



Road Systems, Inc.

PO Box 2163 Big Spring, TX 79721

PH 432-263-2435 FAX 432-267-4039

NCHRP-350 SKT Impact Head Notification

November 15, 2017

Dear Specifying Agency and/or SKT Customer,

We are writing to inform you that after January 1, 2018, Road Systems Inc. will produce only the new SKT impact head that is accepted for use on both NCHRP-350 and MASH guardrail terminals. The old 350 SKT head will be discontinued when inventories are depleted and only the new enhanced SKT head version known as the MSKT will be available.

Road Systems Inc. is proud to announce that the MASH MSKT guardrail terminal uses an impact head that has been crash tested and approved for use on NCHRP-350 SKT systems per FHWA letter CC-130 dated 10/3/2016 (please see attachment). You can see from the FHWA letter that this applies to all options/versions of the NCHRP-350 SKT guardrail terminal. **Please note this does not convert the NCHRP-350 SKT guardrail terminal to a MASH MSKT guardrail terminal.**

This is great news for your Maintenance Departments and for Contractors. This will allow them to inventory less material, thus saving tax payer dollars. For example, if you have an existing NCHRP-350 SKT-SP-MGS steel post or a wood post SKT-MGS guardrail terminal at the 31" rail height which has been replaced with an MSKT impact head, it will only require 4 additional new components for a steel post system or 5 additional new components for a wood post system to upgrade the terminal to MASH compliance, again saving tax payer dollars. For reference, the attached documents outline the differences between the NCHRP-350 SKT and the MASH MSKT.

Please alert all applicable departments within your agency of the discontinuation of the NCHRP-350 SKT Impact Head effective 01/01/2018.

Should you or any of your staff have any questions about the NCHRP-350 SKT or the MASH MSKT we can be reached at the following numbers:

330-799-9291, ask for David Reese

330-346-0721, ask for John Durkos

Our Distributor network will be contacting their customers so that all of the Contractors doing business in your State will be aware of the situation.

Thank you for your assistance in this matter and again, please let us know if you have any questions.

Sincerely,

Kaddo Kothmann

President, Road Systems, Inc.



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

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

October 3, 2016

In Reply Refer To:
HSST-1/CC-130

Mr. Kaddo Kothmann
Road Systems, Inc.
3616 Howard County Airport
Big Spring, Texas 79720

Dear Mr. Kothmann:

This letter is in response to your July 29, 2016 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 CC-130 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:

- 350 SKT Terminal with MASH SKT Impact Head

Scope of this Letter

To be found eligible for Federal-aid funding, new roadside safety devices should meet the crash test and evaluation criteria contained in the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH) or 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

Based solely on a review of crash test results and certifications submitted by the manufacturer, and the crash test laboratory, FHWA agrees that the device described herein meets the crash test and evaluation criteria of the NCHRP Report 350. Therefore, the device is eligible for reimbursement under the Federal-aid highway program if installed under the range of tested conditions.

Name of system:	350 SKT Terminal with MASH SKT Impact Head
Type of system:	W-Beam Guardrail extruder terminal
Test Level:	NCHRP Report 350 Test Level 3 (TL3)
Testing conducted by:	KARCO, Inc.
Dates of request:	December 22, 2015, revised July 29, 2016
Date initially acknowledged:	December 31, 2015 and August 23, 2016
Date of completed package:	September 1, 2016

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 MASH.

