Engineering Evaluation Report #238-012523-03

Prepared by:
A. Lynn Miller, P.E.
1070 Technology Dr.
N. Venice, FL 34275
(941) 480-1600
Registration Number: #29296

Manufacturer:
WinDoor Incorporated
104 Triple Diamond Blvd.
North Venice, FL 34275
(833) 554-5432

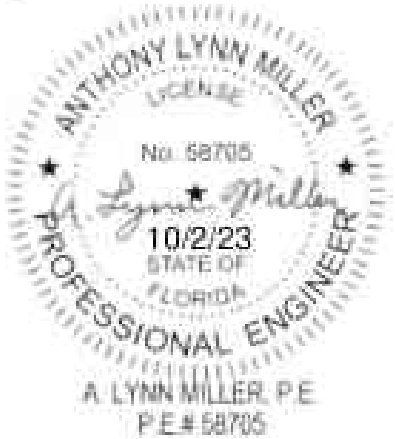
Product Description:
PW 238 Series Outswing Aluminum Casement LMI HVHZ Window – FL16243

Compliance:
The above-mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61 G20-3.005 method 1(d). The product listed herein complies with the requirements of the current Florida Building Code.

Supporting Technical Documentation:
1. Approval Document: drawing number CA238LMI-FPA-REV A, signed and sealed by A. Lynn Miller, P.E.
2. Test Report CTLA-3056 WA, WB, WC dated 03/03/15 and 04/16/15 prepared by Certified Test Laboratories, Inc., signed and sealed by Ramesh C. Patel, P.E. Test Standards: TAS 201-94, TAS 202-94 & TAS 203-94.
3. Test Report CTLA-3009 WB, WC dated 03/24/14 prepared by Certified Test Laboratories, Inc., signed and sealed by Ramesh C. Patel, P.E. Test Standards: TAS 201-94, TAS 202-94 & TAS 203-94.
4. Test Report ATLSF-1109.01-12 dated 11/20/12 prepared by America test Lab of South Florida, signed and sealed by Henry Hattem. P.E. Test Standards: TAS 201-94, TAS 203-94 & TAS 203-94
5. Test Report HTL-0080-0301-07, 0905-07 dated 09/21/07 and 10/12/06, prepared by Hurricane Testing Lab Inc, signed and sealed by Vinu J. Abraham, P.E, Test Standard: TAS 202-94
6. Test Report HETI-08-2143, 08- 2144, 08-4287 and 07-4298 dated 06/27/08 and 07/17/08 prepared by Hurricane engineering &Testing Inc, signed and sealed by Candido F. Font, P.E. Test Standards: TAS 201-94 & TAS 203-94.
7. Test Report FTL-1003 and FTL-1041 dated 10/14/94, prepared by Fenestration Testing Laboratory, Inc. signed and sealed by Yamil Kuri, P.E. Test Standards: TAS 201-94 & TAS 203-94
8. Anchor Calculations and Structural Analysis, dated 04/24/14, prepared by Al-Farooq Corporation, and signed and sealed by Javad Ahmad, P.E.

Limitations and Conditions of use:
- Units must be glazed per ASTM E1300-04/09, refer to approval document for glazing details.
- This product is rated to be used in the HVHZ.
- This product is impact resistant and does not require impact protection in wind borne debris regions.
- Units must be installed in accordance with Approval Document.

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FLORIDA PRODUCT APPROVAL #16243

SERIES "238" OUTSWING ALUMINUM CASEMENT WINDOWS - LARGE MISSILE

NOTES:

1). THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

2). (BY OR JBT WOOD BUCKS & BUCK FASTENERS BY OTHERS) MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

3). ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

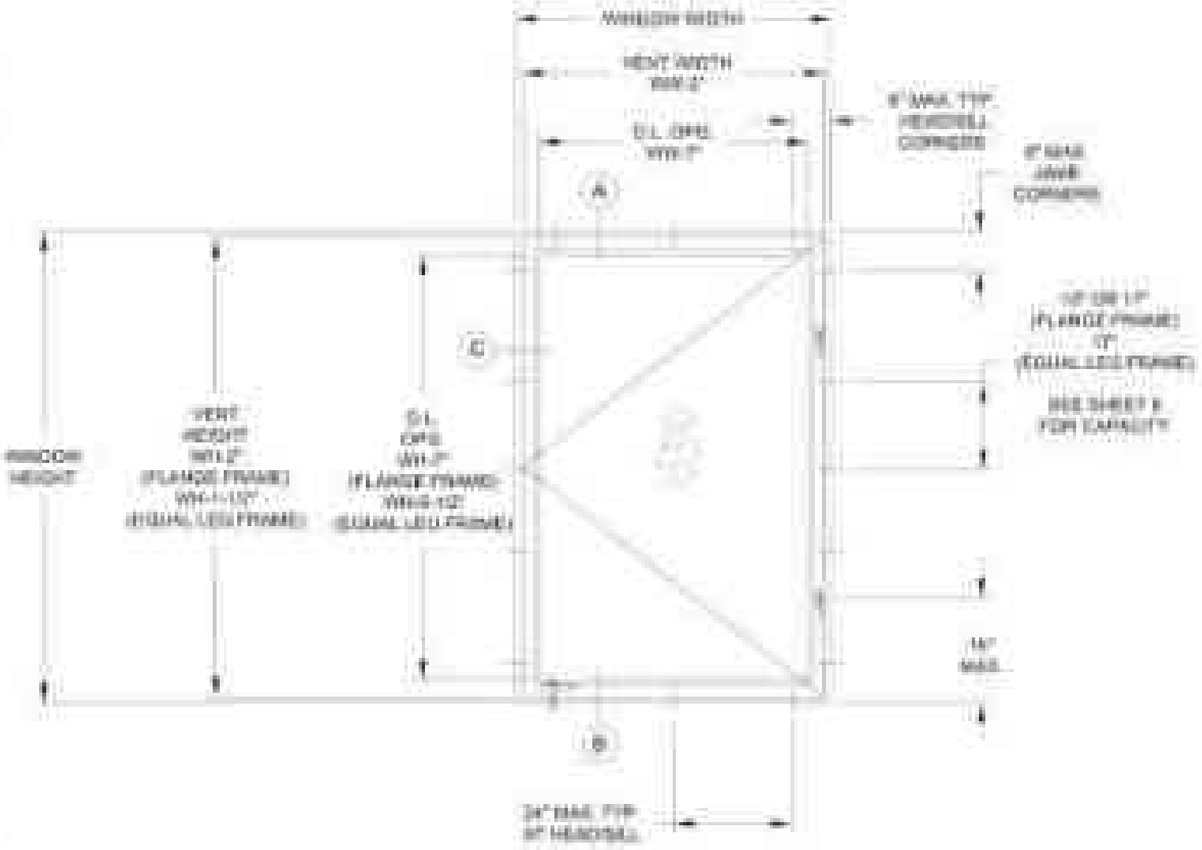
4). A LONG DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

5). ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

6). MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BLDG. CODE & ADOPTED STANDARDS.

7). THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR THE SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND THE SEALING AROUND THE OPENING FOR WATER INFILTRATION RESISTANCE ETC.

8.) CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.



TYPICAL ELEVATION
(FLANGE FRAME)
OR
(EQUAL LEG FRAME)

INSTRUCTIONS: USE CHARTS AS FOLLOWS:

STEP 1: DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.

