



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

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

April 18, 2016

In Reply Refer To:
HSST/SS-164A

Mr. Bret Eckert P.E.
Engineering Applications Manager
Trinity Highway Products
3617 Cincinnati Avenue
Rocklin, CA 95677

Dear Mr. Eckert:

This letter is in response to your December 16, 2015 request for the Federal Highway Administration (FHWA) to review a roadside safety device, hardware, or system for eligibility for reimbursement under the Federal-aid highway program. This FHWA letter of eligibility is assigned FHWA control number SS-164A and is valid until a subsequent letter is issued by FHWA that expressly references this device.

Decision

The following devices are eligible, with details provided in the form which is attached as an integral part of this letter:

- POZ-LOC® Slip Base System with Torque Separation Nut Fastener

Scope of this Letter

To be found eligible for Federal-aid funding, modified roadside safety devices should meet the crash test and evaluation criteria contained in the National Cooperative Highway Research Program (NCHRP) Report 350. However, the FHWA, the Department of Transportation, and the United States Government do not regulate the manufacture of roadside safety devices. Eligibility for reimbursement under the Federal-aid highway program does not establish approval, certification or endorsement of the device for any particular purpose or use.

This letter is not a determination by the FHWA, the Department of Transportation, or the United States Government that a vehicle crash involving the device will result in any particular outcome, nor is it a guarantee of the in-service performance of this device. Proper manufacturing, installation, and maintenance are required in order for this device to function as tested.

This finding of eligibility is limited to the crashworthiness of the system and does not cover other structural features, nor conformity with the Manual on Uniform Traffic Control Devices.

Eligibility for Reimbursement

FHWA previously issued an eligibility letter for the roadside safety system described in your pending request. Your pending request now identifies a modification to that roadside safety system.

The original roadside safety device information is:

Name of system: PozLoc 10-inch Square Slip Base
Type of system: Sign Supports
Date of original request: March 13, 2010
Date of original FHWA eligibility letter: June 8, 2010
FHWA Control number: SS-164

The pending modification(s) consists of the following changes:

1. A torque breakaway fastener will replace the existing standard hex nut and bolt system

FHWA concurs with the recommendation of the accredited crash testing laboratory as stated within the attached form.

Full Description of the Eligible Device

The device and supporting documentation, including reports of the crash tests or other testing done, videos of any crash testing, and/or drawings of the device, are described in the attached form.

Notice

If a manufacturer makes any modification to any of their roadside safety hardware that has an existing eligibility letter from FHWA, the manufacturer must notify FHWA of such modification with a request for continued eligibility for reimbursement. The notice of all modifications to a device must be accompanied by:

- Significant modifications – For these modifications, crash test results must be submitted with accompanying documentation and videos.
- Non-signification modifications – For these modifications, a statement from the crash test laboratory on the potential effect of the modification on the ability of the device to meet the relevant crash test criteria.

FHWA's determination of continued eligibility for the modified hardware will be based on whether the modified hardware will continue to meet the relevant crash test criteria.

You are expected to supply potential users with sufficient information on design, installation and maintenance requirements to ensure proper performance.

You are expected to certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the test and evaluation criteria of the NCHRP Report 350.

Issuance of this letter does not convey property rights of any sort or any exclusive privilege. This letter is based on the premise that information and reports submitted by you are accurate and correct. We reserve the right to modify or revoke this letter if: (1) there are any inaccuracies in the information submitted in support of your request for this letter, (2) the qualification testing was flawed, (3) in-service performance or other information reveals safety problems, (4) the system is significantly different from the version that was crash tested, or (5) any other information indicates that the letter was issued in error or otherwise does not reflect full and complete information about the crashworthiness of the system.

Standard Provisions

- To prevent misunderstanding by others, this letter of eligibility designated as FHWA control number SS-164A 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 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.
- If the subject device is a patented product it may be considered to be proprietary. If proprietary systems are specified by a highway agency for use on Federal-aid 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.

