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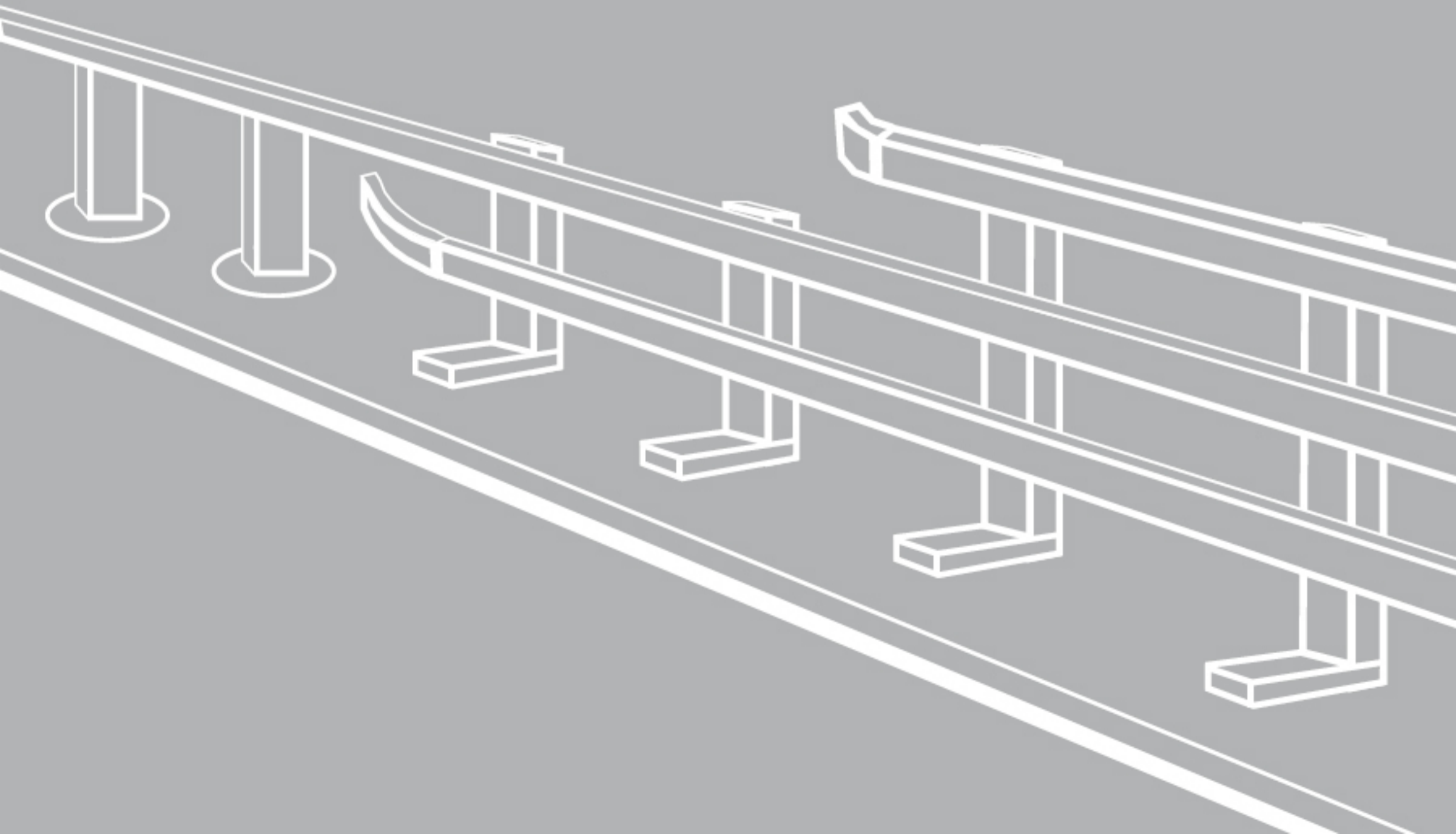


CORUS

Creating a safer journey

Protect 365™

Transitions



Transitions for Road Restraint Systems

Road restraint system experts at Corus have developed a new high-performance transition for use with Protect 365 N2 parapets and safety fence.

An improved product

The new family of Protect 365 products from Corus signals a major move forward in highways restraint systems to ensure safety benefits for all road users. We have drawn on 40 years of knowledge and experience to develop systems that offer improved performance combined with the added advantages of easy installation, low maintenance and long life. The Protect 365 transition is a far cry from traditional system transitions and has been completely re-engineered for optimal performance. Evaluated in accordance with EN 1317 Standard, our transition is guaranteed to minimise impact severity and reduce the risk of injury in accidents.

Flexible application

The Protect 365 transition has been developed by Corus for use with the new and approved Protect 365 N2 normal containment parapet range and Protect 365 N2 safety fence. These systems are suitable for installation on all 110 kph (approximately 70 mph) roads and bridges – even short or lightweight bridges. We are currently developing and testing more types of transition to complement our Protect 365 family of products and provide our customers with increased 'end-to-end' system choice and flexibility.

