

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

GENERAL REQUIREMENTS, GENERAL PROVISIONS, TECHNICAL PROVISIONS
FOR
APRON RECONSTRUCTION, PHASE 1
KAHULUI AIRPORT
KAHULUI, MAUI, HAWAII

STATE PROJECT NO. CM1530-33

2026

NOTICE TO BIDDERS
Hawaii Revised Statutes (HRS),
Chapter 103D

The receiving of bids for **APRON RECONSTRUCTION, PHASE 1, KAHULUI AIRPORT, KAHULUI, MAUI, HAWAII, STATE PROJECT NO. CM1530-33**, will begin as of the HiePRO Release Date. Bidders shall register and submit complete bids through HiePRO only. Refer to the following HiePRO link for important information on Vendor Registration: <https://hiepro.ehawaii.gov/welcome.html>.

The solicitation plans, specifications, proposal, and additional documents designated or incorporated by reference shall be available in HiePRO.

HiePRO OFFER DUE DATE AND TIME is November 16, 2026, at 2:00 p.m., Hawaii Standard Time (HST). **Bidders shall submit and upload the complete proposal to HiePRO prior to the offer due date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HiePRO. Bidders shall not include confidential and/or proprietary documents as part of their proposal. The record of each bidder and their respective proposal shall be open to public inspection. FAILURE TO UPLOAD THE PROPOSAL TO HiePRO SHALL BE GROUNDS FOR REJECTION.**

The scope of work consists of repairing deteriorated exterior concrete and concrete masonry unit surfaces of Holdroom F and Walkway EFF, as well as concrete repair for that respective adjacent area. The estimated cost of construction is between \$2,000,000.00 and \$3,000,000.00.

To be eligible for award, bidders shall possess a valid State of Hawaii General Engineering "A" license **at the time of bidding.**

The Hawaii Department of Transportation, Air and Water Transportation Facilities Division, 2016 GENERAL PROVISIONS FOR CONSTRUCTION PROJECTS, applicable to this project are available on the internet at: <http://hidot.hawaii.gov/administration/con/>.

A virtual pre-bid conference is scheduled for October 12, 2026, at 10:00 a.m., HST. Interested bidders shall contact Jake Shiraki, State Project Manager, directly at jake.l.shiraki@hawaii.gov, no later than two working days prior to the scheduled pre-bid conference to receive the meeting invitation. All prospective bidders and/or their respective representatives are encouraged to attend, however, attendance is not mandatory. All information presented at the pre-bid conference shall be provided for clarification and information only. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

A site visit for Kahului Airport will be scheduled for October 20, 2026, at 9:00 a.m., HST. Prospective bidders must contact the airport representative to indicate they will be planning to attend the site visit and coordinate the meeting place. It is the responsibility of the Contractor to understand the required scope of work. The work shall be performed and documented in accordance with these specifications.

All Request for Information (RFI) questions and Substitution Requests shall be submitted in HiePRO **no later than October 26, 2026, at 2:00 p.m., HST**. RFI questions received after the stated deadline shall not be addressed. Substitution Requests received after the stated deadline shall not be considered. Verbal RFI(s) shall not receive a response. All responses to RFI questions shall be provided for clarification and information only and issued by formal addendum. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

If there is a conflict between the solicitation and information stated in the pre-bid conference, pre-bid site visit, the meeting minutes, and/or the responses to RFI questions, the solicitation shall govern and control, unless as amended by formal addendum.

Apprenticeship Preference. A five percent bid adjustment for bidders that are party to apprenticeship agreements pursuant to HRS § 103-55.6 is applicable to this project.

Employment of State Residents on Construction Procurement Contracts. Compliance with HRS § 103B-3 is a requirement for this project whereby a minimum of 80 percent of the bidder's work force on this project shall consist of Hawaii residents.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of HRS § 11-355 which states that campaign contributions are prohibited from specified State or County government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

Protests. Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with HRS § 103D-701 and Hawaii Administrative Rules § 3-126.

Bidders are hereby notified that the Department of Transportation shall affirmatively ensure that contracts entered into pursuant to this advertisement are awarded to the lowest responsible bidder without discrimination on the basis of race, color, national origin, sex, age, disability, or any other protected status recognized under applicable State and federal law.

For additional information, contact Jake Shiraki, State Project Manager, by phone at (808) 838-8805, or by email at jake.l.shiraki@hawaii.gov.

The State reserves the right to reject any or all proposals and to waive any defects in said proposals in the best interest of the public.



CURT T. OTAGURO
Deputy Director of Transportation for Airports

HlePRO RELEASE DATE: October 2, 2026

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INSTRUCTIONS FOR CONTRACTOR'S LICENSING

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

SPECIAL PROVISIONS

SPECIAL PROVISIONS

The following additional amendments to the General Provisions are applicable to this project:

1.3 DEFINITIONS is amended as follows:

1. The following definition shall be deleted in its entirety and replaced with the following:

“Subcontractor – An individual, partnership, firm, corporation, or joint venture, or other legal entity, as licensed or required to be licensed under Chapter 444, Hawaii Revised Statutes, as amended, which enters into an agreement with the Contractor to perform a portion of the work.”

2. Add the following to 1.3 Definitions.

“HAWAII ePROCUREMENT SYSTEM (HlePRO) - The State of Hawaii eProcurement System for issuing solicitations, receiving proposals and responses, and issuing notices of award.”

2.7 REQUEST FOR SUBSTITUTION OF SPECIFIED MATERIALS AND EQUIPMENT BEFORE BID OPENING is amended as follows:

1. The last sentence in the first paragraph (line 147 to 152) shall be replaced with the following:

Where a bidder intends to use a material or equipment of an unspecified brand, make, or model, the bidder must submit a request to the Department for review and approval at the earliest date possible. As specified in the Notice to Bidders, all requests shall be posted as a question in HlePRO under the "Question and Answer" tab. Supporting documents for specific request shall be emailed to the Project Manager specified in the Notice to Bidders. Request must be posted in HlePRO and supporting documents received by the Project Manager no later than fourteen (14) calendar days before the bid opening date.

2. The first sentence in the second paragraph (line 154 to 156) shall be replaced with the following:

“It shall be the responsibility of the bidder to submit sufficient evidence based upon which a determination can be made by the Department that the alternate brand is a qualified equivalent.”

2.8 PREPARATION AND DELIVERY OF BID is amended as follows: Last Paragraph (line 189 to 192) shall be replaced with the following:

“Bidders shall submit and upload the complete proposal to HlePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. Original (wet ink, hard copy) proposal documents are not required to be

submitted.

FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.

If there is a conflict between the specification document and the HlePRO solicitation, the specifications shall govern and control, unless otherwise specified.”

2.11 BID SECURITY is amended by deleting (a) and replacing it with:

“(a) Unless directed otherwise in the invitation for bids, each bid shall be accompanied by bid security which is intended to protect the Department against the failure or refusal of a bidder to execute the contract for the work bid or to supply the required performance and payment bonds. Bid security shall be in an amount equal to at least five percent of the base bid and additive alternates. Bid security shall be in one of the following forms:

- (1) A deposit of legal tender;
- (2) A valid surety bid bond, underwritten by a company licensed to issue bonds in the State of Hawaii, in the form and composed, substantially, with the same language as provided herewith and signed by both parties.
- (3) A certificate of deposit; credit union share certificate; or cashier’s, treasurer’s, teller’s, or official check drawn by or a certified check accepted by a bank, savings institution, or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA) and payable at sight or unconditionally assigned to the Department. These instruments may be utilized only to a maximum of one hundred thousand dollars (\$100,000.00). If the required amount totals over one hundred thousand dollars (\$100,000.00), more than one instrument not exceeding one hundred thousand dollars (\$100,000.00) each and issued by different financial institutions shall be accepted.

If bidder elects options (1) or (3) above for its bid security, said bid security shall be in its original form and shall be submitted before the bid deadline to the Contract Office, Department of Transportation, Aliiaimoku Hale, 869 Punchbowl Street, Room 103, Honolulu, Hawaii 96813. Original surety bid bonds do not need to be submitted to the Contracts Office. Bidders are reminded that a copy of its surety bid bond shall be included with its bid submitted and uploaded to HlePRO.”

2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS is amended by deleting 2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS in its entirety and replacing with the following:

2.12 PRE-OPENING MODIFICATION OF WITHDRAWAL OF BIDS. Bids may be modified or withdrawn prior to the bid opening date and time. Withdrawal or revision of proposal shall be completed, and submitted and uploaded to HlePRO prior to the bid opening date and time.

2.14 PUBLIC OPENING OF BIDS is amended by deleting 2.14 PUBLIC OPENING OF BIDS in its entirety.

4.12 UTILITIES AND SERVICES is amended as follows:

Add the following after the last paragraph:

“(e) Repairs and Outages.

- (1) The Contractor shall have available on 24-hour call sufficient specialty contractors, such as electrical and plumbing contractors, to repair any damage to existing facilities that might occur as a result of construction operations regardless of when the damage might occur.
- (2) Outage: Written requests for power outage, communication changes, and water and sewer connection outages shall be submitted to the Engineer at least seven (7) days in advance or as specified in other sections of these specifications. Outages will be restricted to non-peak operational hours between midnight and 6:00 a.m.”

7.21 PUBLIC CONVENIENCE AND SAFETY - is hereby added to the General Provisions:

“It shall be especially noted by the Contractor that the area directly adjacent to the existing in use runways and taxiways, is an extremely hazardous area and that very strict controls will apply throughout the entire period required to complete all work within 500 feet from the edge of an in use runway and 180 feet from the edge of an in use taxiway.

The Contractor shall familiarize himself with the Airport Certification Manual available for review at the Airport Manager's Office and shall comply with its requirements.

The Contractor is responsible for the security of access points to the Airport Operational Area that are located within the limits of construction and will be fined \$1,000 per incident for any breach of security at these locations. All gates leading into the AOA shall be kept locked and if required to be open, the Contractor shall provide professional security guards to attend gates. The guards must be approved by the Director and shall be required to attend a training session conducted by the Airport Manager prior to gate assignment.”

8.8 LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE THE WORK OR PORTIONS OF THE WORK ON TIME: The General Provisions is hereby amended to include the following:

The schedule of liquidated damages provided in Section 8.8 of the General Provisions in these specifications shall be amended to include the following:

ONE HUNDRED FIFTY DOLLARS (\$150.00) per calendar day for failure to complete the work within the duration (calendar days) noted on Proposal Schedule page P-1.

8.20 LIMITATION OF OPERATIONS: is hereby added to the General Provisions:

“The following limitations shall be observed by the Contractor when operating within 75 feet from the edge of any taxiway.

General - The Contractor shall schedule his operations to minimize interference with the movement of aircraft or passengers as may be required by the Engineer. The Contractor shall be responsible to alert all of his personnel to the location of power and signal cables installed for the operation of the airport. The Contractor shall control his operations in a manner to preclude any possible damage to those cables. Utility companies shall be notified by the Contractor one week before commencement of work. The Contractor shall give notice to the Engineer in writing, at least 168 hours before operating within 75 feet from the edge of any taxiway and the Engineer will assure himself that the Airport Management personnel are notified in sufficient time to publish the warning (NOTAM). The Contractor shall immediately repair any damages to the existing perimeter fence to prevent inadvertent entry to the Airport Operation Area (AOA).

Work in Vicinity of Runways and Taxiways in Use - Under the terms of this contract, it is intended that work shall be completed without disturbing the paved surface of existing runways and taxiways, unless shown otherwise on the plans. Aircraft traffic shall not be interrupted. The Contractor shall schedule to work within 75 feet of the taxiway as directed by the Airport Management. No ruts, holes, or open trenches of 3 inches or more in depth and no objects or material 3 inches or more in height shall be permitted within the safety area when the airfield is in operation in conformance to Federal Aviation Regulation Part 139. The Contractor is also informed that Airport Zoning Regulations dictate that a 'clear zone' be maintained 500 feet on each side of an active runway, to be known as a hazardous area. The Contractor shall comply with all regulations governing ground operations within hazardous areas. The following FAA Advisory Circulars or later versions and FAA Regulations specify these requirements:

AC 150/5210-5C	Painting, Marking, and Lighting Vehicles Used on an Airport, dated August 2007
AC 150/5340-1J	Standards for Airport Markings
AC 150/5370-2E	Operational Safety on Airports During Construction, dated 1/17/03
FAA Regulations	Objects Affecting Navigable Airspace Part 77

The Contractor shall keep all personnel and equipment off the areas not specifically designated for work under this Contract. At all times when the Contractor's equipment is not in use, the equipment shall be moved outside the hazardous areas to an area designated by the Engineer. Under no condition shall equipment be parked or material stored within the hazardous areas.

Failure on the part of the Contractor to abide by the above will result in suspension of work.

Authority of Control Tower Personnel - With the exception of actual construction methods, the airport control tower personnel will have full authority to control the Contractor's movements within the existing taxiway. When required, the Contractor shall maintain a constant radio vigil within all work areas and in addition shall keep at least one flagman on duty with the radio man. When notified by the control tower to temporarily halt operations, it shall be the duty of the flagman, through the use of appropriate methods (lighted flares shall not be used under any circumstances), to notify all operators of equipment and other personnel to cease work and move men and

equipment off of hazardous areas.

Contractor shall provide, at his own expense, the necessary radio and equipment including a radio equipped mobile vehicle to maintain contact with control tower personnel at all times during job performance. A transceiver operating at a frequency designated by the Engineer to communicate with the Control Tower.

Marking of Hazardous Areas - The Engineer will designate areas that are hazardous for aircraft. The Contractor shall provide red blinker lights spaced not more than 50 feet apart around all hazardous areas and areas of work within 75 feet of any taxiway. Such systems shall be subject to approval by the Engineer. The Contractor shall have personnel on call 24 hours per day for the emergency maintenance of hazard markings.

The Contractor shall provide red flags not less than 20 inches square in addition to the red blinker lights. When danger flags are made of fabric, a wire stiffener shall be used to hold the flags in an extended position. Flags shall be so mounted that they do not produce a hazard. The red danger flags shall be spaced not more than 50 feet apart around all areas of work within 75 feet of any taxiway.

All systems proposed by the Contractor for lighting and barricading shall be submitted to the Engineer for review prior to installation. The Contractor shall install all flags, lighting and barricades as required by the Engineer. Such systems shall be subject to approval by the Engineer.

Storage of Equipment and Materials - At the end of each working shift, all of the Contractor's equipment shall be withdrawn to an area designated by the Engineer. The Contractor shall park all equipment in an orderly fashion and place a sufficient number of red flasher lights to identify these areas. Materials stored within the airport shall be so placed and the work shall, at all times, be so conducted as to cause no greater obstruction to the air and ground traffic than is considered necessary by the Engineer. No runways, taxiways or roadways shall be closed or opened, except by permission of the Engineer.

Blasting Operations - The Contractor shall notify the Engineer at least three (3) days before performing blasting operations as to the extent and timing of such operations, so that the Control Tower and other concerned parties can be informed.

Utilities - The Contractor shall provide for the protection of all utilities from damages in areas to be traversed by his vehicles and equipment. If required, buried cables and utility lines shall be protected by mounding earth over the cables or by any other method approved by the Engineer.

The Contractor shall notify representatives of the owner, agencies, and other affected organizations at least 48 hours prior to working in any area containing the facilities of these organizations.

Failure to notify the owning organization will prevent authorization to work in a specific area.

Archaeological Features - Any archaeological features such as petroglyphs, burial sites, and artifacts discovered or unearthed during the performance of the work shall immediately be brought to the attention of the Engineer and all work that would damage or destroy these features shall be discontinued. The Engineer will decide, after

proper investigation, to salvage or abandon such artifacts."

8.21 OPERATION OF CONTRACTOR'S MOTOR VEHICLE AND PERSONNEL IN RESTRICTED AIR OPERATIONS AND MOVEMENT AREAS is hereby added to the General Provisions:

"The Contractor shall conform with the all sections of the "State of Hawaii, Department of Transportation, Airports , Contractor's Training Guide" pertaining to access and operation in the Airport Operation Area (AOA) hereinafter described as follows:

A. Motor Vehicles in Airport Operation Area

For safety reasons, the operation of motor vehicles in the AOA must conform with all applicable State Airport rules and regulations."

B. Motor Vehicle Access Permit

Each motor vehicle operated in the AOA is required to:

1. Meet all State licensing registration and safety requirements and be specifically licensed for operation in the AOA.
2. Meet all insurance requirements.
3. Be restricted to operation by those persons qualified to drive the vehicle and in possession of a current Ramp Driver's License and applicable Motor Vehicle Operator's License.

C. The operators of motor vehicles in the AOA shall be responsible for meeting the following insurance requirements.

1. Licensed Vehicles

As a condition for authorization to enter the AOA, the Contractor shall provide evidence of vehicle liability insurance in the form of a Certificate of Insurance issued by an authorized insurance carrier. Automobile Liability and general Liability (combined single limit, Bodily Injury and Property Damage, per occurrence) shall be required in the applicable minimum limits specified below:

a. Daniel K. Inouye International Airport

(1) Standard AOA clearance..... \$5,000,000

(2) Limited AOA clearance..... \$1,000,000

Limited AOA clearance is defined as operations restricted to Diamond head and Ewa Concourses second level roadways and connecting third level main terminal roadway only, with entry and exit via Security Access Point "C" (Primary) and Access Point "A" (Secondary)

b. Other Airports

Standard AOA clearance.....\$1,000,000

Standard AOA clearance is defined as any portion of a public Airport from which the public is restricted by fences or appropriate signs and not leased or demised to anyone for exclusive use and shall include runways, taxiways, all ramp and apron areas, aircraft parking and storage areas, fuel storage areas, maintenance areas, and any other area of a public Airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft or used for embarkation or debarkation of passengers.

2. Unlicensed Vehicles

Airport Liability (or General Liability) shall be required in the applicable minimum limits specified below:

a. Daniel K. Inouye International Airport, Kahului Airport and Kona International Airport at Keahole

AOA clearance..... \$5,000,000

b. All other Airports

AOA clearance..... \$1,000,000

3. Specifically name the State of Hawaii as additionally insured.
4. Indicate that the Airport Engineer will be provided with a 30-day written prior notice of policy cancellation or material change in coverage or conditions.

D. Operator's Permit

1. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Airport Motor Vehicle operator's permit issued by the State of Hawaii, Department of Transportation, Airports .
2. Operator's permits will only be issued to persons who apply through the Airport District Security Office and pass a written exam covering those portions of the Airport Rules and Regulation relating to the operation of vehicles in Airport Operations Areas.

E. Authorized Vehicles

1. Only vehicles considered operationally safe and necessary for the performance of this contract may be allowed to operate in the AOA.
2. All motor vehicles must be painted in such a manner so as to be easily identifiable and must carry the Contractor's name on each side. These signs may be of a temporary nature applied to the side windows or doors.

The lettering shall be in bold characters of a minimum of four (4) inches in height and one and one-half (1-1/2) inches in widths, the height of logos should be a minimum of six (6) inches.

3. The Contractor's operations on, over, across, and/or immediately

- adjacent to any runway and/or taxiway at a towered airport shall require the use of two-way radio communication. The Contractor shall obtain the necessary equipment at his own expense.
4. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Motor Vehicle Operator's Permit issued by the Airport Manager.
 - a. The Motor Vehicle Operator's Permit will be issued only to persons who apply through the Airport Security Section and pass a written exam covering those portions of the Airport Rules and Regulations relating to the operation of vehicles in the AOA.
 - b. Permits issued may be suspended or revoked for cause at any time by the Airports .

F. Airport Operation Area Construction Pass

1. Issuance of Airport Operation Area (AOA) Construction Passes shall be limited to contractors, subcontractors, companies, organizations, individuals engaged in authorized and approved construction activity which requires a continuing need for entry into the AOA or Airfield Movement Areas. Request letters for such passes must be made to the Airport District Manager's Office in accordance with the Contractors Training Guide or applicable District requirements.
2. As a condition for security area clearance, applicants must comply with Transportation Security Regulation 1542 which requires a ten-year background Criminal History Records Check for those individuals employed under this contract.

G. Access to Movement Areas

1. Movement areas shall mean all of the runways and taxiways of the Airport which are utilized for taxiing, takeoff, and landing of aircraft.
 - a. Any vehicle which requires access to the movement area shall be equipped with operational radio equipment capable of positive two-way contact with Tower/Ground Control.
 - b. Operators of vehicles in movement areas must possess knowledge and familiarity with restricted and airfield movement areas, operational rules, regulations, and procedures, or be under direct escort by individuals meeting all of the above requirements.
2. Vehicle Operations on Movement Areas
 - a. No vehicle shall proceed across any runway unless specifically cleared by Tower/Ground Control.
 - b. The operator of a vehicle in the movement area shall not leave his vehicle unless continuous radio contact is maintained with the Tower/ Ground Control while he is away from his vehicle.
 - c. Any vehicle proceeding onto the movement area between the hours of sunset and sunrise shall be equipped with an overhead flashing light which is visible for one (1) mile, unless such vehicle

is being escorted by another vehicle so equipped.

- d. All vehicles operated on the movement area between sunrise and sunset except those being escorted, shall operate an overhead amber or red flashing beacon visible for at least one (1) mile; or display a flag at least three (3) feet square with orange and white checkered squares of not less than one (1) foot on each side.

H. Runway and Taxiway Closure

1. Requests for runway or taxiway closures, or for any work which affect operational conditions at the airport must be made in writing through the Airport Engineering Branch.
2. Temporarily closed runways require placement of yellow "X" markings (constructed of material such as fabric or plywood or other acceptable material) on top of the runway identification numerals at both ends of the closed runway.
3. Taxiway closures require placement of barricades with alternate orange and white markings at each end of the closed taxiway segment. Barricades must be supplemented with flashing red lights. The intensity of the lights and spacing for barricades, and lights must adequately define and delineate the hazardous area.

I. Gate Guards Furnished by Contractors

1. If a contractor is permitted by the airport to maintain operational control of an AOA Access Gate, entry through such gate shall be controlled by the posting of a gate guard.
 - a. Written instruction will be provided, outlining the guard's duties to enforce those requirements and provisions prescribed by the airport's security program to include all personnel and vehicle entry and access requirements.
 - b. Procedures will be established to identify the actions which will be undertaken by the guard in calling for assistance.
 - c. An approved emergency communications procedure will be established.

J. Compliance

1. The contractor shall comply with all regulations and rules governing the Air Operations Areas during construction, as specified in the following or later versions:
 - a. Hawaii Revised Statutes, Title 19, Administrative Rules for Public Airports.
 - b. Federal Aviation Administration Advisory Circular AC 150/5340 1J
 - c. Marking of Paved Areas on Airport; AC 150/5370-2E, Operational Safety on Airports During Constructions.

K. Enforcement Authorization

Act 21, Section 1, Section 261-17(a), HRS; Federal Aviation Administration Regulations, Part 139, Part 107.

L. Right of Rejection or Revocation

The State of Hawaii, Airports , reserves the right to withhold, deny or revoke any airport security clearance, licenses or permits to any individual or organization who fails to meet the prescribed or required access area clearance criteria to include background investigation information, or fails to observe or comply with established rules, regulations, and directives.

It should be clearly understood that such denial or revocation is based solely on airport security or safety considerations and does not in any way constitute a determination by the State with regard to private employment by any individual or organization."

- END OF SECTION -

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS**

**PART I - GENERAL PROVISIONS FOR CONSTRUCTION PROJECT
(NOT PHYSICALLY INCLUDED)**

The General Provisions are available at

<http://hidot.hawaii.gov/administration/con/>

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

PART II - TECHNICAL PROVISIONS

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01010 - DESCRIPTION OF WORK

PART I - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified this Section.

1.02 SUMMARY

A. Section Includes:

1. Location of the work
2. Hours of work
3. Safety
4. Operation of airport facilities during construction
5. Construction stakes, lines and grades
6. Special project requirements

1.03 VEHICLE PARKING

Parking passes may be purchased at a monthly rate of \$175.00 plus a one-time fee of \$25.00 for parking access card. These passes are subject to approval by the Airport Manager and availability of parking spaces. All costs associated with obtaining parking passes shall be the responsibility of the Contractor.

1.04 PROVISIONS FOR FIELD OFFICE/STORAGE SPACE

Pending the availability of space on airport property, the State will issue Revocable Permit(s) to the Contractor for the use of the space, assessed at a monthly fee of \$25 for each Revocable Permit issued. The space(s) may be used for a field office, staging of materials and equipment, vehicle parking or other uses subject to the approval of the State. All spaces shall be subject to the requirements of Section 01561 - CONSTRUCTION SITE POLLUTION CONTROL.

Since space on airport property is extremely limited, the State does not guarantee that space(s) provided to the Contractor will be in close proximity to the project site. The State will make every effort to provide the Contractor with space on airport property, however, should the State determine that no space is available for such use(s), the responsibility shall then be on the Contractor to find space outside of airport property.

1.05 LOCATION OF THE WORK

- A. The work to be performed under this contract is located at Kahului Airport, Kahului, Maui, Hawaii.
- B. Conditions:
 - 1. The Main Terminal and airport roadways shall remain operational at all times. Any damages to existing areas caused by the Contractor shall be repaired by the Contractor at no cost to the State.
 - 2. Upon execution of the contract, the Contractor, at their cost, shall obtain all permits required for this project.

1.06 HOURS OF WORK

- A. Work can be performed at the construction site at any time over a 24-hour period without considerable disruption to airport operations or other adjacent tenants. The Contractor shall coordinate their schedule with the Engineer if rescheduling of work or intermittent work is required, such work shall be performed at no extra cost to the State. If the Contractor elects to work overtime, compensation for State employees and for construction management consultant as authorized by the State shall be the Contractor's obligation to pay in accordance with Section 7.6 – "Overtime and Night Payment for State Inspection Services" of the General Provisions of Construction Projects (2016).
- B. Contractor shall clean work areas at the end of each working shift. Rubbish, loose materials, etc. shall be disposed of daily. **Tools and equipment shall not be left unattended during work hours.** This includes tools left in unlocked vehicles, in the bed of pickup trucks, or in unlocked job sites. TSA citations may result in fines in excess of \$13,000 per violation and the confiscation of AOA badges. Materials shall be safely secured and stored in an area designated by the Airport Manager.

1.07 SAFETY

- A. The Contractor shall take the necessary precautions to protect his workers and other personnel from injuries. The rules and regulations promulgated by the Occupational Safety and Health Acts are applicable and made a part of these specifications.
- B. Barricades and warning signs shall be erected by the Contractor in the work area to properly protect all personnel in the area.
- C. During the progress of the work debris, empty crates, waste, material drippings, etc., shall be removed by the Contractor at the end of each workday, and the work area shall be left clean and orderly.

- D. Based on the impacts of the project to airport operations, participation and attendance at meetings with various airport stakeholders may be required to fulfill the project's adherence to Safety Management System (SMS) requirements.
- E. As applicable, the contractor will be required to file a Safety Plan Compliance Document (SPCD) with the Federal Aviation Administration's (FAA) OE/AAA website (<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>).

1.08 OPERATION OF AIRPORT FACILITIES DURING CONSTRUCTION

- A. The Contractor shall coordinate the phases of work under this contract with the Engineer to permit the continuing operation of existing Airport facilities and to minimize disruption to pedestrian and vehicular traffic.
- B. Utility Maintenance: During the construction of this contract, existing utility services serving occupied or used facilities shall not be disrupted except where authorized in writing by authorities having jurisdiction. Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to the Engineer. Damages to the existing utility facilities by the Contractor will be repaired at the Contractors expense.
- C. Outages for water, power, communications, air conditioning or any other utility, if necessary, shall be kept to a minimum and scheduled for off-peak hours, generally from 12:00 a.m. to 6:00 a.m. The Contractor shall submit written requests to the Engineer for such outages no later than fourteen (14) calendar days in advance. The request shall include a description of work and the duration of the outage. The Contractor shall not proceed with such outages until written approval is received from the State.

1.09 CONSTRUCTION STAKES, LINES AND GRADES

- A. The Contractor shall perform all construction layout and reference staking necessary for the proper control and satisfactory completion of all structures, grading, paving, drainage, sewer, water, and all other appurtenances required for the completion of the work.
- B. Existing horizontal and vertical survey control points for the project are shown on the plans. The Contractor shall verify the location of all control points prior to the start of construction.
- C. The Department will not be responsible for delays in setting stakes and marks.
- D. All control points and stakes or marks which the Engineer may set shall be preserved by the Contractor. If such control points, stakes or marks are destroyed or disturbed by the Contractor, the cost of replacing such stakes or marks will be charged against the Contractor and deducted from payments due the Contractor.

