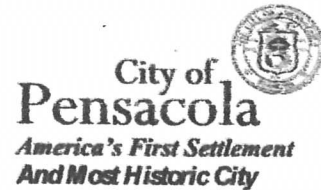


**Architectural Review Board Application  
Full Board Review**



Application Date: 7-28-2022

Project Address: 315 W. Blount St  
Applicant: Bill Robertson (owner)  
Applicant's Address: 315 W. Blount St  
Email: Covingtonmedical@gmail.com Phone: 985-630-8404  
Property Owner: \_\_\_\_\_

District: ☒ PHD ☐ NHPD ☐ OEHPD ☐ PHBD ☐ GCD  
(If different from Applicant)

Application is hereby made for the project as described herein:

- ☒ Residential Homestead – \$50.00 hearing fee  
☐ Commercial/Other Residential – \$250.00 hearing fee

\* An application shall be scheduled to be heard once all required materials have been submitted and it is deemed complete by the Secretary to the Board. You will need to include ten (10) copies of the required information. Please see pages 3 – 4 of this application for further instruction and information.

**Project specifics/description:**

Mr. Robertson is requesting permission to install electric rolldown shutters on his two garage door openings. When he purchased the house his intention was to install conventional garage doors. He consulted two companies for estimates. Both companies said it was not doable due to the restricted clearance above the door. He needs to protect his belonging and have the ability to park his automobiles. The house has no historical value and the rolldowns will not be visible from the street.

I, the undersigned applicant, understand that payment of these fees does not entitle me to approval and that no refund of these fees will be made. I have reviewed the applicable zoning requirements and understand that I must be present on the date of the Architectural Review Board meeting.

[Signature]  
Applicant Signature

July 28, 2022  
Date

**Planning Services**  
222 W. Main Street \* Pensacola, Florida 32502  
(850) 435-1670  
Mail to: P.O. Box 12910 \* Pensacola, Florida 32521





W. Blount St View



no ceiling height





boarded up garage door openings



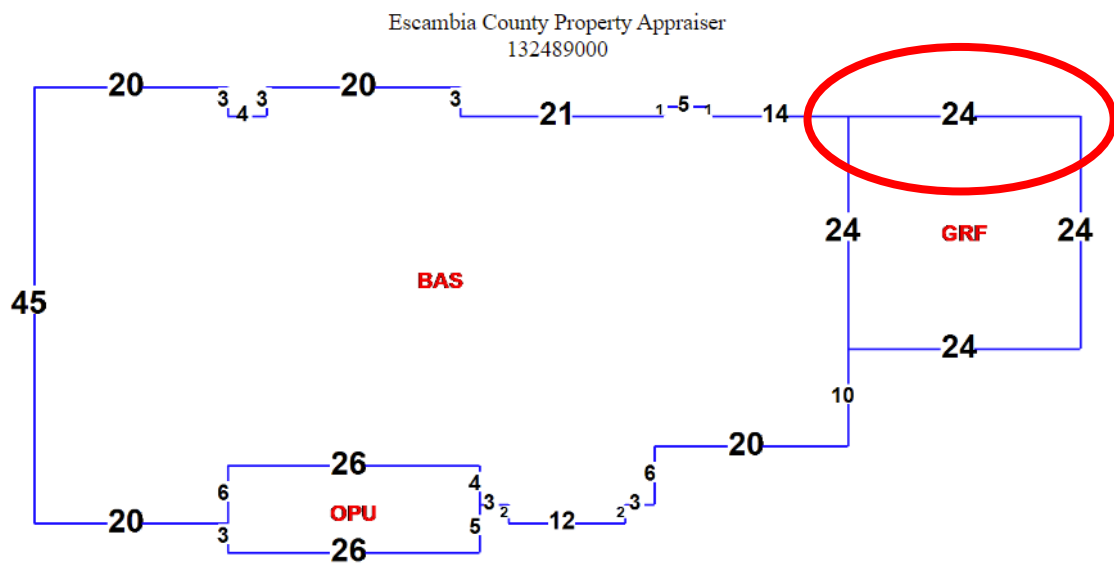
n. Reus St driveway entrance

Hedge to be trimmed higher





N. Reus ST View





Shutters to be painted to match the painted brick.

The shutter box / header will be mounted to be flush with the top of the openings and will be 10" wide cover the top soldier course. The shutter header will also extend 3" wider on both sides of each opening. The below image is the approximate span of the header, while the shutters will fully cover the openings.

Rails along side of openings will be 3" thick.

The full dimensions of the rolldown will be 114" x 95" each. The slats will span the 114". There is no storm bar associated with the rolldown. The technology used today is an end retention system that holds the slats in the side rails. Everything will be direct mounted.



Example images







# Aluminum Roll Shutters



Available through . . .

**Town & Country**  
INDUSTRIES

Wholesale Aluminum and Building Products

A Division of ABC Supply Co., Inc.

TCI105 (5/15)



# EA 44mm & MS 56mm Aluminum Roll Shutters

Engineered to be the best, Town & Country's EA 44mm and MS 56mm End Retention Roll Shutters are designed for strength and beauty. Our product has been rigorously tested and the MS 56mm can achieve widths up to 256" and heights up to 252". Our versatile systems offer you a choice of vented or non-vented EA 44mm & MS 56mm slats, in four (4) colors, combined with a wide array of electronic motors and controls that will seamlessly integrate with your shutters.

Our Rolling Shutters will provide your home or business with unparalleled comfort and convenience while affording you maximum protection against intruders and harsh elements.

