

May 17, 2021

## VDOT NCHRP 350 Approved Products List

ANY MODIFICATION OF MATERIAL OR CONFIGURATION OF ANY VDOT APPROVED PRODUCT OR CHANGE IN THE MANUFACTURER'S NAME AND ADDRESS MUST BE CONVEYED TO VDOT IMMEDIATELY. FAILURE TO DO SO CAN RESULT IN REMOVAL FROM THE NCHRP 350 APPROVAL LIST. VDOT RESERVES THE RIGHT TO AND AT ANY TIME REMOVE A PRODUCT FROM THE APPROVED LIST AFTER ANY DISCLOSED CHANGES ARE REVIEWED.

Changes are shaded.

### IMPACT ATTENUATOR (NCHRP 350 Approved)

**Note that a project specific sheet will be required for each proposed location. For details please contact the Standards Section (Central Office L&D).**

TL-1, 30 MPH Max.

TL-2, <40 MPH Max.

TL-3, ≥40 MPH

Note: CZ refers to Construction Zone

Type I = Re-Directive Impact Attenuator

Type II = Non Re-Directive Impact Attenuator

Type III = Non Re-Directive Impact Attenuator (Water Filled)

### TYPE I (RE-DIRECTIVE LOW-MAINTENANCE)

<b>WORK AREA PROTECTION CORP.</b>	TL-2 SCI-70GM	Low Maintenance Impact Attenuator
	TL-3 SCI-100GM	Low Maintenance Impact Attenuator
<b>ENERGY ABSORPTION SYSTEMS, INC.</b>	TL-2 QUADGUARD ELITE (5 BAY)	Low Maintenance Impact Attenuator
	TL-3 QUADGUARD ELITE (8 BAY)	Low Maintenance Impact Attenuator
	TL-3 REACT 350	Low Maintenance Impact Attenuator (CZ or Permanent)
<b>TRAFFIX DEVICES, INC.</b>	TL-3 COMPRESSOR	Low Maintenance Impact Attenuator

### TYPE I (RE-DIRECTIVE)

<b>ENERGY ABSORPTION SYSTEMS, INC.</b>	TL-2 & TL-3 QUADGUARD	Reusable Impact Attenuator (CZ or Permanent)
	TL-3 QUADGUARD-WIDE	Reusable Impact Attenuator (Permanent)
	TL-2 & TL-3 QUADGUARD II	Reusable Impact Attenuator (CZ or Permanent)
	TL-3 QUADGUARD-WIDE II	Reusable Impact Attenuator (Permanent)
<b>TRINITY INDUSTRIES</b>	TL-3 ADIEM	Sacrificial Lightweight Concrete Impact Attenuator (For use in CZ only)
	TL-2 & TL-3 TRACC	Reusable Impact Attenuator (CZ or Permanent)
	TL-3 FASTRACC	Reusable Impact Attenuator (CZ or Permanent)
	TI-3 WIDETRACC	Reusable Impact Attenuator (CZ or Permanent)
	TL-2 SHORTRACC	Reusable Impact Attenuator (CZ or Permanent)
<b>LINDSAY TRANSPORTATION SOLUTIONS</b>	TL-2 TAU-II (4 bay)	Reusable Impact Attenuator (CZ or Permanent)
	TL-3 TAU-II (8 bay)	Reusable Impact Attenuator (CZ or Permanent)

**TYPE II (NON RE-DIRECTIVE)\***  
**SAND BARRELS**

**\* NOT FOR USE IN LOCATIONS WHERE HIGH-SPEED, HIGH ANGLE IMPACTS ARE LIKELY. REQUIRES 25' WIDE x 75' LONG CLEAR AREA BEHIND HAZARD.**

ENERGY ABSORPTION SYSTEMS, INC.	TL-1 & TL-2 NEAT Non-Re-directive, Guards Pre-cast Traffic Barrier Service Concrete and QMB (CZ only) TL-1, TL-2 & TL-3 FITCH UNIVERSAL MODULE Sand Module (CZ or Permanent) TL-3 ENERGITE III SYSTEM Sand Module (CZ or permanent)
PLASTIC SAFETY SYSTEMS, INC.	TL-3 CRASHGARD SYSTEM Sand Module (CZ or permanent)
TRAFFIX DEVICES, INC.	TL-1, TL-2 & TL-3 BIG SANDY Sand Module (CZ or Permanent)

**TYPE III (NON RE-DIRECTIVE)\***  
**WATER FILLED (CZ ONLY)**

**\* RESTRICTED TO LOCATIONS WHERE POSTED SPEED IS 50 MPH OR LESS. RESTRICTED TO LOCATIONS WHERE TRAFFIC IS TWO LANES OR LESS IN RUN-ON AND RUN-OFF CONDITIONS. REQUIRES A PHYSICALLY STAKED OFF CLEAR AREA AS DEPICTED ON THE PROJECT SPECIFIC SHEET THAT SHALL BE 25' WIDE AND 75' LONG.**

ENERGY ABSORPTION SYSTEMS, INC.	TL-3 ACZ-350 (CZ only)
LINDSAY TRANSPORTATION SOLUTIONS	TL-3 ABSORB 350 (CZ only)
TRAFFIX DEVICES, INC.	TL-3 SLED (CZ only)

