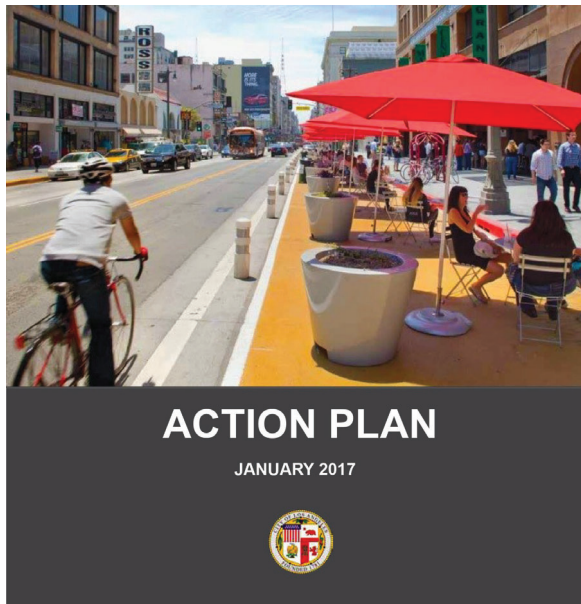


# VISION ZERO

LOS ANGELES | 2015-2025



Eliminating Bicycle and Pedestrian Accidents by 2025

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to jump back to this page



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# History of PROTECTED BIKE LANES





**First Bike Lane**  
July 1967, Davis  
California

First Bike Lane Limited Guidance



**ROADWAYS**  
Los Angeles  
2008-2023

K71 Post



K72 Style Post



**BRIDGES**  
Los Angeles  
Curbing for bridges  
2022-2023

K825 Post  
With LA Star Curb





## SECTION 1

### ENGINEERING & DESIGNING PROTECTED BIKE LANES



# ENGINEERED BIKE LANES



- A Bike Lane is defined as a portion of the roadway that has been designated by striping, signage, delineators and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists.
- Before Vision Zero was established, bike lane had no physical barrier (bollards, medians, raised curbs, etc.) that would restrict or guide the encroachment of motorized traffic.
- Conventional bike lanes run curbside when no parking is present, adjacent to parked cars on the right-hand side of the street or on the left-hand side of the street in specific situations. Bike lanes typically run in the same direction of traffic, though they may be configured in the contra-flow direction on low-traffic corridors necessary for the connectivity of a particular bicycle route.
- The configuration of a bike lane requires a thorough consideration of existing traffic levels and behaviors, adequate safety buffers to protect bicyclists from parked and moving vehicles, and enforcement to prohibit motorized vehicle encroachment and double-parking. Bike Lanes may be distinguished using color, lane markings, delineators, curbing, signage, and intersection treatments.
- With new ways of creating protective bike lanes for urban cities, bicyclists may leave the bike lane to pass other bicyclists, make left turns, avoid obstacles or debris, and avoid other conflicts with other users of the street.

# ENGINEERED BIKE LANES

## Benefits

- Increases bicyclist comfort and confidence on busy streets.
- Creates separation between bicyclists and automobiles.
- Increases predictability of bicyclist and motorist positioning and interaction.
- Increases total capacities of streets carrying mixed bicycle and motor vehicle traffic.
- Visually reminds motorists of bicyclists' right to the street.

## Typical Applications

- Bike lanes are most helpful on streets with  $\geq 3,000$  motor vehicle average daily traffic.
- Bike lanes are most helpful on streets with a posted speed  $\geq 25$  mph.
- On streets with high transit vehicle volume.
- On streets with high traffic volume, regular truck traffic, high parking turnover, or speed limit  $> 35$  mph, consider treatments that provide greater separation between bicycles and motor traffic such as:





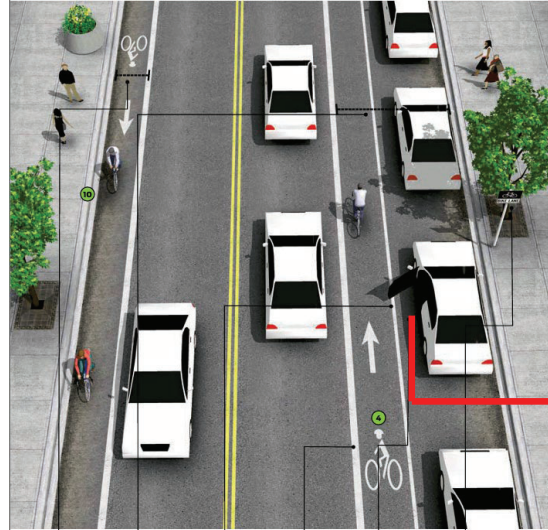
MUTCD FIGURE 3B-24



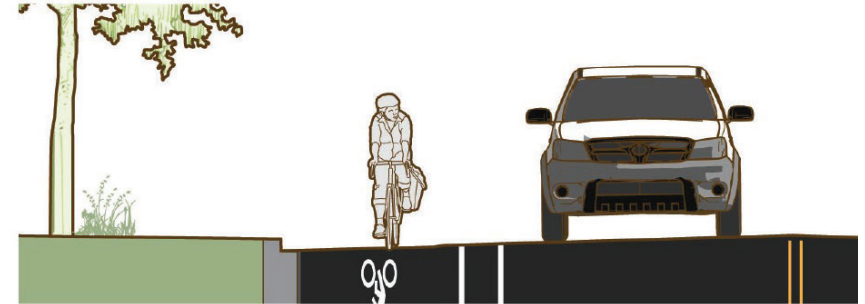
MUTCD FIGURE 3B-24



MUTCD FIGURE 3D-2



- 1 Desired width: 6 feet
- 2 Wherever possible, minimize parking lane width in favor of increased bike lane width.
- 3 4 inch solid white line
- 4 6- to 8-inch solid white line
- 5 Separation between bike lane striping and parking boundary reduces risk of door zone conflicts.
- 6 BIKE LANE MUTCD 93-17



**Bike Lane**  
6 ft (1.8 m)

**Buffer (Optional)**  
1.5-4 ft (0.5-1.2 m) or wider

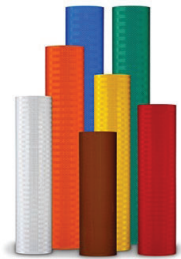
Separation between bike lane striping and parking boundary reduces risk of door zone conflicts,

# TYPICAL BIKE LANE MARKING EXAMPLES

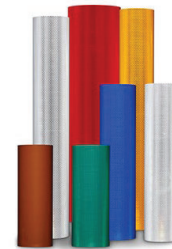
For more information:  
Visit National Association of City Transportation Officials for Safe Streets & Roads.  
<https://nacto.org/2022/05/16/safe-streets-for-all>

**NATCO**  
Urban Bikeway Design  
Guide

# Reflective Film



What is the difference between High Intensity Prismatic and Diamond Grade™ reflective sheeting?



**High Intensity Prismatic**

High Intensity Prismatic Sheeting meets middle grade performance standards and ASTM D4956 Type IV. This reflective sheeting uses polycarbonate cube corner technology and is often used for reflective traffic and road signs.

**Diamond Grade DG<sup>3</sup>**

Diamond Grade DG<sup>3</sup> reflective sheeting meets ASTM D4956 Type XI. This highly reflective sheeting uses 100% efficient full-cube prismatic technology that reflects, almost twice the amount of light back to its source as High Intensity Prismatic sheeting.

<b>Intermediate luminance</b>	<b>Luminance</b>	<b>Maximum luminance</b> Returns nearly twice the amount of light as High Intensity Prismatic with 100% efficient full-cube technology
<b>Standard</b> Standard colors perform best at low and medium light levels	<b>Colors</b>	<b>Standard + fluorescent</b> Fluorescent colors helps make the sign more visible in any light condition
<b>Performs best at medium and long distance</b>	<b>Sight distance</b>	<b>Best performance for all distances</b>

**NOTE:** K71, K72 and K825 posts can be equipped with many different films other than 3M when requested to meet city & state specifications



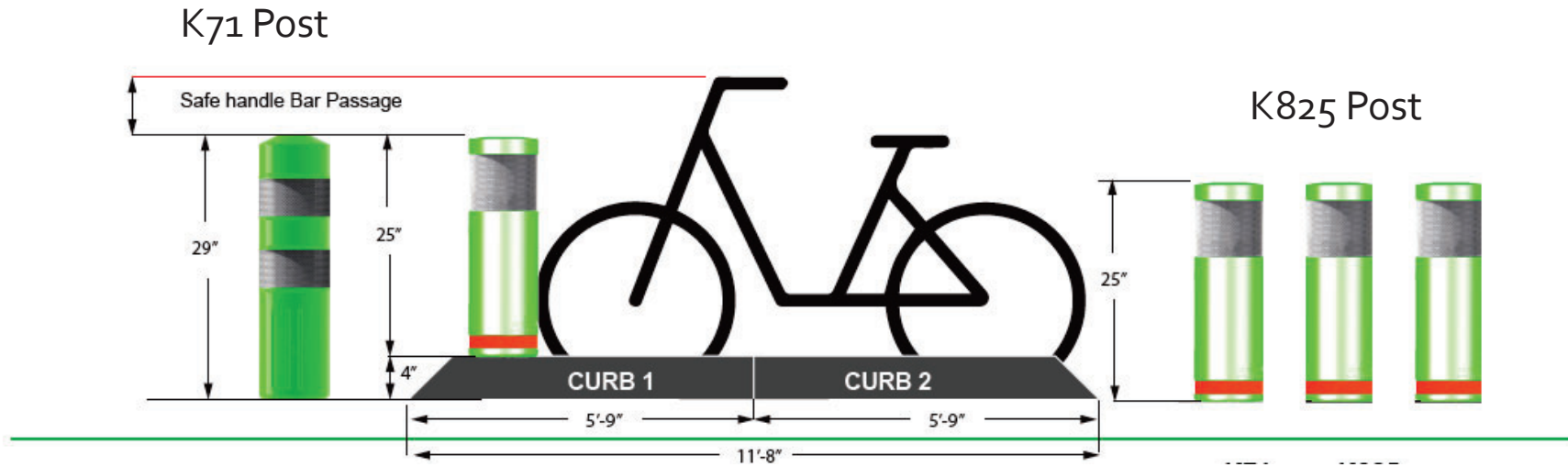
## SECTION 2

SAFE HEIGHT FOR  
BICYCLISTS 29"



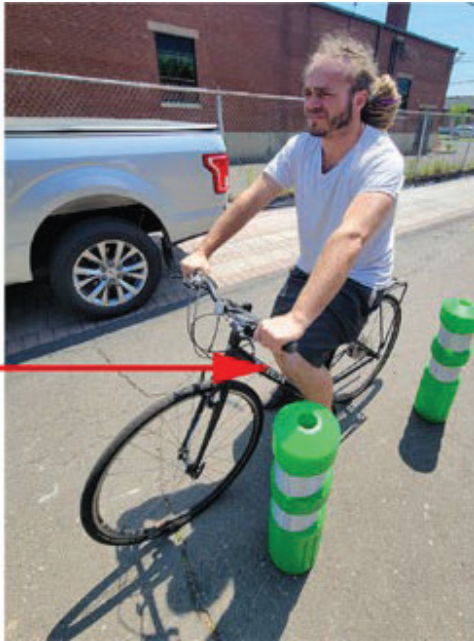


# Safe Height for bicyclists 29"



# Safe Height 29 inches

Close K71 post passage  
without handle bar  
impact



Safe Hight for handle bar  
& finger over pass



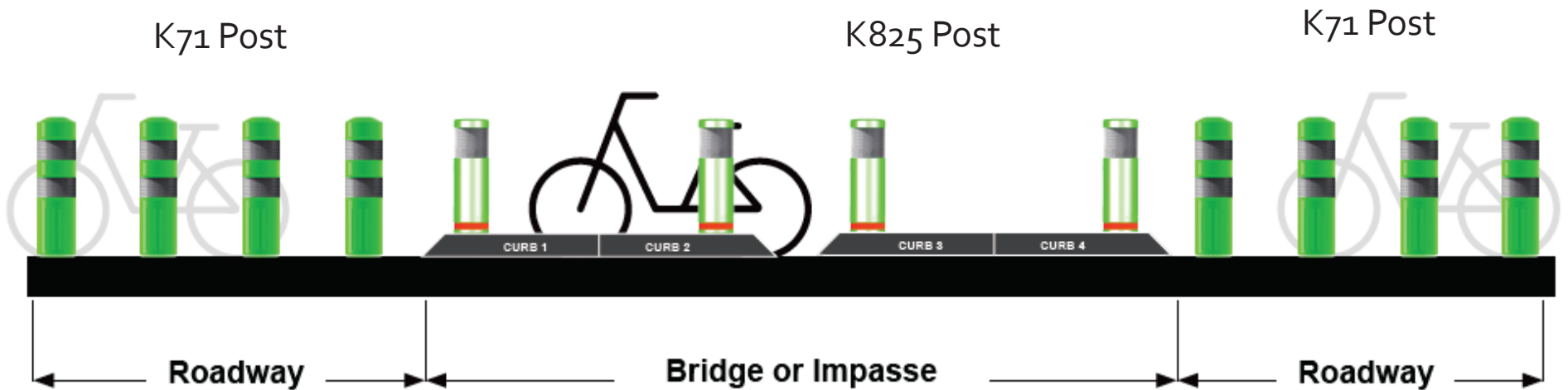


## K<sub>71</sub> IS SAFE FOR CYCLIST IMPACTS.

ENERGY ABSORBING POSTS

NO SHARP INTERNAL OR EXTERNAL OBJECTS OR RIGID PLASTIC

# Bridge & Dangerous Road Curvatures Benefit from Distinctive Lane Dividers



Incorporating raised curbing with vertical posts provides greater lane awareness for approaching motorists.

- 1
- 2
- 3
- 4
- 5

Product Reference Numbers.



## SECTION 3

### FLEXIBLE BIKE LANE TRAFFIC POSTS & CHANNALIZER OVERVIEW

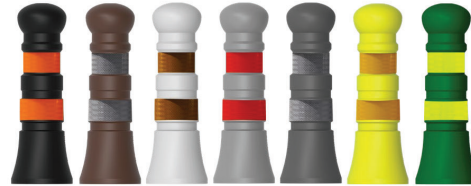


## FLEXIBLE POST OPTIONS FOR PROTECTED BIKE LANES



1

**K71 Flexible post**  
29" H x 7.5"W



2

**K72 Flexible post**  
29" H x 10"W



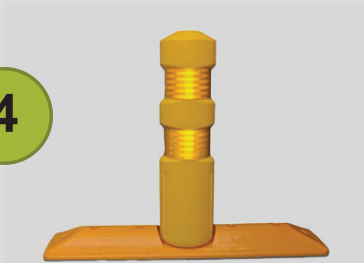
3

**NEW K825 Flexible post**  
25" H x 8"W

## FLEXIBLE POSTS WITH UNIVERSAL CHANNELIZER

*Channelizer fits K71 & 3" dia. Evelux Post*

4



**K71 with ABS CHANNELIZER**  
with Neoprene base

39" L x 7.5"W x 3"H

5



**Evelux 3" dia. Flexible 39" Traffic Post**  
With anchor base or ABS CHANNELIZER

39" L x 8.66"W x 3"H



Evelux 39"  
Traffic Post can be  
attached with full  
face directional  
signage



1

# APPLICATION TYPES



Pedestrians



Bicycle Paths



Vehicles



1

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES



K71 Flexible post  
**29" H x 7.5" W**

Over the past 20 years, US Reflector K71 bicycle lane posts have helped redefine protective bike lanes across north America. The K71 bollards are softer than the flexible thinner posts commonly used and provide a much greater visual separation of traffic and bicycle lanes day & night with 2 high reflective collars 4-inch wide each. (192 square inches of reflective surface)

The K71 post has become part of the Vision Zero program helping redefining safer roadways for the future. Easy to install and maintain, the K71 post 7.5-inch diameter helps motorists and bicyclists identify bike lanes apart from standard thin construction zone and typical channelizing posts.



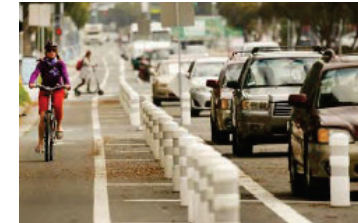
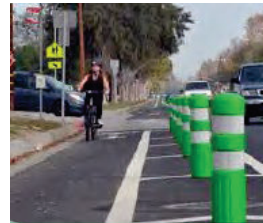
1

## K71 Flexible post **BENNIFITS**



- **FLEXIBLE**

The K71 Marker Post "gives" under impact and re-erects into its vertical position without the use of springs or pivoting devices. Hybrid rubber type materials and energy absorbing design allows the K71 post to reform to its original molded profile after impact. In the event a bicycle or pedestrian falls on the post, the K71 will cushion the impact as there is no rigid vertical parts to the post and is completely hollow inside.



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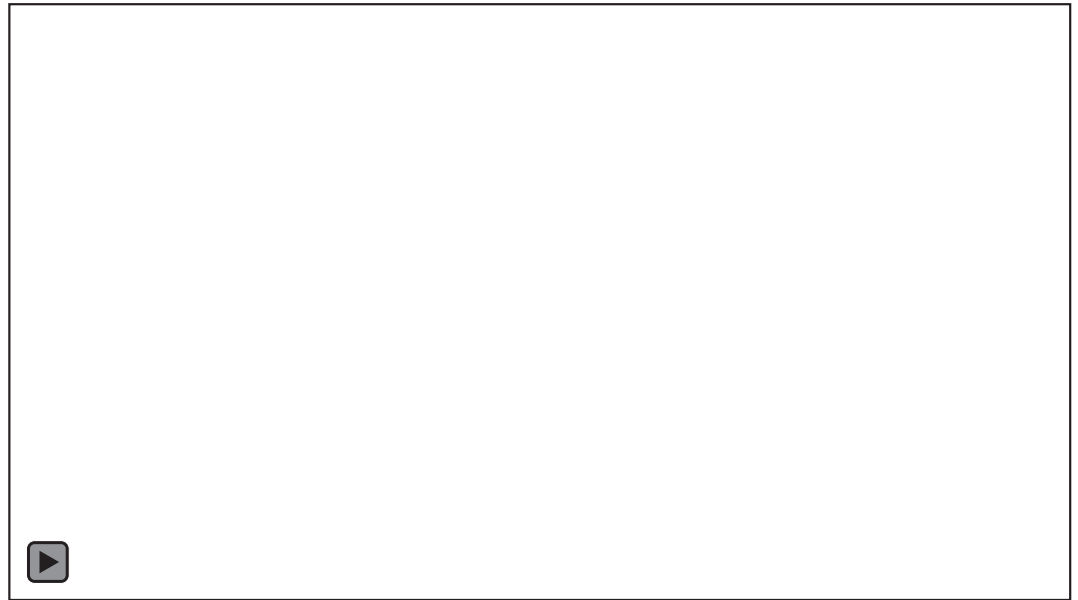
**The K71 Marker Post provides long-term safety for all road users and takes just seconds for removal and re-installation.**

# 1 K71 Flexible post Ripped open

- **FLEXIBLE even when ripped open**  
Two K71 Marker Posts were discovered a couple years ago that had been damaged by snowplows. What is extraordinary is the posts still function with half of the bottom of the post missing. What video below to see how the hybrid material still holds the post upright and remains flexible.



Damaged K71 posts remaining upright.

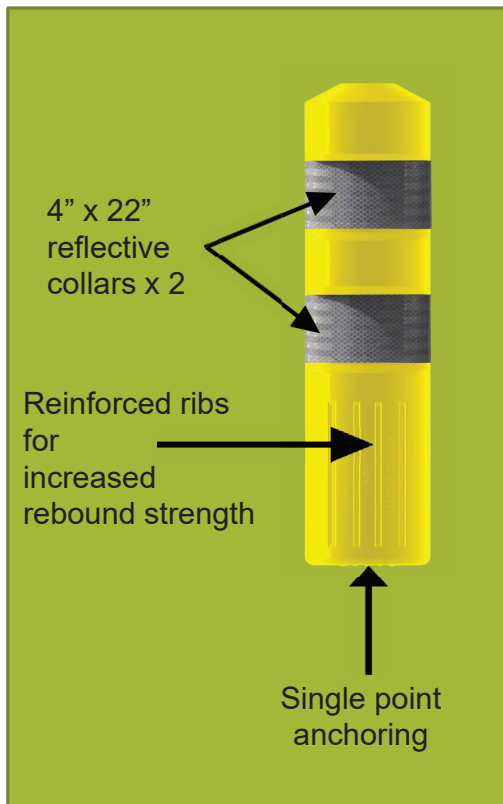


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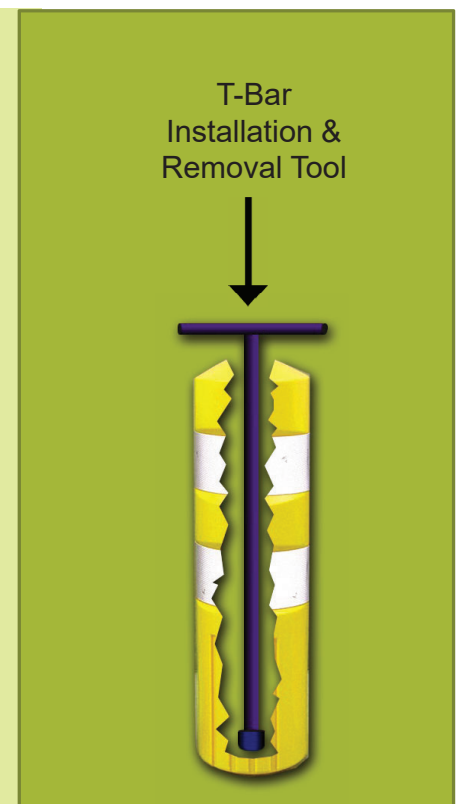
**The K71 Marker Post provides long-term safety for all road users and takes just seconds for removal and re-installation.**

1

## K71 Flexible post **BENNIFITS**

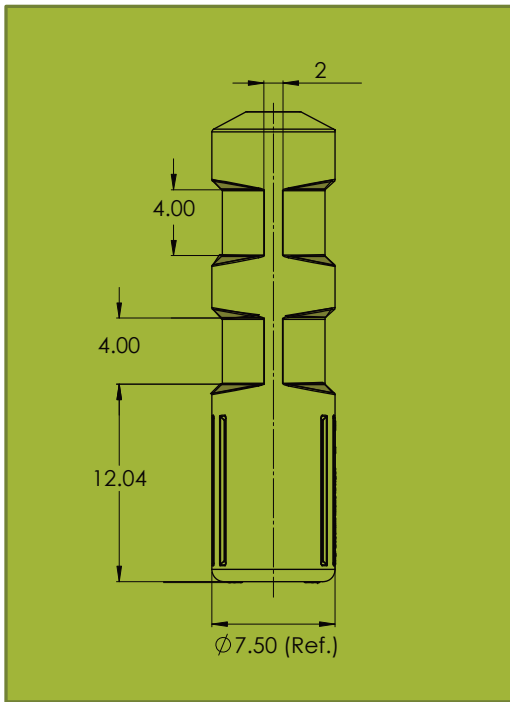


- **Recessed collars**  
Help provide long reflective film collar life by allowing the outer post to protect the collars from shearing
- **SINGLE POINT ANCHORING SYSTEM**  
K-71 Posts are designed with a single point anchor system that promotes quick installation and removal. Sealed ground anchor eliminates water infiltration unlike lag bolts and lag shields.
- **K-71 post has 3 mounting options**
  1. Anchor directly to the road surface
  2. Bonded to the surface with rubber disk
  3. Mount to channelizers and rubber lane dividers
- **Anchoring**  
The K71's "molded-in" anchor attachment disk system eliminates the problems of lost or missing hardware. All that is needed is a T-bar for installation and removal of the post.



