COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3379-11

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 630.08.03.00

FOR INTERNAL CDOT USE

Material code description full name: Traffic Zone, Mobil Impact Attenuator

PART 1

Product name: TTMA-100	Product category: TC\Crash Cushion, Temporary\Trailer Mounted Attenuator
Product representative (name & address): Attn: Eric L. Smith, Gregory Industries, Inc., 4100 13th ST. S.W., Canton, Ohio 44710. Phone: (330) 477-4800 FAX: (330) 477-0328	Manufacturer (name & address): Attn: Eric L. Smith, Gregory Industries, Inc., 4100 13th ST. S.W., Canton, Ohio 44710. Phone: (330) 477-4800 FAX: (330) 477-0328
Web-site address: www.gregorycorp.com	Web-site address: www.gregorycorp.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
The TTMA-100 is a trailer truck mounted attenuator. It is a hitch mounted TL-3 approved TMA that can be used with almost any vehicle in your fleet from 10,000 GVW to infinite GVW. The TTMA-100 is designed to meet both the mandatory and optional crash tests of NCHRP 350 TL-3 criteria with the support vehicle blocked to eliminate all forward movement (worst case scenario). The 1,450 lb. TTMA-100 utilizes a standard 8-ton pintle hitch that allows the TTMA to be attached in a few minutes with absolutely no modification to the towing vehicle. The TTMA-100 utilizes a patented tube bursting process where an oversized mandrel is pushed into a smaller square tube splitting the tube into four straps of metal while dissipating the impact energy. The metal straps remain with the trailer and do not pose any hazard to adjacent traffic. This allows the trailer frame to serve as the energy absorber thus simplifying the design and reducing costs. The TTMA-100 is constructed from galvanized square tube. TTMA-100 Dimensions - W 96 in. x H 31in. x L 23ft.-6 in.

Restrictions, (installation and/or use):
Tow vehicle cannot weigh less than 10,000 G.V.W.

Use of the product, (be specific to CDOT highway activities only):
The TTMA-100 provides protection from roadside collisions and impacts with stationary vehicles in highway maintenance or construction areas.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
The TTMA-100 is easily detachable from the tow vehicle freeing the tow vehicle to perform other duties. Lightweight in design and open framework allows the TTMA-100 to be easily inspected for maintenance purposes as well as interchanging between vehicles in CDOT's fleet. The TTMA-100 provides a safe impact area protecting workers in and around the area of a collision.

Specifications, (listing those applicable is required) **& Certificate of Compliance** (required to certify compliance with listed specifications):

- [x] CDOT : Standard Specifications, Section 630.09
- [x] ASTM : A500-07 Grade B&C
- [ ] AASHTO :
- [x] FHWA : NCHRP 350 TL-3 - 50,51,52,53
- [ ] other :

Product testing, (from national/independent laboratories or universities) **& Certified Test Report** (CTR required to validate all claims):

- [x] NTPEP-AASHTO : NCHRP 350 TL-3 - 50,51,52,53
- [x] FHWA : Letter of Acceptance HSA-10/CC-90 (4-15-2005), HSA-10/CC-90A (9-18-2006), HSST/CC-90B (7-08-2011)
- [ ] other :
- [ ] other :

State DOT Approvals, (current documentation required):
Florida, Maine, Minnesota, New York, North Carolina, Oklahoma, Oregon, Washington

Sample submitted: [ ] yes [ ] no [x] n/a | Materials Safety Data Sheets (MSDS): [ ] yes [ ] no [x] n/a

Notes/Additional Comments
The TTMA-100 can be made available for evaluation upon request.