

DETAIL SHEET

QUADGUARD HIGH SPEED STEEL RAIL CRASH CUSHION

VicRoads Requirements

Refer to Austroads - Safety Barrier System Acceptance Conditions for the Quadguard High Speed Crash Cushion. All requirements listed by Austroads have been adopted by VicRoads for use on the Victorian declared road network.

In this instance, VicRoads applies no additional requirements/conditions for use of Quadguard High Speed Crash Cushion on the Victorian declared road network.

Please Note: VicRoads requirements take precedence over any Product Manual instructions and Austroads conditions where conflicting.

References

- Product Installation Manual and Product Operational Manual [refer licensed product supplier website](#)
- VicRoads Road Design Note 06-04 Accepted Safety Barrier Products



For further information please contact:

VicRoads Technical Services
60 Denmark Street
Kew, Vic, 3101
Telephone: 8391 7192

Accepted safety barrier products are subject to periodic review and the information provided in this document may be superseded. Please refer to *Road Design Note 06-04 – Accepted Safety Barrier products* for the current VicRoads acceptance status.

Safety Barrier System Acceptance Conditions

QUADGUARD HIGH SPEED Steel Rail Crash Cushion

	Proponent	Boylan Group
	Australian Distributor	Boylan Group
	New Zealand Distributor	Ingal Civil Products NZ
	Date Issued	15 September 2014