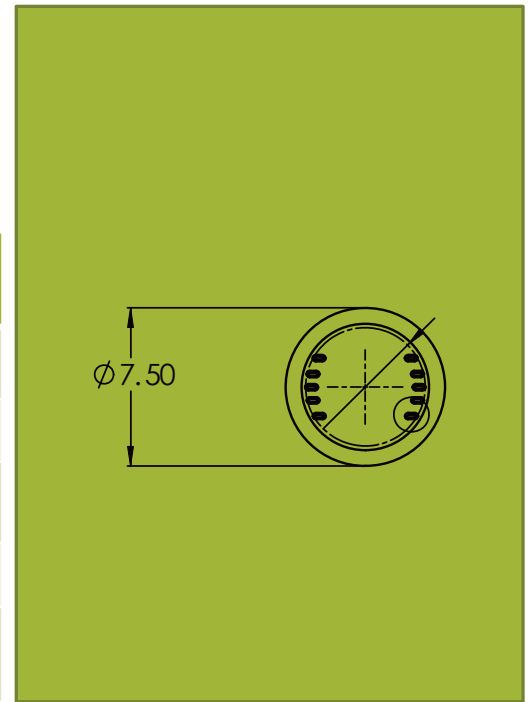
1

# FLEXIBLE POSTS FOR PROTECTED BIKE LANES



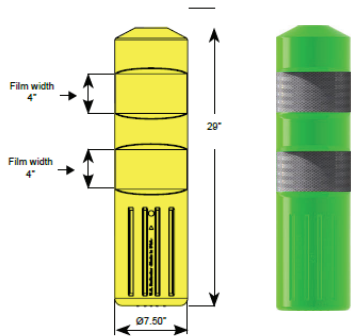
## K72 Flexible post DIMENTIONS

Dimensions	Inches	Centimeters
Height	29	74
Width	7.5	19
Film width	4	10
	Lbs.	Kgs
Weight	4	1.8



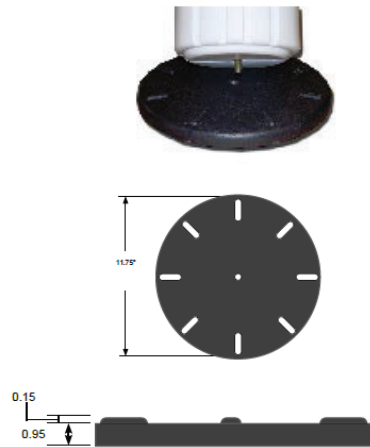
# K71 Flexible post Mounting Options

1



**K71 Post**

(Direct mount to asphalt & concrete) with anchor bolt



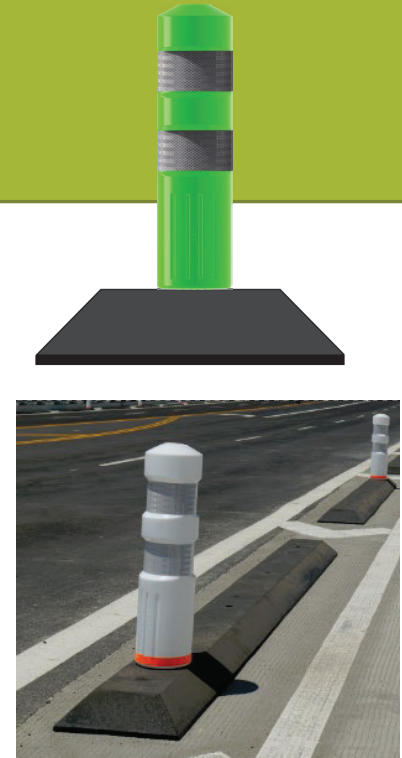
**K71 Post weighted disk**

(Bond to asphalt & concrete)



**K71 Post & channelizer**

Channelizers for lane dividing (Requires anchors to attach to asphalt & concrete)



**Rubber lane dividers**

K71 mounts to several lane divider widths. Molded-in anchors in the divider eliminates the need for hardware for direct attachment.

2

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES

### K72 Flexible post MOUNTING OPTIONS



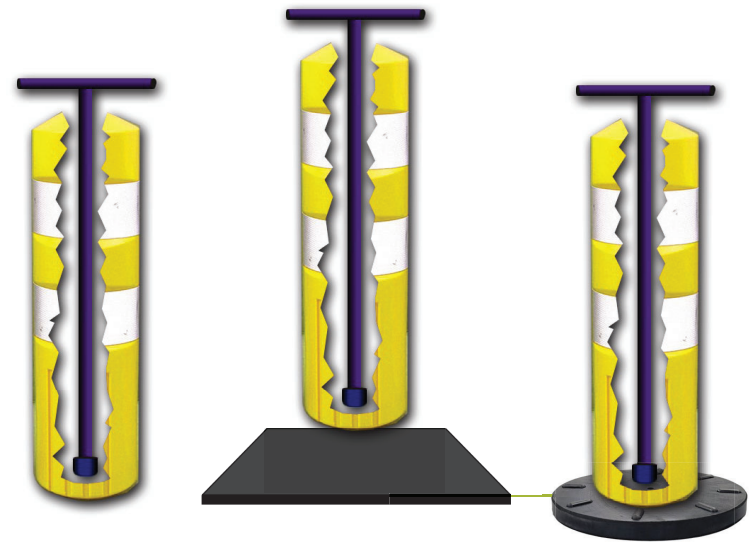
Direct surface mount  
(with anchor Bolt)



Curb mount



Glue down  
disk



Single Point Anchoring System only requires a T-Bar for  
easy installation and removal

Mounting hardware is inside the K71 post. Never worry about missing bolts and hardware

1



**K71 POST**

**DEFINING**  
**BIKE PATHS**



1

# BIKE LANE VISIBILITY

No Post Guidance



3-Inch-wide Post Guidance



7.5-Inch-wide Post Guidance



Wide K71 post enhance the presence and define bike lanes



1



**K71 POST \* VISIBILITY FROM A DISTANCE**

**DEFINING BIKE PATHS**

1



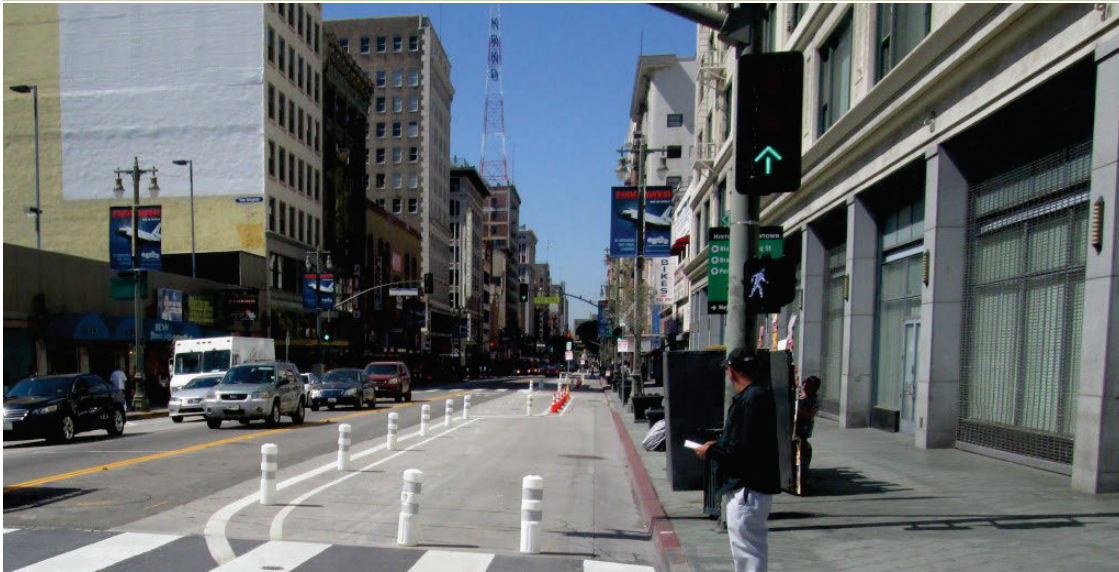
K71 POST \* VISIBILITY FROM A DISTANCE

DEFINING BIKE PATHS



1

# Reflectivity



**2 COLLARS 4 INCHES WIDE EACH**

**EACH BAND IS 24" LONG X 4" WIDE  
OR 96 SQUARE INCHES PER BAND**

# Wide body enhances visibility from a distance





# Day Time Visibility

1



**WIDE DIAMETER K71 POST DO NOT REQUIRE A BASE ALLOWING FOR CLEAN MODERN VISUAL AESTHETICS OVER DISTANCES**

1

# Green K71 Flexible Marker Post



Bright Green



Forest Green



1



## 1 IDENTIFY FIRE HYDRANTS ALONG BIKEWAYS WITH RED K71 POSTS

---

1



**Urban city channelization Examples**



1



**Urban city channelization Examples**

# K71 Mounted on Rubber Curb

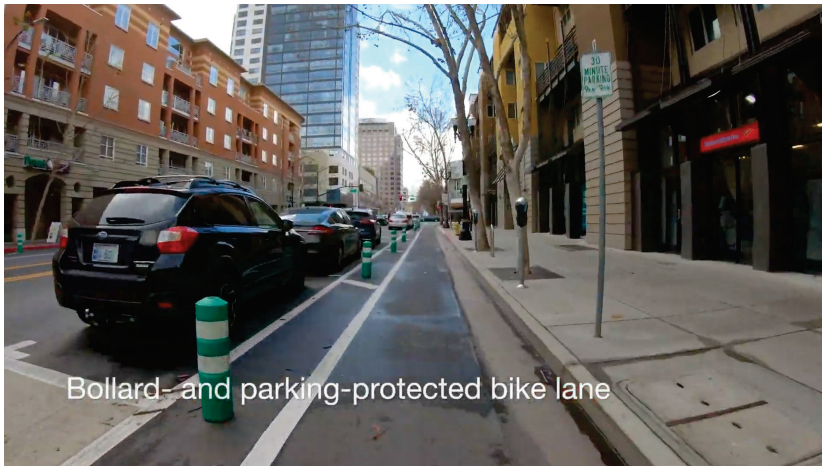
1 Post

14 LA StarCurb





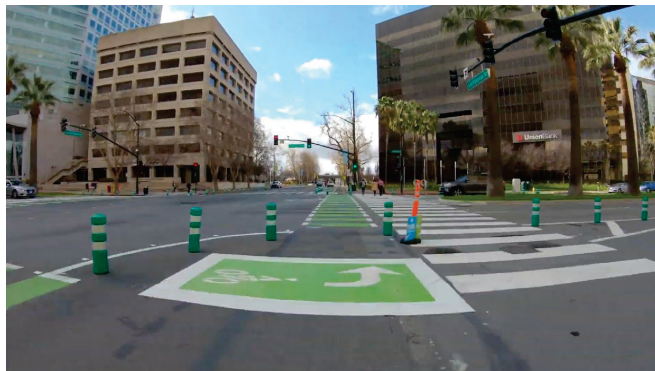
# 1 Bump Outs and Road Obstacle Examples



Bollard- and parking-protected bike lane



Bus boarding island



1

# K71 POSTS WITH BUS PLATFORMS



BUS PLATFORMS

K71 posts help identify the beginning and end of bus platforms for cyclists and motorists.

K71 posts help channelize cyclists between the sidewalk and platform while 2 posts are used to identify the exit/entry to the raised bus platform.



1

# K71 POSTS WITH BUS PLATFORMS



Actual Location

K71 posts help identify the beginning and end of bus platforms for motorists.

Should additional post have been added to the corners and exit/entry to the raised bus platform for added guidance?



Image Simulation  
(white posts with green bands added)

BUS PLATFORMS DISCUSSION BOARD

1



# LONG BEACH CALIFORNIA

Installation Examples





**Without Painted Crosswalks**

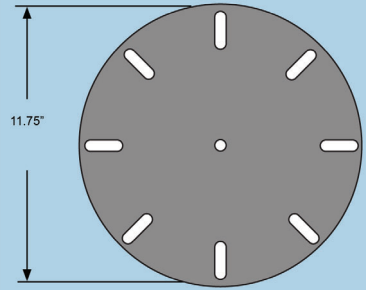


**With Painted Crosswalks**

---

# HOUSTON TEXAS

**1** Rubber weighted disk  
For bonding to road surface

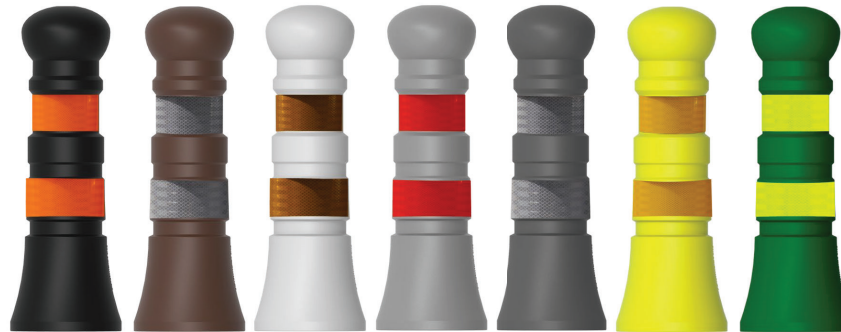


**K71 POST \* LOW PROFILE RECYCLED RUBBER DISK FOR GLUE DOWN APPLICATIONS  
SUCH AS BRIDGES AND FRESHLY PAVED ROADWAYS**



2

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES



K72 Flexible post  
**29" H x 10" W**

K72 STYLE posts are a soft and flexible marker post designed to add esthetics to protected bike lanes and municipal traffic calming applications. Designed to look like steel posts, the K72 Posts are easy to install and can be used for temporary or permanent applications.

Equipped with 2 reflective bands for day night visibility. The K72 Style posts unique design brings a new generation of traffic control devices with functional creativity.

2

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES

### K72 Flexible post

### **BENEFITS**

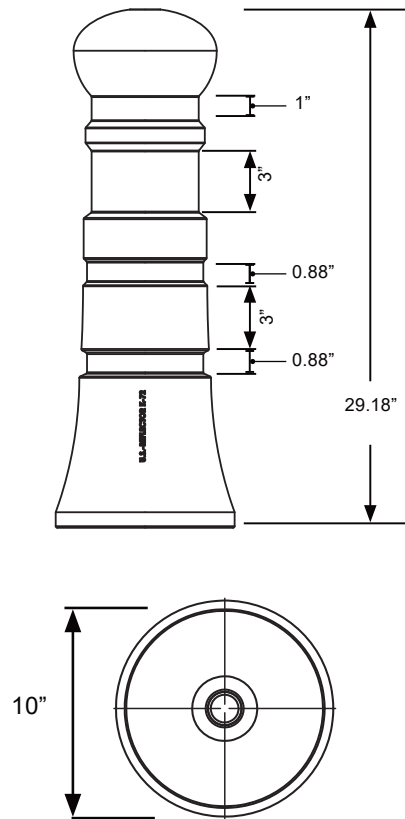
The K72 Style post is a single piece design traffic calming device that is manufactured with unique blend of polyethylene and UV inhibitors. The combination of these materials offers exceptional softness characteristics and remarkable re-erecting memory. Strong and durable with no springs or pivoting devices, the K72 takes just seconds for removal and reinstallation.



- Soft and flexible
- Quick and simple to install
- Aesthetic street scape traffic calming
- Nonaggressive rounded Top head
- “Style Post” Looks solid with full rebound characteristics
- Reflective colors for day contrast and night visibility

## 2 FLEXIBLE POSTS FOR PROTECTED BIKE LANES

### K72 Flexible post **DIMENSIONS**



Dimensions	Inches	Centimeters
Height	29	74
Width Top	8	20
Width Center	6	15.2
Base	10	25.4
	Lbs.	Kgs
Weight	4	1.8



2

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES

### K72 Flexible post **MOUNTING OPTIONS**



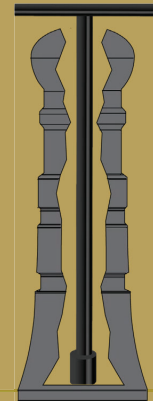
Direct surface mount  
(with anchor Bolt)



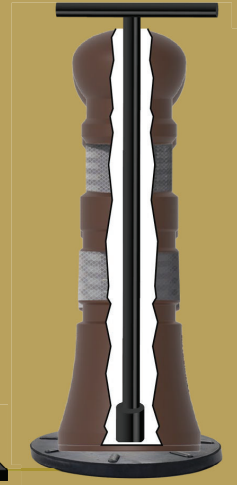
Curb mount



Glue down  
disk



Single Point Anchoring System only requires a T-Bar for  
easy installation and removal



Mounting hardware is inside the K72 post. Never worry about missing bolts and hardware



# DTLA FORWARD INITIATIVE AND VISION ZERO K72

---

2



# K72 STYLE POSTS

Reflective band location options





# K72 POST

Many cities and counties prefer to use the K72 post as the bike lane as it looks different from standard 3-inch diameter posts. The unique profile of the K72 post helps identify to motorists and bicyclist the presence of a bike lane and not a vehicle traffic lane.

2



**K72 POSTS ARE USED FOR DESIGNATING  
BEGINNING AND END OF PARKING ZONES**

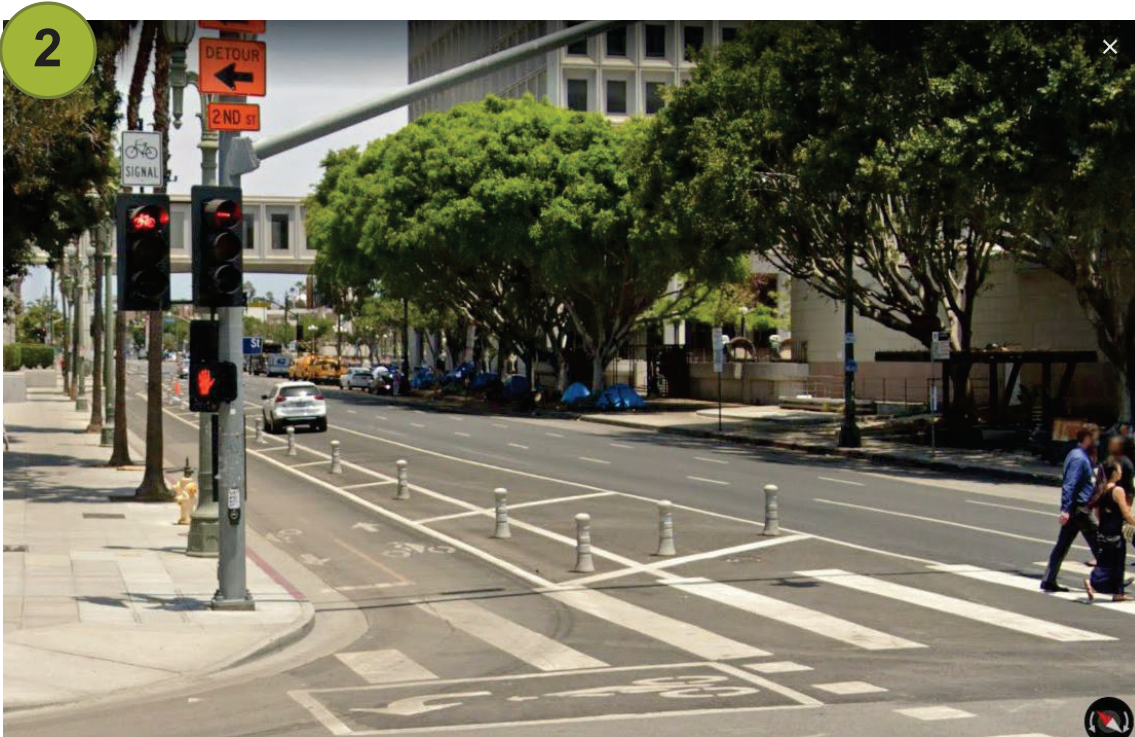


2



**K72 POSTS ARE USED FOR DESIGNATING  
BEGINNING AND END OF PARKING ZONES**





---

**K72 POSTS ARE USED FOR DESIGNATING BEGINNING AND END OF PARKING ZONES**

2



---

## K72 POST BIKE PATHWAYS & MERGING LANES



2

## DIRECT ANCHORING OR RUBBER DISK





3

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES



New K825 Flexible post

**25" H x 8" W**

### **HIGH VISIBILITY BIKE LANE SAFETY**

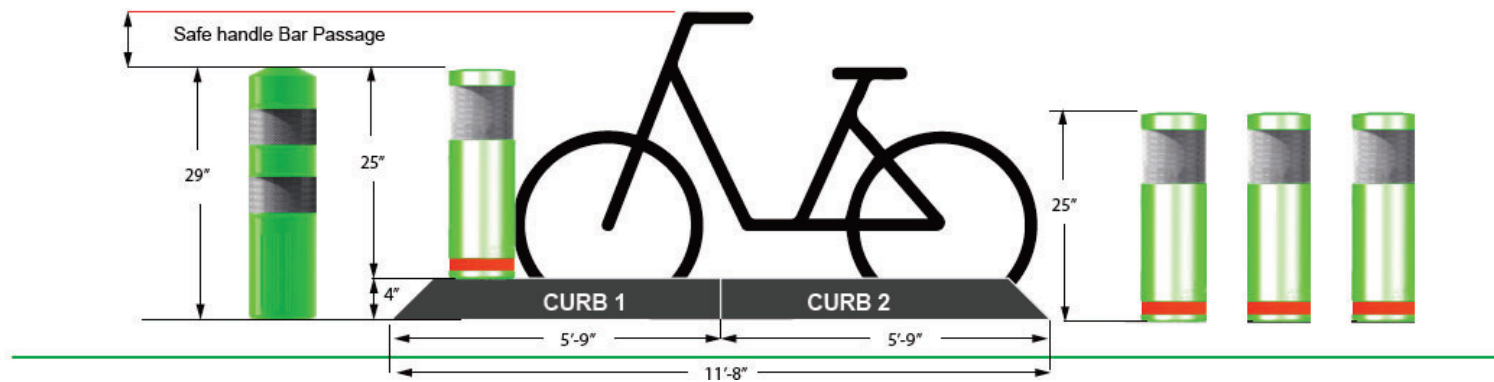
US Reflectors new K825 self-re-erecting marker post has been specially designed with a wide body to distinctly alert approaching motorists of the presence of a protected bike lane.

### **DAY NIGHT VISIBILITY**

The K825 post has a wide 8-inch diameter profile with a 6-inch diamond grade reflective collar in addition to a 1-inch fluorescent orange reflective band at the base making it distinct and prominent for identifying protected bike lanes by not competing or conflicting with typical 2 and 3-inch diameter posts that are commonly used for construction zones and road delineation. Of course, any post is important to help identify a bike lane, but in the end bike lanes should have their own style to designate and identify to all motorists the presence of a protected bike lane the same way school zones, crosswalks and handicap locations are represented

3

## FLEXIBLE POSTS FOR PROTECTED BIKE LANES



### HIGHT

The K825 post height was specifically made to align with the K71 post when seated on a curb as illustrated above. The 29" height brings uniformity when wide or narrow lane curbing is used typically for bridges and or dangerous turns.

