STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADDENDUM NO. 2
for
HAWAII BELT ROAD
REHABILITATION OF UMAUMA STREAM BRIDGE
FAP NO. BR-019-2(61)

The following amendments shall be made to the Bid Documents:

A. NOTICE TO BIDDERS

Prospective bidders are hereby notified that receiving of sealed proposals scheduled for 2;00 PM Hawaiian Standard Time (HST) November 1, 2012 will be postponed and rescheduled for 2:00 P.M., November 8, 2012, at which time and place bid(s) will be publicly open and read.

B. SPECIFICATIONS

1. Replace Table of Contents Page 3 dated 7/25/12 with the attached Table of Contents Page 3 dated r10/22/12.

2. Amend Page 202-1a dated 10/10/11, lines 18 and 19 to read:

   " The existing DOT trailer and field house shall be relocated to the Hawaii District Baseyard at 50 Makaala Street in Hilo, Hawaii."

3. Replace Page 212-1a dated 9/5/12 with the attached Page 212-1a dated r10/25/12.

4. Replace Page 503-2a dated 7/9/12 with the attached Page 503-2a dated r10/22/12.

5. Replace entire Section 512 – Micropiles, Pages 512-1a to 512-12a dated 10/10/11 with the attached Pages 512-1a to 512-12a dated r10/25/12.

6. Replace Page 656-1a dated 10/10/11, with the attached Page 656-1a dated r10/22/12.

7. Amend Page 681-4a dated 9/5/12, by deleting lines 172 and 173.

8. Amend Page 681-8a dated 9/5/12, lines 335 to 338 to read:

"(1) Steel plates shall conform to ASTM A36 and shall be zinc-coated per ASTM A123 or ASTM A153, as applicable.

(2) All bolts, nuts and washers shall be galvanized per ASTM A123 or ASTM A153, as applicable."

9. Replace Pages 694-8a and 694-9a dated 9/5/12 with the attached Pages 694-8a and 694-9a dated r10/22/12.

10. Replace Pages 695-3a, 695-16a and 695-17a dated 9/5/12 with the attached Pages 695-3a, 695-16a and 695-17a dated r10/23/12.

11. Replace Federal Wage Rates dated 8/31/2012 with the attached Federal Wage Rates dated 10/19/12.

C. PROPOSAL

1. Replace Page P-1 dated 7/18/12 with the attached Page P-1 dated r10/23/12.

2. Replace Proposal Schedule Pages P-8 through P-14 dated 7/25/12 with the attached Pages P-8 through P-15 dated r10/23/12.

3. Replace Supplement to Proposal Schedule Pages P-15 through P-18 dated 7/07/05 with the attached Pages P-16 through P-19 dated 1/03/12.

D. PLANS

1. Replace Plan Sheet Nos. 38, 39, and 91 with the attached Plan Sheet Nos. ADD. 38, ADD. 39, and ADD. 91.

2. Amend Plan Sheet 84, Construction Notes, by revising Note 4 to read:

"4. All testing shall be performed by the contractor and monitored by the Engineer. Contractor shall notify the Engineer at least 7 calendar days prior to commencing with any testing. Cost for all testing shall be incidental to cost of ground anchors."

3. Amend Plan Sheet 130, Construction Phasing – General Notes, Note 1 by replacing the last sentence to read:

"Full bridge closure for no more than 10 minute intervals may be permitted, subject to Engineer's approval. Longer closure periods may be permitted between 9:00 P.M. and 4:00 A.M., subject to Engineer's approval. Advance notice, via message boards on both

approaches, shall be given a minimum of two days prior to full bridge closure(s). Passage of emergency vehicles shall be provided at all times"

E. RFI AND RESPONSES

Attached are the Pre-bid RFI's and responses for your information.

F. PRE-BID MEETING MINUTES

Attached are the October 2, 2012 Pre-bid Meeting Minutes and Attendance Sheet for your information.

Please acknowledge receipt of this Addendum No. 2 by recording the date of its receipt in the space provided on page P-4 of the Proposal.

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

DIVISION 600 – MISCELLANEOUS CONSTRUCTION		
Section	**Description**	**Pages**
681	Ground Anchors	681-1a – 681-20a
694	Clean and Paint Structural Bridge Steel	694-1a – 694-9a
695	Lead in Construction	695-1a – 695-17a
696	Field Office and Project Site Laboratory	696-1a
699	Mobilization	699-1a

DIVISION 700 - MATERIALS		
Section	**Description**	**Pages**
703	Aggregates	703-1a
705	Joint Materials for Concrete Structures	705-1a
708	Paints	708-1a
711	Concrete Curing Materials and Admixtures	711-1a
712	Miscellaneous	712-1a
718	Steel Fasteners	718-1a
720	Geogrids	720-1a – 720-3a

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

Federal Wage Rates

Proposal Title Page

Proposal ..... P-1 – P-7
Proposal Schedule ..... P-8 – P-15
Supplement to Proposal Schedule ..... P-16 – P-19

Confirmation by DBE

Surety Bid Bond

Sample Forms

Contract

Make the following Section a part of the Standard Specifications:

"SECTION 212 – PROBING AND GROUTING WORK AT STRUCTURE PIER FOOTINGS

212.01 Description. This section describes performing probing and grouting work indicated in the contract documents after structure excavation to pier footing subgrade has been completed.

212.02 Materials.

Non-Shrink Cement Grout	712.04(A)

212.03 Construction. Perform probing and grouting work at structure pier footings as indicated in the contract documents.

Grout for probing and grouting of voids and cavities shall be per Subsection 212.02 and the referenced Subsection 712.04(A), with the following deviation. The grout shall not contain any gravel and shall have a slump of at least 7 inches. Should the grout take be very high such that the voids and cavities cannot be filled, the Engineer may determine that a lower slump grout can be utilized for certain probe holes.

212.04 Measurement. The Engineer will measure probing and grouting work at structure pier footings on a unit price basis.

The Engineer will measure backfilling or grouting of voids or cavities at Pier #1 and Pier #2 on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

212.05 Payment. The Engineer will pay for the accepted pay item listed below at the contract price per pay unit. Payment will be full compensation for the work prescribed in this section and the contract documents.

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

Pay Item	**PayUnit**
Probing at Pier # 1 and Pier # 2	Linear Foot
Grouting of Probe Holes at Pier #1 and Pier #2	Cubic Yard
Backfilling or Grouting of Voids or Cavities at Pier #1 and Pier #2	Force Account"

END OF SECTION 212

(III) Amend **Subsection 503.03(L)(1) Water Curing** by replacing lines 807 to 814 to read as follows:

"Begin water curing for bridge decks and pour strips immediately after concrete surface is hard enough to receive water without damaging surface or texture of concrete. Continue water curing until end of specified curing period.

Prevent curing water from falling on terrain and stream under bridge structure. Channel curing water away from falsework and bridge structure."

(IV) Amend **Section 503.03 Construction** by adding the following subsection after line 1200 to read:

"**(O) Concrete Bridge Deck Sealer**. New and existing concrete bridge deck surfaces shall be sealed with a corrosion inhibitor/concrete sealer prior to installing new tack coat and hot mix asphalt pavement overlay. Corrosion inhibitor/concrete sealer shall be a penetrating silane sealer that contains a minimum of 40 percent silane by weight and shall comply with NCHRP Report 244. Corrosion inhibitor/concrete sealer shall be "Weather Worker S-40" by Dayton Superior, or approved equal.

New concrete shall be water cured in accordance with Section 503 Concrete. New concrete shall be cured for 28 days minimum in accordance with manufacturer's recommendations prior to applying corrosion inhibitor/concrete sealer.

Surface preparation of new and existing concrete bridge deck shall be in accordance with manufacturer's recommendations, except that shot blasting, water blasting and other high-pressure blasting, and chemical cleaning shall not be permitted. Surface preparation shall not result in more than 1/16 inch thickness of concrete surface being removed.

Application of corrosion inhibitor/concrete sealer shall be in accordance with the manufacturer's recommendations.

(V) Amend **Section 503.04 Measurement** by adding the following paragraph after line 1205 to read:

"The Engineer will not measure concrete bridge deck sealer for payment."

Make the following Section a part of the Standard Specifications:

"SECTION 512 - MICROPILES

512.01 General.

(A) Description. This section shall govern constructing micropiles to the required locations, capacity and dimensions, in place complete, as indicated on the Plans and as specified herein.

(B) Definitions. Micropiles shall be defined as small diameter, high capacity drilled and grouted piles. Each pile shall consist of permanent steel casing, cement grout-to-ground contact area, inner steel reinforcement (central reinforcing bar), centralizers, and cement grout that is tremied into the drill holes as the steel casing is withdrawn and/or injected during post grouting. The micropiles shall be of Type B classification as defined in FHWA-SA-97-070 (June 2000).

512.02 Design Requirements.

(A) General. Micropiles shall have a minimum length of 25 feet below bottom of concrete foundation, including a minimum uncased length of 15 feet into the underlying hard basalt layer and cased length of 10 feet with design loads as shown on the plans.

Permanent steel casings shall be installed throughout the cased zone. The uncased section of the micropile shall extend below the bottom of the steel casing.

The micropile Contractor shall select the drilling, installation, and grouting methods needed to satisfy or exceed the minimum length and capacity of the micropile.

512.03 Qualifications of Micropile Contractor. The Micropile Contractor shall conform to the requirements indicated below.

(A) Micropile Experience. Because of the expertise required to successfully complete the micropile according to contract, a qualified Micropile Contractor shall install the micropile. The Micropile Contractor shall have installed cased permanent micropiles for at least three (3) years and has successfully completed at least five (5) projects (each project shall have at least 20 cased micropiles per project) in the last five (5) years. For a project to count as experience, all of the micropiles must have had casing that was removed during the tremied concrete placement. Projects where the micropiles were grouted while the casing or inner reinforcement was advanced downwards is not acceptable as

experience.

512.04 Preconstruction Requirements.

(A) Protection of Existing Structures. Verify locations of existing underground utilities and structures prior to micropile work. If obstructions are encountered in the drilling work, the Contractor shall stop operations in such areas and immediately notify the Engineer.

(B) Experience Information. The Micropile Contractor shall submit the following to the Engineer within 30 days after award of contract:

(1) List containing at least five (5) projects on which they have installed micropiles. A description of each project including a reference shall be included in the list. The references shall include the individual's name, current phone number, and company name.

(2) List identifying the drill operators and on-site supervisors who will be assigned to this project. The list shall contain a summary of each individual's experience in sufficient detail that the Engineer could determine if the individual has satisfied at least one year of experience in installing micropiles and direct experience on at least two (2) piling projects similar to the scope of work as this project.

(3) The accepted each individual shall not be changed without permission of the Engineer and shall be full-time on this project.

The use of consultants and/or manufacturer's representatives does not satisfy the above qualification requirements. Micropile work shall not start nor order materials until the Engineer has approved the Contractor's qualifications.

The Engineer may suspend the micropile construction if the micropile Contractor substitutes unqualified personnel for approved personnel during construction. If work is suspended due to substitution of unqualified personnel, the Contractor shall be fully liable for additional costs resulting from the suspension of work and no adjustment in contract time resulting for the suspension of work will be allowed.

(C) Prior to the start of the micropile construction, the Contractor shall submit the following to the Engineer for review:

(1) Shop Drawings. Indicate installation methods including drilling, placement of grout, placement of reinforcement and

centralizers.

(2) Grout Mix Design. Submit a grout mix design, not less than 45 calendar days prior to grout placement. Submit certified test reports for grout strength in accordance with ASTM C109.

