



U.S. Department
of Transportation
**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, D.C. 20590

Jun 13, 2013

In Reply Refer To:
HSST/B-114A

Mr. Ernest Knight
NPCG, LLC
P.O. Box Z
Carlisle, Iowa 50047

Dear Mr. Knight:

This letter is in response to your request for the Federal Highway Administration (FHWA) to review a roadside safety system for eligibility for reimbursement under the Federal-aid highway program.

Name of system:	DuroBlock Spacer
Type of system:	Recycled Rubber Spacer Block for Guardrail
Test Level:	NCHRP Report 350 Test Level 3
Testing conducted by:	N/A
Date of request:	March 27, 2013
Date of completed package:	March 27, 2013

Decision

The following device is eligible, with details provided in the form which is attached as an integral part of this letter:

- DuroBlock Spacer Recycled Rubber Spacer Block for Guardrail

Based on a review of crash test results submitted by the manufacturer certifying the device described herein meets the crash test and evaluation criteria of the National Cooperative Highway Research Program (NCHRP) Report 350, the device is eligible for reimbursement under the Federal-aid highway program. Eligibility for reimbursement under the Federal-aid highway program does not establish approval or endorsement by the FHWA for any particular purpose or use.

The FHWA, the Department of Transportation, and the United States Government do not endorse products or services and the issuance of a reimbursement eligibility letter is not an endorsement of any product or service.

FHWA:HSST:NArtimovich:sf:x61331:6/5/13

File: s://directory folder/hsst/nartimovich/HSST B114A_NPCG_LL_C formerly_Welch.docx

cc: HSST (Reader, HSA; Chron File, HSST; NArtimovich, HSST), BFouch, HSST

Requirements

To be found eligible for Federal-aid funding, roadside safety devices should meet the crash test and evaluation criteria contained in the NCHRP Report 350 or the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH).

Description

The device and supporting documentation are described in the attached form and previous FHWA Letter B-114 to Welch Products, Inc. dated March 27, 2003, copy enclosed for reference. We understand you have acquired the rights to manufacture the Welch offset block.

Summary and Standard Provisions

Therefore, the system described and detailed in the attached form is eligible for reimbursement and may be installed under the range of conditions tested.

Please note the following standard provisions that apply to FHWA eligibility letters:

- This finding of eligibility does not cover other structural features of the systems, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may influence system conformance with NCHRP Report 350 criteria will require a new reimbursement eligibility letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals safety problems, or that the system is significantly different from the version that was crash tested, we reserve the right to modify or revoke this letter.
- You are expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.
- You are expected to certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the crash test and evaluation criteria of the NCHRP Report 350.
- To prevent misunderstanding by others, this letter of eligibility is designated as number B-114A and shall not be reproduced except in full. This letter and the test documentation upon which it is based are public information. All such letters and documentation may be reviewed at our office upon request.

- This letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented system for which the applicant is not the patent holder. The FHWA does not become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.

Sincerely yours,

Michael S. Griffith
Director, Office of Safety Technologies
Office of Safety

Enclosures



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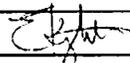
Sincerely yours,



Michael S. Griffith
Director, Office of Safety Technologies
Office of Safety

Enclosures

Request for Federal Aid Reimbursement Eligibility Of Highway Safety Hardware

Submitter	Date of Request:	March 27, 2013	<input type="radio"/> New <input checked="" type="radio"/> Resubmission
	Name:	Ernest Knight 	
	Company:	NPCG, LLC formerly Welch Products, Inc.	
	Address:	PO Box Z, Carlisle, IA 50047	
	Country:	USA	
	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.



System Type	Submission Type	Device Name / Variant	Testing Criterion	Test Level
'CC': Crash Cushions, Attenua	<input checked="" type="radio"/> Physical Crash Testing <input type="radio"/> FEA & V&V Analysis	DuroBlock Spacer	NCHRP Report 350	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 NCHRP Report 350 (Report 350) and that the evaluation results meet the appropriate evaluation criteria in the Report 350.

