

**REQUIREMENTS and SPECIFICATIONS
TO CONSTRUCT**

**GRADING, CONCRETE, AND OTHER REPAIRS
HISTORIC KAKAAKO PUMP STATION
653 ALA MOANA BLVD.
HONOLULU, HAWAI'I
TAX MAP KEY: 2-1-015:063
CONTRACT NO.: 73646**

FOR AND BY THE

**HAWAII COMMUNITY DEVELOPMENT
AUTHORITY 547 QUEEN STREET
HONOLULU, HAWAII 96813**

May 2026

Architect:

Mason Architects Inc.

DIVISION 0 - TABLE OF CONTENTS

Title Page	1
Table of Contents	1 – 2
List of Drawings	1

DIVISION 1 - GENERAL REQUIREMENTS

Section 01100 Project Requirements.....	1 – 5
Section 01310 Project Management and Coordination.....	1 – 6
Section 01320 Construction Progress Documentation.....	1 – 9
Section 01330 Submittal Procedures.....	1 – 4
Section 01400 Quality Requirements.....	1 – 15
Section 01500 Temporary Facilities and Controls.....	1 – 11
Section 01524 Construction Waste Management.....	1 – 9
Section 01700 Execution Requirements	1 – 5
Section 01770 Closeout Procedures.....	1 – 7

DIVISION 2 - SITE CONSTRUCTION

Section 02027 Minor Demolition for Remodeling.....	1 – 2
--	-------

DIVISION 3 - CONCRETE

Section 03300 Cast in Place Concrete	1 – 11
--	--------

DIVISION 4 - MASONRY**(Not Used)****DIVISION 5 – METALS****(Not Used)****DIVISION 6 - WOOD AND PLASTICS****(Not Used)****DIVISION 7 - THERMAL AND MOISTURE PROTECTION****(Not Used)****DIVISION 8 - DOORS AND WINDOWS****(Not Used)****DIVISION 9 - FINISHES****(Not Used)****DIVISION 10 – SPECIALTIES****(Not Used)****DIVISION 11 - EQUIPMENT****(Not Used)****DIVISION 12 – FURNISHING****(Not Used)****DIVISION 13 - SPECIAL CONSTRUCTION****(Not Used)****DIVISION 14 - CONVEYING SYSTEMS****(Not Used)****DIVISION 15 – MECHANICAL****(Not Used)****DIVISION 16 – ELECTRICAL****(Not Used)**

END OF SECTION

LIST OF DRAWINGS

GENERAL

G-001 - SITE PLAN, ABBREVIATIONS, SHEET INDEX TO
DRAWINGS, PROJECT DATA, GENERAL NOTES
G-101 SITE PLAN

ARCHITECTURAL

A-502 - DETAILS

STRUCTURAL

None

FIRE PROTECTION

None

ELECTRICAL

None

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01100 - PROJECT REQUIREMENTS

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Project consists of the construction & renovation and improvement to existing buildings
1. Project Location:
HISTORIC KAKAAKO PUMP STATION
653 ALA MOANA BLVD.
HONOLULU, HAWAI'I 96813
- B. Work under this contract includes the provision of all labor, material, equipment and product necessary for the improvements to existing buildings as contained in the construction documents including, but not limited to, the following:
1. Removal of existing Spanish Mission roofing and gutter lining.
 2. Installing new Spanish Tile roofing and gutters on two buildings.
 3. Removal of concrete as shown and the installation of new concrete as shown.
 4. Installation of various hardware items.
 5. Plastering of interiors where shown.
 6. Painting
- C. Perform operations and furnish equipment, fixtures, appliances, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.
- D. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section.
- E. Contractor shall not alter the Drawings and Specification. If an error or discrepancy is found, notify the Contracting Officer.
- F. Specifying of interface and coordination in the various specification sections is provided for information and convenience only. These requirements in the various sections shall complement the requirements of this Section.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. **Abbreviated Language:** Language used in the Specifications and other Contract Documents is abbreviated and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the Work.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words “shall”, “shall be”, or “shall comply with”, depending on the context, are implied where a colon (:) is used within a sentence or phrase.
3. **Abbreviations and Acronyms for Industry Organizations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research’s “Encyclopedia of Associations” or in Columbia Books’ “National Trade & Professional Associations of the U.S.”.

B. Terms

1. **Directed:** Terms such as “directed”, “requested”, “authorized”, “selected”, “approved”, “required”, and “permitted” mean directed by Contracting Officer, requested by Contracting Officer, and similar phrases.
2. **Indicated:** The term “indicated” refers to graphic representations, notes, or schedules on drawings or to other paragraphs or schedules in specifications and similar requirements in the Contract Documents. Terms such as “shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference.
3. **Furnish:** The term “furnish” means to supply and deliver to project site, ready for unloading, unpacking, assembly, and similar operations.
4. **Install:** The term “install” describes operations at project site including unloading, temporarily storing, unpacking, assembling, erecting,

placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

5. Provide: The terms “provide” or “provides” means to furnish and install, complete and ready for the intended use.
6. Installer: An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-Subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
7. Submit: Terms such as “submit”, “furnish”, “provide”, and “prepare” and similar phrases in the context of a submittal, means to submit to the Contracting Officer.

C. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
2. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
3. Conflicting Requirements: If compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.

1.03 CONTRACT

- A. Refer to SECTION 00800 - SPECIAL CONDITIONS for other contract conditions.

1.04 WORK SEQUENCE

- A. The Work will be conducted in a single construction phase.

1.05 USE OF PREMISES AND WORK RESTRICTIONS

- A. General: Contractor shall have full use of construction zone for construction operations, including use of project site, during construction period. Contractor’s use of premises is limited only by State’s right to perform work or to retain other Contractors on portions of the project site.
- B. Contractor’s use of premises is restricted as follows:
 1. Parking:

- a. Parking: Parking for the Contractor's employees and Subcontractors will be limited to the gravel-paved areas within the site.
2. Sanitation:
 - a. The Contractor will provide their own toilet facilities at no additional cost to the State.
3. Noise and Dust Control:
 - a. In adjacent locations surrounding the project site, noise, dust and other disrupting activities, resulting from construction operations, are detrimental to the conduct of the property activities. Therefore, Contractor shall monitor its construction activities. Exercise precaution when using equipment and machinery to keep the noise and dust levels to a minimum.
 - b. To reduce loud disruptive noise levels, ensure mufflers and other devices are provided on equipment, internal combustion engines and compressors.
 - c. Schedule construction activities that create excessive noise and dust problems, such as concrete coring, drilling, hammering, trenching, and demolition, for the weekends, holidays or non-school hours. Overtime costs for the Contractor's employees and work force are the Contractor's responsibility.
 - d. The Contracting Officer will require any construction activity that produces excessiveness of noise and dust to be performed during non-school hours. The Contracting Officer shall make the final determination. Overtime costs for the Contractor's employees and work force are the Contractor's responsibility.
 4. Other Conditions:
 - a. Arrange for construction debris and trash to be removed from project site weekly.
 - b. Operate machinery and equipment with discretion and with minimum interference to driveways and walkways. Do not leave machinery and equipment unattended on roads and driveways.
 - c. Store materials in the areas as designated by the Contracting Officer. Locate construction equipment, machinery, equipment and supplies within the Project Contract Limits.
 - e. All smoking and vaping activities within construction limits on all Public Works construction sites, indoor or outdoor, are prohibited. Violations will be considered a contractual noncompliance by the

general contractor.

- C. Drug Free System: Comply with the ban on smoking and other use of tobacco products, alcoholic beverages and other illegal substances at all times on premises during operational control.

1.06 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: The State may execute a separate contract for certain construction at the project site that was not known at the time Offers were submitted.
- B. Cooperate fully with separate Contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

- 3.01 PROJECT SCHEDULE** is presented for information and planning purposes. Dates and activities are subject to adjustments.

NO	EVENT OR DESCRIPTION	Reference or Date
1	Pre-Bid Meeting and Site Visit	Notice to Bidders
2	Clarifications or Questions Due	14 days before Offers are opened
3	Bid Opening	Notice to Bidders
4	Project Start Date	Section 01100
5	Jobsite Start Date	Section 01100
6	Project Completion Date	Section 01100

END OF SECTION

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION**PART 1 - GENERAL****1.01 SUMMARY**

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
1. General project coordination procedures.
 2. Project meetings.

1.02 PERFORMANCE AND COORDINATION

- A. Contractor is in charge of the Work within the Project Contract Limits and shall direct and schedule the Work. Include general supervision, management and control of the Work of this project, in addition to other areas more specifically noted throughout the Specifications. Final responsibility for performance, interface, and completion of the Work and the Project is the Contractor's.
- B. The Contractor is responsible for jobsite Administration. Provide a competent superintendent on the job and provide an adequate staff to execute the Work. In addition, all workers shall dress appropriately and conduct themselves properly at all times. Loud abusive behavior, sexual harassment and misconduct will not be tolerated. Workers found in violation of the above shall be removed from the job site as directed by the Contracting Officer.
- C. The State will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the Prime Contractor in matters pertaining to other trades employed on the job.
- D. Coordination: Provide project interface and coordination to properly and accurately bring together the several parts, components, systems, and assemblies as required to complete the Work pursuant to the GENERAL CONDITIONS and SPECIAL CONDITIONS.
1. Provide interface and coordination of all trades, crafts and subcontracts. Ensure and make correct and accurate connections of abutting, adjoining, overlapping, and related work. Provide anchors, fasteners, accessories, appurtenances, and incidental items needed to complete the Work, fully, and correctly in accordance with the Contract Documents.
 2. Provide additional structural components, bracing, blocking, miscellaneous metal, backing, anchors, fasteners, and installation accessories required to properly anchor, fasten, or attach material, equipment, hardware, systems and assemblies to the structure.

3. Provide excavation, backfilling, trenching, and drilling for trades to install their work.
4. Provide concrete foundations, pads, supports, bases, and grouting for trades as needed to install their work.
5. Provide caulking, sealing, and flashing as required to waterproof the building complete and as required to insulate the building thermally and acoustically. Include sealing, flashing, and related work as required to prevent moisture intrusion, air infiltration, and light leakage.
6. Equipment, appliances, fixtures, and systems requiring plumbing and mechanical services, rough-in, and connections, or other utilities and services shall be provided with such services, rough-in, and final connections.
7. Equipment, appliances, fixtures, hardware, and systems requiring electrical services shall be provided with such electrical services, including outlets, switches, overload protection, interlocks, panelboard space, disconnects, circuit breakers, and connections.
8. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which are not provided by Subcontractors shall be provided by the Contractor.
9. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1.03 COOPERATION WITH OTHER CONTRACTORS

- A. The State reserves the right at any time to contract for or otherwise perform other or additional work within the Project Contract Limits. The Contractor of this project shall to the extent ordered by the Contracting Officer, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by the State or other Contractors.