(3) Manufacturer's Instructions. Submit installation instructions for placement of micropiles, including a detailed narrative describing the drilling equipment, drilling procedures, placement of reinforcement, grout centralizers, methods to be used, and all other aspects of the work.

(4) Load Tests. Submit proposed load test frame and associated equipment including calibration data for each hydraulic jack pressure gauge and load cell to be used. Calibration tests shall be performed on jack and pressure gauge as a unit by an independent testing laboratory within 180 calendar days prior to date of load testing.

(5) Certificates. Submit certification identifying cement, brand name, type, mill location, and quantity to be used. Mill test reports of the piling steel components (reinforcement, casing and bearing plates, etc).

(6) Pollution Control Plan. Submit Pollution Control Plan to the Engineer for acceptance.

(D) A signed statement that the Micropile Contractor has inspected both the project site and the subsurface information including soil or rock samples made available in the contract documents.

512.05 Materials. Materials shall conform to the following:

(A) Portland cement shall conform to ASTM C150, Type 1.

(B) Grout shall conform to ASTM C476. Grout shall be neat cement (Portland cement and water) or a sand-cement grout with a fluid consistency, water cement ratio of 0.40 or less, and a minimum unconfined compressive strength (from cubes) of 5500 psi at 28 days in accordance with ASTM C109. The grout shall contain suitable admixtures to control bleeding, improve flowability, and reduce the potential for washout.

(C) Water shall be clean, fresh, potable, and free from injurious amounts of mineral and organic substances.

(D) Central reinforcing steel shall be high strength threadbar conforming to ASTM A722 (AASHTO M 275), Type II, Grade 150, and shall be fusion bonded epoxy coated in accordance with ASTM A934. Epoxy coating thickness after curing shall be 7 mils minimum and 12 mils maximum for straight bar sections.

(E) Centralizers shall be fabricated from plastic or material that is non-detrimental to the reinforcing steel. Wood shall not be used. The centralizer shall be able to support the epoxy coated bar reinforcing so a minimum of 1.5 inches of grout cover is provided and shall permit grout to freely flow up the drill hole.

(F) Permanent steel casing shall conform to the physical properties of ASTM A252, Grade 3 and shall be hot dip zinc coated in accordance with ASTM A123.

(G) The micropile anchorage shall consist of a steel bearing plate with hex nut, and deformed bar spiral reinforcing. The bearing plate shall conform to the provisions in Section 713, "Structural Steel and Related Materials" of the Standard Specifications, except that galvanizing will not be required. Deformed bar spiral reinforcing shall conform to ASTM A615, Grade 40.

(H) Hex nut shall develop the full ultimate load of the threadbar in tension or in compression. Size of hex nut shall be compatible with the epoxy coated threadbar. Hex nut shall be furnished by the threadbar manufacturer.

512.06 Construction Requirements.

(A) Protection of Existing Structures. Verify locations of existing underground utilities and structures prior to micropile work. If obstructions are encountered in the drilling work, stop operations in such area and immediately notify the Engineer.

The Contractor shall control his operations to prevent damage to existing structures and utilities. Preventive measures shall include, but are not limited to, selecting construction methods and procedures that will reduce the amount of cave-ins, over-cuts, and excessive grout losses, and monitoring and controlling the vibrations from construction activities such as drilling or the driving of casing.

(B) Construction Requirement.

(1) General. The Contractor shall perform the micropile installations to the locations, dimensions, batter and tip elevations

as shown in the plans or otherwise required by the Engineer. The Contractor's methods and equipment shall be suitable for the intended purpose and material encountered.

Highly permeable zones within the clinker materials and basalt formation exist at the site. The Contractor shall account for this condition by selecting suitable drilling and grouting methods that will produce micropiles that satisfy or exceed the design load requirements, while reducing the potential for difficult drilling and excessive grout losses or grout takes. Grout takes less than 15 percent of the theoretical volume based on the bit diameter and micropile depth shall be considered incidental to the micropile construction.

Provide drill holes with minimum diameter of 7 inches at the locations and depths shown in the Contract Documents or as directed by the Engineer. Install the reinforcements and grout in the same day the holes are drilled to minimize sloughing and caving.

Contractor shall install temporary steel casings if required to facilitate micropile installation at the Contractor's expense.

During micropile installations, the Engineer will maintain the following information during micropile installation:

(a) Detailed drilling records and logs of the date of drilling, equipment used, driller's name, actual hole sizes and depths, subsurface materials encountered, drilling rates and any unusual conditions.

(b) Grouting records indicating the grouting dates, cement type, quantity injected, and grout pressures at the point of injection, including any post grouting performed.

The Contractor shall submit as-built drawings showing the micropile locations, elevations of top and bottom of steel casing and reinforcing steel, total pile length and bond length, and casing size to the Engineer for review and record.

The Contractor shall immediately report to the Engineer any unusual conditions encountered during the micropile construction.

(2) Drilling Equipment. The drilling equipment for the micropiles may consist of a combination of rotary drilling, core drilling, percussion drilling, or hollow stem auger drilling, and shall be capable of drilling through hard cobbles, hard boulders, hard

basaltic rock, stiff silt and clay, and other subsurface conditions as indicated on the boring logs. It shall have suitable drilling bit and other appropriate equipment to drill into the various subsurface materials anticipated at this site. The use of bentonite or drilling mud will not be allowed.

(3) Grouting Equipment. Grout shall be produced with high-speed, high shear mixers. The grouting equipment shall be equipped with a pressure gauge to monitor grout pressures. An additional in-line pressure gauge shall be installed at the point of injection. Both pressure gauges shall be capable of measuring pressures of at least twice the actual grout pressures anticipated by the Contractor. The grouting equipment shall be capable of thoroughly mixing and producing a grout free of lumps and undispersed cement, and shall be able to pump the grout in a continuous operation.

(C) Soil Cuttings and Fluids. Suitable equipment and approved methods shall be used to contain and treat the soil cuttings and fluids from the drilling and grouting in accordance with County, State and Federal environmental pollution regulations and requirements to prevent environmental impacts to existing structures. The soil cuttings and fluids from the drilling shall be disposed of by the Contractor in accordance with County, State and Federal environmental pollution regulations and requirements. All cuttings and fluids shall be picked up immediately and removed by the end of the work day. No dust or material shall remain on the project site.

(D) Permanent Steel Casings. Casing shall have a minimum outside diameter of 7 inches, minimum wall thickness of 0.45 inch, and machined flush jointed threads.

(E) Central Reinforcing Steel Placement. The central reinforcing steel shall consist of a single epoxy coated longitudinal bar within each micropile, bar size as indicated on the plans. Non-corrosive centralizers shall be used to support the reinforcing bars. The centralizer shall be placed at spacings not exceeding 10 feet and the lower centralizer shall be located not more than one foot above the bottom of the reinforcing bar, unless otherwise indicated.

Where necessary, reinforcing steel shall be spliced only below end of permanent steel casing with mechanical couplers specifically manufactured for splicing epoxy coated bars and capable of achieving 125 percent of the full ultimate strength of the bar in tension or compression. The coupler shall also be corrosion resistant. Contractor shall submit mechanical coupler data to the Engineer for approval.

(F) Grouting. The grout in each micropile shall be placed by starting from the deepest point in the drill hole and working upward. It shall be pumped through grout tubes, pipes, or drill rods. The grout pressures and grout takes shall be controlled to reduce the amount of ground heave and excessive grout takes. Additional post grouting may be performed as determined by the Contractor, to obtain the required load capacity. After completing the grouting, the grout tube or pipe may remain in the hole, but it shall be filled with grout of equal or greater strength than the grout used in the installations.

(G) Grout Quality Control. One set of grout specimens shall be taken daily. Each set shall consist of 6 cubes. Cubes shall be made from brass molds (not plastic molds). Grout specimens shall be cured under laboratory conditions. Cubes shall be tested in accordance with ASTM C109. Strength tests shall be made for 3 cubes at 7 days and for 3 cubes at 28 days. If the strength tests of one or more cubes of a set from a pile are at 10 percent or more below the required compressive strength required at 28 days, all piles shall be abandoned and replaced by piles placed adjacent to the abandoned piles as directed by the Engineer at the Contractor's expense, or Contractor shall submit proposed remedial solution for Engineer's review. All tests shall be performed by an independent testing laboratory approved by the Engineer and paid for by the Contractor. Costs of remedial solution, if any, shall be borne by the Contractor.

(H) Load Tests. Contractor shall obtain the services of a Hawaii Licensed Professional Engineer with satisfactory load test experience to conduct load tests in accordance with the contract documents; record data; and submit reports of test results.

(1) Pre-Production Micropiles and Load Tests. Before installation of production micropiles, at least two (2) preproduction vertical micropiles shall be installed using equipment and methods proposed by Contractor. Approximate locations of test piles shall be as shown on the plans or as determined in the field by the Engineer. Contractor shall load test one pre-production pile in compression and one in tension to the design load for extreme event limit state as shown on the plans and in accordance with ASTM D1143 and ASTM D 3689. Install additional reaction piles or anchors for load tests, and provide necessary load test equipment, hydraulic jack, pump, load cell, and instrumentation in accordance with ASTM D 1143 and ASTM D 3689.

Maximum load in this test shall be maintained for minimum 12 hours or until settlement is less than or equal to 0.01 inches per

hour, but not less than 8 hours. Deflection readings on pile top shall be referenced to a constant elevation benchmark sufficiently far away from test.

Perform load test no earlier than 7 days after the completion of pre-production pile construction and after grout has attained a minimum compressive strength of 4000 psi, whichever is later.

Within one (1) week after completion of micropile load tests, submit detailed test results, including graphs of load versus deflection to the Engineer.

(2) Revised Installation Procedure. Should pre-production load test pile fail to produce acceptable test results, modify installation procedures and install a replacement pile or piles and perform additional compression load tests at the Contractor's expense until acceptable results are obtained.

Submit a revised installation procedure to the Engineer for review and approval. Installation of micropiles will not be permitted to continue until the revised procedure is accepted by the Engineer.

(3) Proof Tests. Proof test 10 percent of the vertical production micropiles (half in compression and half in tension) as indicated on the drawings and as directed by the Engineer. Proof testing of preproduction micropile is not required. Perform proof test no earlier than 14 days after the completion of production pile construction, and after grout has attained a minimum compressive strength of 5,500 psi, whichever is later.

Perform proof testing by incrementally loading micro-pile to be tested in accordance with the following loading schedule:

Proof Test Schedule
0.05P
0.25P
0.50P
0.75P
1.00P

Where P = Design load for extreme event limit state.

Except at maximum proof test load, increase loads from one increment to next immediately after recording the micropile movement. Measure and record the micropile movement at top of pile for each load increment to nearest 0.001 inches with respect to

a constant elevation benchmark located sufficiently far away from pile being tested so as not to be affected by test. Monitor load with a load cell. At load increments other than maximum test load, hold load just long enough to measure micropile movement, but not more than one minute. Hold maximum test load for ten (10) minutes. Periodically pump jack as necessary to maintain a constant load. Start load-holding period as soon as maximum load has been applied and record micropile movements at 1, 2, 3, 4, 5, 6, and 10 minutes.

If micropile movements between the one minute and ten (10) minute readings exceed 0.04 inches, hold maximum test load for an additional 50 minutes and record micropile movements at 15, 20, 25, 30, 45, and 60 minutes.

Submit results of micropile proof testing within two (2) working days after completion of each test. Include a plot of micropile movements versus load with test data.

Proof testing of micropiles with ten (10) minute load-holding periods is acceptable if total movement measured between one minute and ten (10) minutes is less than 0.04 inches, and total movement at the maximum test load does not exceed 0.38 inch.