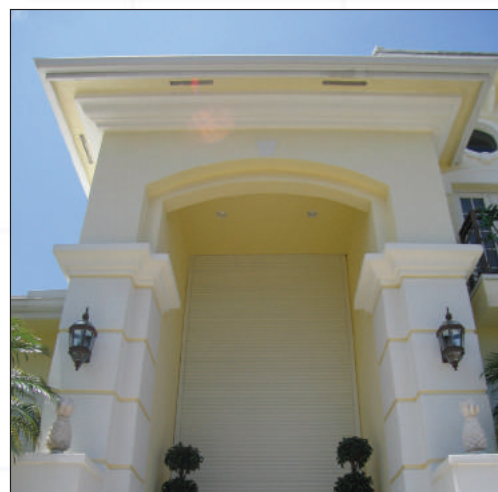
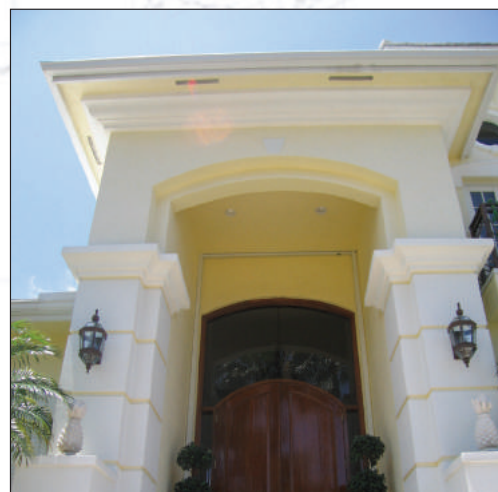
Town & Country's MS 56mm Aluminum Roll Shutters have some of the industry's highest *LOAD BEARING* capacities. The design of the End Retention System is so strong that a 9.5' wide x 20' tall shutter is capable of withstanding over 22,000-lbs. of test load pressure.

## *Aluminum Roll Shutters provide a wide array of benefits:*

- End Retention and Non-End Retention.
- EA 44mm and MS 56mm End and MS 56mm Non-Vented Slats available.
- MS 56mm available in sizes up to 256" in width and 252" in height.
- EA 44mm available in sizes up to 146.5" in width.
- Colors Available: White, Beige, Ivory, and Bronze.
- Motorization available with Eyewall Armor® tubular motors from 20Nm-300Nm and wireless electronics which accommodate a wide range of applications.
- EA 44mm has an ultra compact roll diameter allowing 72" openings in a 7" box and up to 108" in an 8" box.
- Recommended for doors, windows, porches, lanais, balconies, storefronts and more.



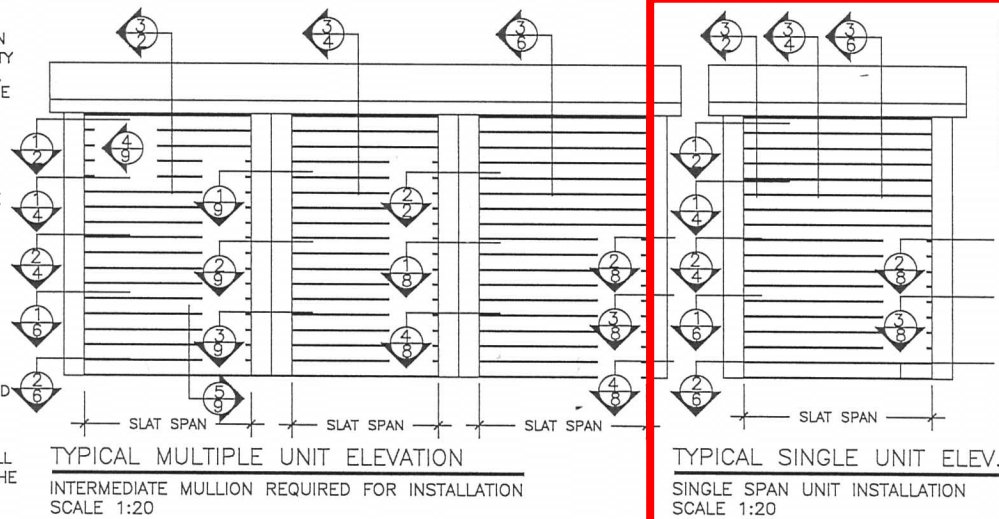
[www.eyewallarmor.com](http://www.eyewallarmor.com)





