COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 4451-18

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: Safety Roller Barrier (SRB)

Product category: Roadway Safety/Crash Cushion/Guardrail Median Terminal

Product Representative (name & address):
Attn: Rick Mauer
4100 13th Street, SW
Canton, OH 44710
Phone: (603) 430-9350 E-mail: RMauer@GregoryCorp.com
Web-site address: www.gregorycorpmobile.com

Manufacturer (name & address):
Attn: Dave Lee
KSI
72-12 Yongjeong
Namwon, Jellabuk-do, Republic of Korea
Phone: (707) 700-8686 E-mail: ksi@ksi04486.com
Web-site address: http://ksiglobal.com.au/

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

The SRB is a MASH TL4 median or longitudinal barrier that is ideally used at locations that have frequent run off the road issues or where existing barriers are impacted on a regular basis. This would include curves, ramps, gore areas, etc. The SRB is constructed from SS400/ASTM A36 round steel posts with two EVA plastic safety rollers sandwiched between SS400/ASTM A36 upper and lower horizontal rail elements. The safety yellow EVA rollers are molded with a recess for mounting a high Intensity Prismatic reflective band to increase their visual presence.

Restrictions, (installation and/or use):

As ANY hwy hardware can be considered a hazard, so too would be the SRB. Use in accordance to barrier placement per the AASHTO RGD guidance

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

For use as a median or longitudinal barrier up to and included the conditions requiring MASH TL4 protection.

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

crete barrier alternatives. It has the lowest OIV of any barrier steel or concrete barrier on the market, thus could be considered the safest. the barriers bright yellow and reflective appearance is proving to reduce the frequency of nuisance impacts. It's EVA rollers absorb minor impacts with little or no damage decreasing maintenance needs as compared to standard steel & cable barriers.

Specifications: (listing those applicable is required)

- ☐ CDOT :
- ☐ ASTM :
- ☑ AASHTO : MASH16 TL4
- ☐ FHWA :
- ☐ other :

☐ Certificate of Compliance (COC) provided ☐ Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report** (CTR) provided to validate all claims.

- ☐ NTPEP-AASHTO :
- ☑ FHWA : letter B-252
- ☑ other : crash testing was conducted by Holmes Solutions NZS ISO/IEC 17025-2005
- ☐ other :
- ☐ other :

State DOT Approvals, (current documentation required): UT DOT

Re-submittal Cycle: 3 Years / 01-28-2022

Sample submitted: ☐ yes ☐ no ☑ n/a

Safety Data Sheets (SDS): ☐ yes ☐ no ☑ n/a

Alternate Product Category:

Additional Comments:

The SRB was tested with Transitions to W-beam using MASH16 TL3 and TL4 vehicles. The SRB's Transition was given FHWA letter B-252A. Gregory Industries has partnered with KSI Global and will produce the system in the US when the market condition warrant.

PART 2

Form #595 (date entered):	Form #595 (date to evaluator):	APL Reference Number:
10/09/2018	10/09/2018	4451-18

Product Evaluation Coordinator's review:

- [x] PART 1 - Completed and changes being reviewed by Product Representative.
- [x] Standard Product - Forwarded to the appropriate CDOT Expert Product Evaluator (EPE) / Subject Matter Expert (SME).
- [ ] Experimental Feature - Forwarded to Research Director.
- [x] Returned from the appropriate CDOT EPE/SME or Research Director.
- [x] Accepted - Product acceptable for pre-approval and meets CDOT's Specifications.
- [ ] Rejected - Product unacceptable for pre-approval or contrary to CDOT specifications.

PART 3

The CDOT Expert Product Evaluator is to complete this portion. Attach references and/or additional sheets as necessary.
Do not perform any work until product is accepted for evaluation in PART 2, and a product reference number is assigned.

Evaluation methods and procedures. (EPE/SME should document intended evaluation procedure.)

Evaluation methods per: MASH 2016 crash testing criteria; FHWA Eligibility Letter HSST/B-252; CDOT Standard Specification 606..

Findings and recommendations. (EPE/SME should write the exact specification(s) that the product complies with. Document the evaluation performed and the recommendation toward APL approval. Conclude with your signature, title and date):

The SRB longitudinal barrier has been successfully crash tested to the TL-4 rating according to MASH 2016 test requirements. Given successful crash testing, FHWA Eligibility Letter and conformance to CDOT Standard Specifications and M-Standard 606-1, this product meets basic requirements for acceptable inclusion on CDOT APL for standard temporary and permanent roadside application. Joshua J. Palmer PE, Guardrail Engineer 1/28/19.

Per PEC: comments and/or post-approval requirements (if applicable):

Expiration Date (YYYY-MM-DD): 2022-01-28

PART 4

- [x] **Acceptable for use. Add to the Approved Products List (APL).**
[The evaluation and acceptance of this product is intended for CDOT use. DO NOT USE for Advertising.]

- [ ] **Rejected for use. Reason for rejection:**

CDOT Materials Engineer, printed name	CDOT Materials Engineer, signature	Date:
Craig Wieden PE III		