



**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII**

**SPECIAL PROVISIONS
PROPOSAL
CONTRACT AND BOND**

FOR

KAUMUALI'I HIGHWAY

**KAUMUALI'I HIGHWAY DRAINAGE IMPROVEMENTS
VICINITY OF OMAO STREAM BRIDGE**

FEDERAL-AID PROJECT NO. ER-27(008)

DISTRICT OF KOLOA

ISLAND OF KAUAI

FY 2027

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

The receiving of bids for **KAUMUALI‘I HIGHWAY DRAINAGE IMPROVEMENTS, VICINITY OF OMAO STREAM BRIDGE, DISTRICT OF KOLOA, ISLAND OF KAUAI, FEDERAL-AID PROJECT NO. ER-27(008)**, will begin as of the HiePRO Release Date. Bidders shall register and submit complete bids through HiePRO only. Refer to the following HiePRO link for important information on Vendor Registration:

<https://hiepro.ehawaii.gov/welcome.html>.

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

HiePRO OFFER DUE DATE AND TIME is October 29, 2026, at 2:00 p.m., Hawaii Standard Time (HST). **Bidders shall submit and upload the complete proposal to HiePRO prior to the offer due date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HiePRO. Bidders shall not include confidential and/or proprietary documents as part of their proposal. The record of each bidder and their respective proposal shall be open to public inspection. FAILURE TO UPLOAD THE PROPOSAL TO HiePRO SHALL BE GROUNDS FOR REJECTION.**

The scope of work includes but is not limited to: demolition and removal of existing drainage structure, concrete apron, asphalt concrete pavement and chain link fencing; fill the existing 24” RCP drain pipe crossing Kaumualii Highway with controlled low-strength material (CLSM) and abandon in place; installation of 42” reinforced concrete pipe; installation of drain

manhole, grated drain inlets and concrete outlet structure; installation of grouted rubble paving, reinforced concrete apron and asphalt concrete pavement; installation of chain link fencing and erosion control matting; clearing and grubbing; excavation; backfilling; grading; and grassing.

The estimated cost of construction is between \$10,000,000 and \$11,000,000.

To be eligible for award, bidders shall possess a valid State of Hawaii General Engineering "A" license **prior to the award of contract.**

A virtual pre-bid conference is scheduled for October 8, 2026, at 10:00 a.m., HST, on Microsoft Teams. Interested bidders shall contact Jeff Aguinaldo, Project Manager, directly at jeff.j.aguinaldo@hawaii.gov, no later than three working days prior to the scheduled pre-bid conference to receive the meeting invitation. All prospective bidders and/or their respective representatives are encouraged to attend, however, attendance is not mandatory. All information presented at the pre-bid conference shall be provided for clarification and information only. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

All Request for Information (RFI) questions and Substitution Requests shall be submitted in HiePRO **no later than October 15, 2026, at 2:00 p.m., HST.** RFI questions received after the stated deadline shall not be addressed. Substitution Requests received after the stated deadline shall not be considered. Verbal RFI(s) shall not receive a response. All responses to RFI questions shall be provided for clarification and information only and issued by formal addendum. Any amendments to the solicitation shall be made by formal addendum and posted in HiePRO.

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

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of HRS § 11-355 which states that campaign contributions are prohibited from

specified State or County government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

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

The Equal Employment Opportunity Regulations of the Secretary of Labor implementing Executive Order (EO) 11246 has been revoked as per EO 14173. To the extent any contract document references this EO, or associated provisions, those references are inoperative.

The U.S. Department of Transportation Regulation entitled “Nondiscrimination in Federally Assisted Programs of the U.S. Department of Transportation”, Title 49, Code of Federal Regulations (CFR), Part 21, is applicable to this project. Bidders are hereby notified that the Department of Transportation shall affirmatively ensure that the contract entered into pursuant to this advertisement shall be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, national origin, or sex (as directed by 23 CFR Part 200).

Disadvantaged Business Enterprise (DBE). The U.S. Department of Transportation Regulations entitled "Participation by Disadvantaged Business Enterprise in Department of Transportation Financial Assistance Programs", Title 49, CFR, Part 26, is applicable to this project. Bidders are hereby notified that the Department of Transportation shall enforce compliance with the applicable requirements of the Disadvantaged Business Enterprise program with respect to this project.

Bidders shall read the following included in the solicitation:

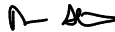
1. “CIVIL RIGHTS COMPLIANCE AND DISADVANTAGED BUSINESS

ENTERPRISE SPECIAL PROVISIONS”

Driving While Impaired (DWI) Education. The Hawaii Department of Transportation (HDOT) encourages all organizations contracted with HDOT to have an employee education program preventing DWI. DWI is defined as operating a motor vehicle while impaired by alcohol or other legal or illegal substances. HDOT promotes this type of program to accomplish our mission to provide a safe environment for motorists, bicyclists, and pedestrians utilizing our State highways, and expects its contractors to do so as well.

For additional information, contact Jeff Aguinaldo, Project Manager, by phone at (808)241-3018, or by email at jeff.j.aguinaldo@hawaii.gov.

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



ROBIN K. SHISHIDO
Deputy Director of Transportation for Highways

HIePRO RELEASE DATE: September 29, 2026

TABLE OF CONTENTS

Instructions for Contractor's Licensing

Civil Rights Compliance And Disadvantaged Business Enterprise Special Provisions

Required Federal-Aid Contract Provisions

Special Provisions Title Page

Special Provisions:

DIVISION 100 - GENERAL PROVISIONS		
Section	Description	Pages
101	Terms, Abbreviations, and Definitions	101-1a – 101-13a
102	Bidding Requirements and Conditions	102-1a – 102-8a
103	Award And Execution of Contract	103-1a – 103-4a
104	Scope of Work	104-1a – 104-2a
105	Control of Work	105-1a – 105-3a
106	Material Restrictions and Requirements	106-1a – 106-4a
107	Legal Relations and Responsibility To Public	107-1a – 107-3a
108	Prosecution And Progress	108-1a – 108-25a
109	Measurement and Payment	109-1a – 109-2a

DIVISION 200 - EARTHWORK		
Section	Description	Pages
201	Clearing and Grubbing	201-1a
202	Removal of Structures and Obstructions	202-1a
206	Excavation and Backfill for Drainage Facilities	206-1a
207	Ditch and Channel Excavation	207-1a
209	Temporary Water Pollution, Dust, and Erosion Control	209-1a – 209-28a
280	Shaft Construction	280-1a – 280-9a

DIVISION 300 - BASES		
Section	Description	Pages
304	Aggregate Base Course	304-1a
305	Aggregate Subbase Course	305-1a
314	Controlled Low-Strength Material (CLSM) for Utilities and Structures	314-1a

DIVISION 400 - PAVEMENTS		
Section	Description	Pages
401	Hot Mix Asphalt Pavement	401-1a – 401-35a

DIVISION 500 - STRUCTURES		
Section	Description	Pages
503	Concrete Structures	503-1a – 503-8a

DIVISION 600 - INCIDENTAL CONSTRUCTION		
Section	Description	Pages
601	Structural Concrete	601-1a – 601-15a
602	Reinforcing Steel	602-1a – 602-2a
603	Culverts and Storm Drains	603-1a
604	Manholes, Inlets and Catch Basins	604-1a – 604-2a
607	Chain Link Fences and Gates	607-1a
612	Grouted Rubble Paving	612-1a
617	Planting Soil	617-1a
619	Planting	619-1a – 619-3a
629	Pavement Markings	629-1a – 629-5a
636	E-Construction	636-1a – 636-5a
641	Hydro-Mulch Seeding	641-1a
645	Work Zone Traffic Control	645-1a – 645-19a
663	Erosion Control Matting	663-1a – 663-3a
671	Protection of Endangered Species	671-1a – 671-6a

DIVISION 600 – INCIDENTAL CONSTRUCTION		
Section	Description	Pages
672	Microtunneling	672-1a – 672-14a
684	Construction Instrumentation and Monitoring	684-1a – 684-6a
685	Muck Handling and Disposal	685-1a – 685-4a
694	Portable Concrete Barrier and End Treatment System	694-1a – 694-9a
699	Reinforced Concrete Jacking Pipe	699-1a

DIVISION 700 - MATERIALS		
Section	Description	Pages
702	Bituminous Materials	702 -1a
703	Aggregates	703 -1a
705	Joint Materials for Concrete Structures	705-1a
717	Cullet and Cullet-Made Materials	717-1a – 717-2a
719	Macro-Synthetic Fibers for Concrete Reinforcement	719-1a
750	Traffic Control Sign and Marker Materials	750-1a – 750-2a
780	Reinforced Concrete Jacking Pipe	780-1a – 780-11a

Requirement of Chapter 104, HRS
Wages and Hours of Employees on Public Works Law

Federal Wage Rates

Proposal Title Page

Proposal P-1 – P-7
Proposal Schedule P-8 - P-13

Surety Bid Bond

Sample Forms

Contract

Performance Bond (Surety)

Performance Bond

Labor and Material Payment Bond (Surety)

Labor and Material Payment Bond

Disclosure of Lobbying Activities
Standard Form - LLL and LLL-A

Statement of Compliance
Form WH-348

Chapter 104, HRS Compliance Certificate

END OF TABLE OF CONTENTS

INSTRUCTIONS FOR CONTRACTOR'S LICENSING

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

CIVIL RIGHTS COMPLIANCE AND DISADVANTAGED BUSINESS ENTERPRISE SPECIAL PROVISIONS

I. GENERAL

This project is subject to Title 49 Code of Federal Regulations (CFR), Part 26, entitled "Participation by Disadvantaged Business Enterprise in Department of Transportation Financial Assistance Programs," hereinafter referred to as the "DBE Regulations" and is incorporated and made a part of this contract herein by this reference, as revised by the United States Department of Transportation's (USDOT) DBE Interim Final Rule (IFR) issued October 3, 2025 (hereinafter referred to as IFR). The following shall be incorporated as part of the contract documents for compliance. If any requirements herein conflict with the general provisions or special provisions applicable to this project, the requirements herein shall prevail unless specifically superseded or amended in the special provisions or by addendum.

II. POLICY

The Hawai'i Department of Transportation's (HDOT) and its political subdivision's Disadvantaged Business Enterprise (DBE) program will operate in a nondiscriminatory manner and without regard to race or sex, while maximizing efficiency of service.

Bidders/offerors, subcontractors, consultants, vendors, suppliers, distributors, manufacturers, trucking companies, service providers, etc. shall fully inform themselves with respect to the requirements of the DBE Regulations.

HDOT's DBE program remains in effect pursuant to 49 CFR Parts 23 and 26. However, consistent with the USDOT's IFR effective October 3, 2025, HDOT has suspended race-conscious measures including DBE contract goals, counting of DBE participation, and associated special provisions, pending the completion of HDOT's DBE certification reevaluation. Where indicated, HDOT reserves the right to reinstate or amend DBE special provisions at a later date, subject to approval by the appropriate USDOT operating administration.

HDOT reserves the right to reimplement, revise, or otherwise modify any reserved provisions, in whole or in part, following its reevaluation period or upon receipt of additional federal guidance. Upon such reimplementation, contractors will be notified in writing and shall comply with the updated requirements as directed by HDOT.

III. NON-DISCRIMINATION POLICY

Each contract signed with a prime contractor (and each subcontract the prime contractor signs with a subcontractor) shall include the following assurance:

"The contractor, sub-recipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26, as revised by the

DBE IFR, in the award and administration of USDOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate which may include, but is not limited to: 1) withholding monthly progress payments; 2) assessing sanctions; 3) liquidated damages; and/or 4) disqualifying the contractor from future bidding as non-responsible.”

The prime contractor agrees to include the above statements in any subsequent contracts that it enters into with other contractors and shall require those contractors to include similar statements in further agreements.

- IV. **BIDDER/OFFEROR RESPONSIBILITIES (RESERVED)**
- V. **PROPOSAL REQUIREMENTS (RESERVED)**
- VI. **COUNTING DBE PARTICIPATION TOWARDS CONTRACT GOAL (RESERVED)**
- VII. **USE OF JOINT CHECKS UNDER THE DBE PROGRAM (RESERVED)**
- VIII. **DEMONSTRATION OF GOOD FAITH EFFORTS FOR CONTRACT AWARD (RESERVED)**
- IX. **ADMINISTRATIVE RECONSIDERATION (RESERVED)**
- X. **AWARD OF CONTRACT (RESERVED)**
- XI. **REPLACEMENT OF A DBE ON A PROJECT WITH A CONTRACT GOAL (RESERVED)**
- XII. **CONTRACT COMPLIANCE**

This contract is subject to contract compliance tracking, and the prime contractor and all subcontractors are required to report payments electronically in the HDOT online Vendor Management System (hereafter referred to as “online tracking system”.) The prime contractor shall report the date payment was made by HDOT and shall report payment to all subcontractors for the audit period. The prime contractor and all subcontractors are responsible for responding by any noted response date or due date to any instructions or request for information, and to check the online tracking system on a regular basis to manage contact information and contract records.

The prime contractor is responsible for ensuring all subcontractors have completed all requested items and that their contact information is accurate and up-to-date. HDOT may require additional information related to the contract to be provided electronically through the online tracking system at any time before, during, or after contract award. Information related to contractor access of the online tracking system will be provided to designated point of contact with each contractor upon award of the contract. The online

tracking system is web-based and can be accessed at the following internet address:
<https://hdot.dbesystem.com/>.

XIII. PAYMENT

- A. HDOT will make an estimate in writing each month based on the items of work performed and materials incorporated in the work and the value therefore at the unit prices or lump sum prices set forth in the contract. All progress estimates and payments will be approximate only and shall be subject to correction at any time prior to or in the final estimate and payment. HDOT will not withhold any amount from any payment to the contractor, including retainage.
- B. The contractor shall pay all subcontractors within 10 calendar days after receipt of any progress payments from HDOT. This clause applies to all subcontractors, and all tiers of subcontracts. As per HRS § 103-10.5 Prompt payment, the contractor will verify that payment or retainage has been released to the subcontractors or its suppliers within the specified time through entries in HDOT's online tracking system during the corresponding monthly audits. Prompt payment will be monitored and enforced through the contractor's reporting of payments to its subcontractors and suppliers in the online tracking system.

Subcontractors, including lower tier subcontractors and/or suppliers will confirm the timeliness and the payment amounts received utilizing the online tracking system. Discrepancies will be investigated by the DBE Program Office and the project engineer. Payments to the subcontractors, including lower tier subcontractors, and including retainage released after the subcontractor or lower tier subcontractor's work has been completed to HDOT's satisfaction, will be reported by the Contractor or the subcontractor.

- C. When any subcontractor has satisfactorily completed its work as specified in the subcontract, and there are no bona fide disputes, the contractor shall make prompt and full payment to the subcontractor of all monies due, including retainage, within 10 calendar days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented, as required by HDOT. The contractor must obtain the prior written approval from HDOT before it can continue to withhold retainage from any subcontractor who has completed its portion of the work. This clause applies all subcontractors, and all tiers of subcontracts.

XIV. RECORDS

The contractor shall maintain and keep all records necessary for HDOT to determine compliance with the contractor's compliance obligations. The records shall be available at reasonable times and places for inspection by HDOT and appropriate Federal agencies.

The records to be kept by the contractor shall include:

1. The names, address, phone number, and contact person of consultants, subcontractors, manufacturers, suppliers, distributors, truckers and vendors;
2. The nature of work of each consultant, subcontractor, manufacturer, supplier, distributor, trucker and vendor;
3. The dollar amount contracted with each consultant, subcontractor, manufacturer, supplier, distributor, trucker and vendor; and
4. Cumulative dollar amount of all change orders to the subcontract.

XV. FAILURE TO COMPLY WITH STATED REQUIREMENTS

The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT assisted contracts. All contractors, subcontractors, manufacturers, suppliers, and distributors are hereby advised that failure to carry out all requirements specified herein shall constitute a material breach of contract that may result in termination of the contract or such other remedy as deemed appropriate by HDOT including but not limited to:

1) withholding monthly progress payments; 2) assessing sanctions; 3) liquidated damages; and/or 4) disqualifying the contractor from future bidding as non-responsible.

CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Davis-Bacon and Related Act Provisions
- IV. Contract Work Hours and Safety Standards Act Provisions
- V. Subletting or Assigning the Contract
- VI. Safety: Accident Prevention
- VII. False Statements Concerning Highway Projects
- VIII. Implementation of Clean Air Act and Federal Water Pollution Control Act
- IX. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- X. Certification Regarding Use of Contract Funds for Lobbying
- XI. Use of United States-Flag Vessels

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only).

I. GENERAL

1. Historically, contracting agencies using Federal-aid highway funds were required to ensure Form FHWA-1273 was physically incorporated into all contracts and subcontracts. Effective June 10, 2026, this requirement was eliminated [91 FR 25492]. Future use of Form FHWA-1273 is now optional on the part of the contracting agency using Federal-aid highway funds. FHWA continues to make Form FHWA-1273 available as a convenience to contracting agencies. Contracting agencies must continue to ensure compliance with the provisions cited in Form FHWA-1273 in accordance with the provisions regardless of the use of Form FHWA-1273. Accordingly, the contracting agency retains the authority to determine whether the contractor must use Form FHWA-1273 to physically incorporate required contract provisions in each subcontract and in lower tier contracts. Where permitted by the contracting agency, the contractor may choose other ways to include required contract provisions in each subcontract, besides incorporating Form FHWA-1273. Contract provisions in Form FHWA-1273 are not required to be physically included in subcontracts for design services on Federal-aid design-build contracts, or in purchase orders, rental agreements and other agreements for supplies or services.

The applicable provisions of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor or design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents.

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's

immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION

The contractor and all subcontractors must comply with the following policies: 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract.

1. Assurances Required:

a. The requirements of 49 CFR Part 26, including any amendments thereto, and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26, including any amendments thereto, in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E, including any amendments thereto, are incorporated by reference. 49 CFR Part 21.

III. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in

paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the

classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. Fringe benefits not expressed as an hourly rate. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. Unfunded plans. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. Interest. In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. Withholding requirements. The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered

necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with paragraph 2.a. of this section or Section IV, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its repurchase costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number

of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with [29 CFR part 30](#), including any amendments thereto.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section III. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs (1) through (11) of this section, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the

contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

IV. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the

Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$33 as of January 15, 2025 (See 90 FR 1859) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section III paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its procurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

V. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of

the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1. of this section refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph 1. of this section is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however,

contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VI. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the

character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

VIII. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

IX. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the

eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers to any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered

transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

X. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XI. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the

extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS** (40 U.S.C. sections 14501(d) and 14701
and the Appalachian Regional Commission Code as
authorized under 40 U.S.C. section 14302)

This provision is applicable to all Federal-aid projects funded
under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor
undertaking to do work which is, or reasonably may be, done
as on-site work, shall give preference to qualified persons who
regularly reside in the labor area as designated by the DOL
wherein the contract work is situated, or the subregion, or the
Appalachian counties of the State wherein the contract work is
situated, except:

a. To the extent that qualified persons regularly residing in
the area are not available.

b. For the reasonable needs of the contractor to employ
supervisory or specially experienced personnel necessary to
assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to
present or former employees as the result of a lawful collective
bargaining contract, provided that the number of nonresident
persons employed under this subparagraph (1c) shall not
exceed 20 percent of the total number of employees employed
by the contractor on the contract work, except as provided in
subparagraph (4) below.

2. The contractor shall place a job order with the State
Employment Service indicating (a) the classifications of the
laborers, mechanics and other employees required to perform
the contract work, (b) the number of employees required in
each classification, (c) the date on which the participant
estimates such employees will be required, and (d) any other
pertinent information required by the State Employment
Service to complete the job order form. The job order may be
placed with the State Employment Service in writing or by
telephone. If during the course of the contract work, the
information submitted by the contractor in the original job order
is substantially modified, the participant shall promptly notify
the State Employment Service.

3. The contractor shall give full consideration to all qualified
job applicants referred to him by the State Employment
Service. The contractor is not required to grant employment to
any job applicants who, in his opinion, are not qualified to
perform the classification of work required.

4. If, within one week following the placing of a job order by
the contractor with the State Employment Service, the State
Employment Service is unable to refer any qualified job
applicants to the contractor, or less than the number
requested, the State Employment Service will forward a
certificate to the contractor indicating the unavailability of
applicants. Such certificate shall be made a part of the
contractor's permanent project records. Upon receipt of this
certificate, the contractor may employ persons who do not
normally reside in the labor area to fill positions covered by the
certificate, notwithstanding the provisions of subparagraph (1c)
above.

5. The provisions of 40 U.S.C. 14501 allow the contracting
agency to provide a contractual preference for the use of
mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1
through 4 of this Attachment A in every subcontract for work
which is, or reasonably may be, done as on-site work.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

SPECIAL PROVISIONS

These Special Provisions shall supplement and/or amend the applicable provisions of the Hawaii Standard Specifications for Road and Bridge Construction, 2005, hereinafter referred to as the "Standard Specifications".

Amend **Section 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS** to read as follows:

“DIVISION 100 - GENERAL PROVISIONS

SECTION 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS

101.01 Meaning of Terms. The specifications are generally written in the imperative mood. In sentences using the imperative mood, the subject, “the Contractor shall”, is implied. In the material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project. The word “will” generally pertains to decisions or actions of the State.

When a publication is specified, it refers to the most recent date of issue, including interim publications, before the bid opening date for the project, unless a specific date or year of issue is provided.

101.02 Abbreviations. Meanings of abbreviations used in the specifications, on the plans, or in other contract documents are as follows:

AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association

46	ARA	American Railway Association
47		
48	AREA	American Railway Engineering Association
49		
50	ASA	American Standards Association
51		
52	ASCE	American Society of Civil Engineers
53		
54	ASLA	American Society of Landscape Architects
55		
56	ASTM	American Society for Testing and Materials
57		
58	AWG	American Wire Gauge
59		
60	AWPA	American Wood Preserver's Association
61		
62	AWS	American Welding Society
63		
64	AWWA	American Water Works Association
65		
66	BMP	Best Management Practice
67		
68	CCO	Contract Change Order
69		
70	CFR	Code of Federal Regulations
71		
72	CRSI	Concrete Reinforcing Steel Institute
73		
74	DCAB	Disability and Communication Access Board, Department of
75		Health, State of Hawaii
76		
77	DOTAX	Department of Taxation, State of Hawaii
78		
79	EPA	U.S. Environmental Protection Agency
80		
81	FHWA	Federal Highway Administration,
82		U.S. Department of Transportation
83		
84	FSS	Federal Specifications and Standards,
85		General Services Administration, U.S. Department of Defense
86		
87	HAR	Hawaii Administrative Rules
88		
89	HDOT	Department of Transportation, State of Hawaii
90		

91	HIOSH	Occupational Safety and Health, Department of Labor and
92		Industrial Relations, State of Hawaii
93		
94	HMA	Hot Mix Asphalt
95		
96	HRS	Hawaii Revised Statutes
97		
98	ICEA	Insulated Cable Engineers Association (formerly IPCEA)
99		
100	IMSA	International Municipal Signal Association
101		
102	IRS	Internal Revenue Service
103		
104	ITE	Institute of Transportation Engineers
105		
106	MUTCD	Manual on Uniform Traffic Control Devices for Streets and
107		Highways, FHWA, U.S. Department of Transportation
108		
109	NCHRP	National Cooperative Highway Research Program
110		
111	NEC	National Electric Code
112		
113	NEMA	National Electrical Manufacturers Association
114		
115	NFPA	National Forest Products Association
116		
117	NPDES	National Pollutant Discharge Elimination System
118		
119	OSHA	Occupational Safety and Health Administration/Act,
120		U.S. Department of Labor
121		
122	SAE	Society of Automotive Engineers
123		
124	SI	International Systems of Units
125		
126	UFAS	Uniform Federal Accessibility Standards
127		
128	UL	Underwriter's Laboratory
129		
130	USGS	U.S. Geological Survey
131		
132	VECP	Value Engineering Cost Proposal
133		
134		

101.03 Definitions. Whenever the following words, terms, or pronouns are used in the contract documents, unless otherwise prescribed therein and without regards to the use or omission of uppercase letters, the intent and meaning shall be interpreted as follows:

Addendum (plural - Addenda) - A written or graphic document, including drawings and specifications, issued by the Director during the bidding period. This document modifies or interprets the bidding documents by additions, deletions, clarifications or corrections.

Addition (to the contract sum) - Amount added to the contract sum by change order.

Advertisement - A public announcement inviting bids for work to be performed or materials to be furnished.

Amendment - A written document issued to amend the existing contract between the State and Contractor and properly executed by the Contractor and Director.

Award - Written notification to the bidder that the bidder has been awarded a contract.

Bad Weather Day (or Unworkable Day) - A day when weather or other conditions prevent a minimum of four hours of work with the Contractor's normal work force on critical path activities at the site.

Bag - 94 pounds of cement.

Barrel - 376 pounds of cement.

Base Course - The layer or layers of specified material or selected material of a designed thickness placed on a subbase or subgrade to support a surface course.

Basement Material - The material in excavation or embankments underlying the lowest layer of subbase, base, pavement, surfacing or other specified layer.

Bid - See Proposal.

Bidder - An individual, partnership, corporation, joint venture or other legal entity submitting, directly or through a duly authorized representative or agent, a proposal for the work or construction contemplated.

Bidding Documents (or Solicitation Documents) - The published solicitation notice, bid requirements, bid forms and the proposed contract documents including all addenda and clarifications issued prior to receipt of the bid.

Bid Security - The security furnished by the bidder from which the State may recover its damages in the event the bidder breaches its promise to enter into a contract with the State, or fails to execute the required bonds covering the work contemplated, if its proposal is accepted.

Blue Book - EquipmentWatch Cost Recovery (formerly known as EquipmentWatch Rental Rate Blue Book), available from EquipmentWatch, a division of Penton, Inc.

Calendar Day - See Day.

Change Order (or Contract Change Order) - A written order signed by the Engineer issued with or without the consent of the Contractor directing changes in the work, contract time or contract price. The purposes of a change order include, but are not limited to (1) establishing a price or time adjustment for changes in the work; (2) establishing full payment for direct, indirect, and consequential costs, including costs of delay; (3) establishing price adjustment or time adjustment for work covered and affected by one or more field orders; or (4) settling Contractor's claims for direct, indirect, and consequential costs, or for additional contract time, in whole or in part.

Completion - See Substantial Completion and Final Completion.

Completion Date - The date specified by the contract for the completion of all work on the project or of a designated portion of the project.

Comptroller - the Comptroller of the State of Hawaii, Department of Accounting and General Services.

Contract - The written agreement between the Contractor and the State, by which the Contractor shall provide all labor, equipment, and materials and perform the specified work within the contract time stipulated, and by which the State of Hawaii is obligated to compensate the Contractor at the prices set forth in the contract documents.

Contract Certification Date - The Date on which the Deputy Comptroller for the State of Hawaii (or authorized representative) signs the Contract Certification.

Contract Completion Date - The calendar day on which all work on the project, required by the contract, must be completed. See CONTRACT TIME.

Contract Documents - The contract, solicitation, addenda, notice to bidders, Contractor's bid proposal (including wage schedule, list of subcontractors and other documentations accompanying the bid), notice to proceed, bonds, general provisions, special provisions, specifications, drawings, all modifications, all written amendments, change orders, field orders, orders for minor changes in the work, the Engineer's written interpretations and clarifications issued on or after the effective date of the contract.

Contract Item (Pay Item) - A specific unit of work for which there is a price in the contract.

Contract Modification (Modification) - A change order that is mutually agreed to and signed by the parties to the contract.

Contract Price - The amount designated on the face of the contract for the performance of work.

Contract Time (or Contract Duration) - The number of calendar or working days provided for completion of the contract, inclusive of authorized time extensions. Contract time shall commence on the Start Work Date and end on the Substantial Completion Date. If in lieu of providing a number of calendar or working days, the contract requires completion by a certain date, the work shall be completed by that date.

Contracting Officer - See Engineer.

Contractor - Any individual, partnership, firm, corporation, joint venture, or other legal entity undertaking the execution of the work under the terms of the contract with the State.

Critical Path - Longest logical sequence of activities that must be completed on schedule for the entire project to be completed on schedule.

Day - Any day shown on the calendar, beginning at midnight and proceeding up to, but not including, midnight the following day. If no designation of calendar or working day is made, "day" shall mean calendar day.

Department - The Department of Transportation of the State of Hawaii (abbreviated HDOT).

Director - The Director of the HDOT acting directly or through duly authorized representatives.

Plans (or Drawings) - The contract drawings in graphic or pictorial form including the notes, tables and other notations thereon indicating the design, location, character, dimensions, and details of the work.

Engineer - The Highway Administrator, Highways Division, HDOT, or the authorized person delegated to act on the Administrator's behalf.

Equipment - All machinery, tools, and apparatus needed to complete the contract.

Field Order - A written order issued by the Engineer or the Engineer's authorized representative to the Contractor requiring a change or changes to the contract work. A field order may (1) establish a price adjustment or time adjustment; or (2) may declare that no adjustment will be made to contract price or contract time; or (3) may request the Contractor to submit a proposal for an adjustment to the contract price or contract time.

Final Acceptance - The Status of the project when the Engineer finds that the Contractor has satisfactorily completed all contract work in compliance with the contract including all plant establishment requirements, and all the materials have been accepted by the State.

Final Completion - The date set by the Director that all work required by the contract has been completed in full compliance with the contract documents.

Final Inspection - Inspection where all contract items (with the exception of Planting Period and Plant Establishment Period) are accepted by the Engineer. Substantial Completion will be issued by the Engineer based on the satisfactory results of the Final Inspection.

Float - The amount of time between when an activity can start and when an activity must start, i.e., the time available to complete non-critical activities required for the performance of the work without affecting the critical path.

Guarantee - Legally enforceable assurance of the duration of satisfactory performance of quality of a product or work.

Hawaii Administrative Rules - Rules adopted by the State in accordance with Chapter 91 of the Hawaii Revised Statutes, as amended.

Hawaii eProcurement System (HlePRO) – The State of Hawaii eProcurement System for issuing solicitations, receiving proposals and responses, and issuing notices of award.

Highway (Street, Road, or Roadway) - A public way within a right-of-way designed, intended, and set aside for use by vehicles, bicyclists, or pedestrians.

Highways Division - The Highways Division of the Hawaii Department of Transportation constituted under the laws of Hawaii for the administration of highway work.

Holidays - The days of each year which are set apart and established as State holidays pursuant to Chapter 8 of the Hawaii Revised Statutes, as amended.

Inspector - The Engineer's authorized representative assigned to make detailed inspections of contract performance, prescribed work, and materials supplied.

Laboratory - The testing laboratory of the Highways Division or other testing laboratories that may be designated by the Engineer.

Laws - All Federal, State, and local laws, executive orders and regulations having the force of law.

Leveling Course - An aggregate mixture course of variable thickness used to restore horizontal and vertical uniformity to existing pavements or shoulders.

Liquidated Damages - The amount prescribed in Subsection 108.08 - Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time, to be paid to the State or to be deducted from any payments payable to or, which may become payable to the Contractor.

Lump Sum (LS) - When used as a payment method means complete payment for the item of work described in the contract documents.

Material - Any natural or manmade substance or item specified in the contract to be incorporated in the work.

Notice to Bidders - The advertisement for proposals for all work or materials on which bids are required. Such advertisement will indicate the location of the work to be done or the character of the material to be furnished and the time and place for the opening of proposals.

Notice to Proceed - Written notice from the Engineer to the Contractor identifying the date on which the Contractor is to begin procuring materials and required permits and adjusting work forces, equipment, schedules, etc. prior to beginning physical work.

Pavement - The uppermost layer of material placed on the traveled way or shoulders or both. Pavement and surfacing may be interchangeable.

Pavement Structure - The combination of subbase, base, pavement, surfacing or other specified layer of a roadway constructed on a subgrade to support the traffic load.

Payment Bond - The security executed by the Contractor and surety or sureties furnished to the Department to guarantee payment by the Contractor to laborers, material suppliers and subcontractors in accordance with the terms of the contract.

Physical Work - Physical construction activities on the project site or at appurtenant facilities including staging areas. It includes; (i) building or installing any structures or facilities including, but not limited to sign erection; BMP installation; field office site grading and building; (ii) removal, adjustment, or demolition of physical obstructions on site; (iii) any ground breaking activities; and (iv) any utility work. It does not include pre-construction environmental testing (such as water quality baseline measurements) that may be required as part of contract.

Pre-Final Inspection - Inspection scheduled when Contractor notifies Engineer that all physical work on the project, with the exception of planting period and plant establishment period, has been completed. Notice from Contractor of substantial completion will suspend contract time until Contractor receives punchlist from Engineer.

Profile Grade - The elevation or gradient of a vertical plane intersecting the top surface of the proposed pavement.

Project Acceptance Date - The calendar day on which the Engineer accepts the project as completed. See Final Completion.

Proposal (Bid) - The executed document submitted by a Bidder in response to a solicitation request, to perform the work required by the proposed contract documents, for the price quoted and within the time allotted.

Public Traffic - Vehicular or pedestrian movement on a public way.

Punchlist - A list compiled by the Engineer specifying work yet to be completed or corrected by the Contractor in order to substantially complete the contract.

Questionnaire - The specified forms on which the bidder shall furnish required information as to its ability to perform and finance the work.

Request for Change Proposal - A written notice from the Engineer to the Contractor requesting that the Contractor provide a price and/or time proposal for contemplated changes preparatory to the issuance of a field order or change order.

Right-of-Way - Land, property, or property interests acquired by a government agency for, or devoted to transportation purposes.

Roadbed - The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Roadside - The area between the outside edges of the shoulders and the right-of-way boundaries. Unpaved median areas between inside shoulders of divided highways and infield areas of interchanges are included.

Section and Subsection - Section or subsection shall be understood to refer to these specifications unless otherwise specified.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the work.

Shoulder - The portion of the roadway next to the traveled way for: accommodation of stopped vehicles, placement of underground facilities, emergency use, and lateral support of base and surface courses.

Sidewalk - That portion of the roadway primarily constructed for use by pedestrians.

Solicitation - An invitation to bid or request for proposals or any other document issued by the Department to solicit bids or offers to perform a contract. The solicitation may indicate the time and place to receive the bids or offers and the location, nature and character of the work, construction or materials to be provided.

Specifications - Compilation of provisions and requirements to perform prescribed work.

(A) Standard Specifications. Specifications by the State intended for general application and repetitive use.

(B) Special Provisions. Revisions and additions to the standard specifications applicable to an individual project.

Standard Plans - Drawings provided by the State for specific items of work approved for repetitive use.

State - The State of Hawaii, its Departments and agencies, acting through its authorized representative(s).

State Waters - All waters, fresh, brackish, or salt, around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, ground waters, and lakes; provided that drainage ditches, ponds, and reservoirs required as a part of a water pollution control system are excluded.

Start Work Date - Date on which Contractor begins physical work on the contract. This date shall also be the beginning of Contract Time.

Structures - Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other such features that may be encountered in the work.

Subbase - A layer of specified material of specified thickness between the subgrade and a base.

Subcontract - Any written agreement between the Contractor and its subcontractors which contains the conditions under which the subcontractor is to perform a portion of the work for the Contractor.

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

Subgrade - The top surface of completed earthwork on which subbase, base, surfacing, pavement, or a course of other material is to be placed.

Substantial Completion - The Status of the project when the Contractor has completed the work, except for the planting period and plant establishment period, and each of the following requirements are met:

- (1) All traffic lanes (including shoulders, ramps, sidewalks and bike paths) are in their final configuration as designed and the final wearing surface has been installed;
- (2) All operational and safety devices have been installed in accordance with the contract documents including guardrails, end treatments, traffic barriers, required signs and pavement markings, drainage, parapet, and bridge and pavement structures;
- (3) All required illumination and lighting for normal and safe use and operation is installed and functional in accordance with the contract documents;
- (4) All utilities and services are connected and working;
- (5) The need for temporary traffic controls or lane closures at any time has ceased, except for lane closures required for routine maintenance;
- (6) The building, structure, improvement or facility can be used for its intended purpose.

Substantial Completion Date - The date the Substantial Completion is granted by the Engineer in Writing and Contract Time stops.

Superintendent - The employee of the Contractor who is responsible for all the work and is a Contractor's agent for communications to and from the State.

Surety - The qualified individual, firm or corporation other than the Contractor, which executes a bond with and for the Contractor to insure its acceptable performance of the contract.

Surfacing - The uppermost layer of material placed on the traveled way or shoulders. This term is used interchangeably with pavement.

Traveled Way - The portion of the roadway for the movement of vehicles, exclusive of shoulders.

Unsuitable Material - Materials that contain organic matter, muck, humus, peat, sticks, debris, chemicals, toxic matter, or other deleterious materials not suitable for use in earthwork.

Utility - A line, facility, or system for producing, transmitting, or distributing communications, power, electricity, heat, gas, oil, water, steam, waste, or storm water.

Utility Owner - The entity, whether private or owned by a State, Federal, or County governmental body, that has the power and responsibility to grant approval for, or undertake construction work involving a particular utility.

Water Pollutant - Dredged spoil, solid refuse, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil, sediment, cellar dirt and industrial, municipal, and agricultural waste.

Water Pollution - (1) Such contamination or other alteration of the physical, chemical, or biological properties of any state waters, including change in temperature, taste, color, turbidity, or odor of the waters, or (2) Such discharge of any liquid, gaseous, solid, radioactive, or other substances into any state waters, as will or is likely to create a nuisance or render such waters unreasonably harmful, detrimental, or injurious to public health, safety, or welfare, including harm, detriment, or injury to public water supplies, fish and aquatic life and wildlife, recreational purposes and agricultural and industrial research and scientific uses of such waters or as will or is likely to violate any water quality standards, effluent standards, treatment and pretreatment standards, or standards of performance for new sources adopted by the Department of Health.

Work - The furnishing of all labor, material, equipment, and other incidentals necessary or convenient for the successful execution of all the duties and obligations imposed by the contract.

Working Day - A calendar day in which a Contractor is capable of working four or more hours with its normal work force, exclusive of:

548 (1) Saturdays, Sundays, and recognized legal State holidays and such
549 other days specified by the contract documents as non-working days,
550

551 (2) Day in which the Engineer suspends work for four or more hours
552 through no fault of the Contractor."
553

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557

END OF SECTION 101

1 Make this section a part of the Standard Specifications:

2
3 **"SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS**

4
5
6 **102.01 Prequalification of Bidders.** Prospective bidders shall be capable of
7 performing the work for which they are bidding.

8
9 In accordance with HRS Chapter 103D-310, the Department may require
10 any prospective bidder to submit answers to questions contained in the 'Standard
11 Qualification Questionnaire For Prospective Bidders On Public Works Contracts'
12 furnished by the Department, properly executed and notarized, setting forth a
13 complete statement of the experience of such prospective bidder and its
14 organization in performing similar work and a statement of the equipment
15 proposed to be used, together with adequate proof of the availability of such
16 equipment. Whenever it appears to the Department, from answers to the
17 questionnaire or otherwise, that the prospective bidder is not fully qualified and
18 able to perform the intended work, the Department will, after affording the
19 prospective bidder an opportunity to be heard and if still of the opinion that the
20 bidder is not fully qualified to perform the work, refuse to receive or consider any
21 bid offered by the prospective bidder. All information contained in the answers to
22 the questionnaire shall be kept confidential. Questionnaire so submitted shall be
23 returned to the bidders after serving their purpose.

24
25 No person, firm or corporation may bid where (1) the person, firm, or
26 corporation, or (2) a corporation owned substantially by the person, firm, or
27 corporation, or (3) a substantial stockholder or an officer of the corporation, or (4)
28 a partner or substantial investor in the firm is in arrears in payments owed to the
29 State or its political subdivisions or is in default as a surety or failure to do
30 faithfully and diligently previous contracts with the State.

31
32 **102.02 Contents of Proposal Forms.** The Department will furnish
33 prospective bidders with proposal forms posted in HlePRO stating:

- 34
35 (1) The location,
36
37 (2) Description of the proposed work,
38
39 (3) The approximate quantities,
40
41 (4) Items of work to be done or materials to be furnished,
42
43 (5) A schedule of items, and
44
45 (6) The time in which the work shall be completed.
46

Papers bound with or attached to the proposal form are part of the proposal. The bidder shall not detach or alter the papers bound with or attached to the proposal when the bidder submits its proposal through HlePRO.

Also, the bidder shall consider other documents including the plans and specifications a part of the proposal form whether attached or not.

102.03 (Unassigned).

102.04 Estimated Quantities. The quantities shown in the contract are approximate and are for the comparison of bids only. The actual quantity of work may not correspond with the quantities shown in the contract. The Department will make payment to the Contractor for unit price items in accordance with the contract for only the following:

(1) Actual quantities of work done and accepted, not the estimated quantities; or

(2) Actual quantities of materials furnished, not the estimated quantities.

The Department may increase, decrease, or omit each scheduled quantities of work to be done and materials to be furnished. When the Department increases or decreases the estimated quantity of a contract item by more than 15% the Department will make payment for such items in accordance with Subsection 104.06 - Methods of Price Adjustment.

102.05 Examination of Contract and Site of Work. The bidder shall examine carefully the site of the proposed work and contract before submitting a proposal.

By the act of submitting a bid for the proposed contract, the bidder warrants that:

(1) The bidder and its Subcontractors have reviewed the contract documents and found them free from ambiguities and sufficient for the purpose intended;

(2) The bidder and its workers, employees and subcontractors have the skills and experience in the type of work required by the contract documents bid upon;

(3) Neither the bidder nor its employees, agents, suppliers or subcontractors have relied upon verbal representations from the Department, its employees or agents, including architects, engineers or consultants, in assembling the bid figure; and

(4) The basis for the bid figure are solely on the construction contract documents.

Also, the bidder warrants that the bidder has examined the site of the work. From its investigations, the bidder acknowledges satisfaction on:

(1) The nature and location of the work;

(2) The character, quality, and quantity of materials;

(3) The difficulties to be encountered; and

(4) The kind and amount of equipment and other facilities needed;

Subsurface information or hydrographic survey data furnished are for the bidders' convenience only. The data and information furnished are the product of the Department's interpretation gathered in investigations made at the specific locations. These conditions may not be typical of conditions at other locations within the project area or that such conditions remain unchanged. Also, conditions found at the time of the subsurface explorations may not be the same conditions when work starts. The bidder shall be solely responsible for assumptions, deductions, or conclusions the bidder may derive from the subsurface information or data furnished.

If the Engineer determines that the natural conditions differ from that originally anticipated or contemplated by the Contractor in the items of excavation, the State may treat the difference in natural conditions, as falling within the meaning of Subsection 104.02 – Changes.

102.06 Preparation of Proposal. The submittal of its proposal shall be on forms furnished by the Department. The bidder shall specify in words or figures:

(1) A unit price for each pay item with a quantity given;

(2) The products of the respective unit prices and quantities

(3) The lump sum amount; and

(4) The total amount of the proposal obtained by adding the amounts of the several items.

The words and figures shall be in ink or typed. If a discrepancy occurs between the prices written in words and those written in figures, the prices written in words shall govern.

When an item in the proposal contains an option to be made, the bidder shall choose in accordance with the contract for that particular item. Determination of an option will not permit the Contractor to choose again.

The bidder shall sign the proposal properly in ink. A duly authorized representatives of the bidder or by an agent of the bidder legally qualified and acceptable to the Department shall sign, including one or more partners of the bidder and one or more representatives of each entity comprising a joint venture.

When an agent, other than the officer(s) of a corporation authorized to sign contracts for the corporation or a partner of a partnership, signs the proposals, a 'Power of Attorney' shall be on file with the Department or submitted with the proposal. Otherwise, the Department will reject the proposal as irregular and unauthorized.

The bidder shall submit acceptable evidence of the authority of the partner, member(s) or officer(s) to sign for the partnership, joint venture, or corporation respectively with the proposal. Otherwise, the Department will reject the proposal as irregular and unauthorized.

102.07 Irregular Proposals. The Department may consider proposals irregular and may reject the proposals for the following reasons:

- (1) The proposal is a form not furnished by the Department, altered, or detached;
- (2) The proposal contains unauthorized additions, conditions, or alternates. Also, the proposal contains irregularities that may tend to make the proposal incomplete, indefinite, or ambiguous to its meaning;
- (3) The bidder adds provisions reserving the right to accept or reject an award. Also, the bidder adds provisions into a contract before an award;
- (4) The proposal does not contain a unit price for each pay item listed except authorized optional pay items; and
- (5) Prices for some items are out of proportion to the prices for other items.
- (6) If in the opinion of the Director, the bidder and its listed subcontractors do not have the Contractor's licenses or combination of Contractor's licenses necessary to complete the work.

Where the prospective bidder is bidding on multiple projects simultaneously and the proposal limits the maximum gross amount of awards that the bidder can accept at one bid letting, the proposal is not irregular if the limit on the gross amount of awards is clear, and the Department selects the awards that can be given.

102.08 Proposal Guaranty. The Department will not consider a proposal of \$25,000 or more unless accompanied by:

(1) A deposit of legal tender; or

(2) A valid surety bid bond, underwritten by a company licensed to issue bonds in the State of Hawaii, in the form and composed, substantially, with the same language as provided herewith and signed by both parties; or

(3) A certificate of deposit, share certificate, cashier's check, treasurer's check, teller's check, or official check drawn by, or a certified check accepted by and payable on demand to the State by a bank, savings institution, or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA).

(a) The bidder may use these instruments only to a maximum of \$100,000.

(b) If the required security or bond amount totals over \$100,000 more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be acceptable.

(c) The instrument shall be made payable at sight to the Department.

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

In accordance with HRS Chapter 103D-323, the above shall be in a sum not less than 5% of the amount bid.

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

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

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

102.10 Withdrawal or Revision of Proposals. Bids may be modified or withdrawn prior to the bid opening date and time. Withdrawal or revision of proposal shall be completed, submitted and uploaded to HlePRO prior to the bid opening date and time.

102.11 Public Opening of Proposals. Not applicable.

102.12 Disqualification of Bidders. The Department may disqualify a bidder and reject its proposal for the following reasons:

- (1) Submittal of more than one proposal whether under the same or different name.
- (2) Evidence of collusion among bidders. The Department will not recognize participants in collusion as bidders for any future work of the Department until such participants are reinstated as qualified bidders.
- (3) Lack of proposal guaranty.
- (4) Submittal of an unsigned or improperly signed proposal.
- (5) Submittal of a proposal without a listing of subcontractors or containing only a partial or incomplete listing of subcontractors.
- (6) Submittal of an irregular proposal in accordance with Subsection 102.07 - Irregular Proposals.
- (7) Evidence of assistance from a person who has been an employee of the agency within the preceding two years and who participated while in

State office or employment in the matter with which the contract is directly concerned, pursuant to HRS Chapter 84-15.

(8) Suspended or debarred in accordance with HRS Chapter 104-25.

(9) Failure to complete the prequalification questionnaire, if applicable.

(10) Failure to attend the mandatory pre-bid meeting, if applicable.

102.13 Material Guaranty. The successful bidder may be required to furnish a statement of the composition, origin, manufacture of materials, and samples.

102.14 Substitution of Materials and Equipment Before Bid Opening. See Subsection 106.13 for Substitution Of Materials and Equipment After Bid Opening.

(A) **General.** When brand names of materials or equipment are specified in the contract documents, they are to indicate a quality, style, appearance, or performance and not to limit competition. The bidder shall base its bid on one of the specified brand names unless alternate brands are qualified as equal or better in an addendum. As specified in the Notice to Bidders, all requests shall be posted as a question in HlePRO under the "Question and Answer" tab. Supporting documents for specific request shall be emailed to the Project Manager specified in the Notice to Bidders. Request must be posted in HlePRO and supporting documents received by the Project Manager no later than thirteen (13) calendar days before the bid opening date.

An addendum will be issued to inform all prospective bidders of any accepted substitution in accordance with Subsection 102.17 – Addenda.

(B) **Statement of Variances.** The statement of variances must list all features of the proposed substitution that differ from the contract documents and must further certify that the substitution has no other variant features. The brochure and information submitted shall be clearly marked showing make, model, size, options, and any other features requested by the Engineer and must include sufficient evidence to evaluate each feature listed as a variance. A request will be denied if submitted without sufficient evidence. If after installing the substituted product, an unlisted variance is discovered, the Contractor shall immediately replace the product with a specified product at no increase in contract price and contract time.

(C) **Substitution Denial.** Any substitution request not complying with the above requirements will be denied.

102.15 Preferences. Preferences shall not apply to this project.

319 **102.16 Certification for Safety and Health Program for Bids in excess of**
320 **\$100,000.** In accordance with HRS Chapter 396-18, the bidder or offeror, by
321 signing and submitting this proposal, certifies that a written safety and health plan
322 for this project will be available and implemented by the notice to proceed date
323 for this project. Details of the requirements of this plan may be obtained from the
324 State Department of Labor and Industrial Relations, Occupational Safety and
325 Health Division (HIOSH).

326
327 **102.17 Addenda.** Addenda issued shall become part of the contract
328 documents. Addenda to the bid documents will be provided to all prospective
329 bidders via HlePRO. Each addendum shall be an addition to the contract
330 documents. The terms and requirements of the bid documents (i.e., drawings,
331 specifications and other bid and contract documents) cannot be changed prior to
332 the bid opening except by a duly issued addendum.”

333
334
335 **END OF SECTION 102**

1 Make this section a part of the Standard Specifications:
2

3 **“SECTION 103 - AWARD AND EXECUTION OF CONTRACT**
4
5

6 **103.01 Consideration of Proposals.** The Department will compare the
7 proposals in terms of the summation of the products of the approximate quantities
8 and the unit bid prices after the submittal date and time established in HlePRO. If
9 a discrepancy occurs between the unit bid price and the bid price, the unit bid price
10 shall govern.
11

12 The “Buy America” provisions in the Surface Transportation Assistance Act
13 of 1982 is applicable to Federal-aid projects. Bidders may submit a bid based
14 upon the furnishing and use of domestic steel or foreign steel. Manufacturing
15 processes for domestic steel shall occur in the United States.
16

17 The Department reserves the right to reject proposals, waive technicalities
18 or advertise for new proposals, if the rejection, waiver, or new advertisement favors
19 the Department.
20

21 **103.02 Award of Contract.** The award of contract, if it be awarded, will be
22 made within 60 calendar days after the opening of bids, to the lowest responsible
23 and responsive bidder whose proposal complies with all the prescribed
24 requirements. The Department may request the bidders to allow the Department
25 to consider the bids for the issuance of an award beyond the 60-calendar day
26 period. Agreement to such an extension must be made by a bidder in writing. Only
27 bidders who have agreed to such an extension will be eligible for the award. No
28 response to request shall mean the bidder shall no longer be eligible for award.
29

30 **(1) Requirement for Award.** The Bidder, as proof of compliance
31 with the requirements of section 103D-310(c), HRS, upon award of a
32 contract made pursuant to section 103D-302, HRS, shall provide the
33 documents listed below. The documents shall be submitted promptly
34 to the Department. If a valid certificate/clearance is not submitted on
35 a timely basis upon award, the Bidder may be deemed non-
36 responsible. See also Subsection 108.03 – Preconstruction Data
37 Submittal.
38

39 **(A) Tax Clearance.** Pursuant to §103D-310(c), 103-53 and 103D-328,
40 HRS, the bidder shall submit a tax clearance certificate from the State of
41 Hawaii Department of Taxation (DOTAX) and the Internal Revenue Service
42 (IRS), subject to section 103D-328, HRS, current within six months of
43 issuance date.

44
45 FORM A6, TAX CLEARANCE CERTIFICATE, is available at the
46 following website:

47
48 <https://tax.hawaii.gov/>

49 To receive DOTAX Forms by fax or mail, phone
50 (808) 587-4242 or 1-800-222-3229.

51
52 The application for the Tax Clearance Certificate is the responsibility
53 of the bidder. Bidder shall submit directly to the DOTAX or IRS. The
54 approved certificate may then be submitted to the Department.

55
56 **(B) DLIR Certificate of Compliance.** Pursuant to §103D-310(c), HRS,
57 the bidder shall submit a certificate of compliance for Hawaii Employment
58 Security Law (Chapter 383, HRS), Workers' Compensation Law (Chapter
59 386, HRS), Temporary Disability Insurance (Chapter 392, HRS), and
60 Prepaid Health Care Act (Chapter 393, HRS), from the State of Hawaii
61 Department of Labor and Industrial Relations (DLIR), current within six
62 months of issuance date.

63
64 FORM LIR#27, APPLICATION FOR CERTIFICATE OF
65 COMPLIANCE WITH SECTION 3-122-112, HAR, is available at the
66 following website:

67 <http://labor.hawaii.gov/>

68
69 Contact the DLIR Unemployment Insurance Division at (808) 586-8926 for
70 additional information.

71
72 Inquiries regarding the status of a LIR#27 Form may be made by calling the
73 DLIR Disability Compensation Division at (808) 586-9200.

74
75 The application for the Certificate of Compliance is the responsibility of the
76 bidder. Bidder shall submit directly to the DLIR. The approved certificate
77 may then be submitted to the Department.

78
79 **(C) DCCA Certificate of Good Standing.** Pursuant to §103D-310(c),
80 HRS, the bidder shall submit a certificate of good standing from the
81 business registration division (BREG) of the State of Hawaii Department of
82 Commerce and Consumer Affairs (DCCA), current within six months of
83 issuance date, to demonstrate it is either:

(1) Incorporated or organized under the laws of the State; or

(2) Registered to do business in the State as a separate branch or division that is capable of fully performing under the contract.

A Hawaii business that is a sole proprietorship, is not required to register with the BREG, and therefore not required to submit a certificate of good standing. Bidders are advised of costs associated with registering and obtaining a Certificate of Good Standing from the DCCA.

To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line Services at the following website:

<http://cca.hawaii.gov/>

The application for the Certificate of Good Standing is the responsibility of the bidder. Bidder shall submit directly to the DCCA. The approved certificate may then be submitted to the Department.

(D) Hawaii Compliance Express (HCE). In lieu of the certificates referenced in subsection A, B, and C, the bidder may make available proof of compliance through a state procurement office designated certification process.

103.03 Cancellation of Award. The Department reserves the right to cancel the award of contracts before the execution of said contract by the parties. There will be no liability to the awardee and to other bidders.

103.04 Return of Proposal Guaranty. The Department will return the proposal guaranties, except those of the three lowest bidders, after the Department checks the proposals. The Department will return the proposal guaranties of the remaining two lowest bidders, not awarded the contract, within five working days following the execution of the contract. The Department will return the successful bidder's proposal guaranty after the successful bidder furnishes a bond and executes the contract.

103.05 Requirement of Contract Bond. At the time of execution of the contract, the successful bidder shall file a good and sufficient performance bond and a payment bond on the forms furnished by the Department conditioned for the full and faithful performance of the contract in accordance with the terms and intent thereof and for the prompt payment to all others for all labor and material furnished by them to the bidder and used in the prosecution of the work provided for in the contract. The bonds shall be of an amount equal to 100 percent of the amount of the contract price and include 5 percent of the contract amount estimated to be required for extra work. The bidder shall limit the acceptable performance and payment bonds to the following:

(a) Legal tender;

(b) Surety bond underwritten by a company licensed to issue bonds in the State of Hawaii; or

(c) A certificate of deposit; share certificate; cashier's check; treasurer's check, teller's check drawn by or a certified check accepted by and payable on demand to the State by a bank savings institution or credit union insured by the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA).

1. The bidder may use these instruments only to a maximum of \$100,000.

2. If the required security or bond amount totals over \$100,000 more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be acceptable.

Such bonds shall also by the terms insure to the benefit of any and all persons entitled to file claims for labor done or material furnished in the work so as to give them a right of action as contemplated by HRS Section 103D-324.

103.06 Execution of the Contract. The contract bond and HRS Chapter 104 - Compliance Certificate, similar to a copy of the same annexed hereto, shall be executed by the successful bidder and returned within ten days after the award of the contract or within such further time as the Director may allow after the bidder has received the contract for execution.

The contract shall not bind the Department unless said parties execute the contract and the Director of Finance endorses the bidder's certificate in accordance with HRS Section 103-39.

103.07 Failure to Execute Contract. Failure to execute the contract and file acceptable bonds shall be cause for the cancellation of the award in accordance with Subsection 103.06 - Execution of the Contract. Also, the Contractor forfeits the proposal guaranty which becomes the property of the Department. This is not a penalty, but liquidated damages sustained by the State. The Department may then make award to the next lowest responsible and responsive bidder or the Department may readvertise and construct the work under contract."

END OF SECTION 103

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(I) Amend Section 104.11(B) Contractor's Duty to Locate and Protect Utility by adding the following after line 291:

(II) Amend **Section 104.06 Methods of Price Adjustment** as follows:

(7) In the absence of agreement by the parties:

(A) For change orders with value not exceeding \$50,000 by documented actual costs of the work, allowing for overhead and profit as set forth in Section 109.05 - Allowances for Overhead and Profit. A change order shall be issued within fifteen days of

48 submission by the contractor of proper documentation of completed
49 force account work, whether periodic (conforming to the applicable
50 billing cycle) or final. The Engineer shall return any
51 documentation that is defective, to the contractor within fifteen days
52 after receipt, with a statement identifying the defect; or
53

54 **(B)** For change orders with value exceeding \$50,000 by a
55 unilateral determination by the Engineer of the costs attributable to
56 the events or situations with adjustment of profit and fee, all as
57 computed by the Engineer in accordance with applicable sections
58 of HAR Chapters 3-123 and 3-126, and Section 109.05 -
59 Allowances for Overhead and Profit. When a unilateral
60 determination has been made, a unilateral change order shall be
61 issued within ten days. Upon receipt of the unilateral change
62 order, if the contractor does not agree with any of the terms or
63 conditions, or the adjustment or nonadjustment of the contract time
64 or contract price, the contractor shall file a notice of intent to claim
65 within thirty days after the receipt of the written unilateral change
66 order. Failure to file a protest within the time specified shall
67 constitute agreement on the part of the contractor with the terms,
68 conditions, amounts, and adjustment or nonadjustment of the
69 contract time or the contract price set forth in the unilateral change
70 order.
71

72 A contractor shall be required to submit cost or pricing data if any
73 adjustment in contract price is subject to the provisions of HAR Chapter 3-122,
74 Subchapter 15. A fully executed change order or other document permitting
75 billing for the adjustment in price under any method listed in Subsections
76 104.06(1) through 104.06(7) shall be issued within ten days after agreement on
77 the method of adjustment."
78
79
80
81
82
83

84 **END OF SECTION 104**

1 **SECTION 105 – CONTROL OF WORK**

2
3 Make the following amendments to said Section:

4
5
6 **(I) Amend 105.01 – Authority to read as follows:**

7
8 **“105.01 Authority.**

9
10 **(A) Authority of the Engineer.** The Engineer is the representative of
11 the Director and has all the authority of the Director with respect to the
12 contract. The Engineer will make decisions on all questions that may
13 arise regarding the contract, such as, but not limited to:

14 **(1)**Interpretation of the contract documents.

15 **(2)**Acceptability of the materials furnished and work performed.

16 **(3)**Manner of performance and rate of progress of the work.

17 **(4)**Acceptable fulfillment of the contract on the part of the
18 Contractor.

19 **(5)**Compensation under the contract.

20
21 The Engineer’s decisions on questions, claims, and disputes will be
22 final and conclusive subject to Subsection 107.15 – Disputes and Claims.

23
24 The Engineer may delegate specific authority to act for the
25 Engineer to a specific person or persons. Such delegation of authority
26 shall be established in writing and shall become effective upon delivery to
27 the Contractor.

28
29 **(B) Authority of the Inspectors.** Inspectors, as a representative of
30 the Engineer or other agencies, will inspect the work done and materials
31 furnished. Such inspection may extend to the preparation, fabrication or
32 manufacture of the materials to be used. The Inspector does not have
33 authority vested in the Engineer unless specifically delegated in writing.
34 The Inspector may not alter or waive the provisions of the contract, issue
35 instructions contrary to the contract, or act as agent or representative of
36 the Contractor.

37
38 Failure of an Inspector at any time to reject non-conforming work
39 shall not be considered a waiver of the State’s right to require work in strict
40 conformity with the contract documents as a condition of final acceptance.
41
42
43
44
45
46

47 **(C) Authority of the Consultant and Construction Management.**

48 The State may engage consultants and construction managements to
49 perform duties in connection with the work. Unless otherwise specified in
50 writing to the Contractor, such retained consultants and construction
51 managements shall have no greater authority than an Inspector.”

52
53 **(II) Amend Subsection 105.02 - Submittals** by revising the first paragraph
54 from lines 52 to 61 to read as follows:

55
56 **“105.02 Submittals.** The contract contains the description of various items
57 that the Contractor must submit to the Engineer for review and acceptance. The
58 Contractor shall review all submittals for correctness, conformance with the
59 requirements of the contract documents and completeness before submitting
60 them to the Engineer. The submittal shall indicate the contract items and
61 specifications subsections for which the submittal is provided. The submittal
62 shall be legible and clearly indicate what portion of the submittal is being
63 submitted for review. The Contractor shall provide six copies of the required
64 submissions at the earliest possible date.”

65
66 **(III) Amend Subsection 105.08 (A) - Furnishing Drawings and Special**
67 **Provisions** to read as follows:

68
69 **“(A) Furnishing Drawings and Special Provisions.** The State will
70 furnish the Contractor an electronic set of the special provisions and
71 plans.” The Contractor shall have and maintain at least one set of plans
72 and specifications on the work site, at all times.”

73
74 **(IV) Amend Subsection 105.14(D) – No Designated Storage Area** from lines
75 421 to 432 to read as follows:

76
77 **“(D) No Designated Storage Area.** If no storage area is designated
78 within the contract documents, materials and equipment may be stored
79 anywhere within the State highway right-of-way, provided such storage
80 and access to and from such site, within the sole discretion of the
81 Engineer, does not create a public or traffic hazard or an impediment to
82 the movement of traffic.”

83
84 **(V) Amend 105.16(A) – Subcontract Requirements** by adding the following
85 paragraph after line 483:

86
87 The 'Specialty Items' of work for this project are as follows:
88

89	Section	Description
90	No.	
91		
92	401	Contract Item No. 401.0100 under Section 401 – Hot Mix
93		Asphalt Pavement
94		
95	629	All Contract Items under Section 629 - Pavement Marking
96		
97	632	All Contract Items under Section 632 - Markers
98		
99	645	Contract Item No. 645.1000 under Section 645 – Work Zone
100		Traffic Control”
101		
102	(VI) Amend Subsection 105.16(B) – Substituting Subcontractors from line	
103	487 to line 494 to read:	
104		
105	“(B) Substituting Subcontractors. Under HRS Chapter 103D-302, the	
106	Contractor is required to list the names of persons or firms to be engaged	
107	by the Contractor as a subcontractor or joint contractor in the performance	
108	of the contract. No subcontractor may be added or deleted, unless	
109	authorized by the Engineer. Substitutions will be allowed only if the	
110	subcontractor:	
111		
112		
113		
114		
115	END OF SECTION 105	

1 **SECTION 106 – MATERIAL RESTRICTIONS AND REQUIREMENTS**

2
3 Make the following amendment to said Section:

4
5 **(I)** Amend **106.04 – Material Sample** by revising the first sentence from line
6 87 to 88 to read as follows:

7
8 “For Sampling and Testing Guide for Acceptable and Verification (dated July
9 2023), go to [https://hidot.hawaii.gov/highways/files/2023/10/HWY-L-23-](https://hidot.hawaii.gov/highways/files/2023/10/HWY-L-23-2.3048-Sampling-Guide-Update-part-3-signed.pdf)
10 [2.3048-Sampling-Guide-Update-part-3-signed.pdf](https://hidot.hawaii.gov/highways/files/2023/10/HWY-L-23-2.3048-Sampling-Guide-Update-part-3-signed.pdf)”

11
12 **(II)** Amend **106.05(B) – Deviations** by revising the third sentence from line 106
13 to 108 to read as follows:

14
15 “Any deviations will be subject to Subsection 102.14 – Substitution of
16 Materials and Equipment Before Bid Opening.

17
18 **(III)** Replace **106.11 – Steel and Iron Construction Material** lines 238 through
19 277 with the following:

20
21 **106.11 Domestic Materials Procurement Preference.** Federal-aid contracts
22 are subject to the Domestic Materials Procurement Preference, as established by
23 the Buy America Act (1978 Surface Transportation Assistance Act) and the Build
24 America, Buy America (BABA) Act (2021 Infrastructure Investment and Jobs Act).
25 This requirement applies to the following categories of products and materials that
26 are permanently incorporated into the project.

27
28 **(1)** Iron or Steel Products, 23 CFR § 635.410 (Buy America).

29
30 **(2)** Construction Materials, 2 CFR Part 184 (BABA).

31
32 **(3)** Manufactured Products, 23 CFR § 635.410 (Buy America).

33
34 **(4)** Other materials, including BABA Section 70917(c) materials.

35
36 An article, material, or supply should not be considered to fall into multiple
37 categories, except for precast concrete products and ITS and electronic hardware
38 system cabinets and enclosures which are designated as falling into 2 categories:
39 Manufactured Products and Steel or Iron in accordance with 23CFR
40 635.410(c)(2)(i) and (ii) and 106.11(C). The classification of an article, material, or
41 supply into the categories must be based on its status at the time it is brought to
42 the work site for incorporation into an infrastructure project. In general, the work
43 site is the location of the infrastructure project at which the iron, steel,
44 manufactured products, and construction materials will be incorporated.

(A) Iron and Steel Products. For Federal-aid projects, steel and iron products permanently incorporated into the project shall be melted and manufactured in the United States in accordance with 23 CFR § 635.410 Buy America Requirements.

Steel or iron products means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both and the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product, and a good faith estimate of the cost of iron or steel components.

Manufacturing includes any process that modifies the chemical content, physical shape or size, or final finish of a product. The manufacturing process begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron.

(B) Construction Materials. Construction materials mean articles, materials, or supplies that consist of only one of the items listed below, except as provided in Subsection 106.11(C) – Manufactured Products subparagraphs (1) and (2). All manufacturing processes, as defined in 23 CFR § 184.6 for these construction materials, must occur in the United States.