STEP 2: SEE CHARTS ON SHEETS 4 AND 5 FOR DESIGN LOAD CAPACITY OF DESIRED GLASS SIZE/TYPE.

STEP 3: USING CHART ON SHEET 3 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

STEP 4: IF ALUMINUM BUCK SYSTEM IS USED USE CHART ON SHEET 6 TO DETERMINE CAPACITY.

STEP 5: THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT. SHUTTERS ARE NOT REQUIRED.

FOR MULLION
MULTIPLE UNITS, REFER TO SEPARATE WINDOW MULLION FLORIDA PRODUCT APPROVED

NO.	CHANGES THIS SHEET	BY	DATE
A	CASE III/FPA	A. MORALES	1/5/23

DESIGNED BY A. LYNN MILLER
WINDOW TECHNOLOGIST
FLORIDA PRODUCT APPROVAL #16243
[redacted]

WINDOW® TECHNOLOGY, INC.
[redacted]

SERIES "238" OUTSWING ALUM. CASEMENT WINDOWS - LARGE MISSILE

ELEVATION & GENERAL NOTES

CASE III

1 OF 10

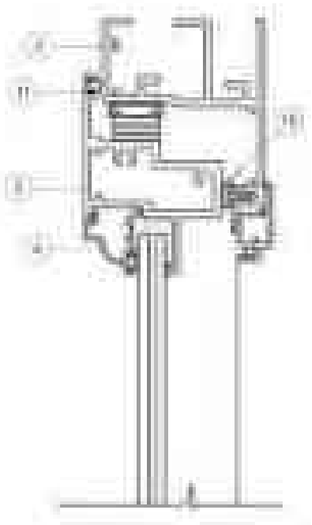
ANTHONY LYNN MILLER
LICENSE
No. 66724
STATE OF
FLORIDA
10/2/23
DATE OF
SIGNATURE
PROFESSIONAL ENGINEER

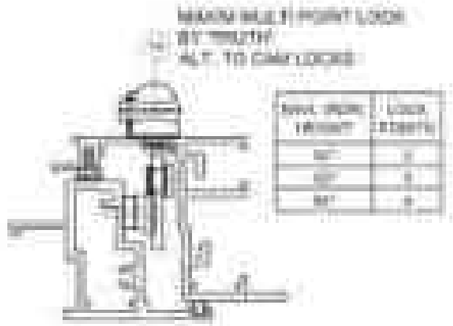
GENERAL WINDOW SECTIONS

FLANGE FRAME

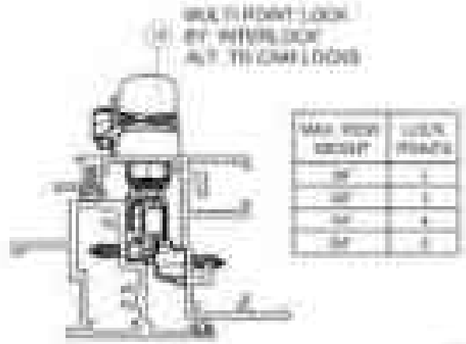


EQUAL LEG FRAME

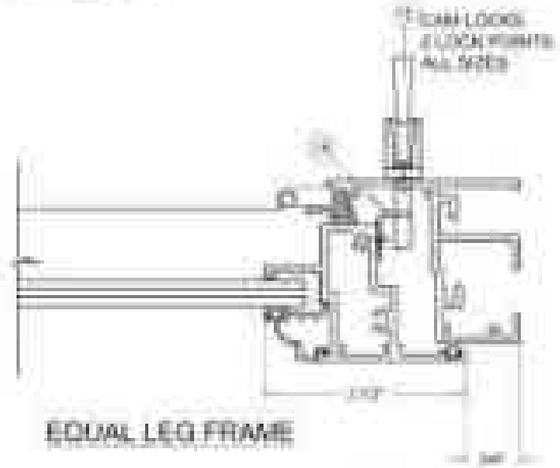




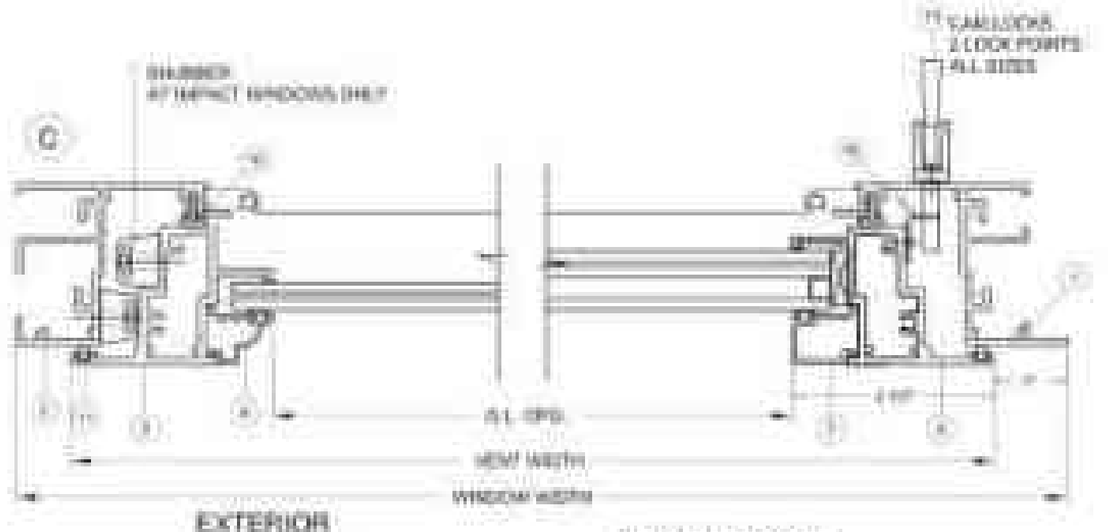
MAX. DOOR HEIGHT	LOCK POINTS
80"	3
96"	4
84"	4



MAX. DOOR HEIGHT	LOCK POINTS
48"	2
60"	3
72"	4
84"	5



EQUAL LEG FRAME



FLANGE FRAME

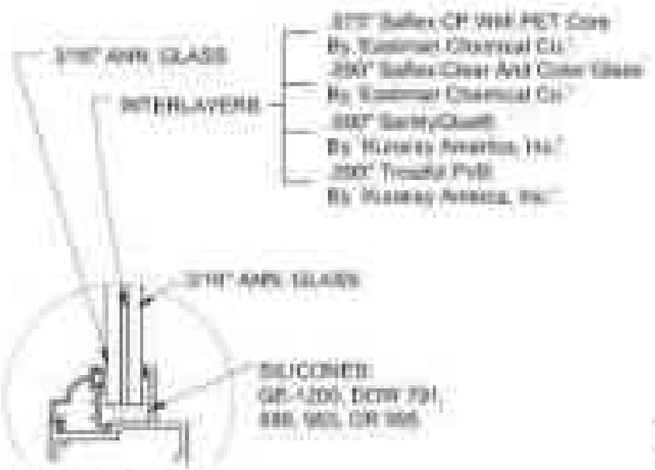
NO CHANGES THIS SHEET	MW
10/20/22	MW
CATALUFFA	A
A. MORADIAN	
1/8"=1'	
1 OF 10	
0425	