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

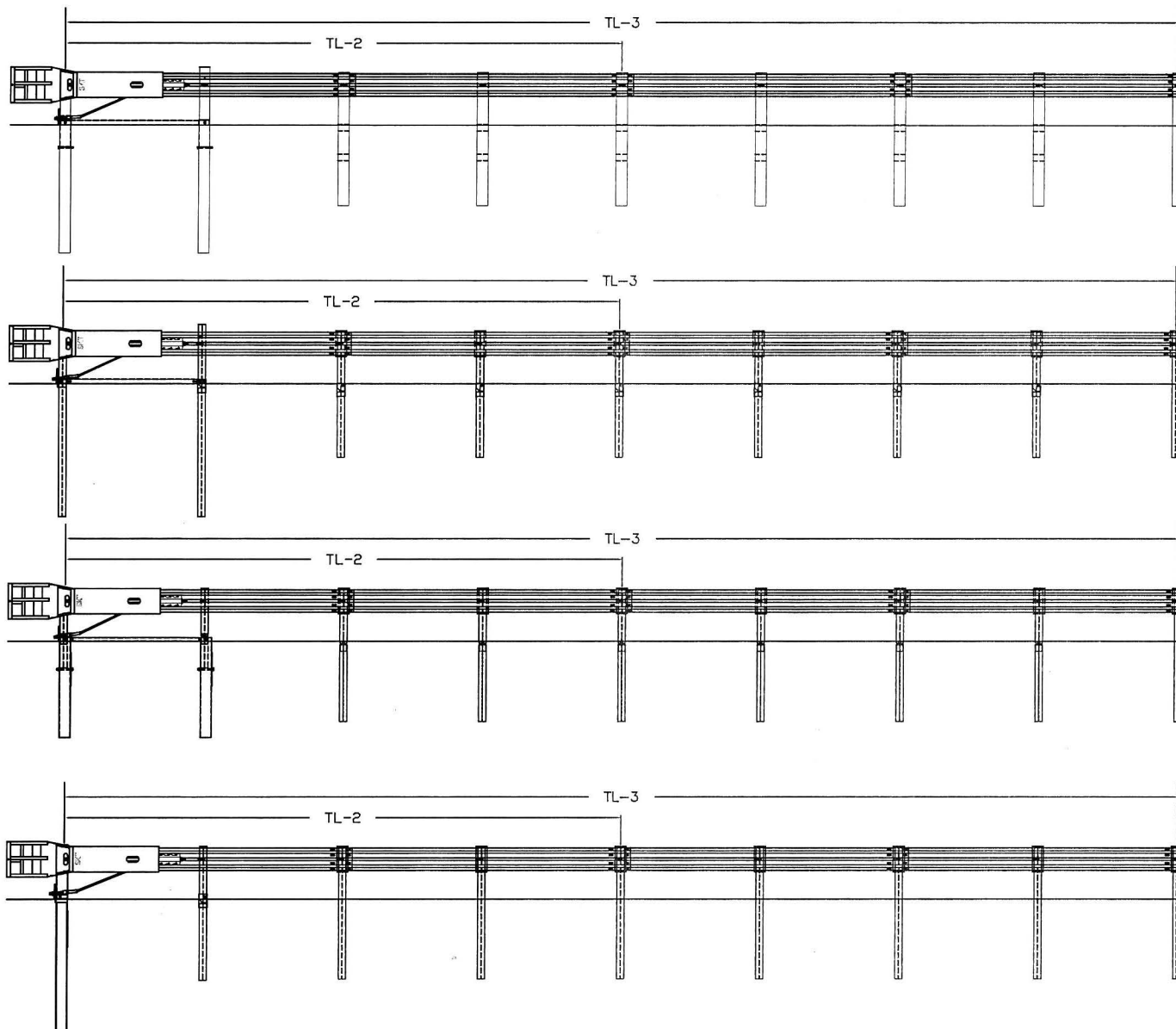
- To prevent misunderstanding by others, this letter of eligibility designated as FHWA control number CC-130 shall not be reproduced except in full. This letter and the test documentation upon which it is based are public information. All such letters and documentation may be reviewed upon request.
- 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,

A handwritten signature in blue ink that reads "Michael S. Griffith". The signature is written in a cursive, flowing style.

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

Enclosures



Wood Post Systems
(2, 4, or 8 Tubes)
Rail Height 28" - *31"
* Blocks may be 8" or 12" Deep

Hinged/Plug Welded System
Posts 3-8 May be Hinged or
Plug Welded
Rail Height 28" - *31"
* Blocks may be 8" or 12" Deep

Plug Welded System
(2, 4, or 8 Tubes)
Rail Height 28" - *31"
* Blocks may be 8" or 12" Deep

SP Steel Post
Rail Height 28" - *31"
* Blocks may be 8" or 12" Deep

END PANELS

12'-6" for 28" through 30" rail heights
25' for 28" through 30" rail heights
12'-6" for 31" rail heights (a)
15'-7 1/2" for 31" rail heights (b)

