Business & Professional Regulation





BCIS Home | Log In | User Registration | Hot Topics | Submit Surcharge | Stats & Facts | Publications | Contact Us | BCIS Site Map | Links |





 $\underline{Product\ Approval\ Menu} > \underline{Product\ or\ Application\ Search} > \underline{Application\ List} > \underline{Application\ Detail}$

▶ OFFICE OF THE SECRETARY FL # FL812-R8
Application Type Affirmation
Code Version 2017
Application Status Approved

Comments Archived

Product Manufacturer Address/Phone/Email

West Palm Beach, FL 33405 (561) 841-8890 dougt@armorscreen.com

Armor Screen Corp.

2744 Hillsboro Road

Authorized Signature Douglas Turner

dougt@armorscreen.com

Technical Representative Address/Phone/Email

Quality Assurance Representative

Address/Phone/Email

Category Impact Protective Systems
Subcategory Removable

Compliance Method Evaluation Report from a Florida Registered Architect or a Licensed

Florida Professional Engineer

Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the

Evaluation Report Florida License

Quality Assurance Entity

Quality Assurance Contract Expiration Date

Validated By

Theodore Berman, P.E.

PE-09814

National Accreditation and Management Institute

12/31/2023 Simon Segal, P.E.

■ Validation Checklist - Hardcopy Received

Certificate of Independence FL812 R8 COI Certification of Independence.SS.pdf

Referenced Standard and Year (of Standard) <u>Year</u> <u>Year</u>

ASTM E 1996 2005
ASTM E 1886 2005
ASTM E 330 2002
TAS 201 1994
TAS 202 1994
TAS 203 1994

Equivalence of Product Standards Certified By

Sections from the Code

 ${rac{1}{N}}$ I affirm that there are no changes in the new Florida Building Code which affect my product(s) and my product(s) are in compliance with the new Florida Building Code.

Documentation from approved Evaluation or Validation Entity ○ Yes ○ No ○ N/A

FL812 R8 COC FL812-R7 2017 Compliance.pdf

Product Approval Method Method 1 Option D

Date Submitted 12/05/2017 Date Validated 12/05/2017

Date Pending FBC Approval

Date Approved 12/10/2017

Summary of Products

	I .				
FL # Model, Number or Name		Description			
812.1	Armor Screen Series 2000	Flexible Wind Abatement / Impact Protection System			
zone (H.V.H.Z.). Glass se within wind zone 4 and o envelope criterion is met porous' and remains inta	ide HVHZ: Yes	Installation Instructions FL812 R8 II Installation Instructions-Armor Screen Series 2000.pdf Verified By: Theodore Berman, P.E. No. 09814 Created by Independent Third Party: No Evaluation Reports FL812 R8 AE Evaluation Report No. TBA 15-0423.02.pdf Created by Independent Third Party: Yes			

Back

Next

Contact Us:: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. Copyright 2007-2013 State of Florida. :: Privacy Statement :: Accessibility Statement :: Refund Statement

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click here.

Product Approval Accepts:











December 5, 2017

Engineering Statement

Prepared by: Theodore Berman, P.E.

Florida Professional Engineer License No. 09814

1. Manufacturer

Armor Screen Corp.

2. Product Line:

Armor Screen Series 2000

3. Code Compliance:

We have reviewed the plans, evaluation and drawings that received Florida product approval FL812-R7 under the 2014 FBC for the above mentioned product and find them in compliance with the requirements of the Florida Building Code 6th Edition (2017).

4.. Certification of Independence

Theodore Berman, P.E., does not have nor will acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, Theodore Berman, P.E. does not have nor will acquire a financial interest in any other entity involved in the approval process of the listed product(s).

Respectfully,

Theodore Berman, P.E. Florida License 12/05/2017

i .L. i londa Li

No. 09814

1

Ted Berman and Associates, LLC Certificate of Authorization 27502

ARMOR SCREEN INSTALLATION INSTRUCTIONS:

Armor Screen is a flexible wind abatement and impact protection system utilizing a woven monofilament geotextile that fulfills the Florida Building Code 5th Edition (2014) requirement for opening protection. This system is for use outside the high velocity hurricane zone (HVHZ Miami-Dade & Broward Counties). For information on use of this system within the HVHZ, refer to Armor Screen's Miami-Dade Notice of Acceptance (NOA) available on the Miami-Dade Product Control website. Separation from glass is required only when system is installed within wind zone 4 and on essential facilities.

