

# Cloverleaf Corporation

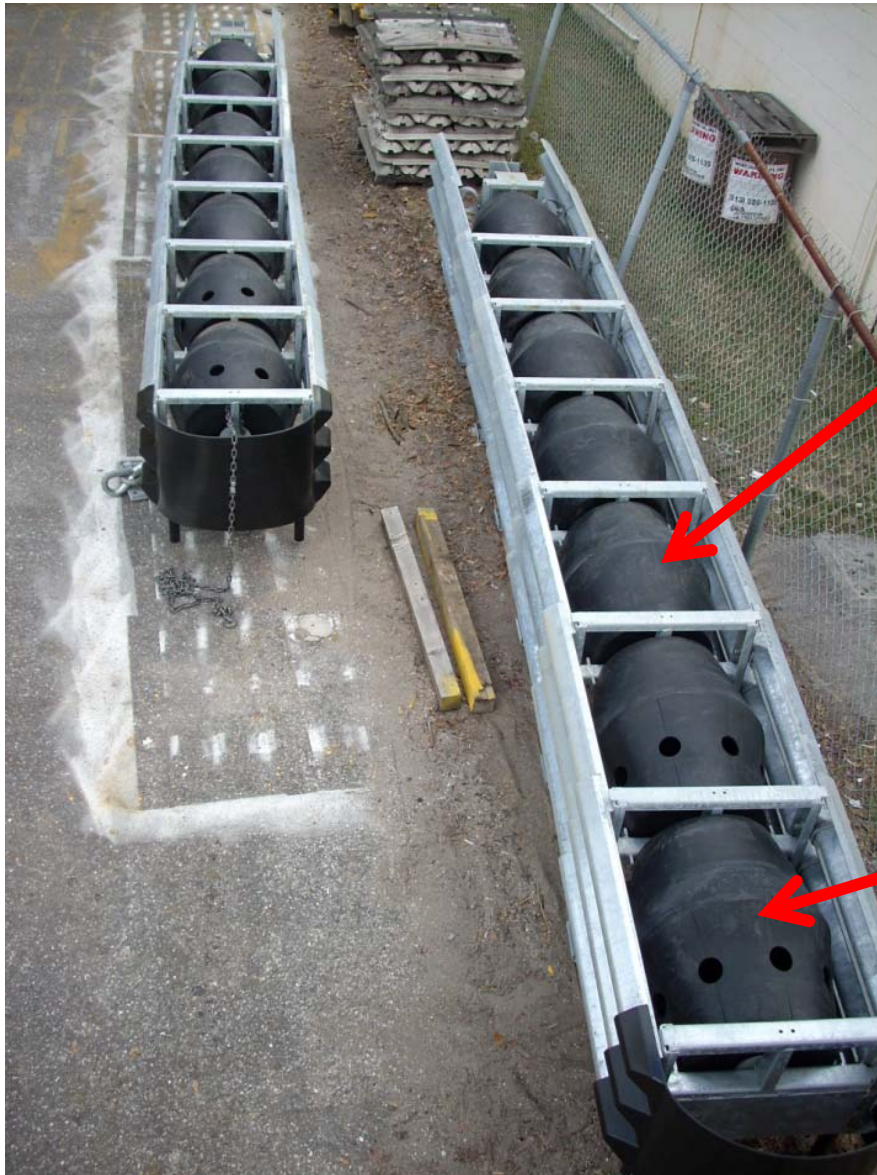
Universal TAU-II Impact Attenuator

QPL 544-0029

# TAU-II



# Cartridge Placement



Type B Cartridge

Type A Cartridge –  
holes towards the  
front

# Cartridge Placement



The writing on the cartridge should face up.

# Cartridge Placement

BACKSTOP WIDTH	SYSTEM CAPACITY									
	30 MPH	35 MPH	45 MPH	50 MPH	55 MPH	60 MPH	70 MPH			
PARALLEL UP TO 30"										
36" BACKSTOP										
42" BACKSTOP										
48" BACKSTOP										
54" BACKSTOP										
60" BACKSTOP										
66" BACKSTOP										
72" BACKSTOP										
78" BACKSTOP										
84" BACKSTOP										
90" BACKSTOP										
96" BACKSTOP										
						102" BACKSTOP				
PARALLEL BACKSTOP 66 MPH							36" BACKSTOP 65 MPH			
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<small>SCALE: 1"=20'</small> <small>TITLE: UNIVERSAL TAU-II SYSTEM CONFIGURATION MATRIX</small> <small>MODEL: DRAWING NUMBER: D031101-FL</small> <small>REV: 9</small>										

Chart is in QPL 544-0029 Vendor Drawings

# Cartridge Placement



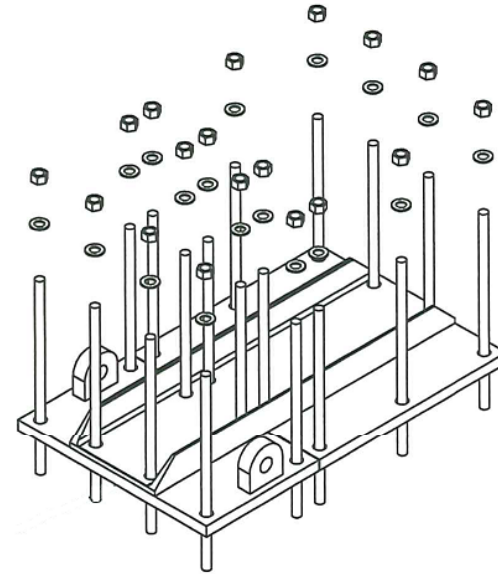
The TAU Configuration chart is printed on the bottom side of each cartridge



