Connecticut Department of Transportation

Qualified Product List

March 2020

Connecticut Department of Transportation
Bureau of Engineering and Construction
Division of Facilities & Transit
Utilities & Engineering Services

APPROVALS

David Kilpatrick
Product Evaluation Committee Secretary

2/24/20
Date

Product Evaluation Committee Chairman

2/24/20
Date

David J. Kilpatrick
Transportation Supervising Engineer
Product Evaluation Committee Secretary
Division of Facilities & Transit
Utilities & Engineering Services

Leo L. Fontaine, P.E.
Transportation Principal Engineer
Product Evaluation Committee Chairman
Division of Facilities & Transit
Utilities & Engineering Services

Preface

This report has been developed as a means for determining what products, suppliers, manufacturers, equipment and methodologies may be used on ConnDOT construction projects. The items referenced have met the approval of ConnDOT personnel in one of the following ways:

- They have been approved by the Product Evaluation Committee
- They have been used successfully since before the establishment of a formal approval process.
- They currently satisfy Department of Transportation specifications.

It should be understood that this document is open to refinement and will be under close scrutiny to ensure that the information contained herein is complete and accurate. Over the years, many items will be added and deleted.

Many products that may be used in ConnDOT will not be represented in this document because they conform to a generic specification, and the approval procedure is in accordance with the standard specifications.

- **ConnDOT's Product Evaluation Web Site:**

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  https://portal.ct.gov/DOT/Division-of-Research/Policy-on-New-Product-Evaluation-at-Connecticut-DOT

- **ConnDOT's Qualified Product List (QPL):**

  https://portal.ct.gov/-/media/DOT/documents/dresearch/conndotqplpdf.pdf?la=en

- **AASHTO's NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPEP):**

  http://www.ntpep.org/Pages/default.aspx

- **AASHTO Product Evaluation List (APEL):**

  http://apel.transportation.org/

If you have any questions, inquires or suggestions, please contact:	**Technical Contact:** **David J. Kilpatrick** **Product Evaluation Committee Secretary** **Voice: (860) 594-3288** **E-mail: David.Kilpatrick@ct.gov** **Administrative Contact:** **Leo L. Fontaine, P.E.** **Product Evaluation Committee Chairman** **Voice: (860) 594-3180** **E-mail: Leo.Fontaine@ct.gov**

SI (Modern Metric) Conversion Factors

SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
		AREA		
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yard	0.836	square meters	m^2
ac	acres	0.405	hectares	ha
mi^2	square miles	2.59	square kilometers	km^2
		VOLUME		
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
		NOTE: volumes greater than 1000 L shall be shown in m^3		
		MASS		
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
		TEMPERATURE (exact degrees)		
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
		ILLUMINATION		
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	$candela/m^2$	cd/m^2
		FORCE and PRESSURE or STRESS		
lbf	poundforce	4.45	newtons	N
lbf/in^2	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.314	cubic feet	ft^3
m^3	cubic meters	1.307	cubic yards	yd^3
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2000 lb)	T
		TEMPERATURE (exact degrees)		
°C	Celsius	1.8C+32	Fahrenheit	°F
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	$candela/m^2$	0.2919	foot-Lamberts	fl
		FORCE and PRESSURE or STRESS		
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.
(Revised March 2003)

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Qualified Product Lists:

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Qualified Product Lists - Continued

Table of Contents - Continued

Qualified Product References (with Acceptance Criteria) – Continued

Addendum

Date:	Item Changed	Page #:
01/20	Enviro-fence & 100X removed from Sediment Control column.	20
01/20	TenCate Geosynthetics and website www.tencategeo.us - company name update.	20
01/20	Ultrabond HS-1CC added.	3
02/20	HIT HY150MAX removed.	3
02/20	HIT-RE 500V3 added.	3
02/20	HIT RE-100 added.	3
02/20	RedHead G5+ added.	4
02/20	RedHead C6+ added.	4
02/20	GRAVIX DOT Precast Wall System added.	42
02/20	Proprietary Impact Attenuation Systems table format – modified data format	21 to 30
02/20	Department's Non-Proprietary Roadside Safety Hardware – added	55 to 70
03/20	Spray-Applied Membrane Waterproofing System's Feb. 29, 2020 products expiration on hold	44

Qualified Product Lists

The following pages contain lists, which are directly referenced in either the standard specifications or in special provisions as Qualified Products Lists. These lists will be updated annually, and no product may be used in these categories unless it is shown on an appropriate list.

Bituminous Concrete Patching Materials (Cold Applied):

SPECIFICATION: REFERENCE FILE No. 2011-01

PREAPPROVAL CRITERIA: Compliance with Section 22a-174-20(k) of the Regulations of Connecticut

Manufacturer/Supplier	Product Brand Name
Cold Mix Manufacturing Corp. Mr. Scott Herman 120-30 28th Avenue Flushing, NY 11354 Mr. Scott Herman – Office Telephone: 914-755-4575 Website: www.GREENPATCH.com Local Distributor: O&G Industries, Inc. 112 Wall Street Torrington, CT 06790 Office Telephone: 860-489-9261	GreenPatch
HI TECH Asphalt Solutions, Inc. 5113 Pole Green Road Mechanicsville, VA 23116-5432 Website: www.aquaphalt.com	Aquaphalt
The EZ Street Company Mr. Tom Francione 1786 NW 82 Avenue Miami, FL 33126 Website: www.ezstreetasphalt.com	EZ Street Cold Asphalt
Tri-Products, LLC Mr. Mike Jennings 89 Ship Street Providence, RI 02903 Website: www.hudsoncompanies.com/hag/triproducts.asp	Plus Patch Asphalt Emulsion

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Qualified Product Lists – Continued

Bituminous Concrete Patching Materials (Cold Applied) - Continued:

SPECIFICATION: REFERENCE FILE No. 2011-01

PREAPPROVAL CRITERIA: Compliance with Section 22a-174-20(k) of the Regulations of Connecticut

Manufacturer/Supplier	Product Brand Name
Logan County Asphalt Mr. Steven McBride 2905 Commerce Boulevard Guthrie, OK 73044 Website: www.prolinecoldasphalt.com/predistributors.php	ProLine Cold Asphalt Patching Material
Quality Pavement Repair Mr. Anthony J. Fargnoli 154 Bouckhart Avenue Rochester, NY 14622 Website: www.qprcoldpatch.com	QPR
UNIQUE Paving Materials Corp William Stull. 3993 East 93rd Street Cleveland, OH 44105 Website: www.uniquepavingmaterials.com	UPM Permanent Pavement Repair Material
B. Metcalf Asphalt Benjamin Metcalf 104 Interlaken Rd Lakeville, CT 06039 Website: www.bmetcalfasphalt.com	GemPatch

Qualified Product Lists – Continued

Chemical Anchors:

SPECIFICATION: Standard Specification, M.03.07

PREAPPROVAL CRITERIA:

1. ASTM E-1512 pullout test by an independent laboratory.

2. The use of all chemical anchors (referenced in Standard Specifications Section M.03.07) in sustained tensile-load overhead applications is prohibited where failure of the chemical adhesive would result in a risk to the public. This applies to all design and ongoing construction projects. Other anchorage alternatives must be used for such applications.

Manufacturer/Supplier	Product Brand Name
A & P Foglia, Inc. 14 Hickory Drive East Brunswick, NJ 08816	Magnabond
Adhesives Technology Corp. 450 East Copans Road Pompano Beach, FL 33064 Website: www.atcepoxy.com.	**Ultrabond:** HS-1CC 1 1300 2 HS-200
Covert Operations, Inc. 1940 Freeman Avenue Signal Hill, CA 90755	CIA Gel 7000
Dayton Superior Chemical Division 4226 Kansas Avenue Kansas City, KS 66106 Website: www.daytonsuperiorchemical.com	Highway Fast Set Epoxy (AHT) ResCon 304 (Symons) Sure Anchor I (J-51)
Fosroc, Inc. 150 Carley Court Georgetown, KY 40324	**Thoroc:** Anchor Bond Anchortite
Hilti, Inc. P.O. Box 21148 Tulsa, OK 74121 Website: www.us.hilti.com	**Hilti:** HIT-RE 500V3 HIT RE-100 HIT HY100 HTE50 HVA Capsules HY-200 RE500

Continued on Next Page:

Chemical Anchors - Continued:

SPECIFICATION: Standard Specification, M.03.07

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Manufacturer/Supplier	Product Brand Name
ITW Commercial Construction 1300 North Michael Drive Wood Dale, IL 60191 Website: www.ramset-redhead.com	Epcon Ceramic 6 Granite 5 RedHead A7+ RedHead G5+ RedHead C6+
Powers Fasteners, Inc. 2 Powers Lane Brewster, NY 10509 Website: www.powers.com	AC 100+ GOLD Chem-Stud PE1000+ PURE GP PURE110+ PURE50+ T308+
DEWALT / Powers Fasteners 701 East Joppa Road Towson, MD 21286 Telephone: (800) 524-3244 Web Site: www.powers.com	DEWALT Pure50+ DEWALT PE1000+ DEWALT AC100+ Gold
Kelken Construction Systems P.O. Box 284 Parlin, NJ 08859 Website: www.kelken.com	Kelibond Anchors Keligrout Keligrout 101
MKT Fastening LLC #1 Gunnebo Drive Lonoke, AR 72086 Website: www.mktfastening.com	**Liquid Roc:** 300 28oz. Twin Tube 300 Capsule Anchors Polyester Pump 500 Epoxy Twin Tube
Polygem, Inc. 1105 Carolina Avenue West Chicago, IL 60185 Website: www.polygem.com	Polybac 1257

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Chemical Anchors - Continued:

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Manufacturer/Supplier	Product Brand Name
Unitex 3101 Gardner Avenue Kansas City, MO 64120 Website: www.unitex-chemicals.com	**Pro-Poxy:** 300 300 Fast Sonneborn Epogel (ChemRex, Inc.)
Simpson StrongTie Anchoring Systems 4120 Dublin Boulevard, Suite 400 Dublin, CA 94568 Website: www.simpsonanchors.com	EDOT ET-HP (formally known as Simpson Strong-Tie Epoxy-Tie) Simpson Strong-Tie Acrylic-Tie
Unisorb Installation Technologies P.O. Box 1000 Jackson, MI 49204-1000 Website: www.unisorb.com	Unisorb Capsule Anchor
USP Structural Connectors 14305 Southcross Drive – Suite 200 Burnsville, MN 55306 Website: http://www.uspconnectors.com	CIA-GEL 6000-GP
Adhesives Technology Corp. 450 East Copans Road Pompano Beach, Florida 33064	Dural HS Gel

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Chemical Anchors - Continued:

SPECIFICATION: Standard Specification, M.03.07

PREAPPROVAL CRITERIA:

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2. The use of all chemical anchors (referenced in Standard Specifications Section M.03.07) in sustained tensile-load overhead applications is prohibited where failure of the chemical adhesive would result in a risk to the public. This applies to all design and ongoing construction projects. Other anchorage alternatives must be used for such applications.

