STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

ADDENDUM NO. 2

FOR

Hana Highway Resurfacing
Vicinity of Waikani Bridge to Kapaula Bridge

PROJECT NO. 360B-01-12M

DISTRICT OF HANA

ISLAND OF MAUL

FY 2012

Amend the bid documents as follows:

A. NOTICE TO BIDDERS

1. Revise the third paragraph on page NB-1 to read as follows:

"The project includes cold planing, resurfacing existing pavement, installing pavement markings and signing, installing of guardrail with steel posts, upgrading guardrail end terminals, adjusting existing guardrail post, cleaning existing drainage culverts, installing of concrete gutter, reconstructing weakened pavement areas, concrete spall, cracks repairs on bridges, installation of drainage pipe and applying for longitudinal joint stabilizer. Estimated construction cost is between \$ 1 M and \$ 5 M."

B. TABLE OF CONTENTS

1. Replace entire TOC dated 1/02/08 with the attached TOC dated r3/12/12

C. PROPOSAL SCHEDULE

1. Replace pages P-10 through P-13 dated 27-Sept-11 with the attached pages P-10 through P-13 dated r3/12/12

D. SPECIAL PROVISIONS

- 1. Replace pages 312-1a dated 07/01/08 with attached pages 312-1a through r312-2a dated 3/12/12.
- 2. Replace pages 676-1a through 676-3a dated 01/03/11 with attached pages 676-1a through 676-4a dated r3/12/12.
- 3. Add pages 412-1a through 412-4a dated 3/16/12.
- 4. Add page 603-1a dated 6/08/10.

E. PLANS

- 1. Replace Plan Sheet No.7 with the attached Plan Sheet No. ADD.7,
- 2. Replace Plan Sheet No 15 with the attached Plan Sheet No. ADD 15
- 3. Add Plan Sheet ADD. No. 7S-1.

F. PRE-BID MEETING

- 1. Sign-in sheet (see attached)
- 2. Pre-Bid Meeting Minutes (see attached)

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

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Performance Bond

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Labor and Material Payment Bond

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r3/12/12

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT	AMOUNT
209.1000	Installation, Maintenance, Monitoring and Removal of BMP	L.S.	L.S.	L.S.	\$
209.2000	Additional Water Pollution, Dust, and Erosion Control	F.A.	F.A.	F.A.	\$ 10,000.00
312.0100	Hot Mix Glassphalt Base Course	180	Ton	€	₩
401.0100	Hot Mix Asphalt (HMA) Pavement, Mix No. IV	5,700	Ton	\$	\$
401.0200	Hot Mix Asphalt (HMA) Pavement, Mix No. IV For Stabilize Unpave Shoulder	200	Ton	₩	<u>β</u>
412.0100	Longitudinal Joint Stabilizer	43,000	S.F.	₩	49
414.0100	Excavation of Weakened Pavement Areas	85	C.Y.	8	\$
415.0100	Cold Planing	7,500	Sq.Yd.	8	€
603.0200	24-inch Reinforced Concrete Pipe, Class III	Ľ.S.	L.S.	€	€
603.0300	Clean Existing Culverts	F.A.	F.A.	F.A.	\$ 125,000.00
604.5010	Type 61614P GDI, (6.00 FT to 6.99 FT.)	,	Each	€	8
606.0500	Reset Guardrail	S.	L.S.	L.S.	8
0090'909	Guardrail, Strong Post W-Beam with 8-foot Post	L.S.	L.S.	L.S.	8
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ITEM NO.	ITEM	APPROX. QUANTITY	TIND	UNIT	AMOUNT
606.0700	Terminal Section, Modified Type "G"	L.S.	L.S.	L.S.	9
606.0800	Terminal Section, Type "A"	Ľ.S.	L.S.	Ľ.S.	↔
0060.0900	Terminal Section, Type ET 2000 (1 Each)		Ľ.S.	L.S.	₩
629.1010	4 - Inch Pavement Striping (Tape, Type II or Thermoplastic Extrusion)(White)	S.	ĽS.	r.S.	₩
629.1011	8 - Inch Pavement Striping (Tape, Type II or Thermoplastic Extrusion) (White)	ь; П	S.	L.S.	₩
629.1012	4 - Inch Double Solid Yellow Pavement Striping (Tape, Type II or Thermoplastic Extrusion)	S.	L.S.	L.S.	₩
629.1013	Yield Line Pavement Marking (Tape, Type III or Thermoplastic Extrusion)	S.	Ë.S.	Ľ.S.	₩
629.2020	Type "C" Pavement Marker	L.S.	L.S.	L.S.	\$
629.2030	Type "D" Pavement Marker	L.S.	L.S.	L.S.	8
630.0100	Type "A" Route Marker Assembly With Post	L.S.	L.S.	L.S.	\$
631.3000	Regulatory Sign (10 Sq. Ft. or Less) With Post	L.S.	L.S.	L.S.	\$
631.3100	Warning Sign (10 Sq. Ft. or Less) With Post	L.S.	L.S.	L.S.	\$
360B-01-12M r3/12/12 P-11	Addendum No. 2				

