

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 TL-3 MASH Compliant approved by HDOT and transition attachment to MASH compliant guardrail.

693.02 Materials.

Terminal impact attenuator shall consist of crushable energy absorbing elements and transition attachment to MASH compliant guardrail. Submit certification attesting that terminal impact attenuator satisfies NCHRP 350, Test Level 3 requirements within 10 working days following award of contract.

693.03 Construction Requirements.

(A) Equipment List and Drawings. Submit six copies of list of materials and equipment to be incorporated in the work within 10 working days following the award of contract. Include manufacturer's name, dimensions and catalog number of unit, detailed scale drawings of special equipment, shop drawings for fabrication and proposed deviations.

(B) Terminal Impact Attenuator. Install terminal impact attenuator according in accordance with manufacturer's recommendations. Provide training for installation of system in field for period not to exceed three hours. Provide minimum eight hours of training at Oahu District Office, 727 Kakoi Street, Honolulu, HI 96819 for installation and maintenance of system. Furnish five copies of installation and maintenance system manuals.

(C) Replacement Elements. Furnish and deliver one set of replacement elements, including nose element and transition attachment, for each installation to locations designated by the Engineer and store as ordered.

693.04 Method of Measurement. The Engineer will measure terminal impact attenuation system and transition attachment to MASH compliant guardrail per each as complete units of the type and design specified in the proposal.

693.05 Basis of Payment. The Engineer will pay for terminal impact attenuation system and transition attachment to MASH compliant guardrail at the contract unit price per each complete in place. The price includes full compensation for submitting the equipment list and drawing; furnishing and installing the terminal impact attenuator systems at the designated locations; excavating and backfilling; concrete pad; transition to guardrail; and furnishing equipment, tools, labor, materials and other incidentals necessary to complete the

work.

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

Pay Item	Pay Unit
Terminal Impact Attenuator – HDOT Approved MASH Compliant, TL-3	Each”

END OF SECTION 693