STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ADDENDUM NO. 1

FOR

INTERSTATE ROUTE H-1
GUARDRAIL AND SHOULDER IMPROVEMENTS
AIRPORT INTERCHANGE TO MIDDLE STREET
FEDERAL-AID INTERSTATE PROJECT NO. IM-H1-1(240)
DISTRICT OF HONOLULU
ISLAND OF OAHU

FY 2004

Amend the bid documents as follows:

A. **SPECIAL PROVISIONS**

1. **Section 693 – Terminal Impact Attenuator.**

   Replace pages 693-1a thru 693-3a dated 7/30/03 with the attached pages 693-1a thru 693-3a dated 12/8/03.

B. **PROPOSAL SCHEDULE**

1. Replace pages P-8 thru P-14 dated 9/30/03 with the attached pages P-8 thru P-14 dated 12/8/03.

C. **PLANS**

1. Replace Plan Sheet Nos. 6, 12, 26, 54, 62, 97, 102, 108 and 121 with the attached Plan Sheet Nos. ADD. 6, ADD. 12, ADD. 26, ADD. 54, ADD. 62, ADD.97, ADD. 102, ADD. 108, and ADD. 121.

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

for RODNEY K. HARAGA
Director of Transportation

Make the following Section a part of the Standard Specifications:

"SECTION 693 – TERMINAL IMPACT ATTENUATOR

693.01 Description. This section describes furnishing and installing a terminal impact attenuator (TAU-II, Quadguard System, or an accepted equal that is fully compatible, complies with the NCHRP 350 criteria, and is approved by the Federal Highway Administration (FHWA)), prior to field installation at a prepared site according to the contract. A terminal impact attenuator shall be system approved for use in Hawaii according to the Hawaii DOT requirements, including but not limited to "STATEWIDE POLICY FOR PERMANENT HIGHWAY SAFETY HARDWARE, March 1, 1999" and manufacturer's recommendations and specifications.

693.02 Material. Material shall conform to the following:

Concrete Structure	503.02
Reinforcing Steel	602.02

The terminal impact attenuator shall be redirective, non-gating, and energy absorbing. Submit written certification to the Engineer for acceptance within 15 working days following the Award of Contract. Certification shall attest that the terminal impact attenuator satisfies the NCHRP Report 350, Test Level as specified by the contract and approved by the FHWA, prior to field installation.

Concrete shall conform to Section 601 - Structural Concrete and shall have a minimum compressive strength of 4000 psi at 28 days.

693.03 Construction Requirements.

(A) Equipment List and Drawings. Submit 6 copies of list of material and equipment to be incorporated in the work to Engineer for acceptance within 15 days following Award of Contract. The list shall include the name of the manufacturer, dimension and catalog number of the unit, detailed scale drawing of equipment, specification and shop drawing for fabrication and proposed deviation.

(B) Site Preparation. Before installing terminal impact attenuator, prepare site. Excavate and backfill according to the Section 206 - Excavation and Backfill for Conduits and Structures. Exercise extreme caution not to damage underground facilities. Repair damage by Contractor immediately at no cost to the State.

Placing and curing of concrete shall conform to Section 503 - Concrete Structures.

Reinforcing steel shall conform to Section 602 - Reinforcing Steel and

manufacturer's recommendation.

(C) Terminal Impact Attenuator. Install terminal impact attenuator according to manufacturer's recommendation. Provide training for installation of system in the field for period not to exceed three hours.

Provide minimum eight hours training at Oahu District Office, 727 Kakoi Street, Honolulu, Hawaii 96819 for installation and maintenance of the system. Furnish five copies of installation and maintenance system manuals.

(D) Replacement Cartridge Cell. Furnish and deliver sets of replacement cartridge cells, when included in proposal, for each installation to location designated by the Engineer and store as directed.

(E) Replacement Nose Section Cover and Cartridge Cell. Furnish and deliver sets of replacement nose section cover and cartridge cell, when included in proposal, for each installation to location designated by Engineer and store as directed.

(F) Existing Attenuator Parts and Sand Barrels. Remove and deliver usable attenuator parts and sand barrels to the State of Hawaii, Department of Transportation, Oahu District Baseyard. All unusable material will be disposed of according to the contract. The Engineer will determine which materials are usable or unusable.

693.04 Method of Measurement. The Engineer will measure terminal impact attenuator per each.

The Engineer will measure unassembled replacement cartridge cells per cell, when included in proposal.

The Engineer will measure unassembled replacement nose section cover and cartridge cell per each, when included in proposal.

