Engineering Evaluation Report #360-092023-01

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

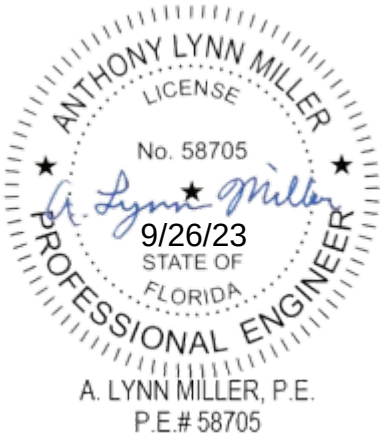
Manufacturer:
WinDoor Incorporated
104 Triple Diamond Blvd.
North Venice, FL 34275
(833) 554-5432

Product Description:
SH360 Series Aluminum LMI HVHZ Single Hung Window – FL14703

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 requirements of the current Florida Building Code.

Supporting Technical Documentation:
1. Approval Document: drawing number SH360LMI-FPA, signed and sealed by A. Lynn Miller, P.E.
2. Test Report No.:
   a. HTL-0080-0323-04 and HTL-0080-0402-08 signed and sealed by Vinus J. Abraham, P.E.
      Hurricane Test Laboratory, LLC
      TAS 201-94, TAS 202-94, TAS 203-94
   b. CTL-3056 WA, CTL-3056 WB, CTL-3056 WC signed and sealed by Ramesh C. Patel, P.E.
      TAS 201-94, TAS 202-94, TAS 203-94
3. Anchor Calculations and Structural Analysis, dated 07/08/14, prepared by Al-Farooq 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.
- Frame material to be extruded aluminum 6063-T6.
- Units must be installed in accordance with Approval Document.



SERIES '360' ALUMINUM SINGLE HUNG WINDOW - L.M.I

1) APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF SINGLE HUNG/SINGLE HUNG OR SINGLE HUNG WITH OTHER FLORIDA PRODUCT APPROVED WINDOWS USING FLORIDA PRODUCT APPROVED MULLIONS IN BETWEEN.

2) LOWER DESIGN PRESSURE FROM WINDOWS OR MULLION APPROVAL WILL APPLY TO THE ENTIRE SYSTEM.

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

4) NBY OR ZBY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

5) 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.

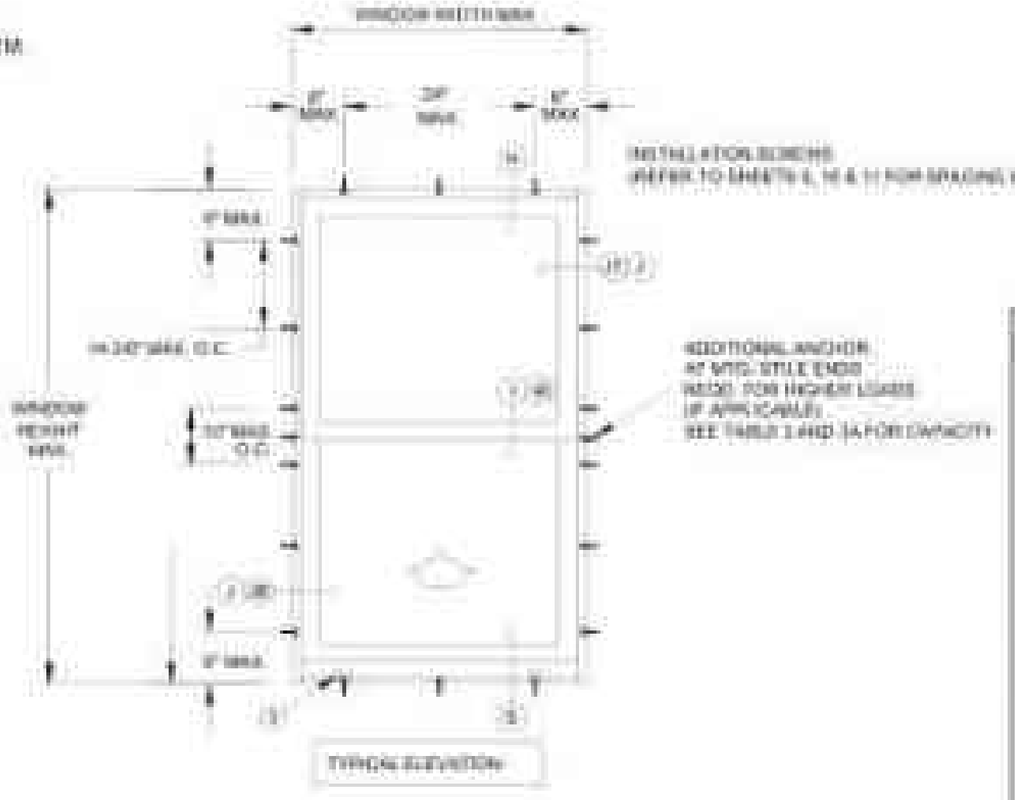
6) A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

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

8) 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.

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

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



INSTRUCTIONS FOR USING CAPACITY CHARTS:

STEP 1 DETERMINE THE REQUIRED DESIGN PRESSURES FOR A GIVEN WINDOW OPENING.

STEP 2 DETERMINE THE CAPACITY OF THE WINDOW SIZE/CONFIGURATION/GLASS TYPE FROM TABLES 1 AND 2, ON SHEET 11-8.

STEP 3 DETERMINE THE ANCHOR CAPACITY FROM TABLE 3, SHEET 11 FOR SINGLE OPENINGS APPLICABLE TO ANCHORS TYPE SHOWN ON SHEET 9.

STEP 4 IF ALUMINUM BUCKS ARE USED, VERIFY THE BUCK INSTALLATION CAPACITY FROM TABLE 8, SHEET 13.

STEP 5 FOR UNEQUIPPED MULLED WINDOWS DETERMINE MULLION/MULLION ANCHORS CAPACITY FOR 734 TUBE MULLION FROM TABLE 7 ON SHEET 12.

STEP 6 IF ALUMINUM BUCKS ARE USED DETERMINE BUCK ANCHORING REQUIREMENTS FROM TABLE 9 ON SHEET 14.

THE LOWEST SELECTED VALUE APPLY TO THE INSTALLATION AND MUST EQUAL OR EXCEED THE REQUIRED DESIGN PRESSURES OBTAINED FROM STEP 1.

