

## GREAT FOR HIGH SECURITY WITH MINIMUM EXCAVATION

- ▶ The bollard's shallow 12" foundation minimizes disturbance of critical underground services with significant savings over installation of deep foundations.
- ▶ Use flexible arrays of fixed and removable bollards to define secure perimeters with easy access when you need it.

### SHALLOW MOUNT BOLLARD



The Innovo **Shallow Mount Bollard System** (SMB) consists of a round steel tube, an internal reinforcing plate, and a round steel sleeve with locking cover and integrated in a reinforced steel shallow depth foundation for a high-strength security measure. The SMB is a low maintenance, low-cost option that provides perimeter protection with controlled access and installation costs that are a fraction of deep foundation bollards.

Arrays are available with fixed or removable bollards. Fixed bollards are a permanent protection for pedestrians and critical assets from oncoming vehicles. Removable bollards create secure perimeters but can be removed using lifting equipment to allow for parking, maintenance, or emergency access. The SMB has a standard powder coat finish and is available in a variety of finishes including galvanized and painted.

Consider adding  
**SHALLOW  
MOUNT  
BOLLARDS**

to protect  
pedestrians and  
critical assets.

### FEATURES

- Crash rated for M30/P1, M40/P1, and M50/P1
- Additional crash rating available (including ratings above M50/P1)
- All steel construction
- 38" post height
- High duty cycle for fast vehicle processing
- Double-sided protection

# SHALLOW MOUNT REMOVABLE BOLLARD

## TECHNICAL DATA

SHALLOW MOUNT	FIXED BOLLARD	REMOVABLE BOLLARD
Crash Rating	K4, K8, K12 M30, M40, M50 *Additional Ratings Available	K4, K8, K12 M30, M40, M50 *Additional Ratings Available
Post Height	38"	38"
Top	Flat, Round, or Angled	Flat, Round, or Angled
Array	Minimum of three bollards	Minimum of three bollards
Foundation Depth	12"	12"
Foundation Size	72" front to back 18" beyond outside bollards	72" front to back 18" beyond outside bollards
Concrete Type	4,000 psi	4,000 psi
Post Spacing (center to center)	Max: 48"	Max: 48"
Additional Options		Lockable Lid Cover

## IDEAL INSTALLATION

### FIXED

- **Limited Excavation** and minimal disturbance of underground services and utilities
- **Provide Guaranteed Perimeter Protection** to maintain structural integrity of critical environments and restrict access from vehicular attack
- **Non-Vehicular Access** with unrestricted access for pedestrians and bicycles
- **Provide Sites With Heavy Traffic** a permanent protection solution that maintains perimeter security

### REMOVABLE

- **Limited Excavation** and minimal disturbance of underground services and utilities
- **High Security Pedestrian Protection** with ease of removal and minimal maintenance
- **Impermanent Movable Solution** for changing controlled site access security needs