Addendum No. 2

ITEM NO.	ITEM	APPROX. QUANTITY	TINU	UNIT	AMOUNT
631.3200	Warning Sign (10 Sq. Ft. or Less) Without Post	L.S.	L.S.	L.S.	\$
632.4000	Reflector Marker (RM-3) Yellow With Steel Post	L.S.	ĽS.	L.S.	\$
632.4100	Reflector Marker (RM-3) Yellow With Flexible Post	L.S.	ĽS.	L.S.	₽
632.4200	Reflector Marker (RM-3) Yellow Without Post	ĽS.	Ľ.S.	ĽS.	₩
632.4300	Reflector Marker (RM-4) Yellow With Steel Post	L.S.	ĽS.	L.S.	₩
632.4400	Reflector Marker (RM-5) on Existing Guardrail	L.S.	L.S.	L.S.	\$
632.4500	Mile Post Marker And Supplemental Route Number Plate (Bi - Directional) With Post	S.	Ľ.S.	L.S.	9
632.4600	Type II Object Marker With Steel Post	Ľ.S.	L.S.	L.S.	€
639.0100	Gutter, Type 7	L.S.	Ľ.S.	L.S.	4
643.0100	Maintenance of Existing Landscape Areas	F.A.	F.A.	F.A.	\$ 5,000.00
645.0100	Traffic Control	Ľ.S.	L.S.	L.S.	€
645.0200	Additional Police Officers, Additional Traffic Control Devices, And Advertisement	F.A.	F.A.	F.A.	\$ 15,000.00
360B-01-12M r3/12/12 P-12	Addendum No. 2				

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT	AMOUNT
648.0100	Field-Posted Drawings	L.S.	L.S.	L.S.	₩
676.0100	Concrete Repair of West Wailuaiki Bridge	F.A.	F.A.	F.A.	\$ 30,000.00
676.0200	Concrete Repair of East Wailuaiki Bridge	F.A.	F.A.	F.A.	\$ 7,000.00
676.0300	Concrete Repair of Kopiliula Bridge	F.A.	F.A.	F.A.	\$ 75,000.00
676.0400	Concrete Repair of Puakaa Bridge	F.A.	F.A.	F,A.	\$ 25,000.00
676.0500	Concrete Repair of Waiohue Bridge	F.A.	F.A.	F.A.	\$ 15,000.00
676.0600	Concrete Repair of Unnamed Bridge Nos.1 and 2	F.A.	F.A.	F,A.	\$ 20,000.00
676.0700	Concrete Repair of Paakea Bridge	F.A.	F.A.	F.A.	\$ 15,000.00
696.1000	Field Office Trailer (Not to Exceed \$ 32,000.00)	Ľ.S.	L.S.	Š	6
696.2000	Maintenance of Trailers	F.A.	F.A.	F.A.	\$ 10,000.00
699.1000	Mobilization (Not to exceed 6% of the Sum of all items excluding the bid price of this item.)	L.S.	L.S.	L.S.	ક્
	Sum of All Items				()
NOTE:	Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid	o so may be gro	ounds for reje	ction of bid.	