Proof testing of micropiles with sixty (60) minutes load-holding periods is acceptable if creep rate does not exceed 0.08 inches per log cycle of time and total movement at the maximum test load does not exceed 0.38 inch.

If a micropile fails proof testing, modify design and /or installation procedures to provide micropiles with acceptable results.

(l) Construction Tolerance. The following construction tolerances shall apply to micropiles:

(1) The micropile shall be within two (2) inches of plan position in the horizontal plane at the plan elevation for the top of the pile.

(2) The vertical alignment of the micropile shall not deviate from plumb by more than one-quarter (1/4) of an inch per foot of depth.

(3) After grouting, the top of the central reinforcing steel shall be no more than six (6) inches above and no more than three (3) inches below plan position.

(4) The top elevation of the micropile shall have a tolerance of ± one-half (1/2) inch from the plan top of pile elevation.

(5) The dimensions of the casings are subject to American Petroleum Institute tolerances applicable to regular steel pipe.

(6) Micropiles not constructed within the required tolerances are unacceptable. Submit correction plan of replacement micropiles to the Engineer. Corrections may be made to an unacceptable micropile by any approved combination of the following methods:

The approval of correction procedures is dependent on analysis of the effect of the degree of misalignment, improper positioning, and/or mis-location of the unacceptable micropile. Correction methods may be approved as design analysis indicated. Redesign drawings and computations shall be signed by a Structural Engineer licensed in the State of Hawaii. Materials and work necessary, including engineering analysis and redesign and construction, to effect corrections for unacceptable micropiles shall be furnished at no cost to the State.

(J) Clean Up. Upon completion of work, remove all materials, tools, scaffolding, refuse and debris generated by the work from premises, leaving premises in clean and satisfactory condition.

Clean up shall be conducted by the Contractor to remove rubbish and debris from the site daily, unless otherwise directed. Store materials which cannot be properly disposed of daily.

512.07 Measurement.

The Engineer will not measure furnishing micropile installation (drilling and grouting) equipment for payment.

The Engineer will not measure furnishing instrumentation, installing the load test micropile (including reaction micropiles), and collecting data during the load test for payment.

The Engineer will measure the following lengths per linear foot complete in place:

(1) Uncased Length. The Engineer will measure the difference between the plan bottom of casing and the plan bottom of the micropile.

(2) Cased Length. The Engineer will measure the difference

between bottom of the concrete pilecap and the plan bottom of the steel casing. The micropile extension into the concrete pilecap, and the steel bearing plate connection assembly and additional reinforcing steel in the pilecap will not be measured nor paid for separately and will be considered incidental to the respective items of work.

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

The Engineer will pay for the accepted load tests (all pre-production load tests specified herein) on a lump sum basis, complete in place. The price includes full compensation for installing the load test micropile and reaction micropiles (as needed), costs related to the performance of the load test, furnishing labor, materials, equipment, tools, and incidentals necessary to complete the work.

The Engineer will pay for the accepted uncased length of the production micropile at the contract unit price per linear foot for the diameter specified. The price includes full compensation for micropile excavation, furnishing and installing reinforcement bar and grout within the uncased length, performing grout tests and proof tests, and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for the accepted cased length of the production micropile at the contract unit price per linear foot for the diameter specified. The price includes full compensation for micropile excavation, furnishing and installing the steel casing, reinforcement bar and grout within the cased length, performing grout tests and proof tests and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

No payment will be made for micropiles that are damaged either during installation or after the micropiles are complete in place. No payment will be made for additional excavation, backfill, concrete, reinforcement, nor other costs incurred from footing enlargement resulting from replacing rejected micropiles.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	Pay Unit
Furnishing Micropile Drilling and Grouting Equipment	Lump Sum

The Engineer will pay for:

(A) 60 percent of the contract bid price when drilling and grouting equipment are on job site, assembled, and ready to install micropiles.

(B) 40 percent of the contract bid price when the Contractor has installed the last micropile and proof-tested all required micropiles.

Preproduction Micropile Load Tests	Lump Sum
Production Micropiles	
Uncased Length of Micropile	Linear Foot
Cased Length of Micropile	Linear Foot"

END OF SECTION 512

SECTION 656 – DRILLING HOLES AND INSTALLING DOWEL REINFORCING BARS

Make the following amendment to said Section:

(I) Amend **Subsection 656.03(A) Drilling and Installation** by adding the following paragraph after line 30 to read:

"All drilled holes shall be cleaned, filled with epoxy, and reinforcing dowels and anchor bolts installed prior to end of the work day."

(II) Amend **Subsection 656.03(B) Inspection** by adding the following paragraph after line 33 to read:

"After epoxy grout has cured, dowel reinforcing bars shall be pull (tension) tested with a calibrated hydraulic stressing jack to a load of one-third times the specified yield strength of the reinforcing bar, or as directed by the Engineer. The Engineer will determine the dowel reinforcing bars to be pull tested."

(III) Amend **Section 656.04 Measurement** by replacing lines 34 and 35 to read as follows:

"**656.04 Measurement.** The Engineer not measure drilling holes and installing dowel reinforcing bars for payment."

(IV) Amend **Section 656.05 Payment** by replacing lines 37 to 47 to read as follows:

"**656.05 Payment.** The Engineer will not pay for drilling holes and installing dowel reinforcing bars and will consider the cost for drilling holes and installing dowel reinforcing bars as included in the contract price for the various contract pay items under Section 602 – Reinforcing Steel. The cost is for the work prescribed in this section and the contract documents."

END OF SECTION 656

data sheets for proper cure times. If any appreciable time elapses between painting operations, as judged by the Engineer, the Contractor shall re-clean surfaces before restarting painting operations.

(5) Apply coatings via spray, brush and/or roll methods, utilizing approved equipment standard to the industry according to the instructions of the paint manufacturer.

(6) Coat the cleaned surfaces with the specific base coat in the same working day. Re-clean and re-prepare any surface that rusts before the application of the base coat, for painting again.

(7) The Contractor shall apply the intermediate and top coats to complete the paint system application.

(F) Submittals.

(1) Paint Manufacturer's Product Data Information. The Contractor shall submit paint manufacturer's paint product data information with their written warranty, including the conditions limiting the warranty.

(G) Cleanup and Disposal. The Contractor shall clean up the entire project site of painting, cleaning, and debris caused by the Contractor's operations, before receiving final payment. This work shall be considered incidental to the other contract items.

694.04 Measurement. The Engineer will measure Repair to Structural Steel Members on a unit price basis according to the contract and as specified by the Engineer.

The Engineer will not measure clean and paint work.

The Engineer will measure for repair to structural steel members in existing superstructure on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

694.05 Payment. The Engineer will pay for the accepted Repair to Structural Steel Members on a unit price basis according to the contract. The amount may be more or less than the estimated amount shown in the proposal. The work includes repairing steel members and furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for the accepted clean and paint work on a lump sum basis according to the contract.

The Engineer will pay for the accepted Repair to Structural Steel Members in existing superstructure on a Force Account basis according to the contract. The work includes repairing steel members and furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for each of the following pay items when included in the proposal schedule:

Pay Item	**Pay Unit**
Repair to Structural Steel Members – Type _____	Each
Repair to Structural Steel Members – Type _____	Linear Foot
Clean and Paint Existing Steel Towers and Bents	Lump Sum
Clean and Paint Existing Steel Superstructure	Lump Sum
Repair to Structural Steel Members in Existing Superstructure	Force Account"

END OF SECTION 694

(C) Quality Assurance and Control of the Work.

(1) Pre-Bid Requirements: The Contractor shall be familiar with the project site(s), and nature of the work according to the Contractor's pre- qualification in Section 102. SSPC PCCP, SSPC-QP1 and SSPC-QP2 Certifications shall be required.

(2) Pre-Construction Meeting. The Contractor shall meet with the Engineer to discuss in detail the lead removal plan, including work procedures and precautions for the work.

(3) Worker Health:

(a) Medical Examinations.

1. Before exposure to lead-contaminated dust on this project, the Contractor shall provide the workers with a comprehensive medical examination as required by Hawaii Occupational Safety and Health (HIOSH) standards. The Contractor shall not require examination if adequate records show that an employee was examined, as required by HIOSH standards, within the last year.

2. Medical exams during lead removal activities shall be conducted according to the most recent guidelines and regulations.

3. The Contractor shall provide and pay for medical examinations and all project related health monitoring for three (3) State Employees or State Consultant Employees as designated by the Engineer.

4. Medical Records. The Contractor shall maintain complete medical records of employees for at least forty (40) years or for the duration of employment plus twenty (20) years, whichever is longer. The Contractor shall forward copies to the Engineer for verification.

(a) Respiratory Protection Program. The Contractor shall set up and carry out a respiratory protection program as required by ANSI Z88.2, and HIOSH standards. The Contractor shall furnish each employee, including the three (3) State employees or State consultant employees, a negative pressure respirator or other appropriate type with a

dispose of lead or lead-contaminated waste according, but not limited to: 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, and 40 CFR 265.

(d) Disposal Documentation. The Contractor shall submit written evidence that the hazardous waste treatment, storage, or disposal (TSD) facility is approved for lead disposal by the EPA and state, or local regulatory agencies. The Contractor shall submit to the Engineer one (1) copy of the completed manifest, signed and dated by the initial transporter according to 40 CFR 262.

695.04 Measurement. The Engineer will measure for Certified Industrial Hygienist and Industrial Hygienist Technician on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

The Engineer will measure removal and disposal of lead-based paint, and remediation of lead-impacted soil on force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

695.05 Payment. The Engineer will pay for the Certified Industrial Hygienist and Industrial Hygienist Technician, and for the removal and disposal of lead-based paint and remediation of lead-impacted soil on a force account basis in accordance with Subsection 109.06 - Force Account Provisions and Compensation. The amount may be more or less than the estimated amount shown in the proposal.

This force account work shall include all costs for labor, materials, equipment, and incidentals, required for the Certified Industrial Hygienist and Industrial Hygienist Technician to perform all work required of them including the following: quality assurance and control of work; worker health requirements; project planning and review; submittal of plans for boundary controls, containment system, monitoring and testing and other requirements for lead removal; training; hazard communication program preparation and compliance; hazardous waste management plan submittal and quality assurance; baseline and other testing and monitoring, including all costs to have samples taken, analyzed and reports made; submittal of all required catalog data, statements & certifications, testing and monitoring reports and results, and certificates of compliance; and planning, monitoring and quality control for all work procedures and clean up/disposal procedures.

The force account work pertaining to the removal of LBP shall include labor, materials, equipment and incidentals for actual removal and disposal of LBP or for labor, materials, equipment and incidentals required to set up boundary controls, containment systems and/or other physical requirements of

the programs and plans laid out by the Certified Industrial Hygienist and Industrial Hygienist Technician. Removal/disposal of LBP as well as boundary controls, containment systems and other physical requirements shall be paid for on a Force Account.

The force account work pertaining to the remediation of lead-impacted soil shall include labor, materials, equipment and incidentals for remediation of lead-impacted soil or for labor, materials, equipment and incidentals required to set up boundary controls, containment systems and/or other physical requirements of the programs and plans laid out by the Certified Industrial Hygienist and Industrial Hygienist Technician. Remediation of lead-impacted soil as well as boundary controls, containment systems and other physical requirements shall be paid for on a Force Account.