Manufacturer/Supplier	Product Brand Name
W.R. Meadows, Inc. 300 Industrial Drive Hampshire, IL 60140 Website: www.wrmeadows.com	Sealtight Rezi-Weld Gel Paste UCE
Wejit, Inc. 7737 Japine Drive Liverpool, NY 13090 315-396-8063 (Cell) Website: www.wejit.com	**Inject-TITE:** AWF (All Weather Formula) Fast Set

Detectable Warning – (i.e., ADA Truncated Dome Detectable Warning Systems)

SPECIFICATION: Standard Specification 9.21

PREAPPROVAL CRITERIA: Federal Standard 595A Color #22144 or approved equal.

Manufacturer/Supplier	Product Brand Name
Access Products Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 Telephone: 888-679-4022 Website: www.accessproducts.com	Access Tile Detectable Warning Tiles
Cape Fear Systems, LLC 215 South Water Street, Suite 103 Wilmington, NC 28401 Telephone: 800-456-5263 Website: www.alerttile.com/	***alerttile*® Detectable Warnings:** alerttile Surfaced Applied alertcast Cast-In-Place
Armor-Tile 300 International Drive, Suite 100 Williamsville, NY 14221 Telephone: 800-682-2525 Website: www.armor-tile.com/	**Armor-Tile Tactile System:** Cast-In-Place System Surface Applied System (Retrofit)
ADA Solutions, Inc. P.O Box 179 North Billerica, MA 01862 Telephone: 978-262-9900 Website: www.adatile.com	**Detectable Warning Tile:** Cast-In-Place Tactile Surface Applied Tactile (Retrofit) Cast-In-Place Replaceable Tactile
East Jordan Iron Works 5000 Airport Road PO Box 439 East Jordan, MI 49727 Telephone: 231-536-2261 Website: www.ejco.com	DURALAST Detectable Warning Plates Cast Iron Uncoated Natural Finish
TufTile Inc. 1200 Flex Court Lake Zurich, IL 60047 Telephone: 888-960-8897 Website: www.tuftile.com	Cast Iron Wet Set (cast-in-place) Polymer Wet-Set (cast-in-place) Polymer Surface-Applied

Erosion Control Matting:

SPECIFICATION: Standard Specification 9.50 & M.13.09

PREAPPROVAL CRITERIA: See below.

In general, organic materials are cheaper than synthetics, will photo-degrade after a period of time leaving a naturally vegetated channel, and are adequate for channels, which are expected to carry storm water flows not exceeding 95.76 Pa shear stress. Synthetic materials generally do not photo-degrade and often remain as a permanent element within a drainage channel, although more expensive, synthetic materials are generally best for critical channels which will carry high flows or velocities of storm water runoff.

Minimum Performance Standards

Erosion control matting is evaluated for use in eight Types, grouped in two Classes. In order for a product to be placed upon the Department's Qualified Products List, it must meet the following Minimum Performance Standards.

Class 1: Slope Protection – Classification is based upon steepness of slope and soil type. The purpose is to protect the seedbed from loss of sediment and promote the establishment of a warm season, perennial vegetative cover.

Type A. Slopes 3:1 or Flatter – Clay Soils
Type B. Slopes 3:1 or Flatter – Sandy Soils
Type C. Slopes Steeper than 3:1 – Clay Soils
Type D. Slopes Steeper than 3:1 – Sandy Soils

Minimum Acceptable Vegetation Density Standards[1]

	Clay Soils	Sandy Soils
Slopes 3:1 or Flatter	80%	70%
Slopes Steeper than 3:1	80%	70%

Minimum Acceptable Sediment Loss Standards (kg/10 m^2)[1]

	Clay Soils	Sandy Soils
Slopes 3:1 or Flatter	0.35	12.00
Slopes Steeper than 3:1	0.35	27.00

Class 2: Flexible Channel Liner Protection – Classification is based upon the permissible shear stress[2] (T_p) present. The purpose is to protect the geometry of the channel from loss of sediment, and to promote the establishment of a warm-season, perennial vegetative cover.

Type E. Permissible shear stress: <25 Pa
Type F. Permissible shear stress: 25 to <50 Pa
Type G. Permissible shear stress: 50 to <100 Pa
Type H. Permissible shear stress: ≥100 Pa

T_p, the permissible shear stress, indicates the force required to initiate the movement of the lining material.

Minimum Acceptable Vegetation Density Standards[1]

70%

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Erosion Control Matting - Continued:

Minimum Acceptable Sediment Loss Standards[1]

	Average Soil Deformation (cm)
Shear Stress 1 to 100 Pa	1.15
Shear Stress > 100 Pa	1.00

It should be recognized that those products listed by brand or trade name on the Qualified Products List have demonstrated their ability to meet or exceed the Department's minimum Performance standards. It is the Contractor's option as to which product he or she actually uses on a project, provided that the product used is on the Qualified Products List for that application.

It will be the district's responsibility to verify that the Erosion Control Matting proposed by the Contractor is, in fact, listed as an acceptable product on the Qualified Products List.

It should also be recognized that the decision to undergo testing for possible approval rests solely with the manufacturers or distributors of Erosion Control Matting. The Department has created a fair but rigorous testing process for Erosion Control Matting. The Department does not choose or stipulate which products are to be tested.

The Department's position is that, while we encourage the evaluation of new products for possible use in our operations, we cannot utilize a product that has not been tested and approved through the Department's evaluation process.

As new products are tested on an annual basis, those meeting our requirements will be added to the Qualified Products List. If, by the time actual field installation of Erosion Control Matting commences on a project, new products have been added to the Qualified Products List, the Contractor may elect to use these newly approved products even though they were not an "approved" product at the time bids were received on the project.

[1] Final Performance Analysis – 1995 Evaluation Cycle, Texas DOT/Texas Transportation Institute, Hydraulics and Erosion Control Laboratory, February 1996.

[2] Shear Stress ranges based on values published in FHWA Hydraulic Engineering Circular No. 15 (HEC-15), Design of Roadside Channels with Flexible Linings, Publication No. FHWA-ZP-87-7, April 19

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Qualified Product Lists – Continued

Erosion Control Matting - Continued:

SPECIFICATION: Standard Specification, Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: Certified Test Report

Manufacturer/Supplier	Class 1: Slope Protection *				Class 2: Flexible Channel Type Protection			
	Type A	Type B	Type C	Type D	Type E *	Type F *	Type G *	Type H **
American Excelsior Co. 831 Pioneer Avenue Rice Lake, WI 54868 Website: www.curlex.com	AEC Premier Coconut AEC Premier Straw/Coconut AEC Premier StrawDoubleNet AEC Premier StrawSingleNet Bindex BFM Curlex I Curlex I CL Curlex II Curlex NetFree	AEC Premier Coconut AEC Premier Straw/Coconut AEC Premier StrawDoubleNet AEC Premier StrawSingleNet Bindex BFM Curlex I Curlex I CL Curlex II CL Curlex NetFree Curlex NetFree	AEC Premier Coconut AEC Premier Straw/Coconut AEC Premier StrawDoubleNet Bindex BFM Curlex I Curlex I CL	AEC Premier Coconut AEC Premier Straw/Coconut AEC Premier StrawDoubleNet Bindex BFM Curlex I Curlex I CL Curlex II Curlex II CL Curlex NetFree	AEC Premier Straw/Coconut AEC Premier StrawDoubleNet AEC PremierCoconut Curlex Enforcer Curlex II Curlex II CL Curlex III Recyclex Recyclex TRM-V	AEC Premier Coconut AEC Premier Straw/Coconut AEC Premier StrawDoubleNet Curlex Enforcer Curlex II Curlex II CL Curlex III Recyclex Recyclex TRM-V	Curlex Enforcer Recyclex Recyclex TRM-V	Curlex Enforcer Recyclex Recyclex TRM-V
Belton Industries 8613 Roswell Road Atlanta, GA 30350		Geocoir/DeKoWe 700 Geocoir/DeKoWe 900		Geocoir/DeKoWe 700 Geocoir/DeKoWe 900				
Contech Construction Products, Inc. 265 Highland Avenue Cheshire, CT 06410 Website: www.contech-cpi.com	Ero-Mat Ero-Mat Hi-Velocity Ero-Mat Standard	Ero-Mat Ero-Mat Standard	Ero-Mat Hi-Velocity					

* Products listed in this category are generally temporary (bio- or photo-degradable). Exceptions are noted.
** Products listed in this category are generally permanent (non-bio- or non-photo-degradable). Exceptions are noted.
TYPE E – Generally includes, but is not limited to, Woven Paper Net, Jute Net.
TYPE F – Generally includes, but is not limited to, Fiberglass Roving (single or double).
TYPE G – Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.
TYPE H – Generally includes, but is not limited to, Synthetic Net.