SECOND RAIL

12'-6" for 28" through 30" rail heights
25' for 28" through 30" rail heights
(a) 9'-4 1/2" for 31" rail heights
(a) 15'-7 1/2" for 31" rail heights
(b) 12'-6" for 31" rail heights

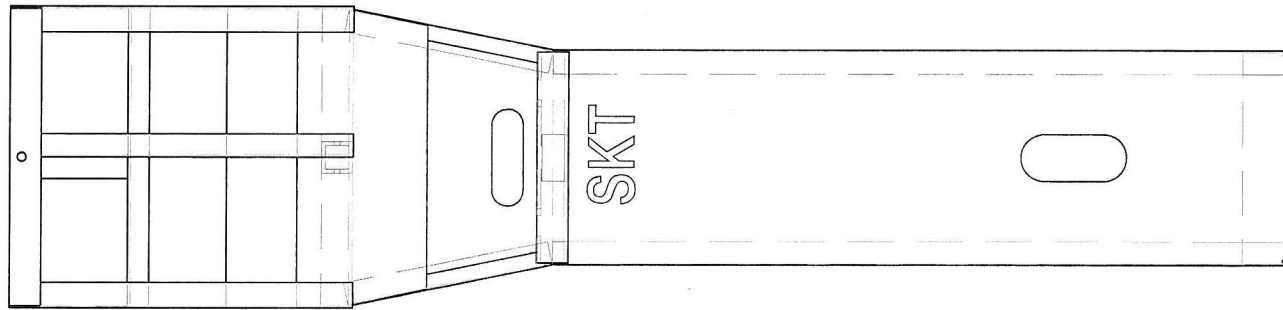


MSKT Impact Head
Applicability for
NCHRP 350 Terminals

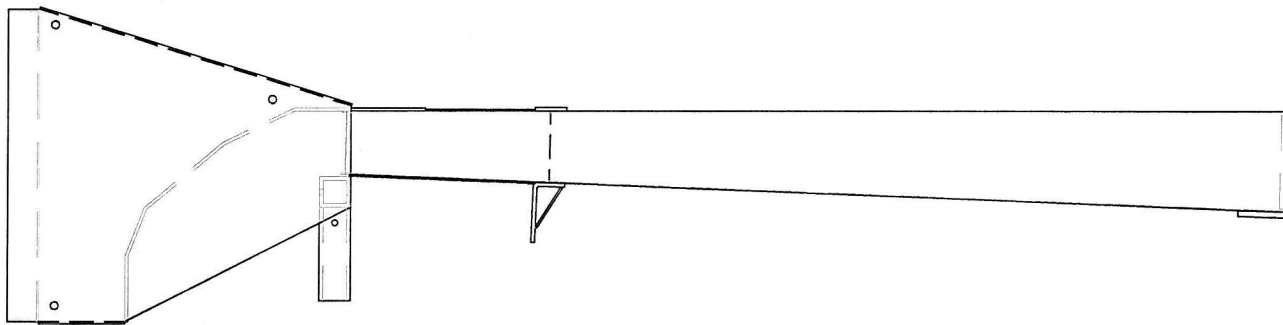
Drawing Name:
MSKT Replacement

Scale:
None

Sheet:	1
Date:	08/30/16
By:	JRR
Rev:	0

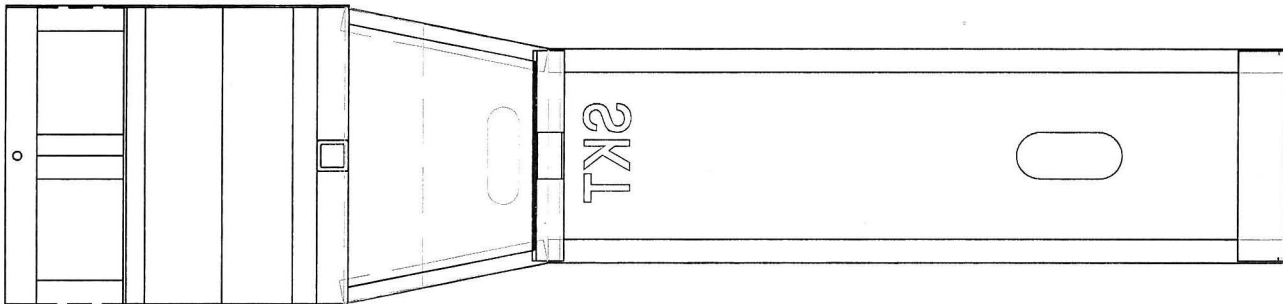


TRAFFIC SIDE



TRAFFIC SIDE

BACK SIDE



BACK SIDE

RSI
Road Systems, Inc.
 Big Spring, TX
 Phone: 432-263-2435
 or Phone: 330-346-0721

