

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

ADDENDUM NO. 1

FOR

**FREEWAY MANAGEMENT SYSTEM
INTERSTATE H-1, FARRINGTON HIGHWAY (RTE 93), KAMEHAMEHA HIGHWAY
(RTE 83), PALI AND KALANIANA'OLE HIGHWAY (RTE 61)
PHASE 2
PROJECT NO. NH-0300(160)**

**DISTRICTS OF HONOLULU, EWA & KOOLAUPOKO
ISLAND OF OAHU
2018**

Amend the Bid Documents as follows:

1. SPECIFICATIONS:

- A. Remove "Section 681 – CCTV Pole and Lower System" dated 3/15/18 and replace it with the attached "Section 681 – CCTV Pole and Lower System" dated 11/13/18.
- B. Replace "Section 708 – Paints" with the attached "Section 708 – Paints" dated 11/13/18.

2. PROPOSAL SCHEDULE:

Remove PROPOSAL SCHEDULE pages P-8 to P-16 dated 10/15/18 and replace it with the attached PROPOSAL SCHEDULE pages P-8 to P-19 dated 11/8/18.

3. PLANS:

Replace Plan Sheet No.26 with the attached Plan Sheet No. ADD.26.

4. FEDERAL WAGE RATES:

Replace Federal Wage Rates dated 10/5/18 with the attached Federal Wage Rates dated 11/2/18.

The following is provided for information.

5. PRE-BID MEETING MINUTES:

Attached are the November 8, 2018 Pre-bid Meeting minutes and signed Attendance Sheet for your information.

The following questions were asked subsequent to the Pre-Bid meeting on November 8, 2018:

Q1: Does the Hawaii DOT have a preferred VMS that is used?

A1: Yes. Per plan, the VMS is Daktronics Vanguard VF-2020 and is Government Furnished Equipment.

Q2: Do the CCTV poles need to be painted?

A2: Yes. CCTV poles shall be painted per Special Provisions Section 681.02(B)(12).

Please acknowledge receipt of this Addendum No. 1 by recording the date of its receipt in the space provided on page P-4 of the Proposal.



JADE T. BUTAY
Director of Transportation

1 Make this Section a part of the Standard Specifications:

2
3 **"SECTION 681 – CCTV POLE AND LOWERING SYSTEM**

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5 **681.01 Description.** This project involves the installation of 6 closed circuit
6 television (CCTV) cameras with lowering systems, the purchase of 2 spare
7 camera lowering systems, and the refurbishment of one existing camera lowering
8 device on the H-1 and H-201 freeways on the Island of Oahu.

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10 In general, this installation consists of the following components:

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12 (A) CCTV poles and foundations,
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14 (B) Camera lowering devices on the top of the poles,
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16 (C) CCTV cabinet on the ground, and equipment pad,
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18 (D) CCTV camera attached to camera lowering device, power supply in
19 the CCTV cabinet,
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21 (E) Installation of encased conduits from the pole to the CCTV cabinet,
22 (F) Electrical power supply and distribution, and
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24 (G) Testing and checkout of equipment.
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26 Contractor shall be responsible for physically installing the equipment on
27 the pole, or in the CCTV cabinet, connecting power and communications cables,
28 and the testing the equipment and communications network and providing a fully
29 operational CCTV system.
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31 **Compliance with Other Specifications and Standards.** All electrical
32 equipment must conform to the standards *NEMA Standards Publication TS 1-*
33 *1989*), the Underwriters' Laboratories, Inc. UL, and the EIA, wherever applicable.
34 All materials and workmanship must conform to the requirements of the MUTCD;
35 NEC; NESC; *Standard Specifications For Structural Supports For Highway*
36 *Signs, Luminaires And Traffic Signals*, a publication of AASHTO, and any State
37 of Hawaii legislation, codes and ordinances which may apply. Wherever
38 reference is made to any such specification, manual, code, or standard, the
39 reference is construed to mean the version, as revised, that is in effect on the
40 date of advertising for bids for this project.

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42 **Definition of Terms.**

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44 (A) **Abbreviations.** Wherever the following abbreviations are used

in these Special Provisions or on the Plans, they shall have the following meaning:

SBW System Bond Wire

FM Factory Mutual

IEEE Institute of Electrical and Electronics Engineers

City City and County of Honolulu

(B) Provide. Where used in these Special Provisions, unless otherwise indicated, this shall mean "furnish and install, complete, including any required electrical connection and testing."

681.02 Materials. The design of traffic signal standards and appurtenances shall conform to AASHTO publication *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2009* and all applicable interims.

(A) CCTV Camera. See Section 683 - CCTV Camera.

(B) CCTV Pole. The 50-foot CCTV pole's tubular member cross-section shall have a constant linear taper as indicated on the contract drawings. It shall conform to the requirements of ASTM A572 Grade 65. The CCTV pole shall be equipped with base plate, hand holes, cable entry holes and pole cap as shown in the contract documents.

(1) Welding. All welding shall be performed by qualified welding operators and shall conform to the requirements of Sections 1 through 8 of the American Welding Society (AWS) D1.1, Structural Welding Code. Longitudinal seam welds shall be performed with automatic processes, be free of cracks and excessive undercut, and be visually inspected. All circumferential butt-welded pole and arm splices shall be ultrasonically and radiographically inspected. If, in the evaluation of the Engineer, any welds are of questionable quality, all such welds shall be tested radiographically as directed by the Engineer.

(2) Handholes. Handholes shall have steel reinforcing frame securely welded into the shaft, complete with gasketted aluminum covers and captive stainless steel attachment screws. Finish handholes smoothly and neatly without rough edges and with a reinforcing frame and cover designed to maintain the

required pole strength. Handhole covers shall be connected to the pole with rustproof chain that connects the inside of the cover to an attachment point inside the pole, just below the handhole. The chain shall be long enough to permit the cover to dangle 3 inches below the handhole opening.

(3) Weatherhead. Weatherhead shall be galvanized 2 inch weather head compatible with the threaded nipple and coupling on the pole.

(4) Galvanizing. The entire pole assembly shall be galvanized inside and outside in accordance with ASTM A123. No double dipping will be allowed. All miscellaneous hardware shall be galvanized per ASTM A153. Prior to galvanizing, all weld flux shall be mechanically removed and the surface shall be prepared by immersion in a series of baths: caustic; sulfuric acid; water; and zinc ammonium chloride flux. After drying, the pole shall be galvanized by dipping in molten zinc, with the pole totally immersed. Flux ash shall be skimmed from the bath prior to immersion and again prior to extraction from the bath.

(5) Identification Tag. The pole shall have an identification tag permanently attached. The tag shall state the length of the pole.

(6) Grounding. The Contractor shall bond the bottom of the pole to one or more ground rods, using exothermic welding at each end of the ground wire (unless the pole has a suitable grounding lug). The Contractor shall use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 10 ohms. The Contractor shall add more ground rods if necessary to achieve this requirement.

(7) Anchor Bolt Assembly. Anchor bolt material shall conform to the requirements of ASTM F1554 Grade 55. The bolts shall be galvanized in accordance with ASTM A153. Anchor plates shall match the hole pattern for each type standard and be clearly marked. The strength of the nuts shall equal or exceed the proof load of the bolts. Anchor bolt assembly shall be delivered partly assembled. The anchor bolts or rods shall come with all nuts, flat washers and split washers on each rod with templates. The six anchors bolts shall then be matched with two plates and delivered as a bundled unit.

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(8) Material Certifications. All materials shall comply with the American Society for Testing and Materials (ASTM) specifications. The supplier shall furnish two copies of mill certificates reflecting the physical and chemical properties of the base metal of the pole, mast arm shafts, base plates and anchor bolts. Two certified copies of the galvanizing test report shall be furnished.

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(9) Certification and Mill Test Reports. Certification and mill test reports shall be submitted with the following information:

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(a) List of component parts including the following:

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1. Description of each part.

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2. Material manufacturing location (including ASTM number where applicable).

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3. Certificate of compliance.

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(b) Shop drawings, accompanied by complete and detailed engineering computations that justify selection of dimensions and material. Hawaii Licensed Professional Engineer (Structural) shall certify computations.

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(c) Copy of mill test report for structural members (posts), including physical and chemical descriptions of material incorporated.

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(10) Construction. Perform work in accordance with requirements of the contract documents and the following: General Order Nos. 6 and 10 of the 82 Hawaii Public Utilities Commission; ASTM; ANSI; local utility company rules; and 83 local ordinances that may apply.

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(11) Equipment List and Drawings. Submit within seven days following contract award, 10 copies of materials and equipment list. Include name of manufacturer, size and identifying number of each item, detailed scale drawings, wiring diagrams of special equipment, and proposed deviations from the contract. If required, submit samples of materials. Upon completion and acceptance of work, submit construction as-built drawings showing detailed construction changes. See section 648 – Field Posted Drawings.

177 (12) **Painting.** Paint CCTV pole per Section 708 – Paints. Color
178 shall be “Aluminum” or “Silver” to match light poles. Submit color
179 sample for review.
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181 (C) **Camera Lowering System.** The Camera Lowering System
182 (CLS) shall include the following components:

- 183 • Contact unit
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- 185 • Self-aligning divided support arm, two per pole
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- 187 • Adapter for attachment to pole
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- 189 • CCTV Control Cable junction box at the top of the pole
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191 (1) **General.** The CLS shall be designed to support and
192 lower a standard closed circuit television camera, lens, housing,
193 pan-tilt-zoom (PTZ) mechanism, cabling, connectors, and other
194 supporting components without damage or causing degradation of
195 camera operations. The CLS shall consist of a contact unit, self-
196 aligning divided support arm, an adapter for attachment to a pole,
197 and a camera connection box. The divided support arm and
198 receiver brackets shall be designed to self-align the contact unit
199 during installation and ensure the contact unit cannot twist under
200 high wind conditions. The CLS shall withstand wind forces of 100
201 mph with a 30 percent gust factor using a 1.65 safety factor. The
202 CLS shall effectively operate within a temperature range of –40°F
203 to 191°F. The CLS manufacturer shall furnish independent
204 laboratory testing documents certifying adherence to the stated
205 wind force criteria utilizing, as a minimum effective projected area
206 EPA, the actual EPA or an EPA greater than that of the camera
207 system to be attached. The CLS to be furnished shall be the
208 product of manufacturers with a minimum of 2 years experience in
209 the successful manufacturing of such systems. The lowering
210 device provider shall be able to identify a minimum of 3 previous
211 projects where the purposed system has been installed
212 successfully.
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214 The CLS manufacturer shall furnish a factory representative
215 to assist the installation Contractor with the assembly and testing of
216 the first lowering system onto the pole. Arrange for the Engineer to
217 witness this installation and testing. The Contractor shall ensure the
218 CLS vendor coordinates with the camera pole vendor to ensure
219 proper integration of the CLS and camera pole. At the time of
220 installation of the CLS, the manufacturer shall furnish the

Department documentation certifying that the Contractor has been instructed on the installation, operation and safety features of the CLS.