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Erosion Control Matting – Continued:

SPECIFICATION: Standard Specification, Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: Certified Test Report

Manufacturer/Supplier	Class 1: Slope Protection *				Class 2: Flexible Channel Type Protection			
	Type A	Type B	Type C	Type D	Type E *	Type F *	Type G *	Type H **
Conwed Fibers 219 Simpson Street Conover, NC 28613	Futerra Mat	Futerra Mat						
East Coast Erosion Blankets 443 Bricker Road Bernville, PA 19506	ECS - 1 ECS - 1B ECS - 1D ECS – 2 ECS - 2B ECS - 2D ECSC - 2 ECSC - 2B ECX - 1 ECX – 2	EC - 7Y EC - 9Y ECS - 1B ECS - 1D ECS – 2 ECS - 2B ECS - 2D ECS -1 ECSC - 2 ECSC - 2B ECX - 1 ECX – 2	ECC - 2 ECC - 2B ECC - 3 ECP - 2 ECS – 2 ECS - 2B ECS - 2D ECSC - 2 ECSC - 2B ECX - 1 ECX – 2	EC - 7Y EC - 9Y ECC - 2 ECC – 2B ECC - 3 ECP - 2 ECS – 2 ECS - 2B ECS - 2D ECSC - 2 ECSC - 2B ECX - 1 ECX – 2	ECC - 2 ECC - 2B ECC - 3 ECP - 2 10 oz. ECP - 2 T-RECS ECP - 3 ECSC - 3	ECC - 2 ECC - 2B ECC - 3 ECP - 2 10 oz. ECP - 2 T-RECS ECP - 3 ECSC - 3	ECC - 2 ECC - 2B ECC - 3 ECP - 2 10 oz. ECP - 2 T-RECS ECP - 3 ECSC - 3	ECC - 2 ECC - 2B ECC - 3 ECP - 2 10 oz. ECP - 2 T-RECS ECP - 3 ECSC - 3
ErosionControlBlanket.com P.O. Box 69 Riverton, Manitoba R0C 2RO Canada	S31 S31UVD	S31 S31UVD	S32 S32UVD	S32 S32UVD	P42 S32 S32UVD	P42 S32 S32UVD	P42	P42
Enviroscape ECM 22700 Street, Rt. 613 Oakwood, OH 45873	S1000 S1000BD S2000 S2000BD SC3000 SC3000BD	S1000 S1000BD S2000 S2000BD SC3000 SC3000BD	C4000 C4000BD	C4000 C4000BD	S1000 S1000BD S2000 S2000BD SC3000 SC3000BD	C4000 C4000BD		

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Qualified Product Lists – Continued

Erosion Control Matting – Continued:

SPECIFICATION: Standard Specification, Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: Certified Test Report

Manufacturer/Supplier	Class 1: Slope Protection *				Class 2: Flexible Channel Type Protection			
	Type A	Type B	Type C	Type D	Type E *	Type F *	Type G *	Type H **
Greenstreak Group 3400 Tree Court Boulevard St. Louis, MO 63122	Pec-Mat	Pec-Mat					Pec-Mat	Pec-Mat
North American Green 14649 Highway 41 Evansville, IN 47711	S150 S150BN S75 S75BN SC150 SC150BN	S150 S150BN S75 S75BN SC150 SC150BN	S150 S150BN SC150 SC150BN	C125 C125BN S150 S150BN SC150 SC150BN	C125 C125BN P300	P300	P300	C350 Biodegradable P300
SI Geosolutions (formally known as Synthetic Industries) 6025 Lee Highway Chattanooga, TN 37421 www.fixsoil.com	**Landlok:** CS2 unseeded S1 S2 TRM435	**Landlok:** CS2 unseeded S1 S2 TRM 435	**Landlok:** C2 CS2 unseeded S2 TRM 435	**Landlok:** C2 CS2 unseeded S2 TRM 435	**Landlok:** C2 TRM 435 TRM 450 TRM1060	**Landlok:** C2 TRM 435 TRM 450 TRM1060	**Landlok:** C2 TRM 1060 TRM 435 TRM 450	**Landlok:** TRM 1060 TRM 435 TRM 450 **Pyramat:** SFB 12
US Erosion Control Products 1034 Albany Avenue W. Pearson, GA 31642							US-1S US-2C US-2S US-2S	US-2P10 US-2P12

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Erosion Control Matting – Continued:

SPECIFICATION: Standard Specification, Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: Certified Test Report

Manufacturer/Supplier	Class 1: Slope Protection *				Class 2: Flexible Channel Type Protection			
	Type A	Type B	Type C	Type D	Type E *	Type F *	Type G *	Type H **
Verdyol Alabama, Inc. P.O. Box 605 407 Miles Parkway Pell City, AL 35125	**Ero-Mat:** Standard **Excelsior:** Hi-Velocity Standard	**Ero-Mat:** Standard **Excelsior:** Standard	**Excelsior:** Hi-Velocity					
Western Excelsior Corp. 4609 E Boonville-New Harmony Road Evansville, IN 47725	Excel R-1 Excel S-2 Excel SR-1 Excel SS-2	Excel R-1 Excel S-2 Excel SR-1 Excel SS-2	Excel S-2 Excel SS-2	Excel S-2 Excel SS-2	Excel PP5-8 Excel S-2 ExcelSD-3	Excel PP5-8 Excel SD-3	Excel PP5-8 Excel PP5-10 Excel PP5-12	Excel PP5-10 Excel PP5-12

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TYPE F – Generally includes, but is not limited to, Fiberglass Roving (single or double).
TYPE G – Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.
TYPE H – Generally includes, but is not limited to, Synthetic Net.

Geotextiles:

SPECIFICATION: Standard Specification, Sections 2.19, 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

The following list denotes those geotextiles that are approved for use on ConnDOT projects. The categories listed are in accordance with the AASHTO M 288 specification. Geotextile selection shall be based on the following definitive information and the applicable design criteria.

1. **Subsurface Drainage** – Geotextiles within this category shall be used for, but not limited to, the following applications: pavement edge drains; interceptor drains; wall drains; recharge basins and relief wells. The geotextile shall be designed to allow the passage of water normal to its surface while retaining in situ soil without clogging. Class A drainage applications for fabrics are where installation stresses are more severe than Class B applications, i.e., very coarse, sharp, angular aggregate is used; a heavy degree of compaction (95% or greater by AASHTO method T 99) is specified; or, depth of trench is greater than 3.00 m. Class B drainage applications are those where the fabric is used with smooth graded surfaces having no sharp angular projections, no sharp angular aggregate is used; compaction requirements are light (less than 95% by AASHTO method T 99); and, trenches are less than 3.00 m in depth.

2. **Sediment Control** – Geotextiles within this category shall be used as a barrier-fence designed to remove suspended particles from the water that passes through it. "Wire Supported" signifies that fabric is supported with a mesh made of wire or plastic.

3. **Erosion Control** – Geotextiles within this category shall be used for, but not limited to, the following applications: cut and fill slope protection; protection of various small drainage structures and ditches, wave protection for causeways and shoreline roadway embankments; and, and scour protection for structures such as bridges and abutments. The geotextile shall be designed to allow the passage of water while retaining in situ soil without clogging. Class A erosion control applications are those where the fabrics are used under conditions where installation stresses are more severe than Class B, i.e., aggregate placement height should be less than 1.00 m; and, aggregate weights should not exceed 115.00 kg. Class B erosion control applications are those where the fabric is used in structures or under conditions where the fabric is protected by a sand cushion or by "zero drop height" placement of aggregate.

4. **Separation** – Geotextiles within this category shall be used for, but are not limited to, the following applications: separation of dissimilar materials, such as subgrades and pavement base courses and zones in embankments, foundations and select fill materials. When soil stabilization is the primary concern, the Design Engineer is cautioned that a detailed process must be followed, taking into consideration not only the separation properties of the geotextile, but its reinforcement function as well. The geotextile shall be designed to allow the passage of water while retaining in situ soil without clogging.

Continued on Next Page:

Qualified Product Lists – Continued

Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivabilityl	Medium Survivabilityl
A.H. Harris & Sons, Inc. P.O. Box 311058 367 Alumni Road Newington, CT 06131			Harris Siltfence	Harris Siltfence				
American Engineering Fabrics, Inc. 1 Coffin Avenue New Bedford, MA 02746 Website: www.boomenviro.com	**AEF:** 200W 300W 600W 650W 880 1080 1280	**AEF:** 100W 130W 150W 200W 300W 480 480HS 600W 650W 680 880 1080 1280	**AEF:** 180W	**AEF:** 100W 150W 180W	**AEF:** 300W 650W 880 1080 1280	**AEF:** 100W 180W 300W 480 480HS 650W 680 880 1080 1280	**AEF:** 300W 1080 1280	**AEF:** 200W 300W 600W 880 1080 1280
BBA Fiberweb, Inc. 70 Old Hickory Boulevard Old Hickory, TN 37138		**Typar:** 3401G	**Typar:** 3401G	**Typar:** 3401G		**Typar:** 3401G	**Typar:** 3631G	**Typar:** 3401G

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

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Qualified Product Lists – Continued

Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivabilityl	Medium Survivability
Belton Industries, Inc. P.O. Box 127 Belton, SC 29627 Website: www.boomenviro.com	768 769 977 1475	307 308 751 768 769 977 1475	940	307 940	769 1475	307 769 940 1475	1475	768 977 1475
Carthage Mills 4243 Hunt Road Cincinnati, OH 45242 Website: www.carthagemills.com	Carthage - 6% FX-75NW	Carthage - 6% FX-35HS FX-35NW FX-40HS FX-40NW FX-75NW	FX-11	FX-11	Carthage - 6% FX-55 * FX-66 FX-75NW	Carthage - 6% FX-33 FX-35HS FX-35NW FX-40HS FX-40NW FX-44 FX-55 * FX-66 FX-75NW	FX-66 FX-75NW	FX-55 * FX-66 FX-75NW
DGI Industries P.O. Box 16522 Hooksett, NH 03442 Website: www.dgiindustries.com			CT138036 CT213036	CT138036 CT213036				
Evergreen Technologies Inc. (Div. of Tensar) 200 Miller Sellers Drive Evergreen, AL 36401	TG650	TG420 * TG500 TG650	TG420	TG550	TG700	TG420 * TG500 TG700	TG650	TG500 TG650

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

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Qualified Product Lists – Continued

Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivabilityl	Medium Survivability
First Line Corp. P.O. Box 68 Pearson, GA 31642			CSF 330	CSF 330				
Hanes Geo Components 815 Buxton Street Winston-Salem, NC 27101 Website: www.hanesgeo.com	**Terratex:** EP NO8	**Terratex:** EP NO4 NO8 SD SO4	**Terratex:** SC SC-90	**Terratex:** SC SC-90	**Terratex:** GS * NO8	**Terratex:** GS * GS-150 * NO4 NO8 SD	**Terratex:** EP HD *	**Terratex:** EP GS * HD * NO8
Hoechst Celanese Corp. P.O. Box 5650 Spartanburg, SC 29304-5650			**Trevira:** 011/140			**Trevira:** 011/140		**Trevira:** 011/200
Indian Valley Industries Inc. 60-100 Corliss Avenue Johnson City, NY 13790 Website: www.iviindustries.com			CT-3611	CT-3611		CT-3611		

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

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Qualified Product Lists – Continued

Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivabilityl	Medium Survivability
LINQ Industrial Fabrics, Inc. 4550 W. Fifth North Street Summerville, SC 29483	180EX 225EX 250EX 275EX 350EX	180EX 125EX 130EX 150EX 225EX 250EX 275EX 350EX	180 102 104 105	180 102 104 105	180EX 225EX 250EX 275EX 350EX GTF 400E	180EX 125EX 130EX 150EX 225EX 250EX 275EX 350EX GTF 400E	180EX 225EX 250EX 275EX GTF 300 * 350#X Typar: 3631	180EX GTF 200S GTF 200 * GTF 300 * 130EX 150EX 225EX 250EX 275EX 350EX
Mutual Industries Inc. 707 West Grange Street Philadelphia, PA 19120			MISF 1830 MISF 1855	MISF 1830 MISF 185 5				
OnSite Systems, Inc. P.O. Box 241166 Charlotte, NC 28224			WCF 120	WCF 120	WCF 200	WCF 150 WCF 200	WCF 300	WCF 200 WCF 300

