Safety Barrier Technical Conditions for Use

BG800 MDS Steel Safety Barrier - Permanent

Issue Date: 1 December 2021 | **Supplier:** Highway Care International

These conditions take precedence over any instructions in the Product Manual.

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 Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.

These acceptance conditions should be read in conjunction with the Product Manual and Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers.

Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.

Status	**Recommended for Acceptance**
Product accepted	BG800MDS Steel Safety Barrier - Permanent Variants • 6 metre BG800 MDS Steel Safety Barrier – Permanent sections with an attached T-Top structure, concrete base using Hilti wedge bolt anchors • 12 metre BG800 MDS Steel Safety Barrier – Permanent sections with an attached T-Top structure, concrete base using Hilti wedge bolt anchors • BG800 MDS Full Height Terminal End (6 and 12 metre). • 0.61 metre BG 800 5° Radius Section. • 0.61 metre BG 800 10° Radius Section. Variants that are NOT listed above are NOT recommended for acceptance.
Accepted Speed	100 km/h
Product Manual reviewed	IMP-031 Issue 1.1
Product Manual	https://az276019.vo.msecnd.net/valmontstaging/docs/librariesprovider35/manuals/bg800-manual-australia-amp-new-zealand---rev-c51847c7898cf6a15a1a9ff5200d30354.pdf?sfvrsn=364b1639_2

Design Requirements

Containment Level	Point of Redirection		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading (m)	Trailing (m)					
MASH TL3	Interface between barrier and the end treatment		42	6.0	0.44	0.98	

Approved Connections

An accepted end treatment must be provided at both ends of all barrier installations	
Public Domain Products	
W-Beam Guardrail	Not Permitted
Thrie-Beam Guardrail	Not Permitted
Concrete	Not Permitted
Proprietary Products	
SMART Steel Crash Cushion	• Refer SMART Crash Cushion Technical Conditions for Use. • The BG800 to SMART Crash Cushion transition must be used to connect the crash cushion to the barrier. The transition includes the Full Height Terminal End. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
Universal Tau-M Crash Cushion	• Refer Universal Tau-M Crash Cushion Technical Conditions for Use. • The BG800 MDS to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
QUADGUARD M10 Crash Cushion	• Refer to QUADGUARD M10 Crash Cushion Technical Conditions for Use. • The QUAD-BEAM transition to end terminal must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.

Design Guidance

Minimum installation length	42 metres between crash cushions/terminals (tested article)
System width (m)	0.54 metres
Minimum distance to excavation (m)	0.44 when anchored on concrete pavement - measured from the outer edge of the foot on the works side 0.70 when anchored on flexible pavement - measured from the outer edge of the foot on the works side
Slope limit	8 %
Systems conditions	1. 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. 2. All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable.
Gore area use	Permitted
Pedestrian area use	Permitted
Cycleway use	Permitted
Frequent impact likely	Permitted
Remote location	Permitted
Median use	Permitted

Foundation Pavement Conditions					
Pavement Type	**Use**	**Max Accepted Impact Speed (km/h)**	**Post/Pin Spacing (m)**	**Post/Pin Type**	**Pavement Construction**
Concrete	Permitted	100	6	M24 x 250mm threaded rod with epoxy	Approx. 204mm (8”) Concrete
Deep lift asphaltic concrete				M24 x 450mm threaded rod with epoxy	Minimum 150mm (6”) Asphalt
Asphaltic concrete over granular pavement					Approx. 89-102mm (3.5-4”) asphalt over Approx. 152mm (6”) thick dense grade aggregate (DGA)
Flush seal over granular pavement	Not Permitted				
Unsealed compacted formation					

Note: Installation in pavement conditions not permitted above have not been justified to the Panel’s satisfaction.