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

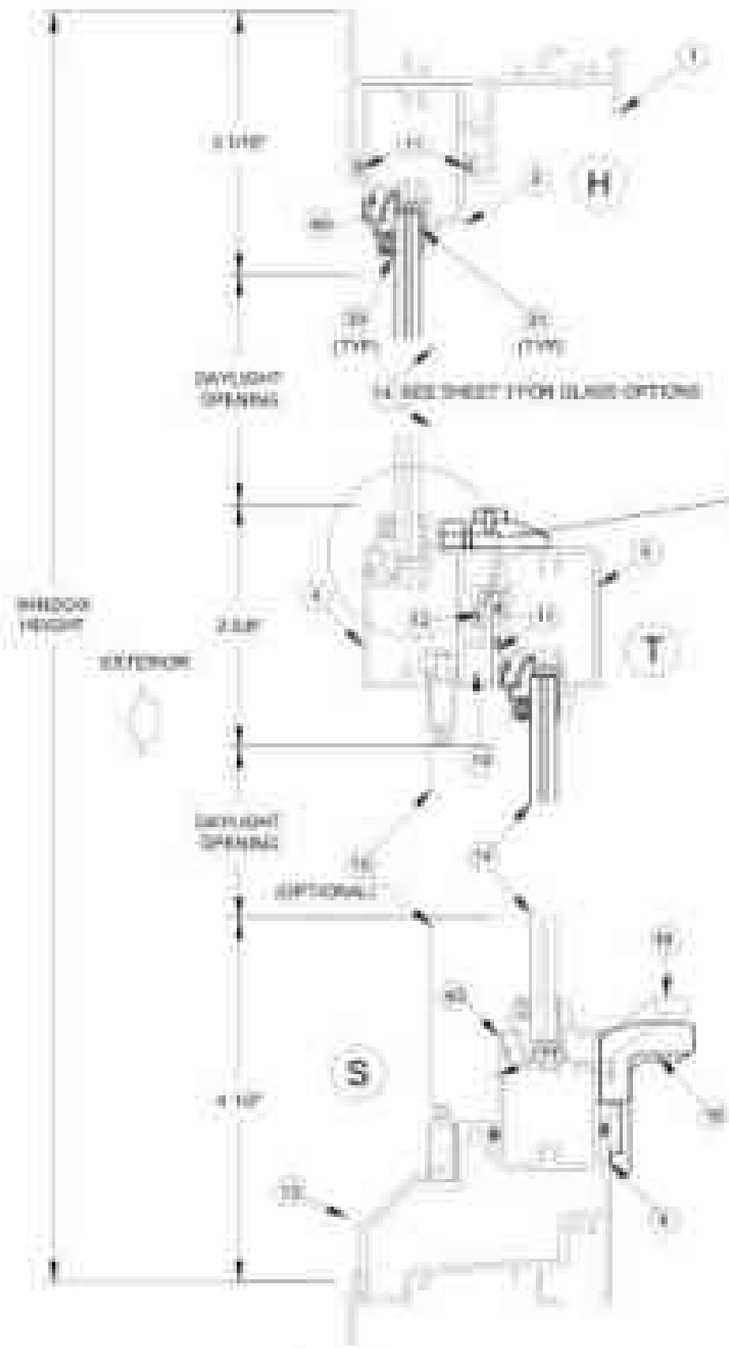
REVISIONS	
DRAWN BY	A. MOSLEY
DATE	12/4/23
SCALE	AS NOTED
SHEET	1 OF 16

WINDOOR®

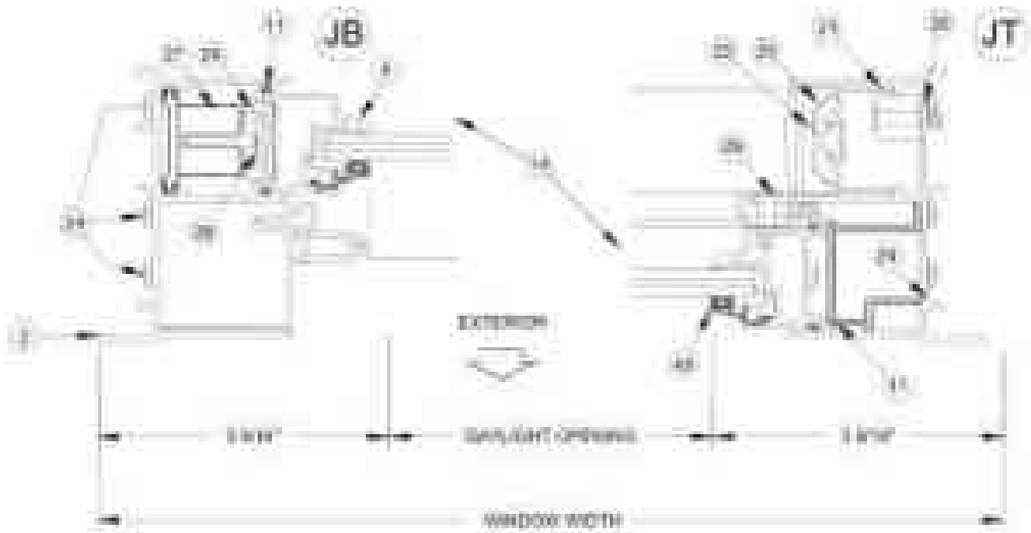
ELEVATION & GENERAL NOTES

SERIES '360' ALUMINUM SINGLE HUNG WINDOW - L.M.I

ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL # 38726









OPTIONAL 15 PSF WATER MAT ADAPTOR
CAN NOT BE USED WITH LOCK TYPE 4



FRAME AND VENT DETAILS FOR GLASS TYPES "G1" & "G2"
SEE SHEETS 5 & 7 FOR CAPACITIES

4	03/23/23	LATEST REVISION	

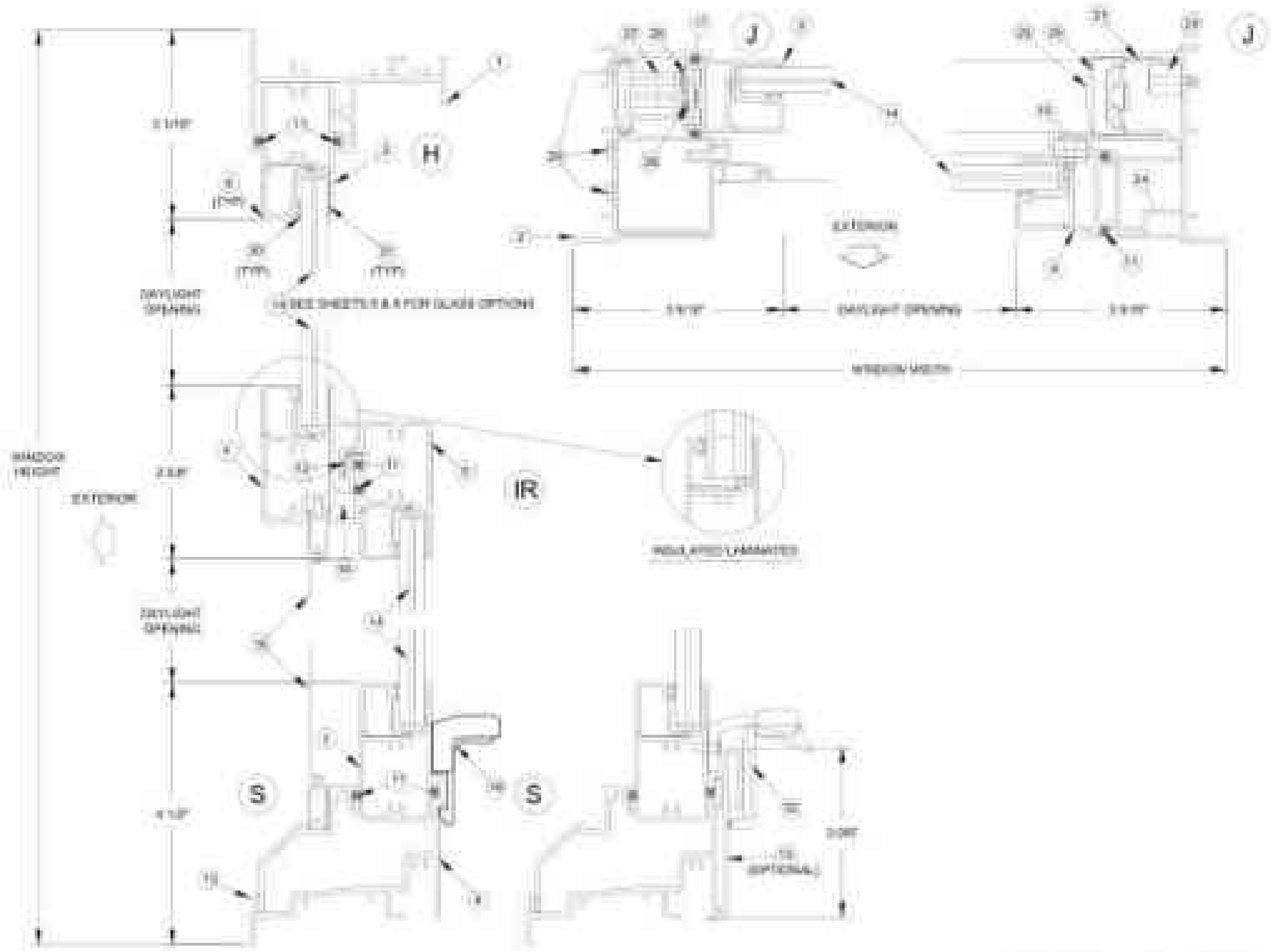
WINDOW
MISSION VIEJO, CA 92691
(949) 586-0555

WINDOOR®
WINDOW & DOOR MANUFACTURERS ASSOCIATION

SECTION DETAILS
SINGLE HUNG & FIXED WINDOWS

SHEET 3 OF 14
SHEET NUMBER

ANTHONY LYNN MILLER
LICENSED
No. 38726
STATE OF CALIFORNIA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
EXP. 6/30/25



STANDARD 12 PSF SILL

OPTIONAL 15 PSF WATER BAR ADAPTOR
CAN NOT BE USED WITH LOCK TYPE 4

FRAME AND VENT DETAILS FOR GLASS TYPES '03','03A', '04' & '04A'
SEE SHEETS 5 & 6 FOR CAPACITIES.
OPTIONAL TOP RAIL SWEEP LOCK NOT AVAILABLE WITH THESE
GLASS TYPES.

4	8/20/08		
3			
2			
1			

WINDOW A WORLD
CORP.

SERIES 750P ALUM. SINGLE HUNG WINDOW

SECTION DETAILS

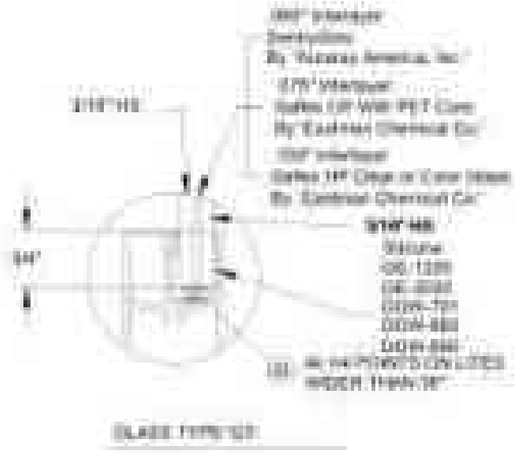
SHEET 4 OF 16

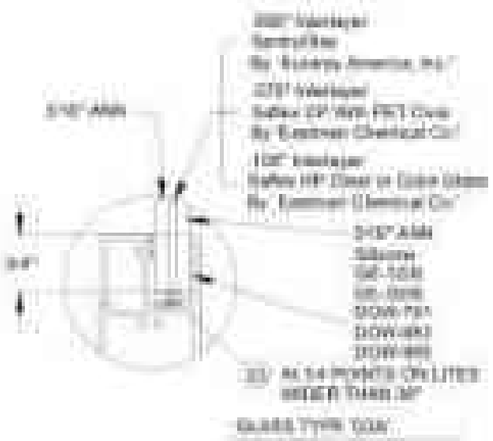
WINDOOR

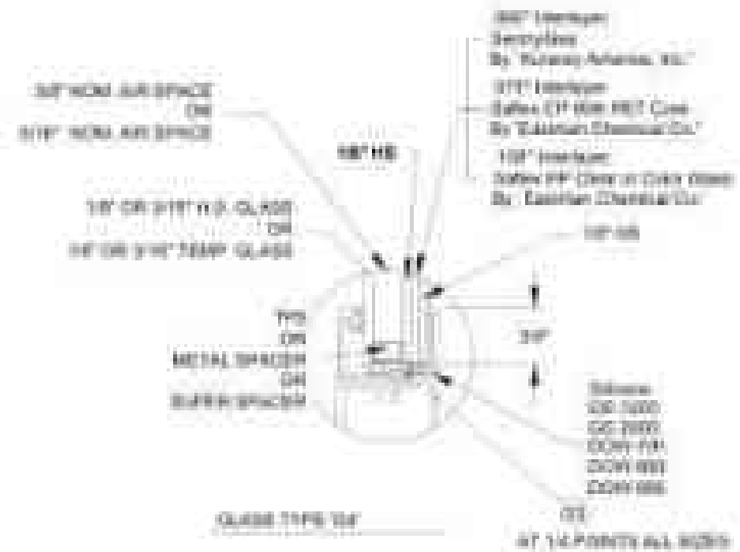
ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL# 38726

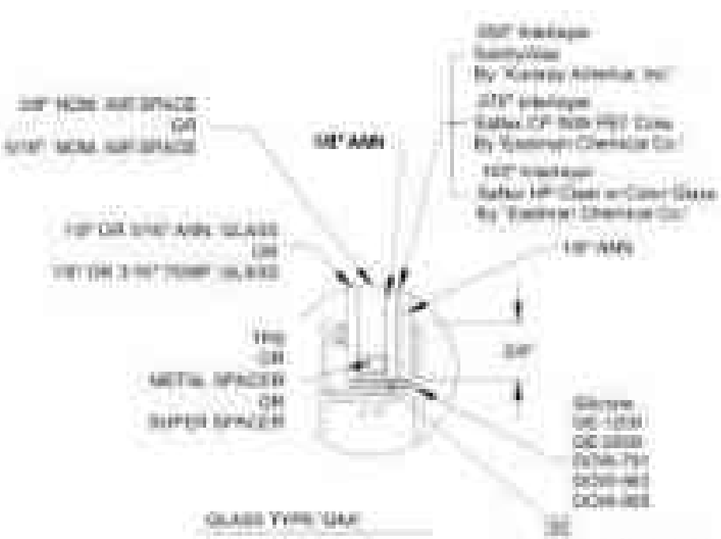












NOTE:
FOR INSULATED GLASS INSTALLATIONS ABOVE 36" IN THE H/W/Z, OR SAFETY GLAZING APPLICATIONS PER FBC, THE OUTBOARD LITE (CAP) MUST BE TEMPERED