# STRUCTURAL NOTES:

- THIS NON POROUS SYSTEM HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2020 EDITION OF THE FLORIDA BUILDING CODE (FBC) . THIS SYSTEM SHALL NOT BE INSTALLED IN THE HIGH VELOCITY HURRICANE ZONE (MIAMI-DADE/ BROWARD COUNTIES), NOR WIND ZONE 4 NOR ESSENTIAL FACILITIES I. THE ADEQUACY FOR IMPACT, DEFLECTION AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE ABOVE REFERENCED CODE, AND ASTM E330-02, ASTM E1886-05 AND ASTM E1996-06. SEE LIST OF REPORTS ON SHEET 1 OF 11.
  - DESIGN PRESSURE REQUIREMENTS OF A SPECIFIC SITE SHALL BE DETERMINED BY OTHERS IN CONFORMANCE TO THE FBC FOR A BASIC WIND SPEED (ALLOWABLE STRESS DESIGN) AS REQUIRED BY THE JURISDICTION WHERE THE SYSTEM WILL BE INSTALLED. ULTIMATE DESIGN LOADS (UD) DETERMINED BY ASCE 7-16 SHALL BE REDUCED TO ALLOWABLE STRESS DESIGN LOADS (ASD) BY MULTIPLYING THE UD BY 0.6. TO COMPARE THEM TO THE ASD PRESSURE RATINGS SHOWN ON SHEETS 3, 5 & 7 OF 11. USE OF DIRECTIONALITY FACTOR  $K_d=0.85$  IS ALLOWED.
  - IMPACT AND FATIGUE RESISTANCE HAS BEEN DETERMINED IN ACCORDANCE WITH THE FBC SECTION 1626 LARGE MISSILE AND 1609.1.2 MISSILE TYPE "D" AS LISTED HEREIN.
  - 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. THE 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 REGARDLESS OF ITS AVAILABILITY FROM THE FLORIDA PRODUCT APPROVAL WEBSITE.
  - AN OPTIONAL UV AND / OR SOLAR EXTERNAL LAYER MAY BE ADDED ONTO THE SYSTEM.
  - LIMITATIONS OF USE:  
THE MAXIMUM SIZE SHALL BE SHOWN ON SHEETS 3, 5 & 7 OF 11.  
MAXIMUM HEIGHT OF ROLL-UP SHALL BE 15'-0".
  - FOR DETERMINING INTERNAL PRESSURE IN THE ABOVE REFERENCED CODES, THIS PRODUCT IS CLASSIFIED AS NON-POROUS WITH A POROSITY OF LESS THAN 10% FOR THE CONDITIONS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT. THIS PRODUCT MUST COMPLETELY COVER AN OPENING IN ALL DIRECTIONS.
  - ALL SCREWS TO BE STAINLESS STEEL 304 OR GALVANIZED A307 STEEL.
  - ALL BOLTS TO BE ASTM A307, GALVANIZED OR 304 SERIES STAINLESS STEEL.
  - SUPPORT BRACKETS AND ANCHORS :  
A. ANCHORS INTO THE SUPPORT SUBSTRUCTURE (WALL, CEILINGS, BEAMS AND FLOORS) SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.  
B. THE ANCHOR SPACING SHOWN ON SHEETS 3, 5, & 7 OF 11 INDICATED FOR 1/4" and 3/8" DIAMETERS REFER TO CENTER OF SUPPORTING BRACKETS.  
C. ANCHOR MINIMUM EMBEDMENT AND EDGE DISTANCES
- | SUBSTRUCTURE                     | EMBEDMENT  | EDGE DISTANCE      |
|----------------------------------|------------|--------------------|
| HOLLOW BLOCK                     | 1-1/4 INCH | 12 D OR PER MANUF. |
| GROUT FILLED OR KSI CONCRETE     | 1-3/4 INCH | 12 D OR PER MANUF. |
| 4 KSI CONCRETE OR 2 KSI CONCRETE | 1-3/4 INCH | 12 D OR PER MANUF. |
| WOOD OR TIMBER                   | 8 D        | 3/4 INCH           |
- NO EMBEDMENT INTO NON-STRUCTURAL MATERIAL SUCH AS STUCCO, SIDING AND PAVERS SHALL BE INCLUDED AS PART OF THE EMBEDMENT REQUIREMENT.
  - STEEL SURFACES TO BE PLACED IN CONTACT WITH ALUMINUM SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPEC NO.: TTP-645, OR BE GALVANIZED.
  - MAXIMUM DESIGN PRESSURE VERSUS PANEL SPAN SHOWN ON SHEETS 3, 5 & 7 OF 11.
  - ALL ALUMINUM ALLOYS SHALL BE 6063-T6 OR 6005-T6 U.N.O.
  - ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
  - MANUFACTURER LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION ON THE ROLL-UP. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:  
National Approved Shutter Assn LLC  
8717 NW 117 St; Suite 1  
Hialeah Gardens, FL 33018  
FLORIDA PRODUCT APPROVAL NUMBER: FL-XXXX. OPENING NO.: XX
  - THIS DOCUMENT IN ITS ENTIRETY WILL BE CONSIDERED INVALID IF IT IS ALTERED BY ANY MEANS OR DOES NOT BEAR THE DATE AND ORIGINAL SEAL OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



## LIST OF REPORTS

EVALUATION BASED ON:  
ARCHITECTURAL TESTING INC.

LAB NO.: B4522.01-401-18

DATED 12/16/2011

TAS 201, TAS 203 - LARGE MISSILE IMPACT RESISTANCE &  
CYCLIC LOADING PERFORMANCE  
TAS 202 - UNIFORM STATIC LOADS

LAB NO.: B4519.01-401-18

DATED 02/02/2012

TAS 201, TAS 203 - LARGE MISSILE IMPACT RESISTANCE & CYCLIC  
LOADING PERFORMANCE  
TAS 202 - UNIFORM STATIC LOADS

LAB NO.: B4521.02-401-44

DATED 02/22/2012

ASTM E330-02 - UNIFORM STATIC LOADS  
ASTM E1886-05 & ASTM E1996-06 - LARGE MISSILE TYPE  
"D" IMPACT RESISTANCE & CYCLIC LOADING PERFORMANCE

LAB NO.: B4520.02-401-44

DATED 02/22/2012

ASTM E330-02 - UNIFORM STATIC LOADS  
ASTM E1886-05 & ASTM E1996-06 - LARGE MISSILE TYPE  
"D" IMPACT RESISTANCE & CYCLIC LOADING PERFORMANCE

## SPAN SCHEDULE

### END RETENTION SHUTTER

SLAT SPAN	ALLOWABLE DESIGN PRESSURE
84.0"	+/- 120.0 PSF
90.0"	+/- 107.9 PSF
100.0"	+/- 92.6 PSF
110.0"	+/- 81.4 PSF
120.0"	+/- 72.9 PSF
130.0"	+/- 66.2 PSF
140.0"	+/- 60.8 PSF
168.0"	+/- 50.0 PSF
190.0"	+/- 46.6 PSF
200.0"	+/- 45.2 PSF
210.0"	+/- 44.0 PSF
220.0"	+/- 43.0 PSF
230.0"	+/- 42.0 PSF
240.0"	+/- 41.0 PSF
250.0"	+/- 40.2 PSF
252.0"	+/- 40.0 PSF



John Henry  
Kampmann Jr.  
2021.08.17  
21:16:  
18-04'00'

John H. Kampmann Jr., PE  
FL License #: 47516  
DATE:

FBC 2020 (NON-HIGH VELOCITY HURRICANE ZONE)

WWW.MEVENENGINEERS.COM



REVISION  
1  
XX/XX/XX - RESERVED.