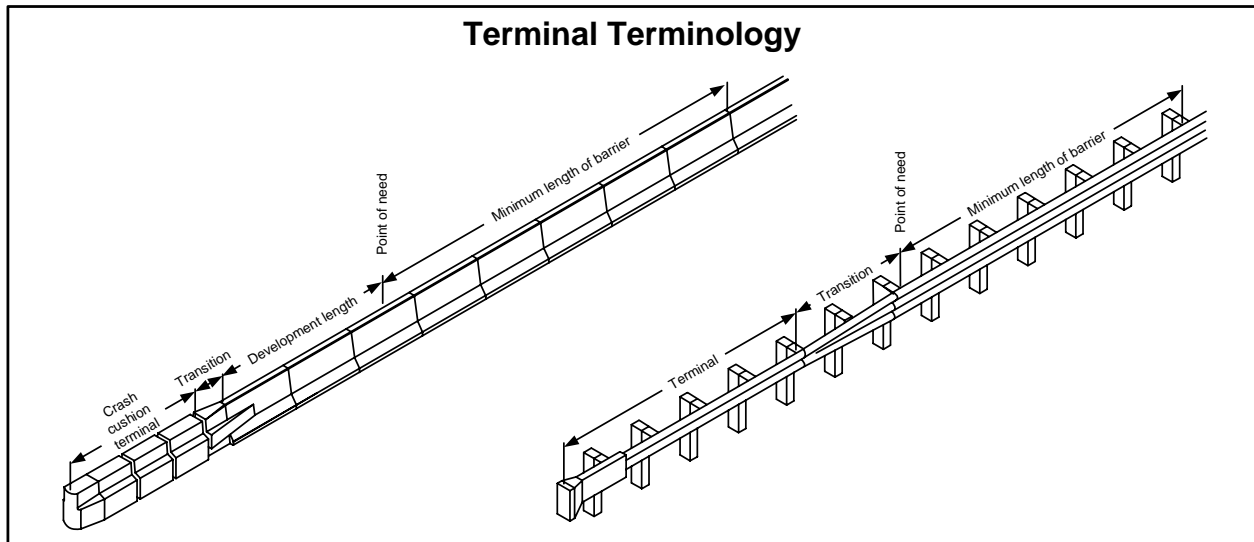
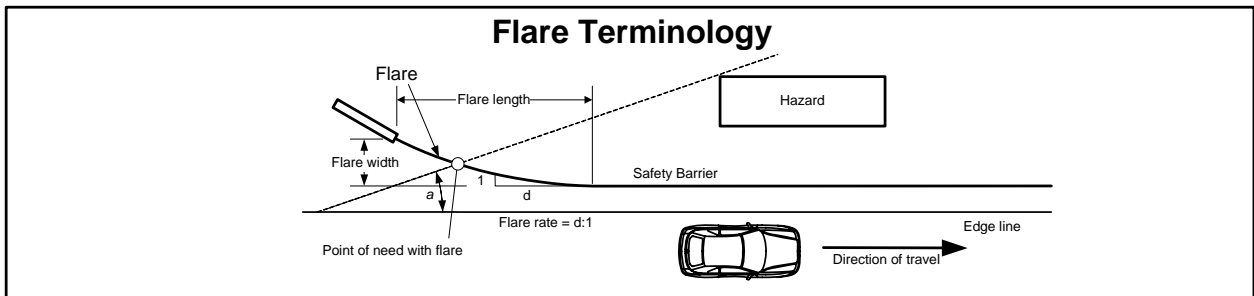
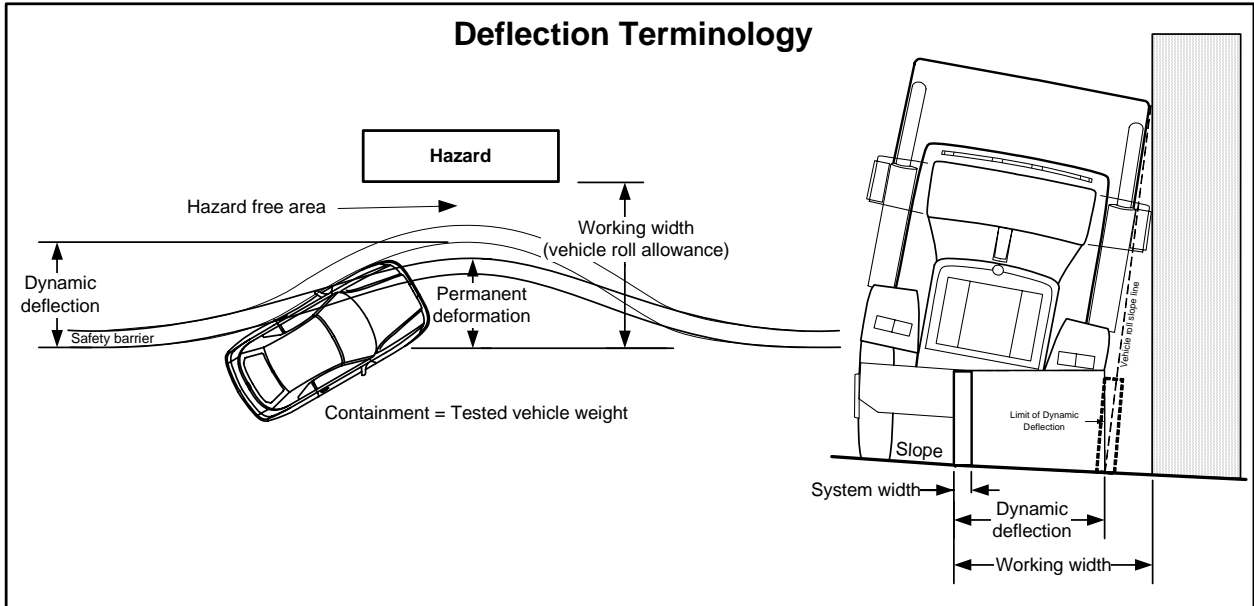
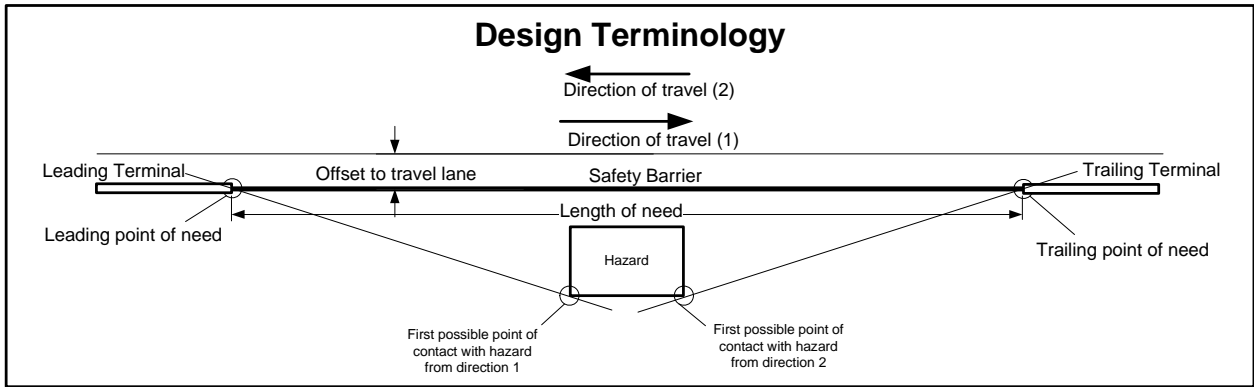
Status	Accepted – May be used on the classified road network. These acceptance conditions take precedence over any instructions in the Product Manual.
Variants accepted	<ul style="list-style-type: none"> • QUADGUARD HIGH SPEED Steel Rail Crash Cushion with tension strut backup - 610mm, 760mm, 915mm, 1,755mm, 2,285mm width. • QUADGUARD HIGH SPEED Steel Rail Crash Cushion with concrete backup - 610mm, 760mm, 915mm, 1,755mm, 2,285mm width. • W-beam transition. • Thrie-beam transition. • End shoe transition. • Safety barrier panel transition. • Grey or yellow plastic nose (colour to be determined by local Road Agency).
Variants NOT accepted	<ul style="list-style-type: none"> • Variants that are not on the list above are not accepted. • Variants accepted in other jurisdictions, but not accepted in the local jurisdiction, are NOT permitted.

