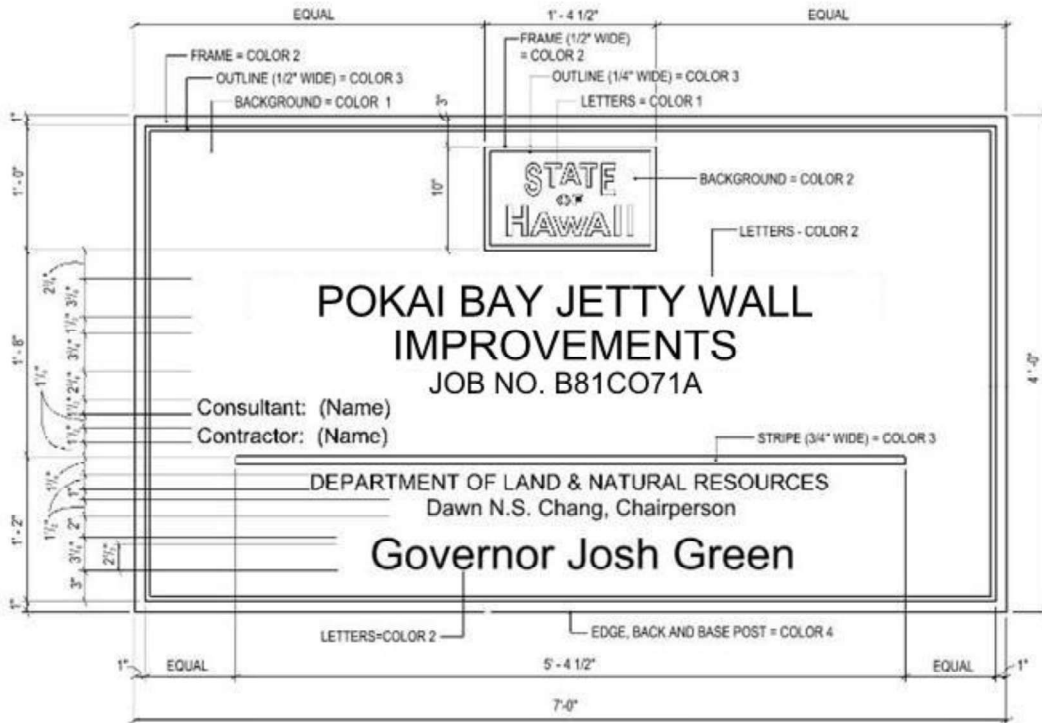
PART 3 – EXECUTION

3.1 GENERAL

- A. The project sign shall be constructed with new materials as specified above.
- B. The Project sign shall be installed at the location indicated on the drawings or as designated by the Engineer. The project sign shall be erected upon commencement of work.

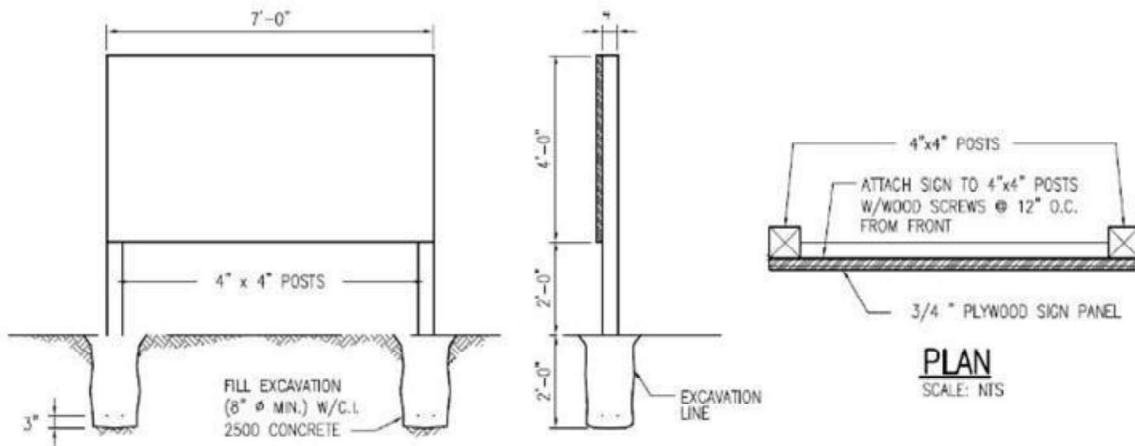
3.2 MEASUREMENTS AND PAYMENT

- A. The construction of the project sign, including all equipment, labor and material necessary to furnish and install the project sign will be paid for under the "Project Sign" proposal item.



