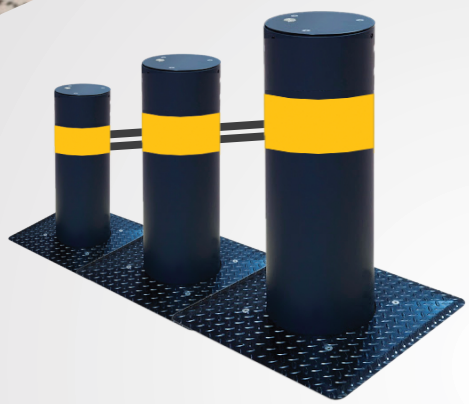
Construck combines
the best of technologies to create
a bridge protection barrier
which satisfies the performance ratings
of International Standards like
PAS 68: 2013, IWA 14-1:2013
ASTM F2656-07 : 2015
EN1317, NCHRP, MASH



CONSTRUCK

BRIDGE PROTECTION SYSTEM *Introducing*

A Versatile Bridge Safety Barrier

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valmont HIGHWAY

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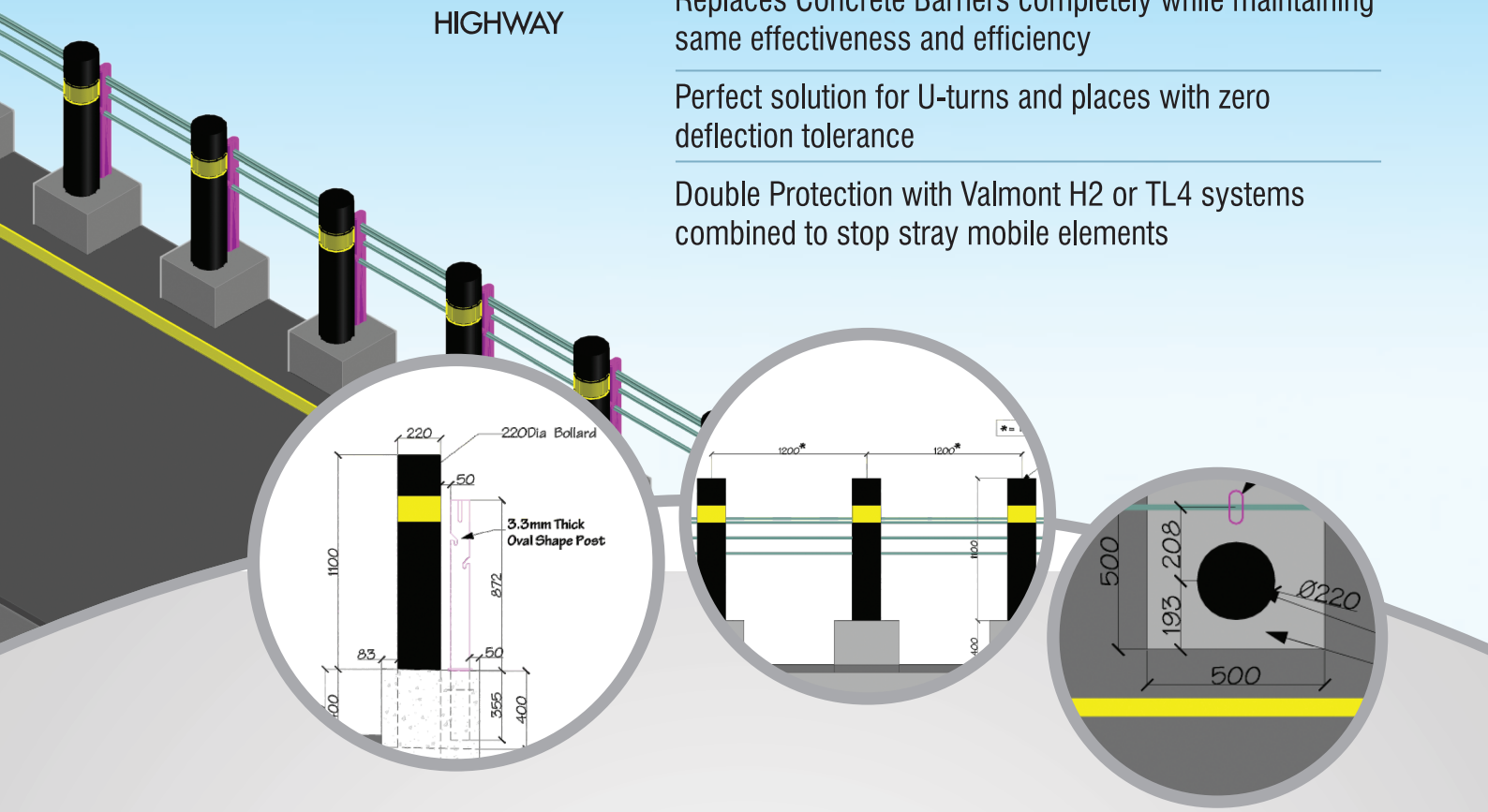
Replaces Concrete Barriers completely while maintaining same effectiveness and efficiency