- E. The Contractor shall be responsible for the placement and preservation of adequate ties to all control points whether established by the Contractor or by the Engineer.
- F. All original, additional or replacement stakes, marks, references and batter-boards which may be required for the construction operations, shall be furnished, set and properly referenced by the Contractor. The Contractor shall be solely and completely responsible for the accuracy of the line and grade of all features of the work. Any errors or apparent discrepancies found in previous surveys, the plans and specifications shall be called to the Engineer's attention by the Contractor for correction or interpretation prior to proceeding with the work.
- G. Before construction is started on any structure which is referenced to an existing structure or topographical feature, the Contractor shall check the pertinent locations and grades of the existing structures or topographical features to determine whether the locations and grades shown on the plans are correct.
- H. All construction staking shall be performed by qualified personnel under the direct supervision of a person with an engineering background who is experienced in the direction of such work and is acceptable to the Engineer.
- I. All stakes and markers used for control staking shall be of the same quality as used by the Department for this purpose. For slope limits, pavement edges, gutter lines, et cetera, where so called "working" stakes are commonly used, stakes of different quality may be acceptable.
- J. The Department may check the Contractor's control of the work at any times as the work progresses. The Contractor will be informed of the results of these checks, but the Department by doing so will in no way relieve the Contractor of his responsibility for the accuracy of the layout work. The Contractor shall at his expense correct or replace any deficient or inaccurate layout and construction work. If, as a result of these deficiencies or inaccuracies, the Department is required to make further studies, redesign, or both, all expenses incurred by the Department due to such deficiencies or inaccuracies, will be deducted from any payments due the Contractor.
- K. The Contractor shall furnish all necessary personnel, engineering equipment and supplies, materials, and transportation incidental to the accurate and satisfactory completion of this work.

Unless otherwise provided, all requirements imposed by this section and performed by the Contractor shall be considered incidental to the various contract items and not separate or additional payment will be made thereof.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this Section will no be measured for payment but will be paid for at the contract Lump Sum Price.

<u>Item No.</u>	<u>Description</u>	<u>Unit Price</u>
01010.1	Construction Work	Lump Sum

END OF SECTION

SECTION 01014 – WORK SEQUENCE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions, and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 TENANTS ADJACENT TO CONSTRUCTION AREA

- A. The User Agencies and their operations will be adjacent to the construction area throughout the construction period. The Contractor shall minimize inconvenience to them and their clientele and shall continue to provide the following for these occupants:
 - 1. Continuity of utility services.
 - 2. Means of ingress and egress.
 - 3. All measures to ensure their safety and health.
 - 4. All measures to ensure the required security in the secure areas.
- B. Official communications and coordination with the User Agencies and operations shall be made through the State Engineer.

1.03 SEQUENCE OF WORK

- A. Work under the entire project shall be completed within specified calendar days from the date indicated in the Notice to Proceed from the State.
- B. Work shall proceed in tasks of construction to facilitate and ensure the continued operations and functions of the existing terminal facilities. Work to be accomplished within each task of construction is described and the areas affected are shown on drawings.

Each task of the work shall be completed within the specified number of calendar days. Specific language relating to the sequence of work is defined below.

- 1. Scheduled Start Day: The day designated as the beginning of a particular task; the number listed is the number of calendar days from which work for that particular task is to be completed.
- 2. Completion Day: The day designated as the end of a given task with completion and acceptance of work as assigned and shown in the drawings.
- 3. The total number of calendar days for all stages of work shall equal the number of calendar days established for the entire project.

1.04 OPERATION OF AIRPORT FACILITIES DURING CONSTRUCTION

- A. The Contractor shall coordinate all tasks of work under this contract with the Engineer to permit the continuing operation of existing airport facilities.

- B. The Contractor shall take precaution to protect people and property from injury and damage. Construction, including barricades as specified in Section 01533 - BARRICADES shall be sequenced to minimize the duration of disruption and appropriate signing be provided to aid the public and airport pedestrian and vehicular traffic around his work areas.
- C. The Contractor shall limit the delivery of materials and equipment and hauling of debris material during non-peak Airport operational hours. Contractor shall obtain prior approval of planned schedule of delivery of material and hauling of debris from the State Engineer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.02 GENERAL REQUIREMENTS

- A. This Section includes administrative and procedural requirements governing allowances. Certain materials, equipment, and services are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials, equipment, and services to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include contingency allowances.
- C. Related Sections include Divisions 1 through 16 Sections for items of Work covered by allowances.

1.03 SUBMITTALS

Submit in accordance with Section 01300 - SUBMITTALS.

- 1. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- 2. Submit invoices or delivery slips to show actual quantities of materials and equipment delivered to the site for use in fulfillment of each allowance.
- 3. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.04 COORDINATION

Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.05 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by State Engineer for State's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products, equipment, and services ordered by the State under the contingency allowance are included in the allowance and are not part of the Contract Lump Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to State by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION

Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.02 PREPARATION

Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.03 SCHEDULE OF ALLOWANCES

See Proposal Schedule for list of allowance and its respective specification sections.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 PROJECT DOCUMENTATION

The contract will not be considered complete until required submittals have been received and accepted by the State.

At the discretion of the Project Manager, the number of copies to be submitted may differ from that specified in this Section.

1.03 DETAILED CONSTRUCTION SCHEDULE

- A. The Contractor shall submit a detailed construction schedule to the State Engineer for review, no later than 30 calendar days after award of the contract. The detailed construction schedule shall be based on a detailed critical path analysis of construction activities and sequence of operations needed for the orderly performance and completion of any separable parts of any work and all work in accordance with the contract. The schedule shall be Critical Path Method (CPM) type in the form of an arrow diagram and activity listing or comprehensive bar graph. The network diagram shall show in detail and in orderly sequence all activities on a time scale, their descriptions, durations and dependencies, necessary and required to complete all work and any separable parts thereof. The schedule shall show in detail the following information for each activity:
1. Identification by code numbers and description;
 2. Duration;
 3. Craft and Equipment;
 4. Earliest start and finish dates;
 5. Latest start and finish dates;
 6. Total and free float time; and
 7. Highlighted Critical Path
- B. The construction schedule shall be complete in all respects, covering in addition to activities at the site of work, off-site activities such as design, fabrication, and procurement of equipment; the scheduled delivery dates of such equipment; submittal and approval of shop drawings and samples; ordering and delivery of materials; inspections; and testing. The schedule shall also include a manpower forecast by crafts. The detailed construction schedule shall be supplemented by a three-week schedule prepared by the Contractor and submitted to the State Engineer on a weekly basis. The Contractor shall promptly inform the State Engineer of any proposed change in

the schedule and shall furnish the State Engineer with a revised schedule and cash flow diagram within 15 calendar days after approval of such change.

The schedule shall be kept up to date, taking into account the actual progress of work and shall be updated, if necessary, every 30 calendar days. The updated schedule shall, as determined by the State Engineer, be sufficient to meet the requirements for the completion of the separable parts of work and the entire projects as set forth in the contract.

Upon commencing work, the Contractor shall submit at the start of each week to the State Engineer for review, a detailed three (3) week construction schedule.

- C. If at any time during the progress of the Work, the Contractor's actual progress appears to the State Engineer to be inadequate to meet the requirements of the contract, the State Engineer will notify the Contractor of such imminent or actual noncompliance with the contract. The Contractor shall thereupon take such steps as may be necessary to improve his progress and the State Engineer may require an increase in the labor force, the number of shifts, and/or overtime operations, days of work and/or the amount of construction plants all without additional cost to the State. Neither such notice by the State Engineer nor the State Engineer's failure to issue such notice shall relieve the Contractor from his obligation to achieve the quality of work and rate of progress required by the contract. Failure of the Contractor to comply with instructions of the State Engineer under these provisions may be grounds for determination by the State that the Contractor is not prosecuting work with such diligence as will assure completion within the times specified. Upon such determination, the State may employ labor and equipment and charge the Contractor for the cost thereof, including depreciation for plant and equipment or may terminate the Contractor's right to proceed with the performance of the contract, or any separable part thereof, in accordance with the applicable provisions of the contract.
- D. The Contractor shall submit to the State Engineer one (1) reproducible and three (3) prints of the detailed construction schedule and of each revised schedule submitted thereafter.

1.04 SCHEDULE OF VALUES

- A. The Contractor shall submit the Schedule of Values to the State Engineer for review, no later than 30 calendar days after award of the Contract.
- B. Format and Content: Use Proposal Schedule and/or the Project Specifications table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section. Provide a breakdown of the contract sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principle work or subcontract amounts down into several smaller identifiable items of work.

- C. Identification: Include the following Project identification on the schedule of values:
1. Project name and location
 2. Project number
 3. Contractor's name and address
 4. Contract No.
 5. Date of submittal
- D. Arrange the Schedule of Values in tabular form with separate columns to indicate the following items listed:
1. Related Specification Section or Division
 2. Description of work
 3. Dollar value and percent complete
- E. Correlate line items in the Schedule of Values with other required administrative schedules and forms including;
1. Construction Schedule
 2. Application for Payment forms including continuation sheets
 3. List of Subcontractors
 4. List of principle suppliers and fabricators
 5. Schedule of submittals
- F. Round amount to nearest whole dollar; the total shall equal the contract sum.
- G. Provide a separate line item in the Schedule of Values for each part of the work where Applications for Payment may include materials or equipment, purchased, fabricated or stored, but not yet installed.
- H. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment or when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.05 OTHER SUBMITTALS REQUIRED BEFORE CONSTRUCTION

The Contractor shall submit the following items prior to or at the pre-construction meeting or unless otherwise noted:

- A. Name, residence phone number, addresses and scope of authority for the following persons:
1. Superintendent
 2. Contractor's authorized representative to sign documents
 3. Two (2) additional persons who can be contacted during non-working hours for emergencies.
 4. Field Office location and phone numbers (cellular, pager, fax, etc.)
- B. Name of Safety Officer

- C. Notice of Materials to be furnished
- D. Three (3) copies each of Certificates of Insurance. The State of Hawaii, Department of Transportation, Airports Division shall be named as additionally insured. The project number and project title shall be referenced in the Description of Operations/Locations/Vehicles. If canceled, 30 days written notice to the State of Hawaii must be given. If certificates are not correct, work cannot proceed.
- E. Three (3) copies each Insurance and Tax Rates.
- F. List of apprentices who will be working on the project supported with the Statement of Apprenticeship or copy of the Apprenticeship Agreements registered with the State Board, for each apprentice.
- G. List of equipment to be used on the job. Designate maximum working height and capacity of equipment involved and their respective rental rates.
- H. Three (3) copies of an expenditure (cash flow) plan consisting of an anticipated work completion graph plotting contract time and gross payment anticipated.

1.06 SHOP DRAWINGS, SAMPLES, CATALOG CUTS, AND CERTIFICATES

- A. Submittal Schedule: Prior to the submission of any shop drawings or submittals, the Contractor shall submit to the State Engineer for review, a submittal schedule. The schedule shall identify the subject matter of each submittal, the corresponding specification section number and the proposed date of submission. During the progress of work, the Contractor shall revise and resubmit the submittal schedule as directed by the State Engineer.
- B. The Contractor shall submit for review to the State Engineer, or to a representative designated by the State Engineer, six (6) copies of all shop drawings, samples, catalog cuts and certificates. Three (3) copies will be returned to the Contractor with information of review action. The Contractor shall submit additional quantities for their subcontractor's or supplier's use. Each shop drawing, certificate of compliance, sample, and equipment list shall be checked and certified correct by the Contractor and shall be identified with the applicable information specified hereinafter under "Submittal Identification."

Items are to be reviewed prior to commencing fabrication or delivery of material to the job site.
- C. Each copy of the drawings, certificates, catalog cuts, and lists reviewed by the State Engineer will be stamped "REVIEW ACTION" with the appropriate action noted therein. The review of the State Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Acceptance of such drawings will not relieve the Contractor the responsibility of conforming to the contract drawings and specifications or for any error or omission which may exist as the Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work. Each shop drawing submitted

for review shall have, in the lower right-hand corner just above title, a white space 4" x 4" in which the State Engineer can place the stamp and indicate action taken. The Contractor shall also inform their subcontractors to provide this space in their preparation of shop drawings.

1.07 MAINTENANCE DATA AND OPERATING INSTRUCTIONS

Six (6) copies of maintenance data and operating instructions shall be submitted by the Contractor at the conclusion of the equipment installation. The manuals shall be assembled in one or more binders, each with a title page, typed table of contents, and heavy section dividers with numbered plastic index tabs. The binders shall be a minimum of 2 inches thick, three ring, "D slant" with hard covers. All data shall be punched for binding and composition and printing shall be arranged so that punching does not obliterate any data. The project number, project title, and Airport shall be inserted in the front and backbone binder cover.

The Contractor shall submit a draft to the State Engineer for review prior to the submission of the final copies.

The manual shall include separate sections describing each equipment. Provide a general description of the equipment, instructions for operation, maintenance, recommended inspection points and periods for inspection, testing, adjustments, calibration procedures with illustrations, wiring diagrams, trouble shooting situations and solutions, and repair methods in a practical, complete, and comprehensive manner.

For each equipment, include information on detailed parts listings (part numbers and costs) with the manufacturer's name, address, contact person, e-mail address and phone/fax numbers. Provide the contact name, address, e-mail address and phone/fax numbers of the distributor in the State of Hawaii for each equipment.

Include a separate section on warranty information on all products and equipment. Provide this information in a tabular format with a listing on all products and equipments with warranty start and completion dates for each item.

Include separate sections on all approved submittals, test reports, certifications, etc.

All information shall be arranged in a logical, orderly sequence. Manuals submitted by the manufacturer will not be accepted.

1.08 TEST REPORTS

Six copies of test reports for any material used in this Contract shall be submitted when specified or required by the State Engineer.

1.09 SUBMITTAL IDENTIFICATION

- A. To avoid rejection and to clarify each submittal, the General Contractor shall have a rubber stamp made up in the following format:

B. _____
General Contractor's Name

PROJECT TITLE: _____
AIRPORT: _____
STATE PROJECT NO: _____
AIP PROJECT NO: _____
THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL
CONTRACTOR AND IS CERTIFIED CORRECT AND IN
COMPLIANCE WITH THE CONTRACT DRAWINGS AND
SPECIFICATIONS.

ITEM NO. _____

SUBMITTAL NUMBER _____
DATE RECEIVED _____
SPECIFICATION SECTION # _____
SPECIFICATION PARAGRAPH # _____
DRAWING NUMBER _____
SUBCONTRACTOR NAME _____
SUPPLIER NAME _____
MANUFACTURER NAME _____

CERTIFIED BY _____ (Contractor's Signature, Date)
(Contractor's Name and Title)

- C. This stamp "filled in" should appear on each reproducible shop drawing, on the cover sheet of copies of test and mill reports, certificates of compliance, catalog cuts, brochures, etc. The stamp should be placed on a heavy stock paper merchandise (approximately 3" x 6") and one tag tied to each sample submitted for approval. The tag on the samples should state what the sample is, so that if the tag is accidentally separated from the sample, they can be matched up again. The back of this tag will be used by the State Engineer for receipt, approval, and log stamp for any comments that relates to the sample.
- D. Submission Number: Each submission is to be sequentially numbered in the space provided in the Contractor's stamp. Correspondence and transmittal will refer to this number.
- E. The Contractor shall ensure that all submittals, including shop drawings, are complete and in conformance to the requirements of the Contract specifications prior to submission to the State for review and acceptance. Incomplete submittals will not be processed by the State and returned to the Contractor for correction. Any cost impacts and delays in the Project schedule as a result of incomplete submittals shall be the responsibility of the Contractor.

1.10 AS-BUILT DRAWINGS

As-built drawings shall conform to the requirements of Section 5.8 - "Coordination Between the Contractor and the State" of the General Provisions for Construction Projects (2016), and the following requirements:

The Contractor shall maintain on the job site a set of full-size contract drawings, marking them in red to show all variations between the construction actually provided and that indicated or specified in the contract documents, including buried or concealed construction. (Section 5.8 (a) Drawings and Special Provisions of the General Provisions for Construction Projects.)

Where a choice of material or method is permitted herein or where variations in scope of character of work from that of the original contract or authorized, the drawings shall be marked to define the construction actually provided. Where equipment installation is involved, the size, manufacturer's name, model number, power input or output characteristics as applicable shall be shown on the as-built drawings.

The representation of such changes shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as necessary to clearly portray the as-built construction.

The drawings shall be maintained and updated on a daily basis. The Contractor shall stamp, sign, and date each sheet with the following stamp:

AS-BUILT DRAWINGS/SPECIFICATIONS

This certifies that the dimensions and details shown on this sheet reflect the dimensions and details, and specifications as constructed in the field.

CONTRACTOR'S NAME

Signature

Date

Monthly and final payments to the Contractor shall be subject to prior approval of the drawings. On completion of the work, both sets of marked-up drawings shall be delivered to the State Engineer and shall be subject to approval before acceptance.

1.11 GUARANTEES

Guarantee periods shall start at time of acceptance in writing by the State.

All guarantees and warranties shall be made out to the "State of Hawaii." Supplier and subcontractor guarantees shall be co-signed by the Contractor.

The Contractor is solely responsible for coincidence or non-coincidence of factory warranties or equipment guarantees, and the Contractor's own warranties and guarantees as required by the contract. The Contractor is solely responsible for scheduling and coordinating the installation of equipment and materials so as to take maximum advantage of factory warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01301 – CONTRACTOR'S CONSTRUCTION SCHEDULE AND REPORTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 SUMMARY

- A. It is expressly understood and agreed that the rate of progress and the time of completion of the Work are of the essence for this Contract. The Work shall be executed with such progress as required to prevent any delay to this contract and to other Contractors working on other contracts at the site. This includes the Contract milestone dates and constraints and the general completion of the Work of the Contract.
- B. The Work specified in this section includes the preparation and submittal of a Construction Progress Schedule and schedule updates and revisions to the Construction Progress Schedule.
- C. The Contractor shall prepare and submit a Baseline Construction Progress Schedule in accordance with the requirements of this section. By preparing and submitting the Baseline Construction Schedule and monthly Schedule Updates, the Contractor represents that it can and intends to safely execute the contracted Work and all portions thereof including all activities of Subcontractors, equipment vendors, and suppliers and including submittals and re-submittals within the specified times and constraints. The Contractor also represents that the Bid price covers all costs associated with the execution of the Work in accordance with the Construction Schedule and Contract Documents.

1.03 PURPOSE OF THE SCHEDULE

- A. This section specifies requirements and procedures for the Contractor to prepare construction schedules, cost loaded schedule, resource loaded schedule, cash flow projections, manpower projection, and cost and schedule reports. The purpose of the schedules and reports shall be to:
 - 1. Ensure adequate planning and timely execution of the work by the Contractor;
 - 2. Establish a baseline Contract schedule which subsequent monthly schedule updates will be compared against to determine overall progress and performance towards satisfactory completion of the Project.
 - 3. Facilitate coordination and interfacing of the Contractor's work with others as needed;
 - 4. Assist the State Engineer in monitoring progress;
 - 5. Establish the amount of the monthly progress payment to be made to the Contractor;

6. Establish the amount of daily manpower required to complete the Project within the Contract duration;
 7. Evaluate proposed changes to the Contract and subsequent impacts to the construction schedule;
 8. Effectively determine impacts of time extensions and change order costs of this Contract to overall Project completion.
- B. The Contractor shall be required to provide and maintain at a minimum the following:
1. Monthly Requirement:
 - a. Construction schedule
 - b. Schedule of values for progress payment application
 - c. Cash flow projection
 - d. Manpower projection
 - e. Monthly status report (Narrative)

1.04 DEFINITIONS

- A. Baseline Construction Progress Schedule: The accepted baseline schedule for the construction Contract, demonstrating the planned activities, activity costs, resources and activity durations as the Project was bid.
- B. Cash Flow: For construction costs, reflects scheduled expenditures based on activity cost loading. This is the anticipated Contractor billings (gross) before the withholding of retention and is estimated by the Contractor.
- C. Cost Loaded Schedule: Allocating bid estimate cost to each schedule activity which forms the basis for anticipated Contractor billings (gross) before the withholding of retention and is estimated by the Contractor.
- D. Early Finish: The earliest a schedule activity is expected to finish, based on its relationship (logic) to other activities in the project.
- E. Early Start: The earliest a schedule activity is expected to start, based on its relationship (logic) to other activities in the project.
- F. Late Finish: The latest a schedule activity can finish, based on its relationship (logic) to other activities on the project, and still permit the project to be completed on time.
- G. Late Start: The latest a schedule activity can start, based on its relationship (logic) to other activities on the project, and still permit the project to be completed on time.
- H. Resource Loaded Schedule: A report that identifies by activity all direct field labor to perform the Work.
- I. Original Duration: The amount of time, in calendar days, an activity is expected to take to complete at the beginning of a project.

- J. Total Float: The number of days by which a part of the Work in the construction schedule may be delayed from its early start/finish dates without necessarily extending the contract completion date.
- K. Work Activity: An activity which requires time and resources to complete and should be performed before the Contract is considered complete.
- L. Critical Path: A continuous sequence of schedule network activities with the least amount of total float ending at a contract milestone.
- M. Longest Critical Path: A continuous sequence of schedule network activities that begins with notice to proceed milestone and ends at the project completion milestone.
- N. Milestone: A significant schedule event identified in the contract as a "milestone".
- O. Critical Path Method (CPM): Schedule development that starts with a proper plan sequenced from beginning to end, followed by time driven forward and backward passes to establish (1) Critical Path and (2) Float for all other paths.

1.05 SUBMITTALS

- A. Work Breakdown Structure [WBS] and Activity Coding Plan
- B. Baseline Construction Progress Schedule
- C. Cost and Resource Loaded Schedule
- D. Monthly Updated Schedule Reports, including Narrative

1.06 QUALIFICATIONS

The Contractor shall employ or retain the services of a Project Scheduler who shall have a minimum of ten (10) years verifiable experience in construction work sequencing, productivity, and scheduling as well as preparing and maintaining detailed construction schedules using the most current version of Primavera P6. Within seven (7) calendar days after Administrative Notice to Proceed, the Contractor shall submit the Project Scheduler's resume to the State Engineer. The State Engineer reserves the right to reject the proposed scheduler based on the lack of qualifications. The Contractor's scheduler shall attend all meetings pertaining to scheduling of the Work. This person, along with the Contractor's management team, is expected to work closely with the State Engineer to deliver acceptable products outlined in this section and comply with the Reports requirements of this section.

1.07 BASELINE CONSTRUCTION PROGRESS SCHEDULE REQUIREMENTS

- A. The Critical Path Method (CPM) type construction schedule will be used to monitor job progress. The Contractor shall be responsible for providing all information concerning the sequencing, logic, and duration of all activities as well

as providing the initial CPM logic network (in electronic and paper form) diagram and tabular report data.

- B. The Contractor shall use Primavera P6 latest version, and a hardware system commensurate with the size of the project. The system shall be capable of handling, processing, printing, and plotting all data required to satisfy the requirements of this section. All electronic files submitted to the State Engineer shall be compatible with Primavera P6 latest version.
- C. Within fourteen (14) days after Administrative Notice to Proceed, the State Engineer shall schedule and conduct a preconstruction scheduling conference to commence development of the required construction schedule. At the meeting, the requirements of this section will be reviewed with the Contractor, the Contractor shall present their proposed methodology for the Construction Progress Schedule, sequence of operations, and resource and quantity loading methodology. The Contractor shall submit to the State Engineer a written copy of its proposed WBS and coding system or activity identification system for labeling all Work activities. The WBS and activity coding/identification scheme shall be acceptable to the State Engineer. The State Engineer shall review and accept the WBS, the coding structure, and activity identification system within fourteen (14) days after submission by the Contractor. The Contractor shall make all modifications to the proposed WBS, the coding structure, and activity identification system that are requested by the State Engineer and shall employ that coding, structure, and system in its Baseline Construction Progress Schedule submission. The WBS shall be correlated with the Contractor's Schedule of Values and the cost loaded schedule. Develop other activity codes and values needed to comply with the reporting requirements listed herewith, subject to acceptance by the State Engineer.
- D. The activities contained within the schedules shall be cost loaded to equal the Contract Total Price with Sub-Totals that match the Schedule of Values. Overhead and profit shall be prorated on all activities for the entire project length. The Contractor shall not unbalance the activity cost loading. Together, the Cost Loaded Schedule and the Schedule of Values shall form the basis for the Pay Application Report and all monthly payment requests.
- E. The Contractor shall collect data and information from subcontractors, suppliers, and equipment manufacturers for incorporation into the Baseline Construction Progress Schedule. The baseline schedule submittal shall include certification in the form of signatures from subcontractors, suppliers and equipment manufacturers validating data collected for schedule development.
- F. Within thirty (30) days after Administrative Notice to Proceed the Contractor shall submit the Baseline Construction Progress Schedule to the State Engineer including a written narrative to further explain the plan as set forth in its CPM logic network and schedule.
- G. The Work activities comprising the Baseline Construction Progress Schedule shall be of sufficient detail to assure adequate planning and execution of the Work such that, in the judgment of the State Engineer, it provides an appropriate

basis for forecasting, monitoring, and evaluating the progress of the Work. Work activities shall conform to the following requirements:

1. Describe Work activities using consistent terminology such that the Work is readily identifiable for assessment of completion.
 2. Subdivide the Work into activities of duration no longer than fourteen (14) calendar days each, except as to non-construction activities (such as procurement of materials, delivery of materials, delivery of equipment, and concrete curing) and any other activities for which the State Engineer may approve a longer duration.
 3. The construction time as determined by the schedule from early start to late finish for any subphase, phase, or the entire project shall not exceed the Contract times specified or shown in the Contract Documents. One day shall be the smallest time unit shown unless otherwise directed by the State Engineer.
 4. Activities labeled "start," "continue," or "completion" will not be allowed. Logic relationships between activities shall be limited to finish to start type relationships. The use of durations between activities, or lags, shall not be permitted.
 5. Show the following information for each Work activity:
 - a. WBS and activity identification number consistent with the coding accepted by the State Engineer. The WBS and activity identification shall be cross-referenced with the Contractor's Schedule of Values.
 - b. Performance responsibility, subcontractor, trade code (GEN, MECH, ELEC, CARP, PLAST, etc.), and separate General Contractor identification.
 - c. Duration (in calendar days).
 - d. Work location code and description of the physical plant area involved.
 - e. Cost data as described herein.
- H. The Baseline Construction Progress Schedule shall contain the following standard milestones:
1. Notice to Proceed
 2. Mobilization
 3. Construction Start
 4. Contract Milestones and constraints in specification 01014 - Work Sequence for each phase of work.
 5. Substantial Completion
 6. Final Completion
- I. The Baseline Construction Progress Schedule shall begin with the date of issuance of the Notice to Proceed and not exceed the maximum contract days provided by the Contract. It shall include, but not be limited to, the following items as appropriate to this Contract:
1. Resource activity loading showing, at a minimum, the composite crew, the classification (e.g., foreman, journeyman, etc.) of the individual craftsman comprising the crew, materials, and equipment associated with each

activity shown on the schedule, plus any other information required by State Engineer.

2. Quantity loading for unit price bid items showing, at a minimum, estimated quantities to be installed or removed as indicated by the contract drawings, or as determined by the Contractor in preparation of its Bid, associated with major activities shown on the schedule, plus any other information required by State Engineer.
3. Type of work to be performed, sequences, and labor trades involved, including performance responsibility and trade code.
4. All purchases, submittals, submittal reviews, fabrication, deliveries, manufacturer factory tests, field tests, readiness tests, and installation activities for all materials and equipment for which the Contractor intends to seek payment, including stored materials.
5. Delivery, installation, check-out/testing, startup, and commissioning of Owner-furnished equipment and/or materials in accordance with the schedule dates set forth in the Specifications or furnished by the Owner.
6. State Engineer review, and approval of shop drawings and material samples showing a thirty (30) calendar day minimum time specified for the State Engineer's review of submittals, unless the submittal is of the type requiring a longer period of time. Twenty one (21) calendar days duration shall be allocated for the State Engineer's review of Contractor resubmittals.
7. Approvals required by regulatory agencies or other third parties.
8. Identification of all subcontract work and assignments of responsibility for performing specific activities.
9. Access to and availability of work areas including all anticipated outages, flow diversions, or bypass pumping.
10. Connection to all existing plant systems and equipment.
11. All temporary utilities and construction.
12. Interruption and shut down requests of facilities or utilities to allow for new connections.
13. All start up, testing, training, and assistance required under the Specifications.
14. Timing of the phased or total takeover by Owner.
15. Identification of any manpower, material, or equipment restrictions, as well as any activity requiring unusual shift work, such as two (2) shifts, six (6) day weeks, overtime, or work at times other than regular days or hours, shall be clearly identified in the Construction Progress Schedule.
16. Contractor activities that will be coordinated with Owner on-going activities.
17. Contractor-obtained permits.
18. Material and Equipment Installation
 - a. Installation
 - b. Check out
 - c. Operations and Maintenance manuals submittal/approval
 - d. Training lesson plans submittal/approval
 - e. Training of Owner staff
19. Preparation of coordination and layout drawings.