1.04 COORDINATION WITH OTHER PRIME CONTRACTORS

- A. Multiple prime Contractors performing work under separate agreements with the State will may be present near the project location, adjacent to and abutting the Project Contract Limits. This Contractor shall coordinate activities, sequence of work, protective barriers and any and all areas of work interfacing with other Prime Contractor's work. Contractor shall provide a continuity of finishes, walks, landscape, etc. at abutting Contract Limits so no additional work will be required. Any damage to other Prime Contractor's Work committed by this Contractor (or its

Subcontractor) shall be repaired promptly at no additional cost to the State.

- B. Coordinate Subcontractors and keep them informed of any work from the other Projects that may affect the site or the Subcontractor's work. If the Contractor has any questions regarding its coordination responsibilities or needs clarification as to the impact in scheduling of its work and the work of other projects, this Contractor shall notify the Contracting Officer in writing.
- C. Subject to approval by the Contracting Officer, this Contractor shall amend and schedule its work and operations to minimize disruptions to the work and operations of other projects.
 - 1. Relocate or remove and replace temporary barriers, fencing supports or bracing to allow work by others to proceed unimpeded. Do not remove required barriers supporting work until specified time or as approved by the Contracting Officer. This does not relieve the Contractor of the responsibility of proper coordination of the work. If directed by the Contracting Officer, leave in place any temporary barriers.
 - 2. Coordinate work that abuts or overlaps work of the other projects with the Contracting Officer and other Prime Contractors to mutual agreement so that work is 100 percent complete with continuity of all materials, systems and finishes.
 - 3. When directed by the Contracting Officer, provide access into the construction zone to allow the other project's Contractor(s) to perform their Work and work that must be interfaced.
 - 4. Contractor shall adjust and coordinate its Work and operations as required by the other projects as part of the Work of this contract without additional cost or delay to the State.
 - 5. When directed by the Contracting Officer provide a combined Contractor's construction schedule.
- D. Other Contracts: If known, they are listed in SECTION 01100 - PROJECT REQUIREMENTS.

1.05 SUBMITTALS

- A. Photo Documentation: Prior to the start of jobsite work, the Contractor shall photo document the existing conditions at the site and file with the Contracting Officer one complete set of documents.

1.06 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences as directed by the Contracting Officer, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Contracting Officer of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Contractor record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Contracting Officer, within 7 days of the meeting.
- B. Preconstruction Conference: Contracting Officer shall schedule a preconstruction conference before the start of construction, at a time convenient to the Contracting Officer, but no later than 7 days before the Project start date or jobsite start date whichever is later. The conference will be held at the Project site or another convenient location. The Contracting Officer shall conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Contracting Officer, and design consultants; Facility Users; Contractor and its superintendent; major Subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and coordination.
 - d. Designation of responsible personnel.
 - e. Use of the premises.
 - f. Responsibility for temporary facilities and controls.
 - g. Parking availability.
 - h. Office, work, and storage areas.
 - i. Equipment deliveries and priorities.
 - j. First aid.
 - k. Security.

- I. Progress cleaning.
 - m. Working hours.
- C. Progress Meetings: Conduct progress meetings at monthly or other intervals as determined by the Contracting Officer. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to Contracting Officer, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Outstanding Requests for information (clarification).
 - 2) Interface requirements.
 - 3) Sequence of operations.
 - 4) Status of outstanding submittals.
 - 5) Deliveries.
 - 6) Off-site fabrication.
 - 7) Access.
 - 8) Site utilization.
 - 9) Temporary facilities and controls.
 - 10) Work hours.

- 11) Hazards and risks.
 - 12) Progress cleaning.
 - 13) Quality and work standards.
 - 14) Force Account work.
 - 15) Change Orders and Change Proposals.
 - 16) Documentation of information for payment requests.
- c. Corrective Action Plan: Contractor shall provide a plan of corrective action for any item which is delayed or expected to be delayed, then that item impacts the contractual dates.
3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION**PART 1 - GENERAL****1.01 SUMMARY**

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Schedule of Prices.
 - 4. Payment Application.
- B. Related Sections include the following:
 - 1. SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION for preparing a combined Contractor's Construction Schedule.
 - 2. SECTION 01322 - WEB BASED CONSTRUCTION MANAGEMENT for use of the StateWebCM for electronic submittals.
 - 3. SECTION 01330 - SUBMITTAL PROCEDURES for submitting schedules and reports.

1.02 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path and control the total length of the project. They must start and finish on the planned early start and finish times.
 - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of project.
- C. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either the Department or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Schedule of Prices: A statement furnished by Contractor allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Payment Applications.

1.03 SUBMITTALS

- A. Required Submittals: Submit 8 sets of the list of the required submittals, by Specification Section, within 15 days after award of the contract or upon earlier written instructions from the Contracting Officer. A general listing is provided under SECTION 01330 - SUBMITTAL PROCEDURES.
1. The listing shall indicate and include the following:
 - a. The number of copies required for submittal.
 - b. Planned submittal date.
 - c. Approval date required by the Contractor.
 - d. A space where the "date of submittal" can be inserted.
 - e. A space where the "date of approval" can be inserted.
 - f. A space where an "action code" can be inserted.
- B. Construction Schedule: Submit 7 sets of the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
- C. Schedule of Prices: Submit 3 sets of the Schedule of Prices integrated with the Construction Schedule for review within 15 days after the award of the contract or upon earlier written instructions from the Contracting Officer.
1. Use the Department's forms for Payment applications.
- D. Payment Application: Submit the payment application at earliest possible date and no sooner than the last day of the month after all payroll affidavits, updated submittal registers, and schedules have been submitted.

1.04 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate Contractors.
- B. Construction Schedule: Coordinate Contractor's Construction Schedule with the Schedule of Prices, Submittals Schedule, loaded monthly event activity, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. Schedule of Prices: Coordinate preparation of the schedule with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Prices with other required administrative forms and schedules, including the following:
 - a. The Department's Payment Application form and the Construction Progress Report continuation sheet for the event cost estimate per time period.
 - b. Submittals Schedule.

PART 2 - PRODUCTS**2.01 SUBMITTALS SCHEDULE**

- A. Comply with the GENERAL CONDITIONS "SHOP DRAWINGS AND OTHER SUBMITTALS" Article. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.
- B. Preparation: Furnish a schedule of submittals per Contracting Officer.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Prices, and Contractor's Construction Schedule.
 - 2. The schedule shall accommodate a minimum of 25 calendar days for the State's review, as applicable for the Island the project is located.
 - 3. Prepare and submit an updated list to the Contracting Officer at monthly intervals or as directed by the Contracting Officer. The listing shall reflect all approvals received since the last update.

**2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE - PERT CHART
CRITICAL PATH METHOD (CPM)**

- A. The construction schedule shall address the entire project, to the extent required by the Contract Documents, and shall show an expedient and practical execution of work. If requested by the Contracting Officer, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submitting the schedule.
- B. The Construction Schedule shall indicate the following:
1. Elements of the Project in detail time scaled by month or by week, and a project summary.
 2. The order and interdependence of activities and the sequence in which the work is to be accomplished.
 3. How the start of a given activity is dependent upon the completion of preceding activities and how its completion restricts the start of following activities.
 4. The submittal and approval of shop drawings, samples, procurement of critical materials and equipment, receipt of materials with estimated costs of major items for which payment will be requested in advance of installation, fabrication of special materials and equipment, and their installation and testing.
 5. Activities of the State that have an effect on the progress schedule, such as the required delivery dates for State furnished materials and equipment and other similar items.
 6. Provide a separate report with the following:
 - a. The description of the activity.
 - b. The duration of time in calendar days.
 - c. For each activity indicate the early start date.
 - d. For each activity indicate the early finish date.
 - e. For each activity indicate the late start date.
 - f. For each activity indicate the late finish date.
 - g. Total float time.
 - h. Cost of event.
 - i. Contract-required dates for completion of all or parts of the Work.
 - j. Events are to be used on "Monthly Progress Report" for monthly payment request.

- C. Upon completion of the Contracting Officer's review, the Contractor shall amend the schedule to reflect the comments. If necessary, the Contractor shall participate in a meeting with the Contracting Officer to discuss the proposed schedule and changes required. Submit the revised schedule for review within 7 calendar days after receipt of the comments.
- D. Use the reviewed schedule for planning, organizing, and directing the work, for reporting progress, and for requesting payment for the work completed. Unless providing an update, do not make changes to the reviewed schedule without the Contracting Officer's approval.
- E. Should changes to the schedule be desired, submit a request in writing to the Contracting Officer and indicate the reasons for the proposed change. If the changes are major, the Contracting Officer may require the Contractor to revise and resubmit the schedule at no additional cost to the State. Contractor shall mitigate the impact of all changes by readjusting the sequence of activities, duration of time, or resources utilizing available float.
 - 1. A change is major if, in the opinion of the Contracting Officer, the change affects the substantial completion date or other contractual and milestone dates.
 - 2. Minor changes are those that only affect activities with adequate float time.
- F. Once the schedule is reviewed by the Contracting Officer, the Contractor shall submit 6 sets of the revised schedule within 14 calendar days.
- G. Throughout the duration of the project, the Contracting Officer may require more detailed breakdowns of activities, logic, and schedule submittals from the Contractor.
- H. Updated Schedules: Submit at monthly intervals or as directed by the Contracting Officer. The schedule shall reflect all changes occurring since the last update including the following:
 - 1. Activities started and completed during the previous period.
 - 2. The estimated duration to complete each activity that was started but not completed.
 - 3. Percentage of cost payable for each activity.
 - 4. Modifications and pending proposed changes.
 - 5. Narrative report describing current and anticipated problem areas or delaying factors with their impact together with an explanation of corrective actions taken or proposed.

