

# PORTABLE PRODUCT MANUAL

# OMNI STOP

**BOLLARDS**



W [www.saferoads.com.au](http://www.saferoads.com.au)  
T +61 3 5945 6600  
E [sales@saferoads.com.au](mailto:sales@saferoads.com.au)



Version 1.1  
November 2018

# Contents

Preface .....	2
Introduction .....	2
Crash Tests .....	3
Bollard Units.....	4
Site Considerations .....	6
Lifting Method.....	6
Bollard Deployment .....	6
Maintenance and Repair.....	7
Safe Work Method Statement .....	8



W [www.saferoads.com.au](http://www.saferoads.com.au)  
T +61 3 5945 6600  
E [sales@saferoads.com.au](mailto:sales@saferoads.com.au)

Version 1.1  
November 2018  
Page 1

## Preface

Proper design, installation and maintenance of the Omni-Stop Portable Security Bollard is essential to ensure maximum performance.

It is critical for installers of the Omni-Stop Portable Security Bollard to be fully familiar with this manual. Take the time to review this manual thoroughly before performing the necessary work.

If more information is required, please contact Saferoads:

Website: [www.saferoads.com.au](http://www.saferoads.com.au)

Australia: 1800 060 672

USA: 859 469 0364

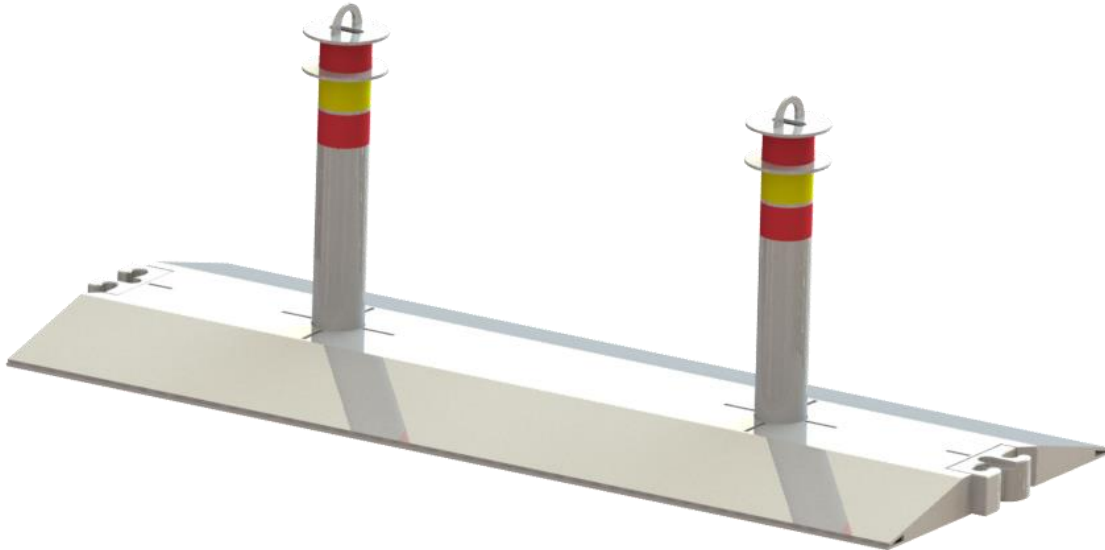
International: +61 3 5945 6600

Email: [sales@saferoads.com.au](mailto:sales@saferoads.com.au)

## Introduction

Saferoads Omni-Stop Portable Security Bollard is a completely freestanding system which has been successfully crash tested to confirm it can contain a 5000lb/2270kg pickup travelling at 30mph/50kmh.

The Omni-Stop Portable Security Bollard provides positive protection for pedestrians at public events, while remaining unobtrusive and allowing free flow of foot traffic throughout the system.



W [www.saferoads.com.au](http://www.saferoads.com.au)  
T +61 3 5945 6600  
E [sales@saferoads.com.au](mailto:sales@saferoads.com.au)