SIGN DETAIL

SCALE: NTS



FRONT ELEVATION

SCALE: NTS

SIDE ELEVATION

SCALE: NTS

PLAN

SCALE: NTS

END OF SECTION

Project Sign
01581-3

SECTION 02100

SITE PREPARATION

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 GENERAL

- A. Maintenance of Traffic: The Contractor shall conduct operations with minimum interference to streets, driveways, sidewalks, passageways, etc.
 - 1. When necessary, the Contractor shall provide and erect barriers, etc., with special attention to protection of personnel.
- B. Protection: Throughout the progress of the work, protection shall be provided for all property and equipment, and temporary barricades shall be provided as necessary. Work shall be done in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and the State of Hawaii's Occupational Safety and Health Standards, Rules and Regulations.
- C. No burning of fires of any kind will be allowed.
- D. Reference Points: Benchmarks, etc., shall be carefully maintained, but if disturbed or destroyed, shall be replaced as directed by the Engineer, at the Contractor's expense.
- E. Disposal: All materials resultant from operations under this Section shall become the property of the Contractor and shall be removed from the site. Loads of materials shall be trimmed to prevent droppings.

3.2 EXISTING UTILITY LINES

- A. The existence of active underground utility lines within the construction area is not definitely known other than those indicated in their approximate locations on the Drawings. Should any unknown line be encountered during excavation, the Contractor shall immediately notify the Engineer of such discovery. The Engineer shall then investigate and

issue instructions for the preservation or disposition of the unknown line. Authorization for extra work shall be issued by the Engineer only as he deems necessary.

3.3 CLEARING AND GRUBBING

- A. Clearing and grubbing is not anticipated to be required to execute the work. If the Contractor determines that clearing and grubbing is necessary, the Contractor shall notify the Engineer prior to any clearing and grubbing activities. No clearing and grubbing work shall commence without written approval from the Engineer.
- B. The Contractor shall protect from injury and damage all surrounding trees, plants, etc., that are to remain and shall leave all in as good as condition as at present. Any damage to existing improvement shall be repaired or replaced by the Contractor to the satisfaction of the Engineer.

3.4 CLEAN UP OF PREMISES

- A. Clean up and remove all debris accumulated from building operations from time-to-time as directed. Upon completion of the construction work and before final acceptance of the contract work, remove all surplus materials, equipment, scaffoldings, etc., and leave entire job site raked clean and neat to the satisfaction of the Engineer.
- B. Restore areas used during the performance of the Contract to the original condition or better. This includes, but is not limited to, the restoration of the existing curbs, pavement and the landscaping at the laydown area.

END OF SECTION

SECTION 02110

CONSTRUCTION SURVEYING

PART 1 – GENERAL

3.1 DESCRIPTION OF WORK

The work includes furnishing materials, labor, and equipment for topographic, and hydrographic surveying of work items in accordance with these Specifications and applicable Drawings.

3.2 REFERENCES

- A. Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

Federal Geographic Data Committee Publications:

FGDC-STD-007.3-1998 Geospatial Positioning Accuracy Standards, Part 3:
National Standard for Spatial Data Accuracy

FGDC-STD-008-1999 Content Standards for Digital Orthoimagery

U.S. Army Corps of Engineers Publications:

EM 1110-2-1003 Hydrographic Surveying

3.3 SUBMITTALS

- A. Refer to Section 01300 for general submittal procedures. Submittals required under this section are listed below. Submittals denoted with an asterisk (*) are Action Submittals subject to review by the Engineer. Unless denoted otherwise, all other submittals are Informational Submittals.