All pulleys for the CLS and portable lowering tool shall have sealed, self lubricated bearings, oil tight bronze bearing, or sintered bronze bushings. The lowering cable shall be a minimum 1/8 in. diameter stainless steel aircraft cable with a minimum breaking strength of 1700 pounds.

All electrical and video connections between the fixed and lowerable portion of the contact block shall be protected from exposure to the weather by a waterproof seal to prevent degradation of the electrical contacts. The electrical connections between the fixed and movable lowering device components shall be designed to conduct 100BaseT Ethernet communications as well as the power requirements for operation of dome environmental controls.

The interface and locking components shall be made of stainless steel and/or aluminum. All external components of the CLS shall be made of corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coatings to withstand exposure to a corrosive environment. A weephole with screen shall be included on the underside of the weight box. A composite cable assembly shall be included for each CLS.

(2) Suspension Contact Unit and Contact Block.

The suspension contact unit shall have a load capacity 600 lbs. with a 4 to 1 safety factor. There shall be a locking mechanism between the fixed and moveable components of the lowering device. The movable assembly shall have a minimum of 2 latches. This latching mechanism shall securely hold the device and its mounted equipment. The latching mechanism shall operate by alternately raising and lowering the assembly using the winch and lowering cable. When latched, all weight shall be removed from the lowering cable. The fixed unit shall have a heavy duty cast tracking guide and means to allow latching in the same position each time. The contact unit housing shall be weatherproof with a gasket provided to seal the interior from dust and moisture. The entire unit shall have a minimum temperature rating of -40 degrees F to +190 degrees F (-40C to 90C).

The prefabricated components of the lift unit support system shall be designed to preclude the lifting cable from contacting the power or video cabling. The lowering device manufacturer shall provide a conduit mount adapter for housing the lowering cable. This adapter shall have an interface to allow the connection of a contractor provided 1.25 inch PVC conduit and be located just below the cable stop block at the back of the lowering device. The Contractor shall supply internal conduit in the pole as directed by the Lowering Device provider. The only cable permitted to move within the pole or lowering device during lowering or raising shall be the stainless steel lowering cable. All other cables must remain stable and secure during lowering and raising operations.

The Lowering Device must be specifically equipped with electrical contacts connectors designed for simultaneous Analog (Coax) and video transmission along with PTZ control. The Contact Connectors shall be designed for extreme environmental outdoor use.

The female and male socket contact halves of the connector block shall be made of a UL94, V-0 rated thermosetting synthetic rubber. The female barrel contacts and the male pin contacts shall be permanently and integrally encased in this rubber material to ensure optimum protection from moisture and the environment.

All current carrying male pin and female socket/barrel contacts shall be Gold-plated per ASTM B-488 over Nickel plated CA 360 per QQ-N-290m.

The configuration contact connector shall include:

Seven (7) specifically designed Male contacts sized a minimum of 0.125 inches while the female contacts shall be at least 0.125 inches I.D. at the contact area. All seven (7) contacts shall be soldered to #18/1 UL lead wire and affixed with numbered tags. Two of these wires shall be equipped with a factory installed BNC connector for video transmission/connection from the CCTV.

Thirteen (13) specifically designed Male contacts sized a minimum of 0.09 inches while the female contacts shall be at least 0.09 inches I.D. at the contact area. Eight of the thirteen contacts shall be soldered to CAT5e Wire end terminated with an RJ45-Male connector. Five of the

thirteen contacts shall be soldered to #18/1 UL lead wire and affixed with numbered tags, which may be used for additional camera requirements including but not limited to power, control, alarms or grounds.

All current carrying male pin and female socket/barrel contacts shall be Gold-plated per ASTM B-488 over Nickel plated CA 360 per QQ-N-290m. Each individual female barrel contact shall have a Nickel plated CA 360 sleeve which prevents foreign matter from entering the contact area as well as preclude the possibility of the leaves of the female contact from opening beyond allowable limits and ensure a snug fit around the respective male pins. There shall be at least one contact that is positioned in a manner which will allow it to make first and break last providing optimum grounding performance.

All soldering shall be per IPC J STD-001E. Each individual contact shall be rated for up to 600v and 7A but de-rated according to the wire used in the application. For optimum weatherproofing, each male shall be self-wiping with a shoulder at the base of each male contact so that it will recess into the female block, thereby giving a rain-tight seal to each individual contact when mated. Further, the wire leads from both the male and female rubber contact blocks shall be permanently and integrally molded in the synthetic rubber body. The facility manufacturing the electrical contact connector must comply with Mil Spec Q-9858 and Mil Spec I-45208.

(3) Lowering Tool. The CLS shall be operated by use of a portable lowering tool. The tool shall consist of a lightweight metal frame and winch assembly with cable as described herein, a quick release cable connector, an adjustable safety clutch and a variable speed industrial duty electric drill motor. When attached to the assembly, the tool shall support itself and the load assuring lowering operations and provide a means to prevent freewheeling when loaded. The lowering tool shall be delivered to the Department upon project completion. The lowering tool shall have a reduction gear to reduce the manual effort required to operate the lifting handle to raise and lower a capacity load. The lowering tool shall be provided with an adapter for operating the lowering device by a portable drill using a clutch mechanism. The lowering tool shall be equipped with a positive locking mechanism to secure the cable reel during raising and lowering operations. The manufacturer shall provide a variable speed, heavy-duty reversible

drill motor and a minimum of two lowering tools. The lowering tool shall be made of durable and corrosion resistant materials, powder coated, galvanized, or otherwise protected from the environment by industry-accepted coating to withstand exposure to a corrosive environment.

(D) Cable and Hardware.

(1) CCTV Cable. The Contractor shall provide a CCTV control cable between the cabinet and the contact unit on the lowering device.

CCTV control cables shall be composite cables consisting of one outdoor rated cables as recommended by the CCTV manufacturer. On the cabinet end, the video cable shall be terminated compatible with the interface on the CCTV camera, and the power shall be terminated and connected to the camera power supply. On the camera end, all wires shall be terminated on an MS style connector with gold pins. The Contractor shall coordinate with the camera manufacturer to ensure proper connectivity.

Applicable Specifications: UL/NEC/CEC CATV or CM.
Flame Resistance: UL 1581 Vertical Tray.

Connectors shall be installed as necessary, and shall match the connector interface requirements for the equipment being connected. Adapters are not acceptable.

(2) CCTV Camera. See Section 683 – CCTV Camera.

(3) Cable Attachment Hardware. Cable attachment hardware and strandvices shall be hot-dipped galvanized, shall be new, and shall be approved by the Engineer.

(E) Air Terminal. Furnish a solid aluminum rod, $\frac{3}{4}$ inch in diameter. The length of the rod shall be such that it projects 5 feet above the top of the lowering device. Attachment hardware shall not interfere with the lowering device cables within the pole.

(F) Cabinets. Furnish a cabinet meeting the requirements for a Model 334 cabinet in the latest edition of Traffic Signal Control Equipment Specifications published by Caltrans, except as specified below:

(1) Cabinets shall be fabricated from 0.125-inch-thick anodized aluminum.

(2) Power supply surge protector shall be furnished.

(3) Front and back fluorescent lights shall be activated upon opening either door.

(4) Convenience ground-fault circuit interrupter (GFCI) receptacles shall be provided.

(5) Door locks shall be of solid brass rim Best Lock Series 516RL3XA7559-606 and include two keys.

(6) Labeling shall be by silk screening only.

(7) One each 24-inch by 36-inch cabinet print shall be attached in weatherproof plastic jacket to front and back cabinet doors.

The manufacturer must be on the list of the Department-Accepted manufacturers of controller cabinets and racks.

The following components are required:

(1) **Sunshields.** On southward facing side and the top.

(2) **Housing.** 1A or 1B, Mounting Cage 1, and Service Panel # 1.

(3) **Rack-mounted,** slide out shelf with storage tray.

(4) **Mounting panel.** For terminal blocks, surge protectors, and other small items on a side wall.

(5) **Terminal blocks.** For all conductors entering the cabinet. The blocks shall be the barrier type with nickel-plated brass screw terminals and solid backs. Each terminal shall be clearly and permanently labeled on a contiguous surface using silk screening or other approved method. Terminal blocks for conductors carrying more than 60 volts must be covered by a clear acrylic shield.

(6) **Two interior fluorescent lights.** One above each door switch. Each door shall have a door switch. When either door

is opened, both lights shall light.

(7) Door switch. If this is the same switch used to control the lights, then there must be separate, electrically isolated contacts for detecting an open door.

(8) Duplex ground fault interrupt outlet. For use by technicians.

(9) Thermostatically controlled fan. The fan shall move 100 CFM through vents at the top of the cabinet. The air intake shall be through louvers in the door, and the air shall pass through a replaceable filter as it enters the cabinet.

(10) Anchor Bolts, Nuts, and Washers. Shall be as specified in the contract documents.

(11) Electrical Distribution System. Provide breaker panels for all cabinets. The circuit breaker panel shall be 120/240 volt, split phase, equipped with a solid neutral. The panel shall be UL listed.

Equip the panel with 30 amp main breakers and two 15 amp branch circuit breakers. Connect one branch circuit to the second stage of the surge suppressor and to at least eight outlets for the equipment. A second branch circuit shall power auxiliary devices in the cabinet, such as the fan, light, and GFCI outlet.

All cabinets shall include a grounding system. Connection to ground must be bare, solid AWG 1 #6 copper wire or equivalent bonding strap.

Provide a lightning arrestor designed to protect 120/240 VAC split phase breaker panels. The protector shall use metal oxide varistors as the protective elements. The response time shall be under five nanoseconds and the maximum surge current shall be at least 40,000 amps. The clamping voltage shall not exceed 400 volts. The device shall protect line-to-line and line-to-neutral.

(12) Miscellaneous. All doors shall have cabinet identification labels displaying the cabinet identifier. The Engineer will provide a list of the identifiers for each location, as well as the format for the labels.

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All seams shall be continuously welded and ground smooth.

All fasteners must be stainless steel.

All cabinets shall have an unfinished anodized aluminum finish, free from blemishes.

(G) Drilled Shaft and Pile Cap Foundation.

The drilled shaft and pile cap installation shall be in accordance with Section 511 - Drilled Shafts.

(H) Ethernet Switch. See Section 682 - Ethernet Switch.

(I) Conduit. Provide conduit from CCTV cabinet to CCTV pole. Lay polyvinyl chloride (PVC) conduits carefully in trenches prepared to receive conduits. Concrete encase PVC Schedule 40 conduits.