WINDOOR
GLASS TYPES
SHEET NUMBER
SHEET 15 OF 15
ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
PE # 38726

TABLE 1A

Mount Line Windows	Glass Type / Qty	Design Load Capacity (lbs/ft²)																	
		Window Size Width (in)																	
		19 1/8		24		28 1/2		36		42		48		57		60		63 1/8		64	
Window Size Height (in)	36	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-171.1	+100.0	-171.1	+100.0	-171.1	+100.0	-171.1
	36 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-197.2	+100.0	-197.2	+100.0	-144.6	+100.0	-124.1	+100.0	-124.1	+100.0	-124.1
	48	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-186.0	+100.0	-186.0	+100.0	-144.6	+100.0	-124.0	+100.0	-102.9	+100.0	-102.9
	60 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-186.7	+100.0	-186.7	+100.0	-186.7	+100.0	-186.7	+100.0	-144.6	+100.0	-124.7	+100.0	-101.2	+98.8	-98.8
	62	+100.0	-216.8	+100.0	-216.8	+100.0	-207.8	+100.0	-186.7	+100.0	-186.7	+100.0	-186.7	+100.0	-174.8	+100.0	-129.8	+100.0	-108.7	+98.8	-88.8	+98.8	-88.8
	63	+100.0	-216.8	+100.0	-207.8	+100.0	-207.8	+100.0	-186.7	+100.0	-186.7	+100.0	-186.7	+100.0	-174.8	+100.0	-129.8	+100.0	-107.8	+98.8	-86.0	+98.1	-86.7	+98.8	-86.8
	72	+100.0	-216.8	+100.0	-201.1	+100.0	-191.3	+100.0	-167.8	+100.0	-167.8	+100.0	-167.8	+100.0	-150.7	+100.0	-146.8	+100.0	-123.0	+98.8	-86.0	+92.0	-82.2	+98.0	-82.0
	76	+100.0	-216.8	+100.0	-178.1	+100.0	-171.8	+100.0	-150.6	+100.0	-136.8	+100.0	-136.8	+100.0	-134.8	+100.0	-134.8	+100.0	-108.1	+98.8	-82.8	+98.0	-80.0	+74.8	-74.8
	84	+100.0	-178.1	+100.0	-178.1	+100.0	-155.8	+100.0	-150.6	+100.0	-136.8	+100.0	-136.8	+100.0	-130.2	+100.0	-126.1	+100.0	-108.1	+98.8	-82.8	+74.8	-73.8	+74.8	-74.8
	96	+100.0	-161.9	+100.0	-161.9	+100.0	-138.8	+100.0	-134.8	+100.0	-111.8	+100.0	-107.5	+98.8	-85.4	+98.8	-85.8	+76.2	-76.2	+98.8	-88.8	+98.8	-88.8
	108	+100.0	-142.8	+100.0	-142.8	+100.0	-122.2	+100.0	-122.2	+98.8	-98.8	+98.8	-90.0	+75.8	-75.8	+75.2	-75.2	+98.8	-80.8						
	120	+100.0	-129.8	+100.0	-129.8	+98.7	-98.7	+98.7	-98.7	+97.8	-97.8	+75.8	-75.8	+98.8	-98.8	+98.8	-98.8								

TABLE 1B

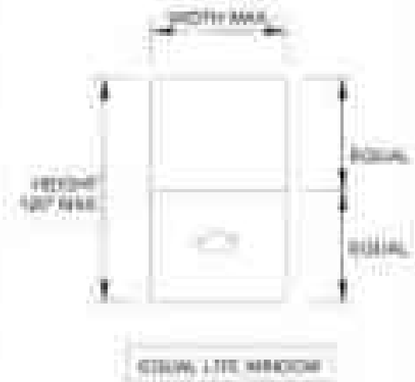
Mount Line Windows	Glass Type / Qty	Design Load Capacity (lbs/ft²)																	
		Window Size Width (in)																	
		19 1/8		24		28 1/2		36		42		48		57		60		63 1/8		64	
Window Size Height (in)	36	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-171.4
	36 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-171.4	+100.0	-171.4
	60 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.7	+100.0	-198.7	+100.0	-123.0
	62	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	63	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	72	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	76	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	84	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	96	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	108	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	120	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8

TABLE 1C

Mount Line Windows	Glass Type / Qty	Design Load Capacity (lbs/ft²)																	
		Window Size Width (in)																	
		19 1/8		24		28 1/2		36		42		48		57		60		63 1/8		64	
Window Size Height (in)	36	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-171.4
	36 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-171.4	+100.0	-171.4
	60 5/8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.7	+100.0	-198.7	+100.0	-123.0
	62	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	63	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	72	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	76	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	84	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	96	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	108	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8
	120	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-216.8	+100.0	-198.8	+100.0	-180.0	+100.0	-129.8

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS).
VALUES FOR EXTERIOR LOADS (+) SHOWN ARE FOR SILL WITH WATER-BAR ADAPTER.
FOR WINDOWS WITHOUT WATER-BAR ADAPTER LIMIT EXTERIOR (+) LOADS TO 80.0 PSF

ALL VALUES SHOWN ARE DESIGN PSF (POUNDS PER SQUARE FOOT)



DESIGN LOAD TABLES	
SHEET NO.	8 OF 15
SHEET NAME	

ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 38726

WINDOOR

TABLE 10

Mount Line Windows	Glass Type / Size	Design Load Capacity (lbs/ft²) — Window Rough Width (A)																					
		19 1/8		24		28 1/2		32		36		38		42		46		53 1/8		54			
Window Rough Height (B)	24	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-171.4
	28 3/4	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-208.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-205.0	+100.0	-171.4	+100.0	-171.4
	52 1/16	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.7	+100.0	-166.7	+100.0	-166.7
	60	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	63	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	72	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	78	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	84	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	96	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	108	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	120	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-114.1				

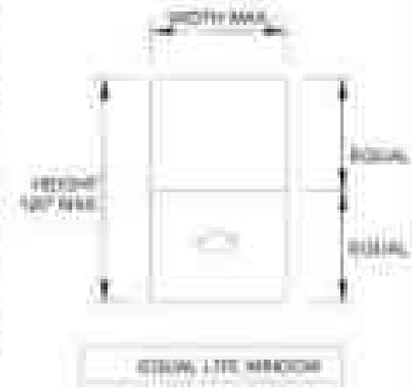


TABLE 11

Mount Line Windows	Glass Type / Size	Design Load Capacity (lbs/ft²) — Window Rough Width (A)																					
		19 1/8		24		28 1/2		32		36		38		42		46		53 1/8		54			
Window Rough Height (B)	24	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-171.4
	28 3/4	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-208.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-205.0	+100.0	-171.4	+100.0	-171.4
	52 1/16	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.7	+100.0	-166.7	+100.0	-166.7
	60	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	63	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	72	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	78	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	84	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	96	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	108	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	120	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-114.1				

TABLE 12

Mount Line Windows	Glass Type / Size	Design Load Capacity (lbs/ft²) — Window Rough Width (A)																					
		19 1/8		24		28 1/2		32		36		38		42		46		53 1/8		54			
Window Rough Height (B)	24	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-171.4
	28 3/4	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-208.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-205.0	+100.0	-171.4	+100.0	-171.4
	52 1/16	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.7	+100.0	-166.7	+100.0	-166.7
	60	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	63	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	72	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	78	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	84	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	96	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	108	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	120	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-114.1				

TABLE 13

Mount Line Windows	Glass Type / Size	Design Load Capacity (lbs/ft²) — Window Rough Width (A)																					
		19 1/8		24		28 1/2		32		36		38		42		46		53 1/8		54			
Window Rough Height (B)	24	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-171.4
	28 3/4	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-208.8	+100.0	-208.8	+100.0	-171.4
	48	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-205.0	+100.0	-171.4	+100.0	-171.4
	52 1/16	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.7	+100.0	-166.7	+100.0	-166.7
	60	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	63	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	72	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	78	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	84	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0	+100.0	-120.0
	96	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	108	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-120.0	+100.0	-112.5		
	120	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-210.0	+100.0	-198.4	+100.0	-198.4	+100.0	-198.4	+100.0	-120.0	+100.0	-114.1				

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3-SEC. GUSTS)
VALUES FOR EXTERIOR LOADS (+) SHOWN ARE FOR SILL WITH WATER-BAR ADAPTER.
FOR WINDOWS WITHOUT WATER-BAR ADAPTER LIMIT EXTERIOR (+) LOADS TO 80.0 PSF

ALL VALUES SHOWN ARE DESIGN PSF (POUNDS PER SQUARE FOOT)

WINDOOR
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ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 38726

DRAWN BY	HWD
CHECKED BY	A. MOELLER
DATE	10/15/09
SHEET	8 OF 16
SHEET NAME	DESIGN LOAD TABLES
SHEET NO.	SHEET 8

TABLE 1A

Design Pressure (+ Inward / - Outward)	Mullion Type / ID	Top Mullion Height (in)	Design Load Capacity (lbs/ft²) — Window Rough Width (in)																	
			19-1/8		24		28-1/2		30		32		36		37		42		48		53-1/8		54	
+15.0 / -15.0	96" (Max)	48	+120.0	-210.0	+120.0	-180.0	+120.0	-154.8	+120.0	-117.9	+120.0	-101.9	+99.0	-84.0	+96.4	-69.4	-116.2	-76.2	+99.8	-69.8	+99.8	-69.8
	108 (Max)	54	+120.0	-210.0	+120.0	-142.4	+120.0	-122.0	+120.0	-102.2	+94.8	-84.3	+85.8	-70.9	+82.8	-62.8	+75.3	-72.3	+99.8	-69.8		
	120 (Max)	60	+120.0	-210.0	+120.0	-120.0	+120.0	-108.6	+96.7	-86.7	+83.8	-83.8	+73.9	-73.9	+73.1	-73.7	+68.4	-66.4				
	132 (Max)	66	+120.0	-210.0	+120.0	-120.0	+108.0	-98.3	+87.7	-87.7	+77.7	-77.7	+67.4	-67.4	+63.7	-63.7						
	120 (Max)	72	+120.0	-210.0	+120.0	-120.0	+92.8	-92.8	+77.1	-77.1	+72.1	-72.7	+60.3	-62.2								
	126 (Max)	78	+120.0	-120.0	+120.0	-120.0	+88.0	-88.5	+77.2	-77.2	+63.8	-63.8										
	132 (Max)	84	+120.0	-120.0	+120.0	-120.0	+79.8	-79.8	+66.6	-66.6												

TABLE 1B

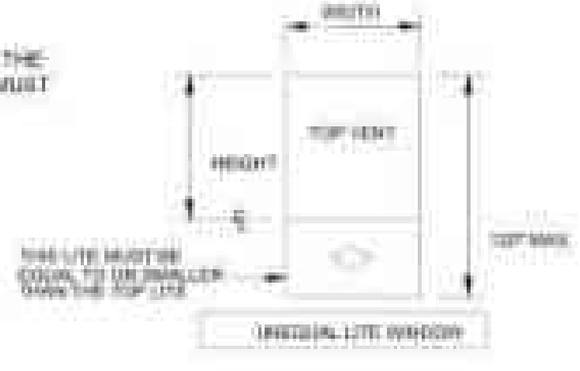
Design Pressure (+ Inward / - Outward)	Mullion Type / ID	Top Mullion Height (in)	Design Load Capacity (lbs/ft²) — Window Rough Width (in)																	
			19-1/8		24		28-1/2		30		32		36		37		42		48		53-1/8		54	
+15.0 / -15.0	96" (Max)	48	+120.0	-210.0	+120.0	-210.0	+120.0	-210.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0
	108 (Max)	54	+120.0	-210.0	+120.0	-210.0	+120.0	-180.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0		
	120 (Max)	60	+120.0	-210.0	+120.0	-132.4	+120.0	-122.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0				
	132 (Max)	66	+120.0	-210.0	+120.0	-120.0	+120.0	-108.6	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0						
	120 (Max)	72	+120.0	-210.0	+120.0	-120.0	+120.0	-92.8	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0								
	126 (Max)	78	+120.0	-120.0	+120.0	-120.0	+120.0	-88.5	+120.0	+120.0	+120.0	+120.0										
	132 (Max)	84	+120.0	-120.0	+120.0	-120.0	+120.0	-79.8	+120.0	+120.0												

TABLE 1C

Design Pressure (+ Inward / - Outward)	Mullion Type / ID	Top Mullion Height (in)	Design Load Capacity (lbs/ft²) — Window Rough Width (in)																	
			19-1/8		24		28-1/2		30		32		36		37		42		48		53-1/8		54	
+15.0 / -15.0	96" (Max)	48	+120.0	-210.0	+120.0	-210.0	+120.0	-210.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0
	108 (Max)	54	+120.0	-210.0	+120.0	-210.0	+120.0	-180.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0		
	120 (Max)	60	+120.0	-210.0	+120.0	-132.4	+120.0	-122.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0				
	132 (Max)	66	+120.0	-210.0	+120.0	-120.0	+120.0	-108.6	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0						
	120 (Max)	72	+120.0	-210.0	+120.0	-120.0	+120.0	-92.8	+120.0	+120.0	+120.0	+120.0	+120.0	+120.0								
	126 (Max)	78	+120.0	-120.0	+120.0	-120.0	+120.0	-88.5	+120.0	+120.0	+120.0	+120.0										
	132 (Max)	84	+120.0	-120.0	+120.0	-120.0	+120.0	-79.8	+120.0	+120.0												

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300 09 (3 SEC. GUSTS).
VALUES FOR EXTERIOR LOADS (+) SHOWN ARE FOR SILL WITH WATER BAR ADAPTER.
FOR WINDOWS WITHOUT WATER BAR ADAPTER LIMIT EXTERIOR (+) LOADS TO 80.0 PSF.

