SPECIFICATIONS Helix Lock Stainless Steel Removable Bollards (HL2002S, HL2002SL, HL2003S, HL2003SL, HL2004S, HL2004SL, HL2006S, HL2006SL) **US Patent 8,297,873**

PART 1 **GENERAL**

1.1 SECTION INCLUDES

Removable bollards and ground sleeves 1.1.1

1.2PART SPECIFICATIONS

- 1.2.1ASTM A312 – bollard post
- 1.2.2 ASTM A513 Type 5 bollard ground sleeve, filler piece
- 1.2.3ASTM A36 – lid assembly
- 1.2.4ASTM A1011-10 & ASTM A500-10 - helix insert

1.3 PERFORMANCE REQUIREMENTS

- 1.3.1Bollard will remove completely from the ground sleeve and provide flush surface when galvanized lid drops down or filler piece is inserted.
- 1.3.2Unlock helix with custom allen wrench. To replace the bollard, make sure the bollard is still unlocked, replace, and lock the helix to secure bollard in ground sleeve.

SUBMITTALS 1.4

1.4.1Submittal document can be found at www.trafficguard.net under "document library" or enclosed with bollard purchase. Follow manufacturer's specifications and installation instructions as required.

1.5 QUALITY

Bollard posts and ground sleeves must be supplied by TrafficGuard 1.5.1to provide consistent quality in appearance and performance.

1.6 DELIVERY, STORAGE AND HANDLING

Inspect materials upon receipt ensure that the correct materials have 1.6.1been received and that they are in good condition.

TrafficGuard, Inc. – PO Box 201 – Geneva, IL 60134 Phone: 877-727-7347 Fax: 800-814-7194 Web: www.traffiguard.net

1.6.2 If not installing immediately, store units to avoid damage from other construction activities and elements.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 TrafficGuard, Inc., P.O. Box 201, Geneva, IL 60134, Tel 877-727-7347, Fax 800-814-7194, Website: http://www.trafficguard.net
- 2.1.2 Different body styles for the Helix Lock are available to fit strength and aesthetic requirements. Architect should specify different body styles:

HL2002S – 2.375" OD, 36" height HL2002SL – 2.375" OD, 36" height HL2003S - 3.5" OD, 36" height HL2003SL- 3.5" OD, 36" height HL2004S – 4.5" OD, 36" height HL2004SL – 4.5" OD, 36" height HL2006S – 6.625" OD, 36" height HL2006SL – 6.625" OD, 36" height

2.2 MATERIALS

- 2.2.1 Bollards supplied should be free from surface blemishes and defects where exposed to view in the finished installation.
- 2.2.2 Steel Tube: ASTM A312, ASTM A500-10
- 2.2.3 Steel Plate: ASTM A36, ASTM A1011-10

2.3 FABRICATION

2.3.1 After fabrication all units are prepared by removing scale and slag through the sand blasting process.

2.4 FINISHES

2.4.1 304 Stainless Steel, #4 brush finish.

PART 3 EXECUTION

- 3.1 INSTALLATION
 - 3.1.1 Comply with manufacturer provided instructions and drawings.

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- 3.1.2 Ground sleeves should be installed with the top of the sleeve set flush with the finished surface.
- 3.1.3Ensure that a minimum of a 3 inch gravel base is put down prior to installation to ensure drainage of the bollard, per installation details.
- 3.1.4Bollard should not be inserted into the ground sleeve until it is leveled and fully cured. Attach bollard per manufacturer instructions. DO NOT ATTEMPT TO INSTALL BOLLARD IN THE LOCKED POSITION.
- 3.1.5 If touch up painting in the field, be careful not to paint moving parts which may restrict the bollard's proper function.

SITE STORAGE AND PROTECTION 3.2

- Upon receipt of bollard unit(s) all materials should be thoroughly 3.2.1inspected to ensure that all parts are received in good condition.
- 3.2.2Store units in a dry location away from possible damage until the time of installation.