(J) Tracer Cable. Tracer cable shall conform to Section 623 – Traffic Signal System. Tracer cable shall be No. 14 AWG bare, stranded copper wire.

(K) CCTV Camera. See Section 683 – CCTV Camera.

681.03 Construction Requirements

(A) Submittals

(1) Submittal Data. Prior to the purchase or fabrication of any equipment or material for use on this project, submit for review by the Engineer catalog cut sheets and specifications for all standard, off-the-shelf items, and shop drawings for all custom items. These documents shall contain sufficient technical data for the Engineer to evaluate the system proposed. The quality, function, and capability of each deliverable item shall be described. Documents shall be originals or copies equal to originals. Shop drawings for each fabricated item shall also be submitted. These drawings shall contain all information required for complete fabrication in accordance with the Contract Documents, such as: materials, welds, finish, etc. Shop drawings shall be on sheets 24 inches in height and 36 inches long.

Furnish four copies of 8 ½-inch x 11-inch submittals, and four copies of shop drawings. One of these will be returned to the

Contractor with appropriate notations within 30 calendar days.

The purpose of the submittal data is to show specifically and in detail how the Contractor intends to satisfy the requirements of the Contract Documents. If preprinted literature is utilized to satisfy some or all of these requirements, no statements on the literature should conflict with the Contract Documents. Cross off and initial any such statements and attach an appropriate statement clearly indicating how the requirements of the Contract Documents will be fulfilled. Clearly label each item of submittal data with the bid item number or other description of the item(s) to which it applies.

Each submittal must contain sufficient information and details to permit the Engineer to fully evaluate the particular component. Submittals which are, in the judgment of the Engineer, insufficient to permit proper evaluation will not be reviewed. Do not deviate from submittals marked "Review Completed" or "Correct as Noted" without the prior written consent of the Engineer. The Department will not be liable for any material purchased, labor performed, or delay to the work prior to the approval of the equipment.

Because of the nature of this work, unusually detailed submittal data is required prior to approval of most of the items in order to avoid nonconformance, which does not become apparent until it is too late to correct without serious consequences. In addition, because certain groups of items as set forth below are closely interrelated, it is required that the submittals be made in groups. If more than one submittal is required, complete information from the entire group must be resubmitted. Plan the submittal data effort accordingly.

In order to expedite the submittal data process and equipment review, take care to address all of the requirements of the Contract Documents in the submittal data, leaving nothing to assumption, and clearly addressing the functional and technical interrelationships among the various items. In general, detailed wiring diagrams are not required as part of the submittal data, nor will they be reviewed unless specifically required by these Project Special Provisions or by the Engineer's request.

Plan for any given package of submittal data to be in the possession of the Engineer for 30 calendar days. The Engineer will date stamp the letters of transmittal for all such data and return a copy of the stamped letters to the Contractor with the submittal data

for his records. Following review of the submittal data, the Engineer will return to the Contractor one copy of the submittal marked "No Exceptions Taken", "Correct as Noted", "Correct and Resubmit", or "Rejected". Proceed with any items marked "Review Completed" and items marked "Correct as Noted". Do not proceed with any items which are marked "Rejected" or "Correct and Resubmit", but proceed immediately to correct said items and resubmit them for review. No time extensions will be granted to the Contractor as a result of the need to resubmit items for review.

Develop a submittal data transmittal form and submit same to the Engineer for approval as to format. Assign a submittal number to each submittal package, to be transmitted under the cover of the approved form. The numbering system must be logical and ascending. Specifically list on the transmittal sheet each item or element included and the bid item and Special Provision section to which that element belongs. (An element is one part of several parts of information related to the same bid item.) When drawings are submitted, list each separately. Completely fill out all portions of the transmittal sheet except those reserved for use by the Engineer. The transmittal sheet will be used by the Engineer to indicate the action taken on the submittal package, and a copy of the transmittal sheet showing these actions will be returned to the Contractor. Transmit only clearly related items under the same transmittal sheet.

Approval by the Engineer of a catalog cut sheet and/or shop drawing does not relieve the Contractor of any of his responsibility under the contract for the successful completion of the work in conformity with the requirements of the Contract Documents in providing a fully integrated operational system.

(2) Equipment Manuals Two manuals for each individual component of the system. The manuals supplied for the off-the-shelf items shall be those supplied by the equipment manufacturer.

(B) Documentation. Provide two types of documentation for this project: submittal data and field-posted documentation. All documentation, except as specifically approved by the Engineer, shall be no smaller than 8 1/2-inches x 11-inches and no larger than 24-inches x 36-inches. Electronic documentation shall be provided on a CD-ROM.

All 8 1/2 x 11-inch documentation, except standard bound manuals, shall be bound in logical groupings in 3-ring loose-leaf binders or plastic

slide-ring, loose-leaf binders. Such binders may also include 11-inch x 17-inch documentation, if "Z-folded". Each bound grouping of documentation shall be permanently and appropriately labeled.

Electronic documentation shall conform to the following file formats: tables shall be provided in current versions of Microsoft Excel or Microsoft Word file format; manuals, reports and other narrative text documents shall be provided in Microsoft Word file format; and drawings shall be provided as CAD files in data exchange (.DXF) file format compatible with the most recent version of Microstation.

All literature from manufacturers shall be original documents provided by the manufacturers or copies equal to originals. All documentation will be paid for under the item Field-Posted Drawings, as described in Section 648 of the Standard Specifications.

(1) Field-Posted Drawings. Provide the field-posted drawings in accordance with Section 648 – Field-Posted Drawings.

(C) Training. Provide one training course covering operation and maintenance of the CLS. Contractor's representative, who is familiar with the installation, operation and maintenance of the CLS shall conduct the training course.

At least 30 days prior to the training course, submit an outline of the course, draft manuals and handouts, and resume of the instructor. The Engineer shall review and request modifications of the material.

Up to eight (8) individuals designated by the Department will be trained. Each individual shall control the lowering of the camera, removal of the camera from the lowering device, reinstallation of the camera on the lowering device, raising the camera, and testing the camera for correct operation. Each individual shall receive a three-ring binder with complete documentation for installing, operating and maintaining the CLS. The documentation shall provided by manufacturer of the CLS, supplemented by material based upon the Contractor's experience with installation of the CLSs.

Take video the training course, using acceptable video format, and deliver the files to the Department at the conclusion of the training on a USB thumb drive or equivalent.

(D) Installation. Connect equipment to power, communication, and ground cables, and test the completed installation and report any

problems to the Engineer.

(1) **Ethernet Switch.** See Section 682 – Ethernet Switch.

(2) **CCTV Camera.** See Section 683 – CCTV Camera.

(3) **Camera Pole.** Connect the bottom of the pole to one or more ground rods using a bare, solid AWG # 6 copper wire. Use exothermic welding for all ground wire connections, except the connection to the pole, which shall use the pole's grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the air terminal to ground does not exceed 8 ohms. Add more ground rods if necessary to achieve this requirement. Perform all work related to the installation of the air terminal in accordance with NFPA 780.

Flatten the bottom 6 inches of the air terminal so that it makes good electrical contact when bolted to the pole. If the lowering device includes a junction box above the camera lowering device, bend the air terminal so that comes no closer than 2 inches to the box. Taper the top of the rod to a point. Bolt the rod to the pole 90 degrees from the arm supporting the camera. Use at least two stainless steel bolts passing through the rod and pole wall. Use a sealant on the inside of the pole to prevent the entry of moisture, but do not use any nonconductive material between the rod and pole. Perform all work related to the installation of the air terminal in accordance with NFPA 78.

(4) **Camera Lowering System.** Refer to the camera orientation details that depict the approximate mounting positions to ensure the lowering system has an adequate field of view.

Attach the CLS to the top of the pole per the manufacturer's installation details. Route the CLS lowering cable inside the pole. Connect the composite power/data cable from the CLS connector to the 'J'-hook inside the pole top, using a cable grip. Tension the CLS composite cable against the inside of the pole to prevent it from interfering with the CLS lowering cable. Route the CLS composite cable from the pole base to the CCTV cabinet. Plug a test cable into the CLS connector, and test camera power and data connectivity between the CCTV cabinet and the CLS connector.

(5) Cabinets. Prior to bolting the cabinet to the foundation, apply silicone sealant to the mating surface of the cabinet to prevent water from seeping between the cabinet and foundation. The silicone sealant shall be guaranteed by the manufacturer to last the lifetime of the cabinet without peeling or cracking. Ensure that the cabinet is plumb, using shims if necessary, and ensure that it is properly seated on the foundation.

(E) Testing. Testing of all equipment, cables and materials purchased by the Contractor under this contract shall be the responsibility of the Contractor and shall be conducted in the presence of the Engineer. Document all testing, and provide the results to the Engineer in hard copy and electronic format. The Engineer reserves the right to perform any inspections deemed necessary to assure that the equipment, cables and materials conform to the requirements specified herein.

(1) Camera Lowering System Testing. Prior to attaching the CLS to the pole, the composite cabling and CLS connector shall be tested by plugging a test cable into the CCTV camera connector. Power shall be checked with a voltmeter. Ethernet connectivity will be tested by plugging the RJ-45 connectors on the test cable and the composite cable into two laptops, and transferring data between the two laptops using a "ping" test, file transfer, or other method of communicating between the two laptops.

After the CLS is attached to the pole, and the pole erected, the tests in the paragraph above shall be repeated.

Once installed, the Contractor shall exercise each CLS once per month and perform maintenance per manufacturer's instructions until the project is complete.

(1) Ethernet Switch Testing. See Section 682 – Ethernet Switch.

(2) CCTV Camera Testing. See Section 683 – CCTV Camera.

(3) Cabinet Testing. The Contractor shall develop a proposed test procedure for the cabinets and submit it to the Engineer for approval. It shall include visual inspection, testing of lights, fan, heater, air conditioner, power outlets and alarm sensors. It shall also include a test in which each branch circuit is shorted to the cabinet wall to confirm that the breaker trips. The Contractor

shall revise the proposed test procedure until it is acceptable to the Engineer.

The Contractor shall provide all equipment and personnel needed to safely conduct the tests, arrange for the Engineer's representative to witness the tests, and give the Engineer a report documenting the result of every visual inspection and test. The Contractor shall include a summary indicating whether the cabinet passed every test. The cabinet must pass every test to be accepted.

If the cabinet fails, the Contractor shall correct the problems and arrange for a new test. If the test of the breakers reveals breakers that do not trip, the resistance to ground is too high; lower the resistance by adding more ground rods and improving the connections in the ground system.

(F) Warranty. See Subsection 108.17 – Guarantee of Work.

