



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

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

August 16, 2011

In Reply Refer To:
HSST/ SS-148A

Mr. Ryan Beduhn
Swing SAFE Mailbox Supports, LLC
3216 Kentucky Avenue S.
St. Louis Park, MN 55426

Dear Mr. Beduhn:

This letter is in response to your request for the Federal Highway Administration (FHWA) acceptance of a modified mailbox support for use on the National Highway System (NHS).

Name of system:	SwingSAFE Swing-Away Mailbox Support
Type of system:	Mailbox Support
Test Level:	NCHRP Report 350 at TL-3
Testing conducted by:	not applicable
Date of request:	January 28, 2011
Date received by FHWA:	February 4, 2011

You requested that we find a modified version of a previously-accepted mailbox support acceptable for use on the NHS under the provisions of the National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

Requirements

Roadside safety devices should meet the guidelines contained in NCHRP Report 350 if tested prior to January 1, 2011, and the guidelines in AASHTO's Manual for Assessing Safety Hardware if tested after that date. The FHWA memorandum "ACTION: Identifying Acceptable Highway Safety Features" of July 24, 1997, provides further guidance on crash testing requirements of longitudinal barriers and crash cushions. Modifications to previously-accepted devices that are not likely to affect crash performance may be accepted without additional crash testing.

Decision

You requested formal FHWA acknowledgement and acceptance of several changes made to a previously-accepted design for a mailbox support. Your SwingSAFE support is similar to the original Minnesota Department of Transportation (MinnDOT) swing-away mailbox and to a modified version of the original that was tested by the Texas Transportation Institute in 2006. The latter design was accepted for use on the NHS in our letter SS-148 on May 8, 2007. Based on staff review of the changes detailed below, the FHWA agrees that your modified support

FHWA: HSSI: WLongstreet: mb: x60087:7/15/11

File: h: //directory folder/HSST/ SS148A_SwingSAFE Swing-Away Mailbox Support.docx

cc: HSST Will Longstreet

remains a crashworthy TL-3 design under NCHRP Report 350 and that no additional testing need be done.

Description

The Minnesota Swing-Away Mailbox Support was originally designed and tested in 1993. The original design utilized a cantilevered arm that permits snowplow operation beyond the shoulder or curb, thereby reducing both snow drifting on the roadway and the potential for damage to the mailbox support.

The Modified Minnesota Swing-Away Mailbox Support (2006 version) was based on the original design and includes several modifications, the following of which were noteworthy:

- Reducing the length of the mailbox cantilever from 53 inch (1346 millimeters) to 36 inch (914 millimeters);
- Revising the angled member to transition from vertical to horizontal using bends of 30 and 60 degrees rather than two 45-degree angles;
- Skewing the ends of the pipe in the angled member at 45 degrees to help the horizontal member to return to its original position after being displaced;
- Adding an 11 inch (279 millimeters) length of security chain between the horizontal and vertical mailbox support members to discourage vandalism and theft.

Your current request described changes made to the Modified MinnDOT design. These include the following:

- Use of two 45-degree bends to transition from the vertical support post to the horizontal mailbox support post. The 1993 MinnDOT design also used 45-degree angles.
- Use of two muffler clamps to stabilize the mailbox on the wood filler. The filler and clamps are secured to the mailbox support with two 5/16-inch (7.9-millimeter) diameter carriage bolts.
- Use of a marginally shorter inner pipe with a 5.25-inch (102-millimeter) projection in lieu of the 7-inch (178-millimeter) projection in the modified MinnDOT design. The shorter projection should cause the post to separate more readily from the vertical support in a crash.
- The exterior safety chain in the MinnDOT design was replaced with an internal steel anti-theft cable.
- The ends of the pipe in the angled member can be cut at 65 or 90 degrees if desired to allow the horizontal member to return to its original position after being displaced.

A drawing of the Modified SwingSAFE Swing-Away Mailbox Support is enclosed.

Testing

No additional testing was conducted.

Findings

Based on the considerations noted above, the FHWA agrees that the SwingSAFE Mailbox Support, as modified, is acceptable as an NCHRP Report 350 TL-3 support.

