COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 2244-11

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

Material code: 606.02.02.00

FOR INTERNAL CDOT USE

Material code description full name: Guardrail, Crash Cushion

PART 1

Product name: QuadTrend 350

Product category: Roadway Safety\Crash Cushion\Barrier End Terminal

Product representative (name & address):
Attn: Roger N. Egan
Interwest Safety Supply, Inc.
195 South Navajo Street
Denver, CO 80223
Phone: (303) 733-8447 FAX: (303) 733-8664

Manufacturer (name & address):
Attn:
Energy Absorption Systems, Inc.
35 East Wacker Drive
Chicago, IL 60601
Phone: (312) 467-6750 FAX: (312) 467-9625

Web-site address: www.energyabsorption.com

Web-site address: www.energyabsorption.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

QuadTrend 350 is a redirective, gating end treatment. It provides both the Transition and End (Trend) treatment from the concrete barrier in only 20' of longitudinal space. It also features the Quad-Beam fender panel shape to provide 30-35 % more strength upon lateral side impacts. During a head-on impact, the system directs the nose of the vehicle away from the hard point. For angle impacts, the vehicle is redirected back onto the roadway and away from the hazard. As a gating system, QuadTrend 350 requires sufficient clear zone recovery space. QuadTrend 350 is 20' long, 32" high, 15" wide.

Restrictions, (installation and/or use):

Use of the product, (be specific to CDOT highway activities only):

Provides end treatment directly from concrete barrier or bridge paraphet walls, and transitions are available that connects to the concrete.

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

QuadTrend 350 provides both the transition and the end treatment in only 20' of longitudinal space. It is highly reusable (approx. 50-60%) after design impact, which makes it cost effective from a maintenance standpoint. It also features a low initial cost. Most components are above ground, therefore, no time consuming posts to pound into the ground as with other end treatments on the market.

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

- [x] CDOT : Standard Specifications Section 614
- [ ] ASTM :
- [ ] AASHTO :
- [x] FHWA : NCHRP 350, TL-3
- [ ] other :

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

- [ ] NTPEP-AASHTO :
- [x] FHWA : FHWA Letter of Acceptance HNG-14 (June 18, 1998), CC-49
- [x] other : E-TECH Testing Serves, Inc. (March 10, 1998)
- [ ] other :

State DOT Approvals, (current documentation required):

Sample submitted: [ ] yes [x] no [ ] n/a

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

Notes/Additional Comments

A sample QuadTrend 350 could be made available if CDOT requires it to evaluate the product completely.