

SHORELINE HVHZ HD BAHAMA SHUTTERS

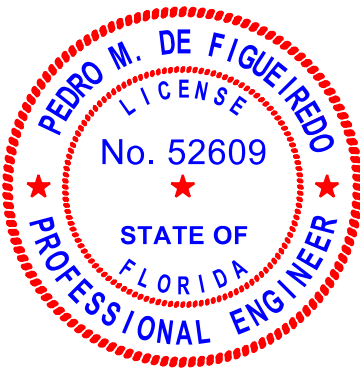
SHORELINE SHUTTERS
105 SEBASTIAN INDUSTRIAL PL #8
SEBASTIAN - FLORIDA 32958
TEL (772) 581-9006

Pedro
Figueiredo

Digitally signed by
Pedro Figueiredo
Date: 2026.09.24
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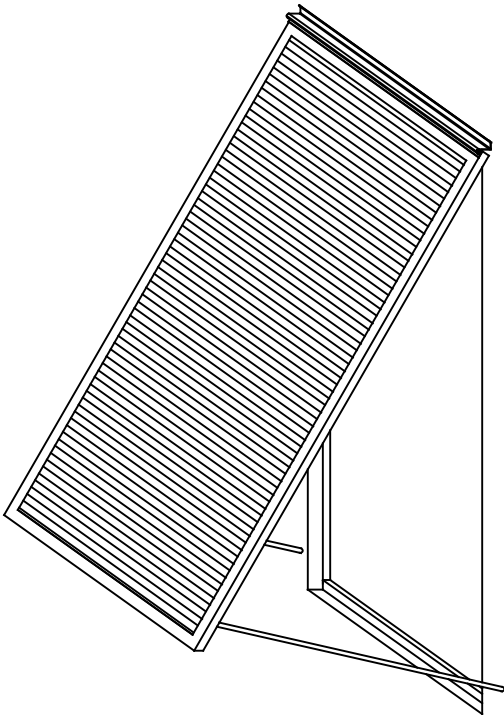
GENERAL NOTES:

FLORIDA BUILDING CODE 2026 - 9th EDITION - HVHZ & NON HVHZ
LARGE MISSILE IMPACT RATED

- 1- CODE: THIS PRODUCT HAS BEEN TESTED UNDER TAS 201 (LARGE MISSILE), 202 AND 203, ASTM E330, ASTM E1996 (LEVEL D) AND ASTM E1886 AND DESIGNED IN ACCORDANCE WITH THE FBC 2026 - 9th EDITION. (HVHZ & non- HVHZ).
- 2- DEFINITION: THIS PRODUCT IS AN ALUMINUM IMPACT RESISTANT BAHAMA SHUTTER DESIGNED, CONSTRUCTED AND TESTED FOR THE PURPOSE OF PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LARGE MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 3- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER FBC. IT SHALL BE LOCATED ON THE BOTTOM, PLACED ON THE BACK OF THE SHUTTER.
- "SHORELINE SHUTTERS - SEBASTIAN - FL.
SHORELINE HVHZ HD BAHAMA SHUTTER
LARGE MISSILE IMPACT RATED"
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7-22. PRESSURES CAN BE PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT OR AS REQUIRED BY THE BUILDING OFFICIAL. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES HERE IN SPECIFIED. THE ULTIMATE DESIGN PRESSURES, AS DETERMINED FROM ASCE 7-22, ARE TO BE MULTIPLE BY 0.6
- 5- MATERIAL: ALL EXTRUDED ALUMINUM PARTS TO BE 6063-T6 ALLOY OR AS NOTED ON THIS APPROVAL.
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS. INSTALLATION AND LOADS AS PER THIS APPROVAL.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
7.1- THE STABILITY OF THE STRUCTURE WHERE THE PRODUCT IS TO BE ATTACHED ENSURING PROPER ANCHORAGE.
7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
7.3- THAT THIS APPROVAL IS ADEQUATE FOR A SPECIFIC PROJECT.
- 8- DISSIMILAR MATERIALS: WHERE ALUMINUM IS IN CONTACT OR FASTENED TO DISSIMILAR MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL, INSTALLATION SHALL MEET THE REQUIREMENTS OF CHAPTER M.7 OF THE ALUMINUM DESIGN MANUAL 2020.
- 9- BLADE CAN BE INSTALLED UPSIDE DOWN FOR THE PURPOSE OF SIGHT BLOCKING.

TABLE OF CONTENTS:

SHEET	CONTENT DESCRIPTION
1	GENERAL NOTES, TABLE OF CONTENTS
2	TYPICAL SINGLE UNIT W/O STIFFENERS - DESIGN RATING TABLES 1 & 2
3	TYPICAL UNIT W/ STIFFENERS - DESIGN RATING TABLES 3 & 4
4	TYPICAL HORIZONTAL AND VERTICAL SECTIONS, GS: GLAZING SEPARATION
5	ANCHORAGE DETAILS CON 1
6	ANCHORAGE DETAILS CON 2
7	ANCHORAGE DETAILS CON 3
8	PRODUCT COMPONENTS, BILL OF MATERIALS
9	CODE COMPLIANCE FOR FBC 2026 SECTION 1711 - COASTAL AREAS



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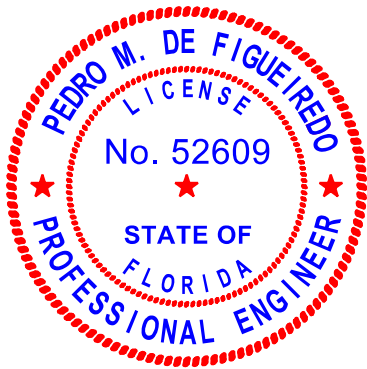