- (1)** Non-ferrous metals.
- (2)** Plastic and polymer-based products such as:
 - (a)** Polyvinylchloride.
 - (b)** Composite building materials.
 - (c)** Polymers used in fiber optic cables.
- (3)** Glass (including optic glass).
- (4)** Fiber optic cable (including drop cable).
- (5)** Optical fiber.
- (6)** Lumber.
- (7)** Engineered wood.

92
93 (8) Drywall.
94

95 BABA Section 70917(c) materials, as defined in 2 CFR § 184.3, do
96 not require domestic sourcing or domestic material certification. BABA
97 Section 70917(c) materials means:
98

99 (1) Cement and cementitious materials.
100

101 (2) Aggregates such as stone, sand, or gravel.
102

103 (3) Aggregate binding agents or additives.
104

105 **(C) Manufactured Products.** Buy America requirements apply to
106 manufactured products. Manufactured products are defined as articles,
107 materials, or supplies that have been processed into a specific form and
108 shape or combined with other articles, materials, or supplies to create a
109 product with different properties than the individual articles, materials, or
110 supplies. For Federal-aid projects, all manufactured products must be
111 produced in the United States.
112

113 For projects let on or after October 1, 2025, manufactured products
114 shall be manufactured, including final assembly, in the United States.
115

116 For projects let on or after October 1, 2026, manufactured products
117 shall be manufactured, including final assembly, in the United States. The
118 cost of the components of the manufactured product that are mined,
119 produced, or manufactured in the United States shall be greater than 55
120 percent of the total cost of all components of the manufactured product.
121

122 (1) Precast Concrete – Precast Concrete products that are
123 classified as manufactured products, components of precast
124 concrete products that consist wholly or predominantly of iron or steel
125 or a combination of both, shall also meet the requirements of
126 Subsection 106.11(A) – Iron and Steel Products.
127

128 (2) Intelligent Transportation and Electronic Hardware Systems –
129 Intelligent transportation systems and other electronic hardware
130 systems that are installed in the highway right of way or other real
131 property and classified as manufactured products. The cabinets or
132 other enclosures of such systems that consist wholly or
133 predominantly of iron or steel or a combination of both shall also
134 meet the requirements of Subsection 106.11(A) – Iron and Steel
135 Products.
136

137 **(D) Contractor Domestic Materials Preference (DMP) Form.** The
138 Prime Contractor shall provide a Contractor Domestic Materials Preference
139 Form using the E-Construction platform. A DMP form must be submitted for
140 iron, steel, construction materials, and manufactured products delivered to
141 the project and permanently incorporated into the work. The Prime
142 Contractor shall provide supporting documentation to assure the article,
143 material, or supply meets the Domestic Materials Procurement Preference
144 requirements as established in the Buy America Act (1978 Surface
145 Transportation Assistance Act) and the Build America, Buy America (BABA)
146 Act (2021 Infrastructure Investment and Jobs Act).

147
148

END OF SECTION 106

1 **SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **Section 107.01 Insurance Requirements** from lines 5 to 81 to
6 read as follows:

7
8 **“(A) Obligation of Contractor.** Contractor shall not commence any
9 work until it obtains, at its own expense, all required insurance described
10 herein. Such insurance shall be provided by an insurance company
11 authorized by the laws of the State to issue such insurance in the State of
12 Hawaii. Coverage by a “Non-Admitted” carrier is permissible provided the
13 carrier has a Best’s Rating of “A-VII” or better. The Contractor shall
14 maintain and ensure all insurance policies are current for the full period of
15 the contract until final acceptance of the work by the State.
16

17 The Certificate of Insurance shall contain: a clause that it is agreed
18 that any insurance maintained by the State of Hawaii will apply in excess
19 of, and not contribute with, insurance provided by this policy; and shall be
20 accompanied by endorsement form CG2010 or equivalent naming the
21 State as an additional insured to the policy which status shall be
22 maintained for the full period of the contract until final acceptance of the
23 work by State.
24

25 The Contractor shall obtain all required insurance as part of the
26 contract price. Where there is a requirement for the State of Hawaii and
27 its officers and employees to be named as additional insureds under any
28 Contractor’s insurance policy, before the State of Hawaii issues the Notice
29 to Proceed, the Contractor shall obtain and submit to the Engineer a
30 Certificate of Insurance and a written policy endorsement that confirms the
31 State of Hawaii and its officers and employees are additional insureds for
32 the specific State project number and project title under such insurance
33 policies. The written policy endorsement must be issued by the insurance
34 company insuring the Contractor for the specified policy type or by an
35 agent of such insurance company who is vested with the authority to issue
36 a written policy endorsement. The insurer’s agent shall also submit
37 written confirmation of such authority to bind the insurer. Any delays in
38 the issuance of the Notice to Proceed attributed to the failure to obtain the
39 proof of the State of Hawaii and its officers and employees’ additional
40 insured status shall be charged to the Contractor.
41

42 A mere Certificate of Insurance issued by a broker who represents
43 the Contractor (but not the Contractor’s insurer), or by any other party who
44 is not authorized to contractually name the State as an additional insured
45 under the Contractor’s insurance policy, is not sufficient to meet the
46 Contractor’s insurance obligations.

47
48 Certificates shall contain a provision that coverages being certified
49 will not be cancelled or materially changed without giving the Engineer at
50 least thirty (30) days prior written notice. Contractor will immediately
51 provide written notice to the Director should any of the insurance policies
52 evidenced on its Certificate of Insurance form be cancelled, reduced in
53 scope or coverage, or not renewed upon expiration. Should any policy be
54 canceled before final acceptance of the work by the State, and the
55 Contractor fails to immediately procure replacement insurance as
56 specified, the State, in addition to all other remedies it may have for such
57 breach, reserves the right to procure such insurance and deduct the cost
58 thereof from any money due or to become due to the Contractor.
59

60 Nothing contained in these insurance requirements is to be
61 construed as limiting the extent of Contractor's responsibility for payment
62 of damages resulting from its operations under this contract, including the
63 Contractor's obligation to pay liquidated damages, nor shall it affect the
64 Contractor's separate and independent duty to defend, indemnify and hold
65 the State harmless pursuant to other provisions of this contract. In no
66 instance will the State's exercise of an option to occupy and use
67 completed portions of the work relieve the Contractor of its obligation to
68 maintain the required insurance until the date of final acceptance of the
69 work.
70

71 All insurance described herein shall be primary and cover the
72 insured for all work to be performed under the contract, all work performed
73 incidental thereto or directly or indirectly connected therewith, including
74 but not limited to traffic detour work, barricades, warnings, diversions, lane
75 closures, and other work performed outside the work area and all change
76 order work.
77

78 The Contractor shall, from time to time, furnish the Engineer, when
79 requested, satisfactory proof of coverage of each type of insurance
80 required covering the work. Failure to comply with the Engineer's request
81 may result in suspension of the work, and shall be sufficient grounds to
82 withhold future payments due the Contractor and to terminate the contract
83 for Contractor's default.
84

85 **(B) Types of Insurance.** Contractor shall purchase and maintain
86 insurance described below which shall provide coverage against claims
87 arising out of the Contractor's operations under the contract, whether such
88 operations be by the Contractor itself or by any subcontractor or by
89 anyone directly or indirectly employed by any of them or by anyone for
90 whose acts any of them may be liable.
91

92 **(1) Workers' Compensation.** The Contractor shall obtain
93 worker's compensation insurance for all persons whom they
94 employ in carrying out the work under this contract. This insurance
95 shall be in strict conformity with the requirements of the most
96 current and applicable State of Hawaii Worker's Compensation
97 Insurance laws in effect on the date of the execution of this contract
98 and as modified during the duration of the contract.
99

100 **(2) Auto Liability.** The Contractor shall obtain Auto Liability
101 Insurance covering all owned, non-owned and hired autos with a
102 Combined single Limit of not less than \$1,000,000 per occurrence
103 for bodily injury and property damage with the State of Hawaii
104 named as additional insured. Refer to SPECIAL CONDITIONS for
105 any additional requirements.
106

107 **(3) General Liability.** The Contractor shall obtain General
108 Liability insurance with a limit of not less than \$2,000,000 per
109 occurrence and in the Aggregates for each of the following:
110

- 111 **(a)** Products - Completed/Operations Aggregate,
- 112
- 113 **(b)** Personal & Advertising Injury, and
- 114
- 115 **(c)** Bodily Injury & Property Damage
116

117 The General Liability insurance shall include the State as an
118 Additional Insured. The required limit of insurance may be provided
119 by a single policy or with a combination of primary and excess
120 policies. Refer to SPECIAL CONDITIONS for any additional
121 requirements.
122

123 **(4) Builders Risk For All Work.** The Contractor shall take out
124 a policy of builder's risk insurance for the full replacement value of
125 the project work; from a company licensed or otherwise authorized
126 to do business in the State of Hawaii; naming the State as an
127 additional insured under each policy; and covering all work, labor,
128 and materials furnished by such Contractor and all its
129 subcontractors against loss by fire, windstorm, tsunamis,
130 earthquakes, lightning, explosion, other perils covered by the
131 standard Extended Coverage Endorsement, vandalism, and
132 malicious mischief. Refer to SPECIAL CONDITIONS for any
133 additional requirements."
134
135
136
137

END OF SECTION 107

1 Amend **Section 108 – PROSECUTION AND PROGRESS** to read as follows:

2
3 **“SECTION 108 – PROSECUTION AND PROGRESS**

4
5
6 **108.01 Notice to Proceed (NTP).** A Notice To Proceed will be issued to the
7 Contractor not more 30 calendar days after the contract certification date. The
8 Engineer may suspend the contract before issuing the Notice To Proceed, in
9 which case the Contractor’s remedies are exclusively those set forth in Subsection
10 108.10 – Suspension of Work.

11
12 The Contractor shall be allowed up to 14 calendar days after the Notice to
13 Proceed to begin physical work. The Start Work Date will be established when
14 this period ends or on the actual day that physical work begins, whichever is first.
15 Charging of Contract Time will begin on the Start Work Date. The Contractor shall
16 notify the Engineer, in writing, at least five working days before beginning physical
17 work.

18
19 In the event that the Contractor fails to start physical work within the time
20 specified, the Engineer may terminate the contract in accordance with Subsection
21 108.11 – Termination of Contract for Cause.

22
23 During the period between the Notice to Proceed and the Start Work Date
24 the Contractor should adjust work forces, equipment, schedules, and procure
25 materials and required permits, prior to beginning physical work.

26
27 Any physical work done prior to the Start Work Date will be considered
28 unauthorized work. If the Engineer does not direct that the unauthorized work be
29 removed, it shall be paid for after the Start Work Date and only if it is acceptable.

30
31 In the event that the Engineer establishes, in writing, a Start Work Date that
32 is beyond 60 calendar days from the Notice to Proceed date, the Contractor may
33 submit a claim in accordance with, Subsection 107.15 – Disputes and Claims for
34 increased labor and material costs which are directly attributable to the delay
35 beyond the first 60 calendar days after the Notice to Proceed date.

36
37 The Contractor shall notify the Engineer at least 24 hours before restarting
38 physical work after a suspension of work pursuant to Subsection 108.10 –
39 Suspension of Work.

40
41 Once physical work has begun, the Contractor shall work expeditiously and
42 pursue the work diligently to completion with the contract time. If a portion of the
43 work is to be done in stages, the Contractor shall leave the area safe and usable
44 for the user agency and the public at the end of each stage.

108.03

108.02 Prosecution of Work. Unless otherwise permitted by the Engineer, in writing, the Contractor shall not commence with physical construction unless sufficient materials and equipment are available for either continuous construction or completion of a specified portion of the work.

108.03 Preconstruction Submittals. The awardee shall submit to the Engineer for information and review the pre-construction submittals within 21 calendar days from award. Until the items listed below are received and found acceptable by the Engineer, the Contractor shall not start physical work unless otherwise authorized to do so in writing and subject to such conditions set by the Engineer. Charging of Contract Time will not be delayed, and additional contract time will not be granted due to Contractor delay in submitting acceptable preconstruction submittals. No progress payment will be made to the Contractor until the Engineer acknowledges, in writing, receipt of the following preconstruction submittals acceptable to the Engineer:

- (1) List of the Superintendent and other Supervisory Personnel, and their contact information.
- (2) Name of person(s) authorized to sign for the Contractor.
- (3) Work Schedule including hours of operation.
- (4) Initial Progress Schedule (See Subsection 108.06 – Progress Schedule).
- (5) Water Pollution and Siltation Control Submittals, including Site-Specific Best Management Practice Plan.
- (6) Solid Waste Disposal form.
- (7) Tax Rates.
- (8) Insurance Rates.
- (9) Certificate of Insurance, satisfactory to the Engineer, indicating that the Contractor has in place all insurance coverage required by the contract documents.
- (10) Schedule of agreed prices.
- (11) List of suppliers.
- (12) Traffic Control Plan, if applicable.

108.04 Character and Proficiency of Workers. The Contractor shall at all times provide adequate supervision and sufficient labor and equipment for prosecuting the work to full completion in the manner and within the time required by the contract. The superintendent and all other representatives of the Contractor shall act in a civil and honest manner in all dealings with the Engineer, all other State officials and representatives, and the public, in connection with the work.

All workers shall possess the proper license, certification, job classification, skill, training, and experience necessary to properly perform the work assigned to them.

The Engineer may direct the removal of any worker(s) who does not carry out the assigned work in a proper and skillful manner or who is disrespectful, intemperate, violent, or disorderly. The worker shall be removed forthwith by the Contractor and will not work again without the written permission of the Engineer.

108.05 Contract Time.

(A) Calculation of Contract Time. When the contract time is on a working day basis, the total contract time allowed for the performance of the work will be the number of working days shown in the contract plus any additional working days authorized in writing as provided hereinafter. The count of elapsed working days to be charged against contract time, will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. When multiple shifts are used to perform the work, the State will not consider the hours worked over the normal eight working hours per day or night as an additional working day.

When the contract is on a calendar day basis, the total contract time allowed for the performance of the work will be the number of days shown in the contract plus any additional days authorized in writing as provided hereinafter. The count of elapsed days to be charged against contract time will begin from the Start Work Date and will continue consecutively to the date of Substantial Completion. The Engineer will exclude days elapsing between the orders of the Engineer to suspend work and resume work for suspensions not the fault of the Contractor.

(B) Modifications of Contract Time. Whenever the Contractor believes that an extension of contract time is justified, the Contractor shall serve written notice on the Engineer not more than five working days after the occurrence of the event that causes a delay or justifies a contract time extension. Contract time may be adjusted for the following reasons or events, but only if and to the extent the critical path has been affected:

(1) Changes in the Work, Additional Work, and Delays Caused by the State. If the Contractor believes that an extension of time is justified on account of any act or omission by the State, and is not adequately provided for in a field order or change order, it must request the additional time as provided above. At the request of the Engineer, the Contractor must show how the critical path will be affected and must also support the time extension request with schedules, as well as statements from its subcontractors, suppliers, or manufacturers, as necessary. Claims for compensation for any altered or additional work will be determined pursuant to Subsection 104.02 – Changes.

Additional time to perform the extra work will be added to the time allowed in the contract without regard to the date the change directive was issued, even if the contract completion date has passed. A change requiring time issued after contract time has expired will not constitute an excusal or waiver of pre-existing Contractor delay.

(2) Delay for Permits. For delays in the routine application and processing time required to obtain necessary permits, including permits to be obtained from State agencies, the Engineer may grant an extension provided that the permit takes longer than 30 days to acquire and the delay is not caused by the Contractor, and provided that as soon as the delay occurs, the Contractor notifies the Engineer in writing that the permits are not available. Permits required by the contract that take less than 30 days to acquire from the time which the appropriate documents are granted shall be acquired between Notice to Proceed and Start Work Date or accounted for in the contractor's progress schedule. Time extensions will be the exclusive relief granted on account of such delays.

(3) Delays Beyond Contractor's Control. For delays caused by acts of God, a public enemy, fire, inclement weather days or adverse conditions resulting therefrom, earthquakes, floods, epidemics, quarantine restrictions, labor disputes impacting the Contractor or the State, freight embargoes and other reasons beyond the Contractor's control, the Contractor may be granted an extension of time provided that:

(a) In the written notice of delay to the Engineer, the Contractor describes possible effects on the completion date of the contract. The description of delays shall:

180 1. State specifically the reason or reasons for the
181 delay and fully explain in a detailed chronology how the
182 delay affects the critical path.

183
184 2. Include copies of pertinent documentation to
185 support the time extension request.

186
187 3. Cite the anticipated period of delay and the time
188 extension requested.

189
190 4. State either that the above circumstances have
191 been cleared and normal working conditions restored
192 as of a certain day or that the above circumstances will
193 continue to prevent completion of the project.

194
195 (b) The Contractor shall notify the Engineer in writing when
196 the delay ends. Time extensions will be the exclusive relief
197 granted and no additional compensation will be paid the
198 Contractor for such delays.

199
200 **(4) Delays in Delivery of Materials or Equipment.** For delays
201 in delivery of materials or equipment, which occur as a result of
202 unforeseeable causes beyond the control and without fault of the
203 Contractor, its subcontractor(s) or supplier(s), time extensions shall
204 be the exclusive relief granted and no additional compensation will
205 be paid the Contractor on account of such delay. The delay shall not
206 exceed the difference between the originally scheduled delivery date
207 and the actual delivery date. The Contractor may be granted an
208 extension of time provided that it complies with the following
209 procedures:

210
211 (a) The Contractor's written notice to the Engineer must
212 describe the delays and state the effect such delays may have
213 on the critical path.

214
215 (b) The Contractor, if requested, must submit to the
216 Engineer within five days after a firm delivery date for the
217 material and equipment is established, a written statement
218 regarding the delay. The Contractor must justify the delay as
219 follows:

220
221 1. State specifically all reasons for the delay.
222 Explain in a detailed chronology the effect of the delay
223 on the critical path.

2. Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s), and any other documents to support the time extension request.

3. Cite the start and end date of the delay and the time extension requested.

(5) Delays for Suspension of Work. When the performance of the work is totally suspended for one or more days (calendar or working days, as appropriate) by order of the Engineer in accordance with Subsections 108.10(A)(1), 108.10(A)(2), or 108.10(A)(5) the number of days from the effective date of the Engineer's order to suspend operations to the effective date of the Engineer's order to resume operations shall not be counted as contract time and the contract completion date will be adjusted. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.

(6) Contractor Caused Delays. No time extension will be granted under the following circumstances:

(a) Delays within the Contractor's control in performing the work caused by the Contractor, subcontractor, supplier, or any combination thereof.

(b) Delays within the Contractor's control in arrival of materials and equipment caused by the Contractor, subcontractor, supplier, or any combination thereof, in ordering, fabricating, and delivery.

(c) Delays requested for changes which do not affect the critical path.

(d) Delays caused by the failure of the Contractor to make submittals in a timely manner for review and acceptance by the Engineer, such as but not limited to shop drawings, descriptive sheets, material samples, and color samples except as covered in Subsection 108.05(B)(3) – Delays Beyond Contractor’s Control and 108.05(B)(4) – Delays in Delivery of Materials or Equipment.

(e) Delays caused by the failure to submit sufficient information and data in a timely manner in the proper form in order to obtain necessary permits related to the work.

(f) Failure to follow the procedure within the time allowed by contract to request a time extension.

(g) Failure of the Contractor to provide evidence sufficient to support the time extension request.

(7) **Reduction in Time.** If the State deletes or modifies any portion of the work, an appropriate reduction of contract time may be made in accordance with Subsection 104.02 - Changes.

108.06 Progress Schedules.

(A) **Forms of Schedule.** All schedules shall be submitted using the specific computer program designated in the bid documents. If no such scheduling software program is designated, then all schedules shall be submitted using the latest version of Microsoft Project by Microsoft or approved equivalent software program.

Schedule submittals shall be as follows:

(1) **For Contracts \$2,000,000 or less or For Contract Time 100 Working Days or 140 Calendar Days or Less.** For contracts of \$2,000,000 or less or for contract time of 100 working days or 140 calendar days or less, the progress schedule will be a Time Scaled Logic Diagram (TSLD). The Contractor shall submit a TSLD submittal package meeting the following requirements and having these essential and distinctive elements:

(a) The major features of work, such as but not limited to BMP installation, grubbing, roadway excavation, structure excavation, structure construction, shown in the chronological order in which the Contractor proposes to work that feature or work and its location on the project. The schedule shall account for normal inclement weather, unusual soil or other

conditions that may influence the progress of the work, schedules, and coordination required by any utility, off or on site fabrications, and other pertinent factors that relate to progress;

(b) All features listed or not listed in the contract documents that the Contractor considers a controlling factor for the timely completion of the contract work.

(c) The time span and sequence of the activities or events for each feature, and its interrelationship and interdependencies in time and logic to other features in order to complete the project.

(d) The total anticipated time necessary to complete work required by the contract.

(e) A chronological listing of critical intermediate dates or time periods for features or milestones or phases that can affect timely completion of the project.

(f) Major activities related to the location on the project.

(g) Non-construction activities, such as submittal and acceptance periods for shop drawings and material, procurement, testing, fabrication, mobilization, and demobilization or order dates of long lead material.

(h) Set schedule logic for out of sequence activities to retain logic. In addition, open ends shall be non-critical.

(i) Show target bars for all activities.

(j) Vertical and horizontal sight lines both major and minor shall be used as well as a separator line between groups. The Engineer will determine frequency and style.

(k) The file name, print date, revision number, data and project title and number shall be included in the title block.

(l) Have columns with the appropriate data in them for activity ID, description, original duration, remaining duration, early start, early finish, total float, percent complete, resources. The resource column shall list who is responsible for the work to be done in the activity. These columns shall be to the left of the bar chart.

(2) **For Contracts Which Have A Contract Amount More Than \$2,000,000 Or Having A Contract Time Of More Than 100 Working Days Or 140 Calendar Days.** For contracts which have a contract amount more than \$2,000,000 or contract time of more than 100 working days or 140 calendar days, the Contractor shall submit a Timed-Scaled Logic Diagram (TSLD) meeting the following requirements and having these essential and distinctive elements:

(a) The information and requirements listed in Subsection 108.06(A)(1) – For Contracts \$2,000,000 or Less or For Contract Time 100 Working Days or 140 Calendar Days or Less.

(b) Additional reports and graphics available from the software as requested by the Engineer.

(c) Sufficient detail to allow at least weekly monitoring of the Contractor and subcontractor's operations.

(d) The time scaled schematic shall be on a calendar or working days basis. What will be used shall be determined by how the contract keeps track of time. It will be the same. Plot the critical calendar dates anticipated.

(e) Breakdown of activity, such as forming, placing reinforcing steel, concrete pouring and curing, and stripping in concrete construction. Indicate location of work to be done in such detail that it would be easily determined where work would be occurring within approximately 200 feet.

(f) Latest start and finish dates for critical path activities.

(g) Identify responsible subcontractor, supplier, and others for their respective activity.

(h) No individual activity shall have duration of more than 20 calendar days unless requested and approved by the Engineer.

(i) All activities shall have work breakdown structure codes and activity codes. The activity codes shall have coding that incorporates information for phase, location, who is responsible for doing work and type of operation and activity description.

(j) Incorporate all physical access and availability restraints.

(B) Inspection and Testing. All schedules shall provide reasonable time and opportunity for the Engineer to inspect and test each work activity.

(C) Engineer's Acceptance of Progress Schedule. The submittal of, and the Engineer's receipt of any progress schedule, shall not be deemed an agreement to modify any terms or conditions of the contract. Any modifications to the contract terms and conditions that appear in or may be inferred from an acceptable schedule will not be valid or enforceable unless and until the Engineer exercises discretion to issue an appropriate change order. Nor shall any submittal or receipt imply the Engineer's approval of the schedule's breakdown, its individual elements, any critical path that may be shown, nor shall it obligate the State to make its personnel available outside normal working hours or the working hours established by the Contract in order to accommodate such schedule. The Contractor has the risk of all elements (whether or not shown) of the schedule and its execution. No claim for additional compensation, time, or both, shall be made by the Contractor or recognized by the Engineer for delays during any period for which an acceptable progress schedule or an updated progress schedule as required by Subsection 108.06(E) – Contractor's Continuing Schedule Submittal Requirements had not been submitted. Any acceptance or approval of the schedule shall be for general format only and shall not be deemed an agreement by the State that the construction means, methods, and resources shown on the schedule will result in work that conforms to the contract requirements or that the sequences or durations indicated are feasible.

(D) Initial Progress Schedule. The Contractor shall submit an initial progress schedule. The initial progress schedule shall consist of the following:

- (1) Four sets of the TSLD schedule.
- (2) All the software files and data to re-create the TSLD in a computerized software format as specified by the Engineer.
- (3) A listing of equipment that is anticipated to be used on the project. Including the type, size, make, year of manufacture, and all information necessary to identify the equipment in the Rental Rate Blue Book for Construction Equipment.
- (4) An anticipated manpower requirement graph plotting contract time and total manpower requirement. This may be superimposed over the payment graph.

(5) A Method Statement that is a detailed narrative describing the work to be done and the method by which the work shall be accomplished for each major activity. A major activity is an activity that:

- (a) Has a duration longer than five days.
- (b) Is a milestone activity.
- (c) Is a contract item that exceeds \$10,000 on the contract cost proposal.
- (d) Is a critical path activity.
- (e) Is an activity designated as such by the Engineer.

Each Method Statement shall include the following items needed to fulfill the schedule:

- (a) Quantity, type, make, and model of equipment.
- (b) The manpower to do the work, specifying worker classification.
- (c) The production rate per eight hour day, or the working hours established by the contract documents needed to meet the time indicated on the schedule. If the production rate is not for eight hours, the number of working hours shall be indicated.

(6) Two sets of color time-scaled project evaluation and review technique charts ("PERT") using the activity box template of Logic – Early Start or such other template designated by the Engineer.

If the contract documents establish a sequence or order for the work, the initial progress schedule shall conform to such sequence or order.

(E) Contractor's Continuing Schedule Submittal Requirements.

After the acceptance of the initial TSLD and when construction starts, the Contractor shall submit four plotted progress schedules, two PERT charts, and reports on all construction activities every two weeks (bi-weekly). This scheduled bi-weekly submittal shall also include an updated version of the project schedule in a computerized software format as specified by the Engineer. The submittal shall have all the information needed to re-create that time period's TSLD plot and reports. The bi-weekly submittal shall include, but not limited to, an update of activities based on actual durations,

all new activities and any changes in duration or start or finish dates of any activity.

The Contractor shall submit with every update, in report form acceptable to the Engineer, a list of changes to the progress schedule since the previous schedule submittal. The Engineer may change the frequency of the submittal requirements but may not require a submittal of the schedule to be more than once a week. The Engineer may decrease the frequency of the submittal of the bi-weekly schedule.

The Contractor shall submit updates of the anticipated work completion graph, equipment listing, manpower requirement graph or method statement when requested by the Engineer. The Contractor shall submit such updates within 4 calendar days from the date of the request by the Engineer.

The Engineer may withhold progress payment until the Contractor is in compliance with all schedule update requirements

(F) Float. All float appearing on a schedule is a shared commodity. Float does not belong to or exist for the exclusive use or benefit of either the State or the Contractor. The State or the Contractor has the opportunity to use available float until it is depleted. Float has no monetary value.

(G) Scheduled Meetings. The Contractor shall meet on a bi-weekly basis with the Engineer to review the progress schedule. The Contractor shall have someone attending the meeting that can answer all questions on the TSLD and other schedule related submittals.

(H) Accelerated Schedule; Early Completion. If the Contractor submits an accelerated schedule (shorter than the contract time), the Engineer's review and acceptance of an accelerated schedule does not constitute an agreement or obligation by the State to modify the contract time or completion date. The Contractor is solely responsible for and shall accept all risks and any delays, other than those that can be directly and solely attributable to the State, that may occur during the work, until the contract completion date. The contract time or completion date is established for the benefit of the State and cannot be changed without an appropriate change order or Substantial Completion granted by the State. The State may accept the work before the completion date is established, but is not obligated to do so.

If the TSLD indicates an early completion of the project, the Contractor shall, upon submittal of the schedule, cooperate with the Engineer in explaining how it will be achieved. In addition, the Contractor shall submit the above explanation in writing which shall include the State's part, if any, in achieving the early completion date. Early completion of the project shall not rely on changes to the Contract Documents unless approved by the Engineer.

(l) Contractor Responsibilities. The Contractor shall promptly respond to any inquiries from the Engineer regarding any schedule submission. The Contractor shall adjust the schedule to address directives from the Engineer and shall resubmit the TSLD package to the Engineer until the Engineer finds it acceptable.

The Contractor shall perform the work in accordance with the submitted TSLD. The Engineer may require the Contractor to provide additional work forces and equipment to bring the progress of the work into conformance with the TSLD at no increase in contract price or contract time whenever the Engineer determines that the progress of the work does not insure completion within the specified contract time.

108.07 Weekly Meeting. In addition to the bi-weekly schedule meetings, the Contractor shall be available to meet once a week with the Engineer at the time and place as determined by the Engineer to discuss the work and its progress including but not limited to, the progress of the project, potential problems, coordination of work, submittals, erosion control reports, etc. The Contractor's personnel attending shall have the authority to make decisions and answer questions.

The Contractor shall bring to weekly meetings a detailed work schedule showing the next three weeks' work. Number of copies of the detailed work schedule to be submitted will be determined by the Engineer. The three-week schedule is in addition to the TSLD and shall in no way be considered as a substitute for the TSLD or vice versa. The three-week schedule shall show:

(a) All construction events, traffic control and BMP related activities in such detail that the Engineer will be able to determine at what location and type of work will be done for any day for the next three weeks. This is for the State to use to plan its manpower requirements for that time period.

(b) The duration of all events and delays.

(c) The critical path clearly marked in red or marked in a manner that makes it clearly distinguishable from other paths and is acceptable to the Engineer.

(d) Critical submittals and requests for information (RFI's).

(e) The project title, project number, date created, period the schedule covers, Contractor's name and creator of the schedule on each page.

Two days prior to each weekly meeting, the Contractor shall submit a list of outstanding submittals, RFIs and issues that require discussion.

108.08 Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time. The actual amount of damages resulting from the Contractor's failure to complete the contract in a timely manner is difficult to accurately determine. Therefore, the amount of such damages shall be liquidated damages as set forth herein and in the special provisions. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract.

When the Contractor fails to reach substantial completion of the work for which liquidated damages are specified, within the time or times fixed in the contract or any extension thereof, in addition to all other remedies for breach that may be available to the State, the Contractor shall pay liquidated damages to the State, in the amount of \$ 5,000.00 per working day.

(A) Liquidated Damages Upon Termination. If the State terminates on account of Contractor's default, liquidated damages may be charged against the defaulting Contractor and its surety until final completion of work.

(B) Liquidated Damages for Failure to Complete the Punchlist. The Contractor shall complete the work on any punchlist created after the pre-final inspection, within the contract time or any extension thereof.

When the Contractor fails to complete the work on such punchlist within the contract time or any extension thereof, the Contractor shall pay liquidated damages to the State of 20 percent of the amount of liquidated damages established for failure to substantially complete the work within contract time. Liquidated damages shall not be assessed for the period between:

(1) Notice from the Contractor that the project is substantially complete and the time the punchlist is delivered to the Contractor.

(2) The date of the completion of punchlist as determined by the Engineer and the date of the successful final inspection, and

(3) The date of the Final Inspection that results in Substantial Completion and the receipt by the Contractor of the written notice of Substantial Completion.

(C) Actual Damages Recoverable If Liquidated Damages Deemed Unenforceable. In the event a court of competent jurisdiction holds that any liquidated damages assessed pursuant to this contract are unenforceable, the State will be entitled to recover its actual damages for Contractor's failure to complete the work, or any designated portion of the work within the time set by the contract.

108.09 Rental Fees for Unauthorized Lane Closure or Occupancy. In addition to all other remedies available to the State for Contractor's breach of the terms of the contract, the Engineer will assess the rental fees in the amount of \$500 for every one-to fifteen-minute increment for each roadway lane closed to public use or occupied beyond the time periods authorized in the contract or by the Engineer. The maximum amount assessed per day shall be \$5,000. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract. The rental fee may be waived in whole or part if the Engineer determines that the unauthorized period of lane closure or occupancy was due to factors beyond the control of the Contractor. Equipment breakdown is not a cause to waive liquidated damages.

108.10 Suspension of Work.

(A) Suspension of Work. The Engineer may, by written order, suspend the performance of the work, either in whole or in part, for such periods as the Engineer may deem necessary, for any cause, including but not limited to:

(1) Weather or soil conditions considered unsuitable for prosecution of the work.

(2) Whenever a redesign that may affect the work is deemed necessary by the Engineer.

(3) Unacceptable noise or dust arising from the construction even if it does not violate any law or regulation.

(4) Failure on the part of the Contractor to:

(a) Correct conditions unsafe for the general public or for the workers.

(b) Carry out orders given by the Engineer.

(c) Perform the work in strict compliance with the provisions of the contract.

(d) Provide adequate supervision on the jobsite.

(5) The convenience of the State.

(B) Partial and Total Suspension. Suspension of work on some but not all items of work shall be considered a "partial suspension". Suspension of work on all items shall be considered "total suspension". The period of suspension shall be computed from the date set out in the written order for work to cease until the date of the order for work to resume.

(C) Reimbursement to Contractor. In the event that the Contractor is ordered by the Engineer in writing as provided herein to suspend all work under the contract for the reasons specified in Subsections 108.10(A)(2), 108.10(A)(3), or 108.10(A)(5) of the "Suspension of Work" paragraph, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Engineer, including costs expended for the protection of the work. An allowance of 5 percent for indirect categories of delay costs will be paid on any reimbursed direct costs, including extended branch and home-office overhead and delay impact costs. No allowance will be made for anticipated profits. Payment for equipment which is ordered to standby during such suspension of work shall be made as described in Subsection 109.06(H) - Idle and Standby Equipment.

(D) Cost Adjustment. If the performance of all or part of the work is suspended for reasons beyond the control of the Contractor except an adjustment shall be made for any increase in cost of performance of this contract (excluding profit) necessarily caused by such suspension, and the contract modified in writing accordingly.

However, no adjustment to the contract price shall be made for any suspension, delay, or interruption:

(1) For weather related conditions.

(2) To the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor.

(3) Or, for which an adjustment is provided for or excluded under any other provision of this Contract.

(E) Claims for Adjustment. Any adjustment in contract price made shall be determined in accordance with Subsections 104.02 – Changes and 104.06 – Methods of Price Adjustment.

Any claims for such compensation shall be filed in writing with the Engineer within 30 days after the date of the order to resume work or the claim will not be considered. The claim shall conform to the requirements of Subsection 107.15(D) – Making of a Claim. The Engineer will take the claim under consideration, may make such investigations as are deemed necessary and will be the sole judge as to the equitability of the claim. The Engineer's decision will be final.

(F) No Adjustment. No provision of this clause shall entitle the Contractor to any adjustments for delays due to failure of its surety, the cancellation or expiration of any insurance coverage required by the contract documents, for suspensions made at the request of the Contractor, for any delay required under the contract, for suspensions, either partial or whole, made by the Engineer under Subsection 108.10(A)(4) of the "Suspension of work" paragraph.

108.11 Termination of Contract for Cause.

(A) Default. If the Contractor refuses or fails to perform the work, or any separable part thereof, with such diligence as will assure its completion within the time specified in this contract, or any extension thereof, or commits any other material breach of this contract, and further fails within seven days after receipt of written notice from the Engineer to commence and continue correction of the refusal or failure with diligence and promptness, the Engineer may, by written notice to the Contractor, declare the Contractor in breach and terminate the Contractor's right to proceed with the work or the part of the work as to which there has been delay or other breach of contract. In such event, the State may take over the work, perform the same to completion, by contract or otherwise, and may take possession of, and utilize in completing the work, the materials, appliances, and plants as may be on the site of the work and necessary therefore. Whether or not the Contractor's right to proceed with the work is terminated, the Contractor and the Contractor's sureties shall be liable for any damage to the State resulting from the Contractor's refusal or failure to complete the work within the specified time.

(B) Additional Rights and Remedies. The rights and remedies of the State provided in this contract are in addition to any other rights and remedies provided by law.

(C) Costs and Charges. All costs and charges incurred by the State, together with the cost of completing the work under contract, will be

108.12

deducted from any monies due or which would or might have become due to the Contractor had it been allowed to complete the work under the contract. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay the State the amount of the excess.

In case of termination, the Engineer will limit any payment to the Contractor to the part of the contract satisfactorily completed at the time of termination. Payment will not be made until the work has satisfactorily been completed and all required documents, including the tax clearance required by Subsection 109.11 – Final Payment are submitted by the Contractor. Termination shall not relieve the Contractor or Surety from liability for liquidated damages.

(D) Erroneous Termination for Cause. If, after notice of termination of the Contractor's right to proceed under this section, it is determined for any reason that good cause did not exist to allow the State to terminate as provided herein, the rights and obligations of the parties shall be the same as, and the relief afforded the Contractor shall be limited to, the provisions contained in Subsection 108.12 – Termination for Convenience.

108.12 Termination For Convenience.

(A) Terminations. The Director may, when the interests of the State so require, terminate this contract in whole or in part, for the convenience of the State. The Director will give written notice of the termination to the Contractor specifying the part of the contract terminated and when termination becomes effective.

(B) Contractor's Obligations. The Contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the Contractor shall stop work to the extent specified. The Contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work subject to the State's approval. The Engineer may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the State. The Contractor must still complete the work not terminated by the notice of termination and may incur obligations as necessary to do so.

(C) Right to Construction and Goods. The Engineer may require the Contractor to transfer title and to deliver to the State in the manner and to the extent directed by the Engineer, the following:

(1) Any completed work.

(2) Any partially completed construction, goods, materials, parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction material") that the Contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.

(3) The Contractor shall protect and preserve all property in the possession of the Contractor in which the State has an interest. If the Engineer does not elect to retain any such property, the Contractor shall use its best efforts to sell such property and construction materials for the State's account in accordance with the standards of HRS Chapter 490:2-706.

(D) Compensation.

(1) The Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by HAR Subchapter 15, Chapter 3-122. If the Contractor fails to file a termination claim within one year from the effective date of termination, the Engineer may pay the Contractor, if at all, an amount set in accordance with Subsection 108.12(D)(3).

(2) The Engineer and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of construction, supplies, and construction materials under Subsection 108.12(C)(3), and the proportionate contract price of the work not terminated.

(3) Absent complete agreement, the Engineer will pay the Contractor the following amounts less any payments previously made under the contract:

(a) The cost of all contract work performed prior to the effective date of the notice of termination work plus a 5 percent markup on the actual direct costs, including amounts paid to subcontractor, less amounts paid or to be paid for completed portions of such work; provided, however, that if it appears that the Contractor would have sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall

be reduced to reflect the anticipated rate of loss. No anticipated profit or consequential damage will be due or paid.

(b) Subcontractors shall be paid a markup of 10 percent on their direct job costs incurred to the date of termination. No anticipated profit or consequential damage will be due or paid to any subcontractor. These costs must not include payments made to the Contractor for subcontract work during the contract period.

(c) The total sum to be paid the Contractor shall not exceed the total contract price reduced by the amount of any sales of construction supplies, and construction materials.

(4) Cost claimed, agreed to, or established by the State shall be in accordance with HAR Chapter 3-123.

108.13 Pre-Final and Final Inspections.

(A) **Inspection Requirements.** Before the Engineer undertakes a final inspection of any work, a pre-final inspection must first be conducted. The Contractor shall notify the Engineer that the work has reached substantial completion and is ready for pre-final inspection.

(B) **Pre-Final Inspection.** Before notifying the Engineer that the work has reached substantial completion, the Contractor shall inspect the project and test all installed items with all of its subcontractors as appropriate. The Contractor shall also submit the following documents as applicable to the work:

- (1) All written guarantees required by the contract.
- (2) Two accepted final field-posted drawings as specified in Section 648 – Field-Posted Drawings;
- (3) Complete weekly certified payroll records for the Contractor and Subcontractors.
- (4) Certificate of Plumbing and Electrical Inspection.
- (5) Certificate of building occupancy as required.
- (6) Certificate of Soil and Wood Treatments.
- (7) Certificate of Water System Chlorination.

(8) Certificate of Elevator Inspection, Boiler and Pressure Pipe Inspection.

(9) Maintenance Service Contract and two copies of a list of all equipment installed.

(10) Current Tax clearance. The contractor will be required to submit an additional tax clearance certificate when the final payment is made.

(11) And any other final items and submittals required by the contract documents.

(C) Procedure. When in compliance with the above requirements, the Contractor shall notify the Engineer in writing that the project has reached substantial completion and is ready for pre-final inspection.

The Engineer will then make a preliminary determination as to whether or not the project is substantially complete and ready for pre-final inspection. The Engineer may, in writing, postpone until after the pre-final inspection the Contractor's submittal of any of the items listed in Subsection 108.13(B) – Pre-Final Inspection, herein, if in the Engineer's discretion it is in the interest of the State to do so.

If, in the opinion of the Engineer, the project is not substantially complete, the Engineer will provide the Contractor a punchlist of specific deficiencies in writing which must be corrected or finished before the work will be ready for a pre-final inspection. The Engineer may add to or otherwise modify this punchlist from time to time. The Contractor shall take immediate action to correct the deficiencies and must repeat all steps described above including written notification that the work is ready for pre-final inspection.

After the Engineer is satisfied that the project appears substantially complete a final inspection shall be scheduled within ten working days after receipt of the Contractor's latest letter of notification that the project is ready for final inspection.

If, as a result of the pre-final inspection, the Engineer determines the work is not substantially complete, the Engineer will inform the Contractor in writing as to specific deficiencies which must be corrected before the work will be ready for another pre-final inspection. If the Engineer finds the work is substantially complete but finds deficiencies that must be corrected before the work is ready for final inspection, the Engineer will prepare in writing and deliver to the Contractor a punchlist describing such deficiencies.

At any time before final acceptance, the Engineer may revoke the determination of substantial completion if the Engineer finds that it was not warranted and will notify the Contractor in writing the reasons therefore together with a description of the deficiencies negating the declaration.

When the date of substantial completion has been determined by the State, liquidated damages for the failure to complete the punchlist, if due to the State will be assessed in pursuant to Subsection 108.08(B) - Liquidated Damages for Failure to Complete the Punchlist.

(D) Punchlist; Clean Up and Final Inspection. Upon receiving a punchlist after pre-final inspection, the Contractor shall promptly devote all required time, labor, equipment, materials and incidentals to correct and remedy all punchlist deficiencies. The Engineer may add to or otherwise modify this punchlist until substantial completion of the project.

Before final inspection of the work, the Contractor shall clean all ground occupied by the Contractor in connection with the work of all rubbish, excess materials temporary structures and equipment, shall remove all graffiti and defacement of the work and all parts of the work and the worksite must be left in a neat and presentable condition to the satisfaction of the Engineer.

Final inspection will occur within ten working days after the Contractor notifies the Engineer in writing that all punchlist deficiencies remaining after the pre-final inspection have been completed and the Engineer concurs. If the Engineer determines that deficiencies still remain at the final inspection, the work will not be accepted and the Engineer will notify the Contractor, in writing, of the deficiencies which shall be corrected and the steps above repeated.

If the Contractor fails to correct the deficiencies and complete the work by the established or agreed date, the State may correct the deficiencies by whatever method it deems appropriate and deduct the cost from any payments due the Contractor.

108.14 Substantial Completion and Final Acceptance.

(A) Substantial Completion. When the Engineer finds that the Contractor has satisfactorily completed all work for the project in compliance with the contract, with the exception of the planting period and the plant establishment period, the Engineer will notify the Contractor, in writing, of the project's substantial completion, effective as of the date of the final inspection. The substantial completion date shall determine end of contract time and relieve contractor of any additional accumulation of liquidated damages for failure to complete the punchlist.

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993 **(B) Final Acceptance.** When the Engineer finds that the Contractor has
994 satisfactorily completed all contract work in compliance with the contract
995 including all plant establishment requirements, and all the materials have
996 been accepted by the State, the Engineer will issue a Final Acceptance
997 Letter. The Final Acceptance date shall determine the commencement of
998 all guaranty periods subject to Subsection 108.16 – Contractor's
999 Responsibility for Work; Risk of Loss or Damage.

1000
1001 **108.15 Use of Structure or Improvement.** The State has the right to use the
1002 structure, equipment, improvement, or any part thereof, at any time after it is
1003 considered by the Engineer as available. In the event that the structure,
1004 equipment or any part thereof is used by the State before final acceptance, the
1005 Contractor is not relieved of its responsibility to protect and preserve all the work
1006 until final acceptance.

1007
1008 **108.16 Contractor's Responsibility for Work; Risk of Loss or Damage.**
1009 Until the written notice of final acceptance has been received, the Contractor shall
1010 take every precaution against loss or damage to any part of the work by the action
1011 of the elements or from any other cause whatsoever, whether arising from the
1012 performance or from the non-performance of the work. The Contractor shall
1013 rebuild, repair, restore and make good all loss or damage to any portion of the
1014 work resulting from any cause before its receipt of the written notice of final
1015 acceptance and shall bear the risk and expense thereof.

1016
1017 The risk of loss or damage to the work from any hazard or occurrence that
1018 may or may not be covered by a builder's risk policy is that of the Contractor and
1019 Surety, unless such risk of loss is placed elsewhere by express language in the
1020 contract documents.

1021
1022 **108.17 Guarantee of Work.**

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1024 **(1)** Regardless of, and in addition to, any manufacturers' warranties, all
1025 work and equipment shall be guaranteed by the Contractor against defects
1026 in materials, equipment or workmanship for one year from the date of final
1027 acceptance or as otherwise specified in the contract documents.

1028
1029 **(2)** When the Engineer determines that repairs or replacements of any
1030 guaranteed work and equipment is necessary due to materials, equipment,
1031 or workmanship which are inferior, defective, or not in accordance with the
1032 terms of the contract, the Contractor shall, at no increase in contract price
1033 or contract time, and within five working days of receipt of written notice
1034 from the State, commence to all of the following:

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1036 **(a)** Correct all noted defects and make replacements, as directed
1037 by the Engineer, in the equipment and work.

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(b) Repair or replace to new or pre-existing condition any damages resulting from such defective materials, equipment or installation thereof.

(3) The State will be entitled to the benefit of all manufacturers and installers warranties that extend beyond the terms of the Contractor's guaranty regardless of whether or not such extended warranty is required by the contract documents. The Contractor shall prepare and submit all documents required by the providers of such warranties to make them effective, and submit copies of such documents to the Engineer. If an available extended warranty cannot be transferred or assigned to the State as the ultimate user, the Contractor shall notify the Engineer who may direct that the warranted items be acquired in the name of the State as purchaser.

(4) If a defect is discovered during a guarantee period, all repairs and corrections to the defective items when corrected shall be guaranteed for a new duration equal to the original full guarantee period. The running of the guarantee period shall be suspended for all other work affected by any defect. The guarantee period for all other work affected by any such defect shall restart for its remaining duration upon confirmation by the Engineer that the deficiencies have been repaired or remedied.

(5) Nothing in this section is intended to limit or affect the State's rights and remedies arising from the discovery of latent defects in the work after the expiration of any guarantee period.

108.18 No Waiver of Legal Rights. The following will not operate or be considered as a waiver of any portion of the contract, or any power herein reserved, or any right to damages provided herein or by law:

(1) Any payment for, or acceptance of, the whole or any part of the work.

(2) Any extension of time.

(3) Any possession taken by the Engineer.

A waiver of any notice requirement or of any noncompliance with the contract will not be held to be a waiver of any other notice requirement or any other noncompliance with the contract.

108.19 Final Settlement of Contract.

(A) **Closing Requirements.** The contract will be considered settled after the project acceptance date and when the following items have been satisfactorily submitted, where applicable:

- 1084 (1) All written guarantees required by the contract.
1085
1086 (2) Complete and certified weekly payrolls for the Contractor and
1087 its subcontractor's.
1088
1089 (3) Certificate of plumbing and electrical inspection.
1090
1091 (4) Certificate of building occupancy.
1092
1093 (5) Certificate for soil treatment and wood treatment.
1094
1095 (6) Certificate of water system chlorination.
1096
1097 (7) Certificate of elevator inspection, boiler and pressure pipe
1098 installation.
1099
1100 (8) Tax clearance.
1101
1102 (9) All other documents required by the Contract or by law.
1103

1104 **(B) Failure to Meet Closing Requirements.** The Contractor shall meet
1105 the applicable closing requirements within 60 days from the date of Project
1106 Acceptance or the agreed to Punchlist complete date. Should the
1107 Contractor fail to comply with these requirements, the Engineer may
1108 terminate the contract for cause."
1109
1110
1111
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1113

END OF SECTION 108

1 **SECTION 109 – MEASUREMENT AND PAYMENT**

2
3 Make the following amendment to said Section:

4
5 **(I) Amend Subsection 109.05 Allowances for Overhead and Profit** by
6 revising lines 101 to 110 to read as follows:

7
8 **“(1) 20 percent of the direct cost for any work performed by the**
9 **Contractor’s own labor force.**

10
11 **“(2) 20 percent of the direct cost for any work performed by each**
12 **subcontractor’s own labor force.**

13
14 **“(3) For the Contractor or any subcontractor for work performed**
15 **by their respective subcontractor or tier subcontractor, 10 percent**
16 **of the amount due to the performing subcontractor or tier**
17 **subcontractor.”**

18
19 **(II) Amend Subsection 109.08(B) Payment for Material On Hand** by
20 revising lines 421 to 423 to read as follows:

21
22 **“(2) The materials shall be stored and handled in accordance**
23 **with Subsection 105.14 – Storage and Handling of Materials and**
24 **Equipment.”**

25
26
27 **(III) Amend Subsection 109.11 Final Payment** by revising lines 568 to 576
28 to read as follows:

29
30 **“(3) A current “Certificate of Vendor Compliance” issued by the**
31 **Hawaii Compliance Express (HCE). The Certificate of Vendor**
32 **Compliance is used to certify the Contractor’s compliance with**

33
34 **(a) Section 103D-328, HRS (for all contracts \$25,000 or**
35 **more) which requires a current tax clearance certificate**
36 **issued by the Hawaii State Department of Taxation and the**
37 **Internal Revenue Service;**

38
39 **(b) Chapters 383, 386, 392, and 393, HRS; and**

40
41 **(c) Subsection 103D-310(c), HRS. The State reserves**
42 **the right to verify that compliance is current prior to the**
43 **issuance of final payment. Contractors are advised that non-**
44 **compliance status will result in final payment being withheld**
45 **until compliance is attained.**

46
47 Sums necessary to meet the claims of any governmental agencies
48 may be withheld from the sums due the Contractor until said

49 claims have been fully and completely discharged or otherwise
50 satisfied.”

51

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END OF SECTION 109

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(I) Amend 201.04 – Measurement by revising lines 167 to 168 to read as follows:

(II) Amend **201.05 – Payment** by revising lines 170 to 179 to read as follows:

The Engineer will pay for the following pay item when included in the proposal schedule:

Clearing and Grubbing	Acre"
-----------------------	-------

ER-27(008)
201-1a

7/1/18

1 **SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **202.04 – Measurement** by revising lines 119 to 120 to read as
6 follows:

7
8 **“202.04 Measurement.** If the proposal provides a contract item for the removal
9 of structure and obstructions, the Engineer will measure the removal of structures
10 and obstructions by the square yard, or linear foot.

11
12 Removal of Existing Grated Drain Inlet and Concrete Apron will be paid on a
13 lump sum basis. Measurement for payment will not apply.”

14
15 **(II)** Amend **202.05 – Payment** by revising lines 122 to 131 to read as follows:

16
17 **“202.05 Payment.** If the proposal does not show a contract item for the
18 removal of structures and obstructions, the Engineer will not pay for the removal
19 of structures and obstructions separately. The Contractor shall consider them
20 incidental to the various contract items.

21
22 The Engineer will pay for specific items stipulated for removal and disposal at the
23 contract price bid per unit specified in the proposal. The price shall be full
24 compensation for removal and disposal of that items, excavation, backfill,
25 salvage of materials removed. Salvaging of materials removed includes their
26 custody, preservation, storage on the right-of-way. Also, the price shall be full
27 compensation for equipment, tools, labor materials and incidentals necessary to
28 complete the work.

29
30 The Engineer will pay for the following pay items when included in the proposal
31 schedule.

32

Pay Item	Pay Unit
Removal of Existing Grated Drain Inlet and Concrete Apron	Lump Sum
Removal of Existing 24-Inch RCP Drain Pipe	Linear Foot
Removal of Existing Asphalt Concrete Pavement	Square Yard
Removal of Existing 6-Feet High Chain Link Fence	Linear Foot

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END OF SECTION 202

1 **SECTION 206 – EXCAVATION AND BACKFILL**
2 **FOR DRAINAGE FACILITIES**

3
4 Make the following amendments to said Section:

5
6 **(I)** Amend **206.04 – Measurement** by revising lines 142 to 143 to read as
7 follows:

8
9 **“206.04 Measurement.** The Engineer will measure Excavation for 42-Inch
10 Reinforced Concrete Pipe and Excavation and Installation for Stabilization Layer
11 per cubic yard in accordance with the contract documents.
12

13 **(II)** Amend **206.05 – Payment** by revising lines 145 to 154 to read as follows:

14
15 **“206.05 Payment.** The Engineer will pay for the accepted pay items listed
16 below at the contract price per pay unit, as shown in the proposal schedule.
17 Payment will be full compensation for the work prescribed in this section and the
18 contract documents.
19

20 The Engineer will pay for the following pay items when included in the
21 proposal schedule:

22

Pay Item	Pay Unit
Excavation for 42-Inch RCP Drain Pipe	Cubic Yard
Excavation and Installation for Stabilization Layer	Cubic Yard

28

29 The work for the evaluation, design, construction and stabilization of the
30 temporary excavation will not be paid for separately but shall be considered
31 incidental to the “Excavation for 42-Inch RCP Drain Pipe” pay item.”
32
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34

35 **END OF SECTION 206**

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(I) Amend **207.04 - Measurement** by revising lines 35 to 41 to read as follows:

The Engineer will measure ditch and channel excavation per cubic yard in accordance with the contract documents. Excavation will be measured after clearing and grubbing."

"207.05 Payment. The Engineer will pay for the accepted pay item listed below at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

Pay Item	Pay Unit
----------	----------

- (1)** 80% of the contract bid price upon completion of clearing and grubbing, excavating ditch, and backfilling and compacting below required bottom grade of ditches and channels.
- (2)** 20% of the contract bid price upon completion of disposing unsuitable and surplus material.

END OF SECTION 207

1 Amend **Section 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**
2 **CONTROL** to read as follows:

3
4
5 **“SECTION 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**
6 **CONTROL**

7
8
9 **209.01 Description.** This section describes the following:

10
11 **(A)** Including detailed plans, diagrams, and written Site-Specific Best
12 Management Practices (BMP); constructing, maintaining, and repairing
13 temporary water pollution, dust, and erosion control measures at the project
14 site, including local material sources, work areas and haul roads; removing
15 and disposing hazardous wastes; control of fugitive dust (defined as
16 uncontrolled emission of solid airborne particulate matter from any source
17 other than combustion); and complying with applicable State and Federal
18 permit conditions.

19
20 **(B)** Work associated with construction stormwater, dewatering, and
21 hydrotesting activities and complying with conditions of the National Pollutant
22 Discharge Elimination System (NPDES) permit(s) authorizing discharges
23 associated with construction stormwater, dewatering, and hydrotesting
24 activities.

25
26 **(C)** Potential pollutant identification and mitigation measures are listed in
27 Appendix A for use in the development of the Contractor’s Site-Specific BMP.

28
29 Requirements of this section also apply to construction support
30 activities including concrete or asphalt batch plants, rock crushing plants,
31 equipment staging yards/areas, material storage areas, excavated material
32 disposal areas, and borrow areas located outside the State Right-of-Way.
33 For areas serving multiple construction projects, or operating beyond the
34 completion of the construction project in which it supports, the Contractor
35 shall be responsible for securing the necessary permits, clearances, and
36 documents, and following the conditions of the permits and clearances, at no
37 cost to the State.

38
39 **209.02 Materials.** Comply with applicable materials described in Chapters 2 and
40 3 of the current HDOT “Construction Best Management Practices Field Manual”. In
41 addition, the materials shall comply with the following:

42
43 **(A) Grass.** Grass shall be a quick growing species such as rye grass,
44 Italian rye grass, or cereal grasses. Grass shall be suitable to the area and
45 provide a temporary cover that will not compete later with permanent cover.
46 Alternative grasses are allowable if acceptable to the Engineer.

47 **(B) Fertilizer and Soil Conditioners.** Fertilizer and soil conditioners shall
48 be a standard commercial grade acceptable to the Engineer. Fertilizer shall
49 conform to Subsection 619.02(H)(1) - Commercial Fertilizer.
50

51 **(C) Hydro-mulching.** Hydro-mulching used as a temporary vegetative
52 stabilization measure shall consist of materials in Subsections 209.02(A) -
53 Grass, and 209.02(B) – Fertilizer and Soil Conditioners. Mulches shall be
54 recycled materials including bagasse, hay, straw, wood cellulose bark, wood
55 chips, or other material acceptable to the Engineer. Mulches shall be clean
56 and free of noxious weeds and deleterious materials. Potable water shall
57 meet the requirements of Subsection 712.01 - Water. Submit alternate
58 sources of irrigation water for the Engineer's acceptance if deviating from
59 712.01 - Water. Installation and other requirements shall be in accordance
60 with portions of Section 641- Hydro-Mulch Seeding including 641.02(D) - Soil
61 and Mulch Tackifier, 641.03(A) – Seeding, and 641.03(B) - Planting Period.
62 Install non-vegetative controls including mulch or rolled erosion control
63 products while the vegetation is being established. Water and fertilize grass.
64 Apply fertilizer as recommended by the manufacturer. Replace grass the
65 Engineer considers unsuitable or sick. Remove and dispose of trash and
66 debris. Remove invasive species. Mow as needed to prevent site or signage
67 obstructions, fire hazard, or nuisance to the public. Do not remove down
68 stream sediment control measures until the vegetation is uniformly
69 established, including no large bare areas, and provides 70 percent of the
70 density of pre-disturbance vegetation. Temporary vegetative stabilization
71 shall not be used longer than one year.
72

73 **(D) Silt Fences.** Comply with ASTM D6462, Standard Practice for Silt
74 Fence Installation.
75

76 Alternative materials or methods to control, prevent, remove and dispose
77 pollution are allowable if acceptable to the Engineer.
78

79 **209.03 Construction.**

81 **(A) Preconstruction Requirements.**

82
83 **(1) Water Pollution, Dust, and Erosion Control Meeting.**
84 Schedule a water pollution, dust, and erosion control meeting with the
85 Engineer after Site-Specific BMP is accepted in writing by the
86 Engineer. Meeting shall be scheduled a minimum of 7 calendar days
87 prior to the Start Work Date. Discuss sequence of work, plans and
88 proposals for water pollution, dust, and erosion control.
89

90 **(2) Water Pollution, Dust, and Erosion Control Submittals.**

91 Submit a Site-Specific BMP Plan within 21 calendar days of date of
92 award. Submission of complete and acceptable Site-Specific BMP
93 Plan is the sole responsibility of the Contractor and additional contract
94 time will not be issued for delays due to incompleteness. Include the
95 following:

96
97 **(a)** Written description of activities to minimize water
98 pollution and soil erosion into State waters, drainage or sewer
99 systems. BMP shall include the following:

100
101 1. An identification of potential pollutants and their
102 sources.

103
104 2. A list of all materials and heavy equipment to be
105 used during construction.

106
107 3. Descriptions of the methods and devices used to
108 minimize the discharge of pollutants into State waters,
109 drainage or sewer systems.

110
111 4. Details of the procedures used for the
112 maintenance and subsequent removal of any erosion or
113 siltation control devices.

114
115 5. Methods of removing and disposing hazardous
116 wastes encountered or generated during construction.

117
118 6. Methods of removing and disposing concrete and
119 asphalt pavement cutting slurry, concrete curing water,
120 and hydrodemolition water.

121
122 7. Spill Control and Prevention and Emergency Spill
123 Response Plan.

124
125 8. Fugitive dust control, including dust from grinding,
126 sweeping, or brooming off operations or combination
127 thereof.

128
129 9. Methods of storing and handling of oils, paints
130 and other products used for the project.

131
132 10. Material storage and handling areas, and other
133 staging areas.

134
135 11. Concrete truck washouts.

- 136 **12.** Concrete waste control.
- 137
- 138 **13.** Fueling and maintenance of vehicles and other
- 139 equipment.
- 140
- 141 **14.** Tracking of sediment offsite from project entries
- 142 and exits.
- 143
- 144 **15.** Litter management.
- 145
- 146 **16.** Toilet facilities.
- 147
- 148 **17.** Other factors that may cause water pollution, dust
- 149 and erosion control.
- 150

151 **(b)** Provide plans indicating location of water pollution, dust

152 and erosion control devices; provide plans and details of BMPs

153 to be installed or utilized; show areas of soil disturbance in cut

154 and fill, indicate areas used for construction staging and

155 storage including items (1) through (17) above, storage of

156 aggregate (indicate type of aggregate), asphalt cold mix, soil or

157 solid waste, equipment and vehicle parking, and show areas

158 where vegetative practices are to be implemented. Indicate

159 intended drainage pattern on plans. Include flow arrows.

160 Include separate drawing for each phase of construction that

161 alters drainage patterns. Indicate approximate date when

162 device will be installed and removed.

163

164 **(c)** Construction schedule.

165

166 **(d)** Name(s) of specific individual(s) designated responsible

167 for water pollution, dust, and erosion controls on the project

168 site. Include home, cellular, and business telephone numbers,

169 fax numbers, and e-mail addresses.

170

171 **(e)** Description of fill material to be used.

172

173 **(f)** For projects with an NPDES Permit for Construction

174 Activities, submit information to address all sections in the

175 Storm Water Pollution Prevention Plan (SWPPP).

176

177 **(g)** For projects with an NPDES Permit, information required

178 for compliance with the conditions of the Notice of General

179 Permit Coverage (NGPC)/NPDES Permit.

180

181 (h) Site-Specific BMP Review Checklist. The checklist may
182 be downloaded from HDOT's Stormwater Management
183 website at <http://stormwaterhawaii.com>.
184

185 Date and sign Site-Specific BMP Plan. Keep accepted
186 copy on site or at an accessible location so that it can be made
187 available at the time of an on-site inspection or upon request by
188 the Engineer, HDOT Third-Party Inspector, and/or DOH/EPA
189 Representative. Amendments to the Site-Specific BMP Plan
190 shall be included with original Site-Specific BMP Plan. Modify
191 SWPPP if necessary to conform to revisions. Include date of
192 installation and removal of Site-Specific BMP measures.
193 Obtain written acceptance by the Engineer before
194 implementing revised Site-Specific BMPs in the field.
195

196 Follow the guidelines in the current HDOT "Construction
197 Best Management Practices Field Manual", in developing,
198 installing, and maintaining Site-Specific BMPs for all projects.
199 For any conflicting requirements between the Manual and
200 applicable bid documents, the applicable bid documents will
201 govern. Should a requirement not be clearly described within
202 the applicable bid documents, notify the Engineer immediately
203 for interpretation. For the purposes of clarification "applicable
204 bid documents" include the construction plans, standard
205 specifications, special provisions, Permits, and the SWPPP
206 when applicable.
207

208 Follow Honolulu's City and County "Rules for Soil
209 Erosion Standards and Guidelines" for all projects on Oahu.
210 Use respective Soil Erosion Guidelines for Maui, Kauai and
211 Hawaii projects.
212

213 **(B) Construction Requirements.** Do not begin work until submittals
214 detailed in Subsection 209.03(A)(2) - Water Pollution, Dust, and Erosion
215 Control Submittals are completed and accepted in writing by the Engineer.
216

217 Install, maintain, monitor, repair and replace site-specific BMP
218 measures, such as for water pollution, dust and erosion control; installation,
219 monitoring, and operation of hydrotesting activities; removal and disposal of
220 hazardous waste indicated on plans, concrete cutting slurry, concrete curing
221 water; or hydrodemolition water. Site-Specific BMP measures shall be in
222 place, functional and accepted by HDOT personnel prior to initiating any
223 ground disturbing activities.
224

If necessary, furnish and install rain gage in a secure location prior to field work including installation of site-specific BMP. Provide rain gage with a tolerance of at least 0.05 inches of rainfall. Install rain gage on project site in an area that will not deter rainfall from entering the gate opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Maintain rain gage and replace rain gage that is stolen, does not function properly or accurately, is worn out, or needs to be relocated. Do not begin field work until rain gage is installed and Site-Specific BMPs are in place. Rain gage data logs shall be readily available. Submit rain gage data logs weekly to the Engineer.

Address all comments received from the Engineer.

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

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

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

Immediately initiate stabilizing exposed soil areas upon completion of earth disturbing activities for areas permanently or temporarily ceased on any portion of the site. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume for a period of 14 or more calendar days, but such activities will resume in the future. The term "immediately" is used in this section to define the deadline for initiating stabilization measures. "Immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

For projects with an NPDES Permit for Construction activities:

(1) For construction areas discharging into waters not impaired for nutrients or sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

(2) For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

For projects without an NPDES Permit for Construction activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

Any of the following types of activities constitutes initiation of stabilization:

(1) Prepping the soil for vegetative or non-vegetative stabilization;

(2) Applying mulch or other non-vegetative product to the exposed area;

(3) Seeding or planting the exposed area;

(4) Starting any of the activities in items (1) – (3) above on a portion of the area to be stabilized, but not on the entire area; and

(5) Finalizing arrangements to have stabilization product fully installed in compliance with the deadline for completing initial stabilization activities.

