COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 3688-14

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, Mobile Impact Attenuator

PART 1

Product name: U-MAD Trailer Mounted Attenuator (100K)

Product category: TC\Crash Cushion, Temporary\Trailer Mounted Attenuator

Product representative (name & address):
Attn: Tony Smiley
Lindsay Transportation Solutions / Barrier Systems
180 River Road
Rio Vista, CA 94571
Phone: (707) 374-6800 FAX: (707) 374-6801
Web-site address: www.barriersystemsinc.com

Manufacturer (name & address):
Attn: Jaime Franco
Lindsay Transportation Solutions / Barrier Systems
180 River Road
Rio Vista, CA 94571
Phone: (707) 374-6800 FAX: (707) 374-6801
Web-site address: www.barriersystemsinc.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)
The U-MAD Trailer consists of a standard U-MAD TMA cartridge attached to a specially designed trailer. It been engineered to capture an errant vehicle during a design impact and keeps both the impacted and impacting vehicle in the same traveling lane. The cartridge is comprised of an aluminum and steel box structure containing energy absorbing elements. The trailer is a fabricated steel, single axle load dampening trailer with an anti-rotation mechanism that activates upon impact.
The U-MAD Trailer has passed the rigorous NCHRP 350 TL-2 and TL-3 criteria for both mandatory and optional tests with an arrow/message board attached.

Physical Specifications TL-3): Length is 21' 4", Width is 90", Height is 40", Weight is 2525 lbs.

Restrictions, (installation and/or use):
Always do pre-trip walk around checking trailer, pintle, hoses, tires, chains, wiring, lights, fittings & support vehicle. Fix any deficiencies before operation.

Use of the product, (be specific to CDOT highway activities only):
To be used on moving or stationary work zones. To be used on shadow vehicles during slow moving construction operations.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):
Only the U-MAD cartridge needs to be replaced after a typical design impact. Integrated universal message board mount is standard. Axle utilizes torsion bar suspension and is capable of being fitted with operational or impact actuated brakes. The trailer is fully adjustable and modular to ensure compatibility with a wide array of tow vehicles.

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

- [x] CDOT : Standard Specifications Section 630.08
- [ ] ASTM :
- [ ] AASHTO :
- [x] FHWA : NCHRP 350 TL-2 and TL-3
- [ ] other :

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

- [ ] NTPEP-AASHTO :
- [x] FHWA : Acceptance Letters, HSA-CC64 (March 30, 2000) thru HSSD/CC-103 (October 6, 2008)
- [x] other : Transportation Research Center, Inc. (70K & 100K test reports 1997-2005)
- [ ] other :

State DOT Approvals, (current documentation required):
Florida, Idaho, Minnesota, Texas, Washington

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

Notes/Additional Comments
Cartridges are interchangeable with the U-MAD Truck Mounted Attenuator (TMA), reducing inventory costs.