**TERMINALS**  
(NCHRP 350 Approved)

ROAD SYSTEMS, INC.	TL-3 FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) 37'-6" with 4'-0" Offset	VDOT ST'D. GR-7
	TL-3 FLEAT Standard Post (FLEAT-SP) 37'-6" with 4'-0" Offset	VDOT ST'D. GR-7
	TL-3 SEQUENTIAL KINKING TERMINAL (SKT-350) 50'-0" 50:1 Flare	VDOT ST'D. GR-9
	TL-3 SKT Standard Post (SKT-SP) 50'-0" 50:1 Flare	VDOT ST'D. GR-9
	TL-3 FLEAT – MT Flared Median Terminal (For use with Std. MB-3)	VDOT ST'D. GR-9
TRINITY INDUSTRIES	TL-3 SLOTTED RAIL TERMINAL (SRT-350) 6-Post System 37'-6" Straight-Line Flare with 4'-0" Offset	VDOT ST'D. GR-7
	TL-3 (SRT-350) 8-Post System 37'-6" Parabolic Flare with 4'-0" Offset	VDOT ST'D. GR-7
	TL-3 CAT – 350, 31'-3" (For use with Std. MB-3. Min. 18'-9" MB-3 req'd.)	VDOT ST'D. GR-9
	TL-3 ET-2000 50'-0"	VDOT ST'D. GR-9
	TL-3 ET-PLUS (5" Channels and Butt Weld) 50'-0"	VDOT ST'D. GR-9
ENERGY ABSORPTION	TL-3 BRAKEMASTER – 350, 31'-6" (For use with Std. MB-3. Min. 12'-6" MB-3 req'd. Allow for additional 7'-3" anchorage prior to Post #1.)	VDOT ST'D. GR-9
LINDSAY TRANSPORTATION SOLUTIONS	TL-3 X-TENSION TANGENT END TERMINAL 50'-0" (Allow for additional 5'-6" anchorage prior to Post #1)	VDOT ST'D. GR-9
	TL-3 X-TENSION FLARED END TERMINAL 37'-6" with 4'-0" offset (Allow for additional 5'-6" anchorage prior to Post #1)	VDOT ST'D. GR-7
LINDSAY TRANSPORTATION SOLUTIONS	TL-3 X-TENSION MEDIAN END TERMINAL 37'-6" (For use with Std. MB-3. Min. 12'-6" MB-3 req'd. Allow for additional 5'-6" anchorage prior to Post #1)	VDOT ST'D. GR-9

**CRASHWORTHY LONGITUDINAL CONCRETE BARRIERS**  
**(NCHRP 350 Approved unless otherwise noted)**

<b>BARRIER SYSTEMS, INC.</b>	<b>TL-3 Narrow Quick Change Moveable Barrier</b>
<b>IOWA DOT</b>	<b>TL- 3 Iowa PCB Temporary CMB F-shape with Pin and Loop Connection</b>
<b>ROCKINGHAM PRECAST</b>	<b>TL-3 Temporary CMB-F shape, 12'-0" long with Slotted Tube/T-Bar Connection</b>
<b>SMITH-MIDLAND</b>	<b>TL-3 Temporary Concrete Median Barrier F-shape with J-J Hook Connection</b>
<b>VIRGINIA DOT</b>	<b>Temporary Concrete Median Barrier F-shape with Pin and Loop connection (20'-0" Length)</b>
<b>LINDSAY TRANSPORTATION SOLUTIONS</b>	<b>TL-3 Quickchange Moveable Barrier (QMB) Moveable Barrier</b>
<b>PENNSYLVANIA DOT</b>	<b>TL-3, 12'-6" Long Temporary Concrete Median Barrier F-Shape with Plate Connection</b>

**CRASHWORTHY LONGITUDINAL STEEL BARRIERS**  
**(NCHRP 350 Approved)**

<b>ENERGY ABSORPTION</b>	<p><b>TL-3 Vulcan Barrier (steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-7D PC)</b></p>
	<p><b>TL-3 Vulcan Barrier with Anchoring System VAS (steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-10A or MB-11A)</b></p>
<b>HIGHWAY CARE, INC.</b>	<p><b>TL-3 Barrier Guard 800(steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-7D PC)</b></p>
	<p><b>TL-3 Barrier Guard 800 MDS (Minimum Deflection System) (steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-10A or MB-11A)</b></p>
<b>HILL &amp; SMITH, INC.</b>	<p><b>TL-3 Zoneguard Standard (steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-7D PC)</b></p>
	<p><b>TL-3 Zoneguard Minimum Deflection (steel barrier temporary use only)</b></p> <p><b>(May be used in place of VDOT std. MB-10A or MB-11A)</b></p>

**MAILBOX SUPPORTS**  
**(NCHRP 350 Approved)**

<b>FRIEND INNOVATIONS</b>	<b>Snowplow Friendly Metal Cantilever Mailbox Support</b>
<b>FORESIGHT PRODUCTS, INC.</b>	<b>V-Loc Mailbox Support System</b>
<b>S-SQUARE TUBE PRODUCTS</b>	<b>Nex Tube Mailbox Support System</b>

**Note: All Work Zone products previously listed can be found on the Traffic Engineering Divisions TCD Pre-Approved Listing on the Traffic Engineering – Traffic Asset Program webpage**  
**<http://www.virginiadot.org/business/trafficeng-productlists.asp>**