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

Pay Item	**Pay Unit**
Certified Industrial Hygienist	Force Account
Industrial Hygienist Technician	Force Account
Removal and Disposal of Lead-Based Paint	Force Account
Remediation of Lead-Impacted Soil	Force Account"

END OF SECTION 695

PROPOSAL TO THE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

PROJECT: HAWAII BELT ROAD
REHABILITATION OF UMAUMA STREAM BRIDGE
DISTRICT OF NORTH HILO
ISLAND OF HAWAII

PROJECT NO.: Federal-Aid Project No. BR-019-2(61)

COMPLETION TIME: 730 Calendar days from the date indicated in the Notice to Proceed from the Department.

DBE PROJECT GOAL: None Specified

DESIGN PROJECT MANAGER:

NAME:	Eddie Chiu
ADDRESS:	601 Kamokila Blvd, Room 688, Kapolei, Hawaii 96707
PHONE NO.:	(808) 692-7547
EMAIL:	Eddie.K.Chiu@Hawaii.gov
FAX NO.:	(808) 692-7555

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
201.0100	Clearing and Grubbing	L.S.	L.S.	L.S.	$_____
202.0130	Removal of Anchor Blocks	L.S.	L.S.	L.S.	$_____
202.0150	Removal of Existing A.C. Ramp	L.S.	L.S.	L.S.	$_____
202.0160	Removal of Existing Stairs	L.S.	L.S.	L.S.	$_____
202.0170	Removal of Existing Concrete Barriers	L.S.	L.S.	L.S.	$_____
202.0180	Removal of Existing Guardrails	L.S.	L.S.	L.S.	$_____
202.1000	Removal of Existing Bridge Railings, Endposts and Sidewalks, Portion of Existing Deck Slabs and Deck Drains, Portion of Existing Abutments, Wingwalls, Fins, Parapets and Brackets, Existing Wood Stairs and Concrete Stair On Grade	L.S.	L.S.	L.S.	$_____
202.2000	Relocate Existing DOT Trailer and Field House	L.S.	L.S.	L.S.	$_____
203.0100	Roadway Excavation	L.S.	L.S.	L.S.	$_____
203.0200	Borrow Excavated Material	L.S.	L.S.	L.S.	$_____
205.0200	Geotextile Fabric Installation	L.S.	L.S.	L.S.	$_____
205.0300	Geogrid Slope Reinforcement	L.S.	L.S.	L.S.	$_____
205.1000	Structure Excavation for Abutments and Wingwalls	L.S.	L.S.	L.S.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
205.2000	Structure Excavation for Piers #1, #2 and #3	L.S.	L.S.	L.S.	$_____
205.3000	Shoring, Bracing and/or Underpinning of Existing Bridge Foundations	L.S.	L.S.	L.S.	$_____
205.4000	Structure Backfill for Abutments and Wingwalls	L.S.	L.S.	L.S.	$_____
205.5000	Structure Backfill for Piers #1, #2 and #3	L.S.	L.S.	L.S.	$_____
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.	$ **100,000**
212.1000	Probing at Pier #1 and Pier #2	460	L.F.	$_____	$_____
212.2000	Grouting of Probe Holes at Pier #1 and Pier #2	4	C.F.	$_____	$_____
212.3000	Backfilling or Grouting of Voids or Cavities at Pier #1 and Pier #2	F.A.	F.A.	F.A.	$ **50,000**
304.1000	Aggregate Base	L.S.	L.S.	L.S.	$_____
401.1000	HMA Pavement, Mix No. V	L.S.	L.S.	L.S.	$_____
415.0100	Cold Planing	L.S.	L.S.	L.S.	$_____
501.1000	Structural Steel – Welded Plate Girders (Primed and Painted)	L.S.	L.S.	L.S.	$_____
501.2000	Structural Steel – Bracing and Other Members (Zinc Hot Dip Galvanized and Painted)	L.S.	L.S.	L.S.	$_____
501.3000	Structural Steel - Longitudinal Strut, Bumper and Strut/Bumper (Zinc Hot Dip Galvanized and Painted)	L.S.	L.S.	L.S.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
503.1000	Concrete in Bridge Deck Slab Widening	L.S.	L.S.	L.S.	$_____
503.2000	Concrete in Pier Columns and Caps – Piers #1, #2 and #3	L.S.	L.S.	L.S.	$_____
503.3000	Concrete in Abutments and Wingwalls	L.S.	L.S.	L.S.	$_____
503.4000	Concrete in Abutment Foundations (Pile Caps)	L.S.	L.S.	L.S.	$_____
503.5000	Concrete in Pier Foundations (Footings and Pile Caps)	L.S.	L.S.	L.S.	$_____
503.6000	Concrete in Approach Slabs Behind Abutments	L.S.	L.S.	L.S.	$_____
503.7000	Concrete in Bridge Deck New and Existing – Joint Seals	L.S.	L.S.	L.S.	$_____
506.1000	Bearing and Expansion Plates Under New and Existing Steel Plate Girders (Including New Anchor Bolts)	L.S.	L.S.	L.S.	$_____
507.1000	Concrete Traffic Railing and Endposts	L.S.	L.S.	L.S.	$_____
511.1000	Furnishing Drilled Shaft Drilling Equipment	L.S.	L.S.	L.S.	$_____
511.2000	Furnishing Instrumentation and Collecting Data	L.S.	L.S.	L.S.	$_____
511.3000	Drilled Shaft	330	L.F.	$_____	$_____
511.4000	Standard Excavation	330	L.F.	$_____	$_____
512.1000	Furnishing Micropile Drilling and Grouting Equipment	L.S.	L.S.	L.S.	$_____
512.2000	Preproduction Micropile Load Tests	L.S.	L.S.	L.S.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
512.3000	Production Micropiles - Uncased Length of Micropile	720	L.F.	$_____	$_____
512.4000	Production Micropiles - Cased Length of Micropile	800	L.F.	$_____	$_____
602.1000	Reinforcing Steel for Bridge (Except Foundations)	L.S.	L.S.	L.S.	$_____
602.2000	Reinforcing Steel for Foundations	L.S.	L.S.	L.S.	$_____
604.0100	Bridge Deck Drain Inlets	L.S.	L.S.	L.S.	$_____
604.1000	Steel Frame and Hatch Cover in Concrete Pier Column	L.S.	L.S.	L.S.	$_____
606.3100	Guardrail Type 3 Strong Post W-Beam	L.S.	L.S.	L.S.	$_____
606.3200	Guardrail Type 3 Thrie Beam	L.S.	L.S.	L.S.	$_____
607.0100	6 Feet - Chainlink Fence	L.S.	L.S.	L.S.	$_____
607.0200	Chain Link Gate, 6 Feet High and 20 Feet Wide	L.S.	L.S.	L.S.	$_____
608.0100	Inertial Sand Barrel Array	L.S.	L.S.	L.S.	$_____
628.1000	Shotcrete for Pier #3 Ground Anchors	L.S.	L.S.	L.S.	$_____
629.1010	Single 4-inch Pavement Striping (Thermoplastic Extrusion)	L.S.	L.S.	L.S.	$_____
629.1015	Double 4-inch Pavement Striping (Thermoplastic Extrusion)	L.S.	L.S.	L.S.	$_____
629.2030	Type C Pavement Marker	L.S.	L.S.	L.S.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
629.2040	Type D Pavement Marker	L.S.	L.S.	L.S.	$_____
632.0100	Type III Object Marker	L.S.	L.S.	L.S.	$_____
640.0100	Concrete Lined Drainage Ditch	L.S.	L.S.	L.S.	$_____
641.0100	Hydro-mulch Seeding	L.S.	L.S.	L.S.	$_____
645.1000	Traffic Control	L.S.	L.S.	L.S.	$_____
648.1000	Field Posted Drawings	L.S.	L.S.	L.S.	$_____
654.1000	Longitudinal Cable Restrainer	L.S.	L.S.	L.S.	$_____
670.1000	Draped Wire Mesh	180	S.Y.	S.Y.	$_____
681.1000	Furnishing Specialty Equipment for Ground Anchors	L.S.	L.S.	L.S.	$_____
681.2000	Ground Anchors for Pier #3	10	EA.	$_____	$_____
681.3000	Reinstallation of Ground Anchors Due to Grout Loss and Additional Performance Tests or Proof Tests	F.A.	F.A.	F.A.	$ **50,000**
694.1001	Repair to Structural Steel Members – Type 1	20	EA.	EA.	$_____
694.1002	Repair to Structural Steel Members – Type 2	500	EA.	EA.	$_____
694.1003	Repair to Structural Steel Members – Type 3	100	EA.	EA.	$_____
694.1004	Repair to Structural Steel Members – Type 4	100	EA.	EA.	$_____

PROPOSAL SCHEDULE					
ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
694.1005	Repair to Structural Steel Members – Type 5	1,000	L.F.	L.F.	$_____
694.1006	Repair to Structural Steel Members – Type 6	1,000	L.F.	L.F.	$_____
694.2000	Clean and Paint Existing Steel Towers and Bents	L.S.	L.S.	L.S.	$_____
694.3000	Clean and Paint Existing Steel Superstructure	L.S.	L.S.	L.S..	$_____
694.4000	Repair to Structural Steel Members in Existing Superstructure	F.A.	F.A.	F.A.	$ **50,000**
695.1000	Certified Industrial Hygienist	F.A.	F.A.	F.A.	$ **13,000**
695.2000	Industrial Hygienist Technician	F.A.	F.A.	F.A.	$ **6,000**
695.3000	Removal and Disposal of Lead-Based Paint	F.A.	F.A.	F.A.	$ **50,000**
695.4000	Remediation of Lead-Impacted Soil	F.A.	F.A.	F.A.	$ **25,000**
696.1000	Field Office Trailer (Not to Exceed $100,000.00)	L.S.	L.S.	L.S.	$_____
696.2000	Maintenance of Trailers	F.A.	F.A.	F.A.	$ **80,000**
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.	$_____

PROPOSAL SCHEDULE

a. Sum of All Items ..... $ _____

b. Either Furnish Foreign Steel Not to Exceed Minimal Amount (Fill in '0') or
Furnish Foreign Steel in Excess of Minimal Amount (Fill in 25% x a) ..... $ _____

c. Amount for Comparison of Bids (a + b) ..... $ _____

All bidders must fill in b and complete c

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

PROPOSAL SCHEDULE

The bidder is directed to Subsection 105.16 – Subcontracts.

The bidder's attention is directed to Sections 696 - Field Office and Project Site Laboratory and 699 - Mobilization for the limitation of the amount bidders are allowed to bid.

If the bid price for any proposal item having a maximum allowable bid indicated therefore in any of the contract documents is in excess of such a maximum amount, the bid price for such proposal item shall be adjusted to reflect the limitation thereon. The comparison of bids to determine the successful bidder and the amount of contract to be awarded shall be determined after such adjustments are made, and such adjustments shall be binding upon the bidder.

The bidder is directed to Section 717 – Cullet and Cullet-Made Materials regarding recycling of waste glass.

INSTRUCTIONS TO COMPUTE THE AMOUNT FOR COMPARISON OF BIDS FOR FOREIGN STEEL

Each bidder shall indicate its intention to furnish foreign steel on this project by initialing after the AMOUNT for each of the items the bidder intends to use such foreign steel including lump sum items. A bidder not indicating such usage certifies that the bidder will furnish and use only domestic steel on this project. Also, the bidder shall add an additional 25% to the SUM OF ALL ITEMS if the bid submitted is based on furnishing foreign steel in excess of the minimal use specified in Subsection 106.11 - Steel and Iron Construction Material.

SUPPLEMENT TO PROPOSAL SCHEDULE

The Department recognizes that certain items of material to be incorporated into the project and/or consumed in the prosecution of the project have historically experienced large fluctuations in price due to local and/or global shortages in supply of the material and/or product used to create such material and that such price fluctuations are beyond the control and without the fault of the Contractor. The effect of such large price fluctuations in such short supply materials makes it difficult for the Contractor to bid with confidence.