3

# Mounting Options K825 Post



Direct surface mount



Curb mount



Glue Down Disk

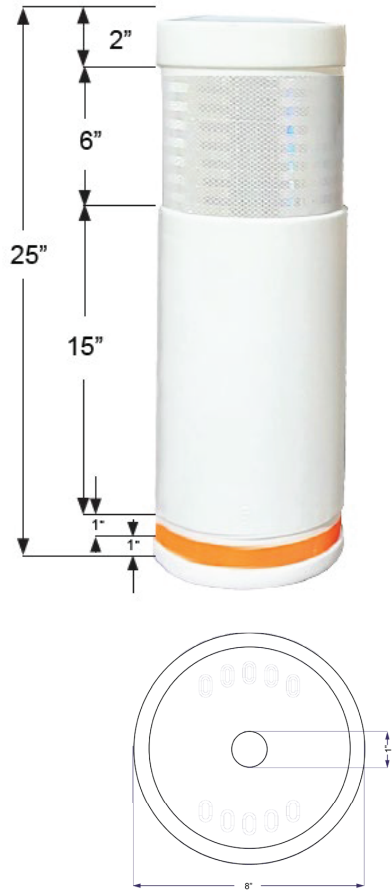


Single Point Anchoring system only requires a T-Bar for easy installation and removal.

**Mounting hardware is molded inside the K825 post. Never worry about missing bolts or hardware**



3



Dimensions	Inches	Centimeters
Height	25	63.5
Width	8	20
Reflective collars	2	
Reflective film type	Diamond Grade	
Film width top	6	15.24
Film width bottom	1	2.5
	Lbs.	Kgs
Weight	4	1.8

## DESIGN & DIMENSIONS

3

14



## SECTION 4

### LA STARCURB & K825 POST



3

K825 POST

14

LA STARCURB



## SIXTH STREET BRIDGE LOS ANGELES

---

K825 POST WITH LA STARCURB



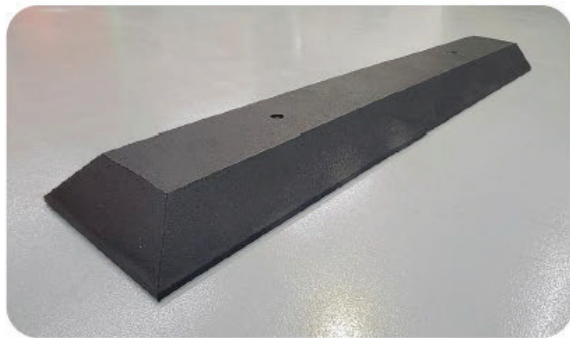
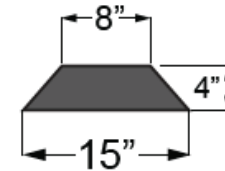
3

14

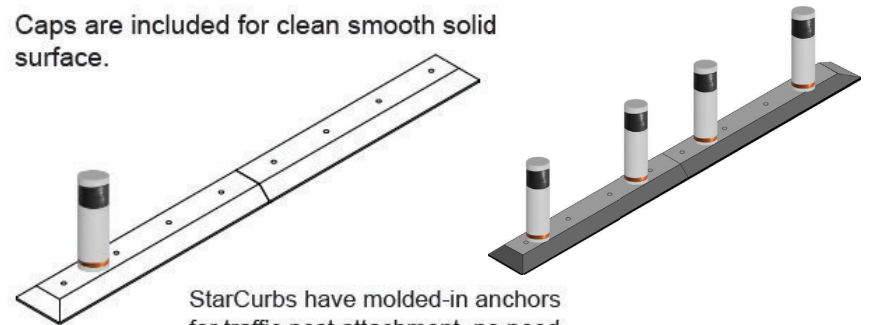
# LA StarCurb Specifications

## Specifications

Length	5'-11"
Base width	15"
Top with	8"
Weight	140 lbs

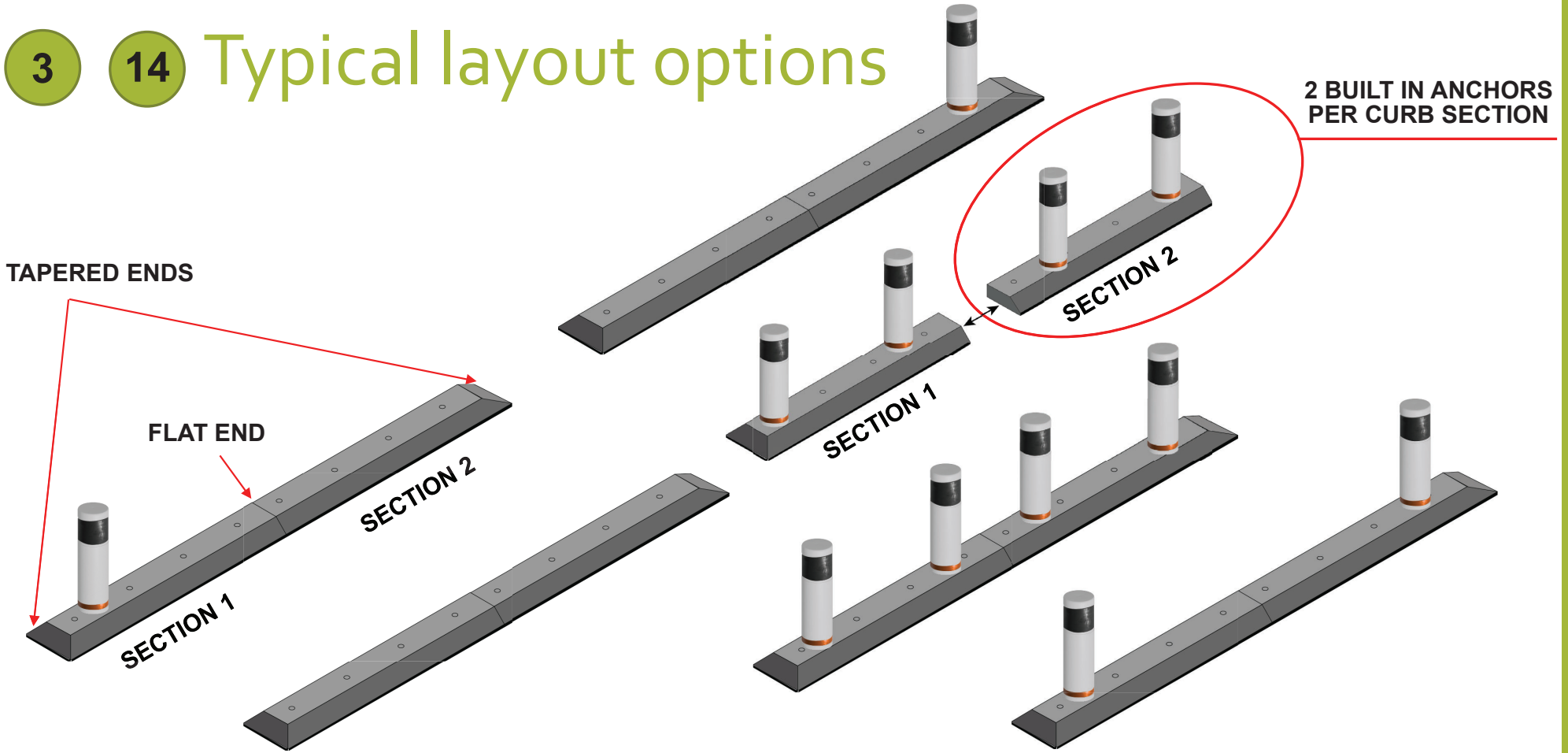


Caps are included for clean smooth solid surface.



StarCurbs have molded-in anchors for traffic post attachment, no need for extra bolts & screws.

# 3 14 Typical layout options



- LA STARCURB HAS 2 BUILT IN ANCHORS PER CURB SECTION

3

14

# Sixth Street Bridge Curb and Post





3

14

## Sixth Street Bridge LA Starcurb & K825 Post



K825 post is manufactured with the same Hybrid flexible low-density materials as the K71 & K72 posts

3

14

## Sixth Street Bridge LA Starcurb & K825 Post

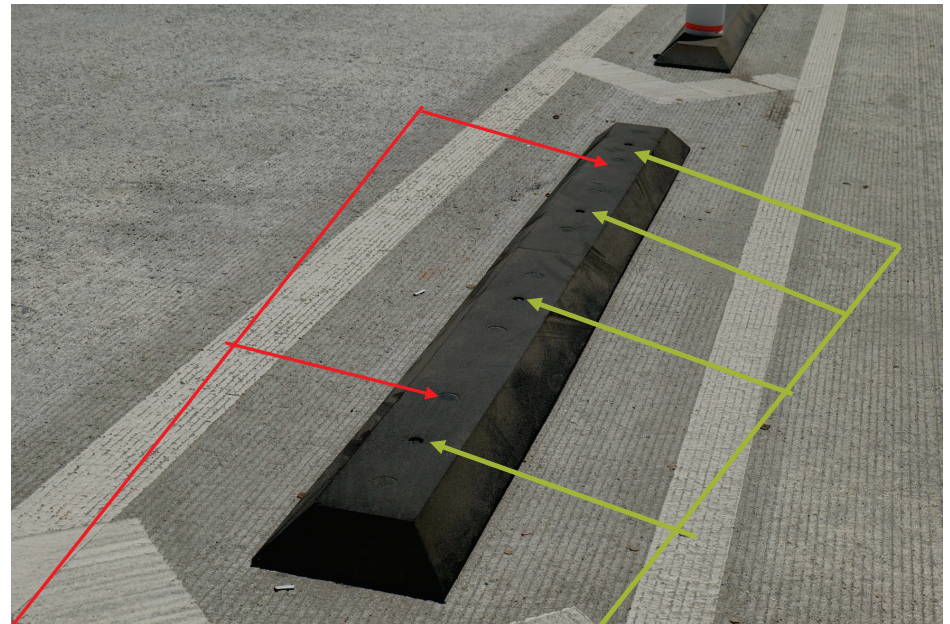




3

14

# Mounting K825 Posts to LA Starcurb



2 embedded post anchors

4 Anchors for fixation  
(Adhesive or mechanical)



3

14

15" wide LA StarCurb provides imposing roadway separation for motorists and bicyclists



3

14

K825 Post on 4"x15" Curb



K71 Post on 4"x15" Curb



- 1
- 2
- 3



## SECTION 5

### INSTALLATION & REMOVAL OF K71, K72 & K825 POST





1

2

3

# Installation and Removal of K71, K71 & K825 Traffic Posts



K71



K72



K825

- 1
- 2
- 3

### Flexible Marker Posts Typical installation time

1 Man 10 Posts per Hour. 2 Men 20 Posts per Hour.	Drilling Approx:	1-2 minutes
	Clean Hole:	< 30 seconds
	Inject Epoxy:	< 30 seconds
	Insert Sleeve:	< 30 seconds
	Install Post:	< 30 seconds
	Removal of Post	< 30 seconds
	Replacement of post	< 30 seconds

Bonded Anchor Sleeve  
Eliminates Water infiltration

- 1
- 2
- 3



Drill Hole 5.75" Deep



Wire brush hole to remove drill powder from cavity



Blow out debris with air



Insert Adhesive



Insert Metal Sleeve



Remove cap for anchor access



Align internal bolt with ground anchor



Spin post in with T-Bar



Open to Traffic



# Bonded Anchor Sleeve Eliminates Water infiltration



- 1
- 2
- 3



K71

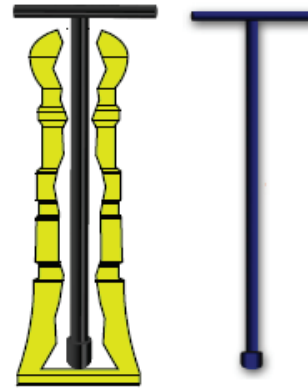


K72



K825

**T-BAR QUICKLY INSTALLS AND REMOVES POST**



1

2

3

# ANCHOR INSTALLATION

- Image 1. Proper drilling depth makes for perfect seating for the anchor.
- Image 2. Hole drilled too deep. (Will make it hard to remove protective cap).
- Image 3. Holes drilled to deep can be filled with small stones to adjust height.

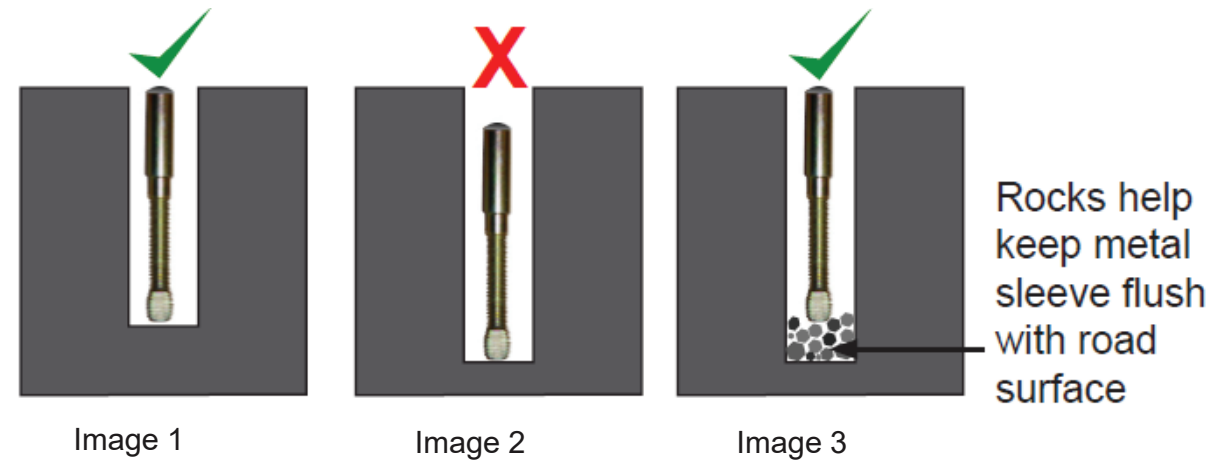
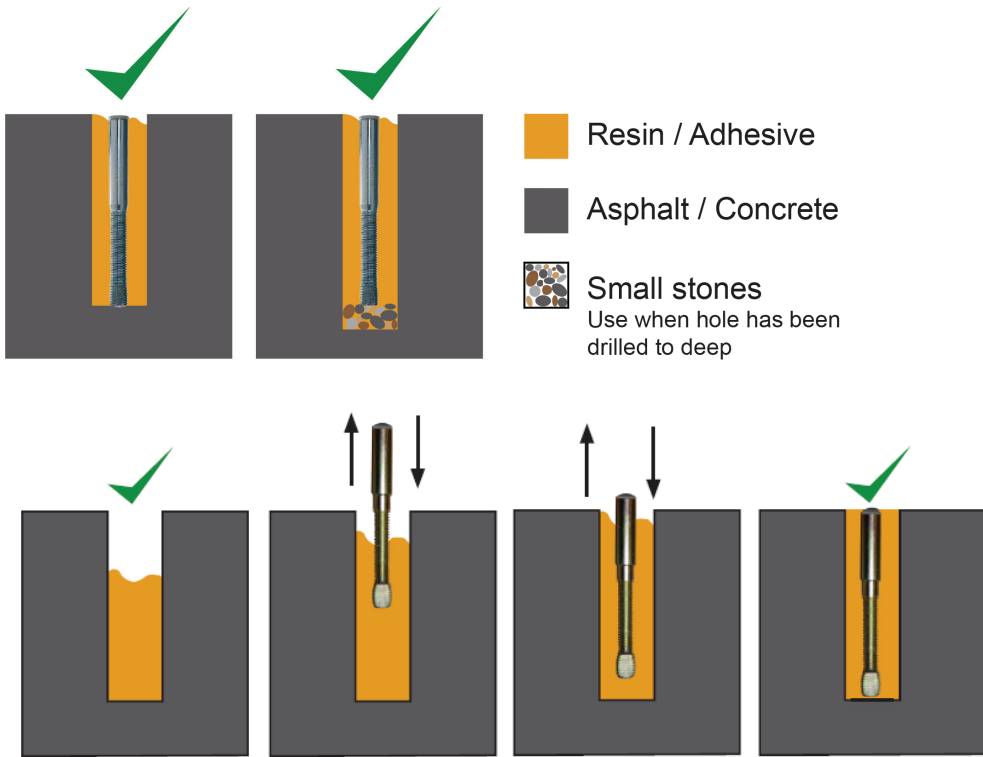


Image 1

Image 2

Image 3

# 1 2 3 ANCHOR INSTALLATION



Bonded Anchor Sleeve Eliminates Water Infiltration

## ASPHALT REINFORCMENT SCREEN

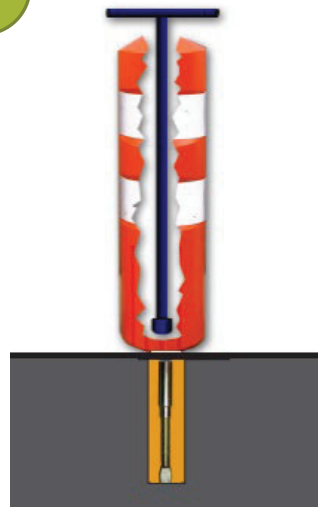


Screen for asphalt installations only

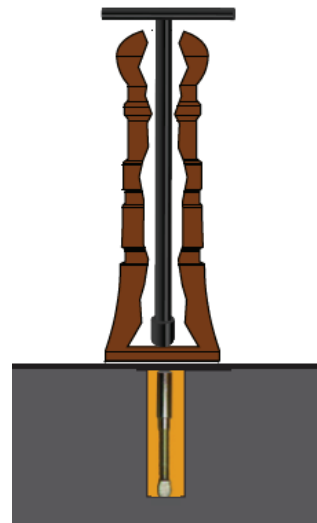
While inserting the sleeve, lift up 1 to 2 inches randomly, this will help spread the resin properly throughout the depth of the hole and improve adhesion to material.



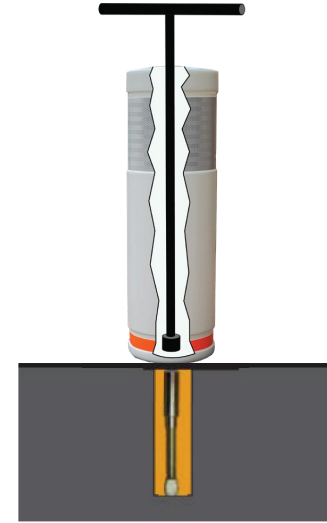
- 1
- 2
- 3



K71



K72



K825

# INSTALLATION COMPLETE

Anchor design benefits

1. Anchoring Hardware molded inside post
2. Single Piece Design
3. No parts to lose

- 1
- 2
- 3

# ADHESIVE DISK OPTION

Flat 10-inch low profile disk provides temporary or permanent placement of posts.  
Bonding for permanent fixation

- Freestanding for portability
- Fits K71, K72 & K825 Posts



4

5



## SECTION 6

### UNIVERSAL CHANNALIZERS

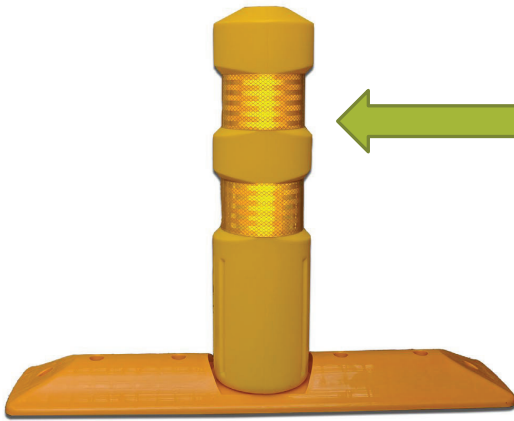




## FLEXIBLE POSTS WITH UNIVERSAL CHANNALIZER ABS CHANNELIZERS

*Channelizer fits K71 & 3" dia. Evelux Post*

4



K71 with ABS CHANNELIZER  
with Neoprene base

39" L x 8.66"W x 3"H

Evelux 39" long channelizer fits wide K71  
post and or 3" diameter flexible posts



5



Post height options  
30" & 39" tall

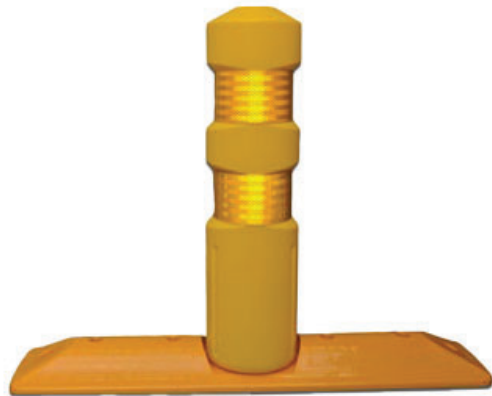


Evelux 39"  
Traffic Post can be  
attached with full  
face directional  
signage

4

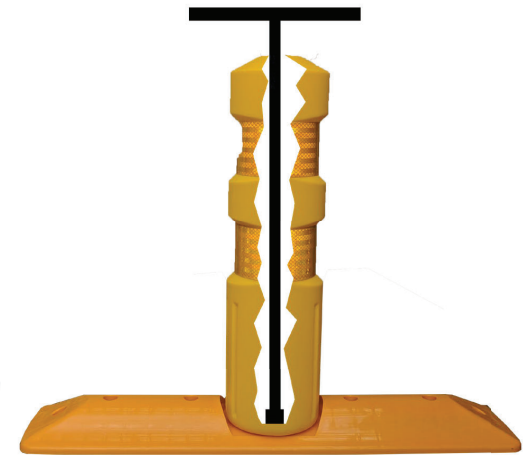
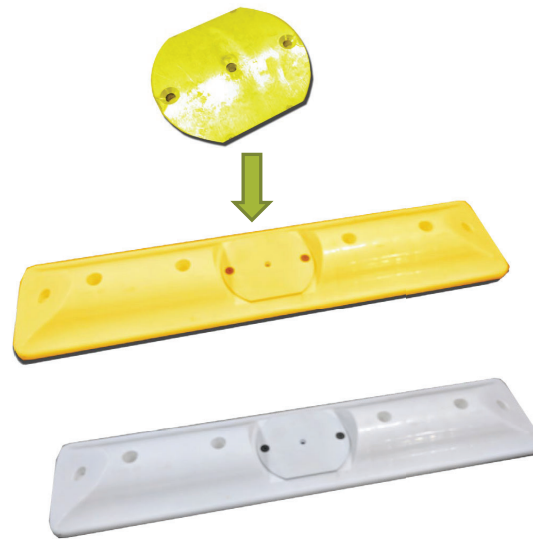
## FLEXIBLE POSTS WITH UNIVERSAL CHANNALIZER ABS CHANNELIZERS With 7.5" Flexible K71 Post