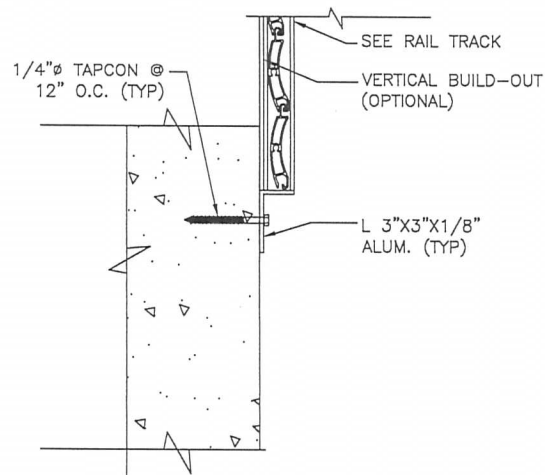
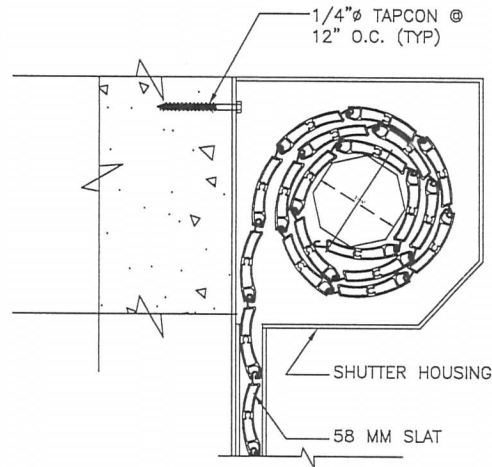
Project Name:  
National Approved Shutter Assn LLC  
8717 NW 117 St, Suite 1  
Hialeah Gardens, FL 33018  
Phone: (786)621-6706

NAS-Assn 58 MILLIMETER  
ROLL-UP SHUTTER SYSTEM

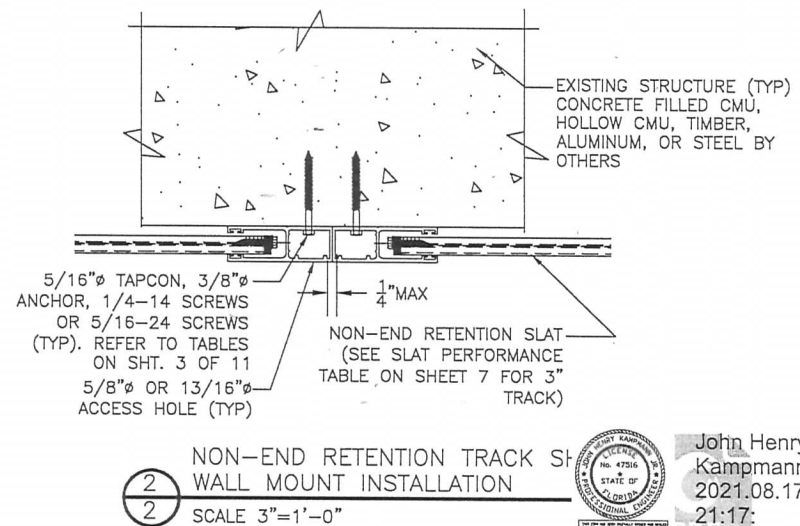
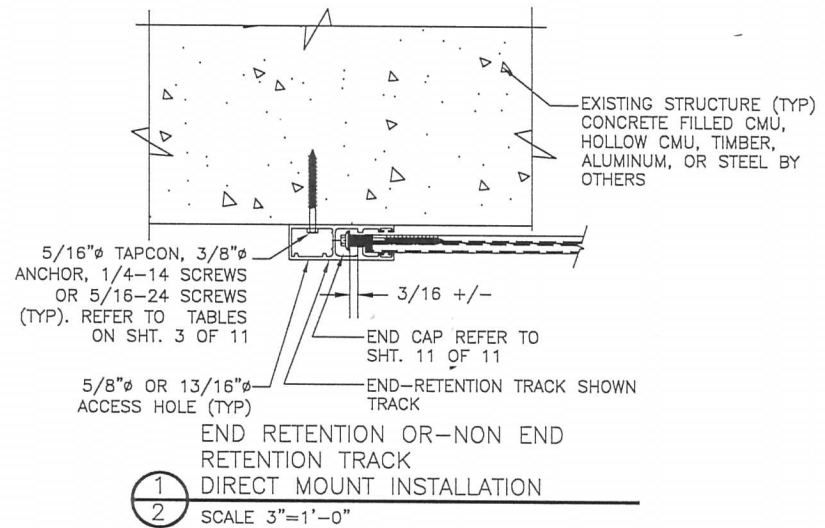
Drawn: JK  
Project #: 21-0817  
Scale: NOTED  
Date: 8/17/21  
Sheet No.:

1 of 11





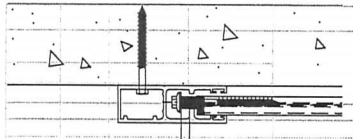
3  
 2 DIRECT MOUNT  
 3-1/4" END RETENTION TRACK  
 WALL MOUNT INSTALLATION  
 SCALE 3"=1'-0"



John Henry  
 Kampmann Jr.  
 2021.08.17  
 21:17  
 03-04'00"

John H. Kampmann Jr., PE  
 FL License #: 47516  
 DATE:

<b>MEAE</b> ENGINEERS, INC. 2352 Applecote Circle Sarasota, Florida 34240 (941) 922-5854 CA-6782	
Project Name: National Approved Shutter Assn LLC 8717 NW 117 St, Suite 1 Hialeah Gardens, FL 33018 Phone: (786) 621-6706	Description: xx/xx/xx - RESERVED.
Project Name: NAS-Assn 58 MILLIMETER ROLL-UP SHUTTER SYSTEM	Description: JK Project #: 21-0817 Scale: NOTED Date: 8/17/21 Sheet No.:
FBC 2020 (NON-HIGH VELOCITY HURRICANE ZONE)	2 of 11



END RETENTION (WALL MOUNT)

