



# Choosing wisely

When choosing a flexible post, road operators should ask several questions before specifying or purchasing, as not all posts are made alike

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Flexible channelizer posts – also known as bollards, pylons, tubular markers, delineator posts and pole cones – are widely used for permanent traffic control purposes such as adding emphasis to lane delineation, gores, islands, along a center line or between lanes to preclude turns or to prevent lane changing. They are also installed temporarily in construction work zones to separate lanes of traffic moving in opposite directions.

How are flexible channelizer posts used in your community – by simply directing traffic in a parking garage? Or separating lanes in high-volume, high-speed managed high-occupancy tolling (HOT) lanes? The needs of both applications are very different, and doing some legwork ahead of issuing specifications or making a purchase can ensure that you are getting the best value for the funds expended.

This type of post is fixed to the roadway by mechanical or adhesive means, designed to rebound, and made of materials that can be struck without causing damage to the impacting vehicle.

Posts are typically fitted with reflective sheeting to provide night-time visibility and colored to match the pavement markings they supplement.

## Size matters

These flexible devices are produced in many sizes and heights. The US federal Manual on Uniform Traffic Control Devices (MUTCD – Sections 6F:63 and 6F:65) requires 'tubular markers' to have a minimum height of 18in (450mm) with one 3in (75mm) retroreflective band for roadways with a posted speed of less than or equal to 40mph (64km/h). On roads with speeds higher than 45mph (72km/h) a minimum height of 28in (700mm) with two 3in bands is required. The most commonly used posts in North America are 36in (900mm) in height.

The MUTCD calls for a minimum 2in (50mm) width for a tubular marker. Most products on the market today are at least that width. However, many applications benefit from having a larger visual target guiding motorists. It is obvious that a 3in-wide unit provides 50% greater delineation than a narrower

Above: **Pexco's City Posts installed on I-95 in Florida, USA**



Above: **The posts are used in a range of applications, such as lane delineation, pictured in Tampa, USA**

Left: **Pexco's City Posts installed in Stockholm, Sweden**

2in (50mm) post. For roadways with serious safety needs – gores, hazardous curves, two-way two-lane detour operations, and managed lanes – a 3in-wide post is highly recommended. In fact, the MUTCD requires roadside delineator posts to support a reflector at least 3in wide. Choosing a wider post where greater safety is needed is a wise decision.

### Color counts

These flexible devices are also produced in a wide variety of colors. For construction work zones, orange is the standard, but fluorescent orange is better because it is more visible in low light conditions such as dawn and dusk, and in inclement weather.

For other types of roadways, the post should be the same color as the adjacent pavement markings they supplement. When choosing colors for the posts on your project, it's worth remembering the following:

- Centerline delineation – yellow posts with yellow reflective sheeting;
- Lane and edgeline delineation – white posts with white sheeting;
- Pedestrian crossings – fluorescent yellow-green (lime green) post and sheeting;
- Bike lane/roadway intersections – red with white sheeting.

When durability counts, design matters. If you install posts in a high-impact area, there are several design considerations to consider as you plan your project.

**Flexion:** how does the post flex upon impact? A rigid tube must have a spring or other hinging mechanism. A design with inherent rebound using flexible polymers, such as polyurethane, has been proven time and again to be more durable.

**Components:** how many pieces are in the complete assembly? The fewer components a post has, the fewer potential failure posts. Simple is better.

**Materials:** how many different materials make up the assembly? Fewer components and parts typically provide greater durability and lower maintenance.

**Prove it:** how has the durability of this device been tested? Was the test done by an independent, accredited test facility? At what temperature, at what speed, and with what size of vehicle? How does it perform when impacted with a bumper versus a wheel-over/tire impact? These factors have considerable influence in how the post you choose will perform.

### Last post standing

Pexco's three versions of its City Posts – EAC (embedded anchor cup), GD (glue down)

and SM (surface mount) – have been proven to be the most durable posts on the market, both with independent third party, Department of Transportation (DOT) sponsored testing, and in real-world projects around the USA. They have inherent rebound, have few components, are made of 100% polyurethane, and feature a simple, unitary design.

On the I-95 Express Lanes in Miami, where the Florida DOT had been spending over US\$1m a year replacing failed, inferior posts, Pexco's City Posts were then installed. The following results were reported after they had been installed for six months: replacement of damaged posts was reduced by 91%; dangerous 'lane diving' behavior (the illegal maneuvering of 'diving' from a free, general purpose lane, into a tolled managed or high occupancy toll lane) was reduced by 87%; crashes in the express lanes were reduced by 34%; and express lane traffic volume increased by 2%.

Asking the right questions and doing some research before choosing a channelizer post can help you get the best value for your money. Pexco has developed a wide range of products suited for the needs of every roadway – even Florida's challenging I-95 Express Lanes! ■