1. Name and Affiliation of Responsible PLS or PE for Surveys (Paragraph 1.4)
2. Surveying Plan (Paragraph 1.4)*
3. Survey Notification (Paragraph 1.5)
4. Survey Submittal Log (Paragraph 3.3)
5. Initial Survey Drawings (Paragraph 3.6)*
6. Interim Survey Drawings (Paragraph 3.7)*
7. Final Survey Drawings (Paragraph 3.8)*

3.4 QUALITY ASSURANCE

Construction Surveying

02110-1

A. All survey plots submitted to the Engineer shall be sealed by a professional land surveyor registered in the State of Hawaii having experience in bathymetric surveying and familiar with the hydrographic surveying guidelines in USACE (2004). Registered Professional Land Surveyor (RPLS) shall not be an employee of Contractor and shall operate under a company. Additionally, if survey work is performed by employees of Contractor, RPLS shall be on site to observe all work. Prior to commencing Work, Contractor shall provide name and credentials of professional land surveyor who will oversee surveys.

B. Surveying Plan:

1. Contractor shall provide written description of methods and equipment to be applied for required surveys as well as quality control and quality assurance (QA/QC) procedures to be applied. In particular, plan shall provide planned transects (in PDF or CAD format) of all areas planned for jetty wall repair(s). Refer to EM 1110-2-1003 for QA/QC guidelines.

C. Transducer Frequency:

1. Where fathometers/echo sounders are applied for bathymetric surveys, transducer frequency shall be consistent between initial and final surveys.

3.5 NOTIFICATION PRIOR TO COMMENCEMENT OF SURVEYING ACTIVITIES

A. Contractor shall notify the Engineer in writing at least 3 days prior to the commencement of surveying activities so that the Engineer may have the opportunity to accompany the survey crew and witness the work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 GENERAL

A. Survey Control:

1. Contractor shall utilize the survey control provided in the Drawings supplemented with any temporary benchmarks set by Contractor. Contractor is responsible for avoiding damage to survey control monuments during construction. If the monument is unusable prior to construction, in danger of being damaged, damaged or, deemed unusable during construction, Contractor shall immediately contact the Engineer.

B. Temporary Benchmarks:

- Contractor shall install and maintain temporary benchmarks (TBMs) as necessary to perform surveys and execute the work. Horizontal and vertical coordinates shall be determined for all TBMs installed. Contractor shall maintain TBMs for the duration of the Work. Unless otherwise instructed by the Engineer, TBMs shall be removed upon project completion.

C. Survey Types and Sequencing:

- Contractor shall provide initial, interim, and final surveys for measurement and acceptance of work items. Plots showing initial, interim, and final lines and grades and associated quantity computations shall accompany payment requisitions. Refer to Table 1 for a general summary of the required surveys.

Table 1. Summary of Required Surveys.		
Survey	Intended Purpose	Submittal(s) Schedule
Jetty wall		
Initial	To verify existing conditions and for review by the Engineer in assessing need for any adjustments to jetty wall repair limits prior to start of work.	Prior to placement of excavation, reworking of Existing Reused Armor Stone, and/or installation of New Armor Stone.
Interim	Verify jetty wall repair excavation is constructed to the required limits, dimensions, thickness, and tolerances shown on the drawings. Document quantity and position of Existing Reused Armor Stone (i.e., material left in place above -2' MSL) Verify jetty wall repair(s) were completed to the extent specified in the Drawings (if multiple sites are awarded)	Within 7 days of completing excavation/rework of existing material. Within 7 days of completing repair area if multiple sites are awarded
Final	To verify jetty wall repair(s) were completed to the extents specified in the Drawings.	Upon completion of all jetty wall repair(s).

3.2 SURVEYING ACCURACY

A. General:

- Horizontal accuracy for all surveying equipment shall be within 0.1 ft RMS.

