



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

1200 New Jersey Ave., SE
Washington, D.C. 20590

November 30, 2011

In Reply Refer To:
HSST/ WZ-310

Jan Miller
Business Development Manager
160 Ave. La Pata
San Clemente, California 92673

Dear Ms. Miller:

This letter is in response to your request for the Federal Highway Administration (FHWA) to review a roadside safety system for eligibility for reimbursement under the Federal-aid highway program.

Name of system:	Quad-Drop Aluminum Sign Stand
Type of system:	Compact Sign Stand
Test Level:	NCHRP Report 350 TL-3
Testing conducted by:	N/A
Date of request:	March 7, 2011
Date initially acknowledged:	April 1, 2011

You certify that the device described herein meets the crashworthiness criteria of the National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features." Based on your evaluation, you asked that we find the device eligible for reimbursement under the Federal-aid highway program. Eligibility for reimbursement under the Federal-aid highway program does not establish approval or endorsement by the FHWA for any particular purpose or use.

Decision:

The following device was found eligible, with details provided below:

- Quad-Drop Aluminum Sign Stand

Requirements

Roadside safety devices should meet the guidelines contained in the NCHRP Report 350 or the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH). The FHWA Memorandum "Identifying Acceptable Highway Safety Features" of July 25, 1997 provides further guidance on crash testing requirements of roadside safety hardware.

Description

FHWA: HSST: NArtimovicht: ms: x61331:11/16/11
File: s: //directory folder/HSST/Artimovich/WZ-310.dotx
cc: HSST (NArtimovich; JDewar)

The Quad-Drop Aluminum Sign Stand is a variation of the many Traffix Devices Inc. (TDI) and industry standard sign stands known as “compact stands” for exclusive use in displaying roll-up signs, up to 48” diamond or 16 sq. ft. or smaller, of standard configuration.

Based on the data, drawings and images provided, you requested we find the Quad-Drop Aluminum Sign Stand eligible for Federal-aid funding because it meets the defined product class of Compact Signs Stand as described in FHWA HSA-10/WZ-85:

“Compact” sign stands are “X-Footprint” sign stands of steel or aluminum with a short mast...the mounting height of a 1220 mm x 1220 mm (48”x48”) diamond sign is 300 mm to 450 mm (12” to 18”) only...with no metal elements at a height that can impact the windshield during a crash.”

Per Drawing 1, enclosed for reference, the Quad-Drop compact aluminum sign stand has a standard type of “mini mast” allowing for display of standard sizes and configurations of roll-up sign at 12” above grade. The entire mast extends to approx 14” above grade allowing for no mass of steel to extend above bumper height which could potentially contact a vehicle windshield upon impact.

The TDI proprietary design feature involves the leg releasing and securing mechanism which facilitates the rapid deployment and retrieval of the sign stand and roll-up sign. The Q-D2 sign and stand system replaces the typical hard-locking pull-pin leg deployment system widely used today. Functionally, the mechanisms are equivalent as all stands have leg-locking systems. We concur that this modification from the “industry-standard” approach is not a factor regarding impact performance.

Findings

We concur that the Quad-Drop Aluminum Sign Stand meets our criteria for a “compact sign stand” per FHWA Acceptance Letter WZ-85. Therefore, the system described in the request above and detailed in the enclosed drawings is form is eligible for reimbursement and should be installed under the range of conditions such stands are tested, when such use is acceptable to a highway agency.

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

- This finding of eligibility is limited to the crashworthiness characteristics of the systems 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 system will require a new letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals unacceptable safety problems, or that the system being marketed is significantly different from the version that was crash tested, we reserve the right to modify or revoke this letter.
- 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

review, and that it will meet the crashworthiness requirements of the FHWA and NCHRP Report 350.

- To prevent misunderstanding by others, this letter of eligibility is designated as number WZ-310 and shall not be reproduced except in full. This letter and the test documentation upon which it is based are public information. All such letters and documentation may be reviewed at our office upon request.
- This letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented system for which the applicant is not the patent holder. The finding of eligibility is limited to the crashworthiness characteristics of the candidate system, and the FHWA is neither prepared nor required to become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.
- TraFFix Devices Aluminum Sign Stands are patented products and considered proprietary. If proprietary systems are specified by a highway agency for use on Federal-aid projects, except exempt, non-NHS projects, (a) they must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with the 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.
- This letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented system for which the applicant is not the patent holder. The eligibility letter is limited to the crashworthiness characteristics of the candidate system, and the FHWA is neither prepared nor required to become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.

