



U.S. Department  
of Transportation

**Federal Highway  
Administration**

May 2, 2006

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

In Reply Refer To: HSA-10/B-141A

Mr. Stephen L. Brown  
President  
Trinity Highway Safety Products, Inc.  
P.O. Box 568887  
Dallas, Texas 75356-8887

Dear Mr. Brown:

In my November 17, 2005, acceptance letter B-141, I agreed that a 3-rope CASS cable barrier using weakened S4 x 7.7 structural steel posts set in concrete footings on 20-foot centers met the National Cooperative Highway Research Program (NCHRP) Report 350 evaluation criteria as a test level 3 (TL-3) traffic barrier. While I also agreed that the same system with direct-driven posts would likely meet Report 350 criteria, I stated that testing would need to be done to determine the design deflections for alternative post designs. The Texas Transportation Institute conducted a test on the system described below on February 6, 2006, and detailed the results in its April 2006 report, "NCHRP Report 350 Test 3-11 of the CASS-TL3 with Driven Posts Spaced at 20 Ft."

In his April 21, 2006, letter, Mr. Brian Smith sent copies of this report to Mr. Richard Powers and requested the Federal Highway Administration's (FHWA) acceptance of the TL-3 modified CASS design which used 6-foot long, direct driven S4 x 7.7 steel posts on 20-foot centers. The 3/4-inch diameter cables were set at the same heights as in the earlier test (i.e., 21.0, 25.2, and 29.5 inches above the ground surface, measured to the center of each cable). The posts were again weakened by adding two 11/16-inch diameter holes through each flange at ground line as shown in the enclosure to this letter, and were driven to a depth of approximately 39 inches. The cables were not pre-stretched, but were tensioned to 5,600 pounds force for the test. The dynamic deflection for the 334-foot long test installation was 6.2 feet. By comparison, the deflection for the socketed posts in your earlier test was 7.7 feet.

The CASS TL-3 design described above may be used as either a roadside or median barrier on the National Highway System (NHS) when such use is acceptable to the contracting agency. Although the cables used in the test were not pre-stretched, this acceptance is also valid if and when pre-stretched cables are used, assuming that the recommended post-tensioning is applied to the barrier.



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

- Our acceptance is limited to the crashworthiness characteristics of the CASS TL-3 design and does not cover its structural features, durability, or maintenance characteristics.
- Any additional design or material changes that may adversely affect the crashworthiness of the barrier 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 barrier 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.
- To prevent misunderstanding by others, this letter of acceptance, designated as number B-141A, 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.
- The CASS Cable Barrier includes patented components and is considered proprietary. When proprietary devices are *specified by a highway agency* 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.

Sincerely yours,

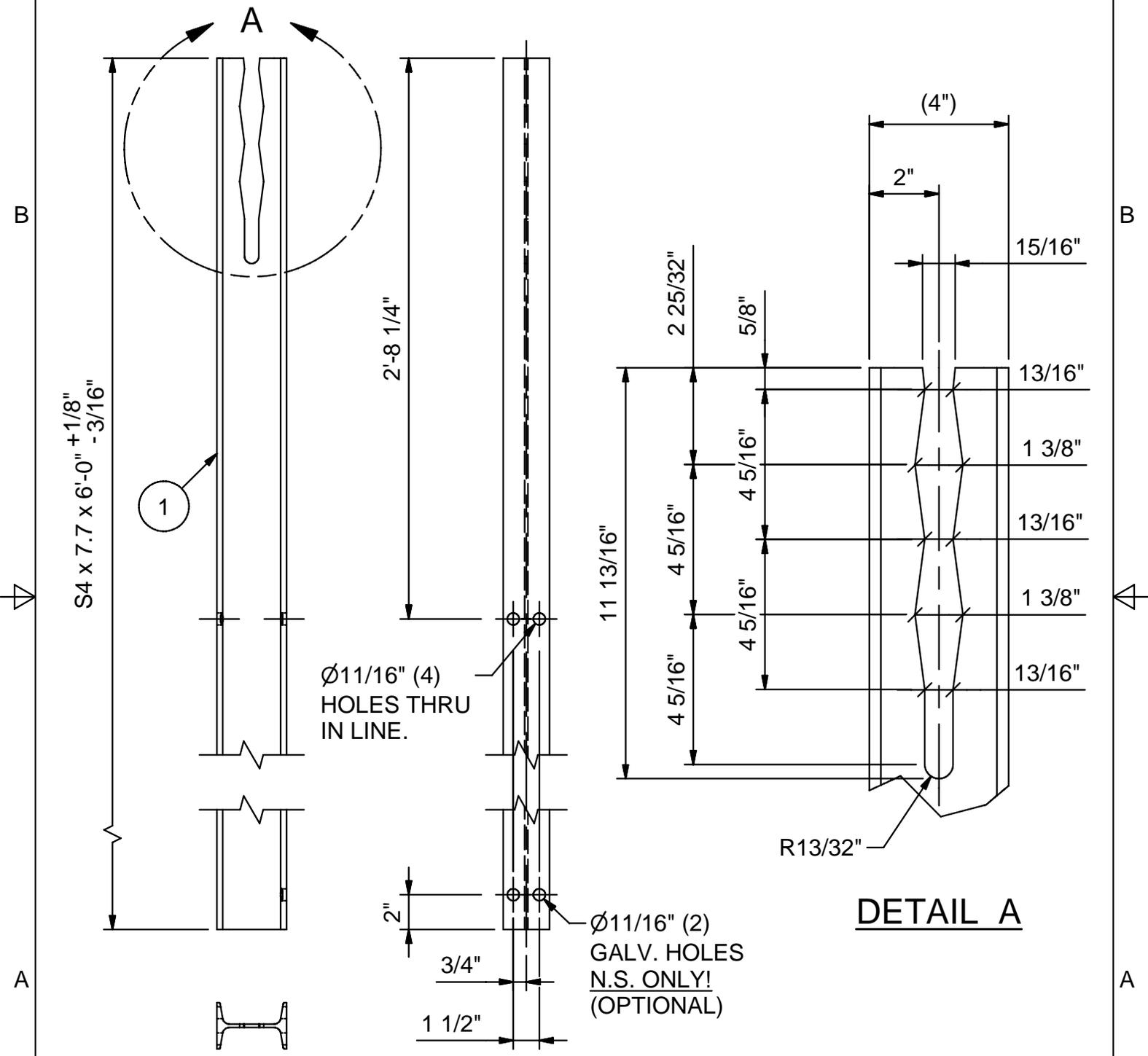
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John R. Baxter, P.E.  
Director, Office of Safety Design  
Office of Safety

Enclosure

BILL OF MATERIAL

QTY	PC NO.	ITEM	DESCRIPTION	LENGTH	Lbs / Each	MATERIAL
1		1	S 4 x 7.7	6'-0"	45.36	A36



<b>CASS-TL3 - LONG POST</b> <b>S4 x 7.7 x 6'-0"</b> <b>(DRIVEN)</b>		GALV SPEC: A123	
		SHIPPING WT: 48.1 lb	
		DRW: E.A.S	1/5/2006
		CHK: B.S.	1/5/2006
		DWG NO:	REV
		<b>033956</b>	<b>2</b>

100% Melted and Manufactured in the USA

PROJ. CASS-TL3



**TRINITY INDUSTRIES, INC.**  
HIGHWAY SAFETY DIVISION