

Refer to: HSA-10/WZ-100(Amendment #2)

Mr. William E. Korman, Jr.
Korman Signs
3029 Lincoln Avenue
Richmond, Virginia 23228

Dear Mr. Korman:

This is in response to your letters of March 19 and April 8, 2003, requesting Federal Highway Administration (FHWA) acceptance of a modification to your company's crashworthy portable sign stand for use in work zones on the National Highway System (NHS). You requested that we find the SS548E and SS548AE sign stands, when modified with telescopic legs, acceptable for use on the NHS under the provisions of National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

Introduction

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.

A brief description of the devices follows:

The SS548E and SS548AE stands hold 48x48 inch roll-up signs at a height of 60 inches. The legs are 1.25 inch square, 16 gage steel tubing and are 48 inches long. The base of the mast is 27 inches long of 1.25 inch square steel tubing, 14 gage wall thickness with an extension spring arrangement. The upper portion of the telescoping mast is 72 inches long 1 inch square tubing, also 16 gage steel. It extends to the middle of the sign where it holds the sign mounting bracket.

The modification you requested was to substitute telescoping legs (29 inches plus

24 inches extension) for the rigid legs. Based upon crash testing that led to FHWA Acceptance Letters WZ-21, WZ-29, and WZ-100, it can be expected that the modification will not have an adverse effect on the safety performance of the stands. Your letter of April 8, 2003, requested that the model numbers of these two stands be modified with the letters "TL" to indicate the use of telescopic legs.

Findings

We concur that the modification of the legs of the crashworthy sign stands SS548E and SS548AE to include telescoping legs, to be designated SS548ETL and SS548AETL, and as described above and detailed in the enclosed drawings are acceptable for use on the NHS under the range of conditions tested, when proposed by a State.

We also concur with your request to modify your other crashworthy X-footprint sign stands by making the legs telescopic instead of a one-piece design, as needed. The overall length of each leg should be similar to that of the one-piece legs.

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

- Our acceptance is limited to the crashworthiness characteristics of the devices and does not cover their structural features, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may adversely influence the crashworthiness of the device will require a new acceptance letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals unacceptable safety problems, or that the device being marketed is significantly different from the version that was crash tested, it reserves the right to modify or revoke its acceptance.
- You will be expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.
- You will be expected to certify to potential users that the hardware 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-100 (Amendment #2) shall not be reproduced except in full. This letter, and the test documentation upon which this letter is based, is public information. All such letters and documentation may be reviewed at our office upon request.
- Korman sign stands may include patented features and may be 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 has been provided in earlier correspondence.

- This acceptance letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented device. Patent issues are to be resolved by the applicant and the patent owner.

Sincerely yours,

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

Enclosures

FHWA:HSA-10:NArtimovich:tb:x61331:4/17/03

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cc: HSA-10 (Reader, HSA-1; Chron File, HSA-10;
N. Artimovich, HSA-10)