Geosynthetic hurricane screen: The hurricane screen shall be produced from a polypropylene, woven monofilament geotextile fabric with individual filaments woven into a basket weave network and calendered such that the filaments retain dimensional stability relative to each other. The woven monofilament geotextile fabric shall have the following minimum average roll values:

Grab Tensile Strength	(ASTM D4632)	425 x 325 LBS
Puncture Strength	(ASTM D4833)	130 LBS
Mullen Burst	(ASTM D3786)	675 PSI
Trapezoidal Tear	(ASTM D4533)	150 x 125 LBS
Wide Width Tensile Strength	(ASTM D4595)	225 x 205 LBS/IN
Wide Width Elongation	(ASTM D4595)	22 x 21%
Apparent Opening Size		30 US STD SIEVE.
Percentage of Open Area		5%

The pores in Armor Screen are small enough that the surface tension of water causes the barrier screen to become solid in the presence of rain, and prevents damaging voluminous water intrusion, even from torrential rains.

In dry conditions, the pores remain open, and based on testing, allow approximately 3% of the wind to pass through. Barrier can be mounted with opposing primary anchored perimeters in vertical, horizontal or any alignment appropriate to the structure being protected.

Design loads calculated to ASCE 7-10 as required by the prevailing building code.

Product marking - a label shall be affixed to the barrier with the following statement:

"Armor Screen Corporation, Florida Building Code Approved"

ALL GEOSYNTHETIC HURRICANE SCREEN ASSEMBLY INSTALLATION DETAILS DEPICTED WITHIN THESE DRAWINGS ARE TYPICAL FOR THE INSTALLATION OF THIS WIND ABATEMENT AND IMPACT PROTECTION ALL OTHER BUILDING COMPONENTS SHOWN HEREIN ARE DEPICTED AS EXISTING, AND NOT CONSTRUCTED BY THE SCREEN COMPANY.



SERIES 2000 FLEXIBLE WIND ABATEMENT/ IMPACT PROTECTION SYSTEM ARMOR SCREEN

ARMOR SCREEN, Inc. 2744 Hillsboro Road West Palm Beach, FL 33405

www.armorscreen.com

841-8890

(561)

www.flproductapproval.com

(305) 868- 4707

ed Berman and Associates, Rd Suite Miami Beach, FL 33140 925 Arthur Godfrey

Engineering Review By:

04/23/15 SCALE: N.T.S.

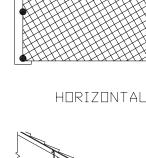
SHEET 1 of 9

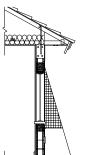
DATE:

EXAMPLES OF TYPICAL INSTALLATIONS

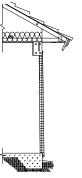




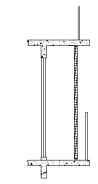












STORM BAR

BALCONY



ANGLED

INVERTED



SERIES 2000 FLEXIBLE WIND ABATEMENT/ IMPACT PROTECTION SYSTEM ARMOR SCREEN

2744 Hillsboro Road West Palm Beach, FL 33405 ARMOR SCREEN, Inc.

www armorscreen com

841-8890

(561)

www.flproductapproval.com

(305) 868 - 4707

Miami Beach, FL 33140

925 Arthur Godfrey Rd. Suite 104 ed Berman and Associates, Sertificate of Authorization # 27

Engineering Review By:

DATE 04/23/15 SCALE: N.T.S.

SHEET: 2 of 9

ble 1	Anchor Spacing		Anchor Choices *					
Span	1' O/C 2' O/C Design Pressure**		1 *	2 *	3 *	4 * 1/2" bolt		
in feet			3/8" open eye	3/8" bolt	1/2" open eye			
4'	130	130 65		Х	Х	Х		
6'	6' 130 65			Х	Х	Х		
6'	92.75	46 X		Х	Х	Х		
8'	130	90				Х		
8'	130	65			Х	Х		
8'	115	58		Х	Х	Х		
8'	68.75	34	Х	Х	Х	Х		
10'	130	90				Х		
10'	130	65		Х	Х	Х		
10'	94.75	47	Х	Х	Х	Х		
12'	130	90				Х		
12'	130	65			Х	Х		
12'	120	60		Х	Х	Х		
12'	69.75	35	Х	Х	Х	Х		
14'	130	80				Х		
14'	130	65			Х	Х		
14'	120	60		Х	Х	Х		
14'	64.75	32	Х	Х	Х	Х		
16'	130	75				Х		
16'	130	65			Х	Х		
16'	110	55		Х	Х	Х		
16'	60	34.25	Х	х х		Х		
20'	58	29			Х	Х		
24'	48	24			х	Х		

CONCRETE: * Table is intended for drop-in and LDT anchors in concrete.