B. Topographic Surveys:

1. For topographic surveys, vertical accuracy for all surveying equipment shall be within $\pm 1.0''$ RMS.

C. Bathymetric Surveys:

1. For bathymetric surveys, vertical accuracy for all surveying equipment shall be within $\pm 1.5''$ RMS.

3.3 SURVEY PLOTS

A. General:

1. All construction surveys submitted to the Engineer shall be in the form of plan-view, cross-section plots, and survey data files unless stated otherwise within these specifications. Plots shall be prepared in AutoCAD Civil 3D 2020 format. Survey data shall be provided to the Engineer in an ASCII format, including XYZ and Description. All survey data shall be referenced to the project datums shown on the Drawings. Sealed plots shall be submitted electronically in PDF format. All plots shall legibly and clearly display the following information:
 - a. Project name and Owner
 - b. PLS or PE seal, signature, and business affiliation
 - c. Date(s) surveys were performed
 - d. Location and description of survey control
 - e. Vertical and horizontal datums
 - f. Sheet names and numbers
 - g. Submittal Description
 - h. Name of Contractor
 - i. Drawing scale(s)
 - j. Transducer frequency (for fathometers/echo sounders, if used)
 - k. All cross sections shall show required construction template and tolerances

2. Initial and interim survey (reference paragraph 3.5 and 3.6) plots shall include survey data plus a graphic representation of the specified construction template (with tolerances) as shown in the Drawings.
3. For final survey (reference paragraph 3.7), plots shall comprise a well organized, stand-alone set of drawings that does not include any outdated or superseded information that may have been submitted for interim surveys. Final plots shall clearly show final cross-sections superimposed over initial and interim cross-sections.

B. Plots (Drawings):

1. All construction surveys submitted to the Engineer shall be in the form of plan-view and cross-section plots. Survey plots shall also be provided in AutoCAD accompanied by XYZ ASCII text files or other digital format approved by the Engineer. All survey data shall be referenced to the project datums shown on the Drawings:
2. Plots of Jetty wall Repair area(s) shall include the following:
 - a. Plan sheets clearly documenting locations, limits, and dimensions of completed Work and locations where cross sections were taken.
 - b. Cross-section sheets providing an overlay of initial, interim, and final survey transects superimposed with specified templates (jetty wall repair area(s)). Cross-sections shall also indicate survey date for each survey.
 - c. As work progresses, plots documenting completed jetty wall repair area(s) shall be submitted with requests for progress payments. In addition, upon completion of all work, a final, complete set of survey plots shall be submitted to document final surveys of jetty wall repair area(s). This final submittal shall be a comprehensive, stand-alone set of drawings, not an assembly of individual drawings that were previously submitted with progress pay requests.

C. Digital Data:

1. In addition to plots, all survey submittals shall include the following:
 - a. A submittal log documenting surveys submitted to date with descriptors for survey dates and locations.
 - b. AutoCAD files
 - c. 3D ASCII files containing northing, easting, elevation, and descriptor for each survey point.

3.4 SURVEY EXTENTS AND SPACING

- A. Survey transects shall be taken every 20' at each station (i.e. 3+00, 3+20, etc.) perpendicular to the Jetty wall Baseline extending at least 40' beyond side of each repair section. Survey shots along transects shall be taken at all significant grade breaks and at maximum horizontal spacing of 5 ft on center. At a minimum, transects shall extend to depth of at least 5 feet below MSL (Elev -5' MSL) to either side of the jetty wall centerline.
- B. A survey profile shall be taken along the Jetty wall Baseline extending at least 40' beyond each side of each repair section. Survey shots along profile shall be taken at all significant grade breaks and at maximum horizontal spacing of 5 ft on center.

3.5 INITIAL SURVEY

- A. Initial survey shall be performed at locations as described in Paragraph 3.4. The initial survey shall be submitted to the Engineer at least seven days prior to commencement of any construction activities. The initial survey shall be conducted within a three-day (max) period.

3.6 INTERIM SURVEYS

- A. As sections of the excavation portion and completed repair sections (if multiple sites are awarded) of the Jetty wall Repair(s) are completed, interim surveys shall be performed at transects locations specified in Paragraph 3.4. Work elements shall be re-surveyed if any re-work is required. Interim survey results shall accompany progress payment requests.

3.7 FINAL SURVEY (HIGH RESOLUTION)

- A. Upon completion of construction activities, a final survey shall be performed that includes the entire Jetty Wall extending from land to the terminal which will encompass the Jetty wall Repair Site(s) at all locations. Final survey shall be performed using drone-based Light Detection and Ranging (LiDAR) methodology or similar high resolution survey methodology approved by Engineer. Survey data shall be capable of producing a point cloud and derived surfaces with a minimum horizontal grid resolution of 1.0 foot by 1.0 foot and an accuracy consistent with Paragraph 3.2. The final survey shall be conducted within a three day (max) period.