- I. Failure on the part of the Contractor to submit updated schedules may be grounds for the Contracting Officer to withhold progress payments for items noted on the schedule.
- J. Contractor shall prosecute the work according to the CPM Schedule. The Contracting Officer shall rely on the reviewed Contractor's CPM Schedule and regular updates for planning and coordination. The Contracting Officer's review of the Contractor's CPM Construction Schedule does not relieve the Contractor of its obligation to complete the work within the allotted contract time. Nor does the review grant, reject or in any other way act on the Contractor's request for adjustments to complete remaining contract work, or for claims of additional compensation. These requests shall be processed in accordance with other relevant provisions of the contract.
- K. If the Contracting Officer issues a field order or change order or other directive that affects the sequence or duration of work activities noted on the construction progress schedule, the Contractor shall promptly update the schedule. To accomplish this update, add, delete or revise the work activities noted or change the logic in the schedule to show the Contractor's plan to incorporate the change into the flow of work. All change orders and time extension requests that affect the construction schedule shall be evaluated based on their impact on the approved Construction Schedule.
- L. If the current work is behind schedule or projected to be behind schedule, such as negative float on a critical activity or inability to meet the Contract Completion Date, the Contracting Officer may require the Contractor, at the Contractor's cost, to take remedial measures to get the project back on schedule. This may require increasing the work force, working overtime and weekends, air freighting materials, or other similar actions.
- M. If at any time the Contracting Officer determines that any critical activity has fallen behind the CPM schedule by 15 calendar days or more, the Contractor shall submit a remedial plan to recapture the lost scheduled time. Include a revised schedule. Furnish the remedial plan no later than 7 calendar days from Contracting Officer's notification.
- N. If an accelerated schedule is proposed, refer to GENERAL CONDITIONS Section 7.22 "CONSTRUCTION SCHEDULE".

2.03 SCHEDULE OF PRICES

- A. Furnish a schedule of prices per Contracting Officer.
- B. Provide a breakdown of the Contract Sum in enough detail to facilitate developing and the continued evaluation of Payment Applications. Provide several line items for principal subcontract amounts, or for materials or equipment purchased or fabricated and stored, but not yet

installed, where appropriate. Round amounts to nearest whole dollar; total shall equal the Contract Price.

- C. Each item in the Schedule of Prices and Payment Application shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

2.04 PAYMENT APPLICATION

- A. Use the Schedule of Prices as the Monthly Construction Progress Report. Each Payment Application shall be consistent with previous applications and payments. The Contracting Officer shall determine the appropriateness of each payment application item.
- B. Payment Application Times: The date for each progress payment is the last day of each month. The period covered by each Payment Application starts on the first day of the month or following the end of the preceding period and ends on the last day of the month.
- C. Updating: Update the schedule of prices listed in the Payment application when Change Orders or Contract Modifications result in a change in the Contract Price.
- D. Provide a separate line item for each part of the Work where Payment Application may include materials or equipment purchased or fabricated and stored, but not yet installed.
- E. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
- F. Provide separate line items for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- G. Payment Application Forms: Use and submit copies of the Payment Application and Construction Progress forms provided by Department. Forms are available at the Department's Public Works Division office or District office. Furnish 7 copies.
- H. Application Preparation: Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of the Contractor.
 - 1. Entries shall match data on the Schedule of Prices and Contractor's Construction Schedule. Use updated schedules if revisions were made. Include amounts of Change Orders and Contract Modifications issued before last day of construction period covered by application.
- I. No payment will be made until the following are submitted each month:
 - 1. Monthly Estimate, 7 copies.
 - 2. Monthly Progress Report, 7 copies.

3. Statement of Contract Time, 7 copies.
 4. Updated Submittal Register, 1 copy.
 5. Updated Progress Schedule, 1 copy.
 6. All Daily Reports, 1 copy.
 7. All Payroll Affidavits for work done, 1 copy.
- J. Retainage: The Department will withhold retainage in compliance with the GENERAL CONDITIONS.
- K. Transmittal: Submit the signed original and 6 copies of each Payment Application for processing.

2.05 GENERAL CONTRACTOR AND SUBCONTRACTORS DAILY PROGRESS REPORTS

- A. The General Contractor is responsible for submitting the General Contractor and Subcontractor Daily Progress Reports (Daily Reports) for the General Contractor, all subcontractors, and any lower-tier subcontractors.
- B. The form of the Daily Reports shall be as directed by the Contracting Officer. A separate report shall be made and submitted for the General Contractor (each calendar day) and each subcontractor (each day worked). The report shall include the following information for each employer: Name of General Contractor or Subcontractor, Report Number, Contract Day (consecutive calendar day from Notice to Proceed (NTP) Date), Date worked, work location and description, number of workers, trade/labor classification, and work hours. For General Contractor, only the Contract Day is required because the Report Number will be the same number.
- C. The Daily Reports shall be prepared from the project NTP Date. Daily Reports shall continue to be prepared and submitted up to the Project Acceptance Date. After the Project Acceptance Date, Daily Reports will be submitted for days worked only, and continue to date of Contract Completion Notice. Running Contract Day will stop at Project Acceptance Date.
- D. Submit/upload copies of the previous day's reports to the appropriate online folder(s) within the State's web-based construction management system as directed by the Contracting Officer by 10:00 a.m. of the next working day.
- E. Daily Reports can be handwritten in the field and shall be uploaded by the General Contractor to the State's web-based construction management system. The reports shall use the following file naming convention:

CN R# CD# YYMMDD

EXHIBIT C

CN: Company Name of General Contractor or Subcontractor (2 capital letters)

R#: Daily Report number (3 digits, used only by Subcontractor)

CD#: Contract Day (consecutive calendar day from NTP Date, 3 digits)

YYMMDD: Report Date in numerals (year, month, day, 6 digits)

Examples: HS 011 015 170314, for Honolulu Subcontractor, Inc.

HG 015 170314, for Honolulu General Contractor, Inc.

F. A sample Daily Progress Report Form can be found at the end of this Section.

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Comply with the GENERAL CONDITIONS “Shop Drawings and Other Submittals” section and “Material Samples” section.
- B. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- C. Related Sections include the following:
 - 1. SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION for submitting schedules and reports, including Contractor’s Construction Schedule and the Submittals Schedule.
 - 2. SECTION 01322 – WEB BASED CONSTRUCTION MANAGEMENT for use of the StateWebCM for electronic submittals.
 - 3. SECTION 01770 - CLOSEOUT PROCEDURES for submitting warranties, project record documents and operation and maintenance manuals.

1.02 SUBMITTAL PROCEDURES

- A. Coordinate Work and Submittals: Contractor shall certify the submittals were reviewed and coordinated.
- B. Submittal Certification: Provide in MS Word when submitting electronically. Contracting Officer will provide an electronic copy of the Submittal Certification. Provide a reproduction (or stamp) of the “Submittal Certification” and furnish the required information with all submittals. Include the certification on:
 - 1. The title sheet of each shop drawing, or on
 - 2. The cover sheet of submittals in 8-1/2 inch x 11-inch format, or on
 - 3. One face of a cardstock tag (minimum size 3-inch x 6-inch) tied to each sample. On the sample tag, identify the sample to ensure sample can be matched to the tag if accidentally separated. The opposite face of the tag will be used by the Contracting Officer to receive, review, log stamp and include comments.
- C. Variances: The Contractor shall request approval for a variance. Clearly note any proposed deviations or variances from the Specifications, Drawings, and other Contract Documents on the submittal and also in a separately written letter accompanying the submittal.

D. Submittal Certification Form (stamp or digital)

CONTRACTOR'S
NAME: _____
PROJECT: _____
HCDA JOB NO: _____

As the General Contractor, we checked this submittal and we certify it is correct, complete, and in compliance with Contract Drawings and Specifications. All affected Contractors and suppliers are aware of, and will integrate this submittal into their own work.

SUBMITTAL NUMBER _____ DATE RECEIVED _____

REVISION NUMBER _____ DATE RECEIVED _____

SPECIFICATION SECTION NUMBER /PARAGRAPH NUMBER _____

DRAWING NUMBER _____

SUBCONTRACTOR'S NAME _____

SUPPLIER'S NAME _____

MANUFACTURER'S NAME _____

NOTE: DEVIATIONS FROM THE CONTRACT DOCUMENTS ARE PROPOSED AS FOLLOWS (Indicate "NONE" if there are no deviations)

CERTIFIED BY	
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Note: Form can be combined with Design Consultant's Review stamp. This is available from the Contracting Officer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SUBMITTAL REGISTER AND TRANSMITTAL FORM

- A. Contractor shall use submittal register and transmittal forms as directed by the Contracting Officer.
- B. The listing of required submittals within this Section is provided for the Contractor’s convenience. Review the specification technical sections and prepare a comprehensive listing of required submittals. Furnish submittals to the Contracting Officer for review.
- C. Contractor shall separate each submittal item by listing all submittals in the following groups with the items in each group sequentially listed by the specification section they come from:
 - 1. Administrative
 - 2. Data
 - 3. Tests
 - 4. Closing
- D. Contractor shall separate all different types of data as separate line items all with the column requirements.
- E. Contractor shall send monthly updates and reconciled copies electronically to the Contracting Officer and the Design Consultant in MS Word or MS Excel or other format as accepted by the Contracting Officer.

Section No. - Title	Shop Drawings & Samples	Certificates (Material, Treatment)	Product Data, Manufacturer's	MSDS Sheets	Calculations	Reports (Testing, Maintenance, Test Plan	O & M Manual	Equipment or Fixture	Schedules (Project	Maintenance Service	Field Posted As-Built	Others	Guaranty or Warranty	Manufacturer's Guaranty or Warranty
01310 – Project Management and Coordination									■			■		
01320 – Construction Progress Documentation									■			■		
01322 – Web Based Construction Management												■		

Section No. - Title	Shop Drawings & Samples	Certificates (Material, Treatment)	Product Data, Manufacturer's	MSDS Sheets	Calculations	Reports (Testing, Maintenance, Test Plan	O & M Manual	Equipment or Fixture	Schedules (Project	Maintenance Service	Field Posted As-Built	Others	Guaranty or Warranty	Manufacturer's Guaranty or Warranty
01330 – Submittal Procedures		■									■			
01500 – Temporary Facilities and Controls						■						■		
01700 – Execution Requirements												■		
01770 – Closeout Procedures	■						■			■	■	■		
02027 – Minor Demolition for Remodeling												■		
03740 – Cast in Place Concrete		■	■									■		
07413 - Roofing														
07620 – Sheet Metal Flashing and Trim	■		■										■	■
09230 – Gypsum Plastering			■											■
09900 – Painting	■	■	■			■		■					■	■

END OF SECTION

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and for Contractor's Quality Control responsibilities and duties.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements of this section or by the Department or authorities having jurisdiction, do not limit the Contractor's responsibility to provide quality-control services.

1.02 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Contracting Officer.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- D. Mockups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Mockups establish the standard by which the Work will be judged.