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

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Qualified Product Lists – Continued

Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivabilityl	Medium Survivability
Propex Geosolutions 6025 Lee Highway Suite 425 PO Box 22788 Chattanooga, TN 37422 Website: www.geotextile.com	Geotex: 104F 135ST 102F 200ST 401 701 801 1071 1291 170 1	Geotex 200ST 311 351 401 451 501 601 701 801 1071 1291 1701		Geotex 117F 2130	Geotex 104F 200ST 315ST 102F 801 1071 1291 1701	Geotex 104F 200ST 315ST 102F 351 401 451 601 801 1071 1291 1701	Geotex 315ST 2x2HF 701 801 1071 1291 1701	Geotex 200ST 315ST 2x2HF 451 501 601 701 801 1071 1291 1701
SKAPS Industries 335 Athena Drive Athens, GA 30601	M706 GT170 GT180	GT131 GT135 GT140 GT142 M706	GT135 W100	W100	SW200* SW315* GT180 M706	GT135 GT140 GT142 SW200* SW315*		M706 GT140 GT142 SW200* SW315* GT180

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

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Geotextiles - Continued:

SPECIFICATION: Standard Specification, Sections 2.19., 7.51, 7.55 and M.08.01-19

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288

Manufacturer/Supplier	Subsurface Drainage		Sediment Control		Erosion Control		Separation	
	Class A	Class B	Wire Supported	Self Supported	Class A	Class B	High Survivability	Medium Survivability
Willacoochee Industrial Fabrics PO Box 599 769 W Main Street Willacoochee, GA 31650 Website: www.winfabusa.com	**WINFAB:** 200W 400N 700N 800N 1000NE 2199	**WINFAB:** 600N 700N 800N 1000NE	**WINFAB:** 77SF	**WINFAB:** 105SF	**WINFAB:** 200W 315W 800N 1000NE 2199	**WINFAB:** 200W 315W 400N 600N 700N 800N 1000NE 2199	**WINFAB:** 315W 700N 800N 2x2HF 1000NE	**WINFAB:** 200W 315W 600N 700N 800N 2x2HF 1000NE
TenCate Geosynthetics 365 South Holland Drive Pendergrass, GA 30567 Website: www.tencategeo.us	170N 180N FW404 FW500 FW700	135N 140N 140NC 140NL FW404 FW500 FW700	FW500 FW700	FW404 FW500 FW700	180N 500X * 600X * FW404 FW500 FW700	140N 140NL 500X * 600X * FW404 FW500 FW700	170N 180N 600X * FW404 FW500 FW700 HP370	140N 500X * 550X 600X * FW500 FW700
TNS Advanced Technologies, Inc. 681 DeYoung Road Greer, SC 29651	R070 R080	R031 R035 R040 R042	R035	W280	R080	R035 R040 R042	R070 R080	R042
US Silt & Site Supply/GETSco Telephone: 603-225-4600 X10 E-Mail: sales@ussilt.com Website: www.ussilt.com			CT36112130	CT36112130				

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

Impact Attenuation Systems:

SPECIFICATION(s): January 2018 Supplements Section 18.02 SAND BARRELS
Standard Specification Form 817 Section 18.02 TYPE A – IMPACT ATTENUATION SYSTEM

PREAPPROVAL CRITERIA: Written approval from FHWA for use on National Highway System roads and Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 – Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 criteria; ***or***, Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria.

Comments: For all attenuators, see the ConnDOT Highway Design Manual for guidance.

Sand Barrels **									
System	**Manufacturer/Supplier**	**Energy Absorbing**	**Transition to Rigid System Required**	**Available Widths (Barrel Size)**	**Available Lengths**	**Deck Structure Required**	**Bi-Direct Capable**	**Redirect Capable**	**Comments**
Big Sandy Barrels	TrafFix Devices, Inc. Telephone: 949-361-5663 Extension 219	No	No	80" (36" Tall x 36" Dia.)	TL-1: approx. 14' TL-3: approx. 29'	No	Yes	No	*Primarily used as a temporary barrier. System is fully gating.
CrashGard Barrels	Plastic Safety Systems, Inc. Telephone: 800-662-6338	No	No	6.5 to unlimited (48" Tall x 36" Dia.)	TL-3 : approx. 28'	No	Yes	No	*Primarily used as a temporary barrier. System is fully gating.
Energite III Barrels	TRANSPO Telephone: 800-321-7870	No	No	6.5 to unlimited (36" Tall x 36" Dia.)	TL-3: 18' to 40'	No	Yes	No	*Primarily used as a temporary barrier. System is fully gating.

* Interchangeable with other approved sand barrel systems; however, this system must be installed in the back due to height.
** Publication of January 2018 Supplements changed Section 18.02 tittle from "TYPE A – IMPACT ATTENUATION SYSTEM" to "SAND BARRELS"

Impact Attenuation Systems - Continued

SPECIFICATION (s) January 2018 Supplementals Section 18.03 IMPACT ATTENUATION SYSTEM
CTDOT Special Provision Item # 1803064A TYPE B IMPACT ATTENUATION SYSTEM (TANGENTIAL) REPLACEMENT PARTS
CTDOT Special Provision Item # 1803071A TYPE B IMPACT ATTENUATION SYSTEM (TANGENTIAL)

PREAPPROVAL CRITERIA: Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria; or, Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 - Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 Criteria.

Comments: For all attenuators, see the CTDOT Highway Design Manual for guidance

Impact Attenuation Systems (Tangential)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
SoftStop	Trinity Highway	MASH 2016	TL-3	CC-115*
	Related Documents Hardware Drawing(s) Installation Manual			
MSKT-SP	Road Systems, Inc.	MASH 2016	TL-3	CC-126*
	Related Documents Hardware Drawing(s) Installation Manual			
MAX-Tension	Barrier Systems by Lindsay	MASH 2016	TL-3	CC-133*
	Related Documents Hardware Drawing(s) Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Impact Attenuation Systems - Continued

Impact Attenuation Systems (Tangential)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
SKT-SP	Road Systems, Inc.	NCHRP 350	TL-3	CC-88*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * Related Documents Hardware Drawing(s) Installation Manual			
BEAT	Road Systems, Inc.	NCHRP 350	TL-3	CC-69*
	******** FOR HW-910_10 BOX BEAM ******* Related Documents Hardware Drawing(s) Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Impact Attenuation Systems - Continued

SPECIFICATION (s) January 2018 Supplementals Section 18.03 IMPACT ATTENUATION SYSTEM
CTDOT Special Provision Item # 1803063A TYPE B IMPACT ATTENUATION SYSTEM (FLARED) REPLACEMENT PARTS
CTDOT Special Provision Item # 1803071A TYPE B IMPACT ATTENUATION SYSTEM (FLARED)

PREAPPROVAL CRITERIA: Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria; or, Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 - Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 Criteria.

Comments: For all attenuators, see the CTDOT Highway Design Manual for guidance

Impact Attenuation Systems (Flared)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
Slotted Rail Terminal (SRT - 31)	Trinity Highway	NCHRP 350	TL-3	CC-100*
	Related Documents Hardware Drawing(s) Installation Manual			
Fleat-SP	Road Systems, Inc.	NCHRP 350	TL-3	CC-88*
	Related Documents Hardware Drawing(s) Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Impact Attenuation Systems - Continued

SPECIFICATION (s) January 2018 Supplementals Section 18.03 IMPACT ATTENUATION SYSTEM
CTDOT Special Provision Item # 1803065A TYPE B IMPACT ATTENUATION SYSTEM (MEDIAN/GORE) REPLACEMENT PARTS
CTDOT Special Provision Item # 1803072A TYPE B IMPACT ATTENUATION SYSTEM (MEDIAN/GORE)
CTDOT Special Provision Item # 1807200A TEMPORARY IMPACT ATTENUATION SYSTEM TYPE B
CTDOT Special Provision Item # 1807201A RELOCATION OF TEMPORARY IMPACT ATTENUATION SYSTEM TYPE B

PREAPPROVAL CRITERIA: Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria; or, Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 - Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 Criteria.

Comments: For all attenuators, see the CTDOT Highway Design Manual for guidance

Impact Attenuation Systems (Median/Gore)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
MAX-Tension Median	Barrier Systems by Lindsay	MASH 2016	TL-3	CC-141*
	Related Documents Installation Manual			
CAT 350	Trinity Highway	NCHRP 350	TL-3	CC-33*
	Related Documents Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Impact Attenuation Systems - Continued

Impact Attenuation Systems (Median/Gore)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
BEAT-MT	Road Systems, Inc.	NCHRP 350	TL-3	CC-69*
	******** FOR HW-910_10 BOX BEAM ******* Related Documents			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Impact Attenuation Systems - Continued

SPECIFICATION (s) January 2018 Supplementals Section 18.03 IMPACT ATTENUATION SYSTEM
CTDOT Special Provision Item # 1803060A TYPE B IMPACT ATTENUATION SYSTEM (NON-GATING)
CTDOT Special Provision Item # 1803062A TYPE B IMPACT ATTENUATION SYSTEM (NON-GATING) REPLACEMENT PARTS

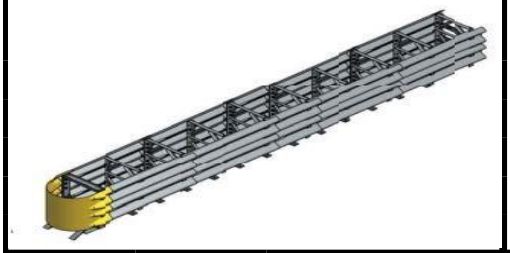
PREAPPROVAL CRITERIA: Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria; or, Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 - Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 Criteria.