Addendum No. 2

1		S	SECTION 312 – HOT MIX GLASSPHALT BASE COURSE	
2 3	Make	the fo	llowing amendments to said Sections:	
4 5 6	(I)		nd Section 312.03(C) Compaction by revising the secgraph, from line 102 to 105, to read as follows:	ond
7 8 9 0 1		densi gravit	npact mixture immediately upon completion of spreading operation ity of not less than 92.0 percent of maximum theoretical specty in accordance with AASHTO T 209, modified by deletion lemental Procedure for Mixtures Containing Porous Aggregate."	cific
.3 .4 .5	(II)	Amer follow	nd Section 312.04 Measurement , from line 116 to 117 to read	as k
6 7	"312.0)4	Measurement.	
18 19 20 21		(A) with c	The Engineer will measure HMGB course per ton in accorda contract documents."	nce
22 23 24 25	(III) follow		nd Section 312.05 Payment, from line 119 to 139, to read	l as
26 27 28 29	Paym	below ent wil	Payment. The Engineer will pay for the accepted pay ite at the contract price per pay unit, as shown in the proposal sched II be full compensation for the work prescribed in this section and cuments.	lule.
30 31 32 33	propo		Engineer will pay of the following pay item when included in hedule:	the
34 35 36			Pay Item Pay U	Jnit
37		(A)	Hot Mix Glassphalt Base Course	Ton
88 89 10 11 12			(1) 80% of the contract unit price upon completion of submit a job-mix formula acceptable to the Engineer; preparing surface, spreading, and finishing the mixture; and compacting mixture by rolling;	the
13 14 15			(2) 20% of the contract unit price upon completion of cut samples from the compacted pavement for testing; placing	-

46	compacting the sampled area with new material conforming to the
47	surrounding area; protecting the pavement; and final analysis."
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62	END OF SECTION 312

1	Make the following section a part of the Standard Specifications:	
2 3	"SECTION 676 - CONCRETE REPAIR	
4 5 6 7 8 9 10 11 12	676.01 Description. The work includes removing damaged concrete cleaning reinforcing steel, splicing corroded reinforcing steel as required applying a rust primer to the reinforcing steel, filling the damaged section with repair mortar, cleaning the concrete surface, and applying a migrating corrosion inhibitor. Removal and disposal of waste materials and providing shoring and/or scaffolding shall be considered incidental to the work. Contractor shall mark off length and width or height of each spall repair area.	
13 14	676.02 Materials.	
15 16 17 18	(A) Repair Mortar. Repair mortar shall be a polymer-modified cement based mortar with a migrating corrosion inhibitor. Repair morta shall be MCI-2702 as supplied by Cortec Corporation, or approved equal.	
19 20 21 22 23	(B) Rust Primer. Rust primer shall be a water-based primer that contains a chemical chelating agent and a waterborne latex with low water vapor permeability. Rust primer shall be VpCl CorrVerter Rust Primer as supplied by Cortec Corporation, or approved equal.	
24 25 26 27 28	(C) Migrating Corrosion Inhibitor. Migrating corrosion inhibitor shall be a surface applied corrosion inhibitor designed to migrate through concrete and protect the reinforcing steel. Migrating corrosion inhibitor shall be MCI-2020 as supplied by Cortec Corporation, or approved equal.	
29	(D) Other Materials. Other materials shall conform to the following:	
30 31 32	Reinforcing Steel ASTM A706	
33 34	Curing Materials 711.01	
35 36	Water 712.01	
37	676.03 Construction Requirements.	
38 39 40 41 42 43 44	(A) Traffic and Equipment Control on Bridge. The Contractor shall use certified flaggers to ensure that the vehicular speed on the bridge is 25 miles per hour or less during repair mortar placement and until initial set (approximately 4 hours). The Contractor shall submittraffic plan to the Engineer two weeks prior to start of work.	
45	The Engineer will not permit compressors or other equipment that	

produce vibration on the bridge during repair mortar application and curing period.

All damages to fresh repair mortar as a result of vibration from traffic loads, adverse weather or Contractor's equipment shall be immediately repaired by the Contractor at no increase in contract price or contract time.