1.03 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Contracting Officer.

1.04 SUBMITTALS

- A. Qualification Data: For QC Manager (alternate QC Manager), inspection and testing agencies, furnish evidence to demonstrate their capabilities and experience. Include proof of qualifications in the form of education, certifications, and license. For the testing agencies, include a recent report on the inspection of the testing agency by a recognized authority.
1. The Contracting Officer may disapprove any QC Manager (alternate QC Manager), inspection or testing agency or individual employed by the agency when the Contracting Officer determines it is in the best interest of the State. The Contractor is not entitled to any claim or cost increase or time extension due to the Contracting Officer's disapproval of an agency or individual.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional. Indicate that the products and systems are in compliance with performance and design criteria required. Include list of codes, loads, and other factors used in performing these services.
- C. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.

9. Test and inspection results and an interpretation of test results.
 10. Ambient conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
 14. Combined Contractor Production and Contractor Quality Control Report, (one sheet): By 10:00 AM the next working day after each day that work is performed.
- D. Permits, Licenses, and Certificates: Submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.05 SCHEDULE FOR SUBMITTING INFORMATION AND REPORTS

- A. Deliver the original and two copies each of the following to the Department:
1. Contractor Quality Control Report (1 sheet) and Contractor Production Report (one sheet): By 10:00 AM the next working day after each day that work is performed.
 2. Field Test Reports: Within two working days after the test is performed, attached to the Contractor Quality Control Report;
 3. Monthly Summary Report of Tests: 2 copies attached to the Contractor Quality Control Report;
 4. Testing Plan and Log: 2 copies, at the end of each month;
 5. Rework Items List: 2 copies, by the last working day of the month;
 6. Quality Control meeting minutes: 2 copies, within 2 working days after the meeting and;
 7. Quality Control Certifications: As required by the paragraph titled "Quality Control Certifications.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- B. Mockups: Before installing portions of the Work requiring mockups,
 - 1. Notify Contracting Officer seven days in advance of dates and times when painting mockups will be done.
 - 2. Obtain Contracting Officer's approval of mockups before starting work, fabrication, or construction.

1.07 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
 - 1. Engage qualified inspection or testing agencies to perform quality-control services, unless services are indicated as the Department's responsibility.
 - 2. Notify Contracting Officer and the inspection or testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 3. Submit certified written reports of each quality-control service.
 - 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Special Inspections:
 - 1. The **Contractor** will employ independent Special Inspectors to perform inspections on various elements of the work as required by the Building Code as locally adopted. Contractor shall notify the contracting officer in writing a minimum five (5) working days prior to the actual inspection date. During the course of the work under inspection, each Special Inspector shall submit detailed reports relative to progress and conditions of the Work, including deviations from specified requirements and stipulating dates, times and location. Special Inspectors shall submit a final report to the Contracting Officer and local code officials. Cooperate fully with the Special Inspectors.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- D. Retesting and Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised

or replaced Work that failed to comply with requirements established by the Contract Documents.

1.08 QUALITY CONTROL MANAGER

- A. Duties: Provide a Quality Control Manager at the work site to implement and manage the QC Program. In addition to implementing and managing the QC Program, the QC Manager may perform the duties of the Project Superintendent. The QC Manager is required to; conduct the QC meetings, perform submittal review, ensure testing is performed and provide QC certifications and documentation required in this Contract. The QC Manager is responsible for managing and coordinating Testing Laboratory personnel and any other inspection and testing personnel required by this Contract.

- B. Qualifications: An individual with a minimum of **10** years experience as a superintendent, inspector, QC Manager, project manager, or construction manager on similar size and type construction contracts which included the major trades that are part of this Contract. The individual must have experience in the areas of hazard identification and safety compliance. It is desirable that the QC Manager completed the course "Construction Quality Management for Contractors" offered by the Navy or the Army Corps of Engineers or other similar course.

- C. Approval: QC Manager shall be subject to the approval of the Contracting Officer. Unless the Contractor has a QC Manager on staff, the Contractor shall provide the names of at least three individuals, and shall rank the individuals based on the Contractor's preference to work with or hire. The Contracting Officer may approve all or any one of the individuals. If any individual is presently working for the Contractor as a QC Manager, the Contractor may choose to submit only one individual, and that individual is subject to approval.
 - 1. Furnish evidence showing the individual(s) meets the qualifications, experience, training and other criteria required by this section.

1.09 QUALITY CONTROL ORGANIZATION

- A. Quality Control Manager: Meet the qualifications and duties required by this section. 01400.

- B. Alternate QC Manager Duties and Qualification: Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. Limit the time the QC Manager is absent to a period not exceed a single duration of two consecutive weeks, and in aggregate not more than 45 days during a calendar year. The qualification requirements for the Alternate QC Manager shall be the same as for the QC Manager.

- C. Safety Specialist: Provide a Safety Specialist at the work site to perform safety management, surveillance, inspections and safety enforcement for

the contractor. The Safety Specialist shall be at the work site at all times whenever work is being performed, shall conduct daily safety inspections and shall have no other duties other than safety management, inspections, and safety enforcement on this Contract.

1.10 PHASES OF CONTROL

- A. Three Phases are used to ensure quality control measures are provided for each definable feature of work, which includes both on-site and off-site work. Notify the Contracting Officer at least 4 days prior to each phase.

- B. Preparatory Phase – Includes a meeting conducted by the QC Manager and attended by the superintendent, and the foreman responsible for the definable feature. Document the results of the preparatory phase actions in the daily Contractor Quality Control Report. Perform the following prior to beginning work on each definable feature of work:
 - 1. Review the contract drawing and each paragraph of the applicable specification sections.
 - 2. Verify that shop drawings and submittals for materials and equipment are submitted and approved. Verify receipt of approved factory test results, when required..
 - 3. Examine the work area. Ensure that the required preliminary work is completed.
 - 4. Examine and ensure the required materials, equipment, and sample work conforms to the approved shop drawings and submitted data. Ensure that the materials and equipment are available at the jobsite.
 - 6. Discuss construction methods, construction tolerances, workmanship standards, and the approach that will be used to provide quality construction. Plan ahead and identify potential problems for each definable feature of work.
 - 7. Review the safety plan and appropriate activity hazard analysis to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted.

- C. Initial Phase: The initial phase starts when construction crews are ready to start work on a definable feature of work. Meet with, the superintendent, and the foreman responsible for that definable feature of work. Observe the initial segment of the definable feature of work to ensure that the work complies with Contract requirements. Document the results of the initial phase in the daily Contractor Quality control Report. Repeat the initial phase for each new crew to work on-site, or when acceptable levels of specified quality are not being met. Perform the following for each definable feature of work:

1. Establish the quality of workmanship required.
 2. Resolve conflicts. Check work procedures for compliance with the Safety Plan and the appropriate activity hazard analysis to ensure that applicable safety requirements are met .
- D. Follow-Up Phase: For on-going work, perform the following activities daily, or more frequently if necessary, until the completion of each definable feature of work. Document the work in the daily Contractor Quality Control Report:
1. Ensure that the work is in compliance with Contract requirements.
 2. Maintain the quality of workmanship required.
 3. Ensure that rework items are being corrected.
 4. Perform safety inspections.
- E. Conduct additional Preparatory and Initial Phases on the same definable features of work if the quality of on-going work is unacceptable, or if there are changes in the applicable quality control organization, or if work on a definable feature is resumed after substantial period of inactivity, or if other problems develop.

1.11 COMPLETION INSPECTIONS

- A. Pre-Final Inspection: Near completion of the Work or any increment Work, the QC Manager shall conduct an inspection to identify items which do not conform to the contract requirements. Include any remaining items on the "Rework Items List" which were not corrected. The QC Manager shall make follow-on inspections to ascertain that all deficiencies have been corrected.
- B. Final Inspection: Comply with the General Conditions section titled "SUBSTANTIAL COMPLETION AND FINAL INSPECTION." Verify that the facility is substantially complete and ready for final inspection. The QC Manager shall ensure that all deficient items are corrected prior to notifying the Department for a final inspection.

1.12 DOCUMENTATION

- A. Maintain current and complete records of on-site and off-site activities.
- B. A Contractor Production Report is required for each day that work is performed and shall be attached to the Contractor Quality Control Report prepared for the same day. Account for each calendar day throughout the life of the Contract. Use terminology consistent with the construction schedule to report the work. The Contractor Production Report is to be

prepared, signed and dated by the project superintendent and shall contain the following information:

1. Report date, report number, contractor's name, project title, HCDA job number, project location and superintendent present.
 2. Weather conditions in the morning and in the afternoon including; maximum and minimum temperatures, durations and estimated rainfall, and prevailing wind directions and speed.
 3. Identify work performed by corresponding schedule activity number, post contract number, change order number, and other items.
 4. A list of Contractor and subcontractor personnel on the work site. Include their trades, work location, description of work performed, hours worked by trade, daily total work hours on work site, and total work hours from start of construction.
 5. A list of job safety actions taken and safety inspections conducted. Indicate that safety requirements have been met including the results, and address the following:
 - a. Was a job safety meeting held? If yes, attach a copy of the meeting minutes.
 - b. Were there any lost time accidents? If yes, attach a copy of the completed OSHA report and the Department's "Contractor Significant Incident Report".
 - c. Was any crane, trenching, scaffold, high voltage electrical, or high work done? If yes, attach a statement or checklist showing inspection(s) performed.
 - d. Were there hazardous material(s) or waste released into the environment? If yes, attach descriptions, accident reports, notifications required and made.
 - e. List safety actions taken today and safety inspections conducted.
 6. A list of equipment or material received each day that is incorporated into the job.
 7. Include a "remarks" section in this report. Address pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site.
- C. A Contractor Quality Control Report is required for each day that work is performed and for every seven consecutive calendar days of no-work period and on the last day of a no-work period. Account for each calendar day throughout the life of the Contract. Use terminology consistent with the construction schedule to report the work. The Contractor Quality

Control Report is prepared, signed and dated by the QC Manager and shall contain the following information:

1. Identify the control phase and the definable feature of work.
 2. Results of the Preparatory Phase meetings held including the location of the definable feature of work and a list of personnel present at the meeting. Indicate in the report that for this definable feature of work, the drawings and specifications have been reviewed, submittals approved, materials comply with approved submittals, materials are stored properly, preliminary work is done correctly, the testing plan was reviewed, work methods and schedule were discussed, and that safety and hazard analysis were addressed.
 3. Results of the Initial Phase meetings held including the location of the definable feature of work and a list of personnel present at the meeting. Indicate in the report that for this definable feature of work the preliminary work was done correctly, samples were prepared and approved, the workmanship is satisfactory, test results are acceptable, work is in compliance with the Contract, work complies with safety requirements, and the required testing was performed including a list of who performed the tests.
 4. Results of the Follow-Up Phase inspections held including the location of the definable feature of work. Indicate in the report for this definable feature of work that the work complies with the Contract as approved in the Initial Phase, work complies with safety requirements, and that required testing was performed including a list of who performed the tests.
 5. List the rework items identified, but not corrected by close of the day's work.
 6. List the rework items corrected from the rework items list along with the corrective action taken.
 7. Include a "remarks" section in this report. Address pertinent information including directions received, quality control problem areas, construction deficiencies encountered, QC meetings held, acknowledgment that as-built drawings have been updated, corrective direction given by the QC organization and corrective action taken by the Contractor.
- D. Testing Plan and Log: As tests are performed, the QC Manager shall record on the "Testing Plan and Log" the date the test was conducted, the date the test results were forwarded to the Department remarks and acknowledgment that an accredited or approved testing laboratory was used. Attach a copy of the updated "Testing Plan and Log" to the last daily Contractor Quality Control Report of each month.