Sincerely yours,

Michael S. Griffith
Director, Office of Safety Technologies
Office of Safety

Enclosures



U.S. Department
of Transportation

**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, D.C. 20590

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industry standard sign stands known as “compact stands” for exclusive use in displaying roll-up signs, up to 48” diamond or 16 sq. ft. or smaller, of standard configuration.

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Per Drawing 1, enclosed for reference, the Quad-Drop compact aluminum sign stand has a standard type of “mini mast” allowing for display of standard sizes and configurations of roll-up sign at 12” above grade. The entire mast extends to approx 14” above grade allowing for no mass of steel to extend above bumper height which could potentially contact a vehicle windshield upon impact.

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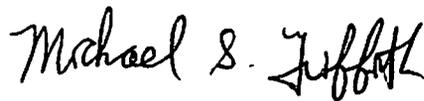
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Sincerely yours,



Michael S. Griffith
Director, Office of Safety Technologies
Office of Safety

Enclosures

**TraFFix
Devices Inc.**



3/7/11

Mr. Nicholas Artimovich
Federal Highway Administration
HAS-10, Room 3407
400 7th Street SW
Washington, DC 20590

Ref. Compliance Review for Certification and Acceptance of TraFFix Devices Compact Aluminum Quad-Drop Quick Deployment compact aluminum sign stand.

Dear Mr. Artimovich,

As Government Agency and Private Sector Contractors and First Responders learn more about the critical benefits of setting-up appropriate Work Zone and Emergency Traffic Control Advance Warning Signs, there is a demonstrated need for improvements in safe and rapid deployment Sign and Sign Stand Systems.

Not only is it important to display the approved signs as required, but because of time and vehicle space and weight constraints, compact light-weight stands that set up quickly and easily have become the "right tool for the job."

In a response to the needs of this growing market, TraFFix Devices has developed an improved version of a "Compact Sign Stand" for use with standard roll-up signs only, featuring a unique and proprietary quick deployment, set-up mechanism.

Please review the information below in support of the conformity certification of our Compact Sign Stand product. We will then request your review for FHWA "crashworthy" Acceptance of the TraFFix Devices, Inc. Quad-Drop Quick Deployment (Q-D2) compact aluminum sign stand.

Background:

The Quad-Drop Quick Deployment (Q-D2) compact aluminum stand is a variation of the many TraFFix Devices and Industry Standard sign stands known as Compact Stands for exclusive use displaying Roll-up Signs only, up to 48" diamond or 16 sq. ft. or smaller, of standard configuration. (See attached comparison table of new Quad Drop Stand and TraFFix Stand and TraFFix Stand with spring, Drawing 1.)

160 Ave. La Pata
San Clemente, California 92673
(949) 361-5663
FAX (949) 361-9205
www.traffixdevices.com

Request 1:

Based on the Data, Drawings and Images contained in this offering, TraFFix Devices, Inc. (TDI) requests your acceptance of our certification that the Quad-Drop Quick Deployment (Q-D2) compact aluminum sign stand meets the defined product class of Compact Signs Stand. By this "Declaration of Conformity," TDI asserts that this product conforms to the definition of a "Compact Sign Stand" as described in FHWA HAS-10/WZ-85.

Background:

The Quad-Drop Quick Deployment (Q-D2) compact aluminum sign stand meets the now industry-generic sign stand class, best described in HSA-10/WZ-85,

"Compact" sign stands are "X-Footprint" sign stands of steel or aluminum with a short mast.....the mounting height of a 1220 mm x 1220 mm (48"x48") diamond sign is 300 mm to 450 mm (12" to 18") only....with no metal elements at a height that can impact the windshield during a crash."

Per Drawing 1, the Q-D2 compact aluminum stand has a standard type of "mini mast" allowing for display of standard sizes and configurations of roll-up sign at 12" above grade. The entire mast extends to approx 14" above grade allowing for no mass or steel to extend above bumper height which could potentially contact a vehicle windshield upon impact.