SLAT SPAN	DESIGN PRESSURE	R <sub>x</sub>	R <sub>y</sub>
7.0 FT	84" +/- 30 PSF 143.1 LB/FT	105.0 LB/FT	10.0"
	84" +/- 35 PSF 249.4 LB/FT	122.5 LB/FT	10.0"
	84" +/- 40 PSF 355.5 LB/FT	140.0 LB/FT	10.0"
	84" +/- 45 PSF 461.4 LB/FT	157.5 LB/FT	8.8"
	84" +/- 50 PSF 567.1 LB/FT	175.0 LB/FT	7.3"
	84" +/- 60 PSF 778.1 LB/FT	210.0 LB/FT	5.5"
	84" +/- 70 PSF 988.2 LB/FT	245.0 LB/FT	4.4"
	84" +/- 80 PSF 1197.6 LB/FT	280.0 LB/FT	3.7"
	84" +/- 90 PSF 1406.1 LB/FT	315.0 LB/FT	3.1"
	84" +/- 100 PSF 1613.7 LB/FT	350.0 LB/FT	
	84" +/- 110 PSF 1820.4 LB/FT	385.0 LB/FT	
	84" +/- 120 PSF 2026.1 LB/FT	420.0 LB/FT	
8.0 FT	96" +/- 30 PSF 401.4 LB/FT	120.0 LB/FT	10.0"
	96" +/- 35 PSF 531.6 LB/FT	140.0 LB/FT	8.1"
	96" +/- 40 PSF 661.9 LB/FT	160.0 LB/FT	7.1"
	96" +/- 45 PSF 792.0 LB/FT	180.0 LB/FT	5.6"
	96" +/- 50 PSF 922.2 LB/FT	200.0 LB/FT	4.8"
	96" +/- 60 PSF 1182.5 LB/FT	240.0 LB/FT	3.8"
	96" +/- 70 PSF 1442.8 LB/FT	280.0 LB/FT	3.1"
	96" +/- 80 PSF 1703.0 LB/FT	320.0 LB/FT	3.0"
10.0 FT	120" +/- 30 PSF 849.8 LB/FT	150.0 LB/FT	5.4"
	120" +/- 35 PSF 1032.0 LB/FT	175.0 LB/FT	4.5"
	120" +/- 40 PSF 1214.2 LB/FT	200.0 LB/FT	3.8"
	120" +/- 45 PSF 1396.3 LB/FT	225.0 LB/FT	3.3"
	120" +/- 50 PSF 1578.5 LB/FT	250.0 LB/FT	3.0"
	120" +/- 60 PSF 1942.8 LB/FT	300.0 LB/FT	
	120" +/- 70 PSF 2307.0 LB/FT	350.0 LB/FT	
	120" +/- 80 PSF 2671.2 LB/FT	400.0 LB/FT	
12.0 FT	144" +/- 30 PSF 1269.0 LB/FT	180.0 LB/FT	3.7"
	144" +/- 35 PSF 1508.7 LB/FT	210.0 LB/FT	3.1"
	144" +/- 40 PSF 1748.4 LB/FT	240.0 LB/FT	3.0"
	144" +/- 45 PSF 1988.0 LB/FT	270.0 LB/FT	
	144" +/- 50 PSF 2227.7 LB/FT	300.0 LB/FT	
	144" +/- 60 PSF 2706.9 LB/FT	360.0 LB/FT	
	144" +/- 70 PSF 3186.1 LB/FT	420.0 LB/FT	
14.0 FT	168" +/- 30 PSF 1689.0 LB/FT	210.0 LB/FT	3.0"
	168" +/- 35 PSF 1901.2 LB/FT	245.0 LB/FT	
	168" +/- 40 PSF 2293.3 LB/FT	280.0 LB/FT	
	168" +/- 45 PSF 2595.5 LB/FT	315.0 LB/FT	
	168" +/- 50 PSF 2897.6 LB/FT	350.0 LB/FT	
16.0 FT	192" +/- 20 PSF 1362.2 LB/FT	160.0 LB/FT	3.5"
	192" +/- 25 PSF 1751.5 LB/FT	200.0 LB/FT	3.0"
	192" +/- 30 PSF 2120.7 LB/FT	240.0 LB/FT	
	192" +/- 35 PSF 2489.9 LB/FT	280.0 LB/FT	
	192" +/- 40 PSF 2859.1 LB/FT	320.0 LB/FT	
	192" +/- 45 PSF 3228.2 LB/FT	360.0 LB/FT	
18.0 FT	216" +/- 20 PSF 1687.9 LB/FT	180.0 LB/FT	3.0"
	216" +/- 25 PSF 2128.4 LB/FT	225.0 LB/FT	3.1"
	216" +/- 30 PSF 2568.8 LB/FT	270.0 LB/FT	
	216" +/- 35 PSF 3009.1 LB/FT	315.0 LB/FT	
	216" +/- 40 PSF 3449.3 LB/FT	360.0 LB/FT	
	216" +/- 45 PSF 3889.4 LB/FT	405.0 LB/FT	
21.0 FT	252.0" +/- 20 PSF 2167.0 LB/FT	210.0 LB/FT	
	252.0" +/- 25 PSF 2722.2 LB/FT	262.5 LB/FT	
	252.0" +/- 30 PSF 3277.1 LB/FT	315.0 LB/FT	
	252.0" +/- 35 PSF 3831.9 LB/FT	367.5 LB/FT	
	252.0" +/- 40 PSF 4386.4 LB/FT	420.0 LB/FT	

MAXIMUM SPACING (O.C.)