Any of the following types of activities constitutes completion of initial stabilization activities:

(1) For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or

(2) For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

If the Contractor is unable to meet the deadlines above due to circumstances beyond the Contractor's control, and the Contractor is using vegetative cover for temporary or permanent stabilization, the Contractor may comply with the following stabilization deadlines instead as agreed to by the Engineer:

314 (1) Immediately initiate, and complete within the timeframe shown
315 above, the installation of temporary non-vegetative stabilization
316 measures to prevent erosion;

317
318 (2) Complete all soil conditioning, seeding, watering or irrigation
319 installation, mulching, and other required activities related to the
320 planting and initial establishment of vegetation as soon as conditions
321 or circumstances allow it on the site; and

322
323 (3) Notify and provide documentation to the Engineer the
324 circumstances that prevent the Contractor from meeting the deadlines
325 above for stabilization and the schedule the Contractor will follow for
326 initiating and completing initial stabilization and as agreed to by the
327 Engineer.

328
329 Follow the applicable requirements of the specifications and special
330 provisions including Section 619 Planting and Section 641 Hydro-Mulch
331 Seeding.

332
333 Immediately after seeding or planting the area to be vegetatively
334 stabilized, to the extent necessary to prevent erosion on the seeded or
335 planted area, select, design, and install non-vegetative erosion controls that
336 provide cover (e.g., mulch, rolled erosion control products) to the area while
337 vegetation is becoming established.

338
339 Protect exposed or disturbed surface area with mulches, grass seeds
340 or hydromulch. Spray mulches at a rate of 2,000 pounds per acre. Add
341 tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate
342 of 125 pounds per acre. For hydromulch, use the ingredients and rates
343 required for mulches and grass seeds. Submit recommendations from a
344 licensed Landscape Architect when deviating from the application rates
345 above.

346
347 Apply fertilizer to mulches, grass seed or hydromulch per
348 manufacturer's recommendations. Submit recommendations from a licensed
349 Landscape Architect when deviating from the manufacturer's
350 recommendations.

351
352 Install velocity dissipation measures when exposing erodible surfaces
353 greater than 15 feet in height.

354
355 BMP measures shall be in place and operational at the end of work
356 day or as required by Section 209.03(B) Construction Requirements.

Install and maintain either or both stabilized construction entrances and wheel washes to minimize tracking of dirt and mud onto roadways. Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other material tracked onto the road, sidewalk, or other paved area by the end of the same day in which the track-out occurs. Modify stabilized construction entrances to prevent mud from being tracked onto road. Stabilize entire access roads if necessary.

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

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

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

- (1) Hydro-mulching the lower region of embankments in the immediate area.
- (2) Installing check dams and siltation control devices.
- (3) Other methods acceptable to the Engineer.

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

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

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

Install or modify Site-Specific BMP measures due to change in the Contractor's means and methods, or for omitted condition that should have been allowed for in the accepted Site-Specific BMP or a Site-Specific BMP that replaces an accepted Site-Specific BMP that is not satisfactorily performing. Modifications to Site-Specific BMP measures shall be accepted in writing by the Engineer prior to implementation.

Properly maintain all Site-Specific BMP measures.

For projects with an NPDES Permit for Construction Activities:

(1) For construction areas discharging into nutrient or sediment impaired waters, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) Within 24 hours of any rainfall of 0.25 inch or greater which occurs in a 24-hour period.

(c) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

(2) For construction areas discharging to waters not impaired for nutrients or sediments, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

For projects without an NPDES Permit for Construction activities, inspect, prepare a written report, and make repairs to BMP measures at the following intervals:

(a) Weekly.

(b) When existing erosion control measures are damaged or not operating properly as required by Site-Specific BMP.

Temporarily remove, replace or relocate any Site-Specific BMP that must be removed, replaced or relocated due to potential or actual flooding, or potential danger or damage to project or public.

Maintain records of inspections of Site-Specific BMP work. Keep continuous records for duration of the project. Submit copy of Inspection Report to the Engineer within 24 hours after each inspection.

The Contractor's designated representative specified in Subsection 209.03(A)(2)(d) shall address any Site-Specific BMP deficiencies brought up by the Engineer immediately, including weekends and holidays, and complete work to fix the deficiencies by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. Address any Site-Specific BMP deficiencies brought up by the State's Third-Party Inspector in the timeframe above or as specified in the Consent Decree or MS4 NPDES

Permit, whichever is more stringent. The Consent Decree timeframe requirement applies statewide. The MS4 NPDES Permit only applies to Oahu. In this section, "immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day. When installation of a new pollution prevention control or a significant repair is needed, complete installation or repair no later than 7 calendar days from the time of notification/Contractor discovery. Notify the Engineer and document why it is infeasible to complete the installation or repair within 7 calendar days and complete the work as soon as practicable and as agreed to by the Engineer. Address Site-Specific BMP deficiencies discovered by the Contractor within the timeframe above. The Contractor's failure to satisfactorily address these Site-Specific BMP deficiencies, the Engineer reserves the right to employ outside assistance or use the Engineer's own labor forces to provide necessary corrective measures. The Engineer will charge the Contractor such incurred costs plus any associated project engineering costs. The Engineer will make appropriate deductions from the Contractor's monthly progress estimate. Failure to apply Site-Specific BMP measures may result in one or more of the following: assessment of liquidated damages, suspension, or cancellation of Contract with the Contractor being fully responsible for all additional costs incurred by the State.

(C) Discharges of Storm Water Associated with Construction Activities. If work includes disturbance of one acre or more, an NPDES Permit authorizing Discharges of Storm Water Associated with Construction Activity (CWB-NOI Form C) or Individual Permit authorizing storm water discharges associated with construction activity is required from the Department of Health Clean Water Branch (DOH-CWB).

Do not begin construction activities until all required conditions of the permit are met and submittals detailed in Subsection 209.03(A)(2) – Water Pollution, Dust, and Erosion Control Submittals are completed and accepted in writing by the Engineer.

(D) Discharges Associated with Hydrotesting Activities. If hydrotesting activities require effluent discharge into State waters or drainage systems, an NPDES Hydrotesting Waters Permit (CWB-NOI Form F) or Individual Permit authorizing discharges associated with hydrotesting from DOH-CWB is required from the DOH-CWB.

Do not begin hydrotesting activities until the DOH-CWB has issued an Individual NPDES Permit or Notice of General Permit Coverage (NGPC). Conduct Hydrotesting operations in accordance with the conditions of the permit or NGPC.

(E) Discharges Associated with Dewatering Activities. If dewatering activities require effluent discharge into State waters or drainage systems, an NPDES Dewatering Permit (CWB-NOI Form G) or Individual Permit authorizing discharges associated with dewatering from DOH-CWB is required from the DOH-CWB.

Do not begin dewatering activities until the DOH-CWB has issued an Individual NPDES Permit or Notice of General Permit Coverage (NGPC). Conduct dewatering operations in accordance with the conditions of the permit or NGPC.

(F) Solid Waste. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 21 calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed, or as directed by the Engineer.

(G) Construction BMP Training. The Contractor's representative responsible for development of the Site-Specific BMP Plan and implementation of Site-Specific BMPs in the field shall attend the State's Construction Best Management Practices Training. The Contractor shall keep training logs updated and readily available.

209.04 Measurement.

(A) Installation, maintenance, monitoring, and removal of BMP will be paid on a lump sum basis. Measurement for payment will not apply.

(B) The Engineer will only measure additional water pollution, dust and erosion control required and requested by the Engineer on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

209.05 Payment. The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for each of the following pay items when included in proposal schedule:

Pay Item	Pay Unit
Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum
Additional Water Pollution, Dust, and Erosion Control	Force Account

543 An estimated amount for force account is allocated in proposal schedule
544 under 'Additional Water Pollution, Dust, and Erosion Control', but actual amount to
545 be paid will be the sum shown on accepted force account records, whether this sum
546 be more or less than estimated amount allocated in proposal schedule. The
547 Engineer will pay for BMP measures requested by the Engineer that are beyond
548 scope of accepted Site-Specific BMP on a force account basis.

549
550 No progress payment will be authorized until the Engineer accepts in writing
551 Site-Specific BMP or when the Contractor fails to maintain project site in accordance
552 with accepted BMP.

553
554 For all citations or fines received by the Department for non-compliance,
555 including compliance with NPDES Permit conditions, the Contractor shall reimburse
556 State within 30 calendar days for full amount of outstanding cost State has incurred,
557 or the Engineer will deduct cost from progress payment.

558
559 The Engineer will assess liquidated damages up to \$27,500 per day for non-
560 compliance of each BMP requirement and all other requirements in this section.
561

Appendix A

The following list identifies potential pollutant sources and corresponding BMPs used to mitigate the pollutants. Each BMP is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual or appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/> under Concrete Curing and Irrigation Water.

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Construction debris, green waste, general litter</i>	• <i>Separate contaminated clean up materials from construction and demolition (C&D) wastes.</i> • <i>Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.</i> • <i>Inspect construction waste and recycling areas regularly.</i> • <i>Schedule solid waste collection regularly.</i> • <i>Schedule recycling activities based on construction/demolition phases.</i> • <i>Empty waste containers weekly or when they are two-thirds full, whichever is sooner.</i> • <i>Do not allow containers to overflow. Clean up immediately if they do.</i> • <i>On work days, clean up and dispose of waste in designated waste containers.</i> • <i>See Solid Waste Management Section SM-6 for additional requirements.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i> • <i>Collect and dispose of all waste materials in trash dumpsters. Place dumpsters, with secure watertight lids, away from storm water conveyances and drains, in a covered materials storage area.</i> • <i>Dispose of construction and non- construction solid waste in accordance with State DOH regs.</i> • <i>Load removed non- recyclable vegetation directly onto trucks; cover and transport to a licensed facility</i>	<i>See Solid Waste Management Section SM-6. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage</i>	• <i>Use off-site wash racks, repair and maintenance facilities, and fueling sites when practical.</i> • <i>Designate bermed wash area if cleaning on site is necessary.</i> • <i>Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks.</i> • <i>Provide an ample supply of readily available spill cleanup materials.</i> • <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i> • <i>Inspect on-site vehicles and equipment regularly and immediately repair leaks.</i> • <i>Regularly inspect fueling areas and storage tanks.</i> • <i>Train employees on proper maintenance and spill practices and procedures and fueling and cleanup procedures.</i> • <i>Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in water-tight containers and provide cover or secondary containment.</i> • <i>Do not remove original product labels and comply with manufacturer's labels for proper disposal.</i> • <i>Dispose of containers only after all the product has been used.</i> • <i>Dispose of or recycle oil or oily wastes according to Federal, State, and Local requirements.</i> • <i>Store soaps, detergents, or solvents under cover or other means to prevent contact with rainwater.</i> • <i>See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13 and Material Storage and Handling Section SM-2 for additional requirements.</i>	<i>See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13, and Material Storage and Handling, Section SM-2, and Spill Prevention and Control SM-10.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Soil erosion from the disturbed areas	• Provide Soil Stabilization, Slope Protection, Storm Drain Inlet Protection SC-1, Perimeter Controls and Sediment Barriers, Sediment Basins and Detention Ponds, Check Dams SC-3 ,Level Spreader EC-6, Paving Operations SM-20, Construction Roads and Parking Area Stabilization SC-10, Controlling Storm Water Flowing Onto and Through the Project, Post-Construction BMPs, and Non-Structural BMPs (Construction BMP Training SM-1, Scheduling SM-14, Location of Potential Sources of Sediment SM-15, Preservation of Existing Vegetation SM-17). • Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas defined in the SWPPP. • Preserve native topsoil where practicable. • In areas where vegetative stabilization will occur, restrict vehicle/equipment use in areas to avoid soil compaction or condition soil to promote vegetative growth. • For Storm Drain Inlet Protection, clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. • Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not feasible. • Sediment basins shall be designed and maintained in accordance with HAR Chapter 11-55. • Minimize disturbance on steep slopes (Greater than 15% in grade). • If disturbance of steep slopes are unavoidable, phase disturbances and use stabilization techniques designed for steep grades. • For temporary drains and swales use velocity dissipation devices within and at the outlet to minimize erosive flow velocities.	Soil Stabilization 1. SM-22 Topsoil Management 2. EC-12 Seeding and Planting 3. EC-14 Mulching 4. EC-11 Geotextiles and Mats Slope Protection 1. EC-12 Seeding and Planting 2. EC-14 Mulching 3. EC-11 Geotextiles and Mats 4. EC-4 Slope Roughening, Terracing, and Rounding 5. EC-7 Slope Drains and Subsurface Drains 6. EC-9 Slope Interceptor or Diversion Ditches/Berms SC-1 Storm Drain Inlet Protection

<i>Pollutant Source</i>	<i>Appropriate Site-Specific BMP to be Implemented</i>	<i>BMP Requirements</i>
		<i>Perimeter Controls and Sediment Barriers</i> <i>1. SC-7 Silt Fence or Filter Fabric Fence</i> <i>2. SC-2 Vegetated Filter Strips and Buffers</i> <i>3. SC-6 Compost Filter Berm/Sock</i> <i>4. SC-8 Sandbag Barrier</i> <i>5. SC-9 Brush or Rock Filter</i> <i>Sediment Basins and Detention Ponds</i> <i>1. SC-4 Sediment Trap</i> <i>2. SC-5 Sediment Basin</i> <i>SC-3 Check Dams</i> <i>EC-6 Level Spreader</i> <i>SM-20 Paving Operations</i> <i>SC-10 Construction Roads and Parking Area Stabilization</i>

<i>Pollutant Source</i>	<i>Appropriate Site-Specific BMP to be Implemented</i>	<i>BMP Requirements</i>
		<i>Controlling Storm Water Flowing onto and Through the Project</i> <i>EC-3 Run-On Diversion</i> <i>EC-5 Earth Dike, Swales and Ditches</i> <i>Post Construction BMPs</i> <i>EC-2 Flared Culvert End Sections</i> <i>EC-10 Rip-Rap and Gabion Inflow Protection</i> <i>EC-8 Outlet Protection and Velocity Dissipation Devices</i> <i>SM-22 Topsoil Management</i> <i>Non-Structural BMPs</i> <i>SM-1 Construction BMP Training</i> <i>SM-14 Scheduling</i> <i>SM-15 Location of Potential Sources of Sediment</i> <i>SM-17 Preservation of Existing Vegetation</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Sediment from soil stockpiles</i>	• <i>Locate stockpiles a minimum of 50 feet or as far as practicable from concentrated runoff or outside of any natural buffers identified on the SWPPP.</i> • <i>Place bagged materials on pallets and under cover.</i> • <i>Provide physical diversion to protect stockpiles from concentrated runoff.</i> • <i>Cover stockpiles with plastic or comparable material when practicable.</i> • <i>Place silt fence, fiber filtration tubes, or straw wattles around stockpiles.</i> • <i>Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any storm water conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or state water.</i> • <i>Unless infeasible, contain and securely protect stockpiles from the wind.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable. See Stockpile Management Section SM-3 for additional requirements.</i>	<i>See Stockpile Management Section SM-3. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i>
<i>Emulsified asphalt or prime/tack coat</i>	• <i>Provide training for employees and contractors on proper material delivery and storage practices and procedures.</i> • <i>Restrict paving operations during wet weather to prevent paving materials from being discharged.</i> • <i>Use asphalt emulsions such as prime coat when possible.</i> • <i>Protect drain inlet structures and manholes during application of tack coat, seal coat, slurry seal, and fog seal.</i> • <i>Keep ample supplies of drip pans and absorbent materials on site.</i> • <i>Inspect inlet protection devices.</i> • <i>See Material Storage and Handling Section SM-2 and Paving Operations Section SM-20 for additional requirements.</i> • <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i>	<i>See Material Storage and Handling Section SM-2, and Stockpile Management Section SM-3, Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
Materials associated with painting, such as paint and paint wash solvent	• Hazardous chemicals shall be well-labeled and stored in original containers. • Keep ample supply of cleanup materials on site. • Dispose container only after all of the product has been used. • Remove as much paint from brushes on painted surface. • Rinse from water-based paints shall be discharged into the sanitary sewer system where possible. If not, direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation. • Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies. • Do not dump liquid wastes into the storm drainage system. • Filter and re-use solvents and thinners. • Dispose of oil-based paints and residue as a hazardous waste. • Ensure collection, removal, and disposal of hazardous waste complies with regulations. • Immediately clean up spills and leaks. • Properly store paints, solvents, and epoxy compounds. • Properly store and dispose waste materials generated from painting and structure repair and construction activities. • Mix paints in a covered and contained area, when possible, to minimize adverse impacts from spills. • Do not apply traffic paint or thermoplastic if rain is forecasted. • See Material Storage and Handling Use SM-2, Hazardous Materials and Waste Management Section SM-9, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21 for additional requirements. Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.	See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, Hazardous Materials and Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Industrial chemicals, fertilizers, and/or pesticides</i>	• <i>Hazardous chemicals shall be well-labeled and stored in original containers.</i> • <i>Keep ample supply of cleanup materials on site.</i> • <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.</i> • <i>Dispose container only after all of the product has been used.</i> • <i>Retain a complete set of safety data sheets (formerly MSDS) on site.</i> • <i>Store industrial chemicals in water-tight containers and provide either cover or secondary containment.</i> • <i>Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.</i> • <i>Restrict amount of pesticide prepared to quantity necessary for the current application.</i> • <i>Do not apply fertilizers or pesticides during or just before a rain event.</i> • <i>Do not apply to stormwater conveyance channels with flowing water.</i> • <i>Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment J.</i> • <i>Apply fertilizers at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth.</i> • <i>Follow federal, state, and local laws regarding fertilizer application.</i> • <i>Do not dispose of toxic liquid wastes (solvents, used oils, and paints) or chemicals (additives, acids, and curing compounds) in dumpsters allocated for construction debris.</i>	<i>See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9, and Spill Prevention and Control SM-10</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
	• <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations. Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.</i> • <i>See Material Storage and Handling Use SM-2, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i>	
<i>Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)</i>	• <i>Do not dispose of toxic materials in dumpsters allocated for construction debris.</i> • <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations.</i> • <i>Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.</i> • <i>Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil or oil filters, greases, cleaning solutions, antifreeze, automotive batteries, and hydraulic and transmission fluids.</i> • <i>Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, and local requirements.</i> • <i>All containers stored outside shall be kept away from surface waters and within appropriately sized secondary containment (e.g., spill berms, decks, spill containment pallets). Provide cover if possible.</i> • <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i> • <i>Do not clean surfaces or spills by hosing the area down.</i> • <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i>	<i>See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Maintenance SM-12</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
	• Ensure collection, removal, and disposal of hazardous waste complies with manufacturer's recommendations and is in compliance with federal, state, and local requirements. • See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Management, Vehicle and Equipment Maintenance SM-12 for additional requirements.	
<i>Metals and Building Materials</i>	• Inspect construction waste and recycling areas regularly. • Schedule solid waste collection regularly. • If building materials or metals are stored on site (such as rebar or galvanized poles) store under cover under tarps or in containers. • Minimize the amount of material stored on site. • Do not stockpile uncovered metals or other building materials in close proximity to discharge points. • See Solid Waste Management Section SM-6 for additional requirements.	See Solid Waste Management Section SM-6
<i>Contaminated Soil</i>	• See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9 for additional requirements. • At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheets.	See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Fugitive Dust Control and Dust Control Water</i>	• Do not over spray water for dust control purposes which will result in runoff from the area. • Apply water as conditions require. • Washing down of debris or dirt into drainage, sewage systems, or State waters is not allowed. • Minimize exposed areas through the schedule of construction activities. • Utilize vegetation, mulching, sprinkling, and stone/gravel layering to quickly stabilize exposed soil. • Direct construction vehicle traffic to stabilized roadways. • Cover dump trucks hauling material from the site with a tarpaulin. See Dust Control Section SM-19 for additional requirements.	See Dust Control Section SM-19
<i>Concrete Truck Wash Water</i>	• Disposal of concrete truck wash water via percolation is prohibited. • Wash concrete-coated vehicles or equipment off-site or in the designated wash area. • Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies. • Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set. • Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation. • The temporary pit shall be lined with plastic to prevent seepage of wash water into the ground. • Allow wash water to evaporate or collect wash water and all concrete debris in a concrete washout system bin. • Do not dump liquid wastes into storm drainage system. • Dispose of liquid and solid concrete wastes in compliance with federal, state, and local standards. • See Waste Management, Concrete Wash and Waste Management Section SM-4 for additional requirements.	See Waste Management, Concrete Wash and Waste Management Section SM-4

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Sediment Track-Out</i>	• <i>Include Stabilized Construction Entrance at all points that exit onto paved roads.</i> • <i>A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.</i> • <i>The pavement shall not be cleaned by washing down the street.</i> • <i>If sweeping is ineffective or it is necessary to wash the streets, wash water must be contained either by construction of a sump, diverting the water to an acceptable disposal area, or vacuuming the wash water.</i> • <i>Use BMPs for adjacent drainage structures.</i> • <i>Remove sediment tracked onto the street by the end of the day in which the track-out occurs.</i> • <i>Restrict vehicle use to properly designated exit points.</i> • <i>Include additional BMPs that remove sediment prior to exit when minimum dimensions cannot be met.</i> <i>See Stabilized Construction Entrance/Exit Section SC-11 for additional requirements.</i>	<i>See Stabilized Construction Entrance/Exit Section SC-11</i>
<i>Irrigation Water</i>	• <i>Consider irrigation requirements.</i> • <i>Where possible, avoid species which require irrigation.</i> • <i>Design, timing and application methods of irrigation water to eliminate the runoff of excess irrigation water into the storm water drainage system.</i> <i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP Attachment A for additional requirements.</i>	<i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation</i>
<i>Hydrotesting Effluent</i>	• <i>If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, the Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form F application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Hydrotesting Activities if necessary. Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.</i>	<i>Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Dewatering Effluent</i>	<i>If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form G application for HDOT submittal to DOH CWB at least 30 calendar days prior to the start of Dewatering Activities if necessary. See Site Planning and General Practices, Dewatering Operations Section SM-18 for additional requirements.</i>	<i>See Dewatering Operations SM-18. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.</i>
<i>Saw-cutting Slurry</i>	• <i>Saw cut slurry shall be removed from the site by vacuuming.</i> • <i>Provide storm drain protection during saw cutting. See Paving Operations Section SM-20 for additional requirements.</i> <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i>	<i>See Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, Perimeter sediment controls where applicable</i>
<i>Concrete Curing Water</i>	• <i>Avoid overspraying of curing compounds.</i> • <i>Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.</i> <i>See California Stormwater BMP Handbook NS-12 Concrete Curing included in SWPPP Attachment A for additional requirements.</i>	<i>See California Stormwater BMP Handbook NS-12 Concrete Curing</i>

Pollutant Source	Appropriate Site-Specific BMP to be Implemented	BMP Requirements
<i>Plaster Waste Water</i>	• <i>Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.</i> • <i>Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.</i> • <i>Any significant residual materials remaining on the ground after the completion of construction shall be removed and properly disposed. If the residual materials contaminate the soil, then the contaminated soil shall also be removed and properly disposed of.</i> • <i>Plaster waste water shall not be allowed to flow into drainage structures or State waters. See Material, Storage and Handling Use SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i>	<i>See Material, Storage and Handling Use Section SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9</i>
<i>Water-Jet Wash Water</i>	• <i>For Water-Jet Wash Water used to clean vehicles, use off site wash racks or commercial washing facilities when practical.</i> • <i>See Vehicle and Equipment Cleaning Section SM-11 for additional information.</i> • <i>For Water-Jet Wash Water used to clean impervious surfaces, the runoff shall not be allowed to flow into drainage structures or State Waters.</i>	<i>See Vehicle and Equipment Cleaning Section SM-11</i>
<i>Sanitary/Septic Waste</i>	• <i>Locate Sanitary facilities in a convenient place away from drainage facilities.</i> • <i>Position sanitary facilities so they are secure and will not be tipped over or knocked down.</i> • <i>Wastewater shall not be discharged to the ground or buried.</i> • <i>A licensed service provider shall maintain sanitary/septic facilities in good working order.</i> • <i>Schedule regular waste collection by a licensed transporter.</i> • <i>See Sanitary Waste Section SM-7 for additional requirements.</i>	<i>See Sanitary Waste Section SM-7.</i>

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“

END OF SECTION 209

ER-27(008)
209-28a

1/14/22

1 Make the following Section a part of the Standard Specifications:

2
3 **“SECTION 280 – SHAFT CONSTRUCTION**

4
5 **280.01 Description.**

6
7 **(A)** The work specified in this section includes requirements for excavation
8 and support of shaft excavation for drive and reception pits for pipe
9 installation and trench excavations for pipeline installation. The Contractor
10 shall design, furnish, install, and maintain a full perimeter excavation support
11 system for the shaft excavations. Construction of shaft excavations shall
12 include all bracing and associated supports to retain excavations in a safe
13 manner, control ground movements, and control groundwater inflows. Upon
14 completion of the required work, the top 5 feet of the shaft support system
15 shall be removed. Shaft and trench support systems that can be removed
16 without inducing excessive vibration, shall be removed. All open excavation
17 and construction staging areas shall be restored.

18
19 **(B)** The work shall include development of construction staging areas;
20 implementing required traffic control measures; fencing and signage; design
21 and construction of excavation support systems for shaft excavations;
22 material disposal; control and disposal of surface water, groundwater, and
23 construction water; and site restoration.

24
25 **(C)** Shaft excavations for for the microtunneling work shall be constructed
26 as shown on the approved Contractor's work plans. The shapes and
27 dimensions of shaft excavations are to be selected by the Contractor, and are
28 to be compatible with selected construction methods and equipment,
29 available staging areas, environmental control requirements, traffic control
30 and street usage requirements, as approved by the Engineer, provided that
31 any additional utility relocations are completed, all at no additional cost to the
32 State.

33
34 **(D)** Shaft and trench construction shall be carried out in accordance with
35 the approved traffic control plans, the State of Hawaii Department of
36 Transportation, Highways Division, Permit to Perform Work Upon State
37 Highways obtained by the Contractor for the project, and any other applicable
38 permits.

39
40 **(E)** Take all precautions necessary to protect or prevent existing structures
41 within 100 feet of shaft or trench construction from damage during
42 construction. Repair any existing facilities or structures damaged by shaft or
43 trench construction activities immediately, at no additional cost to the State.

44
45 **(F)** Take all precautions necessary to protect existing utilities from
46 damage. Repair any existing utilities damaged by shaft construction activities
47 immediately, at no additional cost to the State.

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50
51
52 **280.02 Materials.**
53

54 **(A) Structural Steel.** All structural steel used for supporting systems,
55 whether new or used, shall be sound and free from defects which may impair
56 their strength, in accordance with ASTM A 36 and ASTM A 572. All structural
57 steel shall also satisfy the requirements as specified in SECTION 713.01,
58 "STRUCTURAL STEEL".
59

60 **(B) Concrete.** All concrete shall satisfy the requirements for Class A
61 concrete as specified in SECTION 701.01, "PORTLAND CEMENT
62 CONCRETE".
63

64
65 **280.03 Construction.**
66

67 **(A) Design Criteria.** Design excavation support systems to withstand
68 lateral earth pressures, hydrostatic pressures, bottom heave, drive frame
69 loads, thrust blocks forces, pressures exerted by grouting activities near open
70 excavations, equipment loads, applicable traffic and construction loads, and
71 other surcharge loads to allow safe construction of the drain line without
72 undue movement or settlement of the ground, and to prevent damage to
73 adjacent buildings, structures, streets, and utilities. Excavation support
74 systems shall be compatible with all the geologic conditions described in the
75 boring logs. Acceptable shaft excavation support systems may include
76 internally braced support system, continuously interlocked steel sheet piling,
77 and mini-piles with internal bracing, etc. The Contractor shall engage a
78 Structural Engineer licensed in the State of Hawaii to design shaft excavation
79 support systems in accordance with the following requirements:
80

81 **(1)** Design each member or support element to support the
82 maximum loads that can occur during construction with appropriate
83 safety factors.
84

85 **(2)** Design the support system to limit horizontal and vertical
86 movements to less than one inch at the excavation, protect adjacent
87 structures, improvements and utilities from damage, maintain the
88 stability of the excavation, and provide a factor of safety of at least 1.5
89 against excavation side walls failure, and sliding or bottom heave.
90 Design shaft excavation support systems in accordance with OSHA
91 requirements.
92

93 **(3)** Employ bracing, wales, struts, and beams for lateral support of
94 shaft excavations. Provide intermediate vertical and horizontal
95 supports as required to prevent buckling of supports.
96

(4) Design a concrete working slab for each drive pit shaft bottom to provide stable support for guide rails, jacking frame and jacks, and other construction operations.

(5) Design a sump system for shaft and trench excavations to collect groundwater seepage, rainfall and surface water drainage, prevent piping or loss of ground, and maintain stability of the excavation.

(6) Design a traffic cover for each shaft and trench excavation to provide for safe vehicular and pedestrian traffic over the excavation when the streets must be restored to service during construction. The traffic cover shall be designed for AASHTO HS20-44 loading including impact loading.

(B) Submittals. Submit the following a minimum of three (3) calendar months prior to mobilization of the trenchless installation equipment in accordance with the project's submittal requirements. Provide sufficient detail to allow the Engineer to judge whether or not the proposed equipment, materials, procedures and the qualifications of the actual Contractor work force will meet the Contract requirements.

(1) Name and qualifications of engineer responsible for excavation support system design.

(2) Names and qualifications of the shaft contractor and shaft superintendent responsible for shaft construction work.

(3) Name and qualifications of the trench construction contractor and superintendent responsible for trenching construction work.

(4) Shop Drawings: Submit shop drawings for shaft and trench excavations, excavation support systems, and other related information as requested by the Engineer. The shop drawings and design calculations shall be prepared and sealed by a Structural Engineer licensed in the State of Hawaii who has a minimum of five years of experience in the design of soil retaining structures.

(a) A site plan for each shaft and trench excavation drawn to scale indicating the staging area limits, shaft dimensions, excavation limits, site access provisions, site development details, traffic control details, fencing limits and gate locations, and the locations of the drive or reception pit, cranes, trailers, support facilities, lubrication plant, generators, spoil handling and loading, and other plant equipment.

(b) Drawings and design calculations for each shaft and trench excavation indicating arrangement of shaft and trench

excavation supports and construction sequence for proposed support system(s). Explain shaft and trench support methods and installation sequences. Verify that the selected shaft and trench support method can be successfully installed in the full range of anticipated geologic conditions. Show the elevation of bracing, struts, or other supports as related to the depth of excavation at intermediate stages of construction. Indicate description, sizes, shapes, and material specifications for all support elements. Calculations shall include estimates of likely deflections of deformations of the support system and maximum tolerable values, and capability of shaft design and support to withstand the anticipated drive loads.

(c) Plan for breaking out of drive pit and into reception pit, indicating support installed to maintain shaft excavation support and stability of the excavation when launching out of drive pit for pipe installation, and when breaking into reception pit.

(d) Provision for protecting existing structures and utilities adjacent to shaft and trench excavations. All structures within 100 feet of shaft or trench excavation should be addressed. All utilities within 10 feet of shaft and trench excavations shall be addressed.

(e) Design drawings, details, and calculations for traffic covers over shaft excavations.

(f) Site drainage details. Show details of the measures to control, handle, and dispose of surface water runoff for each shaft excavation.

(g) Details of muck handling, stockpiling, loading, and hauling to disposal sites for excavated materials.

(h) Plans indicating site restoration details.

(5) Reports and Records. The Contractor shall submit excavation monitoring data of horizontal and vertical deflections of supports on each day that measurements are made.

(C) Quality Assurance.

(1) Regulations. Perform all work in accordance with current applicable regulations, permits, and codes of all Federal, State, and local agencies.

(2) Qualifications. Excavation support systems shall be designed by a Structural Engineer licensed in the State of Hawaii who has a

minimum of five years experience in the design of soil retaining structures. Shaft Construction shall be performed by a qualified contractor and work force with at least 5 years experience in similar shaft construction methods. Open trenching shall be performed by a qualified contractor and work force with at least 5 years experience in similar trench excavation and support methods.

(3) Tolerances. Location of the excavation supports shall be in accordance with the support system design engineer's requirements as shown on the shop drawings approved by the Contractor's design engineers and accepted by the Engineer, and as required to protect existing utilities from damage. All surveying, including stake out of all construction locations, shall be performed by a surveyor licensed in the State of Hawaii.

(D) Safety. All shaft and trench excavations and support systems for drive and reception pits and all other excavations shall conform to applicable OSHA excavation, trenching, and shoring standards, which are contained in the code of Federal Regulation 29 CFR Subpart P – Excavations.

(E) General Requirements

(1) Notify the Engineer at least 15 calendar days before beginning any excavation.

(2) Begin site development of staging areas, and shaft and trench excavations only after submittals have been reviewed and accepted in writing for documentation by the Engineer. Locate microtunneling as indicated on the Contractor's work plans. Any modifications shall be submitted to the Engineer for review and acceptance prior to commencement of work. Design shaft and trench excavations to minimize interference with traffic and impact on existing utilities and adjacent properties.

(3) Arrange shaft and trench excavations and related work areas to minimize interference with vehicular and pedestrian traffic. Comply with all traffic control, fencing, barricading, and signing regulations as indicated on the Plans.

(4) Methods of construction selected by the Contractor shall ensure the safety of the work, Contractor's employees, the public, and adjacent property and improvements.

re

(5) Before beginning construction at any shaft or trench location, accurately locate all existing utilities within 10 feet of the excavation using as-built drawings, probing and potholing, or other non-destructive utility location techniques. Indicate utility locations on ground surface with paint or other permanent marking material. During the work,

adequately protect existing building, structures, utilities, signs, trees, shrubs, and other existing facilities from damage. Design excavation support systems to minimize deformations that could damage adjacent buildings and other structures, and utilities. The repair of or compensation for damage to existing utilities, buildings, structures, roadways, or other facilities shall be at no cost to the State.

(6) Install inclinometers and settlement markers as shown on the approved Contractor's work plans prior to beginning shaft construction, in accordance with SECTION 684, "CONSTRUCTION INSTRUMENTATION AND MONITORING."

(7) Perform shaft and trench excavations using hand excavation or conventional mechanical excavation techniques. No blasting will be allowed.

(8) Install excavation support systems in accordance with submittals, which have been reviewed and accepted by the Engineer. All welding shall conform to the applicable provisions of ANSI/AWS D.1.1.

(9) Install excavation support system monitoring provisions as indicated in accepted submittals prior to start of excavations. Monitor performance of excavation support system for both horizontal and vertical deflections and surface settlements daily during excavation, and at intervals not to exceed seven days following the completion of excavation work. If monitoring data indicates that deflections have exceeded estimated values, increase frequency of monitoring as required by the Engineer. Submit all monitoring measurements to the Engineer on the same day measurements are taken. If settlement or deflections of supports indicate that the support system or groundwater control requires modification to prevent excessive movements, redesign and resubmit revised shop drawings and calculations to the Engineer, and install additional support as required, at no additional cost to the State.

(10) Maintain existing surface drainage conditions around all shaft excavations.

(11) Conduct all shaft and trench construction work, including excavation, shoring, temporary facilities, material storage, and construction traffic within approved lane closures obtained for the project.

(12) Construct fencing with locked gates and provide adequate lights and signs, as necessary, around the drive pits, all other open excavations, and 24-hour staging areas to provide for public safety.

289 (13) Take all precautions necessary to prevent a dust and dirt
290 nuisance to adjacent properties. Correct and repair any damage
291 resulting from dust at no additional cost to the State.
292

293 (14) Repair and restore any damage caused by ground settlement
294 and movement due to ground lost into pre-drilling holes at no additional
295 cost to the State.
296

297 **(F) Steel Sheet Piling**
298

299 (1) Drive sheet piles in plumb position with each sheet pile
300 interlocked with adjoining piles for its entire length so as to form a
301 continuous wall around each shaft excavation, bearing tightly against
302 the ground. Remove portions of relocated utilities to allow sheet piles
303 to be installed properly. Drive to depth indicated on the shop drawings.
304 Pre-drill at all sheet piling locations as required to allow sheet piles to
305 be driven to required tip elevations and to minimize excessive vibration
306 generated by the sheet pile driving activities. The methods of driving,
307 cutting, and splicing shall conform to the shop drawings.
308

309 (2) To the extent determined appropriate by the Contractor,
310 overlapping jet grout columns may be used for excavation support.
311 Provide adequate internal bracing support and redundancies in design
312 where overlapping jet grout columns are used for excavation support.
313

314 (3) Use of a vibratory hammer to install (or remove) sheet piles is
315 prohibited. If sheet piles are used, the top 5 feet of the sheet piles shall
316 be removed and remaining portion of the sheet piles shall be left in
317 place. If the Contractor elects to extract the sheet piles, the Contractor
318 must first demonstrate that the sheet piles can be extracted without
319 causing excessive vibrations, ground settlement, and vibration relating
320 property damage.
321

322 **(G) Internal Bracing Support System.**
323

324 (1) The internal bracing support system shall include, but not limited
325 to, wales, struts, segmental steel liner plates, reinforced shotcrete,
326 and/or beams as required to provide lateral support of the shaft
327 excavation.
328

329 (2) Provide struts with intermediate bracing as needed to enable
330 them to carry maximum design load without distortion or buckling.
331

332 (3) Include web stiffeners, plates, or angles as needed to prevent
333 rotation, crippling, or buckling of connections and points of bearing
334 between structural steel members. Allow for eccentricities caused by
335 field fabrication and assembly.
336

(4) Install and maintain all bracing support in tight contact with each other and with the surface being supported.

(5) Preload bracing members by drive struts to 50 percent of the design load if necessary to control ground movements. Preload bracing members in accordance with methods, procedures, and sequences as described on the shop drawings. Coordinate excavation work with installation of bracing and preloading. Use steel shims and steel wedges welded or bolted in place to maintain the preloading force in the bracing after release of the drive equipment pressure. Install support, and preload immediately after installation and prior to continuing excavation.

(6) Use procedures that produce uniform loading member without eccentricities or overstressing and distortion of members of the system.

(H) Traffic Covers. Traffic covers shall be installed over shaft and trench excavations to maintain vehicular and pedestrian traffic over shaft excavations when the roadway must be restored to the service. Each traffic cover shall be at least 2 feet wider than the span of the shaft and trench excavations. In order to provide smooth transit over the cover the cover shall be set into the pavement so that there is not more than a 3/4-inch offset between the cover and the adjacent pavement. The traffic cover shall have a non-skid surface to provide for safe vehicular and pedestrian transit over the covered excavation. All traffic cover shall be designed and installed to minimize noise nuisance to adjoining residents.

(I) Disposal of Excavated Materials.

(1) Temporary stockpiling within the staging areas is not permitted.

(2) Dispose of excavated materials in accordance with SECTION 685, "MUCK HANDLING AND DISPOSAL."

(J) Shaft Backfill.

(1) Prepare the bottom of the microtunneling shaft excavations as a foundation for installing pipe. Furnish, place, and compact backfill in shaft excavations in accordance with SECTION 206, "EXCAVATION AND BACKFILL FOR DRAINAGE FACILITIES."

(2) Sheet piles or other temporary shoring methods installed shall be left in-place except the top 5 feet, which shall be cut and removed. Remove all other support system elements, including bracing, wales, and struts from shaft and trench excavations prior to restoration to the extent practicable. In no case shall any shoring or excavation support elements including sheet piles be left in place in the top 5 feet below

the ground surface. Immediately fill all voids created by the removal of the support system with pea gravel, lean concrete, or cement grout, as approved by the Engineer. Immediately repair any damage caused to existing buildings or other structures, existing utilities or the new pipeline or manholes, at no additional cost to the State. The support system removed from the excavation shall remain the property of the Contractor and shall be removed from the site.

(K) Restoration.

(1) Remove and dispose of all temporary utilities, drainage facilities, temporary fencing, waste materials and surplus materials, and other site development facilities provided by the Contractor following backfilling of the excavation.

(2) The Contractor shall restore all existing improvements such as pavements, slabs, sidewalks, curbs, driveways, gutters, guardrails, fences, walls, floodlight and traffic signal poles with pull boxes, conduits and cables, detector loops, sprinkler and water lines and appurtenances, etc., and vegetation such as trees, hedges, shrubs, ground cover and grass removed or damaged by construction, unless otherwise noted.

280.04 Measurement. The shaft construction for drive and reception pits shall be included in the lump sum price for Shaft Construction as appropriate, and as scheduled in the Proposal. Measurement for payment will not apply.

280.05 Payment. The Engineer will pay for the accepted shaft construction for drive and reception pits on a contract lump sum basis. Payment will be full compensation for the work prescribed in this section and the contract documents. The unit price shall be full compensation for furnishing all materials, labor, tools, and equipment for doing all work involved in shaft construction. Included is mobilization and demobilization, pit excavation and backfill, sheeting, shoring, cleaning, ground improvement, restoration and all incidentals required to complete the work, will be made by each price bid for shaft construction of drive and receptions pits as scheduled in the proposal, respectively.

The Engineer will pay for the following pay item when included in the proposal schedule.

Pay Item	Pay Unit
Shaft Construction	Lump Sum"

END OF SECTION 280

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(I) Amend 304.04 – Measurement by revising lines 54 to 55 to read as follows:

(II) Amend **304.05 – Payment** by revising lines 57 to 66 to read as follows:

The Engineer will pay for the following pay item when included in the proposal schedule:

END OF SECTION 304

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(I) Amend 305.04 – Measurement by revising lines 54 to 55 to read as follows:

(II) Amend 305.05 – Payment by revising lines 57 to 66 to read as follows:

The Engineer will pay for the following pay item when included in the proposal schedule:

END OF SECTION 305

SECTION 314 – CONTROLLED LOW STRENGTH MATERIALS (CLSM) FOR UTILITIES AND STRUCTURES

Make the following amendments to said Section:

(I) Amend **314.04 – Measurement** by revising line 83 to read as follows:

“314.04 Measurement. The Engineer will measure CLSM per cubic yard in accordance with the contract documents.”

(II) Amend 314.05 – Payment by revising lines 85 to 90 to read as follows:

“314.05 Payment.

The Engineer will pay for the accepted CLSM at the contract unit price per cubic yard, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
CLSM for Fill of Existing 24-Inch RCP Drain Pipe	Cubic Yard"

END OF SECTION 314

Amend Section 401- HOT MIX ASPHALT (HMA) PAVEMENT to read as follows:

“SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT

401.01 Description. This section describes furnishing and placing dense graded HMA pavement (herein referred to as HMA) on a prepared surface.

401.02 Materials.

Asphalt Cement (PG 64-16) 702.01

Use for non-surface mixes, unless otherwise specified in the project documents.

Asphalt Cement (PG 64E-22) 702.01

Use for all surface mixes, except for on Lanai and Molokai, and unless otherwise specified in the project documents. Polymer modified asphalt (PMA) pavement refers to asphalt mix using PG 64E-22, unless otherwise indicated.

Emulsified Asphalt 702.04

Warm Mix Asphalt Additive 702.06

Aggregate for Hot Mix Asphalt Pavement 703.09

Filler 703.15

Hydrated Lime or a liquid anti-strip approved by the engineer 712.03

(A) General. HMA pavement shall be plant mixed and shall include mixture of aggregate and asphalt binder and may include reclaimed asphalt pavement (RAP) or filler, or both.

The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these specifications. WMA processes include combinations of organic additives, chemical additives, and foaming.

HMA pavement shall include surface course and may include one or more binder courses, depending on HMA pavement thickness indicated in the contract documents.

RAP is defined as removed or reprocessed pavement materials containing asphalt and aggregates. Process RAP by crushing until 100 percent of RAP passes 3/4-inch sieve. Size, grade uniformly, and combine materials such that blend of RAP and aggregate material conforms to grading requirements of Subsection 703.09 - Aggregate for Hot Mix Asphalt

Pavement.

In surface and binder courses, aggregate for HMA may include RAP quantities up to 20 percent of total mix weight.

Quantity of filler material to correct deficiencies in aggregate gradation passing the No. 200 sieve shall not exceed 3 percent by weight of fine aggregates.

(B) Job-Mix Formula and Tests. Design job-mix formula in accordance with procedures contained in current edition of Asphalt Institute's *Mix Design Methods for Asphalt Concrete and Other Hot Mix Types*, Manual Series No. 2 (MS-2) for either Marshall Method or Hveem Method of Mix Design.

Limit compacted lift thickness and asphalt content of job-mix formula as specified in Table 401.02-1 - Limits of Compacted Lift Thickness and Asphalt Content.

TABLE 401.02-1 - LIMITS OF COMPACTED LIFT THICKNESS AND ASPHALT CONTENT				
MIX NO.	II	III	IV	V
Minimum to Maximum Compacted Thickness for Individual Lifts (Inches)	2-1/4 to 3	2 to 3	1-1/2 to 3	1-1/4 to 3
Asphalt Content Limits (Percent of Total Weight of Mix)	3.8 to 6.1	4.3 to 6.1	4.3 to 6.5	4.8 to 7.0

Asphalt content limits for porous aggregate may be exceeded only if it is requested ahead of placement and is reviewed then accepted in writing by the Engineer.

Meet job-mix formula design criteria specified in Table 401.02-2 - Job-Mix Formula Design Criteria.

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TABLE 401.02-2 - JOB-MIX FORMULA DESIGN CRITERIA	
Hveem Method Mix Criteria (AASHTO T 246 and AASHTO T 247)	
Stability, minimum	37
Air Voids (percent) ¹	3 - 5
Marshall Method Mix Criteria (AASHTO T 245)	
Compaction (number of blows each end of specimen)	75
Stability, minimum (pounds)	1,800
Flow (x 0.01 inch)	8 - 16
Air Voids (percent) ¹	3 - 5
Notes: 1. Air Voids: AASHTO T 166 or AASHTO T 275; AASHTO T 209, AASHTO T 269.	

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Minimum percent voids in mineral aggregates (VMA) of job-mix formula shall be as specified in Table 401.02-3 - Minimum Percent Voids in Mineral Aggregates (VMA).

TABLE 401.02-3 - MINIMUM PERCENT VOIDS IN MINERAL AGGREGATES (VMA)					
Nominal Maximum Particle Size, (Inches)	1-1/2	1	3/4	1/2	3/8
VMA, (percent) ¹	11.0	12.0	13.0	14.0	15.0
Notes: 1. VMA: See Asphalt Institute Manual MS-2					

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(C) Submittals. Establish and submit job-mix formula for each type of HMA pavement mix indicated in the contract documents a minimum of 30 days before paving production. Job mix shall include the following applicable information:

- (1) Design percent of aggregate passing each required sieve size.
- (2) Design percent of asphalt binder material (type determined by type of mix) added to the aggregate (expressed as % by weight of total mix),
- (3) Design proportion of processed RAP.
- (4) Design temperature of mixture at point of discharge at paver.

- (5) Source of aggregate.
- (6) Grade of asphalt binder.
- (7) Test data used to develop job-mix formula.

Except for item (4) in this subsection, if design requirements are modified after the Engineer accepts job-mix formula, submit new job-mix formula before using HMA produced from modified mix design. Submit any changes to the design temperature of mixture at point of discharge for acceptance by the Engineer.

Submit a certificate of compliance for the asphalt binder, accompanied by substantiating test data from a certified testing laboratory.

(D) Range of Tolerances for HMA. Provide HMA within allowable tolerances of accepted job mix formula as specified in Table 401.02-4 - Range of Tolerances HMA. These tolerances are not to be used for the design of the job mix, they are solely to be used during the testing of the production field sample of the HMA mix.

TABLE 401.02-4 - RANGE OF TOLERANCES HMA	
Passing No. 4 and larger sieves (percent)	± 7.0
Passing No. 8 to No. 100 sieves (inclusive) (percent)	± 4.0
Passing No. 200 sieve (percent)	± 3.0
Asphalt Content (percent)	± 0.4
Mixture Temperature (degrees F)	± 20

The tolerances shown are the allowable variance between the physical characteristics of laboratory job mix submitted mix design and the production or operational mix, i.e., field samples.

401.03 Construction.

(A) Weather Limitations. Placement of HMA shall not be allowed under the following conditions:

- (1) On wet surfaces, e.g., surface with ponding or running water, surface that has aggregate or surface that appears beyond surface saturated dry, as determined by the Engineer.

(2) When air temperature is below 50 degrees F and falling. HMA may be applied when air temperature is above 40 degrees F and rising. Air temperature will be measured in shade and away from artificial heat.

(3) When weather conditions prevent proper method of construction.

(B) Equipment.

(1) **Mixing Plant.** Use mixing plants that conform to AASHTO M 156, supplemented as follows:

(a) All Plants.

1. **Automated Controls.** Control proportioning, mixing, and mix discharging automatically. When RAP is incorporated into mixture, provide positive controls for proportioning processed RAP.

2. **Dust Collector.** AASHTO M 156, Requirements for All Plants, Emission Controls is amended as follows:

Equip plant with dust collector. Dispose of collected material. In the case of baghouse dust collectors, dispose of collected material or return collected material uniformly.

3. **Modifications for Processing RAP.** When RAP is incorporated into mixture, modify mixing plant in accordance with plant manufacturer's recommendations to process RAP.

(b) Drum Dryer-Mixer Plants.

1. **Bins.** Provide separate bin in cold aggregate feeder for each individual aggregate stockpile in mix. Use bins of sufficient size to keep plant in continuous operation and of proper design to prevent overflow of material from one bin to another.

2. Stockpiling Procedures. Separate aggregate for Mix II, Mix III and Mix IV into at least three stockpiles with different gradations as follows: coarse, intermediate, and fine. Separate aggregates for Mix V into at least two stockpiles. Stockpile RAP separately from virgin aggregates.

3. Checking Aggregate Stockpile. Check condition of the aggregate stockpile often enough to ensure that the aggregate is in optimal condition.

(c) Batch and Continuous Mix Plants.

1. Hot Aggregate Bin. Provide bin with three or more separate compartments for storage of screened aggregate fractions to be combined for mix. Make partitions between compartments tight and of sufficient height to prevent spillage of aggregate from one compartment into another.

2. Load Cells. Calibrated load cells may be used in batch plants instead of scales.

(2) Hauling Equipment. Use trucks that have tight, clean, smooth metal beds for hauling HMA.

Thinly coat truck beds with a minimum quantity of non-stripping release agent to prevent mixture from adhering to beds. Diesel or petroleum-based liquid release agents, except for paraffin oil, shall not be used. Drain excess release agent from truck bed before loading with HMA.

Provide a designated clean up area for the haul trucks.

Equip each truck with a tarpaulin conforming to the following:

(a) In good condition, without tears and holes.

(b) Large enough to be stretched tightly over truck bed, completely covering mix. The tarpaulin shall be secured in such a manner that it remains stretched tightly over truck bed and HMA mix until the bed is about to be raised up in preparation for discharge.

(3) Asphalt Pavers. Use asphalt pavers that are:

- (a) Self-contained, power-propelled units.
- (b) Equipped with activated screed or strike-off assembly, heated if necessary.
- (c) Capable of spreading and finishing courses of HMA mixtures in lane widths applicable to typical section and thicknesses indicated in the contract documents.
- (d) Equipped with receiving hopper having sufficient capacity for uniform spreading operation.
- (e) Equipped with automatic feed controls to maintain uniform depth of material ahead of screed.
- (f) Equipped with automatic screed controls with sensors capable of sensing grade from outside reference line, sensing transverse slope of screed, and providing automatic signals to control screed grade and transverse slope.
- (g) Capable of operating at constant forward speeds consistent with satisfactory laying of mixture.
- (h) Equipped with a means of preventing the segregation of the coarse aggregate particles from the remainder of the bituminous plant mix when that mix is carried from the paver hopper back to the paver augers. The means and methods used shall be approved by the paver manufacturer and may consist of chain curtains, deflector plates, or other such devices and any combination of these.

The following specific requirements shall apply to the identified bituminous pavers:

1. **Blaw-Knox Bituminous Pavers.** Blaw-Knox bituminous pavers shall be equipped with the Blaw-Knox Materials Management Kit (MMK).
2. **Cedarapids Bituminous Pavers.** Cedarapids bituminous pavers shall be those that were manufactured in 1989 or later.

260 **3. Barber-Green/Caterpillar Bituminous Pavers.**

261 Barber-Green/Caterpillar bituminous pavers
262 shall be equipped with deflector plates as
263 identified in the December 2000 Service
264 Magazine entitled "New Asphalt Deflector Kit
265 {6630, 6631, 6640}".

266
267 Bituminous pavers not listed above shall have similar
268 attachments or designs that shall make them equivalent to the
269 bituminous pavers listed above. The Engineer will solely
270 decide if it is equal to or better than the setups described for the
271 equipment listed above.

272
273 Submit for review and acceptance, prior to the start of
274 using the paver for the placing of plant mix, a full description in
275 writing of the means and methods that will be used to prevent
276 the bituminous paver from having both aggregate and
277 temperature segregation. Use of any paver that has not been
278 accepted is prohibited until acceptance of the paver is received
279 from the Engineer. Any pavement placed with an unaccepted
280 paver will be regarded as not compliant work and may not be
281 paid for and may require removal.

282
283 Supply a Certificate of Compliance that verifies that the
284 manufacturer's approved means and methods used to prevent
285 bituminous paver from having both aggregate and temperature
286 segregation have been implemented on all pavers used on the
287 project and are working in accordance with the manufacturer's
288 requirements and Contract Documents.

289
290 **(4) Rollers.** Rollers shall be self-propelled, steel-tired tandem,
291 pneumatic-tired, or vibratory-type rollers capable of reversing without
292 shoving or tearing the just placed HMA mixture. Provide sufficient
293 number, sequencing, type, and rollers of sufficient weight to compact
294 the mixture to required density while mixture is still in workable
295 condition. Equipment shall not excessively crush aggregate. Operate
296 rollers in accordance with manufacturer's recommendations and
297 Contract Documents. The use of intelligent compaction is encouraged
298 and may be required elsewhere in the Contract Documents.

299
300 **(a) Steel-Tired Tandem Rollers.** Steel-tired tandem rollers
301 used for initial breakdown or intermediate roller passes shall
302 have minimum gross weight of 12 tons and shall provide
303 minimum 250-pound weight per linear inch of width on drive
304 wheel.

305 Steel-tired tandem rollers used for finish roller passes

shall have minimum total gross weight of 3 tons.

Do not use roller with grooved or pitted rolling drum or worn scrapers or wetting pads. Replace excessively worn scrapers and wetting pads before use.

(b) Pneumatic-Tired Rollers. Pneumatic-tired rollers shall be oscillating-type, equipped with smooth-tread pneumatic tires of equal size and diameter. Maintain tire pressure within 5 pounds per square inch of designated operational pressure when hot. Space tires so that gaps between adjacent tires are covered by following set of tires.

Pneumatic-tired rollers used for breakdown or intermediate roller passes shall have a ballast capable of establishing an operating weight per tire of not less than 3,000 pounds. Equip rollers with tires having minimum 20-inch wheel diameter with tires inflated to 70 to 75 pounds per square inch pressure when cold and 90 pounds per square inch when hot. Equip rollers with skirt-type devices to maintain temperature of tires during rolling operations.

Pneumatic-tired rollers used for kneading finished asphalt surfaces shall have a ballast capable of establishing an operating weight per tire of not less than 1,500 pounds. Equip rollers with tires having minimum 15-inch wheel diameter with tires inflated to 50 to 60 pounds per square inch pressure. If required, equip rollers with skirt-type devices to maintain temperature of tires during rolling operations.

(c) Vibratory Rollers. Vibratory rollers shall be steel-tired tandem rollers having minimum total weight of 3 tons. Equip vibratory rollers with amplitude and frequency controls and speedometer. Operate vibratory roller in accordance with manufacturer's recommendations. For very thin lifts, 1 inch or less in thickness, vibratory rollers shall not be used in the vibratory mode. Instead, operate the unit in the static mode.

(5) Hand Tools. Keep hand tools used in production, hauling, and placement of HMA clean and free of contaminants. Diesel or mineral spirits or other cleaning material that is potentially deleterious to HMA may be used to clean hand tools providing:

- (a)** It does not contaminate HMA with cleaning material.
- (b)** Clean hand tools over catch pan with capacity to hold all

the cleaning material.

(c) Remove all diesel or mineral spirits or other cleaning material that is potentially deleterious to HMA from hand tools before using with HMA.

(d) Hand tools used shall be in a condition such that it meets the requirements that it was manufactured for, e.g., a straightedge shall meet the straightness requirement of the manufacturer.

(6) Material Transfer Vehicle (MTV).

(a) **Usage.** MTV usage applies to surface courses of paving projects on all Islands except Lanai, unless otherwise indicated. When placing HMA surface course use MTV to independently deliver mixtures from hauling equipment to paving equipment. MTV usage will not be required for the following:

1. Projects with less than 1,000 tons of HMA.
2. Temporary pavements.
3. Bridge deck approaches.
4. Shoulders.
5. Tapers.
6. Turning lanes.
7. Driveways.
8. Areas with low overhead clearances.

(b) **Equipment.** When using MTV, install minimum 10-ton-capacity hopper insert in conventional paver hopper. Provide the following equipment:

1. High-capacity truck unloading system in MTV capable of receiving HMA from hauling equipment.
2. MTV storage bin with minimum 15-ton capacity.
3. An auger mixing system in one of the following: the MTV storage bin, or paver hopper insert, or paver

hopper to continuously mix HMA prior to discharging to the paver's conveyor system.

Avoid stop-and-go operations by coordinating plant production rate, number of haul units, and MTV and paver speeds to provide a continuous, uniform, segregation-free material flow and smooth HMA pavement. Maintain uniform paver speed to produce smooth pavements.

(c) Performance Evaluation. Evaluate the performance of MTV and mixing equipment by measuring mat temperature profile immediately behind paver screed on first day of paving and when it feels the need to do so due to perceived changes in performance or as directed by the Engineer.

Use a hand-held temperature device that has been calibrated within the past 12 months. It shall be an infrared temperature gun is capable of measuring in one degree or finer increments between the temperatures of 80 degrees to 400 degrees F with a laser to indicate where the temperature reading is being taken. Six temperature profile measurements shall be taken of mat surface using infrared temperature gun at 50-foot intervals behind paver. Each temperature profile shall consist of three surface temperature measurements taken transversely across the mat in approximately a straight line from screed while paver is operating. For each profile, temperatures shall be measured approximately 1 foot from each edge and in middle of mat. The difference between maximum and minimum temperature measurements for each temperature profile shall not exceed 10 degrees F. If any two or more temperature profiles exceeds the allowable 10-degree F temperature differential, halt paving operation and adjust MTV or mixing equipment to ensure that material placed by paver meets specified temperature requirements. Redo the measuring of mat temperature profile until adjustment of the MTV or mixing equipment is adequate. Submit all temperature profiles to the Engineer by next business day. Information on the report shall show location and temperature readings and time test was performed. Enough information shall be given, so the Engineer will be able to easily locate the test site of the individual measurement.

When requested temperature profile measurements shall be done in the presence of the Engineer.

Once adjustments are made, repeat measurement procedure for the next two placements to verify that material

placed by paver meets specified temperature requirements. Terminate paving if temperature profile requirements are not met during repeated measurement procedure. If equipment fails to meet requirements after measurement procedure is repeated once, replace equipment before conducting any further temperature profile measurements

The Engineer may perform surface temperature profile measurements at any time during project. The Engineer may in lieu of a hand-held infrared temperature device use an infrared camera or device that is capable of measuring temperatures to locate cold spots. If such cold spots exist, the Engineer may require adjustments to the MTV.

If bleeding or fat spots occur in the pavement adjust means and methods to eliminate such pavement defects and perform remedial repair to pavement acceptable to the Engineer. Bleeding is defined as excess binder occurring on the surface of the pavement. It may create a shiny, glass-like, reflective appearance and may be tacky to the touch. Fat spots are localized bleeding.

(d) Transport.

1. Trailered MTV. Transport MTV by means of truck-tractor/trailer combination in accordance with Chapter 104 of Title 19, Department of Transportation, entitled "The Movement by Permit of Oversize and Overweight Vehicles on State Highways".

2. Crossing Bridges for Self-Powered MTV. When self-powered MTV exceeds legal axle or total weight limits for vehicles under the HRS, Chapter 291, conform to the following when crossing bridges within project limits unless otherwise indicated in the Contract Documents:

- a. Completely remove mix from MTV.
- b. Move MTV at relatively constant speed not exceeding 5 miles per hour. MTV will not be allowed to stop on bridge.

c. No other vehicle or equipment will be allowed on bridge.

d. The MTV shall not attempt to cross a bridge where the posted load limit is less than or equal to the weight of the MTV empty. Permission to cross the bridge shall be obtained from the Engineer and HWY-DB in writing.

(C) Preparation of Surface. Clean existing pavement in accordance with Section 310 - Brooming Off. Apply tack coat in accordance with Section 407 - Tack Coat. Tack coat shall not be applied to surfaces to receive an application of joint adhesive.

Where indicated in the Contract Documents, bring irregular surfaces to uniform grade and cross section by furnishing and placing one or more leveling courses of HMA Mix V. Spread leveling course in variable thicknesses to eliminate irregularities in existing surface. Place leveling course such that maximum depth of each course, when thoroughly compacted, does not exceed 3 inches.

In multiple-lift leveling course construction, spread subsequent lifts beyond edges of previously spread lifts in accordance with procedures contained in current edition of the Asphalt Institute's *Construction of Hot Mix Asphalt Pavements*, Manual Series No. 22 (MS-22) for leveling wedges.

Notify the Engineer of existing surfaces that may not be in a condition that will have enough strength to be a good bonding surface or foundation and should be removed or have remedial repairs done before new pavement placement.

(D) Plant Operation.

(1) Preparation of Asphalt Binder. Uniformly heat asphalt binder and provide continuous supply of heated asphalt cement from storage to mixer. Do not heat asphalt binder above the recommendation of the supplier for modified binders or above 350 degrees F for neat binders.

(2) Preparation of Aggregate. Dry and heat aggregate material at temperature sufficient to produce design temperature of job-mix formula. Do not exceed 350 degrees F. Adjust heat source used for drying and heating to avoid damage to and contamination of aggregate. When dry, aggregate shall not contain more than 1 percent moisture by weight.

For batch plants, screen aggregates immediately after heating

and drying into three or more fractions. Convey aggregates into separate compartments ready for batching and mixing with asphalt binder.

(3) Mixing. Measure aggregate and asphalt; or aggregate, RAP, and asphalt into mixer in accordance with an accepted job-mix formula. Mix until components are completely mixed and adequately coated with asphalt binder in accordance with AASHTO M 156. Percent of coated particles shall be 95 percent when tested in accordance with AASHTO T 195.

(4) Plant Inspection. For control and acceptance testing during periods of production, provide a testing laboratory that meets the requirements of AASHTO M 156. Provide space, utilities, and equipment required for performing specified tests.

(E) Spreading and Finishing. Prior to each day's paving operation, check screed or strike-off assembly surface with straight edge to ensure straight alignment and there is no damage or wear to the machine that will affect performance. Provide screed or strike-off assembly that produces finished surface without tearing, shoving, and gouging HMA. Discontinue using spreading equipment that leaves ridges, indentations, or other marks, or combination thereof in surface that cannot be eliminated by rolling or affects the final smoothness of the pavement or be prevented by adjustment in operation.

Maintain HMA at minimum 250 degrees F temperature at discharge to paver. The Engineer shall observe the contractor measuring the temperature of mix in hauling vehicle just before depositing into spreader or paver or MTV.

Deposit HMA in a manner that minimizes segregation. Raise truck beds with tailgates closed before discharging HMA.

Lay, spread, and strike off HMA upon prepared surface. Where practical, use asphalt pavers to distribute mixture.

Where practical, control horizontal alignment using automatic grade and slope controls from reference line, slope control device. Existing pavements or features shall not be used for grade control alone.

Obtain sensor grade reference, horizontal alignment by using established grade and slope controls. For subsequent passes, substitution of one ski with joint-matching shoe riding on finished adjacent pavement is acceptable. Use of a comparable non-contact mobile reference system and joint matching shoe is acceptable.

Avoid stop-and-go operation. Maintain a constant forward speed of

paver during paving operation and minimize other methods that impact smoothness.

Offset longitudinal joint in successive lifts by approximately 6 inches. Incorporate into paving method an overlap of material of 1-inch +/- 0.5 inches at the longitudinal joint. The HMA overlap material shall be left alone when initially placed and shall not be bumped back or pushed back with a lute or any other hand-held device. If the overlap exceeds the maximum amount, remove the excess with a flat shovel, allowing recommended amount of overlap HMA material to remain in place to be compacted. Do not throw the removed excess HMA material on to the paving mat. The longitudinal joint in a surface course when total roadway width is comprised of two lanes shall be near the centerline of pavement or near lane lines when roadway is more than two lanes in width. The longitudinal joint shall not be constructed in the wheel path or under the longitudinal lane lines. Make a paving plan drawing showing how the longitudinal joint will not be located in these areas.

Control the horizontal alignment of the longitudinal edge of the HMA mat being installed so that the edge is parallel to the centerline or has a uniform alignment, e.g., the edge of the mat is straight line or uniform curve, no wavy edge, etc. to have a consistent amount of HMA material at the joint.

Check the compaction of the longitudinal joint during paving often enough to ensure that it will meet the compaction requirements.

If nuclear gauges and ground penetrating radar are used as the contractor's quality control method, they shall be properly calibrated and periodically checked by comparison to cores taken from the pavement. The use of sand as an aid in properly seating the gauge may also be considered for improving the accuracy of the gauge.

In areas where irregularities or unavoidable obstacles make use of mechanical spreading and finishing equipment impracticable, spread, rake, and lute mixture by hand tools. For such areas, deposit, spread evenly, and screed mixture to required compacted thickness.

Demonstrate competence of personnel operating grade and crown control device before placing surface courses. If automatic control system becomes inoperative during the day's work, the Engineer will permit the Contractor to finish day's work using manual controls. The Engineer may also allow additional HMA to be ordered and placed using manual controls if it will provide a safer work site for the public to travel through. Do not resume work until automatic control system is made operative. The Engineer may waive requirement for electronic screed control device when paving gores, shoulders, transitions, and miscellaneous reconstruction areas where the use of the devices is not practical.

When production of HMA can be maintained and when practicable, use pavers in echelon shall be used to place surface course in adjacent lanes.