The Engineer will measure replacement unit of applicable terminal impact attenuator per each, when specified in proposal.

693.05 Basis of Payment. The Engineer will pay for the accepted terminal impact attenuator at the contract unit price per each. The price includes full compensation for removing, delivering, and disposing of the existing sand barrels and traffic attenuator systems which includes all attachments and embedments, patching of the existing concrete, doing work necessary for installing the terminal impact attenuator, complete in place including site preparation, excavation, backfill, reinforced concrete foundation, drilling holes, installing crash cushion object marker, epoxing and installation of bolts and anchor bolts into new and existing concrete, and services for training and furnishing labor, materials, tools, equipment,

and incidentals necessary to complete the work.

The Engineer will pay for accepted unassembled replacement cells at the contract unit price per cell. The price includes full compensation for furnishing and delivering the unassembled replacement cells and furnishing labor, material, tools, equipment, and incidentals necessary to complete the work.

The Engineer will pay for accepted unassembled replacement nose section cover and cartridge cells at the contract unit price per each. The price includes full compensation for furnishing and delivering the unassembled replacement nose section cover and cartridge cells and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

The Engineer will make payment under:

Pay Item	**Pay Unit**
Terminal Impact Attenuator _____	Each
Replacement Cartridge Cell (Unassembled)	Cell
Replacement Nose Section Cover and Replacement Cartridge Cell (Unassembled)	Each"

END OF SECTION

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
203.0100	Roadway Excavation	120	Cu Yd	$ _____	$ _____
206.2020	Structure Excavation for Drainage Systems	15	Cu Yd	$ _____	$ _____
206.6000	Structure Excavation for Retaining Wall	260	Cu Yd	$ _____	$ _____
206.7200	Structure Backfill for Retaining Wall	180	Cu Yd	$ _____	$ _____
206.8300	Filter Material for Retaining Wall	2	Cu Yd	$ _____	$ _____
209.1000	Water Pollution and Erosion Control	F.A.	F.A.	F.A.	$ 50,000.00
312.0100	Plant Mix Glassphalt Concrete Base Course	150	Ton	$ _____	$ _____
401.0400	Asphalt Concrete Pavement, Mix No. IV	110	Ton	$ _____	$ _____
503.1090	Concrete for Retaining Wall	L.S.	L.S.	L.S.	$ _____
503.1091	Concrete for Backfill of Retaining Wall (Class D)	L.S.	L.S.	L.S.	$ _____
507.7000	Concrete Bridge Railing	56	Lin Ft	$ _____	$ _____
507.7001	Concrete End Post, Type I	L.S.	L.S.	L.S.	$ _____
507.7002	Concrete End Post, Type II	L.S.	L.S.	L.S.	$ _____