Adapter base plate is required for K71 post



K71 with ABS CHANNELIZER  
with Neoprene base

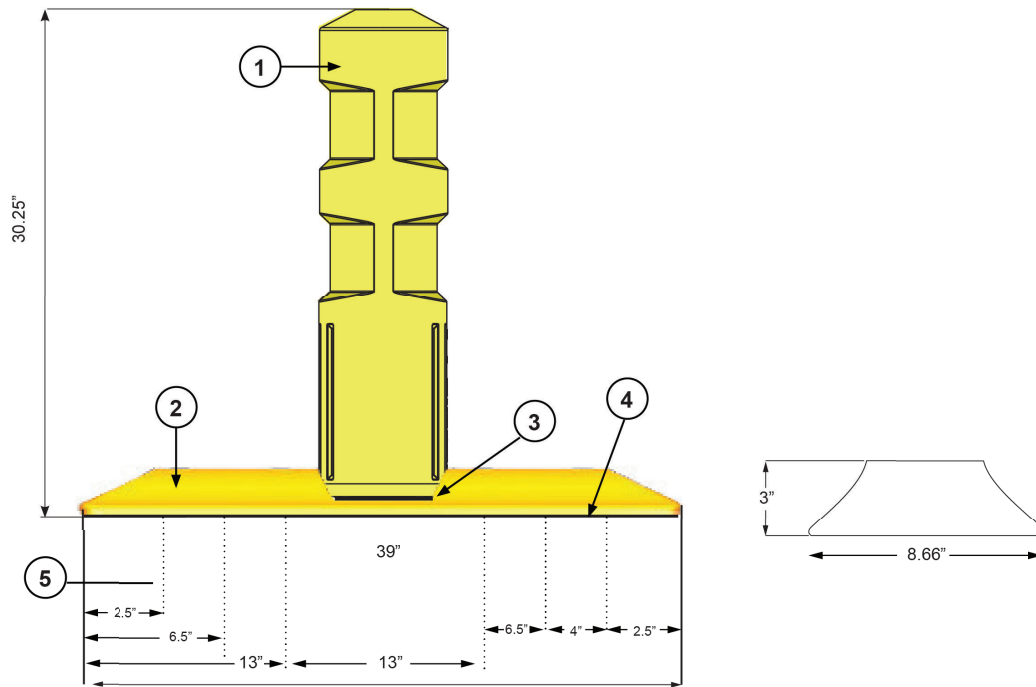
39" L x 8.66"W x 3"H



4

## FLEXIBLE POSTS WITH UNIVERSAL CHANNALIZER

### ABS CHANNELIZERS With 7.5" Flexible K71 Post



**K71 with ABS CHANNELIZER  
with Neoprene base**

Reference	
1	K71 Flexible marker post
2	Channelizer (with Neoprene attached)
3	K71 Anchor plate
4	Neoprene grip pad
5	Anchor holes X6

Dimensions	Inches	Centimeters
Post & Curb Length	39	76.8
Curb Width	8.66	22
Curb Height	3	7.6
	Lbs.	Kgs
Weight	9.5	4.3



4

**Evelux T-Curb Lane Divider**  
39" Long x 8.66" Wide x 3" High  
8 lbs

**ABS PLASTIC**

(with Neoprene base allows "Enhanced gripping to road surface")

*Link to Product Page*

<https://www.usreflector.com/PDF-Products/eveluxusa-total-performancer4.pdf>

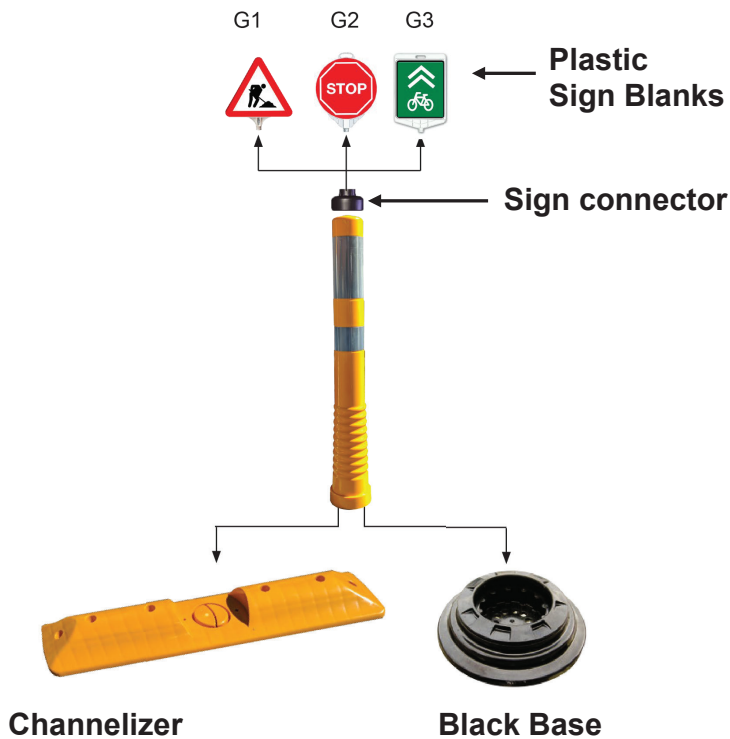


# K71 POSTS WITH CHANNELIZER

5

# FLEXIBLE POSTS WITH UNIVERSAL CHANNELIZER or Black Anchor Base

## ABS CHANNELIZERS with 3" dia post. Available heights 30 & 36"



*Channelizer fits K71 & 3" dia. Evelux Post*



Evelux 3" dia. Flexible 39" Traffic Post  
With anchor base or ABS CHANNELIZER

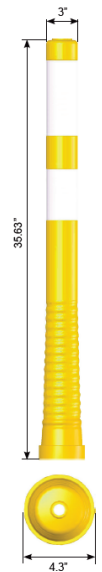


Evelux 39" Traffic Post can be attached with full face directional signage

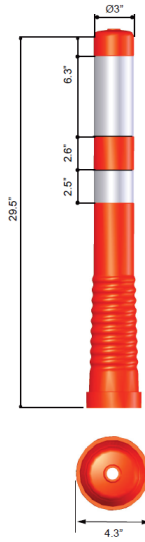
5

# FLEXIBLE POSTS WITH UNIVERSAL CHANNALIZER

## ABS CHANNELIZERS 3" wide x 30 & 36" tall

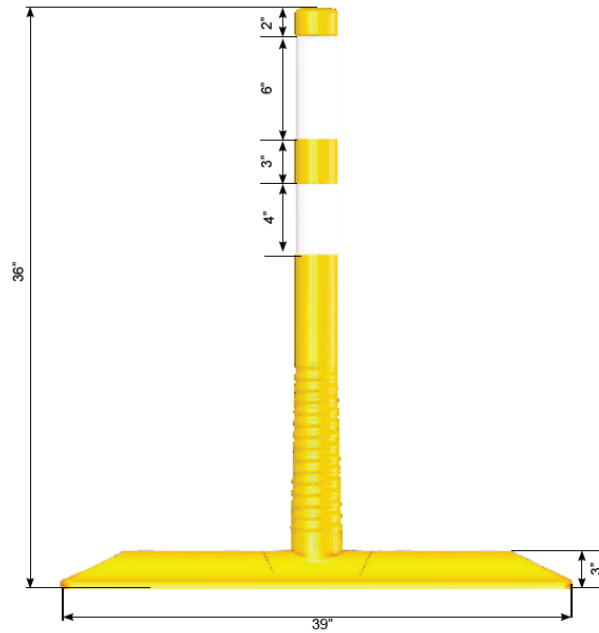


3" x 36"

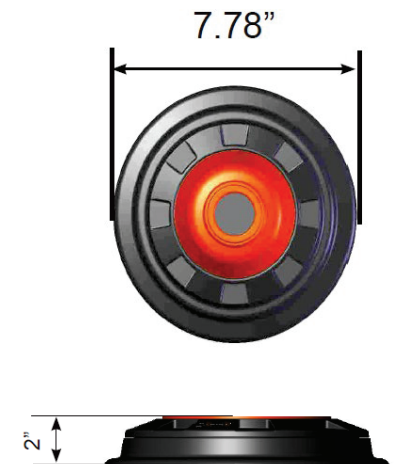


3" x 30"

Posts



Channelizer 39" x 7.9"



Anchor or glue down black base

5

## ABS CHANNELIZERS with 3" dia post 30" Tall





5

## Base installation Options




3" dia post with glue down base



**Quick spin ring post attachment  
No pins or screws required**

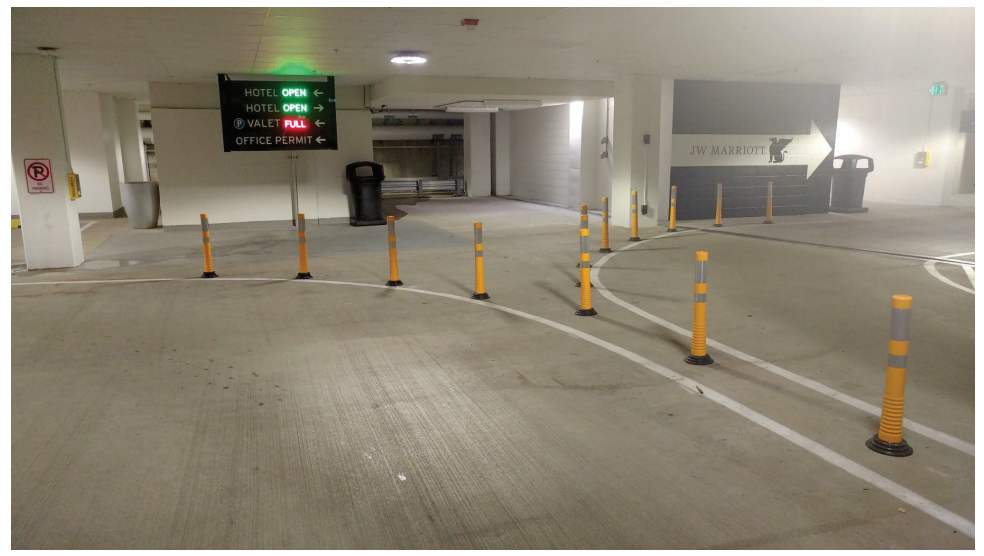
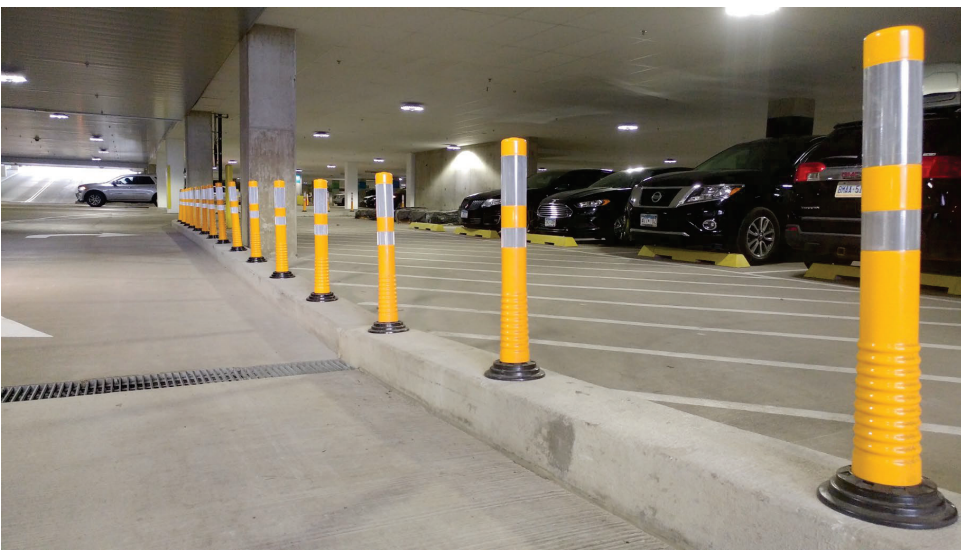
**Bonds with super Bundy or 2-part adhesives**



**Anchor Options**  
Star washer anchor kit for glue down base.  
Attachment to asphalt or concrete with lag screw.  
Available post heights 30 & 36"

5

# 3" Diameter Evelux post with base



Adhesive bond to concrete surface

4

5



## SECTION 7

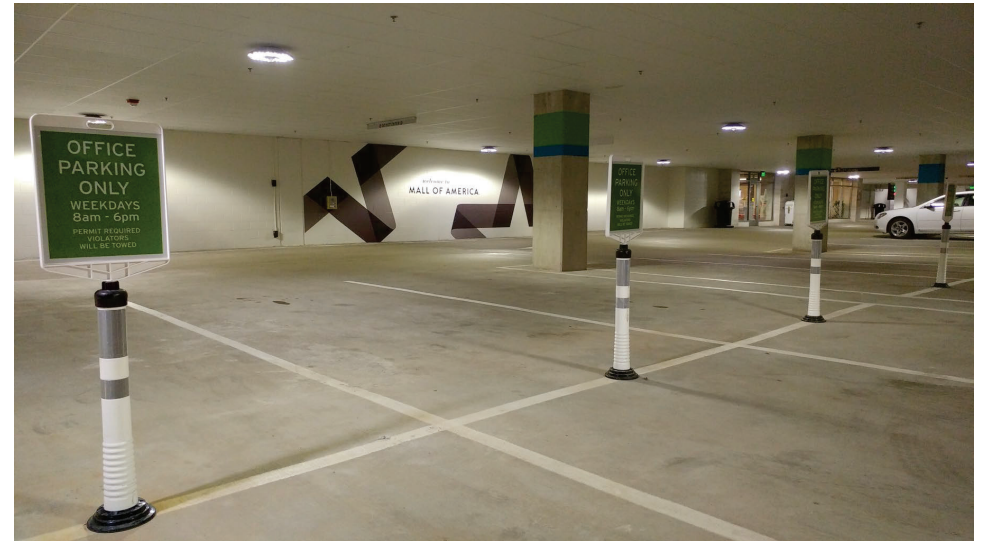
### SIGN ATTACHMENT TO FLEXIBLE BOLLARDS





5

3" Diameter Evelux post with base and upper sign attachment. (Non highway applications)





5



Sign Adapter for post



13.77" W x 16.14" H

Lightweight "Spin-on" message sign panels provide a quick solutions for directional guidance.

Plastic frames provide a safe alternative for bicyclists that may come in contact with signage.



5

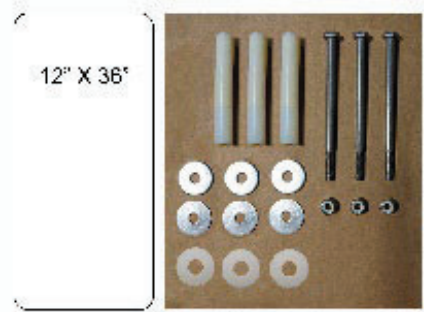
**SIGN DIRECTION FOR BICYCLES AND CARS  
HELP STOP VEHICLE ACCESS INTO  
PROTECTED BIKE LANES**



5

# PREVENTING /STOPPING VEHICLE ACCESS INTO PROTECTED BIKE LANES

## Passive Access



Single or double panel sign kits with installation hardware



5



## STOPPING VEHICLE ACCESS INTO PROTECTED BIKE LANES



- 6
- 7
- 8
- 9
- 10
- 11



## SECTION 8

### SMALL DIVIDER OPTIONS BETWEEN BIKE LANE POSTS



## SMALL DIVIDER OPTIONS BETWEEN K71 POSTS



6



ZICLA  
Type-3

7



Bike Seat  
Type-2

8



Bike Seat  
Type-1



9



Part #: 8A-303-S4PB-BY

10



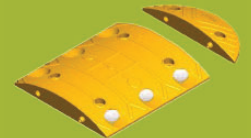
Part #: 8A-303-S4PB-BY



11



Modular speed bumps for  
intersection "Bump Outs"



- 6
- 7
- 8
- 9
- 10
- 11

# BIKE LANE SEPERATOR OPTIONS



32" long x 7.9" wide



## SMALL DIVIDER OPTIONS FOR BETWEEN K71 POSTS



6



ZICLA  
Type-3

7



Bike Seat  
Type-2

8



Bike Seat  
Type-1



9



Part #: 8A-303-S4PB-BY

10



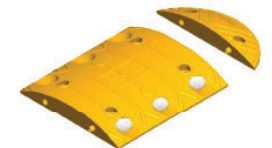
Part #: 8A-303-S4PB-BY



11



Modular speed bumps for  
intersection "Bump Outs"





# K71 POSTS WITH RAISED ARMADILLO /DOME SEPARATORS



6



7



8



# DOME SEPARATORS WITH K71 POSTS

Dome type cycle lane separators help segregate traffic flow by increasing the distance between road traffic and the cycle lane.

K71 posts are often combined with dome separators to enhance vertical presence and lane visibility to help guide vehicles and cyclist from impacting the low-profile separators.



6



7



8



# Types of raised bike lane separators

Different models and sizes are available to accommodate lane widths and spacing



Bike Seat Type-1  
32" long x 7.9" wide

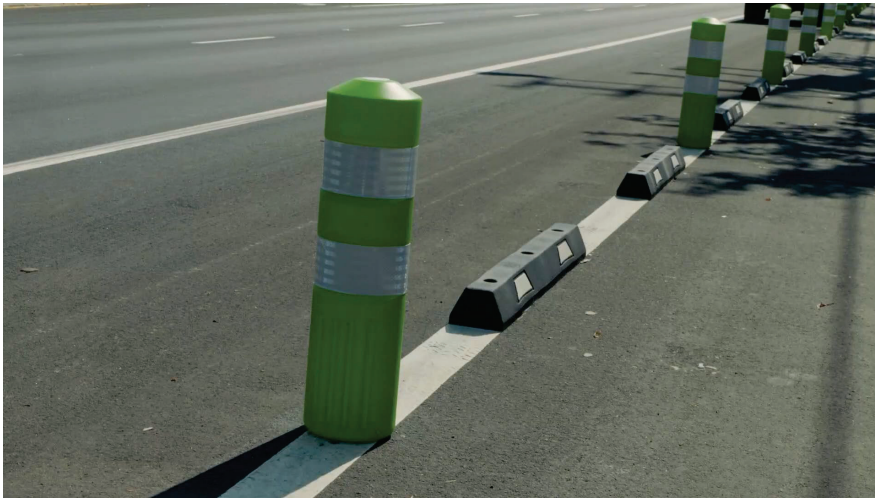


Bike Seat Type-2  
32" long x 7.9" wide



ZICLA Type-3  
2.5' long x 8" wide x 5" high  
2.6' long x 6.5" wide x 3.5" high  
2.5' long x 4.75" wide x 2" high





## K71 POSTS WITH RUBBER PARKING CURBS AS SEPARATORS

9



Part #: 8A-303-S4PB-BY  
Black & Yellow

10



Part #: 8A-303-S4PB-BY  
Black & White



9

10

## CURB STOPS WITH K71 POSTS



Rubber curb stops are an alternative to dome raised bike lane separators to help separate traffic from cycle lanes

K71 posts are used in-between curb stops to create a vertical reflective presence to enhance lane visibility and help guide vehicles and cyclist from impacting the low-profile separators especially at night.

---

STOP CURBS

11

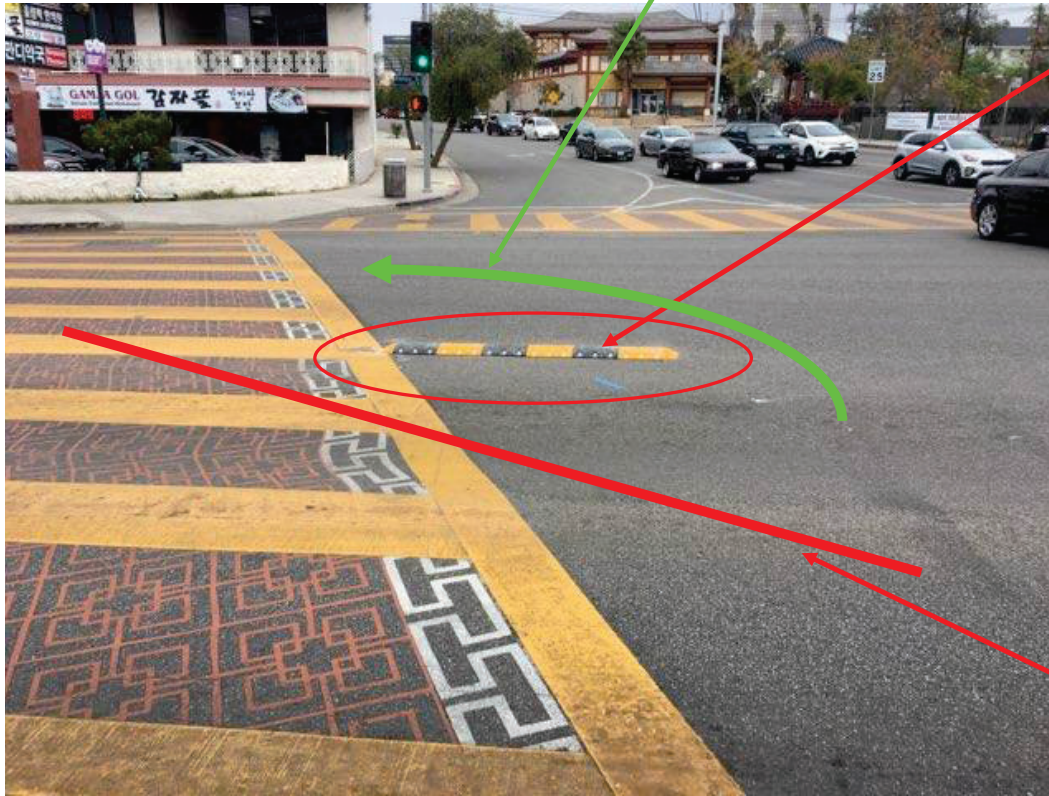
# BUMP OUTS



Speed Bumps

11

# BUMP OUTS



## Speed Bumps

Speed Bumps placed after crosswalks help guide vehicles in front and around the crosswalk preventing them from cutting through a crosswalk where a pedestrian may be crossing



NOT OK



11

# BUMP OUTS

Enforcing separation of vehicles before a crosswalk helps reduce cut throughs from both vehicle directions





11

# BUMP OUTS



11

# WITHOUT BUMP OUTS

Vehicle cut through examples at crosswalk intersections





11

# BUMP OUTS AFTER





11

# BUMP OUTS AFTER

Vehicles travel up and around crosswalks improving pedestrian safety



11

# BUMP OUTS

## Modular Speed Bumps for Center Lane Divisions





## SECTION 9

**NARROW & STANDARD SOLID RUBBER LANE DIVIDERS FOR PROTECTED BIKE LANES**





## SOLID RUBBER LANE DIVIDERS FOR PROTECTED BIKE LANES

12



**Short Narrow Bike lane Divider**  
**NBL-39**  
39" L x 9.25"W x 5"H  
53 lbs

Recycled Rubber

13



**Long Narrow Bike lane Dividers**  
**NBL-78**  
**Narrow Lane Divider**  
6.5 ft" L x 9.25"W x 5"H  
133 lbs  
Recycled Rubber

14



**LA StarCurb Protected Bike Lane Divider**  
**SC-59158**  
5'.11" L x 15"W x 4"H  
140 lbs

15



**Standard Bike Lane Divider**  
**SBL-1500**  
5 ft" L x 19.5" W x 5" H  
209 to 232 lbs  
Recycled Rubber

## NARROW BIKE LANE DIVIDERS

12



Short Narrow Bike lane Divider  
NBL-39  
39" L x 9.25"W x 5"H  
53 lbs



13



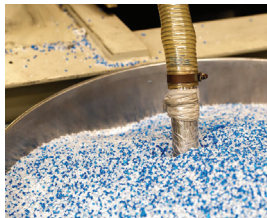
Long Narrow Bike lane Dividers  
NBL-78  
Narrow Lane Divider  
6.5 ft" L x 9.25"W x 5"H  
133 lbs

Separated or  
continuous lanes



Recycled Rubber

# Channelizer's MATERIAL for all types of applications



ABS PLASTIC

## **BENEFITS**

- ABS plastic curbing is available in several colors.
- Quick channelizing solutions for vehicles and bike lanes
- Cost effective / Lightweight
- Post attachment options

## **CONSIDERATION**

- Prone to UV breakdown and brittleness
- Hollow underside (typically with cavities for added strength) reducing \$\$\$ for material
- Requires 4 plus anchors for road attachment
- Non energy absorbing material
- Recycled plastic material (recycled plastics are prone to reduced strength and UV breakdown)



Recycled Rubber

## **BENEFITS**

- Recycled rubber is available in black or gray with or without striping
- Quick channelizing solutions for vehicles and bike lanes
- Post attachment options can be managed /integrated during mfg process
- Fully UV stable.
- Contours to road surface during installation
- Solid curbing eliminates vegetation growth on underside.
- Optical 360-degree reflectors for permanent night guidance
- Can be bonded or anchored to road surface
- Several widths and lengths to accommodate project requirements
- Most dependable modular curbing material available
- Fully energy absorbing material against impacts

## **CONSIDERATION**

- Heavier than plastic
- Higher cost due to material processing and weight



## 12 SHORT NARROW WIDTH CYCLE LANE DEFENDER

US Reflector's Narrow Bike Lane Defenders are solid rubber units which replicate curb height, making them ideal for creating fully segregated bike lanes where roadway width is limited.