20. Clearly identify all non-work days in the schedule, such as, holidays, or other non-work periods.
21. Specific Work activities, including but not limited to, site work, underground piping and electrical duct banks, structural excavation, soil testing, backfill, placement of sheeting, foundations, formwork erection, rebar placement, placing of concrete, stripping forms, concrete curing, installation of process piping, electrical conduits and wiring, instrumentation and controls conduits and wiring, terminations, other materials and equipment, and cleanup.
22. Time Allowance for Inclement Weather:
 - a. Normal weather conditions shall be considered and included in the planning and scheduling of all weather sensitive schedule activities. Thirteen (13) inclement weather days per calendar year shall be included in the baseline schedule.
 - b. Schedule activity duration(s) shall be formulated with allowance for normal weather conditions. Any activity which could be impacted by normally anticipated inclement weather (precipitation, temperature, wind, etc.), due to the time period which the Contractor has scheduled the work, shall include an adjustment to include the anticipated weather impact from normal weather conditions. "Inclement weather" is a lost workday, caused by inclement weather conditions, and is defined as a day in which the Contractor's workforce cannot work fifty (50) percent or more of the day thereby resulting in a delay to the critical path.
 - c. The total number of inclement weather days identified in paragraph 22. a. shall be reflected in a schedule activity titled "Inclement Weather". The duration for this activity shall be the total number of inclement weather days for the total contract time. The inclement weather activity's successor shall be the Project completion milestone. The predecessor activities shall be the last project activities that occur before Project completion. The Contractor shall notify the State Engineer in writing when a lost workday has occurred due to inclement weather in accordance with the Baseline Construction Schedule update requirements. As inclement weather days occur, are recognized and approved by the State Engineer as an inclement weather day, the inclement weather activity duration will be reduced to account for the approval of an inclement weather day. If the number of actual inclement weather delay days exceeds the number of inclement weather delay days in paragraph 22. a., the Contractor shall notify the State Engineer in writing. Such delays shall not entitle the Contractor to any additional compensation. The sole remedy of the Contractor shall be to seek a non-compensable extension of time.
23. Punchlists.
24. Final cleanup.
25. Specific information required by the State Engineer.
26. Required inspections by the Authority Having Jurisdiction and the State Engineer.

- J. The Contractor shall submit copies of detailed CPM network diagram of each of the following:
1. Predecessors/Successor Report showing the predecessor activities and successor activities for each activity in the Baseline Construction Progress Schedule, sorted by Early Start. This report shall flag any activity that has been constrained.
 2. Electronic file(s) containing all data related to the Baseline Construction Progress Schedule including PDF and XER format.
 3. Lists of planned submittals and procurement activities.
- K. The Baseline Construction Progress Schedule shall demonstrate the final level of detail for each activity and shall contain the required relationships completely identified and the durations of each activity correctly depicted. The Baseline Construction Progress Schedule shall be developed as follows:
1. The Baseline Construction Progress Schedule shall contain no Contract changes or delays which may have been incurred during the interim schedule development period. These changes will be entered at the first update after the Baseline Construction Progress Schedule has been accepted and a change to the Contract time or duration was made via an approved Change Order.
 2. The Baseline Construction Progress Schedule submitted for review and approval by the State Engineer shall be un-statused and the data date shall be the contract notice to proceed date.
 3. The Baseline Construction Progress Schedule shall clearly indicate the longest critical path of activities from Notice to Proceed to the Contract completion date.
 4. The Baseline Construction Progress Schedule will contain all cost information assigned each of the specific activities at the final level of detail. Each activity shall be cost loaded to permit initial generation of a cash flow curve and resource curve.
 5. The Contractor shall submit certification that the approved construction schedule has been reviewed and discussed with all subcontractors, suppliers and vendors as it relates to their work prior to commencement of their work.
 6. Once the Baseline Construction Progress Schedule is accepted it becomes the schedule of record and the basis for future schedule updates.
 7. After the acceptance of the Baseline Construction Progress Schedule, no changes shall be made therein without approval of the State Engineer.
- L. Initial Baseline Construction Progress Schedule. Contractor's first (1st) payment application will be processed if the initial Baseline Construction Progress Schedule has been submitted by the Contractor and approved by the State Engineer. If the initial Baseline Construction Schedule has been submitted and is not approved at the time of the Contractor's first payment application, only mobilization costs as allowed pursuant to the General Conditions, and to the extent otherwise supported by the Contractor as due and owing, shall be paid by State Engineer.

- M. Monthly Updates to the Baseline Construction Progress Schedule. Contractor's monthly payment applications shall not be accepted and processed for payment by the State Engineer without Baseline Progress Schedule updates submitted in the time and manner required by this specification which accurately reflect the allowable costs due under the Contract Documents, and are accepted by the State Engineer.

1.08 RESOURCE LOADED SCHEDULE

- A. Contractor shall provide a Resource Loaded Schedule detailing the number of work force employees needed on a work day basis to complete the work within the contract duration.
- B. Any proposed changes to the Resource Loaded Schedule may only be made with the acceptance of the State Engineer.
- C. Manpower resources shall be listed in the Resource Library of the Primavera Software and the Contractor shall assign manpower resource loading by trade for each work activity of the schedule.

1.09 FLOAT OWNERSHIP AND EARLY COMPLETION

- A. Project float, total float, slack time, or contingency within the Construction Progress Schedule (i.e., the difference in time between the projected early completion date and the required Contract completion date), and free float or critical path float within the overall Construction Progress Schedule is not for the exclusive use of either State Engineer or the Contractor but is jointly owned by both and is an expiring resource available to and shared by both as needed to meet Contract milestones and the Contract completion date. Pursuant to the float sharing requirements of the Contract, use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity times, or imposed dates shall be cause for rejection of the Construction Progress Schedule and any revisions or updates. The use of float time shall be shared as directed by the State Engineer.
- B. State Engineer-initiated changes that extend or shorten the Contract Times shall be the sole basis to adjust the Contract completion date. Delays in the critical path not associated with proper requests for time extensions in accordance with the General Conditions and General Requirements shall be deemed to be the responsibility of the Contractor.
- C. Any delays to the Contractor's early completion date shall be non-compensable and is considered Project Float which is not for the exclusive use of the Contractor or State Engineer. The interface and coordination with other contractors and stakeholders preclude acceptance of a zero float early finish schedule.
- D. The only allowable constraint for use in the construction schedule will be for contract milestone dates using a "Finish no later than" constraint, unless approved by the State Engineer.

1.10 PROGRESS OF THE WORK

Monthly Schedule Updates:

1. Once the Baseline Construction Progress Schedule is accepted by the State Engineer, the Contractor shall be responsible for preparing and submitting update information on logic, physical percent complete, cost percent complete, actual start and finish dates, duration changes, and related reports, diagrams, and schedules based on the Progress Payment cycle.
2. On a date determined by the State Engineer, the Contractor shall meet with the State Engineer to review the monthly progress schedule update. The Contractor and the State Engineer will review the updated construction schedule and discuss the content of the narrative report. The State Engineer shall be allowed seven (7) calendar days after the meeting to review and accept or reject the construction schedule update. Rejected construction schedule updates shall be resubmitted to the State Engineer within seven (7) days, at which time a new seven (7) day review period by the State Engineer will begin. Submittal at the monthly construction schedule update to the State Engineer shall be a condition precedent to the making of any payments, which are due or may become due under the terms of the Contract.
3. All subsequent monthly schedule updates shall be compared to the Baseline Construction Progress Schedule. In addition, each current monthly update shall be compared to the last month's update. Each update shall be labeled by period with data date and report date identified on the hard copy and electronic file.
4. The monthly update of the Baseline Construction Progress Schedule shall include the following:
 - a. One (1) electronic copy (PDF and XER) of the schedule, with data date and monthly period clearly marked.
 - b. Four (4) copies and PDF of the CPM computer printout and arrow diagram which shall:
 - (1) Compare baseline schedule activities against current update activities.
 - (2) Clearly identify longest critical path and near critical path activities with less than thirty (30) days of total float.
 - c. Four (4) copies and PDF of the cash flow projections by month with early and late forecast schedule dates and actual partial payment amounts by CONTRACTOR and total project.
 - d. Four (4) copies and PDF of successor/predecessor, total float, and ninety (90) day look ahead reports.
 - e. Four (4) copies and PDF of the monthly summary cost activity report, oriented to the monthly payment requisition level of detail.
 - f. Four (4) copies of the narrative report.

5. Schedule Updates shall be provided monthly with the request for progress payment.
6. Default progress data provided from the scheduling system shall not be allowed. Actual start and finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual start and finish dates in the Construction Progress Schedule database shall match those dates provided from the Contractor Daily Reports. Failure of the Contractor to document the actual start and finish dates on the Contractor Daily Report for every in-progress or completed activity and to ensure that the data contained on the Contractor Daily Reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the State Engineer to evaluate the Contractor's progress for payment purposes.
7. Activities that have reported progress without predecessor activities being completed, Finish Start Relationship (FS) (Out-of-Sequence Progress) will not be allowed except on a case-by-case basis with the approval from State Engineer. A written explanation of each activity shall be included in the monthly submittal. The State Engineer may direct that changes in schedule logic be made to correct any or all out-of-sequence Work.
8. The Contractor shall identify each month any changes to the schedule, such as: new activities, constraint changes, deleted activities, activity duration changes, activity description changes, and changes in logic relationships between activities. Logic changes shall be described with an explanation of the rationale for the change provided in the report.
9. The Contractor shall not constrain the schedule with artificial logic ties and/or constraint dates and/or any other scheduling techniques that may distort the activity float and total float associated with the critical path activities and the schedule in general.
10. The Contractor shall provide a schedule report defining the times at which schedule work activity submittals are required. This submittal schedule shall be tied to early start/early finish and late start/late finish work activity dates to ensure that time has been allowed for review and return.
11. The updated construction progress schedule, as approved by the State Engineer, shall determine the amount of Progress Payment to the Contractor on a monthly basis. Change order work shall be identified in the schedule as a new activity inserted into the affected schedule logic. The schedule activity shall be cost loaded once the change order is approved for payment by State Engineer.

1.11 NARRATIVE PROGRESS REPORT

- A. Prepare a narrative progress report to be submitted with the monthly schedule update that summarizes cost and schedule status as outlined below.
- B. Prepare and submit a summary cost activity report with each progress payment. The cost information shall be updated by activity and summarized for each month. The sum of all monthly costs shall be equal to the contract amount plus approved change orders.

- C. The costs shall be summarized for each pay application and the sum of all pay applications shall be shown as costs to-date, along with the remaining contract balance.
- D. The Narrative Report shall include and be in the following format:
 - 1. The Contractor 's transmittal letter.
 - 2. Schedule report indicating each activity on the CPM Schedule that has been:
 - a. Completed during this reporting period;
 - b. In progress during this reporting period;
 - c. Scheduled for the next reporting period.
 - 3. Analysis, by critical path, of each negative path describing:
 - a. The nature of the critical path;
 - b. Impact on other activities, milestones, and completion dates;
 - c. Recommendations for recovery of the delays.
 - 4. Current and anticipated delays.
 - a. Cause of the delay;
 - b. Corrective action and schedule adjustments to correct the delay;
 - c. Impact of the delay on other activities, milestones, and completion dates.
 - 5. Change in construction sequence, logic changes, relationship changes, or duration changes and the rationale associated with each change.
 - 6. Pending issues and status of other items:
 - a. Permits;
 - b. Contract modifications;
 - c. Time extension requests;
 - d. Long-lead procurement items.
 - 7. Tabular schedule reports tabulated by:
 - a. Contractor /early start;
 - b. Total float/early start;
 - c. Area/early start;
 - d. Activity number.
 - 8. Added/deleted activities.
 - 9. Out of Sequence Report describing the necessity of each activity relationship shown therein.
 - 10. Illogical Progress/Restraint Reports (if any).
 - 11. Contract complete date status.
 - 12. Ahead of schedule and number of days.
 - 13. Behind schedule and number of days.

14. Summary of project status including cumulative information to date, variance, and forecast at completion.
15. Other project or scheduling concerns.
16. Review and update of CPM Schedule.
17. Safety Reports and any code violations or warnings.
18. Computer disk containing the latest CPM schedule update file.
19. Provide a report of STATE ENGINEER activities such as; e.g. owner supplied equipment, shutdowns, permits, inspections, approvals, start-up and training activities, etc.

1.12 THREE (3) WEEK LOOK AHEAD

The Contractor shall provide a three (3) week look ahead schedule from the current Construction Progress Schedule, in Primavera report format which shall include the week in which the schedule is presented, plus the two (2) successive weeks thereafter. The three week (3) look ahead shall be submitted to the State Engineer no later than twenty four (24) hours prior to the weekly project progress meeting.

1.13 TIME EXTENSION REQUESTS

- A. Requests for time extensions shall be submitted in the time and manner specified in the General Conditions.
- B. Request for time extension shall be submitted within seven (7) calendar days of the event that created the extension of time.
- C. Time Impact Analysis (TIA):
 1. The Contractor shall submit a *Fragnet of the* TIA to the State Engineer with each request for an adjustment in contract time or when the Contractor or the State Engineer consider an approved or anticipated change that may impact the critical path or contract progress.
 2. The Contractor shall submit a TIA within seven (7) calendar days of receiving a request from the State Engineer.
 3. The TIA shall illustrate the impact of each change or delay on the current scheduled completion date (or internal milestone) and utilize the baseline schedule as modified by change order(s) and a data date closest to and prior to the event being analyzed.
 4. The TIA shall include an impact schedule developed from incorporating the event into the accepted schedule by adding or deleting activities, or by changing durations or logic of existing activities. If the impacted schedule shows that incorporating the event modifies the critical path and the scheduled completion date of the accepted schedule, the difference between the scheduled completion dates of the two schedules shall be equal to the adjustment of contract time.
 5. The Contractor shall allow the State Engineer seven (7) calendar days after receipt of a TIA to approve or reject the submitted TIA.
 6. All approved TIA schedule changes shall be shown on the next schedule update schedule.

7. When a TIA is rejected by the State Engineer the Contractor shall meet with the State Engineer to discuss to discuss and resolve the issues. If an agreement is not reached, the Contractor shall be allowed within seven (7) calendar days after the meeting to submit a Notice of Claim. The Contractor shall not show any activities related to the TIA in any schedule updates until and if such time the TIA and or claim is approved by the State Engineer.
8. Changes that affect the controlling operation on the critical path will be considered by the State Engineer in decreasing time or granting an extension or deletion of time for completion of the contract. Time extensions will only be granted if the total float is absorbed and the scheduled completion date is delayed one or more days because of the ordered change.
9. Changes that do not affect the controlling operation on the critical path will not be considered as a basis for time adjustment.

1.14 REMEDIAL MEASURES AND RECOVERY SCHEDULE

- A. If at any time during the Project, the Contractor fails to complete a critical or near critical activity by its latest completion date, thereby causing potential delay to the contract completion date, the Contractor will be required, within seven (7) days, to submit to the State Engineer a written statement as to how and when it plans to recover the schedule delay. The recovery plan and schedule changes shall be reflected during the next schedule update period.
- B. Delays to Critical Path: Whenever it becomes apparent from the current monthly update that delays to the critical path have resulted and that these delays are through no fault of the State Engineer and hence, that the Contract completion date will not be met, or when so directed by the State Engineer, the Contractor shall submit to the State Engineer for review a written statement of the steps it intends to take to remove or arrest the delay to the schedule. The Contractor shall promptly provide such level of effort to bring the Work back on schedule.
- C. Under no circumstances will the addition of equipment or construction forces, increasing the working hours or any other method, manner, or procedure to recover delays to the CPM Schedule be considered justification for contract modification or extra Work.
- D. The State Engineer may require the Contractor, at any time during the Project, to develop a more detailed schedule/fragnet than depicted in the detailed schedule to provide a clearer understanding of the effort needed to complete a specific area or task.

1.15 FINAL SCHEDULE UPDATE

- A. As a condition precedent to any release of retention, the last update to the Construction Progress Schedule submitted shall be identified by the Contractor as the As-Built Construction Schedule. The As-Built Construction Schedule shall reflect the exact manner in which the project or portion thereof was actually constructed including start and completion dates, activities, sequences, and logic ties.

- B. This schedule submission shall be accompanied by a certification, signed by an officer of the company and the Contractor's Project Manager and Project Scheduler, stating "To the best of our knowledge, the enclosed final update of the Construction Progress Schedule accurately reflects the actual start and completion dates and logical relationships of all activities contained herein and represents an accurate depiction of the way in which the project was constructed."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 REQUIRED REPORTS

<u>Report No.</u>	<u>Report Description and Frequency</u>
1.	THE BASELINE CONSTRUCTION PROGRESS SCHEDULE CPM LOGIC DIAGRAMS shall be plotter drawn CPM logic diagrams and submitted on sheets 30 inches by 42 inches or as otherwise directed by the STATE ENGINEER. The activity box shall include, at a minimum, the following: activity number, activity description, original durations, total float, and activity constraints. The logic diagram shall be submitted until the Baseline Construction Progress Schedules are accepted. All CPM logic diagrams shall clearly identify all contract milestones and the projects longest critical path to project completion.
2.	ACTIVITY LISTING SCHEDULE REPORT sorted by Total Float (TF) and Early Start Date (ES): As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates
3.	CRITICAL PATH SCHEDULE REPORT sorted by Total Float (TF) with logic ties shown: As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates
4.	THREE WEEK LOOK AHEAD SCHEDULE REPORT sorted by Total Float (TF) with one week of history and three week look ahead: As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates
5.	RESOURCE LOADED SCHEDULE AND LISTING OF ALL LABOR RESOURCES As part of Baseline Construction Progress Schedule Submittal
6.	ACTIVITY LISTING of all activities with all predecessor and successor activities shown: As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates

7. **PURE LOGIC DIAGRAM** network plot of all activities in predecessor diagram format: As part of Baseline Construction Progress Schedule Submittal
8. **COST LOADED ACTIVITY REPORT** without progress: As part of Baseline Construction Progress Schedule Submittal
9. **UPDATED COST LOADED REPORT WITH PROGRESS** and cost values shown: As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates
10. **COST CURVE (CASH FLOW CURVE)** sorted by early start and early finish dates: As part of Baseline Construction Progress Schedule Submittal and Monthly Schedule Updates
11. **RESOURCE HISTOGRAM**, per period and cumulative resource curves: As part of Baseline Construction Progress Schedule Submittal
12. **CONTRACTORS DAILY REPORTS**, submitted daily identifying the start and finish dates of schedule work activities and total number of men on the project per day and project weather condition and description of work performed.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01400 – CONTRACTOR QUALITY CONTROL PROGRAM

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 CONTRACTOR QUALITY CONTROL PROGRAM

A. GENERAL

The Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

1. Adequately provide for the production of acceptable quality materials.
2. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
3. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the pre-construction conference, his/her understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by the Engineer and State Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed and approved by the Engineer and State Engineer.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Engineer. All inspection and test reports shall be stamped and signed by a licensed professional engineer.

B. DESCRIPTION OF PROGRAM

1. General Description. The Contractor shall establish a Quality Control Program to perform work quality inspections and control testing on all materials and items of work required by the technical specifications, including those performed by subcontractors. This program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The program shall be effective for control of all construction work performed under this Contract, in addition to other requirements of this section, and any other activities deemed necessary by the Contractor to establish an effective level of quality control.
2. Quality Control Program. The Contractor shall describe the Quality Control Program in a written document which shall be reviewed by the Engineer and State Engineer prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review within thirty (30) calendar days after the date of award.
3. The Quality Control Program shall be organized to address, as a minimum, the following items:
 - a. Quality control organization;
 - b. Submittals schedule;
 - c. Inspection Requirements;
 - d. Quality control testing plan;
 - e. Documentation of quality control activities; and
 - f. Requirements for corrective action when quality control and/or acceptance criteria are not met.
 - g. A listing of the definable features of work for the project.

The Contractor is encouraged to add any additional elements to the Quality Control Program that he/she deems necessary to adequately control all production and/or construction processes required by this contract.

C. QUALITY CONTROL ORGANIZATION

The Contractor's Quality Control Program shall be implemented by the establishment of a separate organization that is not a part of the production organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel. The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the program, including work quality inspection and control testing on materials for each item of work. At the top of the chart, an overall Contractor Quality Control System Manager, CQCSM, shall be named and his/her subordinates shall follow thereafter.

The quality control organization shall consist of the following minimum personnel:

1. Contractor Quality Control System Manager. The CQCSM shall be a Licensed Engineer of the Contractor, or a consultant engaged by the Contractor. The CQCSM shall have a minimum of 10 years of experience in airport and/or paving and building construction and shall have had prior quality control experience on a project of comparable size and scope as the contract. The CQCSM shall be on the project full time and shall have no production duties. The CQCSM shall NOT be the point of contact for the production organization.

The CQCSM shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications including authority to independently stop any work not in compliance with the contract. The CQCSM shall report directly to a responsible officer of the construction firm, such officer not being the project Superintendent or Foreman.

2. Quality Control Technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall either be an engineer, engineering technicians, or experienced craftsman with qualifications in the appropriate fields and shall have a minimum of 7 years of experience in their area of expertise. The Quality Control Technician shall be on the project full time and shall have no production duties.

The quality control technicians shall report directly to the CQCSM and shall perform the following functions:

- a. Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by Section 1.05E.
 - b. Performance of quality control tests as required by the Contractor's program.
3. Staffing. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

All personnel shown on the organizational chart shall have, in resume form, all information regarding their education, any licenses, their present position, previous work experience, etc. Included in the

Quality Control Program written documentation. These resumes shall be verified by the CQCSM.

D. SUBMITTALS SCHEDULE

The Contractor shall submit a detailed listing of all submittals (e.g., mix designs, material certifications, color samples) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

1. Specification item number;
2. Item description;
3. Description of submittal;
4. Specification paragraph requiring submittal; and
5. Scheduled date of submittal.

E. INSPECTION REQUIREMENTS

Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work.

Before any definable feature of work is started, the CQCSM shall notify the Engineer and State Engineer of such work at least 48 hours in advance. Upon notification, the Engineer or State Engineer shall determine if a meeting shall be held to discuss the condition of the work area, material and equipment status, what is to be expected and any questions or possible problems. No definable feature work shall commence without the consent of the Engineer and State Engineer.

F. QUALITY CONTROL TESTING PLAN

As part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

1. Specification item number;
2. Item description (e.g., plant control, concrete cylinder tests);
3. Test type (e.g., concrete compressive strength);
4. Test standard (e.g., ASTM or AASHTO test number, as applicable);
5. Test results and adjustments made (e.g., to meet specification tolerance requirements; and,)
6. Responsibility (e.g., plant technician, independent lab).

The testing plan shall contain a statistically based procedure of random sampling for acquiring test samples in accordance with ASTM D 3665.

All quality control test results shall be documented by the Contractor as required by Section 1.02G.

G. DOCUMENTATION

The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that inspections or tests have been performed, including type, results of inspections or test; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and/or corrective actions taken.

These records must cover both conforming and defective or deficient features and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer and State Engineer.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

1. Daily Inspection Reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and Subcontractor operations on a form acceptable to the Engineer and State Engineer. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum include the following:
 - a. Technical specification item number and description and location of work performed;
 - b. Compliance with approved submittals;
 - c. Proper storage of materials and equipment;
 - d. Proper operation of all equipment;
 - e. Adherence to plans and technical specifications;
 - f. Review of quality control tests; and
 - g. Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be stamped and signed by the licensed professional engineer CQCSM. The Engineer and State Engineer shall be provided at least one copy of each daily inspection report on the workday following the day of record.

2. Test Reports. The Contractor shall be responsible for establishing a system which will record all off-site and on-site control test results. Test reports shall document the following information:

- a. Technical specification item number and description;
- b. Test designation;
- c. Location;
- d. Date of test;
- e. Control requirements;
- f. Test results;
- g. Causes for rejection;
- h. Remedial action and retest results.

Test results shall be submitted to the Engineer and State Engineer within one (1) week of testing. The test reports shall be stamped and signed by the licensed professional engineer CQCSM.

H. CORRECTIVE ACTION REQUIREMENTS

The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

I. SURVEILLANCE BY THE ENGINEER AND STATE ENGINEER

All items of material and equipment shall be subject to surveillance by the Engineer or State Engineer at the point of production, manufacture or shipment.

Off-site or on-site surveillance by the Engineer or State Engineer does not relieve the Contractor of performing quality control inspections of either the Contractor's or subcontractor's work.

J. NONCOMPLIANCE

The Engineer or State Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the authorized representative at the site of the work, shall be considered sufficient notice.

In cases where quality control activities do not comply with either the Contractor's Quality Control Program or the Contract provisions, or where

the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer or State Engineer the Engineer or State Engineer may:

1. Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors in accordance with Section 8.4 – “Character and Proficiency of Workers” of the General Provisions for Construction Projects (2016).
2. Order the Contractor to stop operations in accordance with Section 8.10 – “Suspension of Work” of the General Provisions for Construction Projects (2016).
3. Determine work performed by the Contractor during periods of noncompliance to be unacceptable and subject to removal or non-payment in accordance with Section 5.12 – “Removal of Non-Conforming and Unauthorized Work: Performance of Corrective or Remedial Work” of the General Provisions for Construction Projects (2016).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01500 - TEMPORARY WATER POLLUTION, DUST, AND EROSION
CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions and General Requirements of the Specifications apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK

A. This section describes the requirements for temporary water pollution, dust, and erosion control.

1. Including detailed plans, diagrams, and written site-specific best management practices (BMP); constructing, maintaining, and repairing temporary water pollution, dust, and erosion control measures at the project site, including local material sources, work areas and haul roads; removing and disposing hazardous wastes; control of fugitive dust (defined as uncontrolled emission of solid airborne particulate matter from any source other than combustion); and complying with applicable State and Federal permit conditions.
2. Work associated with dewatering activities and complying with conditions of the National Pollutant Discharge Elimination System (NPDES) general permit coverage authorizing discharges associated with construction activity dewatering.

Requirements of this section also apply to borrow pit operations, haul roads and Contractor's storage sites located outside of the project site.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300 - SUBMITTALS.
- B. The Contractor shall submit the following items within 30 calendar days after the Notice to Proceed Date:
 1. Submit proposed means, methods, techniques and procedures to be used for temporary water pollution, dust and erosion control.
 2. Submit Best Management Practice to ensure dust/water and construction debris does not enter the drainage system within Airport property in compliance with the current Airport's Division NPDES permit.

PART 2 – PRODUCTS

2.01 MATERIALS

Materials shall conform to the following:

- A. Slope Drains. Slope drains may be constructed of pipe, fiber, mats, erosion control fabric, geotextiles, rubble, portland cement concrete, bituminous concrete, plastic sheets, or other materials acceptable to the State Engineer.
- B. Mulches. Mulches shall be recycled materials include bagasse, hay, straw, wood cellulose, bark, wood chips, or other materials acceptable to the State Engineer. Mulches shall be clean and free of noxious weeds and deleterious materials.
- C. Grass. Grass shall be a quick growing species such as rye grass, Italian rye grass, or cereal grasses. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover. Alternative grasses are allowable if acceptable to the State Engineer.
- D. Fertilizer and Soil Conditioners. Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the State Engineer.
- E. Hydro-mulching. Hydro-mulching used as a BMP shall consist of materials in the following subsections of the 2005 Standard Specifications for Road and Bridge Construction: Subsections 209.02(B) - Mulches, 209.02(C) - Grass, and 209.02(D) –Fertilizer and Soil conditioners, with potable water meeting the requirements of Subsection 712.01 - Water. Installation and other requirements shall in accordance with portions of Section 641- Hydro-Mulch Seeding.
- F. Berms. Berms shall be gravel or sand wrapped with geotextile material. Alternate materials are allowable if acceptable to the State Engineer.
- G. Catch Basin Inlet Protection. To be “True Dam” sediment filter by Dandy Products, Inc. or approved equal.
- H. Compost Filter Sock. To be “Filtrex Siltsoxx” or approved equal. To be a minimum of 12-inches in diameter and filled with sanitized mature compost. The filter socks shall be staked with 2”x2” wooden stakes or #4 steel rebar with safety cap at a minimum of 10-feet on center when placed on unpaved surfaces only.
- I. Grate Inlet Protection. Filter fabric to be Mirafi 140 or approved equal.
- J. Stabilized Construction Entrance. Filter fabric shall be Mirafi 600X or approved equal. Aggregate shall be basalt material 1”-3” coarse aggregate or larger (7” max.).
- K. Alternative materials or methods to control, prevent, remove and dispose pollution are allowable if acceptable to the State Engineer.