WINDOOR

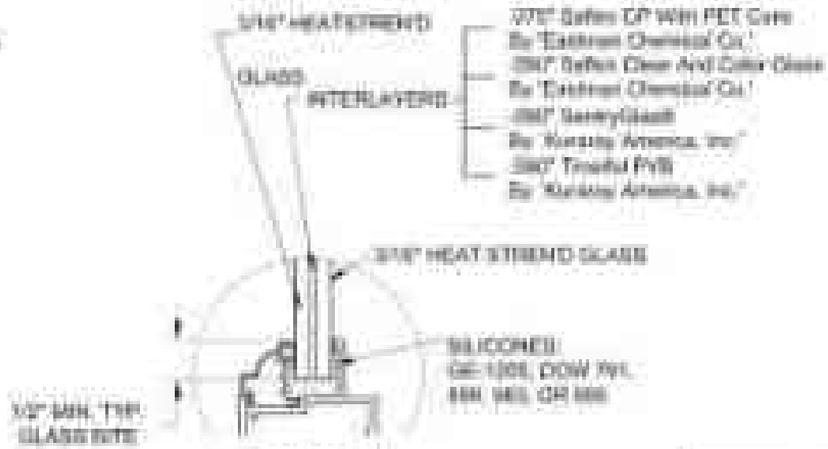
ANTHONY LYNN MILLER
LICENSE
No. 32724
10/2/22
STATE OF
PROFESSIONAL ENGINEER



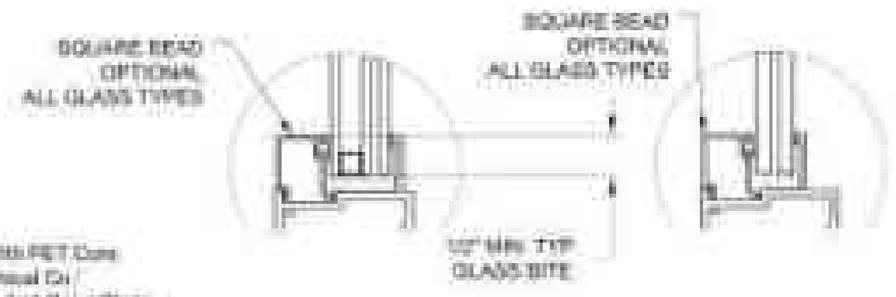
5/16" NOMINAL
GLASS TYPE "1"

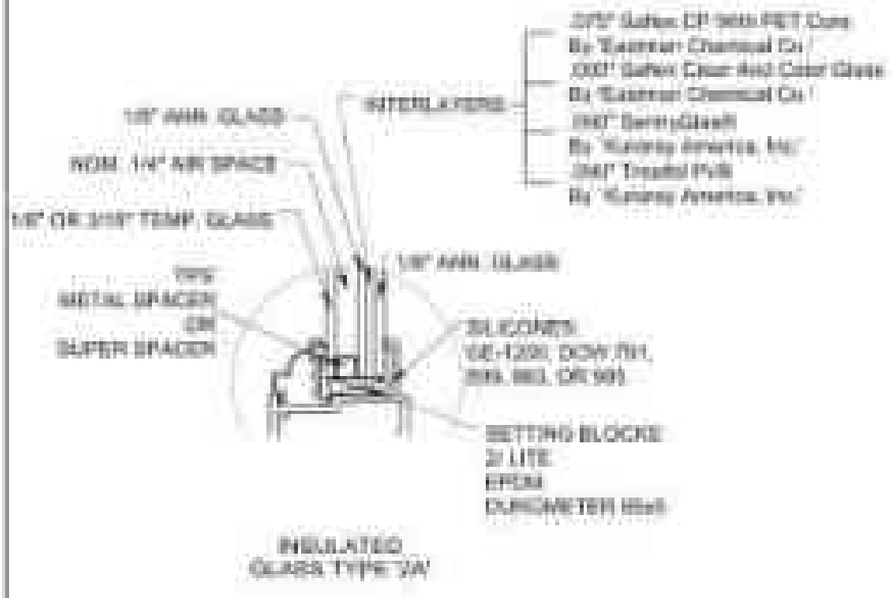


7/16" NOMINAL
GLASS TYPE "2"

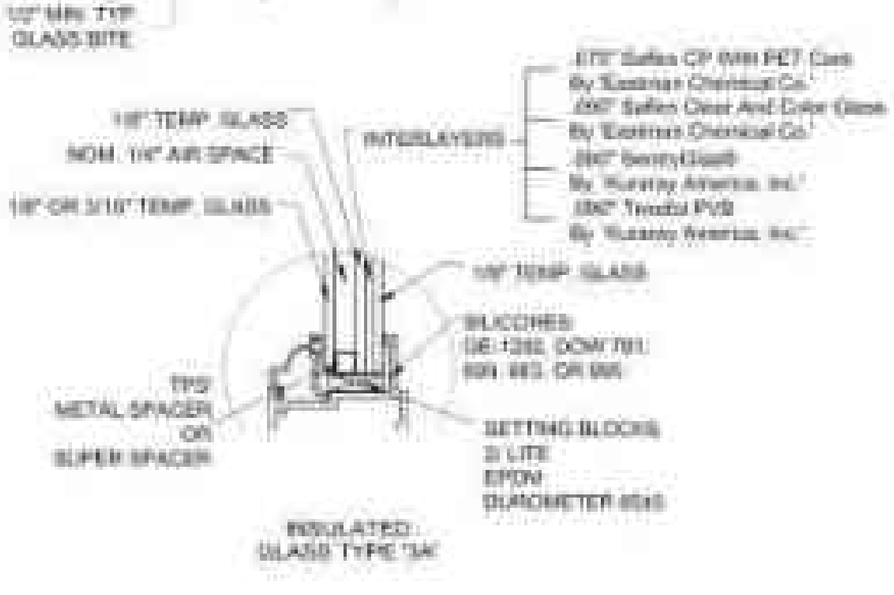


7/16" NOMINAL
GLASS TYPE "3"





INSULATED
GLASS TYPE "2A"



INSULATED
GLASS TYPE "3A"

NO.	CHANGES THIS SHEET	DATE
A		10/3/22

WINDOOR®

PROJECT NAME	
PROJECT ADDRESS	
DESIGNED FOR: (OUTSWING/INSWING CASEMENT)	
VERSION (LM)	
GLASS TYPES	A. MORRISON
DATE	1/30/23
SCALE	
SHEET	4 OF 10
CASEMENT	

ANTHONY LYNN MILLER
LICENSE
No. 68100
10/3/22
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A LYNN MILLER PE
P.E. # 68100

TABLE 1:

Window Dimensions	Window Design Pressure (+/- psf)															
	Height (in)															
	36	48	48-1/8	60	66	96-1/8	72	84	96	108	114	120-1/8	78	90	102	114
36-1/8																
48																
60																
72-1/8																
78																
90																
96																
102																
108																
114																
120																

NOTES:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E-1300-09 (3 SEC. GUSTS)

LOW/AREA LIMITS:
FOR +110.6, -120.6 PSF = 19.34 SQ. FT.
FOR +110.6, -165.6 PSF = 19.06 SQ. FT.

* LIMIT MAX. LOADS TO 111.0 PSF WHEN MULTI POINT LOCK BY 'INTERLOCK' (3) IS USED.