NOTE:
TO QUALIFY FOR SMALL MISSILE IMPACT RATING THE EXTERIOR PANE FOR GLASS TYPES "A" AND "AA" MUST BE TEMPERED.
(INSTALLATIONS ABOVE 30 FT. OF GRADE)



WINDOOR
ANTHONY LYNN MILLER LICENSE No. 38726 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL # 38726

DESIGN LOAD TABLES	SHEET 7 OF 16
1/4" = 1'-0"	
DRAWN BY:	
CHKD BY:	
DATE:	
REVISIONS	
1	02/22/23
2	
3	
4	

TABLE 1C

Vertical Lite Windows	Glass Type / Gap	Top Glass Weight (psf)	Design Load Capacity (lbs/ft²) — Window Sash Width (in)																	
			19-7/8		24		28-1/2		30		32		36		37		42		48		51-1/2		54	
Glass Height (in)	96 (Max)	48	+180.0	-215.0	+180.0	-215.0	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-112.8	+180.0	-112.8
	108 (Max)	54	+180.0	-215.0	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-114.3				
	120 (Max)	60	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-114.1						
	120 (Max)	60	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0								
	132 (Max)	72	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0										
	120 (Max)	72	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0												
	120 (Max)	84	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0														

TABLE 1D

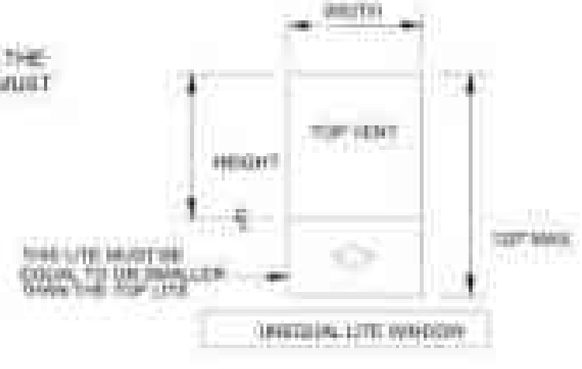
Vertical Lite Windows	Glass Type / Gap	Top Glass Weight (psf)	Design Load Capacity (lbs/ft²) — Window Sash Width (in)																	
			19-7/8		24		28-1/2		30		32		36		37		42		48		51-1/2		54	
Glass Height (in)	96 (Max)	48	+180.0	-215.0	+180.0	-215.0	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0		
	108 (Max)	54	+180.0	-215.0	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0				
	120 (Max)	60	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0						
	120 (Max)	60	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0								
	132 (Max)	72	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0										
	120 (Max)	72	+180.0	-215.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0												
	120 (Max)	84	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0	+180.0	-120.0														

TABLE 1F

Vertical Lite Windows	Glass Type / Gap	Top Glass Weight (psf)	Design Load Capacity (lbs/ft²) — Window Sash Width (in)																	
			19-7/8		24		28-1/2		30		32		36		37		42		48		51-1/2		54	
Glass Height (in)	96 (Max)	48	+180.0	-209.0	+180.0	-164.8	+180.0	-158.8	+180.0	-114.8	+180.0	-114.8	+180.0	-98.8	+97.8	-97.8	+98.8	-98.8	+82.8	-82.8	+76.8	-76.8	+72.7	-72.7
	108 (Max)	54	+180.0	-207.8	+180.0	-158.8	+180.0	-158.8	+180.0	-102.8	+180.0	-102.8	+167.8	-97.8	+98.8	-98.8	+79.8	-79.8	+71.8	-71.8				
	120 (Max)	60	+180.0	-207.8	+180.0	-127.8	+180.0	-127.8	+98.8	-83.8	+98.8	-83.8	+79.8	-79.8	+73.7	-73.7	+82.7	-88.7						
	120 (Max)	60	+180.0	-207.8	+180.0	-158.8	+98.7	-98.7	+98.7	-83.7	+83.7	-83.7	+79.8	-79.8	+98.8	-98.8								
	132 (Max)	72	+180.0	-194.8	+180.0	-134.8	+98.8	-98.8	+98.8	-78.8	+78.8	-78.8	+97.8	-97.8										
	120 (Max)	72	+180.0	-182.8	+180.0	-134.8	+97.8	-97.8	+112.8	-72.8	+112.8	-72.8												
	120 (Max)	84	+180.0	-114.8	+180.0	-114.8	+98.8	-98.8	+98.8	-98.8														

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS).
VALUES FOR EXTERIOR LOADS (+) SHOWN ARE FOR SILL WITH WATER BAR ADAPTER.
FOR WINDOWS WITHOUT WATER BAR ADAPTER LIMIT EXTERIOR (+) LOADS TO 80.0 PSF.

NOTE:
TO QUALIFY FOR SMALL MISSILE IMPACT RATING THE
EXTERIOR PANE FOR GLASS TYPES "A" AND "AA" MUST
BE TEMPERED.
(INSTALLATIONS ABOVE 30 FT. OF GRADE)

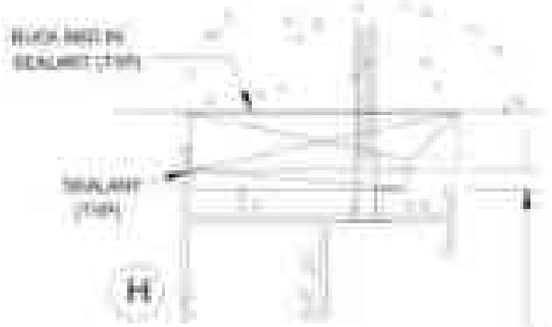


WINDOOR
ENGINEERING SERVICES
DESIGN LOAD TABLES
SHEET 8 OF 9
SHEET NUMBER

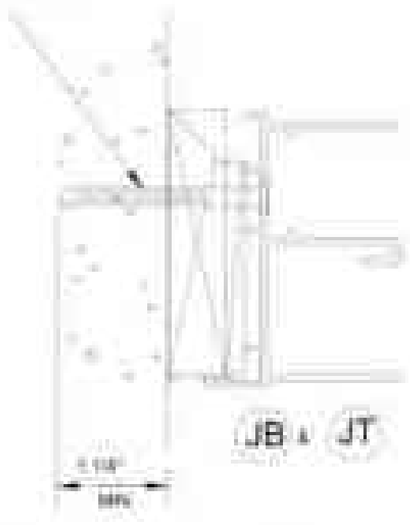
ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FES #38726

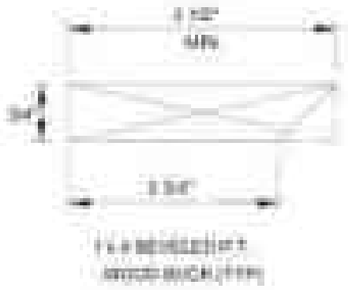
INSTALLATION TYPE 'H'

W 1 x 4 REGULAR F.T. WOOD BUCK

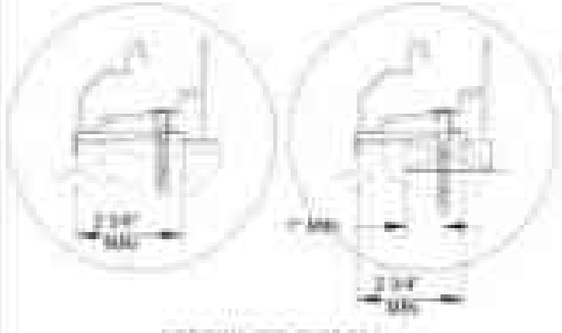


SEE ANCHOR TABLE

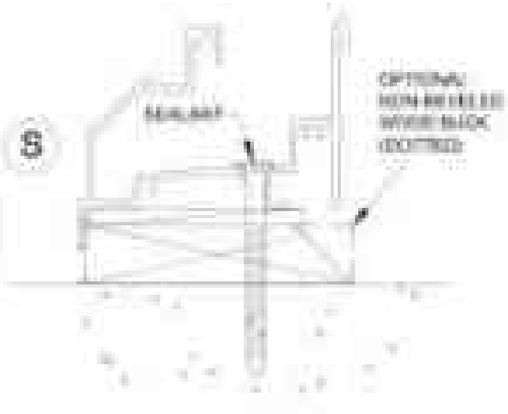




1 x 4 REGULAR F.T.
WOOD BUCK (TYP)



OPTIONAL PRE-CAST SILL



TYPICAL ANCHORS: SEE BUCK FOR MINIMUMS

TABLE 1

Anchor Type	Substrate	Frame Members	Min. Edge Distance	Min. Embedment or Metal Thickness
1/4" DIA. Ultracon + 1/4" DIA. Hilti Kwik con II	Southern Pine (SG = 0.55)	All	1"	1-1/2"
	Thru 1SY Buck into Concrete	All	2-1/2"	1-1/4"
	Hollow or Grout-filled CMU (ASTM C90)	All	2-1/2"	1-3/4"
	Concrete (min. 3.0 ksi)	All	2-1/2"	1-3/4"
1/4" DIA. TEKS or Self Drilling Screws	A36 Steel	All	3/4"	(3) Threads min. to extended beyond metal thickness
	Steel Stud, Gr 33	All	3/4"	(3) Threads min. to extended beyond metal thickness
	Aluminum 1/8" Thk Min. (6063-T5)	All	3/4"	(3) Threads min. to extended beyond metal thickness
#14 SMS	Aluminum 1/8" Thk Min. (6063-T5) (no Shim)	All	3/4"	(3) Threads min. to extended beyond metal thickness
	Steel Stud, Gr 33	All	3/4"	(3) Threads min. to extended beyond metal thickness

VALUES FOR INSTALLATION TYPE "A" APPLY TO THE FOLLOWING INSTALLATION TYPES WITH MAXIMUM SHIM SPACE 1/4":

1) USING 1SY F.T. WOOD BUCKS, MIN. 3/4" THICK.

2) DIRECTLY INTO MASONRY, WITHOUT THE USE OF WOOD BUCKS.

3) DIRECTLY INTO STEEL OR ALUMINUM STRUCTURE
MIN. 1/8" THICK AND USING #14 TEKS OR SELF DRILLING SCREWS.
STRUCTURE MUST BE DESIGN BY OTHERS TO SUSTAIN THE LOADS IMPOSED BY THE WINDOW.

IMPORTANT NOTE:
WOOD BUCKS MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM INTO THE BUILDING STRUCTURE.

