Safety Barrier Technical Conditions for Use

ZONEGUARD Steel Safety Barrier – Temporary

Issue Date: 8 December 2021 | **Supplier:** Hill & Smith Pty Ltd

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	ZONEGUARD Steel Safety Barrier Variants Rubber Pad Option Variants that are NOT listed above are NOT recommended for acceptance.
Accepted impact speed	100 km/h
Product manual reviewed	Revision 7
Product manual	Zoneguard (hsroads.com.au)

Design Requirements

Containment level	Point of redirection		Tested Article Length (m)	Anchor/ post spacing (m)	Dynamic deflection (m)	Working width (m)	Notes/Conditions
	Leading (m)	Trailing (m)					
MASH TL3	Interface between barrier and end treatment		75	65	1.9	2.6	

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	
LEGACY: UNIVERSAL TAU-II Crash Cushion	• **LEGACY status recommended from 1 January 2021.** • Refer to Universal Tau-II Crash Cushion Technical Conditions for Use. • The Zoneguard to Universal Tau-II 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.
LEGACY: QUADGUARD CZ Crash Cushion	• **LEGACY status recommended from 1 January 2021.** • Refer to QUADGUARD CZ Crash Cushion Technical Conditions for Use. • The Zoneguard to Quadguard CZ 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.
LEGACY: ABSORB 350 Plastic Terminal	• **LEGACY status recommended from 1 January 2021.** • **The installation is restricted to an impact speed of 70 km/h or less.** • Refer to ABSORB 350 Terminal Technical Conditions for Use. • The Zoneguard to AB350 Terminal transition must be used to connect the terminal to the barrier. • This is a gating device.
ABSORB-M Crash Cushion	• **The installation is restricted to an impact speed of 80 km/h or less.** • Refer to Absorb-M Crash Cushion Technical Conditions for Use. • The Zoneguard to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. • This is a gating device.
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 Zoneguard to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier.

Design Guidance

Minimum installation length	75 metres between crash cushions/terminals (tested article)
System width (m)	0.7
Minimum distance to excavation (m)	1.9 – measured from the outer edge of the foot on the works side
Side slope limit	7%
Systems conditions	1. **Continuous barrier lengths are to be limited to a maximum of 500 metres.** 2. 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. 3. 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	65	M30 x 300mm threaded rod with epoxy	Not specified
Deep lift asphaltic concrete	Permitted	100	65	M30 x 500mm asphalt pin	Not specified
Asphaltic concrete over granular pavement					
Flush seal over granular pavement	Permitted	100	65		Min 150mm depth
Unsealed compacted formation	Not Permitted				

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