PART 3 - EXECUTION

3.01 PRECONSTRUCTION REQUIREMENTS

- A. Water Pollution, Dust, and Erosion Control Meeting. Submit site specific BMP to the State Engineer. Schedule a water pollution, dust, and erosion control meeting with the State Engineer after site specific BMP is accepted in writing by the State Engineer. Meeting shall be scheduled 14 days before start of construction work. Discuss sequence of work, plans and proposals for water pollution, dust, and erosion control.
- B. Water Pollution, Dust, and Erosion Control Submittals. Submit the following:
 - 1. Written site-specific BMP describing activities to minimize water pollution and soil erosion into State waters, drainage or sewer systems. BMP shall include the following:
 - a. An identification of potential pollutants and their sources.
 - b. A list of all materials and heavy equipment to be used during construction.
 - c. Descriptions of the methods and devices used to minimize the discharge of pollutants into State waters, drainage or sewer systems.
 - d. Details of the procedures used for the maintenance and subsequent removal of any erosion or siltation control devices.
 - e. Methods of removing and disposing hazardous wastes encountered or generated during construction.
 - f. Methods of removing and disposing concrete and asphalt pavement cutting slurry, concrete curing water, and hydrodemolition water.
 - g. Spill control.
 - h. Fugitive dust control, including dust from grinding, sweeping, or brooming off operations or combination thereof.
 - i. Methods of storing and handling of oils, paints and other products used for the project.
 - j. Material storage and handling areas, and other staging areas.
 - k. Concrete truck washouts.
 - l. Concrete waste control.
 - m. Fueling and maintenance of vehicles and other equipment.
 - n. Tracking of sediment offsite from project entries and exits.

- o. Litter management.
 - p. Toilet facilities.
 - q. Other factors that may cause water pollution, dust and erosion control.
- 2. Provide plans indicating location of water pollution, dust and erosion control devices; provide plans and details of BMPs to be installed or utilized; show areas of soil disturbance in cut and fill, indicate areas used for storage of aggregate (indicate type of aggregate), asphalt cold mix, soil or waste, and show areas where vegetative practices are to be implemented. Indicate intended drainage pattern on plans. Include separate drawing for each phase of construction that alters drainage patterns. Indicate approximate date when device will be installed and removed.
- 3. Construction schedule.
- 4. Name(s) of specific individual(s) designated responsible for water pollution, dust, and erosion controls on the project site. Include home and business telephone numbers, fax numbers, and e-mail addresses.
- 5. Description of fill material to be used.

Date and sign BMP. Keep accepted copy on site throughout duration of the project. Revisions to the BMP shall be included with original BMP. Modify contract documents to conform to revisions. Include actual date of installation and removal of BMP. Obtain written acceptance by the State Engineer before revising BMP.

Follow guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu", in developing, installing, and maintaining BMPs for all projects. Follow Honolulu's City and County "Rules for Soil Erosion Standards and Guidelines" for all projects on Oahu. Use respective Soil Erosion Guidelines for Maui, Kauai and Hawaii projects.

- C. Construction Requirements. Do not begin work until submittals detailed in Item 3.01, paragraph B. "Water Pollution, Dust, and Erosion Control Submittals" are completed and accepted in writing by the State Engineer.

Install, maintain, monitor, repair and replace site-specific BMP measures, such as for water pollution, dust and erosion control; installation, monitoring, and operation of hydrotesting activities; removal and disposal of hazardous waste indicated on plans, concrete cutting slurry, concrete curing water; or hydrodemolition water.

Furnish, install rain gage in a secure location for projects that require NPDES permit from the Department of Health prior to field work including installation of site-specific BMP. Provide rain gage with a tolerance of at least 0.05 inches of rainfall, and an opening of at least 1-inch diameter. Install rain gage on project site in an area that will not deter rainfall from entering the gate opening. Maintain

rain gage and replace rain gage that is stolen, does not function properly or accurately, is worn out, or needs to be relocated. Do not begin field work until rain gauge is installed and site specific BMPs are in place.

Address all comments received from the State Engineer.

Modify and resubmit plans and construction schedules to correct conditions that develop during construction which were unforeseen during the design and pre-construction stages.

Coordinate temporary control provisions with permanent control features throughout the construction and post-construction period.

Limit maximum surface area of earth material exposed at any time to 300,000 square feet. Do not expose or disturb surface area of earth material (including clearing and grubbing) until BMP measures are installed and accepted in writing by State Engineer. Protect temporarily or permanently disturbed soil surface from rainfall impact, runoff and wind before end of workday.

Protect exposed or disturbed surface area with mulches, grass seeds or hydromulch. Spray mulches at a rate of 2,000 pounds per acre. Add tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate of 125 pounds per acre. For hydromulch use the ingredients and rates required for mulches and grass seeds.

Apply fertilizer to mulches, grass seed or hydromulch at a rate of 450 pounds per acre. Apply an additional 250 pounds per acre every 90 calendar days.

Install velocity dissipation measures when exposing erodible surfaces greater than 15 feet in height.

BMP measures shall be in place and operational (such as shaping the earthwork to control and directing the runoff) at the end of workday. Shaping earthwork may include constructing earth berms along the top edges of embankments if acceptable to the State Engineer.

Install and maintain either or both stabilized construction entrances and wheel washes to minimize tracking of dirt and mud onto roadways. Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other material tracked onto the road immediately. Modify stabilized construction entrances to prevent mud from being tracked onto road. Stabilize entire access roads if necessary.

Chemicals may be used as soil stabilizers for either or both erosion and dust control if acceptable to the State Engineer.

Provide temporary slope drains of rigid or flexible conduits to carry runoff from cuts and embankments. Provide portable flume at the entrance. Shorten or extend temporary slope drains to ensure proper function.

Protect ditches, channels, and other drainageways leading away from cuts and fills at all times by either:

1. Hydro-mulching the lower region of embankments in the immediate area.
2. Placing an 8- to 15-inch layer of excavated rock, if available on-site, without reducing the cross section of the drainageway. Rocks shall be less than four inches in diameter.
3. Installing check dams and salutation control devices.
4. Other methods acceptable to the State Engineer.

Provide for controlled discharge of waters impounded, directed, or controlled by project activities or erosion control measures.

Cover exposed surface of materials completely with tarpaulin or similar device when transporting aggregate, soil, excavated material or material that may be source of fugitive dust.

Cleanup and remove any pollutant that can be attributed to Contractor.

Install or modify BMP measures due to change in Contractor's means and methods, or for omitted condition that should have been allowed for in the accepted site specific BMP or a BMP that replaces an accepted site specific BMP that is not satisfactorily performing.

Properly maintain all BMP features. Inspect, prepare a written report, and make repairs to BMP measures at following intervals:

1. Weekly during dry periods.
2. Within 24 hours of any rainfall of 0.5 inch or greater which occurs in a 24-hour period.
3. Daily during periods of prolonged rainfall.
4. When existing erosion control measures are damaged or not operating properly as required by site specific BMP.

Remove, destroy, replace or relocate any BMP that must be removed, destroyed, replaced or relocated due to potential or actual flooding, or potential danger or damage to project or public.

Maintain records of inspections of BMP work. Keep continuous records for duration of the project. Submit weekly copy of records to the State Engineer.

In addition to weekly reports, submit to the State Engineer all amounts spent initializing and maintaining BMP during previous week. Amount spent includes, but is not limited to: purchases of erosion control material, construction of storage areas, and installation of water pollution, erosion and dust control measures. Submit report weekly along with site inspection report.

Protect finished and previously seeded areas from damage and from spillover materials placed in upper lifts of embankment.

The Contractor's designated representative specified in item 3.01, paragraph (B)(4), shall address any BMP concerns brought up by the State Engineer within 24 hours of notification, including weekends and holidays. Failure to satisfactorily address these concerns, the State Engineer reserves the right to employ outside assistance or use the State Engineer's own labor forces to provide necessary corrective measures. The State Engineer will charge Contractor such incurred costs plus any associated project engineering costs. The State Engineer will make appropriate deductions from Contractor's monthly progress estimate. Failure to apply BMP measures shall result in either or both the establishment and increase in the amount of retainage due to unsatisfactory progress or withholding of monthly progress payment. Continued failure to apply BMP measures may result in one or more of the following: assessment of liquidated damages, suspension, or cancellation of Contract with Contractor being fully responsible for all additional costs incurred by State.

- D. Hydrotesting Activities. If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, obtain an NPDES Hydrotesting Waters Permit from Department of Health, Clean Water Branch (DOH-CWB).

Do not begin hydrotesting activities until the DOH-CWB has issued a Notice of General Permit Coverage (NGPC). Hydrotesting operations shall be in accordance with conditions in NGPC. Submit a copy of the NPDES Hydrotesting Waters Application and Permit to the State Engineer.

- E. Dewatering Activities. If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, obtain NPDES General Permit Coverage authorizing discharges associated with construction activity dewatering from Department of Health, Clean Water Branch (DOH-CWB). If permit is required, prepare and submit permit application (CWB-NOI Form G) to DOH-CWB.

Do not begin dewatering activities until DOH-CWB has issued Notice of General Permit Coverage (NGPC). Conduct dewatering operations in accordance with conditions in NGPC. Submit copy of NPDES Hydrotesting Waters Application and Permit to the State Engineer.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section, except for Additional Water Pollution, Dust, and Erosion Control, will not be measured for payment but will be paid for at the contract Lump Sum Price.

Work for added Additional Water Pollution, Dust, and Erosion Control required by the State will be paid for under allowance items in the Proposal Schedule. Payment will be the actual cost as invoiced by the Contractor and approved by the State Engineer. The Contractor will not be allowed to include overhead, profit, insurances and/or any other mark-ups which will be considered incidental to and included in the LUMP SUM PRICE.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01500.1	Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum
01500.2	Additional Water Pollution, Dust, and Erosion Control	Allowance

The allowance is an estimate and the amount shall not exceed the maximum amount shown in the proposal schedule. Additional charges by the Contractor for overhead, coordination, profit, insurances and other incidental expenses shall not be allowed. These shall be included in the Contractor's LUMP SUM PRICE.

END OF SECTION

SECTION 01524 – CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the contract, including General and Special Provisions and General Requirements of the Specifications, apply to the work specified in the section.

1.02 DESCRIPTION OF WORK

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.03 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 PERFORMANCE REQUIREMENTS

- A. General: Achieve End-of-Project rates for salvage/recycling of **75** percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following but not limited to:

1. Demolition Waste:

- a. Asphaltic concrete paving
- b. Concrete
- c. Concrete reinforcing steel
- d. Brick
- e. Concrete masonry units
- f. Wood studs
- g. Wood joists
- h. Plywood and oriented strand board
- i. Wood paneling
- j. Wood trim
- k. Structural and miscellaneous steel
- l. Rough hardware
- m. Roofing
- n. Insulation
- o. Doors and frames
- p. Door hardware
- q. Windows
- r. Glazing
- s. Metal studs
- t. Gypsum board
- u. Acoustical tile and panels
- v. Carpet
- w. Carpet pad
- x. Demountable partitions
- y. Equipment
- z. Cabinets
- aa. Plumbing fixtures
- bb. Piping
- cc. Supports and hangers
- dd. Valves
- ee. Sprinklers
- ff. Mechanical equipment
- gg. Refrigerants
- hh. Electrical conduit
- ii. Copper wiring
- jj. Lighting fixtures
- kk. Lamps
- ll. Ballasts
- mm. Electrical devices
- nn. Switchgear and panelboards

oo. Transformers

2. Construction Waste:

- a. Site-clearing waste
- b. Masonry and CMU
- c. Lumber
- d. Wood sheet materials
- e. Wood trim
- f. Metals
- g. Roofing
- h. Insulation
- i. Carpet and pad
- j. Gypsum board
- k. Piping
- l. Electrical conduit
- m. Packaging, including uncontaminated materials as follows:
 - 1) Paper
 - 2) Cardboard
 - 3) Boxes
 - 4) Plastic sheet and film
 - 5) Polystyrene packaging
 - 6) Wood crates
 - 7) Plastic pails

1.05 SUBMITTALS

- A. Submit in accordance with Section 01300 - Submittals.
- B. Waste Management Plan: Submit plan within 30 days of date established for the Notice of Award.

1.06 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use **Form CWM-7** for construction waste and Form CWM-8 for demolition waste. Include the following information:
 - 1. Material category
 - 2. Generation point of waste.
 - 3. Diversion/Recycler Hauler or Location
 - 4. Total quantity of waste in tons.
 - 5. Quantity of waste salvaged, both estimated and actual in tons.
 - 6. Quantity of waste recycled, both estimated and actual in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 8. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

- C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. LEED Submittal: LEED Submittal template for Credit MR 2, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
- H. Qualification Data for waste management coordinator.
- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.07 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: General Contractor shall hire a third party independent experienced firm, with a record of successful waste management coordination of Projects with similar requirements, that employs a LEED Accredited Professional, certified by USGBC, as waste management coordinator.
- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Waste Management Conference: Conduct conference at Project site to comply with requirements in the General Provisions of the contract. Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan including responsibilities of waste management coordinator.

2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

1.08 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to ASTM E 1609 and requirements of this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Use **Form CWM-1** for construction waste and **Form CWM-2** for demolition waste. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use **Form CWM-3** for construction waste and **Form CWM-4** for demolition waste. Include points of waste generation, potential recycling hauler or locations, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Use **Form CWM-5** for

construction waste and **Form CWM-6** for demolition waste. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged materials.
5. Revenue from recycled materials.
6. Savings in hauling and tipping fees by donating materials.
7. Savings in hauling and tipping fees that are avoided.
8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 1. Comply with 01010 Description of Work for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Waste management coordinator shall be responsible for implementing, monitoring, and reporting status of waste management work plan.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

2. Comply with Section 01560 - Environmental Controls for controlling dust and dirt, environmental protection, and noise control.

3.02 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.03 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Grind asphalt to maximum 1-1/2-inch size.
- B. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 1. Pulverize concrete to maximum 1-1/2-inch size.
- D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 1. Pulverize masonry to maximum 3/4-inch size.

2. Clean and stack undamaged, whole masonry units on wood pallets.
- E. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- F. Metals: Separate metals by type.
1. Structural Steel: Stack members according to size, type of member, and length.
 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- G. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- H. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- I. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
- J. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.
- K. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- L. Conduit: Reduce conduit to straight lengths and store by type and size.

3.04 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 2. Polystyrene Packaging: Separate and bag materials.
 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees
- C. Wood Materials: Clean Cut-Offs of Lumber: Grind or chip into small pieces.

D. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.05 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

3.06 ATTACHMENTS

The following forms are appended to the end of this Section.

- A. Form CWM-1 for construction waste identification.
- B. Form CWM-2 for demolition waste identification.
- C. Form CWM-3 for construction waste reduction work plan.
- D. Form CWM-4 for demolition waste reduction work plan.
- E. Form CWM-5 cost/revenue analysis of construction waste reduction work plan.
- F. Form CWM-6 cost/revenue analysis of demolition waste reduction work plan.
- G. Form CWM-7 for construction waste.
- H. Form CWM-8 for demolition waste.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

[illegible]

[illegible]

FORM CWM-5: COST/REVENUE ANALYSIS OF CONSTRUCTION WASTE REDUCTION WORK PLAN								
MATERIALS	TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)	EST. COST OF DISPOSAL (B)	TOTAL EST. COST OF DISPOSAL (C = A X B)	REVENUE FROM SALVAGED MATERIALS (D)	REVENUE FROM RECYCLED MATERIALS (E)	LANDFILL TIPPING FEES AVOIDED (F)	HANDLING AND TRANSPORTATION COSTS AVOIDED (G)	NET COST SAVINGS OF WORK PLAN (H=D+E+F+G)
Packaging: Cardboard								
Packaging: Boxes								
Packaging: Plastic Sheet or Film								
Packaging: Polystyrene								
Packaging: Pallets or Skids								
Packaging: Crates								
Packaging: Paint Cans								
Packaging: Plastic Pails								
Site Clearing Waste								
Masonry or CMU								
Lumber: Cut-Offs								
Lumber: Warped Pieces								
Plywood or OSB (scraps)								
Wood Forms								
Wood Waste Chutes								
Wood Trim (cut-offs)								
Metals								
Insulation								
Roofing								
Joint Sealant Tubes								
Gypsum Board (scraps)								
Carpet and Pad (scraps)								
Piping								
Electrical Conduit								
Other:								

FORM CWM-6: COST/REVENUE ANALYSIS OF DEMOLITION WASTE REDUCTION WORK PLAN								
MATERIALS	TOTAL QUANTITY OF MATERIALS (VOL. OR WEIGHT) (A)	EST. COST OF DISPOSAL (B)	TOTAL EST. COST OF DISPOSAL (C = A X B)	REVENUE FROM SALVAGED MATERIALS (D)	REVENUE FROM RECYCLED MATERIALS (E)	LANDFILL TIPPING FEES AVOIDED (F)	HANDLING AND TRANSPORTATION COSTS AVOIDED (G)	NET COST SAVINGS OF WORK PLAN (H=D+E+F+G)
Asphaltic Concrete Paving								
Concrete								
Brick								
CMU								
Lumber								
Plywood or OSB								
Wood Paneling								
Wood Trim								
Miscellaneous Metals								
Structural Steel								
Rough Hardware								
Insulation								
Roofing								
Doors and Frames								
Door Hardware								
Windows								
Glazing								
Acoustical Tile								
Carpet								
Carpet Pad								
Demountable Partitions								
Equipment								
Cabinets								
Plumbing Fixtures								
Piping								
Supports and Hangers								
Valves								
Sprinklers								
Mech. Equipment								
Electrical Conduit								
Copper Wiring								
Light Fixtures								
Lamps								
Lighting Ballasts								
Electrical Devices								
Switchgear and Panels								
Transformers								
Other								

SECTION 01533 - BARRICADES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 BARRICADES

- A. The Contractor shall take precaution to protect people and property from injury and damage. The Contractor shall erect barricades to delineate and secure their work areas from unauthorized entry. The Contractor shall provide the appropriate signing, hazard lights, and temporary paint striping per the safety plan as approved by the State Engineer, to aid public and airport pedestrian and vehicular traffic around his work areas.
 - 1. Barricades shall be full height, floor to ceiling, painted, plywood faced with framing. Other means of barrier protection may be considered on a case by case basis as submitted for review and approval by the State Engineer to provide proper protection of the public and airport workers. Barricades shall have a lockable, secure door from the public side for emergency access.
- B. The Contractor shall be responsible for their own security and protection of their property, including mobilization yard barricades.
- C. Barricades, in general, shall be neat and in good condition, as required for protection. See Drawings for construction barricades detail and extent.
- D. The Contractor shall coordinate and sequence this work with the State Engineer to permit the continuing operation of the existing Airport facility. Barricades shall be removed upon the completion and acceptance of work and the premises left clean and operational.
- E. The Contractor shall be responsible for securing access into and out of the barricaded areas.
- F. Temporary routes due to barricades shall be accessible and comply with the guidelines below:
 - 1. ADAAG 201.3 Temporary and Permanent Structures. These requirements shall apply to temporary and permanent buildings and facilities.
 - 2. ADAAG 206.1 General. Accessible routes shall be provided in accordance with 206 and shall comply with Chapter 4.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300 – SUBMITTALS.
- B. In addition to the security plan as specified in Section 01565 - SECURITY MEASURES, submit drawings showing locations for temporary dust and noise control protection, including details of barrier construction, to be submitted within thirty (30) calendar days after NTP.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01560 – GENERAL ENVIRONMENTAL, HEALTH, & SAFETY CONTROLS

PART I – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

This section addresses the prevention of environmental pollution as the result of construction operations under this contract. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, adversely affect other species of importance, or degrade the utilization of the environment for aesthetic and recreational purposes.

1.03 REFERENCES

All work shall conform to the most recent edition of the following Federal, State, and Local regulations, unless otherwise noted or specified on the drawings or in these specifications. Where conflicts among the requirements or with these specifications exists, the most stringent requirements shall apply.

- A. DOTA Construction Site Runoff Control Program
<http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program>
- 1. DOTA Construction Activities Best Management Practices (BMP) Field Manual.
- B. Department of Health (DOH) Hazard Evaluation & Emergency Response (DOH HEER) <https://health.hawaii.gov/heer/>
- C. State of Hawaii Administrative Rules, Title 11, Department of Health (DOH)
 - 1. Chapter 46, Community Noise Control.
 - 2. Chapter 59, Ambient Air Quality.
 - 3. Chapter 60.1, Air Pollution Control.
 - 4. Chapters 260.1, 261.1, 262.1, 263.1, 264.1, 265.1, 266.1, 268.1, 270.1, 271.1, 273.1, and 279.1, Hazardous Waste Management.
 - 5. Chapter 451, State Contingency Plan.

- 6. Chapter 501, Asbestos Requirements.
- D. CFR Title 40, Protection of the Environment, Chapter I, Environmental Protection Agency.
- E. CFR Title 42, Public Health, Chapter I, Public Health Service, Department of Health and Human Services.

1.04 SUBMITTALS

- A. The Contractor shall submit the following items as required:
 - 1. Individual Wastewater System (IWS) Final Report: For projects involving the construction of an individual wastewater system, an IWS Final Report is required to be submitted to the DOTA Engineering Branch, Environmental Section (AIR-EE) for approval, prior to submitting to DOH Wastewater Branch and prior to project closeout.
 - 2. Underground Injection Control (UIC) Well Final Report: For new drainage well construction and existing drainage well modification, a UIC Well Final Report is required to be submitted to AIR-EE for review and approval, prior to submitting to DOH Safe Drinking Water Branch (SDWB), and prior to project closeout. The Final Report shall also be submitted within the deadline specified on the UIC Approval to Construct. If a project involves abandoning an existing drainage well, written instructions shall be obtained from DOH SDWB and a copy provided to AIR-EE prior to backfilling the demolished well. All supporting documentation requested by DOH post demolition work shall be completed and provided to AIR-EE for review prior to submitting to DOH SDWB.
 - 3. AST (Flammable/Combustible Liquid) Tank Installation: Provide signed record of Final Inspection issued by County Fire Department.
 - 4. Waste Manifests: If a project will generate hazardous waste, the Contractor shall prepare waste manifests in accordance with HAR 11-262 and provide records to AIR-EE.
- B. The Contractor shall comply with all applicable regulations and maintain records of permits, licenses, certificates, and other environmental regulatory requirement correspondence. Submit copies of permits, licenses, certifications, inspection reports, releases, notices, receipts for fee payments, correspondence, records, and similar documents, established for compliance with environmental regulations bearing on performance of the work.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

- A. Emission: The Contractor shall not be allowed to operate equipment and vehicles that show excessive emissions of exhaust gases until corrective repairs or adjustments are made, as determined by the Engineer.
- B. Dust: The Contractor, for the duration of the contract, shall maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, graded areas, staging and storage areas, and all other work areas within or outside the project limits free from dust that would cause a hazard or nuisance to the work or operations of other Contractors, or to persons or property. Industry-accepted methods, that meet requirements of DOTA Construction BMP Field Manual as noted in Specification 01561 and that meet stabilization suitable for the area or materials involved.
- C. Burning on Airport property shall not be permitted.

3.02 SPILL CONTROL

- A. The Contractor shall follow the DOTA Construction Site Runoff Program and relevant documents, such as the Construction BMP Field Manual to implement BMPs to prevent spills and leaks and report and cleanup spills and leaks immediately, as required.

3.03 DISPOSAL

- A. All unusable debris and waste material shall be hauled away to an appropriate local landfill. Contractor shall control dust during loading operations.
- B. Contractor shall consult with the landfill and conduct any required waste characterization to ensure that waste meets the landfill's requirements for size, type, etc.
- C. No burying of debris or waste materials, except for materials that are specifically indicated elsewhere in these specifications as suitable for backfill, shall be permitted on the project site.
- D. Contractor shall manage all construction materials, debris, and waste in a manner that prevents Foreign Object Debris (FOD) from reaching the airfield, where it could be an aircraft safety hazard.

3.04 HAZARDOUS MATERIALS CONTROL

Hazardous materials shall be properly stored and handled. The use of prohibited hazardous materials, e.g., asbestos, lead paint, and polychlorinated biphenyls (PCBs), in the construction of this project shall be strictly prohibited. Any corrective action to remove and replace hazardous material and contaminated work areas shall be at the sole expense of the Contractor.

3.05 OCCUPATIONAL HEALTH AND SAFETY

The Contractor shall at all times comply with all State of Hawaii and Federal rules and regulations related to occupational health and safety and develop and follow a Health and Safety Plan describing measures the Contractor will employ to protect the health and safety of their employees. Include measures required to protect the public from dangers associated with their work.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

All work specified in this Section shall not be measured nor paid for separately but shall be considered incidental to item 01561.1, Construction Site Pollution Controls.

END OF SECTION

SECTION 01561 – CONSTRUCTION SITE POLLUTION CONTROLS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

- A. This Section describes procedures for the proper application of management and engineering controls at State of Hawaii, Department of Transportation, Airports (DOTA) construction sites so that pollutants do not impact any storm drainage system, State water, soil, or groundwater.
- B. The Contractor shall supply all labor, materials, and equipment necessary for the management of stormwater during construction and to carry out the work in accordance with these specifications, and all applicable Federal, State, and local regulations and latest amendments.
- C. This Section also applies to construction support activities including concrete or asphalt batch plants, rock crushing plants, equipment staging yards/areas, material storage areas, excavated material disposal areas, borrow areas, waste management facilities, sanitary facilities, material storage areas, and temporary equipment fueling locations, regardless of their proximity to the Airport Property and State Right-of-Way. For areas serving multiple construction projects or operating beyond the completion of the construction project in which it supports, the Contractor shall be responsible for securing the necessary permits, clearances, and documents, and following the conditions of the permits and clearances, at no cost to the State.
- D. The Contractor shall be responsible for all subcontractors, suppliers, and vendors, and shall ensure that the means and methods of construction activities of subcontractors, suppliers, and vendors are in full compliance with this Section.
- E. The Contractor shall examine and be familiar with documents related to stormwater management at the airports and shall comply with related requirements for construction stormwater control. Should a requirement not be clearly described within the construction plans, specifications, permits and other applicable bid documents, notify the Engineer immediately for interpretation.

1.03 REFERENCES

All work shall conform to the most recent edition of the following, unless otherwise noted or specified on the drawings or in these specifications. Where conflicts among the requirements or with these specifications exists, the most stringent requirements shall apply.

- A. DOTA Construction Site Runoff Control Program
<http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-site-runoff-control-program>
 - 1. DOTA Construction Activities Best Management Practices (BMP) Field Manual.
 - 2. DOTA Environmental Requirements for Construction Projects Standard Operating Procedures.
 - 3. DOTA Stormwater Management Plans (SWMPs) for the Daniel K. Inouye International Airport (HNL) and Kahului Airport (OGG), as applicable.
 - 4. DOTA Industrial Stormwater Pollution Prevention Plans (SWPPPs) for the HNL, OGG, and Lihue Airport (LIH), as applicable.
- B. State of Hawaii Administrative Rules, Title 11, Department of Health (DOH)
<https://health.hawaii.gov/opppd/departments-of-health-administrative-rules-title-11/>
 - 1. Chapter 54, Water Quality Standards
 - 2. Chapter 55, Water Pollution Control
 - 3. Chapter 451, State Contingency Plan
- C. United States (U.S.) Code of Federal Regulations (CFR), Title 40, Chapter I: Environmental Protection Agency.
- D. Hawaii Revised Statutes (HRS), Part I, Chapter 128D, "Environmental Response Law".

PART 2 – PRODUCTS

2.01 MATERIALS

Comply with applicable materials described in the current DOTA Construction Activities BMP Field Manual. Refer to FAA Advisory Circulars and DOTA District Office, including Wildlife Hazard Management Plan, for additional guidance and conditions. In addition, materials shall comply with the following:

- A. Grass: The FAA and USDA recommend the following grass species when requiring grass: "No-Mow" bermudagrass ("Green Velvet") (*Cynodon dactylon*) or Seashore paspalum (*Paspalum vaginatum*). These species possess higher than average drought resistance, saline soil tolerances, and most importantly, do not produce seed heads attractive to the majority of hazardous avian species. Use stolons, sprigs, or plugs to avoid providing hazardous species with a readily available food source. The use of seeds is generally not allowed.

Alternative grass species shall only be applied with the approval by the Engineer

after consultation with United States Department of Agriculture (USDA) airport representative. This includes, but is not limited to, sodding, cuttings, and planting. Grass shall be a quick-growing species. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover.

