Engineering Evaluation Report # PW5540-20200909

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

Manufacturer:
PGT Industries, Inc.
1070 Technology Drive
North Venice, FL 34275

Product Description:
PW5540 Series Impact-Resistant Vinyl Fixed Window, (LMI), FL-29700

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.

This product has been evaluated and is in compliance with the current Florida Building Code, including the “High Velocity Hurricane Zone” (HVHZ).

Supporting Technical Documentation:
1. Approval Document: Drawing number PW5540 LAMI, signed and sealed by A. Lynn Miller, P.E.
2. Test Report No.: FTL-7897, FTL-8128, FTL 19-9037 & 20-2107.1-4, signed and sealed by Idalmis Ortega, P.E.
Fenestration Testing Laboratories, Medley, FL 33166

TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Calculations, signed and sealed by A. Lynn Miller, P.E., dated 04/10/15 & 3/19/20.

4. Miami-Dade RER Product Control Section NOA’s; PVB Interlayer by Kuraray America, Inc.

Limitations and Conditions of use:
• Units must be glazed per ASTM E1300-09, 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 and sash material to be extruded Vinyl.
• Units must be installed in accordance with approval document, PW5540 LAMI.



A. LYNN MILLER, P.E.
P.E.# 58705

SERIES 5040 IMPACT RESISTANT VINYL FIXED CASEMENT WINDOW

IMPACT RATING	DESIGN PRESSURE RATING
WINDOW SMALL MISSILE IMPACT RESISTANT	VARIES PER OPTIONS AND TABLES ON SHEET 7

TYP. EQUAL LEG BOX & PLUNGE FRAME (90° CORNERS)

TYP. INTEGRAL FIN & J-CHANNEL FRAME (90° CORNERS) (ANCHORED THROUGH RAIL FIN)

TYP. EQUAL LEG BOX & PLUNGE FRAME (CURVED OR ANGLED CORNERS)

TYP. INTEGRAL FIN & J-CHANNEL FRAME (CURVED OR ANGLED CORNERS) (ANCHORED THROUGH RAIL FIN)

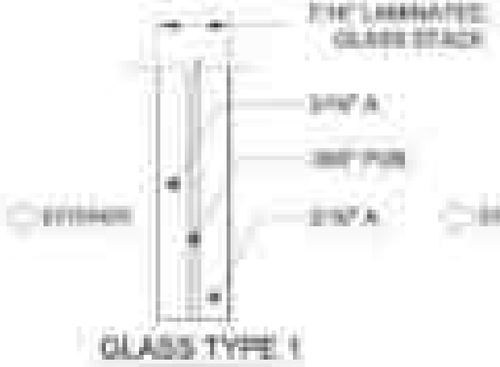
VISIBLE LIGHT FORMULAS

GENERAL NOTES & SPECIFICATIONS 1
FRAME, GLAZING & ANCHOR OPTIONS 2
INSTALLATION: PLUNGE & EQUAL LEG 3
INSTALLATION: INTEGRAL FIN & J-CHANNEL 4
FRAME ASSEMBLY TYPE 5-6
DESIGN PRESSURES 7
BOM & ASSEMBLY 8

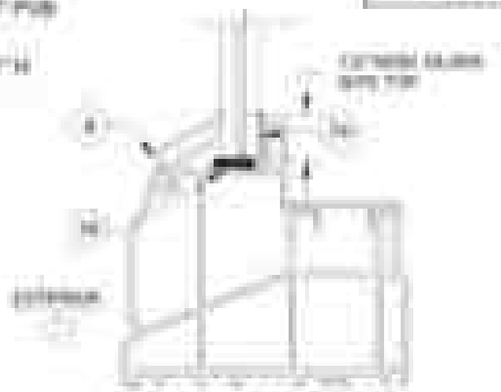
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Glazing Type	Description	Table #	Sheet #
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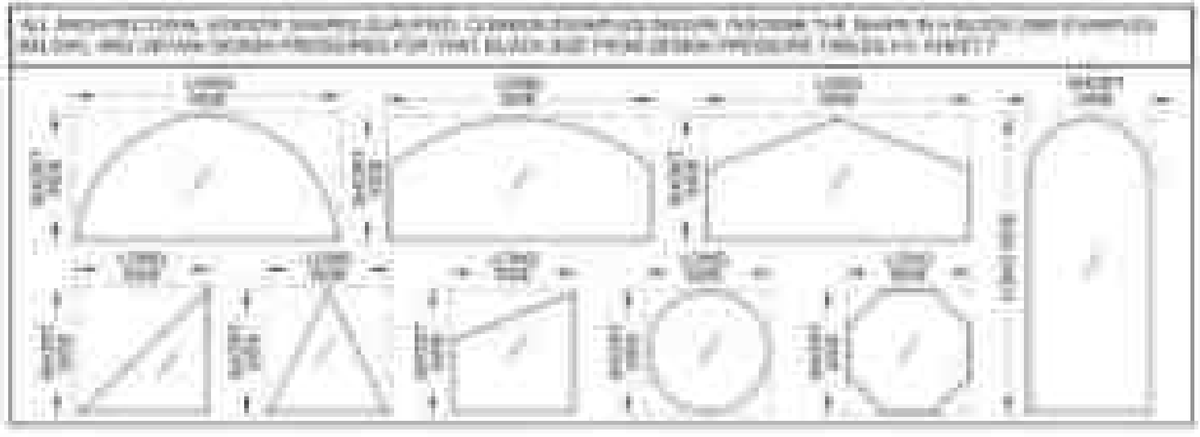
Table Index	
1	2
3	4







Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment
A	#12 Screw-Head (SH) (meets 18-8 S.S. or 410 S.S.)	18 ga. Stainless Steel (ASTM A240)	1/2"	1 1/16"
		16 ga. Stainless Steel (ASTM A240)	1/2"	1 1/16"
		Aluminum, 6063-T5*	3/4"	1 1/16"
		Steel Stud, 18 - 33*	1/2"	1 1/16" (18 GA.)
		Steel, A36*	3/4"	1 1/16"
	#12 SDS (meets 18-8 S.S. or 410 S.S.)	18 ga. Aluminum Plate (ASTM B209)	5/16"	1 1/16"
		Aluminum, 6063-T5*	3/4"	1 1/16"
		Steel Stud, 18 - 33*	3/4"	1 1/16"
		Steel, A36*	3/4"	1 1/16"



Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment*
A	2-1/2" Ring-shank Roofing Nail	18 ga. Stainless Steel (ASTM A240)	3/8"	1 1/16"
	#10 Screw-Head (SH) (meets 18-8 S.S. or 410 S.S.)	16 ga. Stainless Steel (ASTM A240)	1/2"	1 1/16"
		Aluminum, 6063-T5*	3/4"	1 1/16"
		Steel Stud, 18 - 33*	1/2"	1 1/16" (18 GA.)
		Steel, A36*	3/4"	1 1/16"
	#12 SDS (meets 18-8 S.S. or 410 S.S.)	18 ga. Aluminum Plate (ASTM B209)	5/16"	1 1/16"
		Aluminum, 6063-T5*	3/4"	1 1/16"
		Steel Stud, 18 - 33*	3/4"	1 1/16"
		Steel, A36*	3/4"	1 1/16"

NOTE:
USE ONLY SUBSTITUTE APPROPRIATE VALVETEC LISTED ON TABLES 4 & 5 THAT MEET YIELDING EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.

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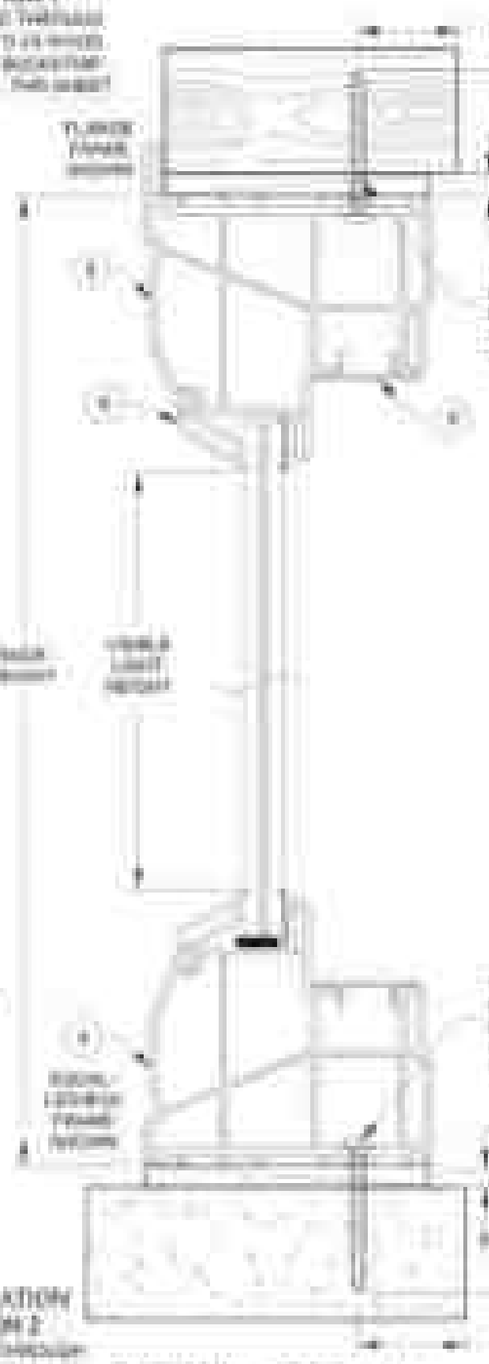
PGT
LEADER OF AUTO WINDOWS
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