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BAHAMA SHUTTER
LARGE MISSILE IMPACT RATED

PRODUCT:
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TYPICAL SINGLE UNIT W/O STIFFENERS



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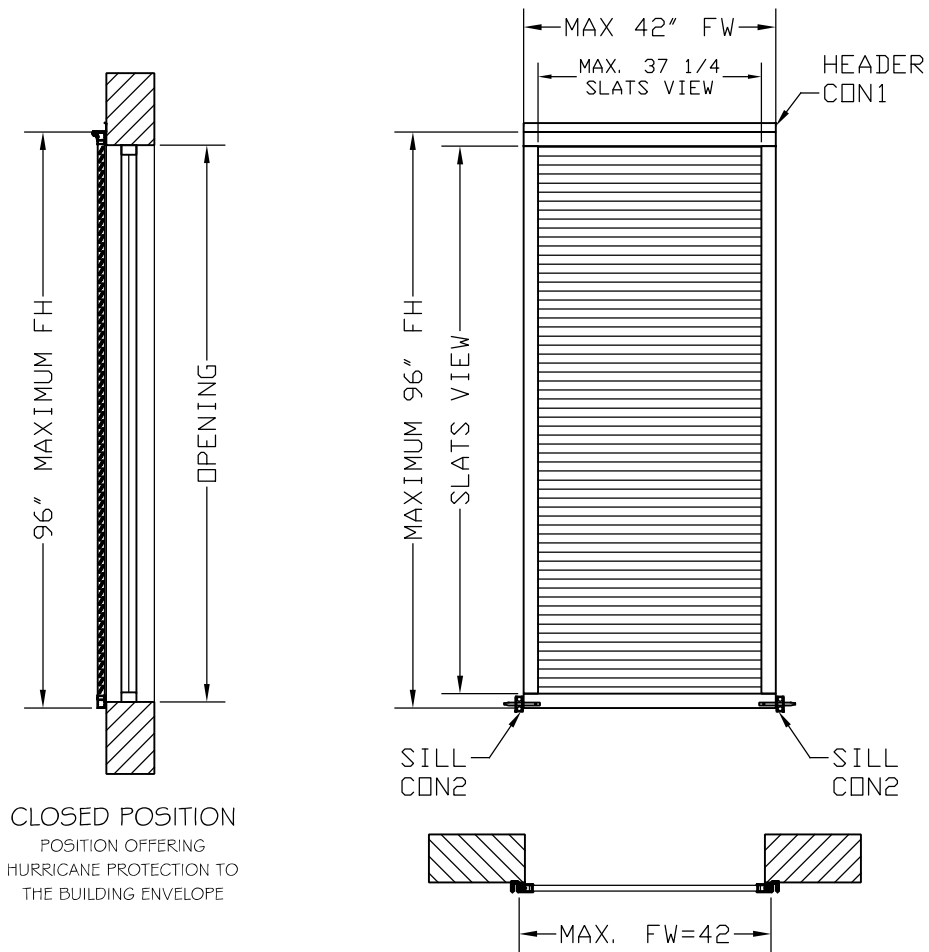


TABLE 1
42" SINGLE UNIT - NON HVHZ
MAXIMUM DESIGN RATING (PSF)

FH	Pd (POS, NEG)
96	70
93	72
90	75
87	77
84	80
81	83
78	86
75	90
72	93
69	97
66	100

TABLE 2
42" SINGLE UNIT - HVHZ
MAXIMUM DESIGN RATING (PSF)

FH	Pd (POS)	Pd (NEG)
96	63	70
93	69	72
90	75	75
87	77	77
84	80	80
81	83	83
78	86	86
75	90	90
72	93	93
69	97	97
66	100	100

HVHZ AND NON HVHZ
SEE SHEET 4 FOR GLAZING
SEPARATION REQUIREMENTS



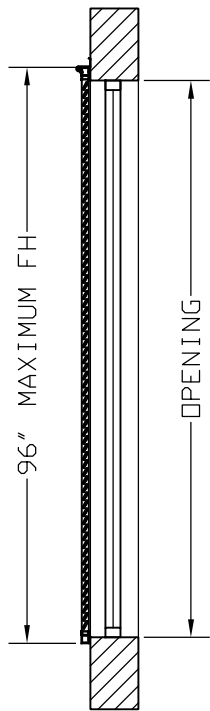
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TYPICAL UNIT WITH ONE, TWO OR MORE VERTICAL STIFFENERS



CLOSED POSITION
POSITION OFFERING
HURRICANE PROTECTION TO
THE BUILDING ENVELOPE

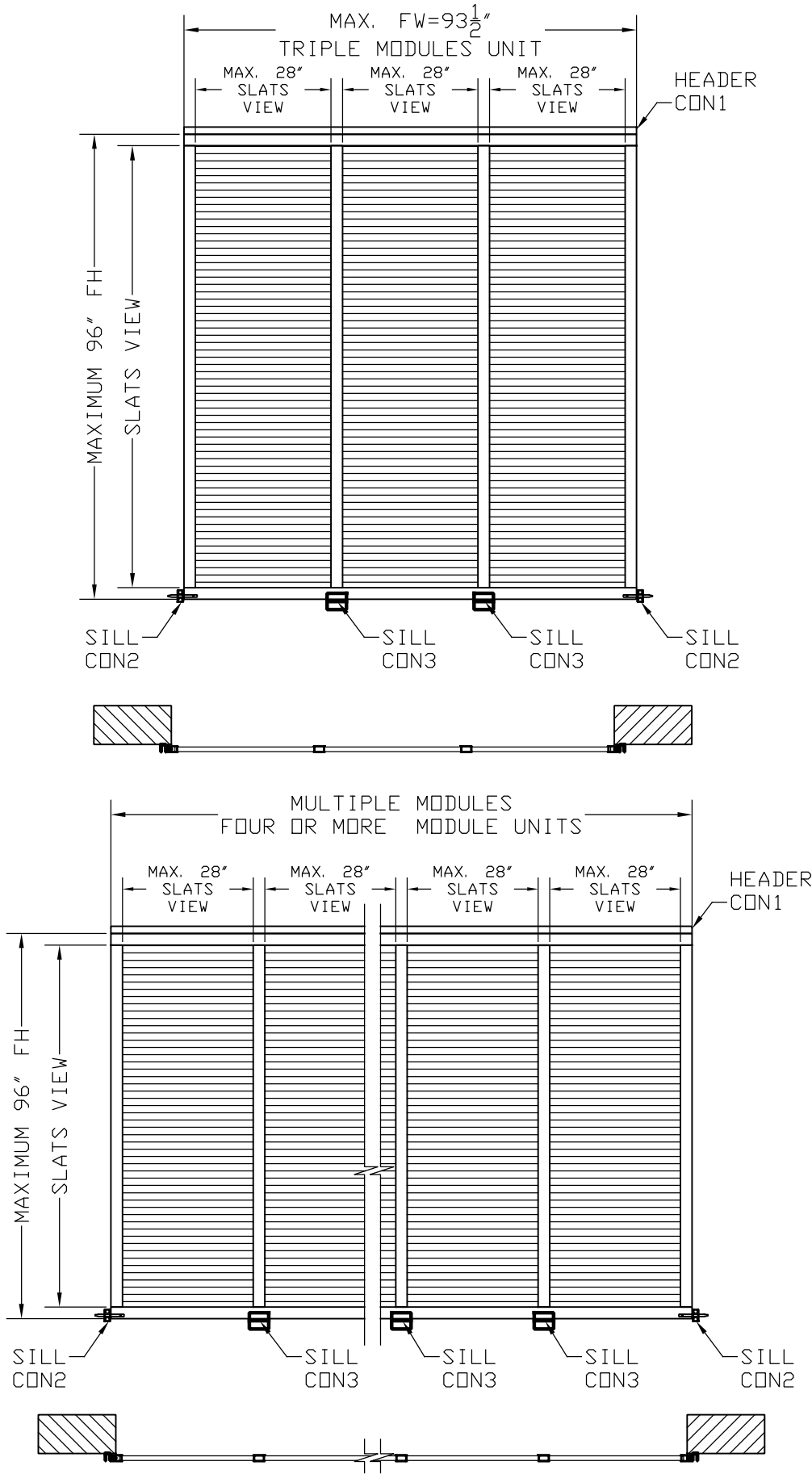


TABLE 3

28" MAX. SLAT MODULES - NON HVHZ
MAXIMUM DESIGN RATING (PSF)