(G) Camera Lowering System Refurbishment. Existing CLS to be replaced is located at H-201 Halawa IC, H-3 SB to H-201 EB ramp referred to as "Ulune CCTV" on a 70-foot pole. Remove existing CLS to be refurbished and return to the manufacturer. Replace existing CLS with a spare CLS all fasteners shall be new. Test and install per this Section. Reinstall CCTV camera and test. When the refurbished CLS is returned from the manufacturer, return to the Engineer to be used as a spare.

681.04 Measurement. Measurement for payment of equipment and materials in this contract will be made as follows.

(A) CCTV Pole of the height specified, will be measured by each pole furnished and installed. The Contractor shall provide all necessary mounting hardware and communication, power, air terminal and grounding cable and conduit installed in the pole and painting of pole.

(B) Camera Lowering System will be measured by each unit installed on pole (2 per new pole and 1 on the existing pole described in Section 681.03(G) and 1 spare unit) to provide a fully operational system installed and tested with an installed CCTV camera, which will include all necessary mounting hardware, 2 lowering winches (total), cabling, CCTV cables, and monthly CLS maintenance.

(C) CLS Training will be paid as a lump sum and shall include preparing and duplicating all documentation and materials, instructor, and taking video of the training. Measurement for payment will not apply.

792
793 (D) **CLS Refurbishment** will be measured by each unit and will include
794 all necessary shipping to and from the manufacturer and all necessary
795 mounting hardware, removal of existing CLS, reinstallation of CCTV
796 camera, and testing of CLS and CCTV.

797
798 (E) **CCTV Cabinet** will be measured by each cabinet fully installed and
799 wired for internal power and communications, including necessary circuit
800 breakers and surge protectors.

801
802 (F) **Cabinet Foundation** will be measured and paid for in units of
803 each. This price shall include concrete, reinforcing steel, anchor bolts,
804 bolt circle templates, stub poles, grounding equipment, conduits and any
805 miscellaneous hardware necessary for mounting a cabinet, excavating,
806 backfilling, compacting, disposing of surplus and unsuitable material, and
807 restoring existing areas.

808
809 (G) **Conduit Concrete Encased**, of the type and size specified, will be
810 measured as a lump sum, which will include all trenching and backfill, and
811 landscaping restoration, conduit couplers, and elbows, and end bushings,
812 and concrete between the CCTV cabinet and CCTV pole and will include
813 all conduit couplers, and elbows, and end bushings.

814
815 (H) **Testing**, the Engineer will not pay for testing separately. The
816 Engineer shall consider the cost for all of the accepted testing as included
817 in the contract price of the various contract items.

818
819 Measurement for pile cap and drilled shafts will be in accordance
820 and under Section 511 – Drilled Shafts.

821
822 Measurement for electrical and communication systems including
823 fiber splice cabinets, cabinet foundation, conduit and innerduct will be in
824 accordance and under Section 621 – Electric and Communication
825 Systems.

826
827 Measurement for fiber optic cable will be in accordance and under
828 Section 647 – Fiber Optic Cable.

829
830 Measurement for CCTV camera will be in accordance and under
831 Section 683 – CCTV Camera.

832
833 Measurement for Ethernet Switch will be in accordance and under
834 Section 682 – Ethernet Switch.

836 Measurement for, Fiber Optic Pigtail, Fiber optic Jumper, Fiber
837 Optic Splice, Rack Mounted Interconnect Center, Modifications in Existing
838 Cabinets, Additional Testing, Splicing and Equipment will be in
839 accordance and under Section 687 – Fiber Optic Communications
840 System.

841

842 **681.05 Payment.** The Engineer will pay for the accepted pay items
843 listed below at the contract price per pay unit. Payment will be full compensation
844 for work prescribed in this section and the contract documents.

845

| 846 | Pay Item | Pay Unit |
|-----|--|----------|
| 847 | | |
| 848 | Pole, 25-Foot | Each |
| 849 | | |
| 850 | CCTV Pole, 50-Foot | Each |
| 851 | | |
| 852 | Camera Lowering System | Each |
| 853 | | |
| 854 | CLS Training | Lump Sum |
| 855 | | |
| 856 | CLS Refurbishment | Each |
| 857 | | |
| 858 | CCTV Cabinet | Each |
| 859 | | |
| 860 | Cabinet Foundation | Each |
| 861 | | |
| 862 | Two 2-Inch Conduit, SCH 40 PVC, Concrete Encased | Lump Sum |

863

864 The Engineer will pay for drilled shafts and pile caps in accordance and
865 under Section 511 – Drilled Shafts.

866

867 The Engineer will pay for electrical and communication systems
868 modifications and VMS cabinets, VMS cabinet foundation, conduit and innerduct
869 in accordance and under Section 621 – Electric and Communication Systems.

870

871 The Engineer will pay for fiber optic cable in accordance and under
872 Section 647 – Fiber Optic Cable.

873

874 The Engineer will pay for fiber optic pigtail, fiber optic jumper, fiber optic
875 splice, rack mounted interconnect center, modifications in existing cabinets,
876 additional testing, splicing and equipment in accordance and under Section 687 –
877 Fiber Optic Communications System.

878

879 The Engineer will pay for Ethernet Switch in accordance and under

880 Section 682 – Ethernet Switch.

881

882 The Engineer will pay for CCTV Camera in accordance and under Section

883 683 – CCTV Camera.”

884

885

END OF SECTION 681

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(I) Add **Section 708.06 High Performance Coating System** by adding the following paragraph after line 79:

(A) Exterior Galvanized Metal, Stainless Steel

(2) Top Coat. Fluorourethane AAMA 605.2. 5 Mils Dry Film Thickness applied in 2 coats of 2-3 Mils Dry Film Thickness. Carboline Carboxane 950 or approved equal."

END OF SECTION 708

| PROPOSAL SCHEDULE | | | | | |
|----------------------------|---|-------------------------|----------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 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. | \$ 41,500.00 |
| 501.0100 | FURNISH AND INSTALL STRUCTURAL STEEL FOR KUALAKAI VMS SIGN SUPPORT AND WALKWAY | L.S. | L.S. | L.S. | \$ _____ |
| 511.0100 | PALAILAI CCTV DRILLED SHAFT AND PILE CAP (1) | 16 | LIN. FT. | \$ _____ | \$ _____ |
| 511.0200 | KUNIA WEST CCTV DRILLED SHAFT AND PILE CAP (1) | 16 | LIN. FT. | \$ _____ | \$ _____ |
| 511.0300 | KUALAKAI CCTV DRILLED SHAFT AND PILE CAP (1) | 16 | LIN. FT. | \$ _____ | \$ _____ |
| 511.0400 | KUALAKAI VMS DRILLED SHAFTS AND PILE CAP (1) | 20 | LIN. FT. | \$ _____ | \$ _____ |
| 606.0100 | GUARDRAIL TYPE 3, MIDWEST GUARDRAIL SYSTEM - KUNIA WEST CCTV SITE | 152 | LIN. FT. | \$ _____ | \$ _____ |
| 606.0200 | GUARDRAIL TYPE 3, MIDWEST GUARDRAIL SYSTEM - KUALAKAI VMS SITE | 189 | LIN. FT. | \$ _____ | \$ _____ |
| 606.0300 | TERMINAL SECTION TYPE TL-3 - KUNIA WEST CCTV SITE | 1 | EACH | \$ _____ | \$ _____ |
| 606.0400 | TERMINAL SECTION TYPE TL-3 - KUALAKAI VMS SITE | 1 | EACH | \$ _____ | \$ _____ |
| 606.0500 | END ANCHORAGE TYPE TRAILING END-ANCHORAGE SYSTEM - KUNIA WEST CCTV SITE | 1 | EACH | \$ _____ | \$ _____ |

| PROPOSAL SCHEDULE | | | | | |
|----------------------------|---|-------------------------|------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 606.0600 | END ANCHORAGE TYPE TRAILING END-ANCHORAGE SYSTEM - KUALAKAI VMS SITE | 1 | EACH | \$ _____ | \$ _____ |
| 621.0100 | KUALAKAI VMS, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0101 | PALAILAI CCTV, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0102 | KUALAKAI CCTV, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0103 | KUNIA WEST CCTV, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0104 | KAMEHAMEHA CONDUIT, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0105 | KINAU CONDUIT, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 621.0106 | HAWAIIAN ELECTRIC CO. CHARGES | F.A. | F.A. | F.A. | \$ 20,000.00 |
| 636.0100 | MAINTENANCE OF PROJECT FIELD OFFICE | F.A. | F.A. | F.A. | \$ 50,000.00 |
| 643.0100 | MAINTENANCE OF EXISTING LANDSCAPE AREAS | F.A. | F.A. | F.A. | \$ 25,000.00 |
| 645.0100 | TRAFFIC CONTROL PALAILAI CCTV SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0200 | TRAFFIC CONTROL KUALAKAI CCTV SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0300 | TRAFFIC CONTROL KUALAKAI VMS SITE | L.S. | L.S. | L.S. | \$ _____ |

| PROPOSAL SCHEDULE | | | | | |
|----------------------------|---|-------------------------|----------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 645.0400 | TRAFFIC CONTROL KUNIA WEST CCTV SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0500 | TRAFFIC CONTROL KINAU OFF-RAMP SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0600 | TRAFFIC CONTROL PALI HWY. SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0700 | TRAFFIC CONTROL KAMEHAMEHA HWY. SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0800 | ADDITIONAL POLICE OFFICERS, ADDITIONAL TRAFFIC CONTROL DEVICES, AND ADVERTISEMENT | F.A. | F.A. | F.A. | \$ 135,000.00 |
| 647.0100 | KUALAKAI VMS, FIBER OPTIC CABLE IN CONDUIT | 4300 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0200 | PALAILAI CCTV, FIBER OPTIC CABLE IN CONDUIT | 250 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0300 | KUALAKAI CCTV, FIBER OPTIC CABLE IN CONDUIT | 1000 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0400 | KUNIA WEST CCTV, FIBER OPTIC CABLE IN CONDUIT | 3600 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0500 | KAMEHAMEHA CONDUIT, FIBER OPTIC CABLE IN CONDUIT | 4700 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0600 | PALI HWY CONDUIT, FIBER OPTIC CABLE IN CONDUIT | 44000 | LIN. FT. | \$ _____ | \$ _____ |
| 647.0700 | KINAU CONDUIT, FIBER OPTIC CABLE IN CONDUIT | 3700 | LIN. FT. | \$ _____ | \$ _____ |
| 648.0100 | FIELD POSTED DRAWINGS | L.S. | L.S. | L.S. | \$ _____ |
| 652.0100 | KUNIA WEST CCTV, HORIZONTAL DIRECTIONAL DRILLING | 450 | LIN. FT. | \$ _____ | \$ _____ |
| 652.0200 | KAMEHAMEHA CONDUIT, HORIZONTAL DIRECTIONAL DRILLING | 1200 | LIN. FT. | \$ _____ | \$ _____ |
| 652.0300 | KINAU CONDUIT, HORIZONTAL DIRECTIONAL DRILLING | 450 | LIN. FT. | \$ _____ | \$ _____ |