- **(B)** Sounding Concrete. The Contractor shall sound the entire structure and mark all delaminated and/or unsound concrete locations. Contractor shall sound with a hammer or other suitable device and mark the perimeter of the concrete repair area with paint. The Contractor shall measure and the Engineer will verify the repair locations.
- (C) Surface Preparation. Repair mortar shall only be placed against clean and sound surfaces of the existing concrete. Sawcut the patch boundary 3/4 inch deep or less if required to avoid cuffing the reinforcing steel. All damaged concrete areas, such as cracks, honeycombs, delaminations, or loose concrete shall be removed with suitable hand operated chipping/pneumatic tools weighing less than 15 pounds. If areas of the structure are damaged during the repair work, the Contractor shall repair the damaged portion in accordance with the contract documents at no increase in contract price or contract time.

All shoring requirements will be the responsibility of the Contractor. The Contractor shall provide shoring calculations prepared and stamped by a Structural Engineer licensed in the State of Hawaii. The Contractor shall consult a Structural Engineer if the concrete removal is greater than 1/3 the depth of a girder, is greater than 15 percent of the length of a girder and around the longitudinal reinforcement, or is in the vicinity of the girder bearing.

(D) Corroded Reinforcing Steel. Corroded reinforcing steel shall be prepared in accordance with the recommendations provided by the manufacturer of the rust primer. As a minimum, all loose rust and concrete shall be removed with a wire brush and the surface washed with high-pressure water. Apply rust primer to the reinforcing steel as recommended by the manufacturer of the rust primer.

All reinforcing steel bars that have corroded more than 25 percent of the original cross-sectional area shall be strengthened by adding a welded splice bar as shown in the contract documents. Splicing of welded splice bars shall be in accordance with Section 602 - Reinforcing Steel.

(E) Repair Mortar. Do not use a bonding agent. Dampen the are to be repaired. Apply the repair mortar in accordance with the recommendations and application instructions provided by the manufacturer of the repair mortar. (F) Curing. See Subsections 503.03(K) – Protection and Curing and 503.03(L) – Curing Methods. (G) Testing. The Engineer will test the repaired sections with hammer to detect unsound concrete repair. Repair imperfections at no increase in contract price or contract time. (H) Applying Migrating Corrosion Inhibitor. All exposed concrete surfaces of the structure, including, but not limited to the deck soffit beams, diaphragms, walls and piers, shall be cleaned by steam cleaning water-blasting or sandblasting. Surface preparation shall be a accordance with the recommendations provided by the manufacturer of the migrating corrosion inhibitor.
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the migrating corrosion inhibitor. 109
109
Application and coverage rate of the migrating corrosion inhibitor t
the exposed concrete surfaces of the structure shall be in accordance wit
the recommendations provided by the manufacturer.
113
114 (I) The Contractor shall be aware of and comply with all Federal, Stat
and County environmental rules and regulations. The Contractor sha
prevent debris and construction materials from entering the water an
stream bank below. Submit the method of controlling pollution for
118 acceptance to the Engineer.
119 120 Debris and waste material shall be disposed of at a disposal sit
Debris and waste material shall be disposed of at a disposal sit accepted by the Engineer.
122 accepted by the Engineer.
123 676.04 Method of Measurement. The Engineer will measure Concret
repair on a force account basis in accordance with Subsection 109.06 – Force
Account Provisions and Compensation and as ordered by Engineer.
126
126 127 676.05 Basis of Payment. The Engineer will pay for the accepte
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136	Concrete Repair of	Force Account."
137		
138	END OF SECTION 676	

360B-01-12M 676-4a (Addendum No. 2) 1 2 3

"SECTION 412 - LONGITUDINAL JOINT STABILIZATION

4 5

412.01 Description. This work includes furnishing and placing longitudinal joint stabilizer on hot mix asphalt concrete pavements.

6 7 8

412.02 Material. The longitudinal joint stabilizer shall meet the following:

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The longitudinal joint stabilizer shall be polymerized cationic emulsion composed of a maltene petroleum resin oil base and SBR co-polymer uniformly emulsified with water.

12 13

.14	<u>Emulsion</u>	Test Method	Requirem	
15			Min	Max
16	Residue, % W¹	ASTM D 244 (Mod)	39	44
17	Miscibility ²	ASTM D 244 (Mod)	No Coagι	ılation
18	Particle Charge	ASTM D 244	Positive	
19				
20	Residue from Distillation			
21	Flash Point, COC °C	ASTM D 92	200	-
22	Viscosity @ 60°C, cSt	ASTM D 445	100	200
23	Asphaltenes, %w	ASTM D 2006-70	-	1.00
24	Maltene Dist. Ratio	ASTM D 2006-70	0.2	0.8
25	_			
26	<u>PC + A</u> ₁ ⁵ S + A ₂			
27	$S + A_2$			
28	5			
29	PC/S Ratio ⁵	D 2006-70	0.5	-
30	Saturated Hydrocarbons,	S° D 2006-70	21	28
31				
32	<u>Polymer</u>			
33	Charge		Positive	
34	Monomer Ratio, Butadier		76/24	•
35	Solids Content, percent b		63	
36	Coagulum on 80 mesh so			
37	Maximum percent		0.1	
38	Mooney Viscosity of Poly			
39	(ML 4 @ 212°F) m	ninimum	100	
40	pH of Polymer		5.0	
41	Weight per gallon			
42	Wet pounds @ 63	% solids content	7.94	
15				

43 44

45

46 47 48

460B-01-12M 412-1a (Addendum No.2)

3/16/12

¹ ASTM D 244 Evaporation test for percent of residue is made by heating 100 gram sample to 149°C (300°F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D 244 except that .02 Normal Calcium

49	Chlorid	e solution shall be used in place of distilled water.
50 51 52 53	PC = P	nical composition by ASTM D 2006-70 colar Compounds $A_1 = First Acidaffins$ $A_2 = Second Acidaffins$ turated Hydrocarbons
54 55 56 57	Submit certi substantiatir	ficate of compliance for longitudinal joint stabilizer accompanied by ag test data.
58 59	412.03 C	onstruction.
50 51 52 53 54 55 56 57	deten the c absor within typica the l	Test Strip. Prior to production, spread longitudinal joint stabilizer at us application rates between 0.07 to 0.25 gallons per square yard to mine the rate of application where the longitudinal joint stabilizer has apability to fully penetrate the asphalt pavement surface and be bed within 30 minutes of application. No surface coating shall remain a 30 minutes of application. Apply longitudinal joint stabilizer under all project environmental conditions at a test strip location determined by Engineer. Manufacturer's representative shall be present for mination of application rate.
69 70 71	(B) not be	Weather Limitations. Application of longitudinal joint stabilizer will allowed under the following conditions:
72 73		(1) On wet surfaces, as determined by the Engineer.
74 75 76		(2) When <u>surface</u> temperature is below 40 degrees Fahrenheit.
77 78 79		(3) When weather conditions prevent proper method of construction.
30	(C)	Equipment.
31 32 33 34		(1) General. Keep equipment, tools, and machinery clean and maintained in satisfactory condition.
35 36 37 38 39 90 91		(2) Longitudinal Joint Stabilizer Application Equipment. Use a self-propelled distributor truck with pneumatic tires or other approved applicator to spread the longitudinal joint stabilizer. The distributor truck or applicator shall be designed and equipped to distribute the longitudinal joint stabilizer uniformly on variable widths of surface at readily determined and controlled rates from 0.07 to 0.25 gallons per square yard of surface. Variation from any specified rate shall not exceed five percent.
93 94 95 96		Distributor truck or applicator shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for applying longitudinal joint stabilizer manually 460B-01-12M