At the end of each workday, HMA pavement that is open to traffic shall not extend beyond the panel of the adjacent new lane pavement by more than the distance normally placed in one workday. At end of each day's production, construct tapered transitions along all longitudinal and transverse pavement drop-offs; this shall apply to areas where existing pavement is to meet newly placed pavement. Use slopes of 6:1 for longitudinal taper transitions and 48:1 for transverse tapered transitions. Maximum drop-off height along the joints shall be 2 inches. Also, using a 48:1 slope provides a taper around any protruding object, e.g., manholes, drain boxes, survey monuments, inlets, etc., that may be above pavement surface when opened to the public. If the object is below the surface of the pavement then fill the depression until it is level with the surrounding pavement or raise depressed objects to the finish grade of the placed pavement. Remove and dispose of all transition tapers before placing adjoining panel or next layer of HMA. Notify traveling public of pavement drop-offs or raised objects with signs placed in every direction of traffic that may use and encounter pavement drop-offs or protruding objects or holes.

Use the same taper rates for areas where there is a difference in elevation due to construction work.

At end of each workweek, complete full width of the roadway's pavement, including shoulders, to same elevation with no drop-offs.

(F) Compaction. Immediately after spreading and striking off HMA and adjusting surface irregularities, uniformly compact mixture by rolling.

Initiate compaction at highest mix temperature allowing compaction without excessive horizontal movement. Temperature shall not be less than 220 degrees F.

Finish rolling using tandem roller while HMA temperature is at or above 175 degrees F.

On superelevated curves, begin rolling at lower edge and progress to higher edge by overlapping of longitudinal trips parallel to centerline.

If necessary, repair damage immediately using rakes and fresh mix. Do not displace line and grade of HMA edges during rolling.

Keep roller wheels properly moistened with water or water mixed with

small quantities of detergent. Use of excess liquid, diesel, and petroleum-based liquids will not be allowed on rollers.

Along forms, curbs, headers, walls and other places not accessible to rollers, compact mixture with hot hand tampers, smoothing irons, or mechanical tampers. On depressed areas, trench roller or cleated compression strips under roller may be used to transmit compression.

Before the start of compaction or during compaction or both remove pavement that is loose, broken, or contaminated, or combination thereof; pavement that shows an excess or deficiency in asphalt binder content; and pavement that is defective in any way. Replace with fresh HMA pavement of same type, and compact. Remove and replace defective pavement and compact at no increase in contract price or contract time.

Operate rollers at slow and uniform speed with no sudden stops. The drive wheels shall be nearest to the paver. Continue rolling to attain specified density and until roller marks are eliminated.

Rollers shall not be parked on the pavement placed that day or shift.

(1) HMA Pavement Courses One and a Half Inches Thick or Greater. Where HMA pavement compacted thickness indicated in the Contract Documents is 1-1/2 inches or greater, compact to not less than 93.0 percent nor greater than 97.0 percent of the maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate.

Place HMA pavement in individual lifts that are within minimum and maximum allowable compacted thickness for various types of mixture as specified in Table 401.02-1 - Limits of Compacted Lift Thickness and Asphalt Content.

(2) HMA Pavement Courses Less Than One and a Half Inches Thick. Where HMA pavement compacted thickness indicated in the contract documents is less than 1-1/2 inches, compaction to a specified density will not be required.

Use only non-vibratory, steel-tired, tandem roller. Roll entire surface with minimum of two roller passes. A roller pass is defined as one trip of the roller in one direction over any one spot.

For intermediate rolling, roll entire surface with minimum of four passes of roller.

Finish rolling using steel-tired, tandem roller. Continue rolling until entire surface has been compacted with minimum of three passes of roller, and roller marks have been eliminated.

Do not use rollers that will excessively crush aggregate.

(3) HMA Pavement Courses One and a Half Inches Thick or Greater In Special Areas Not Designated For Vehicular Traffic.

For areas such as bikeways that are not part of roadway and other areas not subjected to vehicular traffic, compact to not less than 90.0 percent of maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate. Increase asphalt content by at least 0.5 percent above that used for HMA pavements designed for vehicular traffic. Paved shoulders shall be compacted in the same manner as pavements designed for vehicular traffic.

(G) Joints, Trimming Edges and Utility Marking. At HMA pavement connections to existing pavements, make joints vertical to depth of new pavement. Saw cut existing pavement and cold plane in accordance with Section 415 - Cold Planing of Existing Pavement to depth equal to thickness of surface course or as indicated in the Contract Documents.

At HMA connections to previously placed lifts, form transverse joints by cutting back on previous run to expose full depth of course. Dispose of material trimmed from edges. Protect end of freshly laid mixture from rollers.

Before and after paving, identify and mark location of existing utility manholes, valves, and handholes on finished surface. Adjust existing frames and covers and valve boxes to final pavement finish grade in accordance with Section 604 - Manholes, Inlets and Catch Basins and Section 626 - Manholes and Valve Boxes for Water and Sewer Systems.

(1) Longitudinal joints. Submit for review the means and methods that will be used to install longitudinal joints at the required compaction and density. Compact longitudinal joints to be not less than 91.0 percent of the maximum specific gravity determined in accordance with AASHTO T 209, modified by deletion of Supplemental Procedure for Mixtures Containing Porous Aggregate. Verify the compaction of the longitudinal joints meets requirements by using non-destructive testing methods during paving and submit the results on the daily quality control test reports.

Test for compaction and density regardless of layer thickness. Compaction and density of the longitudinal joint shall be determined by using six-inch diameter cores. For longitudinal joints made using butt joints cores

shall be taken over the joint with half of the core being on each side of the joint. For longitudinal joints using notched wedge joints, center core over the center of the wedge so that 50 percent of the material is from the most recently paved material and the remaining 50 percent of the core is from the material used to pave the previous layer. One core shall be taken at a maximum of every 1,500 lineal feet (LF) of the second side of the longitudinal joint and any fraction of that length for each day of paving with a minimum of one core taken for each longitudinal joint per day. Cores taken for the testing of the longitudinal joint may be used to determine pavement thickness.

When the longitudinal joints are found to have less than 91.0 percent of the maximum specific gravity, overband all longitudinal joints within the entire lot represented by the non-compliant core, PG binder seal coat, or other type of joint enrichment accepted by the Engineer. The overband shall not decrease the skid resistance of the pavement under any ambient weather condition. Submit overband material's catalog cuts, test results and application procedure for review and acceptance by the Engineer before use. Center the overband over the longitudinal joint. The overband shall be placed in a uniform width and horizontal alignment. The overband shall have no holidays or streaking in its placement. The width of the overband shall be based on how the longitudinal joint was constructed or as directed by the Engineer. If a butt joint is used, the overband width shall be a minimum of 12-inches. For butt wedge or wedge joints the overband width shall be the width of the wedge plus an additional six-inches minimum. Replace any pavement markings damaged or soiled by the overband remedial repair process.

For longitudinal joints that have a compaction of less than 89 percent of the maximum specific gravity; removal may be required by the Engineer instead of overbanding the non-compliant joint.

Persistent low compaction results may be cause to suspend work and remove non-conforming work. During the suspension of paving, revise means and methods used in constructing longitudinal joints and submit to the Engineer for review and acceptance. Suspension may occur when:

- (1) Two or more longitudinal joints tests fail to meet the minimum compaction
- (2) One sample reveals that the joint compaction is 89 percent or less.

(H) HMA Pavement Samples. Obtain test samples from compacted HMA pavement within 72 hours of lay down. Provide minimum 4-inch diameter cores consisting of undisturbed, full-depth portion of compacted mixture taken at locations designated by the Engineer in accordance with the "Sampling and Testing Guide for Acceptance and Verification" in Hawaii DOT Highways Division, *Quality Assurance Manual for Materials*, Appendix 3. Cores shall be taken in the presence of the Engineer. Turn cores over to Engineer immediately after cores have been taken.

For pavement samples for longitudinal joints provide 6-inch diameter cores minimum. For pavement samples for other than longitudinal joints 4-inch diameter cores minimum shall be taken. All cores shall consist of undisturbed, full-depth of the lift of the compacted mixture taken at locations designated by the Engineer in accordance with the "Sampling and Testing Guide for Acceptance and Verification" in Hawaii DOT Highways Division, *Quality Assurance Manual for Materials*, appendix 3.

Cores that separate shall indicate to the Engineer that there is insufficient bonding of layers. Modify the previously used paving means and methods to prevent future debonding of layers. Debonding of a core sample after adjustment of the Contractor's methods will be an indication of continued non-conforming work and the Engineer may direct removal of the layer at no additional cost or contract time.

Restore HMA pavement immediately after obtaining samples. Clean core hole and walls of all deleterious material that will prevent the complete filling of the core hole and the bonding of the new HMA to the existing. Apply tack coat to vertical faces of sample holes. Fill sampled area with new HMA pavement of same type as that removed. If hand compaction is used; fill in layers not exceeding the minimum thickness stated in Table 401.02-1 - Limits of Compacted Lift Thickness And Asphalt Content. Compact each layer to compaction requirements. If Mechanical Compaction methods are used, then layers may be the maximum layer thickness stated in Table 401.02-1 - Limits of Compacted Lift Thickness And Asphalt Content. Using tires or hand tamping to compact the HMA material to restore the pavement shall not be considered as mechanical compaction.

Only sample and test leveling course if 1-1/2 inches or greater. No compaction requirements for less than 1-1/2 inches.

(I) HMA Pavement Thickness Tolerances.

Thickness of finished HMA pavement shall be within 0.25 inch of thickness indicated in the Contract Documents. Pavement not meeting the thickness requirements of the Contract Documents may be required by the Engineer to be removed and replaced.

Corrective methods taken on pavement exceeding specified tolerances, e.g., insufficient thickness by methods accepted by the Engineer, including removal and replacement, shall be at no increase in contract price or contract time.

The checking of pavement thickness shall be done after all remedial repairs, e.g., smoothness compliance repairs, compaction, have been completed, reviewed, and accepted by the Engineer.

(J) Quality Control Using New Technology. The Engineer and MTRB reserves the right to utilize new technology and methods to improve the detection of noncompliant work on the project. The technology or method may be used to locate defects in the work, e.g., ground penetrating radar to locate delaminations, moisture damage, thin sections, voids, non-compliant compaction, other non-destructive testing to locate flaws. The defect will be verified by the methods stated in the Contract Documents or by other established conventional means. If the technology or method has already been accepted elsewhere or has standardized testing procedures the results may be judged acceptable by the Engineer and no further testing will be required. These new technologies and methods may be used for the selection of sampling locations.

(K) Protection of HMA Pavement. Except for construction equipment directly connected with paving operations, keep traffic off HMA pavement.

Protect HMA pavement from damage until it has cooled and set.

Do not refuel equipment or clean equipment or hand tools over paved surfaces unless catch pan or device that will contain spilled fuel and other products is provided. After completion of refueling or cleaning, remove catch pan or device without spilling any of the collected content.

Do not park roller or other paving equipment on HMA pavement paved within 24 hours of laydown.

(L) Pavement Joint Adhesive

(1) Pavement Joint Adhesive on Joints. Use on all asphalt pavement construction where joints are formed at such locations but not limited to the following:

(a) Adjacent asphalt pavements, e.g., trafficked lanes, shoulders, etc.

(b) Asphalt pavement and adjacent concrete pavement or

curb and gutter or any other surface where the bonding of the asphalt pavement and concrete surface is desired,

(c) Transverse joints between asphalt pavements not placed at the same time or if the pavement's temperature on one side of the joint is below the minimum temperature the mix can be at, during asphalt pavement compaction or installation.

(d) Cut face of an existing pavement where it will have new HMA pavement placed against it, e.g., utility trenches, partial or full depth repairs, etc.

Pavement joint adhesive is not required on a longitudinal construction joint between adjacent hot mix asphalt pavements formed by echelon paving. Echelon paving is defined as paving multiple lanes side-by-side with adjacent pavers slightly offset at the same time.

A longitudinal construction joint between one shift's work and another shall have pavement joint adhesive applied at the joint. Any longitudinal construction joint formed, with the temperature on one side of the joint that is below the minimum temperature the mix can be when compacted to contract requirements during asphalt pavement installation, shall have pavement joint adhesive applied at the joint.

(2) **Material requirements.** Asphalt joint adhesive shall meet requirements as specified in Table 401.03-1 - Asphalt Joint Adhesive Specifications.

TABLE 401.03-1 – ASPHALT JOINT ADHESIVE SPECIFICATIONS		
TEST		SPECIFICATION
Brookfield Viscosity, 204 °C [400 °F]	ASTM D 3236	4,000-10,000 cp
Cone Penetration, 25 °C [77 °F]	ASTM D 5329	60-100 dmm
Resilience, 25 °C [77 °F]	ASTM D 5329	30% minimum
Ductility, 25 °C [77 °F]	ASTM D 113	30 cm minimum
Ductility, 4 °C [39.2 °F]	ASTM D 113	30 cm minimum
Tensile Adhesion, 25 °C [77 °F]	ASTM D 5329	500% minimum
Softening Point	ASTM D 36	77 °C [170 °F] min.
Asphalt Compatibility	ASTM D 5329	Pass

(3) Construction Requirements for Asphalt Joint Adhesive

(a) **Equipment Requirements.** Use a jacketed double

boiler type melting unit, with both agitation and recirculation systems. Provide a pressure feed wand application system.

(b) Material Handling. Submit a copy of the manufacturer's recommendations for heating, re-heating, and applying the joint adhesive material. Follow manufacturer's recommendations. Do not remove the joint adhesive from the package until immediately before it is placed in the melter. Joint adhesive boxes must be clearly marked with the name of the manufacturer, the trade name of the adhesive, the manufacturer's batch and lot number, the application/pour temperature, and the safe heating temperature. Feed additional material into the melter at a rate equal to the rate of material used.

Verify the pouring temperature of the joint adhesive at least once per hour at the point of discharge. Stop production if the adhesive falls below the recommended application/pour temperature. When the temperature of the adhesive exceeds the maximum safe heating temperature, stop production, empty the melter, and dispose of that adhesive in an environmentally safe method. No payment will be made for this material or its disposal.

Do not blend or mix different manufacturer's brands or different types of adhesives.

(c) Joint Adhesive Application: The face of the joint that the new asphalt pavement will bind to shall be clean and dry before the joint adhesive is applied. Apply the pavement joint adhesive material to the entire face of the surface where HMA pavement shall be installed. The thickness of the asphalt adhesive application shall be approximately 1/8 inch. Use an application shoe attached to the end of application wand. Do not overlap the joint by greater than 1/2-inch at the top of the joint or two-inches at the bottom of the joint. Apply the joint adhesive immediately in front of the paving operation. If the adhesive is tracked by construction vehicles, repair the damaged area, and restrict traffic from driving on the adhesive.

(d) Field Sampling. Take a sample from the application wand during the first 20 minutes of placing sealant. One sample should be taken per manufacturer's batch or minimum of every 6 months on the Project in the presence of the Engineer.

Each sample shall consist of one quart in an aluminum or steel sample container. The sampling container shall be labeled with Contractor's name; project name and number; date and time sample taken; location of where material was used at, e.g., from where to where it was used at in stations; manufacturer and lot number of the sealant. Turn over samples to Engineer without Engineer losing sight of the sample. The Engineer reserves the right to conduct supplementary sampling and testing of the sealant material.

(M) Pavement Smoothness Rideability Test. Perform surface profile tests frequently to ensure that the means and methods being used produces pavement that is compliant with the surface profile smoothness requirement. Test the pavement surface for smoothness with High-Speed Inertial Profiler to determine the International Roughness Index (IRI) of the pavement. For the locations determined by the Engineer, a 10-foot straightedge shall be used to measure smoothness.

All smoothness testing must be performed with the presence of the Engineer. The High-Speed Inertial Profiler operator shall be a certified operator by MTRB or the manufacturer.

The High-Speed Inertial Profiler operator's certification shall be no older than five years old at the date of the Notice to Proceed and at the day of the pavement profile measurement.

The finished pavement shall comply to all the following requirements:

(a) Smoothness Test using 10-Foot Straightedge (Manual or rolling) The 10-foot straightedge is used to identify the locations that vary more than 3/16 inch from the lower edge when the 10-foot straightedge is laid on finished pavement on the direction parallel with the centerline or perpendicular to centerline. Remove the high points that cause the surface to exceed that 3/16 inch tolerance by grinding.

The Contractor shall use a 10-foot straightedge for the following locations:

1. Longitudinal profiling parallel to centerline, when within 15 feet of a bridge approach or existing pavement which is being joined.
2. Transverse profiling of cross slopes, approaches, and as otherwise directed. Lay the straightedge in a direction perpendicular to the centerline.

1021 3. When pavement abuts bridge approaches or pavement
1022 not under this Contract, ensure that the longitudinal slope
1023 deviations of the finished pavement comply with Contract
1024 Document's requirements.

1025
1026 4. Short pavement sections up to 600 feet long, including
1027 both mainline and non-mainline sections on tangent sections
1028 and on horizontal curves with a centerline radius of curve less
1029 than 1,000 feet.

1030
1031 5. Within a superelevation transition on horizontal curves
1032 having centerline curve radius less than 1,000 feet, e.g.,
1033 curves, turn lanes, ramps, tapers, and other non-mainline
1034 pavements.

1035
1036 6. Within 15 feet of transverse joint that separates
1037 pavement from existing pavement not constructed under the
1038 contract, or from bridge deck or approach slab for longitudinal
1039 profiling.

1040
1041 7. At miscellaneous areas of improvement where width is
1042 less than 11 feet, such as medians, gore areas, and shoulders.

1043
1044 8. As otherwise directed by the Engineer. The Engineer
1045 may confine the checking of through traffic lanes with the
1046 straightedge to joints and obvious irregularities or choose to
1047 use it at locations not specifically stated in this Section.

1048
1049 **(b) High-Speed Inertial Profiler**

1050
1051 There shall be a minimum 3 profile runs per lane, for each wheel path
1052 (left and right) which is approximately three feet from edge lane line. The
1053 segment length shall be 0.1 mi. The final segments in a lane that are less
1054 than 0.1 mi shall be evaluated as an independent segment and pay
1055 adjustments will be prorated for length. The profiles shall be taken in the
1056 direction of traffic only.

1057
1058 The latest version of FHWA ProVAL software shall be used to conduct
1059 profile analysis to determine IRI and areas of localized roughness. The IRI
1060 values shall be reported in units of in/mi.

1061
1062 Areas of localized roughness will be identified by using ProVAL's
1063 "Smoothness Assurance" analysis, calculating IRI with a continuous short
1064 interval of 25 feet and the 250-mm filter applied.

Additional runs may be required by the Engineer if the data indicate a lack of repeatability of results. A 92% agreement is required for repeatability and IRI values shall have at minimum a 95% confidence level.

(N) Required Pavement Smoothness

The IRI for the left and right wheel paths in an individual lane will be computed and then averaged to determine the Mean Roughness Index (MRI) values. The MRI will be used to determine acceptance and pay adjustment. Each lane shall be tested and evaluated separately.

There are three (3) categories of target MRI values. Refer to table 401.03-2 – Pavement Smoothness Categories:

TABLE 401.03-2 – PAVEMENT SMOOTHNESS CATEGORIES		
Category	Description	MRI
Type A	Three or more opportunities for improving ride	Shall not exceed 60 in/mi
Type B	Two opportunities for improving ride	Shall not exceed 70 in/mi
Type C	One opportunity for improving ride	Shall not exceed 75 in/mi

An opportunity for improving ride is considered as one (1) lift of asphalt pavement, including but not limited to HMAB, HMA, PMA, and SMA.

For the location where a 10-foot manual straightedge is required, the surface shall not vary more than 3/16 inch from the lower edge of a straightedge.

No pre-final inspection, final inspection, and substantial completion granted will be made until the pavement meets smoothness requirement and all required profile reports are submitted to the Engineer and MTRB and are accepted.

(O) Request for Profile Testing by the Department.

For Type C, prior to pavement activities, the Engineer will measure the smoothness of the existing pavement.

The Contractor shall submit a written request to the Engineer to perform all required profile tests.

The request shall be made at least 30 days before desired testing date and shall include an approximate acceptance profile testing date, a plan view drawing of the area to be tested with the limits of the test area highlighted.

The Contractor shall reimburse HDOT for any incurred cost related to any Contractor-caused cancellation or a deduction to the monthly payment will be made.

(P) Department Requirements for Profile Testing. When a request for testing is made, the requested area to be tested shall be 100% of the total area indicated to be paved in the Contract Documents unless the requirement is waived by the Engineer and MTRB.

Department acceptance surface tests will not be performed earlier than 14 days after HMA placement.

Clean debris and clear obstructions from area to be tested, as well as a minimum of 100 feet before and beyond the area to be tested before testing starts for use as staging areas. Provide traffic control for all profile testing.

The Engineer or MTRB or both may cancel the profile testing if the test area is not sufficiently clean, traffic control is unsatisfactory, or the area is not a safe work environment or test area does not meet Contract Document requirements. This canceled profile test will count as one profile test.

(Q) Cost of Acceptance Profile Testing by The Department. The Engineer, MTRB, or State's Third-Party Consultant will perform one initial profile test, at no cost to the Contractor for each area to be tested.

The Department's High-Speed Inertial Profiler pavement profile will be used to determine if the pavement's profile, i.e., smoothness is acceptable.

If the profile of the pavement does not meet the requirements of the Contract Documents, the Contractor shall perform remedial work, i.e. corrective work then retest the area to ensure that the area has the required MRI, i.e., smoothness, before requesting another profile test by the Engineer.

(1) Additional testing. Additional testing, by the Department beyond the initial test will be performed at cost to the Contractor as follows:

(a) \$2,500 per test will be required when Department personnel or State's Third-Party Consultant is used.

(R) Remedial Work for Pavements.

(1) Corrective work shall be required for any 25 ft interval with a localized roughness in excess of 160 in/ mi. The Engineer may waive localized roughness requirements for deficiencies resulting from

manholes or other similar appurtenances. Adjust manholes or other similar appurtenances so that using a 10-ft. straightedge the area around that manhole or other similar appurtenance shall not have more than 3/16-in. variation between any 2 contacts on the straightedge.

If corrective action is not successful, the Engineer may require continued corrective action, or apply a payment adjustment of \$250 per occurrence.

(2) Corrective work shall also be required for any 0.1 mile interval with an average MRI above 95.0 in/mi for Types A and B. For Type A, correct the deficient section to an MRI of 60 in/mi or less. For Type B, correct the deficient section to an MRI of 70 in/mi or less. For Type C, corrective work may be required by the Engineer for 0.1 mile intervals that have an average MRI above the threshold shown in Tables 401.03-4 - Smoothness Pay Disincentives With MRI and 401.03-5 - Smoothness Disincentives for Percent Improvement as applicable.

If corrective action does not produce the required improvement, the Engineer may require continued corrective action, or apply payment adjustment as shown in Tables 401.03-4 - Smoothness Pay Disincentives With MRI and 401.03-5 - Smoothness Pay Disincentives for Percent Improvement.

(3) The Contractor shall notify the Engineer at least 24 hours prior to commencement of the corrective work. The Contractor shall not commence corrective work until the methods and procedure have been approved in writing by the Engineer.

(4) All smoothness corrective work for areas of localized roughness shall be for the entire lane width. Pavement cross slope shall be maintained through corrective areas.

(5) The remedial repair areas shall be neat, rectangular areas having a uniform surface appearance.

(6) If grinding is used on HMA pavement, the surface shall have nearly invisible grinding marks to passing motorist.

(7) Other methods may include milling and overlaying HMA pavement. The length, depth of the milling and the replacement material will be solely decided by the Engineer.

(8) The finished repaired pavement surface shall leave no ridges or valleys or fins of pavement other than those allowed below.

(9) Remedial repairs shall not leave any drainage structures' inlets higher than the surrounding pavement or alter the Contract Document's drainage pattern.

(10) For items in the pavement other than drainage structures, e.g., manhole frame and covers, survey monuments, expansion joints etc., the finish pavement, ground or not, shall not be more than 1/4 inch in elevation difference. Submit to the Engineer remedial repair method to correct these conditions for acceptance.

(11) Pick up immediately grinding operation residue by using a vacuum attached to grinding machine or other method acceptable to the Engineer.

(a) Any remaining residue shall be picked up before the end of shift or before the area is open to traffic, whichever is earlier.

(b) Prevent residue from flowing across pavement or from being left on pavement surface or both.

(c) Residue shall not be allowed to enter the drainage system.

(d) The residue shall not be allowed to dry or remain on the pavement.

(e) Dispose of all material that is the result of the remedial repair operation, e.g., HMA residue, wastewater, and dust at a legal facility.

(12) Complete corrective work before determining pavement thickness for HMA pavements in accordance with Subsection 401.03(I) – HMA Pavement Thickness Tolerances.

(13) All HMA wearing surface areas that have been ground shall receive a coating, e.g., a coating material that will restore any lost impermeability of the HMA due to the grinding of the surface. The coating used shall not be picked up or tracked by passing vehicles or be degraded after a short period of time has passed, i.e., it shall have a service life equal to or greater than the HMA pavement. The coating shall not decrease the pavement's friction value. The coating's limits shall be the full width of the lane regardless how small. If the remedial repair area extends into the next lane, then the repair area will be full lane width also. Extend the length of coating areas in order for the coating area to look like the rest of the road and does not have patches

on it, i.e., make the road look uniform in color. The coating shall be of a color that matches the surrounding pavement. The areas receiving the coating shall not be open to traffic until it has cured enough so that it cannot be picked up or tracked by passing vehicles or degrade. Submit means and methods of the coating and type of coating to the Engineer or MTRB for review and acceptance. Do not proceed with the coating without acceptance from the Engineer.

(14) Recompacting cold HMA, i.e., HMA that has reached ambient temperature is not an acceptable remedial repair method.

(15) Replace all pavement markings damaged or discolored by remedial repairs.

(16) Reprofile the corrected area and provide the Engineer the results that show the corrective action, i.e., remedial repairs were successful.

(S) Pavement Smoothness and Acceptance.

(1) Price and payment in various paving sections, e.g., 401 (Hot Mix Asphalt Pavement), shall be full compensation for all work and materials specified in the various paving sections and this section, including but not limited to furnishing all labor, materials, tools, equipment, testing, incidentals and for doing all work involved in micro milling, milling (cold planing), grinding existing or new pavement, removing residue, cleaning the pavement, necessary disposal of residue, furnishing of any water or air used in cleaning the pavement and any other related ancillary work or material or services. Also, it includes any remedial work, e.g., re-paving, surface grinding, application of a coating, curing compound, and replacement of damaged pavement markings.

(2) The contract price in those sections may be adjusted for pavement smoothness by the Engineer as shown in Table 401.03-3 - Smoothness Pay Incentives. The pavement smoothness contract unit price adjustments and work acceptance will be made in accordance with the following schedules.

TABLE 401.03-3 –SMOOTHNESS PAY INCENTIVES		
Category	MRI (in/mi)	Pay Adjustment \$ per 0.1 mi
Type A	<30.0	\$580
	30.0- less than 35.0	\$480
	35.0- less than 40.0	\$380
	40.0- less than 45.0	\$280
	45.0- less than 50.0	\$180
	50.0- less than 55.0	\$80
	55.0- less than 60.0	\$0
Type B	<35.0	\$420
	35.0- less than 40.0	\$360
	40.0- less than 45.0	\$300
	45.0- less than 50.0	\$240
	50.0- less than 55.0	\$180
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$60
	65.0- less than 70.0	\$0
Type C	<40.0	\$280
	40.0- less than 45.0	\$240
	45.0- less than 50.0	\$200
	50.0- less than 55.0	\$160
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$80
	65.0- less than 70.0	\$40
	70.0- less than 75.0	\$0

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(3) Pay Pavement Smoothness Adjustment will be based on the initial measured MRI for both left and right wheel path, prior to any corrective work for the 0.10-mile section, except for sections that the Contractor has chosen to remove and replace. For sections that are replaced, assessments will be based on the MRI determined after replacement.

(a) The Pavement Smoothness Adjustment will be computed using the plan surface area of pavement shown in the Contract Documents. This Pavement Smoothness Adjustment will apply to the total area of the 0.10-mile section for the lane width represented by MRI for the same lane. It does not include any other price adjustments specified in the Contract Documents. Those price adjustments will be, for each adjustment, calculated separately using the original contract price to determine the amount of adjustment to be made to the contract price. Sections shorter than 0.1 mile and longer than 50 feet shall be prorated.

(b) For 0.1 mile intervals with an average MRI above the threshold shown in Table 401.03-3 – Smoothness Pay Incentives, the Engineer shall apply a disincentive payment adjustment up to the limit shown.

i. For Types A and B, payment adjustments shall be applied up to an MRI of 95.0 per Table 401.03-4 – Smoothness Pay Disincentives with MRI.

ii. For Type C, the payment adjustment shall be dependent on the average MRI of the pavement prior to paving activities

1. If the MRI of the pavement prior to paving activities is 125.0 in/mi or less, the payment adjustment shall be per Table 401.03-4 - Smoothness Pay Disincentives With MRI.

2. If the MRI of the pavement prior to paving activities is more than 125.0 in/mi, the disincentive payment adjustment shall be per Table 401.03-5 - Smoothness Pay Disincentives for Percent Improvement and based on the percent improvement using the following formula:

$$\% \text{ Improvement} = (\text{Initial segment MRI} - \text{Final segment MRI}) \times 100 / (\text{Initial Segment MRI})$$

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TABLE 401.03-4 –SMOOTHNESS PAY DISINCENTIVES WITH MRI		
Category	MRI (in/mi)	Pay Adjustment \$ per 0.1 mi
Type A	60.0- less than 70.0	-\$100
	70.0- less than 75.0	-\$250
	75.0- less than 80.0	-\$350
	80.0- less than 85.0	-\$450
	85.0- less than 95.0	-\$550
	> 95.0	Corrective Work
Type B	70.0- less than 75.0	-\$100
	75.0- less than 80.0	-\$200
	80.0- less than 85.0	-\$300
	85.0- less than 95.0	-\$400
	> 95.0	Corrective Work
Type C (pre-paving MRI < 125)	75.0- less than 80.0	-\$50
	80.0- less than 85.0	-\$100
	85.0- less than 90.0	-\$150
	90.0- less than 100.0	-\$200
	>100.0	-\$250

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TABLE 401.03-5 –SMOOTHNESS PAY DISINCENTIVES FOR PERCENT IMPROVEMENT		
Category	Percent Improvement %	Pay Adjustment \$ per 0.1 mi
Type C	≥ 40	\$0
(pre-paving MRI > 125)	20.0- less than 40.0	-\$100
	< 20	-\$200

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(c) Incentives will not apply to areas where payment deductions or remedial repairs has been made for non-compliant work, e.g., low compaction, thin pavement, thermal segregation, low compressive or flexural strength, non-compliant alignment. Incentives will also not apply to areas where corrective work was required to meet contract smoothness requirements, unless the pavement section was

replaced. All areas where corrective work was performed shall be tested again to ensure the smoothness requirements are met.

(d) There will be no incentive price adjustments to the contract prices regardless of the pavement meeting the Contract Documents' requirements for incentive contract price adjustment, when 25% of the total area paved of that particular type of pavement on the project has failed to meet any of the Contract document requirements, e.g., smoothness, thickness, unit weight, asphalt content, pavement defects, compaction, flexural or compressive strength. Areas exempt from the smoothness requirements may not be included in the total area calculation unless it is non-compliant.

(e) For contracts using lump sum the method described in Subsection 104.06 Methods of Price Adjustment paragraph (3), will be used to calculate proportionate unit price, i.e., the Engineer's calculated theoretical unit price. This calculated proportionate unit price will be used to calculate the unit price adjustment.

401.04 Measurement. The Engineer will measure HMA pavement per ton in accordance with the Contract Documents.

401.05 Payment. The Engineer will pay for the accepted HMA pavement at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

(A) Price and payment in Section 401 – HMA Pavement will be full compensation for all work and materials specified in this Section including furnishing all labor, materials, tools, equipment, testing, pavement profiles and incidentals and for doing all work involved in grinding existing or new pavement, removing residue, and cleaning the pavement, including necessary disposal of residue and furnishing any water or air used in cleaning the pavement and remedial work needed to conform to the requirements of the Contract Documents.

(B) No payment for the Contractor's pavement profile work required in this section will be made. The Contractor's pavement profile work shall be considered incidental to the various paving items unless stated otherwise.

Pay Item	Pay Unit
HMA Pavement, Mix No. IV	Ton

(1) 70% of the contract unit price or the theoretical calculated unit price upon completion of submitting a job-mix formula acceptable to the Engineer; preparing the surface, spreading, and finishing the mixture; and compacting the mixture.

(2) 20% of the contract unit price or the theoretical calculated unit price upon completion of cutting samples from the compacted pavement for testing; placing and compacting the sampled area with new material conforming to the surrounding area; protecting the pavement; and compaction acceptance. Maintain temporary pavement markings and other temporary work zone items, maintain a clean work site.

(3) 10% of the contract unit price or calculate the unit price when the final configuration of the pavement markings is in place.

The Engineer will pay for adjusting existing frames and covers and valve boxes in accordance with and under Section 604 – Manholes, Inlets and Catch Basins. Adjustments for existing street survey monument frames and covers will be paid for as if each were a valve box frame and cover.

The Engineer may, at his sole discretion, use the sliding scale factor as specified in Table 401.05-1 – Sliding Scale Pay Factor for Compaction to accept HMA pavements compacted between 90.0 percent and 98.0 percent. If the sliding scale factor is used, the Engineer will make payment for the material in that production day at a reduced price by multiplying the contract unit price by the pay factor. The Engineer is not obligated to allow non-compliant work to remain in place and may choose to require removal of the pavement that is less than 93.0 percent or greater than 97.0 percent.

Removal of non-compliant pavement shall be in accordance with Subsection 105.12 Removal of Non-Conforming and Unauthorized Work.

Table 401.05-1 – Sliding Scale Pay Factor for Compaction	
Percent Compaction	Percent of Quantity Paid
> 98.0	Removal
>97.0 - 98.0	95
93.0- 97.0	100
90.0 - <93.0	80
<90.0	Removal

END OF SECTION 401”

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provide corrective measures prior to initial set of concrete. Remove unacceptable concrete."

(VI) Amend **503.03(C)(1) Construction** by revising the first paragraph between lines 169 and 172 as follows:

(1) Construction. "Use wood or metal forms that are impervious to moisture, non-staining to concrete, mortar tight and sufficiently rigid to prevent distortion due to pressure of concrete and other loads, including vibration, incidental to construction. Construct and maintain forms to prevent joints from opening. Formwork joints shall be filled with approved material that is impervious to moisture, will not stain concrete, and produces tight joints."

(VII) Amend **503.03(C)(1) Construction** by revising the second paragraph between lines 174 and 176 to read as follows:

"Unless otherwise indicated in the contract documents, place minimum $\frac{3}{4}$ inch by $\frac{3}{4}$ inch chamfer at sharp edges of exposed concrete surfaces. Give girder and coping forms bevels or drafts to ensure easy removal."

(VIII) Amend **503.03(C)(1) Construction** by adding the following sentence to the ninth paragraph at line 209:

"The Engineer will stop the use of the forms or forming systems which produce a concrete surface with excessive undulations until the Contractor makes modification acceptable to the Engineer."

(IX) Amend **503.03(C)(2) Form Lumber** by adding the following sentence to the first paragraph after line 223:

"When requested by the Engineer, submit certificates verifying grade and species of any piece of lumber which does not have a grade or species stamp."

(X) Amend **503.03(D) Removal of Falsework and Forms** by revising Table 503.03-1 – Removal of Falsework and Forms at line 297 to read as follows:

“TABLE 503.03-1 – REMOVAL OF FALSEWORK AND FORMS						
Railing and Barriers – 12 Hours Removal Time						
Beams, Arches, and Other Members – 14 days Removal Time						
Slabs With Maximum Thickness of (Inches)	9		12		More Than 12	
Removal Time (Days)	7		10		14	
Walls, Columns, and Vertical Sides of Beams With Maximum Height of (Feet)	2	5	10	20	30	40 or More
Removal Time (Days)	0.5	1	2	3	5	7
Note: Where forms also support vertical or horizontal loads imposed on slab or beam soffits, use 14 days for removal time.”						

(XI) Amend **503.03(D) Removal of Falsework and Forms** by deleting the last paragraph between lines 329 and 334.

(XII) Amend **503.03(E) Loading** by deleting the words, “except abutment walls and wing walls” in line 337.

(XIII) Amend **503.03(F)(1) General** by adding the following paragraphs after line 419:

“At the time of placement, the concrete temperature shall not exceed 85 degrees Fahrenheit.

The rate of evaporation shall be measured by using the nomograph: ACI 308R Figure 4.1 Nomograph for Estimating the Maximum Potential Rate of Evaporation of the Environment Assuming a Water-Covered Surface in Which the Water Temperature Is Equal to the Concrete Temperature or by using an evaporation rate calculator e.g., Kestrel 5200 hat has been reviewed and accepted by the Engineer. Use procedures as stated in ACI 308R Chapter 4 – Monitoring Curing and Curing Effectiveness. Approximately 30 minutes prior to the scheduled start of concrete placement measure the ambient air temperature, relative humidity and wind velocity with industrial grade weather monitoring instruments or with an evaporation rate calculator to determine the on-site evaporation rate. When the rate of evaporation is equal to or exceeds 0.05 lb/sq ft/h fogging shall begin. During the placement of the concrete recalculate

117 evaporation rate every 15 minutes using new real-time data including actual
118 temperature of concrete being placed. The concrete shall be fogged before,
119 during and after finishing. Fogging shall start at the point the bleed water starts to
120 evaporate. Fogging may stop when the curing compound application is complete.
121 Fogging shall be accomplished by self-powered atomized mister, e.g. BossTek
122 DustBoss, that creates a mist of water droplets above the concrete surface that
123 will float in the air. The droplets should float in the air, not fall on the concrete.
124 The goal is to humidify the air, not wet the concrete. Let the water evaporate
125 before finishing. If the concrete is fogger before floating, brooming or trowelling,
126 do not finish the accumulated surface water into the concrete surface or it will
127 weaken it. Do not allow water to run off the concrete surface. Adjust foggers or
128 pause its operation. Foggers shall not drip water on the poured concrete surface.
129 Point foggers into the air above the concrete pour not at it and not in the direction
130 of the incoming wind. It shall not be acceptable to use a water hose to spray
131 water into the air as a substitute. This will be considered adding additional water
132 to the deck surface. If plastic shrinkage cracks appear during the finishing, the
133 cracks shall be closed by striking each side of the crack with a float and
134 refinishing the concrete.”

135
136 **(XIV) Amend 503.03(F)(7) Hot Weather Concreting with:**

137
138 “When the ambient temperature is expected to meet or exceed 75
139 degrees F or the concrete construction involves flatwork concrete construction,
140 ACI 305 R-20 guide to hot weather concreting or its latest edition or variant shall
141 be part of the contractor’s means and methods. Submit hot weather concreting
142 action plan to the Engineer for review and acceptance. Do not place concrete
143 where the temperature is above 90 degrees F unless the design mix and
144 placement method comply with ACI 305 R-20 Guide to Hot Weather Concreting
145 or its latest edition or variant. Evaporation retarders and finishing aid solutions
146 may be used. Adjust dilution rates to fit the local climate. Evaporation retarders
147 and finishing aids shall be “stand-alone” products no product that is both
148 evaporation retarder and finishing aid shall be used. They shall be designed for
149 highway pavement use. Evaporation retarders and finishing aids shall not
150 deleteriously change the water to cementitious material ratio (w/cm) or affect the
151 physical properties of the surface it is being applied to causing defects, e.g.,
152 chalking, color change, dusting, weaken surface, popouts, brittleness, spalling,
153 cracking, or other unacceptable properties, submit test results that show
154 compliance to these requirements. Evaporation retarders and finishing aids shall
155 not be used interchangeably, using them interchangeably will damage the
156 concrete surface and shall be cause for the pavement being non-compliant and
157 shall be removed or an engineer accepted remedial repair be performed. The
158 engineer will solely decide what method is to be used.”

159
160 **(XV) Amend 503.03(F) Placing Concrete** by adding the following Subsection
161 after line 565:
162

163 **“(8) Certified Concrete Flatwork Finisher Requirement.** Perform
164 the placement, and finishing operations of concrete flatwork with a
165 minimum ratio of one certified ACI Concrete Flatwork Finisher and
166 Technician with 4,500 hours of acceptable work experience (certified
167 craftsman) per three concrete finishers (concrete finishers without ACI
168 Concrete Flatwork Finisher and Technician certification and 4,500 hours of
169 acceptable work experience) at each location having flatwork done. The
170 concrete flatwork shall be under the direct supervision of a certified
171 craftsman. Designate the certified craftsman who will be supervising and
172 responsible for determining the quality of the finish of the concrete flatwork
173 being performed. No flatwork shall be performed without the required
174 amount of certified craftsman present.

175
176 **(a)** Flatwork concrete is defined as any concrete work that
177 requires tools or machines to be used during the placement and
178 finishing operations of concrete. Concrete flatwork includes
179 concrete work that requires a specified finishing, smoothness or
180 rigid surface tolerances such as sidewalks, walkways, Portland
181 cement concrete pavement, concrete white-topping, girder seats,
182 pier caps, bridge decks, on-grade concrete slabs, approach slabs,
183 concrete overlays, and concrete repairs which exceed one square
184 foot per day.

185
186 **(b)** Areas that are not considered flatwork concrete are the top
187 of foundations or structures that will have backfill material placed
188 directly on the concrete surface.

189
190 **(c)** Submit copies of the craftsman’s current ACI certification 30
191 days before concrete flatwork begins for the Engineer’s review and
192 acceptance. The Engineer has the right to require the removal,
193 replacement, retraining and re-certification of a certified craftsman if
194 that person does not, in the opinion of the Engineer, demonstrate
195 the ability to place and finish concrete in accordance with the
196 practices recommended in the ACI Concrete Flatwork Finisher
197 Certification Program and to meet the finishing standards required
198 by the contract documents.

199
200 **(d)** Any cost or impact to the contractor in providing, training,
201 certification, retraining, replacement or re-certification is incidental
202 to the contract items that require concrete flatwork.”
203

204 **(XVI) Amend 503.03(G) Joints** by adding the following sentence after line 566:

205
206 “Prior to backfilling with earth or other materials against the joints, all
207 construction, expansion, contraction, and control joints shall be waterproofed with
208 flashing compound waterproofing as detailed in the Standard Plans.”

(XVII) Amend **503.03(G)(1) Construction Joints** by revising the second paragraph between lines 572 and 579 to read as follows:

“Before placing concrete on substrate concrete at construction joint, the following work shall be performed:

(a) Remove laitance, loose particles, dust, dirt, impervious membrane curing compound, and any other material foreign to the construction joint and projecting reinforcement.

(b) Roughen horizontal construction joint by abrasive blast cleaning or other approved methods to full amplitude of approximately ¼ inch.”

(XVIII) Amend **503.03(G)(3) Contraction Joints** by revising the first paragraph from lines 661 to 665 to read as follows:

“(3) **Contraction Joints.** Contraction joints in walls and in other structures shall be spaced at not more than 20 feet on centers and shall be spaced, at abrupt changes in height or thickness and at obtuse corners unless otherwise directed by the Engineer.”

(XIX) Amend **503.03(L) Curing Methods** by adding the following paragraph after line 794:

“The Contractor shall have the option to use curing compound SINAK WCE or SINAK LITHIUM for bridge structures when approved by the Engineer. Six copies of the manufacturer’s brochure and certificates of test results shall be submitted. All work shall conform with the manufacturer’s recommendations.”

(XX) Amend **503.03(L)(2) Impervious Membrane Curing** by revising the third sentence of the first paragraph from lines 818 to 819, to read as follows:

“Use ratio of at least one gallon for each 100 square feet of concrete surface.”

(XXI) Amend **503.03(L)(2) Impervious Membrane Curing** by adding the following sentences to the first paragraph after line 819:

“The curing compound shall be applied to the concrete following the surface finishing operation, immediately before the moisture sheen disappears from the surface, but before any drying shrinkage or craze cracks begin to appear. In the event of any drying or cracking of the surface, application of water with an atomizing nozzle (fog spray) as specified in Section 503.03(L)(1), “Water Curing”, shall be started immediately and shall be continued until application of

the compound is resumed or started; however, the compound shall not be applied over any resulting freestanding water. Should the film of compound be damaged from any cause before the expiration of 7 days after the concrete is placed in the case of structures and 72 hours in the case of pavement, the damaged portion shall be repaired immediately with additional compound."

(XXII) Amend 503.03(L)(2) Impervious Membrane Curing by revising the last sentence of the second paragraph between lines 822 and 825 as follows:

"Do not apply membrane curing compound on surfaces to which concrete is to be bonded or to which waterproofing or epoxy is to be applied."

(XXIII) Amend 503.03(M) Finishing Concrete Surfaces by adding the following sentences at line 841:

"No additional water shall be added to the concrete surfaces in an effort to aid the finishing operation as the application of water to aid the finishing operation will result in the rejection of the concrete pour. Finishing aids or evaporation retarders may be used only with written authorization by the Engineer. Only finishing aids shall be used to finish the concrete surface and only evaporation retarders used to minimize the evaporation rate of the plastic concrete. These solutions shall not be used interchangeably."

(XXIV) Amend 503.03 Construction by adding subsection 503.03(O) beginning at line 1200 as follows:

"(O) Tolerance for Concrete Construction and Materials. Conform to the stricter of tolerances specified in the specifications, ACI 117 Standard Specifications for Tolerance for Concrete Construction and Materials, PCI Tolerance for Precast and Prestressed Concrete, and PCI MNL-116 Manual for Quality Control of Plants and Production of Structural Precast Concrete Products."

(XXV) Amend 503.04 Measurement by revising lines 1201 to 1205 to read as follows:

"503.04 Measurement. The Engineer will measure Concrete for Concrete Apron per cubic yard in accordance with the contract documents.

(XXVI) Amend 503.05 Payment by revising lines 1206 to 1223 to read as follows:

"503.05 Payment. The Engineer will pay for the accepted quantities of concrete complete in place at the contract price per pay unit, as listed below and contained in the proposal schedule.

301 The contract unit price paid shall be full compensation for the concrete; for
302 placing, curing, finishing, and grinding; for furnishing materials including
303 admixtures and cement (including extra cement added to concrete deposited
304 under water); for furnishing and installing waterproofing at construction joints,
305 waterstops, pipes and conduits, forms, and falsework or centering; and for
306 equipment, tools, labor, materials and incidentals necessary to complete the
307 work.

308
309 The Engineer will pay for the following pay item when included in the
310 proposal schedule:

311	Pay Item	Pay Unit
312		
313		
314	Concrete for Concrete Apron	Cubic Yard

315
316 The Engineer will pay for excavation and backfill for foundations in
317 accordance with and under Section 205 – Excavation and Backfill for Bridge and
318 Retaining Structures and Section 206 – Excavation and Backfill for Drainage
319 Facilities.”

320
321
322
323 **END OF SECTION 503**

1 **DIVISION 600 - MISCELLANEOUS CONSTRUCTION**

2
3 Amend **Section 601 - STRUCTURAL CONCRETE** to read as follows:

4
5 **"SECTION 601 - STRUCTURAL CONCRETE**

6
7
8 **601.01 Description.** This section describes structural concrete consisting of
9 Portland Cement, fine aggregate, coarse aggregate, and water. This will include
10 adding admixtures for the purpose of entraining air, retarding or accelerating set,
11 tinting, and other purposes as required or permitted. To reduce the embodied carbon
12 footprint of concrete, concrete design on the island of Oahu shall include the use of
13 carbon dioxide mineralization or equivalent technology. Other methods to reduce the
14 cement content such as use of supplementary cementitious materials (SCMs) or
15 admixtures such as C-S-H nanoparticle-based strength-enhancing admixture (CSH-
16 SEA) or equivalent may also be used to reduce the embodied carbon footprint
17 including the combination thereof the previously mentioned methods.

18
19 **601.02 Materials.**

20

21 Portland Cement	701.01
22	
23 Fine Aggregate for Concrete	703.01
24	
25 Coarse Aggregate for Portland Cement Concrete	703.02
26	
27 Admixtures	711.03
28	
29 Water	712.01

30

31 Use coarse aggregate for lightweight concrete conforming to ASTM C330
32 except Sections 5, 7 and 9.

33
34 **601.03 Construction.**

35
36 **(A) Quality Control.** Portland Cement concrete production requires
37 Contractor responsibility for quality control of materials during handling,
38 blending, mixing, curing, and placement operations.

39
40 Sample, test, and inspect concrete to ensure quality control of
41 component materials and concrete. Sampling and testing for quality control in
42 accordance with standard methods shall be performed by certified ACI
43 Concrete Field Technician Grade I. Perform quality control tests for slump, air
44 content, temperature, and unit weight during production of structural concrete
45 other than concrete for incidental construction. Submit quality control test
46 results.

(B) Design and Designation of Concrete. Design concrete mixture for concrete work specified. Submit mix design using State Highways Division form DOT 4-151 or an Engineer accepted equivalent form. Do not start work until the Engineer accepts mix design. The Engineer will accept concrete mix design using information given in Table 601.03-1 - Design of Concrete, and other pertinent requirements.

Whenever 28-day compressive strength, f'_c , is 4,000 psi or greater, designate concrete by required minimum 28-day compressive strength.

The 28-day compressive strength, f'_c , less than 4,000 psi listed in Table 601.03-1 – Design of Concrete, is for design information and designation of class only.

Proportion concrete designated by compressive strength such that concrete conforms to required strength.

Design concrete placed in bridge decks and pavements exposed to traffic wear, with air content of 3 percent, including entrapped and entrained air. Maintain air content for plastic concrete within tolerance of 1 percent air content, plus or minus, during the work.

Use concrete Type SBD where specified in the plans with special requirements as listed below:

(a) A shrinkage reducing admixture (SRA), Master Life SRA35 by BASF or Eclipse by W.R. Grace & Co., or approved equal shall be added to the concrete. The minimum dosage requirement shall be 128 ounces per cubic yard of concrete.

(b) A migrating, corrosion-inhibiting, amine-carboxylate, water-based admixture shall be added to the concrete. The minimum dosage shall be 24 ounces per cubic yards of concrete.

(c) The concrete shall have a maximum water to cement ratio of 0.40. The weight of the SRA shall be included in the total water when computing the water to cement ratio. The maximum amount of water shall be 268 pounds per cubic yard.

(d) The 28 day compressive strength of the concrete shall be not less than 6,000 psi.

(e) The concrete shall contain 15 pounds of alkali resistant structural glass fiber such as CEMFIL ANTI-CRAK HP67/36 or approved equal per cubic yard.

(f) The concrete shall have a maximum shrinkage strain of .00006 at 28 days and .000145 at 56 days according to ASTM C512.

(g) The final concrete mix design shall be based on field trial batches to determine the most suitable materials and proportions that will provide a concrete mixture having the least amount of segregation and bleeding, and at the same time provide the necessary workability to meet placing requirements

Type SBD concrete shall utilize CO₂ Mineralization technology, Supplementary cementitious materials (SCMs), CSH-SEA, or equivalent as stated in this section.

Class A concrete shall be used when type of concrete is not indicated in the contract documents.

Design concrete as specified in Table 601.03-1 – Design of Concrete.

TABLE 601.03-1 - DESIGN OF CONCRETE (800 Maximum Cement Content lbs./c.y.)					
Class of Concrete	28-Day Strength f_c, psi.	Minimum Cement Content lbs./c.y.	Maximum Water-Cement Ratio, lb./lb.	Minimum Cement Content with Mineralized CO2 lbs./c.y.	Maximum Water-Cement Ratio with Mineralized CO2 lb./lb.
A	3000	532	0.59	504	0.62
B	2500	475	0.66	450	0.70
C	2000	418	0.75	396	0.79
D	1500	380	0.85	360	0.87
SEAL	3000	610	0.55	NA	NA
Designated by Strength f _c or *f _r	As Specified	610	0.49	NA	NA
*f _r = Specified Modulus of Rupture					

Concrete Design – Projects on Oahu will utilize CO₂ Mineralization technology or equivalent. Supplementary cementitious materials (SCMs), CSH-SEA or equivalent or combination thereof the previously mentioned methods may also be used. Concrete design shall allow a reduction of portland cement content while maintaining the concrete design strength, durability and other requirements. See Table 601.03-1 Design of Concrete specified limits for adjusted minimum cement content and water cement ratio

when using CO₂ mineralization. Material certifications for the above shall include a list of at least 3 projects that used the technology, SCMs, admixtures or combination thereof.

Use the absolute volume method to proportion concrete materials in accordance with requirements of concrete designated by class, cement content in pounds per cubic yards, or specified 28-day compressive strength. Use absolute volumetric proportioning methods as outlined in the American Concrete Institute (ACI) Standard 211.1, "Recommended Practices for Selecting Proportions for Normal and Heavyweight Concrete."

Use coarse aggregate size No. 57 (one inch to No. 4) or No. 67 (3/4 inch to No. 4) for concrete. For concrete placed in bottom slabs and stems of box girders, use No. 67 size aggregate. Smaller size aggregates may be permitted when encountering limited space between forms and reinforcement or between reinforcement when accepted by the Engineer in writing. Maximum aggregate size shall not be greater than 1/3 of the space between reinforcing steel bars or reinforcing steel and the form.

Use the following standard methods in Table 601.03-2 – Standard Methods for determining compliance with requirements indicated in this subsection:

TABLE 601.03-2 – STANDARD METHODS	
Sampling Fresh Mixed Concrete	AASHTO T 141
Mass Per Cubic Meter (Cubic Foot) Yield and Air Content (Gravimetric) of Concrete	AASHTO T 121
Slump of Hydraulic Cement Concrete	AASHTO T 119
Air Content of Freshly Mixed Concrete by the Pressure Method	AASHTO T 152
Specific Gravity and Absorption of Fine Aggregate	AASHTO T 84
Specific Gravity and Absorption of Coarse Aggregate	AASHTO T 85
Temperature of Freshly Mixed Portland Cement Concrete	ASTM C1064
Making and Curing Concrete Test Specimens in the Field	AASHTO T 23

Compressive Strength of Molded Concrete Cylindrical Specimens	AASHTO T 22 (4 inch by 8 inch or 6 inch by 12 inch cylinders)
Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	AASHTO T 97

When concrete is designated by compressive strength, f'_c , or flexural strength, f'_r , or includes CO₂ Mineralization technology, CSH-SEA or SCMs, the Engineer will require prequalification of materials and mix proportions proposed for use before placing such concrete. The Engineer will prequalify concrete based on past performance records using statistical computations of population sizes and (n-1) weighting, or trial batch test reports in compliance with computed minimum average strength for material and mix proportions. The Engineer will determine minimum average strength on probability of not more than one in 20 tests falling below specified strength for the following conditions:

(1) When past performance records are available, furnish the following documented performance records:

(a) Minimum of 15 consecutive 28-day strength tests from projects having same materials and mix proportions.

(b) Two groups totaling 30 or more test results representing similar materials in which mix proportion strengths are within 20 percent of specified strength, from data obtained within one year of proposed use.

The Engineer will analyze performance records to establish standard deviation.

(2) When sufficient past performance records are not provided, the Engineer will assume current standard deviation to be 500 psi for compressive strength, f'_c , and 50 psi for flexural strength, f'_r .

Unless sufficient performance records are available from other projects at DOT Materials Testing and Research Branch, submit test performance records or trial test reports for prequalifications, based on data of most recent tests made on concrete of proposed mix design, and data obtained within one year of proposed use.

When shrinkage reducing admixtures are used, submit test results showing compliance to the Contract Documents' requirements.

Include the following information in test data and trial batch test reports:

date of mixing; mixing equipment and procedures used; size of batch in cubic yards and weight, type, and source of ingredients used; slump of concrete; air content of concrete when using air entraining agent; age at time of testing; and strength of concrete cylinders tested.

Show that concrete strength tests equal or exceed minimum average strength in trial test reports. Test is average 28-day test results of five consecutive concrete cylinders or concrete beams taken from single batch. No cylinder or beam shall have strength less than 85 percent of minimum average strength.

Submit test data and trial test reports signed by official of firm that performed tests.

The Engineer reserves the right to stop work when a series of low strength tests occur. Do not continue concrete work until cause is established and the Engineer is informed of and accepts, necessary corrective action to be taken.

(C) Batching. Measure and batch materials in accordance with the following provisions:

(1) Portland Cement. Either sacked or bulk cement may be used. Do not use fraction of sack of cement in concrete batch unless cement is weighed.

Weigh bulk cement on weighing device accepted by the Engineer. Seal and vent bulk cement-weighing hopper properly to preclude dusting during operation. Do not suspend discharge chute from weighing hopper. Arrange discharge chute so that cement will not lodge in hopper or leak from hopper.

Batching accuracy shall be within 1 percent, plus or minus, of required weight.

(2) Water. Measure water by volume or by weight. Use readily adjustable device for measurement of water, with accuracy within 1 percent, plus or minus, of quantity of water required for batch. Arrange device so that variable pressure in water supply line does not affect measurements. Equip measuring tanks with outside taps and valves or other accepted means to allow for checking calibration.

(3) Aggregates. When storing and stockpiling aggregates, avoid separation of coarse and fine particles within each size, and do not intermix various sizes before proportioning. Protect stored or stockpiled aggregates from dust or other foreign matter. Do not stockpile together,

aggregates from different sources and of different gradations.

When transporting aggregates from stockpiles or other sources to batching plant, ensure uniform grading of material is maintained. Do not use aggregates that have become segregated or mixed with earth or foreign matter. Stockpile or bin aggregates at least 12 hours before batching. Produce or handle aggregates by hydraulic methods and wash and drain aggregates. If aggregates exhibit high or non-uniform moisture content, the Engineer will order storage or stockpiling for more than 12 hours.

Proportion aggregates by weight, with the exception that aggregates in concrete for minor structures, curbs, and sidewalks may be proportioned by either volume or weight. For volumetric proportioning, use measuring boxes of known capacity to measure quantity of each aggregate size.

Use batch weight based on dry materials plus total weight of moisture (both absorbed and surface) contained in aggregate. Measure individual aggregates to within 2 percent, plus or minus, of required weight, and total weight of aggregates to within 1 percent, plus or minus, of required weight.

(4) Admixtures. All admixtures shall be compatible with each other. Admixtures which significantly increase the drying shrinkage or creep in the concrete may be rejected by the Engineer. Store, proportion, and dispense admixtures in accordance with the following provisions:

(a) Liquid Admixtures. Dispense chemical admixtures, air entraining admixtures, and corrosion inhibiting admixtures in liquid form. Use mechanical dispensers for liquid admixtures with sufficient capacity to measure prescribed quantity for each batch of concrete. Include graduated measuring unit in each dispenser to measure liquid admixtures to within 5 percent, plus or minus, of prescribed quantity for each batch. Read graduations accurately from point of measuring unit, and control proportioning operations to permit visual check of batch accuracy before discharging. Mark each measuring unit clearly for type and quantity of admixture.

Arrange with supplier to provide sampling device consisting of valve located in safe and accessible location for sampling admixtures.

When using more than one liquid admixture for concrete mix, use separate measuring unit for each liquid admixture and

276 dispense separately to avoid interaction that may interfere with
277 admixture efficiency and adversely affect concrete. Dispense
278 liquid admixture by injecting so as not to mix admixture at high
279 concentrations.

280
281 When using liquid admixtures in concrete that is
282 completely mixed in paving or continuous mixers, operate
283 dispensers automatically with batching control equipment.
284 Equip such dispensers with automatic warning system that shall
285 provide visible or audible signals at points where proportioning
286 operations are controlled, when the following occurs:

- 287
288 a. Quantity of admixture measured for each batch of
289 concrete varies from pre-selected dosage by more
290 than 5 percent; or
291
292 b. Entire contents of measuring unit from dispenser is
293 not emptied into each batch of concrete.
294

295 Unless liquid admixtures are added to batch with
296 pre-measured water, discharge liquid admixtures into stream of
297 water that disperses admixtures uniformly throughout batch. An
298 exception is that air-entraining admixtures may be dispensed
299 directly into moist sand in batching bins, provided adequate
300 control of concrete air content can be maintained.
301

302 Measure and disperse special admixtures, as
303 recommended by admixture manufacturer, and as accepted by
304 the Engineer. Special admixtures include high-range water
305 reducers requiring dosages greater than capacity of
306 conventional dispensing equipment. For site-added, high-range
307 water reducers, use calibrated, portable dispenser supplied by
308 manufacturer.
309

310 **(b) Mineral Admixtures.** Protect mineral admixtures from
311 exposure to moisture until used. Pile sacked material of each
312 shipment to permit access for tally, inspection, and identification.
313

314 Provide adequate facilities to ensure that mineral
315 admixtures meeting specified requirements are kept separate
316 from other mineral admixtures and that only specified mineral
317 admixtures are allowed to enter into the work. Provide safe and
318 suitable facilities for sampling mineral admixtures at weigh
319 hopper or in feed line immediately in advance of hopper.
320

321 Incorporate mineral admixtures into concrete using

equipment conforming requirements for Portland Cement weigh
hoppers and charging and discharging mechanisms specified in
ASTM C94 and Subsection 601.03(C) - Batching.

When concrete is completely mixed in stationary paving
or continuous mixers, weigh mineral admixture in separate
weigh hopper. Introduce mineral admixture and cement
simultaneously into mixer, proportionately with aggregate.

When interlocks are required for cement-charging
mechanisms, and cement and mineral admixtures are weighed
cumulatively, interlock their charging mechanisms to prevent
introduction of mineral admixture until mass of cement in weigh
hopper is within tolerances specified in Subsection 601.03(C)(1)
- Portland Cement.

In determining maximum quantity of free water that may
be used in concrete, consider mineral admixture and
supplementary cementitious materials (SCMs) to be cement.

(5) Bins and Scales. At batching plant, use individual bins,
hoppers, and scale for each aggregate size. Include separate bin,
hopper, and scale for bulk cement and fly ash.

Except when proportioning bulk cement for pavement or
structures, cement weigh hopper may be attached to separate scale for
individual weighing or to aggregate scale for cumulative weighing. If
cement is weighed cumulatively, weigh cement before other
ingredients.

When proportioning for pavement or structures, keep bulk
cement scale and weigh hopper separate and distinct from aggregate
weighing equipment.

Use springless-dial or beam-type batching scales. When using
beam-type scales, make provisions to show operator that required load
in weighing hopper is approaching. Use devices that show condition
within last 200 pounds of load and within 50 pounds of overload.

Maintain scale accuracy to 0.5 percent throughout range of use.
Design poises to lock to prevent unauthorized change of position. Use
scales inspected by the State Measurement Standards Branch of the
Department of Agriculture to ensure their continued accuracy. Provide
not less than ten 50-pound weights for testing scales.

Batching plants may be equipped to proportion aggregates and

bulk cement by automatic weighing devices.

(6) Batching and Hauling. When mixing is to be performed at work site, transport aggregates from batching plant to mixer in batch boxes, vehicle bodies, or other containers of adequate capacity and construction. Use partitions to separate batches and prevent spilling from one compartment to another while in transit or during dumping.

Transport bulk cement to mixer in tight compartments carrying full quantity of cement required for batch. Once cement is placed in contact with aggregates, batches shall be mixed and placed within 1-1/2 hours of contact. Cement in original shipping packages may be transported on top of aggregates. Ensure that each batch contains number of sacks required by job mix.

Deliver batches to mixer intact. Charge each batch into mixer without loss of cement. When carrying more than one batch on truck, charge batch into mixer without spilling material from one batch compartment into another.

(D) Mixing. Mix concrete in mechanically operated mixers.

Use stationary or truck mixers that distribute materials thoroughly and produce concrete uniform in color and appearance. When there is variation in mixed concrete attributable to worn pickup or throw-over blades, the Engineer will inspect mixer. If inspection reveals that blades are worn more than one inch below original height of manufacturer's design, repair or replace blades. Upon request, make copy of manufacturer's design, showing dimensions and arrangement of blades.

Charge batches into central or truck mixers so that portion of mixing water enters ahead of cement and aggregates. Deliver uniform flow of water. Place entire amount of batch water in mixer by end of first quarter of mixing period. When mixers with multiple compartment drums are used, time required to transfer material between compartments will be included as mixing time. Use drum rotation speed as designated by manufacturer. If mixing does not produce concrete of uniform and smooth texture, provide additional revolutions at same speed until thorough mixing of each concrete batch is attained. Begin measuring mixing time from time cement, aggregates, and 60 percent of water are in drum. Do not exceed manufacturer's rated capacity for volume of concrete mixed in each batch.

Equip central or truck mixers with attachment for automatically timing mixing of each concrete batch. Timing device shall include automatic feature for locking discharge chute and device for warning operator when required mixing duration has been met. If timing or locking device fails to operate,

immediately furnish clock or watch that indicates seconds, to mixer operator. If timing device is not repaired within three days after becoming inoperative, shut down batching operation until timing device is repaired.

For stationary mixers, use mixing time between 50 seconds and 5 minutes. Select mixing time, as necessary, to produce concrete that meets uniformity criteria when tested in accordance with Section 11.3.3 of ASTM C94. The Contractor may designate mixing time for which uniformity tests are to be performed, provided mixing time is not less than 50 seconds or more than 5 minutes. Before using concrete for pavements or structures, mix concrete to meet specified uniformity requirements. The Contractor shall furnish labor, sampling equipment, and materials required for conducting uniformity tests of concrete mixture. The Engineer will furnish required testing equipment, including scales, cubic measure, and air meter; and will perform tests. The Engineer will not pay separately for labor, equipment, materials, or testing, but will consider the costs incidental to concrete. After batching and mixing operational procedures are established, the Engineer will not allow changes in procedures without the Contractor re-establishing procedures by conducting uniformity tests. Repeat mixer performance tests whenever appearance of concrete or coarse aggregate content of samples is not conforming to requirements of ASTM C94. For truck mixers, add four seconds to specified mixing time if timing starts as soon as skip reaches its maximum raised position.

Unless otherwise indicated in the contract documents or accepted by the Engineer, concrete shall be mixed at proportioning plant. Operate mixer at agitating speed while in transit. Concrete may be truck-mixed only when cement or cement and mixing water are added at point of delivery. Begin mixing truck-mixed concrete immediately after introduction of mixing water to cement and aggregates, or introduction of cement to aggregates.