- E. Rework Items List: The QC Manager shall maintain a list of work that does not comply with the Contract, identifying what items need to be reworked, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected. There is no requirement to report rework item that is corrected the same day it is discovered. Attach a copy of the "Rework Items List" to the last daily Contractor Quality Control Report of each month. The Contractor shall be responsible for including on this list items needing rework including those identified by DAGS.
- F. Report Forms: Furnish the proposed forms to be used to the Contracting Officer for review and approval.
 - 1. Contractor Production Report and Contractor Quality Control Report, with separate continuation sheet. These forms may be combined.
 - 2. Testing Plan and Log.
 - 3. Rework Items List.

1.13 RECORD (As-Builts) DRAWINGS

- A. The QC Manager is required to ensure the record drawings and jobsite record sets are kept current on a daily basis in accordance with Section 01770 – Closeout Procedures.

1.14 NOTIFICATION OF NON-COMPLIANCE

- A. Contractor will be notified of any detected non-compliance items. Take immediate corrective action after receipt of such notice.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: On completion testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.02 DEPARTMENT'S AUTHORITY

- A. Review and removal of Quality Control Personnel:
1. All Quality Control organization personnel are subject to review by Contracting Officer; and the Contracting Officer may interview any member of the Quality Control organization at any time in order to verify the submitted qualifications.
 2. The Contracting Officer has the authority to have the QC Manager replaced at any time for cause. Justifications may include but are not limited to: not being on site when QC Manager's duties are required, or wrongfully approving substandard and noncompliant work.
 3. The Contractor is not entitled to any claim or cost increase or time extension due to the Contracting Officer's disapproval of an agency or individual.

END OF SECTION

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

- B. Temporary utilities include but are not limited to, the following:
 - 1. Sanitary facilities, including toilets, wash facilities, and drinking water facilities.
 - 2. Electric power service.
 - 3. Telephone service.
 - 4. Internet Service.

- C. Support facilities include, but are not limited to, the following:
 - 1. Project Sign
 - 2. Field Offices – Not required.
 - 3. Storage and fabrication sheds
 - 4. Trash, refuse disposal
 - 5. Erosion controls and site drainage
 - 6. Cranes, lifts, and hoists
 - 7. Construction aids and miscellaneous services and facilities.

- D. Security and protection facilities and measures include, but are not limited to, the following:
 - 1. Environmental protection
 - 2. Stormwater control
 - 3. Tree and plant protection
 - 4. Site enclosure fence and lockup
 - 5. Barricades, warning signs, and lights
 - 6. Pest control

7. Fire protection
8. Historical and archaeological protection.

E. Related Sections: Refer to Divisions 2 through 16 for other temporary requirements including ventilation, humidity requirements and products in those Sections.

1.02 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to the State and shall be included in the Contract Price. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
1. Other Contractors with agreements with the State working within the contract limits.
 2. Contracting Officer and personnel of authorities having jurisdiction.

1.03 SUBMITTALS

- A. Temporary Utility Reports: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Landfill Disposal Receipts: Submit copies of receipts issued by a landfill facility. Include receipts with Contractor Daily Progress Report

1.04 QUALITY ASSURANCE

- A. Standards: Comply with IBC Chapter 33, "Safeguards During Construction", ANSI A10.6, NECA's "Standard for Installing and Maintaining Temporary Electric Power at Construction Sites", and NFPA 241, "Standard for Safeguarding Construction, Alteration, and Demolition Operations".
1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 2. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70, "National Electrical Code".
 - a. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.05 PROJECT CONDITIONS

- A. Temporary Utilities: At the earliest feasible time, when acceptable to the Contracting Officer, change over from use of temporary service to use of permanent service.
1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and

protection of each permanent service during its use as a construction facility before Contracting Officer's acceptance, regardless of previously assigned responsibilities.

- B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 1. Keep temporary services and facilities clean and neat.
 2. Relocate temporary services and facilities as required by progress of the Work.

1.06 PREPARATION AND PROTECTION

- A. Protection of Property: Continually maintain adequate protection of the Work from damage and protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. Repair, replace or pay the expense to repair damages resulting from Contractor's fault or negligence.
- B. Before starting work to be applied to previously erected constructions, make a thorough and complete investigation of the recipient surfaces and determine their suitability to receive required additional construction and finishes. Make any repair that is required to properly prepare surfaces and coordinate the Work to provide a suitable surface to receive following Work.
- C. Commencing work by any trade implies acceptance of existing conditions and surfaces as satisfactory for the application of subsequent work, and full responsibility for finished results and assumption of warranty obligations under the Contract.
- D. Protect existing (including interiors) work to prevent damage by vandals or the elements. Provide temporary protection. Use curtains, barricades, or other appropriate methods. Take positive measures to prevent breakage of glass and damage to plastic, aluminum, and other finishes.
- E. Repairs and Replacements: Promptly replace and repair damages to the approval of the Contracting Officer. Additional time required to secure replacements and to make repairs does not justify a time extension.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by the Contracting Officer. Provide materials suitable for use intended.

2.02 EQUIPMENT

- A. Field Offices: Not required.
- B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA recommended classes for exposures. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- C. Self Contained Combination Toilet and Urinal Units: Single occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material. One quarter of, or at least one unit(s) shall contain a handwash sink with potable water storage.
- D. Drinking Water Fixtures: Drinking water fountains or containerized, tap dispenser, bottled water drinking water units, or water cooler dispensing water at 45 - 55 degree F available at Field Office including paper cup supply.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

- A. General: Utilities are existing or available. Engage appropriate local utility company to install temporary service if required. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 - 1. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked in services.

Storm Drainage: Drainage due to construction related activities into any storm drain and any major water runoff from the project site is prohibited.

- B. Water Service: Make arrangements with the utility company for temporary use of water and pay for all expenses.

- C. Sanitary Facilities:

1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
- D. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment. Protect wiring, in conduits or other, measures when exposed to possible damage or traffic areas.
- E. Telephone Service: Provide temporary telephone service throughout construction period for common use facilities used by all personnel engaged in construction activities

3.03 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 1. Locate storage sheds, and other temporary construction and support facilities for easy access as coordinated with the Contracting Officer.
 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion.
- B. Site Drainage:
 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
- C. Project Sign and Temporary Sign(s):
 1. Provide and install project identification sign and other signs as listed. Sign designs are attached to Part 3 of this Section:
 - a. Project Sign will be provided by HCDCA.
 - b. Warning Signs
 2. Install signs where directed by the Contracting Officer or where indicated to inform public and persons seeking entrance to the Project. Do not permit installation of unauthorized signs.
 3. Provide temporary signs to provide directional information to constructional personnel and visitors.
 4. Construct signs with durable materials, properly supported or mounted, and visible.
- D. Trash, Refuse Disposal:
 1. Department of Health – Illegal Dumping Notice. See attachment to Part 3 of this section.
 - a. This Notice to be printed out on 8.5x11” paper.

- b. This Notice to be posted at the job site field office and/or in locations visible to all contractors, subcontractors, suppliers, vendors, etc. throughout the duration of the project.
2. Illegal Dumping of solid waste could subject the Contractor to fines and could lead to felony prosecution in accordance with Chapter 342H, HRS. For more information, see the following web site:
<http://www.hawaii.gov/health/environmental/waste/sw/pdf/llldump.pdf>
3. Provide waste collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste.
4. Do not burn debris or waste materials on the project site.
5. Do not bury debris or waste material on the project site unless specifically allowed elsewhere in these specifications as backfill material.
6. Haul unusable debris and waste material to an appropriate off site dump area.
 - a. Water down debris and waste materials during loading operations or provide other measures to prevent dust or other airborne contaminants.
 - b. Vacuum, wet mop, or damp sweep when cleaning rubbish and fines which can become airborne from floors or other paved areas. Do not dry sweep.
 - c. Use enclosed chutes or containers to conveying debris from above the ground floor level.
7. Clean up shall include the collection of all waste paper and wrapping materials, cans, bottles, construction waste materials and other objectionable materials, and removal as required. Frequency of clean up shall coincide with rubbish producing events.

3.04 ENVIRONMENTAL CONTROLS

- A. General: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

B. Dust Control:

1. Prevent dust from becoming airborne at all times including non working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60.1 Air Pollution Control.
2. Contractor is responsible for and shall determine the method of dust control. Subject to the Contractor's choice, the use of water or environmentally friendly chemicals may be used over surfaces that create airborne dust.
3. Contractor is responsible for all damage claims due to their negligence to control dust.

C. Noise Control:

1. Keep noise within acceptable levels at all times in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 46 Community Noise Control. Obtain and pay for the Community Noise Permit when construction equipment or other devices emit noise at levels exceeding the allowable limits.
2. Ensure mufflers and other devices are provided on equipment, internal combustion engines and compressors to reduce loud disruptive noise levels and maintain equipment to reduce noise to acceptable levels.
3. Unless specified elsewhere, do not start construction equipment that meet allowable noise limits prior to 6:45 A.M. or equipment exceeding allowable noise levels prior to 7:00 A.M.

D. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from construction damage. Protect existing landscaping and tree root systems from damage, flooding, and erosion due to construction activity.

E. Pest Control: Before demolition and excavation work begins, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Engage this pest control service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

3.05 VIOLATION OF ENVIRONMENTAL PROVISIONS

A. Violations of any of the above environmental control requirements or any other pollution control requirements; which may also be specified in the other Specifications sections, shall be resolved under the SUSPENSION and CORRECTIVE WORK Section of the GENERAL CONDITIONS.