** SIZE 27" X 77" APPLICABLE TO FLARGE FRAMES ONLY SEE SHEET 5

TABLE 2:

Window Dimensions	Window Design Pressure (+/- psf)															
	Height (in)															
	36	48	48-1/8	60	66	96-1/8	72	84	96	108	114	120-1/8	78	90	102	114
36-1/8																
48																
60																
72-1/8																
78																
90																
96																
102																
108																
114																
120																

TABLE 3:

Window Dimensions	Window Design Pressure (+/- psf)															
	Height (in)															
	36	48	48-1/8	60	66	96-1/8	72	84	96	108	114	120-1/8	78	90	102	114
36-1/8																
48																
60																
72-1/8																
78																
90																
96																
102																
108																
114																
120																

CHANGE TO MATRIX FORMAT | 10/8/22 | MW

WINDOOR

CASTELLI-PA | A

A. MORALES | 1/16/22

SCALE: 1/4" = 1'-0" | SHEET 4 OF 10

10/8/22
STATE OF PENNSYLVANIA
ANTHONY LYNN MILLER
PROFESSIONAL ENGINEER

TABLE 4

Window Designation	Height (ft)															
	30	35	35-1/2	40	45	50-1/2	55	60	65	70	75	75-1/2	80	85	90	95
DH 1/2																
30																
35																
35-1/2																
40																
45																
50																
55																
60																
65																
70																
75																
75-1/2																
80																
85																
90																

TABLE 5

Window Designation	Height (ft)													
	30	35	35-1/2	40	45	50-1/2	55	60	65	70	75	75-1/2	80	85
DH 1/2														
30														
35														
35-1/2														
40														
45														
50														
55														
60														
65														
70														
75														
75-1/2														
80														
85														
90														

NOTES:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUST)

LOADING LIMITS:
FOR +110.0, -120.0 PSF = 18.34 SQ. FT.
FOR +110.0, -100.0 PSF = 19.34 SQ. FT.

* LIMIT MAX. LOADS TO +/- 80 PSF WHEN MULTI POINT LOCKS BY INTERIOR DOOR (s) IS USED

** SIZE 37" x 77" APPLICABLE TO FLANGE FRAMES ONLY. SEE SHEET 1.

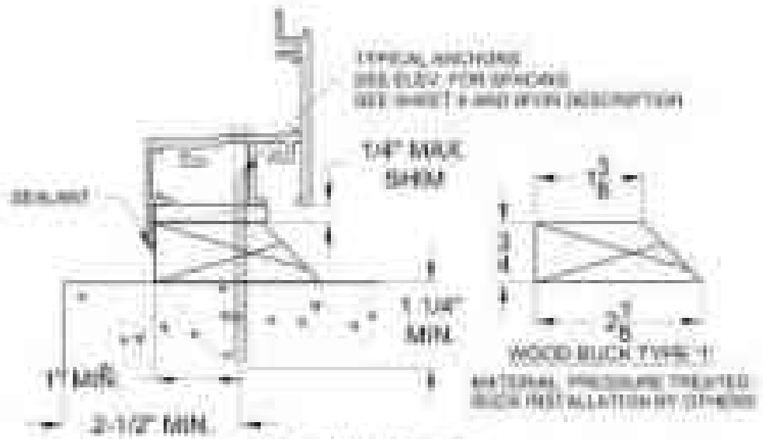
CHANGE TO MULTIPLE FORMATS | 10/3/22 | MW

WINDOOR®

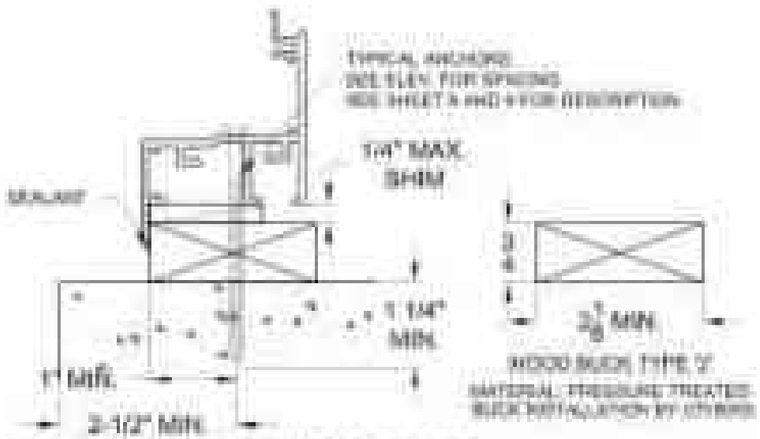
ANTHONY LYNN MILLER
LICENSE
No. 99744
10/3/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER

INSTALLATION CONDITIONS FLANGE FRAME (APPLIES TO ALL FOUR SIDES)

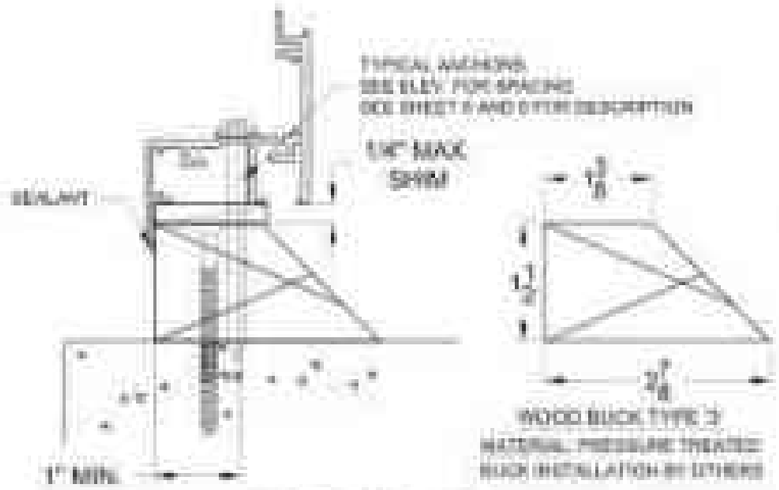
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 8 AND 9



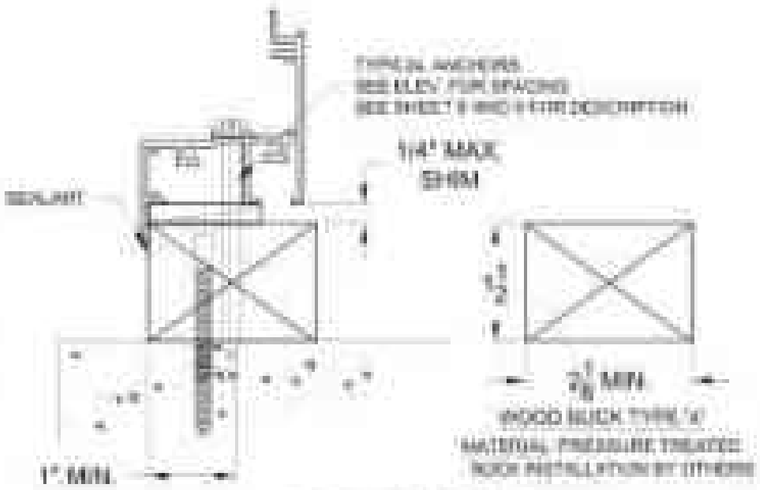
INSTALLATION TYPE '1'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD



INSTALLATION TYPE '2'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD

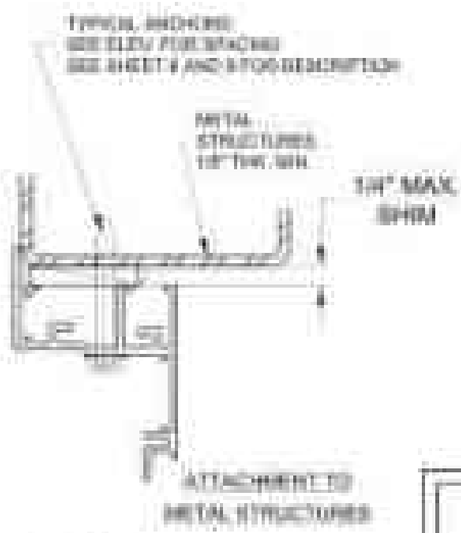


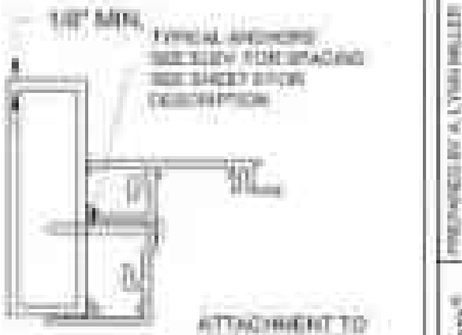
INSTALLATION TYPE '3'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD

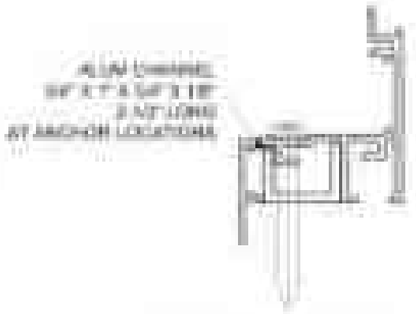


INSTALLATION TYPE '4'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING WOOD

WOOD BUCKS NOT BY WINDOOR, MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.







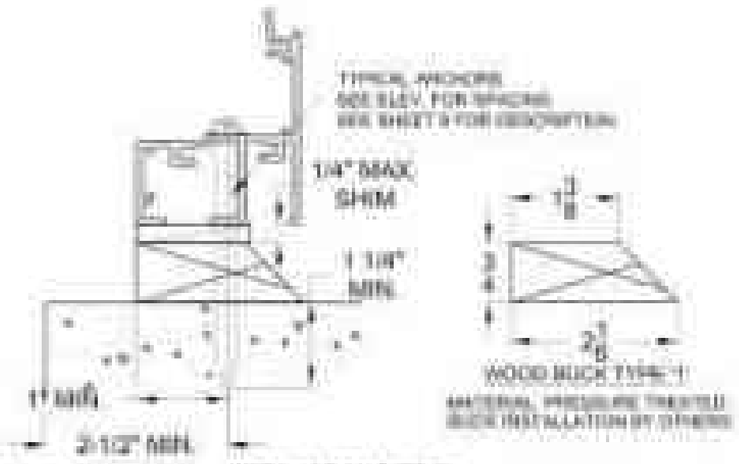
NO CHANGES THIS SHEET	9/29/23	MW
A. MORALES	1/30/23	
ANCHOR INSTALLATION	6 OF 10	CASEMENT
CA139		

WINDOOR®

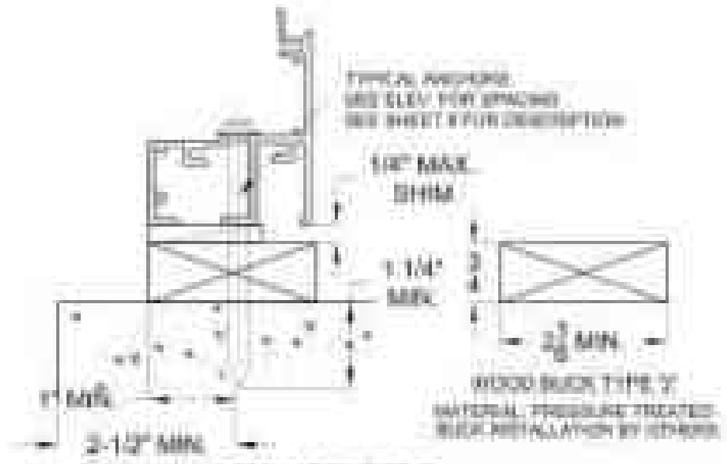
ANTHONY LYNN MILLER
LICENSE
No. 68704
10/6/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

INSTALLATION CONDITIONS EQUAL LEG FRAME (APPLIES TO ALL FOUR SIDES)

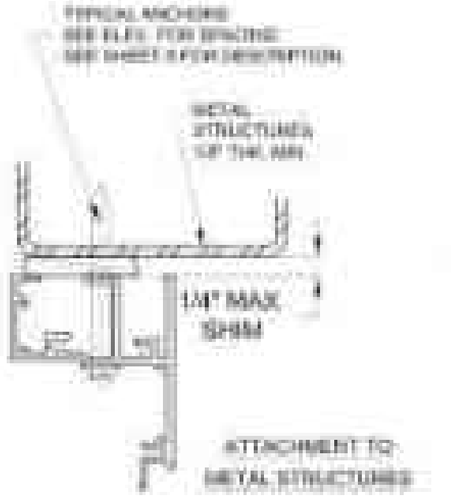
FOR ANCHOR PERFORMANCE VALUES SEE SHEET 5