97 98	to cover areas inaccessible to the distributor. The application of the longitudinal joint stabilizer shall be controlled by a computerized
99	control system that maintains a constant application rate regardless of
100	the forward speed of the distributor unit. The distributor truck or
101	applicator shall be equipped to circulate and agitate the joint stabilizer
102	within the tank.
103	
104	Check distributor equipment, accuracy of application rate and
105	distribution uniformity when directed by the Engineer.
106	, , ,
107	(3) Sand Application Equipment. Use a truck equipped with a
108	spreader that allows the sand to be uniformly distributed on the
109	pavement. The spreader shall be adjustable so as to accommodate
110	various treatment widths.
111	
112	(D) Application of Longitudinal Joint Stabilizer. Whenever practical,
113	apply the longitudinal joint stabilizer within 24 hours of completion of the
114	pavement section and before the pavement is opened to traffic. Apply the
115	longitudinal joint stabilizer at the temperature recommended by the
116	manufacturer and at the pressure required for proper distribution so all points
117	of the area to be treated receive uniform distribution. Commence distribution
118	with a running start to ensure full rate of spread over the entire area to be
119	treated. Areas inaccessible to the distributor or inadvertently missed shall
120	receive additional treatment by hand sprayer application.
121	
122	Grades or super elevations that may cause excessive runoff shall have the
123	required amounts of longitudinal joint stabilizer applied in two applications.
124	Where more than one application is to be made, apply succeeding
125	applications as directed by the Engineer once penetration of the preceding
126	application is complete.
127	
128	(E) Application of Sand. If a significant amount of longitudinal joint
129	stabilizer residue remains on the surface of the treated area after a 30
130	minute period or if blotting of misapplied joint stabilizer is required, apply a
131	light coating of dry sand to the surface. Sweep and remove sand prior to
132	opening the area to traffic.
133	
134	412.04 Measurement. The Engineer will measure longitudinal joint stabilizer
135	per square foot in accordance with the contract documents.
136	
137	412.05 Payment. The Engineer will pay for the accepted longitudinal joint
138	stabilizer at the contract unit price basis, as shown in the proposal schedule.
139	Payment will be full compensation for the work prescribed in this section and the

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

140 141

142

143 144

contract documents.

Pay Unit	145 Pay I
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nt Stabilizer Square Foot	147 Longitu
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neer will pay 100 percent of the contract bid price upon completion	149 T
al joint stabilizer application."	150 of the lo
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END OF SECTION 412	156

Pre-Bid Meeting Minutes

Project:

Hana Highway Resurfacing, Waikani Bridge to Kapaula Bridge

Project No.:

360B-01-12M

Pre-bid meeting was held on March 12, 2012 at 9:00 A.M at the Maui District Conference Room at 650 Palapala Drive, Kahului. The participants were:

David Ortega, of Maui Paving LLC, Brett Ueno of Maui Master, Fred Gutierrez and Crisanto Ragasa of State Highways

- 1. Scope of project was discussed and then opened floor for questions.
- 2. Contractors recommended changing the payment item of Hot Mix Glassphalt Base Course from lump sum to ton Response: Changes will address in addendum No.2
- 3. The Contractors were reminded that there will be an additional item in the proposal schedule and a typical section will be added in the project plans for "Longitudinal Joint Stabilizer." This will be included in Addendum No. 2
- 4. Contractor asking if one hundred (100) working days be added more days.

 Response: Based on the quantity of asphalt and concrete volume use to repair the bridges, working days would be enough.
- 5. Contractors suggested deleting general note no.5 on plan sheet No.3. Response: Cold planing to be done at the side roads and in front of existing asphalt swale is not included of the estimated quantity in line item of cold planing.
- 6. Contractors recommended changing the payment item of Item 676 bid items for Concrete Repair on Bridges from Lump Sum to Force Account. Response: Changes will address in addendum No.2

7. Meeting was adjourned at 9:30 A.M.

(lay

Respectfully Submitted,

Crisanto Ragasa Design Engineer

SIGN IN SHEET - PRE-BID MEETING

March 12, 2012 @9:00 am MAUI DISTRICT OFFICE

Hana Highway Resurfacing Waikani Bridge to Kapaula Bridge Project No. 3607601=10M 360/A-0/-/2M

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4. Brett Ueno

5. FILED GUTIERREZ, DOT 873-313590 FRED. C. GUTIER REZQHAWAII. GOV