Identification of the individual or organization responsible for the product:

Contact Name:	Ernest Knight	Same as Submitter <input checked="" type="checkbox"/>
Company Name:	NPCG, LLC formerly Welch Products, Inc.	Same as Submitter <input checked="" type="checkbox"/>
Address:	PO Box Z, Carlisle, IA 50047	Same as Submitter <input checked="" type="checkbox"/>
Country:	USA	Same as Submitter <input checked="" type="checkbox"/>

PRODUCT DESCRIPTION

<input type="radio"/> New Hardware	<input checked="" type="radio"/> Modification to Existing Hardware	Non-Significant - Effect is positive or Inconsequential
Requesting company and product name change from Welch Products recycled rubber spacer block to NPCG, LLC, DuroBlock Spacer		

CRASH TESTING

A brief description of each crash test and its result:

Required Test Number	Narrative Description	Evaluation Results
3-30 (820C)	See attached files.	PASS
53-30 (700C)		
3-31 (2000P)		
3-32 (820C)		

Required Test Number	Narrative Description	Evaluation Results
S3-32 (700C)		
3-33 (2000P)		
3-34 (820C)		
S3-34 (700C)		
3-35 (2000P)		
3-36 (820C)		
S3-36 (700C)		
3-37 (2000P)		
3-38 (2000P)		
3-39 (2000P)		
3-40 (2000P)		
S3-40 (700C)		
3-41 (2000P)		
3-42 (820C)		
S3-42 (700C)		
3-43 (2000P)		
3-44 (2000P)		

Full Scale Crash Testing was done in compliance with ~~MASH~~ ^{NHTSA 350} by the following accredited crash test laboratory (cite the laboratory's accreditation status as noted in the crash test reports.):

Laboratory Name:	Midwest Roadside Safety Facility	
Laboratory Contact:	Karla Lechtenberg, MSME, EIT	Same as Submitter <input type="checkbox"/>
Address:	130 Whittier Bld., 2200 Vine St., Lincoln, NE 68583--853	Same as Submitter <input type="checkbox"/>
Country:	USA	Same as Submitter <input type="checkbox"/>
Accreditation Certificate Number and Date:	2937.01 Valid until Nov. 30, 2013	

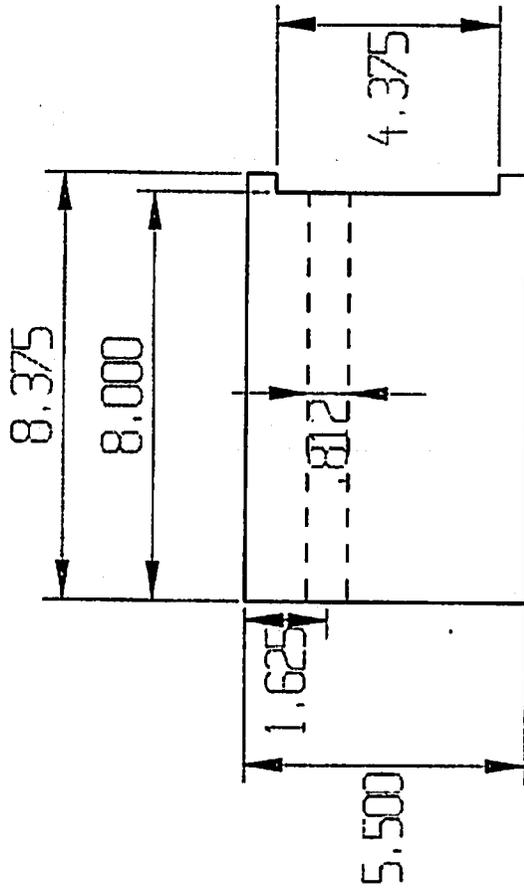
ATTACHMENTS

Attach to this form:

- 1) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
- 2) 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 key to understanding the performance of the device should also be submitted to facilitate our review.