Materials that the Department recognizes as historically experiencing such price fluctuations due to short supply are asphalt cement, portland cement, reinforcing steel, structural steel, galvanized steel, and prestress/post-tension strands.

Each bidder shall submit with the proposal a written statement from the supplier of each short supply material indicating the supplier's current posted price, effective date of that price and the location of the material at that posted price (by island).

If the price of such short supply material is increased or decreased by more than 5% by the supplier prior to the completion of that contract item requiring the short supply material, the Contractor shall submit to the Department a written statement from the supplier indicating the effective date and changed price the Contractor will thereafter be charged for such short supply material. The Contractor shall also obtain whenever possible, quotations for furnishing the material from other available local suppliers. The quotations shall be obtained sufficiently in advance of the need for the material to allow review by the Department so as not to delay the work. The Contractor's request to the Department for adjusted compensation due to such changed prices will be computed only with prices in effect at the time of delivery. Only the lowest quotation obtained will be accepted by the Department. Transportation, handling, loading, processing and other similar costs will not be subject to adjusted compensation.

No adjustment to the unit bid prices will be made when the increase or decrease in the price of the short material is less than 5% of the original posted price.

If the adjustment to the unit bid price is decreased in the price of the short supply material by more than 5% of the original posted price, the State will be credited.

When an adjustment in price is made in accordance with this section, the adjustment will be allowed only so long as the purchase price remains more or less than 5% of the original posted price.

If an increase in the price of any short supply material exceeds or is scheduled to exceed 35% of the original posted price, the Contractor must notify

the State within five working days before using the short supply material. Upon receipt of such notification from the Contractor, the State will direct the Contractor to either (1) authorize work to proceed as usual with the assurance that the indicated incremental price increase above the 35% will be compensable, (2) issue such change orders as the State may deem necessary to reduce further requirements of the short supply material which is to be paid at the increased price, or (3) if the material is considered to have priced itself beyond reason or beyond what the State can pay, the State may order cessation of further use of such short supply material on the project. Such notification by the Contractor will be required at each instance of incremental price increase above the 35% limit. If the Contractor fails to notify the State of any such incremental price increase within five working days before using the short supply material and continues to utilize the short supply material on the project, the State will not be responsible for payment for the incremental cost increase of which the State was not forewarned.

Computation for the adjusted compensation will be as follows:

(A) Portland Cement

If X = Adjustment per cubic yard of concrete,

P = Portland cement content of the approved mix design expressed in hundredweight per cubic yard of concrete,

Q = Increase or decrease in the price of portland cement in dollars per hundredweight,

Then X = QP

Example: Posted price of portland cement increases from $1.40 to $1.70 per cwt. and the hundredweight (cwt) of concrete is 5.6 cwt per c.y., then the adjustment shall be:

$1.70 - $1.40 = $0.30
($1.40)(5%) = $0.07
$0.30 - $0.07 = $0.23
X = ($0.23)(5.6) = $1.29 per c.y. of concrete

(B) Asphalt Cement

If X = adjustment per ton of mix,

P = asphalt cement content, expressed in percent of dry weight of the aggregates, as determined and accepted by the Department for each of the design plant mixes,

Q = increase or decrease in the price of asphalt cement, in

dollars per ton,

Then $X = \frac{Q(P)}{100+P}$

Example: Posted price of asphalt cement increases from $70 to $80 per ton and the asphalt content of the A.C. mix was accepted at 6.0%, then the adjustment shall be:

$$\$80.00 - \$70.00 = \$10.00$$
$$(\$70.00)(5\%) = \$3.50$$
$$\$10.00 - \$3.50 = \$6.50$$
$$X = \$6.50 \left(\frac{6}{100+6}\right) = \$0.37 \text{ per ton A.C. mix}$$

(C) Reinforcing Steel

If X = Adjustment for reinforcing steel,

P = Weight of reinforcing steel, expressed in hundredweight

Q = Increase or decrease in the price of reinforcing steel in dollars per hundred weight,

Then X = QP

Example: Posted price of grade 40 reinforcing steel increases from $14.00 to $15.00 per cwt and the weight of the grade 40 reinforcing steel is 80,000 pounds, then the adjustment shall be:

$15.00 - $14.00 = $1.00
($14.00)(5%) = $0.70
$1.00 - $0.70 = $0.30
X = ($0.30)(800) = $240 for grade 40 reinforcing steel

The Contractor shall submit to the Department original receipted bills covering the short supply material used on the project as soon as practicable after shipments are completed. The bills shall be accompanied by a tabulation on which the bills are listed in chronological order showing for each bill the quantity, the date shipped from the supplier's terminal and the price per unit at the place indicated in the posted price (reflecting any deduction for quantity shipments). These bills shall be subject to audit verification.

The Department reserves the right to alter the quantities of material to be furnished in accordance with the provisions of Subsection 104.02.

The Department also reserves the right, during construction, to decrease or

increase the scope of work, because of limitations of funds, with no adjustment in unit prices other than that specified hereinabove.

NAGAMINE OKAWA ENGINEERS INC.
1003 Bishop Street
Pauahi Tower, Suite 2025
Honolulu, Hawai'i 96813
Tel: (808) 536-2626

Consulting Structural Engineers

October 3, 2012

PRE-BID MEETING MINUTES

Subject: Hawaii Belt Road, Rehabilitation of Umauma Stream Bridge
Federal-Aid Project No. BR-019-2(61)

Location: Oahu District main office, Kakoi Street

Meeting Date: October 2, 2012

Attendees: See attendance list

Meeting Notes:

1. Agenda and clarification questions form made available to all attendees. Sign-in sheet also circulated. Meeting started at 2:00 pm
2. Attendees introduced themselves.
3. Nagamine Okawa Engineers Inc. (NOEI) provided brief description of project scope of work.
4. Eddie Chiu (EC) stated item 4 in agenda. Verbal clarification question will be considered unofficial. Likewise, DOT consultants verbal response to verbal questions will be unofficial.
5. EC noted RFI's responses to questions submitted by bidders to date are in progress.
6. Kiewit stated they already sent RFI's, but also have the following questions:
    a. What loads can bridge support? EC commented HDOT bridge section will provide response and will be included in Addendum.
    b. Right-of-Way tight, can they grade within the Right-of-Way? Can they level it down on Honokaa mauka side. Kiewit informed response forthcoming. EC commented, if Contractor wants to create entry outside of ROW and Right of Entry area, it is their responsibility. (EC comment following meeting, subject to approval of engineer)
7. Abhe & Svoboda asked, are painting certification categories "QP 1" and "QP 2" required for this project? Informed by Consultant that response forthcoming.

8. EC informed that noise permit and SCAP permit waived on this project, but intent of permit needs to be followed.

9. Abhe & Svoboda asked if there is a specific coating system, because they can't find a product that satisfies specification. Informed by Consultant that response forthcoming.

10. EC requested all questions be submitted today.

11. EC soils report is provided for information only. Contract documents shall govern over report.

12. Abhe Svoboda- What is extent of lead paint on structural steel? Informed by Consultant that response forthcoming. (Following meeting Sal Panem stated no lead paint is on steel)

13. Goodfellow suggested better defining extent of lead paint and if difficult to define use force account for this work.

14. Kiewit- Can members be removed? Consultant commented if designed by a Hawaii licensed structural engineer and followed that a complete response is forthcoming.

15. Kiewit- Can deck support temporary barriers (TL-3)? There is concern that Contractor does not have time to do analysis prior to bid closing. Informed by Consultant that response forthcoming.

16. Kiewit- in regards to BMP Note 4.a. on C-13 which states that work within the ordinary high water mark shall only be conducted in the dry season or when the effected stream has minimal or no flow. When is the "dry season"?

17. Kiewit-Utility agreement for communication line in place? Informed by Consultant that response forthcoming.

18. HDCC asked about making existing drawings available. HDOT said they will consider making as-builts available.

19. NAN Inc. asked for a bid extension. Kiewit supported request for extension. EC requested amount of time from Contractors. Two weeks requested.

20. HDCC requested location of existing on-site trailers to be moved. HDCC suggested force account best way to address if location undetermined.

21. EC requested any additional questions or meeting will conclude in a few minutes.

22. Nan requested engineer's estimate. EC declined providing information.

23. Nan asked if value engineering is an option. EC said VE is allowed per 2005 specifications.

24. Meeting adjourned at 2:30 pm. End

AGENDA
PRE-BID MEETING
OCTOBER 2, 2012 AT 2:00 P.M.

1. Project Title.

   Hawaii Belt Road
   Rehabilitation of Umauma Stream Bridge
   Federal Aid Project No. BR-019-2(61)
   District of North Hilo
   Island of Hawaii

2. Project Consultants.

   Nagamine Okawa Engineers, Inc. (NOE)

   Anything said at this meeting is for clarification only, the bid documents shall govern over anything said today and discrepancies shall be clarified by addendum.

3. Scope of Work - As indicated in the contract documents.
   NOE - general scope discussion

4. Contractors' verbal clarification questions.
   Verbal clarification questions will be considered unofficial. Likewise, DOT consultants' verbal response to verbal questions will be unofficial.

5. Contractor's written clarification questions.
   Only clarification questions submitted in writing will be considered official. DOT will provide clarification question forms. Contractors' clarification questions submitted in writing and DOT responses will be included in the Addendum, together with the minutes of this pre-proposal meeting. Clarification questions must be submitted in writing today, or emailed to eddie.k.chiu@hawaii.gov by 4:00 P.M., Wednesday, October 3, 2012. Clarification questions received after the due date/time will not be considered and will not be included in the Addendum.

8. Informal Q & A.
   Contractors are requested to state their name and company before asking questions.

9. Collection of written clarification questions.

10. Adjourn meeting.

ATTENDANCE LIST
Pre-Bid Meeting - October 2, 2012, 2:00 P.M.
HWY-O Conference Room, 727 Kakoi Street, Honolulu, HI

for

HAWAII BELT ROAD
REHABILITATION OF UMAUMA STREAM BRIDGE
FEDERAL AID PROJECT NO. BR-019-2(61)
DISTRICT OF NORTH HILO
ISLAND OF HAWAII

NAME (print)	ORGANIZATION	PHONE
EDDIE CHIN	DOT- DS	692-7547
KARL UMEMOTO	NAGAMINE OKAWA ENGINEERS INC.	536-2626
GEORGE GUTIERREZ	"	"
Rob Foster	dek pacific construction	533-500
Rod Clemtson	Kiewit Infrastructure West Co.	674-1088
Kawai Mar	KIWC	674-1088
Kriselda Cuellar	Abhe & Svoboda, Inc.	682.4833
Tom Heinrich	Global Specialty Contr. Inc	843 8881
EUGENE KUMASAKA	Hawaii Dredging Const	735-3242
Ed shuken	Nan Inc	842-4925
Choonkee Lee	Nan Inc	842-4924
BRIAN CAMPBELL	BOW ENGINEERING	941-8853
CONWAY PINKSTON	GOODFELLOW BROS.	264-2644

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HAWAII BELT ROAD
REHABILITATION OF UMAUMA STREAM BRIDGE
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DISTRICT OF NORTH HILO
ISLAND OF HAWAII

NAME (print)	ORGANIZATION	PHONE
DOMINGO GALICINAO	FHWA	541-2302
Video Conferencing from Hilo District		
Sae Panem	DOT	933-8620
Roy Shiaji	DOT	933-2755

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Project: **HAWAII BELT ROAD**
REHABILITATION OF UMAUMA STREAM BRIDGE
FAP NO. BR-019-2(61)

RFI AND RESPONSES

1. §102.01 ("Bidding Requirements & Conditions") of the Project Specifications stipulates Pre-qualification requirements for prospective (prime) bidders; and §512.03 and §681.03 stipulate Qualification requirements for the Micro-pile and Ground Anchor subcontractors respectively while referring to §102.01 for conformance. Additionally, §102.03 stipulates the bases for which proposals from prospective bidders may be refused.