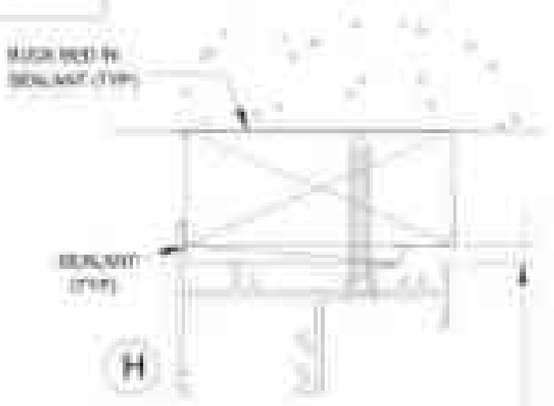
REVISIONS	
DRAWN BY	A. MOSLEH
CHKD	
SERIES "SW" ALUM. SINGLE HUNG WINDOW	
ANCHORS	
SHEET	SW-ANC

WINDOOR®

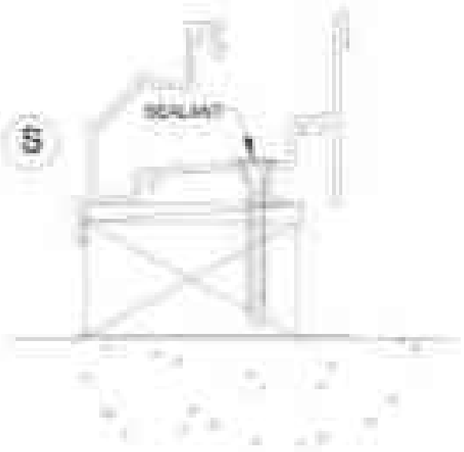
ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL # 38726

INSTALLATION TYPE "B"

W 2X4 BEVELED P.T. WOOD BUCK.

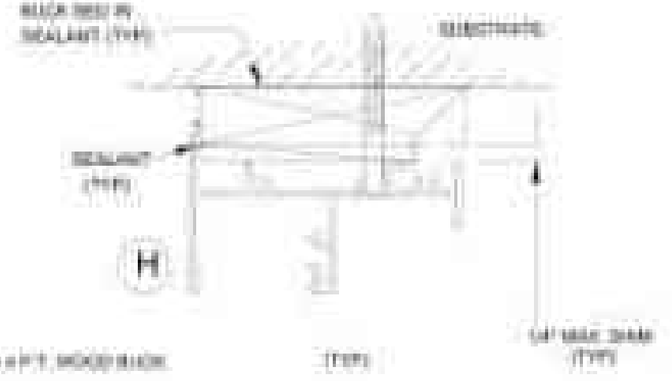






INSTALLATION TYPE "C"

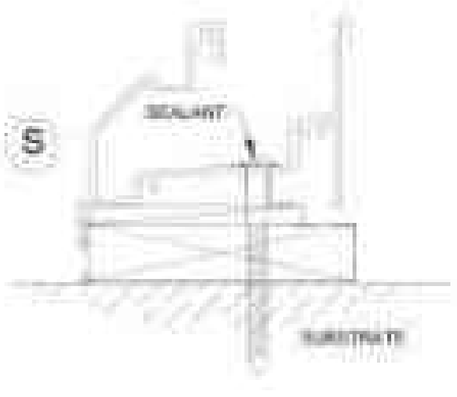
BASED ON WOOD PENETRATION ONLY USING 1 x 4 or 2 x 4 WOOD BUCKS



SEE INSTALLATION TYPES "A" & "B" for 1 x 4 & 2 x 4 P.T. WOOD BUCK STYLES

IMPORTANT NOTE:

WOOD MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.



NO.	REVISIONS
1	ADDED "A" WORDING
2	ADDED "B" WORDING
3	ADDED "C" WORDING
4	ADDED "S" WORDING

WINDOOR®

SHEET TITLE: ANCHORS

SHEET NO. 10 OF 10

ANTHONY LYNN MILLER
LICENSE
No. 39726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL# 39726

TABLE 4A

ANCHORS

DESIGN LOAD CAPACITY - PSF

MAXIMUM SPAN		NO. OF ANCHORS AT JAMB	ESE: HEAD PATTERN WITH JAMB ANCHOR (PSF)	STE: HEAD PATTERN WITH JAMB ANCHOR (PSF)
WIDTH	HEIGHT			
24"	48"	4	210.0	210.0
30"			210.0	210.0
32"			210.0	210.0
36"			186.6	210.0
42"			174.2	210.0
48"			161.7	199.0
54"			127.1	178.2
24"	60"	6	210.0	210.0
30"			210.0	210.0
32"			210.0	210.0
36"			210.0	210.0
42"			171.1	210.0
48"			134.4	201.6
54"			110.7	166.0
24"	72"	6	210.0	210.0
30"			210.0	210.0
32"			210.0	210.0
36"			210.0	210.0
42"			165.1	210.0
48"			126.4	189.2
54"			101.2	151.7
24"	84"	6	210.0	210.0
30"			210.0	210.0
32"			207.6	210.0
36"			186.1	210.0
42"			154.9	192.0
48"			122.2	175.3
54"			86.0	164.0
24"	96"	6	210.0	210.0
30"			185.8	209.1
32"			176.4	186.5
36"			160.8	180.9
42"			143.4	161.3
48"			122.1	147.0
54"			94.1	135.7
24"	108"	10	210.0	210.0
30"			202.3	210.0
32"			191.7	210.0
36"			174.2	191.6
42"			154.5	169.9
48"			122.1	154.0
24"	120"	10	210.0	210.0
30"			179.2	197.1
32"			169.6	186.6
36"			153.7	169.1
42"			135.6	149.3

TABLE 4B

ANCHORS

DESIGN LOAD CAPACITY - PSF

MAXIMUM SPAN		NO. OF ANCHORS AT JAMB	ESE: HEAD PATTERN WITH JAMB ANCHOR (PSF)	STE: HEAD PATTERN WITH JAMB ANCHOR (PSF)
WIDTH	HEIGHT			
19-1/8"	28"	4	210.0	210.0
26-1/2"			210.0	210.0
31"			210.0	210.0
33-1/8"			206.6	210.0
19-1/8"	36-5/8"	4	210.0	210.0
26-1/2"			210.0	210.0
31"			210.0	210.0
33-1/8"			152.7	210.0
19-1/8"	50-5/8"	4	210.0	210.0
26-1/2"			210.0	210.0
31"			176.6	210.0
33-1/8"			155.7	199.5
19-1/8"	62"	6	210.0	210.0
26-1/2"			210.0	210.0
31"			203.6	210.0
33-1/8"			110.7	166.1
19-1/8"	72"	6	210.0	210.0
26-1/2"			210.0	210.0
31"			210.0	210.0
33-1/8"			194.1	194.1
19-1/8"	78"	6	210.0	210.0
26-1/2"			210.0	210.0
31"			210.0	210.0
33-1/8"			182.1	153.1

LOADS APPLY TO INSTALLATION TYPES A, B & C AND INTO ALUMINUM BUCKS. FOR ALUMINUM BUCK INSTALLATION SEE SHEETS 5 AND 6.

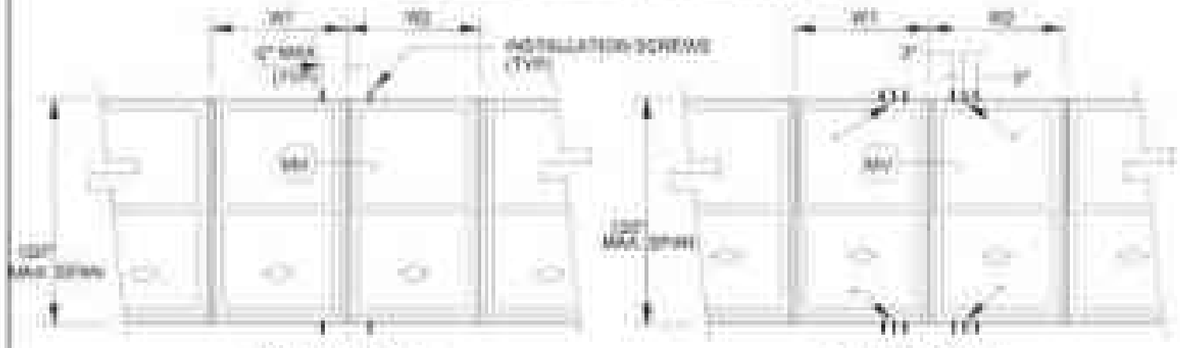
REFER TO SHEETS 4 & 5 FOR DESCRIPTIONS OF INSTALLATION TYPES: A - B - C

WINDOOR
ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. # 38726

VERTICAL MULLION PERFORMANCE

TRIBUTARY WIDTH = (W1 + W2) / 2

FOR WINDOW PERFORMANCE, REFER TO SHEET 3

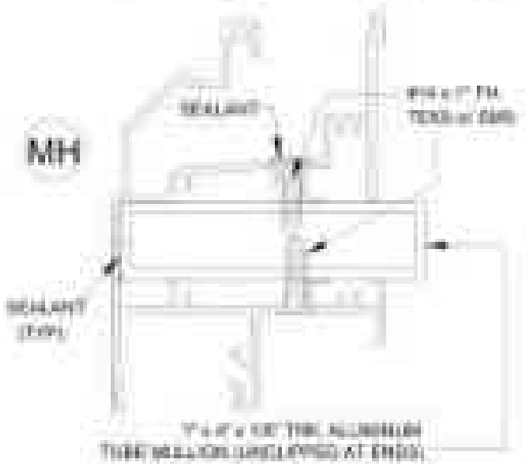


MULTIPLE OPENING
(2 OR MORE WINDOWS)
W/ 1 SCREW ON EACH SIDE OF MULLION
(STANDARD INSTALLATION)

MULTIPLE OPENING
(2 OR MORE WINDOWS)
W/ 2 or 3 SCREWS ON EACH SIDE OF MULLION
(HIGH LOAD INSTALLATION)
(* = ADDITIONAL HOLES TO BE DRILLED BY INSTALLER)

HORIZONTAL MULLION PERFORMANCE

FOR WINDOW PERFORMANCE, REFER TO SHEET 3



3" x 2" x 1/8" THK. ALUMINUM
TUBE MULLION (UNCLIPPED AT ENDS)
(MULL LENGTH = WDW. WIDTH - 3")



3" x 4" x 1/8" THK. ALUMINUM
TUBE MULLION (ASSUMED
UNCLIPPED AT ENDS)
(MULL LENGTH = WDW. HEIGHT - 1")

