

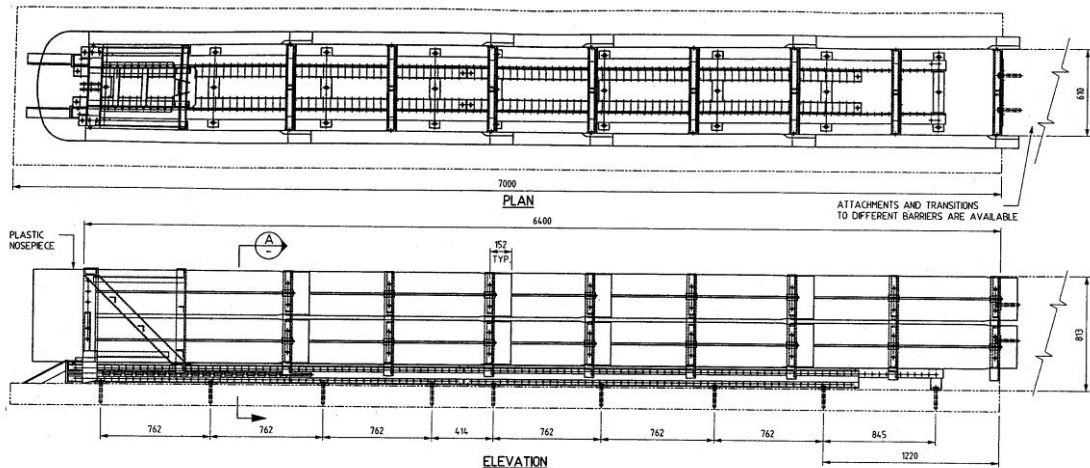
TRACC

REVISION REGISTER

Issue & Revision	Description	Date
1	Issued for use.	23/2/2004
1 A	Minor editorial revisions and addition of additional design information as well as installation and maintenance requirements.	03/03/2006.
1 B	Supplier details amended.	24/06/2008
1 C	Configuration required modified to e as per FHWA Letter CC-54F.	11/05/2009
1 D	Change in Supplier Details.	3/07/2013.
1 E	Update Supplier details	17/08/15

The TRACC system is fully re-directive, non-gating, bi-directional, energy absorbing attenuating crash attenuator.

Drawing:



** Refer to Trinity Industry drawings accompanying the TRACC Family System Manual.

Ownership: Trinity Industries Inc. USA.
www.highwayguardrail.com

Supplier: Ingal Civil Products
 3 Temperley Close, Welshpool WA 6106
 Ph: (08) 9452 9111 Fax: (08) 9358 9111
 Website - <http://www.ingalcivil.com.au/>

Test Level: Tested in accordance with NCHRP 350 to TL2 and TL3.

Speed (km/hr)	Length (m)*
70-TL2	4.33
100-TL3	6.40
112.3	7.89

* This entire length can be used in the length of need calculations.

TRACC

Configuration:

- Configuration to be supplied is as per FHWA approval letter CC-54F.
- Unit to be installed on reinforced concrete pad. Asphalt foundation is not acceptable.

Design:

- Design to be in accordance with product manual produced by Ingal available at http://www.ingalcivil.com.au/pdfs/tracc_manual.pdf.
- The design must allow the side panels at the rear of the unit to retract 1.524 m during an end on impact.
- System comes in various widths ranging from 610mm to 1470mm. Designer must determine width required.
- All the stopping loads pass to the foundation through the anchor bolts and are not transferred to the backup.
- No elevated kerbs, islands, drainage structures or any other item that can affect the height at which a vehicle could impact the unit shall be placed either in front of the unit or along the length of the unit to the rear of the back-up. Only flush kerbing shall be permitted around the unit.
- In situations where traffic is approaching from the rear of the system the Designer has the choice of the following transitions: W-beam median barrier, Thrie-beam median barrier, or concrete barriers.
- Transition type must be specified by the Designer. Uni-directional traffic flow requires no transition. For transition types refer to TRACC Family System Manual produced by Trinity Industries.
- Designer should also identify what nose markings are to be applied.

Limitations:

- Cannot be used on crossfalls steeper than 8%.

Installation and Maintenance Requirements:

The unit shall be installed and repaired after impact in accordance with the product manual available at http://www.ingalcivil.com.au/pdfs/tracc_manual.pdf.

Parts to be Replaced After Impact:

Rip plates for end on impacts and for redirective impacts, side panels may need to be replaced.

Parts Typically Re-useable After Impact:

Undamaged rip plates and side panels.

References:

Relevant FHWA Approval Letters

(Refer to website http://safety.fhwa.dot.gov/fourthlevel/hardware/term_cush.htm)

Code	Description
CC-54	TL3 approval. Unit length 6.40m.
CC-54A	TL2 approval. Unit length 4.33m.
CC-54B	End testing of FASTRACC at a speed of 112.3 km/hr. Unit length 7.89m.
CC-54C	Transition design for TRACC to concrete barriers (Drawing No 55 461 Rev 5).
CC-54D	Approval of Wide TRACC (width at rear 1.47m).

TRACC

Code	Description
CC-54E	Approval of modular base.
CC-54F	Various changes to the design including impact sled from single weldment to six piece bolt up assembly, replacement of single piece heat treated cutter plate with pair of hardened steel bolts and modification of Stage 2 and Stage 3 rip plates.