

# Design Advisory

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April 30, 2018  
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Index:  
Guardrail Approach  
Terminal, Type 2M,  
FUSP 12SP-807K-01,  
Chapter 7 of the Road  
Design Manual, Standard  
Plans R-60-Series and R-  
62-Series.

*This advisory is  
superseded by any  
subsequent revisions to  
the references listed in  
this index.*

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Design Advisory should  
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## UPDATE - MASH-Compliant Guardrail Approach Terminals

Guardrail approach terminals in compliance with the Manual for Assessing Safety Hardware (MASH) will be required for new installations on the National Highway System (NHS) on projects let after June 30, 2018. MDOT's currently-approved National Cooperative Highway Research Program Report 350 (NCHRP 350) compliant guardrail terminals (SRT, FLEAT, ET-Plus, and SKT, respectively) will no longer be acceptable for new installations on the NHS on projects let after **June 30, 2018**.

All guardrail approach terminals currently available are proprietary. Currently, there are three Type 2 (tangent), MASH-compliant guardrail terminals available:

1. MSKT, manufactured by Road Systems, Inc.
2. Soft-Stop, manufactured by Trinity Highway Products, LLC.
3. MAX-Tension, manufactured by Lindsay Transportation Solutions, Inc.

However, only one Type 1 (flared), MASH-compliant guardrail terminal is currently available; SRT M10, manufactured by Trinity Highway Products, LLC.

On all roadways under MDOT's jurisdiction, regardless of whether they are NHS or non-NHS routes, designers are required to specify MASH-compliant guardrail terminals for new installations on projects let after June 30, 2018. In addition, Type 2 (tangent), MASH-compliant guardrail terminals will be required for all new installations on MDOT roadways until further notice. On MDOT roadways, a temporary moratorium will be placed on Type 1 (flared), MASH-compliant guardrail terminals to avoid sole-sourcing. It is expected that Type 1 (flared), MASH-compliant guardrail terminals will be permitted for use in the future once multiple Type 1 (flared) terminals are available and deemed suitable for use by MDOT.

On roadways that are not under MDOT's jurisdiction (e.g., typical Local Agency projects), MASH-compliant guardrail terminals are only required for new installations on NHS routes on projects let after June 30, 2018. The use of MASH-compliant guardrail terminals is optional on non-MDOT, non-NHS roadways. Moreover, Type 1 (flared), MASH-compliant guardrail terminals can be utilized on Local Agency projects when following the current FHWA-approved sole-source process.

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In addition to Standard Plan R-62-Series, designers will need to include a Frequently Used Special Provision (FUSP) when specifying Type 2 (tangent), MASH-compliant guardrail terminals. The FUSP for Type 2 (tangent), MASH-compliant guardrail terminals, referred to as Guardrail Approach Terminals, Type 2M, has been approved and is available online by accessing MDOT's supplemental specifications and frequently used special provisions website. More information regarding Guardrail Approach Terminals, Type 2M is available in Chapter 7 of Road Design Manual (RDM). Designers will need to use the appropriate pay item when specifying Type 2M guardrail terminals:

- Guardrail Approach Terminal, Type 2M

Designers need to be aware that Type 2M guardrail terminals are designed to be attached directly to Type MGS-8 guardrail without the need for a transition section. When it is necessary to attach a Type 2M guardrail terminal to either Type B or Type T guardrail, a transition section between the terminal and the guardrail is required. Standard Plan R-60-Series depicts transition details for connecting a Type 2M guardrail terminal to Type B and Type T guardrail; transition section is included as part of the Guardrail Approach Terminal, Type 2M pay item, and is not paid for separately.

Designers need to be aware that the guardrail worksheet in Chapter 7 of the RDM was revised to include a deduction value when using Type MGS-8 guardrail and Type 2M guardrail terminals. Please refer to the guardrail worksheet and all pertinent notes listed on the worksheet.

In conclusion, designers are urged to carefully review the recent updates to Chapter 7 of the RDM pertaining to guardrail terminals.