
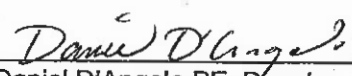


To: SUPERSEDED BY EB 06-057 EFFECTIVE 5/3/07		New York State Department of Transportation ENGINEERING BULLETIN	EB 03-054
<i>Expires one year after issue unless replaced sooner</i>			
Title: REPLACEMENT PAGES FOR EI 03-032 IMPACT ATTENUATOR, BEAM TYPE WITH METAL TEARING STRIPS (WIDE TRACC)			
Distribution: <input checked="" type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input checked="" type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Contractors (39) <input checked="" type="checkbox"/> Regions/Agencies (32) <input type="checkbox"/> _____ ()	Approved:  Daniel D'Angelo PE, Director, Design Quality Assurance Bureau	10/17/03 Date	

ADMINISTRATIVE INFORMATION:

- This Bulletin is effective immediately.
- No issuances are superseded; however, replacement pages and revised shelf note amend EI 03-032.
- The transmitted replacement pages replace those corresponding pages previously issued in EI 03-032.

PURPOSE: To issue replacement pages and a revised shelf note for EI 03-032.

TECHNICAL INFORMATION: EI 03-032 included identical item descriptions for both 654.30XXYR and 654.31XXYR. Both included "New Foundation" in the description where "Existing Foundation" was intended for the latter. This error occurs in Table 1 (page 2 of 3), under New Specifications (page 3 of 3), and in the attached shelf note.

IMPLEMENTATION: Existing copies of EI 03-032 should be updated immediately with the replacement pages transmitted herewith. EI 03-032 remains effective May 6, 2004.

TRANSMITTED MATERIALS: Two replacement pages (pages 2 and 3 of 3) to EI 03-032 and revised shelf note "Impact Attenuators, Beam-Type with Metal Tearing Strips."

CONTACT: Marc Connolly, Design Quality Assurance Bureau at (518) 457-5440 or by email at mconnolly@dot.state.ny.us.

- where approaching traffic will impact only one side of the unit, only 750 mm of added width will be required.
- Damaged barrels must be replaced.
- Corrugated-beam-style impact attenuators and HDPE-cylinder-type impact attenuators provide good redirection in side impacts, and therefore would be good choices if hit on the side. Corrugated beam styles require only moderate replacement of parts on impact.
- The impact attenuators using HDPE cylinders may not provide as desirable a post-collision trajectory with a head-on impact as do the beam types (including the subject impact attenuators), but they require less maintenance and have greater uptime than other types.
- The subject units require foundations, but not backup structures. Sand barrel arrays need neither.

● **Other Information.**

- Six-bay units are rated as TL2 or 70 km/h design speed. Nine-bay units are rated at TL3, or 100 km/h.

Table 1. Impact Attenuator, Beam-Type with Metal Tearing Strips (WideTRACC)

Bays (XX)	Extension bays	Width, Shielded (mm)			Length (mm)	Contract Items and remarks.
		Number of Sides Flared				
		None Y=0	One Y=1	Two Y=2		
6	0	610	NA	NA	4,330	654.30XXYR Impact Attenuator, Beam Type, Metal Tearing Strips, New Foundation, XX Bays, Y Sides Widening 654.31XXYR Impact Attenuator, Beam Type, Metal Tearing Strips, Existing Foundation, XX Bays, Y Sides Widening 654.34XXYR Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to and Construct New Foundation, XX Bays, Y Sides Widening 654.36XXYR Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to Existing Foundation, XX Bays, Y Sides Widening
9	0	610	1,050	1,470	6,400	
10	1	NA	1,140	1,640	7,100	
11	2	NA	1,220	1,810	7,810	
12	3	NA	1,310	1,990	8,520	
13	4	NA	1,400	2,160	9,220	
14	5	NA	1,480	2,330	9,930	
15	6	NA	1,570	2,510	10,630	
16	7	NA	1,650	2,680	11,340	
17	8	NA	1,740	2,850	12,050	
18	9	NA	1,830	3,030	12,750	
19	10	NA	1,910	3,200	13,460	

● **Actions**

- DQAB will insert a shelf note into proposals calling for these contract items.
- EICs should provide drawings and extra copies of product, installation, and maintenance manuals to the Regional Maintenance Groups.

● **Cost Impact.** None.

● **Changes.** This Engineering Instruction changes contract items and provides for additional widths for a standard impact attenuator already included in the *2002 Standard Specifications*.

IMPLEMENTATION:

● **Disapproved Specifications.** 654.30XX, 654.31XX, 654.34XX and 654.36XX, where XX is 06 or 09. They are replaced by the following new specifications indicated below. They may be included in proposals submitted for the letting of May 6, 2004, or later.

● **New Specifications.**

654.30XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, New Foundation, XX Bays, Y Sides Widening	Each
654.31XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Existing Foundation, XX Bays, Y Sides Widening	Each
654.34XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to and Construct New Foundation, XX Bays, Y Sides Widening	Each
654.36XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to Existing Foundation, XX Bays, Y Sides Widening	Each

Where XX = 06, or 09-19 bays

- Y = 0, no flaring. Available only when XX = 06 or 09.
- = 1, flared only on one side
- = 2, flared on two sides
- R = major revision number, now 1

TRANSMITTED MATERIALS:

- Shelf note incorporating the above pay items into the Standard Specifications. See first bullet under "Other information," given above.
- No drawings, design, or installation information is transmitted herein, but such information is available on the manufacturer's website, www.highwayguardrail.com/Images/Flyers/widetracc. This page may also be accessed via the IntraDot link for TRACC at <http://intradot/design/dqab/specs/endterms.html>.

BACKGROUND: Special specifications for the narrow six-bay and nine-bay units were issued under EI 01-003. They were subsequently incorporated into the *Standard Specifications* by EI 01-026. That EI also converted the special specifications for several other impact attenuator types into standard specifications.

Since issuance of EI 01-026, the vendor has developed units that are capable of shielding objects up to 3.2 m wide. This is accomplished by using wider diaphragms in the fourth through ninth bays of the original nine-bay, 6.4 m design. In addition, the length of the impact attenuator is extended by the use of added fender panels mounted on knee-braced posts. The units can be widened on either the left or right sides or both sides. The angles formed by these wider diaphragms create seven degree (7°) flares with respect to the longitudinal axis of the impact attenuator.

VENDOR: Trinity Industries, Inc.
Highway Safety Products
2525 Stemmons Freeway, Dallas, Texas, 75207
(800) 644-7976 Phone. (214) 589-8423 Fax

CONTACT: Marc Connolly, Design Quality Assurance Bureau at (518) 457-5440 or by e-mail at mconnolly@dot.state.ny.us.

654 Impact Attenuators
Impact Attenuators, Beam-Type with Metal Tearing Strip

Make the following changes to Volume 2 of the *Standard Specifications* of January 2, 2002:

Page 6-174, Lines 41 thru page 6-175, line 3 (654.30XX, 654.31XX, 654.34XX, and 654.36XX in list of pay items) *delete* in its entirety and *replace* with the following:

654.30XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, New Foundation, XX Bays, Y Sides Widening	Each
654.31XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Existing Foundation, XX Bays, Y Sides Widening	Each
654.34XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to and Construct New Foundation, XX Bays, Y Sides Widening	Each
654.36XXYR	Impact Attenuator, Beam Type, Metal Tearing Strips, Relocate to Existing Foundation, XX Bays, Y Sides Widening	Each

Where XX = 06, or 09-19 bays

Y = 0, no flaring. Available only when XX = 06 or 09.

= 1, flared on only one side

= 2, flared on two sides

R = major revision number