1/4" ELCO ULTRACON TO 2700 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMEN	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMEN	5/16" ELCO ULTRACON TO 3500 PSI MIN. CONCRETE; 2" MIN. EMBEDMEN	5/16" ITW TAPCON TO 2899 PSI MIN. CONCRETE; 2.25" MIN. EMBEDMEN	TO GROUT-FILLED CONCRETE BLOCK; 1.75" MIN. EMBEDMEN	TO HOLLOW CONCRETE BLOCK; 1.75" MIN. EMBEDMEN	1/4" POWERS POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMEN	1/4" ALL-POINTS SOLID-SET TO 3000 PSI MIN. CONCRETE; 0.875" MIN. EMBEDMEN	TO HOLLOW BLOCK; 0.875" MIN. EMBEDMEN	1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMEN	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMEN	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMEN	#14 410 SS SMS W/ FULL THREAD PENETRATO N OR 1/4-20 410 SS THRU-BOLT TO 0.125" MIN. ALUM; 0.5" MIN	5/16" 410 SS SMS W/ FULL THREAD PENETRATO N OR 5/16-18 410 SS THRU-BOLT TO 0.25" MIN. ALUM; 0.625" MIN	3/8" POWERS WEDGE BOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMEN	3/8" ELCO CONFLX TO 1819 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMEN	TO 4510 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMEN
T; 2.5" MIN. EDGE DISTANCE	T; 2.5" MIN. EDGE DISTANCE	T; 3.125" MIN. EDGE DISTANCE	T; 3.125" MIN. EDGE DISTANCE	T; 4" MIN. EDGE DISTANCE	T; 4" MIN. EDGE DISTANCE	T; 3" MIN. EDGE DISTANCE	T; 3" MIN. EDGE DISTANCE	T; 3" MIN. EDGE DISTANCE	T; 0.75" MIN. EDGE DISTANCE	T; 0.75" MIN. EDGE DISTANCE	T; 0.75" MIN. EDGE DISTANCE	T; 0.75" MIN. EDGE DISTANCE	T; 0.75" MIN. EDGE DISTANCE	T; 4.5" MIN. EDGE DISTANCE	T; 3.75" MIN. EDGE DISTANCE	T; 3.75" MIN. EDGE DISTANCE
10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"
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8.8"	9.5"	10.0"	10.0"	10.0"	8.5"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"
7.3"	7.9"	10.0"	10.0"	10.0"	7.2"	10.0"	9.1"	6.4"	3.5"			8.1"	9.0"	10.0"	10.0"	10.0"
5.5"	5.9"	10.0"	10.0"	10.0"	5.5"	7.6"	6.8"	4.8"				6.3"	7.1"	10.0"	10.0"	10.0"
4.4"	4.7"	8.3"	8.2"	7.9"	4.5"	6.1"	5.5"	3.9"				5.1"	5.9"	10.0"	10.0"	10.0"
3.7"	3.9"	6.9"	6.8"	6.6"	3.8"	5.1"	4.6"	3.2"				4.3"	5.0"	10.0"	10.0"	10.0"
3.1"	3.4"	5.9"	5.9"	5.6"	3.3"	4.4"	3.9"					3.7"	4.4"	10.0"	10.0"	10.0"
		5.2"	5.1"	4.9"		3.9"	3.4"					3.3"	3.9"	9.9"	10.0"	10.0"
		4.6"	4.6"	4.4"		3.5"	3.1"						3.5"	8.8"	9.4"	10.0"
		4.2"	4.1"	4.0"		3.1"							3.2"	7.9"	8.5"	10.0"
10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	10.0"	9.1"	4.9"	4.2"	5.1"	10.0"	10.0"	10.0"	10.0"	10.0"
8.1"	8.7"	10.0"	10.0"	10.0"	8.2"	10.0"	10.0"	7.1"	3.7"	3.2"	3.9"	9.3"	10.0"	10.0"	10.0"	10.0"
6.6"	7.1"	10.0"	10.0"	10.0"	6.8"	9.2"	8.2"	5.8"	3.0"			7.7"	8.9"	10.0"	10.0"	10.0"
5.6"	6.0"	10.0"	10.0"	10.0"	5.8"	7.8"	6.9"	4.9"				6.6"	7.7"	10.0"	10.0"	10.0"
4.8"	5.2"	9.1"	9.0"	8.7"	5.0"	6.8"	6.0"	4.2"				5.8"	6.8"	10.0"	10.0"	10.0"
3.8"	4.1"	7.2"	7.1"	6.8"	4.0"	5.4"	4.7"	3.3"				4.6"	5.5"	10.0"	10.0"	10.0"
3.1"	3.4"	5.9"	5.9"	5.6"	3.3"	4.4"	3.9"					3.8"	4.6"	10.0"	10.0"	10.0"
3.0"	3.0"	5.0"	5.0"	4.8"		3.8"	3.3"					3.3"	3.9"	9.8"	10.0"	10.0"
5.4"	5.8"	10.0"	10.0"	9.7"	5.6"	7.7"	6.7"	4.8"				6.7"	8.2"	10.0"	10.0"	10.0"
4.5"	4.8"	8.4"	8.4"	8.0"	4.8"	6.4"	5.6"	3.9"				5.6"	6.8"	10.0"	10.0"	10.0"
3.8"	4.1"	7.2"	7.1"	6.8"	4.1"	5.5"	4.8"	3.4"				4.8"	5.9"	10.0"	10.0"	10.0"
3.3"	3.6"	6.3"	6.2"	5.9"	3.6"	4.8"	4.2"					4.2"	5.2"	10.0"	10.0"	10.0"
3.0"	3.2"	5.6"	5.5"	5.3"	3.2"	4.2"	3.7"					3.8"	4.6"	10.0"	10.0"	10.0"
		4.5"	4.5"	4.3"		3.5"	3.0"					3.1"	3.8"	8.5"	9.3"	10.0"
		3.8"	3.8"	3.6"									3.2"	7.2"	7.9"	9.6"
		3.3"	3.3"	3.1"										6.2"	6.8"	8.3"
3.7"	4.0"	7.0"	7.0"	6.6"	4.1"	5.4"	4.7"	3.3"				4.8"	6.0"	10.0"	10.0"	10.0"
3.1"	3.4"	5.9"	5.9"	5.6"	3.5"	4.5"	3.9"					4.1"	5.1"	10.0"	10.0"	10.0"
3.0"	3.0"	5.1"	5.1"	4.8"	3.0"	3.9"	3.4"					3.5"	4.4"	9.8"	10.0"	10.0"
		4.5"	4.5"	4.3"		3.4"						3.1"	3.9"	8.5"	9.3"	10.0"
		4.0"	4.0"	3.8"		3.1"							3.5"	7.5"	8.3"	10.0"
		3.3"	3.3"	3.1"										6.2"	6.8"	8.3"
		3.0"	3.0"											5.3"	5.8"	7.0"
3.0"	3.0"	5.4"	5.3"	5.1"	3.2"	4.1"	3.6"					3.8"	4.8"	10.0"	10.0"	10.0"
		4.6"	4.5"	4.3"		3.5"	3.0"					3.2"	4.1"	8.5"	9.4"	10.0"
		4.0"	3.9"	3.7"									3.5"	7.4"	8.1"	9.9"
		3.5"	3.5"	3.3"									3.1"	6.5"	7.2"	8.7"
		3.1"	3.1"	3.0"										5.9"	6.5"	7.8"
3.5"	3.7"	6.6"	6.6"	6.2"	3.9"	5.1"	4.4"	3.1"				4.7"	6.0"	10.0"	10.0"	10.0"
3.0"	3.0"	5.2"	5.2"	4.9"	3.1"	4.0"	3.5"					3.7"	4.8"	9.7"	10.0"	10.0"
		4.3"	4.3"	4.1"		3.3"						3.1"	3.9"	8.0"	8.9"	10.0"
		3.7"	3.7"	3.5"									3.4"	6.9"	7.6"	9.1"
		3.2"	3.2"	3.0"										6.0"	6.6"	8.0"
		3.0"	3.0"											5.3"	5.8"	7.1"
3.0"	3.1"	5.5"	5.4"	5.1"	3.3"	4.2"	3.6"					3.9"	5.1"	10.0"	10.0"	10.0"
		4.3"	4.3"	4.1"		3.3"						3.1"	4.0"	8.0"	8.9"	10.0"
		3.6"	3.6"	3.4"									3.3"	6.7"	7.4"	8.9"
		3.1"	3.1"	3.0"										5.7"	6.3"	7.6"
														5.0"	5.5"	6.6"
														4.4"	4.9"	5.9"
		4.3"	4.3"	4.0"		3.3"								8.0"	8.8"	10.0"
		3.4"	3.4"	3.2"										6.3"	7.0"	8.5"
		3.0"	3.0"											5.3"	5.8"	7.0"
														4.5"	5.0"	6.0"
														3.9"	4.4"	5.3"