Speed limit (km/h)	110 km/h.
Tested containment (kg)	2,000 kg at 110 km/h and 0°.
Adopted dynamic deflection (Nominal 2 tonne vehicle)	Not applicable.
Point of need	At leading end.
Development length	Not applicable.
Minimum length of barrier between terminals	Not applicable.
System width (m)	System width varies from 770mm to 2,446mm.

System conditions	Not specified.
Terminal conditions	<ol style="list-style-type: none"> 1. Unit to be installed with a 28 MPa concrete pad to anchor the system. 2. Concrete Backup should be used when the unit is connecting to a cast in situ concrete barrier being constructed as part of the works. 3. 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.
Gore area use	Permitted.
Pedestrian area use	Permitted – consider potential for snagging and deflection.
Cycleway use	Permitted – consider potential for snagging and deflection.
Frequent impact likely	Permitted.
Remote location	Permitted.

Median use	Permitted.	
Minimum median width (m)	Not specified.	
Flare rate (See Explanation of Terms diagram)	Not applicable.	
Offset to travel lane (m)	Refer to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers, Section 6.3.5.	
Hazard free area beside barrier or terminal (Working Width)	Refer to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers, Section 6.3.16.	
Installation	The QUADGUARD HIGH SPEED Steel Rail Crash Cushion must be installed and maintained in accordance with the Product Manual and Road Agency specifications. The Road Agency specifications and standards shall have precedence.	
Minimum distance to excavation	Not applicable.	
Slope limit	Side slope limit: 12 Horizontal to 1 Vertical (8%). Longitudinal slope limit: Not specified.	
Foundation pavement conditions	Concrete	Permitted.
	Deep lift Asphaltic Concrete	Permitted on concrete pad.
	Asphaltic concrete over granular pavement	Permitted on concrete pad.
	Flush seal over granular pavement	Permitted on concrete pad.
	Unsealed compacted formation	Permitted on concrete pad.
	Natural surface	Permitted on concrete pad.
	Foundation pavement conditions must be smooth and free of snag points, kerbs or obstructions that may interfere with deflection of the barrier.	
Attachments and screens	<p>Visual screens, debris screens, platforms for workers and other non-product hardware must not be attached to the product.</p> <p>Screens may be placed adjacent to the side of the product not exposed to traffic. The distance between the screen and the product shall be determined by a site specific risk assessment that considers the deflection distance.</p> <p>Screens must not have horizontal members that present a risk of impaling errant vehicles that impact the product.</p>	
Damaged components	Damaged components must be replaced. Repaired components must not be used.	
Delineation	The installed system shall include delineation as prescribed by Road Agency specifications and drawings.	
Traceability and markings	<p>Product markings shall be in accordance with marking/s prescribed by the current Australian/New Zealand Standard "AS/NZS 3845 Road Safety Barrier Systems" and Road Agency specifications. Traceability details that must be permanently fixed to the product are:</p> <ul style="list-style-type: none"> • Name of the product. • Model or version details of the product, if applicable. • Manufacturer or distributor name. • Batch number, if applicable. • Serial number, if applicable. • Date of manufacture. 	

	<p>Traceability details must easily visible but unobtrusive and not be in a form that becomes prominent advertising. No advertising shall be displayed on the installation.</p> <p>Traceability must be in a form that will not be erased with use.</p>
<p>Notes</p>	<p>Acceptance is based on drawings in the Product Manual supplied by the Proponent, dated January 2014 (Revision A). This acceptance will cease if there is any change in the product design or specifications.</p>
	<p>Only the Product Manual authorised by the Proponent shall be used in any marketing of the product.</p>
	<p>Acceptance of the QUADGUARD HIGH SPEED Steel Rail Crash Cushion does not place any obligation on the Road Agency, or its contractors, to purchase or use the product.</p>
	<p>The Austroads Safety Barrier Assessment Panel may periodically re-assess the QUADGUARD HIGH SPEED Steel Rail Crash Cushion.</p> <p>The Road Agency may withdraw or modify at any time, the acceptance status or conditions of use of the product without notice. Users should refer to the Road Agency web site to ensure they have the latest version of the conditions related to this product.</p>



Safety Barrier terminology.vsd

For more information, refer to
Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers