



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Hurricane Fabric.com LLC
P. O. Box 50153
Clayton, MO 63105

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: "Astro Guard " Flexible Wind Abatement System

APPROVAL DOCUMENT: Drawing No. 09-0408, titled " Astro Guard Wind Abatement System ", sheets 1 and 2 of 2, prepared by MEA Engineers, Inc., dated May 04, 2009, last revision #2 dated September 22, 2010, signed and sealed by John H. Kampmann Jr., P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, Tulsa, OK and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
 10/20/2010

NOA No. 10-0607.02
Expiration Date: 10/20/2015
Approval Date: 10/20/2010
Page 1

Hurricane Fabric.com LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 09-0408, titled " Astro Guard Wind Abatement System ", sheets 1 and 2 of 2, prepared by MEA Engineers, Inc., dated May 04, 2009, last revision #2 dated September 22, 2010, signed and sealed by John H. Kampmann Jr., P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of Astro Guard Hurricane Fabric Flexible Hurricane Wind Abatement System, prepared by Fenestration Testing Laboratory, Inc., Report No. 08-541, dated January 13, 2009, signed and sealed by Jorge A. Causo, P.E.*

C. CALCULATIONS

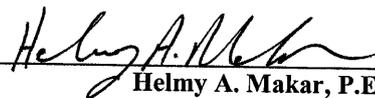
1. *Comparative Analysis and Anchor calculations dated January 8, 2009, 10 pages, prepared by MEA Engineering, Inc., signed and sealed by John H. Kampmann Jr., P.E.*
2. *Comparative Analysis and Anchor calculations dated September 11, 2010, 8 pages, prepared by MEA Engineering, Inc., signed and sealed by John H. Kampmann Jr., P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *Fabric specifications.*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 10-0607.02
Expiration Date: 10/20/2015
Approval Date: 10/20/2010

STRUCTURAL NOTES:

- THIS SYSTEM HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE (FBC). THIS SYSTEM MAY BE INSTALLED IN THE HIGH VELOCITY HURRICANE ZONE (HVHZ) WHICH IS MIAMI-DADE AND BROWARD COUNTIES. THE ADEQUACY FOR IMPACT, DEFLECTION AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 OF THE ABOVE REFERENCED CODE, AND AS PER TAS 201, 202 AND 203 AT FENESTRATION TESTING LABORATORY, INC. PER THEIR REPORT(S) LISTED HEREIN.
- DESIGN PRESSURE REQUIREMENTS OF A SPECIFIC SITE SHALL BE DETERMINED BY OTHERS IN CONFORMANCE TO SECTION 1609 OF THE FBC AS REQUIRED BY THE JURISDICTION WHERE THE SYSTEM WILL BE INSTALLED. WHEN CALCULATING PRESSURES PER ASCE 7, USE OF DIRECTIONALITY FACTOR $K_d=0.85$ IS ALLOWED.
- IMPACT AND FATIGUE RESISTANCE HAS BEEN DETERMINED IN ACCORDANCE WITH THE FBC SECTION 1609.1.2 AS PER FENESTRATION TESTING LABORATORY, INC. FILE # 08-541 LAB NUMBER 5804
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS INCREASE HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.
- THIS PRODUCT EVALUATION DOCUMENT (PED) DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS TO BE USED IN CONJUNCTION WITH THIS DOCUMENT.
- THE CONTRACTOR AND / OR PERMIT HOLDER IS TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS SYSTEM, INCLUDING VERIFYING THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND THE NEW SUPERIMPOSED LOADS SHOWN BELOW AND THE SOUNDNESS OF THE STRUCTURE WHERE THE SYSTEM IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.
- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA LICENSED ENGINEER OR ARCHITECT WHO WILL BECOME THE ENGINEER OF RECORD (EOR) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE PED ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE PED ENGINEER SHALL SUBMIT TO THIS ENGINEER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- THIS PED SHALL BEAR THE DATE AND ORIGINAL SEAL OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
- THIS SYSTEM MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN HEREIN.
- THIS WIND ABATEMENT SYSTEM IS INTENDED FOR USE ONLY DURING HURRICANE OR OTHER TROPICAL STORM WARNINGS. SEASONAL OR PERMANENT INSTALLATION OR STORAGE OF THIS WIND ABATEMENT SYSTEM IN AREAS OF PROLONGED EXPOSURE TO DIRECT SUNLIGHT OR OTHER WEATHERING CONDITIONS MAY CAUSE MATERIAL DETERIORATION OR OTHERWISE INHIBIT THEIR ADEQUACY AS AN IMPACT RESISTANT SYSTEM.
- LIMITATIONS OF USE
FOR PRODUCT INSTALLED WITHIN THE HIGH VELOCITY HURRICANE ZONE, THE MINIMUM SEPARATION FROM GLASS SHALL BE 1 INCH AT MAXIMUM DEFLECTION. THE MAXIMUM SIZE SHALL BE 60 PSF MAX. PRESSURE @176 INCHES MAXIMUM SPAN. SEE TABLE ON SHEET 1/2.
- RESERVED.
- ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES OR CORROSION RESISTANT COATED CARBON STEEL WITH A 50 KSI YIELD STRENGTH AND A 90 KSI TENSILE STRENGTH.
- ALL BOLTS TO BE ASTM A307, GALVANIZED OR 304 SERIES STAINLESS STEEL WITH A MINIMUM 36 KSI YIELD STRENGTH.
- ANCHORS TO STRUCTURE (WALL / FLOOR / CEILING / SYSTEM) SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS AND AS FOLLOWS:
 - CONCRETE BLOCK MASONRY (ASTM C-90)
TAPCON ANCHORS (ITW BUILDEX) OR PANELMATE MALE & FEMALE FASTENERS (ELCO TEXTRON) - 1/4 IN. DIA.
I. MINIMUM EMBEDMENT INTO HOLLOW CONCRETE BLOCK MASONRY FOR TAPCON ANCHORS AND ELCO PANELMATES IS 1 1/4 IN., FILLED MASONRY EMBEDMENT IS 1 3/4". NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED.
II. PAVERS, BRICKS OR OTHER PRE-CAST PRODUCTS LOCATED ON THE EXISTING STRUCTURE WALL OR FLOOR SHALL HAVE ANCHORS OF SUFFICIENT LENGTH TO PROPERLY ATTACH TO THE PRIMARY STRUCTURE BEHIND IT.
III. MINIMUM EDGE DISTANCE = 3.0"
 - POURED CONCRETE ($f'_c=3000$ PSI MIN.)
TAPCON ANCHORS (ITW BUILDEX) OR PANELMATE MALE & FEMALE FASTENERS (ELCO TEXTRON) - 1/4 IN. DIA.
I. MINIMUM EMBEDMENT INTO POURED CONCRETE FOR TAPCON ANCHORS AND ELCO PANELMATES IS 1 3/4 IN. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. SCREWS TO BE 1/4"-20 X 1 3/4" FOR STUCCO, 1 1/4" WITH NO STUCCO.
II. PAVERS, BRICKS OR OTHER PRE-CAST PRODUCTS LOCATED ON THE EXISTING STRUCTURE WALL OR FLOOR SHALL HAVE ANCHORS OF SUFFICIENT LENGTH TO PROPERLY ATTACH TO THE PRIMARY STRUCTURE BEHIND IT.
III. MINIMUM EDGE DISTANCE = 3.0"
 - WOOD (Nominal 2x4(min) "Southern Pine" SG=0.55 OR GREATER)
TAPCON ANCHORS (ITW BUILDEX) DIA. OR PANELMATE MALE & FEMALE FASTENERS (ELCO TEXTRON) - 1/4 IN.
I. MINIMUM EDGE DISTANCE = CENTER OF 2" NOMINAL LUMBER (APPROX. 3/4"). MINIMUM EMBEDMENT = 1-1/2"
- MAXIMUM DESIGN PRESSURE VERSUS PANEL SPAN SHOWN ON SHEET 2/2
- SCREEN PANEL'S MANUFACTURER LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION ON THE PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
HURRICANE FABRIC.COM LLC
PO BOX 50153; CLAYTON, MO 63105
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.
- THIS DOCUMENT IN ITS ENTIRETY WILL BE CONSIDERED INVALID IF IT IS ALTERED BY ANY MEANS.

RETENTION CLIP END CONNECTOR:
RHODIA ENGINEERING PLASTICS - POLYAMIDE 66
FABRIC SPECIFICATION:

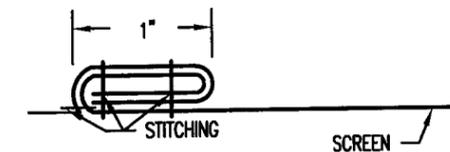
FIBER CONTENT: TEXTILE FABRIC
CONSTRUCTION: 25 X 25 WEAVE
FINISH: RESIN COATED
WEIGHT (ASTM D-3776): 10.8 -OZ/SQUARE YARD
TENSILE STRENGTH (GRAB METHOD, ASTM D -4632): WARP - 879 lbs., WEFT - 879 lbs.
BURST STRENGTH (ASTM D - 3786): 1,000 PSI
ABRASION RESISTANCE (ASTM D -4886) 95% STRENGTH RETAINED

SEWING:

ONLY SEWING IS AT SPLICE

EDGES:

NO SEWING AT EDGES



SPLICE DETAIL

Approved as complying with the Florida Building Code
Date 10/20/2010
NOA#10-0607-02
Miami Dade Product Control
Division
By *Heather A. Nelson*

FASTENER SPACING OF A SINGLE UNIT SCREEN FOR ANY LENGTH ATTACHED WITH 3/8" DROP-IN ANCHOR WITH SIDEWALK BOLT (INCHES) 1-1/2" EMBEDMENT 12d EDGE DISTANCE

SCREEN SPAN	FILLED MASONRY (1900psi)				CONCRETE (4000psi)				HOLLOW MASONRY				TIMBER w/ Sarmy's			
	PRESSURE (PSF)				PRESSURE (PSF)				PRESSURE (PSF)				PRESSURE (PSF)			
	60	50	40	30	60	50	40	30	60	50	40	30	60	50	40	30
4'-0"	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
6'-0"	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
8'-0"	10	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10
10'-0"	10	10	10	10	10	10	10	10	10	10	10	10	7	8	10	10
12'-0"	10	10	10	10	10	10	10	10	10	10	10	10	6	7	8	10
14'-8"	10	10	10	10	10	10	10	10	10	10	10	10	5	6	7	9

FASTENER SPACING OF A SINGLE UNIT SCREEN FOR ANY LENGTH ATTACHED WITH 1/4" ELCO PANELMATE PRO, MALE, & FEMALE (INCHES)

SCREEN SPAN	FILLED MASONRY (1900psi)				CONCRETE (4000psi)				HOLLOW MASONRY				TIMBER			
	PRESSURE (PSF)				PRESSURE (PSF)				PRESSURE (PSF)				PRESSURE (PSF)			
	60	50	40	30	60	50	40	30	60	50	40	30	60	50	40	30
4'-0"	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
6'-0"	10	10	10	10	10	10	10	10	10	10	10	10	8	9	10	10
8'-0"	10	10	10	10	10	10	10	10	7	8	9	10	6	7	9	10
10'-0"	8.5	10	10	10	9	10	10	10	6	6.5	8	10	5	6	7	9
12'-0"	7	8.5	10	10	8	9	10	10	5	5.5	7	8.5	4	5	6	8
14'-8"	6	7	8.5	10	7	7.5	9	10	4	4.5	6	7	-	4.5	5	6.5

MINIMUM SEPARATION FROM GLAZING (including installation fabric slack)

SPAN	60 PSF	50 PSF	40 PSF	30 PSF
feet	defl - in	defl - in	defl - in	defl - in
4'-0"	6.1	5.7	5.3	4.8
6'-0"	10.0	9.8	9.1	8.3
8'-0"	15.3	14.4	13.4	12.6
10'-0"	20.6	19.4	18.0	16.4
12'-0"	26.3	24.8	23.0	20.9
14'-8"	35.4	31.4	29.1	26.5

John H. Kampmann Jr., PE
FL License #: 47516
DATE: 09/22/10

CA #4752 WWW.MEAENGINEERS.COM

MEAE ENGINEERS, INC.
5656 Lawton Drive
Sacramento, Florida 34233
(941) 922-3854 CA-0072