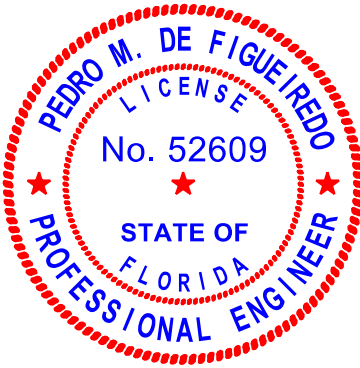
FH (IN)	Pd (POS, NEG)
96	70
93	72
90	75
87	77
84	80
81	83
78	86
75	90
72	93
69	97
66	100

TABLE 4

28" MAX SLAT MODULES - HVHZ
MAXIMUM DESIGN RATING (PSF)

FH	Pd (POS)	Pd (NEG)
96	30	52
93	34	58
90	38	63
87	43	70
84	47	78
81	53	83
78	58	86
75	64	90
72	71	93
69	78	97
66	86	100

HVHZ AND NON HVHZ
SEE SHEET 4 FOR GLAZING
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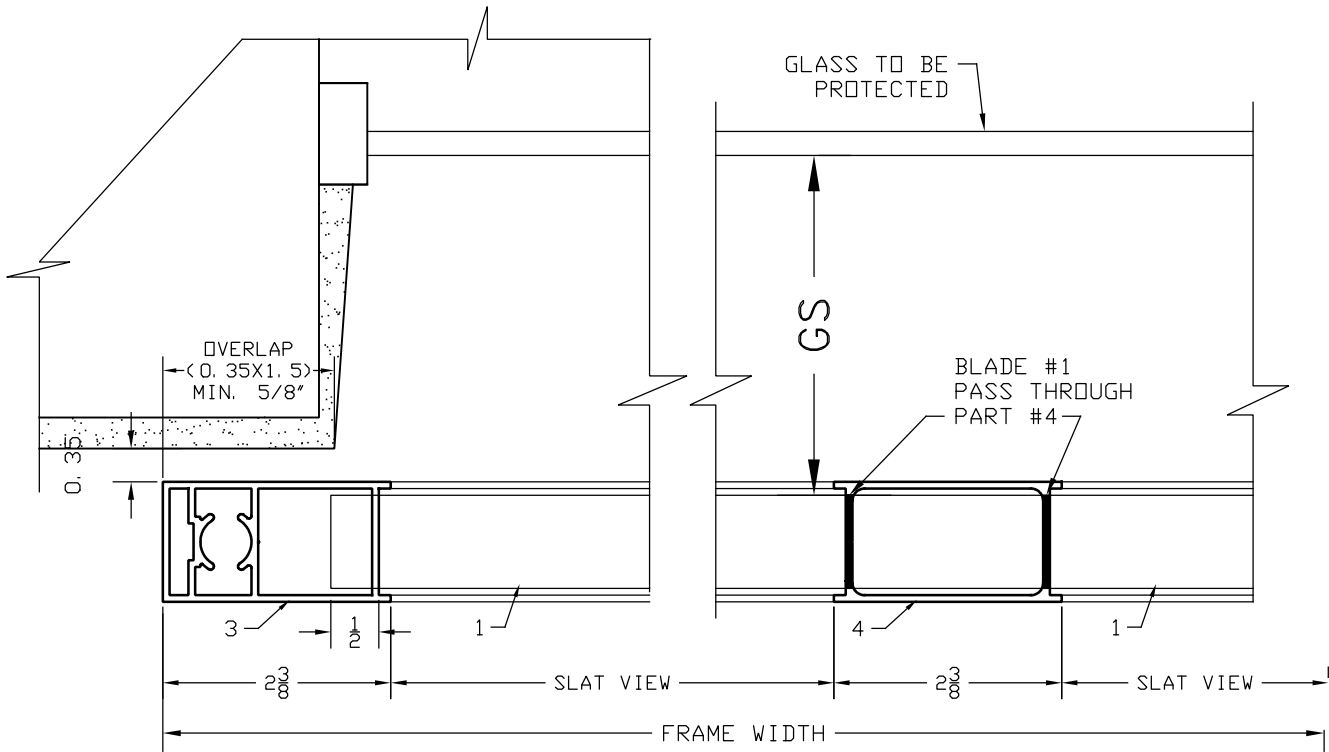
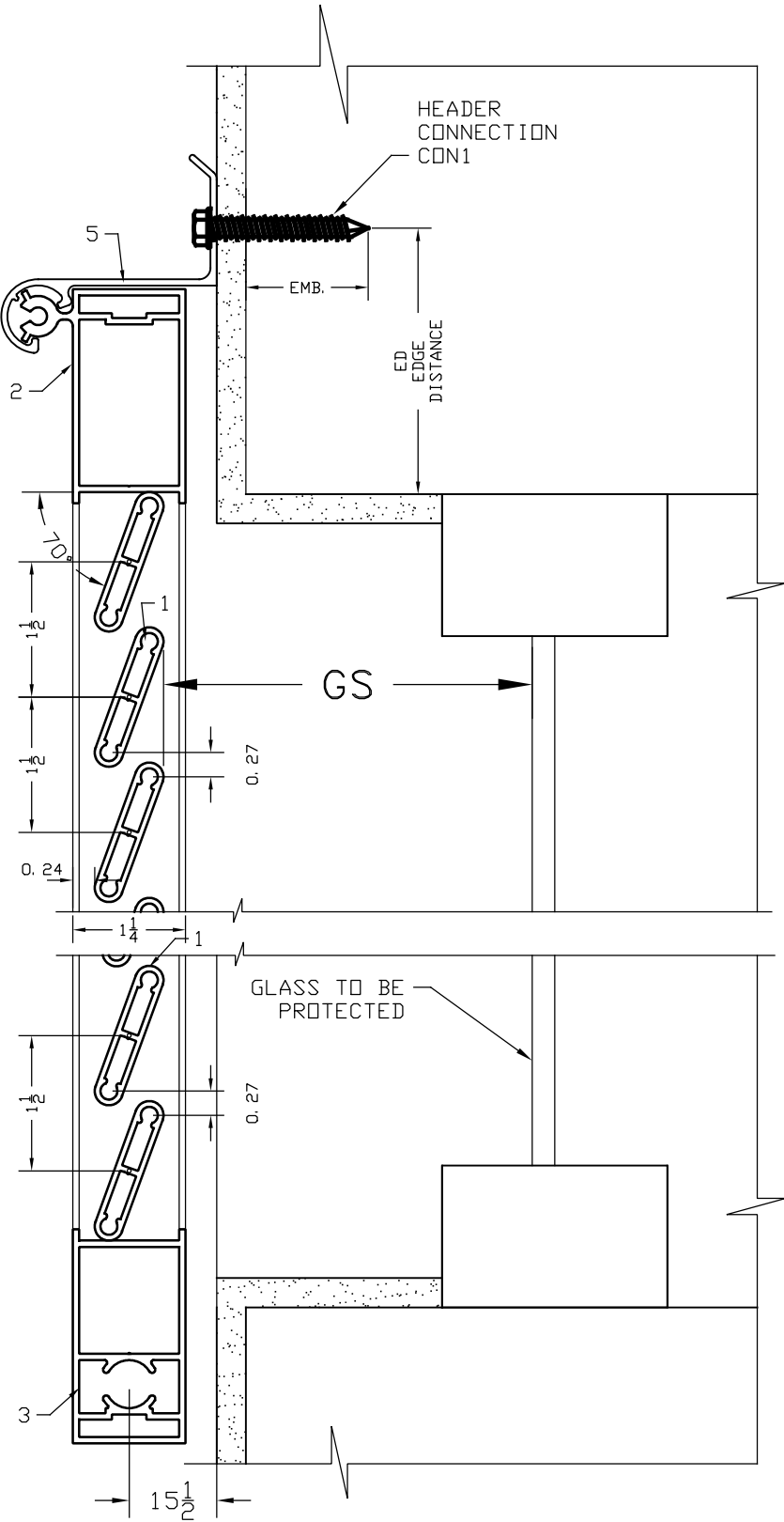
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3 OF 9