WOOD: Lag anchoring (incl. LDT) into wood as follows

Column 1*: 3/8" thread, 1.75" penetration into SYP (0.55 sg)

Column 2*: 3/8" thread, 3.1" penetration into SYP Column 3*: 1/2" thread, 3.0" penetration into SYP Column 4*: 1/2" thread, 3.7" penetration into SYP

EARTH: * Specified earth anchor may be used with any of table choices.

HOLLOW BLOCK: Column 1*, approved epoxy anchoring system for 3/8" & 1/2" thread.

NOTE: ** Design pressure may be increased by 5% for negative loads

TRACK SYSTEM: Table applies to track system, anchored with two 5/16" fasteners per cleat, as follows:

- into hollow block, min. 1 1/4" embed can be installed as in column 1*
- into concrete, min. 1 3/4" embed can be installed as in column 3*
- into concrete, min. 2" embed can be installed as in column 4*
- into wood (SYP. sg. 0.55), min. 1" embed can be installed as in column 1*
- into wood (SYP. sg. 0.55), min. 2" embed installed as in column 3*

NOTES:

Anchor Spacing: varies inversely with pressure and is subject to rational analysis.

Span: is measured anchor to anchor.

ANCHOR SPECIFICATION:

Part numbers: 3/8" Lag Anchor (AS9038S)

1/2" Lag Anchor (AS9012S)

Tapcon 5/16", 3/8", and 1/2" LDT can anchor in both wood and concrete

Drop-in Anchor: 3/8" Steel Drop-in anchor in 3000 PSI (min.) concrete, 1 5/8" min.

embedment (H3038S)

1/2" Steel Drop-in Anchor in 3000 PSI (min.) concrete, 2" min.

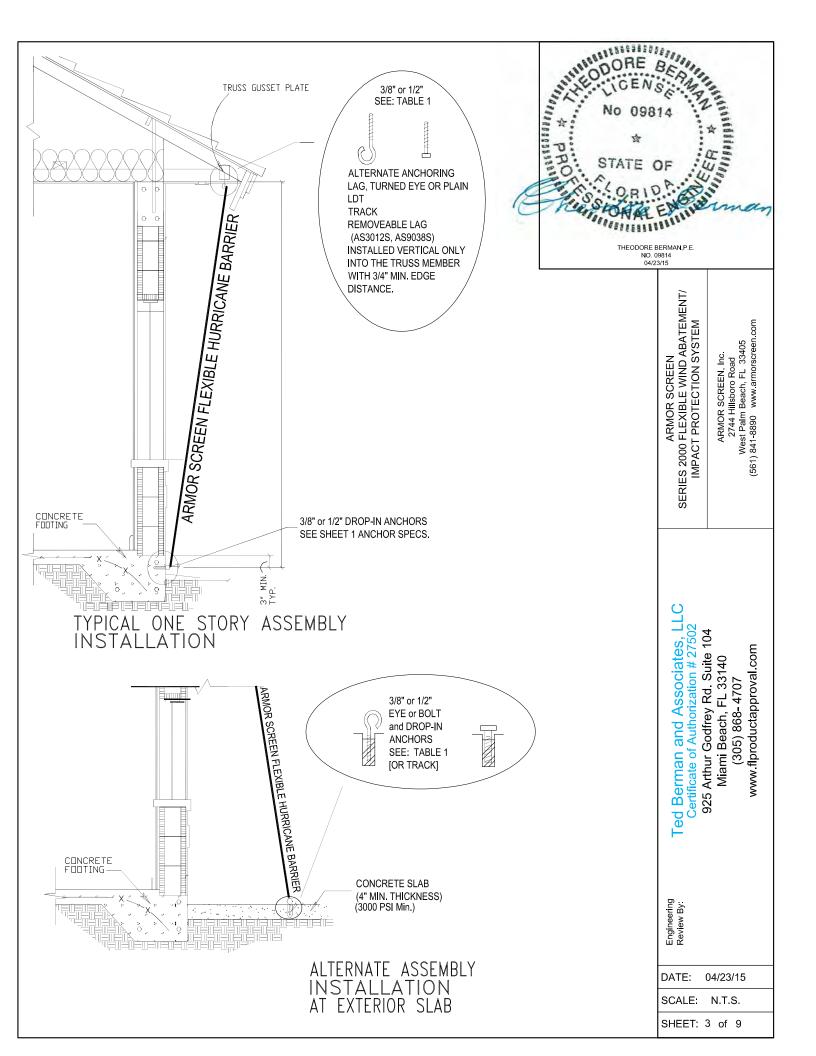
embedment (H3012S)

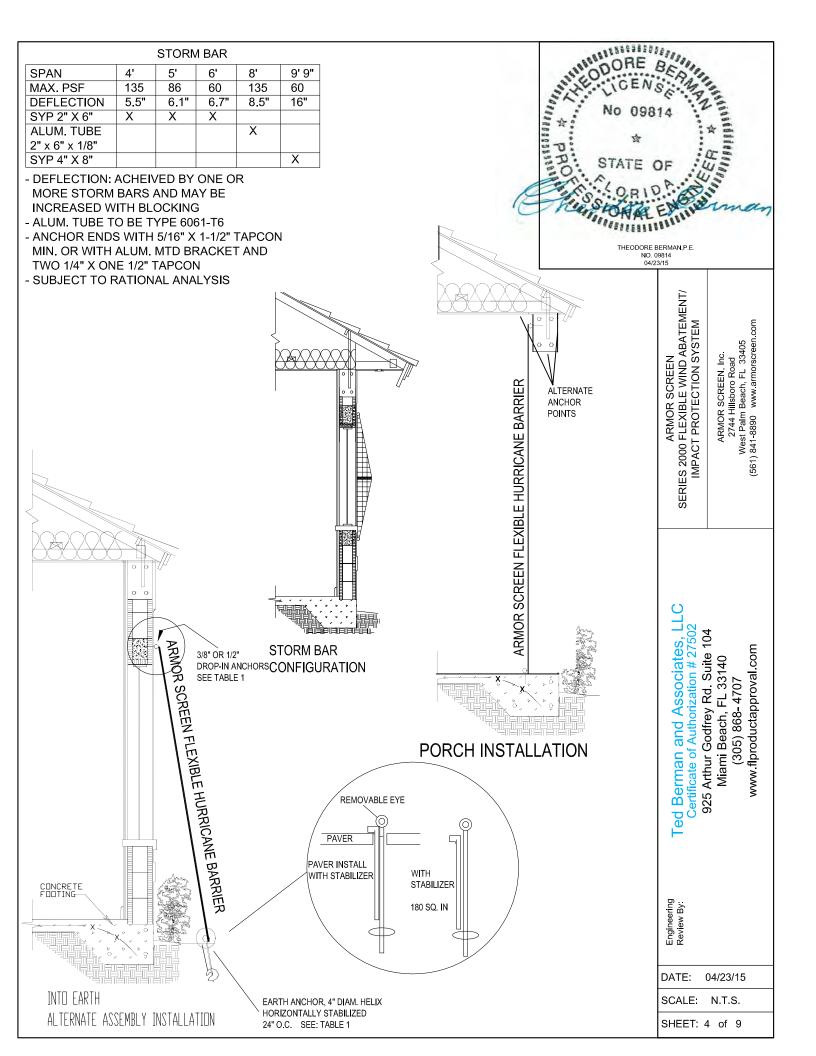
Earth Anchor: Proprietary System: Stabilized 1/2" x 30" shaft with 4" helix

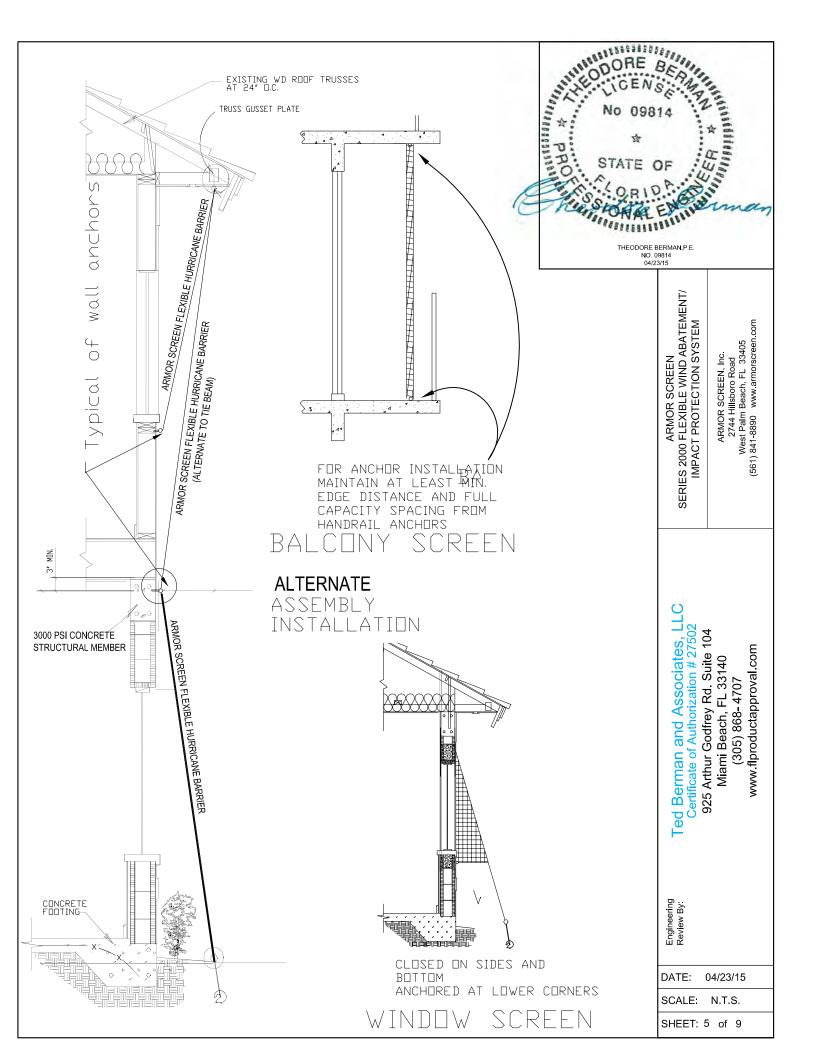
Working load 3150 LBS. (E7912P)

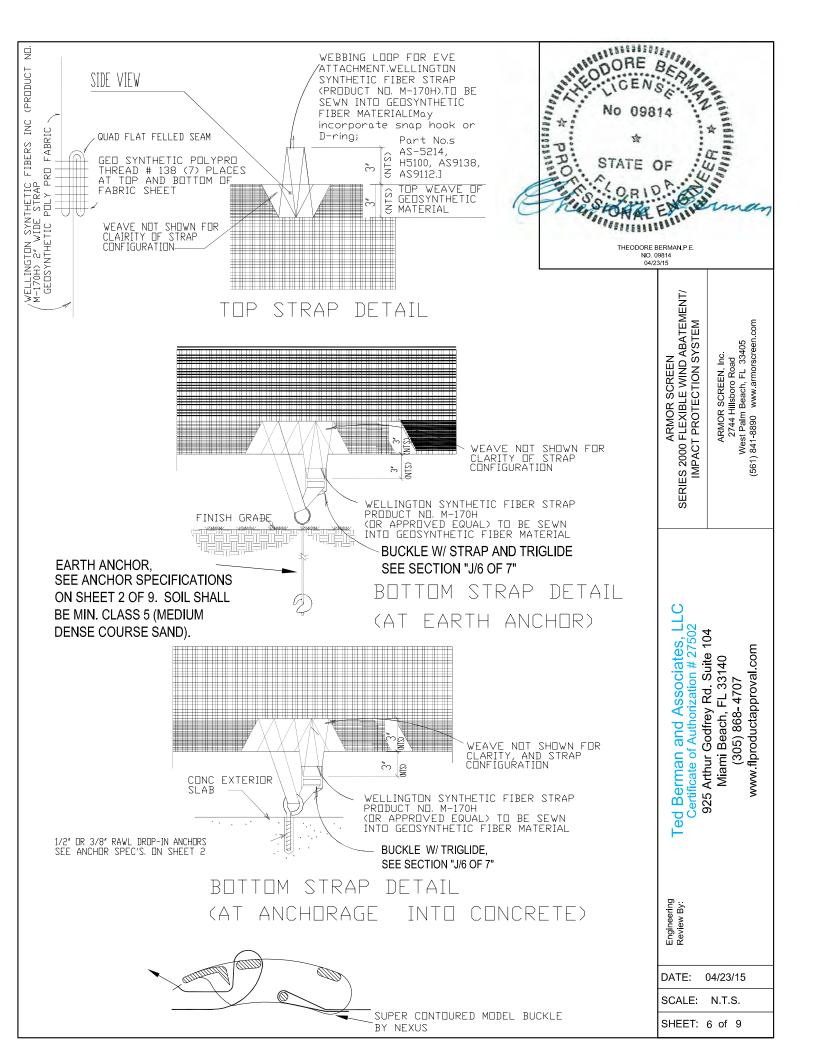
Soil Class: 5 (medium dense coarse sand)