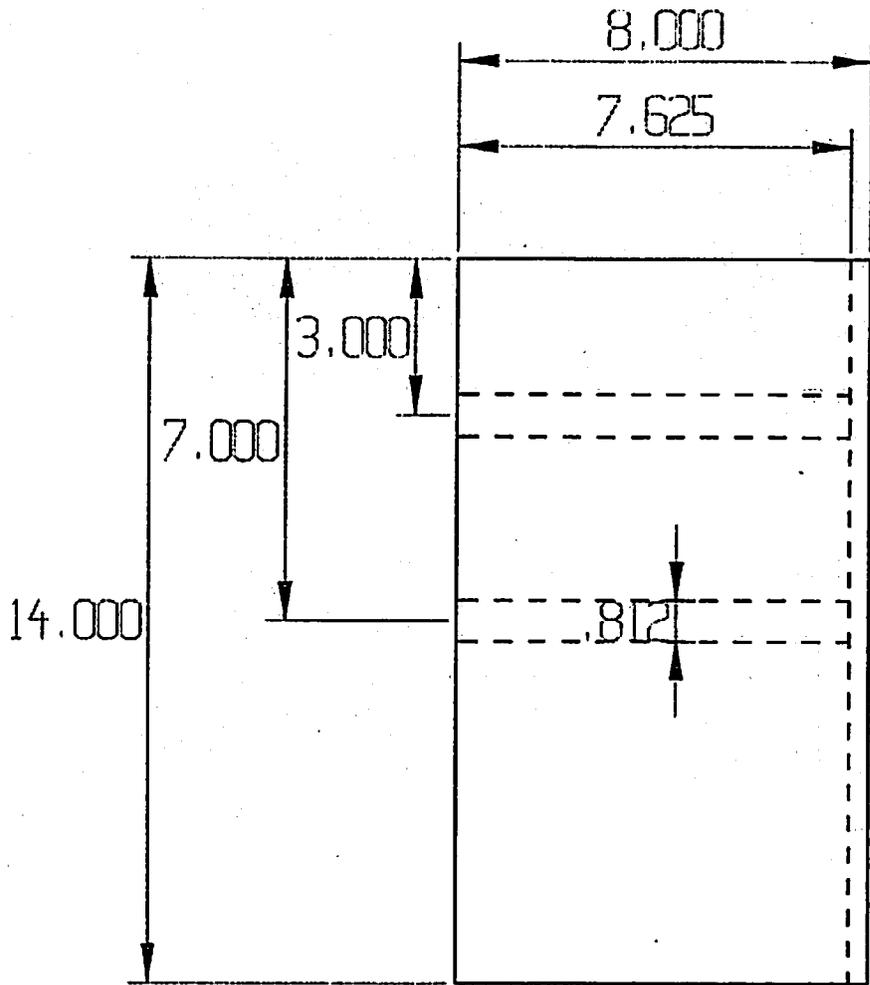
FHWA Official Business Only:

Eligibility Letter		AASHTO TF13	
Number	Date	Designator	Key Words



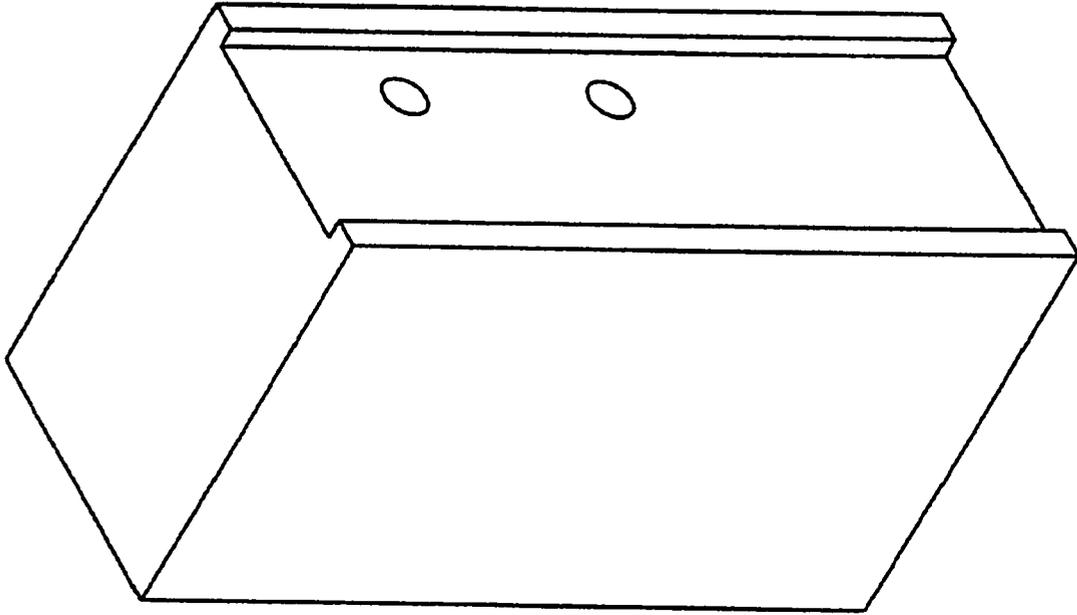
TOP VIEW

WELCH PRODUCTS, INC.	
DRAWING NAME WPSB-I 6X8	TOLERANCE ± 1/8" ALL
DRAWN BY D.W.	DESCRIPTION 6X8X1/4 (T BEAM) GUARDRAIL SPACER I
MATERIAL RUBBER-DOT	DATE 1/8/6



