

Safety Barrier Technical Conditions for Use

HighwayGuard MDS Safety Barrier – Permanent & Temporary

	Issue Date: 7 March 2024	Proponent: Highway Care International
	Status: Recommended for acceptance	Accepted Impact Speed: 100 km/h
This document is a summary of the Austroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies. The Austroads Safety Barrier Assessment Panel may at any time, withdraw or modify this document without notice. These Technical Conditions for Use do not imply that this product may be used on roads under the care and control of individual Road Agencies. Users should refer to individual Road Agency websites to determine whether this product is accepted for use within that jurisdiction, and if the Road Agency has adopted any additional or specific requirements. These conditions do not take precedence over Road Agency specifications and standards. These conditions take precedence over instructions in the Product Manual, refer Austroads Technical Advice SBTA 22-001. Product manual current at time of TCU: IMP-173 1.2		

Design Requirements

Containment Level	MASH TL3
Accepted Impact Speed	100 km/h
Point of Redirection – Leading (m)	Interface between the barrier and the end treatment
Point of Redirection – Trailing (m)	
Tested Article Length (m)	36
Anchor/Post Spacing (m)	2.0
Dynamic Deflection (m)	0.03
Working Width (m)	0.67
System Width (m)	0.54
Unit Length (m)	6
Minimum Support Width (m)	Requires site specific analysis. Refer Austroads Technical Advice SBTA 22-001.
Minimum Installation Length (m) <i>between crash cushions/terminals - tested article</i>	36
System Conditions	• Single sided applications only. May only be impacted on the pinned side. • May not be used for applications where road traffic can impact the unpinned side of the barrier. • Installation on top of a kerb is not recommended, however if installed on top of a kerb all system components must be free to operate. • All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable. • This product is designed for constrained sites ONLY that cannot accommodate the working widths of more flexible systems. While providing lower working width, this product increases the potential for vehicle occupant risk during high-speed impacts. • Throughout the installation it is recommended to revert to greater pin spacing (LDS, Standard) where there is the accepted working with behind the installation. • A risk assessment of using this product must be undertaken. Where the risk of high-speed impacts is high, the speed must be limited to not greater than 80 km/h.

Approved Variants

Variant	Functional Purpose	Conditions
Nil		
<i>Variants that are not listed above are NOT recommended for acceptance. Alterations to or combinations of the variants listed above are not recommended unless noted.</i>		

Approved Connections

An accepted end treatment must be provided at both ends of all barrier installations	
End Treatments – Permanent & Temporary Installations	
Quadguard M10 Crash Cushion	- Refer Quadguard M10 Crash Cushion Technical Conditions for Use. - The HighwayGuard transition to end terminal must be used to connect the crash cushion to the barrier. - Reverse impacts into the transition section can product a greater occupant severity value than preferred. Where reverse impacts are possible (e.g., bidirectional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
Universal Tau-M Crash Cushion	Permitted for use in unidirectional applications only. Not permitted as a departure terminal. - Refer Universal Tau-M Crash Cushion Technical Conditions for Use. - The HighwayGuard to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier.
End Treatments – Temporary Installations Only	
Absorb-M Crash Cushion	The installation is restricted to an impact speed of 80 km/h or less. - Refer Absorb-M Crash Cushion Technical Conditions for use. - The HighwayGuard to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. - This is a gating device.
ArmorBuffa Crash Cushion	The installation is restricted to an impact speed of 80 km/h or less. - Refer ArmorBuffa Crash Cushion Technical Conditions for use. - The HighwayGuard to ArmorBuffa Crash Cushion transition must be used to connect the crash cushion to the barrier. - This is a gating device.
Quadguard M10 CZ Crash Cushion	- Refer Quadguard M10 CZ Crash Cushion Technical Conditions for Use. - The HighwayGuard transition to end terminal must be used to connect the crash cushion to the barrier. - Reverse impacts into the transition section can product a greater occupant severity value than preferred. Where reverse impacts are possible (e.g., bidirectional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
Transitions	
BG800 Safety Barrier	- Refer BG800 Safety Barrier Technical Conditions for Use. - The HighwayGuard to BG800 transition must be used to connect the barriers.
<i>Connections that are not listed above are NOT recommended for acceptance.</i>	

Foundation Pavement Conditions

Permanent & Temporary Installations			
Pavement Type	Post/Pin Spacing (m)	Post/Pin Type	Pavement Construction
Concrete	2.0	M24 x 450mm threaded rod with epoxy	Min 200mm reinforced Min 250mm non-reinforced
Deep lift asphaltic concrete	2.0	M24 x 450mm threaded rod with epoxy	Min 250mm
Asphaltic concrete over granular	2.0	M24 x 450mm threaded rod with epoxy	150mm AC over 150mm granular pavement
Flush seal over granular	Not permitted		
Unsealed compacted formation	Not permitted		
Installation in pavement conditions not permitted above have not been justified to the Panel's satisfaction.			