| PROPOSAL SCHEDULE | | | | | |
|----------------------------|---|-------------------------|------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 681.0100 | CCTV POLE, 50 - FOOT | 3 | EACH | \$ _____ | \$ _____ |
| 681.0101 | CAMERA LOWERING SYSTEM | 8 | EACH | | |
| 681.0102 | CLS TRAINING | L.S. | L.S. | \$ _____ | \$ _____ |
| 681.0103 | CLS REFURBISHMENT | 1 | EACH | \$ _____ | \$ _____ |
| 681.0104 | CCTV CABINET | 3 | EACH | \$ _____ | \$ _____ |
| 681.0105 | CABINET FOUNDATION | 3 | EACH | \$ _____ | \$ _____ |
| 681.0106 | TWO 2-INCH CONDUIT, SCH 40 PVC, CONCRETE ENCASED | L.S. | L.S. | L.S. | \$ _____ |
| 682.0100 | INSTALL GFE ETHERNET SWITCH | 11 | EACH | \$ _____ | \$ _____ |
| 683.0100 | INSTALL GFE CCTV CAMERA ON CLS | 6 | EACH | \$ _____ | \$ _____ |
| 683.0101 | INSTALL GFE CCTV CAMERA ON VMS STRUCTURE | 1 | EACH | \$ _____ | \$ _____ |
| 685.0100 | INSTALL GFE VMS AT KUALAKAI SITE | L.S. | L.S. | L.S. | \$ _____ |
| 687.0100 | FIBER OPTIC PIGTAIL | 524 | EACH | \$ _____ | \$ _____ |
| 687.0101 | FIBER OPTIC SPLICE | 1664 | EACH | \$ _____ | \$ _____ |
| 687.0102 | FIBER OPTIC JUMPER | 240 | EACH | \$ _____ | \$ _____ |
| 687.0103 | RACK MOUNTED INTERCONNECT CENTER | 16 | EACH | \$ _____ | \$ _____ |
| 687.0201 | MODIFICATIONS IN EXISTING CABINETS - KAPOLEI PKWY./KAMOKILA BLVD. | L.S. | L.S. | L.S. | \$ _____ |

ADDENDUM NO. 1

NH-0300(160)

11/8/2018

P-11

| PROPOSAL SCHEDULE | | | | | |
|----------------------------|---|-------------------------|------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 687.0202 | MODIFICATIONS IN EXISTING CABINETS - KAMOKILA BLVD./ULUOHIA ST. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0203 | MODIFICATIONS IN EXISTING CABINETS - KAMOKILA BLVD./OLD FARRINGTON HWY. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0204 | MODIFICATIONS IN EXISTING CABINETS - FT. BARRETTE RD./KAMAAHA ST. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0205 | MODIFICATIONS IN EXISTING CABINETS - KAMAAHA/KAIAU | L.S. | L.S. | L.S. | \$ _____ |
| 687.0206 | MODIFICATIONS IN EXISTING CABINETS - KAMAAHA/KULOA | L.S. | L.S. | L.S. | \$ _____ |
| 687.0207 | MODIFICATIONS IN EXISTING CABINETS - KAPOLEI PKWY./KAMAAHA | L.S. | L.S. | L.S. | \$ _____ |
| 687.0208 | MODIFICATIONS IN EXISTING CABINETS - KAPOLEI PKWY./KINOIKI | L.S. | L.S. | L.S. | \$ _____ |
| 687.0209 | MODIFICATIONS IN EXISTING CABINETS - KUALAKAI PKWY./HOOPILI DW | L.S. | L.S. | L.S. | \$ _____ |
| 687.0210 | MODIFICATIONS IN EXISTING CABINETS - FARRINGTON HWY./KUALAKAI PKWY. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0211 | MODIFICATIONS IN EXISTING CABINETS - KAPOLEI PKWY./RENTON RD. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0212 | MODIFICATIONS IN EXISTING CABINETS - FT. WEAVER RD./FAMILY SERVICE | L.S. | L.S. | L.S. | \$ _____ |
| 687.0213 | MODIFICATIONS IN EXISTING CABINETS - FT. WEAVER RD./AAWA DR. | L.S. | L.S. | L.S. | \$ _____ |

| PROPOSAL SCHEDULE | | | | | |
|--|--|-------------------------|------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| BASE BID PROPOSAL SCHEDULE | | | | | |
| 687.0214 | MODIFICATIONS IN EXISTING CABINETS - FT. WEAVER RD./LAULAUNUI | L.S. | L.S. | L.S. | \$ _____ |
| 687.0215 | MODIFICATIONS IN EXISTING CABINETS - LEOKU ST./FARRINGTON HWY. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0216 | MODIFICATIONS IN EXISTING CABINETS - PUPUPUHI ST./FARRINGTON HWY. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0217 | MODIFICATIONS IN EXISTING CABINETS - WAIPAHU DEPOT RD./FARRINGTON HWY. | L.S. | L.S. | L.S. | \$ _____ |
| 687.0218 | MODIFICATIONS IN EXISTING CABINETS - H-3 HUB HALEKOU IC | L.S. | L.S. | L.S. | \$ _____ |
| 687.0300 | ADDITIONAL TESTING, SPLICING AND EQUIPMENT | F.A. | F.A. | F.A. | \$ 65,000.00 |
| 699.1000 | MOBILIZATION (NOT TO EXCEED 6 PERCENT OF THE SUM OF ALL ITEMS EXCLUDING BID PRICE OF THIS ITEM) | L.S. | L.S. | L.S. | \$ _____ |
| a. Sum of All Base Bid Items | | | | | \$ _____ |
| NOTE: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid. | | | | | |

| BID ADDITIVE ALTERNATE #1 PROPOSAL SCHEDULE | | | | | |
|--|---|-------------------------|----------|-------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
| 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. | \$ 1,300.00 |
| 511.0100 | LOCATION 3 MAC & SPEED READER DRILLED SHAFT AND PILE CAP (1) | 15 | LIN. FT. | \$ _____ | \$ _____ |
| 511.0200 | LOCATION 4 MAC & SPEED READER DRILLED SHAFT AND PILE CAP (1) | 15 | LIN. FT. | \$ _____ | \$ _____ |
| 645.0100 | TRAFFIC CONTROL FARRINGTON SITES | L.S. | L.S. | \$ _____ | \$ _____ |
| 645.0200 | ADDITIONAL POLICE OFFICERS, ADDITIONAL TRAFFIC CONTROL DEVICES, AND ADVERTISEMENT | F.A. | F.A. | F.A. | \$ 6,000.00 |
| 648.0100 | FIELD POSTED DRAWINGS | L.S. | L.S. | L.S. | \$ _____ |
| 681.0100 | POLE, 25 - FOOT | 2 | EACH | \$ _____ | \$ _____ |
| 684.0100 | INSTALL GFE SPOT SPEED DETECTION ASSEMBLY | 2 | EACH | \$ _____ | \$ _____ |
| 684.0200 | CORRECTIVE MAINTENANCE, SPOT SPEED ASSEMBLY | F.A. | F.A. | F.A. | \$ 3,500.00 |
| 686.0100 | INSTALL GFE TRAFFIC DETECTION ASSEMBLY | 4 | EACH | \$ _____ | \$ _____ |
| 686.0200 | CORRECTIVE MAINTENANCE, TRAFFIC DETECTION ASSEMBLY | F.A. | F.A. | F.A. | \$ 4,000.00 |
| 699.1000 | MOBILIZATION (NOT TO EXCEED 6 PERCENT OF THE SUM OF ALL ITEMS EXCLUDING BID PRICE OF THIS ITEM) | L.S. | L.S. | L.S. | \$ _____ |

| BID ADDITIVE ALTERNATE #1 PROPOSAL SCHEDULE | | | | |
|--|---|-------------------------|------------------------|---------------------|
| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT UNIT PRICE (c) | AMOUNT (a) x (c) |
| b. | Sum of All Bid Additive Alternate #1 Items..... | | | \$ _____ |
| NOTE: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid. | | | | |

**BID ADDITIVE ALTERNATE #2
PROPOSAL SCHEDULE**

| ITEM NO. | ITEM | APPROX. QUANTITY (a) | UNIT | UNIT PRICE (c) | AMOUNT (a) x (c) |
|----------|---|-------------------------|----------|-------------------|---------------------|
| 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. | \$ 3,500.00 |
| 621.0100 | CASTLE JUNCTION TO PALI VMS, SITE ELECTRICAL AND COMMUNICATION SYSTEMS | L.S. | L.S. | L.S. | \$ _____ |
| 645.0100 | TRAFFIC CONTROL KALANIANA'OLE SITE | L.S. | L.S. | L.S. | \$ _____ |
| 645.0200 | ADDITIONAL POLICE OFFICERS, ADDITIONAL TRAFFIC CONTROL DEVICES, AND ADVERTISEMENT | F.A. | F.A. | F.A. | \$ 6,000.00 |
| 648.0100 | FIELD POSTED DRAWINGS | L.S. | L.S. | L.S. | \$ _____ |
| 652.0100 | CASTLE JUNCTION TO PALI VMS, HORIZONTAL DIRECTIONAL DRILLING | 1300 | LIN. FT. | \$ _____ | \$ _____ |
| 699.1000 | MOBILIZATION (NOT TO EXCEED 6 PERCENT OF THE SUM OF ALL ITEMS EXCLUDING BID PRICE OF THIS ITEM) | L.S. | L.S. | L.S. | \$ _____ |

c. Sum of All Bid Additive Alternate #2 Items..... \$ _____

NOTE: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.