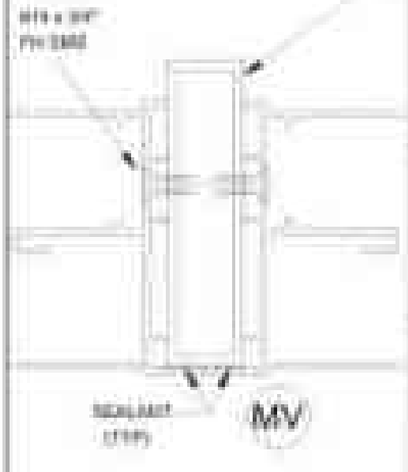


TABLE 5A

MULLION DESIGN LOAD CAPACITY - PSF

WIDTH	HEIGHT	ONE MULLION (EACH SIDE)	TWO MULLIONS (EACH SIDE)	THREE MULLIONS (EACH SIDE)
24"	48"	158.0	210.0	210.0
30"		126.4	210.0	210.0
32"		118.5	210.0	210.0
36"		105.3	210.0	210.0
42"		90.2	210.0	210.0
48"		78.9	210.0	210.0
54"		70.2	210.0	210.0
24"	60"	126.4	210.0	210.0
30"		101.1	210.0	210.0
32"		94.9	210.0	210.0
36"		84.2	210.0	210.0
42"		72.2	210.0	210.0
48"		63.1	210.0	210.0
54"		56.1	210.0	210.0
24"	72"	105.3	210.0	210.0
30"		84.2	210.0	210.0
32"		79.0	210.0	210.0
36"		70.2	210.0	210.0
42"		60.2	210.0	210.0
48"		52.6	210.0	210.0
54"		46.8	210.0	210.0
24"	84"	90.2	210.0	210.0
30"		72.2	210.0	210.0
32"		67.7	210.0	210.0
36"		60.2	210.0	210.0
42"		51.6	210.0	210.0
48"		45.1	210.0	210.0
54"		40.1	84.3	181.2

TABLE 5B

MULLION DESIGN LOAD CAPACITY - PSF

WIDTH	HEIGHT	ONE MULLION (EACH SIDE)	TWO MULLIONS (EACH SIDE)	THREE MULLIONS (EACH SIDE)
24"	96"	84.3	126.8	142.1
30"		67.5	109.1	119.3
32"		63.6	101.2	108.7
36"		56.2	92.3	97.8
42"		47.1	82.3	85.6
48"		37.5	75.0	76.8
54"		34.6	69.8	70.3
24"	108"	56.3	99.3	99.3
30"		48.5	80.3	80.3
32"		44.0	75.0	75.8
36"		42.0	67.8	67.8
42"		35.5	59.1	59.1
48"		32.1	52.8	52.8
54"		30.0	72.1	72.1
30"	120"	41.1	58.2	58.2
32"		38.9	54.7	54.7
36"		35.3	49.0	49.0
42"		31.2	42.8	42.8

TABLE 5C

MULLION DESIGN LOAD CAPACITY - PSF

WIDTH	HEIGHT	ONE MULLION (EACH SIDE)	TWO MULLIONS (EACH SIDE)	THREE MULLIONS (EACH SIDE)
53-1/8"	26"	210.0	210.0	210.0
19-1/8"	26-1/2" to 36"	210.0	210.0	210.0
26-1/2"		184.6	210.0	210.0
37"		176.2	210.0	210.0
53-1/8"		176.0	210.0	210.0
19-1/8"	36-1/2" to 48"	165.0	210.0	210.0
26-1/2"		130.9	210.0	210.0
37"		108.0	210.0	210.0
53-1/8"		101.1	205.3	210.0
19-1/8"	48-1/2" to 60"	126.8	210.0	210.0
26-1/2"		98.3	198.8	210.0
37"		78.7	157.4	210.0
53-1/8"		67.9	133.9	200.8
19-1/8"	60-1/2" to 72"	108.5	210.0	210.0
26-1/2"		83.2	166.5	210.0
37"		65.5	130.9	195.5
53-1/8"		53.7	107.4	160.3
19-1/8"	72-1/2" to 84"	102.0	204.0	210.0
26-1/2"		77.9	155.8	210.0
37"		60.9	121.8	170.8
53-1/8"		48.2	96.7	131.1

WINDOOR

DESIGN LOAD TABLE/ELEVATIONS

SHEET 12 OF 13

ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.

TABLE 8A

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS
PF(+) & PF(-)

WINDOW WIDTH	WINDOW HEIGHT	MAXIMUM DESIGN PRESSURE WITH 2 SCREWS PF(+)		MAXIMUM DESIGN PRESSURE WITH 3 SCREWS PF(+)		MAXIMUM DESIGN PRESSURE WITH 4 SCREWS PF(+)	
		W	F	W	F	W	F
24"	48"	210.0	210.0	178.7	210.0	210.0	210.0
30"		210.0	210.0	159.9	210.0	210.0	210.0
36"		210.0	210.0	150.0	210.0	210.0	210.0
38"		210.0	210.0	142.9	210.0	210.0	210.0
42"		205.7	210.0	131.3	204.2	175.3	210.0
48"		205.7	210.0	131.3	201.6	160.0	210.0
54"		166.0	210.0	107.2	167.6	144.8	210.0
24"	63"	210.0	210.0	134.0	210.0	210.0	210.0
30"		179.2	210.0	114.3	200.1	210.0	210.0
32"		171.8	210.0	109.8	191.8	210.0	210.0
36"		160.0	210.0	102.1	179.7	210.0	210.0
42"		147.7	210.0	94.2	164.9	176.3	210.0
48"		140.0	210.0	89.3	156.3	190.0	210.0
54"		135.8	210.0	86.6	151.6	142.2	210.0
24"	72"	210.0	210.0	134.5	210.0	210.0	210.0
30"		178.8	210.0	112.8	200.1	210.0	210.0
32"		168.8	210.0	107.7	183.8	210.0	210.0
36"		155.8	210.0	99.3	178.7	210.0	210.0
42"		141.2	210.0	90.1	162.2	176.3	210.0
48"		131.3	210.0	83.8	150.6	160.0	210.0
54"		124.4	210.0	79.4	142.9	142.2	210.0
24"	84"	210.0	210.0	134.0	210.0	210.0	210.0
30"		175.5	210.0	111.9	196.4	210.0	210.0
32"		166.8	210.0	106.6	177.4	210.0	210.0
36"		152.7	210.0	97.5	162.4	210.0	210.0
42"		137.1	210.0	87.5	145.9	176.3	210.0
48"		126.6	210.0	80.8	134.5	160.0	210.0
54"		111.8	186.3	75.2	125.4	142.2	210.0
24"	96"	210.0	210.0	134.0	210.0	210.0	210.0
30"		174.2	210.0	111.2	192.6	210.0	210.0
32"		165.4	210.0	105.5	182.8	210.0	210.0
36"		150.8	210.0	96.2	164.9	210.0	210.0
42"		134.4	210.0	85.8	147.3	176.3	210.0
48"		122.3	210.0	78.2	134.8	160.0	210.0
54"		112.6	194.8	72.8	124.3	142.2	210.0
24"	108"	185.8	210.0	117.3	210.0	210.0	210.0
30"		161.7	210.0	96.8	176.8	210.0	210.0
32"		143.3	210.0	81.8	170.4	210.0	210.0
36"		130.7	210.0	83.4	154.8	210.0	210.0
42"		115.9	210.0	73.9	137.3	176.3	210.0
48"		105.0	196.0	67.0	124.4	160.0	210.0
24"	120"	186.7	210.0	119.1	210.0	210.0	210.0
30"		160.9	210.0	98.5	183.8	210.0	210.0
32"		149.4	210.0	92.8	173.9	210.0	210.0
36"		131.8	210.0	84.1	157.8	210.0	210.0
42"		116.4	210.0	74.3	139.3	176.3	210.0

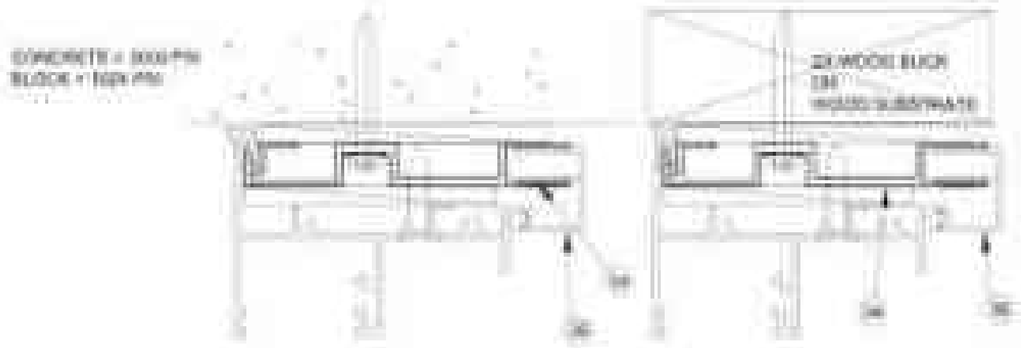
TABLE 8B

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS
PO5.(+) & PO5.(-)

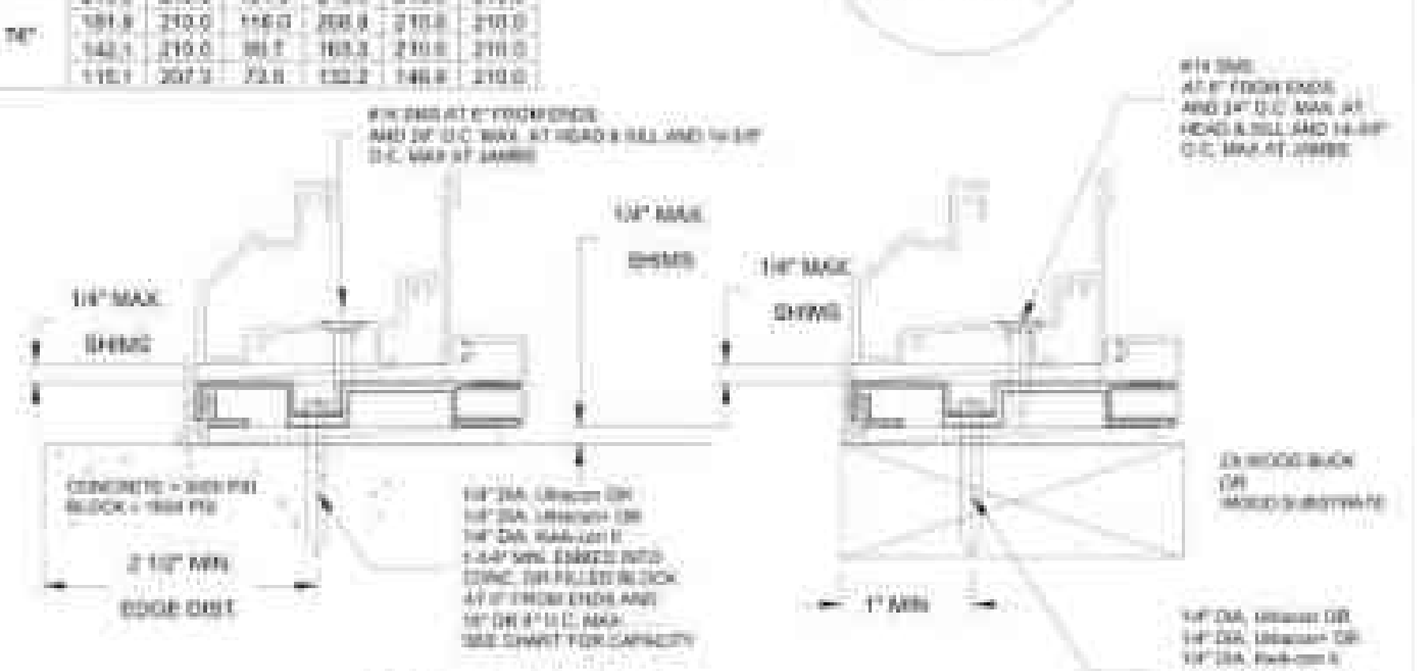
WINDOW WIDTH	WINDOW HEIGHT	MAXIMUM DESIGN PRESSURE WITH 2 SCREWS PF(+)		MAXIMUM DESIGN PRESSURE WITH 3 SCREWS PF(+)		MAXIMUM DESIGN PRESSURE WITH 4 SCREWS PF(+)	
		W	F	W	F	W	F
24"	48"	210.0	210.0	210.0	210.0	210.0	210.0
30"		210.0	210.0	210.0	210.0	210.0	210.0
36"		210.0	210.0	189.5	210.0	210.0	210.0
38"		210.0	210.0	148.0	210.0	198.8	210.0
42"		210.0	210.0	210.0	210.0	210.0	210.0
48"		210.0	210.0	173.5	210.0	210.0	210.0
54"		210.0	210.0	157.4	210.0	210.0	210.0
24"	63"	186.8	210.0	118.5	207.4	159.2	210.0
30"		210.0	210.0	186.8	210.0	210.0	210.0
32"		210.0	210.0	165.9	210.0	210.0	210.0
36"		203.5	210.0	129.9	194.8	210.0	210.0
42"		171.8	210.0	109.6	180.7	147.3	210.0
48"		210.0	210.0	168.6	210.0	210.0	210.0
54"		210.0	210.0	146.4	210.0	210.0	210.0
24"	72"	183.7	210.0	117.2	187.5	210.0	210.0
30"		156.2	210.0	99.7	159.5	146.9	210.0
32"		210.0	210.0	161.6	210.0	210.0	210.0
36"		194.3	210.0	122.9	210.0	210.0	210.0
42"		152.8	210.0	97.8	175.5	210.0	210.0
48"		129.3	210.0	79.9	143.8	146.9	210.0
54"		210.0	210.0	161.9	210.0	210.0	210.0
24"	84"	181.9	210.0	116.0	206.9	210.0	210.0
30"		142.1	210.0	90.7	163.3	210.0	210.0
32"		116.1	207.3	73.8	132.2	146.9	210.0