1A. Question: Can you provide the appropriate "Standard Qualification Questionnaire for Prospective Bidders on Public Works Contracts" stipulated in §102.01?

Response: No. See Addendum No. 2.

1B. Question: In order that the Prospective (Prime) Bidders use and list properly (officially) qualified subcontractors for the project, will HIDOT review the qualifications of, and provide a list of, Micro-pile and Ground Anchor subcontractors who have been pre-qualified and meet the requirements of §512.03 and §681.03 prior to the Bid Opening Date?

Response: No. See Addendum No. 2.

1C. Question: If HIDOT will not be providing a list of pre-qualified subcontractors to prospective bidders, will the successful bidder be permitted to adjust/revise their bid amount for the potential cost impact to procure a replacement subcontractor should any of their listed subcontractors subsequently be determined to not meet the requirements of §512.03 and §681.03?

Response: No. See Addendum No. 2.

1D. Question: Will HIDOT be employing the criteria stipulated in §102.03 to evaluate the acceptability of prospective subcontractors also?

Response: No. See Addendum No. 2.

2. §212.02 ("Probing & Grouting Work at Structure Pier Footings") references §712.04A "Non-Shrink Grout" (of the Standard Specifications) for the materials to be employed in the specified work. §212.05 stipulates that the work will be paid on a unit price basis per Linear Foot.

2A. Question: Will a sanded cement grout with a W:C ratio of .45:1 and historical compressive strength tests of 8000 psi and higher be acceptable? Note that this grout can be field batched at significantly lower cost as compared to pre-bagged non-shrink grout mixes.

Response: Grout for probing and grouting of voids and cavities shall be per Special Provision Subsection 212.02 and the referenced Subsection 712.04(A), with the following deviation. The grout shall not contain any gravel and shall have a slump of at least 7 inches. Should the grout take be very high such that the void and cavities cannot be filled, the Engineer may determine that a lower slump grout can be utilized for certain probe holes. See Addendum No. 2.

2B. Question: Since the linear footage of the proposed work can readily be determined, but the grout quantity required to complete the work can vary significantly in the event voids or cavities are encountered during the probing process, can HIDOT revise the pay unit to "per cubic foot"?

Response: Pay Item 212.1000 shall be revised to "Probing at Pier #1 and Pier #2", in unit of linear feet. Add Pay Item 212.2000 for "Grouting of probe holes at Pier #1 and Pier #2", in unit of cubic yards. Add Pay Item 212.3000 for "Backfilling or grouting of voids or cavities at Pier #1 and Pier #2", by Force Account. See Addendum No. 2.

3. §512.04B(1) & §512.04B(1) ("Micro-piles") stipulate the qualification submittal requirements for the micro-piling subcontractor.

3A. Question: Must the qualifying projects on the submittal be completed in Hawaii?

Response: No.

3B. Question: Must the qualifying individual's projects of similar scope be projects completed in Hawaii while in the employ of the qualifying subcontractor?

Response: No.

3C. Question: Pending the response(s) to RFI 1 preceding, if the proposed micro-piling subcontractor is determined to be unqualified, will the successful bidder be permitted to adjust/revise their bid amount for the potential cost impact to procure a replacement subcontractor?

Response: No. See Addendum No. 2.

4. §512.05B and Note 9 on Sheet S3.1 stipulate that the water to cement ratio (W:C) for the grout shall be .40:1 or less.

4A. Question: Will a sanded cement grout with a W:C ratio of .45:1 and historical compressive strength tests (at 28 days) of 8000 psi and higher be acceptable?

Response: No.

4B. Question: Further to the sampling requirements of ASTM C109 and the stipulation in §512.06G against the use of plastic molds, will the molds in the attached cut sheet that conform with ASTM C109 be permissible to use in sampling the grout for testing in accordance with ASTM C109?

Response: No.

5. §512.05D stipulates that the Central Reinforcing Bar shall conform to ASTM A615 Grade 75, whereas Note 7 on Sheet S3.1 stipulates conformance with A722 Grade 150.

5A. Question: Can you confirm that Grade 150 and ASTM A722 shall apply to this material?

Response: Confirmed. Central reinforcing bar shall be ASTM A722, Type II, Grade 150, as shown in the plans. See Addendum No. 2.

6. §512.05G and Sheet S3.2 stipulate spiral reinforcing as part of the termination detail for the micro-piles, but do not indicate any connection details to the Central Reinforcing Bar nor to the "lower" or "upper" bearing plates secured to the micro-piles.

6A. Question: Could you clarify or provide any requirements, if any, for a structural connection between the micro-pile and the spiral reinforcing?

Response: Spiral reinforcing shall be placed as shown in the plans and shall be securely tied in-place to pile cap reinforcing steel.

7. §512.05H stipulates that the "Hex Nut shall be furnished by the threadbar manufacturer."

7A. Question: Can you clarify if any corrosion protection (e.g. Epoxy Coating) is required for the Hex Nuts and the applicable specification if so required?

Response: Hex nuts need not be epoxy coated.

8. §512.06E and Note 10 on Sheet S3.1 prohibits coupling or couplers within the (stipulated minimum of 10') cased length of the micro-pile not including the required 6' extension into the pile cap.

8A. Question: Irrespective of the weight of the 1.375"Ø bar, the project site presents extremely difficult site conditions for safe and effective handling of a 16' (minimum) long bar required at the uppermost length of the micro-pile; would a more manageable and typical piece length of 10' be acceptable in the work which would require/include couplers in the cased length of the micro-piles?

Response: Couplers shall not be permitted within the permanent steel cased length of the micropiles.

9. §681.02A(3) stipulates the requirements for design calculations for the ground anchors.

9A. Question: Do these calculations have to be furnished and/or stamped by a licensed engineer?

Response: No. However, the test setup (especially for the compression test and the reaction piles), along with the calibration records for the gauges and pumps (and other test equipment) shall be stamped by contractor's Hawaii Licensed Professional Engineer and submitted to the Engineer for approval.

9B. Question: If a licensed engineer must provide the referenced calculations, which discipline must the licence cover?

Response: Civil (with Geotechnical experience) or Structural.

9C. Question: If a licensed engineer must provide the referenced calculations, can the (out-of-state) manufacturer's staff engineer provide the submittal or must the engineer be licensed in Hawaii?

Response: The Engineer must be licensed in Hawaii.

10. §681.04H stipulates that plates, bolts, nuts, and washers shall be galvanized.

10A. Question: Can you provide the applicable specification for the galvanizing requirement for these materials?

Response: Steel plates shall be zinc-coated per ASTM A 123 or ASTM A 153, as applicable. Bolts, nuts and washers shall be galvanized per ASTM A 123 or ASTM A 153, as applicable. See Addendum No. 2.

11. Detail 1/S5.12 stipulates "Steel Anchor Plate, Typical" and "Tapered Steel Shim Plate, Typical" where the ground anchors interface with the slope.

11A. Question: Can you provide the applicable dimensions for these plates?

Response: Dimensions of steel anchor plates and tapered steel shim plates shall be determined by the Contractor.

11B. Question: In lieu of the specified Tapered Steel Shim Plate, would beveled washers (Maximum installation/applicability limited to 25 degrees) be acceptable?

Response: No.

11C. Question: In lieu of a the specified Tapered Steel Shim Plate, would a Trumpet Head with a "Beveled" Pipe Section (to be fully grouted as part of the finish grouting after stressing) and Flat Plates at each end be acceptable?

Response: No.

12. Detail 1 and General Note 4 on Sheet S5.12 stipulates that no splicing and a single anchor section is preferred, but that couplers may be employed with the approval of the Engineer.

12A. Question: Can you provide the length of the "Tail" at the stressing end (between the slope face and the termination plate) of the anchors for the top and the bottom rows of the specified anchors?

Response: Contractor shall refer to sheet S5.8 for dimensions of new grade beam GB2 and new low wall.

12B. Question: Will coupling of the tail "section" be permitted within the length extending beyond the slope face?

Response: No.

13. General Note 1 on Sheet S5.12 (plus additional references elsewhere within the Project Specifications and Drawings) are made to a Geotechnical Report by Hirata & Associates.

13A. Question: Is the referenced report a part of the Project Documents?

Response: No.

13B. Question: Can you provide a copy of the report?

Response: The report is provided in Addendum No. 1 for information and convenience only.

14. Construction Note 4 on Sheet S5.12 stipulates that testing shall be performed by an engineer retained by the (anchor sub) Contractor; it is suggested that either HIDOT's consultant or a third-party engineer not engaged by the anchor subcontractor would better provide for monitoring of this testing requirement and/whereas the actual test would be performed by the anchor subcontractor's forces.

14A. Question: Can you revise this requirement to provide for monitoring of anchor testing by your current (Hirata & Associates) consultant?

Response: Yes. The Micropile and Anchor Subcontractor shall perform the test, and the monitoring will be done by Hirata & Associates (who will be hired by HDOT).

14B. Question: If HIDOT will maintain this stipulation unmodified, will it be permissible for the anchor subcontractor to retain Hirata & Associates in this capacity?

Response: Not applicable.

15. §512.06B(1) on Page 5 notes "Highly permeable zones . . . exist at the site." It is also stipulated that the micro-piling subcontractor reduce the potential for excessive grout takes.

15A. Question: Could you provide an estimated quantity, or a percentage factor of the theoretical volume of the micro-pile, for the acceptable grout take per micro-pile location?

Response: Grout take less than 15% of the theoretical volume based on the bit diameter and micropile depth shall be considered incidental to the micropile construction. See Addendum No. 2.

15B. Question: Will the micro-pile subcontractor be entitled to additional compensation should the grout take per micro-pile location exceed the estimated quantity, or a stipulated percentage of the theoretical volume (as per the preceding) of the micro-pile?

Response: Refer to Special Provisions Section 102.04 Estimated Quantities.

15C. Question: Can you provide for an additional Pay Item to compensate the contractor on a Per Cubic Foot basis for grout quantities employed in the work further to the preceding?

Response: Refer to Special Provisions Section 102.04 Estimated Quantities.

16. Question: NTB project number BR-019-2(61) does not match Proposal page P-1: BR-019-29(61).

Response: See Addendum No. 2.

17. Question: Special Provisions 209.03(A)(2)(f) refers to The Water Quality Monitoring and Assessment Plan (WQMAP) which was prepared for the project. Where may I acquire a copy of this Plan?

Response: Please see 404 USACE and 401 DOH WQC Permit documents in Addendum No. 1.

18. Question: Hazard Materials Notes on Plan Sheet S1.1, Note 1 refers to the report Hazardous Materials Assessment with Soil and Sediment Sampling Analysis. Where would I obtain a copy of this report?

Response: Please see Addendum No. 1.

19. Question: As-built plans: It is noted on sheet No. S1.1 – general note #6 that as built plans are available for review from the State of HI office in Kapolei. Please provide us with electronic copies of these plans.

Response: See Addendum No. 2 for as-built drawings for information only.

20. Question: HAZMAT Survey / Assessment report: It is noted on sheet No. S1.1 – HAZMAT note # 1 that portion of existing structure contains lead-based paint, also portion of existing grade around pedestal footings contains lead impact soil. It is indicated on this note that there is a HAZMAT survey / assessment report prepared by Bureau Veritas North America, Inc., please provide us with this report.