Sincerely yours,



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

Enclosures

Request for Federal Aid Reimbursement Eligibility of Highway Safety Hardware

Submitter	Date of Request:	March 24, 2016	<input type="radio"/> New <input checked="" type="radio"/> Resubmission
	Name:	Bret R. Eckert, P.E.	
	Company:	Trinity Highway Products, LLC	
	Address:	3617 Cincinnati Ave., Rocklin, CA 95765	
	Country:	USA	
	To:	Michael S. Griffith, Director FHWA, Office of Safety Technologies	

I request the following devices be considered eligible for reimbursement under the Federal-aid highway program.

System Type	Submission Type	Device Name / Variant	Testing Criterion	Test Level
'SS': Breakaway Sign Supports, Mailboxes, & other small sign supports	<input type="radio"/> Physical Crash Testing	POZ-LOC® Slip Base System with Torque Separation Nut Fastener	NCHRP Report 350	TL3
	<input checked="" type="radio"/> Engineering Analysis			

By submitting this request for review and evaluation by the Federal Highway Administration, I certify that the product(s) was (were) tested in conformity with the NCHRP Report 350 (Report 350) and that the evaluation results meet the appropriate evaluation criteria in the Report 350.

Identification of the individual or organization responsible for the product:

Contact Name:	Bret R. Eckert, P.E.	Same as Submitter <input checked="" type="checkbox"/>
Company Name:	Trinity Highway Products, LLC	Same as Submitter <input checked="" type="checkbox"/>
Address:	3617 Cincinnati Ave., Rocklin, CA 95765	Same as Submitter <input checked="" type="checkbox"/>
Country:	USA	Same as Submitter <input checked="" type="checkbox"/>

Enter below all disclosures of financial interests as required by the FHWA 'Federal-Aid Reimbursement Eligibility Process for Safety Hardware Devices' document.

The POZ-LOC® Slip-Base castings for break-away post systems technology is the commercial embodiment of intellectual property that is protected by patents that are owned by Trinity Highway Products, LLC (THP). THP does not pay royalties for sales of the POZ-LOC® Slip-Base castings for break-away post systems. The POZ-LOC® Slip-Base castings for break-away post systems was designed and developed by Horace M. Jordan at Northwest Pipe Co. The patent holder of record for the POZ-LOC® Slip-Base castings for break-away post systems is Horace M. Jordan. The associated United States Patent Office patent number (6,422,783) is owned by Trinity Industries, Inc.

Northwest Pipe Co. sponsored crash tests of the POZ-LOC® Slip-Base castings for break-away post systems conducted by the Texas A&M Transportation Institute ("TTI") Proving Ground. TTI Proving Ground is an International Standards Organization ("ISO") 17025 accredited laboratory with American Association for Laboratory Accreditation (A2LA) Mechanical Testing certificate 2821.01. Full-scale crash testing on the break-away post systems was performed in accordance with testing criteria, as set forth by the National Cooperative Highway Research Program ("NCHRP") in the NCHRP Report 350 (1993).

PRODUCT DESCRIPTION

<input type="radio"/> New Hardware or Significant Modification	<input checked="" type="radio"/> Modification to Existing Hardware	Non-Significant
<p>Original submission date December 22, 2015. The POZ-LOC® Slip-Base System for small sign breakaway supports was accepted by the FHWA in acceptance letters SS-65, SS-65A, SS-65B, SS-88, SS-117, SS-128, SS-130, SS-150 Revised, and SS-164. The POZ-LOC® slip-base system consists of a signpost, upper slip plate, galvanized steel bolt retainer plate, ground stub with lower slip plate, and fastener sets. The upper slip plate and lower slip plate are held in contact with the fastener sets that are tightened to within a specified torque range. The specified torque range of 38 to 80 ft.-lb. maintains the slip plate connection for service loads (wind) and provides the separation feature when the post is impacted by a vehicle.</p> <p>This request is to allow the use of a auto-torque breakaway fastener within the fastener set with a predetermined release torque rated within the 38 ft.-lb. to 80 ft.-lb. POZ-LOC® system assembly torque specifications. The auto-torque breakaway fastener would be an option that could be used within the fastener kits in all POZ-LOC® slip-base systems. The top hex portion of the nut or bolt breaks free from the lower base portion of the fastener at a predetermined torque value and eliminates installation tightening inconsistencies. The auto-torque breakaway fastener will provide the same clamping force between the upper and lower slip plates as the torqued standard hex nut and bolt system and will provide the same fastener set separation feature when the system is impacted.</p> <p>This component modification has been justified through engineering analysis and judgement and has been determined to be non-significant and will have no bearing on the as-tested performance of the POZ-LOC® slip-base system. The Testing Laboratory's signature concurs that these modifications are considered non-Significant.</p>		