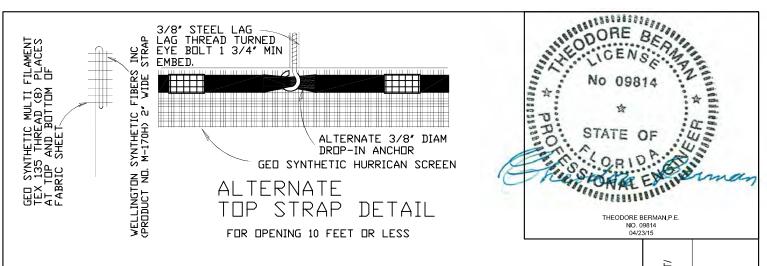
Epoxy Anchor: Equal to Red Head umbrella inserts and screens with C7 adhesive.











ALTERNATE CORNER DETAIL

N.T.S.

ADJACENT SCREENS

3' 3' (NTS) SCREEN THREAD NOT SHOWN FOR CLARITY (STN)

TYPICAL ADJACENT **SCREENS ARE OVERLAPPED ONE** ANCHOR SPACING.

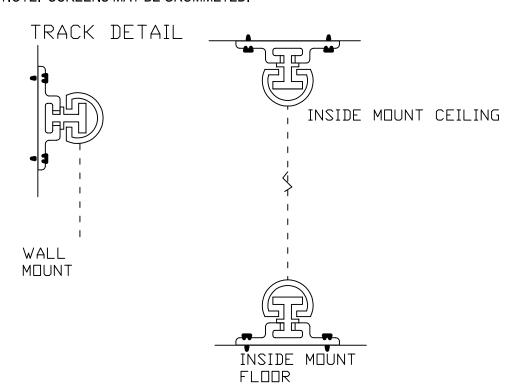
DETAIL STRAP

BUCKLE W/ STRAP AND TRIGLIDE SEE SECTION 'J/6 OF 7'

WELLINGTON SYNTHETIC FIBER STRAP
PRODUCT NO. M-170H
(OR APPROVED EQUAL) TO BE SEWN
INTO GEOSYNTHETIC FIBER MATERIAL

C1 Anchor Overlap)

NOTE: SCREENS MAY BE GROMMETED.



SERIES 2000 FLEXIBLE WIND ABATEMENT/ IMPACT PROTECTION SYSTEM ARMOR SCREEN

ARMOR SCREEN, Inc.