ALUMINUM BUCK FRAMING DETAILS

REFER TO SHEETS 3 THRU 5 FOR WINDOW CAPACITIES
USE LOWER APPLICABLE VALUES







TYPICAL INSTALLATION DETAIL
ON ALL FOUR SIDES USING ALUMINUM BUCK SYSTEM

WINDOOR
WINDOW & DOOR MANUFACTURERS ASSOCIATION
2211 E. HOWELL AVE., ANAHEIM, CA 92806
(714) 634-1571 FAX (714) 634-1574

ANTHONY LYNN MILLER
LICENSED
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
PE # 38726

NO.	DATE	DESCRIPTION
4	12/22/15	ADDED NOTE TO DRAWING
3	12/22/15	ADDED NOTE TO DRAWING
2	12/22/15	ADDED NOTE TO DRAWING
1	12/22/15	ADDED NOTE TO DRAWING

ALUMINUM BUCK FRAMING DETAILS
WINDOW & DOOR MANUFACTURERS ASSOCIATION
2211 E. HOWELL AVE., ANAHEIM, CA 92806
(714) 634-1571 FAX (714) 634-1574

DRAWN BY: [illegible] | CHKD: [illegible] | SHEET 1 OF 16 | 08/20/15

TABLE 7A

PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

P (lbs.) & M (lbs.-in.)

WINDOW SIZE		ANCHORING WITH WOOD LINER BLOCK				ANCHORING INTO CONC.				ANCHORING INTO WOOD			
		CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5	CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5	CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5
WIDTH	HEIGHT	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +
24"	48"	85.3	116.7	216.0	216.0	146.0	216.0	216.0	216.0	130.0	210.0	210.0	210.0
		78.0	106.8	216.0	216.0	133.3	210.9	216.0	216.0	104.1	209.5	216.0	216.0
		75.4	150.8	216.0	216.0	118.1	210.6	216.0	216.0	101.1	202.5	210.0	210.0
		71.5	142.9	216.0	216.0	113.0	210.0	216.0	216.0	96.8	192.0	210.0	210.0
	48"	69.1	138.1	204.2	216.0	108.7	216.0	216.0	216.0	91.4	182.9	210.0	210.0
		67.9	134.8	201.0	216.0	108.0	216.0	216.0	216.0	90.5	180.0	210.0	210.0
		67.6	134.0	201.0	216.0	108.0	216.0	216.0	216.0	90.0	180.0	210.0	210.0
		67.5	134.8	201.0	216.0	108.0	216.0	216.0	216.0	90.0	180.0	210.0	210.0
36"		57.2	114.3	171.5	216.0	86.6	179.2	216.0	216.0	76.8	153.6	216.0	216.0
		56.8	109.6	164.5	216.0	85.9	171.8	216.0	216.0	73.8	147.5	216.0	216.0
		51.0	102.1	153.1	204.2	80.0	160.0	216.0	216.0	68.6	137.1	205.7	216.0
	60"	47.1	94.2	141.4	188.5	73.9	147.7	216.0	216.0	63.3	126.6	189.9	216.0
		44.7	89.3	134.0	178.7	70.0	140.0	216.0	216.0	60.0	120.0	180.0	216.0
		43.3	86.6	129.9	173.3	67.9	135.8	203.6	216.0	58.2	116.4	174.6	216.0
		43.0	86.0	129.0	172.0	67.5	135.0	202.5	216.0	57.9	115.8	173.7	216.0
36"		53.8	107.4	160.8	214.0	84.0	168.0	216.0	216.0	72.0	144.0	216.0	216.0
		45.1	90.3	135.4	180.5	70.7	141.3	216.0	216.0	60.8	121.3	181.9	216.0
		43.1	86.1	129.2	172.3	67.6	135.2	202.8	216.0	57.9	115.7	173.6	216.0
	72"	39.7	79.4	119.1	158.8	62.2	124.4	186.7	216.0	53.3	106.7	160.0	216.0
		36.0	72.1	108.1	144.1	56.5	113.0	169.4	216.0	48.4	96.8	145.2	193.6
		33.5	67.0	100.5	134.0	52.5	105.0	157.5	210.0	45.0	90.0	135.0	180.0
		31.8	63.5	95.3	127.1	49.8	99.6	149.3	198.1	42.7	85.3	128.0	170.7
30"		44.7	89.2	134.0	178.7	70.0	140.0	210.0	216.0	60.0	120.0	180.0	216.0
		37.3	74.6	111.9	149.1	58.4	116.9	175.3	216.0	50.1	100.2	150.3	200.3
		35.5	70.9	106.4	141.9	55.5	111.2	166.8	216.0	47.6	95.3	142.9	190.6
	84"	32.5	65.0	97.5	129.9	50.9	101.8	152.7	203.6	43.6	87.3	130.9	174.5
		29.2	58.3	87.5	116.7	45.7	91.4	137.1	182.8	39.2	78.4	117.6	156.7
		26.8	53.6	80.4	107.2	42.0	84.0	126.0	168.0	36.0	72.0	108.0	144.0
		25.1	50.2	75.2	100.3	39.3	78.6	117.9	157.2	33.7	67.4	101.1	134.7
		38.3	76.6	114.9	153.1	60.0	120.0	180.0	216.0	51.4	102.9	154.3	205.7
		31.4	63.5	95.3	127.1	49.8	99.6	149.3	199.1	42.7	85.3	128.0	170.7
		30.1	60.3	90.4	120.6	47.2	94.5	141.7	189.0	40.5	81.0	121.5	162.0
	96"	27.5	55.0	82.5	109.9	43.1	86.2	129.2	172.3	36.9	73.8	110.8	147.7
		24.3	48.6	72.9	97.2	38.4	76.8	115.2	153.6	32.9	65.8	98.7	131.7
		22.3	44.7	67.0	89.3	35.0	70.0	105.0	140.0	30.0	60.0	90.0	120.0
		20.7	41.4	62.1	82.9	32.5	64.9	97.4	129.9	27.8	55.7	83.5	111.3
		33.5	67.0	100.5	134.0	52.5	105.0	157.5	210.0	45.0	90.0	135.0	180.0
		27.7	55.3	83.0	110.7	43.4	86.7	130.1	173.4	37.2	74.3	111.5	148.6
	108"	26.2	52.4	78.7	104.9	41.1	82.2	123.3	164.3	35.2	70.4	105.7	140.9
		23.8	47.6	71.5	95.3	37.3	74.7	112.0	149.3	32.0	64.0	96.0	128.0
		21.1	42.2	63.4	84.5	33.1	66.2	99.3	132.4	28.4	56.7	85.1	113.5
		19.1	38.3	57.4	76.6	30.0	60.0	90.0	120.0	25.7	51.4	77.1	102.9
		29.8	59.6	89.3	119.1	46.7	93.3	140.0	186.7	40.0	80.0	120.0	160.0
		24.5	49.0	73.5	98.0	38.4	76.8	115.2	153.6	32.9	65.8	98.7	131.7
	120"	23.2	46.4	69.6	92.8	36.3	72.7	109.0	145.4	31.2	62.3	93.5	124.6
		21.0	42.0	63.1	84.1	32.9	65.9	98.8	131.8	28.2	56.5	84.7	112.9
		19.6	37.1	55.7	74.3	29.1	58.2	87.3	116.4	24.9	49.8	74.8	99.7

ANCHORS AT
ALUMINUM BUCK FRAMING
(AT MULLION ENDS)

TABLE 7B

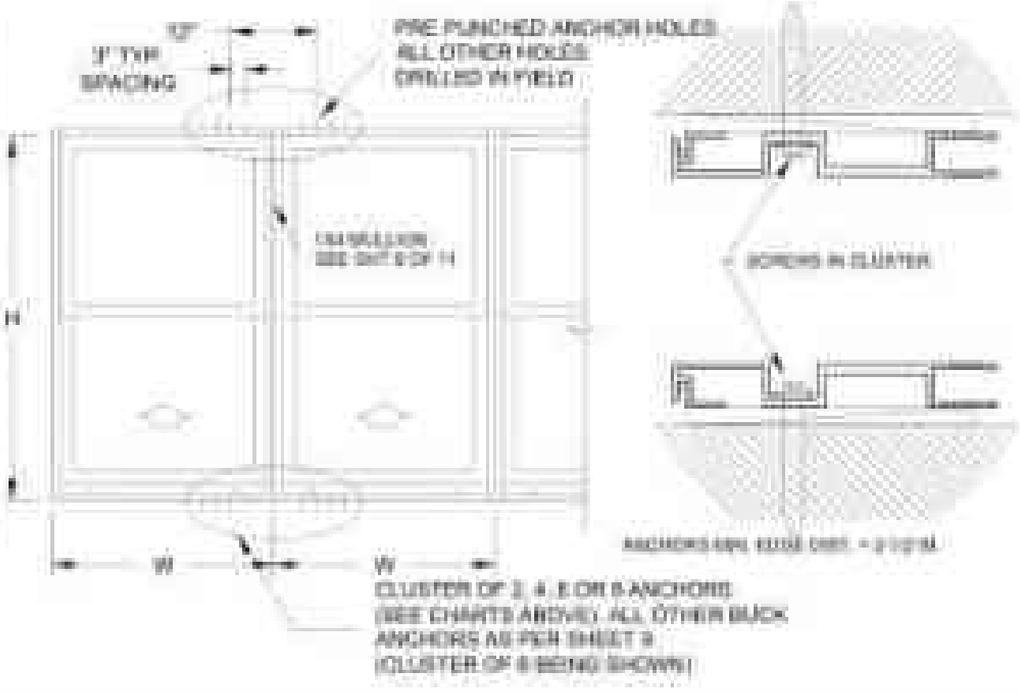
PERFORMANCE VALUES OF ALUMINUM BUCK INSTALLATION ANCHORS

P (lbs.) & M (lbs.-in.)