CRASH TESTING

A brief description of each crash test and its result:

Required Test Number	Narrative Description	Evaluation Results
3-60 (820C)	TTI Test No 405481-1, Test Date July 24, 1995, Test Report entitled "Crash Testing and Evaluation of a Slip Base Design for Thin Wall Pipe, October 1995). The non-significant modification option of using a auto-torque breakaway fastener that maintains the same clamping force as described in the Product Description will have no bearing on the as-tested performance of the Poz-Loc® system.	PASS
S3-60 (700C)	Not Applicable. Test S3-60 is an optional test not required for system eligibility.	
3-61 (820C)	TTI Test No 405481-2, Test Date July 24, 1995, Test Report entitled "Crash Testing and Evaluation of a Slip Base Design for Thin Wall Pipe, October 1995). The non-significant modification option of using a auto-torque breakaway fastener that maintains the same clamping force as described in the Product Description will have no bearing on the as-tested performance of the Poz-Loc® system.	PASS
S3-61 (700C)	Not Applicable. Test S3-61 is an optional test not required for system eligibility.	

Full Scale Crash Testing was done in compliance with NCHRP Report 350 by the following accredited crash test Laboratory. By signature below, the Laboratory agrees in support of this submission that all critical and relevant crash tests for the device listed above were conducted. (cite the laboratory's accreditation status as noted in the crash test reports.):

Testing Laboratory's signature concurs that these modifications are considered Non-Significant.		
Laboratory Name:	Texas Transportation Institute	
Laboratory Signature:	Bligh, Roger P	<small>Digitally signed by Bligh, Roger P DN: postalCode=77843, o=TAMU SIGN, street=Texas A&M University, st=TX, l=College Station, c=US, cn=Bligh, Roger P, email=rbligh@tamu.edu Date: 2016.03.25 12:13:59 -0500</small>
Address:	3135 TAMU, College Station, TX 77843	Same as Submitter <input type="checkbox"/>
Country:	USA	Same as Submitter <input checked="" type="checkbox"/>
Accreditation Certificate Number and Dates of current Accreditation period :	A2LA Certificate# 2821.01, Valid to April 30, 2017	

Submitter Signature*: **Bret Eckert P.E.** Digitally signed by
bret.eckert@trn.net
DN: cn=bret.eckert@trn.net
Date: 2016.03.29 08:44:03 -0700