Comments: For all attenuators, see the CTDOT Highway Design Manual for guidance

Impact Attenuation Systems (Non-Gating)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
QUADGUARD M10	Trinity Highway	MASH 2016	TL-3	CC-112*
	Unit size is 22' - 4" Long by 31" Wide ** New Installations on Concrete Pad Only** Related Documents Hardware Drawing(s) Installation Manual			
TAU-M	Barrier Systems by Lindsay	MASH 2016	TL-3	CC-147*
	** New Installations on Concrete Pad Only** Related Documents Installation Manual			
QUADGUARD	Trinity Highway	NCHRP 350	TL-3	CC-35*
	Unit size is 21' - 0" Long by 31" to 137" Wide ** New Installations on Concrete Pad Only** Related Documents Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER, ** Refer to Manufacturer's Drawings

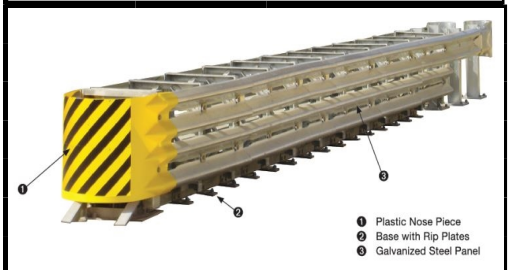
Impact Attenuation Systems - Continued

Impact Attenuation Systems (Non-Gating)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
QUADGUARD II	Trinity Highway	NCHRP 350	TL-3	CC-35*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * Unit size is 19' - 0" to 22' - 0" Long by 31" to 137" Wide ** New Installations on Concrete Pad Only** Related Documents Installation Manual			
TAU II	Barrier Systems by Lindsay	NCHRP 350	TL-3	CC-75*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * ** New Installations on Concrete Pad Only** Related Documents Installation Manual			
TAU II -R	Barrier Systems by Lindsay	NCHRP 350	TL-3	CC-75*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * ** New Installations on Concrete Pad Only** Related Documents Installation Manual			
TRACC	Trinity Highway	NCHRP 350	TL-3	CC-54*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * ** New Installations on Concrete Pad Only** Unit size is 21' - 3" Long by 32" Wide Related Documents Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

** For more detail dimensions of concrete pad & device, refer to manufacturer's drawings.

Impact Attenuation Systems - Continued

Impact Attenuation Systems (Non-Gating)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing**	**Test**	**Approval**
WIDETRACC	Trinity Highway	NCHRP 350	TL-3	CC-54*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * ** New Installations on Concrete Pad Only** Unit size is 21' - 0" Long by 6' - 6" Wide Related Documents Installation Manual			
FASTRACC	Trinity Highway	NCHRP 350	TL-3	CC-54*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * ** New Installations on Concrete Pad Only** Unit size is 25' - 11" Long by 32" Wide Related Documents Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

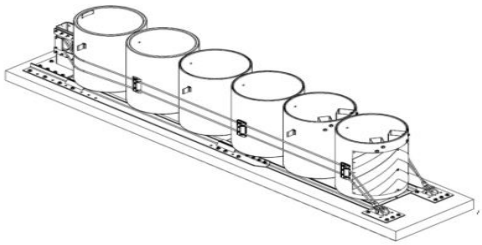
** For more detail dimensions of concrete pad & device, refer to manufacturer's drawings.

Impact Attenuation Systems - Continued

SPECIFICATION (s) January 2018 Supplementals Section 18.03 IMPACT ATTENUATION SYSTEM
CTDOT Special Provision Item # 1803066A TYPE B IMPACT ATTENUATION SYSTEM (HIGH INCIDENT) NON-GATING

PREAPPROVAL CRITERIA: Crash tested in accordance with "AASHTO Manual for Assessing Safety Hardware (MASH)" Test Level 3 criteria; or, Crash Tested in accordance with "National Cooperative Highway Research (NCHRP) Report 350 - Recommended Procedures for the Safety Performance Evaluation of Highway Features" Test Level 3 Criteria.

Comments: For all attenuators, see the CTDOT Highway Design Manual for guidance

Impact Attenuation Systems (Non-Gating - High Incident)				
ROADSIDE SAFETY HARDWARE	**Manufacturer**	**Testing Criteria**	**Test Level**	**Approval Basis**
SCI100GM	Hill & Smith Inc.	MASH 2016	TL-3	CC-128*
	Unit size is 21' - 6 1/8" Long by 37 7/16" wide Related Documents			
REACT 350	Trinity Highway	NCHRP 350	TL-3	CC-26*
	Unit size is 28' - 0" to 30' - 3" Long by 41.5" wide Related Documents Installation Manual			
REACT 350 WIDE	Trinity Highway	NCHRP 350	TL-3	CC-73*
	* FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWINGS * Unit size is 30' - 7" to 30' - 10" Long by 71" to 122" wide Related Documents Installation Manual			

Note: CC-###* is FHWA HARDWARE ELIGILITY LETTER

Qualified Product Lists – Continued

Penetrating Sealer Protective Compound – Clear or Pigmented:

SPECIFICATION: Standard Specification, M.03.09

PREAPPROVAL CRITERIA: Independent laboratory test results per NCHRP 244 for northern climates.

TYPES OF SEALER – Each product will be assigned a category based on its physical characteristics, as follows:

P - Pigmented. Not necessarily white. Overcoat for clear.

C - Clear. Intended for use on structure wing walls, beam seats, inside faces of parapets, or as called for by the engineer. Requires pigmented sealant overcoat.

W - White. Intended for use on Jersey barrier or when called for by the engineer.

Manufacturer/Supplier	Product Brand Name	Type
Advanced Chemical Technologies 100 W. Wilshire Boulevard Oklahoma City, OK 73116 Website: www.advchemtech.com	Sil-Act ATS-42	C
Bay Oil Company 38 Plainfield Street Chicopee, MA 01013	BayGuard Salt Protector No. 244	C
Degussa Building Systems 889 Valley Park Drive Shakopee, MN 55379 Website: www.DegussaBuildingSystems.com	Enviroseal 20 Enviroseal 40 Masterseal SL40 VOC	C,P
Modac Products Co. 600 Reed Road Broomall, PA 19008 Website: www.modacproducts.com	Modac F	C,P
Nox-crete Products Group P.O. Box 8102 Omaha, NE 68108 Website: www.NOX-CRETE.com	Stifel-S	C
Princeton Chemical, Inc. P.O. Box 132 Lincoln, RI 02865	Crete-Shield	C
ProSoCo, Inc. 3741 Greenway Circle Lawrence, KS 66046 Website: www.prosoco.com	Consolideck Saltguard WB	C

Continued on Next Page:

Qualified Product Lists – Continued

Penetrating Sealer Protective Compound – Clear or Pigmented - Continued:

SPECIFICATION: Standard Specification, M.03.09

PREAPPROVAL CRITERIA: Independent laboratory test results per NCHRP 244 for northern climates.

TYPES OF SEALER – Each product will be assigned a category based on its physical characteristics, as follows:

P - Pigmented. Not necessarily white. Overcoat for clear.

C - Clear. Intended for use on structure wing walls, beam seats, inside faces of parapets, or as called for by the engineer. Requires pigmented sealant overcoat.

W - White. Intended for use on Jersey barrier or when called for by the engineer.

Manufacturer/Supplier	Product Brand Name	Type
Sivento, Inc. 65 Challenger Road Ridgefield Park, NJ 07660	CHEM-TRETE BSM 40 VOC Dynasylan BH-N	C
Tamms Industries 3835 State Route 72 Kirkland, IL 60146	Baracade 16 (Formerly SMS-250 and Chemstop SMS-250)	C
Vexcon Chemicals 7240 State Road Philadelphia, PA 19135 Website: www.vexcon.com	**Certi-Vex:** Enfio Smooth VOC Enfio Tex VOC Powerseal 40%	C,P
Watson-Bowman & Acme 95 Pineview Drive Amherst, NY 14228	WABO HorseySet WDE	C,P

Qualified Product Lists – Continued

Retroreflective Sheeting:

Construction Barricade Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 1-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type IV	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3336 White/Orange
Avery Dennison Reflective Products Division 7542 Natchez Avenue Niles, IL 60714	W11144 White/Orange W11145 White/Orange

Retroreflective Sheeting Type XI	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	446 White/Orange

Qualified Product Lists – Continued

Retroreflective Sheeting:

Traffic Drums, 42" Traffic Cones, Opposing Traffic Lane Divider, Glare Screens and Posts and Tubular Markers (Flexible) Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 1-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type IV	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3310 - White
Avery Dennison Corp. 7542 N. Natchez Avenue Niles, Illinois, 60714	WR-7100 Reboundable White Prismatic WR-7114 Reboundable Fluorescent Orange Prismatic
ORAFOL Americas Inc. 120 Darling Drive Avon, Connecticut 06001	Resilience Channelizer – Fluorescent Orange

Qualified Product Lists – Continued

Retroreflective Sheeting:

Traffic Cone Collar Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956

Retroreflective Sheeting Type VI	
Manufacturer/Supplier	Product Brand Name
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	ORALITE: 2010 White Cone Collar
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3340 – Flexible Prismatic Cone Sheeting

Qualified Product Lists – Continued

Retroreflective Sheeting:

Construction Roll-Up Sign Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 1-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type VI	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	RS60 - White RS64I – Fluorescent Orange RS20 - White RS24 – Fluorescent Orange RS33 – Fluorescent Pink
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	ORALITE: Orange Roll Up Sign Fluorescent Orange Super Bright Roll Up Sign

Qualified Product Lists – Continued

Retroreflective Sheeting:

Delineator Non-Adhesive Backing Type Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type V	
Manufacturer/Supplier	Product Brand Name
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	ORALITE: AP1000 Red AP1000 White AP1000 Yellow AR1000 White AR1000 Yellow

Qualified Product Lists – Continued

Retroreflective Sheeting:

Sign and Delineator Sheeting

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type IV	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3930 – White 3931 – Yellow 3932 – Red 3935 – Blue 3937 – Green 3939 – Brown
Avery Dennison Corp. 7542 N. Natchez Avenue Niles, Illinois, 60714	T-6500 – White T-6501 – Yellow T-6505 – Blue T-6507 – Green T-6508 – Red T-6509 – Brown
Nippon Carbide Industries 12981 E. Florence Avenue Santa Fe Springs, CA 90670	94802 – White 94804 – Yellow 94805 – Red 94806 – Blue 94807 – Orange 94808 – Green
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	5900-010 – White 5900-020 – Yellow 5900-030 – Red 5900-050 – Blue 5900-060 – Green 5900-080 – Brown

Qualified Product Lists – Continued

Retroreflective Sheeting:

Sign and Delineator Sheeting – Continued

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type VIII	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3924S Fluorescent Orange
Avery Dennison Corp. 7542 N. Natchez Avenue Niles, Illinois, 60714	W7514 Fluorescent Orange
Nippon Carbide Industries, Inc. 3136 East Victoria Street Rancho Dominguez, CA 90221	Nikkalite: 92847 Fluorescent Orange
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	Oralite®: 5930-038 Fluorescent Orange

Qualified Product Lists – Continued

Retroreflective Sheeting:

Sign and Delineator Sheeting – Continued

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type IX	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	3910 – White 3914 – Fluorescent Orange 3981 – Fluorescent Yellow 3983 – Fluorescent Yellow/Green 3990 – White 3991 – Yellow 3992 – Red 3995 – Blue 3997 – Green 4091 – Yellow 4092 – Red 4095 – Blue 4097 – Green 4081 – Fluorescent Yellow 4083 – Fluorescent Yellow-Green 4084 – Fluorescent Orange
Avery Dennison Corp. 7542 N. Natchez Avenue Niles, Illinois, 60714	T-9500 – White T-9501 – Yellow T-9505 – Blue T-9507 – Green T-9508 – Red T-9513 – Fluorescent Yellow/Green W-9514 – Fluorescent Orange T-11500 – White T-11501 – Yellow T-11505 – Blue T-11507 – Green T-11508 – Red T-11511 – Fluorescent Yellow T-11513 – Fluorescent Yellow/Green W-11514 – Fluorescent Orange

Qualified Product Lists – Continued

Retroreflective Sheeting:

Sign and Delineator Sheeting – Continued

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type IX	
Manufacturer/Supplier	Product Brand Name
ORAFOL Americas, Inc. 120 Darling Drive Avon, CT 06001	7900-010 – White 7900-020 – Yellow 7900-050 – Blue 7900-060 – Green 7900-029 – Fluorescent Yellow-Green 7900-037 – Fluorescent Yellow 5930-038 – Fluorescent Orange

Qualified Product Lists – Continued

Retroreflective Sheeting:

Sign and Delineator Sheeting – Continued

SPECIFICATION: 1) Standard Specification M.18.09
2) Material Certificate submission conforming to Standard Specification 1.06.07.