WINDOW SIZE		ANCHORING WITH WOOD LINER BLOCK					ANCHORING INTO CONC.					ANCHORING INTO WOOD				
		CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5	CLUSTER OF 6	CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5	CLUSTER OF 6	CLUSTER OF 2	CLUSTER OF 3	CLUSTER OF 4	CLUSTER OF 5	CLUSTER OF 6
WIDTH	HEIGHT	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +	DP +
	19-1/8"	210.0	213.0	213.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
	26-1/2"	210.0	213.0	213.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
24"	37"	210.0	213.0	213.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
	53-1/8"	210.0	213.0	213.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
	19-1/8"	140.7	213.0	213.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	188.2	210.0	213.0	210.0	210.0
	26-1/2"	113.9	213.0	213.0	210.0	210.0	181.7	210.0	210.0	210.0	210.0	158.7	210.0	213.0	210.0	210.0
36-3/8"	37"	105.0	208.8	213.0	210.0	210.0	168.5	210.0	210.0	210.0	210.0	141.0	210.0	213.0	210.0	210.0
	53-1/8"	104.8	209.6	213.0	210.0	210.0	168.3	210.0	210.0	210.0	210.0	140.8	210.0	213.0	210.0	210.0
	19-1/8"	98.3	196.6	213.0	210.0	210.0	164.0	210.0	210.0	210.0	210.0	132.6	210.0	213.0	210.0	210.0
	26-1/2"	77.5	155.0	210.0	210.0	210.0	122.1	210.0	210.0	210.0	210.0	104.7	209.4	210.0	210.0	210.0
53-1/8"	37"	64.5	129.0	194.5	210.0	210.0	107.8	203.5	210.0	210.0	210.0	87.2	174.5	210.0	210.0	210.0
	53-1/8"	60.2	120.5	180.7	210.0	210.0	94.4	188.8	210.0	210.0	210.0	80.9	161.8	210.0	210.0	210.0
	19-1/8"	75.5	151.0	210.0	210.0	210.0	116.4	210.0	210.0	210.0	210.0	101.4	202.9	210.0	210.0	210.0
	26-1/2"	56.5	113.1	170.6	210.0	210.0	91.7	183.5	210.0	210.0	210.0	76.6	153.3	210.0	210.0	210.0
63"	37"	46.8	93.6	140.6	187.5	210.0	73.5	146.9	210.0	210.0	210.0	63.2	126.3	189.5	210.0	210.0
	53-1/8"	39.9	79.7	119.6	159.5	199.3	62.5	125.0	187.5	210.0	210.0	53.8	107.7	161.7	210.0	210.0
	19-1/8"	64.8	129.3	193.9	210.0	210.0	101.3	202.6	210.0	210.0	210.0	86.8	173.7	210.0	210.0	210.0
	26-1/2"	49.6	99.2	148.7	198.3	210.0	77.7	155.4	210.0	210.0	210.0	66.8	133.2	199.8	210.0	210.0
74"	37"	39.5	79.0	117.0	156.0	195.1	61.1	122.2	183.3	210.0	210.0	52.4	104.8	157.1	209.5	210.0
	53-1/8"	33.6	67.1	100.5	134.0	167.6	52.5	105.0	157.5	210.0	210.0	45.0	89.9	134.9	179.8	210.0
	19-1/8"	80.7	161.5	210.0	210.0	210.0	126.4	210.0	210.0	210.0	210.0	108.1	216.2	210.0	210.0	210.0
	26-1/2"	61.4	122.8	184.2	210.0	210.0	96.2	192.5	210.0	210.0	210.0	82.3	164.7	210.0	210.0	210.0
74"	37"	48.9	97.8	146.7	195.6	210.0	76.7	153.3	210.0	210.0	210.0	65.7	131.4	197.0	210.0	210.0
	53-1/8"	41.6	83.2	124.8	166.4	208.0	65.2	130.4	195.6	210.0	210.0	55.8	111.6	167.4	210.0	210.0
	19-1/8"	94.6	189.2	210.0	210.0	210.0	148.2	210.0	210.0	210.0	210.0	126.7	210.0	210.0	210.0	210.0
	26-1/2"	72.0	144.0	210.0	210.0	210.0	112.8	210.0	210.0	210.0	210.0	96.5	193.0	210.0	210.0	210.0
84"	37"	57.4	114.7	172.1	210.0	210.0	89.9	179.8	210.0	210.0	210.0	77.0	153.9	210.0	210.0	210.0
	53-1/8"	48.8	97.6	146.4	195.2	210.0	76.4	152.9	210.0	210.0	210.0	65.4	130.8	196.2	210.0	210.0

NOTE:

1) FOR WINDOW ANCHORING TO ALUMINUM BUCKS USE #14 SCREWS SPACED AS PER SHEETS 7 & 8.
2) ALUMINUM BUCKS ARE SUPPLIED WITH CLUSTERS OF 2 (1 SCREW HOLE PER SIDE) STANDARD.
3) EXTRA HOLES MUST BE FILED/DRILLED IF REQUIRED.



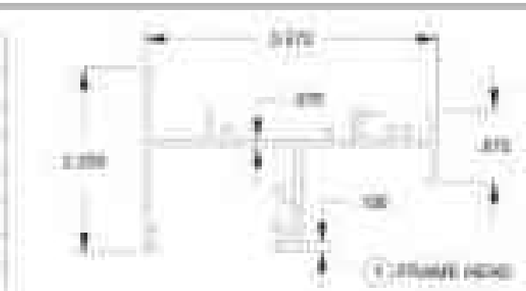
4	
02/22/23	
SHEET	5 OF 16

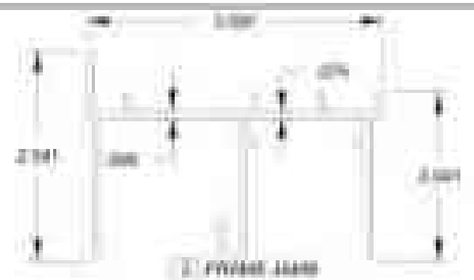
WINDOW ANCHORING
ALUMINUM BUCKS

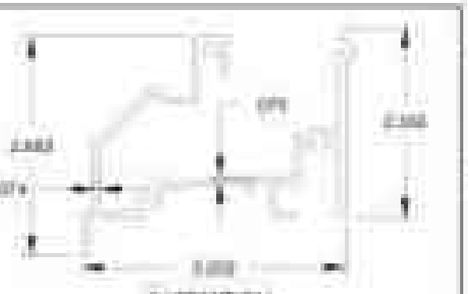
WINDOOR

ANTHONY LYNN MILLER
LICENSE
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.

ITEM	PART #	DESCRIPTION	MATERIAL
1	600	FRAME HEAD	6063-T5
2	602	FRAME JAMB	6063-T5
3	606	HORIZONTAL RAIL	6063-T5
4	609	FIXED INTERLOCK	6063-T5
5	607	MOVING INTERLOCK	6063-T5
6	601	FRAME SILL	6063-T5
7	603	GLAZING BEAD	6063-T5
8	620	GLAZING BEAD	6063-T5
9	608	SIDE RAIL	6063-T5
10	611	WATERBAR	6063-T5
11	NDS2075SL	WOOD PILE WITH CENTER SOFT PIN (GRAY)	PILE
12	DG4410P	PLASTIC BUMPER GUIDE	PVC
13	#140-4	WEEP HOLE COVER	NYLON
14	N/A	GLAZING	GLASS
15	N/A	COMPLETE SCREEN	ALUMINUM
16	DG4410C & 4410C	COMBINATION ESPAGNOLETTE LOCK AND LIFT PULL ATTACHED W/(2) #6 X 5/8" FH SMS	ZINC
17	4320700 & 4320702	UPT. SWEEP LOCK & KEEPER (REPLACE ITEM 5) ATTACHED W/ (2) #6 X 5/8" FH SMS	ZINC
18	10-11-JVL-100	LIFT PULL	ZINC
19	DG4214C	TIE DOWN BLOCK	ZINC
20	VARIES	BALANCERS (6&7 OF SPIRAL)	VARIES
21	DG4410P	BALANCE COVER @ TOP HALF OF EACH JAMB	PVC
22	DG4410P	VENT STOP @ TOP OF JAMBS	PVC
24	DG4410P	FIXED VENT SHIM @ TOP OF FIXED VENT	PVC
25	DG4410P	TOP GUIDE AT OPERABLE VENT	NYLON
26	DG4420N	BOTTOM GUIDE/CLIP AT OPERABLE VENT	NYLON
27	DG4420C & 4210L	CAMMING SYSTEM (OPTIONAL - BALANCER ATTACHED TO IT	ZINC
28	N/A	VENT ASSEMBLY SCREWS #10 X 1/4" PH SMS (2 PER CORNER)	S/S
29	N/A	FRAME ASSEMBLY SCREWS #10 X 1/4" PH SMS (2 PER CORNER)	S/S
30	DG4380S	VINYL BULB	PVC
31	VARIES	WEATHERSTRIPPING (SEE DETAIL SHEET)	SILICONE
32	320-002	COMBINATION ESPAGNOLETTE LOCK & LIFT PULL ATTACHED W/(2) #6 X 3/4" FLAT PH TYPE B	SS
33	-	SETTING BLOCKS (VARIES PER SIZE)	EPDM
34	-	RUBBER BULB	6063-T5
35	-	OPTIONAL COVER	6063-T5
36	604	HORIZONTAL RAIL	6063-T5
37	609	FIXED INTERLOCK	6063-T5
38	608	MOVING INTERLOCK	6063-T5
39	607	SIDE RAIL	6063-T5
40	605	GLAZING BEAD	6063-T5
41	611	WATERBAR	6063-T5

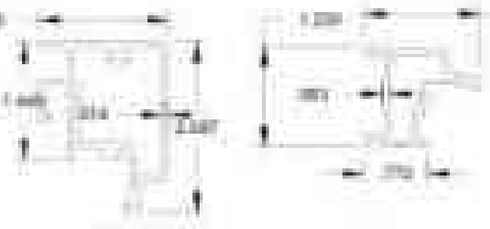






VENT SHAPES FOR GLASS TYPES "DP", "DSP", "DP" & "DPAP"







VENT SHAPES FOR GLASS TYPES "DO" & "DAP"



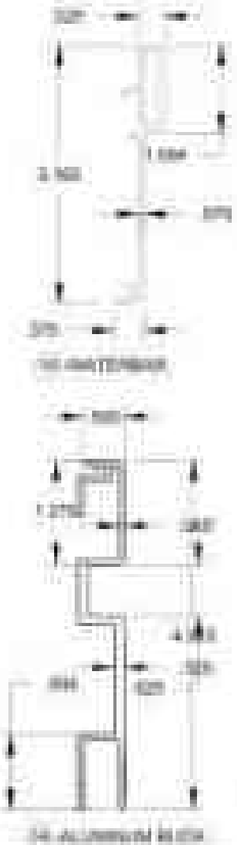
















REVISIONS	
DRAWN BY	A. MOELLER
DATE	10/2/23
SHEET	15 OF 15
SCALE	3" = 1'-0"
BOW / EXTRUSIONS	

WINDOOR

ANTHONY LYNN MILLER
LICENSED
No. 38726
STATE OF FLORIDA
PROFESSIONAL ENGINEER
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