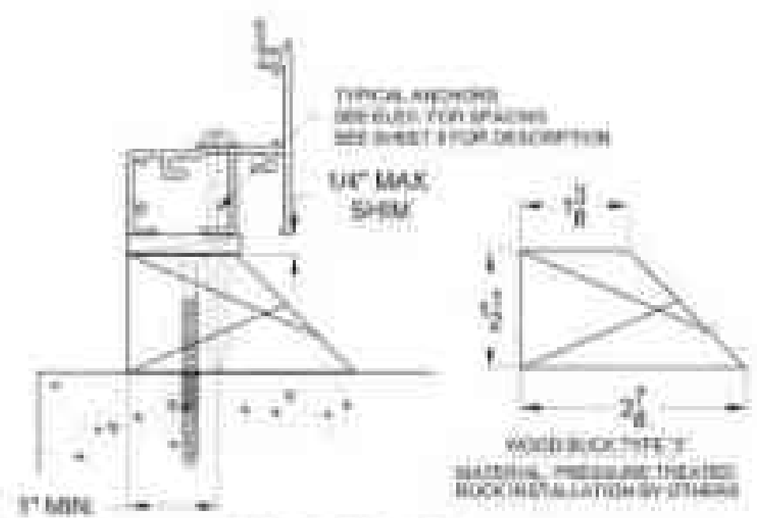


INSTALLATION TYPE 'I'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD

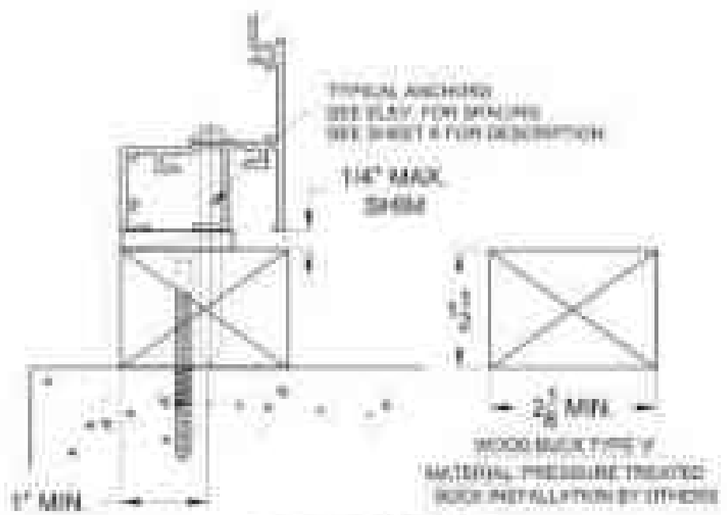


INSTALLATION TYPE 'J'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD

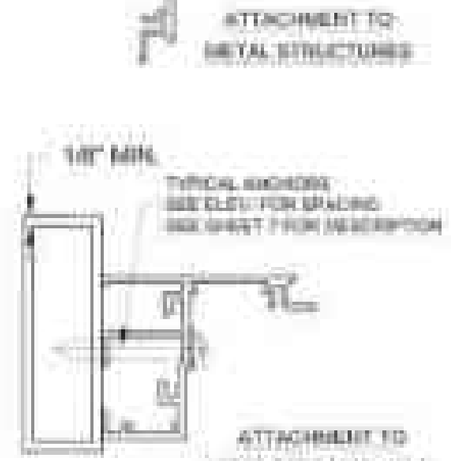




INSTALLATION TYPE 'I'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



INSTALLATION TYPE 'J'
TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES/USING WOOD



WOOD BUCKS NOT BY WINDOOR, MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

NO.	DATE	COMMENTS
A		NO CHANGES THIS SHEET

WINDOOR®

PREPARED BY ALLYNN MILLER
[illegible]

PROJECT TYPE: CUSTOMIZED ALUM. CASEMENT
FINISH: [illegible]

ANCHOR INSTALLATION 2

A. MILLER

CASE | 1 OF 10 | CASEMENT

ANTHONY LYNN MILLER
LICENSE
No. 59704
10/2/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET A1.1 FOR DETAILS

Substrate		24" x 36" (DP 30)		36" x 36" (DP 30)	
Width	Material	Positive (+PSF)	Negative (-PSF)	Positive (+PSF)	Negative (-PSF)
20"	36"	195.0	195.0	154.8	195.0
24"		195.0	195.0	129.0	172.0
28"		162.8	195.0	110.6	147.4
30"		180.0	195.0	103.2	137.6
32"		168.8	195.0	96.8	129.0
36"		150.0	195.0	86.0	114.7
40"		135.0	180.0	77.4	103.2
42"		128.6	171.4	73.7	98.3
20"	42"	195.0	195.0	132.7	177.0
24"		192.8	195.0	110.6	147.4
28"		165.3	195.0	94.8	126.4
30"		154.2	195.0	88.5	117.9
32"		144.6	192.9	82.9	110.6
36"		128.6	171.4	73.7	98.3
40"		115.7	154.3	66.3	88.5
42"		110.2	146.9	63.2	84.2
20"	48"	195.0	195.0	154.8	195.0
24"		195.0	195.0	129.0	161.3
28"		192.8	195.0	110.6	138.2
30"		180.0	195.0	103.2	129.0
32"		168.8	195.0	96.8	120.8
36"		150.0	187.5	86.0	107.3
40"		135.0	168.8	77.4	96.8
42"		128.6	160.7	73.7	92.1
20"	54"	195.0	195.0	137.6	195.0
24"		195.0	195.0	114.7	172.0
28"		171.4	195.0	98.3	147.4
30"		160.0	195.0	91.7	137.6
32"		150.0	195.0	86.0	129.0
36"		133.3	195.0	76.4	114.7
40"		120.0	180.0	68.8	103.2
42"		114.3	171.4	65.5	98.3
20"	60"	195.0	195.0	123.9	185.8
24"		193.0	195.0	103.2	154.8
28"		154.3	195.0	88.5	132.7
30"		144.0	195.0	82.9	123.8
32"		135.0	195.0	77.4	116.1
36"		120.0	180.0	68.8	103.2
40"		108.0	162.0	61.9	92.9
42"		102.9	154.3	59.0	88.5
20"	66"	195.0	195.0	140.7	195.0
24"		195.0	195.0	117.3	164.2
28"		175.3	195.0	100.5	140.7
30"		163.8	195.0	93.8	131.3
32"		153.4	195.0	88.0	123.1
36"		136.4	190.9	78.2	109.5
40"		122.7	171.8	70.4	98.5

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET A1.1 FOR DETAILS

Substrate		24" x 36" (DP 30)		36" x 36" (DP 30)	
Width	Material	Positive (+PSF)	Negative (-PSF)	Positive (+PSF)	Negative (-PSF)
20"	72"	195.0	195.0	129.0	180.6
24"		187.5	195.0	107.5	150.5
28"		160.7	195.0	92.1	129.0
30"		150.0	195.0	86.0	120.4
32"		140.6	195.0	80.6	112.9
36"		125.0	175.0	71.7	100.3
32"	76"	133.2	195.0	76.4	122.2
36"		118.4	189.5	67.9	108.6
20"	78"	195.0	195.0	119.1	190.3
24"		173.1	195.0	99.2	158.8
28"		148.4	195.0	85.1	136.1
30"		138.5	195.0	79.4	127.0
32"		129.9	195.0	74.4	119.1
20"	84"	195.0	195.0	132.7	195.0
24"		192.8	195.0	110.6	165.9
28"		165.3	195.0	94.8	142.2
32"		154.3	195.0	88.5	132.7

PERFORMANCE VALUES OF INSTALLATION ANCHORS
REFER TO SHEET A1.1 FOR DETAILS

Substrate		24" x 36" (DP 30)		36" x 36" (DP 30)	
Width	Material	Positive (+PSF)	Negative (-PSF)	Positive (+PSF)	Negative (-PSF)
19-1/8"	26"	195.0	195.0	149.4	195.0
28-1/2"		195.0	195.0	107.8	161.8
37"		195.0	195.0	77.2	115.8
19-1/8"	38-3/8"	195.0	195.0	151.9	195.0
28-1/2"		191.2	195.0	109.8	146.1
37"		136.8	182.6	78.5	104.7
19-1/8"	50-5/8"	195.0	195.0	153.8	191.9
28-1/2"		193.2	195.0	110.8	138.0
37"		138.4	173.0	79.2	98.2
19-1/8"	62"	195.0	195.0	123.3	195.0
28-1/2"		150.3	195.0	89.0	155.8
37"		111.2	194.6	63.8	111.6
42"		98.0	171.4	56.2	98.3
19-1/8"	74-1/4"	195.0	195.0	130.8	195.0
28-1/2"		164.7	195.0	94.4	161.1
37"		117.8	196.6	67.6	108.1

TYPICAL ANCHORS:

Anchor Type	Description	Substrate	Frame Members	Min. Edge Distance	Min. Embedment or Metal Thickness
A	1/4" DIA. HWH Tech-con II	Into 2BY Wood Buck or Wood Structure	All	1"	1-1/2"
		Thru 1BY Buck into Concrete or Masonry	All	2-1/2"	1-1/4"
		Directly into Concrete or Masonry	All	2-1/2"	1-1/4"
B	1/4" DIA. Ultracon+	Into 2BY Wood Buck or Wood Structure	All	1"	1-1/2"
		Thru 1BY Buck into Concrete or Masonry	All	1"	1-1/4"
		Directly into Concrete or Masonry	All	2-1/2"	1-1/4"
		Directly into Grout filled Block	All	2-1/2"	2-1/4"
C	#14 SMS OR SELF DRILLING SCREW	Into Steel 12 GA Min	All	3/4"	(3) Threads min. to extended beyond metal thickness
		Into Aluminum 1/8" thk.	All	3/4"	(3) Threads min. to extended beyond metal thickness
		Into FRP Mullions	All	3/4"	(3) Threads min. to extended beyond metal thickness
		Into 2BY Wood Buck or Wood Structure	All	1"	1-1/2"