PREAPPROVAL CRITERIA: 1) Conformance to ASTM D4956
2) Participation in the National Transportation Product Evaluation Program (NTPEP) 3-Year Retroreflective Sheeting Test Deck.

Retroreflective Sheeting Type XI	
Manufacturer/Supplier	Product Brand Name
3M Company Transportation Safety Division 3M Center, Building 235-03W-052 St. Paul, MN 55144	4090 – White 4091 – Yellow 4092 – Red 4095 – Blue 4097 – Green 4099 – Brown 4081 – Fluorescent Yellow 4083 – Fluorescent Yellow-Green
Avery Dennison Corp. 7542 N. Natchez Avenue Niles, Illinois, 60714	T-11501 – Yellow T-11509 – Brown T-11511 – Fluorescent Yellow

Qualified Product Lists – Continued

Spray-Applied Membrane Waterproofing System:

SPECIFICATION: Item No. 0707009A – Membrane Waterproofing (Cold Liquid Elastomeric)

PRE-APPROVAL CRITERIA:

A) Material requirements:

1. Primer: The primer shall be a 100% reactive, acrylic based, two component, spray applied resin capable of full cure in 40 minutes at 68°F (20°C).

2. Membrane: The membrane shall be 100% solvent free reactive, acrylic based, two component, spray applied material.

3. Aggregate: The aggregate shall be a nonfriable, durable #8 aggregate stone.

B) Test Requirements:

The membrane, when tested as an 80 mil layer alone or as an 80mil layer plus 40mil topping with aggregate system, shall meet or exceed the following performance requirements:

Water Vapor Transmission	ASTM E96	0.3 Perms or less
Adhesion (Concrete)	ASTM D4541	150 psi (1.0 MPa) or failure in concrete.
Adhesion (Steel)	ASTM D4541	300 psi (2.1 MPa)
Minimum Tensile Strength	ASTM D638, Method A, Die C	940 psi (6.4 MPa)
Minimum Elongation at Break	ASTM D638, Method A, Die C	80%
Crack Bridging (3.2mm) -15°F (-26°C)	ASTM 1305	Pass @ 10 cycles, 0.125 in.
Resistance to Heat Aging	ASTM C1522	Pass

APPROVAL:

Submitted products will be reviewed for approval pending results of a one-year long test trial.

PROVISIONS FOR CONTINUANCE ON QPL:

All testing shall have been performed no longer than 5 years prior to the product installation date. Testing showing conformance with the above noted performance requirements shall be submitted to the Department who shall establish the "Date of Test Compliance". Products with a "Date of Test Compliance" greater than 5 years prior to the product installation date shall not allowed to be used.

Continued on Next Page:

Qualified Product Lists – Continued

Spray-Applied Membrane Waterproofing System - Continued:

SPECIFICATION: Item No. 0707009A – Membrane Waterproofing (Cold Liquid Elastomeric)

PRE-APPROVAL CRITERIA: See previous page.

APPROVAL: See previous page**.**

PROVISIONS FOR CONTINUANCE ON QPL: See previous page.

Manufacturer/Supplier	Product Brand Name	Date of Test Compliance	Expiration Date
Bridge Preservation, LLC 87 Shawnee Avenue Kansas City, KS 66105 Telephone: 913-321-9006	Bridge Deck Membrane System	March 1, 2015	~~Feb. 29, 2020~~ ** See Note 1 **
GCP Applied Technologies Inc 62 Whittemore Ave. Cambridge, MA 02140 Telephone: 617-498-4816	Eliminator	March 1, 2015	~~Feb. 29, 2020~~ ** See Note 1 **
PIM Corporation 201 Circle Drive North, Suite 105 Piscataway, NJ 08854 Telephone: 732-469-6224	PmB Blue Shield	November 29, 2017	November 28, 2022
Wasser Coatings Inc. 4118 B Place NW Suite B Auburn, WA 98001	Wasser Polyflex Bridge Deck System	November 7, 2018	November 7, 2023

Note 1: Products remain **"Qualified"** while updated test data is under review.

Qualified Product Lists – Continued

Walls: Embankment Walls:

SPECIFICATION: ConnDOT Special Provision:

1. ITEM #0601445A - #0601449A (SITE NO. 1 thru 5)
2. ITEM #0601490A - #0601495A (SITE NO. 6 thru 11)

PREAPPROVAL CRITERIA: LRFD Bridge Design Specification

SUPPLIER/LOCATION	PRODUCT BRAND NAME
Keystone Retaining Wall Systems 4444 West 78th Street Bloomington, MN 55435 Telephone: 952-897-1040 E-Mail: jfriederichs@keystonewalls.com Website: www.keystonewalls.com	KeySystem I Retaining Wall
TENSAR Earth Technology, Inc. 227 Ritter Road Sewickley, PA 15143 Telephone: 412-749-9190	MESA Retaining Wall System
The Reinforced Earth Company 133 Park Street North Reading, MA 01864 Telephone: 978-664-2830 E-Mail: PAnderson@reinforcedearth.com Website: www.reinforcedearth.com	Pyramid Modular Blockwall
Connecticut Precast Corp. 555 Fan Hill Road Monroe, CT 06468 Telephone: 203-268-8688 Fax: 203-452-1007 Website: www.ctprecast.com	Recon Retaining Wall
Redi-Rock Walls - CT Division 68A South Canal Street Plainville, CT 06062 Telephone: 860-793-6805	Redi-Rock Retaining Wall-Cobblestone Face Mold
VERSA-LOK of New England 5 Northern Boulevard, Unit 15 Amherst, NH 03031 Telephone: 603-883-3042 E-Mail: Sales@wallsthatwork.com Website: www.versa-Lok.com	VERSA-LOK Retaining Wall

Qualified Product Lists – Continued

Walls: Retaining Walls - Mechanically Stabilized Earth (MSE) Walls:

SPECIFICATION: ConnDOT Special Provision: Item #'s 0601651A, 0601665A, 0601678A & 0601687A RETAINING WALL

PREAPPROVAL CRITERIA: LRFD Bridge Design Specification

SUPPLIER/LOCATION	PRODUCT BRAND NAME
Big R Bridge Corporate P.O. Box 1290 Greeley, CO 80632 Telephone: 207-232-3228	Vist-A-Wall Systems
TEG Engineering, LLC 1505 44th Street Wyoming, MI 49509	Tricon Retained Soil Wall System
The Reinforced Earth Company 133 Park Street North Reading, MA 01864 Telephone: 978-664-2830	Reinforced Earth Walls
The Reinforced Earth Company 1372 Oldbridge Road, Suite 101 Woodbridge, VA 22192 Telephone: 703-499-9818	Retained Earth
Inventure Civil LLC P.O. Box 1781 Wake Forest, NC 27588 Telephone: (919) 453-2011	SINE WALL

Walls: Retaining Walls - Prefabricated Modular Walls:

SPECIFICATION: ConnDOT Special Provision: Item #'s 0601651A, 0601665A, 0601678A & 0601687A RETAINING WALL

PREAPPROVAL CRITERIA: LRFD Bridge Design Specification

PRODUCT BRAND NAME	SUPPLIER/LOCATION
Doublewal-Standard Module	Doublewal Corporation 7 West Main Street Plainville, CT 06062 Telephone: 860-793-0295
T-Wall Retaining Wall System	The Neel Company 8328-D Traford Lane Springfield, VA 22152 Telephone: 703-913-7858
GRAVIX DOT Precast Wall System	Earth Wall Products 1349 Old 41 Highway NW. Suite 135 Marietta, GA 30060

Qualified Product Lists – Continued

The categories listed below have products and or materials that have met the specific requirements of the Standard Specifications or project Special Provisions.

Antistripping Additives

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Eliana V. Carlson, P.E.
Telephone: 860-258-0325

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Special Provision.

Asphalt Plug Expansion Joints – Movement Capacity 1½" or less

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Bearings – Pot, Spherical or Disc

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: Recurring Special Provision.

Channelizing Devices – Traffic Cones and Drums Type 1 (purchased after 10/1/98)

RESPONSIBLE UNIT: Division of Traffic Engineering

Technical Contact: Mark F. Makuch P.E.
Telephone: 860-594-2788

Administrative Contact: Mark F. Carlino, P.E.

Acceptance Criteria: 1) Catalog cut check for compliance with state specifications.
2) Manufacturer's self-certifying letter, stating NCHRP 350 testing requirements.

Qualified Product References (With Acceptance Criteria)

Coating Systems for New Steel

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Jonathan T. Boardman
Telephone: 860-258-0327

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Prequalification Procedure NEPCOAT.

Elastomeric Concrete Expansion Joint Systems

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Epoxy Injection Crack Repair

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R. Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Special Provision; Prequalification Procedure.

Fast Setting High Strength Header Materials

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Qualified Product References (With Acceptance Criteria)

Field Coatings for Blast Cleaned Steel

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Jonathan T. Boardman
Telephone: 860-258-0327

Administrative Contact: James P. Connery P.E.

Acceptance Criteria: Prequalification Procedure NEPCOAT.

