



U.S. Department
of Transportation

**Federal Highway
Administration**

January 12, 1999

400 Seventh St., S.W.
Washington, D.C. 20590

Refer to: HNG-14

Mr. D. Lance Bullard
Safety Quest, Inc.
505 University Drive
Suite 701
College Station, Texas 77840

Dear Mr. Bullard:

This is in reply to your letter of July 24 requesting Federal Highway Administration's (FHWA) acceptance of the "ROADGUARD" safety device as a crashworthy traffic control device for use in work zones on the National Highway System. You included a video tape of the informal crash testing that was done to show that the device shows no potential for passenger compartment intrusion. The enclosed drawings were also submitted with your application.

The panel and base of the device are made of crossed linked polyethylene and have a total mass of 18 kg with full ballast. The upright panel alone is approximately 2 kg and is inserted into a slot in the base. The panel and the slot in the base are designed so that the panel can lay flat on the ground if hit at low speed. At high speeds the panel is knocked loose by the impacting vehicle. The base is hollow and can be filled with sand or water for ballasting. The overall height of this vertical panel and base is 1118 mm, the base alone measuring 76 mm tall.

A number of hits occurred during the informal crash testing at speeds from 80 km/h to 113 km/h. Installations of one, two, and three devices were struck, with some being mounted backwards. What was evident was the ease at which the vehicle knocked the vertical panel loose from the ballasted base. The loose panels were projected in the direction of travel of the test vehicle and did not show potential to penetrate the passenger compartment. The panels remained intact with occasional damage to the reflective sheeting.

The ROADGUARD breakaway vertical highway delineator panel was demonstrated to be crashworthy via reduced testing and recording procedures and is therefore acceptable for use on the National Highway System at NCHRP Report 350 Test Level 3, when proposed by a State.

Our acceptance is limited to the crashworthiness characteristics of the device and does not cover its structural features, nor conformity with the Manual on Uniform Traffic Control Devices. Presumably, you will supply potential users with sufficient information on design and installation requirements to ensure proper performance. We anticipate that the States will require certification from Traffic Safety Devices that the hardware furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance. To prevent misunderstanding by others, this letter of acceptance shall not be reproduced except in full.

The ROADGUARD is a patented product and is considered "proprietary." The use of proprietary work zone traffic control devices in Federal-aid projects is generally of a temporary nature. They are selected by the contractor for use as needed and removed upon completion of the project. Under such conditions they can be presumed to meet requirement "a" given below for the use of proprietary products on Federal-aid projects. On the other hand, if proprietary devices are specified for use on Federal-aid projects, except exempt, non-NHS projects, they: (a) must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with existing highway facilities or that no equally suitable alternative exists or; (c) they must be used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes. Our regulations concerning proprietary products are contained in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is enclosed.