PROPOSAL SCHEDULE

		APPROX.		UNIT	
507.7003	Concrete End Post, Type III	L.S.	L.S.	L.S.	$ _____
507.7004	Concrete End Post, Type IV	L.S.	L.S.	L.S.	$ _____
507.7005	Concrete End Post, Type V	L.S.	L.S.	L.S.	$ _____
507.7006	Concrete End Post, Type VI	L.S.	L.S.	L.S.	$ _____
602.0090	Reinforcing Steel for Retaining Wall	L.S.	L.S.	L.S.	$ _____
603.0010	Bed Course Material for Culvert	4	Cu Yd	$ _____	$ _____
603.0020	18-Inch Reinforced Concrete Pipe, Class III or 18-Inch High Density Polythelene Pipe (Type S)	21	Lin Ft	$ _____	$ _____
603.0100	Clean Existing Culverts	F.A.	F.A.	F.A.	$ 30,000.00
604.1000	Type "1" Grate	2	Each	$ _____	$ _____
604.5100	Reconstructed Type "61614" GDI (5.00 to 5.99 Feet)	1	Each	$ _____	$ _____
604.5200	Type "A-9P" Grated Drop Inlet (3.00 to 3.99 Feet)	1	Each	$ _____	$ _____
606.3110	Guardrail Post	1	Each	$ _____	$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
606.3130	Guardrail, Strong Post with W-Beam	398	Lin Ft	$ _____	$ _____
606.3140	Guardrail, Strong Post with W-Beam and Rubrail	45	Lin Ft	$ _____	$ _____
606.3360	Guardrail Type 3, Thrie Beam with Steel Posts	150	Lin Ft	$ _____	$ _____
606.5200	State Furnished Portable Concrete Barrier (Intermediate)	82	Each	$ _____	$ _____
606.7110	Terminal Section, Type FLEAT-350	2	Each	$ _____	$ _____
606.7112	Terminal Section, Type "A"	1	Each	$ _____	$ _____
609.1000	Curb and Gutter, Type 2DG	64	Lin Ft	$ _____	$ _____
609.1100	Gutter, Type 2(1211214)	435	Lin Ft	$ _____	$ _____
609.2000	Concrete Gutter Transition	24	Lin Ft	$ _____	$ _____
621.0210	Relocation of Existing Destination Sign	1	Each	$ _____	$ _____
621.1210	4.00 lbs/ft. Flanged Channel Post for Destination Sign	3	Each	$ _____	$ _____
621.4100	Reflector Marker (RM-2) on Steel Post	3	Each	$ _____	$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
621.5300	Regulatory and Warning Sign (Greater than 10 Square Feet) with Posts	1	Each	$ _____	$ _____
621.6100	Type A Route Marker Assembly	1	Each	$ _____	$ _____
621.7100	Construction Signs with Two Posts	53	Each	$ _____	$ _____
640.1000	Type "1" Concrete Spillway	L.S.	L.S.	L.S.	$ _____
645.0200	Additional Police Officers and/or Additional Traffic Control Devices	F.A.	F.A.	F.A.	$ 160,000.00
649.6210	Inertial Barrier Module, (200 lbs.)	2	Each	$ _____	$ _____
649.6220	Inertial Barrier Module, (400 lbs.)	8	Each	$ _____	$ _____
649.6230	Inertial Barrier Module, (700 lbs.)	4	Each	$ _____	$ _____
649.6240	Inertial Barrier Module, (1,400 lbs.)	8	Each	$ _____	$ _____
649.6250	Inertial Barrier Module, (2,100 lbs.)	4	Each	$ _____	$ _____
655.1000	Drilling Holes and Installing Dowel Reinforcing Bars for End Posts	200	Each	$ _____	$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
655.1001	Drilling Holes and Installing Dowel Reinforcing Bars for Retaining Wall	6	Each	$ _____	$ _____
655.1002	Drilling Holes and Installing Dowel Reinforcing Bars for Concrete Bridge Railing	110	Each	$ _____	$ _____
655.1003	Drilling Holes and Installing Stainless Steel Dowels for Concrete Bridge Railing	4	Each	$ _____	$ _____
655.1004	Drilling Holes and Installing Stainless Steel Dowels for Concrete Barriers	5	Each	$ _____	$ _____
655.1005	Drilling Holes and Installing Stainless Steel Dowels at Expansion Joints	8	Each	$ _____	$ _____
664.0100	Emergency Telephone with Concrete Pedestrian Access Pad	1	Each	$ _____	$ _____
693.0020	Terminal Impact Attenuator I	1	Each	$ _____	$ _____
693.0021	Terminal Impact Attenuator II	1	Each	$ _____	$ _____
693.0022	Terminal Impact Attenuator III	1	Each	$ _____	$ _____
693.0023	Terminal Impact Attenuator IV	1	Each	$ _____	$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
693.0024	Terminal Impact Attenuator V	1	Each	$ _____	$ _____
693.0025	Terminal Impact Attenuator VI	1	Each	$ _____	$ _____
693.0026	Terminal Impact Attenuator VII	1	Each	$ _____	$ _____
693.0027	Terminal Impact Attenuator VIII	1	Each	$ _____	$ _____
693.0028	Terminal Impact Attenuator IX	1	Each	$ _____	$ _____
693.0029	Terminal Impact Attenuator X	1	Each	$ _____	$ _____
693.0030	Terminal Impact Attenuator XI	1	Each	$ _____	$ _____
693.0031	Terminal Impact Attenuator XII	1	Each	$ _____	$ _____
693.0032	Terminal Impact Attenuator XIII	1	Each	$ _____	$ _____
693.0033	Terminal Impact Attenuator XIV	1	Each	$ _____	$ _____
693.1010	Replacement Cartridge Cell (unassembled)	67	Cell	$ _____	$ _____
693.1020	Replacement Nose Section Cover and Replacement Cartridge Cell (Unassembled)	14	Each	$ _____	$ _____

PROPOSAL SCHEDULE

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
699.1000	Mobilization (Not to exceed 10% of the sum of all items, excluding the bid price of this item and force account items)	L.S.	L.S.	L.S.	$ _____

A. SUM OF ALL ITEMS $ _____

B. Either Furnish Foreign Steel Not to Exceed Minimal Amount (Insert "0") or Furnish Foreign Steel in Excess of Minimal Amount (Insert "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.