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

- This acceptance is limited to the crashworthiness characteristics of the device and does not cover its structural features, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any design 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, the 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 it will meet the crashworthiness requirements of NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance, designated as number SS-148A shall not be reproduced except in full. This letter, and 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 modified SwingSAFE Mailbox Support is not currently a patented product. However, if 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 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



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

August 16, 2011

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

In Reply Refer To:
HSST/ SS-148A

Mr. Ryan Beduhn
Swing SAFE Mailbox Supports, LLC
3216 Kentucky Avenue S.
St. Louis Park, MN 55426

Dear Mr. Beduhn:

This letter is in response to your request for the Federal Highway Administration (FHWA) acceptance of a modified mailbox support for use on the National Highway System (NHS).

Name of system:	SwingSAFE Swing-Away Mailbox Support
Type of system:	Mailbox Support
Test Level:	NCHRP Report 350 at TL-3
Testing conducted by:	not applicable
Date of request:	January 28, 2011
Date received by FHWA:	February 4, 2011

You requested that we find a modified version of a previously-accepted mailbox support acceptable for use on the NHS under the provisions of the National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

Requirements

Roadside safety devices should meet the guidelines contained in NCHRP Report 350 if tested prior to January 1, 2011, and the guidelines in AASHTO's Manual for Assessing Safety Hardware if tested after that date. The FHWA memorandum "ACTION: Identifying Acceptable Highway Safety Features" of July 24, 1997, provides further guidance on crash testing requirements of longitudinal barriers and crash cushions. Modifications to previously-accepted devices that are not likely to affect crash performance may be accepted without additional crash testing.

Decision

You requested formal FHWA acknowledgement and acceptance of several changes made to a previously-accepted design for a mailbox support. Your SwingSAFE support is similar to the original Minnesota Department of Transportation (MinnDOT) swing-away mailbox and to a modified version of the original that was tested by the Texas Transportation Institute in 2006. The latter design was accepted for use on the NHS in our letter SS-148 on May 8, 2007. Based on staff review of the changes detailed below, the FHWA agrees that your modified support

remains a crashworthy TL-3 design under NCHRP Report 350 and that no additional testing need be done.

Description

The Minnesota Swing-Away Mailbox Support was originally designed and tested in 1993. The original design utilized a cantilevered arm that permits snowplow operation beyond the shoulder or curb, thereby reducing both snow drifting on the roadway and the potential for damage to the mailbox support.

The Modified Minnesota Swing-Away Mailbox Support (2006 version) was based on the original design and includes several modifications, the following of which were noteworthy:

- Reducing the length of the mailbox cantilever from 53 inch (1346 millimeters) to 36 inch (914 millimeters);
- Revising the angled member to transition from vertical to horizontal using bends of 30 and 60 degrees rather than two 45-degree angles;
- Skewing the ends of the pipe in the angled member at 45 degrees to help the horizontal member to return to its original position after being displaced;
- Adding an 11 inch (279 millimeters) length of security chain between the horizontal and vertical mailbox support members to discourage vandalism and theft.

Your current request described changes made to the Modified MinnDOT design. These include the following:

- Use of two 45-degree bends to transition from the vertical support post to the horizontal mailbox support post. The 1993 MinnDOT design also used 45-degree angles.
- Use of two muffler clamps to stabilize the mailbox on the wood filler. The filler and clamps are secured to the mailbox support with two 5/16-inch (7.9-millimeter) diameter carriage bolts.
- Use of a marginally shorter inner pipe with a 5.25-inch (102-millimeter) projection in lieu of the 7-inch (178-millimeter) projection in the modified MinnDOT design. The shorter projection should cause the post to separate more readily from the vertical support in a crash.
- The exterior safety chain in the MinnDOT design was replaced with an internal steel anti-theft cable.
- The ends of the pipe in the angled member can be cut at 65 or 90 degrees if desired to allow the horizontal member to return to its original position after being displaced.

A drawing of the Modified SwingSAFE Swing-Away Mailbox Support is enclosed.

Testing

No additional testing was conducted.

Findings

Based on the considerations noted above, the FHWA agrees that the SwingSAFE Mailbox Support, as modified, is acceptable as an NCHRP Report 350 TL-3 support.