Inclined-axis, revolving drum truck mixers shall conform to Truck Mixer, Agitator and Front Discharge Concrete Carrier Standards TMMB 100-01, 15th Revision, published by Truck Mixer Manufacturers Bureau. Truck mixers shall produce thoroughly mixed and uniform mass of concrete and shall discharge concrete without segregation.

Manufacturer's standard metal rating plate shall be attached to each truck mixer, stating maximum rating capacity in terms of volume of mixed concrete for various uses and maximum and minimum mixing speeds. When using truck mixers for mixing, adhere to maximum capacity shown on metal rating plate for volume of concrete in each batch.

Operate truck mixers at mixing speed designated by manufacturer, but at not less than 6 or more than 18 revolutions per minute. Mix truck-mixed concrete initially between 70 and 100 revolutions at manufacturer-designated

mixing speed, after ingredients, including water, are in mixer. Water may be added to mixture not more than two times after initial mixing is completed. Each time that water is added, turn drum an additional 30 revolutions or more at mixing speed until concrete is mixed uniformly.

When furnishing shrink-mixed concrete, transfer partially mixed concrete at central plant to truck mixer. Apply requirements for truck-mixed concrete. The Engineer will not credit number of revolutions at mixing speed for partial mixing in central plant.

When accepted by the Engineer, hand mixing may be allowed. The entire concrete placement at one location shall not exceed 1/3 cubic yard. It shall be hand mixed on a watertight, level platform. Use no aluminum to construct platform. Measure proper amount of coarse aggregate in measuring boxes and spread on platform. Spread fine aggregate on that coarse aggregate layer. Limit coarse and fine aggregate layers to total depth of one foot. Spread dry cement on this mixture. Turn whole mass not less than two times dry. Add sufficient clean water, distributed evenly. Turn whole mass again, not less than three times, not including placing in carriers or forms.

(E) Transporting Mixed Concrete. Transport central-mixed concrete to delivery point in truck agitators or truck mixers operating at speed designated by equipment manufacturer as agitating speed; or in non-agitating hauling equipment, provided consistency and workability of mixed concrete upon discharge at delivery point is suitable for placement and consolidation in place; and provided mixed concrete after hauling to delivery point conforms to uniformity criteria when tested as specified in ASTM C94.

For revolving drum truck mixers transporting central-mixed concrete, limit concrete volume to manufacturer's rated capacity for agitator operation. Maintain agitating speed for both revolving drum mixers and revolving blade type agitators as designated on manufacturer's data plate. Equip truck mixers or truck agitators with electrically or mechanically actuated counters. Actuate counters after introducing cement to aggregates.

Bodies of non-agitating hauling equipment shall be smooth, watertight, metal containers equipped with gates to permit control of concrete discharge. Protect open-topped haul vehicle against weather with cover accepted by the Engineer.

When hauling concrete in non-agitating trucks, complete discharge within 30 minutes after introducing mixing water to cement and aggregates.

When truck mixer or agitator is used for transporting central-mixed concrete to delivery point, complete discharge within 1-1/2 hours, or before 250 revolutions of drum or blades, whichever comes first after introduction of

506 mixing water to cement and aggregates, or cement to aggregates. For truck-
507 mixed concrete, complete concrete discharge within 1-1/2 hours, or before 300
508 revolutions of drum or blades, whichever comes first. These limitations are
509 permitted to waived if concrete is of such slump after the 1-1/2 hour time or
510 300-revolution limit has been reached, that it can be placed, without addition of
511 water to the batch.

512
513 Submit delivery tickets from manufacturers of truck-mixed concrete and
514 central-mixed concrete with each truckload of concrete before unloading at
515 jobsite. Printed, stamped, or written delivery ticket shall include the following
516 information:

- 517 (1) Name of concrete plants.
- 518
- 519 (2) Serial number of ticket.
- 520
- 521 (3) Date and truck number.
- 522
- 523 (4) Name of Contractor.
- 524
- 525
- 526 (5) Specific project, route, or designation of job (name and location),
527 and truck overweight permit number when required.
- 528
- 529 (6) Specific class or designation of concrete in accordance with
530 contract documents.
- 531
- 532 (7) Quantity of concrete in cubic yards.
- 533
- 534 (8) Time of loading batch or mixing of cement and aggregates.
- 535
- 536 (9) Water added by receiver of concrete and receiver's initials.
- 537
- 538 (10) Information necessary to calculate total mixing water added by
539 producer. Total mixing water includes free water on aggregates, water,
540 and water added by truck operator from mixer tank.
- 541
- 542 (11) Readings of non-resettable revolution counters of truck mixers
543 after introduction of cement to aggregates, or introduction of mixing
544 water to cement aggregates.
- 545
- 546 (12) Supplier's mix number or code.
- 547

548 Furnish additional information designated by the Engineer and
549 required by job specifications upon request.

550 (F) **Consistency.** Regulate quantity of water used in concrete mixes so
551

that concrete consistency, as determined by AASHTO T 119 test method, is within nominal slump range specified in Table 601.03-3 - Slump for Concrete or as stated on the accepted concrete mix design. If concrete slump exceeds nominal slump, adjust mixture of subsequent batches. If slump exceeds maximum slump, the Engineer will reject concrete unless deemed satisfactory for its use.

The Engineer will also reject harsh or unworkable concrete that cannot be properly placed. Remove rejected concrete at no increase in contract price or contract time.

Slump for concrete shall be as specified in Table 601.03-3 – Slump for Concrete.

TABLE 601.03-3 - SLUMP FOR CONCRETE		
Type of Work	Nominal Slump Inches	Maximum Slump Inches
Concrete Pavements	0 – 3	3-1/2
Reinforced Concrete Structures: Sections Over 12 Inches	0 – 4	5
Sections 12 Inches Thick or Less	2 – 5	6
Non-Reinforced Concrete Facilities	1 – 3	4
Concrete Placed Underwater	6 – 8	9
Bridge Decks	4 – 6	7
Walls Using Formliners	5 – 7	8

If the slump of the ready mix concrete upon delivery is below the design slump, water may be added provided:

- (1) Water shall not be added to the concrete if more than ¼ cubic of concrete has been discharged from the mixer.
- (2) Water may be added only up to 30 minutes after the average travel time to the jobsite.
- (3) The maximum slump, the maximum water/cement ratio, and the maximum water per cubic yard shall not be exceeded.
- (4) Not more than 1 ½ gallons of water per cubic yard shall be added to the concrete, but not more than the amount of “held-back” water.
- (5) The amount of “held-back” water from the approved mix design

shall be shown on the delivery ticket.

In adverse or difficult conditions that may affect placement of concrete, the above slump limitations may be exceeded for placement workability, with the addition of admixture conforming to Subsection 711.03 - Admixtures, if accepted by the Engineer in writing and provided water-cement ratio is maintained. Provide additional cement and water, or admixture at no increase in contract price or contract time.

(G) Forms. Construct forms in accordance with applicable sections.

(H) Placing Concrete. Place concrete in accordance with applicable sections.

(I) Finishing Concrete Surfaces. Finish concrete surfaces in accordance with applicable sections.

(J) Curing Concrete. Cure concrete in accordance with applicable sections.

601.04 Measurement. The Engineer will measure concrete in accordance with the applicable sections.

601.05 Payment. The Engineer will pay for the accepted concrete under the applicable sections.

END OF SECTION 601”

SECTION 602 - REINFORCING STEEL

Make the following amendments to said Section:

(I) Amend **Subsection 602.03(D) Placing and Fastening** by revising the first sentence of the first paragraph between lines 58 and 60 to read as follows:

“Unless otherwise indicated in the contract documents, place and fasten reinforcing steel in accordance with the CRSI Placing Reinforcing Bars and the CRSI *Manual of Standard Practice*.”

(II) Amend **Subsection 602.03(D) Placing and Fastening** by adding the following sentence to Note 1 in Table 602.03-1 Placement Tolerances at line 68:

“Note 1 is not applicable for deck slabs, approach slabs, and sleeper slabs.”

(III) Amend **Subsection 602.03(D) Placing and Fastening** by amending the last sentence of paragraph three at line 79 and 80 to read as follows:

“All plastic bar supports will be allowed only in prestressed concrete members and for vertical positions in drilled shafts.”

(IV) Amend **Subsection 602.03(E)(1)(b)** by revising the number 33 to read 50 at line 159.

(V) Amend **Subsection 602.03(E)(3) Butt-Joined Splices** by replacing the last sentence of the first paragraph between lines 262 and 263 with the following sentence:

“Completed butt splices shall develop not less than the specified tensile strength of the unspliced bars.”

(VI) Amend **Subsection 602.03(E)(3)(b)1. General** by deleting the words “of 125 percent of specified yield strength” in subparagraph d. at lines 443 and 444.

(VII) Amend **602.04 – Measurement** by revising lines 803 to 809 to read as follows:

“602.04 Measurement. The Engineer will not measure reinforcing steel for payment.

(VIII) Amend **602.05 – Payment** by revising lines 810 to 820 to read as follows:

“602.05 Payment. The Engineer will not pay for the accepted reinforcing steel separately. The Engineer shall consider the cost for the accepted

49 reinforcing steel as included in the contract price of the various contract items.
50 The cost is for the work prescribed in this section and the contract documents.”
51

52

END OF SECTION 602

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(I) Amend 603.03(C)(1) - Culverts by revising lines 106 to 108 to read as follows:

(II) Amend **603.04 – Measurement** by revising lines 282 to 292 to read as follows:

(A) The Engineer will measure bed course material for culverts per cubic yard in accordance with contract documents.

(III) Amend 603.05 – Payment by revising lines 294 to 361 to read as follows:

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
Bed Course Material for 42-Inch RCP Drain Pipe	Cubic Yard
42-Inch RCP Drain Pipe, Class V (Open Trench Installation)	Linear Foot"

ER-27(008)
603-1a

3/16/26

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(I) Amend **604.05 – Payment** by revising lines 126 to 237 to read as follows:

The Engineer will pay for each of the following pay items when included in the proposal schedule:

The Engineer will pay for:

- (1) 20 percent of contract bid price upon completion of excavating to depth established for manhole.
- (2) 60 percent of contract bid price upon completion of constructing manhole.
- (3) 20 percent of contract bid price upon completion of backfilling around manhole.

The Engineer will pay for:

- (1) 20 percent of contract bid price upon completion of excavating to depth established for inlet.
- (2) 60 percent of contract bid price upon completion of constructing inlet.
- (3) 20 percent of contract bid price upon completion of backfilling around inlet.

The Engineer will pay for:

(1) 20 percent of contract bid price upon completion of excavating to

48 depth established for inlet.
49
50 (2) 60 percent of contract bid price upon completion of constructing
51 inlet.
52
53 (3) 20 percent of contract bid price upon completion of backfilling
54 around inlet.
55
56 Standard Concrete Outlet Structure Each”
57
58
59 **END OF SECTION 604**

SECTION 607 – CHAIN LINK FENCES AND GATES

Make the following amendments to said Section:

(I) Amend **607.04 Measurement** by revising lines 105 to 106 to read as follows:

“607.04 Measurement. The Engineer will measure Chain Link Fence per linear foot in accordance with the contract documents.”

(II) Amend 607.05 Payment by revising lines 108 to 115 to read as follows:

“607.05 Payment. The Engineer will pay for the chain link fence at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
4-Feet, Chain Link Fence	Linear Foot
6-Feet, Chain Link Fence	Linear Foot"

END OF SECTION 607

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(I) Amend **612.04 Measurement** by revising lines 46 to 47 to read as follows:

(II) Amend **612.05 Payment** by revising lines 49 to 60 to read as follows:

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
Grouted Rubble Paving	Cubic Yard"

ER-27(008)
612-1a

7/1/18

SECTION 617 – PLANTING SOIL

Make the following amendments to said Section:

(I) Amend **617.04 Measurement** by revising lines 104 to 105 to read as follows:

“617.04 Measurement. The Engineer will measure Imported Planting Soil per cubic yard in accordance with the contract documents.”

(II) Amend 617.05 Payment by revising lines 107 to 123 to read as follows:

“617.05 Payment. The Engineer will pay for the accepted imported planting soil at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item

Pay Unit

Imported Planting Soil (4" Layer)	Cubic Yard
-----------------------------------	------------

The Engineer will consider planting soil obtained from within highway right-of way as selected material. The Engineer will pay this material under Section 203 – Excavation and Embankment.

The Engineer will not consider placing of materials in windrows as stockpiling as specified in Section 203 – Excavation and Embankment.”

END OF SECTION 617

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(l) Amend **Subsection 619.02(H)(3) – Application Records** from lines 207 to 210 to read:

(II) Amend **Subsection 619.03(A) – Codes and Standards** from lines 262 to 264 to read:

(1) Codes and Standards. Perform work in accordance with applicable laws, codes, and regulations. Provide inspections and permits required by Federal, State, and local governmental authorities.

(a) A statement declaring at least five continuous years of experience of a scope similar to that required for the work, including installing temporary irrigation (where applicable), hydro-mulch application, soil preparation, and plant installation and establishment.

(c) Produce a list of completed projects similar to the scope and size of the required work to substantiate the experience. The list shall contain a minimum of five different landscape projects, excluding single-family residential landscape. A minimum of five different landscape projects shall be rated positive on a performance evaluation by the references in the list below. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information:

- 48 1. Project name
- 49 2. Location of project (city, state)
- 50 3. Owner
- 51 4. Owner Contact (name and current phone
- 52 number)
- 53 5. Architect or Engineer Company Name
- 54 6. Architect or Engineer Contact (name and
- 55 current phone number)
- 56 7. Construction Manager (name and current
- 57 phone number)
- 58 8. Description of Project, Scope of Work
- 59 Performed
- 60 9. Total Value of Construction (including change
- 61 orders)
- 62 10. Original Scheduled Completion Date
- 63 11. Actual Date of Completion

64 (d) **Approval.** The Contractor shall submit the items
65 under this section to the Engineer for approval prior to
66 construction. If the applicant does not have proof of five
67 continuous years of experience with a minimum of five
68 completed projects similar in scope and size, the Contractor
69 shall remove the applicant from the project upon receipt of a
70 written notice from the Engineer. Requests to substitute an
71 applicant will be allowed under Subsection 105.16
72 Subcontracts.”

73
74 (III) Amend **Subsection 619.03(I) – Adding Fertilizer and Amendments** by
75 revising the section from lines 310 to 314 to read:

76
77 “(1) Uniformly distribute fertilizer and amendments over planting areas as
78 recommended by the Soil Analysis Report as specified in Section 617 –
79 Planting Soil. Document if rates and amounts of fertilizer deviate from
80 manufacturer’s specifications. Rototill top four inches of soil to evenly
81 incorporate fertilizer and amendments. Rototill before installing drip
82 irrigation system.”

83
84 (IV) Amend **Subsection 619.03(T)(3) – Fertilizing** by adding the following
85 paragraph after line 478:

86
87
88
89
90
91
92
93
94

“Submit recommendations from a licensed Landscape Architect when deviating from the application rates and amounts above. Document if the rates and amounts of fertilizer deviate from manufacturer’s specifications.”

END OF SECTION 619

SECTION 629 - PAVEMENT MARKINGS

Make the following amendments to said Section:

(I) Amend **Subsection 629.03(B) – Temporary Pavement Markings** by revising the third paragraph from line 62 to 63 to read:

“Maintain and replace temporary pavement markings, flexible delineators, and barricades. ”

(II) Amend **Table 629.03 – 1 – Temporary Pavement Markings** to read as follows:

“TABLE 629.03-1 TEMPORARY PAVEMENT MARKINGS	
TYPE	PAVEMENT MARKINGS
Passing Permitted - Both Sides	Single 4-inch yellow stripe 5 feet in length spaced 20 feet on center with Type D markers spaced 40 feet on center and located on center of 5-foot length of stripe.
Passing Prohibited - Both Sides	Double solid 4-inch yellow stripes with Type D markers placed 20 feet on center on one of 4-inch yellow stripes selected by the Engineer.
Passing Permitted - One Side Only	Single continuous 4-inch yellow stripe with Type D markers placed on stripe 20 feet on center on no-passing side and single 4-inch yellow stripes 5 feet in length spaced 20 feet on center on passing side.
Lane Lines - Lane Changing Permitted	Single 4-inch yellow or white stripe 5 feet in length spaced 20 feet on center with Type C or Type D markers spaced 40 feet on center.
Lane Lines - Lane Changing Prohibited	Double solid 4-inch white stripes with Type C markers placed 20 feet on center on one of the 4-inch white stripes selected by the Engineer.
Crosswalk	Two 12-inch white transverse lines spaced 8 feet on center or as ordered by the Engineer.
Stop Line	Single 12-inch white transverse line.
Note: Paint may be used for temporary markings in areas where final paving is not complete.”	

(III) Amend **Subsection 629.03(C) – Permanent Pavement Markings** by adding the following after line 267:

19 **“(5) Thermoplastic Hot Spray Pavement Marking.**
20

21 **(a) Equipment.** Use equipment constructed for preparation
22 and application of thermoplastic hot spray pavement marking.
23

24 Equipment shall provide continuous mixing and agitation of
25 material. Conveying parts of equipment shall be constructed to
26 prevent accumulation and clogging.
27

28 Use applicator capable of containing minimum of 125
29 pounds of molten material.
30

31 Provide kettle for melting and heating composition. Equip
32 kettle with automatic thermostat control device so that heating can
33 be done by controlled heat transfer liquid rather than direct flame.
34

35 Equip and arrange applicator and kettle in accordance with
36 National Fire Underwriters requirements.
37

38 Mixing and conveying parts, including the spray gun, shall
39 maintain material at molten temperature.
40

41 Apply beads to entire surface of completed stripe by
42 automatic bead dispenser attached to hot spray applicator.
43

44 Equip bead dispenser with automatic cutoff control
45 synchronized with cutoff of thermoplastic material.
46

47 Use equipment that provides for varying spray widths to
48 produce varying widths of traffic markings.
49

50 Use mobile and maneuverable applicator that is capable of
51 following straight lines and making curves in true arcs.
52

53 **(b) Application.** Clean off dirt, debris, blaze, paint, tape, and
54 grease. Apply thermoplastic hot spray pavement marking only
55 when pavement surface is dry.
56

57 Use equipment that can apply material in variable widths
58 from 2 inches to 12 inches. Apply material for full width of stripe
59 in one application or pass.
60

61 On concrete pavements, on HMA pavements more than
62 seven days old, and on HMA pavements paved within seven days
63 containing less than 6 percent bituminous asphalt, pre-stripe
64 application area with binder material, primer, or prime seal coat
65 recommended by pavement marker manufacturer.

Line thickness, as viewed from lateral cross section, shall measure not less than 3/32 inch at edges, and not less than 1/8 inch in center.

Where required by the contract documents to apply new markings over existing markings, bond new line over old line so that no splitting or separation takes place during its useful life.

Provide finished lines with well-defined edges, free of waviness."

(IV) Amend **629.04 – Measurement** by revising lines 292 to 294 to read as follows:

"629.04 Measurement.

(A) The Engineer will measure thermoplastic and preformed pavement marking tape per linear foot in accordance with the contract documents. The longitudinal pavement markings will be measured per linear foot as a single stripe for the width specified in the contract and in the proposal.

The Engineer will measure the painted stripes that are twelve (12) inches wide or less as a single stripe. The Engineer will measure the painted stripes over twelve (12) inches wide as two (2) stripes. The Engineer will measure the double stripes that are twelve (12) inches or less in total width including the transverse space between the stripes as a single stripe.

The Engineer will measure the transverse markings by the linear foot according to the contract.

The Engineer will not measure temporary pavement markings including flexible delineator posts with reflector markers or Type I Barricades and temporary signs installed for the longitudinal guidance of public traffic over reconstructed areas, cold planed surfaces, newly paved surfaces or other unmarked or scarified areas for payment.

The Engineer will measure the temporary pavement markings and temporary signs installed as ordered by the Engineer for special temporary traffic patterns on a force account basis, if the contract specifies payment in the proposal.

The Contractor shall consider the work required for the removal of pavement markings incidental to the various contract items, except as provided in the proposal or elsewhere in the contract. If the contract

113 stipulates that the Engineer will make payment for the removal of
114 pavement markings, the Engineer will measure the removal of
115 pavement markings.

116
117 The Engineer will measure the longitudinal pavement markings by
118 the linear foot according to the contract. Longitudinal gaps for skip
119 striping will not be included in the measurement.

120
121 (B) The Engineer will measure the pavement markers per each for the
122 types shown in the proposal.”

123
124 (V) Amend **629.05 – Payment** by revising lines 296 to 330 to read as follows:

125
126 **“629.05 Payment.**

127
128 (A) The Engineer will pay for thermoplastic and preformed pavement
129 marking tape at the contract price per linear foot or on a lump sum
130 basis according to the contract, complete in place, including primers.

131
132 The Engineer will pay for double four (4) inch striping with a four (4)
133 inch space between stripes at the contract price per linear foot or on a
134 lump sum basis according to the contract.

135
136 The Engineer will pay for crosswalk markings at the contract price
137 per lane of traffic marked, according to the contract.

138
139 The Engineer will pay for pavement arrows (single and multiple
140 heads), symbols, and words at the contract price per each according to
141 the contract.

142
143 The contract unit price paid shall be full compensation for furnishing
144 labors, materials, tools, equipment and incidentals and for doing the
145 work involved in furnishing and installing pavement markings complete
146 in place according to the contract.

147
148 The Engineer will not pay for the temporary pavement markings
149 including flexible delineator posts with reflector markers or Type I
150 Barricades and temporary signs installed for the longitudinal guidance
151 of public traffic over reconstructed areas, cold planed surfaces, newly
152 paved surfaces or other unmarked or scarified areas for payment if not
153 shown in the proposal separately. The Engineer will consider them
154 incidental to the various contract items.

155
156 If the contract specifies payment for temporary pavement markings
157 installed as ordered by the Engineer for special temporary traffic
158 patterns, the Engineer will pay from an allowance for “Temporary
159 Construction Zone Markings”.

The Engineer will compute the actual amount paid to the Contractor for force account work according to Subsection 109.06 – Force Account Provisions and Compensation.

If the contract specifies payment for removal of pavement markings under unit price pay items, the Engineer will pay for the accepted quantities at the contract unit prices bid. The prices shall be full compensation for removing such items according to the contract.

(B) The Engineer will pay for the various types of pavement markers at the contract price per each according to the contract, complete in place, including adhesives.

(C) The Engineer will pay for pavement striping at the contract price per linear foot according to the contract.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
Removal of Existing Pavement Striping and Markings	Lump Sum
Removal of Temporary Pavement Striping and Markings	Lump Sum
4-Inch White Pavement Striping (Thermoplastic Extrusion)	Linear Foot
4-Inch Double Yellow Pavement Striping (Thermoplastic Extrusion)	Linear Foot
Type C Pavement Marker	Each
Type D Pavement Marker	Each"

END OF SECTION 629

1 Make the following Section a part of the Standard Specifications:

2
3 **SECTION 636 – E-CONSTRUCTION**
4
5

6 **636.01 Description.** This section specifies requirements for performing the
7 Project in a “paperless” manner, using electronic tools for all submittals,
8 communications, quantity tracking, testing and sampling, scheduling, quality
9 control, and performance monitoring.

10
11 **636.02 General Requirements.** The Contractor shall implement the use of the
12 E-Construction platform, as provided by the HDOT and directed by the Engineer,
13 for use throughout the project. Paper-based or hard copy submittals will not be
14 accepted.

15
16 This Special Provision shall take precedence over all other Specification
17 sections with respect to providing and receiving paper copy communications,
18 submittals, and any project records. Where conflicts exist, and a decision between
19 a hard-copy item and a corresponding electronic version is needed, the electronic
20 version shall be selected, unless otherwise directed by the Engineer.

21
22 **636.03 Construction**
23

24 **(A) Plans and Specifications.** Project drawings will not be provided to
25 the Contractor in hard copy format. An electronic version will be provided
26 in the E-Construction platform for use during the project.
27

28 The Contractor shall note all changes to the work, including all
29 subcontractor’s work, in electronic format using the E-Construction
30 platform. Red annotations shall be used to note changes. Blue annotations
31 shall be used for any additional notes that will be helpful for the State in
32 interpreting the field posted drawings. Other drafting standards may be
33 implemented by the Engineer and shall be adhered to by the Contractor.
34 Changes shall be input by the Contractor and reviewed by the Engineer
35 monthly. The Contractor shall make any changes that the Engineer
36 requires.
37

38 **(B) Submittals.** The Contractor shall provide all required submittals, as
39 listed within the contract documents, via the E-Construction platform. All
40 review, approval, and resubmittal regarding submittals shall also be
41 documented within the E-Construction platform.
42

43 **(C) Correspondence.** Electronic mail (email) shall be the preferred
44 method of electronic communication. All communications that affect project
45 scope, schedule, cost, or quality, including changes and requests for
46 information, shall be submitted as directed by the Engineer.

47 **(D) Prosecution and Progress.** The Contractor shall provide all
48 administrative, management, and project support documents required by
49 various specification sections, using the E-Construction platform. These
50 elements include, but are not limited to:

- 51
- 52 (1) Preconstruction Data Submittal (Section 108.03)
- 53 (2) Correspondence regarding Contract Time (Section 108.05)
- 54 and Delays
- 55 (3) Progress Schedules (Section 108.06)
- 56 (4) Weekly Meeting preparatory materials (Section 108.07)
- 57 (5) Samples, certifications, material data, installation instructions,
- 58 and shop drawings (Sections 105 – Control of Work and 106
- 59 -Material Restrictions and Requirements)
- 60 (6) Field-posted Drawings (Section 648)
- 61 (7) Pre-Final and Final Inspection submittals (Section 108.13)
- 62 (8) Warranty documentation – Guarantee of Work (Section
- 63 108.17)
- 64 (9) Project Closing Documents – Final Settlement of Contract
- 65 (Section 108.19)
- 66

67 In addition to the foregoing, the Contractor shall provide any
68 other materials, correspondence, and submittals using the E-
69 Construction platform as directed by the Engineer.
70

71 **(E) Resources.** The Contractor shall provide a comprehensive list of
72 Contractor labor and equipment, including all subcontractor labor and
73 equipment, that will be deployed on the project, using spreadsheet-based
74 templates provided in the E-Construction platform. All template fields shall
75 be completed. The submitted information shall comply with the
76 requirements of Specification Section 108 – Prosecution and Progress
77 (identification of labor and equipment resources) and Specification Section
78 109 - Measurement and Payment (cost data) and represent all individual
79 personnel with labor categories and rates, and all equipment owned or
80 rented, with associated rates, on this project. Updates for additional
81 personnel or equipment shall be accomplished by the Contractor at will and
82 shall be completed when directed by the Engineer.
83

84 **(F) Electronic Ticketing.** The Contractor/supplier shall provide
85 electronic material tickets for all loads of Asphalt Mix (Hot Mix Asphalt
86 Concrete, Hot Mix Asphalt Base Course, or Stone Matrix Asphalt), Portland
87 Cement Concrete (PCC), or Construction Aggregates delivered to the
88 project.
89

90 The Contractor/supplier may use the plant ticketing system of their
91 choice to create the material ticket data.
92

Digital material records created, altered, or voided by a person with direct knowledge of the event (the weighmaster or batch person) must be transmitted directly from the plant computer system (scale and batch) to the Department of Transportation at or near the time of the event.

Should digital material records be transmitted to the Department of Transportation through other methods, the weighmaster or batch person must certify the digital material records received by the Department of Transportation daily.

The Department's minimum service level expectation is to receive tickets no later than 5 minutes from when they were created, 99.5% of the time. The Department of Transportation may reject any ticket(s) received later than 5 minutes from when the ticket was created.

(1) Ticket data shall include the following:

(a) Material ticket data will be submitted to the agency via direct connection or a Hypertext Transfer Protocol (HTTPS) post as JavaScript Object Notation (JSON) documents.

(b) Material suppliers must test to confirm that ticketing data can be shared from the originating system no less than 10 days before the project starts. The topic shall be discussed at the pre-construction meeting.

(c) Ticket data must be available immediately upon project start so that tickets can be viewed without delay.

(d) Provide the same data currently accessible and viewed by agency users previously on printed tickets for state projects.

(2) The Contractor shall submit material ticket data in accordance with the plant manufacturer's system recommendations to provide the following unless otherwise directed by the Engineer:

(a) Net weight (or volume for ready mix concrete) of material being transported to the nearest 0.01 ton or cubic yard.

(b) Running daily total of net weight of material (or volume for ready mix concrete) being transported to the nearest 0.01 ton or cubic yard.

(c) Each material ticket shall contain the following:

a. General Ticket information (All Materials)

1. Date
2. State Project Name
3. State Project Number
4. Name of Contractor
5. Name of Material Supplier
6. Customer Name
7. Hauler
8. Unique Truck ID
9. Plant/scale name (source)
10. Unit of Measure
11. Ticketed time
12. Ticket Number

b. Asphalt Mix

1. Material Name/Description
2. Gross Weight (if not automatic)
3. Tare Weight (if not automatic)
4. Net weight
5. Mix Design Number
6. Weighmaster

c. Portland Cement Concrete

1. Loaded time (water/cement time)
2. Wet and dry batch weights (if computer generated)
3. Water:
 - i. In aggregate
 - ii. Total water
 - iii. Water/cement ratio
 - iv. Allowable water to add
4. Admixtures (including brand names if available):
 - i. Retarder and weights
 - ii. Water reducer and weights
 - iii. Air entrainment and weights
 - iv. Special performance admixtures and weights
 - v. Concrete fibers
5. Mix Design
6. Slump

184 7. Truck Revolution

185
186 d. Construction Aggregates:

- 187
188 1. Material Name/Description
189 2. Gross Weight (if not automatic)
190 3. Tare Weight (if not automatic)
191 4. Net weight
192 5. Mix Design Number
193 6. Weighmaster

194
195 e. Optional Additional Truck Status (Will be
196 accepted when available – All Materials)

- 197
198 1. Left plant
199 2. Arrive at project
200 3. Begin unload
201 4. Finish unload
202 5. Leave project
203

204 **636.04 Measurement.** The Engineer will measure additional E-Construction
205 programs, additional licenses, or additional equipment, if ordered by the Engineer,
206 on a force account basis in accordance with Subsection 109.06 – Force Account
207 Provisions and Compensation.

208
209 **636.05 Payment.** The Engineer will pay for the additional E-Construction
210 programs, additional licenses, or additional equipment, on a force account basis in
211 accordance with Subsection 109.06 – Force Account Provisions and
212 Compensation.

213
214 The Engineer may withhold progress payment until the Contractor is in
215 compliance with all E-Construction requirements.

216

217 Pay Item	218 Pay Unit
219 Additional E-Construction Programs, additional licenses 220 or additional equipment	221 Force Account

222 An estimated amount for force account may be allocated in the proposal
223 schedule under “Additional E-Construction Programs, additional licenses or
224 additional equipment.” The actual amount to be paid will be the sum shown on
225 accepted force account records.

226
227
228
229 **END SECTION 636**

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(l) Amend Subsection 641.02(B) – Fertilizer by revising the section from line 33 to 36 to read:

(II) Amend **Subsection 641.03(A) – Seeding** by revising the first paragraph from line 100 to 103 to read:

(III) Amend **Section 641.04 Measurement**, from line 173 to 174 to read as follows:

(IV) Amend Section 641.05 Payment, from line 176 to 185, to read as follows:

The Engineer will pay for the following pay item when included in the proposal schedule:

42
43
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2/12/21

SECTION 645 - WORK ZONE TRAFFIC CONTROL

645.01 Description. This section describes the following:

(A) Furnishing, installing, maintaining, and subsequently removing work zone traffic control devices, and personnel. Work zone traffic control shall include providing flaggers and police officers.

(B) Keeping roads for public traffic open and in passable condition; providing and maintaining temporary access crossings for trails, businesses, parking lots, garages, residences, farms, parks, and other driveways; taking necessary work precautions for the protection, safety, and convenience of the public; should pedestrian facilities exist, taking necessary measures for safe and accessible passage, with route information and ADAAG compliance, for pedestrians traveling through or near work zone; taking necessary precautions to protect work zone workers from situations that place workers at increased risk from motorized traffic.

(C) Taking safety and precautionary measures, such as illuminating roadway obstructions during hours of darkness, in accordance with Chapter 286, HRS; Title 19, Subtitle 5, Chapters 127, 128, and 129, HAR; and *MUTCD*.

645.02 Materials.

Signs	750.01
Sign Posts	750.02
Fasteners for Signs and Route Markers	750.03
Reflector Marker	750.07
Flexible Delineator Posts and Reflectors	750.08
Traffic Delineators	750.09
Preformed Pavement Marking Tape	755.04

Submit electronic crashworthy documentation, including but not limited to, drawings in pdf and CADD, crash test reports, and FHWA eligibility letters certifying compliance with MASH 2016, for signs, sign supports, barricades, tubular markers, cones, vertical panels, and other traffic control devices. Only devices that are deemed crashworthy will be allowed.

645.03

Upon request of the Engineer, furnish self-certified MASH 2016 compliant letter from vendor(s) for each type of Category 1 traffic control device, as defined by FHWA and/or AASHTO, including single-piece traffic cone, single-piece drum, and tubular marker.

Traffic control devices, including signs, barricades, warning lights, arrow boards, portable changeable message signs, cones, tubular markers, and temporary concrete barriers shall conform to the American Traffic Safety Services Association (ATSSA), *Quality Guidelines for Temporary Traffic Control Devices and Features* and the *MUTCD*.

Protective devices including barricades, warning signs, lights, and temporary signals shall conform to Title 19, Subtitle 5, Chapters 127, 128, and 129, HAR. Retroreflectorization for protective devices such as barricades, tubular markers, and warning signs shall conform to Subsection 750.01 – Signs.

645.03 Construction. Furnish, install, and maintain barricades, signs, cones, tubular markers, lights, flashing signals, and other traffic control devices.

Furnish two flaggers or police officers for each location that requires work zone traffic control. If the Traffic Control Plan (TCP) is included in the contract documents, furnish number of flaggers or police officers indicated in the TCP, whichever is greater.

When directing traffic, flaggers, or police officers, or both shall be in direct communication with each other.

TCP for lane closure on two-lane road will consider intersections and driveway access. Maximum length of a lane closure on a two-lane road is 1,000 feet.

Submit TCP and schedule at least 15 working days before work starts. Submit modifications and deviations from accepted TCP and schedule at least 15 working days before start of work requiring modification or deviation. Illegible TCP will not be accepted.

Include the following in TCP and schedule:

- (1) Signs (type, size, designation, and placement).
- (2) Traffic movements shown by arrows.
- (3) Positions of flaggers and police officers.

(4) Barricades, cones, tubular markers, and additional traffic control devices and measures necessary for protection of work and public safety; and placement, spacing, distances, and reference points for traffic control devices.

(5) Layout, drawn to scale, of traffic control devices, including information needed to layout TCP.

(6) Brief description of work.

(7) Dates of work.

(8) Times of day affected.

(9) Proposed public information sign.

(10) Proposed news release.

Place sign or device situated farthest upstream from work zone first. Then place others progressively downstream toward work zone.

Extend cones or tubular markers to point where cones or tubular markers are visible to approaching traffic.

For signs with messages on both faces, cover inapplicable message before placement.

Keep barricades, construction and warning signs, and other traffic control devices in good condition. Repair, clean, or replace barricades, signs, or other devices as required to maintain effectiveness and appearance. The Engineer alone will decide suitable condition of each barricade, sign, or other traffic control device.

Remove or cover regulatory and warning signs that conflict with TCP. Restore signs upon completion of work or as ordered by the Engineer. Affix object markers to post(s) of covered sign.

Promptly remove or cover construction and warning signs that are not applicable or not in use.

For sign covers, fully covers signs as indicated in the Acceptable category of the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features. Covers that are deemed to be in the Marginal or Unacceptable categories will not be accepted. Covers that are fabricated from rigid materials will also not be accepted unless it is certified to be MASH 2016 compliant.

Promptly remove traffic control devices that are no longer needed.

645.03

Remove traffic control devices in reverse order of installation, starting closest to work zone and continuing away from work zone.

Maintain abutting owners' existing access until replacement access is usable. Obtain permission from abutting owners, including conditions for closing existing access. Submit copy of agreement with abutting owners before beginning work in the affected area.

When working on existing facility that will be kept open to traffic, provide smooth and even surface for public traffic use. Only work on a portion of roadway at one time, and stage construction from one side to other while routing traffic over opposite side.

During subgrade and paving operations, paved shoulders may be used for public traffic.

Do not store material or equipment where it will interfere with public traffic. Remove equipment and other obstructions out of right-of-way or clear zone to permit free and safe passage of public traffic during non-working hours or suspension of work. For storage of materials and equipment, see Subsection 105.14 – Storage and Handling of Materials and Equipment.

Notify Fire Department, in writing, at least 24 hours before blocking or closing road access. Keep fire hydrants accessible to Fire Department by not placing material or other obstructions within five feet of fire hydrant or closer than permitted by applicable ordinances, rules, and regulations.

Notify the Engineer and County, including Bus Systems Division, Police Department, Fire Department, Emergency Medical Services, and Department of Health in writing at least five days before start of construction.

(A) Signs. Install signs sufficiently ahead of location where operations may interfere with use of road by traffic and at intermediate points where new work crosses or coincides with existing road.

Place signs in accordance with TCP as accepted by the Engineer.

(B) Work Zone Signs. Erect construction signs at the beginning of project and at the end of project at the location indicated by the Engineer. These signs shall remain for the duration of the highway project. Maintain these signs. Place these signs besides the required traffic control signs called for herein.

The work zone signs shall be new and become the property of the Contractor.

(1) **Covers.** Use sign covers when existing signs confuse the public or are in conflict with TCP signs installed. Sign covers shall be commercially manufactured and accepted by the Engineer before use. Sign covers shall at all times and under all conditions not allow any portion of the sign being covered to be visible. If more than one side of the sign has words or symbols cover all sides of the sign until needed. "Homemade" or "field made" covers shall not be used. Covering of sign identification markings are not required if that is the only markings on that side of the sign. Sign covers shall be maintained.

Removal of the existing sign in lieu of the use of sign covers may be acceptable to the Engineer provided the previously removed existing sign is immediately reinstalled when directed. Removal of existing post(s) and mounting hardware is required if not used to mount the new TCP sign. New mounting hardware shall be used to mount the TCP signs if the existing hardware is in an unacceptable condition in the opinion of the Engineer. In addition, should the sign or post during storage, in the opinion of the Engineer, become unacceptable or lost or stolen the Contractor shall replace the sign or post with a new sign or post. Use new hardware to reinstall the sign regardless whether it is an existing sign or new."

(C) **Barricades.**

(1) **General.** Provide, erect, and maintain necessary barricades suitable for protection of work and safety of the public.

Barricades shall be in good condition. Barricade application and installation shall be in accordance with accepted TCP.

Provide sand bags if required or ordered by the Engineer. Sand bags and installation method shall comply with *MUTCD* and be accepted by the Engineer prior to use. Do not place sand bags on striped barricade rail.

During hours of darkness, install steady burn or flashing lamps on barricades selected by the Engineer. Attach lamps on barricade ends closest to traveled way and visible to oncoming traffic.

Do not install signs on barricades unless signs and barricades have been crash tested as a unit and accepted under NCHRP Report 350.

(2) **Retroreflectorization.** Retroreflectorize barricade rails and attachment with retroreflective sheeting in accordance with Subsection 750.01(C)(4) - Type III or IV Retroreflective Sheeting (High

Intensity) or Subsection 750.01(C)(5) - Hardened Aluminum-Backed Retroreflective Sheeting.

Retroreflectorize both vertical faces of each barricade rail.

(3) Color. Provide white colored rails, frames, and braces with front and back rail faces having 6-inch-wide alternating orange or red and white stripes sloping downward toward traveled way at angle of 45 degrees from vertical. Use stripe colors in accordance with the following:

(a) Use orange and white stripes for the following conditions:

1. Construction work.
2. Detours.
3. Maintenance work.

(b) Use red and white stripes for the following conditions:

1. On roadways with no outlet, such as dead-ends and cul-de-sacs.
2. Ramps or lanes closed for operational purposes.
3. Permanent or semi-permanent closure or termination of roadway.

(4) Maintenance. Keep barricades in good condition. Repair, repaint, clean, or replace barricades to maintain effectiveness and appearance. Immediately replace missing or damaged barricades, lamps, sandbags, and other accepted weights.

Clean and repair barricades before relocating to other locations.

(D) Traffic Delineators. Install traffic delineators in accordance with accepted TCP.

Maintain traffic delineators in good condition. Immediately replace missing or damaged tubular markers.

Clean delineators prior to relocating to new location.

(E) **Cones.** Install traffic cones in accordance with accepted TCP.

Maintain traffic cones. Keep traffic cones clean and in good repair. Immediately replace lost, stolen, or damaged traffic cones.

Clean cones prior to relocating to new location.

(F) **Lane Closures.** Lane closures will be allowed only from 8:30 a.m. to 3:00 p.m., Monday through Friday. Exceptions to lane closure hours specified require written acceptance by the Engineer. Placement and removal of all work zone devices within the travel lanes, such as arrow boards, cones, etc., are restricted to allowable closure times. No increase in contract price or contract time will be given for lane closure restrictions specified.

For island of Kauai, no lane closures will be allowed during 24-hour periods as follows:

(1) Day preceding holiday (3:00 p.m. to Midnight), except as otherwise specified.

(2) Holidays (Midnight to Midnight).

(3) Day before and day after Thanksgiving Day (Midnight to Midnight).

(4) Three-week holiday period for Christmas and New Years (Midnight to Midnight).

(5) Three-week "Beat-the-School-Jam" period, to be determined, (Midnight to Midnight) beginning approximately third week of August.

(6) Other dates of events indicated in the contract documents.

No time extension will be given for the above restrictions. The contract time for the project has accounted for any loss of time due to the above restrictions.

Closure of only one lane of traffic will be allowed during lane-closure hours. Keep lanes open to traffic and allow flow at posted speed limit during non-lane closure hours.

If applicable, coordinate lane closures with adjacent project(s) at no increase in contract price or contract time.

Rental fees will be assessed in accordance with Subsection 108.10 –

645.03

Rental Fees for Unauthorized Lane Closure or Occupancy, for failure to open lanes to traffic during peak hours. Morning and afternoon peak hours shall be from 5:30 a.m. to 8:30 a.m. and 3:00 p.m. to 6:00 p.m., respectively, Monday through Friday.

Before scheduling work, submit requests for detours and lane closures as follows:

- (1) Detours - 8 weeks before implementing detours.
- (2) Lane closures - 6 weeks before implementing lane closures.

Include the following with detour and lane closure requests:

- (1) Explanation of proposed changes to existing traffic pattern.
- (2) Installation schedule for informational and traffic control signs.
- (3) Publication schedule for legal notices.
- (4) Plan showing proposed informational signs.

(5) Plan showing lane changes or detours in accordance with accepted TCP, including details at beginning of multi-lane highway lane changes and detours.

Detours or lane closures will not be allowed before the Engineer accepts detour or lane closure request.

TABLE 645-I - FOR TRAFFIC CONTROL PLAN							
POSTED SPEED LIMIT (M.P.H.)	SIGN SPACING (D) (FEET)	TAPER LENGTH (T) (FEET)		LONGI- TUDINAL BUFFER SPACE (B) (FEET)	SPACING OF CONES OR TUBULAR MARKERS (FEET)		
		W = 12' OR LESS	W = GREATER THAN 12' *		TAPER	TANGENT	WORK AREA
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W x 20	85	30	30	10
35	250	250	W x 20	120	35	35	10
40	500	350	W x 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W x 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10
* W = width of lane or shoulder							

(G) **Advisory Signs.** Advisory signs are not required for this project.

(H) **Advertisement.** Place advertisement in newspaper, as ordered by the Engineer, for the following traffic pattern changes or night work:

- (1) Detours.
- (2) Lane closure.
- (3) Permanent road closure.
- (4) Permanent new route that changes previous route.

Include the following information:

- (1) Map of traffic pattern change limits.
- (2) Map showing lane(s) closure and detour pattern.

(3) Notice of starting and ending dates and duration.

(4) Explanation of lane(s) closure or detours in "Notice To Motorist".

Quality of map shall conform to the following requirements:

(1) No freehand printing or penciling.

(2) Highlight important features by darkening, cross-hatching, crossing-out, or coloring important words, as necessary.

(3) Provide maps with minimum size of five columns wide and four columns deep. Lesser width columns may be considered to balance against size of drawing.

(4) Text specifications.

(a) Work being featured - 3/16-inch text.

(b) Major roads and features - 1/8-inch text.

(c) Other roads and features- first letter of sentence upper case.

(d) "NOTICE TO MOTORIST" in upper case.

(e) Message - first letter of sentence upper case.

(5) Line Thickness.

(a) Important feature being advertised - line thicker than rest of map.

(b) Directional arrow - bolder than rest of lines shown on map, when important, to show route traffic should use.

(6) Show reference direction such as "TO HONOLULU" with arrow
Submit the following:

(a) "Notice to Motorists" before placement in newspaper, six weeks before start of work.

(b) Actual size of notice to be published in newspaper. The Engineer will not allow size reduction of notices once accepted. Submit final, camera-ready "Notice to Motorists" advertisement.

Place advertisement for three (3) consecutive days and within one week before traffic pattern changes, in publication as ordered by the Engineer. In lieu of the advertisement(s), the Engineer may substitute the use of two portable changeable message boards and accessories at no additional cost for three (3) days for each required advertisement."

645.04 Measurement.

(A) Traffic control as specified in Subsection 645.03 - Construction including sign covers and the initial advertisement(s) will be measured on a contract lump sum (LS) basis and will not include any work performed under other specific traffic control contract bid items. Measurement for payment will not apply.

(B) If the proposal specifies "Arrow Board", the Engineer will measure the arrow board per EACH furnished, installed and maintained per day.

(C) If the proposal specifies "Changeable Portable Message Sign", the Engineer will measure the arrow board per EACH furnished, installed and maintained per day.

(D) "Cones" will be considered incidental to traffic control Measurement for payment will not apply.

(E) "Traffic Delineators" will be considered incidental to traffic control. Measurement for payment will not apply.

(F) "Work Zone Signs" will be considered incidental to traffic control.

(G) The Engineer will measure additional police officers, additional traffic control devices, and advertisement, if ordered by the Engineer, on a force account basis, in accordance with Subsection 109.08 - Force Account Provisions and Compensation.

(H) If the proposal specifies "Drum", they will be considered incidental to

645.04

traffic control.

645.05 Payment. The Engineer will pay for the accepted traffic control, traffic control device, police officers, flaggers, additional traffic control devices, specific traffic control contract bid items and advertisement at the contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

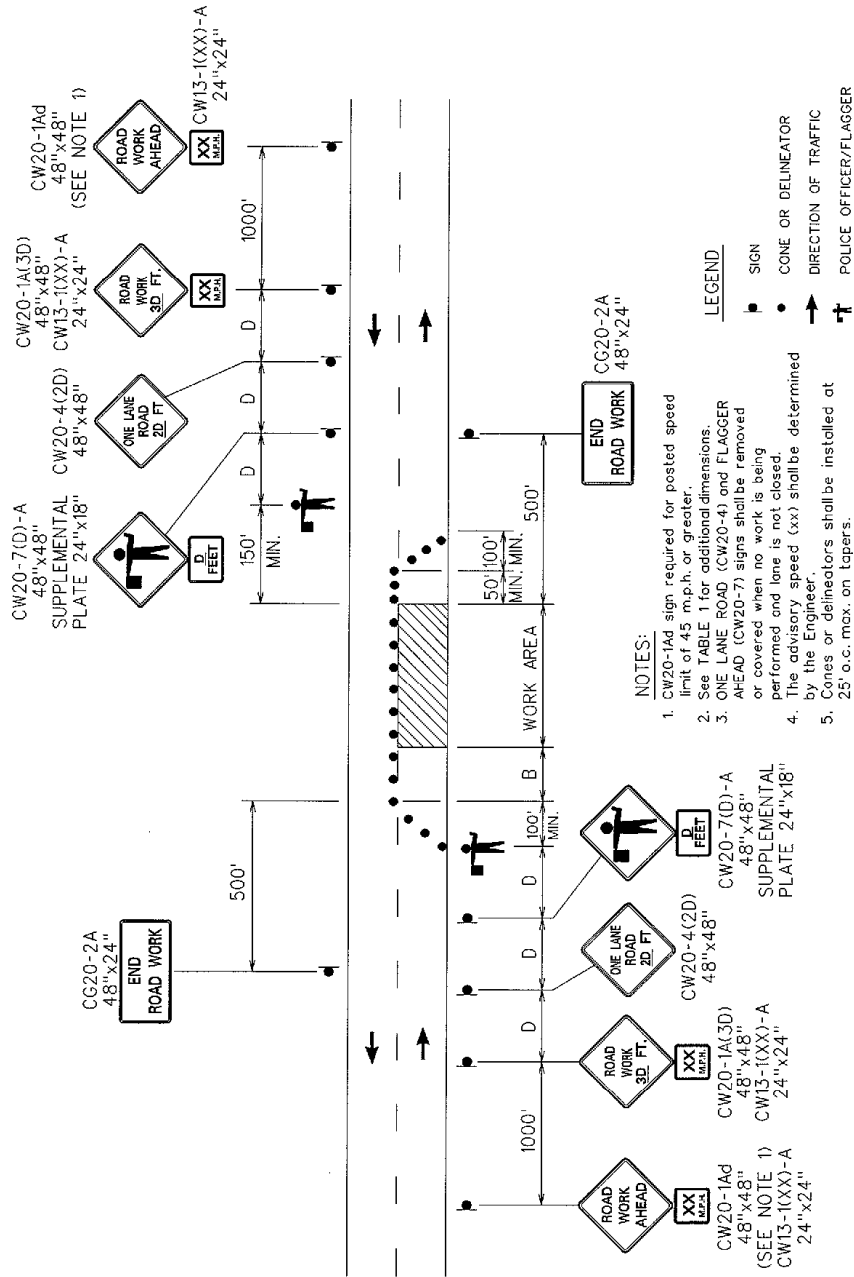
Costs associated with the provision of uniformed law enforcement to maintain safe and efficient travel through highway work zones and their payment terms are explained in more detail in Section III. D. of HDOT's WORK ZONE SAFETY MANAGEMENT GUIDELINES.

The Engineer will pay for the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
Traffic Control	Lump Sum
Additional Police Officers, Traffic Control Devices, and Advertisement	Force Account

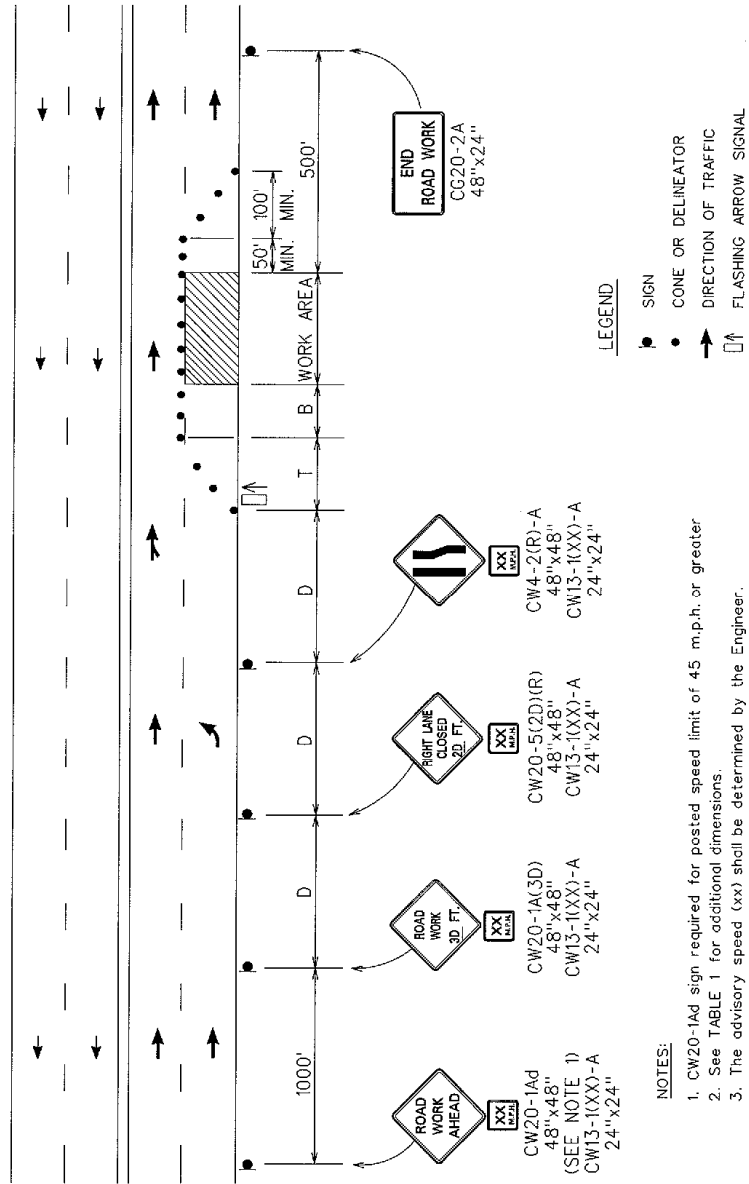
An estimated amount for the force account may be allocated in the proposal schedule under "Additional Police Officers And Additional Traffic Control Devices", but the actual amount to be paid will be the sum shown on the accepted force account records, whether this sum be more or less than the estimated amount allocated in the proposal schedule.

The Engineer will not pay for request submittals. The Engineer will not consider claims for additional compensation of late submittals or requests by Contractor.



TWO-LANE HIGHWAY - ONE LANE CLOSED
FIGURE 1 - TRAFFIC CONTROL PLAN

484
485

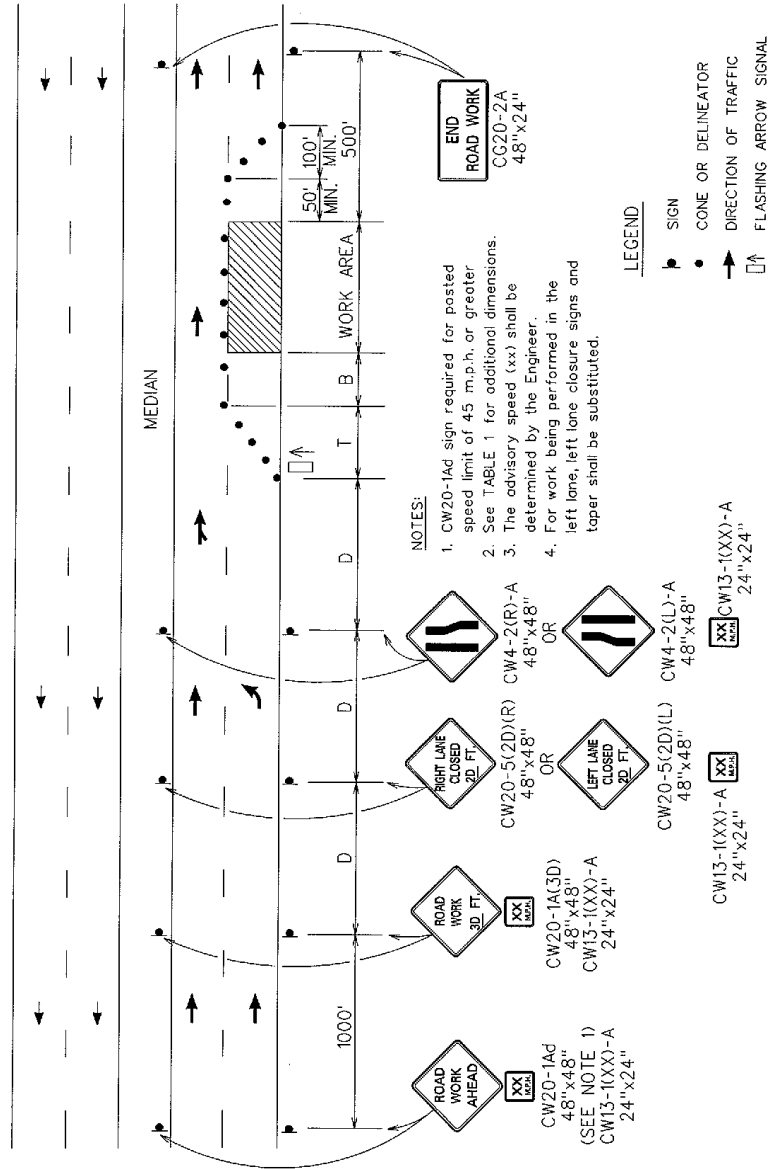


MULTILANE UNDIVIDED HIGHWAY - RIGHT LANE CLOSED

FIGURE 2 - TRAFFIC CONTROL PLAN

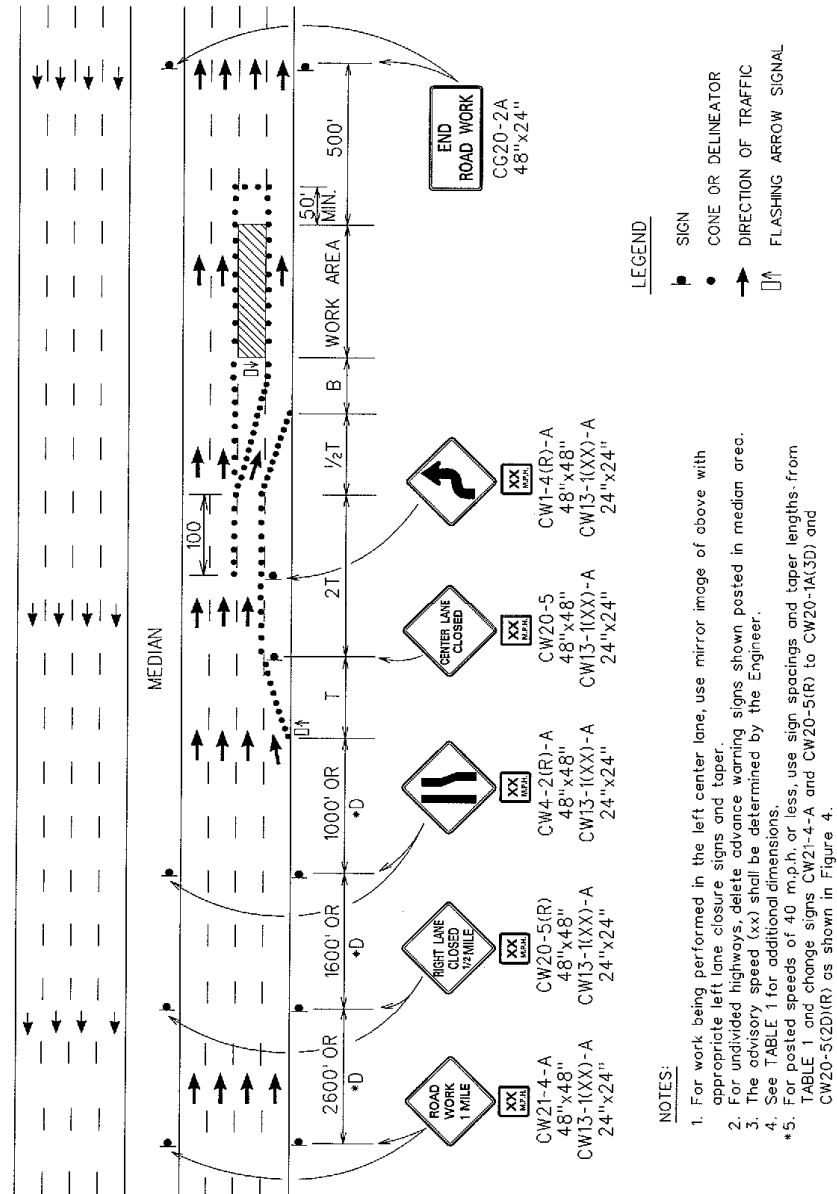


FIGURE 3 - TRAFFIC CONTROL PLAN



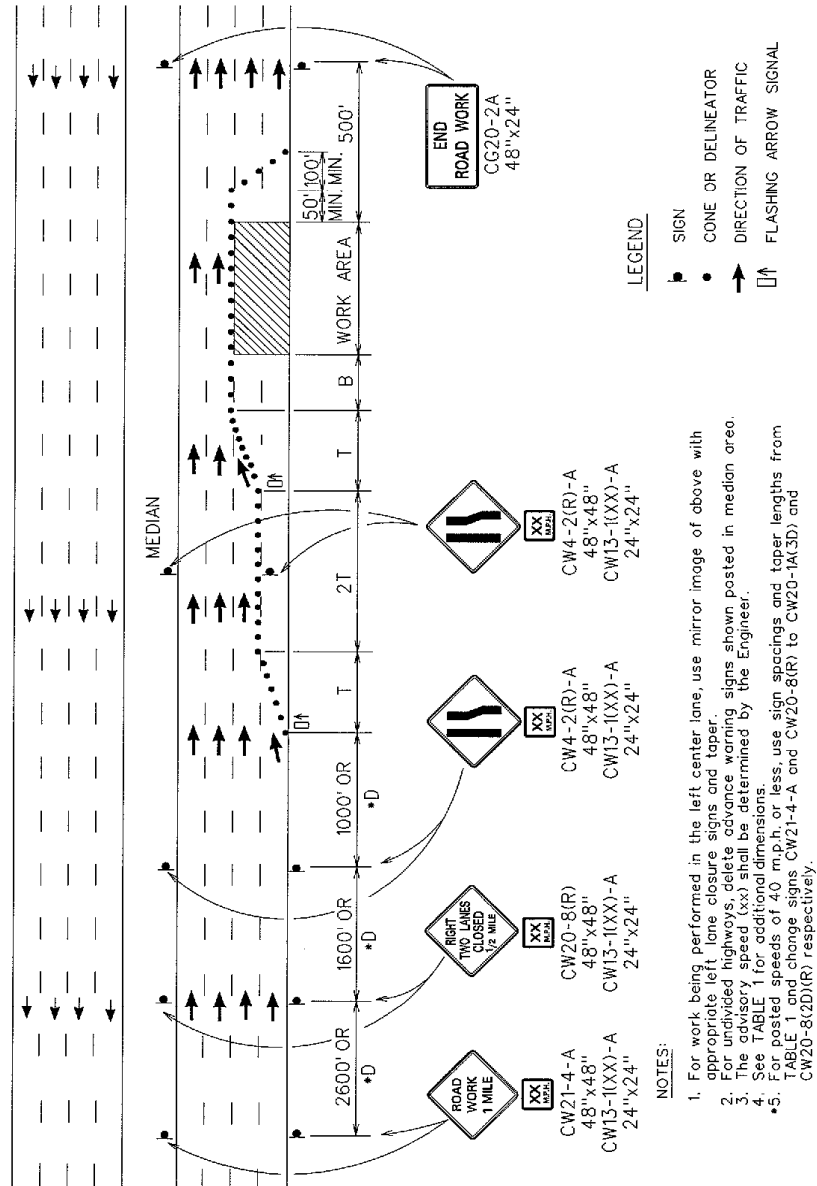
MULTILANE DIVIDED HIGHWAY - ONE LANE CLOSED

FIGURE 4 - TRAFFIC CONTROL PLAN



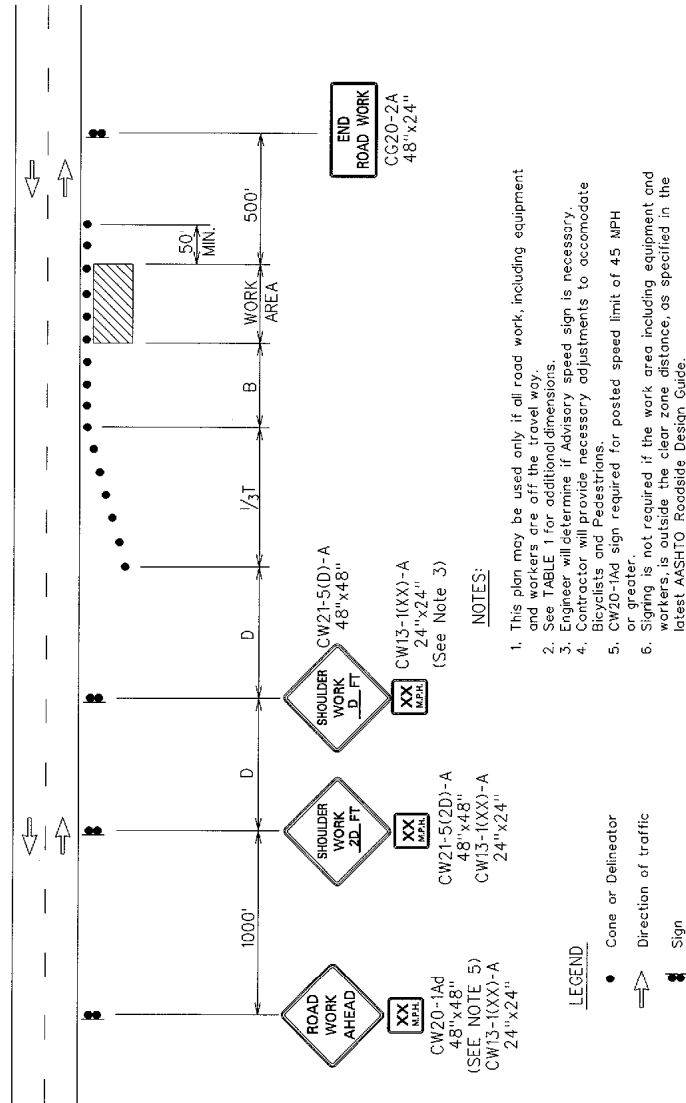
MULTILANE HIGHWAY - CENTER LANE CLOSED

FIGURE 5 - TRAFFIC CONTROL PLAN



MULTILANE HIGHWAY - MULTIPLE LANE CLOSED

FIGURE 6 - TRAFFIC CONTROL PLAN



WORKING ON SHOULDER OR ROADSIDE
FIGURE 7 - TRAFFIC CONTROL PLAN

1 Make the following Section a part of the Standard Specifications:

2
3 **“SECTION 663 – EROSION CONTROL MATTING**

4
5 **663.01 Description.** This work includes furnishing and installing an
6 erosion control matting according to the contract.