TYPICAL HORIZONTAL AND VERTICAL SECTION DETAILS



HVHZ - GLAZING SEPARATION - GS
HIGH VELOCITY HURRICANE ZONES (HVHZ) -
MIAMI-DADE AND BROWARD COUNTIES
GS >= 3 1/4" FOR SINGLE MODULES
GS >= 3" FOR MULTIPLE MODULES

NON HVHZ - GLAZING SEPARATION - GS
PRODUCT IS QUALIFIES AS "NON POROUS",
THEREFORE GLAZING SEPARATION GS IS NOT
REQUIRED WITH THE FOLLOWING EXCEPTIONS:

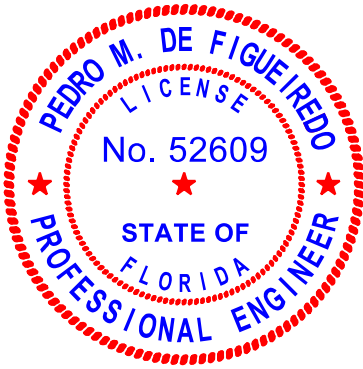
- A- FOR ESSENTIAL FACILITIES IN ALL WIND ZONES.
- B- FOR WIND ZONE 4 AS DEFINED IN ASTM E 1996 WITH
MODIFICATION BY THE FBC SECTION 1609.1.2.2 (LOCATIONS WITH
BASIC WIND SPEED GREATER THAN 170 MPH)

SINGLE MODULE SHUTTERS
GS >= 3 1/4"

MULTIPLE MODULES SHUTTERS
GS >= SEE TABLE 5

TABLE 5
28" MAX. SLAT MODULES - NON HVHZ

FH	GS
96	4.875
93	4.500
90	4.125
87	3.750
84	3.500
81	3.375
78	3.125
75	3.000
72	2.750
69	2.625
66	2.500



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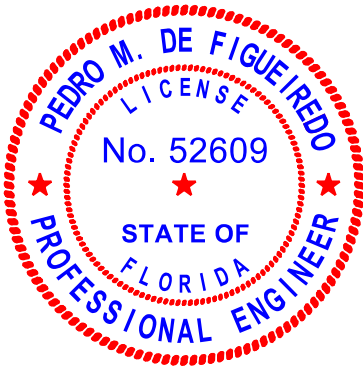
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HEADER WALL ANCHORAGE
CONNECTION CON I