NO.	DESCRIPTION	DATE
	NO CHANGES THIS SHEET	

WINDOOR®

ARCHITECTURAL PRODUCTS & SYSTEMS

WINDOOR (USA)

ANTHONY LYNN MILLER
LICENSE
No. 39750
10/2/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DRAWN BY:	A. MORALES
DATE:	1/9/23
PROJECT:	
SCALE:	
SHEET:	9 OF 10
CAD FILE:	
REVISION:	A

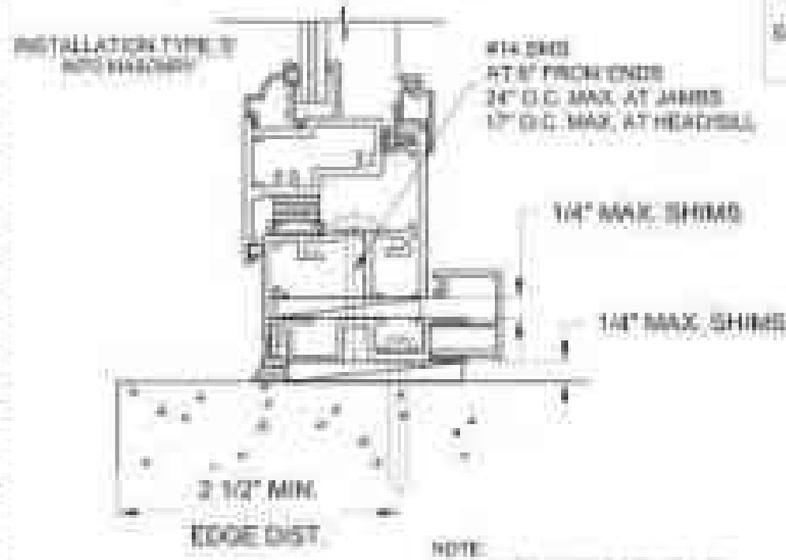
PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW SIZE		PSF (+)	PSF (-)
WIDTH	HEIGHT		
20"	36"	110.0	195.0
24"		110.0	195.0
28"		110.0	186.5
30"		110.0	182.4
32"		110.0	179.5
36"		110.0	177.3
40"		105.8	145.1
42"		97.5	120.0
20"	42"	110.0	179.5
24"		110.0	159.0
28"		106.9	146.6
30"		103.5	141.9
32"		101.7	138.1
36"		97.5	120.0
40"		90.2	120.0
42"		85.5	120.0
20"	48"	110.0	165.0
24"		110.0	177.3
28"		110.0	160.9
30"		110.0	154.6
32"		106.1	150.0
36"		103.3	126.0
40"		95.8	126.0
42"		90.0	126.0
20"	54"	110.0	174.1
24"		110.0	152.0
28"		99.8	126.0
30"		95.5	126.0
32"		91.9	126.0
36"		86.2	116.2
40"		82.2	112.7
42"		80.6	110.5
20"	60"	110.0	163.2
24"		97.0	133.9
28"		86.8	118.0
30"		82.8	113.5
32"		79.4	108.8
36"		73.9	101.3
40"		60.0	90.0
42"		60.0	60.0
20"	66"	110.0	171.0
24"		107.8	128.0
28"		95.9	126.0
30"		91.3	126.0
32"		87.3	119.7
36"		80.6	90.0
40"		60.0	60.0

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW SIZE		PSF (+)	PSF (-)
WIDTH	HEIGHT		
20"	72"	110.0	154.5
24"		97.0	120.0
28"		86.0	117.9
30"		81.7	112.0
32"		77.9	106.9
36"		60.0	60.0
20"	78"	105.8	120.0
24"		90.9	120.0
28"		80.5	110.3
30"		76.3	104.7
32"		60.0	60.0
36"		60.0	60.0
20"	84"	102.7	120.0
24"		88.2	120.0
28"		77.9	120.0
30"		73.8	101.3
32"		60.0	60.0
20"	84"	110.0	120.0
24"		97.0	120.0
28"		85.5	117.3
30"		60.0	60.0
32"		60.0	60.0

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS			
WINDOW SIZE		PSF (+)	PSF (-)
WIDTH	HEIGHT		
20"	26"	110.0	195.0
26-1/2"		110.0	195.0
37"		110.0	194.2
42"		110.0	192.4
19-1/8"	38-3/8"	110.0	195.0
26-1/2"		110.0	172.5
37"		110.0	156.2
42"		95.7	120.0
19-1/8"	51-5/8"	110.0	195.0
26-1/2"		110.0	154.7
37"		94.8	120.0
42"		85.8	120.0
19-1/8"	63"	109.2	149.9
26-1/2"		94.8	116.2
37"		67.8	93.1
42"		60.0	60.0
19-1/8"	74-1/4"	110.0	154.8
26-1/2"		86.4	118.5
37"		60.0	60.0
19-1/8"	76"	109.9	129.0
26-1/2"		84.6	115.2
37"		60.0	60.0
19-1/8"	77"	108.3	126.0
26-1/2"		80.7	113.4
37"		60.0	60.0