John H. Kampmann, Jr.  
2021.08.17  
21:17:  
45-04'00'

John H. Kampmann, Jr., PE  
FL License #: 47516  
DATE:

MEAN ENGINEERS, INC.

2352 Applecreek Circle  
Gainesville, Florida 32608  
(941) 922-3504 FAX 941-922-3504

WWW.MEENGINEERS.COM

REVISIONS

REV	DESCRIPTION
1	XX/XX/XX - RESERVED

Project Name: National Approved Shutter Assn LLC

Project #21-0817

8717 NW 117 St, Suite 1  
Hialeah Gardens, FL 33018  
Phone: (786) 621-6706

Drawn: JK

Checked: NOTED

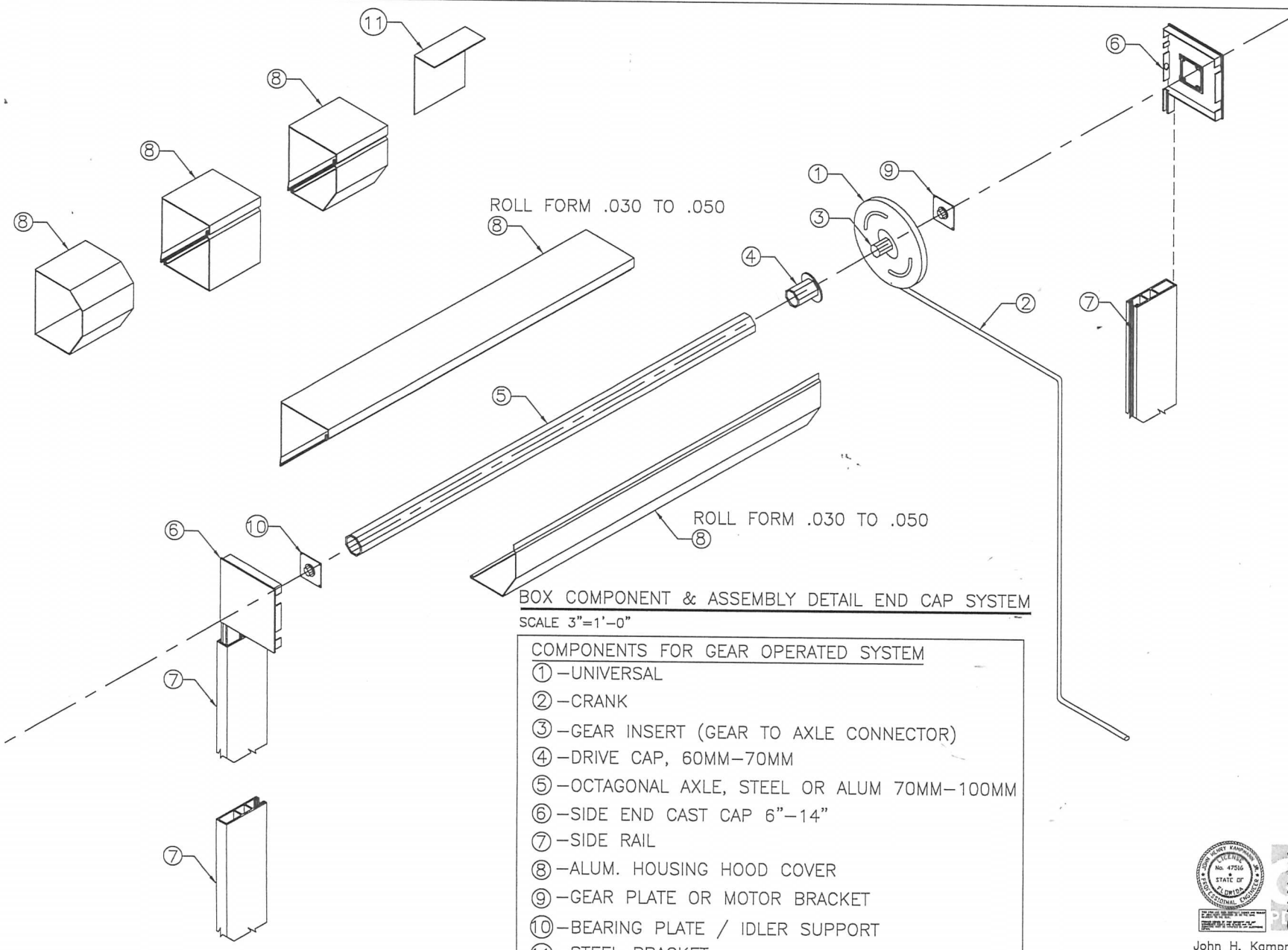
Scale: 8/17/21

Sheet No: 3 of 11

DESCRIPTION: NAS-Assn 58 MILLIMETER ROLL-UP SHUTTER SYSTEM

DATE: 2021.08.17





**BOX COMPONENT & ASSEMBLY DETAIL END CAP SYSTEM**  
 SCALE 3"=1'-0"

- COMPONENTS FOR GEAR OPERATED SYSTEM**
- ① - UNIVERSAL
  - ② - CRANK
  - ③ - GEAR INSERT (GEAR TO AXLE CONNECTOR)
  - ④ - DRIVE CAP, 60MM-70MM
  - ⑤ - OCTAGONAL AXLE, STEEL OR ALUM 70MM-100MM
  - ⑥ - SIDE END CAST CAP 6"-14"
  - ⑦ - SIDE RAIL
  - ⑧ - ALUM. HOUSING HOOD COVER
  - ⑨ - GEAR PLATE OR MOTOR BRACKET
  - ⑩ - BEARING PLATE / IDLER SUPPORT
  - ⑪ - STEEL BRACKET