SIDE VIEW

WELCH PRODUCTS, INC	
DRAWING NAME WPSB-I 6X8	TOLERANCE ± 1/8" ALL
DRAWN BY D.W.	DESCRIPTION 6X8X14 (T BEAM) GUARDRAIL SPACER
MATERIAL RUBBER-DOT	DATE 1/7/



3-D VIEW

WELCH PRODUCTS	
DRAWING NAME	WFSH-I 6XB
	10LFPA
DRAWN BY	DESCRIPTION
D.W.	6XB(I) 6 (I BEAM) BL.
MATERIAL	
R100R-001	

March 27, 2003

HSA-10/B114

Mr. Howard Block
President
Welch Products, Inc.
205 South Garfield (PO Box Z)
Carlisle, Iowa 50047

Dear Mr. Block:

In your March 17 letter to Mr. Richard Powers of my staff, you sent him a copy of a test report prepared by the Midwest Roadside Safety Facility, dated March 16, and entitled "Performance Analysis of Welch Products Recycled Rubber Spacer Block" and a CD showing the bogie test that was conducted with your product. You requested a ruling on the acceptability of your product, presumably for use with strong steel-post w-beam guardrail on the National Highway System (NHS).

The Welch offset block is composed of approximately 40 per cent recycled rubber (natural and synthetic), 35 per cent carbon black, 11 per cent volatiles, and 5 per cent or less each of zinc oxide, ash, stearic acid and sulfur. Figure 9 in the test report shows the tested block to be 140-mm wide by 213-mm deep by 360-mm tall, with a 111-mm wide, 9.5-mm deep routing on the field side to fit over the steel post flange. Testing consisted of two bogie tests in which a 992-kg bogie first impacted a standard routed timber block (Test WB-1) and then your block (Test WB-2), both of which were mounted between a W150 x 13.5 (W6 x 9) post and a short section of w-beam guardrail. The steel posts were set in a rigid foundation that prevented any rotation in the soil prior to failure at the ground line. In both tests, the posts did fail at the ground line with the blocks remaining essentially intact. It was noted in the test report that the Welch block compressed approximately 76 mm as the post yielded, leaving an effective depth of 127 mm. While this could increase the likelihood of a wheel snagging on a post under some impact conditions, the compression was maximized by the 90-degree impact angle and the rigidity of the post at the ground line. Since the FHWA has accepted (but discouraged) the use of nominal 150 mm x 150 mm wood offset blocks based on crash testing, we do not believe it is necessary to conduct a full-scale test of the Welch block at this time.

Based on the results of the bogie test run using the Welch offset block, your product may be considered acceptable for use on the NHS with a strong-post w-beam guardrail when it conforms to the dimensions noted above, is composed of the same materials as the tested blocks, and is installed flush with the top of the post. As with all other alternative material offset blocks accepted for use on the NHS, this acceptance is based solely on the reported impact performance of the Welch block and is not intended to address the long-term performance or durability of the product. Field installations should be carefully monitored to verify expected performance and service life.

If your block is or will be patented, its use on Federal-aid projects, except exempt, non-NHS projects, is subject to the conditions listed in Title 23, Code of Federal Regulations,

Section 635.411, a copy of which is enclosed for your ready reference. If you have any questions, please call Mr. Powers at (202) 366-1320.

Sincerely yours,

(original signed by Michael S. Griffith)

Michael S. Griffith
Acting Director, Office of Safety Design
Office of Safety

Enclosure

Sec. 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

(1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or

(2) The State highway agency certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the PS&E for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State highway agency wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Appendix A sets forth the FHWA requirements regarding (1) the specification of alternative types of culvert pipes, and (2) the number and types of such alternatives which must be set forth in the specifications for various types of drainage installations.

(e) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.

ENCLOSURE 2