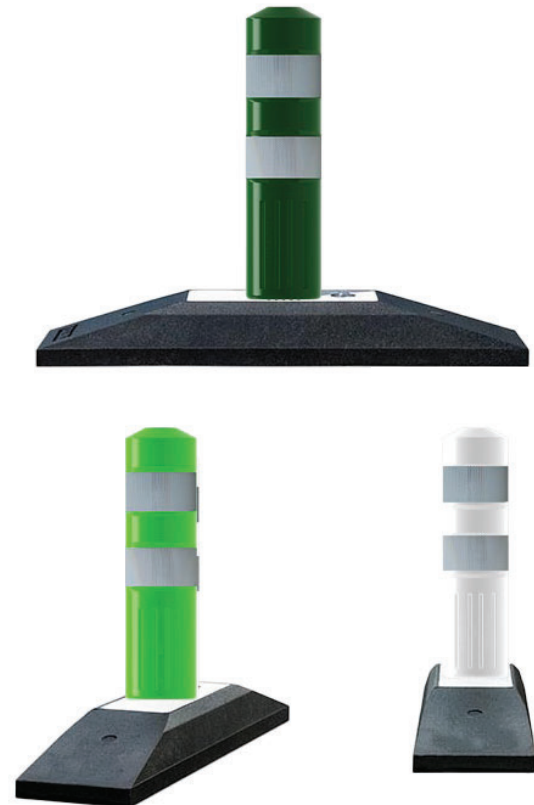
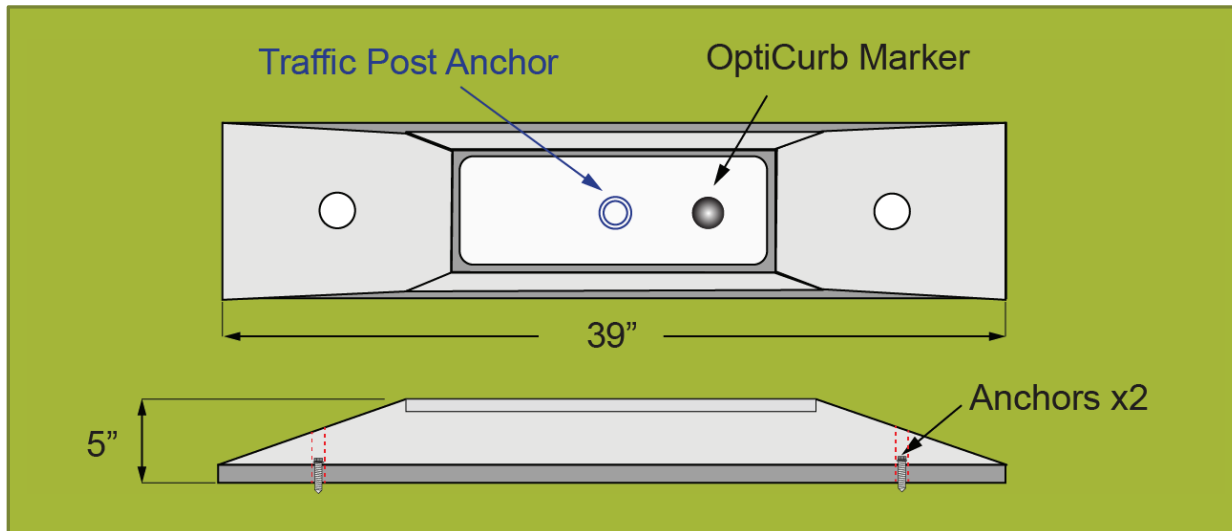


## SHORT DIVIDERS

- High contrast colors ensure good visibility in all light conditions
- Solid rubber units offer excellent stability and impact absorption
- Solid rubber dividers form to road surface
- Accommodates a wide range of third-party bollards
- Made from recycled tire rubber
- Stand-alone, intermittent, and continuous configuration options
- Highly reflective with integrated OptiCurb optical glass markers
- Quick and easy to install
- No excavation – minimize disruption and reduce cost
- Excellent for Limited width roadways

## 12 SPECIFICATIONS

Short Narrow Bike Lane Defenders have two anchor inserts and built-in anchor for Traffic posts with optional optical curb 360-degree reflective marker.



13

## NARROW CYCLE LANE DEFENDERS

Engineered for rapid installation in bike lanes of any scale. The flexible rubber material accommodates curves while effectively absorbing impacts, creating safe and secure spaces which encourage biking regardless of traffic levels.



## NARROW LANE DIVIDERS

- High contrast colors ensure good visibility in all light conditions
- Solid rubber units offer excellent stability and impact absorption
- Solid rubber dividers form to road surface
- Accommodates a wide range of third-party bollards
- Made from recycled tire rubber
- Stand-alone, intermittent, and continuous configuration options
- Highly reflective with integrated OptiCurb optical glass markers
- Quick and easy to install
- No excavation – minimize disruption and reduce cost
- Excellent for Limited width roadways



13

# NARROW CYCLE LANE DEFENDERS

Continuous

Dividers used

- 2 Ramps
- 17 Extensions
- Total Feet: 123.5

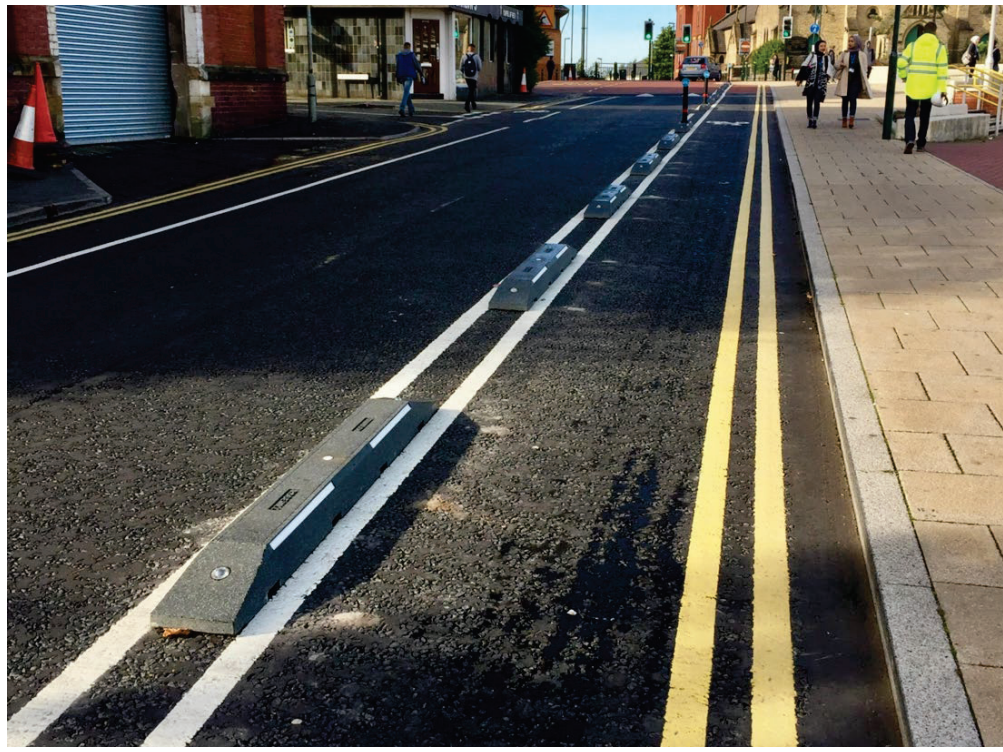




13

# NARROW CYCLE LANE DEFENDERS

Separated Lane Distance 7ft



13

# NARROW CYCLE LANE DEFENDERS

Double back-to-back tapered



Continuous





13

# NARROW CYCLE LANE DEFENDERS

Curb Mount



Separated Bike Lane





13

## COMBINATION NARROW CYCLE LANE DEFENDERS WITH REFUGE PADS

“Bump Outs” help redirect vehicles away from the bike lanes.



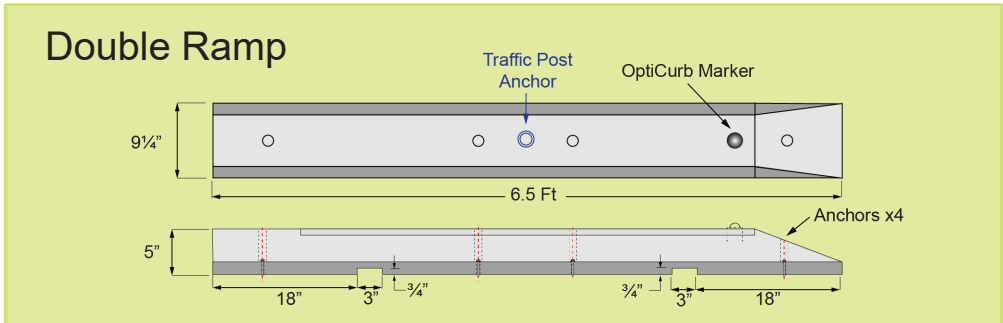
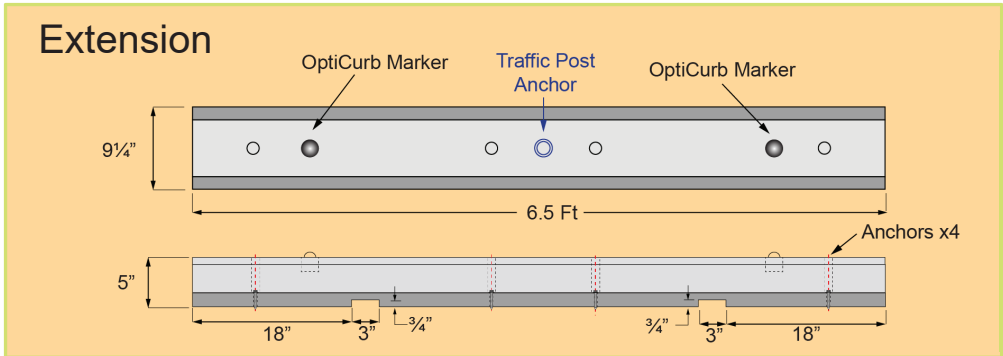
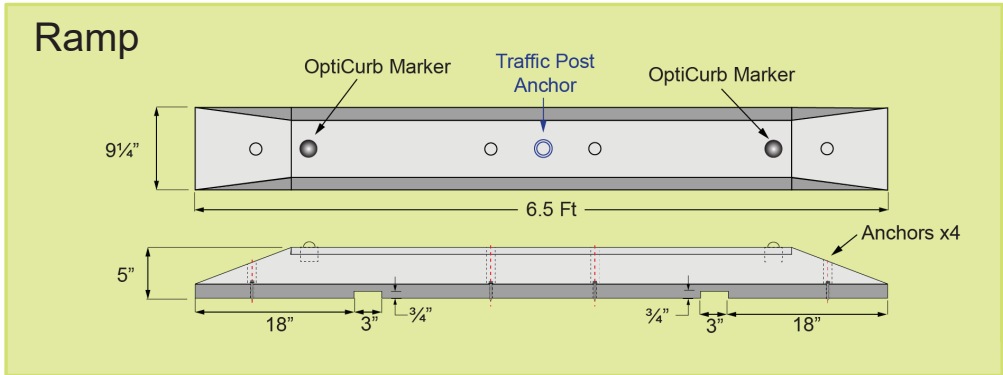
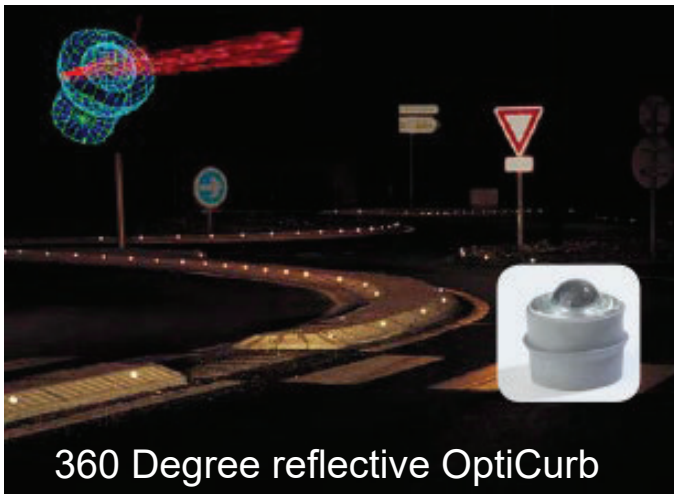
Emphasize the presence of bike lanes by using the traffic islands as “Bump Outs” keeping vehicles from coming too close to the bike lanes.



17 Double piece island

# 12 SPECIFICATIONS

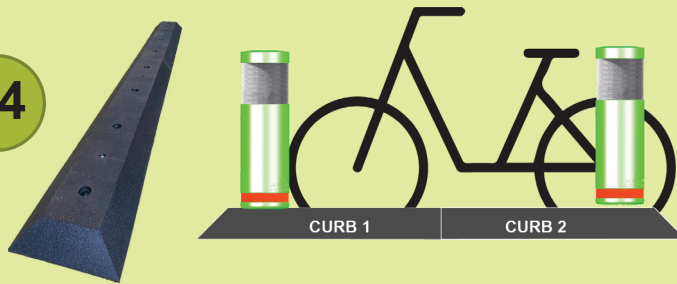
Narrow Bike Lane Defenders have 4 anchor inserts and built-in anchor for Traffic posts with optional optical curb 360-degree reflective marker for increased night visibility.





## SOLID RUBBER LANE DIVIDER OPTIONS FOR PROTECTED BIKE LANES

14



LA StarCurb Protected Bike Lane Divider

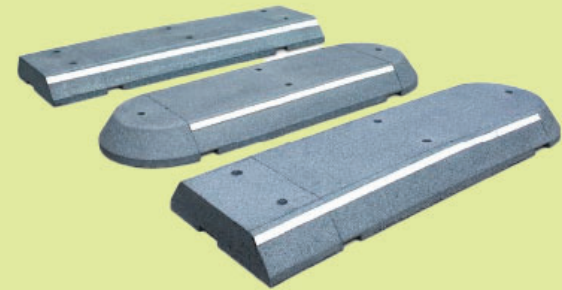
SC-59158

5'.11" L x 15"W x 4"H

140 lbs

[See Pages 58 to 66](#)

15



Standard Bike Lane Divider

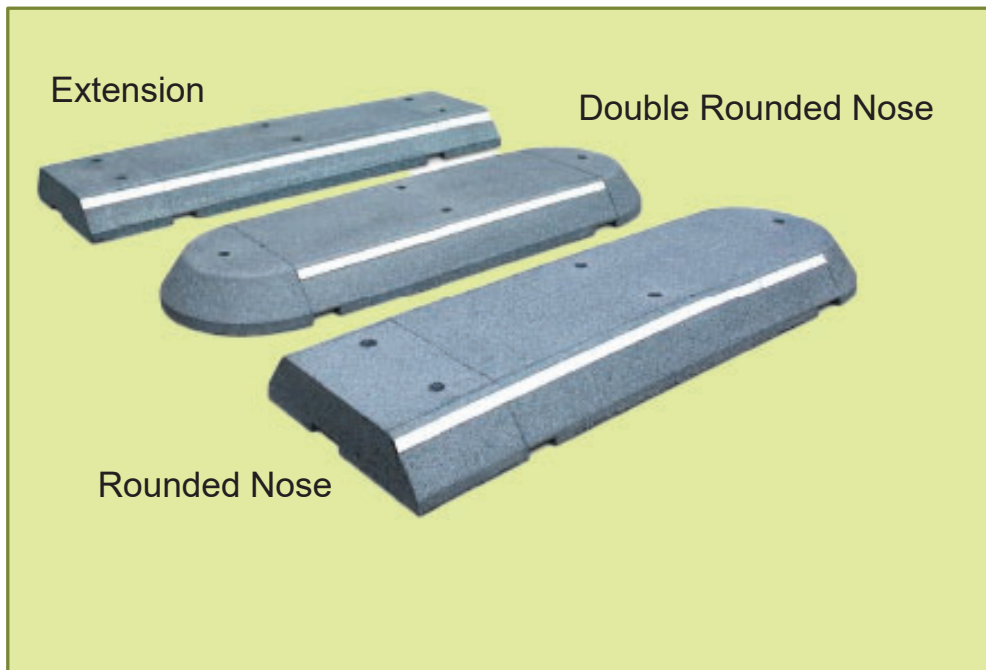
SBL-1500

5 ft" L x 19.5" W x 5" H

209 to 232 lbs

Recycled Rubber

## 15 STANDARD BIKE & LANE DEFENDER



### REDUCING SPEED, GENTLY AND EFFECTIVELY

- High contrast colors ensure good visibility in all light conditions
- Solid rubber units offers excellent stability and impact absorption
- Recycled Rubber provides excellent UV protection and EPDM properties
- Accommodates a wide range of third-party bollards
- Made from recycled tire rubber
- Stand-alone, intermittent, and continuous configuration options
- Highly reflective with integrated OptiCurb 360° optical glass markers
- Quick and easy to install
- No excavation – minimize disruption and reduce cost
- Pre-formed underside for cable channels and side ports for water drainage

## 15 STANDARD BIKE & LANE DEFENDER

## REDUCING SPEED, GENTLY AND EFFECTIVELY

US Reflector's Standard Bike Separators are solid rubber units which replicate road mediums making them ideal for creating lanes for vehicles and / or bike lanes

Engineered for rapid installation for the division of traffic lanes of any scale. The flexible rubber material contours to a roads surface while effectively absorbing impacts, creating safe road channelizing.





**15 STANDARD BIKE & LANE DEFENDER**

**UNIVERSAL APPLICATIONS**



**Pedestrian Crossing**



**Security Gates**



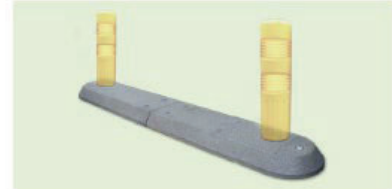
**Bike Lanes**



**Access Ways**



**Crosswalks**



**Medians**

**Universal Applications**

Permanent or temporary - US Reflector Standard Lane Separators offer tremendous versatility and cost saving benefits over cast in-place and modular alternatives

**15** **STANDARD BIKE & LANE DEFENDER**

**CONTINUOUS BIKE LANES**



**15** **STANDARD BIKE & LANE DEFENDER**

## ROAD DIVIDERS SEPARATED



Dividers used

- 2 Rounded nose
- Total Feet: 10



Dividers used

- 2 Rounded nose
- 1 Extensions
- Total Feet: 15



**15****STANDARD BIKE & LANE DEFENDER**

## TRAFFIC ISLAND

- **No excavation.**
- **Highly reflective.**
- **Stand alone, broken and continuous configuration options.**
- **Cast in cableway and drainage channels as standard.**
- **Complete with standard fixing kit. Relocatable and adjustable fixings are available, if required.**
- **Anchor or adhesive install or combination of both depending on road surface**

15

## STANDARD BIKE & LANE DEFENDER



## INSTALLATION

### Advantages

- Longer sections
- Fast installation
- Removable and relocatable
- Manufactured from 100% recycled tire rubber
- Strong, durable and flexible
- Low risk of detachment if impacted
- Compatible with K71, K72, K825 flexible posts and many other post and sign options.

**Attachment fixation Options** Standard Dividers can be anchored or bonded to asphalt and concrete surfaces.

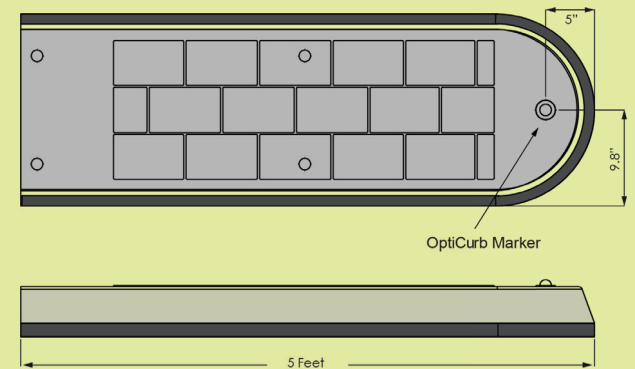
### Surface Options

- Available in gray and black
- Faux brick or smooth surface
- Reflective Opticurb 360° markers for night visibility

# 15 SPECIFICATIONS

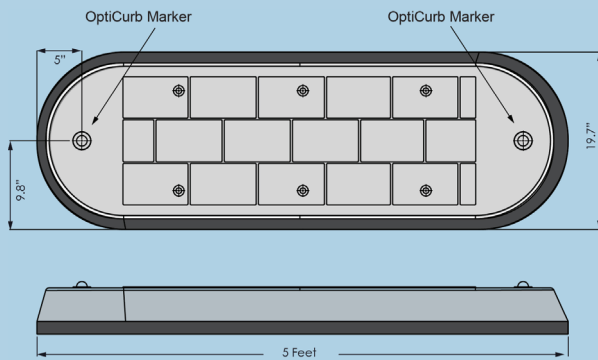
Standard Bike Lane Defenders have up to 10 anchor inserts and built-in anchor for Traffic posts with optional optical curb 360-degree reflective marker for increased night visibility.

