



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

February 2, 2007

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

In Reply Refer To:  
HSA-10/ WZ-177  
Amendment #2

Mr. Randy L. Warner  
V.P. Purchasing/Product Development  
Protection Services Inc.  
635 Lucknow Road  
Harrisburg, PA 17110

Dear Mr. Warner:

Thank you for your letter of January 15, 2007, requesting the Federal Highway Administration (FHWA) acceptance of your company's vertical panel framed with 14-ga perforated square steel tubes as crashworthy traffic control devices for use in work zones on the National Highway System (NHS). Accompanying your letter was a drawing of the device and video of informal crash testing conducted. You requested that we find these devices 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."

The FHWA initially accepted this device for use in 8-inch deep excavations via the FHWA acceptance letter WZ-177 dated December 2, 2004. Pending successful completion of crash testing, provisional acceptance for one year was issued for your product's use on flat pavement via the FHWA acceptance letter WZ-177 Amendment #1 dated October 7, 2005.

Your letter indicates the vertical panel framed with 1-1/2" x 1-1/2" x 14 gauge, perforated Telespar tubing was crash tested with successful results. The impacting vehicle is a NCHRP 350 class 820C Geo Metro weighing 1,821 pounds (820 kg.) with an impact speed measured as 60 mph. Each vertical panel frame was ballasted with one 50 pound sandbag. One panel was placed facing the vehicle and the second placed 19.7 ft (6m) behind the first panel and rotated 90 degrees. Upon impact the stands were pushed forward and downward with minor crushing to the bumper and hood. Evidence from the video shows there was no contact with the windshield or risk of intrusion into the occupant compartment.

The results of testing met the FHWA requirements and, therefore, the vertical panel described above and shown in the enclosed drawing for reference is acceptable for use on the NHS.

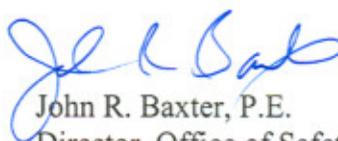


Please note the following standard provisions that apply to the FHWA letters of acceptance:

- Our acceptance is limited to the crashworthiness characteristics of the devices and does not cover their structural features, nor conformity with the MUTCD.
- 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 the FHWA and the NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance, designated as number WZ-177 Amendment #2 shall not be reproduced except in full. As this letter and the documentation which support it become public information, it will be available for inspection at our office by interested parties.

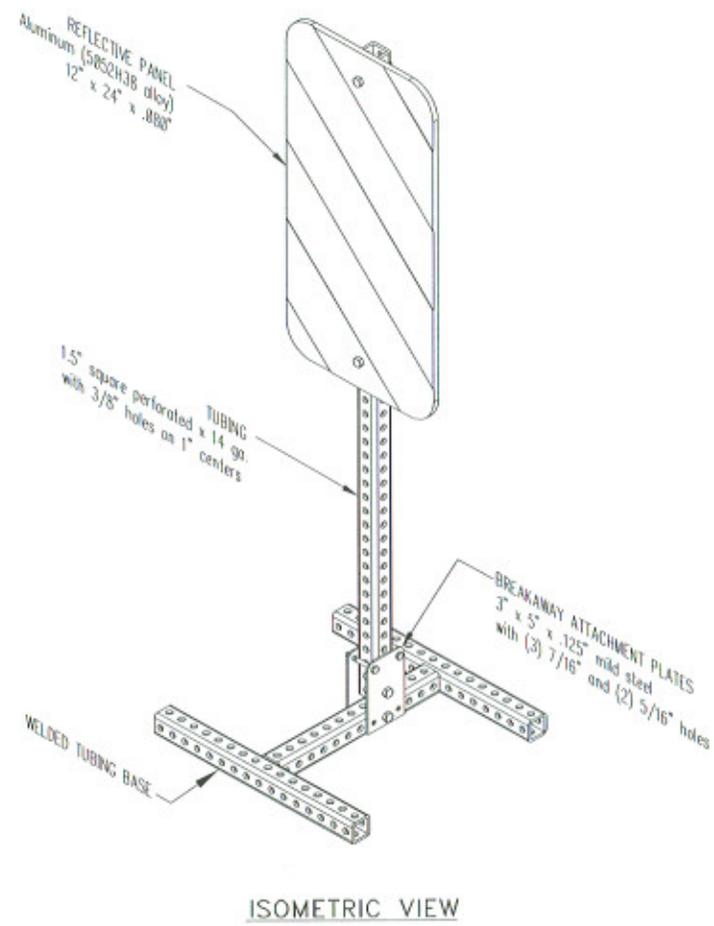
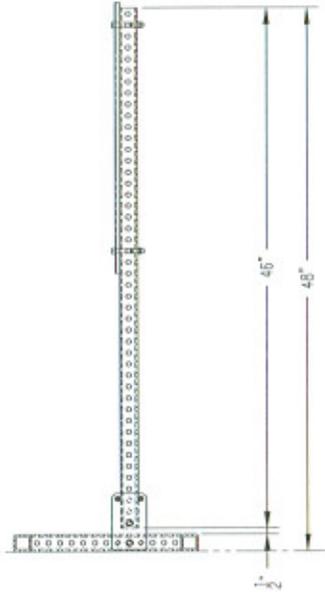
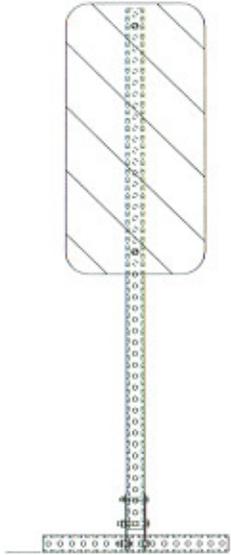
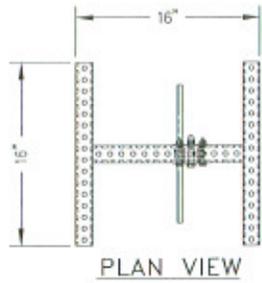
The vertical panel may be considered a patented product that is considered "proprietary". The use of proprietary devices specified on Federal-aid projects, except exempt, non-NHS projects: (a) must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency 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.

Sincerely yours,



John R. Baxter, P.E.  
Director, Office of Safety Design  
Office of Safety

Enclosure



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

PROTECTION SERVICES INC. Traffic Control Equipment & Services 635 Ludlow Road ~ Harrisburg, PA 17110 ~ (717) 236-9307				
SIGN STAND				
0	6/7/04	ORIGINAL ISSUE	SS01	REV 0
REV	DATE	DESCRIPTION	SCALE 1/8"=1'-0"	DRN BY: [Signature]