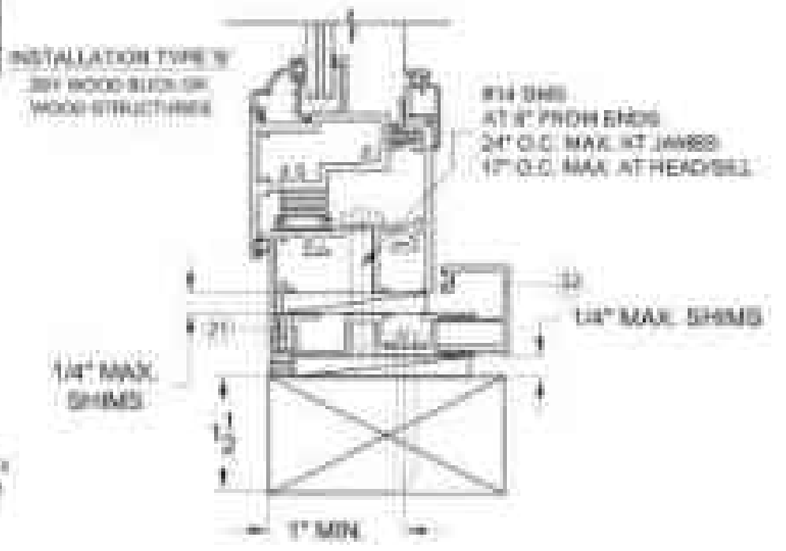
ALUMINUM BUCK FRAMING DETAILS

REFER TO SHEETS 4 THRU 8 FOR WINDOW CAPACITIES
USE LOWER APPLICABLE VALUES



NOTE:
ALUM BUCK ANCHORS TO BE INTO CONCRETE AT HEAD & SILL
MAY BE INTO FILLED CMU AT JAMBS

TYPICAL INSTALLATION DETAIL ON ALL FOUR SIDES USING ALUMINUM BUCK SYSTEM







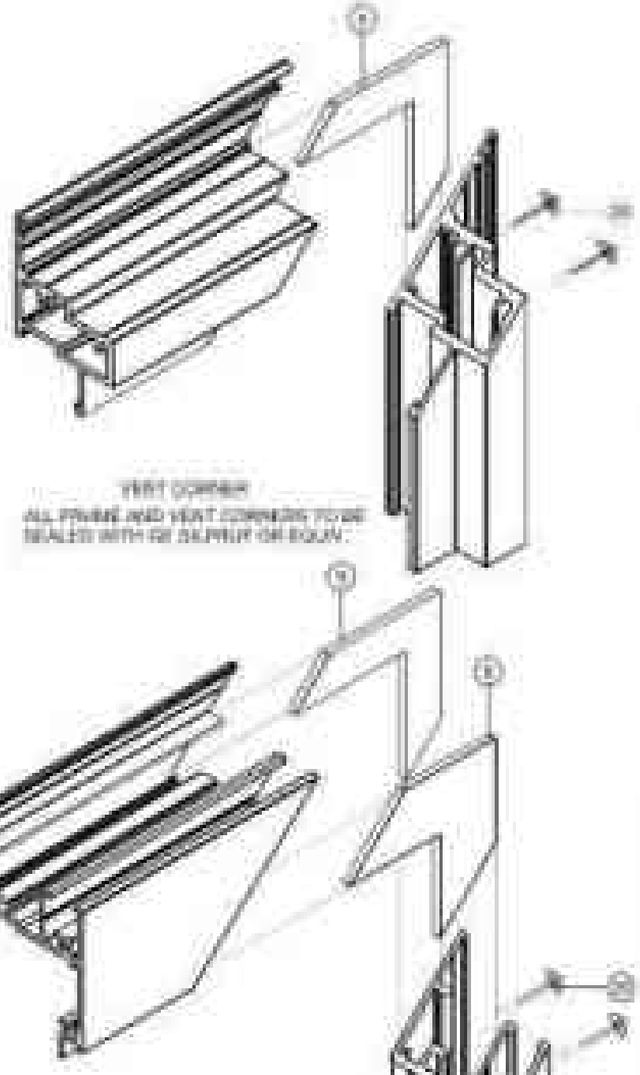


(MAY NOT BE USED WITH ULTRACONA ANCHORS)

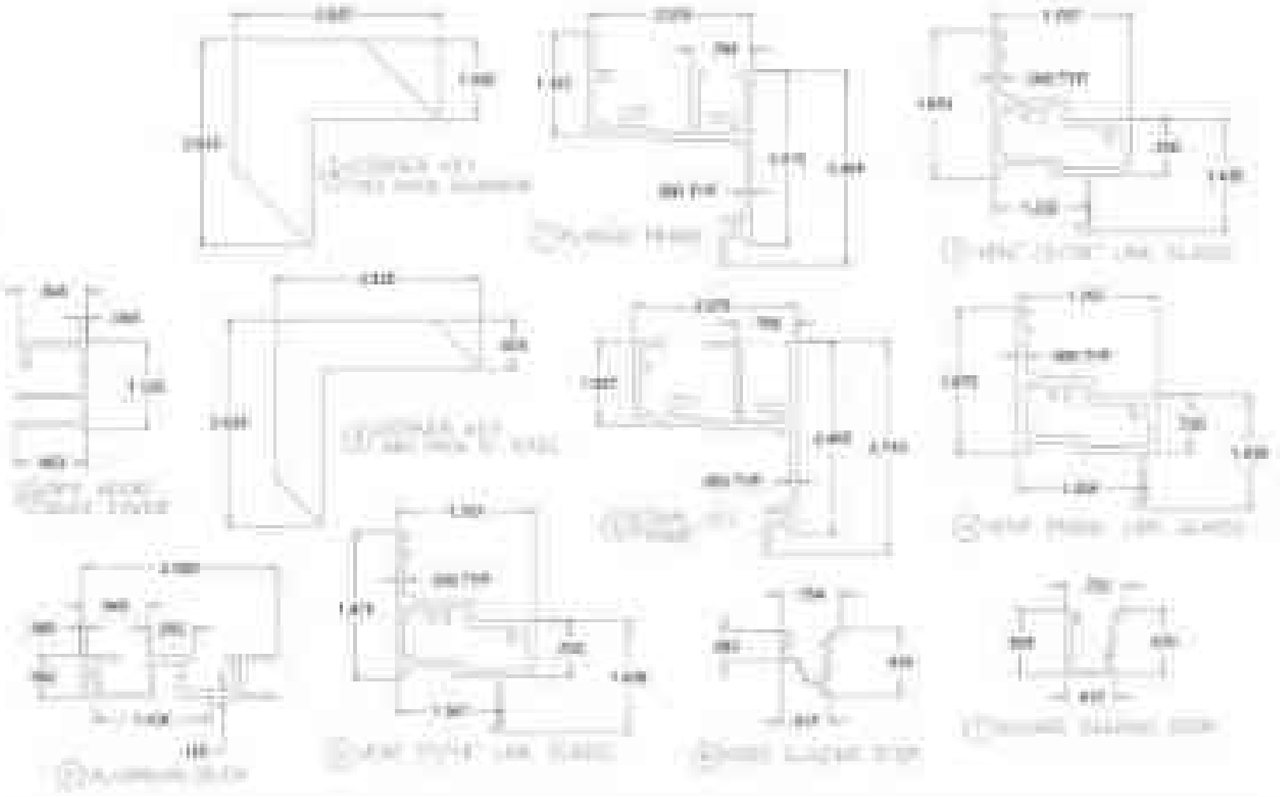
NO CHANGES THIS SHEET	MM	10/3/22
CATBUILT-PA	A	10/3/22
A. MORGAN		10/3/22
CARPENTRY		10/3/22
ALU. BUCK PERFORMANCE		10/3/22
CA318		10/3/22

WINDOR

ANTHONY LYNN MILLER
LICENSE
No. 68104
10/3/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER



Material	Min. "L"	Min. "C"
#14 SMS or Self-drilling Steel Screw, SS 3	38 mm	63 mm
1/4" HEX Kwik Con II	127 mm	190 mm
1/4" Kwik Hex-Con	190 mm	190 mm
1/4" Metal Anchors	190 mm	190 mm
5/16" Fasteners	76 mm	76 mm
Split Shield	89 mm	89 mm
1/4" - 20 Steel Bolt	51 mm	51 mm



ITEM	PART #	DESCRIPTION	MATERIAL
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]
8		[illegible]	[illegible]
9		[illegible]	[illegible]
10	[illegible]	[illegible]	
11	[illegible]	[illegible]	
12	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	
14	-	[illegible]	
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16	-	[illegible]	[illegible]
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18	-	[illegible]	[illegible]
19	-	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]
21		[illegible]	[illegible]
22		[illegible]	[illegible]

NO	CHANGES TYPE SHEET	BY/DATE

PREPARED BY/ALTERNATE CONTACT
[illegible]

WINDOOR®
[illegible]

DESIGN TYP CUTOUT/HOLE/SLOT CARDINET
[illegible]

SCALE	1/2" = 1'-0"
ROM # EXTRUSIONS	A. MORIN #2000
CASTER	1/2 OF 10
	CASTER/MILLWORK