## Rounded nose



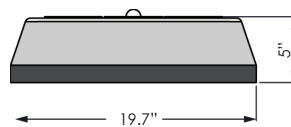
223 lbs 101 kg

## Double rounded nose

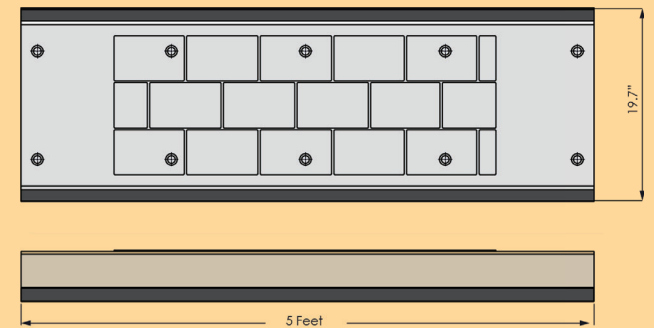


214 lbs 97 kg

## Cut View



## Extension



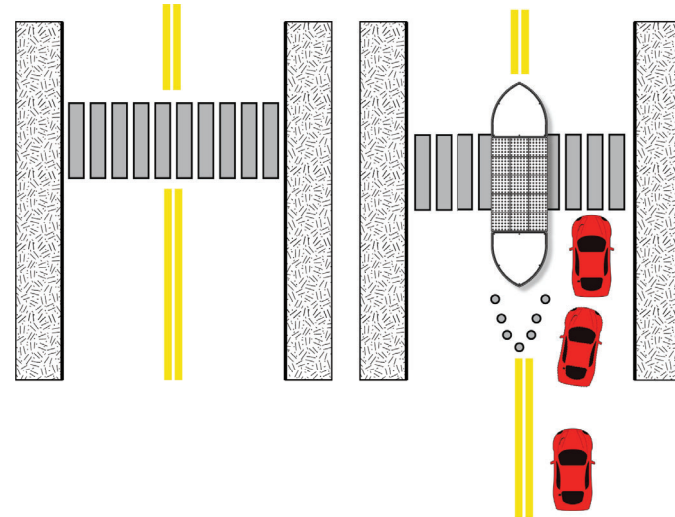
232 lbs 105 kg





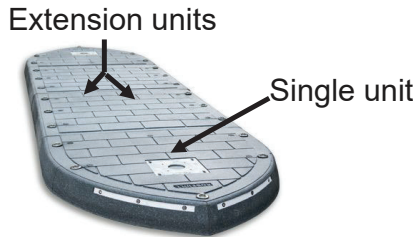
## SECTION 10

### MODULAR SOLID RUBBER MEDIANS & PEDESTRIAN REFUGES



# SOLID RUBBER MEDIANS & PEDESTRIAN REFUGES

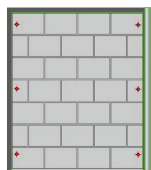
## 16 Single Piece Island



Widths 3.3', 4', 6.5', 6.7'

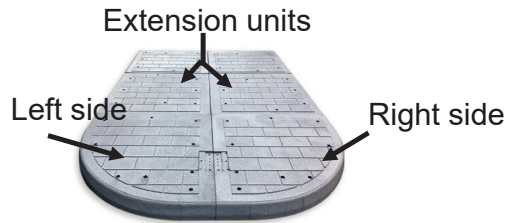
STI-1000 to 2032  
Single Piece Island  
5 ft" L x 19.5" W x 5" H  
330 to 620 lbs

Recycled Rubber



Extension units

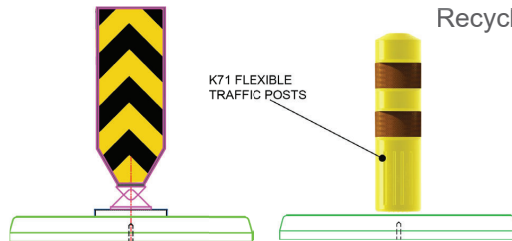
## 17 Double Piece Island



Widths 5', 6', 6.5', 8ft

MTI-1500 to 2400  
Double Piece Island (Wide)  
5 ft" L x 19.5" W x 5" H  
209 to 232 lbs

Recycled Rubber



K71 FLEXIBLE TRAFFIC POSTS

Built in anchors for quick sign attachments

## 18



Modular units allow length & width to any size

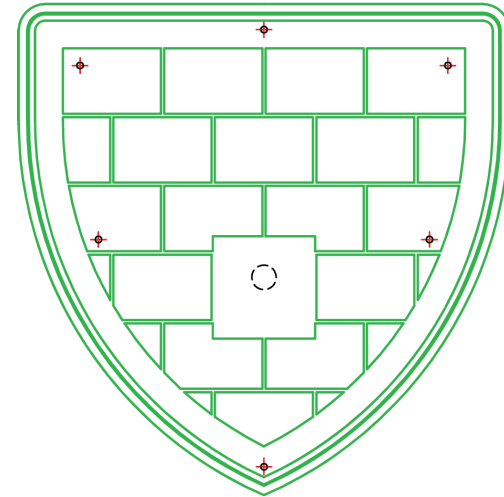
RPI-Any length or width  
Raised Pedestrian Island Platforms  
5 ft" L x 19.5" W x 5" H  
330 lbs (Each piece)

Recycled Rubber

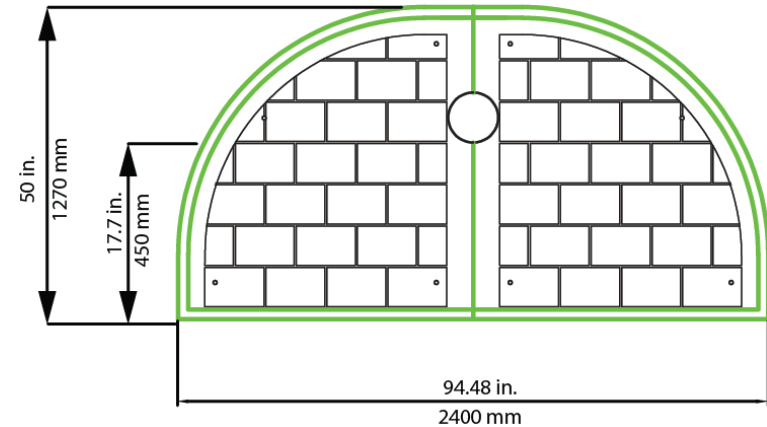
**SOLID RUBBER  
MEDIANS ARE  
AVAILABLE IN SINGLE  
AND DOUBLE ISLAND  
PADS**

**Each Island is available  
in 4 different sizes**

**16** Single Piece Island



**17** Double Piece Island



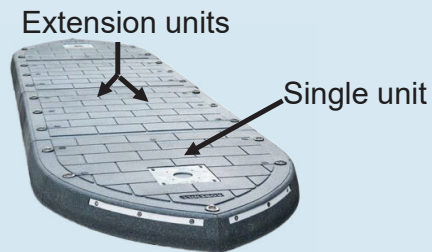


## SOLID RUBBER MEDIANS ARE AVAILABLE IN SINGLE AND DOUBLE ISLAND PADS

**16** Single Piece Island

**17** Double Piece Island

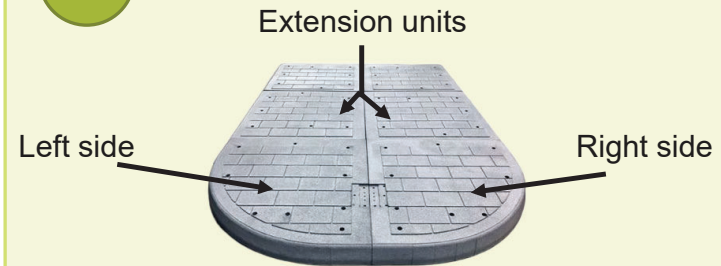
**16** Single Piece Island



Widths 3.3', 4', 6.5', 6.7'

STI-1000 to 2032  
Single Piece Island  
5 ft" L x 19.5" W x 5" H  
330 to 620 lbs  
Recycled Rubber

**17** Double Piece Island



Widths 5', 6', 6.5', 8ft

MTI-1500 to 2400  
Double Piece Island (Wide)  
5 ft" L x 19.5" W x 5" H  
209 to 232 lbs  
Recycled Rubber

Pedestrian Refuge are available in single piece units for narrow roads and double piece units for wide road applications. Both units are available with a smooth or faux brick surface and extensions pieces.

All pads are available with built in anchors for quick sign attachments

16

# SINGLE PIECE SOLID RUBBER MEDIANS & PEDESTRIAN REFUGES

Single Piece Pedestrian Refuge for narrow roads. Available with a smooth or faux brick surface and extensions pieces.



Available in 4 Sizes



Pedestrian Refuge



Speed Bump Warning



Medians & Dividers

16

# Example median / pedestrian refuge with extensions

Single Piece Pedestrian Refuge for narrow roads. Available with a smooth or faux brick surface and extensions pieces.

### Single Piece Island with 2 extensions

Extension units

Single unit

4 Model widths Available 3.3', 4', 6.5', 6.7'

### Single Piece Island with extensions & refuge area

SRB-1200

REFUGE AREA CAN BE ANY LENGTH

EXTENSION PIECE SRB-EXT-1200

EXTENSION PIECE SRB-EXT-1200

SRB-1200

1. Single rounded head
2. Straight single extensions
3. Tactile "peel and stick" pads

### SURFACE OPTIONS

Smooth      Faux Brick

### Extensions

Recycled Rubber

Extend Islands to any length with Extensions



**16** Single Piece Island

**4 SIZES AVAILABLE**

Single Piece Pedestrian Refuge are available in 4 different widths & lengths



**STI-1000**  
3.5 ft x 3.5 ft

**16A**



**STI-1200**  
4 ft x 4 ft

**16B**



**STI-2000**  
6.5 ft x 3.28 ft

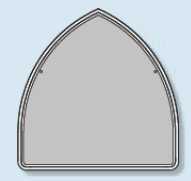
**16C**



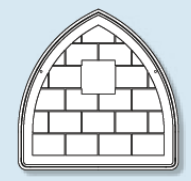
**STI-2032**  
6.7 ft x 3.28 ft

**16D**

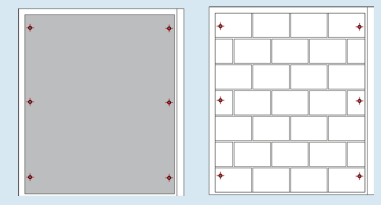
**SURFACE OPTIONS**



Smooth



Faux Brick



Extensions

Extend Islands to any length with Extensions

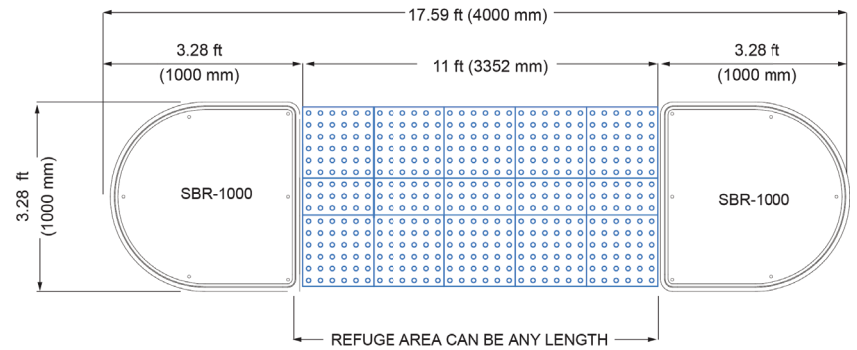
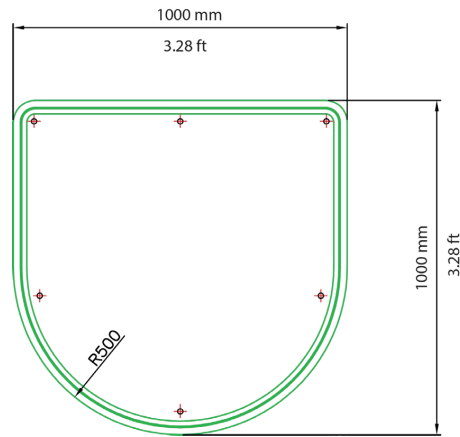
16A Single Piece Island

# SINGLE PIECE ISLANDS TYPES

Single Piece Pedestrian Refuge are available in 3 different widths



**STI-1000**  
4 ft x 4 ft



Extensions Available

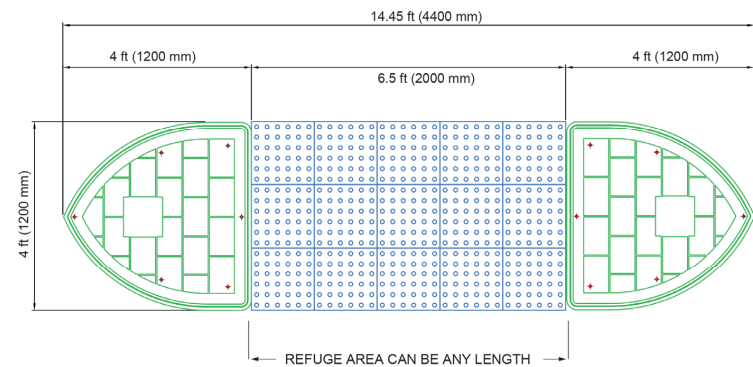
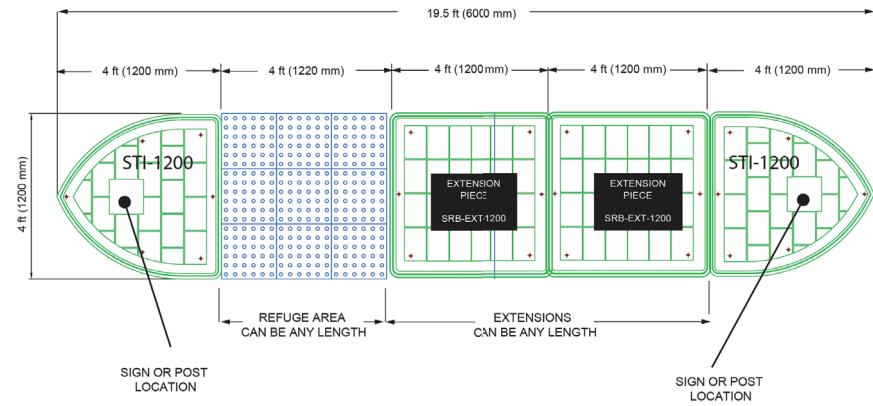
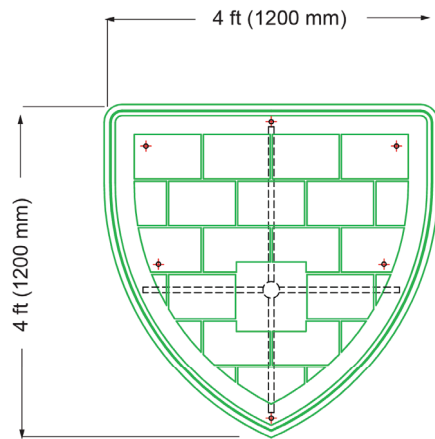
**16B** Single Piece Island

# SINGLE PIECE ISLANDS TYPES

Single Piece Pedestrian Refuge are available in 3 different widths



**STI-1200**  
4 ft x 4 ft





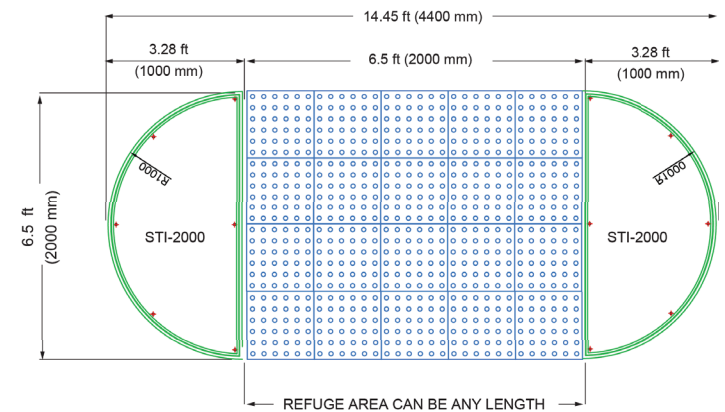
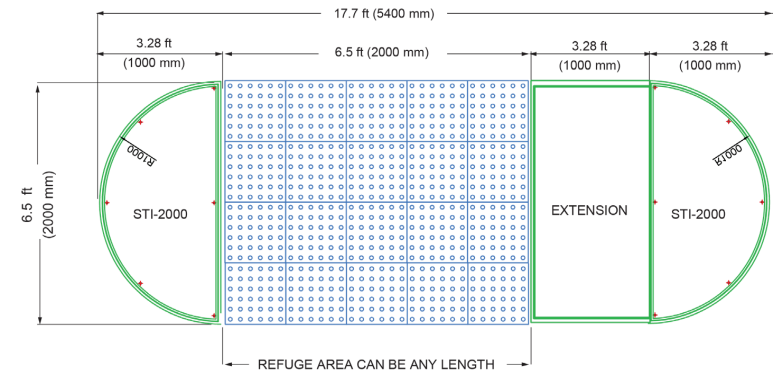
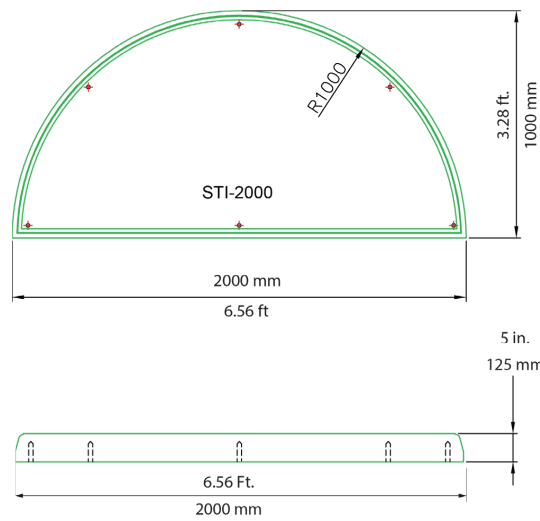
16C Single Piece Island

# SINGLE PIECE ISLANDS TYPES

Single Piece Pedestrian Refuge are available in 3 different widths



**STI-2000**  
6.5 ft x 3.28 ft



**16D** Single Piece Island

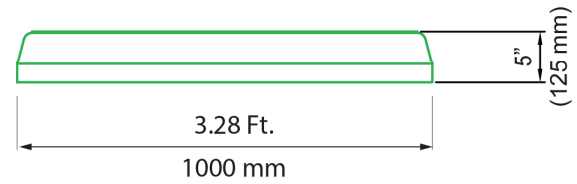
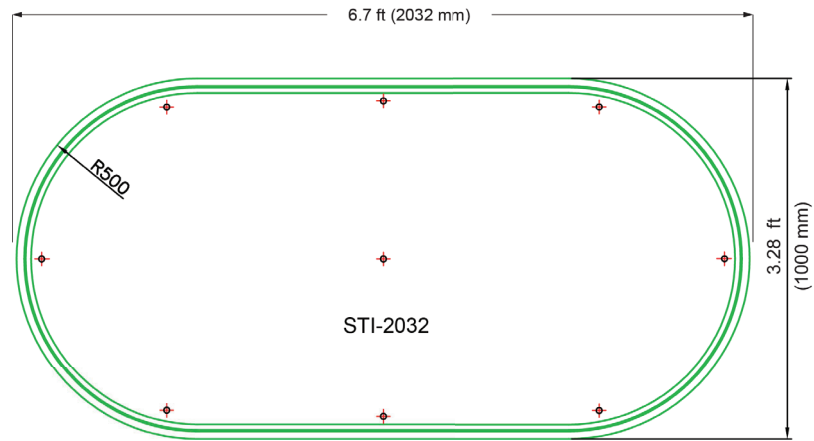
# SINGLE PIECE ISLANDS TYPES

Single Piece Pedestrian Refuge are available in 3 different widths



**STI-2032**

6.7 ft x 3.28 ft



## 17 DOUBLE PIECE SOLID RUBBER MEDIANS & PEDESTRIAN REFUGES

Double Piece Pedestrian Refuge for Wide roads. Available with a smooth or faux brick surface and extensions pieces.



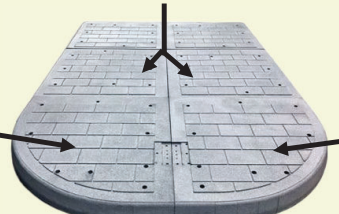
Available in 4 Sizes



17 Double Piece Island

SOLID RUBBER MEDIANS ARE AVAILABLE IN SINGLE AND DOUBLE ISLAND PADS

**Double Piece Island**  
Extension units

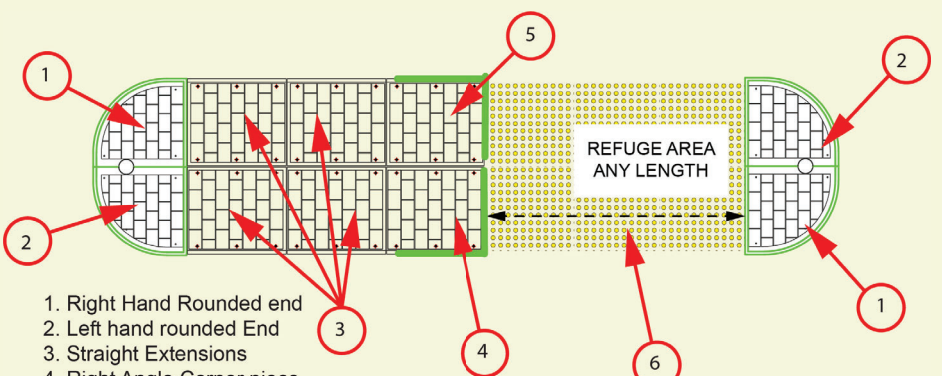


Left side Right side

Widths 5', 6', 6.5', 8ft

**Double Piece Island (Wide)**  
5 ft" L x 19.5" W x 5" H  
209 to 232 lbs

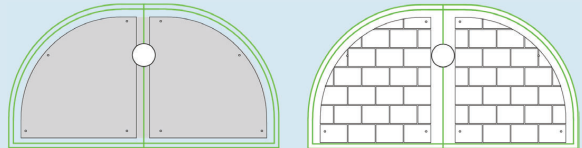
**Double Piece Island**



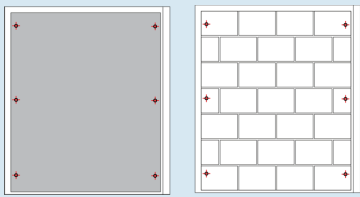
REFUGE AREA ANY LENGTH

1. Right Hand Rounded end
2. Left hand rounded End
3. Straight Extensions
4. Right Angle Corner piece
5. Left Angle corner piece
6. Tactile "peel and stick" pads

**SURFACE OPTIONS**



Smooth Faux Brick



Extensions

Extend Islands to any length with Extensions

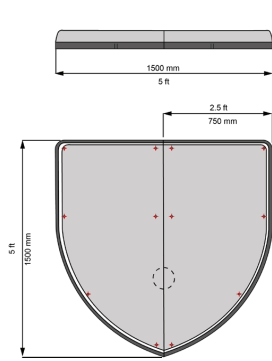
Recycled Rubber



17

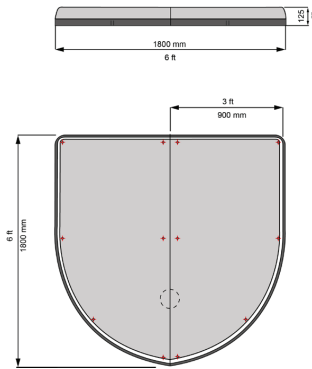
# DOUBLE ISLAND TYPES - 4 SIZES AVAILABLE

Double Piece Pedestrian Refuge for Wide roads. Available with a smooth or faux brick surface and extensions pieces.