VINYL FIXED CASEMENT WINDOW (LSM)		Series 15
GLASS AND ACCESSORY/FRAME OPTIONS		/ ROSEWIN
ADDED ULTRACORE ANCHORS - JP - 9/6/2020		
PAV 03/22	NOTE:	2 OF 8
PHOENIX LAMI		E

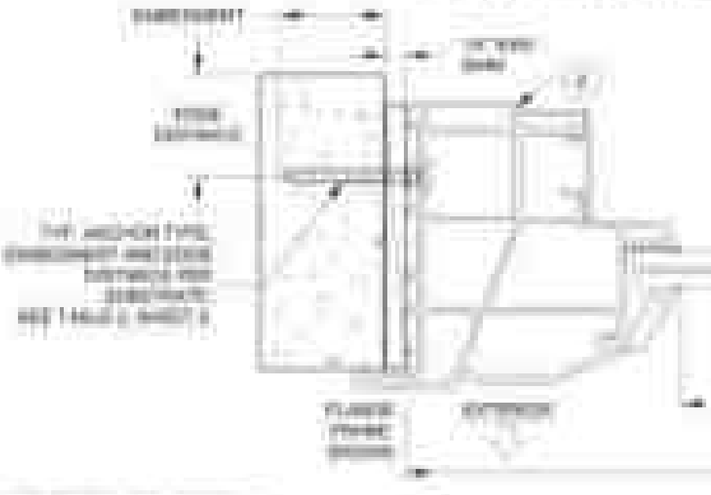
STATE OF FLORIDA
No. 70700
PROFESSIONAL ENGINEER