- B. Irrigation: Any required irrigation shall be done after dark to reduce instances of water becoming a hazardous wildlife attractant.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION REQUIREMENTS

Do not begin construction activities until all submittals detailed in this Subsection are completed, submitted to the Engineer, and accepted in writing by AIR-EE.

- A. Water Pollution, Dust, Sediment, and Erosion Control Meeting: Schedule a water pollution, dust, sediment, and erosion control meeting with the Engineer after all documents required by AIR-EE are submitted to the Engineer and accepted in writing by AIR-EE. The meeting shall be scheduled a minimum of 14 calendar days prior to the Start Work Date. At a minimum, the meeting shall be attended by the Contractor, subcontractors whose work may provide an impact to stormwater or site environmental conditions, Engineer, AIR-EE, and any authorized representatives of the designated attendees. The meeting will discuss the sequence of work and plans and proposals for water pollution, dust, sediment, and erosion controls.
- B. Land Disturbance Calculations: The Contractor is responsible for calculating the total land disturbance for the life of the project and complying with all environmental requirements associated with the total land disturbance calculated. Disturbance of land is defined by Hawaii Department of Health as “the penetration, turning, or moving of soil or resurfacing of pavement with exposure of the base course or the exposure of bare soil or ground surface, including the land surface exposed by construction roads, baseyards, staging areas, demolition, headquarters, and parking areas. It does not include grass or weed cutting, bush or tree trimming or felling that leaves soil or ground intact. It includes ‘grubbing’ in its normal meaning of the use of equipment to knock down and push vegetation out of the way, typically uprooting vegetation and disturbing the ground surface.”

Land disturbing activities that shall be included in the disturbance area calculation shall follow the guidance provided in the Environmental Requirements for Construction Projects Standard Operating Procedures.

- C. Site-Specific BMP (SSBMP) Plan or SWPPP: The Contractor shall submit a SSBMP Plan (for projects disturbing less than one acre) or SWPPP (for projects disturbing one acre or more) using the latest DOTA template for acceptance by AIR-EE. If a SSBMP Plan or SWPPP was prepared by the Designer, the Contractor shall revise the plan using the latest template to include additional

information required of the Contractor and any changes the Contractor proposes. The SSBMP Plan or SWPPP shall include site-specific temporary BMPs following requirements and practices outlined in DOTA's "Construction Activities BMP Field Manual." All AIR-EE comments shall be resolved and the SSBMP Plan or SWPPP approved prior to the start of land-disturbing activities, including those activities that are needed for the implementation of the BMPs. Submission of the complete and acceptable SSBMP Plan or SWPPP is the sole responsibility of the Contractor, and additional contract time will not be issued for delays due to incompleteness.

D. SSBMP Plan/SWPPP Modifications: Modify, as necessary, and resubmit amended SSBMP Plan or SWPPP and construction schedules to the Engineer for acceptance by AIR-EE. Amendments to the SSBMP Plan or SWPPP shall be made under the following circumstances at a minimum:

1. Conditions that develop during construction that were unforeseen during the design and pre-construction stages that could impact stormwater, soil, or groundwater.
2. Changes to the Contractor's Means and Methods of Construction that could impact stormwater, soil, or groundwater.
3. Omitted conditions that should have been allowed for in the accepted documents.
4. A SSBMP Plan measure that replaces an accepted SSBMP Plan measure that was not satisfactorily performing.
5. Revised dates of installation and/or removal of SSBMP Plan measures.

SSBMP Plan/SWPPP modifications shall be submitted to the Engineer and accepted in writing by AIR-EE before implementing the revised site-specific BMPs in the field. Amendments to the SSBMP Plan or SWPPP shall be included with the original SSBMP Plan or SWPPP and documented in the Amendment Log.

E. Documentation: A copy of the accepted original or amended SSBMP Plan or SWPPP, with the signed certification by the authorized representative filed with DOH for SWPPPs, shall be kept on site or at an accessible location so that it can be made available at the time of an on-site inspection, or upon request by the Engineer, AIR-EE, DOTA's designated authorized representative, and/or DOH/EPA Representative.

F. NPDES Construction Permit: If the total land disturbance for the life of the project, including all construction support activity areas, is one acre or more, coverage under an NPDES Permit Authorizing Discharges of Storm Water Associated with Construction Activity (NPDES Construction Permit) authorizing stormwater discharges associated with construction activity is required from the Department of Health, Clean Water Branch (CWB).

1. Do not begin land-disturbing activities until the CWB has issued an Individual NPDES Permit or NGPC. Conduct land-disturbing activities in accordance with the conditions of the NPDES Permit and/or NGPC.
 2. The Contractor shall submit a Notification of Start to CWB a minimum of seven calendar days before the start of construction and provide AIR-EE with a record of submittal.
 3. Before construction begins, the Contractor shall assign one of their personnel as the Duly Authorized Representative, in accordance with Section 15 of Appendix A, Chapter 1155. The Duly Authorized Representative is responsible for compliance with the NPDES Construction Permit (i.e., operations of the construction project) and shall certify, sign, and date various documents, including the SWPPP and SWPPP inspection documents.
- G. Solid Waste Disclosure: Submit the Solid Waste Disclosure Form for Construction Sites, if applicable, to the DOH Solid Waste Branch as specified on the form within 7 calendar days before the start of construction activities and provide a copy to the Engineer. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer. This shall also include documentation from any intermediary facility where solid waste is stored, handled or processed.
- H. NPDES Hydrotesting Permit: If hydrotesting activities require effluent discharge into State waters or drainage systems, coverage under an NPDES Hydrotesting Waters Permit authorizing discharges associated with hydrotesting is required from the CWB. Do not begin hydrotesting activities until the CWB has issued an Individual NPDES Permit or NGPC for hydrotesting. Conduct Hydrotesting operations in accordance with the conditions of the NPDES Permit and/or NGPC.
- I. NPDES Dewatering Permit: If dewatering activities require effluent discharge into State waters or drainage systems, coverage under an NPDES Dewatering Permit authorizing discharges associated with dewatering is required from the CWB. Do not begin dewatering activities until the CWB has issued an Individual NPDES Permit or NGPC for dewatering. Conduct dewatering operations in accordance with the conditions of the permit or NGPC.
- J. Construction BMP Training: All Contractor's and subcontractor's employees on the project shall complete the DOTA Construction BMP Training prior to entering the construction site and every calendar year thereafter. All Contractor and subcontractor personnel involved with construction project responsibilities shall also be trained on the site-specific BMPs that are utilized during construction and spill response. Records of completion and/or training roster sign-in sheet shall be up to date and included in the SWPPP or SSBMP Plan. Additional training required by AIR-EE shall be at no additional time or cost to the project. There are two training options:

1. All Contractor and subcontractor employees involved with construction project responsibilities watch the DOTA Construction BMP Training Video located on the DOTA Construction Site Runoff Control Program webpage and complete the [DOTA Construction BMP Training Survey](#) with a passing score, or
2. The Contractor and subcontractor supervisors/managers watch the DOTA Construction BMP Training Video located on the DOTA Construction Site Runoff Control Program webpage, complete the [DOTA Construction BMP Training Survey](#) with a passing score, then train all employees involved with construction project responsibilities and submit a sign-in roster documenting all employees trained at the bottom of the [DOTA Construction BMP Training Survey](#).

[DOTA Construction BMP Training Survey:](#)

<https://hidot.hawaii.gov/airports/doing-business/engineering/environmental/construction-bmp-training-survey/>

- K. Construction Connection, Discharge, and Surface Runoff Permit: The Contractor shall complete the Contractor's section of the Construction Connection, Discharge, and Surface Runoff Permit and submit to AIR-EE for review. All AIR-EE comments shall be resolved prior to the start of land-disturbing activities.

3.02 CONSTRUCTION REQUIREMENTS

- A. Construction Start: Do not expose or disturb surface area of earth material or initiate any land-disturbing activities until submittals detailed in Subsection 01561.3.01 – Pre-construction Requirements are completed, submitted to the Engineer and accepted in writing by AIR-EE. Once installation of BMPs is allowed, a Pre-construction BMP Inspection is conducted, and all deficiencies that are noted during the inspection shall be corrected prior to any other ground disturbance.
- B. BMP Installation and Maintenance: Provide, install, maintain, monitor, repair and replace BMPs as needed to maintain efficacy. Address all inspection comments received from the Engineer, AIR-EE, and/or DOTA's designated authorized representative.
- C. Protect temporarily or permanently disturbed soil surface from rainfall impact, runoff, and wind before the end of each work day. Coordinate and schedule the work to the maximum extent possible to minimize the amount of exposed or disturbed surface area of earth material.
- D. Install and maintain stabilized construction entrances/exits, including any wheel washes, to minimize tracking of dirt and mud onto roadways, sidewalks, and other paved areas. Restrict traffic to stabilized construction entrance areas only. Clean dirt, mud, or other material tracked onto the road, sidewalk, or other paved area by the end of the same day in which the track-out occurs. If tracking is excessive or sediment is being transported farther along the pavement or

sidewalk by other vehicles traveling outside of the construction site, conduct cleaning and sweeping immediately. Modify stabilized construction entrances/exits, as needed, to prevent mud from being tracked onto road. Stabilize entire access roads if necessary.

- E. Maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas within the project limits free from dust that would cause a hazard to the work, airport operations, operations of other contractors, or to persons or property. If chemicals are used as soil stabilizers for erosion and dust control, submit the manufacturer's product data sheets of the chemicals to the Project Manager for acceptance by AIR-EE. Oil treating shall not be used. Dust screens and fabrics are not allowed to be mounted on, or to inhibit the view of, the TSA and AOA Security Fences.
- F. Cover exposed surfaces of materials completely with tarpaulin or a similar device when transporting aggregate, soil, excavated material, or other materials that may be a source of fugitive dust.
- G. Protect ditches, channels, and other drainageways leading away from cuts and fills at all times by:
 - 1. Hydromulching cuts and fills that may erode.
 - 2. Installing check dams or other silt control devices.
 - 3. Other methods acceptable to AIR-EE.
- H. Clean up and remove any pollutant that is attributed to the Contractor. Care shall be taken to ensure that no petroleum/chemical products, bituminous materials, or other deleterious substances, including debris, are allowed to fall, flow, leach, or otherwise enter the sewage systems or storm drains. Deposition of solid waste or the discharge of liquid waste, such as fuels, lubricants, bituminous waste, untreated sewage and other pollutants that may contaminate stormwater, surface waters, soil, or groundwater shall not be permitted.
- I. Disturbed Area Stabilization: Immediately initiate stabilization of exposed soil areas upon completion of land-disturbing activities for areas where disturbance has permanently or temporarily ceased on any portion of the site. Land-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Land-disturbing activities have temporarily ceased when clearing, grading, or excavation within any area of the site will not resume for a period of 14 or more calendar days, but such activities will resume in the future. The term "immediately" is used in this Section to define the deadline for initiating stabilization measures. "Immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the land-disturbing activities have temporarily or permanently ceased.

1. After the initiation of stabilization, stabilization activities shall be completed according to the following timeline:
 - a. For projects with an NPDES Construction Permit:
 - For construction areas discharging into waters not impaired for nutrients or sediments, complete installation of stabilization measures within 14 calendar days after the temporary or permanent cessation of land-disturbing activities.
 - For construction areas discharging into nutrient or sediment impaired waters, complete installation of stabilization measures within 7 calendar days after the temporary or permanent cessation of land-disturbing activities.
 - b. For projects without an NPDES Construction Permit, complete stabilization within 14 calendar days after the temporary or permanent cessation of land-disturbing activities.
- J. Notice of Cessation: For projects with an NPDES Construction Permit, the Contractor shall submit a Notice of Cessation to CWB within seven calendar days after the end of the month that the project was completed and provide AIR-EE with a record of submittal.
- K. Changes to Land-disturbing Activities: The Contractor shall be responsible to prepare a new SWPPP or SSBMP Plans or amend existing SWPPP or SSBMP Plans if changes to the project or to the Contractor's activities result in land-disturbing activities additional to those previously approved:
 1. Land-disturbing activity outside of the approved limits is NOT allowed until approval and proper permits are received. Revised documents, including an updated SWPPP or SSBMP Plan, shall be submitted to and approved by AIR-EE prior to conducting additional land-disturbing activities.
 2. If coverage under an NPDES Construction Permit is needed, no activity in the additional area may occur until the additional permit coverage is granted:
 - a. If the project was already granted coverage under an NPDES Construction Permit, additional coverage shall be obtained from CWB for the additional area, either by adding the area to existing project documents, and applying for NPDES Construction Permit coverage for the entire project OR by creating new documents and obtaining separate NPDES Construction Permit coverage for the additional area.
 - b. If the new disturbed area will result in the total disturbed area

equaling one (1.0) acre or more for a project without existing NPDES Construction Permit coverage, NPDES Construction Permit coverage shall be obtained from CWB that will cover all land-disturbing activities anticipated for the life of the project.

3.03 INSPECTIONS

Refer to the DOTA Construction Site Runoff Program for information pertaining to AIR-EE BMP inspections (pre-construction, routine, and final). Contractor self-inspections shall occur based on the frequency outlined in the SSBMP Plan and, if applicable, NPDES Permit (HAR 11-55) and SWPPP requirements.

- A. Corrective Actions: The Contractor shall be responsible for the correction of all deficiencies identified during any of the above inspections.
1. If the Contractor fails to satisfactorily address inspection deficiencies, the DOTA reserves the right to employ outside assistance or use the State's own labor forces to provide necessary corrective measures. The Contractor will be fully responsible for all related cost and time. The State will charge the Contractor such incurred costs plus any associated project engineering costs and will make appropriate deductions from the Contractor's progress payment. Additionally, DOTA can issue liquidated damages for deficiencies not resolved to DOTA's satisfaction and for illicit discharges or contaminant discharges to soil, groundwater, surface water, or State waters (see Appendix A).
 2. Failure to install or maintain site-specific BMP measures may result in the assessment of liquidated damages (Appendix A). Depending on the severity of the deficiencies, additional enforcement actions, such as suspension of work and/or termination of the contract (with the Contractor's Surety being fully responsible for all additional costs incurred by the State), can be conducted and assessed against the Contractor.
 3. For all citations or fines received by the DOTA for non-compliance, including non-compliance with NPDES Permit conditions, the Contractor shall reimburse the State within 30 calendar days for the full amount of outstanding cost that the State has incurred. The State may deduct incurred costs from the Contractor's progress payments; however, the Contractor shall be responsible for reimbursing the State if the costs exceed remaining payments owed to the Contractor.
 4. The Contractor shall be responsible for all citations, fines and penalties levied by DOH or EPA against the State due to the Contractor's failure to satisfactorily address site-specific BMP deficiencies and/or any Contractor's illicit discharges. The State may make the appropriate deductions from the Contractor's progress payment; however, the Contractor shall be responsible for reimbursing the State if the costs of correction exceed remaining payments owed to the Contractor.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

The work specified in this Section will be paid for at the contract lump sum price. Payment shall be full compensation for work prescribed in this Section and contract documents, including but not limited to, all labor, materials, tools, equipment, and all incidentals necessary to install, maintain, monitor, repair, replace, modify, and remove site-specific BMP measures.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01561.1	Construction Site Pollution Controls	Lump Sum

Partial payments shall be paid in the Monthly Progress Payment as follows:

- A. 20% of the line item price shall be paid upon the satisfactory completion of the Pre-construction BMP Inspection and associated corrective actions accepted by AIR-EE or their designated authorized representative, as described in Section 01561.3.03(A), above.
- B. 70% of the line item price shall be paid in equal monthly payments over the duration of the contract. Failure to satisfactorily apply, maintain, or modify BMP measures and devices, and/or submittals shall result in the withholding of monthly progress payments for this line item.

For projects that will disturb one acre or more of land, or will be part of a larger common plan of development that will disturb one acre or more of land, payments shall be made only after Routine BMP Inspections described in Section 01561.3.03 above have been satisfactorily completed, and associated corrective actions accepted by AIR-EE or their designated authorized representative.

- C. The remaining 10% of the line item price shall be paid after all temporary BMP measures have been satisfactorily removed.

Payment will be made only after the satisfactory completion of the Final BMP Inspection and associated corrective actions accepted by AIR-EE or their designated authorized representative, and acceptance of the Post-construction BMPs by AIR-EE or their designated authorized representative.

Liquidated Damages, up to \$25,000 per day (Appendix A), shall be assessed for each non-compliance of the BMP requirements described in this Section. The Contractor shall not be entitled to recover any Liquidated Damages assessed, even after the deficiencies have been corrected.

The Liquidated Damages cited in Appendix A are in excess of reimbursement for any citations, fines, or penalties levied by any regulatory agency against the State due to the Contractor's violations of clean water regulations or standards.

Appendix A. Liquidated Damages Schedule for Non-Compliances

Non-Compliance	Amount
Failure to obtain coverage under an NPDES Construction Permit for construction activities associated with a project that will disturb one acre or more of land, or will be part of a larger common plan of development that will disturb one acre or more of land, as defined by DOH.	\$1,000 per calendar day per violation.
Failure to obtain coverage under an NPDES Hydrotesting Permit for hydrotesting activities that will require effluent discharge into State waters or drainage systems.	\$1,000 per calendar day per violation.
Failure to obtain coverage under an NPDES Dewatering Permit for dewatering activities that will require effluent discharge into State waters or drainage systems.	\$1,000 per calendar day per violation.
Failure to comply with the conditions specified in an NPDES Permit, or any other applicable permit.	\$1,000 per calendar day per violation.
Failure to schedule a Pre-construction BMP Inspection and receive acceptance of all associated corrective actions prior to conducting land-disturbing activities.	\$1,000 per calendar day per violation.
Failure to provide corrective actions accepted by AIR-EE or their designated authorized representative by the deadlines identified in the BMP inspection report.	\$1,000 per calendar day per violation.
Failure to have the accepted SSBMP Plan and amendments or the accepted SWPPP and amendments available at a project construction site.	\$1,000 per calendar day per violation.
Failure to properly install or maintain a BMP specified by the SSBMP Plan, SWPPP, contract drawings and documents, or permit.	\$2,000 per calendar day per violation.

Non-Compliance	Amount
Failure to have an accepted amendment to the SSBMP Plan or an accepted amendment to the SWPPP prior to implementing changes to previously accepted BMPs. Note: Advance review and acceptance can be provided to satisfy this non-compliance. However, for projects with an NGPC or NPDES permit, the written amendment shall still be formally submitted for certification and signature by the authorized representative identified in the NGPC or NPDES Permit.	\$2,000 per calendar day per violation.
Failure to conduct required inspections.	\$1,000 for each of the first ten violations, \$2,500 for each of the next ten violations, \$5,000 for each subsequent violation.
Failure to maintain required records such as BMP inspection reports, rain gauge data logs, etc.	\$500 per calendar day for the first ten days of each violation, \$1,000 per calendar day for the next ten days of each violation, \$2,500 per calendar day for each subsequent day of violation.
Any violation resulting in a polluted discharge.	Up to \$25,000 per calendar day per violation.
Note: Liquidated Damages shown in the Table shall be assessed at the discretion of the DOTA.	

Assessment of Liquidated Damages for Non-Compliance:

The Contractor may be assessed liquidated damages by issuance of an Enforcement Letter. The Enforcement Letter shall indicate the amount of liquidated damages that are assessed for the non-compliances which shall be deducted from the Contractor's next progress payment. The Enforcement Letter will be sent electronically via e-mail and a hard copy to the Contractor's designated representative(s), identified in Section 01561.3.01(2)(d), responsible for the Contractor's Construction Site Runoff Control Program. An Enforcement Letter may be issued with or without previous verbal notifications, written warnings, or official enforcement letters (i.e. Warning Letter or Notice of Violation (NOV).

Liquidated Damages may be assessed for the following:

- Non-compliances listed in the Table, herein, included in Appendix A.
- Non-compliances have not been corrected in the timeframes noted.
- Corrective actions are not completed after a verbal notification, written warning (email or formal letter), or NOV is issued.
- Contractors are non-responsive to DOTA's directives.
- Repeated non-compliance.
- A polluted discharge has occurred.

The number of days used for the liquidated damages calculations shall start on the day that the non-compliance was required to be corrected and shall end on the day that the non-compliance is corrected and accepted. If DOTA's personnel are not able to go out in the field to verify that the BMP deficiencies are corrected in the timeframe specified, the Contractor can send photographs showing the corrected deficiency via e-mail to the DOTA Engineer and AIR-EE along with documentation on how the deficiency was corrected. The DOTA Engineer and AIR-EE may visit the site to verify the corrective actions are acceptable. If the corrective actions are acceptable, then the clock stops on the day that the documentation was received.

The Contractor shall not be entitled for compensation for any liquidated damages or penalty, fine, or citations assessed and deducted from the Contractor's progress payments, even after corrective actions have been taken.

END OF SECTION

SECTION 01565 - SECURITY MEASURES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION

The Contractor shall incorporate the State's airport security measures as part of his work. The Contractor shall adhere to established and enhanced security procedures, as mandated by the State and FAA, throughout the course of this Contract.

1.03 SUBMITTALS

Submit a security plan that addresses the conditions set forth in this Contract. Said plan shall contain, at a minimum, a plan of the project scope with locations of construction barricades with secured entry/exits, identification of locations requiring guards, Contractor measures to ensure security of worksite and personnel and procedures to ensure the containment of the worksite from unauthorized personnel. This package shall be submitted within 14 calendar days after award of the Contract.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 SECURITY

- A. Obtain airport security identification badges for all employees working on this project and Air Operations Area (AOA) decals for all vehicles entering the AOA area in accordance to the requirements stated in Special Provisions, Paragraph 8.21 – "OPERATION OF CONTRACTOR'S MOTOR VEHICLE AND PERSONNEL IN RESTRICTED AIR OPERATIONS AND MOVEMENT AREAS". All requests for badges and AOA decals shall be submitted in writing to the Airport District Manager through the State Engineer within 14 calendar days after award of the Contract. Only authorized personnel working on this project shall be allowed to obtain badges. The Contractor shall be responsible to pay for all costs associated with complying with airport security requirements, including obtaining airport security identification badges.

Currently, the fee to obtain a new airport identification badge is \$60.00, but due to the changing fee structure of these services, the Contractor shall inquire with the Kahului Airport Pass & ID office at (808) 872-3874. For

other Airport Districts cost inquiries should be made the District Manager's office.

- B. The Contractor shall comply with all existing and proposed airport security initiative requirements. Contractor may be subject to civil penalties up to \$35,000.00 for each security violation.
- C. The Contractor shall protect work areas from theft, vandalism, and unauthorized entry. Ensure that proper methods are undertaken to secure tools, materials, and equipment from the public.
- D. All vehicles entering the AOA through any of the Airport Access Check Points may be subject to search. The Contractor shall allow extra time for these inspections and be able to provide personnel, as required, to assist Airport security personnel during the inspections.
- E. If required by the State, the Contractor will be responsible for the posting of guards at access points where the construction traffic may compromise the integrity of the airport security. Payment for posting of security guards required by the State shall be paid for as an allowance item in the Proposal Schedule. The Contractor shall submit the name and qualifications of the security company to the State Engineer for review prior to hiring the security company. The security company shall have extensive experience in working on airports and knowledgeable in airport security procedures within the State of Hawaii.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF PAYMENT

Work under this Section, except for posting security guards, shall be considered incidental to, and included in the prices bid for the various items of work in this project.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01565.1	Security Measures	Allowance

Posting of security guards required by the State shall be paid for under an allowance item in the Proposal Schedule. The allowance is an estimate, and the amount shall not exceed the maximum amount shown in the proposal schedule. Additional charges by the Contractor for overhead, coordination, profit, insurances, and other incidental expenses shall not be allowed.

END OF SECTION

SECTION 01580 - TEMPORARY FACILITIES AND UTILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions for Construction Projects (2016), Special Provisions and General Requirements of the Specifications, apply to the work specified in this section.

1.02 DESCRIPTION

This item shall consist of arranging and maintaining all utilities including, but not limited to, water, electricity, sewage disposal and telephone communications in the work area which the Contractor and State Engineer deems necessary to meet the requirements of the work under the contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 TEMPORARY UTILITIES DURING CONSTRUCTION

- A. Water and Sanitation: The Contractor shall provide temporary drinking water and sanitary facilities for the field personnel. The facilities shall be in accordance with the applicable health regulations and shall be maintained clean and operable until the conclusion of the construction work.
- B. Telephone: The Contractor shall have a telephone available for the State's use for communications with field personnel. Cellular telephones are acceptable. The Contractor shall install the telephone immediately upon starting work and maintain service until the project is completed. All costs associated with obtaining and maintaining telephone service shall be borne by the Contractor.
- C. Electricity: Contractor shall obtain or provide temporary electric power and shall pay for all connections and energy charges incurred during construction.
- D. Metering: Water and electrical services shall be metered and payment for meters and services shall be borne by the Contractor. Temporary connections for water shall include installation of a meter and backflow preventer at the point of connection according to State standards at the Contractor's cost. The Contractor shall submit requests for temporary connections in writing to the State Engineer 14 calendar days prior to the connection and shall include a description of work and a sketch of the proposed installation.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the contract Lump Sum Price.

END OF SECTION

SECTION 01700 – MOBILIZATION & DEMOBILIZATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 GENERAL REQUIREMENTS

- A. "Hawaii Standard Specifications for Road, Bridge, and Public Works Construction, 2005," are hereby incorporated into and made a part of these specifications by reference unless otherwise modified hereinafter.

1.03 MOBILIZATION

- A. The Contractor shall mobilize and transport his construction plant and equipment including materials and supplies for operation to the site of work, construct temporary buildings and facilities as necessary, and assemble the equipment at the site as soon as possible after receipt of Notice to Proceed, subject to the provisions of the General Provisions.

1.04 DEMOBILIZATION

- A. The Contractor shall demobilize and transport his construction plant and equipment including materials, supplies and temporary buildings off the site as soon as possible after construction is completed. Demobilization shall include all cleanup required under this contract and as directed by the Engineer. Demobilization and final cleanup shall be completed prior to final acceptance.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

PART 4 MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

Work under this section will not be measured nor paid for separately but shall be considered incidental to and included in the prices bid for the lump sum items of work in this project.

- A. A line item will be created in the Schedule of Values, and the maximum pay item allowed for "Mobilization" shall be an amount not to exceed six (6) percent of the sum of all items (excluding this item and all Allowances). If the proposal submitted by the bidder indicates an amount in excess of the allowable maximum, the indicated amount or amounts shall be reduced to the allowable maximum; the "Total Amount for Comparison of Bids," in the proposal schedule shall be adjusted to reflect any such reduction. For the purposes of comparing bids and determining the contract price to be inserted in the contract awarded to the bidder, if any is so awarded, the "Sum of All Items" adjusted in accordance with the foregoing shall be used and the bidder's proposal shall be deemed to have been submitted for the amounts as reduced and adjusted in accordance herewith."
- B. Demobilization will not be measured for payment. A separate line item called "Demobilization" will be added to the Contractor's Schedule of Values after the contract has been awarded. The total amount for this item shall be 2.5% of the Contractor's total bid amount and will be deducted from other line items in the schedule of values as negotiated between the Contractor and the State. **THE CONTRACTOR SHALL NOT MODIFY THE PROPOSAL SCHEDULE BY ADDING A "DEMOBILIZATION" BID ITEM TO THE PROPOSAL SCHEDULE.**
- C. The Mobilization cost shall be incidental to and included in the LS Construction Work bid item, and that a separate line item will be created in the Schedule of Values for Mobilization with an amount not to exceed 6% of the sum of all items (excluding the mobilization item and all allowances).

4.02 BASIS OF PAYMENT

- A. Mobilization will be paid for at the Contract Lump Sum Price.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01700.1	Mobilization (Not to Exceed 6% of sum of all items, Excluding this item and all allowances)	Lump Sum

- B. Partial payment for "Mobilization" will be made as follows:

- 1. When 2 ½ percent of the original contract amount is earned, 50 percent of the bid amount will be paid.

2. When 5 percent of the original contract amount is earned, 75 percent of the bid amount will be paid.
 3. When 10 percent of the original contract amount is earned, 100 percent of the bid amount will be paid.
Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the contract.
- C. Partial payment will not be paid for Demobilization. Full payment will be made on the Contractor's final payment request. This will occur after the Contractor has fulfilled all of the requirements of the Contract bid documents to the satisfaction of the State and issuance of the Final Acceptance letter to the Contractor by the State.

END OF SECTION

SECTION 01800 – SPECIAL REQUIREMENTS FOR CONTRACTORS ON THE AOA

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions of the Contract, including General and Special Provisions and General Requirements of the Specifications shall apply to the work specified in this section.

1.02 DESCRIPTION OF WORK

- A. Provide all materials, labor, equipment, and tools necessary to complete the Special Requirements for Contractors on the Air Operations Area (AOA).
- B. The requirements of the Section are essential for ensuring public and worker safety on this project; hence, the Contractor shall comply with all requirements of this section when performing work on the AOA. Should the Contractor fail to comply with any requirement of this section; work may be delayed or temporarily suspended without contract time extensions. Liquidated damages or fines may result. All liquidated damages or fines resulting from violations due to improper activity, inattention, or failure to comply with required airport procedures; shall be borne by the Contractor.

1.03 PROJECT LIMITATIONS

- A. The project normal working hours shall refer to SECTION 01010 – DESCRIPTION OF WORK. The Contractor shall work continuously during the project duration. No work shall be performed during State Holidays or when weather conditions restrict construction from occurring.

1.04 AOA SECURITY REQUIREMENTS

- A. AOA Access Points: The Contractor will be assigned only one access point for each work phase, and shall ensure that all of their personnel, vehicles, and equipment enter and exit the AOA only through the assigned access point.

All vehicles entering the AOA through any of the Airport Access Check Points may be subject to search. The Contractor shall allow extra time for these inspections and be able to provide personnel, as required, to assist Airport security personnel during the inspection.

If the State deems an emergency situation has rendered the assigned access point unusable the Contractor will be assigned a temporary access point for the remaining workday. Should the original assigned access point remain unusable for a prolonged period, the Contractor will be assigned a new access point the following day and shall be responsible for all requirements at the new assigned access point.

- B. The Contractor shall comply with all existing and proposed airport security initiative requirements. Contractor may be subject to civil penalties up to \$35,000.00 for each security violation.
- C. The Contractor shall protect work areas from theft, vandalism and unauthorized entry. Ensure that proper methods are undertaken to secure tools, materials and equipment from the public.
- D. AOA Access Gates: Should the Contractor's assigned AOA access point be through an unguarded gate, the Contractor shall be responsible for the following:
 - 1. Obtain the AOA access gate key(s) from the Airport Security Office (a \$500.00 deposit is required per key).
 - 2. Provide all gate guards required. Each gate guard shall possess the following expertise:
 - a. Familiarity with all of the AOA security access clearance requirements.
 - b. Knowledge related to AOA access badge, AOA vehicle decal, and airport vehicle operator requirements.
 - c. A communication device and specific instructions to call for assistance whenever problems occur.
 - 3. Proper control of the AOA access gate in accordance with all required airport security procedures.
 - 4. Close the AOA access gate during prolonged periods of inactivity; and close and lock whenever the AOA access gate is not in use, or is unattended.

1.05 AOA OPERATIONAL SAFETY REQUIREMENTS

- A. It is the explicit intent of this contract that the safety of aircraft, and all of the personnel and equipment under the Contractor's jurisdiction, be the highest priority; hence, the Contractor shall carefully plan the operations of all personnel and equipment under their jurisdiction to provide for the free and unobstructed movement of all aircraft on the AOA, and to provide for the uninterrupted operation of visual and electronic signals used to guide aircraft while all personnel and equipment under their jurisdiction traverses the AOA.
- B. With the exception of actual construction methods, the Federal Aviation Administration (FAA), Airport Traffic Control Tower (ATCT) will have full authority to control the Contractor's movements within the existing movement area. If the FAA, ATCT notifies the Contractor to temporarily halt operations, the Contractor shall effectively notify all personnel and equipment under its jurisdiction, without using lighted flares, to cease all work and move all equipment and themselves away from hazardous areas.
- C. The Contractor is responsible for all of their movements on the AOA. Should the State deem that an escort, flagman, or driver fails to perform their duties, that escort, flagman, or driver may be terminated, or suspended and required to undergo additional training.

- 1.06 AOA COMMUNICATION DEVICES: The Contractor shall have at least two (2) people on the AOA possessing and continuously monitoring the following fully charged communication devices:
- A. A two-way radio capable of communicating on frequencies 118.90 (Tower) and 121.90 (Ground); with a spare charged battery and
 - B. A cellular telephone, with a listing of all required emergency contact numbers.
- 1.07 AOA TRAVEL ROUTE: The Contractor will be assigned only one (1) travel route per work phase, and shall ensure that all of their personnel, vehicles, and equipment traverses the AOA only along the assigned travel route.
- Should the State deem that an emergency situation has caused the assigned travel route to become unusable the Contractor will be assigned a temporary travel route for the duration needed and shall be responsible for all requirements associated with the new assigned travel route.
- 1.08 AOA AUTHORIZED VEHICLES: Only vehicles considered safe, and required to complete the contracted work will be allowed to operate on the AOA. Each vehicle operating on the AOA shall be authorized, possessing:
- A. An AOA vehicle decal obtained from the Airport Security Office and displayed on the driver's side front bumper (use of an AOA temporary vehicle permit is not allowed).
 - B. Insurance coverage as required by Article 7.1 of the General Provisions, and further amended by the Special Provisions.
- 1.09 VEHICLE AND EQUIPMENT REQUIREMENTS ON THE AOA: Each vehicle and driven piece of equipment shall possess the following when operating or staging on the AOA.
- A. Operations occurring at night, or during periods of poor visibility, shall require a Flashing Amber Beacon mounted atop each vehicle /equipment's highest point.
 - B. Daylight operations with clear visibility, shall require a Checkered Orange and White Flag attached to a staff that is mounted to each vehicle and/or equipment in lieu of a Flashing Amber Beacon. The flag shall be at least a three-foot square with a checker pattern of international orange and white squares that are at least one-foot on each side.
 - C. Two placards shall be on both sides of each vehicle or equipment at all times to identify the vehicle or equipment owner. Placards shall contain the company name in letters at least four-inches (4") tall, or six-inch (6") minimum-sized company logo.

- D. All additional equipment marking, lighting and positioning that may be required by the FAA.
- 1.10 AOA DRIVERS: All people operating a vehicle or any driven piece of equipment on the AOA shall possess the following license, permit and expertise:
- A. Current and valid Hawaii State Driver's License.
 - B. Current and valid Airport Vehicle Operator's Permit.
 - C. Complete Airport Familiarization.
 - D. An understanding and ability to identify the following:
 - 1. All RSA's (Runway Safety Area), TWSA's (Taxiway Safety Area).
 - 2. All AOA Markings, Lighting, and Signing.
 - 3. The Need for Control of DOD (Foreign Object Debris).
 - 4. All AOA Equipment for Aircraft.
 - 5. All AOA Critical Areas.
 - 6. All AOA Travel Routes for the Various Work Places.
 - E. An understanding and ability to follow all ground vehicle operation and communication requirements while operating on the AOA.
 - F. Successful completion of all AOA driver training require by the Airport Operations Manager.
- 1.11 AIRPORT VEHICLE OPERATOR'S PERMIT: Airport vehicle operator's permit shall only be issued to people that apply through the Airport Security Office, and pass a written exam covering portions of the Airport Rules and Regulations related to vehicle operations on the AOA.
- 1.12 AOA ESCORTS: While operating on the AOA, the Contractor shall provide at least one escort for every five (5) vehicles and/or equipment under their jurisdiction. The Airport Operations Manager shall approve all escorts prior to any work commencing; hence, each escort shall possess:
- A. All AOA Driver Requirements.
 - B. Both AOA Communications Devices previously specified.
 - C. Knowledge about the assigned access points and travel routes for the project.
 - D. Successful completion of all AOA driver training required by the Airport Operations Manager. Each escort shall pass an exam given by the Airport Operations Manager, which demonstrates they possess an understanding and ability to follow all ground vehicle operation and communication requirements while operating on the AOA.

- 1.13 AOA TRAFFIC CONTROL: The Contractor shall furnish and provide the following traffic control devices to block off entrances of working area:
- A. Runway Lighted X's: Wherever working within an RSA.
 - B. Low-Profile Barricades: Low-profile barricades shall be any one of the following: however, if option a or b is selected, the Contractor shall be responsible for water filling and emptying these types of barricades as part of their contracted work.
 - 1. Neubert Aero Corporation's reusable Airport Low-Profile Barricade Model No. NAC-PC 2410 with at least one battery-powered red barricade light, or
 - 2. Multi-Barrier Safety Barricade Model No. AR-10x96 with at least one Multi-Barrier 360 degree solar-powered light, or
 - 3. Constructed barricades as indicated on plans.
 - 4. All Low-profile barricades shall be spaced fifteen (15) feet on center, and used as follows:
 - a. Restrict aircraft from taxiing into work areas: Barricades shall extend across the full TWY/RWY width, with one (1) barricade places on the TWY/RWY centerline.
 - b. Channel aircraft around work areas: Barricades shall be placed ten (10) feet away from active RSAs/TWSAs.
 - C. Reflective Cones: Reflective cones shall be used to demarcate AOA travel routes and locations where vehicles shall yield to aircraft.
- 1.14 AOA FOD CONTROL: The Contractor shall keep all work areas, AOA Travel Routes, and all adjacent areas clean at all times. Unless otherwise stated in this contract, or otherwise directed by the Airport Manager, the Contractor shall properly haul and dispose all removed pavement materials and collected debris to a site off the Airport. The State will require remedial cleaning from the Contractor whenever their FOD Control Operations are unsatisfactory. Upon receipt of notification, the Contractor shall be ready to start remedial cleaning at the jobsite within one-hour. Notification by telephone will be deemed as official.
- 1.15 AOA FLAG PERSONS: Should the plans require flag persons along the AOA Travel Route, each flag-person shall possess:
- A. AOA Driver as state in Sections 1.05.E.3, 1.05.E.4, and 1.05.E.6.
 - B. Both AOA Communication Devices previously specified in Section 105.A.
 - C. A traffic directing LED (Light-Emitting Diode) Light Baton.
 - D. A broom and dustpan to assist in AOA FOD Control.

- 1.16 AIRPORT STAGING AREAS: The Contractor shall only stage its vehicles and equipment at State approved areas. No vehicle or equipment shall park within four (4) feet of a security fence. Demarcation of the staging area shall be as follows:
- A. Weighted Lighted Barricades shall be placed around the staging area perimeter at a maximum of twenty feet (20') on center.
 - B. Yellow Barrier Tape with the words "CAUTION DO NOT ENTER" continuously printed on the tape shall be used with barricades to demarcate the staging area perimeter.
- 1.17 COORDINATION OF CONSTRUCTION ON THE AOA
- A. Work on the AOA requires RWY and TWY closures that demand proper notification to numerous agencies responsible for public safety; thus, the Engineer shall receive the following sufficiently accurate information from the Contractor.
 - B. Maximum height equipment: Equipment height shall be submitted to the State at least thirty-five (35) consecutive calendar days prior to construction. Construction shall not commence until the State receives confirmation from the FAA. All reported heights shall be the maximum heights among all vehicles or equipment used to complete the contracted work, and includes proper notification to the State whenever the reported maximum heights are to be exceeded.
 - C. Detailed work schedule: See SECTION 01300 – SUBMITTALS.
 - D. Cancellations: The Contractor shall only cancel work through the Engineer, Airport Operations Manager, or Airport Duty Manager. Whenever a cancellation is not made and the Contractor is not at the assigned AOA Access Point within thirty (30) minutes of the start time; all Contractor closures for the remaining workweek will be cancelled. The Contractor shall reimburse the State six hundred dollars (\$600.00) for every work cancellation the State deems unjustified. This reimbursement is to compensate the State for all unnecessary costs related to cancelling existing and coordinating new closures.
- 1.18 CONSTRUCTION LIGHTING REQUIREMENTS
- A. Should any part of the work area lack sufficient sunlight; the Contractor shall provide sufficient artificial lighting to permit the work and inspection to be carried out efficiently, thoroughly, safely, and satisfactorily. Work and inspections shall not be performed with only flashlight and/or vehicle/equipment headlights. All lights shall be positioned so they do not blind aircraft pilots, or FAA-ATCT controllers. All wiring for electrical lights and power shall be properly installed, maintained, securely fastened and kept as far as possible from telephone and signal wires. The Contractor shall submit a lighting plan to the Engineer for all work phases that shall be subject to approval.

1.19 ENVIRONMENTAL AND HEALTH REQUIREMENTS

- A. The Contractor shall perform the following in accordance with all applicable federal, state, local, and airport rules and regulations related to environmental pollution control, abatement, and fire code.
- B. Airport water: Airport water shall not be drawn from a tap lacking a reverse pressure principal backflow prevention device. Water valves shall be opened and closed so that water hammers are not produced.
- C. Waste Disposal: Waste disposal shall be performed properly. Materials shall not be burned, and construction wastes shall not be disposed into Airport storm water or sewer systems.
- D. Restoration: Completely restore, to an acceptable condition; staging area, work area, AOA travel routes, and areas adjacent to the aforementioned.
- E. When the Contractor damages an existing Airport perimeter fence, the Contractor shall perform immediate repairs on the fence to prevent inadvertent entry and maintain Airport Security.
- F. Vehicle/equipment leaks and material spills: Shall be handled by the following five-step process, and pertains to all fluids other than potable water:
 - 1. All leaked or spilled fluids shall immediately be kept from entering the Airport storm water and sewer systems.
 - 2. All fluid leaks or spills shall be respectively fixed or stopped, immediately after ensuring that the fluids are kept out of the Airport storm water and sewer systems.
 - 3. All areas containing the leaks or spills shall be properly cleaned and restored.
 - 4. Dispose all wastes per Section 1.08.B.
 - 5. Submit proper documentation to the State showing that all leaks or spills were properly cleaned and disposed.
- G. Erosion control: The Contractor shall provide any essential temporary drainage, dikes, and similar facilities to prevent erosion damage to the site. Run-off shall be controlled to prevent damage to the surrounding areas.
- H. Dust control: The Contractor shall positive measures to ensure that dust is properly controlled without chemicals and/or oil treatments.
- I. Noise control: Noise control shall be within the levels that comply with all applicable regulations.

1.20 OTHER REQUIREMENTS

- A. The Contractor shall also comply with the following requirements should they arise:
- B. Any new TSA (Transportation Security Administration) security requirements.

- C. Any additional operational safety requirement generated by the FAA.
- D. Provide additional lights along AOA travel routes should the Engineer deem additional safety enhancements are needed.
- E. Any new environmental and health requirements generated by the EPA (Environmental Protection Agency) or DOH (Department of Health).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT & PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the bid prices for the various items of work in this project.

END OF SECTION

DIVISION 2 – SITE CONSTRUCTION

SECTION 02410 – SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

The General Provisions, Special Provisions and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK

- A. Extent of selective demolition work is indicated on the drawings. Selective demolition work includes, but is not limited to, selective demolition, removal, and subsequent disposal of all materials indicated or required to be removed.
- B. It shall be the responsibility of the Contractor to examine the project site and determine for himself the existing conditions.
- C. Execute all work in an orderly and careful manner with due consideration for all items of work to remain.
- D. Obvious conditions which exist on the site shall be accepted as part of the work, even though they may not be clearly indicated on the Drawings and/or described herein or may vary therefrom.
- E. All debris of any kind accumulated from the work of this Section shall be disposed off the site.
- F. Protect all building interior at all times from dust, falling and flying debris during concrete chipping work to prevent damage during construction work. Coordinate with exterior work to provide temporary cover, weather protection, waterproofing, etc. as required over unfinished work area at the end of each day and during rain to prevent damage.
- G. Schedule construction work in sections or phases to be able to protect exposed area from rain damage.
- H. Protect all existing conditions surrounding the work area, including, but not limited to, walkways, parking, landscaping, etc. at all times from damage.
- I. Any damage as a result of demolition work and any neglect to provide protection shall be fixed new at Contractor's own expense.
- J. Demolish and remove materials as indicated on the drawings and as required to perform work under this project.
- K. Carefully remove and salvage, relocate, or return to the State as indicated on the drawings.

- L. Remove/relocate existing furniture, equipment, pictures, signage, blinds, etc. as required to perform demolition work. Return all items to its original location, unless otherwise indicated or directed by the State Engineer, after completion of work.
- M. Existing Conditions: The Contractor is cautioned that the paints or coating that may contain hazardous substances are unknown.
- N. Permits, Notice, Etc.:
 - 1. The Contractor shall procure and pay for all necessary permits or certificates that may be required in connection with this work.
 - 2. The Contractor shall serve proper notice and consult with the State Engineer regarding any temporary disconnections of electrical or other utility lines in the area which may interfere with the removal work, and all such lines where necessary shall be properly disconnected or relocated before commencing with the work.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01300 - SUBMITTALS.
- B. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work for review prior to commencement of work. Include coordination for temporary shut-off and continuation of utility services as required, together with details for dust and noise control protection. The schedule shall identify what section of the Holdroom will be worked on and which Boarding Gate will be closed.

1.04 JOB CONDITIONS

- A. Condition of Structure: The State assumes no responsibility for actual condition of items or portions of structure to be demolished.
- B. Existing Conditions: Conditions existing at time of commencement of contract will be maintained by the State insofar as practicable.
- C. Occupied Spaces: Do not interfere with use of adjacent occupied spaces. Maintain free and safe passage to and from occupied spaces. The Contractor shall construct protective structures to allow continued use of adjacent space next to or below work areas if the occupied space has not alternate access. If a protective structure cannot be provided to protect users to safely access adjacent spaces, then work shall be scheduled when the adjacent space is not occupied.

- D. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor, may be removed from structure as work progresses. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.
- E. Explosives: Use of explosives will not be permitted.
- F. Utility Services: The existence of above and below ground and exposed and concealed utility lines other than those shown on the drawings is not definitely known. Should any other utility lines be encountered, the Contractor shall immediately notify the State Engineer and follow his direction as to procedure. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied building or facilities, except when authorized in writing by the State Engineer. Outages and interruptions must be accepted in advance by the State Engineer. Submit written notice of outages and interruptions not less than fourteen days in advance of intended outage. Report damage, however slight, immediately. Do not repair or reconstruct any pipe, conduit, or installation without authorization, except perform emergency repairs immediately.
- G. Dust Control:
1. Keep dust within acceptable levels at all times, including non-working hours, weekends and holidays, in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 60.1, Air Pollution Control, latest edition as amended.
 2. Mechanical dry sweeping not permitted. Vacuuming, wet mopping, approved limited dry hand, wet or damp sweeping is acceptable.
 3. During loading operations, water down debris and waste materials to allay dust.
 4. The method of dust control and all costs incurred thereof shall be the responsibility of the Contractor.
- H. Noise Control:
1. Noise shall be kept within acceptable levels at all times in conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 46 - Community Noise Control, latest edition as amended. The Contractor shall obtain and pay for community noise permit from the State Department of Health when the construction equipment or other devices emit noise at level exceeding the allowable limits.
 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. Conform to noise control related to events at the project site or adjoining facilities as directed by the State Engineer.

I. Other Controls:

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. Wastewater shall not be discharged into existing streams, waterways, or drainage systems such as gutter and catch basins unless treated to comply with Department of Health pollution regulations.
2. Trucks hauling materials shall be covered as required by PUC regulation. Trucks hauling fine materials shall be covered.

- J. Existing Conditions: The Contractor shall be responsible for protection of existing conditions for the entire duration of the project. Damage to the existing conditions as a result of the work of this Section shall be corrected at Contractor's own expense.

PART 2- PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 INSPECTION

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Inventory existing conditions of structure surfaces, equipment or surrounding properties which could be misconstrued as damage resulting from selective demolition work; photograph, video or otherwise document and file with the State Engineer prior to starting work.

3.02 SELECTIVE DEMOLITION

- A. Perform selective demolition work, including all improvements indicated on the drawings, in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations.
1. Demolish concrete and masonry surfaces to be repaired in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
 2. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction. All dust shall be suppressed by a fog spray or other approved method.

- B. If unanticipated mechanical, electrical, or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the State Engineer in written, accurate detail. Pending receipt of directive from the State Engineer rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.03 PROTECTIONS

- A. Provide temporary barricades and other forms of protection as required to protect the general public from injury due to selective demolition work.
1. Erect temporary barricades as required, to prevent people from entering into the project area to the extent as approved by the State Engineer. The extent of barricade may be adjusted as necessary with the approval of the State Engineer. This work shall be accomplished at Contractor's own expense.
 2. When necessary, the Contractor shall provide, erect, and maintain lights, barriers, covered walkways etc., as required by traffic and safety regulations with special attention to protection of life.
 3. The Contractor shall erect barriers and dust fence enclosures to prevent falling and flying debris from becoming a Foreign Object Debris (FOD) hazard to aircraft operations. At the start and end of each workday, the Contractor shall inspect the work area and pick up and dispose of any concrete, debris, or tools from the work site that could become a potential FOD hazard. A report of the Contractor's daily FOD inspections shall be kept and submitted to State Engineer once a month for review.
 4. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or elements to be removed, and adjacent facilities or work to remain.
 5. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
 - Close off, seal, mask, and board up areas, landscaping, materials, and surfaces not receiving Work of this Section to protect from damage.
 - Protect glass, unpainted metal trim, and polished stone from contact with acidic chemical cleaners by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape; apply masking agent to comply with manufacturer's recommendations; do not apply liquid masking agent to painted or porous surfaces.
 - Protect unpainted metal from contact with alkali chemical cleaners by covering them either with liquid strippable masking agent or polyethylene film and waterproof masking tape.

6. For exterior demolition work that may cause dust or debris to enter into interior spaces, construct dust proof and weatherproof partitions to close off areas as required that are not in scope of work.
7. Life safety procedures and provisions shall be in conformance with all applicable Federal, State, and City and County regulations, including OSHA.
8. Remove protections at completion of work.

3.04 DAMAGES

Provide temporary barricades and other forms of protection as required to protect the general public from injury due to selective demolition work.

3.05 TRAFFIC

- A. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from the State Engineer. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations, as directed by the State Engineer.
- B. Buildings and facilities which are essential for public use for the construction period shall be provided with safe pedestrian passageways around the construction site as per ADAAG 201.3, 206, and ADAAG Chapter 4.

3.06 DISPOSAL OF DEMOLISHED MATERIALS

Remove debris, rubbish, and other materials resulting from demolition operations from building site daily. Transport and legally dispose of materials off site. Burning of removed materials is not permitted on project site.

3.07 HAZARDOUS MATERIALS

If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

3.08 MATERIAL STORAGE

Removed items to be re-installed by the Contractor shall be stored in a secured room. The Contractor shall be responsible for all items and shall replace any missing items at his own expense.

3.09 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.

- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.
- C. Where exposed existing surfaces and/or materials are damaged or left unfinished by the removal work, the resultant exposed unfinished surfaces shall be repaired, patched, filled or finished to match the adjoining existing surfaces. Where the method of repair work is not indicated or specified, the Contractor shall perform the repair work in accordance with the best recognized workmanlike procedure.
- D. All existing grass areas disturbed or damaged due to construction or ingress or egress to the site shall be repaired to its original conditions. Grass areas shall be recultivated, topsoiled, and then grassed with the same kind and type of material as existing.
- E. Trenches, holes, depressions, and pits left by the removal of miscellaneous improvements shall be backfilled with suitable material and compact to 95% maximum dry density as determined by ASTM D 1557.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section, except for Unforeseen Conditions will not be measured for payment but will be paid for at the Contract Lump Sum Price.

Work for Unforeseen Conditions required by the State shall be paid for under allowance items in the Proposal Schedule. Payment shall be the actual cost as invoiced by the Contractor and approved by the State Engineer. The Contractor shall be allowed to include overhead, profit, insurances and/or any other mark-ups, as stipulated in Section 9.5 of the General Provisions.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
02410.1	Unforeseen Conditions	Allowances

The allowance is an estimate, and the amount shall not exceed the maximum amount shown in the proposal schedule.

END OF SECTION

DIVISION 3 – CONCRETE

SECTION 03740 – CONCRETE REHABILITATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provision, Special Provisions and General Requirements of the Specifications, and the Drawings apply to the work specified in this Section.

1.02 REFERENCES

- A. Comply with the provisions of the following specifications and standards, except as otherwise shown or specified. Local Codes and Standards shall govern wherever provisions of the above standards are in conflict with same.
 - 1. ACI 311, "Recommended Practice for Concrete Inspection".
 - 2. ACI 318, American Concrete Institute, "Building Code Requirements for Structural Concrete", 2014 Edition.
 - 3. ACI 546r, American Concrete Institute, "Guide to Concrete Repair", 2014 Edition.
 - 4. ICRI 310.2r, International Concrete Repair Institute, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, And Concrete Repair.
 - 5. ICRI 320.1r, International Concrete Repair Institute, Guideline for Selecting Application Methods for The Repair of Concrete Surfaces.

1.03 WORKMANSHIP

- A. Contractor to assume responsibility for concrete repair work which does not conform to the specified requirements, including strength, tolerances, and finishes. Correct deficient concrete as directed. Protect all finished work against damage from whatever cause during the work and until final acceptance.

1.04 SUMMARY

- A. Repair and restore all delaminated, spalled, and damaged concrete. Work shall include:
 - 1. Inspection of all concrete surfaces as indicated in the drawings.
 - 2. Removal of all deteriorated concrete.
 - 3. Preparation of all reinforcing bars.
 - 4. Application of rust inhibiting coatings and bonding agents.

5. Application of manufactured repair mortars.
6. Application of joint sealants.

1.05 WARRANTY

- A. This Contractor shall furnish the Owner a written warranty countersigned and guaranteed by the General Contractor and/or concrete repair subcontractor stating that all work executed by him will be free from defects of material and workmanship and that the repair system will not exhibit adverse behavior and/or failure, and that the repair systems materials, when properly installed, will meet or exceed the physical properties and performance claims on the manufacturer's published specification data sheets, marketing bulletins and brochures for a period of five (5) years from the date of acceptance of the contract. In the event spalling occurs within the guarantee period, this Contractor agrees to repair spalls at his own expense. This Applicator Guarantee Certificate shall be submitted to the Owner prior to the notice to proceed.
- B. Once every year, prior to the expiration of the guarantee, a joint jobsite meeting consisting of the Contractor, Applicator, and Owner representatives shall be held. All noted damaged surfaces relating to materials and workmanship shall be repaired within 15 days from written notice to the Contractor and Applicator.

1.06 QUALITY ASSURANCE

- A. The Contractor shall be experienced and have expertise in the field of concrete repairs, and shall be familiar with the materials, repair and protection systems of the manufacturer selected for this project.
- B. All surface preparation and installation of the repair material system shall be in strict accordance with the International Concrete Repair Institute (ICRI) guidelines and specifications for surface preparation and placement of concrete repair mortars, American Concrete Institute (ACI) guidelines and specifications for placement and curing of new concrete, and the Steel Structures Painting Councils (SSPC) guidelines and specifications for surface preparation and application of coatings for steel.
- C. The manufacturer's authorized technical representative shall be onsite to monitor the Contractor's work at the beginning of the project, whenever the Contractor changes work crews, at the request of the Owner, and at final completion of the work at each building prior to painting. A minimum total of four site visits shall be provided by the authorized technical representative and at no additional cost to the Owner.

1.07 SUBMITTALS

- A. Provide published product data, specifications, SDS data, material certificates signed by manufacturers certifying each item below complies with the requirements, installation instructions, and warranty for:
 - 1. Concrete bonding agents.
 - 2. Concrete repair mortars and concretes.
 - 3. Cementitious Grouts.
 - 4. Reinforcement.
 - 5. Admixtures.
 - 6. Corrosion Inhibiting Coatings.
 - 7. Epoxies.
 - 8. Sealants.
 - 9. Warranty agreement.

1.08 JOB CONDITIONS

- A. Adhere to the Manufacturer's printed instructions regarding weather and climate condition restrictions on the use of all materials supplied in this section.
- B. Do not apply the materials if it is raining or if rain is imminent. Take proper precautions to protect newly placed and completed repairs from weather conditions such as high winds or rain.

1.09 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original, unopened containers or packaging with manufacturer's name, label, product identification including date of manufacturing and lot numbers.
- B. Store materials out of the weather in original containers or unopened packages as recommended by the manufacturer. Temperature and humidity requirements of the manufacturer shall be adhered to at all times.

PART 2 - PRODUCTS

2.01 CONCRETE REPAIR AND RELATED MATERIALS

- A. Mixing Water: Clean, free from oil, acid, and injurious amount of vegetable matter, alkalis and other impurities; potable.

- B. Epoxy Injection Materials:
 - 1. Pressure Injection Epoxy: Sikadur 35, Hi-Mod LV, or approved equal; performance criteria as follows:
 - a. Two Component, 100% solids, low viscosity, high-strength epoxy resin conforming with ASTM C881 Type II, Grade 1, Class C.
 - b. Nonsag Epoxy used to seal cracks in between injection ports shall be: Sikadur Injection Gel or Sikadur 31, or approved equal.
- C. Corrosion Inhibitor Material: Sika FerroGard -903, or approved equal; performance criteria as follows.
 - 1. Meets the requirements of ASTM C1582 & ASTM C494 Type C.
 - 2. Tested in accordance to ASTM G180.
- D. Concrete Bonding Agent: Sikadur 32 HI-Mod, or approved equal; performance criteria as follows.
 - 1. Properties of the mixed epoxy resin adhesive.
 - a. Pot Life: 30 minutes.
 - b. Contact Time: Up to 2 hours at 80 to 90 degrees F.
 - c. Color: Match existing color.
 - 2. Properties of the cured epoxy resin adhesive.
 - a. Compressive Strength (ASTM C 109):
 - 1) 1 day: 1,000 psi min.
 - 2) 7 day: 6,000 psi min.
 - 3) 28 day: 8,000psi min.
 - b. Flexural Strength (ASTM D 490): 7,000 psi min. at 14 days.
 - c. Bond Strength (ASTM C 882 modified) at 14 days: 2,000 psi min.
- E. Repair Mortar: SikaTop 122 Plus, or approved equal: performance criteria as follows:
 - 1. Typical Properties of the mixed polymer-modified Portland cement mortar:
 - a. Working Time: 10-15 minutes.
 - b. Finishing Time: 20-60 minutes.

- c. Color: Match existing color.
- 2. Typical Properties of the cured polymer-modified Portland cement mortar:
 - a. Compressive Strength (ASTM C 109 Modified):
 - 1) 1 day: 2,500 psi.
 - 2) 7 day: 5,500 psi.
 - 3) 28 day: 7,000 psi
 - b. Splitting Tensile Strength (ASTM C 496) at 28 days: 750 psi.
 - c. Flexural Strength (Modulus of Rupture) (ASTM C 293) at 28 days: 1,700psi.
 - d. Rapid Freeze/Thaw Durability (ASTM C 666; Procedure A); Passes test.
 - e. Bond Strength (ASTM C 882 Modified) at 28 days: 2200 psi.
 - f. Thermal Compatibility (ASTM C884 Modified): Passes test.
 - g. Abrasion (Taber Abrader) at 7 days: Weight Loss – 7.0 gm (H22 wheel; 1000 gm load; 1000 cycles).
 - h. Rapid Chloride Ion Permeability (AASHTO-T277): 1000 coulombs max.
 - i. The polymer-modified Portland cement mortar shall not produce a vapor barrier.
- F. Repair Concrete: SikaCrete 211 SCC Plus, or approved equal: performance criteria as follows:
 - 1. The repair concrete shall be self-consolidating, and polymer modified. It shall be comprised of selected portland cements, specially graded aggregates, admixtures for controlling setting time and plasticizers for workability as well as silica fume and a migrating corrosion inhibitor. The materials shall be non-combustible, both before and after cure. The materials shall be supplied as a factory-blended unit. The portland cement concrete must be placeable from 1" to 8" in depth and appropriate for full-slab depth repair and replacement. The portland cement concrete aggregate shall conform to ASTM C-33, (similar to No.8 distribution per ASTM C33, Table II) and be clean, well-graded, having low absorption and high density.
 - 2. Typical Properties of the mixed polymer-modified Portland cement mortar:
 - a. Application thickness: Minimum 1"; Maximum 8"

- b. Application Temperature: > 45 °F
 - c. Initial Spread (ASTM C 1611): 25-30"
 - d. Spread at 30 minutes (ASTM C 1611): > 15"
 - e. Application time: 60 minutes.
 - f. Color: Match existing color.
3. Typical Properties of the cured polymer-modified Portland cement mortar:
- a. Compressive Strength (ASTM C 39):
 - 1) 1 day: 2,000 psi.
 - 2) 7 days: 5,000 psi.
 - 3) 28 days: 6,500 psi
 - b. Splitting Tensile Strength (ASTM C 496) at 28 days: 1000 psi.
 - c. Flexural Strength (Modulus of Rupture) (ASTM C 293) at 28 days: 1,000 psi.
 - d. Rapid Freeze/Thaw Resistance: 300 cycles > 99%
 - e. Bond Strength (ASTM C 882 Modified) at 28 days: 2200 psi.
 - f. Abrasion (Taber Abrader) at 7 days: Weight Loss – 7.0 gm (H22 wheel; 1000 gm load; 1000 cycles).
 - g. Rapid Chloride Ion Permeability (AASHTO-T277): 1000 coulombs max.
 - h. The polymer-modified Portland cement mortar shall not produce a vapor barrier.
- G. Sealants at Horizontal Cracks: Sikaflex 1c-SL, or approved equal: performance criteria as follows:
- H. Self-leveling, one-part polyurethane-based sealant, conforming to ASTM C 920, Type S, Grade P, Class 25, Use T.
- I. Non-Shrink Cementitious Grout: SikaGrout 212, or approved equal:
- J. Non-metallic, containing no chlorides, shrinkage compensating grout in both the plastic and hardened state conforming to CRD C-621 and ASTM C 1107 (Grade C).

K. Reinforcing Steel:

1. Reinforcing steel shall be deformed billet steel, conforming to ASTM A706, Grade 60.
2. All reinforcing shall be new, free from dirt, paint, detrimental scale, oil or other foreign substances.
3. Prepare and fabricate reinforcing steel in accordance with "CRSI Manual of Standard Practice."

L. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer.

M. Primer for Sealants: Non-staining, as recommended by the sealant manufacturer.

N. Detergent Cleaner: A commercially produced concrete cleaning detergent as approved by the Engineer.

2.02 MIXING, CONVEYING, AND PLACING

A. Mixing: Mixing of all materials shall be in strict accordance with the manufacturer's mixing instructions.

B. Material Placement

1. Deposit material continuously or in layers of thickness as recommended by the manufacturer. Ensure that the placement is such as to not cause seams or planes of weakness.

2.03 EQUIPMENT FOR EPOXY INJECTION

- A. Type. The equipment used to meter and mix the two injection adhesive components and inject the mix adhesive into the crack shall be portable, positive displacement type pumps of the two components at the nozzle. The pumps shall be electric, or air powered and shall provide in-line metering and mixing.
- B. Discharge Pressure. The injection equipment shall have automatic pressure control capable of discharging the mixed adhesive at any pre-set pressure up to 160± 5 psi and shall be equipped with a manual pressure control override.
- C. Manual Dispensing, Spring-Plunger, or Gravity-Feed applications are not permitted.

2.04 ALT. SUPPLIER FOR CONCRETE REPAIR AND RELATED MATERIALS

- A. All repair materials used shall be furnished from the same manufacturer. Products specified in paragraph 2.1 are manufactured by the Sika Corporation and shall be used as a system as specified. Alternative supplier for concrete

repair materials may be from BASF [formerly Degussa Building Systems (ChemRex)] or another approved equal are as follows:

<u>Sika Product</u>		<u>BASF (formerly Degussa Building Systems)</u>
Sika Injection Gel or Sikadur 31		MasterEmaco ADG 327, Epogel, or Concreive Standard Paste
Sikadur 32, HiMod		MasterEmaco ADH 326, Epogel
Sikadur 35, Hi-Mod LV		MasterInject 1500 (also Concreive Standard LVI)
Sika Top 122 Plus		MasterEmaco T302 (formerly Thoroc SD20), Emaco 100 (formerly Sonopatch 100)
SikaCrete 211 SCC+		MasterEmaco S 440 CI
SikaGrout 212		Masterflow 713 or Sonneborn 10K

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall refer to project drawings for locations of damages.

3.02 INSPECTION

- A. The Contractor shall inspect all concrete surfaces for delamination, spalling and/or other deterioration by hammer sounding or other similar method. Areas identified for repair shall be marked on the surface, recorded in a project logbook and indicated in the table on a project drawing.

3.03 DEMOLITION OF CONCRETE AT SPALLS

- A. Remove all deteriorated concrete to expose sound concrete without removing the existing reinforcing bars.
 - 1. All perimeters of repair areas shall be saw cut in straight lines, at a 90-degree angle and be a minimum of 3/4 inch in depth.
 - 2. All concrete surfaces to receive repair mortars shall be roughened to obtain an aggregate-fractured surface with a minimum profile of +/- 1/8 of

an inch. This is to include the vertical edges of the saw cuts. There are to be no polished or smooth surfaces prior to placement of repair mortars.

3. At reinforcing bars, remove sound concrete from the ends of the bar until a minimum of 3 inches of unaffected steel bar is exposed at each end.
- B. An additional 2 inch or 1/3 of the concrete slab thickness, whichever is greater, shall be removed from around the reinforcing bar to provide proper clearance for repair mortars and new concrete. This process of fully exposing the reinforcing bar, shall be done if there is any of the following conditions:
1. Rust formation has developed to the point that the bar is not completely bonded to the existing concrete.
 2. More than 1/2 the circumference of the bar is exposed.
 3. Inadequate concrete cover is provided to the bar as defined within ACI 318-19 Section 20.5.

3.04 PREPARATION AND PLACEMENT OF REINFORCING BARS

- A. Remove all heavy rust and scale from the existing reinforcing steel by abrasive blast cleaning to achieve a clean steel substrate with a pronounced metallic sheen, conforming to the Steel Structures Painting Council standard SSPC-SP-6, commercial blast cleaning. A cleaner shall be used to remove chlorides from metal such as CHLOR RID or equal. If, after removal of all loose rust, corrosion has reduced the effective diameter of the reinforcing bar by a significant amount (refer to the Allowable Bar Corrosion Chart in the plans), replace or add replacement reinforcement as shown on the plans.
- B. Reinforcing steel shall be accurately placed as shown on approved shop drawings, secured in place by black annealed iron wire, and by use of concrete blocks or metal chairs and spacers.
- C. Tie wires shall be black annealed iron wire No. 16 B.W.G for No. 5 bars or smaller, and No. 14 B.W.G. for larger bars.
- D. Splice reinforcing steel bars only where indicated on approved shop drawings.

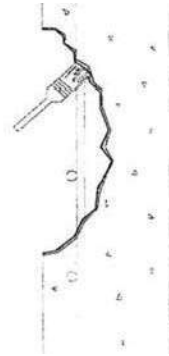
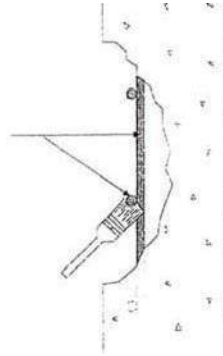
3.05 PREPARATION OF CONCRETE AT CRACKS

- A. Clean all cracks in accordance with manufacturer's Recommendations.
- B. Crack routing: Inspect surfaces adjacent to crack to receive repair material. If deteriorated, route a V-groove section at the crack face until sound concrete is reached.
- C. Crack sealing: For epoxy injection, apply a surface Seal over all exterior faces of the crack that can be reached to contain the injection adhesive in the crack.

3.06 APPLICATION OF CORROSION-INHIBITORS AND ANTI-CORROSION BONDING AGENTS TO REINFORCING STEEL AND CONCRETE AT REPAIR AREAS

Apply first coat of Sikadur 32 HiMod to reinforcing bars

Apply second coat of Sikadur 32 HiMod to reinforcing bars and concrete repair surface



- A. Mix and apply corrosion-inhibitor and bonding agent to the reinforcing steel in strict conformance with the manufacturer's published instructions. Apply corrosion-inhibitor first, follow manufacturer's recommendations for curing prior to application of the bonding agent. Apply by stiff bristled brush or broom. Apply 2 full even coats to reinforcing steel at a total application rate of 20 mils. Take special care to completely coat all exposed steel surfaces. When second coat of bonding agent is being applied to the reinforcing steel it can then also be applied to the concrete as a bonding agent for the system repair mortars. Apply to concrete in one complete, even, holiday free coat. Temperature and humidity dramatically effect open time and bond strengths. Follow manufacturer's published data or project specific written instructions as to time frames in which their repair mortars can be placed over their anti-corrosion and bonding agent that will allow for maximum bond strength and anti-corrosion protection. For additional information, refer to the Construction Drawings.

3.07 APPLICATIONS OF REPAIR MORTARS

- A. Mix and apply repair mortars in strict conformance with the manufacturer's published or job specific written instructions. For additional information, refer to the Construction Drawings.
- B. At the time of application of repair mortar all concrete surfaces shall be saturated surface dry (SSD) unless otherwise specified by the manufacturer.
- C. For all hand, trowel placed vertical and overhead repair areas, the repair mortar will be placed in lifts/layers no greater the 1-1/2 inches unless approved by the manufacturer of the repair mortar. For repair areas that require multiple lifts, the top surface of each must be roughened to create a mechanical bond for the following layer of repair mortar.
- D. Immediately after the final layer of repair mortar has been placed and finished to match the surrounding surface, curing shall begin. All repairs shall be cured with a fine mist of cool, clean potable water or pre-tested manufacture approved

water-based curing compound or a pre-tested, manufacture approved curing cover.

- E. Cure repair material per manufacturer's recommendations. Curing shall be performed with wet burlap cover and tenting over the repaired area for a minimum of 72 hours or as directed by ACI and the manufacturer. Wet burlap and tenting cure are mandatory.
- F. Finish exposed repaired surfaces to match existing finish.

3.08 APPLICATION OF JOINT SEALANTS

- A. Mix sealant in accordance with the manufacturer's instructions. Avoid entrapment of air during mixing.
- B. Joints: Placement Procedure: Completely remove all existing sealants in joints and prime all substrates as required based upon the recommendations of the manufacturer of the sealant and when field testing indicates need.
 - 1. Install approved backer rod or bond breaker tape in all joints subject to thermal movement to prevent three-sided bonding and to set the depth of the sealant. Approval of the backer rod or bond breaker tape shall be made by the Owner.
 - 2. Joints shall be masked to prevent discoloration or application on unwanted areas, as directed by the State Engineer. If masking tape is used, it shall not be removed before tooling, yet must be removed before the initial cure of the sealant. Do not apply the masking tape until just prior to the sealant application.
 - 3. Install sealant into the prepared joints when the joint is at mid-point of its designed expansion and contraction.
 - a. Non-sag sealant: Load the sealant into a caulking gun. Place the nozzle of the gun, either hand or air or electric powered, into the bottom of the joint and fill entire joint. Keep the tip of the nozzle in the sealant, continue on with a steady flow of sealant proceeding the nozzle to avoid air entrapment. Avoid overlapping the sealant to eliminate the entrapment of air. Tool, as required, to properly fill and finish joint.
 - b. Repair all spalls on either side of existing joints before installation of sealant.
 - 4. Adhere to all limitation and cautions for the polyurethane sealant as stated in the manufacturers printed literature.
- C. The uncured sealant can be cleaned with an approved solvent. The cured polyurethane sealant can only be removed mechanically. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

3.09 APPLICATION OF CRACK FILLERS

- A. Indicated cracks shall be mechanically routed or vee-notched neat along the length of the crack according to the plans. Surfaces of crack to receive crack filler shall be clean and sound.
- B. Mix crack filler in accordance with the manufacturer's instruction until uniform in consistency.

3.10 APPLICATION OF EPOXY INJECTIONS

- A. Install the injection entry and venting ports using flush mounted or drilled fittings per proprietary manufacturer's instructions. Space the ports at 8 inches on center. Inject the epoxy using material manufacturer's recommended equipment, and at the recommended manufacturer's injection pressure. Apply injection by proceeding from one end of the crack to the other until the crack is fully sealed. Remove ports and remove the surface seal by chipping or grinding or other acceptable means after the injected epoxy has cured.

3.11 FIELD QUALITY CONTROL

- A. Quality Control: The contractor shall perform quality assurance and quality control during the courses of repair work.
- B. Special Inspection: The Contractor shall engage a qualified independent special inspection agency, approved by the State Engineer, to perform special inspection in accordance with IBC 2018, Chapter 17.
 - 1. Special Inspections: As indicated in the Construction Drawings.

3.12 CLEANING

- A. Keep all work areas, including the areas below and adjacent to work, clean on a daily basis.
- B. Immediately scrape off fresh sealant compound that has been smeared on masonry or porous surfaces and rub clean with a solvent as recommended by the compound manufacturer. Upon completion of sealant compound application, remove all remaining smears and stains resulting therefrom and leave the work in a clean, uniform, and neat condition.
- C. At the conclusion of the work, clean up all debris, refuse, and surplus materials and remove from the premises.

PART 4 - MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the Contract Lump Sum Price.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
03740.1	Concrete Rehabilitation	Lump Sum

END OF SECTION

DIVISION 4 - MASONRY

SECTION 04012 – CONCRETE MASONRY UNIT REPAIR

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes the repair of existing masonry surfaces and as follows:

1. Inspection of all CMU surfaces, as indicated in the drawings.
2. Cutting and Chipping of deteriorated CMU.
3. Repair of Cracks and Spalling.
4. Removal of Paint.
5. Cleaning.
6. Refer to the drawings for locations and quantities.

1.02 RELATED SECTIONS

A. Coordinate the Work of this Section with the Work of other Sections specifying repair work, including 03740 – CONCRETE REPAIR.

1.03 REFERENCES

A. ASTM International:

1. ASTM C881, Specification for Epoxy-Resin-Base Bonding System for Concrete
2. ASTM C928, Specification for Packaged, Dry Rapid Hardening Cementitious Materials for Concrete Repairs
3. ASTM C1107, Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)

B. TMS 402 / 602, Building Code Requirements and Specifications for Masonry Structures, 2016 Edition

1.04 SUBMITTALS

A. Submit in accordance with SECTION 01300 – SUBMITTALS.

B. Submit manufacturer's technical data for each product indicated, including specifications, SDS data, recommendations for their application and use; include test reports and certifications substantiating that products comply with the

requirements, installation instructions, and warranty.

1.05 QUALITY ASSURANCE

A. Performance Requirements:

1. Perform Work in accordance with TMS 602.
2. Maintain one copy of each document on site.

B. Repair and restoration of existing masonry surfaces shall be performed by a skilled and experienced subcontractor specializing in restoration of masonry.

C. Qualifications:

1. Manufacturer:

- a. Company specializing in manufacturing products specified in this Section with minimum five years' experience.
- b. Manufacturer capable of providing field service representation during construction and approving application method(s).

2. Installer: Company specializing in performing Work of this Section with minimum five years documented experience.

D. Repair and restoration of existing unit masonry shall achieve security, strength, and weather protection, as applicable and required, and shall preserve the integrity and continuity of fire-rated assemblies.

E. Repair and restoration of existing masonry work shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is a dispute as to whether or not duplication is successful or has been achieved to a reasonable degree, the State Engineer's judgement shall be final.

F. Pre-Installation Conference:

1. Convene minimum one week prior to commencing Work of this Section.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver masonry neatly stacked and tied on pallets and store clear of ground with adequate waterproof covering.

B. Store restoration cleaner materials in manufacturer's packaging; keep containers tightly closed and away from open flames.

C. Store mortar ingredients in manufacturer's packaging, or when delivered loose, with adequate weatherproof covering.

- D. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.07 PROJECT CONDITIONS

A. Environmental Requirements - Rebuilding Materials:

- 1. Hot Weather Requirements: MSJC Specification.

B. Environmental Requirements - Cleaning Operations:

- 1. Do not apply at surface and air temperatures above 95 degrees F unless otherwise indicated by manufacturer's written instructions.
- 2. Do not apply under windy conditions, which would cause cleaning products or protective treatments to be blown onto adjacent unprotected surfaces.
- 3. Do not apply consolidation or protective treatments earlier than 24 hours after rain or if rain is predicted for a period of 6 hours after application, unless otherwise indicated by manufacturer's written instructions.

- C. Dispose of run-off from cleaning operations by legal means and in a manner which prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

1.08 SEQUENCING

- A. Provide masonry restoration and cleaning materials and other construction in ample time to complete Work in a timely manner.
- B. Perform repointing before cleaning masonry surfaces.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Requirements: Provide all materials, equipment, tools, appurtenances, and services as required for performing and completing all repair and restoration of existing unit masonry as indicated.
- B. Equipment, Tools, and Materials: Provide appropriate and proper equipment, tools, and materials for the chipping and air-pressure cleaning of cracks in masonry, for pressure injection grouting of cracks in mortar joints, for sandblasting or water-blasting of masonry surfaces, and for the cleaning of masonry.
- C. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts, and organic matter.

D. Brushes: Fiber bristle only.

E. Mortar Repair Materials:

1. Mortar for joints shall be a polymer modified material, similar high-strength bonding mortar conforming with ASTM C928; or approved equal.
2. Minimum compressive strength at 28 days shall be 2,000 psi.
3. Sand: Sand shall be clean, washed, kiln-dried, fine sand, all passing a U.S. Standard No. 16 sieve.

F. Concrete Masonry Units (CMU):

1. Where CMU are damaged and require replacement, provide CMU that matches the species, color, and texture of adjacent masonry surfaces.
2. Replacement of CMU require approval of the State Engineer before they may be used in the work.
3. Recovered cleaned CMU from areas of selective demolition as directed by the State Engineer.

G. Reinforcing Steel:

1. Reinforcing steel shall be deformed billet steel, conforming to ASTM A615, Grade 60. Reinforcing steel to be welded shall be deformed billet steel, conforming to ASTM A706, Grade 60.
2. All reinforcing shall be new, free from dirt, paint, detrimental scale, oil, or other foreign substances.
3. Prepare and fabricate reinforcing steel in accordance with "CRSI Manual of Standard Practice."
4. All reinforcing shall be new, free from dirt, paint, detrimental scale, oil, or other foreign substances.

H. Mortar Bonding Agent: Adhesive for the bonding of new mortar and grout to existing masonry and mortar shall be an epoxy adhesive meeting the requirements of ASTM C881, of type required for the conditions.

I. Detergent Cleaner: A commercially produced concrete cleaning detergent as approved by the State Engineer.

2.02 MIXING, CONVEYING, AND PLACING

A. Mixing: Mixing of all materials shall be in strict accordance with the manufacturer's mixing instructions.

B. Material Placement

1. Deposit material continuously or in layers of thickness as recommended by the manufacturer. Ensure that the placement is such as to not cause seams or planes of weakness.

PART 3 – EXECUTION

3.01 REQUIREMENTS

- A. Perform cutting, chipping, patching/restoring work, and cleaning in a manner to prevent damage to other work, as required to return the building surfaces to the original condition and configuration.
- B. Major cracks shall be repaired and filled by removal and replacement of damaged face shells, or as indicated in the drawings. All other cracks shall be repaired in the manner most appropriate and as required for weatherproofing or waterproofing the building or structure.
- C. Do not cut or alter structural members when not indicated without prior approval of the State Engineer.
- D. Finish or refinish as required to match adjacent surfaces.

3.02 PREPARATION

- A. Verify surfaces to be cleaned and restored are ready for Work of this Section.
 1. Clean substrates of substances that interfere with penetration or performance of surface treatments.
 2. Test for moisture content and pH level, according to manufacturer's instructions, to ensure surface is prepared and dry to receive surface treatments.
- B. Protect elements surrounding Work of this Section from damage or disfiguration.
- C. Immediately remove stains, efflorescence, or other excess resulting from Work of this Section.
- D. Protection:
 1. Close off, seal, mask, and board up areas, landscaping, materials, and surfaces not receiving Work of this Section to protect from damage.
 2. Protect glass, unpainted metal trim, and polished stone from contact with acidic chemical cleaners by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape; apply masking

agent to comply with manufacturer's recommendations; do not apply liquid masking agent to painted or porous surfaces.

3. Protect unpainted metal from contact with alkali chemical cleaners by covering them either with liquid strippable masking agent or polyethylene film and waterproof masking tape.
- E. For any repair work at the interior, construct dust proof and weatherproof partitions to close off areas as required that are not in scope of work.

3.03 REPAIR AND RESTORATION WORK

A. Cutting and Chipping:

1. Cutting and chipping work shall be neatly and accurately performed with proper tools and equipment. Cuts shall be of minimum size required for the work. Check the locations of existing steel reinforcing before cutting or chipping.
2. If cutting is required, use motor driven saw designed to cut masonry with clean, sharp unchipped edges.
3. Cut out damaged, spalled, and deteriorated masonry with care in manner to prevent damage to adjacent remaining materials; cut off full units from joint to joint and in manner to permit replacement with full size units.
4. Support structure in advance of cutting out units to maintain stability of remaining materials.
5. Cut away loose or unsound adjoining masonry and mortar to provide firm and solid bearing for new Work.

B. Repair of Cracks:

1. Cracks shall be repaired and filled with grout, or as indicated otherwise. Masonry joint cracks shall be mapped, and the injection shall be on center-to-center spacings as necessary to achieve proper structural bonding. Replace all masonry units that have cracks across the face.
2. Adhesive material shall be mixed with grout in proportion necessary to provide structural bonding of concrete. Grout material shall be inserted into cracks by pressure-injection grouting in accordance with the manufacturer's installation instructions and recommendations, or as indicated otherwise.
3. Minor cracks too small for injection grouting shall be repaired as specified in Articles 3.03C for restoration work.
4. Small holes, cracks, and other imperfections to be painted shall be suitably primed and patched with a compound recommended by the manufacturer of the paint to be applied to these surfaces as specified in Section 09900 –

Painting.

C. Restoration Work:

1. Preparation of Existing Surfaces: Where masonry is cracked or spalled, cut or chip out to solid surface. Use wire brush and high-pressure air to clean masonry of dirt, dust, and loose particles. Clean exposed reinforcing bars with power wire brushing to remove all visible corrosion. See also the requirements as specified in Articles 3.02 and 3.03A and notes in the drawings.
2. Repairing of Masonry:
 - a. Repairing and patching of existing masonry surfaces and joints shall be expertly performed with specified adhesive, mortar, and grout materials. At completion, patched surfaces shall match adjacent existing surfaces as closely as possible.
 - b. Mortar bonding agent, mortar, and grout shall be applied or installed where indicated, or where otherwise required, in accordance with the manufacturer's instructions and recommendations.
 - c. Where necessary to build out cut, spalled, or chipped masonry surfaces, mix mortar bonding agent, mortar, and sand into a special mortar, and apply in layers as required to fill out or build up surfaces. Float, trowel, or texture surfaces to match adjacent existing surfaces.
 - d. Where indicated or required to replace existing, damaged CMU, expertly cut out damaged units with a masonry saw or cutting wheel. Clean out all loose particles and dust with air-pressure cleaning. Then install new units to match adjacent masonry surfaces as closely as possible, include joint treatment.
 - e. Ensure anchors, ties, reinforcing, and flashing are correctly located and built in.
 - f. Build in openings, accessories, and fittings.
 - g. Build in new and reclaimed masonry units following procedures for new Work specified in Sections 04200.
 - h. Butter ends with sufficient mortar to fill head joints and shove into place.
 - i. Use wetting methods, which ensure that units are nearly saturated but surface dry when laid.
 - j. Maintain joint width for replacement units to match existing.
 - k. Tool exposed mortar joints in repaired areas to match joints of surrounding existing.

3. Repointing:

- a. Cut out loose or disintegrated mortar in joints to depths equal to 2-1/2 times their width, but not less than minimum 1/2-inch depth or until sound mortar is reached.
- b. Utilize power tools only after test cuts determine no damage to masonry units' results.
- c. Do not damage masonry units, spall edge of masonry unit or widen joints; replace any masonry units which become damaged at the Contractor's expense.
- d. When cutting is complete, remove dust and loose material by brushing with air jet; brush, vacuum, or flush joints to remove dirt and loose debris.
- e. Premoisten joint and apply mortar specified in Section 04200; joint surfaces shall be damp but free of standing water.
- f. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas; apply in layers not greater than 3/8 inch until a uniform depth is formed; compact each layer thoroughly and allow to become thumb-print-hard before applying next layer.
- g. After joints have been filled to a uniform depth, place remaining pointing material in three layers with each of the first and second layers filling approximately 2/5 of joint depth and third layer the remaining 1/5; fully compact each layer and allow to become thumb-print-hard before applying next layer.
- h. Where existing units have rounded edges, recess final layer slightly from face.
- i. Take care not to spread mortar over edges onto exposed surfaces or to feather edge mortar.
- j. When mortar is thumb-print-hard, tool joints to match original appearance of joints, unless otherwise indicated.
- k. Moist cure for 72 hours.
- l. Where repointing Work precedes cleaning of existing masonry and stone, allow mortar to harden not less than 30 days before beginning cleaning Work.

D. Cleaning Existing Exterior Masonry:

1. Restoration Cleaning:

- a. Clean surfaces and remove large particles with wood scrapers or non-ferrous wire brush.
- b. Allow sufficient time for solution to remain on masonry and agitate with soft fiber brush or sponge.
- c. Rinse from bottom up with potable water applied at 400 to 600 psi and at rate of 4 gallons per minute; older, more delicate masonry may require restricting water pressure to avoid damage.

