Request for Federal Aid Reimbursement Eligibility of Highway Safety Hardware

Submitter	Date of Request:	February 01, 2022	◉ New ○ Resubmission
	Name:	John Pasakarnis	
	Company:	Dicke Safety Products	
	Address:	1201 Warren Avenue, Downers Grove, IL 60515	
	Country:	United States of America	
	To:	Michael S. Griffith, Director FHWA, Office of Safety Technologies	

I request the following devices be considered eligible for reimbursement under the Federal-aid highway program.

Device & Testing Criterion - Enter from right to left starting with Test Level

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System Type	Submission Type	Device Name / Variant	Testing Criterion	Test Level
'WZ': Crash Worthy Work Zone Traffic Control Devices	◉ Physical Crash Testing ○ Engineering Analysis	STF1008 with 48" x 48" Roll-Up Sign	AASHTO MASH	TL3

By submitting this request for review and evaluation by the Federal Highway Administration, I certify that the product(s) was (were) tested in conformity with the AASHTO Manual for Assessing Safety Hardware and that the evaluation results meet the appropriate evaluation criteria in the MASH.

Individual or Organization responsible for the product:

Contact Name:	John Pasakarnis	Same as Submitter ☒
Company Name:	Dicke Safety Products	Same as Submitter ☒
Address:	1201 Warren Avenue, Downers Grove, IL 60515	Same as Submitter ☒
Country:	United States of America	Same as Submitter ☒

Enter below all disclosures of financial interests as required by the FHWA `Federal-Aid Reimbursement Eligibility Process for Safety Hardware Devices' document.

Dicke Safety Products is the manufacturer and marketer of device.

Applus IDIADA KARCO Engineering, LLC (IDIADA KARCO) is an independent research and testing laboratory having no affiliation with any other entity. IDIADA KARCO is actively Involved In data acquisition and compliance/certification testing for a variety of government agencies and equipment manufacturers. The principals and staff of IDIADA KARCO have no past or present financial, contractual or organizational interest in any company or entity directly or indirectly related to the products that KARCO tests. If any financial interest should arise, other than receiving fees for testing, reporting, etc., with respect to any project, the company will provide, In writing, a full and immediate disclosure to the FHWA.

PRODUCT DESCRIPTION

(●) New Hardware or Significant Modification ( ) Modification to Existing Hardware

Product Description of STF1008 with 48" x 48" Roll-Up Sign
(Reference Drawing STF1008)
The STF1008 is a work-zone traffic control device used to display traffic control signs.
Further Description:
The DICKE Safety Products STF1008 utilized a 48.0 in. (1.2 m) reflective square vinyl roll-up sign mounted at a height of 60 in. (1.52 m) measured to the bottom corner of the sign. The device has a total weight of 46.9 lbs (21.3 kg). The device consists of a telescoping mast and base assembly. The telescoping mast consists of a top mast and bottom mast. The top mast is constructed of 1.0 in. (25.4 mm) aluminum tube and the bottom mast is constructed of 1.25 in. (32 mm) square steel tube. The vinyl roll-up sign is mounted to the mast via a fiberglass cross brace constructed of 1.25 in. (32 mm) wide by 65.0 in. (1.65 m) long fiberglass. The base assembly consists of a base top, and four (4) steel legs. The four (4) steel legs are constructed of square steel tubing with a heavy duty dual upright spring system. In the deployed state, the legs have a footprint that measures 73 in. (1.9 m) by 52.0 in. (1.3 m).

CRASH TESTING

By signature below, the Engineer affiliated with the testing laboratory, agrees in support of this submission that all of the critical and relevant crash tests for this device listed above were conducted to meet the MASH test criteria. The Engineer has determined that no other crash tests are necessary to determine the device meets the MASH criteria.

Engineer Name:	Antonio Reyes	
Engineer Signature:	Antonio Reyes Digitally signed by Antonio Reyes Date: 2022.02.01 10:57:49 -08'00'	
Address:	9270 Holly Road, Adelanto, CA 92301	Same as Submitter ☐
Country:	United States of America	Same as Submitter ☒

A brief description of each crash test and its result:

Required Test Number	Narrative Description	Evaluation Results
3-70 (1100C)	Designed to evaluate the ability of a small vehicle to activate any breakaway, fracture, or yielding mechanism. Is considered optional for work-zone traffic control devices weighing less than 220 lbs (100 kg). The as-tested device weighed 46.9 lbs (21.3 kg) and therefore Test 70 was not performed.	Non-Relevant Test, not conducted

Required Test Number	Narrative Description	Evaluation Results
3-71 (1100C)	An 1100C test vehicle approached the test article at a nominal speed of 62 mph. The first STF1008 with 48" x 48" vinyl roll-up sign device was oriented at 0° and was impacted at a velocity of 64.48 mph (100.77 km/h). Upon impact, the STF1008 device's top and bottom masts yielded in a predictable manner and the occupant compartment was not penetrated and deformations into the occupant compartment did not exceed MASH recommended limits. The second device was oriented at 90° and was impacted at a velocity of 61.47 mph (98.93 km/h). Upon impact, the STF1008 device's top and bottom masts yielded in a predictable manner. The occupant compartment was not penetrated and deformations into the occupant compartment did not exceed MASH recommended limits. The STF1008 with 48" x 48" vinyl roll-up sign met all the requirements for MASH Test 3-71.	PASS
3-72 (2270P)	An 2270P test vehicle approached the test article at a nominal speed of 62 mph. The first STF1008 with 48" x 48" vinyl roll-up sign device was oriented at 0° and was impacted at a velocity of 63.69 mph (102.50 km/h). Upon impact, the STF1008 device's top and bottom masts yielded in a predictable manner and the occupant compartment was not penetrated and deformations into the occupant compartment did not exceed MASH recommended limits. The second device was oriented at 90° and was impacted at a velocity of 60.96 mph (98.11 km/h). Upon impact, the STF1008 device's top and bottom masts yielded in a predictable manner and the occupant compartment was not penetrated and deformations into the occupant compartment did not exceed MASH recommended limits. The STF1008 with 48" x 48" vinyl roll-up sign met all the requirements for MASH Test 3-72.	PASS

Full Scale Crash Testing was done in compliance with MASH by the following accredited crash test laboratory (cite the laboratory's accreditation status as noted in the crash test reports.):

Laboratory Name:	Applus IDIADA KARCO Engineering, LLC.	
Laboratory Signature:	Antonio Reyes Digitally signed by Antonio Reyes Date: 2022.02.01 10:57:31 -08'00'	
Address:	9270 Holly Road, Adelanto, CA 92301	Same as Submitter ☐
Country:	United States of America	Same as Submitter ☒
Accreditation Certificate Number and Dates of current Accreditation period :	TL 371: July 1, 2019 - July 1, 2022	

Submitter Signature*: John Pasakarnis Digitally signed by John Pasakarnis Date: 2022.11.29 15:57:46 -06'00'

Submit Form

ATTACHMENTS

Attach to this form:

1) Additional disclosures of related financial interest as indicated above.
2) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
3) A drawing or drawings of the device(s) that conform to the Task Force-13 Drawing Specifications [Hardware Guide Drawing Standards]. For proprietary products, a single isometric line drawing is usually acceptable to illustrate the product, with detailed specifications, intended use, and contact information provided on the reverse. Additional drawings (not in TF-13 format) showing details that are relevant to understanding the dimensions and performance of the device should also be submitted to facilitate our review.

FHWA Official Business Only:

Eligibility Letter		
Number	Date	Key Words