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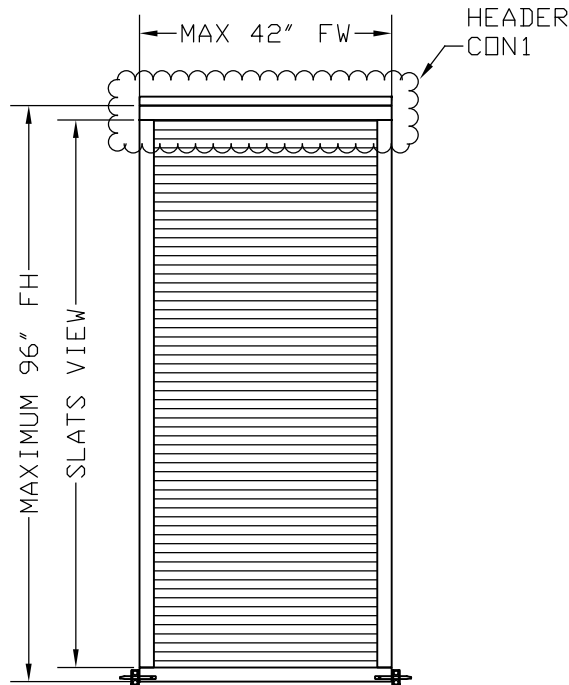
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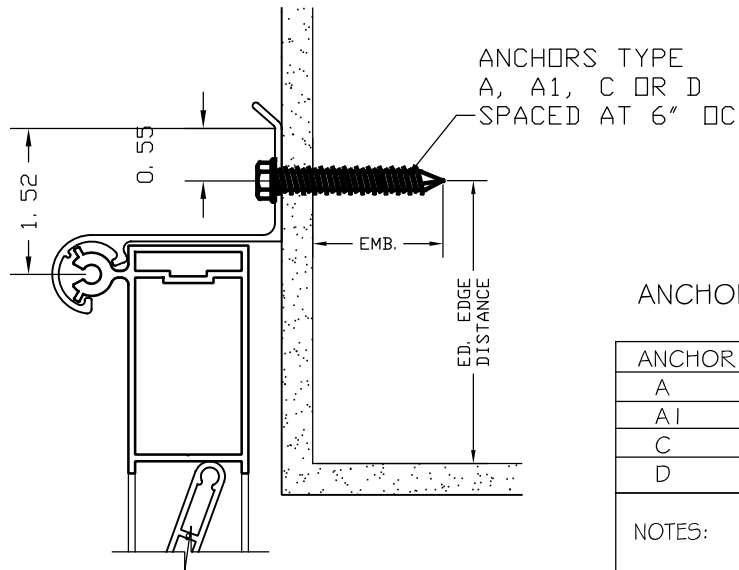
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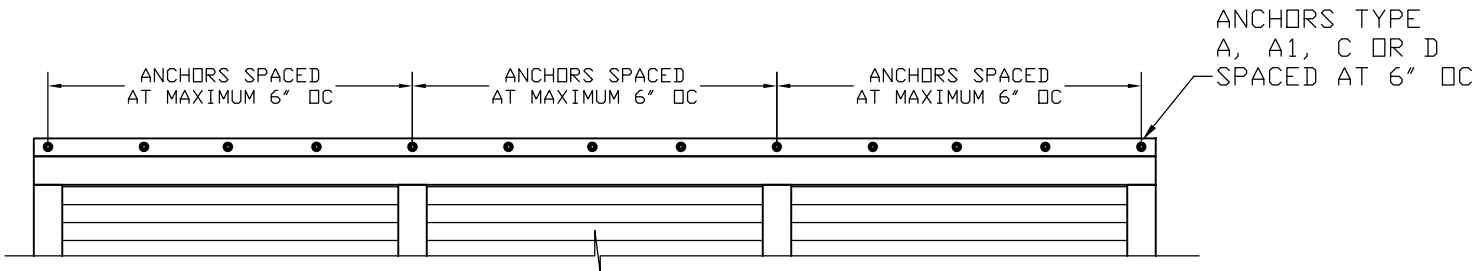
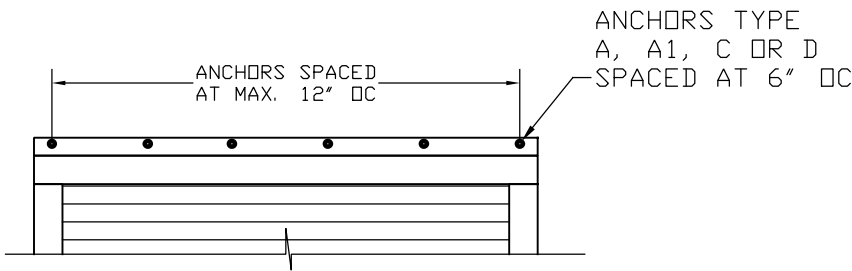
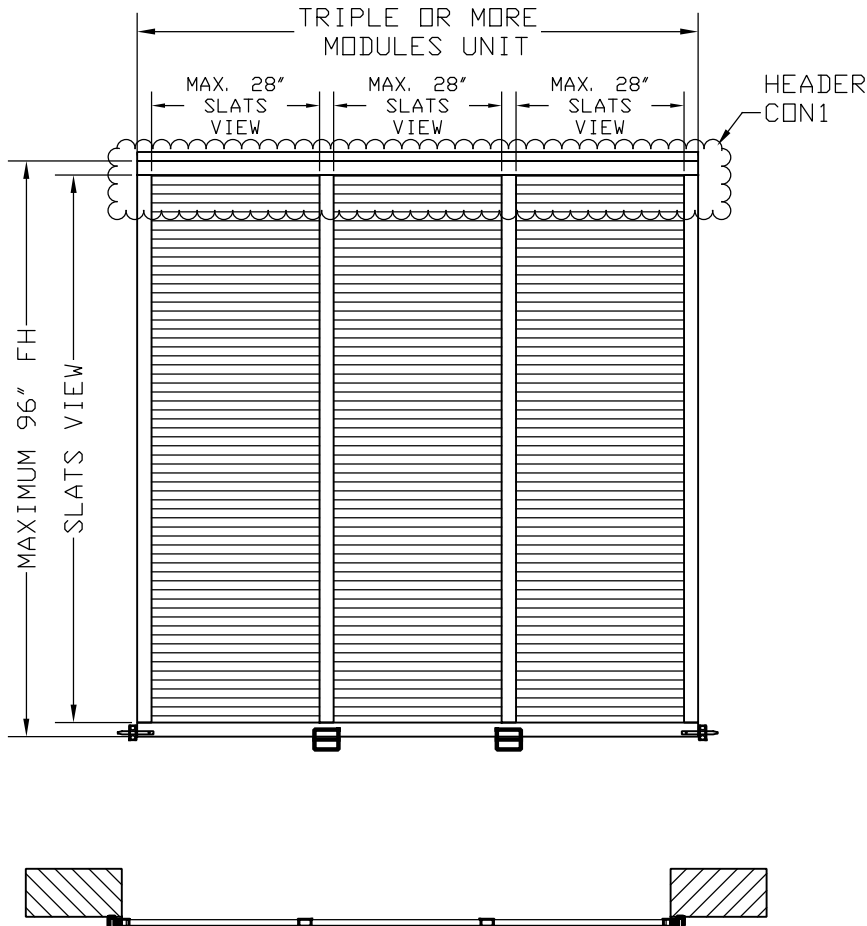
SINGLE OR
MULTIPLE
MODULES

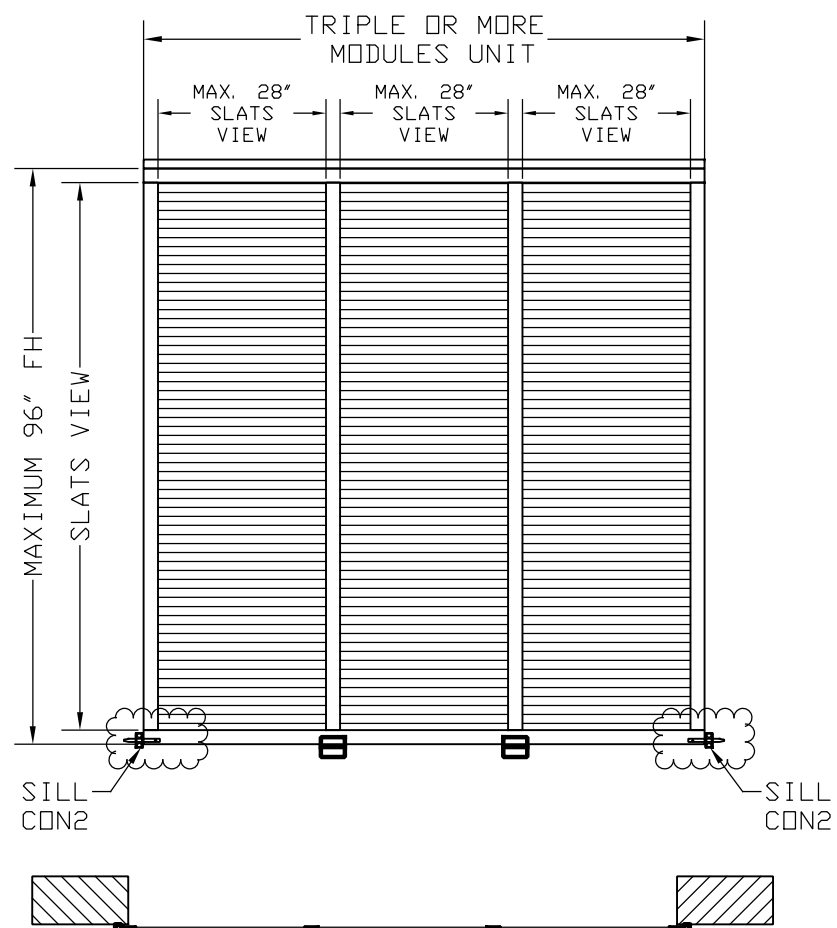
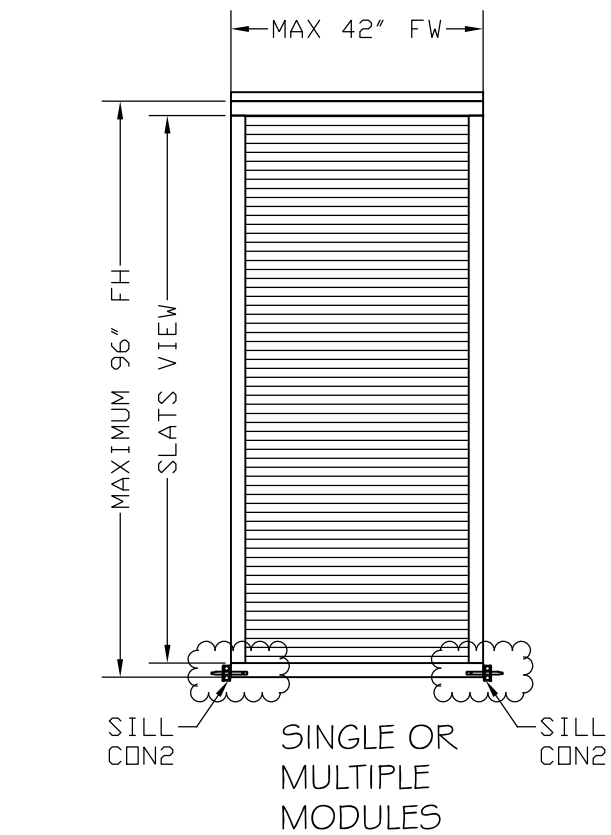