ADDENDUM NO. 1

NH-0300(160)

11/8/2018

P-16

| BID SUMMARY | |
|--|----------|
| Total Lump Sum Base Bid | \$ _____ |
| Additive Alternate #1 | \$ _____ |
| Additive Alternate #2 | \$ _____ |
| Total Amount for Comparison of Bids (Sum of Total Lump Sum Base Bid and Additive Alternates #1 & #2) | \$ _____ |

Notes:

1. Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.
2. All bidders are required to bid on the BASE BID and ALL BID ADDITIVE ALTERNATE 1 THRU BID ALTERNATE 2 ITEMS to be considered responsive.
3. Evaluation of Bids. The lowest responsive, responsible bid is determined by the following procedures:
 - a. Chapter 103D, HRS, which provides for the preferences, shall apply.
 - b. The total lump sum bid price is adjusted to reflect the applicable preferences.
 - i. For projects with alternates, the total lump sum base bid price and alternates will be adjusted to reflect the applicable preferences.
 - c. Project control budget is established prior to the submission of bids.
 - d. If there is more than one alternate for a project, the State will determine the precedence of the alternates for each project prior to the submission of bids.
 - e. The project will be evaluated based on the adjusted bid price.
4. Evaluating Bids with Additive Alternates:
 - a. Prior to opening bids, the State will announce the project control budget. All bids will be evaluated on the basis of the same alternate item.
 - b. After adjusting for applicable preferences, the alternates, in their precedence order, are added to the total lump sum base bid price. This (these) sum(s) are compared to the project control budget, and must be within the project control budget.
 - c. If adding another alternate would make the aggregate amount exceed the project control budget for all bidders, that alternate will be skipped and the next alternate will be added, provided an award might be made within the project control budget. This procedure will continue, until adding any remaining alternates will result in the aggregate total amount for all the bidders to exceed the project control budget, or until no additional alternates remain.
 - d. The bidder with the lowest aggregate amount, within the project control budget (after application of the various preferences), for the total lump sum base bid plus the alternates in their precedence order, is the "Low Bidder" for that project and is designated for award.

ADDENDUM NO. 1

NH-0300(160)

11/8/18

P-18

- e. Additive Alternate Example: The project control budget available is \$100,000. In the order of precedence, alternates A-1, A-2 and A-3 are additive alternates. After applying the preferences, the bids are ranked lowest price to highest price and are "Bid A", "Bid B" and "Bid C". Bid A's total lump sum base bid price and three additive alternates (in the precedence order) are \$80,000, \$16,000, \$10,000 and \$5,000 respectively. Bid B's total lump sum base bid price and three additive alternates (in the precedence order) are \$82,000, \$10,000, \$9,000 and \$3,000 respectively. Bid C's total lump sum base bid price and three additive alternates (in the precedence order) are \$85,000, \$10,000, \$8,000 and \$4,000 respectively.
- i. In adding the alternates to the bids, alternate A-1 is under the project control budget for all bids. The second alternate A-2 is initially skipped since it would cause the aggregate amount of all bids to exceed \$100,000. The third alternate A-3 is added and the aggregate amounts, including base bid price plus alternates A-1 and A-3, of both Bid Band Bid C, are under the project control budget.
 - ii. Bid A's aggregate total is \$101,000. Bid B's aggregate total is \$95,000. Bid C's aggregate total is \$99,000.
 - iii. Bid B's price including alternates A-1 and A-3 is the lowest bid price (over Bid C) and has an aggregate amount within the adjusted project control budget, and therefore is designated the "Low Bidder" for the project.
- f. Should the Lump Sum Base Bid of all bidders exceed the project control budget, the bidder with the lowest total lump sum base bid after application of the preferences is designated the low bidder for the project.
5. No additional compensation will be made by the State for losses, including overhead and profit, resulting from the deletion of the additive alternate items.
6. Contract time shall remain the same whether or not the scope of work is increased.

General Decision Number: HI180001 11/02/2018 HI1

Superseded General Decision Number: HI20170001

State: Hawaii

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

Counties: Hawaii Statewide.

BUILDING CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories); HEAVY AND HIGHWAY CONSTRUCTION PROJECTS AND DREDGING

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0 | 01/05/2018 |
| 1 | 01/26/2018 |
| 2 | 02/23/2018 |
| 3 | 03/09/2018 |
| 4 | 04/27/2018 |
| 5 | 07/06/2018 |
| 6 | 07/20/2018 |
| 7 | 08/03/2018 |
| 8 | 08/24/2018 |
| 9 | 08/31/2018 |
| 10 | 09/07/2018 |
| 11 | 09/28/2018 |
| 12 | 10/05/2018 |
| 13 | 10/26/2018 |
| 14 | 11/02/2018 |

ASBE0132-001 08/31/2015

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.....\$ 39.65 23.50

BOIL0627-005 01/01/2013

| | Rates | Fringes |
|------------------|----------|---------|
| BOILERMAKER..... | \$ 35.20 | 27.35 |

* BRHI0001-001 09/04/2017

| | Rates | Fringes |
|------------------------------|----------|---------|
| BRICKLAYER | | |
| Bricklayers and Stonemasons. | \$ 39.76 | 28.12 |
| Pointers, Caulkers and | | |
| Weatherproofers..... | \$ 40.01 | 28.12 |

* BRHI0001-002 09/04/2017

| | Rates | Fringes |
|--------------------------------|----------|---------|
| Tile, Marble & Terrazzo Worker | | |
| Terrazzo Base Grinders..... | \$ 39.14 | 28.12 |
| Terrazzo Floor Grinders | | |
| and Tenders..... | \$ 37.59 | 28.12 |
| Tile, Marble and Terrazzo | | |
| Workers..... | \$ 40.95 | 28.12 |

CARP0745-001 09/03/2018

| | Rates | Fringes |
|----------------------------|----------|---------|
| Carpenters: | | |
| Carpenters; Hardwood Floor | | |
| Layers; Patent Scaffold | | |
| Erectors (14 ft. and | | |
| over); Piledrivers; | | |
| Pneumatic Nailers; Wood | | |
| Shinglers and Transit | | |
| and/or Layout Man..... | \$ 49.45 | 21.75 |
| Millwrights and Machine | | |
| Erectors..... | \$ 49.70 | 21.75 |
| Power Saw Operators (2 | | |
| h.p. and over)..... | \$ 49.60 | 21.75 |

CARP0745-002 09/03/2018

| | Rates | Fringes |
|--------------------------|----------|---------|
| Drywall and Acoustical | | |
| Workers and Lathers..... | \$ 49.70 | 21.75 |

ELEC1186-001 08/26/2018

| | Rates | Fringes |
|------------------------------|----------|---------|
| Electricians: | | |
| Cable Splicers..... | \$ 54.78 | 29.20 |
| Electricians..... | \$ 49.80 | 27.85 |
| Telecommunication worker.... | \$ 28.44 | 11.94 |

ELEC1186-002 08/26/2018

| | Rates | Fringes |
|------------------------------|----------|---------|
| Line Construction: | | |
| Cable Splicers..... | \$ 54.78 | 29.20 |
| Groundmen/Truck Drivers..... | \$ 37.35 | 24.48 |
| Heavy Equipment Operators... | \$ 44.82 | 26.49 |
| Linemen..... | \$ 49.80 | 27.85 |
| Telecommunication worker.... | \$ 28.44 | 11.94 |

ELEV0126-001 01/01/2018

| | Rates | Fringes |
|------------------------|----------|---------|
| ELEVATOR MECHANIC..... | \$ 57.36 | 32.65 |

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.

ENGI0003-002 09/03/2018

| | Rates | Fringes |
|------------------------------|----------|---------|
| Diver (Aqua Lung) (Scuba)) | | |
| Diver (Aqua Lung) (Scuba) | | |
| (over a depth of 30 feet)... | \$ 66.00 | 31.26 |
| Diver (Aqua Lung) (Scuba) | | |
| (up to a depth of 30 feet).. | \$ 56.63 | 31.26 |
| Stand-by Diver (Aqua Lung) | | |
| (Scuba)..... | \$ 47.25 | 31.26 |
| Diver (Other than Aqua Lung) | | |
| Diver (Other than Aqua | | |
| Lung)..... | \$ 66.00 | 31.26 |
| Diver Tender (Other than | | |
| Aqua Lung)..... | \$ 44.22 | 31.26 |
| Stand-by Diver (Other than | | |
| Aqua Lung)..... | \$ 47.25 | 31.26 |
| Helicopter Work | | |
| Airborne Hoist Operator | | |
| for Helicopter..... | \$ 45.80 | 31.26 |
| Co-Pilot of Helicopter..... | \$ 45.98 | 31.26 |
| Pilot of Helicopter..... | \$ 46.11 | 31.26 |
| Power equipment operator - | | |
| tunnel work | | |
| GROUP 1..... | \$ 42.24 | 31.26 |
| GROUP 2..... | \$ 42.35 | 31.26 |
| GROUP 3..... | \$ 42.52 | 31.26 |
| GROUP 4..... | \$ 42.79 | 31.26 |
| GROUP 5..... | \$ 43.10 | 31.26 |
| GROUP 6..... | \$ 43.75 | 31.26 |
| GROUP 7..... | \$ 44.07 | 31.26 |
| GROUP 8..... | \$ 44.18 | 31.26 |
| GROUP 9..... | \$ 44.29 | 31.26 |
| GROUP 9A..... | \$ 44.52 | 31.26 |
| GROUP 10..... | \$ 44.58 | 31.26 |
| GROUP 10A..... | \$ 44.73 | 31.26 |
| GROUP 11..... | \$ 44.88 | 31.26 |

| | | |
|----------------------------|----------|-------|
| GROUP 12..... | \$ 45.24 | 31.26 |
| GROUP 12A..... | \$ 45.60 | 31.26 |
| Power equipment operators: | | |
| GROUP 1..... | \$ 41.94 | 31.26 |
| GROUP 2..... | \$ 42.05 | 31.26 |
| GROUP 3..... | \$ 42.22 | 31.26 |
| GROUP 4..... | \$ 42.49 | 31.26 |
| GROUP 5..... | \$ 42.80 | 31.26 |
| GROUP 6..... | \$ 43.45 | 31.26 |
| GROUP 7..... | \$ 43.77 | 31.26 |
| GROUP 8..... | \$ 43.88 | 31.26 |
| GROUP 9..... | \$ 43.99 | 31.26 |
| GROUP 9A..... | \$ 44.22 | 31.26 |
| GROUP 10..... | \$ 44.28 | 31.26 |
| GROUP 10A..... | \$ 44.43 | 31.26 |
| GROUP 11..... | \$ 44.58 | 31.26 |
| GROUP 12..... | \$ 44.94 | 31.26 |
| GROUP 12A..... | \$ 45.30 | 31.26 |
| GROUP 13..... | \$ 42.22 | 31.26 |
| GROUP 13A..... | \$ 42.49 | 31.26 |
| GROUP 13B..... | \$ 42.80 | 31.26 |
| GROUP 13C..... | \$ 43.45 | 31.26 |
| GROUP 13D..... | \$ 43.77 | 31.26 |
| GROUP 13E..... | \$ 43.88 | 31.26 |

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Fork Lift (up to and including 10 tons); Partsman (heavy duty repair shop parts room when needed).

GROUP 2: Conveyor Operator (Handling building material); Hydraulic Monitor; Mixer Box Operator (Concrete Plant).

GROUP 3: Brakeman; Deckhand; Fireman; Oiler; Oiler/Graderchecker; 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.

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).

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.

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).

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).

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).

GROUP 9: Combination Mixer and Compressor (gunite); 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.).

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).

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.

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).

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 Tired Earthmoving Machine (with Tandem Scraper); Tandem Cats; Trencher (pulling attached shield).