# Foundation Options



# Asphalt Foundations



18" threaded rod w/ 16" embedment

# Incorrect Embedment Depth



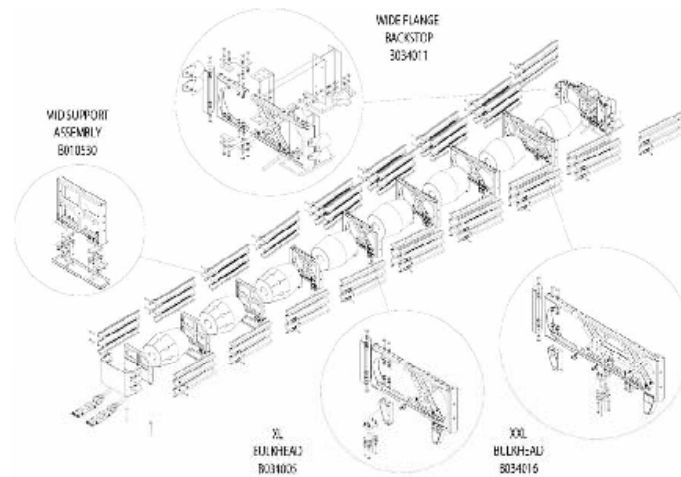
# Incorrect Embedment Depth



## Installation and Assembly Manual

# UNIVERSAL TAU-II® Crash Cushion

Step By Step Instructions For Parallel & Tapered Systems



*"Advancing Safety Through Innovation"*

An ISO 9001:2000 Company

**BARRIER SYSTEMS**

U12-8M v27 050407

Available for download: [www.cloverleafcorp.com](http://www.cloverleafcorp.com) Click on "Download Library"

## APPENDIX B - System Torque Chart

## CONCRETE INSTALLATION

Compact Backstop Anchors .....	120 ft-lbs (160 N-m)
PCB Backstop Anchors .....	120 ft-lbs (160 N-m)
Cable Anchor (Rear) .....	120 ft-lbs (160 N-m)
Cable Anchor (Front) .....	120 ft-lbs (160 N-m)
Cable Adj. Eye Bolt .....	500 ft-lbs (675 N-m)

## ASPHALT INSTALLATION

Compact Backstop Anchors .....	5 ft-lbs (8 N-m)
PCB Backstop Anchors .....	5 ft-lbs (8 N-m)
PCB Asphalt Adapter .....	5 ft-lbs (8 N-m)
Cable Anchor (Front) .....	5 ft-lbs (8 N-m)
Cable Adj. Eye Bolt .....	120 ft-lbs (160 N-m)

## SYSTEM COMPONENT INSTALLATION

Sliding Bolt Assembly .....	20 ft-lbs (27 N-m)
Front Panel Holding Nose Cover .....	200 ft-lbs (270 N-m)
Pipe Panel Mount to Backstop .....	70 ft-lbs (95 N-m)
Cable Guide Bolts .....	30 ft-lbs (48 N-m)

The Universal TAU-II Crash Cushion has been successfully tested in various configurations having the cable torque ranging from 120 ft-lbs for asphalt installation, to 500 ft-lbs of torque for concrete applications. The system will function properly under this full range of torque. If a torque wrench is not available, refer to the table below for an alternate method of reaching the desired torque range.

Ways of creating approximately 500 ft-lbs of torque:

- 6 ft. [1.8 m] wrench extension with entire weight of 100 lbs [45 kg] applied 12" from the end
- 42 in. [1.1 m] wrench extension with entire weight of 200 lbs [90 kg] applied 12" from the end
- Use free weights or human weight

These methods should ensure torque within tested range and manufacturer tolerances.

**STEP 12**

**Final Inspection**

Use the check list below to confirm that all of the installation steps have been completed.

Inspection Date	Inspection By:	Item
		All front cable anchor plate and backstop anchor bolts in place and epoxy cured.
		Clevis and pin, mounted to the front cable anchor, is installed with the handle portion of the pin on the inside of the anchor assembly, firmly tightened. <i>(This may be different depending on the type of foundation, ie, asphalt or PCC.)</i>
		All cable guide assemblies securely fastened.
		System cables tightened to meet torque specifications.
		Pipe panel mounts positioned properly, flat end facing back, cut out facing forward.
		Sliding panels installed properly to allow for stacking.
		Sliding panels should have no more than a 3/4" (19mm) gap between stacked panels.
		Nose cover properly installed with thick spacer and tightened to specifications.
		Torque Sliding Bolt assemblies to specifications. Do NOT over tighten.
		Energy Absorbing Cartridges (EAC) installed in proper A-B position and sequence. See Configuration Chart.
		EAC air discharge holes positioned properly. Rotate cast ID to the top of the cartridge.
		Asphalt adapter installed on both sides of portable concrete barrier when applicable.
		Torque all fasteners to meet specifications.

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