3.8 SURVEY EVALUATION

- A. The Engineer reserves the right to suspend work for up to ten (10) calendar days upon completion of surveying by Contractor to review survey results/findings and, if applicable, provide direction regarding interference or discrepancies encountered. Said suspension of work shall not suspend the contract time nor be construed as Standby Time.

3.9 MEASUREMENTS AND PAYMENT

- A. Construction surveying, including all equipment, labor and material necessary to perform topographic and bathymetric surveys will be paid by lump sum under each repair site proposal item.

END OF SECTION

SECTION 02274

JETTY WALL

PART 1 – GENERAL

- 1.1 GENERAL REQUIREMENTS: This specification covers the requirements for furnishing and installing armor rock and reuse of existing armor rock for jetty wall repairs.
- 1.2 REFERENCES: Publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only.
1. American Society for Testing and Materials (ASTM) Publications
 - C 535 Standard Test Method for Resistance to Degradation of Large-Size Course Aggregate by Abrasion and Impact in the Los Angeles Machine
 - D 75 Standard Practice for Sampling Aggregates
 - D 3740 Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
 - D 5519 Standard Test Method for Particle Size Analysis of Natural and Man-Made Riprap Materials
 - D 6092 Standard Practice for Specifying Standard Sizes of Stone for Erosion Control
 - D 6473 Standard Test Method for Specific Gravity and Absorption of Rock for Erosion Control
 - E 329 Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
- 1.3 SUBMITTALS: Submittals required under this section are listed below. Submittals denoted with an asterisk (*) are Action Submittals subject to review by The Engineer. Unless denoted otherwise, all other submittals are Informational Submittals.
1. Name, Location, and Historical Quality Reports from Quarry (Paragraph 1.4)
 2. Qualifications/Certifications for Sampling/Testing Agency (Paragraph 1.4)

3. New Armor Stone Delivery, Staging, and Schedule (Paragraph 1.4)
4. New Armor Stone Quality Test Report (Paragraph 1.4)*
5. New Armor Stone Gradation Test Report (Paragraph 1.4)*
6. New Armor Stone Gradation Test Methodology Description (Paragraph 1.4)*
7. Jetty Wall Repair Workplan (Paragraph (Paragraph 1.4)
8. Daily Activities Reports (Paragraph 1.4)

1.4 QUALITY CONTROL:

A. Materials Testing:

1. Contractor/Quarry shall provide all equipment and facilities for testing construction materials.
2. Acceptable New Armor Stone shall meet the quality acceptance criteria in paragraph 2.1 A, when tested in accordance with the procedures listed below:
 - a. Sampling of the New Armor Stone shall be performed in accordance with ASTM D 75.
 - b. The absorption of New Armor Stone shall be determined in accordance with ASTM D 6473.
 - c. The unit weight of New Armor Stone shall be provided based on the apparent specific gravity determined in accordance with ASTM D 6473.
 - d. The loss by abrasion of New Armor Stone shall be determined in accordance with ASTM C 535.
 - e. The gradation of the New Armor Stone shall be determined in accordance with ASTM D 5519, Test Method C.
3. Throughout the duration of the work, Contractor/Quarry shall inspect, sample, and test construction materials for compliance with the specified requirements and record the inspection of all operations. All sampling and testing shall be performed by a qualified testing laboratory meeting the requirements of ASTM D 3740 and ASTM E 329, or a commercial testing facility qualified by U.S. Army Corps of Engineers (USACE) Materials Testing Center (MTC). A copy of the records of inspection, as well as the records of corrective action taken, shall be provided to The Engineer. As a minimum, Contractor/Quarry shall perform quality control inspection and testing in accordance with the following requirements and Table 1 or approved alternative submittal schedule.
 - a. Gradation: Sample sizes shall consist of at least 10 stones per test and weigh at least 40 tons per test. Refer to paragraph 2.1 for gradation requirements.
 - b. Quality: Refer to paragraph 2.1 for quality requirements.
 - c. Placement: Continuous inspection of placement to ensure proper

thickness. Refer to paragraph 3.2 for placement requirements.