Submit Form

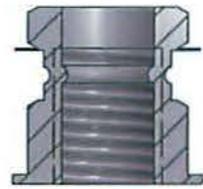
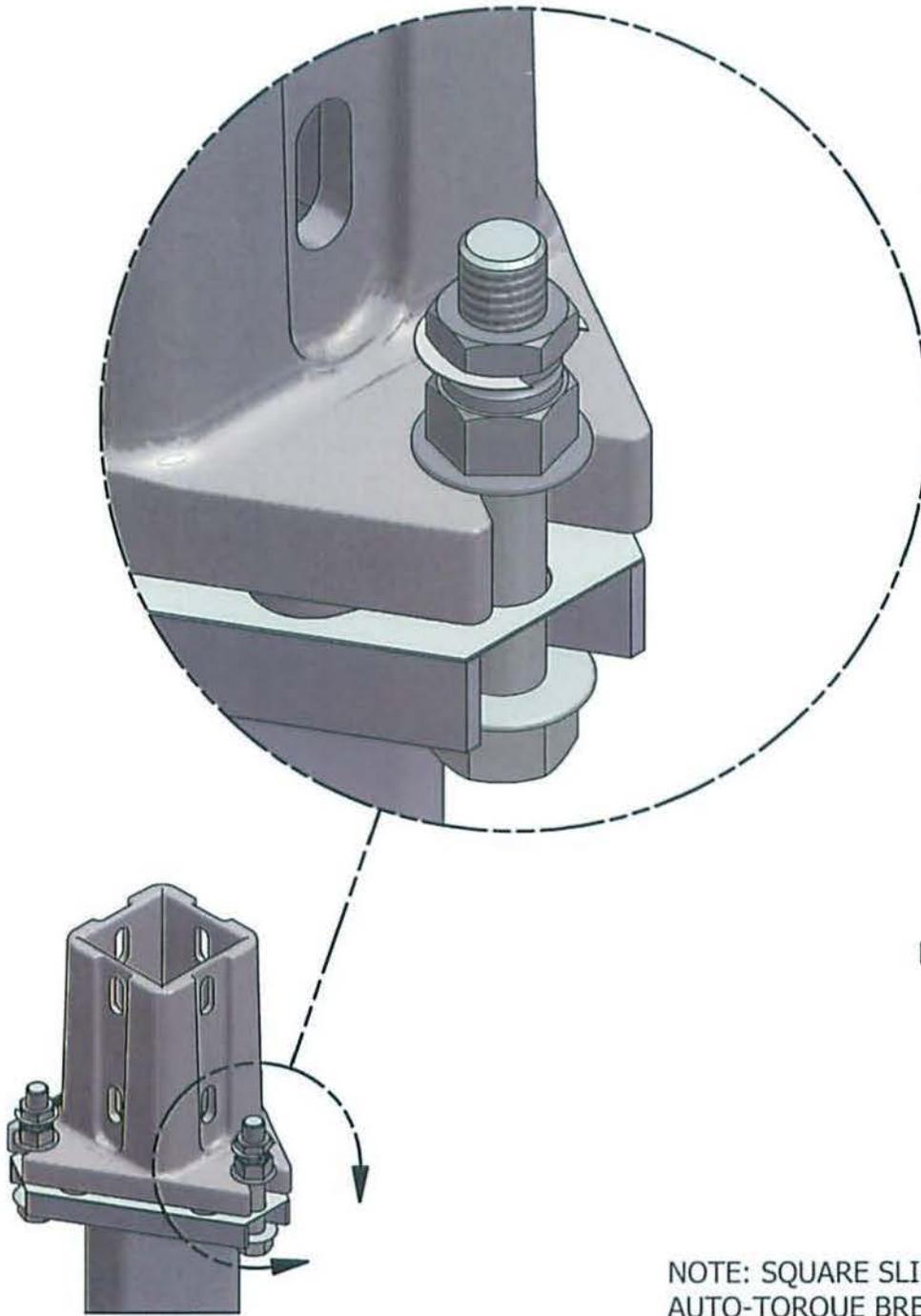
ATTACHMENTS

Attach to this form:

- 1) Additional disclosures of related financial interest as indicated above.
- 2) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
- 3) A drawing or drawings of the device(s) that conform to the Task Force-13 Drawing Specifications [[Hardware Guide Drawing Standards](#)]. For proprietary products, a single isometric line drawing is usually acceptable to illustrate the product, with detailed specifications, intended use, and contact information provided on the reverse. Additional drawings (not in TF-13 format) showing details that are relevant to understanding the dimensions and performance of the device should also be submitted to facilitate our review.

FHWA Official Business Only:

Eligibility Letter		AASHTO TF13	Key Words
Number	Date	Designator	



AUTO-TORQUE
BREAKAWAY NUT
SECTION VIEW

NOTE: SQUARE SLIP BASE SHOWN,
AUTO-TORQUE BREAKAWAY FASTENER
CAN ALSO BE USED WITH ROUND POST
SLIP BASE SYSTEM.

POZ-LOC[®] SLIP BASE
AUTO-TORQUE
BREAKAWAY FASTENER
(OPTIONAL FASTENING SYSTEM)