Field Touch-Up Paint

RESPONSIBLE UNIT: Division of Bridge Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Grouts – Non-Shrink Cementitious

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R. Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification, M.03.05.

High Strength Patch Materials for Concrete Bridge Decks

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Qualified Product References (With Acceptance Criteria)

Offset Blocks for W-beam Guide Rail – Plastic

RESPONSIBLE UNIT: Division of Design Services

Technical Contact: David J. Kilpatrick
Telephone: 860-594-3288

Administrative Contact: Leo L. Fontaine, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification.

Pavement Joint and Crack Sealants

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R. Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification, M.04.01.

Pile Point Reinforcement – Prefabricated

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Jonathan T. Boardman
Telephone: 860-258-0327

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: ASTM A27.

Pile Splicers – Prefabricated

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Jonathan T. Boardman
Telephone: 860-258-0327

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: ASTM A36.

Qualified Product References (With Acceptance Criteria)

Polypropylene (5A) & Polyester Fibers (5B)

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R. Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification or Special Provision, M.04.02.

Portland Cement Concrete
Air-Entraining Admixtures
High Range Water-Reducing Admixtures
Portland Cement
Retarders
Water-Reducing Admixtures

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification, M.03.01-3.

Prefabricated Expansion Joints – Movement Capacity Over 4”

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Qualified Product References (With Acceptance Criteria)

Prefabricated Geocomposite Drain

RESPONSIBLE UNIT: Soils and Foundations Section

Technical Contact: Leo L. Fontaine, P.E.
Telephone: 860-594-3180

Administrative Contact: Timothy M. Wilson, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Rebar Connectors

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: John R. Giannini
Telephone: 860-258-0324

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: AASHTO 8.32.2.3.

Release Agents

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Eliana V. Carlson, P.E.
Telephone: 860-258-0325

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification or Special Provision, 4.06.03-3

Rebar Zinc Rich Coatings – Rehabilitation

RESPONSIBLE UNIT: Division of Bridge Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: Special Provision.

Qualified Product References (With Acceptance Criteria)

Shear Connectors – Welded Stud

RESPONSIBLE UNIT: Division of Materials Testing

Technical Contact: Jonathan T. Boardman
Telephone: 860-258-0327

Administrative Contact: James P. Connery, P.E.

Acceptance Criteria: Standard Specification, M.06.02-4; Prequalification AMS D1.5.

Silicone Expansion Joint System

RESPONSIBLE UNIT: Bridge Consultant Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: Special Provision; Prequalification Procedure.

Stormwater Treatment (Oil/Grit Separators)

RESPONSIBLE UNIT: Office of Environmental Compliance

Technical Contact: Kevin F. Carifa; Telephone: 860-594-2932

Administrative Contact: Kimberly C. Lesay,

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Strip Seal Expansion Joint Systems (with Bridge Joint Extrusions)

RESPONSIBLE UNIT: Bureau of Highway & Bridge Operations

Technical Contact: David Hiscox
Telephone: 860-594-2626

Administrative Contact: **TBD**

Acceptance Criteria: Special Provision ITEM #0520034A.

Qualified Product References (With Acceptance Criteria)

Variable Depth Patch

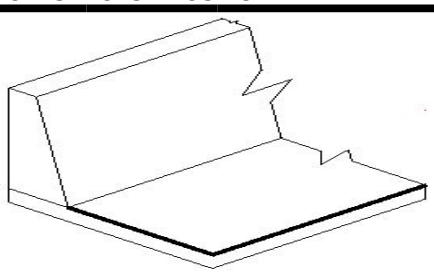
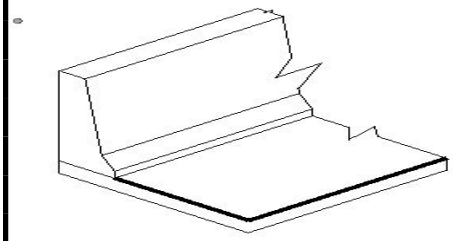
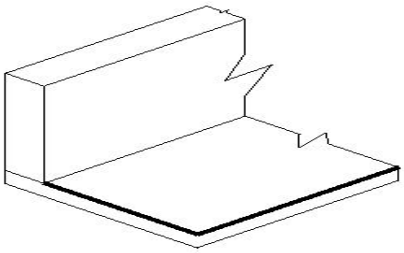
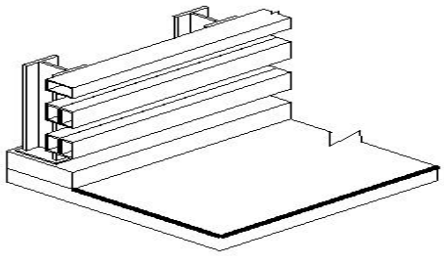
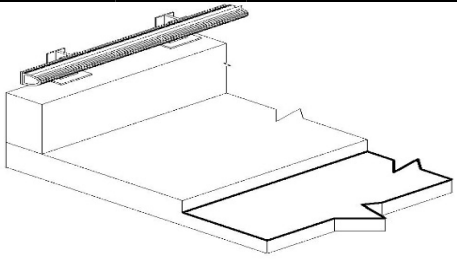
RESPONSIBLE UNIT: Division of Bridge Design

Technical Contact: Timothy D. Fields, P.E.
Telephone: 860-594-3217

Administrative Contact: Theodore H. Nezames, P.E.

Acceptance Criteria: 1) Special Provision.
2) Prequalification Procedure.

Connecticut Department of Transportation
Non-Proprietary Roadside Safety Hardware

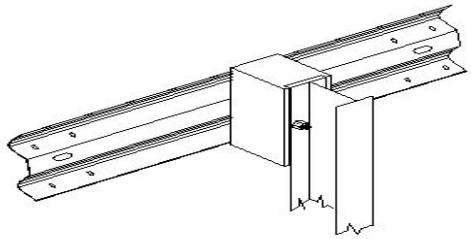
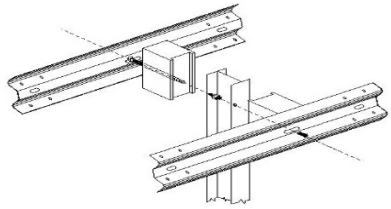
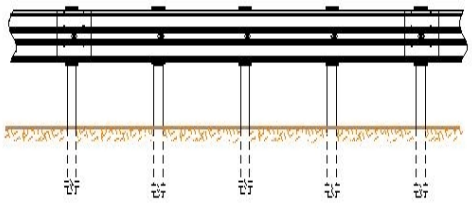
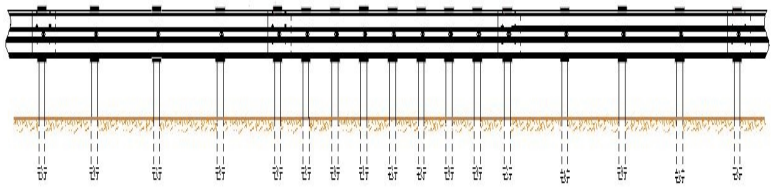
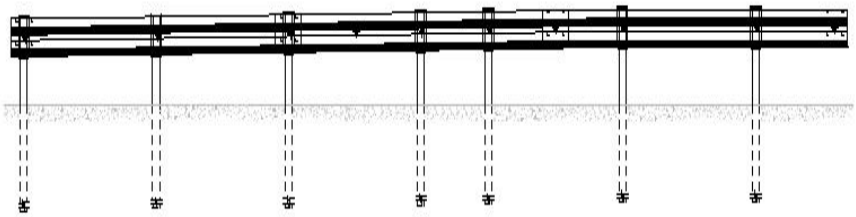
Parapets and Railing Designs for Bridges and Retaining Walls			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
42" SINGLE SLOPE CONCRETE PARAPET	MASH 2016	TL-4	Eng. Analysis
	Related Documents Guide Sheet for Single Slope Parapet		
42" F-SHAPE CONCRETE PARAPET	MASH 2016	TL-4	Eng. Analysis
	Related Documents Guide Sheet for F-Shape Parapet		
42" VERTICAL CONCRETE PARAPET	MASH 2016	TL-4	Eng. Analysis
	Related Documents Guide Sheet for Vertical Shape Parapet		
42" Curb Mounted Bridge Railing	MASH 2016	TL-4	Eng. Analysis
	Related Documents		
Vertical Shape Concrete Parapet with Sidewalk	MASH 2016	TL-4	Eng. Analysis
	Related Documents Guide Sheet for Vertical Shape Parapet at Sidewalk		

Cable Barriers			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
THREE CABLE GUIDERAIL (I-BEAM POSTS)	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing Details HW-918_01a		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

Cable Barrier Terminal Ends			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
THREE CABLE END ANCHOR TYPE I	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing Details HW-918_01b & 01c		
THREE CABLE TRAILING END ATTACHMENT	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing Details HW-918_01b		

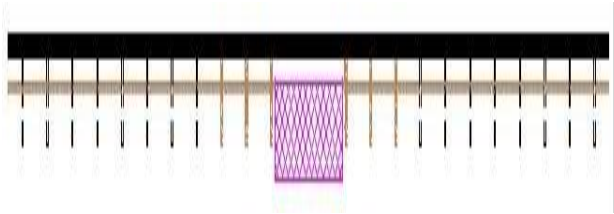
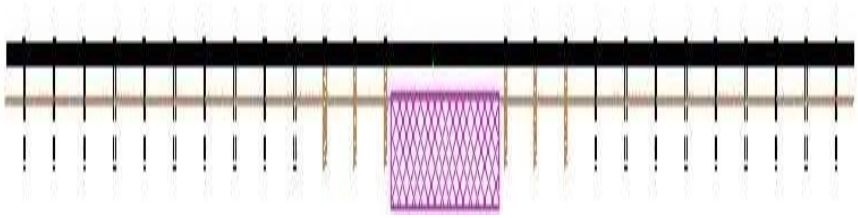
NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

METAL BEAM RAIL (TYPE)			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
METAL BEAM RAIL (R-B MASH) GUIDERAIL	MASH 2016	TL-3	B-240
	Related Documents Hardware Drawing HW-910_21		
METAL BEAM RAIL (MD - MASH) GUIDERAIL	MASH 2016	TL-3	Eng. Analysis
	Related Documents Hardware Drawing HW-910_22		
METAL BEAM RAIL (R-B MASH) HALF - POST SPACING	MASH 2016	TL-3	Eng. Analysis
	Related Documents Hardware Drawing HW-910_23		
METAL BEAM RAIL (R-B MASH) QUARTER POST SPACING	MASH 2016	TL-3	Eng. Analysis
	Related Documents Hardware Drawing HW-910_23		
METAL BEAM RAIL TRANSITION 350 TO MASH	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_25		