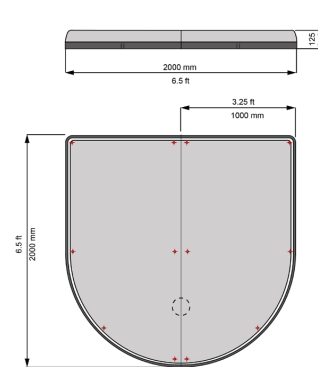
17A

**MTI-1500**  
5 ft x 5 ft



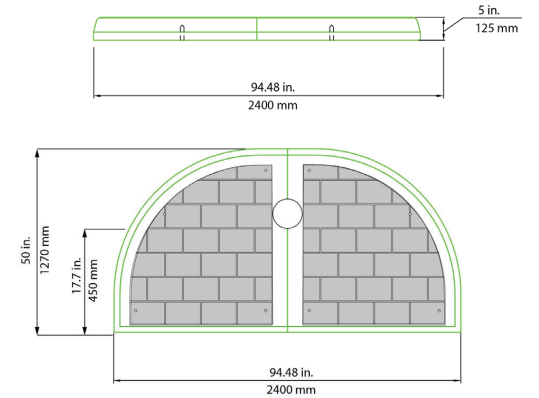
17B

**MTI-1800**  
6 ft x 6 ft



17C

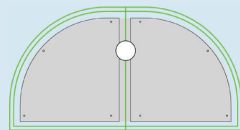
**MTI-2000**  
6.5 ft x 6.5 ft



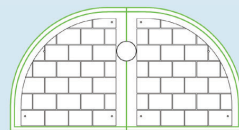
17D

**MTI-2400**  
4.1 ft x 8 ft

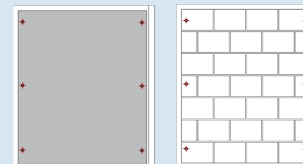
SURFACE  
OPTIONS



Smooth



Faux Brick



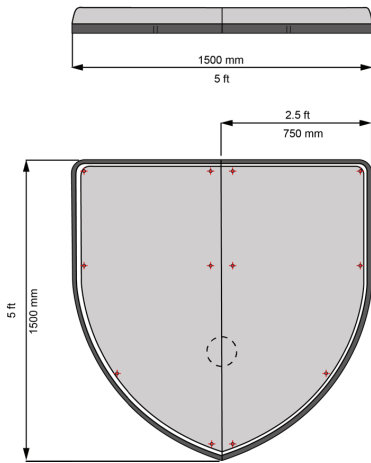
Extensions

Extend Islands to  
any length with  
Extensions

Recycled Rubber

17A Double Piece Island

5ft x 5ft

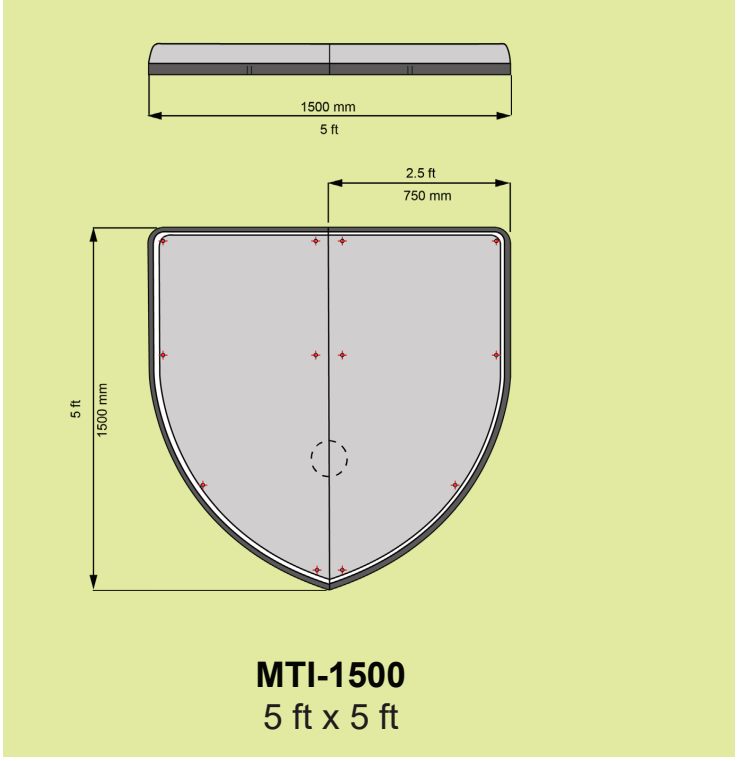


**MTI-1500**  
5 ft x 5 ft

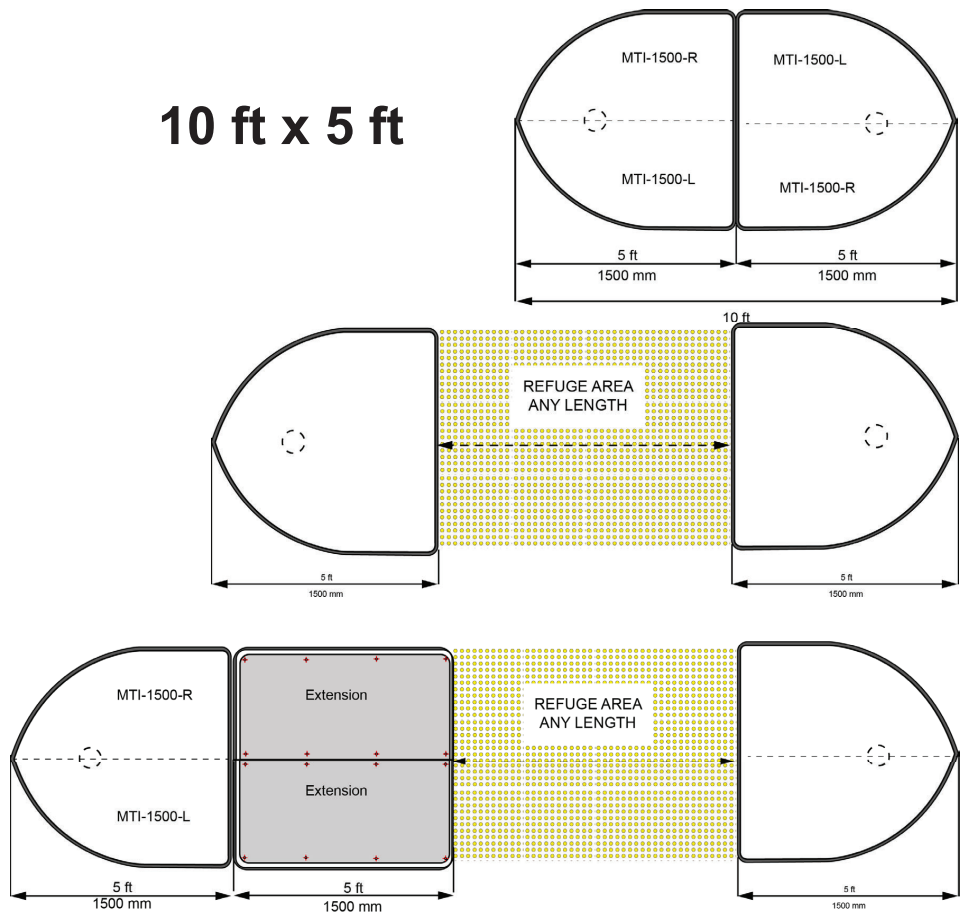


Double Piece back-to-back platforms used for vehicle bump-outs keeping motorists from coming in contact on dangerous turns

**17A** Double Piece Island

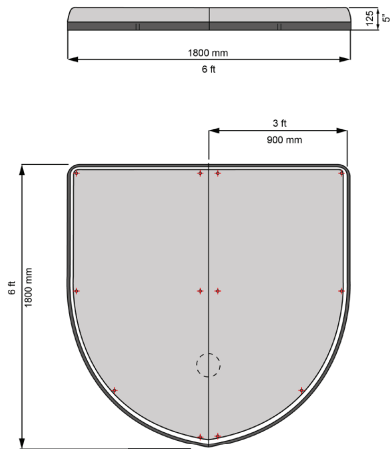


**10 ft x 5 ft**



**17B** Double Piece Island

**6 ft x 6 ft**



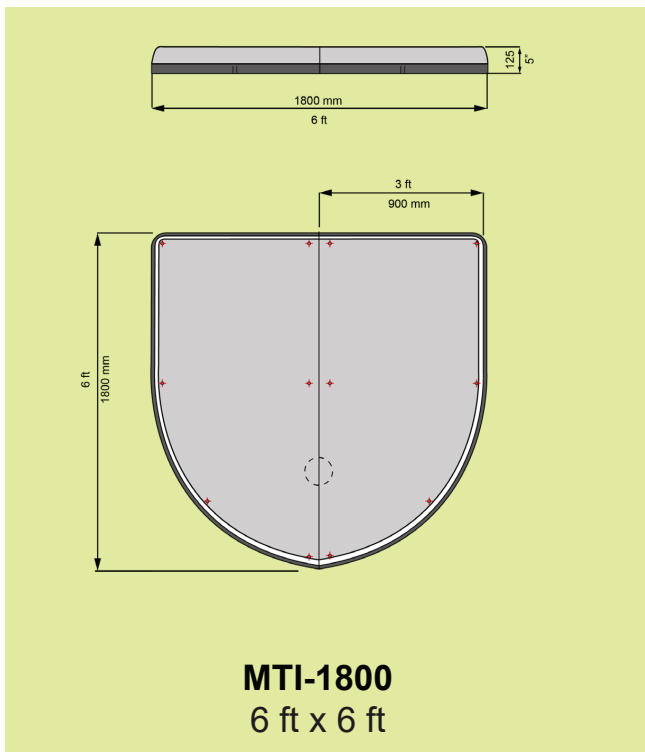
**MTI-1800**  
6 ft x 6 ft



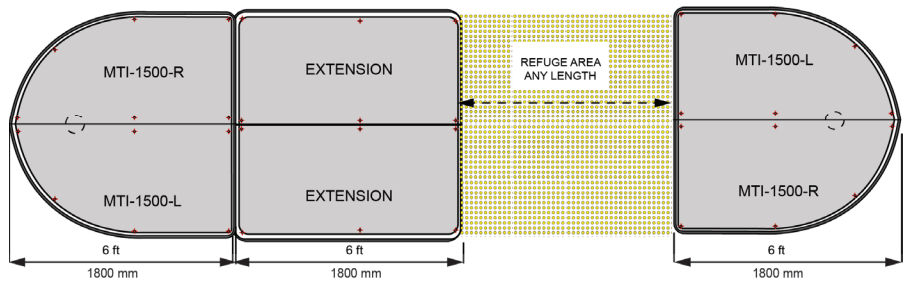
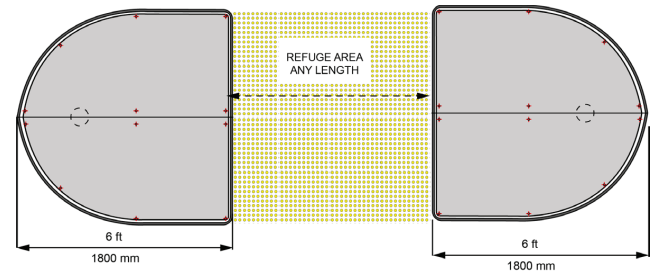
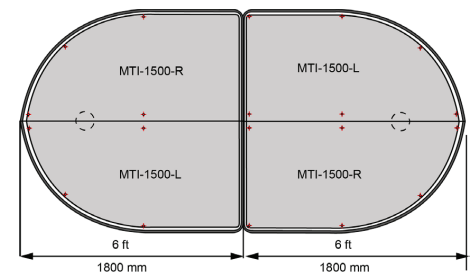
Double Piece Pedestrian Refuge for Wide roads. Available with a smooth or faux brick surface and extensions pieces.



**17B** Double Piece Island

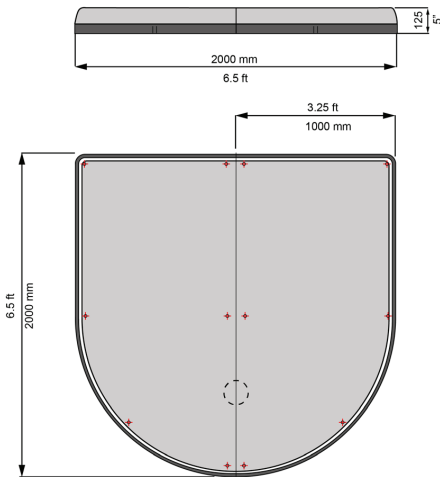


**12 ft x 6 ft**



**17C** Double Piece Island

**6.5 ft x 6.5 ft**



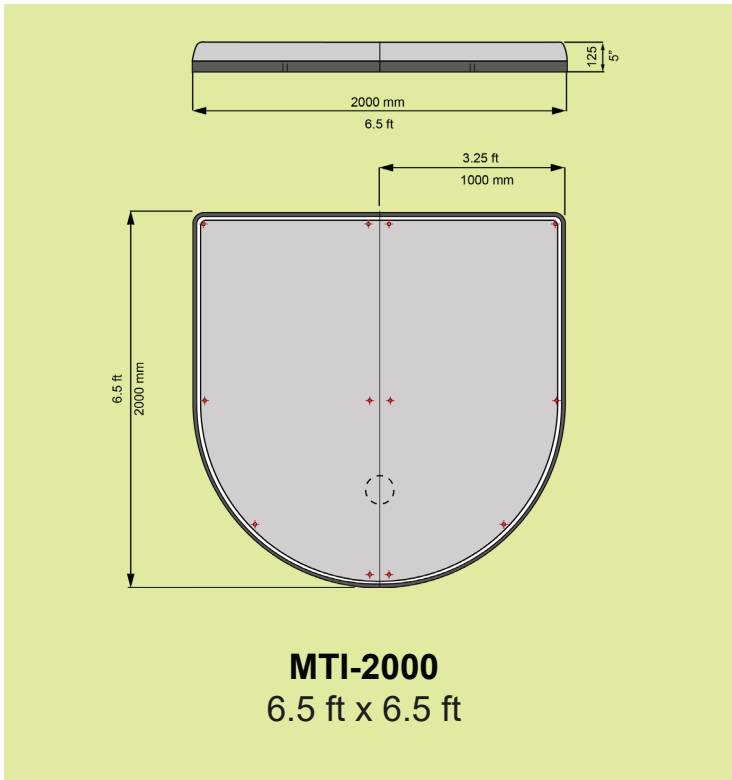
**MTI-2000**  
6.5 ft x 6.5 ft



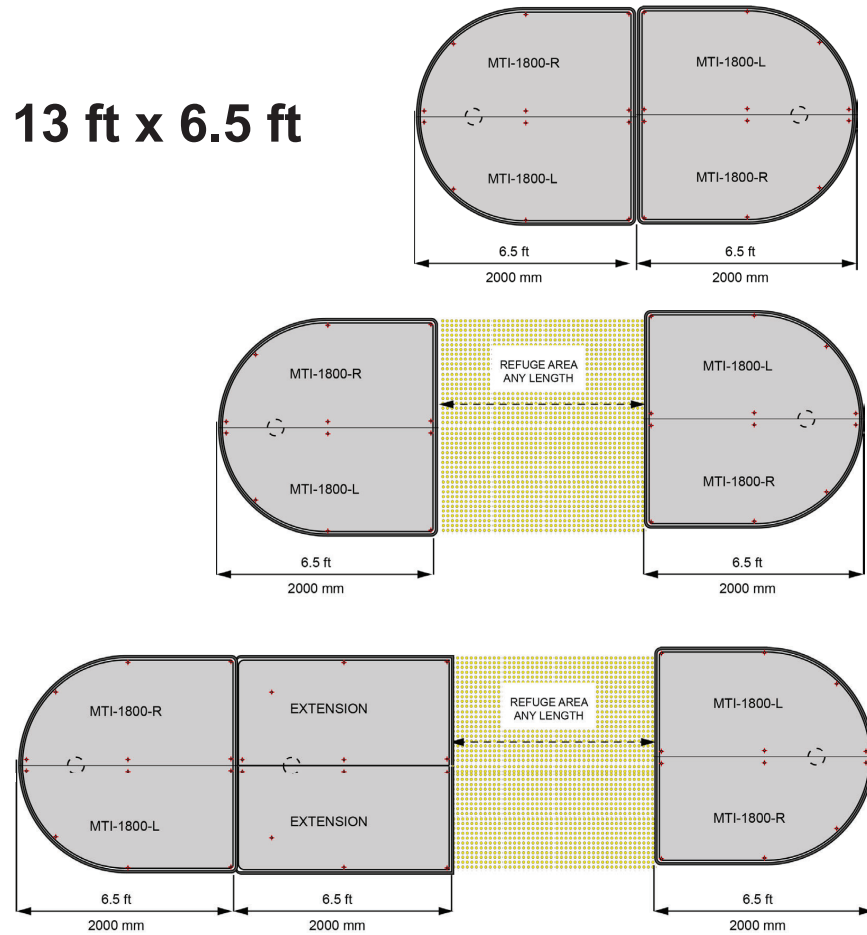
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Double Piece Pedestrian Refuge for Wide roads. Available with a smooth or faux brick surface and extensions pieces.

17C Double Piece Island



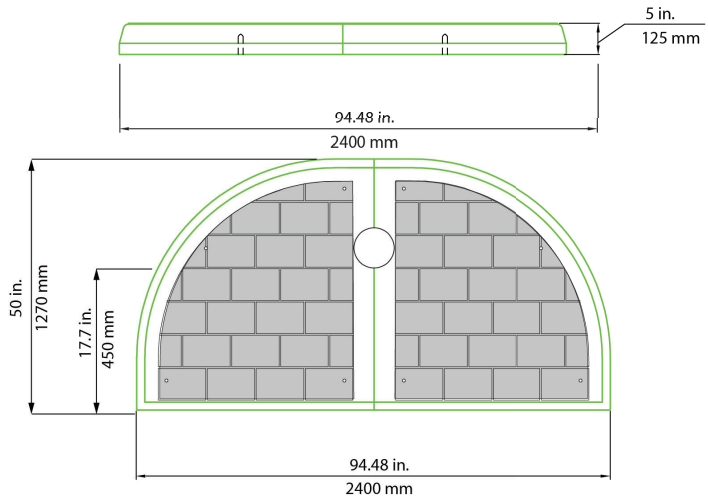
13 ft x 6.5 ft



17D

Double Piece Island

4.1 ft long x 8 ft wide



**MTI-2400**  
4.1 ft x 8 ft

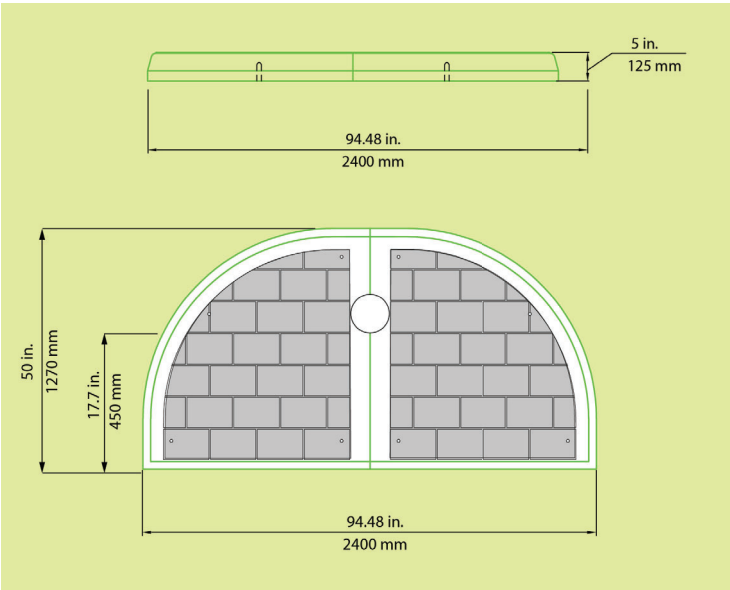


Double Piece Pedestrian Refuge for Wide roads. Available with a smooth or faux brick surface and extensions pieces.



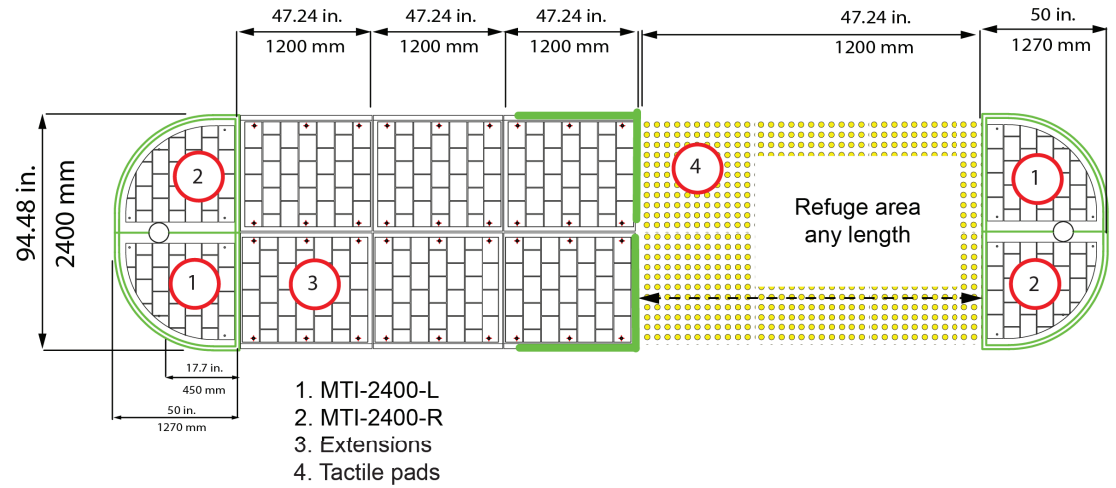
17D

Double Piece Island

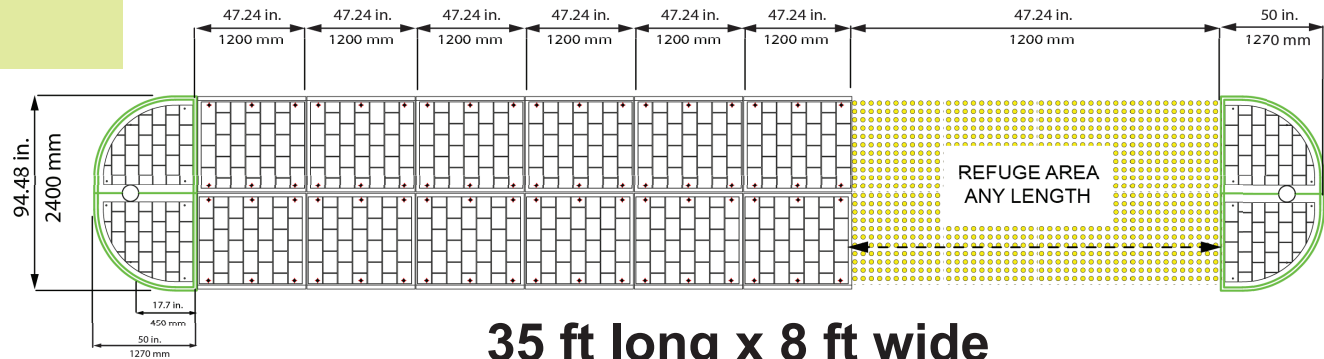


**MTI-2400**  
4.1 ft x 8 ft

**25 ft long x 8 ft wide**



**35 ft long x 8 ft wide**



17

# APPLICATION EXAMPLES Double Piece Island

# PEDESTRIAN REFUGE





17

## APPLICATION EXAMPLES Double Piece Island

## PEDESTRIAN REFUGE



17

# APPLICATION EXAMPLES Double Piece Island

# PEDESTRIAN REFUGE





17

APPLICATION EXAMPLES Double Piece Island

PEDESTRIAN REFUGE





17

APPLICATION EXAMPLES Double Piece Island

BOTTLE NECK



17

APPLICATION EXAMPLES Single Piece Island

BOTTLE NECK





17

## APPLICATION EXAMPLES Single Piece Island

## BOTTLE NECK





17

APPLICATION EXAMPLES Double Piece Island

BOTTLE NECK WITH SPEED HUMPS



17

## APPLICATION EXAMPLES Double Piece Island

## INSTALLATIONS



1. Mark location



2. Place refuge pads on roadway





17

## APPLICATION EXAMPLES Double Piece Island

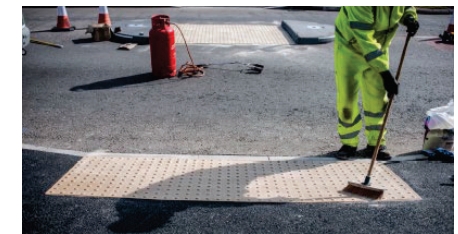
## INSTALLATIONS



3. Add adhesive or anchor or both



4. Anchor in place



5. Clean area – Open to traffic  
Complete





## **SECTION 6**

### **RAISED PEDESTRIAN CROSSWALKS**



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## PEDESTRIAN ISLAND CROSSWALK PLATFORMS



Modular units allow length & width  
to any size

RPI-Any length or width  
Raised Pedestrian Island Platforms  
5 ft" L x 19.5" W x 5" H  
330 lbs (Each piece)



Recycled Rubber

18

## PEDESTRIAN ISLAND CROSSWALK PLATFORMS



US Reflector's solid rubber raised platforms alert approaching motorists to reduce speed by enhancing the presence of pedestrian crosswalks. Pedestrian platforms can accommodate any road width allowing curb-to-curb installation without excavation.