DESCRIPTION: 10/21/09-FABRIC SPEC. 09/22/10-10" MAX SP

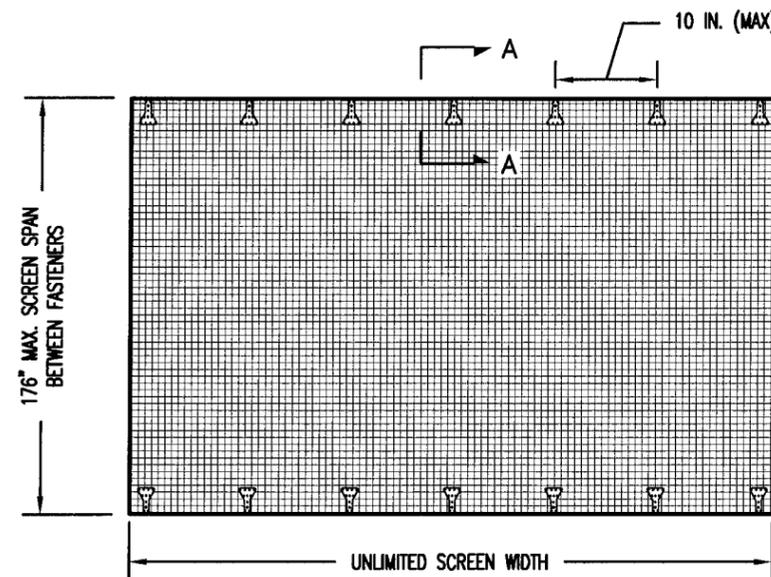
REV: 1 2

HURRICANE FABRIC.COM LLC
PO BOX 50153
CLAYTON, MO 63105
PHONE: (239)699-0099
WWW.HURRICANEFABRIC.COM

Project Name: ASTRO GUARD Wind Abatement System

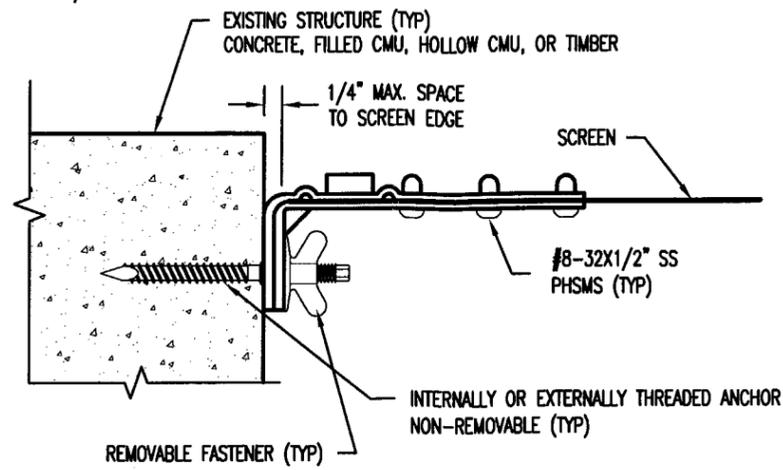
FBC (HIGH VELOCITY HURRICANE ZONE) / MIAMI-DADE NOA 10-0607.02

Drawn: JK
Project #: 09-0408
Scale: NTS
Date: 05/04/09
Sheet No.: 1/2

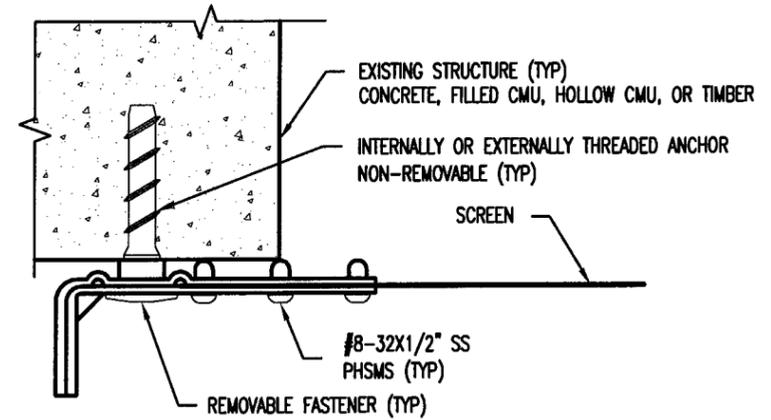


TYPICAL TWO-SIDED INSTALLATION
VERTICAL OR HORIZONTAL INSTALLATION - N.T.S.

NOTE:
PANELS CAN BE ATTACHED ON THREE OR FOUR SIDES.
FOR FOUR SIDE ATTACHMENT THE SPAN IS IN THE SHORT
DIMENSION BETWEEN FASTENERS



SECTION A-A (OPTION 1)
INSIDE MOUNT INSTALLATION - N.T.S.



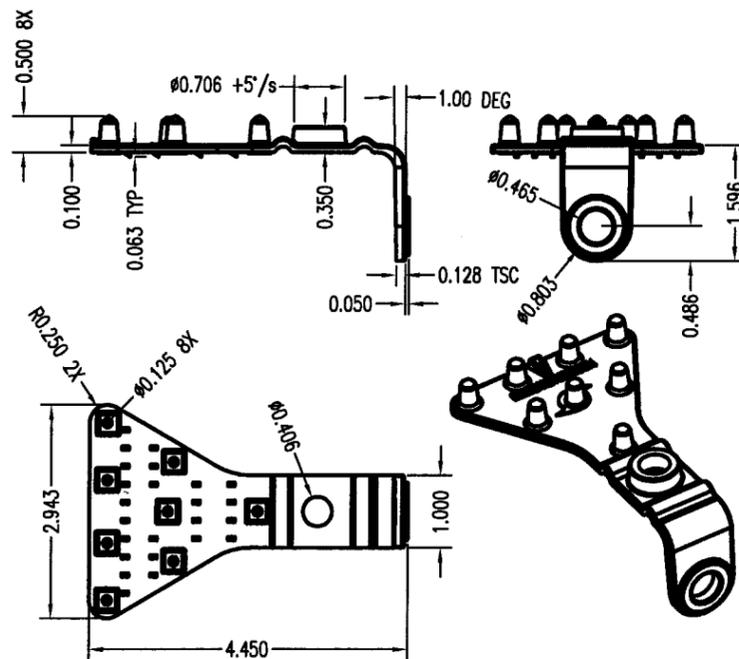
SECTION A-A (OPTION 2)
OUTSIDE MOUNT INSTALLATION - N.T.S.

LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM
T_x = PARALLEL LOADS (PLF)

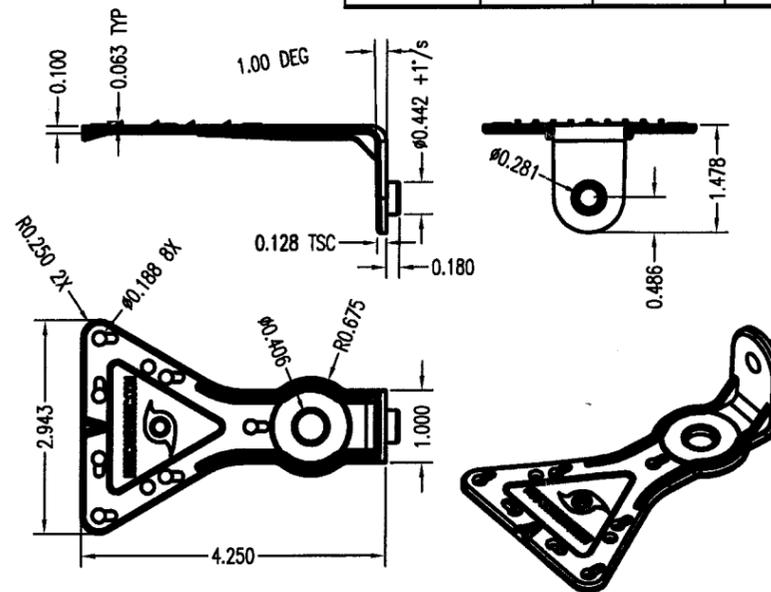
SCREEN SPAN	PRESSURE (PSF)			
	60	50	40	30
4'-0"	237	210	180	149
6'-0"	310	275	237	195
8'-0"	376	333	287	237
10'-0"	436	387	333	275
12'-0"	493	436	376	310
14'-8"	547	514	442	365

LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM
T_y = PERPENDICULAR LOADS (PLF)

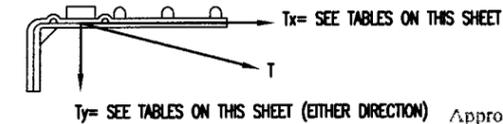
SCREEN SPAN	PRESSURE (PSF)			
	60	50	40	30
4'-0"	120	100	80	60
6'-0"	180	150	120	90
8'-0"	240	200	160	120
10'-0"	300	250	200	150
12'-0"	360	300	240	180
14'-8"	440	367	293	220



BOTTOM MOUNTING CLIP DETAILS
INSIDE OR OUTSIDE MOUNT INSTALLATION - N.T.S.
AVERAGE THICKNESS = 0.100 IN.
MATERIAL SPECIFICATION = POLYAMIDE 66



TOP MOUNTING CLIP DETAILS
INSIDE OR OUTSIDE MOUNT INSTALLATION - N.T.S.
AVERAGE THICKNESS = 0.100 IN.
MATERIAL SPECIFICATION = POLYAMIDE 66



Approved as complying with the
Florida Building Code
Date 10/20/2010
NOA# 10-0607-02
Miami Dade Product Control
Division
By *Helmut A. Moberg*

John H. Kampmann Jr., PE
FL License #: 47516
DATE: 09/22/10

FBC (HIGH VELOCITY HURRICANE ZONE) / MIAMI-DADE NOA 10-0607-02

CA #6752
WWW.MEAENGINEERS.COM
MEAE
ENGINEERS, INC.
5656 Lawton Drive
Sarasota, Florida 34233
(941) 922-3654 CA-6072

DESCRIPTION
1 09/22/10-10" MAX SP

HURRICANE FABRIC.COM LLC
PO BOX 50153
CLAYTON, MO 63105
PHONE: (239) 669-0099
WWW.HURRICANEFABRIC.COM

Project Name:
ASTRO GUARD
Wind Abatement System

Drawn: JK
Project #: 09-0408
Scale: NTS
Date: 05/04/09
Sheet No.:

2/2