**MASH SKT
 IMPACT HEAD**

Drawing Name: MS3000

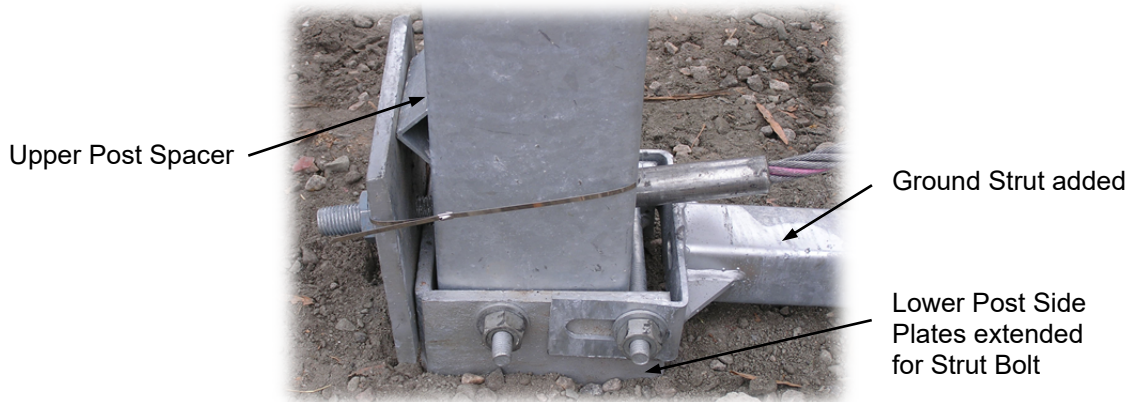
Scale: NONE

Sheet: **1**
 Date: 02/15/15
 By: JRR
 Rev:

Interchangeability between MASH MSKT and NCHRP 350 SKT-SP

The following components are exactly the same for the MASH MSKT and NCHRP 350 SKT-SP:

- All W-Beam rail sections.
 - Post #2 upper.
 - Posts #3 and beyond.
 - Blockouts, 8" or 12" deep.
 - Cable anchor bracket and shoulder bolts.
 - Cable assembly.
 - Bearing plate.
 - All hardware, no new hardware for MSKT.
- The MASH MSKT Impact Head may be used for new NCHRP 350 terminals or repairs of existing systems (any steel or wood post design option). Note this does not convert the NCHRP 350 SKT to a MASH terminal.
 - The MSKT uses a ground strut and requires another $\frac{3}{8}$ " bolt. See below.
 - The MSKT upper post #1 has a spacer angle welded to the post. See below.
 - The MSKT lower post #1 has longer side plates for the strut. See below.
 - The MSKT lower post #2 is longer, but has been used in other SKT steel post systems.