- Surface mounted installation eliminates the need for excavation
- Fast and easy installation
- Accommodates any road widths Curb to Curb
- Taper end systems at locations where curb is non-existent
- Tough and flexible – follows surface undulations
- Impact resistant – retains form
- Reflective markings for day/night visibility

Modular units allow length & width to any size



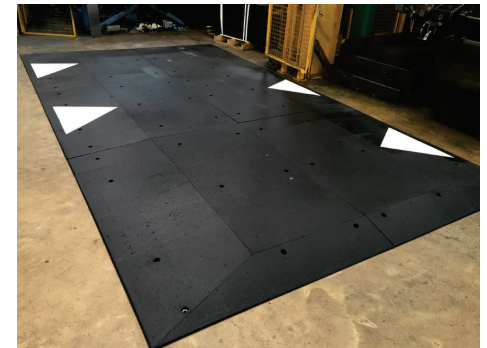
18

## PEDESTRIAN ISLAND CROSSWALK PLATFORMS



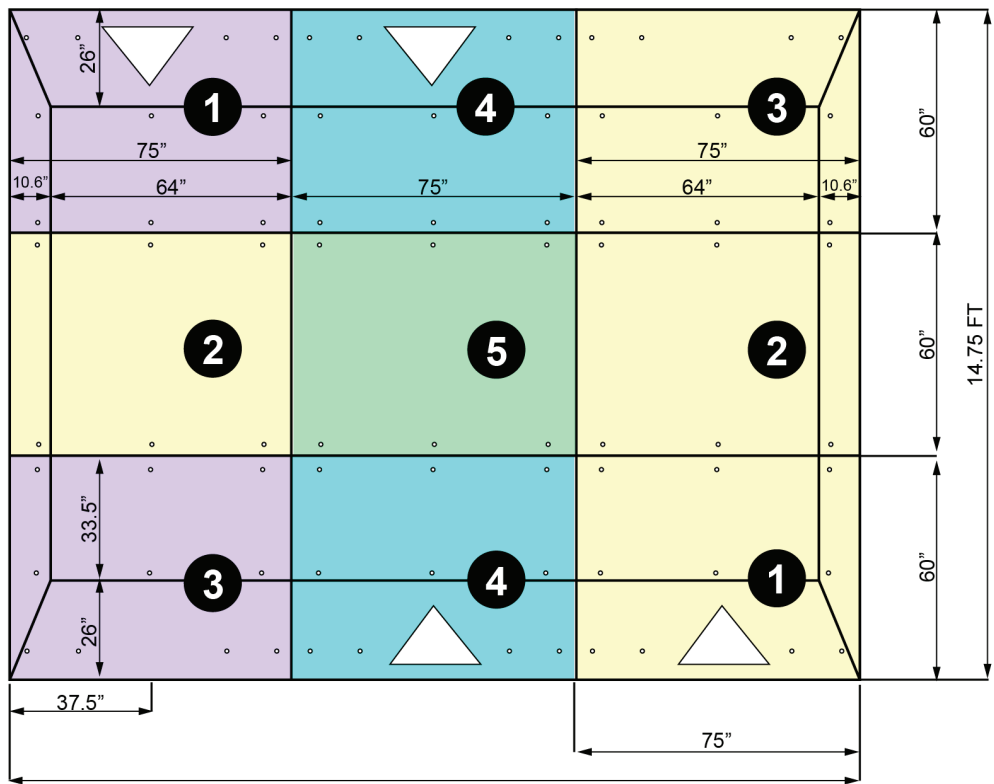
The raised table is available in two configuration options to suit location and budget. Both durable products provide the benefit of consistent material consolidation and gradient angles in accordance with ADA recommendations.

The complete table offers integral ramps and table top at 9.8 ft long, thereby ensuring a smooth transit. Individual ramp sections offer a more exacting and economical alternative to in-situ formed ascent and descent ramps, as part of an asphalt system.



18

# PEDESTRIAN ISLAND CROSSWALK PLATFORMS

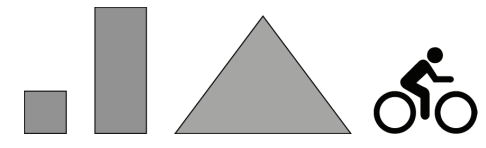


### PART DESCRIPTIONS

1. Tapered Top Left Corner
2. Tapered End Section
3. Tapered Bottom Right Corner
4. Straight Ramp Section
5. Straight Extension Section

### SURFACE MARKING OPTIONS

- A. Triangle
- B. Pedestrian Crossing Line
- C. Guidance Square
- D. Bicycle Legend





## SECTION 12

STOP VEHICLES FROM ACCESING  
BIKE LANES





19

## STOP VEHICLES FROM ACCESING BIKE LANES



**PREVENTING VEHICLE ACCESS**

Anchored and unanchored bicycle access barriers

5



Passive Access

19



Prohibitive Access

# PREVENTING /STOPPING VEHICLE ACCESS INTO PROTECTED BIKE LANES

19

As city's evolve, bicycle lanes will change and widen from single lanes to double lanes. Widening of bicycle lanes can indirectly create access ways for cars to pass through intentionally or unintentionally. Special flexible signage or modular barricades should be used to prohibit vehicles from entering the bicycle lane that would potentially cause a harm to bicyclists.

### Passive Access



### Prohibitive Access





19

Models  
BLD-1U-Unanchored  
BLD-1A-Anchored

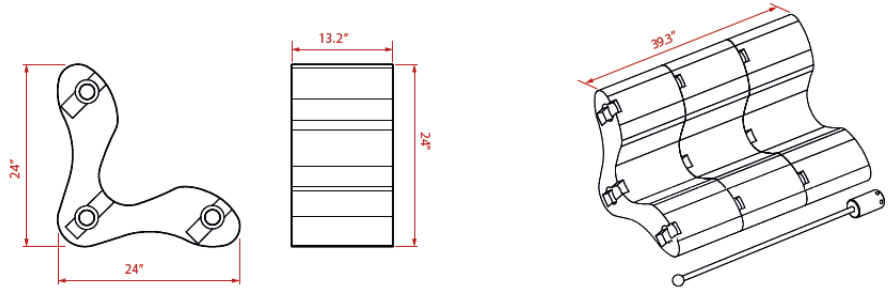


**PREVENTING VEHICLE ACCESS**

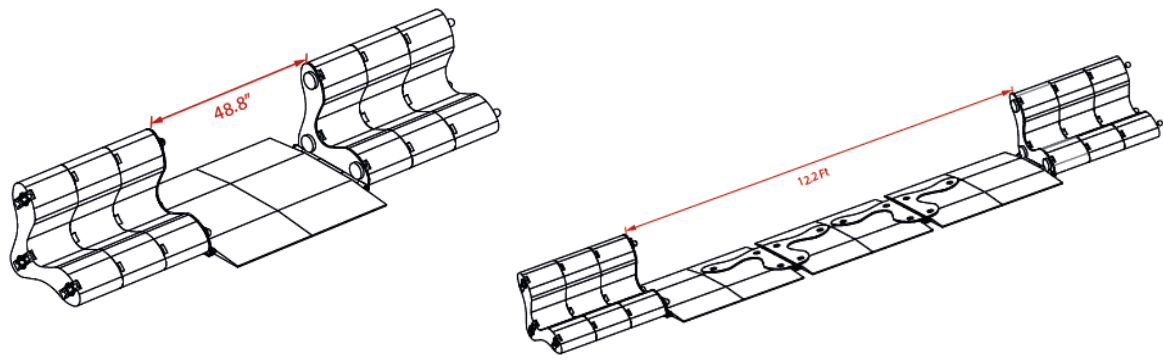
**STOP**  
**VEHICLE**  
**ACCESS**  
**OPTIONS**

19

## Cyclest & Pedestrian Access Portal



Manufactured from 100% recycled rubber and polyurethane, the Bike Lane Defender is supplied complete with steel securing rods and anchors.



# STOP VEHICLE ACCESS

	Cycle or Pedestrian Portal	Vehicle Portal
Opening	4 ft	12.2 ft
Weight	210 lbs	687 lbs
Connection	3/4" steel rods	3/4" steel rods



## SECTION 6

### STEEL BARRIER FOR PROTECTED BIKE LANES OVER BRIDGES





## STOP VEHICLES FROM ACCESING BIKE LANES

19

[See Page 100 to 105](#)



### PREVENTING VEHICLE ACCESS

Anchored and unanchored bicycle access barriers

## CREATE PROTECTED BIKE LANES OVER BRIDGES

20



Minimum Deflection Steel Barriers  
Available in Test Level 4 & Test Level 5 Containment

20

## CREATE PROTECTED BIKE LANES OVER BRIDGES



Lightweight Limited Deflection Steel barriers provides a solution to increasing cyclists safety over bridges.

- Lightweight 64 lbs per foot
  - MASH Compliant
  - Easy to install
  - 2 anchors every 10 feet
  - Anchor depth 5.25 inches
- 
- Available in Test Level 4 and Test Level 5



20

## CREATE PROTECTED BIKE LANES OVER BRIDGES

Create protected bike lanes over bridges and expressways with modular steel barriers

- <https://www.youtube.com/watch?v=kdvglgGifeg&t=96s>



- Test Level 4 Limited Deflection Steel Barriers



## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

Create protected bike lanes over bridges and expressways with MODULAR MDS TL4 and TL5 steel Barriers. Bring new life to cities and municipalities by providing bicyclists and pedestrians the ability to cross over waterways, train tracks and expressways with high containment safe bicycle lanes.



Smooth backside for safe bicycle passage



Variable length barriers for expansion joints

## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

Join communities with high containment steel barrier without the need for rebuilding or reinforcing bridges to support the deadweight of concrete barrier



Smooth backside for safe bicycle passage

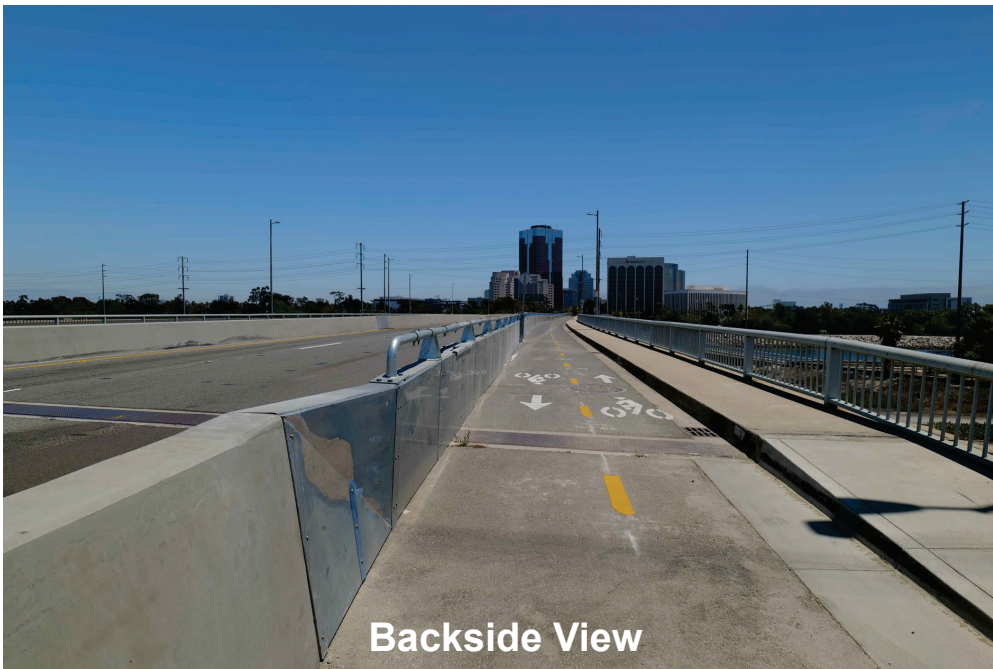


Variable length barriers for expansion joints



## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

Transitions are available to adapt to concrete, W-Beam, Thrie Beam and attenuators for seamless linier protection



Smooth transition into concrete barriers



## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

Smooth transitions into crash attenuators



## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS



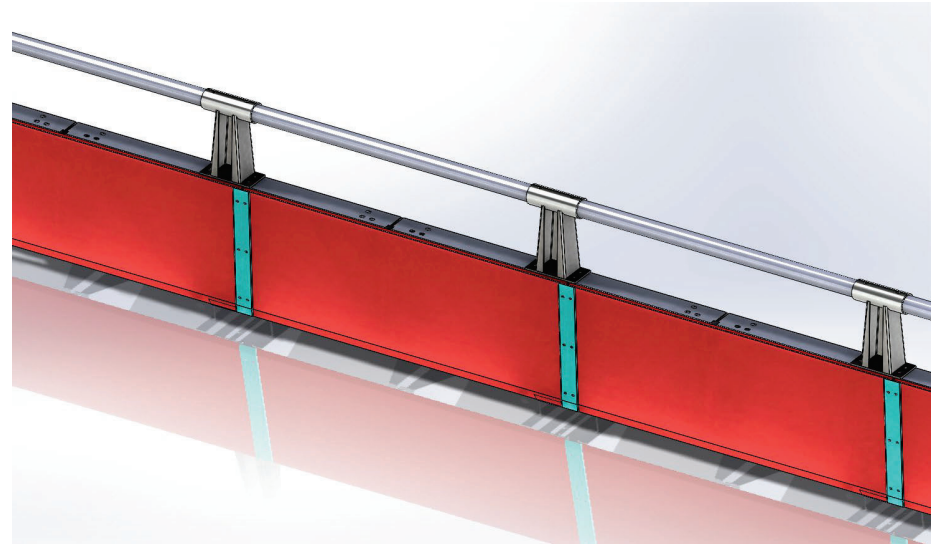
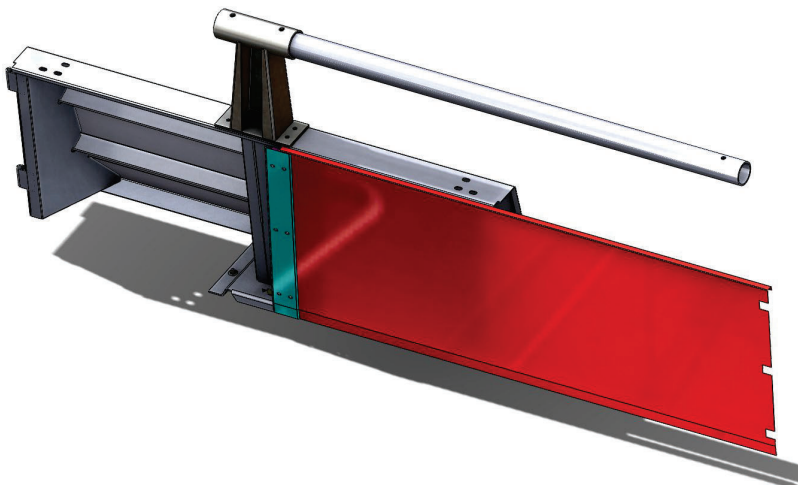
MASH TL4



MASH TL5

## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

Aluminum safety plate backing





## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

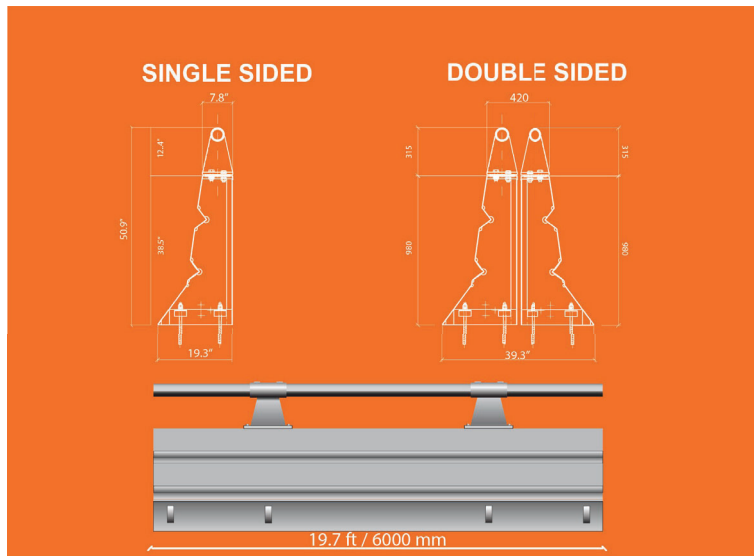
### Safety Walls / Sound Barriers



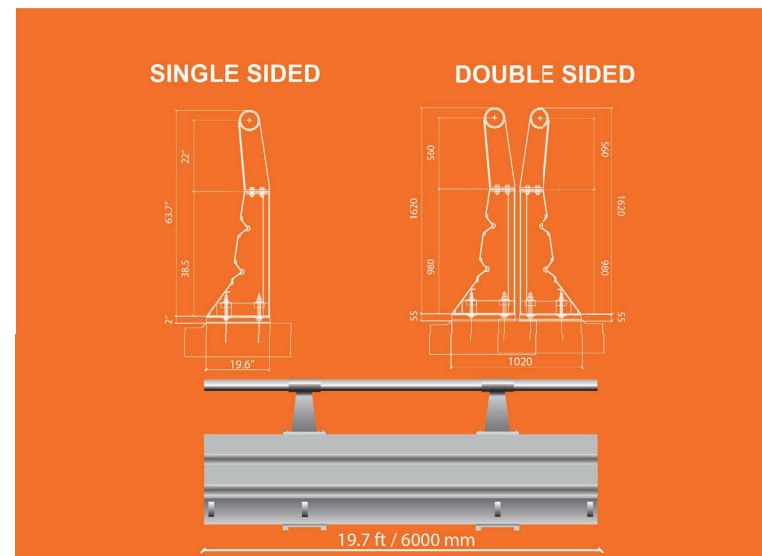
MDS Barriers have the ability to incorporate site and sound walls for added safety and noise mitigation. Sound walls are attached to the back of the barrier. No additional anchoring is required.

# 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

## Test Level 4



## Test Level 5



Available in 20 ft and 10 ft standard sections

Made in USA

## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS



MDS® Barriers are a high performance aesthetically engineered bridge rail System designed for both new and existing bridges. Modular design facilitates assembly for permanent installations and can be easily installed and relocated for temporary installations. Developed specifically for bridges due to its light weight and high impact TL-4 & TL-5 protection.



## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS



MDS® Barriers are a high performance aesthetically engineered bridge rail System designed for both new and existing bridges. Modular design facilitates assembly for permanent installations and can be easily installed and relocated for temporary installations. Developed specifically for bridges due to its light weight and high impact TL-4 & TL-5 protection.

## 20 CREATE PROTECTED BIKE LANES OVER BRIDGES & EXPRESSWAYS

520 Feet per truckload.



## VIDEO SLIDE

[Visit Youtube for video clip](#)

- <https://www.youtube.com/watch?v=5e713fusSdw>



▶ ▶| 🔊 0:02 / 0:57







## Bicycle Lane Safety

## YouTube VIDEO LINKS

### [All Video Folder US Reflector - YouTube](#)

#### K71 Presentation Video

<https://www.youtube.com/watch?v=5e713fusSdw>

#### K71, K72, K825 Installation Video

<https://www.youtube.com/watch?v=UQ-W3z3wltM&t=1s>

#### 360 Degree optical curb markers

<https://www.youtube.com/watch?v=iZ3zwfXCH7k>

#### LED Snow Plowable Markers

[https://www.youtube.com/watch?v=nk\\_TaD4OW04](https://www.youtube.com/watch?v=nk_TaD4OW04)

#### MDS Steel Barrier Video

<https://www.youtube.com/watch?v=kdvlgGifeg>

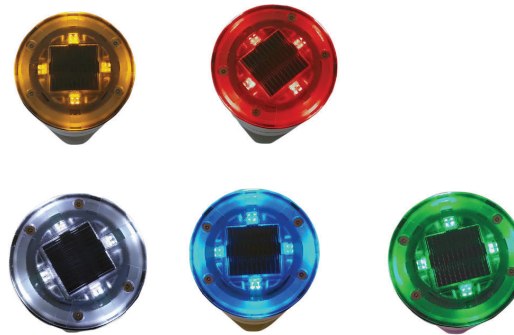
#### General Presentation K71 Protected Bike lanes

<https://www.usreflector.com/presentation/>

#### Illuminated Flexible LED Posts



## SECTION 6 New Products



**CITY-LIGHTS SOLAR LED** Flexible bike-lane and guidance posts are a groundbreaking new traffic solution to meet the changes modern urban mobility.

Identify entry and lane exit points such as intersections and crossroads.

The City-Lights flexible illuminating bollard has a built-in solar light on top that is designed to provide excellent illumination on public roads and pathways with low energy consumption. Posts are ideal for lighting walkways, bike paths, pedestrian areas, and similar spaces.

Link: <https://www.usreflector.com/wp-content/uploads/2023/02/LED-Solar-City-Light-Flex.pdf>



### **CITY-LIGHTS CROSSWALK SOLAR LED**

Easily Connects with the pedestrian crossing traffic lights, the LED's on top of the bollard changes from red to green in sequence according to the pedestrian crossing traffic signal lights alerting pedestrians if it is safe to cross the street or not.

Designed to be at a walker's angle of view when pedestrians are looking at their phones, the new CITY-LIGHTS flexible bollard alerts pedestrians if it is safe to cross the street or not. Specifically designed for distracted walkers, the light on the top of the bollard is at the angle of view of a pedestrian who is looking at a cellphone. The bollard is connected with the pedestrian crossing traffic lights, the LED on top of the bollard changes from red to green according to the pedestrian crossing traffic lights alerting pedestrians if it is safe to cross the street or not.