

TECHNICAL SPECIFICATIONS for Model: EW-8000
SECTION 34 71 13
ACTIVE VEHICLE BARRIERS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Vehicle wedge barriers
 - 2. []

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-in-Place Concrete
- B. Section 09 90 00 – Painting & Coatings
- C. Section 28 13 00 – Security Systems
- D. []

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM F2656 - Standard Test Method for Vehicle Crash Testing of Perimeter Barriers

1.4 SUBMITTALS

- A. Product Data:
 - 1. Comply with Section [01 33 00 – Submittal Procedures.] [].
 - 2. Product Data: Provide for each type of barrier, component, finish, and accessory specified.
 - 3. Maintenance Data: Submit manufacturer's field touch-up, cleaning, and maintenance instructions.
 - 4. Warranty Documentation: Submit sample of manufacturer's warranty.

1.5 QUALITY ASSURANCE

- A. COMPLY WITH SECTION [01 43 00 – QUALITY ASSURANCE.] [].
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
- C. Installer Qualifications:
 - 1. Engage an experienced installer who has minimum five years documented experience with projects of similar scope and complexity.

2. Installer is an authorized representative of the vehicle barrier manufacturer for both installation and maintenance of the type of units required for this Project. Installer Qualifications:
- D. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
- E. Each Sloan Surface Electric Wedge Barrier FS30/P1 is cycled in-house prior to shipment to ensure proper working order and calibration of limit switches.
- F. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.
- G. Nameplates: The vehicle barrier shall have the manufacturer's names, contact for service, and catalog or serial number permanently affixed to a plate securely attached to the equipment in a suitable location.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with Section [01 66 00 – Product Storage and Handling Requirements.] [_____].
- B. The Sloan Surface Electric Wedge Barrier, FS30/P1 shall be packaged to protect the materials from damage during shipment.
- C. While Sloan Security Group does not assume responsibility for injury to persons or property during loading, unloading, transporting or installation, verbal guidance and additional written instructions are available upon request.
- D. Sloan Security Group does not assume responsibility for insuring that the rigging and lifting gear is properly sized and attached when lifting heavy components. Equipment used shall be capable of handling product in an overhang position.
- E. Sloan Surface Electric Wedge Barrier FS30/P1 is coated to protect materials from the effects of exposure to all outdoor elements; however, when site storage is required Sloan Security Group recommends the following guidelines:
 1. Short term storage (0-12 months): Store in such a manner to ensure proper ventilation and drainage. The storage location shall protect against damage, vandalism, and theft.
 2. Long term storage (more than 12 months): In addition to the recommendations for short term storage, the Sloan Surface Electric Wedge Barrier FS30/P1 shall also be covered to prevent exposure to the elements prior to installation. The purpose of this recommendation is to preserve the aesthetic appearance of the coating finish. Long term exposure to the elements naturally degrades coating appearances; therefore, proper storage is essential for ensuring preservation of the material.
- F. Upon delivery of Sloan Surface Electric Wedge Barrier FS30/P1 control systems, the crate or pallets containing any electrical components shall be marked as such and stored in a covered location that ensures proper ventilation and drainage. The storage location shall protect against damage, vandalism and theft. Control cabinets may not be rated for outdoor exposure; therefore, higher storage measures should be taken.
- G. Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft.

1.7 WARRANTY

- A. Sloan's active vehicle barrier products carry a standard warranty against defects in material and workmanship on fabricated components for one year when installed by a Sloan authorized installer. Warranty begins at the ship date of product.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Sloan Security Group, Phone: (888) 382-8370, Website: www.sloansg.com, Email: info@sloansg.com
- B. Substitutions: Not Permitted.

2.2 VEHICLE BARRIERS

- A. Basis of Design: Sloan Surface Electric Wedge Barrier FS30/P1 System, Model: EW-8000, as manufactured by Sloan Security Group
 - 1. This system shall be tested and certified to meet ASTM F2656-20, Impact Condition Designation FS30, Penetration Rating P1, with the capability of stopping a 4,630lb vehicle traveling at speeds up to 30mph and less than 1 meter of dynamic penetration.
 - 2. The manufacturer shall supply a total active vehicle barrier system of the Sloan Surface Electric Wedge Barrier FS30/P1 design. The vehicle barrier system shall include an operable barrier with controls, cabling, and obstruction detection devices. The barrier shall comply with Sloan's System Drawings.
 - 3. The Sloan Surface Electric Wedge Barrier FS30 P1 System is designed to operate in a wide range of environmental conditions. These include the following:
 - a. Ambient temperature ranges without heating or cooling systems: -13° F (-25 ° C) to 158° F (70 ° C). Heating and cooling options to be used when necessary
 - b. Ambient relative humidity range: 0% to 100%
 - c. High dust environments
 - 4. The Sloan Surface Electric Wedge Barrier FS30/P1 has a raised height of 17.9in – 21in and the entire barrier sits flush to roadway when in the retracted position.
 - 5. The Sloan Surface Electric Wedge Barrier FS30/P1 System has an overall height of 44.4in.
 - 6. The Sloan Surface Electric Wedge Barrier FS30/P1 System shall be capable of 300 complete up/down cycles per hour. The barrier shall be capable of instantly changing direction when cycling through normal operation. Deployment speeds are programmable to match customer specifications. Normal operation shall be 5 seconds.
 - 7. In the event of electrical failure, the Sloan Surface Electric Wedge Barrier FS30/P1 is designed to hold the last commanded position, including the raised position. The Sloan Control system options include battery back-up and manual operating capability for use in event of power failure. Back-up operating equipment capable of a minimum 150 complete cycles (open and close) without use of manual system available upon request. Manual operating capability included as standard issue. Manual operation of barrier shall be simple and without need of special tools or knowledge.
 - 8. The wedge barrier shall not utilize any pneumatics, springs, or assists other than the actuator and motor to deploy the barrier.