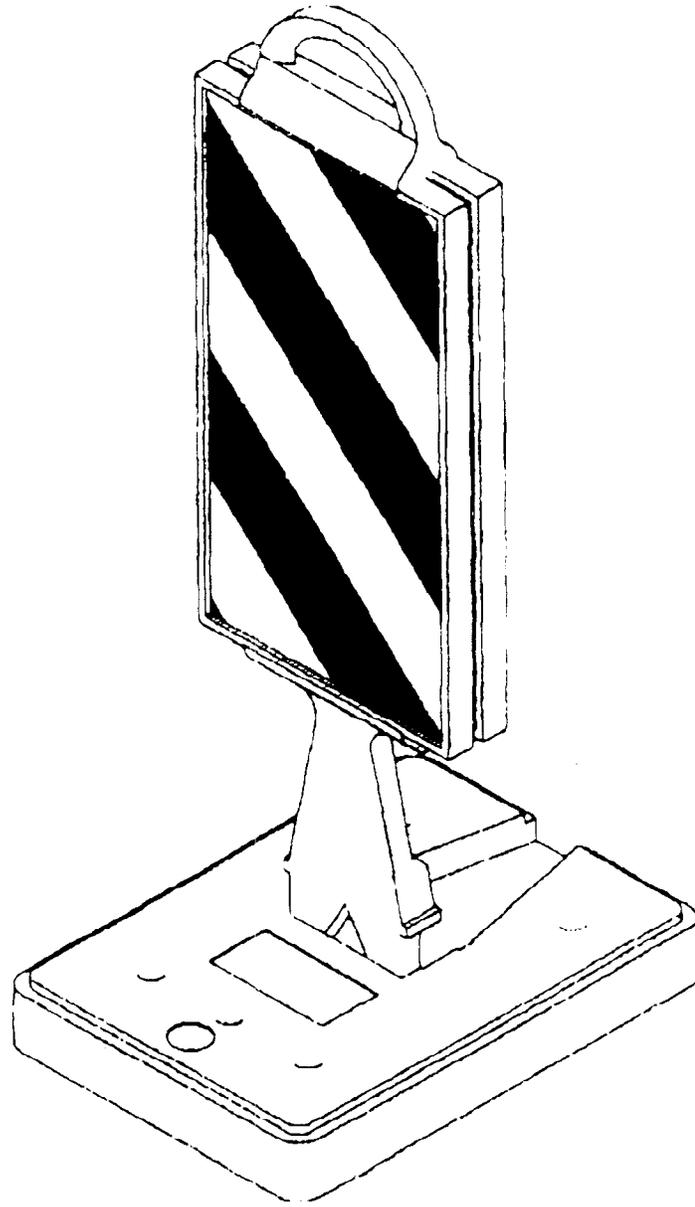
Sincerely yours,



 Dwight A. Horne
Chief, Federal-Aid and Design Division

2 Enclosures

Geometric and Roadside Safety Acceptance Letter WZ-9



VERTICLE
PANEL

**TRAFFIC SAFETY DEVICES
INCORPORATED**

the request. The RFHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFHWA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA's action on such a request may be published in the FEDERAL REGISTER for public comment.

(7) In determining whether the waivers described in paragraph (c)(1) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.

[48 FR 53104, Nov. 25, 1983, as amended at 49 FR 18821, May 3, 1984; 58 FR 38975, July 21, 1993]

EDITORIAL NOTE: For a waiver document affecting § 635.410, see 60 FR 15478, Mar. 24, 1995.

§ 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 com-

petitive 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.

§ 635.413 Warranty clauses.

The SHA may include warranty provisions in National Highway System (NHS) construction contracts in accordance with the following:

(a) Warranty provisions shall be for a specific construction product or feature. Items of maintenance not eligible for Federal participation shall not be covered.

(b) All warranty requirements and subsequent revisions shall be submitted to the Division Administrator for advance approval.

(c) No warranty requirement shall be approved which, in the judgment of the Division Administrator, may place an undue obligation on the contractor for items over which the contractor has no control.

(d) A SHA may follow its own procedures regarding the inclusion of war-

ranty provisions in non-NHS Federal aid contracts.

[60 FR 44274, Aug. 25, 1995]

§ 635.417 Convict produced materials.

(a) Materials produced after July 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:

(1) Produced by convicts who are parole, supervised release, or probation from a prison or

(2) Produced in a qualified prison facility and the cumulative annual production amount of such materials used in Federal-aid highway construction does not exceed the amount such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

(b) Qualified prison facility means prison facility in which convicts, during the 12-month period ending July 1987, produced materials for use in Federal-aid highway construction projects [53 FR 1923, Jan. 25, 1988, as amended at 58 FR 38975, July 21, 1993]

APPENDIX A TO SUBPART D—SUMMARY OF ACCEPTABLE CRITERIA FOR SPECIFYING TYPES OF CULVERT PIPES

Type of drainage installation	Alternatives required			AASHTO designations to be included with alternatives	Application	Remarks
	Yes	No	Number			
Cross drains under high-type pavement. ¹		X			Statewide	Any AASHTO approved material Do ²
Other cross-drain installations	X		3 minimum	M-170 and M-190	do	
Side-drain installations	X		do	M-38	do	Do ²
Special installation conditions		X			Individual installation	Specified to meet special conditions
Special drainage systems (storm sewers, inverted siphons, etc.)		X			do	Specified to meet site requirements

¹ High type pavement is generally described as FHWA construction type codes I, J, K, L, and plant mix and penetration Adam segments, respectively shown in the right-hand columns of type codes G and H having a combined thickness of 8 in and base of 7 in or more (or equivalent) or that are constructed on rigid bases.

² Types not included in currently approved AASHTO specifications may be specified if recommended by the State with adequate justification and approved by FHWA.

Subpart E—Interstate Maintenance Guidelines

SOURCE: 45 FR 20793, Mar. 31, 1980, unless otherwise noted.

§ 635.501 Purpose.

To prescribe Interstate maintenance guidelines and establish the policy procedures to insure that the condition of Interstate routes is maintained the level required by the purposes which they were designed.