Response: Please see Addendum No. 1.

21. Question: Please provide information regarding the design axle load and design gross vehicle weight on the existing bridge.

    Response: The existing bridge can support the legal vehicular load for the State of Hawaii. Any load greater than the legal load would require a permit from the Hawaii District Office.

22. Question: Would it be possible to have a separate bid item for all cranes, false-work and general access ramping & scaffolding needed for the project that is clearly separate from any one of the many items provided on the bid form. Without such an item the cost must be spread across many of the items; and being a real fixed cost, a portion of this is at risk if any one item is reduced or eliminated. It also makes it harder to value engineer different or better solutions with the individual line items populated with a percentage of a fixed cost that would need to be redistributed with any modification.

    Response: No. Work items such as false-work, scaffolding, cranes, temporary access ramps, etc. are temporary items and shall be incidental to the respective pay items in the proposal schedule. The cost of some work items could be considered as mobilization cost.

23. Question: Will the contractor be allowed to construct temporary earthworks and or concrete footings for the construction of access ways, false work, shoring and scaffolding?

    Response: No. Bid accordingly.

24. Question: Are there any permits associated with doing work in the stream area required for any of the work contemplated?

    Response: Yes. A 404 Department of Army Nationwide permit and a 401 Department of Health Water Quality Certification (WQC) permit has been obtained for this project. The 401 WQC will require water quality monitoring and reporting. A copy of these permits will be provided in Addendum No. 1. The project is exempt from the Stream Alteration Permit per Senate Bill 3010 but project must comply with the intent of the permit.

25. Question: The depicted new footing configuration for pier 2 and 3 will require hydraulic ramming to liberate the rock for excavation. The proximity of this operation and the energy that will be imparted by its methods may prove to be very risky for the existing footings for bents 2, 3, 4 and 5? What if once the contractor is onsite and performs a proper inspection of the existing substructure it is determined that excavation of rock around and in such proximity to the existing

footing is not feasible?

Response: Contractor will be responsible for construction means and methods. Contractor can consider other excavation methods. Depending on Contractor's means and methods, temporary shoring of existing bridge structure may be necessary.

Plans indicate that the Contractor will be responsible to protect existing bridge foundations and structures at all times during construction. Existing pedestal footings shall be strengthened, shored and/or under-pinned prior to excavation per Plan sheet 74, Note 1.

26. Question: Are as-built drawings for existing Umauma Stream Bridge going to be issued as part of the bid documents? There is work to be done on existing structure, but there are no plans available.

Response: See Addendum No. 2 for as built drawings for information only.

27. Question: Is there any coatings system in mind? There is no coating system that meets the specifications. Would require a 4-coat system (vs. 3 coat system).

Response: Coating system shall consist of a modified aluminum epoxy mastic coating (base coat and intermediate coat) and a polyurethane top coat. See generic coating system specified in Special Provisions Section 694, subsection 694.02 Materials.

28. Question: Are QP1 and QP2 certifications required for this project?

Response: Yes. See Addendum No. 2.

29. Question: Will HDOT allow the Contractor to grade areas within the ROW for access and staging?

Response: Any changes to the plans will need to be approved by the Engineer.

30. Question: Please provide the extent of the lead based paint on the structural steel member and girders. If the quantity of lead based paint cannot be determined, then consider making the cleaning of steel structures a force account item.

Response: Refer to Standard Specs Section 107, subsection 107.16. A force account pay item will be added to the proposal schedule. See Addendum No. 2.

31. Question: Is there a utility agreement for the overhead lines on the mauka side of the bridge? This line will need to be temporarily relocated to provide clearance for construction activities.

Response: The utility agreement to relocate the telephone lines on the mauka side of the bridge is being processed.

32. Question: Given the complexity of this project and the number of outstanding questions that will affect the cost estimate for this project, please consider extending the bid date by two weeks.

Response: See Addendum No. 1.

33. Question: Will the Skyclimber work platforms that are currently hanging from the bridge be made available to the contractor?

Response: No.

34. Reference: Project's special provisions – section 102.01 – prequalification of bidders, second paragraph indicates that the Department "MAY" requires any prospective bidder to submit answers to questions contained in the "Standard Qualification Questionnaire For Prospective Bidders On Public Works Contracts" furnished by the Department.

34A. Question: Please clarify if all bidders are required to submit such Standard Qualification Questionnaire prior to bid date.

Response: No. See Addendum No. 2.

35. Reference: Sheets C-17 to C-19 Traffic Control Plan and Sheet S15.1 Construction Phasing Plan.

35A. Question: Note 1 on Sheet S15.1 indicates full bridge closure for only short period of time "MAY BE" permitted, subject to Engineer's approval. What is the duration (in HRS / DAYS) of short time? Please clarify.

Response: For bidding purposes, full bridge closure for only very short periods of time shall mean no more than 10 minutes. A longer closure period will generally be permitted between 9:00 p.m. and 4:00 a.m., subject to Engineer's approval. Advance notice, via message boards on both approaches, shall be given a minimum of two days prior to full bridge closure(s). Passage of emergency vehicles shall be provided at all times.

35B. Question: Is it allowed to deviate from construction phasing plan indicated on sheet S15.1?

Response: For bidding purposes, construction phasing plan indicated in Plan sheet 130 (S15.1) shall be followed. After award of contract, Contractor may propose modifications to the specified phasing plan, subject to Engineer's review and approval, per Standard Specs Section 105, subsection 105.15 "Value Engineering Incentive Proposal".

35C. Question: If the contractor needs to revise the approved traffic control plan (during construction) due to unforeseen constructability issues, how long it will take to get the revised TCP approved?

Response: Bid accordingly.

36D. Question: Sheets C-18 & C-19 Traffic Control Plan indicates two types of one lane condition, Signalized or Police officer, please confirm that both options are acceptable.

Response: During Phases 4 and 8 on Sht. S15.1 (pouring and curing of bridge deck strip), a speed limit of 5 mph must be enforced by a County Police Officer. The signalized condition will be acceptable for all other one lane conditions.

36E. Question: Sheets C-18 & C-19 Traffic Control Plan indicates one lane condition, please advise if there is any limitation on time duration on this condition, also advise if there are certain days / months of the year that this condition may not be allowed.

Response: Bid accordingly.

37. Reference: Sheet S5.1 – Note 4 indicates that Pier #1 & Pier #2 footings shall bear on sound rock (hard basalt). If existing rock surface is unsound, contractor shall notify the engineer to adjust bottom of the footing.

37A. Question: Please confirm that additional cost associated with the abovementioned condition shall be treated as a change order.

Response: Refer to the following specifications including but not limited to Special Provisions Section 102, subsection 102.05 "Examination of Contract and Site of Work", Standard Specs Section 104 "Scope of Work", and to Standard Specs subsection 104.08 "Differing Site Conditions".

38. Reference: Proposal schedule – bid item # 212.1 Probing and Grouting at Pier #1 and Pier #2 indicates a lump sum bid item and notes 1 to 7 on sheet S5.2 describes scope of work without quantifying volume of grout. Note 4 on sheet S5.2 indicates that probe holes which encounter large pockets / voids, or which consume large quantities of grout shall require additional probe holes as directed by the engineer.

38A. Question: In order to identify and quantify probing & grouting, we suggest to change unit of bid item # 212.1 from LS to CY and include reasonable quantity for it for bidding purposes, in this case all bidders will have same / comparable scope and to avoid costly assumptions. Please advise.

Response: See Addendum No. 2.

38B. Question: Will the case described in Note 4 on sheet S5.2 abovementioned be treated as a change order?

Response: See Addendum No. 2.

39. Reference: Clean & Paint Existing Steel Towers & Bents Sheet S17.1 – Note 4 indicates that existing conditions of Steel Towers & Bents were surveyed on December 2010. Last two sentences on this note indicate that the contractor shall verify existing conditions / dimensions and inform the engineer with any discrepancies between plan and actual conditions.

39A. Question: If such discrepancies are found, will this case treated as a change order?

Response: Refer to Special Provisions Section 104 "Scope of Work" and Standard Specs Sub-section 104.08 "Differing Site Conditions".

39B. Question: During construction, if steel towers require shoring / support in addition to what's depicted on plans, will this case be treated as a change order?

Response: Refer to Special Provisions Section 104 "Scope of Work" and Standard Specs Sub-section 104.08 "Differing Site Conditions".

40. Reference: Special Provision – Added Sub-Section 503.03 "O" pertains to Concrete Bridge Deck Sealer.

40A. Question: Please provide us with preferred / approved manufactures' names and product's technical data to price this item accordingly.

Response: See Addendum No. 2.

41. Reference: Sheet S1.2 – Note 5 indicates to abate & dispose lead impacted soil around existing pedestal footings.

41A. Question: Our understanding that the cost of this item is to be incorporated in bid items 205.10 & 205.20 structural excavation correct? However scope of work related to lead contaminated soil is vague because there is no defined quantity. We suggest to add a separate pay item on this bid schedule just for lead contaminated soil testing, removal and disposal and based on CY pay unit pay, in this case all bidders will have same / comparable scope.

Response: See Addendum No. 2.

42. Reference: Sheet T5 location map indicates proposed construction staging area location on Hilo side (south side of bridge).

42A. Question: Is it allowed to excavate and create lager area other than what's indicated on the above sheet (beyond construction right of entry) to accommodate contractor's trailer and storage area?

Response: No. Bid accordingly.

42B. Question: Is it allowed to excavate areas east and west of both abutments to allow staging / standing area for heavy equipment as required?

Response: No. Bid accordingly.

43. Reference: Allowable axle load and gross vehicle weight on the existing bridge.

43A. Question: Please provide the above information to determine types of equipment / trucks that existing bridge will withstand.

Response: The existing bridge can support the legal vehicular load for the State of Hawaii. Any load greater than the legal load would require a permit from the Hawaii District Office.

44. Reference: Access Hatch opening at pier & cap.

44A. Question: Is there any lighting fixtures in pier access area to maintenance?

Response: No.

45. Reference: Elastomeric Bearing Pads (sheet S10.4 Detail 2). Usually, contractor should provide non-shrink grout pad under existing girder, however it seems that there is elastomeric bearing pad on plan S10.4 Detail 2.

45A. Question: Please clarify whether Contractor shall be provided epoxy grout for all elastomeric bearing pads.

Response: No. Unless otherwise indicated, elastomeric bearing pads shall be secured with adhesive to concrete abutment shelf and concrete bearing seats per Plan sheet 113, Detail 5/S10.5.

45B. Question: Please indicate where elastomeric pad is in connection with existing girders.

Response: Refer to Plan sheet 113, Detail 5/S10.5.

46. Reference: Water source.

46A. Question: Where is the closest water source to the site location?

Response: It appears that the closest water source is in Honomu (approximately 3 miles to the southeast of the project). Availability should be confirmed by the bidder with the Department of Water Supply.

47. Question: The plans and specifications do not address how additional probing and grouting will be paid. On other HDOT projects, if voids and/or excessive grout takes are encountered, there is a prescribed method to handle these events (see attached plan notes from the Keaau-Pahoa Road project). The amount of additional probing and grouting is not quantifiable, therefore there will be a wide range of pricing for this item of work. In order for a fair comparison of bids, please consider having "Additional Probing and Grouting" paid for by Force Account.

Response: See Addendum No. 2.

48. Question: Similarly, the plans and specifications do not address how filling of voids at the bottom footings will be paid. Again the amount of Class D Lean Concrete is not quantifiable, therefore there could be a wide range of pricing for this item of work. In order for a fair comparison of bids, please consider having "Filling with Class D Lean Concrete" for voids at bottom of footings be paid for by Force Account.