(561) 841-8890 www.armorscreen.com

2744 Hillsboro Road West Palm Beach, FL 33405

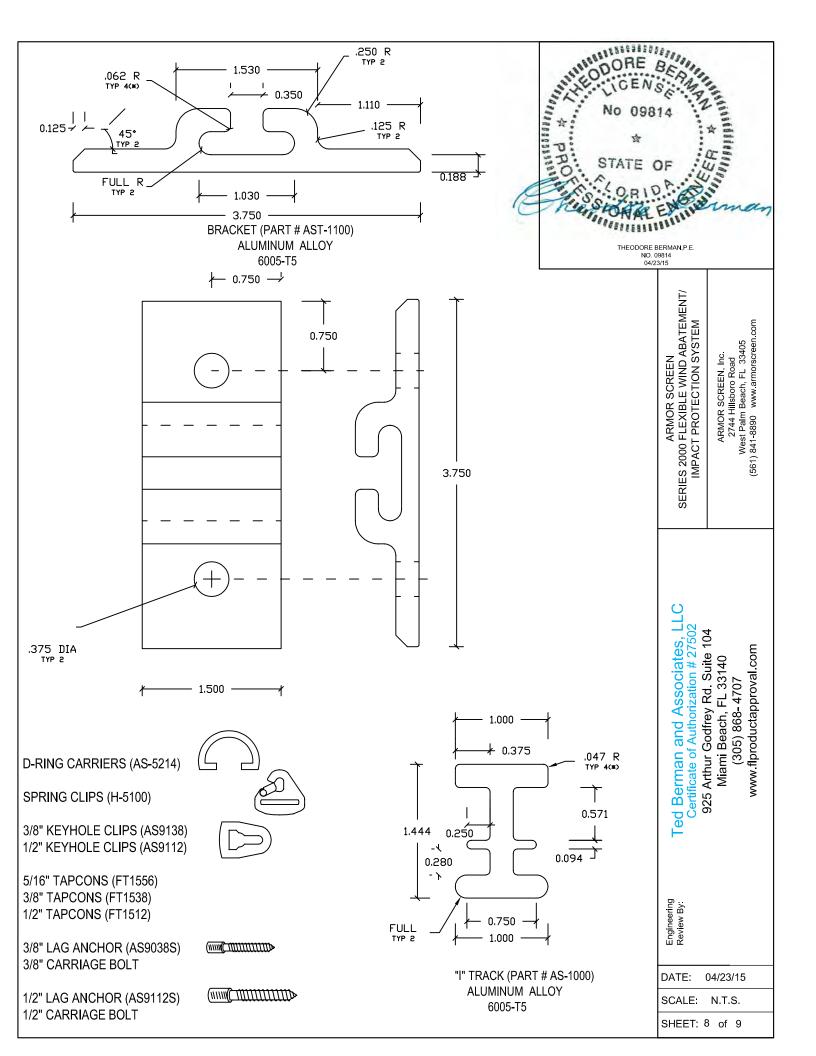
925 Arthur Godfrey Rd. Suite 104 www.flproductapproval.com Miami Beach, FL 33140 (305) 868-4707

Engineering Review By:

Ted Berman and Associates,

04/23/15 DATE SCALE: N.T.S.

SHEET: 7 of 9





SCREEN LOADING ON STRUCTURE (PER LINEAR FOOT)									
	DESIGN LOAD (PSF)								
		30	40	50	60	70	90	110	130
	4	180	217	246	276	284	332	358	401
	5	224	275	312	342	355	416	447	500
	6	268	327	372	408	426	500	536	599
}	7	311	380	437	480	503	579	625	704
	8	355	438	497	546	574	663	715	802
	9	399	491	557	617	644	747	804	901
]	10	447	543	625	683	715	832	893	1013
(FT.)	11	491	602	683	749	786	910	982	1105
SPAN (F	12	535	654	743	821	857	994	1072	1203
	13	579	712	808	887	928	1079	1155	1302
	14	622	760	868	959	999	1165	1244	1401
	15	666	818	928	1025	1070	1241	1333	1506
SCREEN	16	715	870	994	1091	1141	1325	1423	1604
SC	17	758	923	1054	1162	1212	1410	1512	1703
	18	802	981	1114	1228	1283	1494	1601	1802
	19	846	1034	1180	1300	1359	1572	1690	1907
	20	890	1086	1240	1366	1430	1657	1780	2005
	21	933	1144	1305	1432	1501	1741	1869	2104
	22	977	1197	1365	1504	1572	1825	1958	2203
	23	1026	1250	1425	1570	1643	1903	2047	2308
	24	1069	1308	1491	1642	1714	1988	2137	2406

Notes:

1. Span is measured anchor to anchor.

ARMOR SCREEN SERIES 2000 FLEXIBLE WIND ABATEMENT/ IMPACT PROTECTION SYSTEM

ARMOR SCREEN, Inc.
2744 Hillsboro Road
West Palm Beach, FL 33405
(561) 841-8890 www.armorscreen.com

Ted Berman and Associates, LLC Certificate of Authorization # 27502 925 Arthur Godfrey Rd. Suite 104 Miami Beach, FL 33140 (305) 868-4707 www.flproductapproval.com

Engineering Review By:

DATE: 04/23/15

SCALE: N.T.S.

SHEET: 9 of 9