



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

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

February 10, 2012

In Reply Refer To:
HSST/CC-88E

Mr. John Durkos
VP Technical Support and Marketing
Road Systems, Inc.
3616 Howard County Airport Road
Big Spring, TX 79720

Dear: M. Durkos:

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: Flared Median Terminal (FLEAT-MT) for the Midwest
Guardrail System (MGS)

Type of system: Flared Energy Absorbing Terminal

Test Level: NCHRP 350 Test Level 3 (TL-3)

Testing conducted by: 'n/a'

Task Force 13 Designator: SEW16b

Date of request: September 20, 2011

Date initially acknowledged: September 27, 2011

Date of completed package: January 20, 2012

Decision:

The following device is eligible, with details provided:

- Flared Median Terminal (FLEAT-MT) for the Midwest Guardrail System (MGS)

Based on a review of crash test results submitted by the manufacturer certifying the device described herein meets the crashworthiness criteria of the National Cooperative Highway Research Program (NCHRP) Report 350, the device is 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.

The FHWA, the Department of Transportation, and the United States Government do not endorse products or services and the issuance of a reimbursement eligibility letter is not an endorsement of any product or service.

Requirements

Roadside safety devices should meet the guidelines contained in the National Cooperative Highway Research Program (NCHRP) Report 350.

Description

The FLEAT-MT terminal is identical to the standard NCHRP 350 FLEAT-MT terminal as per HSA-10/CC46D dated August 24, 2001 except for the following:

1. The nominal top mounting height for the W-beam rail is increased from 700 millimeters (27-5/8 inches) to 787 millimeters (31 inches) to match the MGS guardrail. Correspondingly, the rail center height is increased from 545 millimeters (21 1/2 inches) to 632 millimeters (24 7/8 inches).
2. Post embedment depth is reduced by 87 millimeters (3-3/8 in.) to 1,019 millimeters (40 in.) in order to accommodate the increased mounting height.
3. Rail element is spliced mid-span between the posts.
4. In order to accommodate the mid-span splice and the 5.72 meters (18 feet 9 inches) single-faced portion of the terminal on the traffic side, the following panel lengths are recommended for the MGS terminal. On the traffic side - 3.81 meters (12 feet 6 inches) for the end panel, 4.76 meters (15 feet 7 1/2 inches) for the second panel, and 3.81 meters (12 feet 6 inches) for the third panel. On the back side (i.e., double-faced section) - 3.81 meters (12 feet 6 inches) for the end panel and 2.86 meters (9 feet 4 1/2 inches) for the second panel. This combination of panel lengths would allow both sides of the terminal to end mid-span at the typical 12.38 meters (40 feet 7 1/2 inches) pay limit.
5. Depth of the wood spacer blocks is increased from 203 millimeters (8 inches) to 305 millimeters (12 inches).

In addition to this steel post system, a wood post version of this system is also requested. The FLEAT-MT terminal wood post option is identical to the standard NCHRP 350 FLEAT-MT wood post terminal as per HSA-10/CC46C dated June 1, 2001, except for the above stated revisions as for steel post version.

Design details for both steel and wood post versions are provided as enclosure to this correspondence.

Findings

The FLEAT-MT steel and wood post versions have been successfully crash tested as per NCHRP 350 criteria and have been in service for several years. The as described revisions that accommodate generic MGS guardrail system are considered modifications that do not affect the structure of the as-tested hardware. In addition and in support of this testing is the previous successful testing as per NCHRP 350 for the MGS terminal roadside FLEAT as per HSSD/CC-88D dated January 29, 2010.

Therefore, the system described and detailed in this correspondence is eligible for reimbursement and may be installed under the range of conditions tested.

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

- This letter provides a AASHTO/ARTBA/AGC Task Force 13 designator that should be used for the purpose of the creation of a new and/or the update of existing Task Force 13 drawing for posting on the on-line 'Guide to Standardized Highway Barrier Hardware' currently referenced in AASHTO Roadside Design Guide.
- 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 influence the crashworthiness of the system will require a new reimbursement eligibility letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals safety problems, or that the system 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 the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the crashworthiness requirements of the NCHRP Report 350.
- To prevent misunderstanding by others, this letter of eligibility is designated as number CC-88E 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.
- The FLEAT-MT is a patented product and considered 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