2.3 MATERIAL

- A. Sloan will provide material certifications with each order upon request.

2.4 FABRICATION

- A. Fabrication of the members shall be in accordance with manufacturer's instructions, the plan

details, and this specification.

- B. The Sloan Surface Electric Wedge Barrier FS30/P1 coating system shall protect against the effects of long-term corrosion. Sloan can provide systems in galvanized with wet painted finishes. The standard coating design shall be all structural members hot dip galvanized to ASTM A123. In addition to the galvanizing, the blocking beams are painted white. The blocking beam is coated with nonskid reflective glass beading and painted with 4in (102 mm) wide red reflective stripes 4 in (102 mm) apart on the roadway surface. All stripes are diagonal at 45 degrees and pointing down and outward from the center of the blocking assembly. When alternative color pattern is required, the buyer will specify the custom color and design to the manufacturer at the time of ordering.
- C. Shop drawings can be provided for site specific locations of each barrier upon request.
- D. All Sloan products are coated to the customer specification.

PART 3 – EXECUTION

3.1 SITE EXAMINATION

- A. The purchaser shall indicate the location of all products with suitable means.
- B. The purchaser shall indicate all underground utility locations, USC&G benchmarks, property monuments, and other underground structures that interfere with installation.
- C. Before installing the Sloan Surface Electric Wedge Barrier FS30/P1, all necessary site clearing and grading shall be performed by the purchaser. An adequate clearance on both sides of the vehicle barrier line is required.
- D. Soil strength shall be equivalent to soil strength recorded during the ASTM F2656-07 certification test of the footer size and depth must be adjusted accordingly based on professional engineering analysis.
- E. The barrier frame shall require a minimum 6 in (1523 mm) depth to accommodate its foundation. An additional 4 in (102 mm) is required anchor strap area.

3.2 PREPARATION

- A. Examine and verify foundation suitability for product installation.
- B. Clean surfaces thoroughly prior to installation
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best results for substrate under the project conditions.

3.3 INSTALLATION

- A. The active vehicle barrier shall be installed per Sloan's System Drawing. Construct concrete foundations to the dimensions specified by the plans. Excavate a properly sized area for barrier foundations and install reinforcing steel in accordance with the plans. Place the concrete, install the barrier, and plumb. Refer to contract or submittal plans for more installation details.
- B. Sloan's vehicle barriers are warranted against defects in material and workmanship on structural components for one year from ship date, when installed by a Sloan authorized

installer.

- C. Engage an experienced installer who has minimum five years documented experience with projects of similar scope and complexity.
- D. Suggested Installer: Sloan Security Group Phone: (888) 382-8370, Website: www.sloangsg.com, Email: info@sloangsg.com

3.4 CLEANING

- A. Clean active vehicle barriers in accordance with the manufacture's recommendations to remove dust, dirt, adhesives, and other foreign materials.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. The contractor shall clean the jobsite thoroughly to ensure it is left neat and free of any debris caused by the installation of the active vehicle barrier system.

3.5 CONTINUED SERVICE AND DOCUMENTATION

- A. General maintenance of the Sloan Electric Wedge Barrier FS30/P1 System shall consist of removing foreign materials from frame or sub-grade frame as debris may cause damage to the barrier and may cause safety concerns. Refer to the owner's manual for more details on the system maintenance.
- B. Sloan will supply an operator manual that contains recommended maintenance intervals, procedures, and replacement parts lists.
- C. Maintenance instructions shall include routine maintenance procedures, possible breakdowns, and repairs, and troubleshooting guide. The instructions shall include piping layout, equipment layout and simplified wiring, and control diagrams of the systems as installed.
- D. Suggested Maintenance Contractor: Sloan Security Group, Phone: (888) 382-8370, Website: www.sloangsg.com, email: info@sloangsg.com

NOTE: Sloan Security Group reserves the right to change these specifications at any time. Call (888) 382-8370 to ensure that you have the latest edition.

CAUTION: Barriers manufactured by Sloan Security Group are intended for use in controlling vehicular traffic and are not intended to be used by pedestrians or to control pedestrian traffic. **Always install a separate pedestrian entry.**