Version 1.1  
November 2018  
Page 2

## Crash Tests

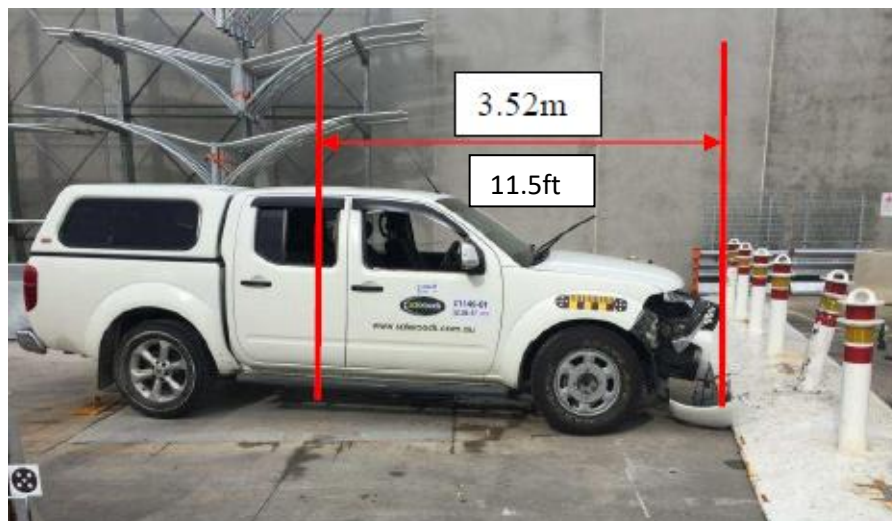
The test vehicle impacted the bollard in the centre of the vehicle. The forward displacement of the vehicle and bollards during impact was 3.52m (11.5ft). The test was conducted with the minimum required deployment of 5 bollard units, with a total length of 15m (49.2ft).

The Omni-Stop Portable Security Bollard was crash tested in August 2018, for full details refer to NATA test report 21140 01.



Impact velocity exceeded AS/NZS 3845.2:2017 at 57kmh (35mph). In accordance with MASH Clause 5.2, the bollard yielded predictably with no fragmentation, and the vehicle was contained with 3.52m (11.5ft) of deflection.

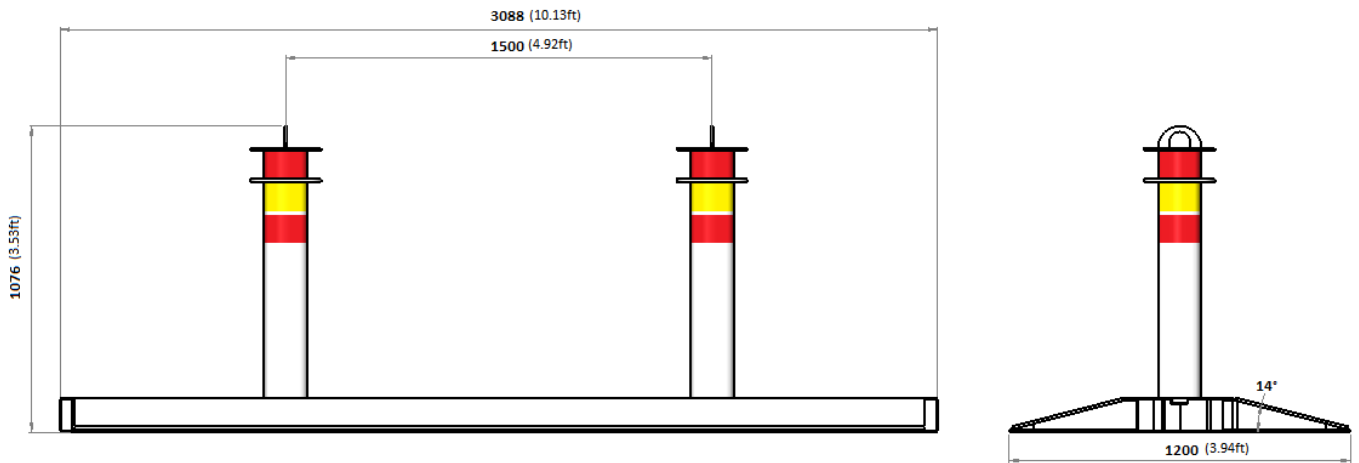
This test was completed on concrete. It is important to note that alternative surfaces such as asphalt may result in different deflections.