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).

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.

GROUP 13: Truck Driver (Utility, Flatbed, etc.)

GROUP 13A: Dump Truck, 8 cu.yds. and under (water level); Water Truck (up to and including 2,000 gallons).

GROUP 13B: Water Truck (over 2,000 gallons); Tandem Dump

Truck, over 8 cu. yds. (water level).

GROUP 13C: Truck Driver (Semi-trailer. Rock Cans, Semi-Dump or Roll-Offs).

GROUP 13D: Truck Driver (Slip-In or Pup).

GROUP 13E: End Dumps, Unlicensed (Euclid, Mack, Caterpillar or similar); Tractor Trailer (Hauling Equipment); Tandem Trucks hooked up to Trailer (Hauling Equipment)

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 |

ENGI0003-004 09/04/2017

| | Rates | Fringes |
|--|----------|---------|
| Dredging: (Boat Operators) | | |
| Boat Deckhand..... | \$ 41.22 | 30.93 |
| Boat Operator..... | \$ 43.43 | 30.93 |
| Master Boat Operator..... | \$ 43.58 | 30.93 |
| Dredging: (Clamshell or Dipper Dredging) | | |
| GROUP 1..... | \$ 43.94 | 30.93 |
| GROUP 2..... | \$ 43.28 | 30.93 |
| GROUP 3..... | \$ 42.88 | 30.93 |
| GROUP 4..... | \$ 41.22 | 30.93 |
| Dredging: (Derricks) | | |
| GROUP 1..... | \$ 43.94 | 30.93 |
| GROUP 2..... | \$ 43.28 | 30.93 |
| GROUP 3..... | \$ 42.88 | 30.93 |
| GROUP 4..... | \$ 41.22 | 30.93 |
| Dredging: (Hydraulic Suction Dredges) | | |
| GROUP 1..... | \$ 43.58 | 30.93 |
| GROUP 2..... | \$ 43.43 | 30.93 |
| GROUP 3..... | \$ 43.28 | 30.93 |
| GROUP 4..... | \$ 43.22 | 30.93 |

| | | |
|--------------|----------|-------|
| GROUP 5..... | \$ 37.88 | 26.76 |
| Group 5..... | \$ 42.88 | 30.93 |
| GROUP 6..... | \$ 37.77 | 26.76 |
| Group 6..... | \$ 42.77 | 30.93 |
| GROUP 7..... | \$ 36.22 | 26.76 |
| Group 7..... | \$ 41.22 | 30.93 |

CLAMSHELL OR DIPPER DREDGING CLASSIFICATIONS

GROUP 1: Clamshell or Dipper Operator.
 GROUP 2: Mechanic or Welder; Watch Engineer.
 GROUP 3: Barge Mate; Deckmate.
 GROUP 4: Bargeman; Deckhand; Fireman; Oiler.

HYDRAULIC SUCTION DREDGING CLASSIFICATIONS

GROUP 1: Leverman.
 GROUP 2: Watch Engineer (steam or electric).
 GROUP 3: Mechanic or Welder.
 GROUP 4: Dozer Operator.
 GROUP 5: Deckmate.
 GROUP 6: Winchman (Stern Winch on Dredge)
 GROUP 7: Deckhand (can operate anchor scow under direction of Deckmate); Fireman; Leveeman; Oiler.

DERRICK CLASSIFICATIONS

GROUP 1: Operators (Derricks, Piledrivers and Cranes).
 GROUP 2: Saurman Type Dragline (over 5 cubic yards).
 GROUP 3: Deckmate; Saurman Type Dragline (up to and including 5 yards).
 GROUP 4: Deckhand, Fireman, Oiler.

 ENGI0003-044 09/03/2018

| | Rates | Fringes |
|---|----------|---------|
| Power Equipment Operators (PAVING) | | |
| Asphalt Concrete Material Transfer..... | \$ 42.92 | 32.08 |
| Asphalt Plant Operator..... | \$ 43.35 | 32.08 |
| Asphalt Raker..... | \$ 41.96 | 32.08 |
| Asphalt Spreader Operator... | \$ 43.44 | 32.08 |
| Cold Planer..... | \$ 43.75 | 32.08 |
| Combination Loader/Backhoe (over 3/4 cu.yd.)..... | \$ 41.96 | 32.08 |
| Combination Loader/Backhoe (up to 3/4 cu.yd.)..... | \$ 40.98 | 32.08 |
| Concrete Saws and/or Grinder (self-propelled unit on streets, highways, airports and canals)..... | \$ 42.92 | 32.08 |
| Grader..... | \$ 43.75 | 32.08 |
| Laborer, Hand Roller..... | \$ 41.46 | 32.08 |
| Loader (2 1/2 cu. yds. and under)..... | \$ 42.92 | 32.08 |
| Loader (over 2 1/2 cu. yds. to and including 5 cu. yds.)..... | \$ 43.24 | 32.08 |
| Roller Operator (five tons and under)..... | \$ 41.69 | 32.08 |
| Roller Operator (over five tons)..... | \$ 43.12 | 32.08 |

| | | |
|----------------------|----------|-------|
| Screed Person..... | \$ 42.92 | 32.08 |
| Soil Stabilizer..... | \$ 43.75 | 32.08 |

IRON0625-001 09/01/2018

| Rates | Fringes |
|-------|---------|
|-------|---------|

| | | |
|-------------------|----------|-------|
| Ironworkers:..... | \$ 40.25 | 35.79 |
|-------------------|----------|-------|

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.

LAB00368-001 09/03/2018

| Rates | Fringes |
|-------|---------|
|-------|---------|

| | | |
|---|----------|-------|
| Laborers: | | |
| Driller..... | \$ 38.40 | 20.26 |
| Final Clean Up..... | \$ 28.80 | 16.12 |
| Gunite/Shotcrete Operator and High Scaler..... | \$ 37.90 | 20.26 |
| Laborer I..... | \$ 37.40 | 20.26 |
| Laborer II..... | \$ 34.80 | 20.26 |
| Mason Tender/Hod Carrier.... | \$ 37.90 | 20.26 |
| Powderman..... | \$ 38.40 | 20.26 |
| Window Washer (bosun chair). | \$ 36.90 | 20.26 |

LABORERS CLASSIFICATIONS

Laborer I: Air Blasting run by electric or pneumatic compressor; Asphalt Laborer, Ironer, Raker, Luteman, and Handroller, and all types of Asphalt Spreader Boxes; Asphalt Shoveler; Assembly and Installation of Multiplates, Liner Plates, Rings, Mesh, Mats; Batching Plant (portable and temporary); Boring Machine Operator (under streets and sidewalks); Buggymobile; Burning and Welding; Chainsaw, Faller, Logloader, and Bucker; Compactors (Jackson Jumping Jack and 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, and sidewalks); Concrete Core Cutter (Walls, Floors, and 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 and cleaning of equipment); Concrete and/or Asphalt Saw (Walking or Handtype) (cutting walls or flatwork) (scoring old or new concrete and/or asphalt) (cutting for expansion joints) (streets and ways for laying of pipe, cable or conduit for all purposes); 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 and the pouring of concrete to

secure the hole; Cribbers, Shorer, Lagging, Sheeting, and Trench Jacking and Bracing, Hand-Guided Lagging Hammer Whaling Bracing; Curbing (Concrete and Asphalt); Curing of Concrete (impervious membrane and form oiler) mortar and other materials by any mode or method; Cut Granite Curb Setter (setting, leveling and grouting of all precast concrete or stone curbs); Cutting and Burning Torch (demolition); Dri Pak-It Machine; Environmental Abatement: removal of asbestos, lead, and bio hazardous materials (EPA and/or OSHA certified); Falling, bucking, yarding, loading or burning of all trees or timber on construction site; Forklift (9 ft. and under); Gas, Pneumatic, and Electric tools; Grating and Grill work for drains or other purposes; Green Cutter of concrete or aggregate in any form, by hand, mechanical means, grindstone or air and/or water; Grout: Spreading for any purpose; Guinea Chaser (Grade Checker) for general utility trenches, sitework, and excavation; Headerboard Man (Asphalt or Concrete); Heat Welder of Plastic (Laborers' AGC certified workers) (when work involves waterproofing for waterponds, artificial lakes and reservoir) heat welding for sewer pipes and fusion of HDPE pipes; Heavy Highway Laborer (Rigging, signaling, handling, and installation of pre-cast catch basins, manholes, curbs and gutters); High Pressure Nozzleman - Hydraulic Monitor (over 100# pressure); Jackhammer Operator; Jacking of slip forms: All semi and unskilled work connected therewithin; Laying of all multi-cell conduit or multi-purpose pipe; Magnesite and Mastic Workers (Wet or Dry)(including mixer operator);Mortar Man; Mortar Mixer (Block, Brick, Masonry, and Plastering); Nozzleman (Sandblasting and/or Water Blasting): handling, placing and operation of nozzle; Operation, Manual or Hydraulic jacking of shields and the use of such other mechanical equipment as may be necessary; Pavement Breakers; Paving, curbing and surfacing of streets, ways, courts, under and overpasses, bridges, approaches, slope walls, and all other labor connected therewith; Pilecutters; Pipe Accessment in place, bolting and lining up of sectional metal or other pipe including corrugated pipe; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, HDPE, metallic or non-metallic, conduit, and 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 and without regard to the nature of material from which tubular material is fabricated; No-joint pipe and stripping of same, Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, treating Creosote and similar-type materials (6-inch) pipe and over); Piping: resurfacing and 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 and marking of the joint used for main or side sewers and storm sewers; Laying of all clay, terra cotta, ironstone, vitrified concrete, HDPE or other pipe for drainage; Placing and setting of water mains, gas mains and all pipe including removal of skids; Plaster Mortar Mixer/Pump; Pneumatic Impact Wrench; Portable Sawmill Operation: Choker setters, off bearers, and lumber handlers connected with clearing; Posthole Digger (Hand Held, Gas, Air and Electric); Powderman's Tender; Power Broom Sweepers (Small); Preparation and Compaction of roadbeds for

railroad track laying, highway construction, and 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 and 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 and Signaling of building materials into high rise units; Riprap, Stonepaver, and Rock Slinger (includes placement of stacked concrete, wet or dry and loading, unloading, signaling, slinging and 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 and hanging) including maintenance thereof; Scaler; Septic Tank/Cesspool and Drain Fields Digger and Installer; Shredder/Chipper (tree branches, brush, etc.); Stripping and Setting Forms; Stripping of Forms: Other than panel forms which are to be re-used in their original form, and stripping of forms on all flat arch work; Tampers (Barko, Wacker, and similar type); Tank Scaler and Cleaners; Tarman; Tree Climbers and Trimmers; Trencher (includes hand-held, Davis T-66 and similar type); Trucks (flatbed up to and including 2 1/2 tons when used in connection with on-site Laborers' work; Trucks (Refuse and 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.