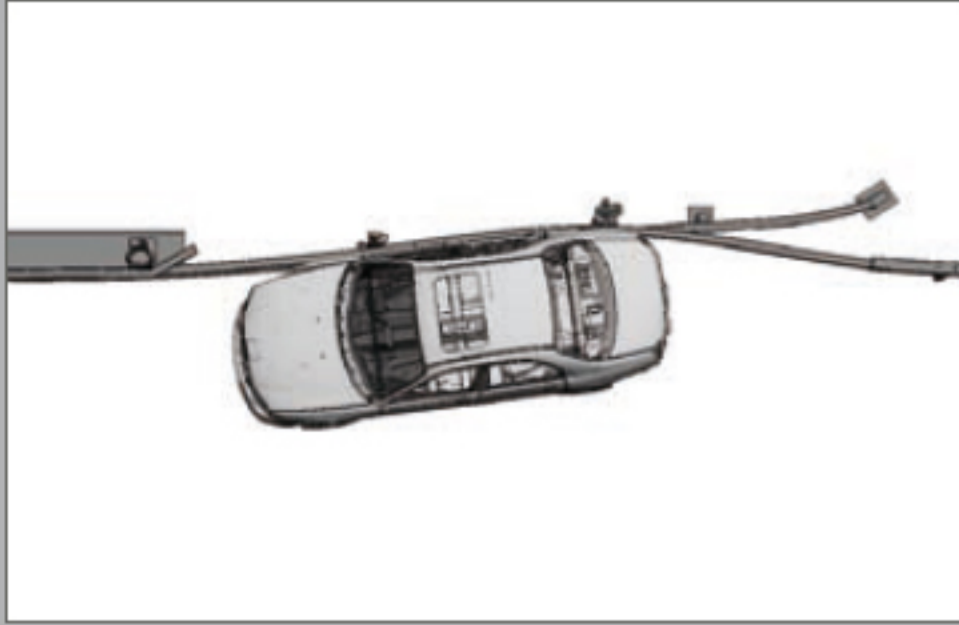
Designed to perform

At Corus we have challenged assumptions and evaluated foreseeable worst case scenarios to ensure our Protect 365 systems deliver performance. We used advanced computer modelling to simulate aspects of road restraint system behaviour in representative crash situations involving modern vehicles. Simulations of 17 different impact points along the Protect 365 transition ensured that we fully understood the strengths and critical areas of our system. These 'what if' checks also explored the outcome of an impact in the opposite direction to that specified in the EN 1317 Standard. Subsequent strain gauge analysis proved our predictions were robust. The upshot was a brand new design that is 7,500 mm long compared with the more traditional 600 mm length.



The new features of the Protect 365 N2 safety fence to N2 parapet transition have been proven in physical tests.

- EN 1317 accredited.
- Approved by the UK Highways Agency.
- Fully compatible with Protect 365 N2 systems.
- Minimum 30-year performance life.
- Low maintenance.
- Quick and easy to install.



Transition performance has been optimised with the aid of advanced computer models of a 1500 kg car (left) and 900 kg car (right).

Assurance of safety

All Protect 365 products have been subjected to full-scale impact tests carried out under strictly controlled conditions by MIRA Ltd. Test results prove that our systems offer an impressive combination of safety characteristics and perform consistently to minimise impact severity irrespective of impact position. The MIRA crash tests used a 1500 kg car travelling at 110 kph and a 900 kg car travelling at 100 kph to test our transition at the recommended EN 1317 Standard impact points. The results showed that our design is compliant with the requirements of the standard – hence reducing the system risk in accidents.

Easy to install

Installation methods were a serious consideration in the development of Protect 365. We wanted to deliver systems that were safe, easy and quick to install – with all the associated whole life cost benefits. Out-of-position tolerances were incorporated and increased to aid installation of transitions on site. Pre-threaded holes within the components also speed up assembly. Simple rail connections allow for easy and quick repair to all our parapet and safety fence systems after an impact.

Built to last

Ease of maintenance was another design driver in our aim to deliver high-performance products offering lifetime value. The Protect 365 transition is made from rectangular hollow steel sections and is built to last. We guarantee a minimum 30-year performance life for Protect 365 – even in the worst environmental conditions. All Protect 365 products are hot dip galvanised so there is no need to paint them to extend their life. Stainless steel bolts ensure long-term reliability.

Transitions

	N2 SF - N2P
Maximum working width	1.0m W3
ASI rating	B
Dynamic deflection	0.8m
Maximum vehicle roll	23.4°

Care has been taken to ensure that this information is accurate, but Corus Group plc, and its subsidiaries, does not accept responsibility or liability for errors or information which is found to be misleading.

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Detailed technical specifications for all Protect 365 parapets, safety fence and related products may be obtained by contacting:

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