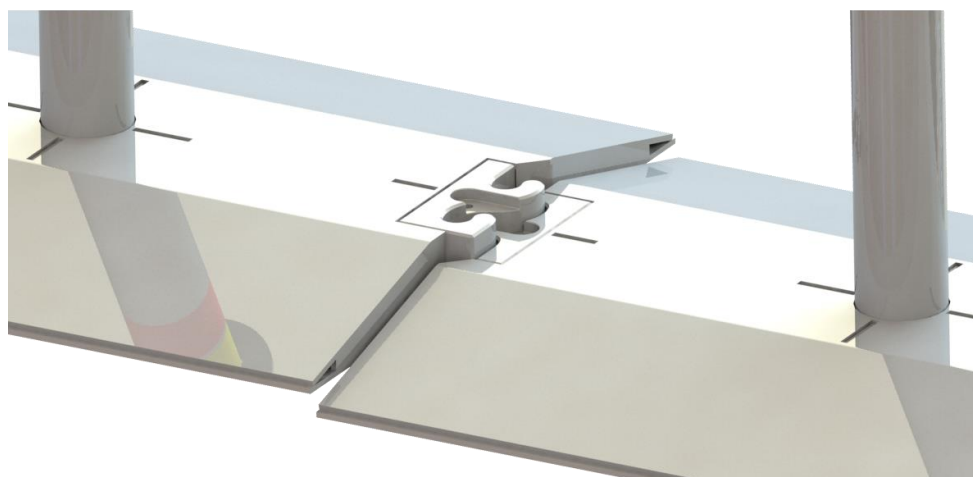
## Bollard Units

An Omni-Stop Portable Security Bollard installation is constructed from a series of individual bollard units. Each unit is constructed from steel and contains concrete ballast. A minimum deployment of 5 units is required.

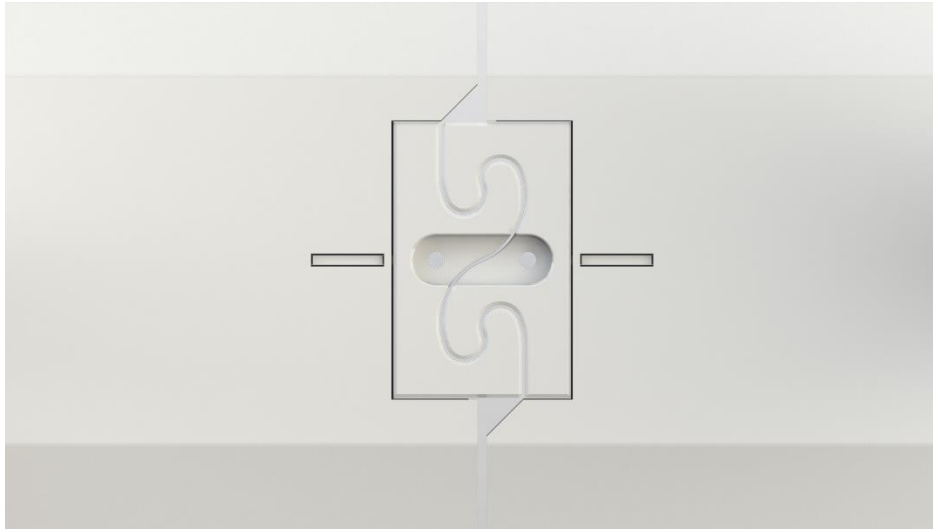
Installed length	3,000mm (9.84ft)
Unit length	3088mm (10.13ft)
Unit width	1200mm (3.94)
Unit height (bollard)	1076mm (3.53ft)
Unit Height (base)	100mm (4in)
Weight	1,290kg (2,840lbs)



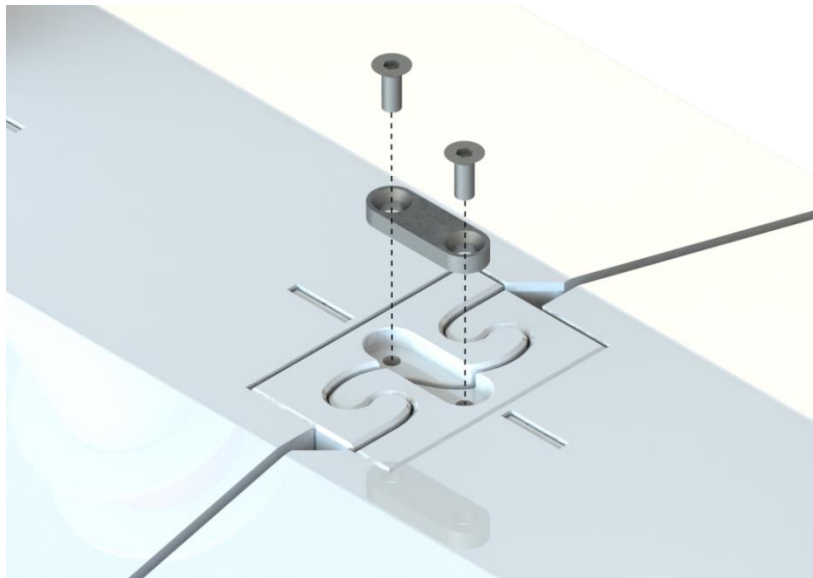
Bollard units are aligned by an integrated, interlocking connector, which simply slides together when lowered into position.



The bollards are bi-directional, allowing to be installed in either orientation.



The units are then fastened with a small joiner plate that is bolted into the joiner with an M20 bolt.