The TDI proprietary design feature involves the leg releasing and securing mechanism which facilitates the rapid deployment and retrieval of the sign stand and roll-up sign. The Q-D2 sign and stand system replaces the typical antiquated hard-locking pull-pin leg deployment system widely used today. Functionally, the mechanisms are equivalent as all stands have leg-locking systems. We believe this modification from the "industry-standard" approach is not a factor regarding impact performance.

As noted in the table, the footprint of the QD-2 sign stand is approximately the same as the other 2-TraFFix Devices stands shown in the "class" and the weight falls in between the stands described.

Request 1 Conclusion:

Given the demonstrated similarities in design of the new TDI, Q-D2 compact aluminum sign stand with the weights, dimensions and configuration criteria as set forth in attached Drawing and Table 1, we believe we meet the FHWA "generic" definition of a Compact Sign Stand as reviewed in FHWA HAS-10/WZ-85.

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Request 2:

Since the Q-D2 compact aluminum stand falls into the class of a FHWA described compact sign stand, and since it is restricted by design to display only roll-up signs of standard configuration, 48" diamond (16 sq ft) in size or less, Traffix Devices requests that NCHRP-350 testing be waived and the product be accepted by the FHWA as a member of the compact stand class and the TDI family of compact signs stands for use on the National Highway System.

Background:

Given conformity to the FHWA described generic class of Compact Stand, as reviewed in FHWA HAS-10/WZ-85 demonstrated in Request 1 and the significant NCHRP-350 Testing performed by Traffix Devices, Inc. on comparable products resulting in Accepted compact stands, (WZ-46, 73) we respectfully request a waiving of impact testing on TDI's new Quad-Drop Quick Deployment (Q-D2) compact aluminum stand. Though unique in mechanical 4-leg simultaneous leg deployment, this Compact Stand uses the leg locking features common in this class of sign stands. By design, the Q-D2 can only display standard Roll-up sign configurations of 48" diamond; 16 sq' or less.

Conclusion:

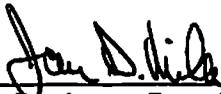
We have demonstrated that our TDI, Quad-Drop Quick Deployment (Q-D2) compact aluminum sign stand falls well within the size and weight matrix defined by FHWA as a Compact Stand. Given the multiple tests of this class of item by Traffix Devices and others in the Industry, we believe it is a reasonable request to waive formal impact testing of the Quad-Drop Quick Deployment (Q-D2) compact aluminum sign stand.

TDI also Certifies to the authenticity of the drawings and data contained in the enclosed. Based on this information we believe that this product will consistently meet or exceed the crashworthy NCHRP-350 Standard.

We would appreciate the expeditious review, confirming acceptance of our above requests at your earliest convenience. Please call either of us at Traffix Devices, Inc. at (949) 361-5663 with any questions or comments regarding the Test Report or Requests. Jan can be reached directly at (607) 259-0531.

Thank you for your attention to this matter.