Laborer II: Asphalt Plant Laborer; Boring Machine Tender; Bridge Laborer; Burning of all debris (crates, boxes, packaging waste materials); Chainman, Rodmen, and Grade Markers; Cleaning, clearing, grading and/or removal for streets, highways, roadways, aprons, runways, sidewalks, parking areas, airports, approaches, and other similar installations; Cleaning or reconditioning of streets, ways, sewers and waterlines, all maintenance work and work of an unskilled and semi-skilled nature; Concrete Bucket Tender (Groundman) hooking and unhooking of bucket; Concrete Forms; moving, cleaning, oiling and carrying to the next point of erection of all forms; Concrete Products Plant Laborers; Conveyor Tender (conveying of building materials); Crushed Stone Yards and Gravel and Sand Pit Laborers and all other similar plants; Demolition, Wrecking and Salvage Laborers: Wrecking and dismantling of buildings and all structures, with use of cutting or wrecking tools, breaking away, cleaning and 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 and filling of she-bolt holes); Fence and/or Guardrail Erector: Dismantling and/or re-installation of all fence; Finegrader; Firewatcher; Flagman (Coning, preparing, establishing and 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 and all other labor connected therewith; Digging of trenches, ditches and manholes and the leveling, grading and other preparation prior to laying pipe or conduit for any purpose; Excavations and foundations for buildings,

piers, foundations and holes, and all other construction. Preparation of street ways and bridges; General Laborer: Cleaning and Clearing of all debris and surplus material. Clean-up of right-of-way. Clearing and slashing of brush or trees by hand or mechanical cutting. General Clean up: sweeping, cleaning, wash-down, wiping of construction facility and equipment (other than "Light Clean up (Janitorial) Laborer. Garbage and Debris Handlers and Cleaners. Appliance Handling (job site) (after delivery unloading in storage area); Ground and 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 waterponds, artificial lakes and reservoirs); Limbers, Brush Loaders, and Pilers; Loading, Unloading, carrying, distributing and handling of all rods and 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 and distribution of water mains, gas mains and all pipes; Loading and unloading of all materials, fixtures, furnishings and appliances from point of delivery to stockpile to point of installation; hooking and signaling from truck, conveyance or stockpile; Material Yard Laborers; Pipelayer Tender; Pipewrapper, Caulker, Bander, Kettlemen, and men applying asphalt, Laykold, Creosote, and similar-type materials (pipe under 6 inches); Plasterer Laborer; Preparation, construction and maintenance of roadbeds and sub-grade for all paving, including excavation, dumping, and 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, and Rail Transit Maintenance and Repair; Roustabout; Rubbish Trucks in connection with Building Construction Projects (excluding clearing, grubbing, and excavating); Salvage Yard: All work connected with cutting, cleaning, storing, stockpiling or handling of materials, all cleanup, removal of debris, burning, back-filling and landscaping of the site; Sandblasting Tender (Pot Tender): Hoses and pots or markers; Scaffolds: Erection, planking and removal of all scaffolds used for support for lathers, plasters, brick layers, masons, and other construction trades crafts; Scaffolds: (Specially designed by carpenters) laborers shall tend said carpenter on erection and dismantling thereof, preparation for foundation or mudsills, maintenance; Scraping of floors; Screeds: Handling of all screeds to be reused; handling, dismantling and conveyance of screeds; Setting, leveling and securing or bracing of metal or other road forms and expansion joints; Sheet Piling/trench shoring (handling and placing of skip sheet or wood plank trench shoring); Ship Scalers; Shipwright Tender; Sign Erector (subdivision traffic, regulatory, and street-name signs); Sloper; Slurry Seal Crews (Mixer Operator, Applicator, Squeegee Man, Shuttle Man, Top Man); Snapping of wall ties and removal of tie rods; Soil Test operations of semi and 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 and 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 and handling concrete forms an false work.

LAB00368-002 09/03/2018

| | Rates | Fringes |
|---------------------------------|----------|---------|
| Landscape & Irrigation Laborers | | |
| GROUP 1..... | \$ 25.50 | 12.68 |
| GROUP 2..... | \$ 26.40 | 12.68 |
| GROUP 3..... | \$ 21.10 | 12.68 |

LABORERS CLASSIFICATIONS

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)..:

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).

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.

LAB00368-003 09/03/2018

| | Rates | Fringes |
|---------------------|----------|---------|
| Underground Laborer | | |
| GROUP 1..... | \$ 38.00 | 20.26 |
| GROUP 2..... | \$ 39.50 | 20.26 |
| GROUP 3..... | \$ 40.00 | 20.26 |
| GROUP 4..... | \$ 41.00 | 20.26 |
| GROUP 5..... | \$ 41.35 | 20.26 |
| GROUP 6..... | \$ 41.60 | 20.26 |
| GROUP 7..... | \$ 42.05 | 20.26 |

GROUP 1: Watchmen; Change House Attendant.

GROUP 2: Swamper; Brakeman; Bull Gang-Muckers, Trackmen; Dumpmen (any method); Concrete Crew (includes rodding and spreading); Grout Crew; Reboundmen

GROUP 3: Chucktenders and Cabletenders; Powderman (Prime House); Vibratorman, Pavement Breakers

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 Picker (where car is lifted); Nipper; Grout Gunmen; Grout Pumpman & Potman; Guniting, 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

GROUP 5: Shaft Work & Raise (below actual or excavated ground level); Diamond Driller; Guniting or Shotcrete Nozzleman; Rodman; Groundman

GROUP 6: Shifter

GROUP 7: Shifter (Shaft Work & Raiser)

PAIN1791-001 07/01/2018

| | Rates | Fringes |
|-------------------------|----------|---------|
| Painters: | | |
| Brush..... | \$ 37.35 | 27.85 |
| Sandblaster; Spray..... | \$ 37.35 | 27.85 |

PAIN1889-001 07/01/2018

| | Rates | Fringes |
|---------------|----------|---------|
| Glaziers..... | \$ 38.00 | 31.78 |

PAIN1926-001 02/26/2017

| | Rates | Fringes |
|------------------------|----------|---------|
| Soft Floor Layers..... | \$ 33.00 | 27.73 |

PAIN1944-001 01/01/2018

| | Rates | Fringes |
|------------|----------|---------|
| Taper..... | \$ 42.10 | 26.15 |

PLAS0630-001 09/04/2017

| | Rates | Fringes |
|----------------|----------|---------|
| PLASTERER..... | \$ 40.54 | 28.23 |

PLAS0630-002 09/04/2017

| | Rates | Fringes |
|----------------|-------|---------|
| Cement Masons: | | |

| | | |
|------------------------------|----------|-------|
| Cement Masons..... | \$ 39.70 | 29.38 |
| Trowel Machine Operators.... | \$ 39.85 | 29.38 |

PLUM0675-001 07/01/2018

| | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

| | | |
|---|----------|-------|
| Plumber, Pipefitter, Steamfitter & Sprinkler Fitter... | \$ 45.49 | 26.02 |
|---|----------|-------|

ROOF0221-001 09/02/2018

| | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

| | | |
|--|----------|-------|
| Roofers (Including Built Up, Composition and Single Ply)..... | \$ 40.50 | 18.13 |
|--|----------|-------|

SHEE0293-001 09/03/2017

| | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

| | | |
|-------------------------|----------|-------|
| Sheet metal worker..... | \$ 41.80 | 26.53 |
|-------------------------|----------|-------|

SUHI1997-002 09/15/1997

| | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

| | | |
|------------------------|----------|------|
| Drapery Installer..... | \$ 13.60 | 1.20 |
|------------------------|----------|------|

| | | |
|--|---------|------|
| FENCE ERECTOR (Chain Link Fence)..... | \$ 9.33 | 1.65 |
|--|---------|------|

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 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) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which 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. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of 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. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write 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 the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write 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 by 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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

PRE-BID MEETING MINUTES

Project: Freeway Management System, Phase 2
Fed Aid Project No. NH-0300(160)
District of Honolulu, Ewa and Koolaupoko
Island of Oahu

Subject: Non-mandatory Pre-bid Conference

Date/Time: November 8, 2018 / 9:00 AM – 9:45 AM

Held: State Department of Transportation, Highways Division, 601 Kamokila Boulevard, Room 541, Kapolei, HI 96707

Present: See attached list of attendees

Discussed:

A. Neal Honma opens meeting at 9:00 A.M.:

1. Pre-bid conference is non-mandatory and is intended for clarification prior to bidding.
2. If you haven't done yet, please sign in.
3. Any discrepancies will be addressed by addendum.
4. The minutes to this meeting will be distributed prior to bid opening.
5. Bidders have until November 15, 2018 at 2:00 P.M. to submit any questions.
6. Bid opening is scheduled for 2:00 P.M., November 29, 2017
7. To be eligible for award, bidders must complete all unit prices and amounts in the Base Bid and Additive Alternates 1 and 2.
8. Please note that the cameras, VMS, speed and MAC readers are all Government Furnished Equipment (GFE).
9. The Proposal Schedule is missing page P-17 thru P-19. Addendum No. 1 is being processed to add these sheets.
10. This meeting will be held open until 9:30 A.M. to assure all prospective bidders have the opportunity to attend this Pre-bid meeting.

B. Open discussion to prospective bidders:




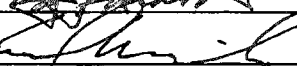

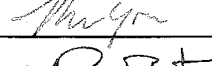

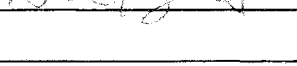
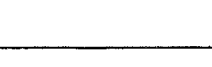
1. Q: After the VMS is installed and the communication link has been established as required by the specifications, who is responsible for the programming / integration to HDOT system?
A: HDOT will program / integrate the new VMS.
2. The proposed portion of work on Pali Highway from the H-3 Halekou interchange to Vineyard Boulevard is dependent on the completion of an on-going resurfacing project on Pali Highway.

The Pali Highway Resurfacing and Lighting Replacement Project (Federal Aid Project No. NH-061-1(035) will install the conduits that will be used to connect the fiber optic system. Therefore, the work proposed for Pali Highway shall not begin until the on-going project is completed. The current project schedule has a completion date in April 2020.

Meeting Adjourned at 9:45 A.M.

Prepared by: Neal Honma

Pre-Bid Meeting Attendance List
 Freeway Management System, Phase 2
 Fed Aid Project No. NH-0300(160)
 November 8, 2018 at 900am

| NAME | Signature | Organization | Phone | E-mail Address |
|----------------------|---|-----------------|----------|---------------------------------|
| 1 NEAL HONMA |  | DOT | 642-7675 | neal.f.honma@hawaii.gov |
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