Bollard units feature 2 integrated lifting hoops which can be used to safely position the bollard into place.



## Site Considerations

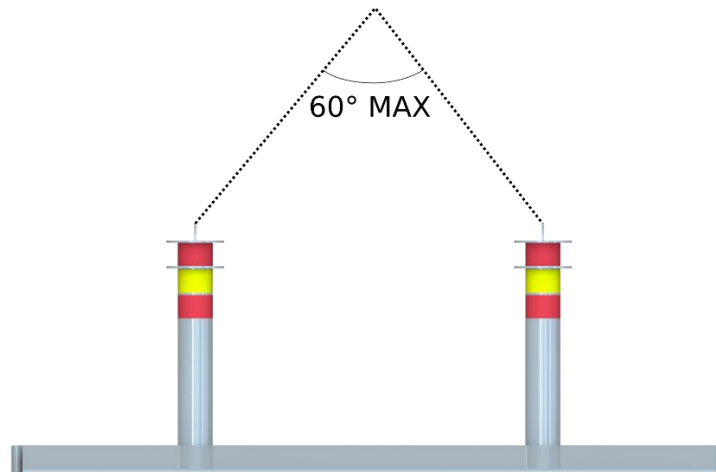
While Omni Stop Portable Bollards can be installed in most locations, some obstacles must be avoided. Bollards should not be installed if there is:

- Cross slope steeper than 5%
- Longitudinal slope steeper than 5%
- Ditches or crests
- Kerbs or similar obstacles restricting placement

Omni Stop Portable Bollards can be installed around shallow curves; however, the system is primarily designed to be used in straight line installations.

## Lifting Method

Bollards should be lifted using appropriate machinery such as a crane and operated by competent personnel. A sling should be attached between the two integrated lifting points on top of each bollard, and the lifting point of the machine. The sling should have an angle no greater than 60° as shown in the below diagram. Alternatively, an appropriately rated spreader bar can be used.



## Bollard Deployment

Before starting deployment, ensure there is adequate traffic management, and whenever possible, personnel should remain on the non-traffic side of the installation. Also ensure appropriate lifting equipment is used and operated by competent personnel.

1. Beginning at one end of the installation, unload the first bollard unit and place in the correct position.
2. Working downstream of the first bollard unit, unload the second bollard unit and align the connectors while lowering the unit into place. Remain cautious of potential pinch and crush points when lowering and connecting bollards.
3. Using two M20 countersunk bolts and a 12mm hex key, install the joining plate into the bollard connectors.
4. Repeat steps 2 and 3 until all bollards have been deployed.



## Maintenance and Repair

No ongoing maintenance is required for the Saferoads Omni-Stop Portable Security Bollard. However, bollards should be inspected regularly and any units with cracking, tearing, bending or perforation of steel components should be disposed of. Units that need to be changed after installation can simply be swapped without dismantling the system. Repair of bollards is not recommended. Coatings including paint and non-slip or reflective adhesives should also be inspected regularly and repaired or replaced as necessary.



W [www.saferoads.com.au](http://www.saferoads.com.au)  
T +61 3 5945 6600  
E [sales@saferoads.com.au](mailto:sales@saferoads.com.au)

Version 1.1  
November 2018  
Page 7



## Safe Work Method Statement

Activity	Hazard Identified	Controls Required	Risk Before Controls	Person Responsible	Residual Risk	Sign Off
Lifting Bollard Units	Lifting equipment failure	Ensure machinery and operators are appropriately certified. Ensure all equipment is in good, working and tagged condition.	M		L	
	Contact with overhead services	Ensure there are no hazards above the area. If unsure arrange a spotter.	H		L	
	Contact with people or property	Ensure hazards are cleared from area, and do not use lifting equipment in adverse weather.	M		L	
Placing Bollard Units	Crushing under or between segments	Where possible personnel should be away from area. If personnel are required body parts should be clear when lowering and joining barrier segments. Appropriate PPE should also be worn.	M		L	
Arriving or departing worksite	Collision with people or property	Abide by worksite speed limits and transport routes. Ensure nearby personnel are wearing high-vis clothing.	L		L	
Attending worksite	Environmental hazards	Personnel should wear appropriate clothing and foot wear for environmental conditions.	L		L	
	Excess noise	Where required personnel should wear appropriate hearing protection.	M		L	
	Falling items or debris	Where required personnel should wear appropriate protective gear such as helmets, boots and eye protection.	M		L	





W [www.saferoads.com.au](http://www.saferoads.com.au)  
T +61 3 5945 6600  
E [sales@saferoads.com.au](mailto:sales@saferoads.com.au)

Version 1.1  
November 2018  
Page 9