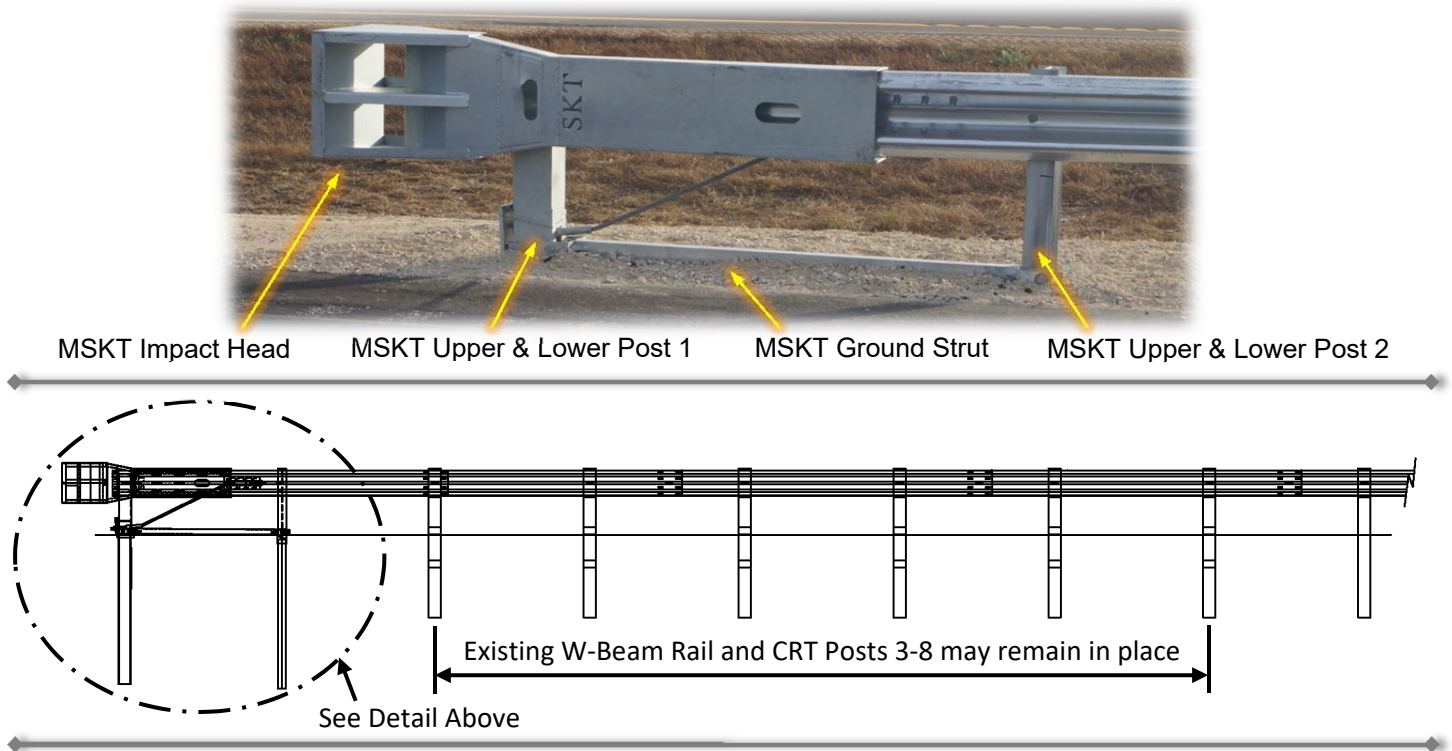


*The MSKT Impact Head is able to be used on NCHRP 350 SKT units for new installations or for repairs. **ADDING THE MSKT IMPACT HEAD DOES NOT RETROFIT NCHRP 350 SKT INTO THE MSKT.** The letters "SKT" are cut into the traffic side of the MSKT Impact Head. This is because there will be NCHRP 350 SKT installations and there will be MASH MSKT installations, both with the same head. The other changes noted above will distinguish the MASH MSKT from the NCHRP 350 SKT.*

Interchangeability between “Wood Post” MASH MSKT & NCHRP 350 SKT-W-MGS

The following components are exactly the same for the **Wood Post MASH MSKT** and the **Wood Post NCHRP 350 SKT-W-MGS**:

- All W-Beam rail sections.
 - CRT posts #3 and beyond.
 - Blockouts, 8” or 12” deep.
 - Cable anchor bracket and shoulder bolts.
 - Cable assembly.
 - Bearing plate.
- The MASH MSKT Impact Head may be used for new NCHRP 350 terminals or repairs of existing systems (any wood or steel post design option). Note this does not convert the NCHRP 350 SKT to a MASH terminal.
 - The existing Wood Posts 1 & 2, Foundation Tubes, and Ground Strut must be replaced with MSKT upper and lower Steel Posts 1 & 2 and the new Ground Strut. See below.



The MSKT Impact Head is able to be used on NCHRP 350 SKT units for new installations or for repairs. **ADDING THE MSKT IMPACT HEAD DOES NOT RETROFIT NCHRP 350 SKT INTO THE MSKT.** The letters “SKT” are cut into the traffic side of the MSKT Impact Head. This is because there will be NCHRP 350 SKT installations and there will be MASH MSKT installations, both with the same head. The other changes noted above will distinguish the MASH MSKT from the NCHRP 350 SKT.