OUTLINE

MASH Update
Temporary Work Zone Devices
New developments in Flared Terminals
Connecting to existing guardrail
MASH UPDATE

December 31, 2019

Last NCHRP 350 sunset date passed.

All types of highway safety hardware must now be MASH - 2016 compliant.
EXCEPTIONS

1. A MASH-2016 compliant device does not exist.

2. A MASH-2016 compliant device exists but does not meet the need.

3. The device is a temporary work zone device and was in use prior to December 31, 2019 and is still within its normal service life.
TEMPORARY WORK ZONE DEVICES

Category 1: Cones, Drums (including lighted drums), Tubular Markers

Category 2: Barricades, Sign Stands, Lighted Cones

Qualified Products List for Cat. 1 & 2 devices:
Temporary Traffic Control Devices  (doesn’t include sign standards)
TEMPORARY WORK ZONE DEVICES

Category 3: Portable Barriers, Portable Attenuators

(think jersey barriers…)

Portable Barrier

Qualified Products List being developed for portable barrier.

Standard Detail being developed for temporary concrete barrier.

Portable Attenuators

Qualified Products List:

Crash Cushions/Impact Attenuators
TEMPORARY WORK ZONE DEVICES

Category 4: Truck mounted attenuators, message boards

Qualified Products List

Crash Cushion/Impact Attenuators *(doesn’t include message boards)*
SERVICE LIFE EXCEPTION

Any NCHRP 350 compliant temporary work zone device that was in use last year can continue to be used if it is functional, in good condition, and within its normal service life.

We are looking at defining “normal service life”… This may involve cutoff dates 5-10 years out.
FLARED TERMINALS FOR 2020

• The MFLEAT is now available and has been added to the Terminals for W-Beam Guardrail QPL.

• Other 31” NCHRP 350 terminals are still listed on the QPL for the 2020 construction season.

Choices for this year: 31” FLEAT NCHRP 350

MFLEAT MASH – 2016

31” SRT NCHRP 350
MEET THE M FLEAT
## How is the MFLEAT Different?

<table>
<thead>
<tr>
<th>MFLEAT</th>
<th>FLEAT 350</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>39’-7” straight flared length</strong></td>
<td><strong>37’-6” straight flared length</strong></td>
</tr>
<tr>
<td><strong>3-ft. offset</strong></td>
<td><strong>4-ft. offset</strong></td>
</tr>
<tr>
<td>Three steel Hinged Posts (#1, #2, #3)</td>
<td>Two steel Hinged Posts (#1,#2)</td>
</tr>
<tr>
<td>6’-3” and 4’-2” post spacing</td>
<td>6’-3” post spacing</td>
</tr>
</tbody>
</table>
**HOW IS THE MFEAT DIFFERENT?**

Guardrail Widening would be constructed to the same dimensions as before.
FLARED TERMINALS FOR 2020

We are NOT installing 27” terminals!
GUARDRAIL POLICY

What has changed starting in 2020?

**MELTs** on Corridor Priority 1&2 roads must be replaced!

All **BCTs and Low Volume Ends** must be replaced!

Replace with terminals from the **Terminals for W-Beam Guardrail QPL**.
GUARDRAIL POLICY

What has **NOT** changed in 2020?

*All Existing FLEATs and SRTs in good condition can be left in place!*

*MELTs in good condition can be left on Corridor Priority 3&4 roads!*
CONNECTIONS

31” Midway Splice Guardrail → 27 ¾” Guardrail:

Height transition must be spread out over at least 25 feet.
- Transition must take place within the existing rail section.
- Several existing posts will need to be adjusted.

An extra post or a shorter rail section will be needed.
CONNECTIONS

31” Midway Splice Terminal ➔ 27 ¾” Guardrail:

Height transition must be spread out over at least 25 feet.

- Transition must take place outside the limits of the terminal.
- Several existing posts will need to be adjusted.

An extra post or a shorter rail section will be needed.
MISCELLANEOUS REMINDERS

1. If you are adjusting existing guardrail, height should not exceed 30”
2. Standard post length is 7 feet. With a reduced berm, 8 foot posts are required.
3. Under no circumstances should guardrail posts within terminals be cut for any reason.
4. Section 606 was updated but not included in the 2020 Standard Specs. Make sure to refer to the Repair Spec!!