Perfect solution for U-turns and places with zero deflection tolerance

Double Protection with Valmont H2 or TL4 systems combined to stop stray mobile elements



Bridge Crash Barrier System

Mitigating localized sand accumulation using Innovative Barrier Systems

KEY FINDINGS

- Traditional measures to mitigate sand accumulation on the road incur high costs
- Road Safety Barriers can contribute to sand accumulation within the carriageway
- The porosity of barriers can affect the distribution of windblown sand
- Rigid Bollard with Cable Safety offer a potential alternate to mitigate sand accumulation in Bridges, U Turns and all areas with low deflection requirements

ABSTRACT

Sand Accumulation on highways around Concrete is an ongoing problem for road authorities in arid areas across the globe. There are no single system solutions to replace concrete barrier due to the low deflection requirements. This proposal discusses the impact of different road safety barrier types used in areas prone to sand accumulation and provides solution for replacing an W- Beam Median Barrier or Concrete Barrier with a Bollard-Wire Rope Barrier system.

Different Standards for Fixed Barrier Testing

Publicly Available Standard (PAS 68- Latest Version 2013

UK based threat vehicles

Likely withdrawn 2018

PAS 68: 2013- British Standard				
Performance Classification	Speed(Km/h)	Weight(kgs)	Angle	Energy(kJ)
PAS 68 V/7500[N3]/80/90	80	7500	90	1852
PAS 68 V/7500[N2]/48/90	48	7500	90	667

IWA 14-1 - Latest Version 2013

Includes all - world threat vehicles contianied in PAS 68 & ASTM F2656

Due for review 2017

IWA 14-1:2013 - International Workshop Agreement				
Performance Classification	Speed(Km/h)	Weight(kgs)	Angle	Energy(kJ)
IWA 14-1 V/7200[N3C]/80/90	80	7200	90	1772
IWA 14-1 V/7200[N2A]48/90	48	7200	90	656

ASTM F2656 - Latest Version 2015

North America threat vehicles

Superseded "DOS" or SD/STD 2.01

ASTM F2656-07 :2015 - American Standard				
Performance Classification	Speed(Km/h)	Weight(kgs)	Angle	Energy(kJ)
ASTM F2656-07 M50/P1 (Triple unit)	80	6800	90	1699
ASTM F2656-07 M30/P1 (Triple unit)	48	6800	90	612

- Crash Tested Shallow Foundation Fixed Bollards shall be fixed at recommended spacing on the edges of the Bridge Decks longitudinally.
- These Bollards shall be Performance Classification as per **ASTM F5656 07 – M50 -P1 or equivalent** Corresponding PAS and IWA performance Classifications are available in the comparison sheet
- The Bollards are effective to halt errant vehicles as per the classification.
- Due to the space available between bollards, the sand accumulation is reduced
- Wire Rope Safety Barrier shall be fixed along with the Bollards to act as an additional safety barrier.
- This WRSB shall be a **H2 rated system as per EN1317** and can act as a further deterrent
- Unfortunate event of a Crash with Bollard will reduce the terminal velocity of the errant vehicle to near 0 and hence removes most of the Kinetic Energy.
- With highly Diminished Kinetic energy, the vehicle can be brought to a further halt by the WRSB.
- Additional use of WRSB is to stop stray elements(like detached tyresetc) from the crash to fall down the road below.
- The WRSB will also act as a barrier to stop any pedestrians from falling down the bridge by accident(in extension the animals as well)

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