3.06 BARRICADES AND ENCLOSURES

- A. Barricades: Use the existing perimeter fence as the barricade to the site. If additional barricades are determined to be required by the Contractor they shall be erected before construction operations begin.
1. Provide gates in sizes and at locations necessary to accommodate delivery vehicles and other construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Contracting Officer with 2 sets of keys.
 3. Maintain temporary construction barricade(s) throughout the duration of the Work. During the course of the project, the Contracting Officer may require additional barricades be provided for the safety of the public. Contractor shall erect the additional barricade(s) at its own expense.
 4. Construction
 - a. Contractor's choice.

3.07 TEMPORARY FIRE PROTECTION

1. Locate fire extinguishers where convenient and effective for their intended purpose; provide not less than one extinguisher on each floor at or near each usable stairwell.
2. Store combustible materials in containers in fire safe locations.
3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for firefighting. Prohibit smoking in hazardous fire exposure areas.
4. Supervise welding operations, combustion type temporary heating units, and similar sources of fire ignition.
5. Develop and supervise an overall fire prevention and first aid fire protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
6. Provide hoses for fire protection of sufficient length to reach construction areas. Hang hoses with a warning sign stating that hoses are for fire protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.
7. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire protection

purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.08 OPERATION, TERMINATION, AND REMOVAL

- A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by heat temperatures and similar elements.

- B. Termination and Removal: Remove each temporary facility when need for its service has ended, or when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the property of Contractor. The Department reserves the right to take possession of Project identification signs.

3.09 ATTACHMENTS.

- A. Warning Sign: Requirements for Warning Sign.

- B. Department of Health – Illegal Dumping Notice

END OF SECTION

REQUIREMENTS FOR WARNING SIGN

1. General Requirements: Furnish all labor, materials and equipments necessary to construct and install warning signs as specified hereinafter.
2. Materials
 - a. Backing: Backing shall be 6061-T6 aluminum 0.032-inch minimum thickness.
 - b. Paint: Paint shall be satin finish, exterior grade or factory baked enamel or a combination thereof.
3. Colors: Signs shall have white background. Remaining items shall be similar to Rust-Oleum Federal Safety Red.
4. Requirements for Warning Sign: Message configuration and dimensions shall be in accordance with the attached illustration.
5. Installation
 - a. Signs shall be located at 50-foot intervals around roped off work area or at all entrances in the case of interior work.
 - b. Signs shall be attached to the rope barrier, rope barrier supports, individual sign supports or buildings. Do not use nails to attach signs to building(s).
6. Clean-up: Remove all signs upon completion of project. Repair any damages caused by sign mounting and removal.

**DEPARTMENT OF HEALTH
ILLEGAL DUMPING NOTICE**

The law requires you to dispose solid waste only at recycling or disposal facilities permitted by the Department of Health.

“Solid waste” includes municipal refuse, construction and demolition waste, household waste, tires, car batteries, derelict vehicles, green wastes, furniture, and appliances.

Illegal dumping of solid waste or allowing illegal disposal of solid waste on your property even if contractual or other arrangements are made could subject you to fines from \$10,000 to \$25,000 per occurrence and could lead to felony prosecution in accordance with Chapter 342H, HRS.

Contact the Department of Health, Solid Waste Section at 586-4226 to report illegal dumping activities or if you have further questions.

SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 4 - GENERAL

4.01 SUMMARY

- A. This 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.
- B. The State's goal is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that goal, the Contractor shall:
 - 1. Practice efficient waste management when sizing, cutting, and installing products and materials and
 - 2. Use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

4.02 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.

4.03 REFERENCES –

- A. *A Contractor's Waste Management Guide: Best Management Practices and Tools for Job Site Recycling and Waste Reduction in Hawaii*, 1999. Request a copy from the State of Hawaii, Clean Hawaii Center (808) 587-3802 or download from www.hawaii.gov/dbedt/ert/cwmg/index.html.
- B. *Minimizing Construction & Demolition Waste*. State of Hawaii, Department of Health guidance on construction and demolition (C&D) waste management and listing of permitted C&D waste management facilities. Download from www.state.hi.us/health/eh/shwb/sw.

4.04 PERFORMANCE REQUIREMENTS

- A. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of [50] [75] <Insert number> percent by weight of total waste generated by the Work.
- B. Salvage/Recycle Requirements: Owner's requirement is to salvage and recycle as much nonhazardous demolition and construction waste as possible including the following materials:
 - 1. Demolition Waste:
 - a. Concrete.
 - b. Copper
 - 2. Construction Waste:
 - a. Roofing.
 - b. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Plastic pails.

4.05 SUBMITTALS

- A. Waste Management Plan: Submit 3 copies of plan within 30 days of date established for the Notice to Proceed.

- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three copies of report. Include separate reports for demolition and construction waste. Failure to submit this report may render the Payment Application incomplete and delay payment. Include the following information(the Progress Reports may be submitted in a form similar to Table 2 of Appendix A):
1. Material category.
 2. Generation point of waste.
 3. Total quantity of waste in tons.
 4. Quantity of waste salvaged, both estimated and actual in tons.
 5. Quantity of waste recycled, both estimated and actual in tons.
 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
 8. Records (Donations, Sales, Recycling/Processing, Landfill/Incinerator) as described in the following paragraph)
- C. Before request for Substantial Completion, submit:
1. Waste Reduction Calculations: Before request for Substantial Completion, submit three copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work. Fill out the actual quantities in Appendix A Table 2 WASTE REDUCTION WORK PLAN. Also include an actual Cost/Revenue analysis to be compared with the projected Cost/Revenue analysis of the Waste Management Plan (See Appendix A Table 3).
 2. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
 3. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
 4. 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.
 5. 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.
- D. Qualification Data: For Waste Management Coordinator.

4.06 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: Submit qualifications of individual designated as Waste Management Coordinator, including resume and past related projects.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." 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 subcontractor.

4.07 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Use the plan included in Appendix A of this section and fill out the appropriate items. Include separate sections in plan for demolition and construction waste. Indicate quantities by weight or volume but use same units of measure throughout waste management plan.
- B. Waste Management Coordinator: Indicate name of individual(s) to be responsible for implementing, monitoring, and reporting status of waste management plan.
- C. Waste Identification: Fill out Table 1 of Appendix A. Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- D. Waste Reduction Work Plan: Fill out the estimated quantities in Table 2 of Appendix A. The actual quantities will be filled out at the end of the project. List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, 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.
- E. Cost/Revenue Analysis: Fill out Table 3 of Appendix A. 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. 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 from reusing materials versus purchasing new materials.
 7. Savings in hauling and tipping fees by donating materials.
 8. Savings in hauling and tipping fees that are avoided.
 9. Handling and transportation costs. Include cost of collection containers for each type of waste.
 10. Net additional cost or net savings from waste management plan.
- F. Forms: Prepare waste management plan on forms included in Appendix A.

PART 5 - PRODUCTS

- 5.01 MATERIALS – Recycled-content, salvaged, or otherwise resource-efficient products are specified in appropriate sections.

PART 6 - EXECUTION

6.01 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by the Contracting Officer. 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 Division 1 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- 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.
 3. Provide education for all on-site workers on efficient waste reduction and waste management when, sizing, cutting, and installing products and materials.
 4. Use meetings, signage, and subcontractor agreements to communicate the goals of the waste reduction plan. Consider incorporating the meetings with the safety meetings.
- 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 Division 1 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.
- E. Provide a central cutting area to facilitate re-use of existing cutoffs and to consolidate scrap for recycling.

6.02 SALVAGING DEMOLITION WASTE

- A. First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered.
- B. Salvaged Items for Reuse in the Work:
1. No existing materials shall be reused in the Work.

6.03 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. Hazardous Materials:
1. Materials separated for recycling must be clean: materials must not contain contaminants such as lead-based paint, asbestos, PCB's, or Freon.
 2. Manage hazardous waste materials separately from recyclable materials.
- 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.
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. Make sure bins are in convenient locations as close as possible to where material is being generated.
 - b. 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.

6.04 RECYCLING DEMOLITION WASTE

- A. Clean Concrete: Remove reinforcement, other metals, and other contaminants from concrete and sort with other metals.
 1. Pulverize concrete to maximum 1-1/2-inch (38-mm) size.
- B. Clean Metals: Send to permitted recycling facility.

6.05 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. Untreated 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. Untreated Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Wood Materials:
 1. Untreated Clean Cut-Offs of Lumber: Grind or chip into small pieces.

6.06 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 currently permitted 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.
- B. Burning: Do not burn waste materials.

- C. Disposal: Transport waste materials off Owner's property and legally dispose of them at a permitted landfill.

END OF SECTION 01524

APPENDIX A

WASTE MANAGEMENT PLAN

Project Title: Roof and Miscellaneous Repairs – Historic Kakaako Pump Station

HCDA Job No.: 73646

Waste Management Coordinator: **<Insert Name, Title, and contact information>**

Recycling Requirement – To recycle/salvage **<Insert Percentage>** of waste generated on the site.

EXHIBIT C

TABLE 1: WASTE IDENTIFICATION

Material	Est. Qty.	Est. tons *	Point of Generation	Comments/Assumptions

* Avg volume-to-weight conversions are:

Mixed waste 5.7 yds/ton

Wood 6.7 yds/ton

Cardboard 20 yds/ton

Drywall 4 yds/ton

Rubble 1.4 yds/ton

TABLE 2: WASTE REDUCTION WORK PLAN

Material	S/R/D *	Est Qty S/R/D (tons)	Actual Qty S/R/D(tons)	Handling and Transport Procedures	Destination (Name, address, phone) **

*S Salvage/Reuse
 R Recycle
 D Dispose

** For materials sent for recycling or disposal, send to facilities currently permitted by the DOH, Solid Waste Section (808) 586-4226.

No solid waste management permit required for on-site processing of clean waste concrete, provided the processed product

meets the “inert fill material” definition in Chapter 342H, HRS.

Solid Waste Management Permit required if destination site accepts for processing such waste materials (eg. Clean waste concrete) from other sites.

TABLE 3: COST/REVENUE ANALYSIS

Material	Est Cost of Disposal(1)	Est Revenue from Salvage/Recycle(2)	Est Cost of Salvage/Recycle(3)	Est Net Savings/Cost (1)+(2)-(3)

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including the following:
 - 1. Construction layout. Field engineering and surveying.
 - 2. General installation of products.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
 - 6. Correction of the Work.
- B. Related Sections
 - 1. SECTION 01770 - CLOSEOUT PROCEDURES.

1.02 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.03 NOTIFICATION

- A. Contact the Contracting Officer and the Project Contact Person at least 3 working days prior to starting any onsite work.

1.04 PROJECT AND SITE CONDITIONS

- A. Project Contract Limits (Contract Zone Limits) indicate only in general the limits of the work involved. Perform necessary and incidental work, which may fall outside of these demarcation lines. Confine construction activities within the Project Contract Limits and do not spread equipment and materials indiscriminately about the area.
- B. Utility Services: No utilities are existing or available to the Contractor. Contractor will provide temporary electrical and other utility services. Pay for temporary services as part of the contract.
- C. Contractor's Operations - Provide means and methods to execute the Work and minimize interruption or interference to the facility's operations. Rearrange the construction schedule when construction activities result in interruptions that hamper the operations of the school.
- D. Contractor, Subcontractor(s) and their employees will not be allowed to park in the school parking zones or property.

1.05 QUALITY ASSURANCE

- A. Professional Engineer Qualifications: A professional engineer with a license to practice in Hawaii.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINING THE SITE

- A. Contractor and Subcontractors are expected to visit the site and make due allowances for difficulties and contingencies to be encountered. Compare contract documents with work in place. Become familiar with existing conditions, the conditions to be encountered in performing the Work, and the requirements of the drawings and specifications.
- B. Verify construction lines, grades, dimensions, and elevations indicated on the drawings before any construction begins. Bring any discrepancy to the attention of the Contracting Officer and make any change in accordance with the Contracting Officer instruction.
- C. Obtain all field measurements required for the accurate fabrication and installation of the Work included in this Contract. Verify governing dimensions and examine adjoining work on which the Contractor or Subcontractor's work is in any way dependent. Submit differences discovered during the verification work to the Contracting Officer for interpretations before proceeding with the associated work. Exact measurements are the Contractor's responsibility.
- D. Furnish or obtain templates, patterns, and setting instructions as required for the installation of all Work. Verify dimensions in the field.
- E. Contractor shall accept the site in the condition that exists at the time access is granted to begin the Work. Verify existing conditions and dimensions shown and other dimensions not indicated but necessary to accomplish the Work.

3.02 SITE UTILITIES AND TONING

- A. Cooperate, coordinate and schedule work to maintain construction progress, and accommodate the operations and work of the owners of underground or overhead utility lines or other property in removing or altering the lines or providing new services.
- B. Contact all the various utility companies before the start of the work to ascertain any existing utilities and to develop a full understanding of the utility requirements with respect to this Project. Furnish the Contracting Officer with evidence that the utility companies were contacted.

- C. Should the Contractor discover the existence and location of utilities in the contract drawings are not correct, do not disturb the utilities and immediately notify the Contracting Officer.
- D. Do not disturb or modify any utilities encountered, whether shown or not on the Contract Drawings, unless otherwise instructed in the drawings and specifications or as directed by the Contracting Officer. Repair and restore to pre-damaged condition any utilities or any other property damaged by construction activities.
- E. Transfer to "Field Posted As-Built" drawings the location(s) and depth(s) of new and existing utilities that differ from the Contract Drawings. Locate by azimuth and distance and depth(s) from fixed referenced points.
- H. Existing Irrigation System: Where work is located in areas with existing irrigation systems, Contractor shall test the existing systems and document all deficiencies prior to any work that may damage the existing systems.

3.03 FIELD MEASUREMENTS

- A. Take field measurements to fit and install the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Submit a Request For Information (RFI) immediately upon discovery of the need for clarification of the Contract Documents. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents and/or addressing the issue being raised..

3.04 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to existing conditions. If discrepancies are discovered, notify the Contracting Officer promptly.

3.06 INSTALLATION

- A. Install materials, items, fixtures required by the various Divisions and Sections of the Specifications in accordance with Contract Documents, by workers specially trained and skilled in performance of the particular type of work, to meet guarantee and regulatory agency requirements. Should the drawings or specifications be void of installation requirements, install the materials, items, and fixtures in accordance with the manufacturer's current specifications, recommendations, instructions and directions.

3.07 CUTTING AND PATCHING

- A. Oversee cutting and patching of concrete, masonry, structural members and other materials where indicated on drawings and as required by job conditions. Unless noted elsewhere in the contract documents, do not cut or patch existing or new structural members without previously notifying the Contracting Officer.
- B. Provide patch materials and workmanship of equal quality to that indicated on the drawings or specified for new work.

3.09 CLEANING

- A. General: Clean the Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste more than seven (7) days unless approved otherwise by the Contracting Officer.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use only cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar

materials. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.11 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions to provide proper temperature and relative humidity conditions.

3.12 CORRECTION OF THE WORK

- A. Repair or replace defective construction. Restore damaged substrates and finishes. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

END OF SECTION

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including the following:
 - 1. Project Record Documents.
 - 2. Operation and Maintenance Manuals.
 - 3. Warranties.
 - 4. Instruction for the State's personnel.
- B. Related documents include the following:
 - 1. SECTION 01700 – EXECUTION REQUIREMENTS.

1.02 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting a Final Inspection to determine Substantial Completion, complete the following items in addition to requirements of Article 7 of the GENERAL CONDITIONS.
 - 1. Advise the Contracting Officer of pending insurance changeover requirements.
 - 2. Submit specific warranties, final certifications, and similar documents.
 - 3. Obtain and submit occupancy permits, operating certificates, and similar releases and access to services and utilities, unless waived by the Contracting Officer.
 - 4. Arrange to deliver tools, spare parts, extra materials, and similar items to a location designated by the Contracting Officer. Label with manufacturer's name and model number where applicable.
 - 5. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 6. Advise the Contracting Officer of changeover in other utilities.
 - 7. Submit changeover information related to the State's occupancy, use, operation, and maintenance.
 - 8. Complete final cleaning requirements, including touch up painting.
 - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.03 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit two (2) copies of any updated and action taken list. In addition to requirements of GENERAL CONDITIONS Article 7 PROSECUTION AND PROGRESS, include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project Name and Title.
 - b. HCDA Job No.
 - c. Date and page number.
 - d. Name of Contractor.

1.04 PROJECT RECORD DOCUMENTS AND REQUIREMENTS

- A. General:
1. Definition: "Project Record Documents", including Record Drawings, shall fulfill the requirements of "Field-Posted As-Built Drawings" listed in the GENERAL CONDITIONS.
 2. Do not use Project Record Documents for daily construction purposes. Protect Project Record Documents from deterioration and loss.
 3. The Designer, under contract with the State, will update the drawings to show all addendum, PCD, and sketch changes. The Contracting Officer will transmit these drawings (mylar or vellum) to the Contractor who will make all "red-line" corrections to these drawings to record the changes depicted on the Contractor's Field Posted Record ("As-Built") by accepted drafting practices as approved by the Contracting Officer.
 4. Where the recorded changes depicted on the Contractor's Field Posted Record ("As-Built") are in the form of shop drawings, the Contractor shall provide those shop drawings electronically on the same sheet size as the drawings transmitted to the Contractor. The new drawing sheets shall be titled and numbered to conform to the construction drawings and clearly indicate what information they supersede in the actual construction drawings. For example, a new drawing that replaces drawing M-3, could be numbered M3a.

5. The Contractor shall bring to the attention of the Contracting Officer any discrepancy between the changes made by the Designer and those depicted on addendum, PCD, and sketch changes. The Contracting Officer will resolve any conflicts.
 6. Submit final Record Documents (Field Posted Record Drawings) before the Final Inspection Date and no later than the Contract Completion Date, unless the GENERAL CONDITIONS require otherwise.
 7. The Contractor shall guarantee the accuracy of its final Record Documents. The State will hold the Contractor liable for costs the State incurs as a result of inaccuracies in the Contractor's Record Documents.
 8. Prepare and submit construction photographs and electronic files, damage or settlement surveys, property surveys, and similar final record information as required by the Contracting Officer.
 9. Deliver tools, spare parts, extra materials, and similar items to a location designated by the Contracting Officer. Label with manufacturer's name and model number where applicable.
- B. Record Drawings:
1. Maintain a duplicate full-size set as the Field Posted Record ("As-Builts") Drawings at the job site. Clearly and accurately record all deviations from alignments, elevations and dimensions, which are stipulated on the drawings and for changes directed by the Contracting Officer that deviate from the drawings.
 2. Record changes immediately after they are constructed in place and where applicable, refer to the authorizing document (Field Order, Change Order, or Contract Modification). Use red pencil to record changes. Make Field Posted Record Drawings available to the Contracting Officer at any time so that its clarity and accuracy can be monitored and can be countersigned for validity.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark the contract drawings or the shop drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on contract drawings.
 - e. Mark important additional information that was either shown schematically or omitted from original Drawings.

- f. Locate concealed building utilities by dimension from bench marks or permanent structures. Locate site utilities by dimensions, azimuth and lengths from bench marks or permanent structures.
 - g. Note field order numbers, Change Order numbers, Contract Modification numbers, Alternate numbers, post-construction drawing numbers (PCD) and similar identification (RFI numbers) where applicable.
 - h. The Contractor shall initial each deviation and each revision marking.
3. Use the final updated Contract Drawing set (including all addenda, PCD, and sketches) plus applicable shop drawings for making the final Field Posted Record Drawings submittal.
 4. Certify drawing accuracy and completeness. Label and sign the record drawings or use digital electronic signature as approved by the Contracting Officer.
 5. Label the title sheet and on all sheets in the margin space to the right of the sheet number, written from the bottom upward, with the title "FIELD POSTED RECORD DRAWINGS" and certification information as shown below. Provide a signature line and company name line for each subcontractor that will also certify the respective drawing. Adjust size to fit margin space.

FIELD POSTED Certified By: _____ Date: _____
 _____ RECORD DRAWINGS [Contractor's
 Company Name]

6. Revise the Drawing Index and label the set "FIELD POSTED RECORD DRAWINGS". Include the label "A COMPLETE SET CONTAINS [] SHEETS" in the margin at the bottom right corner of each sheet. Quantify the total number of sheets comprising the set.
7. If the Contracting Officer determines a drawing does not accurately record a deviation or omits relevant information, the State will correct any FIELD POSTED RECORD DRAWINGS sheet. Contractor will be charged for the State's cost to correct the error or omission.
8. Use the final Field Posted Record Drawings sheets and create one electronic version of the set. The set shall be recorded in Adobe Acrobat PDF (Portable Document Format). Create a single indexed, bookmarked PDF file of the entire set of drawings and upload electronically per SECTION 1322 – WEB BASED CONSTRUCTION MANAGEMENT.