Response: See Addendum No. 2.

49. Question: Are the ground anchor bars supposed to be double corrosion protected (DCP) as indicated by Section 2 on sheet number S5.12. General notes on the same page, S5.12, directly state that the ground anchors are to be uncoated high-strength steel deformed bars. Typically corrugated plastic encapsulation is not associated

with uncoated bars.

Response: Ground anchors shall be uncoated high-strength steel deformed bars with Class 1 double corrosion protection per plans and specs.

50. Reference: Bid items 694.1001, 694.1002, 694.1003, 694.1004, 694.1005 & 694.1006 are related to structural steel members repairs Type 1 to Type 6.

50A. Question: After visiting the site (please see attached pictures), we noticed that some of existing **steel plate girders and steel bearing plates** (at both abutments) are **severely** corroded. Obviously, major structural repairs will be required for such members, however the six types of structural repairs covered under the above bid items do not include such cases.
Please advise how the additional cost of structural repairs for members that not covered under bid schedule be treated? Do all bidders should include allowances for such unforeseen conditions? or this cost will be determined during construction and to be reimbursed as a change order on case by case basis?

Response: See Addendum No. 2.

51. Reference: Test Shaft.

51A. Question: Please clarify if test shaft is required on this project. If so, will the test shaft have the same requirements of production shafts (diameter, depth, rebar..etc.)?

Response: Both trial and test drilled shafts will not be required per Special Provisions Section 511.

52. Reference: S10.5 (DRAWING No. 113) Detail 4

52A. Question: Can contractor drill holes into existing steel plate girder in order to use temporary bracing & shoring?

Response: Contractor will be responsible to protect existing structure during construction. Contractor shall hire their own Hawaii licensed structural engineer to evaluate. Any proposed modification or alteration to existing bridge structure will be subject to Engineer's approval.

53. Question: We intent to provide a proposal for the above referenced section, to paint the existing structural steel framing of the bridge.
Unfortunately, the contract drawings do not indicate the dimensions of all the existing steel. We cannot figure out how we should

calculate the areas to be cleaned and painted. Is there a possibility that you can issue the as-built original drawings for our information, prior to the bid date?
Kindly inform us if you could address this request in the addendum.

Response: Bid accordingly.

54. Question: The plans and specifications identify lead contaminated soil at Pier 2. The last sentence on page 695-1a of the Special Provisions state that "Additional testing may be required to assess the horizontal and vertical delineation of the lead contamination." Since the quantity of lead contaminated soil cannot be determined until further investigations are made, please consider having "Handling of Lead Contaminated Soil" paid for by Force Account.

Response: See Addendum No. 2.

55. Question: Please verify that the State will be considered the Generator for all existing contaminated and hazardous materials found on the project and will sign all Hazardous Waste Receipt Manifests and or bill of ladings for transport and disposal.

Response Yes, the State DOT Highways will sign all manifests and / or bill of ladings.

56. Question: The last paragraph on page 205-1a of the Special Provisions state that the "Existing bridge foundations shall be shored, braced, and/or underpinned prior to excavating grade for the new foundations. Contractor shall hire a Hawaii Licensed Civil Engineer . . . . to design and monitor the required strengthening, shoring and/or underpinning work." Until the exact nature of the footing subgrade is known, it is not possible to determine the required design. Given the wide range of cost that each contractor could assume and to have a fair comparison of bids, please consider having "Shoring, Bracing, and/or Underpinning of Existing Bridge" paid on a Force Account basis.

Response: Boring log information is shown on Plan sheets 10 thru 15, and estimated foundation loads are indicated for bidder's information on Plan sheets 48, 50 and 52. For this pay item, each bidder may have differing costs depending on their means and methods, risk and comfort level, etc. Bidders shall price this pay item accordingly.

57. Question: Glover's salesman at their concrete plant tells me that he will have a hard time meeting the concrete specifications for the drilled shafts included in this project. Is there any flexibility on the water-cement

ration and/or the maximum cement limit of 800 pounds?

Response: Specified maximum water-cement ratio and maximum cement content shall be followed. Suggest the Bidders consider reducing cement content and adding a water reducing admixture to the concrete mix.

58. Question: In the contract specs, the DBE goal percentage was left blank. Will assume the goal is 0% DBE. Please confirm that this is correct.

Response: The DBE Project goal on page P-1 is listed as "None Specified" since there is no specific DBE goal to meet for this project. On page P-3, the Bidder is supposed to fill in the DBE goal they plan to use for the project based on the subcontractors the Bidder plans to use.

59. Question: I would like a list (is available) of bridges with ratings on Hawaii Island. Particularly along the Route 19 between Kawaihae and Hilo. If readily available, the lengths and widths of these bridges may be helpful to us as well.

Response: See attachment in Addendum No. 2.

60. Question: Special Provisions Section 694 - Clean & Paint Structural Bridge Steel of the Proposal, page 694-1a, paragraph (A) (1), states that "The coating system for all existing steel surfaces to be painted on this project shall be a three-coat system ....". Also in Section 501 – Steel Structures, the last paragraph section (III) calls for a "three coat system" for existing steel plate girders and other existing steel superstructure.

However in the drawings, on Plan Sheet S0.3 (37), it states in the upper left hand corner that the "Portion of existing structural steel to be encased in new concrete structure shall be blast cleaned, coated with 2 coats of epoxy ....".

Please confirm that steel exposed to the elements/environment require a three coat system, and that steel encapsulated in concrete require only 2 coats of epoxy.

Response: Confirmed.

61. Reference: HAZMAT assessment with soil and sediment Sampling and Analysis report provided in amendment 1 – section 4.3 – second paragraph indicates that contaminated soil shall be submitted for TCLP analysis to assess final disposal options.

61A. Question: Per discussion with our environmental consultant, we were advised that soil with concentration of 50 mg / Liter contamination will not be accepted in local landfills and it has to be shipped to the mainland for disposal. Cost of 55 gallon barrel may exceed $800 per each. Since there is no quantity or test results provided, please advise how to handle the additional cost of this unknown item? We believe this item should be covered in new force account item in the bid schedule.

Response: The Contractor should bid the project based on the assumption that the excavated soil will not be classified as hazardous waste. Prior to disposal, the excavated soil must be sampled for toxicity characteristic leaching procedure (TCLP)-lead analysis. If the analytical result of the TCLP-lead sampling is greater than 5 milligrams per liter (mg/L), the excavated soil must be containerized and disposed at an approved facility on the mainland. A Force Account pay item is added. See Addendum No. 2.

62. Reference: Plan S0.1 (Sheet page 35, General Note 4.)

62A. Question: To protect the structure during construction, contractor may have to use instruments, such as Load cell, Tilt meter, Strain gages and Displacement sensors etc.

Usually, major bridge structural repairing will be necessary this monitoring works. And, contractor would not decide required instruments that can provide by themselves.

Furthermore, the cost of monitoring & instrumentation are related to criteria whether instruments will be permanent ,or temporary.

Please clarify required instruments, if so.

Response: Contractor will be responsible for means and methods of protecting bridge structure during construction.

63. Question: Will the Contractor be allowed to use the existing structure for any construction lifting below the bridge and/or setting up a crane on the deck of the existing structure for setting any of the new structural components? The existing structure seems to be in a very dangerous condition – we would assume not.

Response: The Contractor shall hire its own structural engineer to evaluate. The structural engineer shall be licensed in the State of Hawaii. Also any proposals shall be submitted for review and approval.

64. Question: Will a Vibration study be required before rock excavation is allowed around or near the existing bridge foundation?

Response: No, it isn't required. Contractor shall provide all measures necessary to protect the structure during construction. Contractor will be responsible for means and methods of protecting bridge structure during construction. Temporary works such as shoring shall be incidental to the respective pay items in the proposal schedule.

65. Question: Given the 0.40 water cement ratio, the high slump requirement of 7" or 8" plus or minus 1", the exclusion of super plasticizers, and the State DOT limit of 800 lbs of cement / per cy, we were informed by a concrete supplier that they will not be able to provide a quote for the concrete for the drilled shafts as currently specified. Can you check to see if there is any flexibility on the water cement ratio and or the maximum cement limit of 800 lbs / cy?

Response: Specified maximum water-cement ratio and maximum cement content shall be followed. Suggest the Bidders consider reducing cement content and adding a water reducing admixture to the concrete mix.

66. Question: Per Section 656 for the installing of dowel reinforcing, a pull test is required. What are the parameters for the pull test? How is it to be performed and to what force?

Response: Epoxy grouted dowel reinforcing bars shall be pull (tension) tested with a calibrated hydraulic stressing jack to a load of one-third times the specified minimum yield strength of the reinforcing bar, or as directed by the Engineer. See Addendum No. 2.

67. Question: In the Hazardous Materials Notes on Sheet No. S1.1, Note 4, it states that remediation of lead-impacted soil shall be paid under Section 205. Can this quantity of soil be quantified?

If it is not quantified, how are we to bid this project on an level playing field with other Contractors? Shouldn't this work be covered in a Force Account?

Response: See Addendum No. 2.

68. Question: Since there is no way to also quantify the removal of lead-based paint from the existing structures, shouldn't this work also be covered in a Force Account?

Response: See Addendum No. 2.

69. Question: On Sheet S7.4, the East and West Elevation shows the top of base elevation to be 90.0 and the bottom of cap elevation to be 167.5. This would make the column height 77.5'. The dimensions given for each level total to 68.5'. Which dimension is the correct one?

Response: Column height of 68.5' is correct. Top of base elevation shall be revised to 99.0. See Addendum No. 2.

70. Question: When will Addendum #2 be issued? Can we assume that the bid date will be postponed to allow two weeks for review of the addendum after it is issued?

Response: See Addendum No. 2.

71. Reference: Structural drawing S7.1 detail 4 depicts an isometric view of notching detail of existing steel towers' members at pier 1 and piers 2, based on this detail all steel members intersect with proposed reinforcing steel shall be notched. It is noted on the detail that" Contractor shall submit detailed shop drawings of proposed notch sizes and locations for engineer's review and approval prior to fabrication or ordering of reinforcing steel".

71A. Question: Please clarify which engineer will approve the above mentioned shop drawing? HDOT' engineer or the Contractor's structural engineer?

Response: HDOT Engineer.

71B. Question: Due to high number of existing towers' steel members that intersect with reinforcing steel at the above mentioned locations and considering the heavily reinforced pier and pier caps concrete sections, we envision that some of the steel members will have several notches within short distance, this will undermine the structural integrity of both towers at pier 1 and pier 2, consequently a complete shoring system will be required for the entire superstructure prior to notch the subject steel members per provided detail. Since there is no bid item covers shoring existing bridge' superstructure, please advise in case shoring of entire bridge is required how this additional cost will be compensated? Will the bid schedule amended prior to bid date by adding new pay item as a force account item (in case is required), or the contractor shall incorporate the cost in another bid item, or this item will be treated as a change order after award? Please advise in order to have all bidders price same / comparable scope accordingly.

Response: Per General Note 4 on Plan sheet 35, Contractor shall provide all

measures necessary to protect the structure during construction. Contractor will be responsible for means and methods of protecting bridge structure during construction. Temporary works such as shoring shall be incidental to the respective pay items in the proposal schedule.

72. Question: Can a new subcontractor (micropile or drilled shaft) count the experience of its employees as its own company experience?

Response: No. The Standard Specifications and Special Provisions require that the company obtain its own experience working as that particular company.

73. Question: Can a smaller diameter and longer anchor be utilized to replace the 8" diameter anchors shown on the plans?

Response: Bid accordingly.

END OF RFI AND RESPONSES