7
8 **663.02 Materials.**

9
10 **(A) General.** The erosion control matting shall be a multi-layered
11 geosynthetic netting specifically designed for erosion control as a long-
12 term installation. The erosion control matting shall provide erosion
13 protection for at least 36 months during vegetation establishment. The
14 matting shall allow grass or other natural ground cover to grow and take
15 root through the matting. The internal matrix material color shall be green
16 or brown and the outer net material shall be black.

17
18 **(B) Physical Properties.** The erosion control matting shall have the
19 following minimum physical properties:

20
21 **(1)** Materials shall be manufactured from coconut fiber and
22 polypropylene.

23
24 **(2)** Thickness of the erosion control matting shall be 0.58 inches
25 minimum according to ASTM D 6525.

26
27 **(3) Ultraviolet stability** – ASTM D 4355 (tensile strength
28 retained after 1000 hours) 80%.

29
30 **(4) Porosity** (calculation based upon weight, thickness and
31 specific gravity based on Erosion Control Technology Council
32 (ECTC) guidelines) minimum 99%.

33
34 **(5) Resiliency** – ASTM D 6524 90% minimum.

35
36 **(6) Tensile strength (machine direction)** – ASTM D 6818,
37 750 lbs./foot minimum.

38
39 **(7) Tensile strength (transverse direction)** – ASTM D 6818,
40 750 lbs./foot minimum.

41
42 **(8) Elongation (machine direction)** – ASTM D 6818, 30%
43 maximum.

44
45 **(9) Elongation (transverse direction)** – ASTM D 6818, 20%
46 maximum.

47
48 **(C) Brochures and Manufacturer's Certification.** The Contractor
49 shall submit erosion control matting brochures and certifications stating
50 the quality of the material meets the intended use on the project. The
51 certification shall clearly show the product number or other similar control
52 number, which match the markings on the product delivered to the site.
53 The manufacturer shall furnish certified test reports with each shipment
54 attesting that the erosion control matting meets the requirements of the
55 specification for material physical properties. Samples of the erosion
56 control matting shall also be submitted to the Engineer.
57

58 **663.03 Construction.**
59

60 **(A) General.** Protect the permanent exposed soil face of the reinforced
61 soil slope with an erosion control matting.
62

63 **(B) Installation.**
64

65 **(1) Site Preparation.** Grade and compact the slope face
66 properly. Remove all materials such as rocks and vegetation that
67 would interfere with the soil and the erosion control matting.
68

69 **(2) Anchor Trenches.** Anchor trenches shall be as
70 recommended by the manufacturer. The trenches shall be a
71 minimum of six inches deep and six inches wide before placing the
72 erosion control matting. Backfill and compact trenches properly to
73 the original requirements of the slope.
74

75 **(3) Planting.** Install the erosion control matting prior to
76 hydromulching to retain good seed distribution and avoid
77 disturbance by work crews. However, if the erosion control matting
78 is too thick or dense to allow the hydromulching to penetrate it
79 consistently, the contractor may ask for a waiver from
80 hydromulching after the erosion control matting is placed. The
81 disturbed areas shall be corrected by re-hydromulching the area
82 again at the original application rate at no cost to the State. The
83 erosion control matting shall be placed before the seeds start to
84 sprout if the waiver is granted.
85

86 **(4) Placement.** Place the erosion control matting according to
87 the manufacturer's recommendations and supervision. Provide
88 supervision by the manufacturer at the start up and initial
89 installation. The matting roll ends shall be overlapped a minimum
90 of 6 inches. The adjacent edges of the matting shall be overlapped
91 a minimum of 4 inches.
92
93

(5) Anchoring. Anchor the erosion control matting at overlaps with treated wooden stakes. The distribution of the stakes shall be a minimum of 3.0 stakes (minimum) per square yard. Alternate anchoring methods will be allowed if approved by the matting manufacturer and accepted by the Engineer.

For installation in rock area, anchor matting according to the manufacturer's recommendations.

(6) Repairs. Correct tears and holes in the erosion control matting with a minimum of 3-foot overlap in each direction of the damage. Re-hydromulch the repaired area if ordered by the Engineer. Repair and/or replace the damaged or defective erosion control matting at no cost to the State.

(7) Installation Plan. Submit an installation plan prior to any work on the slope.

663.04 Measurement. The Engineer will measure erosion control matting per square yard in accordance with the contract documents.

663.05 Payment. The Engineer will pay for the accepted erosion control matting at the contract per square yard price, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
Erosion Control Matting	Square Yard"

END OF SECTION 663

1 Make the following section a part of the Standard Specifications:

2
3 **“SECTION 671 – PROTECTION OF ENDANGERED SPECIES**

4
5 **671.01 Description.** The Endangered Species Act (ESA) listed species
6 Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), Hawaiian waterbirds, including
7 the Hawaiian coot or ‘alae ke‘oke‘o (*Fulica americana alai*), Hawaiian stilt or ae‘o
8 (*Himantopus mexicanus knudseni*), Hawaiian common gallinule (*Gallinula galeata*
9 *sandvicensis*), and Hawaiian duck or koloa (*Anas wyvilliana*); Hawaiian Goose or
10 nene (*Branta sandvicensis*) and Hawaiian seabirds, including the Hawaiian Petrel or
11 ‘ua‘u (*Pterodroma sandwichensis*), and the Hawaii Distinct Population Segment
12 (DPS) of the Band-rumped Storm-Petrel or ‘ake‘ake (*Oceanodroma castro*) may be
13 in the general vicinity of the proposed project and may transit or visit the proposed
14 project. The contractor shall protect these endangered species throughout the
15 construction duration.

16
17 **671.02 Materials.** None

18
19 **671.03 Construction.**

20
21 **(A) Pre-Construction and Construction Requirements.** Comply with
22 the following conditions:

23
24 **(1)** The Contractor will be required to implement construction-
25 phase temporary best management practices (BMPs) per
26 HDOT standards (see Construction Best Management
27 Practices Field Manual, dated October 2021,
28 [https://www.stormwaterhawaii.com/wp-](https://www.stormwaterhawaii.com/wp-content/uploads/2022/02/D.1-Construction-BMP-Field-Manual.pdf)
29 [content/uploads/2022/02/D.1-Construction-BMP-Field-](https://www.stormwaterhawaii.com/wp-content/uploads/2022/02/D.1-Construction-BMP-Field-Manual.pdf)
30 [Manual.pdf](https://www.stormwaterhawaii.com/wp-content/uploads/2022/02/D.1-Construction-BMP-Field-Manual.pdf)), including measures related to water pollution,
31 erosion and sediment control, waste management, and good
32 housekeeping. The BMPs will be designed to and, if
33 necessary, adjusted to maintain compliance with applicable
34 State of Hawaii water quality standards (HAR Chapter 11-
35 54) and water pollution control requirements (HAR Chapter
36 11-55).

37
38 **(2)** The Contractor shall reduce the disturbance and impacts to
39 the natural stream channel bottom substrate types (cobble,
40 boulders, etc.) at Omao Stream as much possible
41 throughout construction.

42
43 **(3)** To avoid and minimize the risk of spreading invasive
44 species, the contractor shall:

45
46 **(a)** Clean all equipment, material and personnel of

47 excess soil and debris.

48
49 (b) Minimize the movement of plant or soil material
50 between worksites.

51
52 (c) Consult the Kauai Invasive Species Committee to
53 learn of high-risk invasive species in the area, and
54 ways to mitigate their spread. The information and
55 guidance at <https://cms.ctahr.hawaii.edu/rod> shall be
56 reviewed and followed in the unlikely event that Ohia
57 trees are present and will be removed.

58
59 (4) When engaging in activities that have a high risk of starting a
60 wildfire (i.e. welding in grass), the Contractor shall:

61
62 (a) Consult the Hawaii Wildfire Management
63 Organization at (808) 850-0900 or
64 admin@hawaiiwildfire.org.

65
66 (b) Wet down the area before starting the task.

67
68 (c) Continuously wet down the area as needed.

69
70 (d) Have a fire extinguisher on hand.

71
72 (e) If the worker's vision is impaired, (i.e. welding
73 goggles) a spotter will watch for fire starts.

74
75 (5) The Contractor shall place flagging or deflectors on all guy
76 wires throughout the project duration.

77
78 (6) Hawaiian Hoary Bats nest in both exotic and native woody
79 vegetation. To minimize impacts to the Hawaiian Hoary Bat,
80 the contractor shall not disturb, remove or trim woody plants
81 greater than 15 feet (4.6 meters) tall during the birthing and
82 pup rearing season (June 1 through September 15).

83
84 Additionally, barbed wire shall not be used for fencing and for
85 any construction.

86
87 (7) To avoid and minimize potential impacts to Hawaiian
88 waterbirds, the contractor shall:

89
90 (a) Inform project personnel and contractors about the
91 presence of endangered species on-site.
92

93 (b) Have a biological monitor that is familiar with the
94 species' biology and approved by the Engineer conduct
95 Hawaiian waterbird nest surveys, where appropriate
96 habitat occur within the vicinity of the proposed project
97 site, prior to project initiation. Repeat surveys again
98 within three (3) days of project initiation and after any
99 subsequent delay of work of three (3) or more days
100 during which time the birds may attempt to nest. Work
101 may continue after the bird leaves the area of its own
102 accord.

103
104 (c) In the unlikely event that Hawaiian waterbirds (stilt, coot,
105 common gallinule, or duck) are observed at or within
106 100 feet of the project site, the contractor shall:

- 107
108 i. Not approach, feed or disturb the waterbird.
109
110 ii. Cease work within 100 feet until the bird or birds
111 leave of their own accord.
112

113 (d) If a waterbird nest or active brood is identified within the
114 proposed project site, the contractor shall:

- 115
116 i. Contact the Kauai Branch Division of Forestry
117 and Wildlife (DOFAW) office at (808) 274-3433
118 and the United States Department of Interior
119 Fish and Wildlife Service (USFWS) at (808) 792-
120 9400 within 48 hours for further guidance.
121
122 ii. Immediately establish and maintain a 100-foot
123 buffer around all active nests and/or broods until
124 the chicks/ducklings have fledged. Do not
125 conduct potentially disruptive activities or habitat
126 alteration within this buffer.
127
128 iii. Have a biological monitor, approved by the
129 Engineer, that is familiar with the species' biology
130 present on the project site during all construction
131 or earth moving activities until the
132 chicks/duckling fledge to ensure that Hawaiian
133 waterbirds and nests are not adversely impacted.
134

135 (8) To avoid and minimize potential impacts to Hawaiian
136 seabirds, the contractor shall:

137 (a) Prepare a Protection of Seabirds Training Plan and
138

submit to the Engineer for review and acceptance at least two (2) weeks prior to any construction activity. Include a detailed description of information and materials the Contractor intends to use in the training classes. Revise and resubmit as directed by the Engineer. The Contractor will disseminate information regarding the protection of seabirds and seabird fallout by conducting training classes for all employees, subcontractors, suppliers and other personnel working on the project, including HDOT personnel, on such topics as the Save Our Shearwater (SOS) program, proper use of temporary lighting, procedures to store and report downed seabirds, and the consequences of non-compliance with the laws regarding threatened and endangered seabirds.

- (b)** Furnish and maintain a small (approximately 10 x 12 x 19 inch), portable cat kennel or other product approved by the SOS Program on site to temporarily hold a downed seabird. If a downed dead seabird is found, the Contractor shall contact the USFWS (Ms. Megan Laut at (808) 792-9400) within 24 hours.
- (c)** Maintain a record of all downed seabirds for the duration of the project. The records shall include the date, time, location and condition (dead or alive) the seabird was found and delivered.
- (d)** If a downed, alive seabird is identified within the project site, the Contractor shall:

 - i. Pick up the bird from behind as soon as possible using a clean towel, t-shirt or cloth by gently wrapping it around its back and wings.
 - ii. Place the seabird in the cat kennel or other suitable container and immediately contact the SOS Program Coordinator at 808-635-5117 for further instructions on where to deliver the seabird.
 - iii. Deliver the seabird to the location determined by the coordinator of the SOS Program. The Contractor & any personnel on site shall not feed, provide water, handle or release the bird.

185 (e) Hawaiian seabirds may traverse the project area at
186 night. If night work will be required in conjunction with
187 the development of the project, the contractor shall:

188
189 i. Obtain written authorization from the Engineer
190 prior to performing any night work.

191
192 ii. Fully shield all outdoor lights so the bulb can
193 only be seen from below bulb height to reduce
194 the potential for interactions of nocturnally
195 flying seabirds with external lights and man-
196 made structures. All outdoor lights shall be
197 turned off when human activity is not occurring
198 in the lighted area.

199
200 iii. Avoid night time construction during the peak
201 seabird fledging period (September 15 through
202 December 15).
203

204 (9) To avoid and minimize potential impacts to the Hawaiian Nene
205 Goose, the contractor shall:

206
207 (a) Not approach, feed or disturb any Nene in or near the
208 project area.

209
210 (b) Have a biological monitor, approved by the Engineer,
211 that is familiar with nene nesting behavior survey the
212 area in and around the project area for nests prior to
213 each work day if nene are observed loafing, foraging,
214 or otherwise present within the project area during the
215 breeding season (September 1 through April 30).
216 Surveys shall be repeated after any subsequent delay
217 of work of three (3) or more days (during which the
218 birds may attempt to nest).
219

220 (c) Immediately cease all work if a nest is identified within
221 a radius of 150 feet of the project area, or a previously
222 undiscovered nest is found within the 150-foot radius
223 after work begins, and contact the USFWS for further
224 guidance.
225

226 (d) Implement reduced speed limits in areas where nene
227 are known to be present, and project personnel and
228 Contractors will be informed of the presence of
229 endangered species on site.
230

(B) **Compliance Requirements.** The Contractor shall protect Hawaiian Hoary Bats, Hawaiian waterbirds, and Hawaiian seabirds for the duration of construction. Failure to comply with the construction requirements, harm or a taking of an individual threatened or endangered species during the construction duration shall be enforceable by the USFWS as set forth by the ESA and DOFAW. Resultant penalties and/or fines shall be at the Contractors expense without cost or liability to the State.

671.04 Measurement. The Engineer will measure the work required for the protection of endangered species on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation and as ordered by the Engineer.

671.05 Payment. The Engineer will pay for the accepted protection of endangered species on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation. Payment will be full compensation for the work prescribed in this section, by the Engineer, and in the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
Protection of Endangered Species	Force Account

An estimated amount may be allocated in the proposal schedule under “Protection of Endangered Species”, but the actual amount to be paid will be the sum shown on the accepted force account records, whether this sum be more or less than the estimated amount allocated in the proposal schedule.”

END OF SECTION 671

1 Make the following Section a part of the Standard Specifications:

2
3 **"SECTION 672 - MICROTUNNELING**

4
5 **672.01 Description.** This section includes requirements for the installation of
6 reinforced concrete pipelines using microtunneling methods at the location shown on
7 the Plans. Pipe jacking methods using microtunneling equipment shall be employed
8 to install the reinforced concrete pipeline at the locations indicated on the Plans and
9 in accordance with the Contract requirements. The Contractor is responsible to
10 select, design, and provide a microtunneling system to install the reinforced concrete
11 pipes along the alignment and profile as shown on the Plans.

12
13 **(A) Definitions.**

14
15 **(1) Microtunneling.** A trenchless, steerable installation method to
16 jack a casing or product pipe behind a remotely controlled steerable,
17 laser-guided, tunnel boring machine. Drive and reception pits are
18 excavated adjacent to the trenchless alignment. Installation
19 commences from the drive pit, progressing below grade, and ending
20 when the pipe exits at stream bank. During the microtunneling process
21 the excavated material may be removed using a mixture of water and
22 slurry, pumped through a pipe for disposal; balanced screw auger; or
23 screw conveyor system.

24
25 The Contractor shall have full discretion to select the pipe installation
26 method, subject to acceptance by the Engineer.

27
28 **(5) Jacking System.** A system of jacks which push the string of
29 casing or product pipe. Capacity of jacks and extension rate is
30 synchronized with excavation rate of the machine.

31
32 **(6) Drive/Launch Pit.** A pit used for "launching" a casing or
33 product pipe.

34
35 **(7) Launch Seal.** A mechanical seal, usually comprised of a
36 rubber flange that is mounted to the wall of the drive pit. The flange
37 seal is distended by the casing or product pipe as it passes through
38 creating a seal to prevent groundwater or lubrication inflow into the pit
39 during sleeve or product pipe installation.

40
41 **(8) Locator.** An electronic instrument used to determine the
42 position of the leading edge of the casing or product pipe. Sometimes
43 referred to as a walkover system.

44
45 **(9) Reception/Exit Pit.** Excavation into which sleeve or product
46 pipe is driven.

48 **(10) Reinstatement.** The backfilling, compaction and resurfacing of
49 any excavation in order to restore the surface and underlying structure
50 to enable it to perform its original function.
51

52 **(11) Retrieval Seal.** A mechanical seal usually comprised of a
53 rubber flange that is distended by the casing. Similar to the launch
54 seal, this seal is used during the holing-out operation. Serves to keep
55 water from infiltrating into the reception pit.
56

57
58 **(B)** All microtunneling and related work shall be carried out in accordance
59 with the approved microtunneling work plans.
60

61 **(C)** Take all precautions necessary to protect and prevent existing utilities,
62 trees, and structures from damage by construction activities. Repair and/or
63 restore any existing utilities, trees, and all nearby structures damaged by
64 microtunneling and related work immediately, at no additional cost to the
65 State.
66

67 **(D)** Refer to Section 280, Shaft Construction, for requirements for drive
68 and reception pit construction.
69

70 **672.02 Materials.**

71 **(A) General.**

72
73
74 Steel plate covers shall be structural steel conforming to the
75 requirements of ASTM A 36.
76

77 Concrete shall conform to the requirements of Section 601 - Structural
78 Concrete and shall be Class B unless specified otherwise.
79

80 Materials shall meet the requirements specified in the following
81 subsections of Division 700 - Materials, as modified herein.
82

83 Trench Backfill Material	703.21
84 Reinforcing Steel	709.01

85 **(B) Microtunneling.**

86 **(1) Materials.**

87
88 **(a)** Slurry, if used, shall be as selected by the Contractor and
89 formulated to control ground conditions described in the boring
90 logs.
91
92

93 **(2) Equipment -- Tunneling Machine.**

94
95

(a) Tunneling machine selected shall be specifically designed for excavating and installing pipe from a drive pit through the geologic materials as described in the boring logs.

(b) Tunneling machine shall be guided using a laser and monitored continuously.

(c) Tunneling machine shall be capable of being operated in a manner which will prevent loss of ground during tunneling and shall be steerable and capable of controlling the advance of the heading to maintain line and grade within the tolerances specified in Subsection 672.03(C) - Highway Procedures and Requirements.

(d) Amount of overcut shall be compatible with the ground conditions, stiffness characteristics of selected casing or product pipe, and joint system at the designed maximum jacking loads.

(e) Line and grade control system shall include, as a minimum, the capability to report the machine operating parameters listed Subsection 672.03(B)(1)(d).

(C) Reinforced Concrete Jacking Pipe. Refer to Section 780, Reinforced Concrete Jacking Pipe.

672.03 Construction.

(A) Design Criteria.

(1) Reinforced concrete pipe installation using microtunneling methods and associated equipment selected by the Contractor shall be compatible with the geologic conditions described in the boring logs, and other requirements specified herein.

(2) Design drive and reception pits, excavation support systems to withstand lateral earth pressures, ground loads, equipment loads, applicable traffic and construction loads, and other surcharge loads to allow safe construction of drive and reception pits without appreciable movement or settlement of ground, and to prevent damage to or movement of adjacent structures, streets, utilities and trees.

(3) Control ground surface settlement or heave above the centerline of the pipeline to 1 inch or less. The Contractor shall repair any damage resulting from surface settlement or heave caused by trenchless sleeve installation, or drive and reception pit excavation and construction, at no additional cost to the State.

(4) The thrust block shall be constructed perpendicular to the proposed pipe alignment and shall be designed to withstand the maximum jacking pressure to be used, with a factor of safety of at least 2.5, without excessive deflection or displacement.

(B) Submittals. Working drawings and documentation for microtunneling shall be submitted in accordance with Section 105 – Control of Work. The working drawing and documentation requirements of this section are in addition to, and shall take precedence over conflicting requirements for working drawings in Section 105 – Control of Work.

(1) Microtunneling.

(a) Submit for approval complete working drawings showing details of the proposed method of construction and the sequence of operations to be performed during construction. Show the method of microtunneling, including the microtunneling system to be used, location of working pits including method of excavation and shoring and bracing appurtenance installation that are proposed to be used. These submittals shall include all the restrictions and limitations imposed in Subsection 672.03(C) - Highway Procedures and Requirements. The following is not intended to limit, but to provide, the minimum of details which must be included.

1. A detailed description of the microtunneling procedure including construction techniques to provide the access required to install reinforced concrete pipelines in conformance with Contract Documents.

2. Manufacturer's literature describing in detail the microtunneling system to be used. Detailed description of projects on which this system has been successfully used including the names, addresses and telephone numbers of owner's representatives for these projects as well as length, diameter, ground conditions encountered, and pipe material used.

3. Calculations and drawings indicating limits of access pits and any ground support to be utilized.

4. Method of spoil disposal.

5. Certification by the machine manufacturer of the thrust, torque, condition, and operational characteristics of all equipment to be used for installing the specified reinforced concrete pipeline. The microtunneling equipment shall employ a spoil removal system. The

system shall prevent caving beyond the outside diameters of the pipeline.

6. Working Drawings, including the following:

- a. Layout of tunneling and ancillary equipment at each drive and reception pit location.
- b. Tunnel machine shop drawings including configuration of cutterhead and overcut.
- c. Ventilation details.
- d. Pipe lubrication details.
- e. Electrical system and lighting details.
- f. Grade and alignment control details.
- g. Groundwater control provisions.

7. Details of mucking system and soil disposal methods.

8. Details of jacking system, method of operation, and thrust capacity. Include calculations of anticipated jacking forces required to advance the reinforced concrete pipeline. Describe controls to prevent the maximum jacking force from being exceeded.

9. If casing is used, details of grouting the annulus space after the product pipe has been installed including injection pressure and method of controlling grout pressures.

10. Calculations demonstrating that the reinforced concrete pipe selected has been designed to support the maximum anticipated earth loads and superimposed live loads, both static and dynamic, which may be imposed on the pipe. Determine the additional stresses imposed on the reinforced concrete pipe during jacking operations and upgrade the quality and strength of the pipe and pipe joints to the extent necessary to withstand the additional stresses imposed by the jacking operation.

11. Contractor's safety plan for personnel conducting the tunneling operations including provisions for lighting, ventilation, electrical safeguards, and safety to the public.

239
240 **12.** Keep and maintain at the construction site a
241 complete set of field drawings for recording as-built
242 conditions. It shall have marked or noted thereon all field
243 information, properly dated, recording as-built conditions.
244 This set of field drawings shall be kept up to date.

245
246 **13.** Pipe certification of compliance.

247
248 **14.** Reinforced concrete pipe jointing method and
249 details.

250
251 **15.** All Contractor submittals requiring structural
252 design shall be signed by a professional structural
253 engineer registered in the State of Hawaii.

254
255 **16.** Written documentation summarizing the
256 qualifications of the project superintendent, machine
257 operators, and site safety representative.

258
259 **(b)** The Contractor shall prepare a schedule for the work and
260 submit it to the Engineer for approval. The schedule shall include
261 all major tasks to be performed including the following:

- 262
263 1. Reinforced concrete pipe delivery
264
265 2. Tunneling equipment mobilization and setup
266
267 3. Reinforced concrete pipe installation
268
269 4. Testing and pigging pipe after installation

270
271 **(c)** At least 30 days prior to mobilization of equipment, the
272 Contractor shall submit a detailed installation plan to the
273 Engineer for review and approval. The plan shall also include a
274 detailed plan and profile of the bore plotted at a scale no smaller
275 than 1-inch equals 20 feet horizontally and vertically.

276
277 **(d)** Submit a computer-generated log of the jacking
278 operations. Log shall be permanent and separate.

279
280 1. A hard-copy printout of the computer-generated
281 log shall be submitted to the Engineer once per day.

282
283 2. This computer-generated log will be taken at
284 intervals of no more than 10 minutes apart and a
285 minimum of four readings per pushed 10 foot joint and
286 accomplished by a video recording of the TV image at

the operator's console. Video shall show a real-time clock that matches the time scale used in the log. Indicators in the tunneling machine being viewed by the video recorder shall indicate when the tunneling machine is excavating and the number of the pipe joint that is being pushed. A hard-copy printout of the computer-generated log shall be submitted to the Engineer once per day. The video recording shall be submitted to the Engineer each week.

3. As a minimum the log shall consist of the following:

- a.** Position of the tunneling machine in relation to the design line and grade.
- b.** Jacking forces exerted on the product pipe.
- c.** Date, starting time, and finish time.
- d.** Position of the steering jacks.
- e.** Inclination.
- f.** Cutter head torque.
- g.** Slurry flow rates in both the supply and return lines (if slurry is used).

(e) Submit a separate computer-generated log tracking sleeve lubricant used in gallons, its viscosity, and pumping pressure. Log shall be submitted daily.

(f) Submit a separate computer-generated log tracking the volume of muck removed from the site. Log shall be submitted daily.

(g) The Engineer will base the review of submitted details and data with consideration of requirements for the completed work, utilities, and the possibility of unnecessary details in the execution of the work to be constructed under this contract. Review of the Contractor submittals by the Engineer shall not relieve the Contractor of his responsibilities under this Contract.

(h) Equipment and installation methods shall be adequate to preserve the quality of the product pipe.

334 **(C) Highway Procedures and Requirements.** The Contractor shall
335 perform all work in accordance with Subsection 104.09 - Maintenance of
336 Traffic. The requirements of this subsection are in addition to, and shall take
337 precedence over conflicting requirements with Subsection 104.09.
338

339 (1) Maintain traffic at all times. Pit locations shall be kept clear of
340 intersections and within a single lane of traffic in order to minimize
341 disruption to the flow of traffic. Pit locations shall be kept out of the
342 existing travel ways. No lane closures will be allowed along Kaumuali'i
343 Highway in conjunction with any microtunneling installation unless
344 noted on Contract Plans.
345

346 (2) The Contractor is responsible for containing slurry and
347 contaminants such that it does not reach any water body. Traffic
348 barriers are required between the active traffic and any work space.
349

350 (3) The Contractor shall monitor ground movements associated
351 with the microtunneling work in accordance with SECTION 684,
352 "CONSTRUCTION INSTRUMENTATION AND MONITORING" and
353 provide the Engineer with copies upon request. These actions are
354 meant to supplement the Contractor's monitoring system and do not
355 relieve the Contractor of his responsibility, nor place on the Engineer,
356 responsibility for control of ground movement and protection of work
357 and adjacent structures. The Contractor shall stop work immediately
358 at the first sign of any surface subsidence.
359

360 (4) Control line and grade of sleeve to within the specified
361 tolerances as accepted by the Engineer. Monitor line and grade
362 continuously during microtunneling installation. When the installation is
363 off line and / or grade, return to plan line and / or grade at a rate of not
364 more than one inch (1") per one hundred feet (100'), unless approved
365 by the Engineer. If the microtunneling installation is sufficiently far off
366 specified tolerances to require redesign of product pipelines, the
367 Contractor shall do so at no cost to the State.
368

369 **(D) Construction Requirements**
370

371 (1) **Equipment List and Drawings.** Within 30 days following the
372 award of the Contract, the Contractor shall submit to the Engineer for
373 approval a list of all materials and equipment to be incorporated in the
374 work. The list shall comprise all items of the work and for each item
375 shall typically include identification enabling ready determination of its
376 intended application; and, manufacturer's product identification
377 including size, rating, and technical description. Manufacturer's catalog
378 cuts, diagrams, charts, and other descriptive data shall also be
379 submitted to facilitate the Engineer's review of the equipment list. If the
380 Engineer requests samples of materials or equipment proposed for

381 installation, the Contractor shall furnish such samples without claim for
382 additional compensation.
383

384 Upon completion of the work, the Contractor shall submit
385 'as-built' plans, reflecting construction departures from the Contract
386 plans.
387

388 **(2) Existing Utilities.** Existing utilities shown on the drawings are
389 in approximate locations for the convenience of the Contractor. The
390 fact that any utility is not shown on the drawings shall not relieve the
391 Contractor of his responsibility. It shall be the Contractor's
392 responsibility to ascertain the location of all existing utilities which may
393 be subject to damage by reason of his operations. The Contractor shall
394 be responsible for and shall pay for all damages to existing utilities of
395 all types.
396

397 **(3) Excavation and Backfill.** Excavation and backfill shall conform
398 to the applicable requirements of Section 206 - Excavation and Backfill
399 for Drainage Facilities. Excavations shall be performed in a manner to
400 prevent damage to pavements, gutters, sidewalks, and other
401 improvements. The material from the excavation shall be placed so as
402 to prevent damage and obstruction to vehicular and pedestrian traffic
403 and interferences with surface drainage.
404

405 **(4) Quality Assurance.**
406

407 **(a) Qualifications.** The project superintendent shall have at
408 least three years of experience with the construction method to
409 be used and shall have worked on at least two projects in
410 similar ground conditions using equipment similar to the
411 equipment required for this project. The operator shall have at
412 least two years of experience and shall have worked on at least
413 one project using the same equipment required for this project.
414 Welders shall be certified prior to the commencement of pipe
415 welding operations.
416

417 **(b) Field Tests and Inspections.**
418

419 **1.** The Engineer will witness field tests as specified in
420 this Section.
421

422 **2.** Perform field tests and provide labor, equipment,
423 and incidentals required for testing. Be able to produce
424 evidence, when required, that each item of work has
425 been constructed properly in accordance with the
426 Contract Documents.
427

428 **(c) Quality Control.** Contractor shall establish and maintain
429 quality control for operations under this Section to assure
430 compliance with contract requirements and maintain records of
431 his quality control for materials, equipment, and construction
432 operations including but not limited to the following:

433
434 **1.** Preparatory Inspection: (To be conducted prior to
435 commencing work).

436
437 **a.** Check reinforced concrete pipe for
438 conformance to approved certified tests.

439
440 **b.** Check reinforced concrete pipe for proper
441 storage and handling.

442
443 **c.** Discuss and review pipe installation
444 procedures with Engineer to include placing of
445 pipe, joint preparation, and application of each
446 pipe used.

447
448 **2.** Initial Inspection: (To be conducted after a
449 representative sample of the work is complete).

450
451 **a.** Check for proper depth and grade for
452 reinforced concrete pipe.

453
454 **b.** Check method of joining sleeves.

455
456 **c.** Check the sleeve for proper alignment.

457
458 **(d) Project Conditions.** Provide adequate lighting for the
459 nature of the activity being conducted by workers. Separate
460 both power and lighting circuits and thoroughly insulate.
461 Lighting voltage not to exceed 120 VAC protected by a ground
462 fault circuit interrupter.

463
464 **(e) Construction.**

465
466 **1. Pits.**

467
468 **a.** Construction techniques required to provide
469 access shall be such as to ensure the safety of the
470 work. Acceptable excavation methods include the
471 use of interlocked steel sheet piling or open
472 excavation.

473
474 **b.** Final dimensions of access pits selected by
475 Contractor shall conform as a minimum with

dimensions required to permit installation of the work.

c. The Contractor shall be required to properly support all excavations and to prevent all movement of the soil, pavement, utilities or structures outside of the excavation. All pits shall conform with applicable Local Safety Standards, OSHA Standards, trenching, and shoring standards.

d. If at any time the method being used by the Contractor for supporting any material or structure adjacent to any excavation is not safe in the opinion of the Engineer or applicable Federal, State or local inspection authorities, the Engineer may require and the Contractor shall provide additional bracing and support necessary to furnish the added degree of safety required by the Engineer. The Contractor shall provide such added bracing and support by such method accepted by the Engineer as he may elect to use but the taking of such added precautions shall in no way relieve the Contractor of his sole final responsibility for the safety of lives, work, and structures. The use of such additional bracing and support shall be without additional cost to the State. The absence of an order from the Engineer for the aforementioned additional bracing shall in no way relieve the Contractor of his sole and final responsibility.

e. Construct pits to accommodate the installation of reinforced concrete pipeline and needed equipment. Install seals in the pit wall as required to control ground movement where the pipe enter and exit the ground.

f. All work of excavating shoring and bracing, and pipe installation shall be so executed that settlement is minimized, the in-place pipe shall have full bearing against earth, and no voids or pockets are left in any portion of the work.

g. Before beginning construction at any location of this project, adequately protect existing structures and other permanent objects. The repair of or compensation for damage to

524 permanent facilities due to negligence or lack of
525 adequate protection on the part of the Contractor
526 will be at no cost to the State.

527
528 **h.** Provide surface drainage during the period
529 of construction to protect the work.

530
531 **i.** Conduct operations in such a fashion that
532 trucks and other vehicles do not create a dirt
533 nuisance. Secure the required permits and
534 promptly remove and dispose of any spillage.

535
536 **j.** Size and locate pits and work areas so as
537 to avoid interferences with all forms of traffic.

538
539 **2. Control of Line and Grade.**

540
541 **a.** The Contractor will establish the baseline
542 and benchmarks indicated on the plans. Check
543 these baselines and benchmarks at the beginning
544 of the contract period and report any error or
545 discrepancies to the Engineer.

546
547 **b.** Use these baselines and benchmarks to
548 furnish and maintain all reference lines and grades
549 for the pipe installation. Use these lines and
550 grades to establish the exact starting location of
551 the pipe.

552
553 **c.** Submit to the Engineer copies of field notes
554 used to establish all lines and grades; however,
555 the Contractor remains fully responsible for the
556 accuracy of his work and the correction of it, as
557 requires.

558
559 **d.** The excavation and run of pipe installed
560 shall be controlled such that the deviation from
561 grade is below the design grade.

562
563 **e.** After installation of the pipe, provide the
564 Engineer with access to both pipeline ends for
565 visual inspection of the line and grade of the
566 completed pipeline.

567
568 **(g) Installation.**

569
570 **1.** No work shall commence until the design and
571 construction procedures have been accepted in writing

572 by the Engineer. The Contractor is totally responsible for
573 the performance of the equipment and methods selected.
574 The Engineer's approval signifies only that the
575 construction process is compatible with the overall
576 objectives of the project.
577

578 **2.** Each pipe section shall be rammed or jacked as
579 the excavation progresses in such a way to provide
580 complete and adequate ground support at all times.
581 Lubrication shall be applied to the external surface of the
582 pipe to reduce skin friction. A hammer or jacking frame
583 shall be positioned to develop a uniform distribution of
584 forces around the periphery of the pipe. Special care
585 shall be taken by the Contractor to insure that the launch
586 seal is properly designed and constructed. Special care
587 should be taken when setting the pipe guard rails in the
588 pit to ensure correctness of the alignment.
589

590 **3.** Be responsible for monitoring ground movements
591 associated with the work and making suitable changes in
592 the construction methods to control ground movements
593 and prevent damage or detrimental movement to the
594 work and adjacent structures and pavements.
595 Permissible tolerances with respect to settlement of
596 ground surface and alignment of sleeve or product pipe
597 shall not be exceeded.
598

599 **4.** The soil transportation method shall be capable of
600 handling and removing material identified in the boring
601 logs. All excavated material from the pipe installation and
602 pit construction shall be disposed of off-site by the
603 Contractor.
604

605 **5.** A lubrication system shall be provided that injects
606 an approved lubricant to the pipe to lower the friction
607 developed on the pipeline during installation. Spacing of
608 lubricant points shall be at the Contractor's option with
609 approval from the Engineer.
610

611 **6.** The overcut on the pipeline shall not exceed
612 1 inch without the approval of the Engineer. The annular
613 space created by the overcut shall be filled with a
614 lubricant that has been proved suitable for the particular
615 ground conditions.
616

617 **(h) Invert Finishing.** Clean pipe of all debris from
618 construction.
619

(i) **Clean-up and Restoration.** Restoration shall follow construction activities as the work progresses and shall be completed as soon as possible, in accordance with SECTION 280, "SHAFT CONSTRUCTION." Restore and repair any damage resulting from surface settlement caused by shaft construction or microtunneling. Any property damaged or destroyed shall be restored to a condition equal to or better than existing prior to construction. Final restoration that cannot be performed within the thirty (30) day period due to adverse weather conditions, may, upon written request that includes a proposed procedure and time schedule, be performed as approved by the Engineer.

672.04 Measurement. The reinforced concrete pipeline installed by microtunneling methods will be paid for on a lump sum basis. Measurement for payment will not apply.

672.05 Payment. The Engineer will pay for the accepted reinforced concrete pipe installed using microtunneling methods on a contract lump sum basis. Payment will be full compensation for the work prescribed in this section and the contract documents. The contract lump sum price shall be full compensation for furnishing all materials, fittings, labor, tools, and equipment for doing all work involved in installing reinforced concrete pipes using microtunneling methods, complete in place. Included is stakeout, reinforced concrete jacking pipes, annulus spacers, annulus grouting, muck handling disposal, and restoration of existing pavement, private property and / or other facilities affected by this work. Damaged pipe shall be repaired or replaced at no additional cost to the State.

The Engineer will pay for the following pay item when included in the proposal schedule.

Pay Item	Pay Unit
Microtunneling	Lump Sum"

END OF SECTION 672

1 Make the following Section a part of the Standard Specifications:

2
3 **"SECTION 684 - CONSTRUCTION INSTRUMENTATION AND MONITORING**

4
5 **684.01 Description.**

6
7 **(A)** The work specified in this section includes furnishing, installing, and
8 monitoring instrumentation to monitor ground movements within, around, and
9 above tunnel excavations, and adjacent to all shaft and open trench
10 excavations. The work includes, but is not limited to: installing and monitoring
11 surface settlement points; installing slope inclinometers; and furnishing
12 monitoring equipment.

13
14 **(B)** The Contractor shall monitor the slope inclinometers and furnish the
15 Engineer with a copy of the results. The Contractor is responsible for
16 surveying the elevations of all surface settlement points.

17
18 **684.02 Materials.**

19
20 **(A) Surface Settlement Points.** Surface settlement points shall be
21 established by an inscribed marking or approved surveyor's nail driven flush
22 with the surface in asphalt or concrete paved areas and 2-inch by 2-inch
23 timber stake flush with the ground in unpaved areas. Each control point shall
24 have a tag or marking indicating the station and offset from centerline of the
25 pipeline.

26
27 **(B) Slope Inclinometers.** Slope inclinometers shall be installed in vertical
28 drill holes to the required depth. The following materials and equipment shall
29 be provided.

30
31 **(1) Inclinometer.** Inclinometer casing shall be approximately
32 2.75-inch flush couplings. Each inclinometer shall be furnished with a
33 bottom cap with grout port connection, top cap, and a protective
34 housing with locking cap that are compatible with the casing furnished.
35 Furnish one padlock with 3 keys for each inclinometer. Couplings and
36 accessories necessary for the installation shall be provided as
37 recommended by the manufacturer.

38
39 **(2) Inclinometer Probe Assembly.** One inclinometer assembly
40 shall be furnished including a sensor (probe) on a minimum 100-foot-
41 long cable, a pulley assembly, a case, and any other necessary
42 accessories. An identical backup probe shall be available on site or be
43 obtained within 24 hours.

44
45 **(3) Inclinometer Software.** Computer software required to reduce,
46 analyze, and plot the inclinometer data shall be furnished for use by
47 the Contractor.

49 (4) **Grout.** Provide a cement-bentonite grout for installing
50 inclinometer with drill hole. Grout mix shall be in accordance with
51 manufacturer's requirements.
52

53 (5) **Traffic Vaults.** Traffic vaults should provide at least 6 inches of
54 clearance all around the inclinometer casing and shall be rated for
55 AASHTO HS20-44 traffic loads.
56

57 **684.03 Construction.**

58 59 **(A) Quality Assurance.**

60
61 (1) **Personnel Qualifications:** Employ qualified personnel with a
62 minimum of 2 years of experience in the installation of geotechnical
63 instrumentation similar to that specified herein.
64

65 (2) Each instrument specified herein shall be the product of an
66 acceptable manufacturer currently engaged in manufacturing
67 geotechnical instrumentation hardware of the specified types.
68

69 (3) **Surveyor Qualifications:** Surveying for monitoring surface
70 settlement points shall be performed by a land surveyor licensed in the
71 State of Hawaii with previous experience surveying for the detection of
72 structural deformations and surface movements.
73

74 **(B) Tolerances.**

75
76 (1) Install surface settlement points within 1 foot of the horizontal
77 location shown on the work plan by the Contractor or as directed by
78 the Engineer. Other surface control points shall be installed as directed
79 by the Engineer.
80

81 (2) Should actual field conditions prevent installation of instruments
82 at the location shown on the Contractor's work plan or specified herein,
83 obtain prior acceptance from the Engineer from new instrument
84 location and elevation.
85

86 **(C) Submittals.** Submit the following a minimum of three (3) calendar
87 months prior to mobilization of the trenchless installation equipment in
88 accordance with the project's submittal requirements. Provide sufficient detail
89 to allow the Engineer to judge whether or not the proposed equipment,
90 materials, procedures and qualifications will meet the Contract requirements.
91

92 (1) **Qualifications.** Submit personnel and supplier qualifications for
93 review demonstrating compliance with the requirements herein.
94

95 (2) **Shop Drawings.** Submit the following:
96

- 97 (a) Description of methods, procedures, and materials for
98 installing slope inclinometers and establishing surface
99 settlement points. Provide manufacturer's literature
100 describing inclinometer materials, traffic vaults, and
101 monitoring equipment.
102 (b) Plan showing locations of the surface settlement points,
103 and slope inclinometers.
104
105 c) Instrumentation Schedule: Submit the proposed schedule
106 for installing the slope inclinometers and surface settlement
107 points.
108

109 **(3) Reports and Records.**

- 111 (a) Provide surface settlement point monitoring data to the
112 Engineer.
113
114 (b) **Instrumentation Schedule.** Submit the proposed
115 schedule for installing the slope inclinometers and surface
116 settlement points.
117
118 (c) Following installation of the instruments, submit drawings
119 showing the installed location, the instrument identification
120 number, the instrument type, the installation date and time, the
121 heading station or shaft/trench excavation depth on the
122 installation date, where applicable, and the anchor or tip
123 elevation and instrument length, when applicable. Include
124 details of installed instruments, accessories and protective
125 measures including all dimensions and materials used.
126

127 **(D) General Requirements.**

- 129 (1) Instrumentation shall be installed at the locations shown on the
130 Contractor's work plans and as approved by the Engineer. Instruments
131 shall be installed in accordance with the approved submittals.
132
133 (2) Provide the Engineer any assistance required in obtaining
134 monitoring data.
135

136 **(E) Surface Settlement Points.**

- 138 (1) A three-point array of surface settlement points shall be
139 established every 50 feet along the alignment of the pipe to be
140 installed by trenchless methods, and around and along shaft and
141 trench excavations, as shown on the Contractor's Work Plans.
142 Relocate settlement points that cannot be safely surveyed as required
143 by the Engineer. An array of surface settlement point shall be
144 established every 50 feet along both sides of all open trench

excavation for pipeline installation, as shown on the Contractor's Work Plans Furnish and monitor a minimum of 10 surface settlement points on each individual property along the alignment of the drain pipe to be installed by trenchless methods or open trenching, as directed by the Engineer. Furnish and monitor an additional 54 settlement points to be installed for monitoring other structures and utilities, as directed by the Engineer.

(2) Install settlement points and make initial surveying measurements prior to performing any predrilling and excavation at shafts or open trench excavations, and prior to any pipe installation. Thereafter, survey the elevation of the settlement points daily while, trenching or trenchless installation operations are within 100 feet of the settlement point, and at least once per week until all measurable subsidence stops. For trench and shaft excavations survey the elevation of settlement points daily until all temporary support is installed, then weekly until the excavation is backfilled.

(3) Survey settlement points using conventional level surveying techniques to a measurement accuracy of at least 0.01 (one hundredth) of a foot.

(4) Provide data from readings of surface control points to the Engineer within 24 hours of reading.

(5) At the completion of settlement monitoring, remove settlement monitoring points along centerline of the drain line alignment, fill any holes or voids with cement grout, and restore asphalt concrete pavement.

(F) Slope Inclinometers.

(1) Meet with the Engineer at least every 3 days in advance of installing inclinometers to verify that all necessary materials are available.

(2) Provide the inclinometer probe, cable, software, data logger, and readout unit to the Engineer prior to installing the inclinometer casing.

(3) A minimum of 1 slope inclinometer shall be located at each microtunneling shaft. The slope inclinometers shall be installed as close as practicable to the locations shown on the Contractor's work plans. The Engineer may modify inclinometer locations depending on field conditions and monitoring objectives.

(4) Slope inclinometer installations shall be completed at least 10 working days in advance of starting of any shaft excavation work on the shaft being monitored.

(5) Conduct drilling operations using appropriate methods that are consistent with anticipated geologic conditions. Use rotary wash methods or provide casing as required to hold drill hole open. Drill hole or inside of casing shall provide a clear opening 6 inches in diameter or greater.

(6) Inclinometer casing shall extend from the ground surface to the minimum depth of 10 feet below the bottom of the excavations.

(7) Install slope inclinometers in accordance with the manufacturer's recommendations and the approved submittals. Grout annulus between inclinometer and the drill hole in accordance with the manufacturer's recommendations. Grout installations from bottom of hole to the ground surface using approved methods. Use a grout tube inside the casing connected to grout port connection in bottom cap. Grout casing into hole immediately after installing both the casing and grout tube.

(8) Protection: Install protective housing with locking cap and padlock, and give keys to the Engineer. Protective housing shall be installed within a flush-mounted precast concrete traffic vault designed for vehicular traffic loads so as not to obstruct vehicle or foot traffic.

(9) The contractor shall monitor the inclinometers and provide data from readings taken to the Engineer within 24 hours of reading. The contractor shall make his own interpretations of monitoring data for his own purposes. Data or interpretations shall not be published or disclosed to other parties without advance written permission of the State.

(G) Instrument Protection, Maintenance, and Repair

(1) Protect the inclinometers and surface settlement points from damage and vandalism. Damaged installations shall be replaced or repaired prior to continuing trenchless pipe installation, unless permitted otherwise by the Engineer.

(2) Maintain the instruments by draining water and flushing debris from under protective covers and keeping covers locked and sealed at all times.

(H) Disposition of Instruments

(1) **Surface Settlement Points.** All surface settlement points shall be removed during the cleanup and site restoration work, as directed by the Engineer.

(2) **Slope Inclinometers.** When directed by the Engineer, remove and dispose of the top two feet of inclinometer casing, protecting housing and caps.

(a) Backfill remaining portion of inclinometer casing with cement-bentonite grout that has a 28-day strength of at least 1,000 psi.

(b) Following backfilling, remove precast boxes or vaults, backfill excavation, and restore to original conditions.

684.04 Measurement. The Construction Instrumentation and Monitoring will be paid for on a lump sum basis. Measurement for payment will not apply.

684.05 Payment. The Engineer will pay for the accepted Construction Instrumentation and Monitoring on a contract lump sum basis. Payment will be full compensation for the work prescribed in this section and the contract documents. The contract lump sum price shall be full compensation for furnishing all materials, fittings, labor, tools, and equipment for doing all work involved in Construction Instrumentation and Monitoring, complete in place. Included is furnishing and monitoring surface settlement points, inclinometer readout instruments including software, data logger, capable and probe, inclinometer casings including drilling, installation, grouting inclinometer casings, provision of locking casing covers, removal, and restoration.

The Engineer will pay for the following pay item when included in the proposal schedule.

Pay Item	Pay Unit
Construction Instrumentation and Monitoring	Lump Sum"

END OF SECTION 684

1 Make the following Section a part of the Standard Specifications:

2
3 **“SECTION 685 – MUCK HANDLING AND DISPOSAL**

4
5 **685.01 Description.** The work specified in this section includes requirements for
6 muck handling, transporting, and disposal. Performance of the work shall be as
7 specified in the following paragraphs, or as approved by the Engineer.

8
9 **685.02 Materials.**

10
11 **(A) Muck.** Muck consists of the soil or rock materials and other debris
12 generated from excavations for trenchless pipe installation, open trenching,
13 and shafts for drive and reception pits, manholes, recovery shafts, and other
14 unclassified excavations associated with the project.

15
16 **685.03 Construction.**

17
18 **(A) Submittals.**

19
20 **(1) Muck Disposal Work Plan.** The Contractor shall prepare and
21 submit to the Engineer for review and acceptance a detailed work plan
22 for disposal of muck generated from trenchless pipe installation, shaft,
23 open trenching, and other required project excavations. Work plan
24 shall include a general procedure for muck handling, transporting,
25 stockpiling, testing, and hauling muck to disposal site. In addition,
26 provide the following:

27
28 **(a)** Location of temporary stockpile site, site plan, site
29 development, and containment provisions.

30
31 **(b)** Haul routes and traffic control plan for haul routes for
32 transportation muck from the job site to any temporary stockpile
33 site, and for transporting muck from the temporary stockpile site
34 to the disposal site(s).

35
36 **(c)** Noise and dust control measures.

37
38 **(d)** Description of testing equipment for screening muck
39 loads, including manufacturer's literature.

40
41 **(e)** Name of disposal site(s) and written documentation from
42 the disposal site(s) or Owner(s) indicating that they will accept
43 the muck or slurry and are in compliance with all applicable
44 regulations.

45
46 **(f)** Listing of required permits and agreements.

48 (2) **Records.** Provide daily reports from approved disposal site(s)
49 each day that muck or slurry is delivered indicating quantity of material
50 delivered.
51

52 (B) **QUALITY ASSURANCE**
53

54 (1) **Regulations:** All muck handling, transportation, and disposal
55 shall be performed in accordance with current applicable regulations
56 and codes of federal, state, and local authorities having jurisdiction.
57

58 (C) **GENERAL REQUIREMENTS**
59

60 (1) All muck handling, transportation, and disposal shall be
61 performed in accordance with current applicable regulations and codes
62 of federal, state, and local authorities having jurisdiction.
63

64 (2) Muck shall be disposed of at a designated site or landfill
65 selected by the Contractor and approved by the Engineer, unless
66 approved otherwise by the Engineer.
67

68 (3) **Permits.** Before proceeding, the Contractors shall obtain all
69 required permits in accordance with SECTION 107.02, "PERMITS
70 AND LICENSES."
71

72 (4) **Dust Control:** The Contractor shall minimize and control dust
73 raised during muck handling and disposal in accordance with the
74 project's requirements.
75

76 (5) The Contractor shall perform visual inspection of all muck or
77 spoils excavated during the project and also screen the muck and
78 spoils for the presence of contamination using a real time
79 photoionization detector, such as an HNu, Mini-Rae or similar, with a
80 10.2 electron volts (eV) lamp or equivalent that is calibrated daily in
81 accordance with the manufacturer's recommendations. Screen each
82 truck load with the detector at least three times as the truck is being
83 loaded and notify the Engineer if any of the readings exceeds 5 ppm or
84 if visual contamination is observed.
85

86 (6) The muck shall be tested as required by the accepted policies of
87 the disposal site or the owner of the site. Uncontaminated materials
88 shall be taken to the disposal site and be disposed of in accordance
89 with the requirements of the disposal site.
90

91 (7) Temporary stockpiling of materials at the jacking and receiving
92 pit sites or at other locations for the convenience of the Contractor is
93 not allowed, unless approved by the Engineer.
94

(8) Public roadways, where used, shall be cleaned by washing or with cleaning equipment as required to prevent excessive dusting or dirt accumulation on a daily basis. Vehicles shall be washed prior to existing disposal or stockpiling sites and entering public roadways, as required. The Contractor is responsible to immediately contain and remove all spilled slurry, washing or cleaning water from the site and discharge in accordance with all applicable government requirements.

(9) Requirements for Haulers:

(a) The Contractor shall ensure that all drivers in the hauling of muck have in their possession a valid Class One (1) Hawaii Driver's License, required vehicle registration and licensing and all required vehicle insurance coverage.

(b) The Contractor shall be responsible for informing all drivers of hauling vehicles with regard to:

(1) The nature of the material hauled.

(2) The muck handling and disposal process.

(3) Required haul routes from the construction site to the temporary stockpiling site and from the stockpiling site to the disposal site.

(c) Haul trucks carrying muck shall be loaded so that the muck does not extend above the walls of the truck bed. The Contractor shall wash the tires of the haul trucks before they re-enter city streets. Any spillage of muck on roadways shall be promptly cleaned up by the Contractor.

(d) Haul trucks shall be lined with a 10-mil polyethylene plastic sheeting. The muck loads will be tightly covered using a 10-mil polyethylene plastic sheet so as to prevent muck from spilling over the side and back of the haul trucks.

685.04 Measurement. The Muck Handling Disposal shall not be paid directly, but shall be included in the lump sum price for Microtunneling. Measurement for payment will not apply.

685.05 Payment. The Engineer will pay for accepted Muck Handling Disposal included in the lump sum price for Microtunneling as appropriate, and as scheduled in the Proposal. Payment will be full compensation for the work prescribed in this section and the contract documents. The lump sum price shall be full compensation for furnishing all materials, fittings, labor, tools, and equipment for doing all work involved in Muck Handling Disposal. Included is muck handling, stockpiling, loading, transporting, and disposal of uncontaminated materials. Muck testing as required by

143 acceptance policies of the disposal site or the owner of the site shall not be paid for
144 directly, but shall be included in the lump sum price for Microtunneling as
145 appropriate, and as scheduled in the Proposal.”

146

147

148

END OF SECTION 685

1 Make this Section a part of the Standard Specifications:

2
3 **"SECTION 694 - PORTABLE CONCRETE BARRIER**
4 **AND END TREATMENT SYSTEM**

5
6 **694.01 Description.** This section is for furnishing, hauling, installing, maintaining,
7 relocating, and subsequently removing portable concrete barriers and
8 end treatment systems according to the contract documents.

9
10 **694.02 Materials.**

11
12 **(A) Portable Concrete Barriers.** Materials must meet the requirements
13 specified in the following subsections of Division 700 - Materials.

14

15 Reinforcing Steel	709.01
16 Reflector Marker	750.07
17 Preformed Pavement Marking Tape	755.04
18 Structural Steel	713.01
19 High-Strength Bolts and Studs	718.02
20 Nuts	718.03
21 Macro-Synthetic Fibers for Concrete Reinforcement	719

22
23
24
25
26
27
28

29 **694.03 Construction Requirements.**

30
31 **(A) Portable Concrete Barriers.**

32
33 **(1) Fabrication.** Construct the contractor furnished portable
34 concrete barriers in accordance with contract plans and as modified
35 herein. The barriers will be in 150-inch segments. The
36 identification and date of design will be placed at the location
37 shown in the plans. Prior to fabrication of the portable concrete
38 barrier, submit detailed shop drawings to the Engineer for review
39 and acceptance.

40
41 **(a) Forms.** Forms must be according to Section 503 - Concrete
42 Structures.

43
44 **(b) Concrete.** Use 5000 psi concrete with synthetic structural
45 macrofiber reinforcement (s macrofiber). Use an amount of
46 macrofiber that will result in an average residual strength (ARS)
47 of 300 pounds per square inch. ASTM C1399 must be used to
48 determine average residual strength. "The structural macrofiber
49 must comply with Section 719 Macro-Synthetic Fibers for

Concrete Reinforcement unless required otherwise in this Section. The fibers must have a tensile strength not less than 90 ksi. The structural macrofiber must have a nominal length of 2-1/4", be gray in color to match the concrete, and comply with or exceed ASTM C-1116. It must have an aspect ratio (length divided by the equivalent diameter of the fiber) between 115 and 165. The length of the structural macrofiber may be reduced to 0.75 to 1.25 inches if the longer length is not uniformly distributed throughout the placed mix due to the reinforcing steel segregating the fibers out of the mix.

ASTM C1399 - Standard Test Method for Obtaining Average Residual-Strength of Fiber-Reinforced Concrete must be used to determine acceptable ARS.

(c) **Placing Concrete.** Moisten the form thoroughly and apply form oil to all surfaces of the form that will come in contact with concrete immediately prior to the placing of the concrete. Forms must be in a state that they must not absorb or add moisture to the concrete and be water-tight. Place the concrete in accordance with Section 503 - Concrete Structures. Notify the Engineer of all concrete pours so that the Engineer will have an opportunity to inspect the work for compliance with the Contract Documents.

(d) **Curing.** Cure the portable concrete barriers in accordance with Subsection 504.03(G) - Curing.

(e) **Handling.** Do not handle or move the portable concrete barriers until the concrete has attained a compressive strength of more than 3,000 pounds per square inch. Only lifting holes must be used to hoist the portable concrete barrier. Do not use the drainage slots that are located at the bottom of the barrier to lift or move the barriers. The Engineer may direct barriers to be repaired or replaced when damaged by handling at no increase in the contract price and contract time. The stacking of precast barriers may be employed by the Contractor only when prior acceptance of the method is obtained from the Engineer."

(f) **Accessories.** Furnish, install, and maintain a longitudinal 4-inch by 150-inch (240-inch if the barrier is of pre- January 2021 design) permanent preformed pavement marking tape, Type I (color to match appropriate roadway pavement stripe) on the lower side of the barrier facing traffic, furnish, and install one RM-2 reflector marker, and a steady burn amber lamp on each barrier unit. Space the reflector markers, and lamps so that when multiple barriers are used they will alternate and be approximately evenly spaced from lamp to lamp or reflector marker to reflector marker. The longitudinal 4-

inch permanent preformed pavement marking tape must be installed on a cleaned surface free of deleterious substances that would affect the bonding of the primer or tape, Apply the tape's manufacturer's recommended primer to the entire concrete surface that will come in contact with the tape in manner acceptable to the manufacturer and the Engineer.

(g) Ownership. Upon completion of the project, the portable concrete barriers and the portable concrete barrier end treatments must become the property of the Department of Transportation, Highways Division, Kauai District.

(h) State-Furnished Portable Concrete Barriers. Select the barrier units from the State stockpile at the HWY-K Baseyard located on 1720 Haleukana Street, Lihue, HI 96766 or as specified by the Engineer. Haul the barrier units from the storage areas to the job site. State furnished portable concrete barriers must not be used if it has reached the end of their useful service life. The end of useful service life is defined as when a portable concrete barrier's cost of repair is one-third or more of the cost of a portable concrete barrier on the project's cost proposal or when the Engineer deems it so.

(2) Installation. Erect all barriers as shown on the contract documents or as specified by the Engineer. Set the barriers in a vertical position, closely following the roadway grade. The barriers must have a maximum of 1/4-inch offset in any direction between adjacent panels at the connections. Install an edge line using a six-inch-wide permanent preformed pavement marking tape, Type I (color to match adjacent roadway pavement stripe). The permanent preformed pavement marking tape must be 12 inches from the toe of the barrier, however, if the situation warrants it the Engineer may allow the pavement marking tape to be as close to the barrier as just in front of the toe of the barrier. Horizontal alignment of the panels must be such that any panel is not out of alignment by more than 1/2-inch from a straight line. Furnish and install steel pins for connecting the barrier sections according to contract documents.

Barrier ends within the clear zone must not be exposed to traffic and must have an end treatment that complies with MASH Test Level 3 criteria.

Portable concrete barriers constructed using different designs or were not built in accordance with the January 2021 design must not be used together, e.g., only January 2021 design barriers will be allowed to be used together within the same barrier installation.

Relocate any barrier regardless of when it was made e.g., this project, another project, or its location during the duration of the project. Relocate the barriers to the locations shown in the contract documents or as ordered by the Engineer.

151
152 Upon completion of the work, clean, repair, remove, haul, offload and
153 store all units at the location shown in the contract documents or as
154 ordered by the Engineer. If the final designation is not available when
155 the units are ready to be removed, haul the units to an interim location
156 or an alternate Engineer designated location at no additional cost to the
157 State.

158
159 The cleaning and repair of the barriers must be performed regardless
160 of cause, e.g., accidents, 'wear and tear', improper handling by the
161 Contractor during use. Cleaning and maintaining of the barriers must
162 be at a level that the barriers are easy to see by the traveling public.
163 Maintenance must be to a level that the barrier functions as designed
164 and has not decreased the safety of the traveling public as solely
165 determined by the Engineer. Repair all damaged barriers back to their
166 original configuration, i.e., undamaged condition. A damaged barrier
167 that, in the sole judgment of the Engineer, is considered irreparable for
168 any reason, must be replaced with a new barrier and the irreparable
169 barrier disposed of. This must be done at no increase in the contract
170 price or contract time. However, if the irreparable barrier is of a pre-
171 January 2021 design the contractor must replace the barrier with two
172 January 2021 design barriers. The Engineer will inspect the barriers at
173 the storage area designated in the contract documents or at a location
174 designated by the Engineer. Any barrier that is not cleaned or repaired
175 to an acceptable condition must be removed from the designated
176 storage site and not returned until is made acceptable or new
177 replacement barriers are supplied.

178
179 Portable concrete barriers must only be used for work zone traffic
180 control, e.g., traffic barriers. Portable concrete barriers must not be
181 used as retaining walls, grade adjustment walls, material enclosure
182 walls, etc. If the portable concrete barriers are used for other than which
183 it was designed or built for or both the barriers used in such a manner
184 will be deemed irreparable and must be replaced with new portable
185 concrete barriers at no additional cost or the Engineer may deduct the
186 contract price of new barriers from the monthly estimate.

- 187
188 **(3) Type II Barricades.** Furnish, install, and maintain Type II Barricade
189 with a steady burn amber lamp to be used as channelizing
190 devices. Spacing must be the same as the required spacing of
191 cones or delineators in that area or in accordance with the
192 requirements of MUTCD part 6 whichever distance is shorter. Their
193 position must comply with MUTCD Typical Application 5, found in
194 part 6.

195
196 **(B) Portable Concrete Barrier End Treatment.**

- 197
198 **(1)** Sand Barrels must not be used. Each End Treatment system array
199 must- be configured to provide a satisfactory average rate of
200 deceleration (8 g's maximum preferred) for errant vehicle +s in the
201 weight ranges of 1,810 to 4,410 lbs. For impact vehicles weighing

between 2,585 and 5,000 lbs. and traveling at speeds of up to 62 mph, the maximum 24-inch occupant fail space velocity must be less than 39 ft/sec and the vehicles' highest 10 millisecond occupants' ride-down acceleration must be less than 20 g's. The end treatment system must meet the requirements of MASH Test Level 3 for non-redirection gating energy-absorbing terminal crash cushions providing impact protection as accepted by Hoot and FHWA.

The center of gravity of each end treatment module must be at a height that must aid in controlling the pitch of standard passenger vehicles.

The components of the end treatment modules must interface to prevent excessive leakage of components contained therein. The interface must, however, permit drainage of excess water that may enter the end treatment system array.

Submit a brochure of the product to be used along with an FHWA accepted MASH cash test and acceptance letter for review and acceptance by the Engineer prior to ordering the end treatment.

- (2) The portable concrete barrier's end treatment must be designed for easy attachment and removal from the end of the concrete barrier. The nose of the end treatment system must be equipped with a chevron or slanted line sign, i.e., crash cushion object marker (CCOM) which must match the corresponding traffic direction.
- (3) Installation and use of the end treatments must be consistent with shy-line and placement guidelines specified in the contract documents and the latest edition of the MSHTO Roadside Design Guide.
- (4) Provide, install, and maintain a MASH compliant end treatment system that is compatible with the barrier units. The end treatment must be attached and installed in compliance with the manufacturer's instructions and the FHWA MASH acceptance letter. If requested by the Engineer, provide three (3) copies of the maintenance and operational manual for the end treatments along with an instructional class for State personnel on the installation, maintenance, and removal of the end treatment system. Provide handouts for the class.
- (5) Haul the portable concrete barrier's end treatment to the project site. Prepare the beds and set the portable concrete barrier's end treatment at a location shown in the contract documents and as directed by the Engineer.
- (6) Furnish, install, and maintain the attachment for connecting the portable concrete barrier end treatment to the barrier unit.

(7) Furnish install and maintain the crash cushion object marker (CCOM) on each leading or trailing nose of a portable concrete barrier end treatment in accordance with the contract documents or as directed by the Engineer.

(8) Relocate any barrier end treatment regardless of when it was made e.g., this project, another project, or where its location is during the duration of the project. Relocate the barriers' end treatments to the locations shown in the contract documents or as ordered by the Engineer.

(9) Upon completion of the work, clean, repair, remove, haul, offload and store the portable concrete barrier end treatments at the location shown in the contract documents or as ordered by the Engineer. If the final destination is not available when the end treatment units are ready to be removed, haul the end treatment units to an interim location or to an alternate Engineer designated location at no increase in the contract price or contract time.

The cleaning and repair of the portable concrete barrier end treatments must be performed regardless of cause, e.g., 'wear and tear', improper handling by the Contractor during use. Repair must include the replacement of all damaged portions of the portable concrete barrier end treatment. The level of repair must be back to its original configuration.

When a portable concrete barrier end treatment in the sole judgment of the Engineer is considered irreparable it must be replaced with a new portable concrete barrier end treatment at no increase in the contract price or contract time. All portable concrete barrier end treatments must be found acceptable by the Engineer before the contractor returns them to the area designated in the Contract Documents or as directed by the Engineer.

(10) The portable concrete barrier end treatment must be the property of the DOT, Highways Division after project completion.

(C) Pavement Striping and Markers for Lane Shifting.

Furnish and install pavement striping and markings according to Section 629 -Pavement Markings, Subsection 629.03(C) - Permanent Pavement Markings. Do not use temporary pavement striping and markers. Striping must be done in accordance with the contract documents or as directed by the Engineer. If no striping plan is provided, submit a striping plan for review and acceptance by the Engineer a minimum of 14 days prior to the installation of barriers and end treatments. Upon completion of the contract work, remove the lane shift striping and markers, and restore the original

striping and markers in accordance with the contract documents or as directed by the Engineer.

(D) Restoration of Project Site. Restore the project site to the original or better condition where the barriers and end treatments were used and as directed by the Engineer.