2. Cleaning New Masonry: Refer to Section 04200.

3.04 REMOVAL OF PAINT

- A. Where removal of existing paint film is required for restoration of masonry surfaces, existing painted masonry surfaces shall be sandblasted by the "wet" sandblast method to remove all such paint film. Surfaces not to be sandblasted shall be properly masked and otherwise protected to preclude any damage to these surfaces.
- B. Masonry surfaces shall be thoroughly dry or dried before any painting restoration work.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
- B. Site Visits: Manufacturer's field service representative shall be required for Pre-installation Meeting, two visits during execution of Work, and for a final inspection of completed Work.

3.06 CLEAN UP

- A. As Work proceeds and on completion, remove excess mortar, smears, droppings, using stiff nylon bristle brushes and clean water, spray applied at low pressure (40 psi maximum); metal scrapers or brushes shall not be used; acid or alkali cleaning agents shall not be used.
- B. Remove temporary coverings and protection of adjacent work areas.
- C. Clean surrounding surfaces.
- D. All adjacent glass areas shall be cleaned after washing of masonry surfaces.
- E. Repair or replace damaged or deteriorated surfaces.
- F. Replace any glass damaged by the cleaning operations.

G. Remove construction debris from project site and legally dispose of debris.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

Work under this Section will not be measured for payment but will be paid for at the Contract Lump Sum Price.

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
04012.1	Concrete Masonry Unit Repair	Lump Sum

END OF SECTION

Requirements of Chapter 104, HRS

Wages and Hours of Employees on Public Works Law

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

Rate of Wages for Laborers and Mechanics

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

Overtime

- Laborers and mechanics working on a Saturday, Sunday, or a legal holiday of the State or more than eight hours a day on any other day shall be paid overtime compensation at not less than one and one-half times the basic hourly rate plus the cost of fringe benefits for all hours worked. If the Director of Labor determines that a prevailing wage is defined by a collective bargaining agreement, the overtime compensation shall be at the rates set by the applicable collective bargaining agreement [§§104-1, 104-2(c), HRS; §12-22-4.1, HAR]

Weekly Pay

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

Posting of Wage Rate Schedules

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

Withholding of Accrued Payments

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

Certified Weekly Payrolls and Payroll Records

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

Termination of Work on Failure to Pay Wages

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

Apprentices

- Apprentice wage rates apply to contractors who are a party to a bona fide apprenticeship program which has been registered with the DLIR. In order to be paid apprentice rates, apprentices must be parties to an agreement either registered with or recognized as a USDOL nationally approved apprenticeship program by the DLIR, Workforce Development Division, (808) 586-8877, and the apprentice must be individually registered by name with the DLIR. [§12-22-6(1) and (2), HAR]
- The number of apprentices on any public work in relation to the number of journeymen in the same craft classification as the apprentices employed by the same employer on the same public work may not exceed the ratio allowed under the apprenticeship standards registered with or recognized by the DLIR. A registered or recognized apprentice receiving the journeyman rate will not be considered a journeyman for the purpose of meeting the ratio requirement. [§12-22-6(3), HAR]

Enforcement

- To ensure compliance with the law, DLIR and the contracting agency will conduct investigations of contractors and subcontractors. If a contractor or subcontractor violates the law, the penalties are: [§104-24, HRS]
 - First Violation Equal to 25% of back wages found due or \$250 per offense up to \$2,500, whichever is greater.
 - Second Violation Equal to amount of back wages found due or \$500 for each offense up to \$5,000, whichever is greater.
 - Third Violation Equal to two times the amount of back wages found due or \$1,000 for each offense up to \$10,000, whichever is greater; and
Suspension from doing any new work on any public work of a governmental contracting agency for three years.
- A violation would be deemed a second violation if it occurs within two years of the **first notification of violation**, and a third violation if it occurs within three years of **the second notification of violation**. [§104-24, HRS; §12-22-25(b), HAR]
- **Suspension:** For a first or second violation, the department shall immediately suspend a contractor who fails to pay wages or penalties until all wages and penalties are paid in full. For a third violation, the department shall penalize and suspend the contractor as described above, **except that if the contractor continues to violate the law, then the department shall immediately suspend the contractor for a mandatory three years. The contractor shall remain suspended until all wages and penalties are paid in full.** [§§104-24, 104-25, HRS]
- **Suspension:** Any contractor who fails to make payroll records accessible or provide requested information within 10 days, or fails to keep or falsifies any required record, shall be assessed a penalty including suspension as provided in Section 104-22(b) and 104-25(a)(3), HRS. [§104-3(c), HRS; §12-22-26, HAR]
- If any contractor interferes with or delays any investigation, the contracting agency shall withhold further payments until the delay has ceased. Interference or delay includes failure to provide requested records or information within ten days, failure to allow employees to be interviewed during working hours on the job, and falsification of payroll records. The department shall assess a penalty of \$10,000 per project, and \$1,000 per day thereafter, for interference or delay. [§104-22(b), HRS; §12-22-26, HAR]
- Failure by the contracting agency to include in the provisions of the contract or specifications the requirements of Chapter 104, HRS, relating to coverage and the payment of prevailing wages and overtime, is not a defense of the contractor or subcontractor for noncompliance with the requirements of this chapter. [§104-2(f), HRS]



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

Oahu (Wage Standards Division)(808) 586-8777
Hawaii Island.....(808) 974-6464
Maui and Kauai(808) 243-5322

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

PROPOSAL

PROPOSAL TO THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

PROJECT: APRON RECONSTRUCTION, PHASE 1
KAHULUI AIRPORT
KAHULUI, MAUI, HAWAII

PROJECT NO.: CM1530-33

COMPLETION TIME: ONE HUNDRED TWENTY (120) Calendar days from
the date indicated in the Notice to Proceed from the
Department.

LIQUIDATED DAMAGES: ONE HUNDRED FIFTY DOLLARS (\$150.00) for each
and every working (or calendar) day which the
Contractor has delayed the completion of this project.

PROJECT MANAGER: Mr. Jake Shiraki
Department of Transportation
Airports
Daniel K Inouye International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, HI 96819-1880
Phone: (808) 838-8805
FAX: (808) 838-8017
Email: jake.l.shiraki@hawaii.gov

ELECTRONIC SUBMITTAL: **Bidders shall submit and upload the complete proposal to HlePRO prior to the bid opening date and time. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders shall refer to SPECIAL PROVISIONS 2.8 PREPARATION AND DELIVERY OF BID for complete details. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.**

Director of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned Bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.
2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.
3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned Bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.
2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.
3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.
5. Agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.
6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.
7. The undersigned Bidder further agrees to the following: Pursuant to HRS §103D-405(d), any contractor (including consultants) paid for services to develop or prepare specifications or work statements shall be precluded from submitting an offer or receiving a contract for that particular solicitation. This includes the preparation of reports relied upon by HDOT in the development of the project scope.

The Bidder acknowledges receipt of and certifies that it has completely examined the following listed items: the Hawaii Department of Transportation, Air and Water Transportation Facilities Division General Provisions for Construction Projects dated 2016, the Notice to Bidders, the Special Provisions, if any, the Technical Provisions, the Proposal, the Contract and Bond Forms, and the Project Plans.

In accordance with Section 103D-323, Hawaii Revised Statutes, this proposal is accompanied with a bid security in the amount of 5% of the total amount bid, in the form checked below. (Check applicable bid security submitted with bid.)

_____ Surety Bid Bond (Use standard form),

_____ Cash,

_____ Cashier's Check,

_____ Certified Check, or

_____ .
(Fill in other acceptable security.)

The undersigned Bidder acknowledges receipt of any addendum issued by the Department by recording in the space below the date of receipt.

Addendum No. 1 _____

Addendum No. 3 _____

Addendum No. 2 _____

Addendum No. 4 _____

In accordance with Section 103D-302, Hawaii Revised Statutes, the undersigned as Bidder, has listed the name of each person or firm, who will be engaged by the Bidder on the project as a Subcontractor or Joint Contractor and the nature of work to be done by each. **The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Subcontractor or Joint Contractor.** For each listed firm, the Bidder declares the respective firm is a Subcontractor or Joint Contractor and is subject to evaluation as a Subcontractor or Joint Contractor. It is understood that failure to comply with the aforementioned requirements may be cause for rejection of the bid submitted.

<u>Name of Subcontractor</u>	<u>Nature and Scope of Work</u>
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____

<u>Name of Joint Contractor</u>	<u>Nature and Scope of Work</u>
1. _____	_____
2. _____	_____
3. _____	_____

NOTES:

"None" or if left blank indicates no Subcontractor or Joint Contractor.

If more space is needed, attach additional sheets.

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct and final.

This declaration is made with the understanding that the undersigned is subject to the penalty of perjury under the laws of the United States and is in violation of the Hawaii Penal Code, Section 710-1063, unsworn falsification to authorities, of the Hawaii Revised Statutes, for knowingly rendering a false declaration.

Bidder (Company Name)

By _____
Authorized Signature

Print Name and Title

Business Address

Business Telephone

Date

Contact Person (If different from above)

Phone: _____ Email: _____

NOTE:

If Bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts for the corporation. Please attach to this page current (not more than six months old) evidence of the authority of the officer(s) to sign for the corporation.

If Bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above, with the signature(s) of the general partner(s). Please attach to this page current (not more than six months old) evidence of the authority of the partner authorized to sign for the partnership.

If Bidder is an INDIVIDUAL, the bidder's signature shall be placed above.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department before opening bids or submitted with the bid. Otherwise, the Department may reject the bid as irregular and unauthorized.

PREFERENCES

Bidders acknowledge that while preferences are considered in the evaluation of bids, the award of the contract will be in the amount of the bid offered exclusive of any preferences.

A. HAWAII BIDDER PREFERENCE

In accordance with HRS §103D-302, the Hawaii bidder preference is applicable to this solicitation for evaluation purposes only. Bidders desiring to qualify for the five per cent (5%) preference shall submit with their bid a completed *Hawaii Bidder/Offeror Preference Certification Form* (Form SPO-081) at or before the time set for receipt of bids. Certifications submitted for previous or other solicitations will not be accepted.

☐ **Yes, the Bidder elects to receive the Hawaii Bidder Preference and has included the Form SPO-081 with the bid.**

B. APPRENTICESHIP AGREEMENT PREFERENCE

In accordance with HRS §103-55.6, the estimated value of this public works contract is \$250,000 or more and the apprenticeship agreement preference is applicable to this solicitation for evaluation purposes only. Bidders desiring to qualify for the five per cent (5%) preference shall submit with their bid a complete, valid CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED APPRENTICESHIP PROGRAM UNDER ACT 17 (Certification Form 1) *for each apprenticeable trade* the Bidder will employ on the project.

☐ **Yes, the Bidder elects to receive the Apprenticeship Agreement Preference and has attached Certification Form(s) 1 for each apprenticeable trade the Bidder will employ for this project (excluding subcontractors).**

By submission of this offer, the Bidder certifies that it has indicated **all apprenticeable trades that Bidder will employ** for this project (excluding subcontractors) by listing the applicable trades below:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(Attach additional sheet if necessary.)

Form 1 Required. Failure to submit a valid Form 1 with the bid for every apprenticeable trade that Bidder will employ on the project will result in the preference being denied, regardless of whether the trade is listed above. If a Form 1 is submitted for a trade that is not listed above, the Form 1 will take

precedence over the listing and may be used to qualify Bidder for the preference.

Form 2 Required. If awarded the contract with the Apprenticeship Agreement Preference applied, then for the duration of the contract, the Bidder **shall** certify each month that work is being conducted on the project that the Contractor continues to be a participant in the relevant apprenticeship program for each trade it employs. Monthly certification shall be made on the Certification Form 2 and submitted to the HDOT.

Failure to comply with the requirements of the Apprenticeship Agreement Preference program will subject the Contractor to sanctions pursuant to HRS §103-55.6.

C. HAWAII PRODUCTS PREFERENCE

Hawaii Products Preference shall not apply to this solicitation.

D. RECYCLED PRODUCT PREFERENCE

Recycled Product Preference shall not apply to this solicitation.



STATE OF HAWAII
Hawaii Bidder/Offeror
Preference Certification Form
(As Defined in HRS103D-1001)

I, _____, _____ of
(Authorized Officer's Name) (Office or Position Held)

_____, certify the following:
(Name of Bidder/Offeror)

- (1) That the Bidder/Offeror holds a valid commercial place of business located in the State of Hawaii at the following address:

and that the above-named office was opened on the following date: _____,

and has been staffed by the Bidder/Offeror or an employee of the Bidder/Offeror for not less than two (2) consecutive years immediately preceding the time and date set for the opening of bids or receipt of proposals;

- (2) That the bid or proposal in response to IFB/RFP No. _____, is submitted under the name under which the Bidder/Offeror is authorized to do business in the State;
- (3) That not less than fifty-one percent (51%) of the total direct labor hours required for performance of the contract will be performed within the State; and
- (4) If the Bidder/Offeror is a joint venture, the Bidder/Offeror is composed entirely of parties meeting the requirements of paragraphs (1), (2), and (3).

I certify under penalty of perjury that the above statements are true. I agree to maintain the above qualifications throughout contract performance; any changes in eligibility shall be reported to the Contract Administrator or purchasing agency's contact person identified in the RFP/IFB. I acknowledge that failure to maintain the above qualifications triggers a price adjustment equal to the value of the preference applied and may constitute cause for debarment under HRS §103D-702.

Signature of Authorized Officer

Print Name and Title

Date

APRON RECONSTRUCTION, PHASE 1
KAHULUI AIRPORT
KAHULUI, MAUI, HAWAII
STATE PROJECT NO. CM1530-33

PROPOSAL SCHEDULE

Item No.	Description	Quantity	Unit	Unit Price	Total
<u>I. General Requirements</u>					
01010.1	Construction Work	L.S.	L.S.	L.S.	\$ _____
01500.1	Installation, Maintenance, Monitoring, and Removal of BMP	L.S.	L.S.	L.S.	\$ _____
01561.1	Construction Site Pollution Controls	L.S.	L.S.	L.S.	\$ _____
01700.1	Mobilization (Not to Exceed 6% of sum of all items, excluding this item and all allowances)	L.S.	L.S.	L.S.	\$ _____
03740.1	Concrete Rehabilitation	L.S.	L.S.	L.S.	\$ _____
04012.1	Concrete Masonry Unit Repair	L.S.	L.S.	L.S.	\$ _____
<u>II. Allowances</u>					
01500.2	Additional Water Pollution, Dust, and Erosion Control	Allow	Allow	Allow	\$ 50,000
01565.1	Security Measures	Allow	Allow	Allow	\$ 50,000
02410.1	Unforeseen Conditions	Allow	Allow	Allow	\$650,000
TOTAL AMOUNT FOR COMPARISON OF BIDS					\$ _____

The prices bid herein shall include all labor, materials, equipment, and incidentals necessary to construct all items in place, including installation and testing of equipment, complete and ready for operation, all in accordance with the plans and specifications.

- Note 1: Bid shall include all Federal, State, County and other applicable taxes and fees.
- Note 2: The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest responsible bidder.
- Note 3: Bidders shall complete all unit prices and amounts. Failure to do so shall be grounds for rejection of bid.
- Note 4: The State reserves the right to reject any or all Bids and to waive any defects in said Bids in the best interest of the State.
- Note 5: The bidders' attention is directed to Section 2.11 – BID SECURITY of the "General Provisions" as amended by the "Special Provisions."
- Note 6: If the lowest TOTAL AMOUNT FOR COMPARISON OF BIDS is less than, or approximately equal to the funds available for this project, an award will be made to the lowest responsible bidder.
- Note 7: If the TOTAL AMOUNT FOR COMPARISON OF BIDS exceeds the funds available for the project, then the State reserves the right to negotiate with the lowest, responsive, responsible bidder as permitted under Section 103D-302, Hawaii Revised Statutes, to further reduce the scope of work and award a contract thereafter.
- Note 8: **Bidders shall submit and upload the complete proposal to HlePRO prior to bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. Original (wet ink, hard copy) proposal documents are not required to be submitted. Contract award shall be based on evaluation of proposals submitted and uploaded to HlePRO.**

**FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO
SHALL BE GROUNDS FOR REJECTION OF THE BID.**

If there is a conflict between the specification document and the HlePRO solicitation, the specifications shall govern and control, unless otherwise specified.

SURETY BID BOND

Bond No. _____

KNOW TO ALL BY THESE PRESENTS:

That we, _____

(full name or legal title of offeror)

as Offeror, hereinafter called the Principal, and

(name of bonding company)

as Surety, hereinafter called Surety, a corporation authorized to transact business as a Surety in the State of Hawaii, are held and firmly bound unto

(State/county entity)

as Owner, hereinafter called Owner, in the penal sum of

(required amount of bid security)

Dollars(\$ _____), lawful money of the United States of America, for the payment of which sum well and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS:

The Principal has submitted an offer for

(project by number and brief description)

NOW, THEREFORE:

The condition of this obligation is such that if the Owner shall reject said offer, or in the alternate, accept the offer of the Principal and the Principal shall enter into a contract with the Owner in accordance with the terms of such offer, and give such bond or bonds as may be specified in the solicitation or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof as specified in the solicitation then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed this _____ day of _____, _____

Name of Principal (Offeror) (Seal)

Signature

Print Name and Title

Name of Surety (Seal)

Signature

Print Name and Title

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS

FORMS

CONTRACT

THIS AGREEMENT, made this day of _____, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE", and «CONTRACTOR», «STATE_OF_INCORPORATION», whose business/post office address is «ADDRESS», hereinafter referred to as CONTRACTOR";

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for "«PROJECT_NAME_AND_NO»", or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of «BASIC»----DOLLARS (\$«BASIC_NUMERIC») as follows:

TOTAL AMOUNT FOR COMPARISON OF BIDS.....\$«BASIC_NUMERIC»

which sum shall be provided from State funds, all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans for «PROJECT_NO_ONLY», and any supplements thereto, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within «WORKING_DAYS» from the date indicated in the Notice to Proceed from the State subject, however, to such extensions as may be provided for in writing under the specifications.

For and in consideration of the covenants, undertakings and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of «BASIC»---DOLLARS (\$«BASIC_NUMERIC») in lawful money, but not more than such part of the same as is actually earned according to the STATE's determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract.

An additional sum of «EXTRAS»-----DOLLARS (\$«EXTRA_NUMERIC») is hereby provided for extra work.

All words used herein in the singular shall extend to and include the plural. All words used in the plural shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

Director of Transportation

«CONTRACTOR»

(Seal)

Signature

Print name

Print Title

Date

PERFORMANCE BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a
surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligee, in the amount of _____

DOLLARS (\$ _____), to which payment Principal and Surety bind themselves,
their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by
these presents.

WHEREAS, the above-bound Principal has signed a Contract with Obligee on
_____, for the following project: _____

hereinafter called Contract, which Contract is incorporated herein by reference and made a part
hereof.

NOW THEREFORE, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in
strict accordance with the terms of the Contract as said Contract may be modified or amended
from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Obligee to the Surety and the Principal and subject to the limitation of the penal sum of this bond, Surety shall remedy the Default, or take over the work to be performed under the Contract and complete such work, or pay moneys to the Obligee in satisfaction of the surety's performance obligation on this bond.

Signed this _____ day of _____, _____.

(Seal)

Name of Principal (Contractor)

*

Signature

Title

(Seal)

Name of Surety

*

Signature

Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

PERFORMANCE BOND

KNOW TO ALL BY THESE PRESENTS:

That we, _____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

(Dollar amount of Contract) DOLLARS \$ _____),

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ☐ **Legal Tender;**
- ☐ **Share Certificate** unconditionally assigned to or made payable at sight to
Description: _____;
- ☐ **Certificate of Deposit**, No. _____, dated _____ issued
by _____ drawn on _____ a bank, savings
institution or credit union insured by the Federal Deposit Insurance Corporation or the
National Credit Union Administration, payable at sight or unconditionally assigned to
_____;
- ☐ **Cashier's Check** No. _____, dated _____
drawn on _____ a
bank, savings institution or credit union insured by the Federal Deposit Insurance
Corporation or the National Credit Union Administration, payable at sight or
unconditionally assigned to _____;
- ☐ **Teller's Check** No. _____, dated _____
drawn on _____ a
bank, savings institution or credit union insured by the Federal Deposit Insurance
Corporation or the National Credit Union Administration, payable at sight or
unconditionally assigned to _____;
- ☐ **Treasurer's Check** No. _____, dated _____
drawn on _____ a
bank, savings institution or credit union insured by the Federal Deposit Insurance
Corporation or the National Credit Union Administration, payable at sight or
unconditionally assigned to _____;
- ☐ **Official Check** No. _____, dated _____
drawn on _____ a
bank, savings institution or credit union insured by the Federal Deposit Insurance
Corporation or the National Credit Union Administration, payable at sight or
unconditionally assigned to _____;
- ☐ **Certified Check** No. _____, dated _____
accepted by a bank, savings institution or credit union insured by the Federal Deposit
Insurance Corporation or the National Credit Union Administration, payable at sight or
unconditionally assigned to _____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project: _____

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The Condition of this obligation is such that, it Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligee, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed and sealed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

Signature*

Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND (SURETY)
(6/21/07)

KNOW TO ALL BY THESE PRESENTS:

That _____,
(Full Legal Name and Street Address of Contractor)

as Contractor, hereinafter called Principal, and _____

_____,
(Name and Street Address of Bonding Company)

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the _____,
(State/County Entity)

its successors and assigns, hereinafter called Obligor, in the amount of _____

_____ Dollars (\$ _____), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-bound Principal has signed Contract with the Obligor on _____
_____ for the following project: _____

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to any Claimant, as hereinafter defined, for all labor and materials supplied to the Principal for use in the performance of the Contract, then this obligation shall be void; otherwise to remain in full force and effect.

1. Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

2. A "Claimant" shall be defined herein as any person who has furnished labor or materials to the Principal for the work provided in the Contract.

Every Claimant who has not been paid amounts due for labor and materials furnished for work provided in the Contract may institute an action against the Principal and its Surety on this bond at the time and in the manner prescribed in Section 103D-324, Hawaii Revised Statutes, and have the rights and claims adjudicated in the action, and judgment rendered thereon; subject to the Obligee's priority on this bond. If the full amount of the liability of the Surety on this bond is insufficient to pay the full amount of the claims, then after paying the full amount due the Obligee, the remainder shall be distributed pro rata among the claimants.

Signed this _____ day of _____, _____.

(Seal)

Name of Principal (Contractor)

*

Signature

Title

(Seal)

Name of Surety

*

Signature

Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND

KNOW TO ALL BY THESE PRESENTS:

That we, _____
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto _____
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

_____ DOLLARS (\$ _____)
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- ☐ Legal Tender;
- ☐ Share Certificate unconditionally assigned to or made payable at sight to _____
Description: _____
- ☐ Certificate of Deposit, No. _____, dated _____ issued by _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;
- ☐ Cashier's Check No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;
- ☐ Teller's Check No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;
- ☐ Treasurer's Check No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;
- ☐ Official Check No. _____, dated _____ drawn on _____ a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;
- ☐ Certified Check No. _____, dated _____ accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

WHEREAS:

The Contractor has by written agreement dated _____ entered into a contract with Obligee for the following Project: _____

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

NOW THEREFORE,

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

AND IT IS HEREBY STIPULATED AND AGREED that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

AND IT IS HEREBY STIPULATED AND AGREED that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payments of mechanics' liens which may be filed of record against the Project, whether or not claim for the amount of such lien be presented under and against this bond..

Signed this _____ day of _____, _____.

(Seal) _____

Name of Contractor

Signature*

Title

ALL SIGNATURES MUST BE ACKNOWLEDGED BY A
NOTARY PUBLIC

CHAPTER 104, HRS COMPLIANCE CERTIFICATE

The undersigned bidder does hereby certify to the following:

1. Individuals engaged in the performance of the contract on the job site shall be paid:
 - A. Not less than the wages that the director of labor and industrial relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects; and
 - B. Overtime compensation at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or a legal holiday of the State or in excess of eight hours on any other day.
2. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

DATED at Honolulu, Hawaii, this _____ day of _____, 20____.

«CONTRACTOR»
Name of Corporation, Partnership, or Individual

Signature and Title of Signer

Notary Seal
NOTARY ACKNOWLEDGEMENT

Subscribed and sworn before me this
_____ day of _____
Notary signature _____
Notary public, State of _____
My Commission Expires: _____

Notary Seal
NOTARY CERTIFICATION

Doc. Date: _____ #Pages: _____
Notary Name: _____ Circuit
Doc. Description: _____

Notary signature _____
Date _____

PROVISIONS TO BE INCLUDED IN CONSTRUCTION PROCUREMENT SOLICITATIONS

1. Definitions for terms used in HRS Chapter 103B as amended by Act 192, SLH 2011:

- a. "Contract" means contracts for construction under 103D, HRS.
- b. "Contractor" has the same meaning as in Section 103D-104, HRS, provided that "contractor" includes a subcontractor where applicable.
- c. "Construction" has the same meaning as in Section 103D-104, HRS.
- d. "General Contractor" means any person having a construction contract with a governmental body.
- e. "Procurement Officer" has the same meaning as in Section 103D-104, HRS.
- f. "Resident" means a person who is physically present in the State of Hawaii at the time the person claims to have established the person's domicile in the State of Hawaii and shows the person's intent is to make Hawaii the person's primary residence.
- g. "Shortage trade" means a construction trade in which there is a shortage of Hawai'i residents qualified to work in the trade as determined by the Department of Labor and Industrial Relations.

2. HRS Chapter 103B as amended by Act 192, SLH 2011—Employment of State Residents Requirements:

- a. A Contractor awarded a contract shall ensure that Hawaii residents comprise not less than 80% of the workforce employed to perform the contract work on the project. The 80% requirement shall be determined by dividing the total number of hours worked on the contract by Hawaii residents, by the total number of hours worked on the contract by all employees of the Contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

- b. Prior to award of a contract, an Offeror/Bidder may withdraw an offer/bid without penalty if the Offeror/Bidder finds that it is unable to comply with HRS Chapter 103B as amended by Act 192, SLH 2011.
- c. Prior to starting any construction work, the Contractor shall submit the subcontract dollar amount for each of its Subcontractors.
- d. The requirements of this section shall apply to any subcontract of \$50,000 or more in connection with the Contractor; that is, such Subcontractors must also ensure that Hawaii residents comprise not less than 80% of the Subcontractor's workforce used to perform the subcontract.
- e. The Contractor and any Subcontractor whose subcontract is \$50,000 or more shall comply with the requirements of HRS Chapter 103B as amended by Act 192, SLH 2011.
 - 1) Certification of compliance shall be made in writing under oath by an officer of the General Contractor and applicable Subcontractors and submitted with the final payment request.
 - 2) The certification of compliance shall be made under oath by an officer of the company by completing a "Certification of Compliance for Employment of State Residents" form and executing the Certificate before a licensed notary public.
 - 3) In addition to the certification of compliance as indicated above, the Contractor and Subcontractors shall maintain records such as certified payrolls for laborers and mechanics who performed work at the site and time sheets for all other employees who performed work on the project. These records shall include the names, addresses and number of hours worked on the project by all employees of the Contractor and Subcontractor who performed work on the project to validate compliance with HRS Chapter 103B as amended by Act 192, SLH 2011. The Contractor and Subcontractors shall retain these records and provide access to the State for a minimum period of four (4) years after the final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four-year period, the Contractor and Subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four-year period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any Subcontractor.

- f. A General Contractor or applicable Subcontractor who fails to comply with this section shall be subject to any of the following sanctions:
 - 1) With respect to the General Contractor, withholding of payment on the contract until the Contractor or its Subcontractor complies with HRS Chapter 103B as amended by Act 192, SLH 2011.
 - 2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawaii. Revised Statutes §103D-702.
- 3. Conflict with Federal Law: This section shall not apply if the application of this section is in conflict with any federal law, or if the application of this section will disqualify the State from receiving Federal funds or aid.

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

Project Title: _____

Agency Project No: _____

Contract No.: _____

As required by Hawaii Revised Statutes Chapter 103B, as amended by Act 192, Session Laws of Hawaii 2011—Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of _____ and
(Name of Contractor or Subcontractor Company)
for the Project Contract indicated above, _____ was in
(Name of Contractor or Subcontractor Company)
compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawaii residents, as calculated according to the formula in the solicitation, to perform this Contract.

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

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

CORPORATE SEAL

(Name of Company)

(Signature)

(Print Name)

(Print Title)

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

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

Notary Name: _____

Doc. Description: _____

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

Notary Signature Date
NOTARY CERTIFICATION