ANCHOR SCHEDULE:

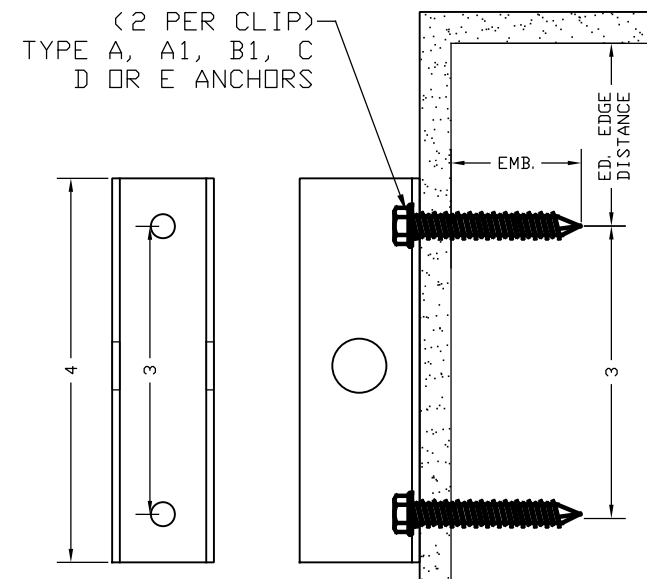
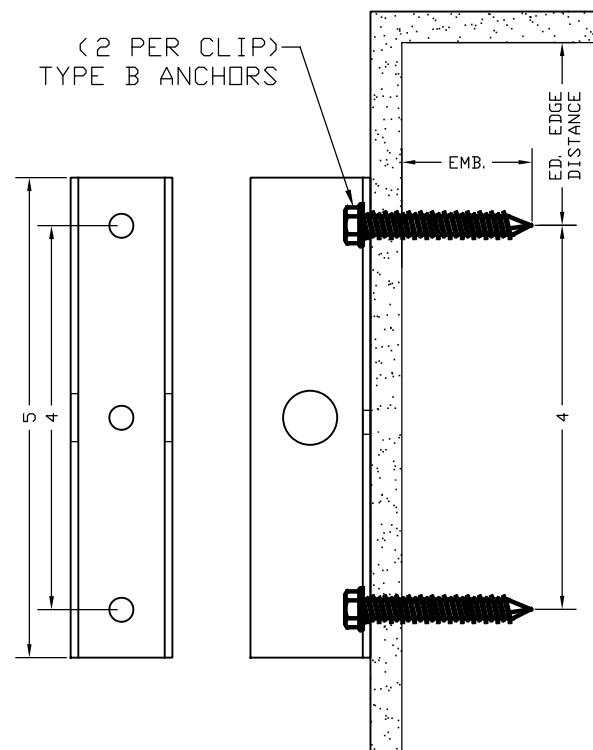
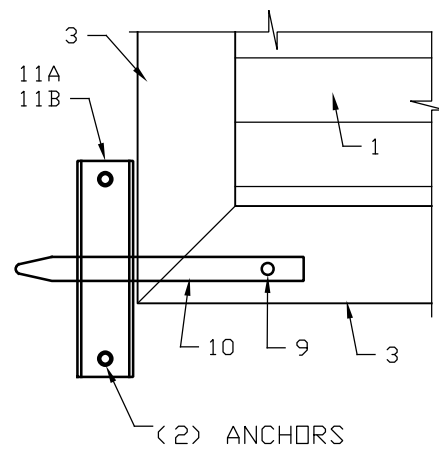
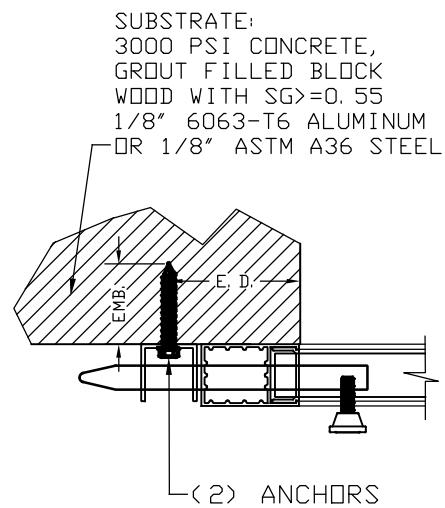
ANCHOR	DESCRIPTION	MATERIAL	EMB.	E.D.
A	1/4" ULTRACON	MIN. 3000 p _{SI} CONCRETE	1 3/4"	2 1/2"
A1	1/4" AGGRE-GATOR SS	MIN. 3000 p _{SI} CONCRETE	1 3/4"	2 1/2"
C	#14 SS WOOD SCREWS	WOOD WITH SG ≥ 0.55	1 1/2"	3/4"
D	1/4"-20 BI-FLEX SS	MIN. 1/8" 6063-T6 ALUM.	-	1/2"