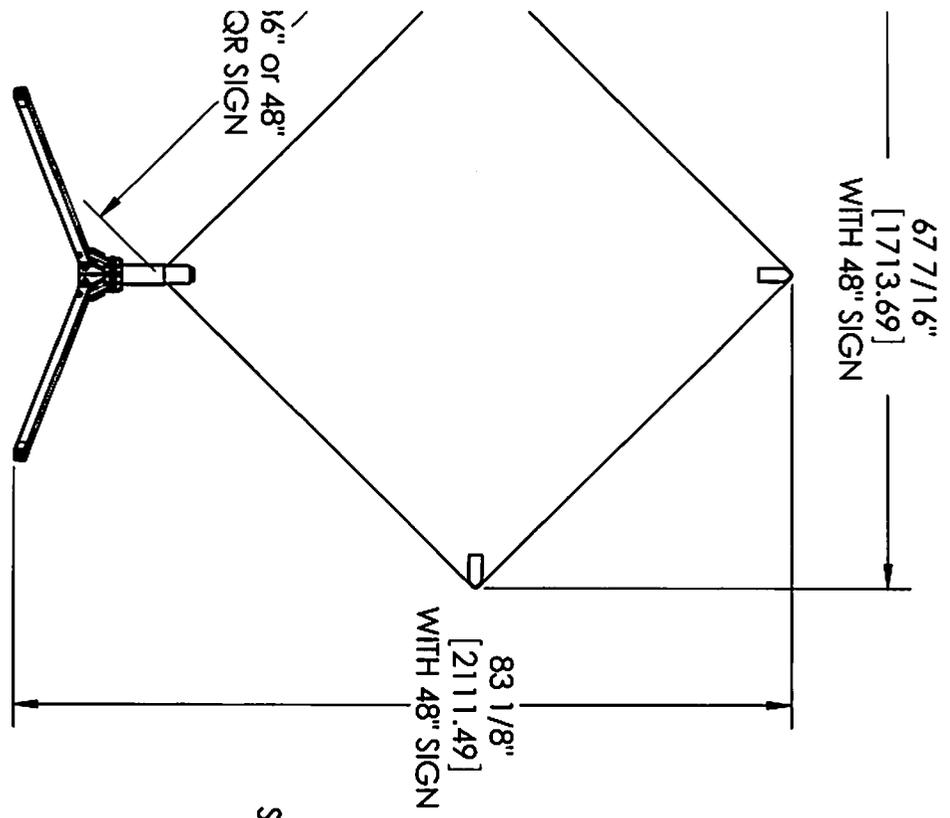
Sincerely,



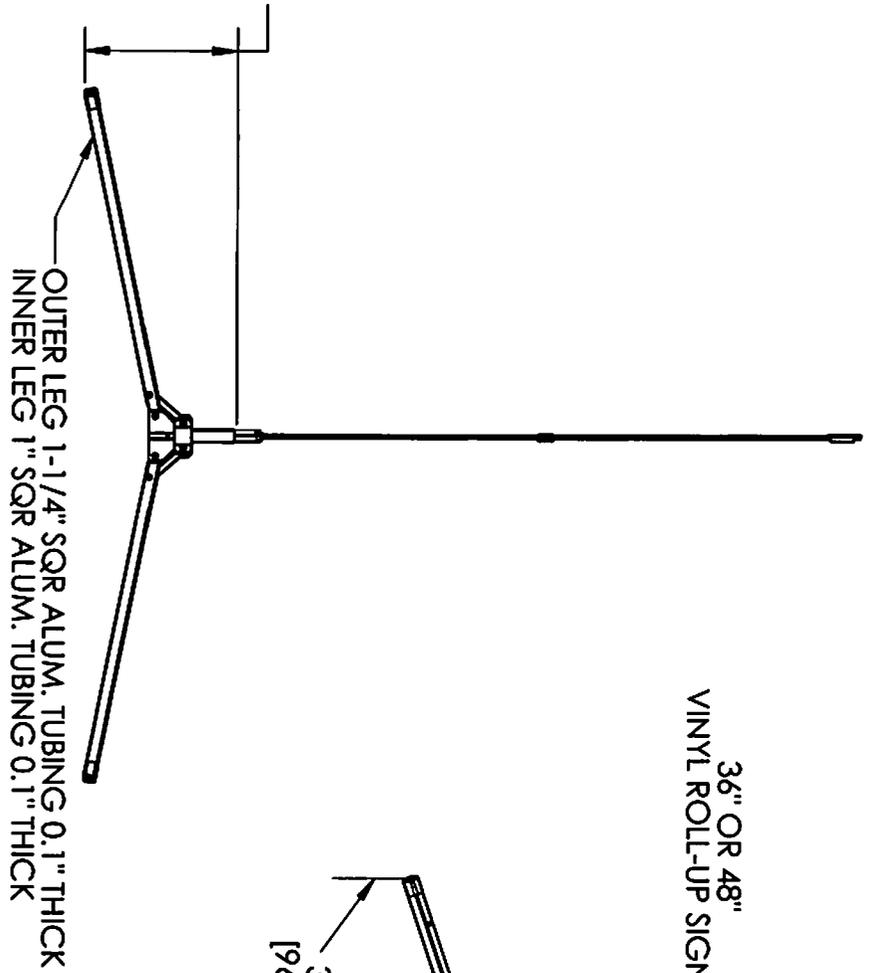
Jan Miller, Business Development Manager

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TraFix Sign Stand	67	40
Aluminum TraFix Single Spring Sign Stand	67	40



SIGN MOUNTING HEIGHT
12"
[304.80] MINIMUM



UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES (mm).
TOLERANCES:
FRACTIONAL: X/8 ± 1/16" (1.6mm)
DECIMAL: .000 ± .0625
DEGREES: ± 0.5°