4. Prior to performing quality or gradation testing of stone, Contractor shall provide at least 3 days advance notice, in writing, so that The Engineer may have the opportunity to attend and observe the testing. Contractor shall conduct gradation tests at the quarry, not at the project site.
5. Table 1 provides required submittals associated with New Armor Stone quality. Detailed descriptions of submittals are below.

Table 1. New Armor Stone Submittal Schedule		
New Armor Stone Submittal Number	Submittal Description	Required Submission Timeframe
1	Name, Location, and Historical Quality Reports from Quarry	During or prior to Pre-Construction Meeting.
2	Testing Laboratory Qualifications	During or prior to Pre-Construction Meeting.
3	New Armor Stone Delivery, Staging, and Schedule	Prior to transport or delivery of any New Armor Stone from supplier.
4	New Armor Stone Quality and Gradation Test Report	

6. New Armor Stone Submittal 1: Contractor shall provide the name and location of the quarry that will be the source of the New Armor Stone material for the project. Contractor shall also provide historical quality reports from the selected quarry to determine the acceptability of the New Armor Stone from the proposed source. Historical quality reports are not considered suitable alternatives to the quality and gradation reports required during construction. Quality and gradation reports during construction shall be from new tests performed on actual armor stone to be used on the project unless other approved in writing by the engineer.
7. New Armor Stone Submittal 2: Testing laboratory qualifications shall be submitted.
8. New Armor Stone Submittal 3: Prior to commencing New Armor Stone delivery to project site, Contractor shall submit an armor stone delivery, staging, and testing schedule, and a description of the planned gradation test procedure. The schedule shall describe when New Armor Stone quality and gradation testing will be performed to ensure that test results are available for The Engineer’s review prior to New Armor Stone being shipped from the quarry. A minimum of 1 quality and 1 gradation tests are

required and shall be performed, submitted, and reviewed by the Engineer prior to delivery of any stone.

9. New Armor Stone Submittal 4: Contractor shall obtain The Engineer’s review and confirmation of compliance of gradation and quality tests prior to shipment of New Armor Stone.

- B. Jetty Wall Repair Workplan: Contractor shall provide a written workplan detailing the methodology for repairing the jetty wall site(s) to include material delivery, storage, material transportation, installation equipment, and repair and installation methodology. Workplan must be approved by DOBOR prior to commencing work.

- C. Daily Activities Reports: Contractor shall provide a daily record of activities. Records shall document general quantity and locations of New Armor Stone placement, percent completion, and adverse weather or other problems that cause delays.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. New Armor Stones: All stone for New Armor Stone shall be a durable natural stone. It shall be free from visible cracks, clay pockets, cavities (vugs or “honeycombs”), laminations, and other defects that would tend to increase unduly its deterioration from natural causes. Stone shall not include objectionable quantities of dirt, sand, clay, or rock fines. Stone tested at the quarry shall have a maximum percent chips and fragments by weight of 5%, where chips and fragments are defined as pieces of stone lighter than 10 lb. Stone shall comply with quality parameters in Table 1.

Parameter	Value	Max/Min	Standard
Unit Weight	160 PCF	Min	ASTM D 6473
Absorption	3%	Max	ASTM D 6473
Loss by Abrasion	36%	Max	ASTM C 535

- B. New Armor Stone size ranges (gradations) shall conform to the requirements specified in Table 2 in accordance with ASTM D6092.