694.04 Measurement. The Engineer will measure portable concrete barriers and end treatment system as requested by the Engineer on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

694.05 Payment. The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will not pay separately for the accepted portable concrete barriers' installation, maintenance, relocation, subsequent removal, and delivery to the designated storage site. The Engineer will consider the cost for the accepted portable concrete barriers' installation, maintenance, relocation, subsequent removal, and delivery to the designated storage site as included in the contract price of the contractor furnished, or State furnished portable concrete barriers. The price includes full compensation for preparing beds; hauling and setting portable concrete barriers; installing connector pins; maintaining reflector markers, lamps, permanent preformed pavement marking tape; cleaning, maintaining, and relocating portable concrete barriers during construction; cleaning, repairing, hauling, offloading and storing the portable concrete barriers after completion of the project to the Kauai District Baseyard or to a place designated by the Engineer; or Contract Documents, restoration of the area and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for the accepted end treatment modules at contract price per pay unit, as shown in the proposal schedule. The price includes full compensation for work prescribed in this section and the contract documents.

The Engineer will not pay separately for the accepted end treatment modules' installation, maintenance, relocation, subsequent removal, and delivery to the designated storage site. The Engineer will consider the cost for the accepted end treatment modules' installation, maintenance, relocation, subsequent removal, and delivery to the designated storage site as included in the contract price of the portable concrete barriers. The price includes full compensation for holding classes, handouts, submitting a list of materials and equipment to be incorporated in the work; grading and compacting the ground; furnishing, assembling,

installing; and maintaining an end treatment module system; relocating end treatment modules to locations specified in the contract documents; filling each installed end treatment module with repair material or replacement of the entire end treatment module. Also included must be the cleaning, hauling of the end treatment modules to the designated locations or as directed by the Engineer upon completion of the project, restoration of the area, and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Portable Concrete Barrier (State Furnished)	Force Account
---	---------------

End Treatment System	Force Account
----------------------	---------------

(1) Pay 40% of the amount bid when the portable concrete barrier (January 2021d or Later Design or State Furnished) is furnished and delivered to the project site and the ground is prepared for installation.

(2) Pay 20% of the amount bid when the portable concrete barrier (January 2021d or Later Design or State Furnished) is assembled and installed at the initial location shown in the contract documents.

(3) Divide 30% of the amount bid unit by the total number of months remaining in the contract time after the initial installation is complete.

Pay that percentage each month, when portable concrete barriers (January 2021d or Later Design or State Furnished) are satisfactorily relocated or maintained or damaged barriers are replaced or a combination thereof during construction.

(4) Pay the remainder of the contract amount upon removal and delivery of the portable concrete barriers (January 2021d or Later Design or State Furnished) to the designated storage site after completion of the project or as directed by the Engineer."

(5) Pay 40% of the amount bid when the end treatment modules are furnished and delivered to the project site and the ground is prepared for installation.

(6) Pay 20% of the amount bid when the end treatment modules are assembled and installed at the initial location shown in the contract documents.

394 (7) Divide 30% of the amount bid unit by the total number of months
395 remaining in the contract time after the initial installation is complete.
396 Pay that percentage each month, when end treatment modules are
397 satisfactorily relocated or maintained or damaged barriers replaced or
398 a combination thereof during construction.
399

400 (8) Pay the remainder of the contract amount upon removal and delivery
401 of the end treatment module to the designated storage site after
402 completion of the project or as directed by the Engineer.
403

404 An estimated amount for the force accounts allocated in the proposal
405 schedule under Portable Concrete Barrier (State Furnished) and End
406 Treatment System, but the actual amount to be paid will be the sum
407 shown on the accepted force account records, whether this sum be more
408 or less than the estimated amount allocated in the proposal schedule.
409

410 **END OF SECTION 694"**
411
412

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SECTION 702 – BITUMINOUS MATERIALS

Make the following amendments to said Section:

- (I) Amend **Subsection 702.06 (Unassigned)** by replacing line 23 to read:
“702.06 Warm Mix Asphalt (WMA) Additive. Additives for WMA shall be approved by the Engineer.”

END OF SECTION 702

SECTION 703 – AGGREGATES

Make the following amendments to said Section:

(I) Amend **TABLE 703.01-3 FINE AGGREGATE GRADING REQUIREMENTS, HAWAII AND KAUAI** to read as follows:

“

TABLE 703.01-3 - FINE AGGREGATE GRADING REQUIREMENTS, HAWAII AND KAUAI		
Sieve Sizes	Percent Passing by Weight	
	Calcareous Sand	Crusher Screenings
3/8 Inch	100	100
No. 4	95 – 100	95 - 100
No. 8	-	50 - 85
No. 16	-	32 - 60
No. 30	-	-
No. 50	-	15 - 30
No. 100	0 – 5	5 - 20

“

END OF SECTION 703

1 **SECTION 705 – JOINT MATERIALS FOR CONCRETE STRUCTURES**

2
3 Make the following amendments to said Section:

4
5 **(I) Amend 705.05 Flashing Compound** to read as follows:

6
7 “Flashing compound for waterproofing of joints as specified in Standard Plan
8 B-01 shall be asphaltic mastic, asbestos free, conforming to ASTM D4586. Product
9 furnished shall adhere to damp concrete and masonry surfaces.”

10
11 **(II) Amend 705 Joint Materials for Concrete Structures** by adding the
12 following Subsection:

13
14 “705.13 **Asphalt Roll Roofing (Organic Felt)**. Asphalt roll roofing, roofing
15 felt shall conform to ASTM D6380 Type III or ASTM D224 Type III.”

16
17
18 **END OF SECTION 705**
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1 **SECTION 717 – CULLET AND CULLET-MADE MATERIALS**

2
3 Make the following amendments to said Section:

4
5 **(I) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**
6 **Construction Materials** by revising the third paragraph from line 16 to 20 to

7 read:
8
9 “Debris shall not exceed values specified in Tables 717.02-1 - Cullet in
10 Roadway Applications, 717.03-1 - Cullet in Utility Applications, and 717.04-1 -
11 Cullet in Drainage Applications. Debris is defined as deleterious material that
12 includes plastics, papers, and non-ceramic constituents of cullet. Hazardous
13 material will not be allowed in cullet such as but not limited to, TV or other
14 cathode ray tubes, fluorescent light bulbs, and any toxic or hazardous materials.
15 Test cullet stockpile for toxic or hazardous materials every 90 days and submit
16 the results to the Engineer.”

17
18 **(II) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**
19 **Construction Materials** by adding the following paragraph after line 21:

20
21 “Cullet shall not be used in concrete.”

22
23 **(III) Amend Table 717.03-1 – Cullet in Utility Applications** from line 37 to
24 line 39 to read:

25

TABLE 717.03-1 - CULLET IN UTILITY APPLICATIONS		
Utility Trench Bedding and Backfill Applications	Maximum Cullet Content (Percent By Weight)	Maximum Debris Level (Percent By Weight Of Cullet)
Sewer Pipes	25	0.3
Electrical Conduits	25	0.3
Fiber Optic Lines	25	0.3

(IV) Amend **Table 717.04-1 – Cullet in Drainage Applications** from line 47 to line 49 to read:

TABLE 717.04-1 - CULLET IN DRAINAGE APPLICATIONS		
Drainage Fill Applications	Maximum Cullet Content (Percent By Weight)	Maximum Debris Level (Percent By Weight Of Cullet)
Retaining Walls	25	0.2
Foundation Drains	25	0.2
Drainage Blankets	25	0.2
French Drains	25	0.2

END OF SECTION 717

1 Make the following Section a part of the Standard Specifications:
2

3 **"SECTION 719 – MACRO-SYNTHETIC FIBERS FOR CONCRETE**
4 **REINFORCEMENT**
5

6 **719.01 Macro-Synthetic Fibers for Concrete Reinforcement.** Macro-Synthetic
7 Fibers for Concrete Reinforcement shall conform to the following requirements:
8

9 (A) Macro-synthetic fibers shall be manufactured from virgin polyolefins
10 (polypropylene and polyethylene) and comply with ASTM C 1116.4.1.3.
11 Fibers manufactured from materials other than polyolefins must show
12 documentary evidence confirming their long term resistance to deterioration
13 when in contact with moisture and alkalies present in cement paste and/or
14 the substances present in air-entraining and chemical admixtures.
15

16 (B) The minimum fiber length shall be 1.50 inches.
17

18 (C) Macro-synthetic fibers shall have an aspect ratio (length divided by the
19 equivalent diameter of the fiber) between 45 and 150.
20

21 (D) Macro-synthetic fibers shall have a minimum tensile strength of 40 ksi
22 when tested in accordance with ASTM D 3822.
23

24 (E) Minimum dosage rate in pounds of fibers per cubic yard of concrete
25 shall be established by determining a minimum average residual strength of
26 no less than 150 psi when tested in accordance with ASTM C 1399. The
27 minimum fiber dosage rate shall be 3 lbs/cubic yard.
28

29 (F) Macro-synthetic fibers shall have a minimum modulus of elasticity of 400
30 ksi when tested in accordance with ASTM D 3822."
31
32

33 **END OF SECTION 719**

1 **SECTION 750 – TRAFFIC CONTROL SIGN AND MARKER MATERIALS**

2
3 Make the following amendments to said Section:

4
5 **(I)** Amend **Subsection 750.01(A)(1) Retroreflectorization** by replacing lines
6 8 through 31 to read:

7
8 **“(1) Retroreflectorization.** The following shall be retroreflectorized:

9
10 **(a)** Background for illuminated guide signs and exit number panels ("E"
11 designation) with ASTM D 4956 Type XI retroreflective sheeting.

12
13 **(b)** Background for non-illuminated guide signs and exit number panels
14 ("D" designation) with ASTM D 4956 Type XI retroreflective sheeting.

15
16 **(c)** Messages, arrows, and borders of guide signs and exit number
17 panels ("D" and "E" designations) with ASTM D 4956 Type XI
18 retroreflective sheeting.

19
20 **(d)** Regulatory and warning signs, directional signs ("DIR" designation),
21 route and auxiliary markers, shield symbols, yellow "EXIT ONLY" panels,
22 construction warning signs, and barricade rails, completely, with Type III,
23 IV, or IX retroreflective sheeting.

24
25 **(e)** Pedestrian, school, bicycle crossing series, completely with Type IX
26 fluorescent yellow green retroreflective sheeting.”

27
28
29 **(II)** Amend **Subsection 750.01(B) Backing** by replacing lines 72 through 73
30 to read:

31
32 “Aluminum sheet shall conform to ASTM B 209, alloy 5052-H38 or 6061-
33 T6 flat sheet.”

34
35 **(III)** Amend **Subsection 750.01(E) Retroreflective Sheeting Materials** by
36 replacing lines 1126 through 1137 to read:

37
38 **“(E) Retroreflective Sheeting Materials.** Retroreflective sheeting
39 includes white or colored sheeting having smooth outer surface.

40
41 Retroreflective sheeting shall be classified in accordance with ASTM D
42 4956.

43
44 The coefficient of retroreflection shall meet the minimum requirements of
45 ASTM D 4956 for the type of reflective sheeting specified.
46

The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956.

Test methods and procedures shall be in accordance with ASTM.

(IV) Amend Subsection 750.02 Sign Posts by replacing lines 1168 through 1172 to read:

“(C) Square Tube Posts. Square and other tube posts shall conform to ASTM A 653 for cold-rolled, carbon steel sheet, commercial quality; or ASTM A 787 for electric-resistance-welded, metallic-coated carbon steel mechanical tubing.”

END OF SECTION 750

1 Make the following Section a part of the Standard Specifications:

2
3 **“SECTION 780 – REINFORCED CONCRETE JACKING PIPE**

4
5 **780.01 Description.**

6
7 **(A)** This Section includes requirements for furnishing reinforced concrete
8 jacking pipes to be installed by microtunneling methods.

9
10 **(B)** The pipe furnished shall have, at a minimum, steel joint rings and
11 O-ring rubber gaskets.

12
13 **(C)** Refer to Section 672, Microtunneling, for related considerations and
14 options.

15
16 **780.02 Materials.**

17
18 **(A)** Design of the jacking pipe and determining acceptable pipe fabrication
19 tolerances is the responsibility of the Contractor. Maximum compressive
20 stresses applied to the pipe during installation shall not exceed 33 percent of
21 the design compressive strength of the pipe material, or shall not exceed the
22 manufacturer's recommended allowable stresses, whichever is lower. Pipe
23 design, materials, manufacturing, and testing shall conform to the provisions
24 of ASTM C361, Class D-50 for reinforced concrete low-head pressure pipe,
25 except as modified herein. If required, upgrade the pipe strength and pipe
26 joints to withstand the stresses imposed by pipe handling and jacking
27 operations at no additional cost to the State.

28
29 Pipe shall be manufactured by the vertical cast process utilizing
30 stationary inner and outer forms as required to meet specified tolerances.
31 Vertically cast pipe shall be cast, vibrated, steam cured, and shall remain in
32 the forms for a minimum of six hours.

33
34 **(B)** The reinforced concrete jacking pipe shall meet the following
35 requirements:

36
37 **(1)** All pipes, joints incorporated into the pipes, and manufactured
38 fittings connecting pipes between structures, shall be fabricated by the
39 same manufacturer and be of the same type, quality, class, and size
40 unless otherwise specified or shown.

41
42 **(2)** Cement shall be Type II Portland cement in conformance with
43 ASTM C150 or shall be modified Type I Portland cement except that
44 the amount of tricalcium aluminate shall not exceed 8 percent.

45
46 **(3)** Concrete shall have a minimum design strength of 5,000 psi.
47 Materials shall be as specified in ASTM C361 except as modified
48 herein.

(4) Concrete shall contain a minimum of 7 sacks (658 lbs.) of cement per cubic yard.

(5) An approved admixture whose active ingredient is a metallic salt of hydroxylated carboxylic acid and conforming to ASTM C494, Type D, shall be added in strict conformance with the manufacturer's recommendations.

(6) The wall thickness and circumferential and longitudinal reinforcement shall not be less than specified in ASTM C361. Circumferential steel shall be double cage. Longitudinal steel may be placed either inside or outside the circumferential ring provided cover requirements are met. Cover distances shall be maintained by Type 316 stainless steel supports or by other means as approved by the Engineer. Concrete spacer blocks shall not be used. Spacing of circumferential rings shall not exceed 6 inches for all cages.

(C) Dimensions and Tolerances. The pipe shall be manufactured in accordance with the following minimum tolerances, unless the Contractor determines that tighter tolerances are required for the proposed microtunneling methods to avoid damaging pipe during installation.

(1) Outside Diameter: The outside diameter shall not vary from the design outside diameter by more than $\pm 3/16$ inch.

(2) Wall Thickness: At the pipe joint, the wall thickness shall not vary by more than ± 3 percent of the design wall thickness or $\pm 3/16$ inch whichever is less.

(3) Roundness: The outside diameter of the pipe shall not vary from a true circle by more than ± 0.5 percent. At any one location along the barrel, the out-of-round dimensions shall be one-half the difference between the maximum and minimum outside diameter of the pipe.

(4) Pipe Length: Finished pipe length shall not deviate from design length by more than $\pm 1/4$ inch.

(5) Length of Two Opposite Sides: Variations in the length of two opposite sides of the pipe (determined by measuring pipe length 180 degrees apart) shall not be more than $\pm 1/4$ inch.

(6) End Squareness: Variations in end squareness (determined by measuring diagonals 180 degrees apart) shall not be more than $\pm 1/4$ inch.

97 **(D) Pipe Joints.**

98
99 **(1)** Pipe joint assembly design shall be a fully-retained, minimum
100 rubber gasket joint conforming to ASTM C361 with requirements and
101 additional manufacturer designed and manufactured seals for pressure
102 application. The minimum thickness of the end ring or collar shall be
103 3/8-inch unless a greater thickness is required by the Contractor for
104 microtunneling.

105
106 **(2)** End rings or pipe collars for pipe joints shall be made of a non-
107 corrosive material which shall have sufficient thickness and resistance
108 to chemical attack from seawater for a design life of minimum 50
109 years. Pipe joints and end rings must be capable of withstanding
110 potential damage during tunneling through the range of anticipated
111 geotechnical conditions.

112
113 **(3)** Rubber gasket materials shall meet the requirements of ASTM
114 C1619, Class A. Gaskets shall be designed to completely fill the
115 gasket groove and make a watertight joint when hydrostatically tested
116 as specified herein. Product data to be submitted shall include the
117 basis of design of gasket grooves and the size and length of gaskets.
118 All rubber gaskets shall be stored in a cool, well-ventilated place and
119 shall not be exposed to direct rays of the sun.

120
121 **(4)** Pipe joints that show leakage shall be promptly repaired to the
122 satisfaction of the Engineer and at no cost to the State.

123
124 **(5)** Joining of jacking pipes dissimilar in size and/or material shall
125 be accomplished by use of a junction structure, or by use of special
126 adapters or couplings, to be approved by the Engineer for such use.
127 All field-cut pipe shall be accomplished by methods and equipment
128 recommended by the jacking pipe manufacturer. No hammer and
129 chisel cuts will be permitted. The Contractor shall submit shop
130 drawings and material details of all special jacking pipes for approval
131 before the jacking pipe is manufactured.

132
133 **(E) Lubrication Ports.** Lubrication injection ports shall be Type 316 or
134 better stainless steel as approved by the Engineer. Lubrication ports shall
135 have a threaded plug that fits flush with interior surface when installed. After
136 installation, all lubrication ports must be patched and sealed in accordance to
137 the Manufacturer's recommendations.

138
139 **(F) Pipe Marking.** Pipe shall be clearly marked on the inside to
140 indicate the following:

141 **(1)** Name and/or trademark of the pipe manufacturer.

142 **(2)** Pipe number or designation.
143
144

- 145
- 146 (3) Lot number.
- 147
- 148 (4) Date of manufacture.
- 149
- 150 (5) Outside diameter in inches.
- 151
- 152 (6) Pipe class, pressure rating, and stiffness class.
- 153
- 154 (7) Manufacturing standard reference e.g. ASTM C361.
- 155
- 156 (8) The mark of the person responsible for pipe manufacturer
- 157 quality assurance marking acceptance.
- 158

159 **(G) Concrete Finish and Repair.** The pipe shall have smooth dense

160 surfaces, be free from pits, air holes, fractures, excessive surface crazing,

161 and roughness. The interior and exterior surfaces of the pipe shall be

162 concentric. Pits or air holes greater than 3/8 inch shall be repaired. Fractures,

163 cracks, or chips extending into the pipe wall in such a manner as to reduce

164 the strength of the pipe shall not be permitted.

165

166 **780.03 Construction.**

167

168 **(A) Submittals.** Submit the following within 30 calendar days of pipe

169 order in accordance with the project's submittal requirements. Provide

170 sufficient detail to allow the Engineer to judge whether the proposed

171 materials, equipment, procedures, and qualifications will meet the Contract

172 requirements.

173

174 All design calculations and shop drawings shall be prepared and stamped by

175 a Registered Structural Engineer licensed in the State of Hawaii. No pipe

176 shall be shipped prior to acceptance of the design calculations and shop

177 drawings by the Engineer.

178

179 **(1) Reinforced Concrete Jacking Pipe Manufacturer**

180 **Qualifications.** Submit manufacturer qualifications demonstrating

181 compliance with the requirements of this Section.

182

183 **(2) Product data.**

184

185 **(a)** Submit material properties and manufacturer's literature

186 for pipes including details and dimensions.

187

188 **(b)** Submit description of aggregate gradation and durability

189 requirements, mix constituents, and mix proportions. Provide

190 documentation for proposed mix proportions indicating that

191 design strength will be achieved, and test data supporting

192 structural design assumptions.

(c) Submit detailed shop drawings showing details and all dimensions of the pipe, including:

1. Pipe Length.
2. Wall Thickness.
3. Pipe joint configuration.
4. Gaskets and gasket grooves.
5. Joint collar.
6. Joint cushion materials.
7. Lubrication ports.
8. Any associated fittings.

(d) Submit detailed shop drawings of the reinforcing steel, including:

1. Type of reinforcing steel cage or cages.
2. Location of the cage or cages in the pipe wall.
3. Size and spacing of the circumferential and longitudinal reinforcing steel.
4. Cross-sectional area of reinforcing steel in each cage per lineal foot of pipe.
5. Submit product literature and details for gaskets including description of materials, physical properties, and shape and profile of the gasket when compressed and uncompressed.
6. Manufacturer's written instructions for handling, transporting, storage, installation of pipe, and any restrictions or special installation requirements for the pipe.
7. Submit factory testing reports as specified in this Section prior to production of pipe.
8. Submit factory testing reports as specified in this Section prior to shipment of pipe.

241
242 **9.** Submit quality control reports as specified in this
243 Section prior to shipment of this pipe.
244

245 **(e) Design Calculations.** Submit design calculations
246 demonstrating that the pipe is capable of withstanding the
247 maximum stresses to be imposed on the pipe during and after
248 microtunneling and during the design life of the new pipeline.
249 The calculations shall take into account the following:
250

- 251 **1.** Maximum ground loads and hydrostatic pressures.
- 252
- 253 **2.** Estimated jacking forces and slurry pressures.
- 254
- 255 **3.** Stresses due to steering corrections during
256 microtunneling.
- 257
- 258 **4.** Stresses due to handling and pipe transportation.
- 259
- 260 **5.** Traffic live loads.
- 261
- 262 **6.** Stresses due to trench backfill and compaction
263 activities.
- 264
- 265 **7.** Any other loads that may be reasonably
266 anticipated.
- 267

268 All loads shall be shown and described. Calculations
269 submitted shall confirm that the maximum compressive
270 stresses applied to the pipe will not exceed specified
271 allowable stresses. Calculations shall clearly indicate the
272 concrete design compressive strength. Compressive
273 stress check shall consider the minimum wall thickness
274 at the joint.
275

276 **(f)** Manufacturer shall submit written confirmation indicating
277 the pipe and pipe joints furnished for installation using
278 microtunneling methods for this project complies with the
279 material and manufacturing requirements of this section and the
280 referenced Standards, and is suitable for microtunneling
281 installation when constructed within the tolerances required in
282 this section.
283

284 **(g)** Contractor shall submit written confirmation indicating the
285 pipe and pipe joints furnished for installation using
286 microtunneling methods for this project complies with the
287 requirements of this Section and the referenced Standards, and

can be successfully installed using the planned construction methods.

(B) Quality Assurance.

(1) The manufacturer shall demonstrate at least 5 years of successful pipe manufacturing with over 100,000 linear feet of pipe supplied in the United States, or as accepted by the Engineer. Qualifications shall also include at least three prior projects of similar installations using pipes produced by the manufacturer, installed by microtunneling, and are in satisfactory service. Each example shall include:

(a) Pipe Size.

(b) Total lengths installed.

(c) Installation methods.

(d) Names and contact phone numbers of project owners.

(2) Acceptability of pipe shall be determined by the results of crushing tests on pipe samples, records of hydrostatic testing of similar assembled pipe joints, concrete compressive strength tests, and inspection of each pipe during and after manufacturing to determine whether the pipe conforms to specified tolerances.

(3) The pipe manufacturer shall designate one person to be responsible for Quality Assurance. It shall be that individual's responsibility to assure quality control of the pipe manufacturing process. This individual shall be responsible for all pipe testing, keeping quality control records, insuring that quality assurance procedures are followed during pipe manufacturing, and inspecting each pipe length before it leaves the plant.

(C) Installation. Reinforced concrete jacking pipe shall be installed in accordance with the manufacturer's recommendations and with the requirements of Section 672, Microtunneling. The jacking pipe shall be installed between the limits indicated on the Plans in accordance with specified tolerances and utilizing special methods and skills to work within very limited work space, and shall include due regard for safety of workers, adjacent structures and improvements, utilities, and the public. Install jacking pipe in conformance with the minimum size indicated on the Plans. Increase jacking pipe size as required for construction and installation of the pipeline, at no additional cost to the State. Following completion of the drive, disconnect lubrication lines and install screw plugs in jacking pipe. Use dry pack mortar to fill any recesses to provide a smooth surface.

(D) Pipe Repairs. Pipe may be repaired to correct occasional manufacturing imperfections or minor damage during handling, storage, or transport. Repair methods recommended by the manufacturer shall be submitted to the Engineer for review and acceptance. It will be considered acceptable if, in the opinion of the Engineer, the repairs are sound and properly finished and cured, and the repaired pipe conforms to the requirements of these Specifications. Otherwise damaged pipe shall be replaced or cycled out at no cost to the State. Pipes damaged during jacking shall be repaired according to manufacturer's instructions, as approved by the Engineer, or replaced, at no additional cost to the State.

(E) Pipe Handling, Storage, and Transportation.

(1) All pipe handling, storage and transportation shall be in strict conformance with the pipe manufacturer's recommendation.

(2) Pipe shall be handled carefully with belt slings and other devices, in accordance with the manufacturer's recommendations. Handling devices shall be constructed so no metal surfaces bear against pipe sections and that bearing is uniform. Pipe sections shall not be dropped. During transport, pipe sections shall be blocked to prevent shifting of position.

(F) Quality Control.

(1) Factory Testing Prior to Production. The following factory testing shall be performed prior to manufacturing of the reinforced concrete jacking pipes for the project, in accordance with and meeting the requirements of ASTM D361 and the applicable ASTM standards. The cost of the pipe and testing shall be borne by the Contractor at no additional cost to the State.

Fabricate three (3) test specimens and perform the following tests. Should either test fail to meet the test requirements, the pipe manufacturer will be allowed a retest on two (2) additional specimens from the same class for the specimen that failed. The pipe shall be acceptable for fabrication only when both of the retest specimens meet the specified requirements.

(a) External Load Crushing Strength Test by the Three-Edge Bearing Test Method: Perform on one test specimen in accordance with ASTM C497. The load test shall not be terminated until the loading has reached 120 percent of the design load specified for the pipe.

(b) Joint Tightness Test: Perform on two test specimens in accordance with ASTM D4161. Prior certified hydro-testing records of reinforced concrete pipe of at least 30-inch nominal

inside diameter and with similar joint configuration would be acceptable.

(2) Factory Testing During Production. The following factory testing shall be performed during production of the reinforced concrete jacking pipes for this project, in accordance with and meeting the requirements of ASTM C361 and the applicable ASTM standards. The cost of the pipe and testing shall be borne by the Contractor at no additional cost to the State.

The following tests shall be performed on a minimum of one pipe for every 10 pipes or fraction thereof manufactured for the project:

(a) Concrete Compressive Strength in accordance with ASTM C361 and ASTM C39.

(b) Hydrostatic Test in accordance with ASTM C361 and ASTM C497.

(c) Rubber gaskets in accordance with ASTM C361 and ASTM C1619, Class A.

(3) Factory Quality Control Reports. Prior to shipping jacking pipe, submit a quality control report for each pipe section manufactured. The report shall compare measured dimensions with acceptable tolerances and indicate if the pipe is acceptable with respect to specified tolerances. The report shall include:

(a) Project's Job Number.

(b) Name and/or trademark of the pipe manufacturer.

(c) Pipe number or designation.

(d) Lot number.

(e) Date of manufacture.

(f) Pipe class, pressure rating, and stiffness class.

(g) Outside diameter in inches.

(h) Nominal inside diameter in inches.

(i) Wall thickness in inches.

(j) Roundness.

431 (k) Pipe length.

432
433 (l) Length of two opposite sides.

434
435 (m) End squareness.

436
437 (n) All applicable test data and information required by the
438 applicable ASTM standard and this Section.

439
440 (o) Manufacturing Standard reference e.g. ASTM C361.

441
442 (p) Manufacturer's quality control inspector making
443 acceptance.

444
445 **(4) Pipe Acceptance and Rejection.** Acceptance of the pipe and
446 materials shall be based on results obtained from the tests specified in
447 ASTM C361 and herein, and inspection of each pipe during and after
448 manufacturing to determine whether the pipe conforms to specified
449 tolerances. The quality of materials, the manufacturing process, and
450 the finished pipe shall be subject to inspection and approval by the
451 Engineer. Unless otherwise authorized in writing, only pipes marked by
452 the Engineer after delivery to the job site shall be used in the work.
453 Examination of the delivered pipes by the Engineer shall not relieve the
454 Contractor's responsibility to comply with the Contract requirements.

455
456 Pipe shall be smooth and substantially free of dents, gouges,
457 cracks or other defects. In addition, the pipe shall be subject to
458 rejection due to the following:

459
460 (a) Measurements of outside diameter, wall thickness, length
461 of two opposite sides, length of pipe, and position of
462 reinforcement shall be within the tolerance limits specified
463 herein.

464
465 (b) Any shattering or flaking of concrete or other conditions
466 indicating an improper concrete mix or molding.

467
468 (c) Any exposed reinforcing steel or voids around the
469 reinforcing steel.

470
471 (d) Fractures or cracks passing through the wall except for a
472 single end crack that does not exceed the depth of the joint.

473
474 (e) Defects that indicates proportioning, mixing, and molding
475 not in compliance with ASTM C361.

(f) Dimensional irregularities, which may impede assembling the joint, the microtunnelling process, or affect water tightness of the joint.

(g) Surface defects indicating honeycomb rock pockets, or open texture.

(h) Any continuous crack having a surface width of 0.01 inch or more and extending for a length of 12-inches or more regardless of position in the wall of the pipe.

The State's decision regarding rejection of the pipe shall be final and the rejected pipe shall be immediately removed from the job site at the Contractor's cost. Rejected pipe shall be clearly and indelibly marked accordingly to prevent confusion with pipe delivered in subsequent shipments.

780.04 Measurement. The reinforced concrete jacking pipe installed by microtunneling methods shall not be paid directly, but shall be included in the prices bid for Microtunneling. Measurement for payment will not apply.

780.05 Payment. The Engineer will pay for accepted reinforced concrete jacking pipe installed by microtunneling methods included in the lump sum price for Microtunneling as appropriate, and as scheduled in the Proposal. Payment will be full compensation for the work prescribed in this section and the contract documents. The unit price shall be full compensation for furnishing all materials, fittings, labor, tools, and equipment for doing all work involved in Reinforced Concrete Jacking Pipe. Included is reinforced concrete jacking pipe, stockpiling, loading, and transporting of pipe materials.

END OF SECTION 780"

Requirements of Chapter 104, HRS

Wages and Hours of Employees on Public Works Law

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

Rate of Wages for Laborers and Mechanics

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

Overtime

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

Weekly Pay

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

Posting of Wage Rate Schedules

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

Withholding of Accrued Payments

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

Certified Weekly Payrolls and Payroll Records

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

Termination of Work on Failure to Pay Wages

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

Apprentices

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

Enforcement

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



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

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

"General Decision Number: HI20260001 05/27/2026

State: Hawaii

Construction Types: Building, Heavy, Highway and Residential

Counties: Hawaii Counties of
Hawaii, Honolulu, Kalawao, Kauai and
Maui

BUILDING CONSTRUCTION PROJECTS

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

HIGHWAY CONSTRUCTION PROJECTS

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
1	01/16/2026
2	05/18/2026
3	05/27/2026

ASBE0132-001 09/07/2025

	Rates	Fringes
ASBESTOS WORKERS/INSULATOR (INCLUDES APPLICATION OF ALL INSULATING MATERIALS, PROTECTIVE COVERINGS, COATINGS AND FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS. ALSO THE APPLICATION OF FIRESTOPPING MATERIAL FOR WALL OPENINGS AND PENETRATIONS IN WALLS, FLOORS, CEILINGS AND CURTAIN WALLS.).....	\$ 46.90	29.75

BOIL0627-005 01/01/2025

	Rates	Fringes
BOILERMAKER.....	\$ 49.37	31.25

BRHI0001-001 09/05/2023

	Rates	Fringes
BRICKLAYER: POINTERS, CAULKERS AND WEATHERPROOFERS..	\$ 48.28	32.23
BRICKLAYERS AND STONEMASONS.....	\$ 48.03	32.23

BRHI0001-002 09/05/2023

	Rates	Fringes
TILE, MARBLE & TERRAZZO WORKER (TERRAZZO BASE GRINDERS).....	\$ 44.69	33.00
TILE, MARBLE & TERRAZZO WORKER (TERRAZZO FLOOR GRINDERS AND TENDERS).....	\$ 43.14	33.00
TILE, MARBLE & TERRAZZO WORKER (TILE, MARBLE AND TERRAZZO WORKERS).....	\$ 46.50	33.00

CARP0745-001 09/01/2025

	Rates	Fringes
CARPENTERS: (CARPENTERS; HARDWOOD FLOOR LAYERS; PATENT SCAFFOLD ERECTORS (14 FT. AND OVER); PILEDRIERS; PNEUMATIC NAILERS; WOOD SHINGLERS AND TRANSIT AND/OR LAYOUT MAN).....	\$ 55.50	29.81
CARPENTERS: MILLWRIGHTS AND MACHINE ERECTORS.....	\$ 55.75	29.81
CARPENTERS: POWER SAW OPERATORS (2 H.P. AND OVER)...	\$ 55.65	29.81

CARP0745-002 09/01/2025		
	Rates	Fringes
DRYWALL AND ACOUSTICAL WORKERS AND LATHERS.....	\$ 55.75	29.81

ELEC1186-001 08/24/2025		
	Rates	Fringes
ELECTRICIANS.....	\$ 56.55	33.16
ELECTRICIANS: CABLE SPLICERS.....	\$ 63.90	33.38
ELECTRICIANS: TELECOMMUNICATION WORKER.....	\$ 41.00	16.28

ELEC1186-002 08/24/2025		
	Rates	Fringes
LINE CONSTRUCTION: CABLE SPLICERS.....	\$ 63.90	33.38
LINE CONSTRUCTION: GROUND MEN/TRUCK DRIVERS.....	\$ 42.41	27.14
LINE CONSTRUCTION: HEAVY EQUIPMENT OPERATORS.....	\$ 50.90	30.75
LINE CONSTRUCTION: LINEMEN.....	\$ 56.55	33.16
LINE CONSTRUCTION: TELECOMMUNICATION WORKER.....	\$ 41.00	16.28

ELEV0126-001 01/01/2025		
	Rates	Fringes
ELEVATOR MECHANIC A. VACATION: EMPLOYER CONTRIBUTES 8% OF BASIC HOURLY RATE FOR 5 YEARS SERVICE AND 6% OF BASIC HOURLY RATE FOR 6 MONTHS TO 5 YEARS SERVICE AS VACATION PAY CREDIT. B. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THE FRIDAY AFTER THANKSGIVING DAY AND CHRISTMAS DAY.....	\$ 73.85	38.44

ENGI0003-002 09/01/2025		
	Rates	Fringes
DIVER TENDER: OTHER THAN AQUA LUNG.....	\$ 59.94	35.68
DIVER: (AQUA LUNG) (SCUBA) (over 30 feet).....	\$ 81.72	35.68
DIVER: (AQUA LUNG) (SCUBA) (up to 30 feet).....	\$ 72.35	35.68
DIVER: OTHER THAN AQUA LUNG.....	\$ 81.72	35.68
HELICOPTER WORK, AIRBORNE HOIST OPERATOR FOR HELICOPTER.....	\$ 61.52	35.68
HELICOPTER WORK: CO-PILOT OF HELICOPTER.....	\$ 61.66	35.68
HELICOPTER WORK: PILOT OF HELICOPTER.....	\$ 62.83	35.68
POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 1: FORK LIFT (UP TO AND INCLUDING 10 TONS); PARTSMAN (HEAVY DUTY REPAIR SHOP PARTS ROOM WHEN NEEDED). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET 0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET 1.75.....	\$ 57.96	35.68
POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 2: CONVEYOR OPERATOR (HANDLING BUILDING MATERIAL); HYDRAULIC MONITOR; MIXER BOX OPERATOR (CONCRETE PLANT). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE		

OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.75.....\$ 58.07

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 3: BRAKEMAN; DECKHAND; FIREMAN; OILER; OILER/GRADECHECKER; SIGNALMAN; SWITCHMAN; HIGHLINE CABLEWAY SIGNALMAN; BARGEMAN; BUNKERMAN; CONCRETE CURING MACHINE (SELF-PROPELLED, AUTOMATICALLY APPLIED UNIT ON STREETS, HIGHWAYS, AIRPORTS AND CANALS); LEVEEMAN; ROLLER (5 TONS AND UNDER); TUGGER HOIST. BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 58.24

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 4: BOOM TRUCK OR DUAL PURPOSE ""A"" FRAME TRUCK (5 TONS OR LESS); CONCRETE PLACING BOOM (BUILDING CONSTRUCTION); DINKY OPERATOR; ELEVATOR OPERATOR; HOIST AND/OR WINCH (ONE DRUM); STRADDLE TRUCK (ROSS CARRIER, HYSTER AND SIMILAR BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN

ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 58.51

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 5:
ASPHALT PLANT FIREMAN; COMPRESSORS, PUMPS,
GENERATORS AND WELDING MACHINES ("BANK" OF 9 OR
MORE, INDIVIDUALLY OR COLLECTIVELY); CONCRETE PUMPS
OR PUMPCRETE GUNS; LUBRICATION AND SERVICE ENGINEER
(GREASE RACK); SCREEDMAN. BOOMS AND/OR LEADS
(HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER
50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING
JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF
100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM
FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS)
IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS
OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR
LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130
FEET 0.50 BOOMS
AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING
180 FEET 0.75 BOOMS AND/OR LEADS OF 180
FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET

1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER)
WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB)
SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (50 TONS AND OVER) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 58.82

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 6:
BOOM TRUCK OR DUAL PURPOSE "A" FRAME TRUCK (OVER 5
TONS); COMBINATION LOADER/BACKHOE (UP TO AND
INCLUDING 3/4 CU. YD.); CONCRETE BATCH PLANTS (WET
OR DRY); CONCRETE CUTTER, GROOVER AND/OR GRINDER
(SELF-PROPELLED UNIT ON STREETS, HIGHWAYS,
AIRPORTS, AND CANALS); CONVEYOR OR CONCRETE PUMP
(TRUCK OR EQUIPMENT MOUNTED); DRILLING MACHINERY
(NOT TO APPLY TO WATERLINERS, WAGON DRILLS OR JACK
HAMMERS); FORK LIFT (OVER 10 TONS); LOADER (UP TO
AND INCLUDING 3 AND 1/2 CU. YDS); LULL HIGH LIFT
(UNDER 40 FEET); LUBRICATION AND SERVICE ENGINEER
(MOBILE); MAGINNIS INTERNAL FULL SLAB VIBRATOR (ON
AIRPORTS, HIGHWAYS, CANALS AND WAREHOUSES); MAN OR
MATERIAL HOIST; MECHANICAL CONCRETE FINISHER (LARGE
CLARY, JOHNSON BIDWELL, BRIDGE DECK AND SIMILAR);
MOBILE TRUCK CRANE DRIVER; PORTABLE SHOTBLAST
CONCRETE CLEANING MACHINE; PORTABLE BORING MACHINE
(UNDER STREETS, HIGHWAYS, ETC.); PORTABLE CRUSHER;
POWER JUMBO OPERATOR (SETTING SLIP FORMS, ETC., IN
TUNNELS); ROLLERS (OVER 5 TONS); SELF-PROPELLED
COMPACTOR (SINGLE ENGINE); SELF-PROPELLED PAVEMENT
BREAKER; SKIDSTEER LOADER WITH ATTACHMENTS; SLIP
FORM PUMPS (POWER DRIVEN BY HYDRAULIC, ELECTRIC,
AIR, GAS, ETC., LIFTING DEVICE FOR CONCRETE FORMS);
SMALL RUBBER TIRED TRACTORS; TRENCHER (UP TO AND
INCLUDING 6 FEET); UNDERBRIDGE PERSONNEL AERIAL
PLATFORM (50 FEET OF PLATFORM OR LESS). BOOMS
AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A
CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR
MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS)
WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER
HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE
(UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING
SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT
INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT
NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO
BUT NOT INCLUDING 180 FEET 0.75 BOOMS
AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250
FEET 1.15 BOOMS AND/OR

LEADS OVER 250 FEET 1.50 THE OPERATOR OF A

CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.47

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 7: CRUSHER PLANT ENGINEER, DOZER (D-4, CASE 450, JOHN DEERE 450, AND SIMILAR); DUAL DRUM MIXER, EXTEND LIFT; HOIST AND/OR WINCH (2 DRUMS); LOADER (OVER 3 AND 1/2 CU. YDS. UP TO AND INCLUDING 6 YARDS.); MECHANICAL FINISHER OR SPREADER MACHINE (ASPHALT), (BARBER GREENE AND SIMILAR) (SCREEDMAN REQUIRED); MINE OR SHAFT HOIST; MOBILE CONCRETE MIXER (OVER 5 TONS); PIPE BENDING MACHINE (PIPELINES ONLY); PIPE CLEANING MACHINE (TRACTOR PROPELLED AND SUPPORTED); PIPE WRAPPING MACHINE (TRACTOR PROPELLED AND SUPPORTED); ROLLER OPERATOR (ASPHALT); SELF-PROPELLED ELEVATING GRADE PLANE; SLUSHER OPERATOR; TRACTOR (WITH BOOM) (D-6, OR SIMILAR); TRENCHER (OVER 6 FEET AND LESS THAN 200 H.P.); WATER TANKER (PULLED BY EUCLIDS, T-PULLS, DW-10, 20 OR 21, OR SIMILAR); WINCHMAN (STERN WINCH ON DREDGE). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.79

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 8: ASPHALT PLANT OPERATOR; BARGE MATE (SEAGOING); CAST-IN-PLACE PIPE LAYING MACHINE; CONCRETE BATCH PLANT (MULTIPLE UNITS); CONVEYOR OPERATOR (TUNNEL); DECKMATE; DOZER (D-6 AND SIMILAR); FINISHING MACHINE OPERATOR (AIRPORTS AND HIGHWAYS); GRADESETTER; KOLMAN LOADER (AND SIMILAR); MUCKING MACHINE (CRAWLER-TYPE); MUCKING MACHINE (CONVEYOR-TYPE); NO-JOINT PIPE LAYING MACHINE; PORTABLE CRUSHING AND SCREENING PLANT; POWER BLADE OPERATOR (UNDER 12); SAURMAN TYPE DRAGLINE (UP TO AND INCLUDING 5 YDS.); STATIONARY PIPE WRAPPING, CLEANING AND BENDING MACHINE; SURFACE HEATER AND PLANER OPERATOR, TRACTOR (D-6 AND SIMILAR); TRI-BATCH PAVER; TUNNEL BADGER; TUNNEL MOLE AND/OR BORING MACHINE OPERATOR UNDERBRIDGE PERSONNEL AERIAL PLATFORM (OVER 50 FEET OF PLATFORM). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO
BUT NOT INCLUDING 180 FEET 0.75 BOOMS
AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250
FEET 1.15 BOOMS AND/OR
LEADS OVER 250 FEET 1.50 THE OPERATOR OF A
CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR
MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR
PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS
AND OVER) IN ACCORDANCE WITH THE FOLLOWING
SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING
250 FEET 1.25 BOOMS
OVER 250 FEET

1.75.....\$ 59.90

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 9:
COMBINATION MIXER AND COMPRESSOR (GUNIT); DO-MOR
LOADER AND ADAMS ELEGRADER; DOZER (D-7 OR EQUAL);
WHEEL AND/OR LADDER TRENCHER (OVER 6 FEET AND 200
TO 749 H.P.). BOOMS AND/OR LEADS (HOURLY
PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS)
WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR
OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET
OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH
HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
80 FEET UP TO BUT NOT INCLUDING 130 FEET OR
LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130
FEET 0.50 BOOMS
AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING
180 FEET 0.75 BOOMS AND/OR LEADS OF 180
FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER)
WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB)
SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (50 TONS AND OVER) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.01

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 9A:
DOZER (D-8 AND SIMILAR); GRADESETTER (WHEN REQUIRED
BY THE CONTRACTOR TO WORK FROM DRAWINGS, PLANS OR
SPECIFICATIONS WITHOUT THE DIRECT SUPERVISION OF A
FOREMAN OR SUPERINTENDENT); PUSH CAT; SCRAPERS (UP
TO AND INCLUDING 20 CU. YDS); SELF-PROPELLED
COMPACTOR WITH DOZER; SELF-PROPELLED, RUBBER-TIRED
EARTHMOVING EQUIPMENT (UP TO AND INCLUDING 20 CU.
YDS) (621 BAND AND SIMILAR); SHEEP'S FOOT; TRACTOR
(D-8 AND SIMILAR); TRACTORS WITH BOOM (LARGER THAN
D-6, AND SIMILAR). BOOMS AND/OR LEADS (HOURLY
PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS)
WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR
OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET
OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH
HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
80 FEET UP TO BUT NOT INCLUDING 130 FEET OR
LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130
FEET 0.50 BOOMS
AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING
180 FEET 0.75 BOOMS AND/OR LEADS OF 180
FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER)
WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB)
SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (50 TONS AND OVER) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.24

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 10:
CHICAGO BOOM; COLD PLANERS; HEAVY DUTY REPAIRMAN OR

WELDER; HOIST AND/OR WINCH (3 DRUMS); HYDRAULIC SKOOPER (KOEHRING AND SIMILAR); LOADER (OVER 6 CU. YDS. UP TO AND INCLUDING 12 CU. YDS.); SAURMAN TYPE DRAGLINE (OVER 5 CU. YDS.); SELF-PROPELLED, RUBBER-TIRED EARTHMOVING EQUIPMENT (OVER 20 CU. YDS. UP TO AND INCLUDING 31 CU. YDS.) (637D AND SIMILAR); SOIL STABILIZER (P & H OR EQUAL); SUB-GRADER (GURRIES OR OTHER AUTOMATIC TYPE); TRACTORS (D-9 OR EQUIVALENT, ALL ATTACHMENTS); TRACTOR (TANDEM SCRAPER); WATCH ENGINEER. BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.30

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 10A: BOAT OPERATOR; CABLE-OPERATED CRAWLER CRANE (UP TO AND INCLUDING 25 TONS); CABLE-OPERATED POWER SHOVEL, CLAMSHELL, DRAGLINE AND BACKHOE (UP TO AND INCLUDING 1 CU. YD.); DOZER D9-L; DOZER (D-10, HD41 AND SIMILAR) (ALL ATTACHMENTS); GRADALL (UP TO AND INCLUDING 1 CU. YD.); HYDRAULIC BACKHOE (OVER 3/4 CU. YDS. UP TO AND INCLUDING 2 CU. YDS.); MOBILE TRUCK CRANE OPERATOR (UP TO AND INCLUDING 25 TONS) (MOBILE TRUCK CRANE DRIVER REQUIRED); SELF-PROPELLED BOOM TYPE LIFTING DEVICE (CENTER MOUNT) (UP TO AND INCLUDING 25 TONS) (GROVE, DROTT, P&H, PETTIBONE AND SIMILAR; TRENCHER (OVER 6 FEET AND 750 H.P. OR MORE); WATCH ENGINEER (STEAM OR ELECTRIC). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.45

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 11: AUTOMATIC SLIP FORM PAVER (CONCRETE OR ASPHALT); BAND WAGON (IN CONJUNCTION WITH WHEEL EXCAVATOR); CABLE-OPERATED CRAWLER CRANES (OVER 25 TONS BUT LESS THAN 50 TONS); CABLE-OPERATED POWER SHOVEL,

CLAMSHELL, DRAGLINE AND BACKHOE (OVER 1 CU. YD. UP TO 7 CU. YDS.); GRADALL (OVER 1 CU. YDS. UP TO 7 CU. YDS.); DW-10, 20, ETC. (TANDEM); EARTHMOVING MACHINES (MULTIPLE PROPULSION POWER UNITS AND 2 OR MORE SCRAPERS) (UP TO AND INCLUDING 35 CU. YDS., ""STRUCK"" M.R.C.); HIGHLINE CABLEWAY; HYDRAULIC BACKHOE (OVER 2 CU. YDS. UP TO AND INCLUDING 4 CU. YDS.); LEVERMAN; LIFT SLAB MACHINE; LOADER (OVER 12 CU. YDS); MASTER BOAT OPERATOR; MOBILE TRUCK CRANE OPERATOR (OVER 25 TONS BUT LESS THAN 50 TONS); (MOBILE TRUCK CRANE DRIVER REQUIRED); PRE-STRESS WIRE WRAPPING MACHINE; SELF-PROPELLED BOOM-TYPE LIFTING DEVICE (CENTER MOUNT) (OVER 25 TONS M.R.C); SELF-PROPELLED COMPACTOR (WITH MULTIPLE-PROPULSION POWER UNITS); SINGLE ENGINE RUBBER TIED EARTHMOVING MACHINE (WITH TANDEM SCRAPER); TANDEM CATS; TRENCHER (PULLING ATTACHED SHIELD). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.60

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 12: CLAMSHELL OR DIPPER OPERATOR; DERRICKS; DRILL RIGS; MULTI-PROPULSION EARTHMOVING MACHINES (2 OR MORE SCRAPERS) (OVER 35 CU. YDS ""STRUCK""M.R.C.); OPERATORS (DERRICKS, PILEDRIVERS AND CRANES); POWER SHOVELS AND DRAGLINES (7 CU. YDS. M.R.C. AND OVER); SELF-PROPELLED RUBBER-TIRED EARTHMOVING EQUIPMENT (OVER 31 CU. YDS.) (657B AND SIMILAR); WHEEL EXCAVATOR (UP TO AND INCLUDING 750 CU. YDS. PER HOUR); WHEEL EXCAVATOR (OVER 750 CU. YDS. PER HOUR).\$ 60.96

35.68

POWER EQUIPMENT OPERATOR - TUNNEL WORK, GROUP 12A: DOZER (D-11 OR SIMILAR OR LARGER); HYDRAULIC EXCAVATORS (OVER 4 CU. YDS.); LIFTING CRANES (50 TONS AND OVER); PIONEERING DOZER/BACKHOE (INITIAL CLEARING AND EXCAVATION FOR THE PURPOSE OF PROVIDING ACCESS FOR OTHER EQUIPMENT WHERE THE TERRAIN WORKED INVOLVES 1-TO-1 SLOPES THAT ARE 50 FEET IN HEIGHT OR DEPTH, THE SCOPE OF THIS WORK DOES NOT INCLUDE NORMAL CLEARING AND GRUBBING ON USUAL HILLY TERRAIN NOR THE EXCAVATION WORK ONCE THE ACCESS IS PROVIDED); POWER BLADE OPERATOR (CAT 12 OR EQUIVALENT OR OVER); STRADDLE LIFTS (OVER 50 TONS); TOWER CRANE, MOBILE; TRAVELING TRUSS CRANES; UNIVERSAL, LIEBHERR, LINDEN, AND SIMILAR TYPES OF TOWER CRANES (IN THE ERECTION, DISMANTLING, AND MOVING OF EQUIPMENT THERE SHALL BE AN ADDITIONAL OPERATING ENGINEER OR HEAVY DUTY REPAIRMAN); YO-YO CAT OR DOZER. BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN

ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
80 FEET UP TO BUT NOT INCLUDING 130 FEET OR
LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130
FEET 0.50 BOOMS
AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING
180 FEET 0.75 BOOMS AND/OR LEADS OF 180
FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET
1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER)
WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB)
SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (50 TONS AND OVER) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 61.32

35.68

POWER EQUIPMENT OPERATORS:, GROUP 1: FORK LIFT (UP
TO AND INCLUDING 10 TONS); PARTSMAN (HEAVY DUTY
REPAIR SHOP PARTS ROOM WHEN NEEDED). BOOMS AND/OR
LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE
(UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE
(INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH
LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR
PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER
50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130
FEET OR LEADS OF 100 FEET UP TO BUT NOT
INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT
NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR
LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER
250 FEET 1.50 THE OPERATOR OF A CRANE (50
TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE
(INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM
FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND
OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 57.66

35.68

POWER EQUIPMENT OPERATORS:, GROUP 2: CONVEYOR
OPERATOR (HANDLING BUILDING MATERIAL); HYDRAULIC
MONITOR; MIXER BOX OPERATOR (CONCRETE PLANT).
BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR
OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET
OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50
TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE
A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID
CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE
FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT
NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO
BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP
TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS
AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250
FEET 1.15 BOOMS AND/OR

LEADS OVER 250 FEET 1.50 THE OPERATOR OF A
CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR
MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR
PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS
AND OVER) IN ACCORDANCE WITH THE FOLLOWING
SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING
250 FEET 1.25 BOOMS

OVER 250 FEET

1.75.....\$ 57.77

35.68

POWER EQUIPMENT OPERATORS:, GROUP 3: BRAKEMAN;
DECKHAND; FIREMAN; OILER; OILER/GRADECHECKER;
SIGNALMAN; SWITCHMAN; HIGHLINE CABLEWAY SIGNALMAN;
BARGEMAN; BUNKERMAN; CONCRETE CURING MACHINE
(SELF-PROPELLED, AUTOMATICALLY APPLIED UNIT ON
STREETS, HIGHWAYS, AIRPORTS AND CANALS); LEVEEMAN;
ROLLER (5 TONS AND UNDER); TUGGER HOIST. BOOMS
AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A

CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 57.94

35.68

POWER EQUIPMENT OPERATORS:, GROUP 4: BOOM TRUCK OR DUAL PURPOSE "A" FRAME TRUCK (5 TONS OR LESS); CONCRETE PLACING BOOM (BUILDING CONSTRUCTION); DINKY OPERATOR; ELEVATOR OPERATOR; HOIST AND/OR WINCH (ONE DRUM); STRADDLE TRUCK (ROSS CARRIER, HYSTER AND SIMILAR). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET 0.50 BOOMS

AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 58.21

35.68

POWER EQUIPMENT OPERATORS:, GROUP 5: ASPHALT PLANT FIREMAN; COMPRESSORS, PUMPS, GENERATORS AND WELDING MACHINES ("BANK" OF 9 OR MORE, INDIVIDUALLY OR COLLECTIVELY); CONCRETE PUMPS OR PUMPCRETE GUNS; LUBRICATION AND SERVICE ENGINEER (GREASE RACK); SCREEDMAN BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS

OVER 250 FEET

1.75.....\$ 58.52

35.68

POWER EQUIPMENT OPERATORS:, GROUP 6: BOOM TRUCK OR DUAL PURPOSE ""A""FRAME TRUCK (OVER 5 TONS); COMBINATION LOADER/BACKHOE (UP TO AND INCLUDING 3/4 CU. YD.); CONCRETE BATCH PLANTS (WET OR DRY); CONCRETE CUTTER, GROOVER AND/OR GRINDER (SELF-PROPELLED UNIT ON STREETS, HIGHWAYS, AIRPORTS, AND CANALS); CONVEYOR OR CONCRETE PUMP (TRUCK OR EQUIPMENT MOUNTED); DRILLING MACHINERY (NOT TO APPLY TO WATERLINERS, WAGON DRILLS OR JACK HAMMERS); FORK LIFT (OVER 10 TONS); LOADER (UP TO AND INCLUDING 3 AND 1/2 CU. YDS); LULL HIGH LIFT (UNDER 40 FEET); LUBRICATION AND SERVICE ENGINEER (MOBILE); MAGINNIS INTERNAL FULL SLAB VIBRATOR (ON AIRPORTS, HIGHWAYS, CANALS AND WAREHOUSES); MAN OR MATERIAL HOIST; MECHANICAL CONCRETE FINISHER (LARGE CLARY, JOHNSON BIDWELL, BRIDGE DECK AND SIMILAR); MOBILE TRUCK CRANE DRIVER; PORTABLE SHOTBLAST CONCRETE CLEANING MACHINE; PORTABLE BORING MACHINE (UNDER STREETS, HIGHWAYS, ETC.); PORTABLE CRUSHER; POWER JUMBO OPERATOR (SETTING SLIP FORMS, ETC., IN TUNNELS); ROLLERS (OVER 5 TONS); SELF-PROPELLED COMPACTOR (SINGLE ENGINE); SELF-PROPELLED PAVEMENT BREAKER; SKIDSTEER LOADER WITH ATTACHMENTS; SLIP FORM PUMPS (POWER DRIVEN BY HYDRAULIC, ELECTRIC, AIR, GAS, ETC., LIFTING DEVICE FOR CONCRETE FORMS); SMALL RUBBER TIRED TRACTORS; TRENCHER (UP TO AND INCLUDING 6 FEET); UNDERBRIDGE PERSONNEL AERIAL PLATFORM (50 FEET OF PLATFORM OR LESS). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.17

35.68

POWER EQUIPMENT OPERATORS:, GROUP 7: CRUSHER PLANT ENGINEER, DOZER (D-4, CASE 450, JOHN DEERE 450, AND SIMILAR); DUAL DRUM MIXER, EXTEND LIFT; HOIST AND/OR WINCH (2 DRUMS); LOADER (OVER 3 AND 1/2 CU. YDS. UP TO AND INCLUDING 6 YARDS.); MECHANICAL FINISHER OR SPREADER MACHINE (ASPHALT), (BARBER GREENE AND SIMILAR) (SCREEDMAN REQUIRED); MINE OR SHAFT HOIST; MOBILE CONCRETE MIXER (OVER 5 TONS); PIPE BENDING MACHINE (PIPELINES ONLY); PIPE CLEANING MACHINE (TRACTOR PROPELLED AND SUPPORTED); PIPE WRAPPING MACHINE (TRACTOR PROPELLED AND SUPPORTED); ROLLER OPERATOR (ASPHALT); SELF-PROPELLED ELEVATING GRADE PLANE; SLUSHER OPERATOR; TRACTOR (WITH BOOM) (D-6, OR SIMILAR); TRENCHER (OVER 6 FEET AND LESS THAN 200 H.P.); WATER TANKER (PULLED BY EUCLIDS, T-PULLS, DW-10, 20 OR 21, OR SIMILAR); WINCHMAN (STERN WINCH ON DREDGE). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE,

SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE
WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP
TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100
FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130
FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND
INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE
OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM
OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A
PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE
(50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING
SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING
250 FEET 1.25 BOOMS
OVER 250 FEET

1.75.....\$ 59.49

35.68

POWER EQUIPMENT OPERATORS:, GROUP 8: ASPHALT PLANT
OPERATOR; BARGE MATE (SEAGOING); CAST-IN-PLACE PIPE
LAYING MACHINE; CONCRETE BATCH PLANT (MULTIPLE
UNITS); CONVEYOR OPERATOR (TUNNEL); DECKMATE; DOZER
(D-6 AND SIMILAR); FINISHING MACHINE OPERATOR
(AIRPORTS AND HIGHWAYS); GRADESETTER; KOLMAN LOADER
(AND SIMILAR); MUCKING MACHINE (CRAWLER-TYPE);
MUCKING MACHINE (CONVEYOR-TYPE); NO-JOINT PIPE
LAYING MACHINE; PORTABLE CRUSHING AND SCREENING
PLANT; POWER BLADE OPERATOR (UNDER 12); SAURMAN
TYPE DRAGLINE (UP TO AND INCLUDING 5 YDS.);

STATIONARY PIPE WRAPPING, CLEANING AND BENDING
MACHINE; SURFACE HEATER AND PLANER OPERATOR,
TRACTOR (D-6 AND SIMILAR); TRI-BATCH PAVER; TUNNEL
BADGER; TUNNEL MOLE AND/OR BORING MACHINE OPERATOR
UNDERBRIDGE PERSONNEL AERIAL PLATFORM (OVER 50 FEET
OF PLATFORM). BOOMS AND/OR LEADS (HOURLY

PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS)
WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR
OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET
OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH
HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
80 FEET UP TO BUT NOT INCLUDING 130 FEET OR
LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130
FEET 0.50 BOOMS

AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING
180 FEET 0.75 BOOMS AND/OR LEADS OF 180
FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET

1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER)
WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB)
SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR
WORKED ON SAID CRANE (50 TONS AND OVER) IN
ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF
180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.60

35.68

POWER EQUIPMENT OPERATORS:, GROUP 9: COMBINATION
MIXER AND COMPRESSOR (GUNITE); DO-MOR LOADERAND
ADAMS ELEGRADER; DOZER (D-7 OR EQUAL); WHEEL AND/OR
LADDER TRENCHER (OVER 6 FEET AND 200 TO 749 H.P.).
BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR
OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET
OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50
TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE
A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID
CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE
FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT
NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO
BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP
TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS
AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250
FEET

1.15 BOOMS AND/OR

LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.71

35.68

POWER EQUIPMENT OPERATORS:, GROUP 9A: DOZER (D-8 AND SIMILAR); GRADESETTER (WHEN REQUIRED BY THE CONTRACTOR TO WORK FROM DRAWINGS, PLANS OR SPECIFICATIONS WITHOUT THE DIRECT SUPERVISION OF A FOREMAN OR SUPERINTENDENT); PUSH CAT; SCRAPERS (UP TO AND INCLUDING 20 CU. YDS); SELF-PROPELLED COMPACTOR WITH DOZER; SELF-PROPELLED, RUBBER-TIRED EARTHMOVING EQUIPMENT (UP TO AND INCLUDING 20 CU. YDS) (621 BAND AND SIMILAR); SHEEP'S FOOT; TRACTOR (D-8 AND SIMILAR); TRACTORS WITH BOOM (LARGER THAN D-6, AND SIMILAR). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET 0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET

1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.25 BOOMS OVER 250 FEET

1.75.....\$ 59.94

35.68

POWER EQUIPMENT OPERATORS:, GROUP 10: CHICAGO BOOM; COLD PLANERS; HEAVY DUTY REPAIRMAN OR WELDER; HOIST AND/OR WINCH (3 DRUMS); HYDRAULIC SKOOPER (KOEHRING AND SIMILAR); LOADER (OVER 6 CU. YDS. UP TO AND INCLUDING 12 CU. YDS.); SAURMAN TYPE DRAGLINE (OVER 5 CU. YDS.); SELF-PROPELLED, RUBBER-TIRED EARTHMOVING EQUIPMENT (OVER 20 CU. YDS. UP TO AND INCLUDING 31 CU. YDS.) (637D AND SIMILAR); SOIL STABILIZER (P & H OR EQUAL); SUB-GRADER (GURRIES OR OTHER AUTOMATIC TYPE); TRACTORS (D-9 OR EQUIVALENT, ALL ATTACHMENTS); TRACTOR (TANDEM SCRAPER); WATCH ENGINEER. BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS

OVER 250 FEET

1.75.....\$ 60.00 35.68

POWER EQUIPMENT OPERATORS:, GROUP 10A: BOAT OPERATOR; CABLE-OPERATED CRAWLER CRANE (UP TO AND INCLUDING 25 TONS); CABLE-OPERATED POWER SHOVEL, CLAMSHELL, DRAGLINE AND BACKHOE (UP TO AND INCLUDING 1 CU. YD.); DOZER D9-L; DOZER (D-10, HD41 AND SIMILAR) (ALL ATTACHMENTS); GRADALL (UP TO AND INCLUDING 1 CU. YD.); HYDRAULIC BACKHOE (OVER 3/4 CU. YDS. UP TO AND INCLUDING 2 CU. YDS.); MOBILE TRUCK CRANE OPERATOR (UP TO AND INCLUDING 25 TONS) (MOBILE TRUCK CRANE DRIVER REQUIRED); SELF-PROPELLED BOOM TYPE LIFTING DEVICE (CENTER MOUNT) (UP TO AND INCLUDING 25 TONS) (GROVE, DROTT, P&H, PETTIBONE AND SIMILAR; TRENCHER (OVER 6 FEET AND 750 H.P. OR MORE); WATCH ENGINEER (STEAM OR ELECTRIC). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.15 35.68

POWER EQUIPMENT OPERATORS:, GROUP 11: AUTOMATIC SLIP FORM PAVER (CONCRETE OR ASPHALT); BAND WAGON (IN CONJUNCTION WITH WHEEL EXCAVATOR); CABLE-OPERATED CRAWLER CRANES (OVER 25 TONS BUT LESS THAN 50 TONS); CABLE-OPERATED POWER SHOVEL, CLAMSHELL, DRAGLINE AND BACKHOE (OVER 1 CU. YD. UP TO 7 CU. YDS.); GRADALL (OVER 1 CU. YDS. UP TO 7 CU. YDS.); DW-10, 20, ETC. (TANDEM); EARTHMOVING MACHINES (MULTIPLE PROPULSION POWER UNITS AND 2 OR MORE SCRAPERS) (UP TO AND INCLUDING 35 CU. YDS., "" STRUCK"" M.R.C.); HIGHLINE CABLEWAY; HYDRAULIC BACKHOE (OVER 2 CU. YDS. UP TO AND INCLUDING 4 CU. YDS.); LEVERMAN; LIFT SLAB MACHINE; LOADER (OVER 12 CU. YDS); MASTER BOAT OPERATOR; MOBILE TRUCK CRANE OPERATOR (OVER 25 TONS BUT LESS THAN 50 TONS); (MOBILE TRUCK CRANE DRIVER REQUIRED); PRE-STRESS WIRE WRAPPING MACHINE; SELF-PROPELLED BOOM-TYPE LIFTING DEVICE (CENTER MOUNT) (OVER 25 TONS M.R.C.); SELF-PROPELLED COMPACTOR (WITH MULTIPLE-PROPULSION POWER UNITS); SINGLE ENGINE RUBBER TIED EARTHMOVING MACHINE (WITH TANDEM SCRAPER); TANDEM CATS; TRENCHER (PULLING ATTACHED SHIELD). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET

1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A

CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.30

35.68

POWER EQUIPMENT OPERATORS:, GROUP 12 CLAMSHELL OR DIPPER OPERATOR; DERRICKS; DRILL RIGS; MULTI-PROPULSION EARTHMOVING MACHINES (2 OR MORE SCRAPERS) (OVER 35 CU. YDS. ""STRUCK""M.R.C.); OPERATORS (DERRICKS, PILEDRIERS AND CRANES); POWER SHOVELS AND DRAGLINES (7 CU. YDS. M.R.C. AND OVER); SELF-PROPELLED RUBBER-TIRED EARTHMOVING EQUIPMENT (OVER 31 CU. YDS.) (657B AND SIMILAR); WHEEL EXCAVATOR (UP TO AND INCLUDING 750 CU. YDS. PER HOUR); WHEEL EXCAVATOR (OVER 750 CU. YDS. PER HOUR). BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET

0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15

BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS AND OVER) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.25 BOOMS OVER 250 FEET