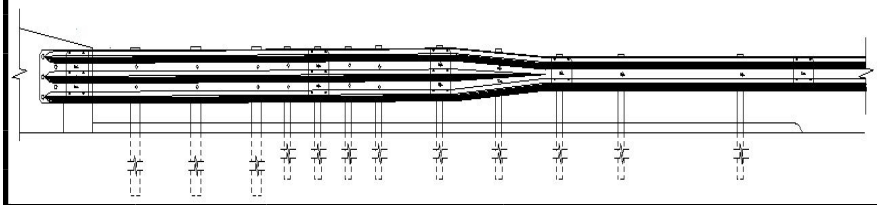
NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

METAL BEAM RAIL (TYPE)			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
METAL BEAM RAIL 8" X 6" BOX BEAM	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_10		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

METAL BEAM RAIL SPAN SECTION (TYPE II OR III)			
ROADSIDE SAFETY HARDWARE	**Testing**	**Test**	**Approval**
METAL BEAM RAIL SPAN SECTION TYPE II	MASH 2016	TL-3	**
	Related Documents Hardware Drawing HW-910_24		
METAL BEAM RAIL SPAN SECTION TYPE III	MASH 2016	TL-3	**
	Related Documents Hardware Drawing HW-910_24		

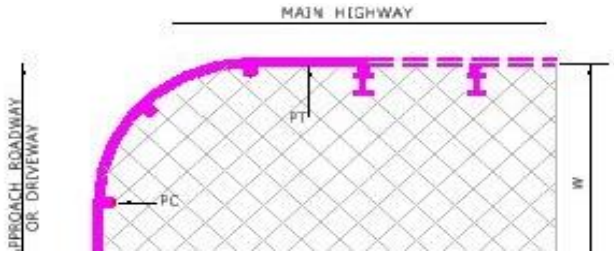
NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

(TYPE) ATTACHMENT ROADSIDE SAFETY HARDWARE	Testing	Test	Approval
THRIE-BEAM ATTACHMENT	MASH 2016	TL-3	Eng. Analysis
	Related Documents Hardware Drawing HW-910_27		
R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	NCHRP 350	TL-3	**
	*** FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWING *** Related Documents Hardware Drawing HW-910_06		
R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	NCHRP 350	TL-3	**
	*** FOR REPAIR ONLY UNLESS SPECIFIED ON CONTRACT DRAWING *** Related Documents Hardware Drawing HW-910_07		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

(TYPE) ATTACHMENT			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_15		
MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_16		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

(TYPE) CURVED GUIDE RAIL TREATMENT			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
	NCHRP 230	TL-2	**
	Related Documents Hardware Drawing HW-910_11		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

R-B TERMINAL SECTION			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
R-B TERMINAL SECTION	NCHRP 350	TL-2	**
	Related Documents Hardware Drawing HW-910_17		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

(TYPE) END ANCHORAGE TYPE I			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
R-B END ANCHORAGE TYPE I			**
	* NOT CRASHWORTHY * LOCATE OUTSIDE CLEAR ZONE Related Documents Hardware Drawing HW-910_17		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

(TYPE) END ANCHORAGE TYPE II			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
R-B END ANCHORAGE TYPE II			**
	* NOT CRASHWORTHY * OCATE OUTSIDE CLEAR ZONE Related Documents rdware Drawing HW-910_17		

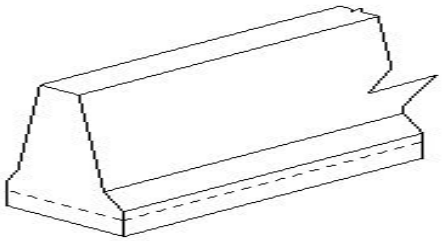
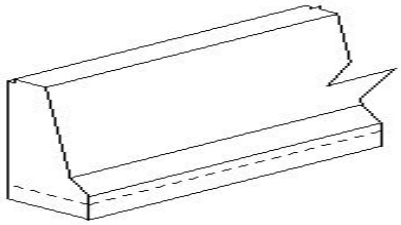
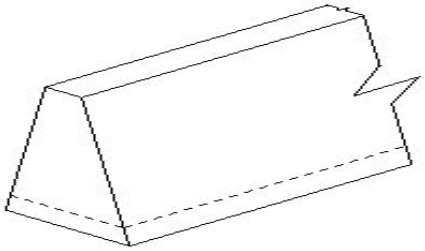
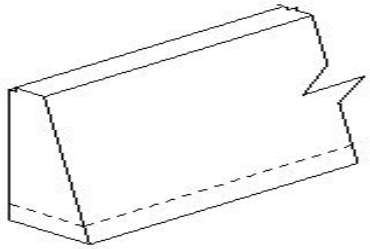
NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

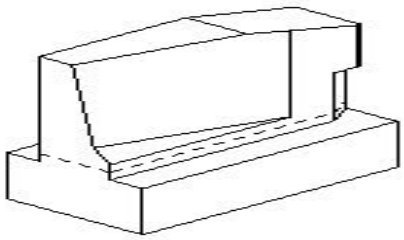
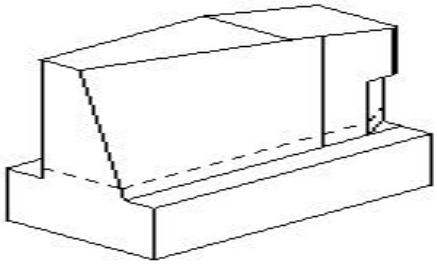
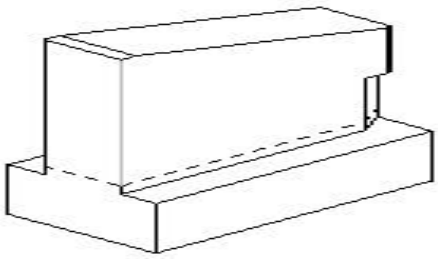
(TYPE) END ANCHORAGE			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
BOX BEAM END ASSEMBLY	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_10		

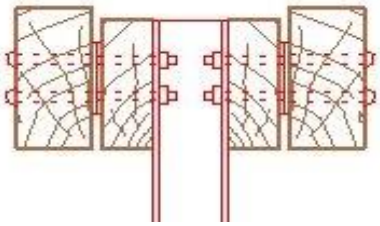
NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

ANCHOR IN (TYPE) SLOPE			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
ANCHOR IN ROCK CUT SLOPE	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-911_03		
ANCHOR IN EARTH CUT SLOPE	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-911_03		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

PRECAST CONCRETE BARRIER CURB			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
F-SHAPE PRECAST CONCRETE BARRIER CURB (30" x 45")	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-821_ 02a & 02b		
F-SHAPE PRECAST CONCRETE BARRIER CURB (21" x 45")	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-821_02a & 02b		
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (28" x 42")	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-821_11a & 11b		
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB (20" x 42")	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-11a & 11b		

PRECAST CONCRETE BARRIER CURB			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
F-SHAPE PRECAST CONCRETE BARRIER CURB FOR THRIE-BEAM ATTACHMENT			
	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-08a & 08b		
SINGLE SLOPE PRECAST CONCRETE BARRIER CURB FOR THRIE-BEAM ATTACHMENT			
	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-821_09a & 09b		
VERTICAL PRECAST CONCRETE BARRIER CURB FOR THRIE-BEAM ATTACHMENT			
	MASH 2016	TL-4	Eng. Analysis
	Related Documents Hardware Drawing HW-821_10a & 10b		

MERRITT PARKWAY RAIL (TYPE)			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MERRITT PARKWAY GUIDERAIL	NCHRP 350	TL-3	**
	Related Documents Drawing HW-910_12a& b		
MERRITT PARKWAY MEDIAN GUIDERAIL	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_12d		
MERRITT PARKWAY GUIDERAIL SYSTEMS 2	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_12a		
MERRITT PARKWAY GUIDERAIL SYSTEMS 3	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_12a		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

MERRITT PARKWAY RAIL (TYPE)			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MERRITT PARKWAY MEDIAN CONCRETE BARRIER	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-821-04b		
MERRITT PARKWAY NARROW CONCRETE MEDIAN BARRIER	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-821-04a		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

MERRITT PARKWAY (TYPE) ATTACHMENT			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MERRITT PARKWAY GUIDERAIL LEADING END ATTACHMENT	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_12a		
MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENT	NCHRP 350	TL-3	**
	Related Documents Hardware Drawing HW-910_12c		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

MERRITT PARKWAY END ANCHORAGE (TYPE)			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MERRITT PARKWAY GUIDERAIL END ANCHOR TYPE I			**
	* NOT CRASHWORTHY * LOCATE OUTSIDE CLEAR ZONE Related Documents Hardware Drawing HW-911_05		
MERRITT PARKWAY GUIDERAIL END ANCHOR TYPE II			**
	* NOT CRASHWORTHY * LOCATE OUTSIDE CLEAR ZONE Related Documents Hardware Drawing HW-911_05		
MERRITT PARKWAY GUIDERAIL END ANCHOR TYPE III			**
	Related Documents Hardware Drawing HW-911_05		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

MERRITT PARKWAY MEDIAN GUIDERAIL END ANCHORAGE			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
MERRITT PARKWAY MEDIAN GUIDERAIL END ANCHORAGE	NCHRP 350	TL-3	**
	* NOT CRASHWORTHY * LOCATE OUTSIDE CLEAR ZONE Related Documents Hardware Drawing HW-910_12d		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

Sign Support			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
METAL SIGN POSTS	NCHRP 350	TL-3	**
	Related Documents Sign Post Hardware Drawing TR-1208_02		
BREAKAWAY SIGN SUPPORT	NCHRP 350	TL-3	**
	Related Documents Breakaway Sign Supports Hardware		
Breakaway Luminaire Transformer Base	NCHRP 350	TL-3	**
	Related Documents Light Standard Hardware		
Pedestal Base	NCHRP 350	TL-3	**
	Related Documents Pedestal Base TR-1102_01 Traffic Control Foundation Pedestal - Type I - Precast TR-1002_01		

NOTE: ** Device approved prior to implementation of MASH-Compliant Determination Process

TEMPORARY WORKZONE DEVICES			
ROADSIDE SAFETY HARDWARE	**Testing Criteria**	**Test Level**	**Approval Basis**
Temporary Concrete Barriers	NCHRP 350	TL-3	***
	Related Documents Hardware Drawing HW-822_01		

NOTE: *** Any Temporary Work zone device manufactured on or before December 31, 2019 and successfully tested to NCHRP Report 350 or the 2009 Edition of MASH, may be used throughout their normal service life.