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

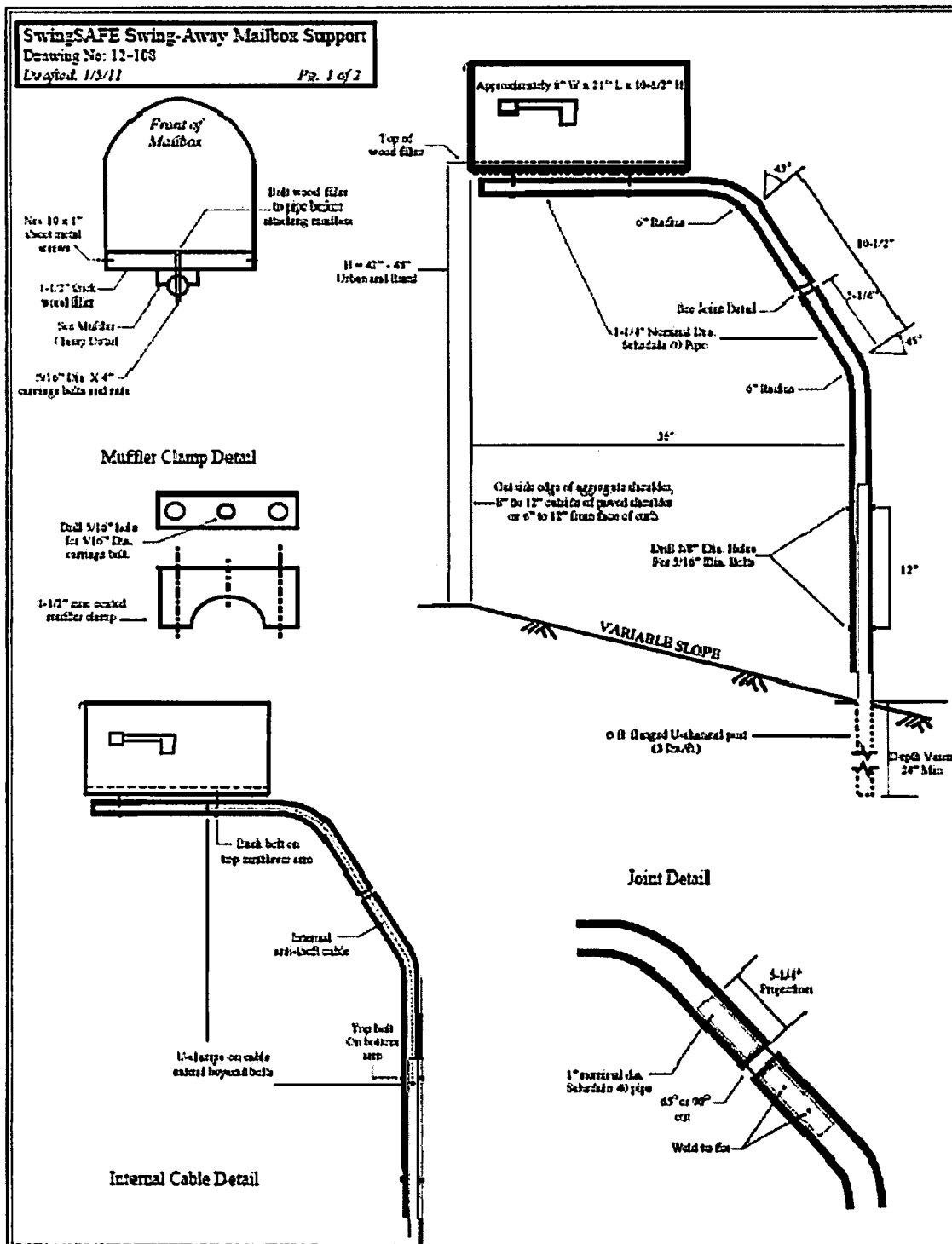
- This acceptance is limited to the crashworthiness characteristics of the device and does not cover its structural features, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any design changes that may adversely influence the crashworthiness of the device will require a new acceptance letter.
- Should the FHWA discover that the qualification testing was flawed, the 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 it will meet the crashworthiness requirements of NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance, designated as number SS-148A shall not be reproduced except in full. This letter, and 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 modified SwingSAFE Mailbox Support is not currently a patented product. However, if 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 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



Enclosure 1 (1 of 2)

