

PRODUCT SPECIFICATION

Section 10718 – Flexible Transparent Hurricane Protection System

Part 1: General

1.1 Section Includes

- A. Hurricane protection system

1.2 Design/Performance Requirements

- A. Contractor shall provide for design, fabrication, testing and installation of hurricane wind abatement and impact protection system products and materials specified herein as required to meet the 2004 Florida Building Code, hurricane rated and structural envelope / opening requirements by FL 812 & and HVHZ by NOA 07-0424.04, FL320 or FL8363. Barrier to be transparent and rain resistant.
- B. Design of the System shall be performed to standards verifiable by a professional engineer registered in the State of Florida, and experienced in this application.
- C. Generally configure screen system to maintain the integrity and contiguity of structure envelope for hurricane related purposes, and as required by the applicable regulations. At door openings, configure screen system to allow egress from the building.
- D. System must meet the following standards: Florida Building Code and HVHZ TAS 201, TAS 202, TAS 203 , ASTM E 1886, ASTM E 1996 Level E, ASTM E330, SSTD12, IBC, IRC and ASCE-7.

1.3 Quality Assurance

- A. Products provided under this section shall meet or exceed requirements of Miami-Dade NOA quality certification program and National Accreditation Management Institute (NAMI) quality assurance program as instituted pursuant to Florida Building Code.
- B. Field Measurements: Verify size and location of each opening to be protected prior to fabrication.
- C. Installer Qualifications: Engage an experienced installer, trained by the manufacturer, to perform work on this section who has specialized in installing the system provided and who is approved, authorized, or licensed by the system manufacturer to install manufacturer's product.
- D. Inspections: Provide on-site inspections by primary material manufacturer's representative during and after installation of hurricane protection system.

1.4 Submittals

- A. Product Data: Manufacturer's specifications, test data, and installation instructions.
- B. Shop drawings: For fabrication and erection of screen system units and fasteners. Include plan view layout, elevations, wind load calculation sheet(s) and details specific to each project condition and screen. These details should include location by name and/or screen number corresponding to the plan layout, diagram showing the style of screen(s), types of anchors / fasteners , minimum required PSF and anchor spacing.
- C. Samples: 12 inch by 24 inch sample of screen material complete with hemmed perimeter edges, top attachment loops and bottom attachment strap with buckle. Include typical identification tag.
- D. Product/Code Certification: Provide verifiable documentation demonstrating conformance to all of the following standards: Miami-Dade NOA, ASTM E1886, ASTM E1996 Level E, SSTD 12-99, Florida Building Code, and that the hurricane protection products, including screen and anchoring devices be provided and installed as a system or assembly in this project meet or exceed requirements
- E. Inspection Report: Satisfactorily pass any inspections required by applicable regulations.

1.5 Warranty

- A. General warranty: The warranty specified in this article shall not deprive the owner of other rights the owner may have under other provisions of the contract documents and shall be in addition to, and run concurrent with, other warranties made by the contractor under the requirements of the contract documents.
- B. System Warranty: Submit a written warranty signed by the system manufacturer agreeing to promptly repair or replace units damaged due to defects in materials or manufacture.
- C. Provide 10 year pro-rated warranty on defects in manufacture that lead to failure, 1 year on labor. User must notify of defects immediately.

Part 2 – Products

2.1 Source Product/Manufacturer

- A. Armor Screen Corporation, 2001-H North Congress Avenue, Riviera Beach Florida 33404, Tel (561) 841-8890, fax (561) 841-8892, www.armorscreen.com.

2.2 Hurricane Protection System

- A . The transparent system shall be resistant to wind, rain, and large and small missiles, and may provide additional benefits such as compact, easy storage and protection for unconventional spaces. The system shall be versatile and able to be installed as a removable product, an unobtrusive roll-up or horizontal track system. Various aluminum extrusions may be incorporated as permanent or removable anchor attachments. The system shall be approved by Miami-Dade NOA in the HVHZ to 136.5 PSF design pressure and 24' unsupported span between opposing anchored edges or the Florida Building Code approval for 115.5 PSF with a 192" span (FL 8363). Maximum allowable distance between unanchored edges shall be unlimited. When the opening is protected all around, the system shall be approved under the Florida Building Code as a hurricane rated building envelope product.
- B. System shall incorporate a flexible, transparent membrane designed to deflect under the strongest hurricane force but not rupture, nor allow penetration by large or small missiles. The barrier is to be manufactured from a lightweight, extremely tough geosynthetic textile, tested to ASTM D4355, D4533, D4751, D5261, D3884, and D3786 and meeting manufacturer's requirements. The weave shall be tight enough for surface tension of water to create a barrier resistant to driving rain, and open enough to be transparent. The standard system shall require no independent frame, and efficiently attach to pre-installed anchors. Quick and simple deployment can be staged well before the potential threat without significantly affecting the usability of the structure.

2.3 Fabrication

- A. Factory fabricates screen barrier panels complete and ready for installation without field adjustment.
- B. Identify each separate panel with an identification tag indicating installed location descriptive reference such as "north side entry, etc." to implement deployment without location plan. Provide back-up location plan where appropriate.
- C. Provide custom storage bags for screen storage, as appropriate
- D. Fabricate screen panels of similar size and shape to be interchangeable to reduce the number of different sized units.

Part 3 – Execution

3.1 Examination and Preparation

- A. Examine substrates for conditions that would prevent quality installation of system
- B. Do not proceed until defects are corrected.
- C. Coordinate drawings, diagrams, templates, instructions and directions for installation of anchorages which are embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

3.2 Installation

- A. Comply with manufacturer's instructions and recommendations for installation.
- B. Provide anchors, inserts and accessories required for a complete installation.
- C. Install each screen unit in its prescribed location to verify proper installation of anchors then immediately remove and store in location within building as designated by owner.

3.2 Field Quality Control

- A. When directed, install all screen units at the same time, for verification and review by the Architect, Engineer, Owner, Manufacturer and Building Inspector.
 - a. Notify all attendee at least 5 working days in advance of the date and time of meeting/deployment.
 - b. Immediately following meeting/deployment, remove screen units and store as designated by owner within building.

Editor's note: specifier may renumber at his discretion