- NOTES:
- 1- ED: EDGE DISTANCE SHALL BE BEYOND WALL DRESSING
 - 2- EMB: EMBEDMENT SHALL BE BEYOND WALL DRESSING
 - 3- ANCHORS TYPE A AND A1 CAN ALSO BE USED AS AN ALTERNATE TYPE C INTO WOOD
 - 4- 1/4"-14 GRADE 5 SELF DRILLING SCREWS CAN BE USED AS AN ALTERNATE TO TYPE D ANCHOR





JAMB SILL WALL ANCHORAGE CONNECTION - CON 2



ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMB.	E.D.
A	1/4" ULTRACON	MIN. 3000 psi CONCRETE	1 3/4"	2 1/2"
A1	1/4" AGGRE-GATOR SS	MIN. 3000 psi CONCRETE	1 3/4"	2 1/2"
B	1/4" ULTRACON	GROUT FILLED CMU BLOCK	2 1/4"	2 1/2"
B1	1/4" AGGRE-GATOR SS	GROUT FILLED CMU BLOCK	2"	2"
C	#14 SS WOOD SCREWS	WOOD WITH SG >= 0.55	1 1/2"	3/4"
D	1/4"-14 BI-FLEX SS	MIN. 1/8" 6063-T6 ALUM.	-	1/2"
E	1/4"-20 18.8 SS SOLID SET	MIN. 3000 PSI CONCRETE	7/8"	3"

- NOTES:
- 1- ED: EDGE DISTANCE SHALL BE BEYOND WALL DRESSING
 - 2- EMB: EMBEDMENT SHALL BE BEYOND WALL DRESSING
 - 3- ANCHORS TYPE A AND A1 CAN ALSO BE USED AS AN ALTERNATE TYPE C INTO WOOD
 - 4- 1/4"-14 GRADE 5 SELF DRILLING SCREWS CAN BE USED AS AN ALTERNATE TO TYPE D ANCHOR



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BAHAMA SHUTTER
LARGE MISSILE IMPACT RATED

PRODUCT:

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SEBASTIAN, FLORIDA 32958
TEL: (772) 581-9006

SCALE:
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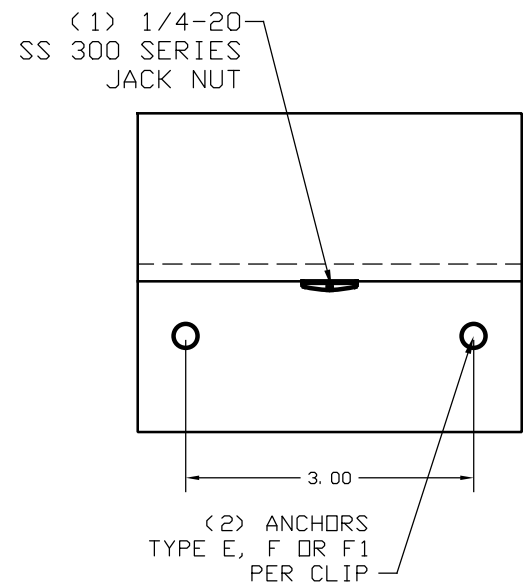
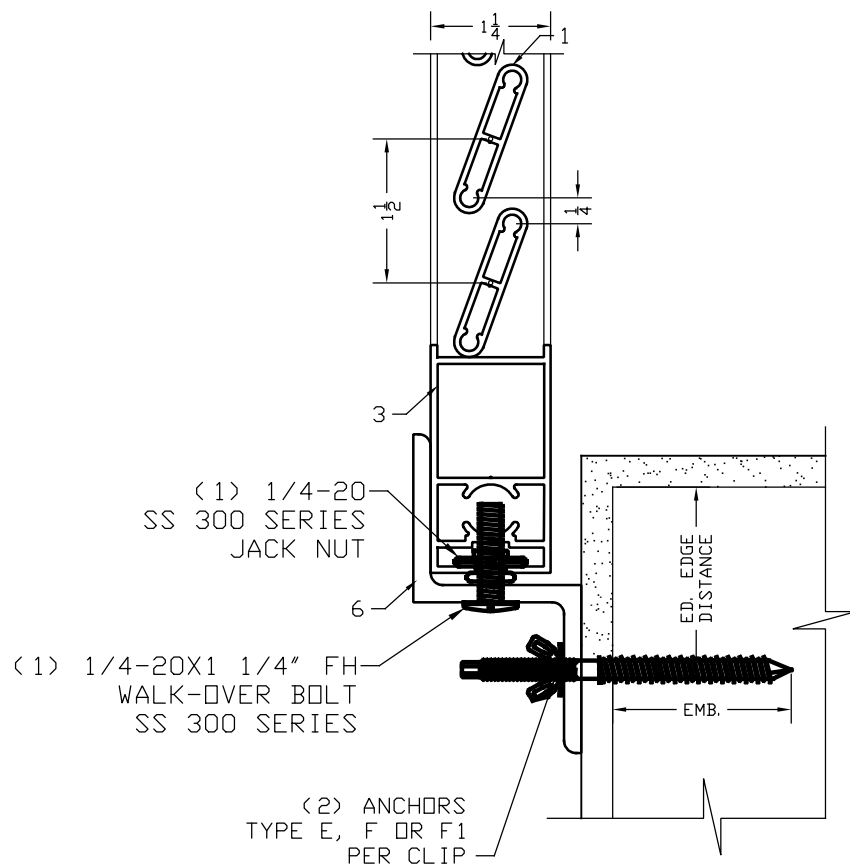
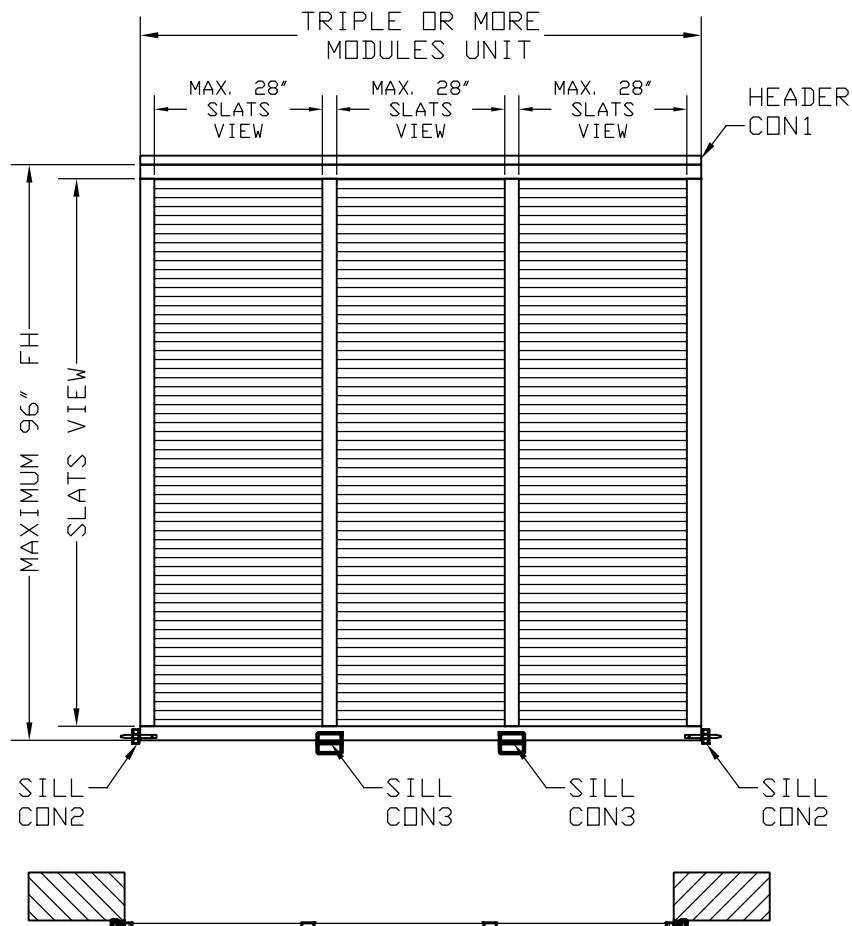
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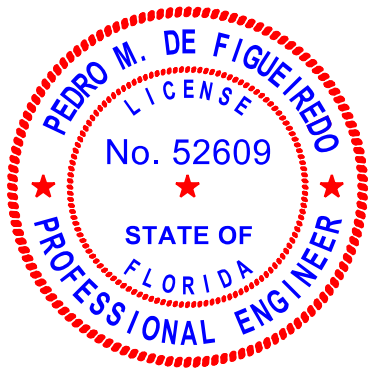
SILL WALL ANCHORAGE
CONNECTION - CON 3



ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMB.	E.D.
E	1/4"-20 18.8 SS SOLID SET	MIN. 3000 PSI CONCRETE	7/8"	3"
F	PANELMATE PRO	MIN. 3000 PSI CONCRETE	1 3/4"	2.5"
F1	PANELMATE PRO	SOUTHERN PINE WOOD SG>=0.55	1 1/2"	3/4"

NOTES: 1- ED: EDGE DISTANCE SHALL BE BEYOND WALL DRESSING
2- EMB: EMBEDMENT SHALL BE BEYOND WALL DRESSING



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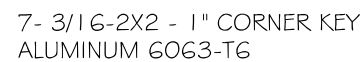
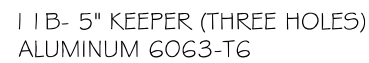
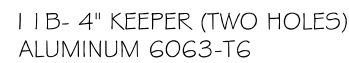
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NOTE: MATERIAL FOR ALL COMPONENTS IS MIN TYPE 6063-T6
EXTRUDED ALUMINUM.ALL DIMENSIONS ARE INCHES.



ITEM	DESCRIPTION	MATERIAL
1	LOUVER BLADE	6063-T6 ALUMINUM
2	HEADER WITH MALE HINGE	6063-T5 ALUMINUM
3	PERIMETER FRAME	6063-T6 ALUMINUM
4	VERTICAL SLAT BRACE	6063-T6 ALUMINUM
5	FEMALE HINGE	6063-T6 ALUMINUM
6	SILL "Z" CLIP	6063-T6 ALUMINUM
7	CORNER KEY ANGLE	6063-T6 ALUMINUM
8	0.09"-1 X 1 1/2" CHANNEL	6063-T5 ALUMINUM
9	1/2" DIAM. LOCKING PINS	6063-T6 ALUMINUM
10	THUMB SCREW	STAINLESS STEEL
11A	WALL LATCH KEEPER - 4"	6063-T6 ALUMINUM
11B	WALL LATCH KEEPER - 5"	6063-T6 ALUMINUM



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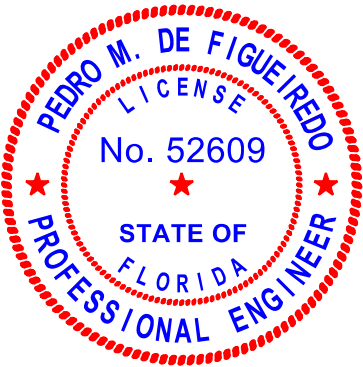
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OF 9

TABLE 1711.1 - CORROSION RESISTANCE OF FASTENERS

EXPOSURE		BUILDING LOCATION FROM COASTAL SHORELINE	
		≤ 300 FEET	>300 AND ≤3000 FEET
EXTERIOR	PARTIALLY SHELTERED	STAINLESS STEEL SECTION 1711.1.1.1	GALVANIZED SECTION 1711.1.1.2
	OPEN EXPOSED		
INTERIOR UNCONDITIONED ENCLOSED		GALVANIZED SECTION 1711.1.1.2	GALVANIZED SECTION 1711.1.1.2



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PE 52609
08/09/2026

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PPM Inc.

ANCHOR DATA						FBC 2026 SECTION 1711 COMPLIANCE
MARK	MANUFACTURER	DESCRIPTION	SUBSTRATE	EMB.	ED	
A	DEWALT	1/4" ULTRACON W/ STALGARD	MIN. 3KSI CONCRETE	1.75	2.5	1711.1.1.2
A1	DEWALT	1/4" AGGRE-GATOR 300 SS	MIN. 3KSI CONCRETE	1.75	2.5	1711.1.1.1
C	GENERIC	#14 - 300 SS WOOD SCREWS	SG>=0.55 WOOD	1.5	0.75	1711.1.1.1
D	DEWALT	1/4" BI-FLEX 300 SS	1/8" 6063-T6 METAL	3 TREADS	0.5	1711.1.1.1
E	THE HILLMAN GROUP	1/4"-20 18.8 SS SOLID SET	MIN. 3KSI CONCRETE	0.875	3	1711.1.1.1
F	DEWALT	1/4-20 PANELMATE PRO	MIN. 3KSI CONCRETE	1.75	2.5	1711.1.1.2
F1	DEWALT	1/4-20 PANELMATE PRO	SG>=0.55 WOOD	1.5	0.75	1711.1.1.2
NOTES: 1- EMD.: MINIMUM EMBEDMENT INTO SUBSTRATE, E.D.: MINIMUM EDGE DISTANCE, S: MINIMUM ANCHOR SPACING 2- ALL DIMENSIONS IN INCHES 3- ANCHORS CAN BE CONSIDERED EXTERIOR OPEN OR PARTIALLY SHELTERED EXPOSED AS PER SECTION 1711 OF THE FBC						

PRODUCT: EXTRUDED ALUMINUM
BAHAMA SHUTTER
LARGE MISSILE IMPACT RATED

PRODUCT: SHORELINE SHUTTERS
105 SEBASTIAN INDUSTRIAL PL #8
SEBASTIAN, FLORIDA 32958
TEL: (772) 581-9006

SCALE: NA
DATE: 08/09/2026
DRAWING # 26-175
SHEET 9 OF 9