John Henry  
 Kampmann Jr.  
 2021.08.17  
 21:21  
 03-04'00'

John H. Kampmann Jr., PE  
 FL License #: 47516  
 DATE:

Project Name:  
**NAS-Assn 58 MILLIMETER  
 ROLL-UP SHUTTER SYSTEM**

Project Number:  
**JK**

Project #:  
**21-0817**

Scale:  
**NOTED**

Date:  
**8/17/21**

Sheet No. 2:  
**10 of 11**

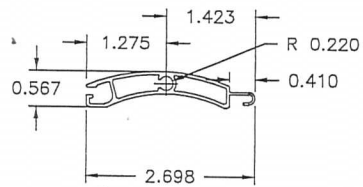
DESCRIPTION  
 xx/xx/xx - RESERVED.

REV.  
 1

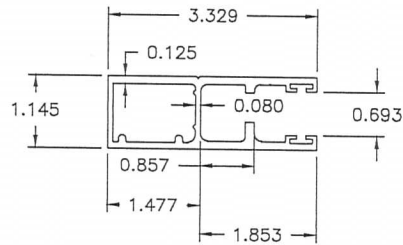
Project Name:  
**National Approved Shutter Assn LLC**  
 8717 NW 117 St, Suite 1  
 Hialeah Gardens, FL 33018  
 Phone: (786)621-6706

WWW.MEAENGINEERS.COM  
**MEA**  
 ENGINEERS, INC.  
 2352 Appaloosa Circle  
 Sarasota, Florida 34240  
 (941) 922-3854 CA-6752

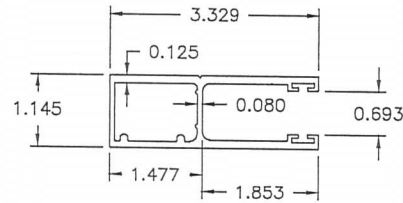
FBC 2020 (NON-HIGH VELOCITY HURRICANE ZONE)



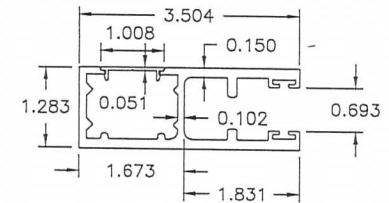
58MM SLAT  
SCALE 1:2



58MM SIDE RAIL W/ RETENTION LEGS  
SCALE 1:2



58MM SIDE RAIL W/O RETENTION LEGS  
SCALE 1:2



1500 ULTRA END RETENTION SIDE RAIL  
W/ COVER  
SCALE 1:2



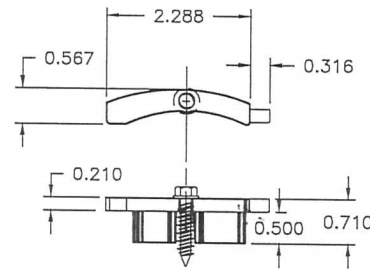
DETAIL-1  
SCALE 1:2  
2' TO 7'  
NON-END RETENTION



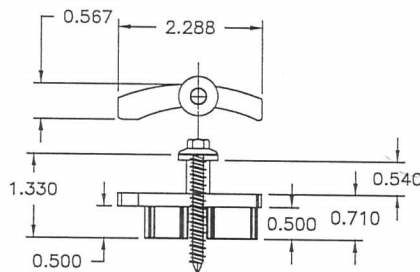
DETAIL-2  
SCALE 1:2  
2' TO 14'  
END RETENTION



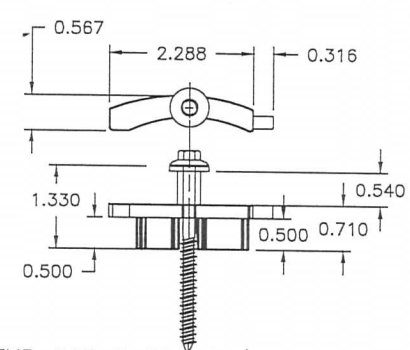
DETAIL-3  
SCALE 1:2  
14' TO 21'  
END RETENTION



1 END CAP & TIP W/OUT BUSHING  
SCALE 1:2  
SEE DETAIL-1 ON THIS SHT.



3 END CAP W/ BUSHING  
SCALE 1:2  
SEE DETAIL-3 ON THIS SHEET



2 END CAP & TIP W/ BUSHING  
SCALE 1:2  
SEE DETAIL-2 ON THIS SHEET



John Henry  
Kampmann Jr.  
2021.08.17  
21:21:  
49-04'00'  
John H. Kampmann Jr., PE  
FL License #: 47516  
DATE:

FBC 2020 (NON-HIGH VELOCITY HURRICANE ZONE)

www.meengineers.com  
**ME**  
ENGINEERS, INC.  
2352 Applecreek Circle  
Sarasota, Florida 34240  
(941) 922-3854 CA-6752

DESCRIPTION  
xx/xx/xx - RESERVED.

REV  
1

Project Name  
National Approved Shutter Assn LLC  
8717 NW 117 St, Suite 1  
Hialeah Gardens, FL 33018  
Phone: (786) 621-6706

Description  
NAS-Assn 58 MILLIMETER  
ROLL-UP SHUTTER SYSTEM

Drawn: JK  
Project #: 21-0817  
Scale: NOTED  
Date: 8/17/21  
Sheet No.:

11 of 11