1.05 WARRANTIES

- A. Submittal Time: Submit written manufacturer's warranties at request of the Contracting Officer for designated portions of the Work where commencement of warranties other than Project Acceptance date is indicated.
- B. Partial Occupancy: Submit properly executed manufacturer's warranties within forty-five (45) days of completion of designated portions of the Work that are completed and occupied or used by the State during construction period by separate agreement with Contractor.
- C. Organize manufacturer's warranty documents into an orderly sequence based on the table of contents of the Specifications.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 inch x 11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer and prime contractor.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES", Project Name and Title, HCDA Job Number, and name of Contractor.
 - 4. Use the final submittal of the warranties to create an electronic Adobe Acrobat PDF (Portable Document Format) version of the bound warranty documents files. Each sheet shall be separately scanned, at 600 DPI or better into a PDF file, indexed, and uploaded electronically per SECTION 1322 – WEB BASED CONSTRUCTION MANAGEMENT.
- D. Provide two (2) sets of manufacturer's warranties that exceed one year and one CD as part of the closing document submittal. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 – EXECUTION

3.01 FINAL PROGRESSIVE CLEANING

- A. General: Provide progressive final cleaning <for each phase of work prior to starting the next phase>. In addition to requirements of Article 7 of the GENERAL CONDITIONS conduct cleaning and waste-removal operations to comply with local laws and ordinances and federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturers written instructions unless noted otherwise. Complete the following cleaning operations before requesting final inspection for entire Project or for a portion of Project:
1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits resulting from construction activities.
 3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 4. Remove tools, construction equipment, machinery, and surplus material from Project site.
 5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 6. Remove debris and surface dust from limited access spaces, including: roofs.
 7. Sweep floors broom clean.
 8. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass surfaces, taking care not to scratch surfaces.
 9. Remove labels that are not permanent.
 10. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 11. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the State's property. Do not

EXHIBIT C

discharge volatile, harmful, or dangerous materials into drainage and sewer systems or onto State property. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

DIVISION 2 - EXISTING CONDITIONS

SECTION 02072 – MINOR DEMOLITION FOR REMODELING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS: The General Terms and Conditions, HCDA/State of Hawaii (not specifically attached), the Special Provisions, and all other applicable documents preceding these specifications shall govern all work specified hereinafter in all DIVISIONS AND SECTIONS.

1.02 WORK INCLUDED: Furnish all labor, materials, tools, and equipment necessary to complete all miscellaneous work as required and specified hereinafter.

- A. Demolition work shall include, but not necessarily be limited to the following:
 - 1. Removal of concrete slabs.
- B. The Contractor shall visit the site, examine the areas and note all existing conditions and extent of work involved for the complete removal and surface preparation work required.
- C. All removed materials shall become the property of the Contractor and shall be completely removed, hauled away from the premises and properly disposed of according to State and County regulations at his own expense, except for items as noted on the plans.
- D. Miscellaneous patch work may be required as a result of removal work and other damage already existing.
- E. The Contractor shall comply with all pollution control regulations and safety codes.
- F. Clean up.

PART 2 – MATERIALS

2.01 MATERIALS

- A. Products shall be as specified and/or the best of their respective trades, matching existing.

PART 3 – EXECUTION

3.01 REMOVAL AND DEMOLITION:

- A. All work shall be executed in a safe, neat, orderly, and careful manner with due consideration for the remaining parts of the building.
- B. PATCHING: All areas damaged as a result of demolition work and those already existing shall be patched to match existing.
- C. CLEAN UP: Clean up and remove all debris accumulated from demolition construction operations from time to time, when and as directed by the Officer-in-Charge. Upon completion of the construction work and before final acceptance of work, remove all surplus materials, equipment, etc., and leave entire jobsite clean and neat.

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. Related Requirements:

Section 02411 – Selective Demolition

1.02 **DEFINITIONS**

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.
- B. Formwork: The total system of support of freshly placed concrete, including the mold or sheathing that contacts the concrete, as well as supporting members, hardware, and necessary bracing.
- C. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.03 **ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated and required for installation. Include the following:

Admixtures: Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.

Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

- 1. Indicate amounts of mixing water to be withheld for later addition at Project site.

- B. Shop Drawings, Construction Joints: Indicate proposed construction and control joints required for construction. Location of construction joints is subject to approval of the Contracting Officer (CO).

1.04 **INFORMATIONAL SUBMITTALS**

Welding certificates.

Qualification Data:

1. Qualification Data: For firms and persons specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.
2. Installer: Include copies of applicable ACI certificates.
3. Ready-mix concrete manufacturer.
4. Testing agency: Include copies of applicable ACI certificates.

Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Form materials and form-release agents.
4. Steel reinforcement and accessories.
5. Curing compounds.
6. Bonding agents.
7. Adhesives.
8. Semirigid joint filler.
9. Joint-filler strips.
10. Repair materials.

1.05 QUALITY ASSURANCE

ACI Publications: Comply with ACI 301 unless modified by requirements in the Contract Documents.

Installer Qualifications:

1. Concrete: A qualified installer who employs project personnel qualified as ACI-certified Flatwork Technician and Finisher and supervisor who is an ACI-certified Concrete Flatwork Technician.
2. Installer shall be experienced cast-in-place concrete installer, with not less than five consecutive years' experience, specializing in installing cast-in-place concrete similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's “Certification of Ready Mixed Concrete Production Facilities.

Preinstallation Conference: Conduct conference at Project site.

1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials.
2. Review special finishing, including methods for matching and conditions required for successful matching of finishes.

1.06 DELIVERY, STORAGE, AND HANDLING

Deliver, store, and handle steel reinforcement to prevent bending and damage.

Comply with ASTM C94 and ACI 301.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

Concrete Formwork: Design, engineer, erect, shore, brace, and maintain formwork, shores, and reshores in accordance with ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads, so that resulting concrete conforms to the required shapes, lines, and dimensions.

1. Design formwork to limit deflection of form-facing material to 1/240 of center-to-center spacing of supports.

2.02 FORM-FACING MATERIALS

Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

2. Plywood, metal, or other approved panel materials.
3. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - APA High-density overlay (HDO), Class 1, or better.
 - APA Medium-density overlay (MDO), Class 1, or better, mill-release agent treated and edge sealed.
 - APA Structural 1 Plyform, B-B, or better, mill oiled and edge sealed.
 - APA Plyform Class I, B-B or better, mill oiled and edge sealed.

Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

4. Formulate form-release agent with rust inhibitor for steel form-facing materials.

2.03 CONCRETE MATERIALS

Source Limitations:

1. Obtain all concrete mixtures from a single ready-mixed concrete manufacturer for entire Project.
2. Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant.
3. Obtain aggregate from single source.
4. Obtain each type of admixture from single source from single manufacturer.

Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C150, Type I/II
 - a. Fly Ash: ASTM C618, Class C or F. Refer to General Structural Notes for additional information.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C989, Grade 100 or 120.

Silica Fume: ASTM C1240, amorphous silica.

Normal-Weight Aggregate: ASTM C33, coarse aggregate or better, graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 3/4 inch.
2. Combined Aggregate Gradation: Well graded from coarsest to finest with not more than 18 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 sieve, and less than 8 percent may be retained on sieves finer than No. 50.
3. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

Water: ASTM C94/C94M and potable.

2. ADMIXTURES

- a. Air-Entraining Admixture: ASTM C260.

- b. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
- Water-Reducing Admixture: ASTM C494/C494M, Type A.
 - High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.

3. CURING MATERIALS

- a. General: Curing materials used shall be guaranteed by manufacturer. Named products may be used where manufacturer's documentation is provided during Submittals.
- b. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
- c. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.
- d. Water: Potable.

2.04 **RELATED MATERIALS**

- A. Bonding Agent: ASTM C1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- B. Epoxy-Bonding Adhesive: ASTM C881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class, suitable for application temperature and grade to suit requirements, and as follows:
1. Types I and II for non-load bearing and types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.05 REPAIR MATERIALS

- A. Products to be used in locations permanently exposed to the weather shall be approved by the manufacturer for use in exterior environments.

2.06 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 and in accordance with the following:
 - i. Compressive Strength: 4,000 psi minimum.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete.
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- D. Admixtures, General: Use admixtures according to manufacturer's written instructions. Do not add multiple admixtures simultaneously.
 - 1. Use water-reducing, high-range water-reducing or plasticizing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.
 - 2. Use water-reducing admixture in pumped concrete, concrete for slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
 - 3. At board-formed concrete, use water-reducing and plasticizing admixtures.

2.07 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C94/C94M and ASTM C1116, and furnish batch ticket information.
 - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.01 FORMWORK

- A Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads.
- B Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
 - 1. Surface Finish-3.0: ACI 117 Class A, 1/8 inch for smooth-formed finished surfaces.
- D Construct forms tight enough to prevent loss of concrete mortar.
- E Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces.
- F Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- H Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- I Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 **VAPOR-RETARDER INSTALLATION**

A. Sheet Vapor Retarders: None required.

3.03 **JOINTS**

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by the CO.
 - 1. Use a bonding agent or roughen interface to 1/4-inch amplitude at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

3.04 **CONCRETE PLACEMENT**

- A. Before placing concrete, verify the following:
 - 1. That installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by the CO.
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mix.
- C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
- D. Hot-Weather Placement: Comply with ACI 301 and as follows:
 - 1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.05 **FINISHING FORMED SURFACES**

- A. Related Unformed Surfaces: At top of ramps, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.06 **FINISHING SLABS**

- A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

3.07 **MISCELLANEOUS CONCRETE ITEMS**

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction.

3.08 **CONCRETE PROTECTION AND CURING**

- A. General: Protect freshly placed concrete from premature drying and excessive hot temperatures. Comply with recommendations in ACI 305R for hot-weather protection during curing.
- B. Cure concrete according to ACI 308.1 by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

3.09 **PROTECTION**

A. Protect concrete surfaces as follows:

1. Protect from petroleum stains.
2. Diaper hydraulic equipment used over concrete surfaces.
3. Prohibit use of pipe-cutting machinery over concrete surfaces.
4. Prohibit placement of steel items on concrete surfaces.
5. Prohibit use of acids or acidic detergents over concrete surfaces.
6. Protect concrete surfaces and saw cut and exposed joint edges during construction.

END OF SECTION 03300