



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

March 23, 2000

W 2 - 3 5
400 Seventh St. S.W.
Washington, DC 20590

Refer to: HSA- 1

Mr. Pat Budke
President,
Service Signing, L.C.
Cedar Falls, Iowa 50613

Dear Mr. Budke:

Thank you for your letter of December 15, 1999, requesting Federal Highway Administration (FHWA) acceptance of your company's traffic control devices for use in work zones on the National Highway System (NHS). Accompanying your letter was a detailed description and drawing of each device, and videos of the crash tests you conducted. You requested that we find the devices acceptable for use on the NHS under the provisions of National Cooperative Highway Research Program Report (NCHRP) 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features." This letter finds your vertical panel crashworthy an acceptable for use.

The FHWA guidance on crash testing of work zone traffic control devices is contained in two memoranda. The first dated July 25, 1997, titled "Information: Identifying Acceptable Highway Safety Features," established four categories of work zone devices: Category I devices were those lightweight devices which could be self-certified by the vendor, Category II devices were other lightweight devices which needed individual crash testing, Category III devices were barriers and other fixed or massive devices also needing crash testing, and Category IV devices were trailer mounted lighted signs, arrow panels, etc. The second guidance memorandum was issued on August 28, 1998, and is titled "INFORMATION: Crash Tested Work Zone Traffic Control Devices." This later memorandum lists devices that are acceptable under Categories I, II, and III.

The devices you are requesting acceptance for are considered "Category II" devices which warrant formal crash testing with 820 kg automobiles at 100 km/hr and impacts both head-on and at 90 degrees. Our reason for including vertical panels in Category II was to ensure that no hazardous base units were used. Concrete blocks, tire rims, and wooden boxes have been used to support vertical panels, any of which could snag the undercarriage of the vehicle or become hazardous missiles. Your products, however, use low-profile bases which have been shown to be safe. We understand that you intend to pursue additional testing of your MUTCD Type 2 barricade according to NCHRP Report 350.

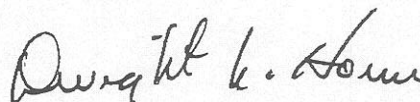
You tested your vertical panel numerous times at speeds in the range of 89 to 97 km/hr. In every case the panel separated cleanly from the base and was knocked aside, showing no potential to impact the vehicle's windshield. Based on your tests, along with tests of other vertical panel designs which included 90-degree testing, we can find your vertical panel acceptable for use on

either the ballasted plastic base or the recycled rubber base, In summary, the Service Signing, L.C. Vertical Panel without lights as shown in the enclosed drawings is acceptable as a Test Level 3 device on the NHS 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 Service Signing, L.C., that the devices furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance, and that they will meet the crashworthiness requirements of FHWA and NCHRP Report 350. To prevent misunderstanding by others, this letter of acceptance, designated as number WZ-35, shall not be reproduced except in full

Service Signing, L.C. Vertical Panels are patented products and 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
Acting Program Manager, Safety

Enclosure

the request. The RFWA 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 RFWA 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 RFWA 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. 26, 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 1, 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 on 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 for use in Federal-aid highway construction does not exceed the amount of 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 any prison facility in which convicts, during the 12-month period ending July 1, 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. ²
Other cross-drain installations.	X		3 minimum	M-170 and M-190.	do	Do. ²
Side-drain installations	X		do	M-36	do	Specified to meet special conditions.
Special installation conditions.		X			Individual installation.	Specified to meet site requirements.
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 macadam segments, respectively shown in the right-hand columns of type codes G and H having a combined thickness of surface 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.

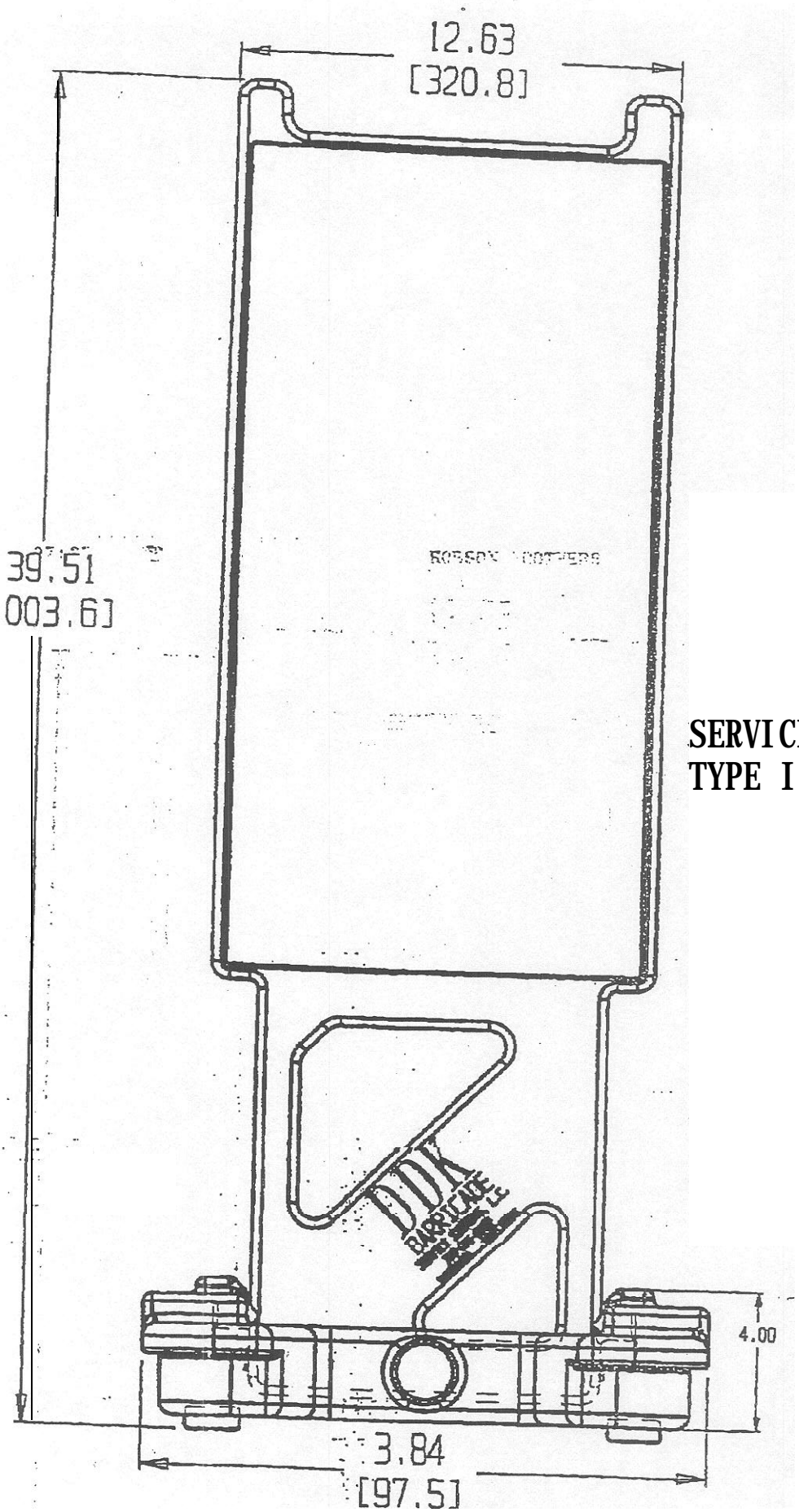
Subpart E—Interstate Maintenance Guidelines

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

§635.501 Purpose.

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

ADDISON DAVIDSON



**SERVICE SIGNING
TYPE I WITH BASE**