1.75.....\$ 60.66

35.68

POWER EQUIPMENT OPERATORS:, GROUP 12A: DOZER (D-11 OR SIMILAR OR LARGER); HYDRAULIC EXCAVATORS (OVER 4 CU. YDS.); LIFTING CRANES (50 TONS AND OVER); PIONEERING DOZER/BACKHOE (INITIAL CLEARING AND EXCAVATION FOR THE PURPOSE OF PROVIDING ACCESS FOR OTHER EQUIPMENT WHERE THE TERRAIN WORKED INVOLVES 1-TO-1 SLOPES THAT ARE 50 FEET IN HEIGHT OR DEPTH, THE SCOPE OF THIS WORK DOES NOT INCLUDE NORMAL CLEARING AND GRUBBING ON USUAL HILLY TERRAIN NOR THE EXCAVATION WORK ONCE THE ACCESS IS PROVIDED); POWER BLADE OPERATOR (CAT 12 OR EQUIVALENT OR OVER); STRADDLE LIFTS (OVER 50 TONS); TOWER CRANE, MOBILE; TRAVELING TRUSS CRANES; UNIVERSAL, LIEBHERR, LINDEN, AND SIMILAR TYPES OF TOWER CRANES (IN THE ERECTION, DISMANTLING, AND MOVING OF EQUIPMENT THERE SHALL BE AN ADDITIONAL OPERATING ENGINEER OR HEAVY DUTY REPAIRMAN); YO-YO CAT OR DOZER. BOOMS AND/OR LEADS (HOURLY PREMIUMS): THE OPERATOR OF A CRANE (UNDER 50 TONS) WITH A BOOM OF 80 FEET OR MORE (INCLUDING JIB), OR OF A CRANE (UNDER 50 TONS) WITH LEADS OF 100 FEET OR MORE, SHALL RECEIVE A PER HOUR PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (UNDER 50 TONS) IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: BOOMS OF 80 FEET UP TO BUT NOT INCLUDING 130 FEET OR LEADS OF 100 FEET UP TO BUT NOT INCLUDING 130 FEET

0.50 BOOMS AND/OR LEADS OF 130 FEET UP TO BUT NOT INCLUDING 180 FEET 0.75 BOOMS AND/OR LEADS OF 180 FEET UP TO AND INCLUDING 250 FEET 1.15 BOOMS AND/OR LEADS OVER 250 FEET 1.50 THE OPERATOR OF A

CRANE (50 TONS AND OVER) WITH A BOOM OF 180 FEET OR MORE (INCLUDING JIB) SHALL RECEIVE A PER HOUR

PREMIUM FOR EACH HOUR WORKED ON SAID CRANE (50 TONS
AND OVER) IN ACCORDANCE WITH THE FOLLOWING
SCHEDULE: BOOMS OF 180 FEET UP TO AND INCLUDING
250 FEET 1.25 BOOMS
OVER 250 FEET

1.75.....	\$ 61.02	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13: TRUCK DRIVER (UTILITY, FLATBED, ETC.).....	\$ 57.94	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13A: DUMP TRUCK, 8 CU.YDS. AND UNDER (WATER LEVEL); WATER TRUCK (UP TO AND INCLUDING 2,000 GALLONS).....	\$ 58.21	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13B: WATER TRUCK (OVER 2,000 GALLONS); TANDEM DUMP TRUCK, OVER 8 CU. YDS. (WATER LEVEL).....	\$ 58.52	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13C: TRUCK DRIVER (SEMI-TRAILER. ROCK CANS, SEMI-DUMP OR ROLL-OFFS)...	\$ 59.17	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13D: TRUCK DRIVER (SLIP-IN OR PUP).....	\$ 59.49	35.68
POWER EQUIPMENT OPERATORS:, GROUP 13E: END DUMPS, UNLICENSED (EUCLID, MACK, CATERPILLAR OR SIMILAR); TRACTOR TRAILER (HAULING EQUIPMENT); TANDEM TRUCKS HOOKED UP TO TRAILER (HAULING EQUIPMENT)	\$ 59.60	35.68
STAND-BY DIVER: (AQUA LUNG) (SCUBA).....	\$ 62.97	35.68
STAND-BY DIVER: OTHER THAN AQUA LUNG.....	\$ 62.97	35.68

ENGI0003-004 09/01/2025

	Rates	Fringes
DREDGING (BOAT OPERATORS): BOAT DECKHAND.....	\$ 57.94	35.68
DREDGING (BOAT OPERATORS): BOAT OPERATOR.....	\$ 60.15	35.68
DREDGING (BOAT OPERATORS): MASTER BOAT OPERATOR....	\$ 60.30	35.68
DREDGING:, CLAMSHELL OR DIPPER DREDGING: GROUP 1: CLAMSHELL OR DIPPER OPERATOR.....	\$ 60.66	35.68
DREDGING:, CLAMSHELL OR DIPPER DREDGING: GROUP 2: MECHANIC OR WELDER; WATCH ENGINEER.....	\$ 60.00	35.68
DREDGING:, CLAMSHELL OR DIPPER DREDGING: GROUP 3: BARGE MATE; DECKMATE.....	\$ 59.60	35.68
DREDGING:, CLAMSHELL OR DIPPER DREDGING: GROUP 4: BARGEMAN; DECKHAND; FIREMAN; OILER. HYDRAULIC SUCTION DREDGING CLASSIFICATIONS.....	\$ 57.94	35.68
DREDGING:, DERRICKS: GROUP 1: OPERATORS (DERRICKS, PILEDRIERS AND CRANES).	\$ 60.66	35.68
DREDGING:, DERRICKS: GROUP 2: SAURMAN TYPE DRAGLINE (OVER 5 CUBIC YARDS).	\$ 60.00	35.68
DREDGING:, DERRICKS: GROUP 3: DECKMATE; SAURMAN TYPE DRAGLINE (UP TO AND INCLUDING 5 YARDS).	\$ 59.60	35.68
DREDGING:, DERRICKS: GROUP 4: DECKHAND, FIREMAN, OILER.....	\$ 57.94	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 1: LEVERMAN.	\$ 60.30	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 2: WATCH ENGINEER (STEAM OR ELECTRIC).	\$ 60.15	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 3: MECHANIC OR WELDER.	\$ 60.00	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 4: DOZER OPERATOR.	\$ 59.94	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 5: DECKMATE.	\$ 59.60	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 6: WINCHMAN (STERN WINCH ON DREDGE).....	\$ 59.49	35.68
DREDGING:, HYDRAULIC SUCTION DREDGES: GROUP 7: DECKHAND (CAN OPERATE ANCHOR SCOW UNDER DIRECTION OF DECKMATE); FIREMAN; LEVEEMAN; OILER.....	\$ 57.94	35.68

ENGI0003-044 09/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATORS (PAVING): ASPHALT CONCRETE MATERIAL TRANSFER.....	\$ 58.67	34.86
POWER EQUIPMENT OPERATORS (PAVING): ASPHALT PLANT OPERATOR.....	\$ 59.07	34.86
POWER EQUIPMENT OPERATORS (PAVING): ASPHALT RAKER...	\$ 57.68	34.86

POWER EQUIPMENT OPERATORS (PAVING): ASPHALT SPREADER OPERATOR.....	\$ 59.16	34.86
POWER EQUIPMENT OPERATORS (PAVING): COLD PLANER.....	\$ 59.47	34.86
POWER EQUIPMENT OPERATORS (PAVING): COMBINATION LOADER/BACKHOE (OVER 3/4 CU.YD.).....	\$ 57.68	34.86
POWER EQUIPMENT OPERATORS (PAVING): COMBINATION LOADER/BACKHOE (UP TO 3/4 CU.YD.).....	\$ 56.70	34.86
POWER EQUIPMENT OPERATORS (PAVING): CONCRETE SAWS AND/OR GRINDER (SELF-PROPELLED UNIT ON STREETS, HIGHWAYS, AIRPORTS AND CANALS).....	\$ 58.64	34.86
POWER EQUIPMENT OPERATORS (PAVING): GRADER.....	\$ 59.47	34.86
POWER EQUIPMENT OPERATORS (PAVING): LABORER, HAND ROLLER.....	\$ 57.18	34.86
POWER EQUIPMENT OPERATORS (PAVING): LOADER (2 1/2 CU. YDS. AND UNDER).....	\$ 58.64	34.86
POWER EQUIPMENT OPERATORS (PAVING): LOADER (OVER 2 1/2 CU. YDS. TO AND INCLUDING 5 CU. YDS.).....	\$ 58.96	34.86
POWER EQUIPMENT OPERATORS (PAVING): ROLLER OPERATOR (FIVE TONS AND UNDER).....	\$ 57.41	34.86
POWER EQUIPMENT OPERATORS (PAVING): ROLLER OPERATOR (OVER FIVE TONS).....	\$ 58.84	34.86
POWER EQUIPMENT OPERATORS (PAVING): SCREED PERSON...	\$ 58.64	34.86
POWER EQUIPMENT OPERATORS (PAVING): SOIL STABILIZER.	\$ 59.47	34.86

IRON0625-001 09/01/2025

	Rates	Fringes
IRONWORKERS A. EMPLOYEES WILL BE PAID \$.50 PER HOUR MORE WHILE WORKING IN TUNNELS AND COFFER DAMS; \$1.00 PER HOUR MORE WHEN REQUIRED TO WORK UNDER OR ARE COVERED WITH WATER (SUBMERGED) AND WHEN THEY ARE REQUIRED TO WORK ON THE SUMMIT OF MAUNA KEA, MAUNA LOA OR HALEAKALA.....	\$ 50.50	43.46

LAB00368-001 09/02/2024

	Rates	Fringes
LABORERS: DRILLER.....	\$ 44.75	25.96
LABORERS: FINAL CLEAN UP.....	\$ 31.40	21.37
LABORERS: GUNITE/SHOTCRETE OPERATOR AND HIGH SCALER.	\$ 42.25	25.96
LABORERS: MASON TENDER/HOD CARRIER.....	\$ 42.25	25.96
LABORERS: POWDERMAN.....	\$ 42.75	25.96
LABORERS: WINDOW WASHER (BOSUN CHAIR).....	\$ 41.25	25.96
SEE LABORERS: LABORER I IN FOOTER.....	\$ 41.75	25.96
SEE LABORERS: LABORER II IN FOOTER.....	\$ 39.15	25.96

LAB00368-002 09/03/2024

	Rates	Fringes
LANDSCAPE & IRRIGATION LABORERS, GROUP 1: INSTALLATION OF NON-POTABLE PERMANENT OR TEMPORARY IRRIGATION WATER SYSTEMS PERFORMED FOR THE PURPOSES OF LANDSCAPING AND IRRIGATION ARCHITECTURAL HORTICULTURAL WORK; THE INSTALLATION OF DRINKING FOUNTAINS AND PERMANENT OR TEMPORARY IRRIGATION SYSTEMS USING POTABLE WATER FOR LANDSCAPING AND IRRIGATION ARCHITECTURAL HORTICULTURAL PURPOSES ONLY. THIS WORK INCLUDES (A) THE INSTALLATION OF ALL HEADS, RISERS, VALVES, VALVE BOXES, VACUUM BREAKERS (PRESSURE AND NON-PRESSURE), LOW VOLTAGE ELECTRICAL LINES AND, PROVIDED SUCH WORK INVOLVES ELECTRICAL WIRING THAT WILL CARRY 24 VOLTS OR LESS, THE INSTALLATION OF SENSORS, MASTER CONTROL PANELS, DISPLAY BOARDS, JUNCTION BOXES, CONDUCTORS, INCLUDING ALL OTHER COMPONENTS FOR CONTROLLERS, (B) AND METALLIC (COPPER, BRASS, GALVANIZED, OR SIMILAR) PIPE, AS WELL AS PVC OR OTHER PLASTIC PIPE INCLUDING ALL WORK INCIDENTAL THERETO, I.E., UNLOADING, HANDLING AND DISTRIBUTION OF ALL PIPES FITTINGS, TOOLS, MATERIALS AND EQUIPMENT, (C) ALL SOLDERING WORK IN CONNECTION WITH THE ABOVE WHETHER DONE BY TORCH, SOLDERING IRON, OR OTHER MEANS; (D) TIE-IN TO MAIN LINES, THRUST BLOCKS (BOTH PRECAST		

AND POURED IN PLACE), PIPE HANGERS AND SUPPORTS INCIDENTAL TO INSTALLATION OF THE ENTIRE IRRIGATION SYSTEM, (E) MAKING OF PRESSURE TESTS, START-UP TESTING, FLUSHING, PURGING, WATER BALANCING, PLACING INTO OPERATION ALL IRRIGATION EQUIPMENT, FIXTURES AND APPURTENANCES INSTALLED UNDER THIS AGREEMENT, AND (F) THE FABRICATION, REPLACEMENT, REPAIR AND SERVICING OF LANDSCAPING AND IRRIGATION SYSTEMS. OPERATION OF HAND-HELD GAS, AIR, ELECTRIC, OR SELF-POWERED TOOLS AND EQUIPMENT USED IN THE PERFORMANCE OF LANDSCAPE AND IRRIGATION WORK IN CONNECTION WITH ARCHITECTURAL HORTICULTURE; CHOKE-SETTING, SIGNALING, AND RIGGING FOR EQUIPMENT OPERATORS ON JOB-SITE IN THE PERFORMANCE OF SUCH LANDSCAPING AND IRRIGATION WORK; CONCRETE WORK (WET OR DRY) PERFORMED IN CONNECTION WITH SUCH LANDSCAPING AND IRRIGATION WORK. THIS WORK SHALL ALSO INCLUDE THE SETTING OF ROCK, STONE, OR RIPRAP IN CONNECTION WITH SUCH LANDSCAPE, WATERSCAPE, ROCKSCAPE, AND IRRIGATION WORK; GRUBBING, PICK AND SHOVEL EXCAVATION, AND HAND ROLLING OR TAMPING IN CONNECTION WITH THE PERFORMANCE OF SUCH LANDSCAPING AND IRRIGATION WORK; SPRIGGING, HANDSEEDING, AND PLANTING OF TREES, SHRUBS, GROUND COVERS, AND OTHER PLANTINGS AND THE PERFORMANCE OF ALL TYPES OF GARDENING AND HORTICULTURAL WORK RELATING TO SAID PLANTING; OPERATION OF FLAT BED TRUCKS (UP TO AND INCLUDING 2 1/2 TONS).:\$ 28.40 17.15

LANDSCAPE & IRRIGATION LABORERS, GROUP 3:
 MAINTENANCE OF TREES, SHRUBS, GROUND COVERS, LAWNS AND OTHER PLANTED AREAS, INCLUDING THE REPLANTING OF TREES, SHRUBS, GROUND COVERS, AND OTHER PLANTINGS THAT DID NOT "TAKE" OR WHICH ARE DAMAGED; PROVIDED, HOWEVER, THAT RE-PLANTING THAT REQUIRES THE USE OF EQUIPMENT, MACHINERY, OR POWER TOOLS SHALL BE PAID FOR AT THE RATE OF PAY SPECIFIED UNDER LANDSCAPE AND IRRIGATION LABORER, GROUP 1; RAKING, MOWING, TRIMMING, AND RUNING, INCLUDING THE USE OF "WEED EATERS", HEDGE TRIMMERS, VACUUMS, BLOWERS, AND OTHER HAND-HELD GAS, AIR, ELECTRIC, OR SELF-POWERED TOOLS, AND THE OPERATION OF LAWN MOWERS (NOTE: THE OPERATION OF SIT-DOWN TYPE AND "GANG" MOWERS SHALL BE PAID FOR AT THE RATE OF PAY SPECIFIED UNDER LANDSCAPE & IRRIGATION LABORER, GROUP 2); GUYWIRING, STAKING, PROPPING, AND SUPPORTING TREES; FERTILIZING, CHEMICAL SPRAYING USING SPRAY EQUIPMENT WITH LESS THAN 200 GALLON CAPACITY, MAINTAINING IRRIGATION AND SPRINKLER SYSTEMS, INCLUDING THE STAKING, CLAMPING, AND ADJUSTMENT OF RISERS, AND THE ADJUSTMENT AND/OR REPLACEMENT OF SPRINKLER HEADS, (NOTE: THE CLEANING AND GLUING OF PIPE AND FITTINGS SHALL BE PAID FOR AT THE RATE OF PAY SPECIFIED UNDER LANDSCAPE & IRRIGATION LABORER(GROUP 1); WATERING BY HAND OR SPRINKLER SYSTEM AND THE PERFORMANCE OF OTHER TYPES OF GARDENING, YARDMAN, AND HORTICULTURAL-RELATED WORK.....\$ 23.00 17.15

LANDSCAPE & IRRIGATION LABORERS, GROUP 2: LAYOUT OF IRRIGATION AND OTHER NON-POTABLE IRRIGATION WATER SYSTEMS AND THE LAYOUT OF DRINKING FOUNTAINS AND OTHER POTABLE IRRIGATION WATER SYSTEMS IN CONNECTION WITH SUCH LANDSCAPING AND IRRIGATION WORK. THIS INCLUDES THE LAYOUT OF ALL HEADS, RISERS, VALVES, VALVE BOXES, VACUUM BREAKERS, LOW VOLTAGE ELECTRICAL LINES, HYDRAULIC AND ELECTRICAL CONTROLLERS, AND METALLIC (COPPERS, BRASS, GALVANIZED, OR SIMILAR) PIPE, AS WELL AS PVC OR OTHER PLASTIC PIPE. THIS WORK ALSO INCLUDES THE READING AND INTERPRETATION OF PLANS AND SPECIFICATIONS IN CONNECTION WITH THE LAYOUT OF LANDSCAPING, ROCKSCAPE, WATERSCAPE, AND IRRIGATION WORK; OPERATION OF HYDRO-MULCHING MACHINES (SPRAYMAN AND DRIVER), DRILLERS, TRENCHERS (RIDING

TYPE, DAVIS T-66, AND SIMILAR) AND FORK LIFTS USED IN CONNECTION WITH THE PERFORMANCE OF SUCH LANDSCAPING AND IRRIGATION WORK; TREE CLIMBERS AND CHAIN SAW TREE TRIMMERS, SPORADIC OPERATION (WHEN USED IN CONNECTION WITH LANDSCAPING, ROCKSCAPE, WATERSCAPE, AND IRRIGATION WORK) OF SKID-STEER LOADERS (BOBCAT AND SIMILAR), CRANES (BANTAM, GROVE, AND SIMILAR), HOPTOS, BACKHOES, LOADERS, ROLLERS, AND DOZERS (CASE, JOHN DEERE, AND SIMILAR), WATER TRUCKS, TRUCKS REQUIRING A STATE OF HAWAII PUBLIC UTILITIES COMMISSION TYPE 5 AND/OR TYPE 7 LICENSE, SIT-DOWN TYPE AND ""GANG"" MOWERS, AND OTHER SELF-PROPELLED, SIT-DOWN OPERATED MACHINES NOT LISTED UNDER LANDSCAPE & IRRIGATION MAINTENANCE LABORER; CHEMICAL SPRAYING USING SELF-PROPELLED POWER SPRAYING EQUIPMENT (200 GALLON CAPACITY OR MORE).....	\$ 29.40	17.15
LANDSCAPE & IRRIGATION LABORERS: GROUP 2 LAYOUT OF IRRIGATION AND OTHER NON-POTABLE IRRIGATION WATER SYSTEMS AND THE LAYOUT OF DRINKING FOUNTAINS AND OTHER POTABLE IRRIGATION WATER SYSTEMS IN CONNECTION WITH SUCH LANDSCAPING AND IRRIGATION WORK. THIS INCLUDES THE LAYOUT OF ALL HEADS, RISERS, VALVES, VALVE BOXES, VACUUM BREAKERS, LOW VOLTAGE ELECTRICAL LINES, HYDRAULIC AND ELECTRICAL CONTROLLERS, AND METALLIC (COPPERS, BRASS, GALVANIZED, OR SIMILAR) PIPE, AS WELL AS PVC OR OTHER PLASTIC PIPE. THIS WORK ALSO INCLUDES THE READING AND INTERPRETATION OF PLANS AND SPECIFICATIONS IN CONNECTION WITH THE LAYOUT OF LANDSCAPING, ROCKSCAPE, WATERSCAPE, AND IRRIGATION WORK; OPERATION OF HYDRO-MULCHING MACHINES (SPRAYMAN AND DRIVER), DRILLERS, TRENCHERS (RIDING TYPE, DAVIS T-66, AND SIMILAR) AND FORK LIFTS USED IN CONNECTION WITH THE PERFORMANCE OF SUCH LANDSCAPING AND IRRIGATION WORK; TREE CLIMBERS AND CHAIN SAW TREE TRIMMERS, SPORADIC OPERATION (WHEN USED IN CONNECTION WITH LANDSCAPING, ROCKSCAPE, WATERSCAPE, AND IRRIGATION WORK) OF SKID-STEER LOADERS (BOBCAT AND SIMILAR), CRANES (BANTAM, GROVE, AND SIMILAR), HOPTOS, BACKHOES, LOADERS, ROLLERS, AND DOZERS (CASE, JOHN DEERE, AND SIMILAR), WATER TRUCKS, TRUCKS REQUIRING A STATE OF HAWAII PUBLIC UTILITIES COMMISSION TYPE 5 AND/OR TYPE 7 LICENSE, SIT-DOWN TYPE AND ""GANG"" MOWERS, AND OTHER SELF-PROPELLED, SIT-DOWN OPERATED MACHINES NOT LISTED UNDER LANDSCAPE & IRRIGATION MAINTENANCE LABORER; CHEMICAL SPRAYING USING SELF-PROPELLED POWER SPRAYING EQUIPMENT (200 GALLON CAPACITY OR MORE).....		
	\$ 29.40	17.15

LAB00368-003 09/02/2024

	Rates	Fringes
UNDERGROUND LABORER, GROUP 1: WATCHMEN; CHANGE HOUSE ATTENDANT.....	\$ 42.35	25.91
UNDERGROUND LABORER, GROUP 2: SWAMPER; BRAKEMAN; BULL GANG-MUCKERS, TRACKMEN; DUMPMEN (ANY METHOD); CONCRETE CREW (INCLUDES RODDING AND SPREADING); GROUT CREW; REBOUNDMEN.....	\$ 43.85	25.91
UNDERGROUND LABORER, GROUP 3: CHUCKTENDERS AND CABLETENDERS; POWDERMAN (PRIME HOUSE); VIBRATORMAN, PAVEMENT BREAKERS.....	\$ 44.35	25.91
UNDERGROUND LABORER, GROUP 4: MINERS - TUNNEL (INCLUDING TOP AND BOTTOM MAN ON SHAFT AND RAISE WORK); TIMBERMAN, RETIMBERMAN (WOOD OR STEEL OR SUBSTITUTE MATERIALS THEREOF); BLASTERS, DRILLERS, POWDERMAN (IN HEADING); MICROTUNNEL LABORER; HEADMAN; CHERRY PICKERMAN (WHERE CAR IS LIFTED); NIPPER; GROUT GUNMEN; GROUT PUMPMAN & POTMAN; GUNIT, SHOTCRETE GUNMEN & POTMEN; CONCRETE FINISHER (IN TUNNEL); CONCRETE SCREED MAN; BIT GRINDER; STEEL FORM RAISERS & SETTERS; HIGH		

PRESSURE NOZZLEMAN; NOZZLEMAN (ON SLICK LINE); SANDBLASTER-POTMAN (COMBINATION WORK ASSIGNMENT INTERCHANGEABLE); TUGGER.....	\$ 45.35	25.91
UNDERGROUND LABORER, GROUP 5: SHAFT WORK & RAISE (BELOW ACTUAL OR EXCAVATED GROUND LEVEL); DIAMOND DRILLER; GUNITE OR SHOTCRETE NOZZLEMAN; RODMAN; GROUNDMAN.....	\$ 45.70	25.91
UNDERGROUND LABORER, GROUP 6: SHIFTER.....	\$ 45.95	25.91
UNDERGROUND LABORER, GROUP 7: SHIFTER (SHAFT WORK & RAISER).....	\$ 46.40	25.91

PAIN1791-001 07/01/2025

	Rates	Fringes
PAINTERS: BRUSH.....	\$ 44.05	30.05
PAINTERS: SANDBLASTER; SPRAY.....	\$ 44.05	30.05

PAIN1889-001 07/01/2025

	Rates	Fringes
GLAZIERS.....	\$ 48.50	40.20

PAIN1926-001 03/02/2025

	Rates	Fringes
SOFT FLOOR LAYERS.....	\$ 43.27	35.18

PAIN1944-001 01/01/2025

	Rates	Fringes
TAPER.....	\$ 47.36	32.00

PLAS0630-001 09/04/2023

	Rates	Fringes
PLASTERER.....	\$ 46.12	34.53

PLAS0630-002 09/04/2023

	Rates	Fringes
CEMENT MASONS.....	\$ 44.12	33.63
CEMENT MASONS: TROWEL MACHINE OPERATORS.....	\$ 44.27	33.63

PLUM0675-001 07/06/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER & SPRINKLER FITTER.....	\$ 53.83	33.19

ROOF0221-001 11/06/2022

	Rates	Fringes
ROOFERS (INCLUDING BUILT UP, COMPOSITION AND SINGLE PLY).....	\$ 43.15	21.21

SHEE0293-001 03/02/2025

	Rates	Fringes
SHEET METAL WORKER.....	\$ 50.16	33.32

SUHI1997-002 09/15/1997

	Rates	Fringes
DRAPERY INSTALLER.....	\$ 13.60	1.20
FENCE ERECTOR (CHAIN LINK FENCE).....	\$ 9.33	1.65

LABORERS: LABORER I: AIR BLASTING RUN BY ELECTRIC OR PNEUMATIC COMPRESSOR; ASPHALT
LABORER, IRONER, RAKER, LUTEMAN, & HANDROLLER, AND ALL TYPES OF ASPHALT SPREADER
BOXES; ASPHALT SHOVELER; ASSEMBLY & INSTALLATION OF MULTIPLATES, LINER PLATES, RINGS,
MESH, MATS; BATCHING PLANT (PORTABLE & TEMPORARY); BORING MACHINE OPERATOR
(UNDER STREETS & SIDEWALKS); BUGGYMOBILE; BURNING & WELDING; CHAINSAW, FALLER,
LOGLOADER, & BUCKER; COMPACTORS (JACKSON JUMPING JACK & SIMILAR); CONCRETE BUCKET

DUMPMAN; CONCRETE CHIPPING; CONCRETE CHUTEMAN/HOSEMAN (POURING CONCRETE) (THE HANDLING OF THE CHUTE FROM READY-MIX TRUCKS FOR SUCH JOBS AS WALLS, SLABS, DECKS, FLOORS, FOUNDATIONS, FOOTINGS, CURBS, GUTTERS, & SIDEWALKS); CONCRETE CORE CUTTER (WALLS, FLOORS, & CEILING); CONCRETE GRINDING OR SANDING; CONCRETE: HOOKING ON, SIGNALING, DUMPING OF CONCRETE FOR TREME WORK OVER WATER ON CAISSONS, PILINGS, ABUTMENTS, ETC.; CONCRETE: MIXING, HANDLING, CONVEYING, POURING, VIBRATING, OTHERWISE PLACING OF CONCRETE OR AGGREGATES OR BY ANY OTHER PROCESS; CONCRETE: OPERATION OF MOTORIZED WHEELBARROWS OR BUGGIES OR MACHINES OF SIMILAR CHARACTER, WHETHER RUN BY GAS, DIESEL, OR ELECTRIC POWER; CONCRETE PLACEMENT MACHINE OPERATOR: OPERATION OF SOMERO HAMMERHEAD, COPPERHEADS, OR SIMILAR MACHINES; CONCRETE PUMP MACHINE (LAYING, COUPLING, UNCOUPLING OF ALL CONNECTIONS & CLEANING OF EQUIPMENT); CONCRETE SHOVELERS/LABORERS (WET OR DRY); CONCRETE SCREEDING FOR ROUGH STRIKE-OFF: RODDING OR STRIKING-OFF, BY HAND OR MECHANICAL MEANS PRIOR TO FINISHING; CONCRETE VIBRATOR OPERATOR; CORING HOLES: WALLS, FOOTINGS, PIERS OR OTHER OBSTRUCTIONS FOR PASSAGE OF PIPES OR CONDUITS FOR ANY PURPOSE & THE POURING OF CONCRETE TO SECURE THE HOLE; CRIBBERS, SHORER, LAGGING, SHEETING, & TRENCH JACKING & BRACING, HAND-GUIDED LAGGING HAMMER WHALING BRACING; CURBING (CONCRETE & ASPHALT); CURING OF CONCRETE (IMPERVIOUS MEMBRANE & FORM OILER) MORTAR & OTHER MATERIALS BY ANY MODE OR METHOD; CUT GRANITE CURB SETTER (SETTING, LEVELING & GROUTING OF ALL PRECAST CONCRETE OR STONE CURBS); CUTTING & BURNING TORCH (DEMOLITION); DRI PAK-IT MACHINE; ENVIRONMENTAL ABATEMENT: REMOVAL OF ASBESTOS, LEAD, & BIO HAZARDOUS MATERIALS (EPA &/OR OSHA CERTIFIED); FALLING, BUCKING, YARDING, LOADING OR BURNING OF ALL TREES OR TIMBER ON CONSTRUCTION SITE; FORKLIFT (9 FT. & UNDER); GAS, PNEUMATIC, & ELECTRIC TOOLS; GRATING & GRILL WORK FOR DRAINS OR OTHER PURPOSES; GREEN CUTTER OF CONCRETE OR AGGREGATE IN ANY FORM, BY HAND, MECHANICAL MEANS, GRINDSTONE OR AIR &/OR WATER; GROUT: SPREADING FOR ANY PURPOSE; GUINEA CHASER (GRADE CHECKER) FOR GENERAL UTILITY TRENCHES, SITEWORK, & EXCAVATION; HEADERBOARD MAN (ASPHALT OR CONCRETE); HEAT WELDER OF PLASTIC (LABORERS' AGC CERTIFIED WORKERS) (WHEN WORK INVOLVES WATERPROOFING FOR WATERPONDS, ARTIFICIAL LAKES & RESERVOIR) HEAT WELDING FOR SEWER PIPES & FUSION OF HDPE PIPES; HEAVY HIGHWAY LABORER (RIGGING, SIGNALING, HANDLING, & INSTALLATION OF PRE-CAST CATCH BASINS, MANHOLES, CURBS & GUTTERS); HIGH PRESSURE NOZZLEMAN - HYDRAULIC MONITOR (OVER 100# PRESSURE); JACKHAMMER OPERATOR; JACKING OF SLIP FORMS: ALL SEMI & UNSKILLED WORK CONNECTED THEREWITHIN; LAYING OF ALL MULTI-CELL CONDUIT OR MULTI-PURPOSE PIPE; MAGNESITE & MASTIC WORKERS (WET OR DRY) (INCLUDING MIXER OPERATOR); MORTAR MAN; MORTAR MIXER (BLOCK, BRICK, MASONRY, & PLASTERING); NOZZLEMAN (SANDBLASTING &/OR WATER BLASTING): HANDLING, PLACING & OPERATION OF NOZZLE; OPERATION, MANUAL OR HYDRAULIC JACKING OF SHIELDS & THE USE OF SUCH OTHER MECHANICAL EQUIPMENT AS MAY BE NECESSARY; PAVEMENT BREAKERS; PAVING, CURBING & SURFACING OF STREETS, WAYS, COURTS, UNDER & OVERPASSES, BRIDGES, APPROACHES, SLOPE WALLS, & ALL OTHER LABOR CONNECTED THEREWITH; PILECUTTERS; PIPE ACCESSMENT IN PLACE, BOLTING & LINING UP OF SECTIONAL METAL OR OTHER PIPE INCLUDING CORRUGATED PIPE; PIPELAYER PERFORMING ALL SERVICES IN THE LAYING & INSTALLATION OF PIPE FROM THE POINT OF RECEIVING PIPE IN THE DITCH UNTIL COMPLETION OF OPERATION, INCLUDING ANY & ALL FORMS OF TUBULAR MATERIAL, WHETHER PIPE, HDPE, METALLIC OR NON-METALLIC, CONDUIT, & ANY OTHER STATIONARY-TYPE OF TUBULAR DEVICE USED FOR CONVEYING OF ANY SUBSTANCE OR ELEMENT, WHETHER WATER, SEWAGE, SOLID, GAS, AIR, OR OTHER PRODUCT WHATSOEVER & WITHOUT REGARD TO THE NATURE OF MATERIAL FROM WHICH TUBULAR MATERIAL IS FABRICATED; NO-JOINT PIPE & STRIPPING OF SAME, PIPEWRAPPER, CAULKER, BANDER, KETTLEMEN, & MEN APPLYING ASPHALT, LAYKOLD, TREATING CREOSOTE & SIMILAR-TYPE MATERIALS (6-INCH) PIPE & OVER); PIPING: RESURFACING & PAVING OF ALL DITCHES IN PREPARATION FOR LAYING OF ALL PIPES; PIPE LAYING OF LATERAL SEWER PIPE FROM MAIN OR SIDE SEWER TO BUILDINGS OR STRUCTURE (EXCEPT CONTACTOR MAY DIRECT WORK BE DONE UNDER PROPER SUPERVISION); PIPE LAYING, LEVELING & MARKING OF THE JOINT USED FOR MAIN OR SIDE SEWERS & STORM SEWERS; LAYING OF ALL CLAY, TERRA COTTA, IRONSTONE, VITRIFIED CONCRETE, HDPE OR OTHER PIPE FOR DRAINAGE; PLACING & SETTING OF WATER MAINS, GAS MAINS & ALL PIPE INCLUDING REMOVAL OF SKIDS; PLASTER MORTAR MIXER/PUMP; PNEUMATIC IMPACT WRENCH; PORTABLE SAWMILL OPERATION: CHOKER SETTERS, OFF BEARERS, & LUMBER HANDLERS CONNECTED WITH CLEARING; POSTHOLE DIGGER (HAND HELD, GAS, AIR & ELECTRIC); POWDERMAN'S TENDER; POWER BROOM SWEEPERS (SMALL); PREPARATION & COMPACTION OF ROADBEDS FOR RAILROAD TRACK LAYING, HIGHWAY CONSTRUCTION, & THE PREPARATION OF TRENCHES, FOOTINGS, ETC., FOR CROSS-COUNTRY TRANSMISSION BY PIPELINES, ELECTRICAL TRANSMISSION OR UNDERGROUND LINES OR CABLES (BY MECHANICAL MEANS); RAISING OF STRUCTURE BY MANUAL OR HYDRAULIC JACKS OR OTHER METHODS & RESETTING OF STRUCTURE IN NEW LOCATIONS, INCLUDING ALL CONCRETE WORK; RAMMING OR COMPACTION; RIGGING IN CONNECTION WITH LABORERS' WORK (EXCEPT DEMOLITION), SIGNALING (INCLUDING THE USE OF WALKIE TALKIE) CHOKE SETTING, TAG LINE USAGE; TAGGING & SIGNALING OF BUILDING MATERIALS INTO HIGH RISE UNITS; RIPRAP, STONEPAVER, & ROCK SLINGER (INCLUDES PLACEMENT OF STACKED CONCRETE, WET OR DRY & LOADING, UNLOADING, SIGNALING, SLINGING & SETTING OF OTHER SIMILAR MATERIALS); ROTARY SCARIFIER (INCLUDING MULTIPLE HEAD CONCRETE CHIPPING SCARIFIER); SALAMANDER HEATER, DRYING OF PLASTER, CONCRETE MORTAR OR OTHER AGGREGATE; SCAFFOLD ERECTOR LEADMAN; SCAFFOLDS: (SWING & HANGING) INCLUDING MAINTENANCE THEREOF; SCALER; SEPTIC TANK/CESSPOOL & DRAIN FIELDS DIGGER & INSTALLER; SHREDDER/CHIPPER (TREE

BRANCHES, BRUSH, ETC.); STRIPPING & SETTING FORMS; STRIPPING OF FORMS: OTHER THAN PANEL FORMS WHICH ARE TO BE RE-USED IN THEIR ORIGINAL FORM, & STRIPPING OF FORMS ON ALL FLAT ARCH WORK; TAMPERS (BARKO, WACKER, & SIMILAR TYPE); TANK SCALER & CLEANERS; TARMAN; TREE CLIMBERS & TRIMMERS; TRENCHER (INCLUDES HAND-HELD, DAVIS T-66 & SIMILAR TYPE); TRUCKS (FLATBED UP TO & INCLUDING 2 1/2 TONS WHEN USED IN CONNECTION WITH ON-SITE LABORERS' WORK; TRUCKS (REFUSE & GARBAGE DISPOSAL) (FROM JOB SITE TO DUMP); VIBRA-SCREED (BULL FLOAT IN CONNECTION WITH LABORERS' WORK); WELL POINTS, INSTALLATION OF OR ANY OTHER DEWATERING SYSTEM.

LABORERS: LABORER II: ASPHALT PLANT LABORER; BORING MACHINE TENDER; BRIDGE LABORER; BURNING OF ALL DEBRIS (CRATES, BOXES, PACKAGING WASTE MATERIALS); CHAINMAN, RODMEN, & GRADE MARKERS; CLEANING, CLEARING, GRADING &/OR REMOVAL FOR STREETS, HIGHWAYS, ROADWAYS, APRONS, RUNWAYS, SIDEWALKS, PARKING AREAS, AIRPORTS, APPROACHES, & OTHER SIMILAR INSTALLATIONS; CLEANING OR RECONDITIONING OF STREETS, WAYS, SEWERS & WATERLINES, ALL MAINTENANCE WORK & WORK OF AN UNSKILLED & SEMI-SKILLED NATURE; CONCRETE BUCKET TENDER (GROUNDMAN) HOOKING & UNHOOKING OF BUCKET; CONCRETE FORMS; MOVING, CLEANING, OILING & CARRYING TO THE NEXT POINT OF ERECTION OF ALL FORMS; CONCRETE PRODUCTS PLANT LABORERS; CONVEYOR TENDER (CONVEYING OF BUILDING MATERIALS); CRUSHED STONE YARDS & GRAVEL & SAND PIT LABORERS & ALL OTHER SIMILAR PLANTS; DEMOLITION, WRECKING & SALVAGE LABORERS: WRECKING & DISMANTLING OF BUILDINGS & ALL STRUCTURES, WITH USE OF CUTTING OR WRECKING TOOLS, BREAKING AWAY, CLEANING & REMOVAL OF ALL FIXTURES, ALL HOOKING, UNHOOKING, SIGNALING OF MATERIALS FOR SALVAGE OR SCRAP REMOVED BY CRANE OR DERRICK; DIGGING UNDER STREETS, ROADWAYS, APRONS OR OTHER PAVED SURFACES; DRILLER'S TENDER; CHUCK TENDER, OUTSIDE

NIPPER; DRY-PACKING OF CONCRETE (PLUGGING & FILLING OF SHE-BOLT HOLES); FENCE &/OR GUARDRAIL ERECTOR: DISMANTLING &/OR RE-INSTALLATION OF ALL FENCE; FINEGRADER; FIREWATCHER; FLAGMAN (CONING, PREPARING, STABLISHING & REMOVING PORTABLE ROADWAY BARRICADE DEVICES); SIGNAL MEN ON ALL CONSTRUCTION WORK DEFINED HEREIN, INCLUDING TRAFFIC CONTROL SIGNAL MEN AT CONSTRUCTION SITE; GENERAL EXCAVATION; BACKFILLING, GRADING & ALL OTHER LABOR CONNECTED THEREWITH; DIGGING OF TRENCHES, DITCHES & MANHOLES & THE LEVELING, GRADING & OTHER PREPARATION PRIOR TO LAYING PIPE OR CONDUIT FOR ANY PURPOSE; EXCAVATIONS & FOUNDATIONS FOR BUILDINGS, PIERS, FOUNDATIONS & HOLES, & ALL OTHER CONSTRUCTION. PREPARATION OF STREET WAYS & BRIDGES; GENERAL LABORER: CLEANING & CLEARING OF ALL DEBRIS & SURPLUS MATERIAL. CLEAN-UP OF RIGHT-OF-WAY. CLEARING & SLASHING OF BRUSH OR TREES BY HAND OR MECHANICAL CUTTING. GENERAL CLEAN UP: SWEEPING, CLEANING, WASH-DOWN, WIPING OF CONSTRUCTION FACILITY & EQUIPMENT (OTHER THAN ""LIGHT CLEAN UP (JANITORIAL) LABORER. GARBAGE & DEBRIS HANDLERS & CLEANERS. APPLIANCE HANDLING (JOB SITE) (AFTER DELIVERY UNLADING IN STORAGE AREA); GROUND & SOIL TREATMENT WORK (PEST CONTROL); GUNITE/SHOTCRETE OPERATOR TENDER; JUNK YARD LABORERS (SAME AS SALVAGE YARD); LASER BEAM ""TARGET MAN"" IN CONNECTION WITH LABORERS' WORK; LAYOUT PERSON FOR PLASTIC (WHEN WORK INVOLVES WATERPROOFING FOR WATERPOND, ARTIFICIAL LAKES & RESERVOIRS); LIMBERS, BRUSH LOADERS, & PILERS; LOADING, UNLOADING, CARRYING, DISTRIBUTING & HANDLING OF ALL RODS & MATERIAL FOR USE IN REINFORCING CONCRETE CONSTRUCTION (EXCEPT WHEN A DERRICK OR OUTRIGGER OPERATED BY OTHER THAN HAND POWER IS USED); LOADING, UNLOADING, SORTING, STOCKPILING, HANDLING & DISTRIBUTION OF WATER MAINS, GAS MAINS & ALL PIPES; LOADING & UNLOADING OF ALL MATERIALS, FIXTURES, FURNISHINGS & APPLIANCES FROM POINT OF DELIVERY TO STOCKPILE TO POINT OF INSTALLATION; HOOKING & SIGNALING FROM TRUCK, CONVEYANCE OR STOCKPILE; MATERIAL YARD LABORERS; PIPELAYER TENDER; PIPEWRAPPER, CAULKER, BANDER, KETTLEMEN, & MEN APPLYING ASPHALT, LAYKOLD, CREOSOTE, & SIMILAR-TYPE MATERIALS (PIPE UNDER 6 INCHES); PLASTERER LABORER; PREPARATION, CONSTRUCTION & MAINTENANCE OF ROADBEDS & SUB-GRADE FOR ALL PAVING, INCLUDING EXCAVATION, DUMPING, & SPREADING OF SUB-GRADE MATERIAL; PRESTRESSED OR PRECAST CONCRETE SLABS, WALLS, OR SECTIONS: ALL LOADING, UNLOADING, STOCKPILING, HOOKING ON OF SUCH SLABS, WALLS OR SECTIONS; QUARRY LABORERS; RAILROAD, STREETCAR, & RAIL TRANSIT MAINTENANCE & REPAIR; ROUSTABOUT; RUBBISH TRUCKS IN CONNECTION WITH BUILDING CONSTRUCTION PROJECTS (EXCLUDING CLEARING, GRUBBING, & EXCAVATING); SALVAGE YARD: ALL WORK CONNECTED WITH CUTTING, CLEANING, STORING, STOCKPILING OR HANDLING OF MATERIALS, ALL CLEANUP, REMOVAL OF DEBRIS, BURNING, BACK-FILLING & LANDSCAPING OF THE SITE; SANDBLASTING TENDER (POT TENDER): HOSES & POTS OR MARKERS; SCAFFOLDS: ERECTION, PLANKING & REMOVAL OF ALL SCAFFOLDS USED FOR SUPPORT FOR LATHERS, PLASTERS, BRICK LAYERS, MASONS, & OTHER CONSTRUCTION TRADES CRAFTS; SCAFFOLDS: (SPECIALLY DESIGNED BY CARPENTERS) LABORERS SHALL TEND SAID CARPENTER ON ERECTION & DISMANTLING THEREOF, PREPARATION FOR FOUNDATION OR MUDSILLS, MAINTENANCE; SCRAPING OF FLOORS; SCREEDS: HANDLING OF ALL SCREEDS TO BE REUSED; HANDLING, DISMANTLING & CONVEYANCE OF SCREEDS; SETTING, LEVELING & SECURING OR BRACING OF METAL OR OTHER ROAD FORMS & EXPANSION JOINTS; SHEETING PILING/TRENCH SHORING (HANDLING & PLACING OF SKIP SHEET OR WOOD PLANK TRENCH SHORING); SHIP SCALERS; SHIPWRIGHT TENDER; SIGN ERECTOR (SUBDIVISION TRAFFIC, REGULATORY, & STREET-NAME SIGNS); SLOPER; SLURRY SEAL CREWS (MIXER OPERATOR, APPLICATOR, SQUEEGEE MAN, SHUTTLE MAN, TOP MAN); SNAPPING OF WALL TIES & REMOVAL OF TIE RODS; SOIL TEST OPERATIONS OF SEMI & UNSKILLED LABOR SUCH AS FILLING SAND

BAGS; STRIPER (ASPHALT, CONCRETE OR OTHER PAVED SURFACES); TOOL ROOM ATTENDANT (JOB SITE); TRAFFIC DELINEATING DEVICE APPLICATOR; UNDERPINNING, LAGGING, BRACING, PROPPING & SHORING, LOADING, SIGNALING, RIGHT-OF-WAY CLEARANCE ALONG THE ROUTE OF MOVEMENT, THE CLEARANCE OF NEW SITE, EXCAVATION OF FOUNDATION WHEN MOVING A HOUSE OR STRUCTURE FROM OLD SITE TO NEW SITE; UTILITIES EMPLOYEES; WATER MAN; WATERSCAPE/HARDSCAPE LABORERS; WIRE MESH PULLING (ALL CONCRETE POURING OPERATIONS); WRECKING, STRIPPING, DISMANTLING & HANDLING CONCRETE FORMS AN FALSE WORK.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than **⬢SU⬢**, **⬢UAVG⬢**, **⬢SA⬢**, or **⬢SC⬢** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the

example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ♦SU♦ identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

♦SU♦ wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ♦SA♦ identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ♦SA♦ identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to

davisbaconinfo@dol.gov or by mail to:
Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

P R O P O S A L

6/02/98

**PROPOSAL TO THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION**

PROJECT: KAUMUALI'I HIGHWAY
DRAINAGE IMPROVEMENTS
VICINITY OF OMAO STREAM BRIDGE
DISTRICT OF KOLOA
ISLAND OF KAUAI

**FEDERAL-AID
PROJECT NO.:** ER-27(008)

COMPLETION TIME: Two Hundred Eighty (280) Working days from the
Start Work Date from the Department.

DBE PROJECT GOAL: None specified

DESIGN PROJECT MANAGER:

NAME: Jeff Aguinaldo
ADDRESS: 1720 Haleukana Street, Lihue, HI 96766
PHONE NO.: (808) 241-3018
EMAIL: jeff.j.aguinaldo@hawaii.gov
FAX NO.: (808) 241-3011

ELECTRONIC SUBMITTAL: Bidders shall submit and upload the complete proposal to HlePRO prior to the bid opening date and time. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. See SPECIAL PROVISIONS 102.09 DELIVERY OF PROPOSALS for complete details. FAILURE TO UPLOAD THE COMPLETE PROPOSAL TO HlePRO SHALL BE GROUNDS FOR REJECTION OF THE BID.

Director of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

The undersigned Bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.
2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two years.
3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e., an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.
4. It will not maintain for its employees any segregated facilities at any of its establishments.
5. Does not and will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained.

The undersigned Bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within 10 days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 1032D-323, Hawaii Revised Statutes.
2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.

3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.
4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.
5. Unless amended by Special Provision, agrees to begin work within 10 working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.
6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.
7. The undersigned Bidder further agrees to the following: Pursuant to HRS §103D-405(d), any contractor (including consultants) paid for services to develop or prepare specifications or work statements shall be precluded from submitting an offer or receiving a contract for that particular solicitation. This includes the preparation of reports relied upon by HDOT in the development of the project scope.

The Bidder acknowledges receipt of and certifies that it has completely examined the following listed items: Hawaii Standard Specifications for Road and Bridge Construction, 2005, and/or the General Provisions for Construction Projects for AIR and WATER Transportation Facilities Division dated 2016, as applicable, the Notice to Bidders, Special Provisions, Proposal, Contract, Bond Forms, and Project Plans.

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

_____ Surety Bid Bond (Use standard form),

_____ Cash,

_____ Cashier's Check,

_____ Certified Check, or

_____.
(Fill in other acceptable security.)

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

Addendum No. 1 _____ Addendum No. 3 _____

Addendum No. 2 _____ Addendum No. 4 _____

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

SUBCONTRACTOR LISTING
(Attach additional sheets if necessary.)

	NAME OF FIRM	NATURE OF WORK
SUBCONTRACTOR:		
1.	_____	_____
	1a ¹ . _____	_____
2.	_____	_____
	2a. _____	_____
3.	_____	_____
	3a. _____	_____
4.	_____	_____
	4a. _____	_____
5.	_____	_____
	5a. _____	_____
6.	_____	_____
	6a. _____	_____
7.	_____	_____
	7a. _____	_____

NOTES:

The Name of Firm and Nature of Work shall be indicated for all listed firms. The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Sub- or Joint Contractor.

For each listed firm, the Bidder declares the respective firm is a Sub- or Joint Contractor and subject to evaluation as a Sub- or Joint Contractor.

¹ Second tier subcontractors

JOINT CONTRACTOR LISTING
(Attach additional sheets if necessary.)

	NAME OF FIRM	NATURE OF WORK
JOINT CONTRACTOR:		
1.	_____	_____
	1a ¹ . _____	_____
2.	_____	_____
	2a. _____	_____
3.	_____	_____
	3a. _____	_____
4.	_____	_____
	4a. _____	_____
5.	_____	_____
	5a. _____	_____
6.	_____	_____
	6a. _____	_____
7.	_____	_____
	7a. _____	_____

NOTES:

The Name of Firm and Nature of Work shall be indicated for all listed firms. The Bidder must adequately and unambiguously disclose the unique nature and scope of the work to be performed by each Sub- or Joint Contractor.

For each listed firm, the Bidder declares the respective firm is a Sub- or Joint Contractor and subject to evaluation as a Sub- or Joint Contractor.

¹ Second tier joint contractors

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

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

Bidder (Company Name)

Authorized Signature

Title

Business Address

Business Telephone

Email

Date

Contact Person (If different from above.)

Phone: _____ Email: _____

NOTE:

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

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

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

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

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
201.0100	Clearing and Grubbing	0.51	AC.	\$ _____	\$ _____
202.0100	Removal of Existing Grated Drain Inlet and Concrete Apron	L.S.	L.S.	L.S.	\$ _____
202.0200	Removal of Existing 24-Inch RCP Drain Pipe	8	L.F.	\$ _____	\$ _____
202.0300	Removal of Existing Asphalt Concrete Pavement	207	S.Y.	\$ _____	\$ _____
202.0400	Removal of Existing 6-Foot High Chain Link Fence	342	L.F.	\$ _____	\$ _____
206.0100	Excavation for 42-Inch RCP Drain Pipe	1,091	C.Y.	\$ _____	\$ _____
206.0200	Excavation and Installation for Stabilization Layer	199	C.Y.	\$ _____	\$ _____
207.0100	Ditch and Channel Excavation	100	C.Y.	\$ _____	\$ _____
209.0100	Installation, Maintenance, Monitoring, and Removal of BMP	L.S.	L.S.	L.S.	\$ _____
209.0200	Additional Water Pollution, Dust, and Erosion Control	F.A.	F.A.	F.A.	\$ <u>25,000.00</u>
280.0100	Shaft Construction	L.S.	L.S.	L.S.	\$ _____
304.0100	Aggregate Base	76	TON	\$ _____	\$ _____
305.0100	Aggregate Subbase	32	TON	\$ _____	\$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
314.0100	CLSM for Fill of Existing 24-Inch RCP Drain Pipe	8	C.Y.	\$ _____	\$ _____
401.0100	HMA Pavement, Mix No. IV	23	TON	\$ _____	\$ _____
503.0100	Concrete for Concrete Apron	14	C.Y.	\$ _____	\$ _____
603.0100	Bed Course Material for 42-Inch RCP Drain Pipe	377	C.Y.	\$ _____	\$ _____
603.0200	42-Inch RCP Drain Pipe, Class V (Open Trench Installation)	389	L.F.	\$ _____	\$ _____
604.0100	Type C Storm Drain Manhole, 13.00 feet to 13.99 feet	1	EA.	\$ _____	\$ _____
604.0200	Type 1211216P Grated Drop Drain Inlet, 5.00 feet to 5.99 feet	3	EA.	\$ _____	\$ _____
604.0300	Type 1211216P Grated Drop Drain Inlet, 11.00 feet to 11.99 feet	1	EA.	\$ _____	\$ _____
604.0400	Standard Concrete Outlet Structure	1	EA.	\$ _____	\$ _____
607.0100	4-Feet, Chain Link Fence	22	L.F.	\$ _____	\$ _____
607.0200	6-Feet, Chain Link Fence	342	L.F.	\$ _____	\$ _____
612.0100	Grouted Rubble Paving	102	C.Y.	\$ _____	\$ _____
616.0100	Temporary Irrigation System	L.S.	L.S.	L.S.	\$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
617.0100	Imported Planting Soil (4" Layer)	99	C.Y.	\$ _____	\$ _____
629.0100	Removal of Existing Pavement Striping and Markings	L.S.	L.S.	L.S.	\$ _____
629.0200	Removal of Temporary Pavement Striping and Markings	L.S.	L.S.	L.S.	\$ _____
629.0300	4-Inch White Pavement Striping (Thermoplastic Extrusion)	960	L.F.	\$ _____	\$ _____
629.0400	4-Inch Double Yellow Pavement Striping (Thermoplastic Extrusion)	840	L.F.	\$ _____	\$ _____
629.0500	Type C Pavement Marker	24	EA.	\$ _____	\$ _____
629.0600	Type D Pavement Marker	170	EA.	\$ _____	\$ _____
636.0100	Additional E-Construction Programs, additional licenses or additional equipment	F.A.	F.A.	F.A.	\$ <u>10,000.00</u>
641.0100	Hydro-mulch Seeding	2,253	S.Y.	\$ _____	\$ _____
645.1000	Traffic Control	L.S.	L.S.	L.S.	\$ _____
645.2000	Additional Police Officers, Additional Traffic Control Devices, And Advertisement	F.A.	F.A.	F.A.	\$ <u>60,000.00</u>
648.0100	Field-Posted Drawings	L.S.	L.S.	L.S.	\$ _____
663.0100	Erosion Control Matting	679	S.Y.	\$ _____	\$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
671.0100	Protection of Endangered Species	F.A.	F.A.	F.A.	\$ <u>100,000.00</u>
672.0100	Microtunneling	L.S.	L.S.	L.S.	\$ _____
684.0100	Construction Instrumentation & Monitoring	L.S.	L.S.	L.S.	\$ _____
694.0100	Portable Concrete Barrier (State Furnished)	F.A.	F.A.	F.A.	\$ <u>50,000.00</u>
694.0200	End Treatment System	F.A.	F.A.	F.A.	\$ <u>120,000.00</u>
699.1000	Mobilization (Not to exceed 6 percent of the sum of all items excluding the bid price of this item)	L.S.	L.S.	L.S.	\$ _____
Total Amount for Comparison of Bids..... \$ _____					

PROPOSAL SCHEDULE NOTES:

1. Bids shall include all Federal, State, County and other applicable taxes and fees.
2. The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest responsible bidder.
3. Bidders shall complete all unit prices and amounts. Failure to do so shall be grounds for rejection of bid.
4. If a discrepancy occurs between unit bid price and the bid price, the unit bid price shall govern.
5. **Bidders shall submit and upload the complete proposal to HlePRO prior to the bid opening date and time. Proposals received after said due date and time shall not be considered. Any additional support documents explicitly designated as confidential and/or proprietary shall be uploaded as a separate file to HlePRO. Bidders shall not include confidential and/or proprietary documents with the proposal. The record of each bidder and respective bid shall be open to public inspection. Original (wet ink, hard copy) proposal documents are not required to be submitted. Contract award shall be based on evaluation of proposals submitted and uploaded to HlePRO.**

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

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

1 **PROPOSAL SCHEDULE**

2
3 The bidder is directed to Subsection 105.16 – Subcontracts.

4
5 The bidder's attention is directed to Sections 696 - Field Office and Project
6 Site Laboratory and 699 - Mobilization for the limitation of the amount bidders are
7 allowed to bid.

8
9 If the bid price for any proposal item having a maximum allowable bid
10 indicated therefore in any of the contract documents is in excess of such a
11 maximum amount, the bid price for such proposal item shall be adjusted to reflect
12 the limitation thereon. The comparison of bids to determine the successful
13 bidder and the amount of contract to be awarded shall be determined after such
14 adjustments are made, and such adjustments shall be binding upon the bidder.

15
16 The bidder is directed to Section 717 – Cullet and Cullet-Made Materials
17 regarding recycling of waste glass.
18
19

SURETY BID BOND

Bond No. _____

KNOW TO ALL BY THESE PRESENTS:

That we, _____
(full name or legal title of offeror)
as Offeror, hereinafter called the Principal, and

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

(State/county entity)
as Owner, hereinafter called Owner, in the penal sum of

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

WHEREAS:

The Principal has submitted an offer for

(project by number and brief description)

NOW, THEREFORE:

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

Signed this _____ day of _____, _____

Name of Principal (Offeror) (Seal)

Signature

Print Name and Title

Name of Surety (Seal)

Signature

Print Name and Title

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HONOLULU, HAWAII

SAMPLE FORMS

Contract

Performance Bond (Surety)

Performance Bond

Labor and Material Payment Bond (Surety)

Labor and Material Payment Bond

Disclosure of Lobbying Activities (Standard Form - LLL and LLL-A)

Statement of Compliance (Form WH-348)

Chapter 104, HRS Compliance Certificate

C O N T R A C T

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

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the
CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish
and pay for all labor and materials necessary for

“«PROJECT_NAME_AND_NO»”,

or such a part thereof as shall be required by the STATE, the total amount of which labor,
materials and construction shall be computed at the unit and/or lump sum prices set forth in the
attached proposal schedule and shall be the sum of «BASIC»----- DOLLARS

(\$«BASIC_NUMERIC») as follows:

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

which shall be provided from the following funds:

Federal Funds.....
State Funds.....
TOTAL AMOUNT.....

all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal and plans for «PROJECT NO ONLY», and any supplements thereto, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within «WORKING DAYS», from the date indicated in the notice to proceed from the STATE, subject, however, to such extensions as may be provided for under the specifications.

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

An additional sum of «EXTRAS»-----DOLLARS (\$«EXTRA NUMERIC») is hereby provided for extra work and shall be provided from the following funds:

Federal Funds.....
 State Funds.....
 Total.....

Where Federal funds are involved, it is covenanted and agreed by and between the parties hereto that the sum of ----«FEDERAL_BASIC»----DOLLARS (\$«FEDERAL_BASIC_NUMERIC») and ----«FEDERAL_EXTRAS»----DOLLARS (\$«FEDERAL_EXTRAS_NUMERIC»), a portion of the contract price and extras, respectively, shall be paid out of the applicable Federal funds, and that this contract shall be construed to be an agreement to pay said sums to the Contractor only out of the aforesaid Federal funds if and when such Federal funds shall be received from the Federal Government, and that this contract shall not be construed to be a general agreement to pay said portions at all events out of any funds other than those which may be so received from the Federal Government; provided, that if the Federal share of the cost of the project is not immediately forthcoming from the Federal Government, the STATE may advance the CONTRACTOR the anticipated Federal reimbursement of the cost of the completed portions of the work from funds which have been appropriated by the STATE for its pro rata share.

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

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

STATE OF HAWAII

Director of Transportation

«CONTRACTOR»

Signature

Print name

Print Title

Date

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

KNOW TO ALL BY THESE PRESENTS:

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

as Contractor, hereinafter called Principal, and _____

(Name and Street Address of Bonding Company)

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

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

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

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

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

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

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

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

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

Signed this _____ day of _____, _____.

(Seal)

Name of Principal (Contractor)

*

Signature

Title

(Seal)

Name of Surety

*

Signature

Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

PERFORMANCE BOND

KNOW ALL BY THESE PRESENTS:

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

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

(State/County entity)

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

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

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

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

Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to _____;

WHEREAS:

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

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

NOW THEREFORE,

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

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

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

Signed and sealed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

* _____
Signature

Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

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

KNOW TO ALL BY THESE PRESENTS:

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

as Contractor, hereinafter called Principal, and _____

_____,
(Name and Street Address of Bonding Company)

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

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

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

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

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

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

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

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

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

Signed this _____ day of _____, _____.

(Seal)

Name of Principal (Contractor)

*

Signature

Title

(Seal)

Name of Surety

*

Signature

Title

*ALL SIGNATURES MUST BE ACKNOWLEDGED
BY A NOTARY PUBLIC

LABOR AND MATERIAL PAYMENT BOND

KNOW ALL BY THESE PRESENTS:

That we, _____
(full legal name and street address of Contractor)
as Contractor, hereinafter called Contractor, is held and firmly bound unto _____
(State/County entity)
its successors and assigns, as Obligee, hereinafter called Obligee, in the amount
_____ DOLLARS (\$ _____),
(Dollar amount of Contract)

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

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

WHEREAS:

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

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

NOW THEREFORE,

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

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

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

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

Signed this _____ day of _____, _____.

(Seal) _____
Name of Contractor

* _____
Signature

Title

*ALL SIGNATURES MUST BE
ACKNOWLEDGED BY A NOTARY PUBLIC

DISCLOSURE OF LOBBYING ACTIVITIES
Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

Approved by
0348-0046

1. Type of Federal Action: ☐ a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance						2. Status of Federal Action: ☐ a. bid/offer/application b. initial award c. post-award						3. Report Type: ☐ a. initial filing b. material change For Material Change Only: year _____ quarter _____ date of last report _____					
4. Name and Address of Reporting Entity: ☐ Prime ☐ Subawardee Tier _____, if known:								5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime									
Congressional District, if known:								Congressional District, if known:									
6. Federal Department/Agency:								7. Federal Program Name/Destination:									
								CFDA Number, if applicable:									
8. Federal Action Number, if known:								9. Award Amount, if known: \$									
10. a. Name and address of Lobbying Entity (if individual, last name, first name, MI):								b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):									
(attach Continuation Sheet(s) SF-LLL-A, if necessary)																	
11. Amount of Payment (check all that apply): \$ _____ ☐ actual ☐ planned								13. Type of Payment (check all that apply): ☐ a. retainer ☐ b. one-time fee ☐ c. commission ☐ d. contingent fee ☐ e. deferred ☐ f. other; specify: _____									
12. Form of Payment (check all that apply): ☐ a. cash ☐ b. in-kind; specify: nature _____ value _____																	
14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employees(s) or Member(s) contacted, for Payment Indicated in Item 11:																	
(attach Continuation Sheet(s) SF-LLL-A, if necessary)																	
15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No																	
16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.										Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____							
Federal Use Only:										Authorized for Local Reproduction Standard Form - LLL							

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal Agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10.
 - (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
 - (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) or Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction (0348-0046), Washington, D.C. 20503.
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DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Approved by
0348-0046

Reporting Entity: _____ Page _____ of _____

STATEMENT OF COMPLIANCE

Date _____

I, _____ do hereby state:

(Name of signatory party) (Title)
(1) That I pay or supervise the payment of the persons employed by _____ on
(Contractor or subcontractor)
the _____; that during the payroll period commencing on the _____ day of _____,
(Building or work)
_____ and ending the _____ day of _____, all persons employed on said project have been paid the
full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said
_____ from the full weekly wages earned by any person and that no deductions have
(Contractor or subcontractor)
been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in
Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948.63
Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 2760, and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that
the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage
determination incorporated into the contract; that the classifications set forth therein for each laborers or mechanic conform with
the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered
with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor,
or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States
Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above—
Referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to
appropriate program for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ Each Laborer or mechanic listed in the above referenced payroll has been paid as indicated on the payroll, an
amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe
benefits as listed in the contract, except as noted in Section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARK	

NAME AND TITLE	SIGNATURE
THE WILFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	

INSTRUCTIONS FOR PREPARATION OF STATEMENT OF COMPLIANCE

This statement of compliance meets needs resulting from the amendment of the Davis-Bacon Act to include fringe benefits provisions. Under this amended law, the contractor is required to pay fringe benefits as predetermined by the Department of Labor, in addition to payment of the minimum rates. The contractor's obligation to pay fringe benefits may be met by payment of the fringes to the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringes.

The contractor should show on the face of his payroll all monies paid to the employees whether as basic or as cash in lieu of fringes. The contractor shall represent in the statement of compliance that he is paying to others fringes required by the contract and not paid as cash in lieu of fringes. Detailed instructions follow:

Contractors who pay all required fringe benefits:

A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor shall continue to show on the face of his payroll the basic cash hourly rate and overtime rate paid to his employees, just as he has always done. Such a contractor shall check paragraph 4(a) of the statement to indicate that he is also paying to approved plans, funds, or programs not less than the amount predetermined as fringe benefits for each craft. Any exception shall be noted in Section 4(c).

Contractors who pay no fringe benefits:

A contractor who pays no fringe benefits shall pay to the employee and insert in the straight time hourly rate column of his payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on the basic or regular rate plus the required cash in lieu of fringes at the straight time rate. To simplify computation of overtime, it is suggested that the straight time basic rate and cash in lieu of fringes be separately stated in the hourly rate column, thus \$3.25/.40. In addition, the contractor shall check paragraph 4(b) of the statement to indicate that he is paying fringe benefits in cash directly to his employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in Section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employees as cash in lieu of fringes, and the hourly amount paid to plans, funds, or programs as fringes.

CHAPTER 104, HRS COMPLIANCE CERTIFICATE

The undersigned bidder does hereby certify to the following:

1. Individuals engaged in the performance of the contract on the job site shall be paid:

A. Not less than the wages that the director of labor and industrial relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects; and

B. Overtime compensation at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or a legal holiday of the State or in excess of eight hours on any other day.

2. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

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

«CONTRACTOR»

Name of Corporation, Partnership, or Individual

Signature and Title of Signer

Notary Seal
NOTARY ACKNOWLEDGEMENT

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

Notary Seal
NOTARY CERTIFICATION

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

Notary signature _____
Date _____