Table 2. Gradation Limits for New Armor Stone.	
Particle Mass, ton	Percent Lighter than the Mass Specified
6	100
3	0-100
<3	0-5

- C. Stone Shape: The greatest dimension of each stone shall not be more than three times its least dimension. The faces of individual stones shall be roughly angular, not rounded, in shape.
- D. Existing Reused Armor Stones: Existing stone with the repair limits shown on the drawings may be used for rock repair that meet the following criteria:
 - 1. Smallest dimension of existing stone is no less than two (2) feet.
 - 2. Stones smallest dimension is no smaller than three (3) times its largest diameter.
- E. Unsuitable Material: Any stones within the repair areas shown on the drawings not meeting the requirements for Existing Reused Armor Stone shall be considered unsuitable material. Concrete, asphalt, flotsam, jetsam, or other debris within the repair area shall be considered unsuitable material. Any unsuitable material within the repair areas shown in the drawings shall become the property of the contractor, shall be removed from the Project site, and disposed of in accordance with all laws and regulations. Stone not meeting Existing Reusable Armor Stone requirements may be salvaged by the Contractor.

PART 3 – EXECUTION

3.1 GENERAL

- A. The Contractor shall use equipment and workmen capable of performing the work specified in this section.
- B. The construction methods which the Contractor intends to use shall be thoroughly discussed with the Engineer, documented in the Jetty wall Repair Workplan (Paragraph 1.4) and the approval of the methods obtained prior to commencing the operations.

3.2 INSTALLATION

- A. Stones shall be placed to match the limits, elevations, lines and slopes as indicated on the drawings and as specified hereinafter. In general, the stone shall be keyed and fitted tight and placed so that vertical joints are broken with the long axis of the stone set approximately

normal to the structure slope and pointing inward toward the center of the structure section. The Contractor shall maintain the placed stone until accepted and any material displaced by any cause shall be replaced at his expense.

- B. Placement: Jetty wall repair of New Armor Stone and reworking of Existing Reused Armor Stone shall be constructed as indicated on the drawings, and include the following characteristics:
1. A placement technique and drop height less than 3 feet shall be used to limit stone breakage.
 2. Each stone shall be fitted and keyed with adjacent stones. Contact between individual stones shall be maximized on all sizes leaving voids through which underlying stones cannot pass. **Each stone shall have a minimum of three points of contact with other stones.**
 3. Resetting of adjacent in-place stone to provide for proper placing of shifted or separated stone shall be considered incidental to this work. All stone shall rest securely upon the underlying stone. The voids between the stone shall not be filled with chink stones.
- C. Tolerance: New Armor Stone and Existing Reused Armor Stone shall be placed to the full thickness shown on the drawings. The total tolerance of New Armor Stone and/or Existing Reused Armor Stone shall be **plus or minus one (1) foot** from the lines and grades shown on the drawings. The outside slopes shall present a uniform appearance with a minimum of pieces projecting outside the finished slope surface.
- D. Removal of Rejected Stones: If a newly placed stone or reset stone is found defective in quality, size, shape, weight or placement, the Contractor shall promptly remove the defective stone and replace it with a new stone or reset the required stone to the satisfaction of the Engineer, at no increase in contract price.

3.3 SURVEYING AND ACCEPTANCE

- A. General: Contractor shall provide initial, interim, and final surveys, as described in Section 02110, "Construction Surveying", for measurement and acceptance of excavation, reworking of Existing Reused Armor Stone, and New Armor Stone placement.
- B. Acceptance Criteria: Acceptance of the Existing Reused Armor Stone and New Armor Stone placement shall be based upon field observations and review of interim and final surveys to verify that the stone materials meets the limits and tolerances specified in the Drawings and the requirements of paragraph 3.2.

3.4 CLEAN UP

- A. Upon completion of the work, all plant, including ranges, buoys, stakes, piles, excess stone, silt fence, and other markers or obstructions placed by or for Contractor shall be promptly removed.

3.5 MEASUREMENTS AND PAYMENT

- A. The construction of the jetty wall repairs, including all equipment, labor and material necessary to furnish and install New Armor Stone, removal and disposal of Unsuitable Material, and reworking of Existing Reused Armor Stone material to the lines and grades shown on the drawings will be paid by lump sum for each repair site under the following proposal items awarded:
1. “Jetty wall Repair Site 1 (Base Bid)”
 2. “Jetty wall Repair Site 2 (Additive Bid 1)”
 3. “Jetty wall Repair Site 3 (Additive Bid 2)”
 4. “Jetty wall Repair Site 4 (Additive Bid 3)”
 5. “Jetty wall Repair Site 5 (Additive Bid 4)”

END OF SECTION