INSTALLATION DETAILS FOR FLANGE & EQUAL-LEG/BOX FRAMES

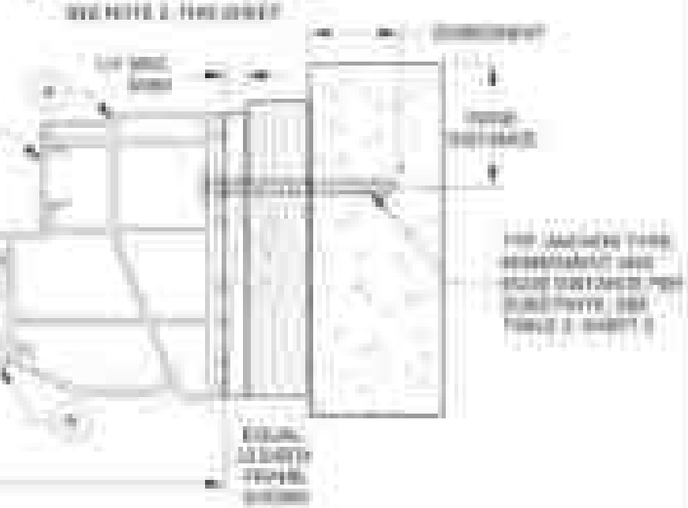
INSTALLATION OPTION 1



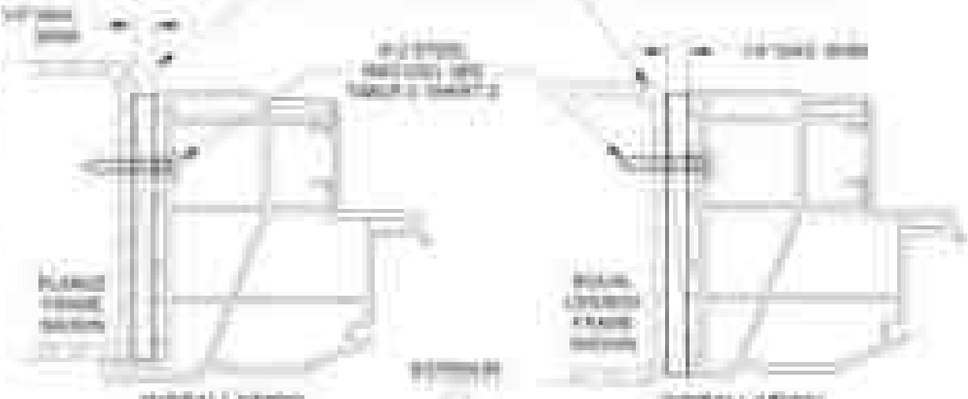
INSTALLATION OPTION 2



INSTALLATION OPTION 3



HORIZONTAL SECTION A-A



INSTALLATION OPTION 4

INSTALLATION OPTION 5

VERTICAL SECTION B-B

VISIBLE LIGHT FORMULAS

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VINYL FIXED CASEMENT WINDOW (CW) | SERIES 15

FLANGE & EQUAL LEG/BOX FRAMES | / WOW2HWH

P/N 33000	NOTE	2 OF 2	PHOSAU LAMA	B

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INSTALLATION DETAILS FOR INTEGRAL FIN & J-CHANNEL FRAMES

INSTALLATION OPTION A

INSTALLATION OPTION B

INSTALLATION OPTION C

HORIZONTAL SECTION C-C

INSTALLATION OPTION D

INSTALLATION OPTION E

INSTALLATION OPTION F

VERTICAL SECTION D-D

VISIBLE LIGHT FORMULAS

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VINYL FIXED CASEMENT WINDOW (CW)

J-CHANNEL & INTEGRAL FIN FRAMES

REGISTERED
ARCHITECT
STATE OF FLORIDA

ILLUSTRATION OF FIXED CASEMENT-TO-FIXED CASEMENT (OXO)

(EQUAL LEG BOX FRAME WITH IDENTICAL MULLS COMBINED)

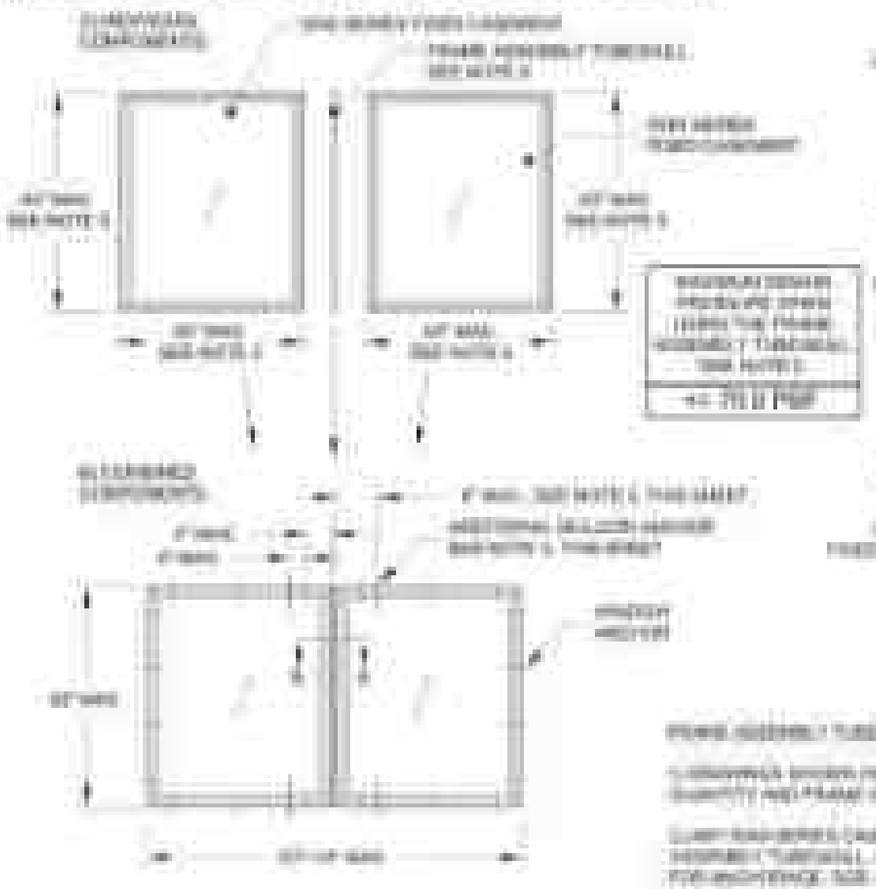
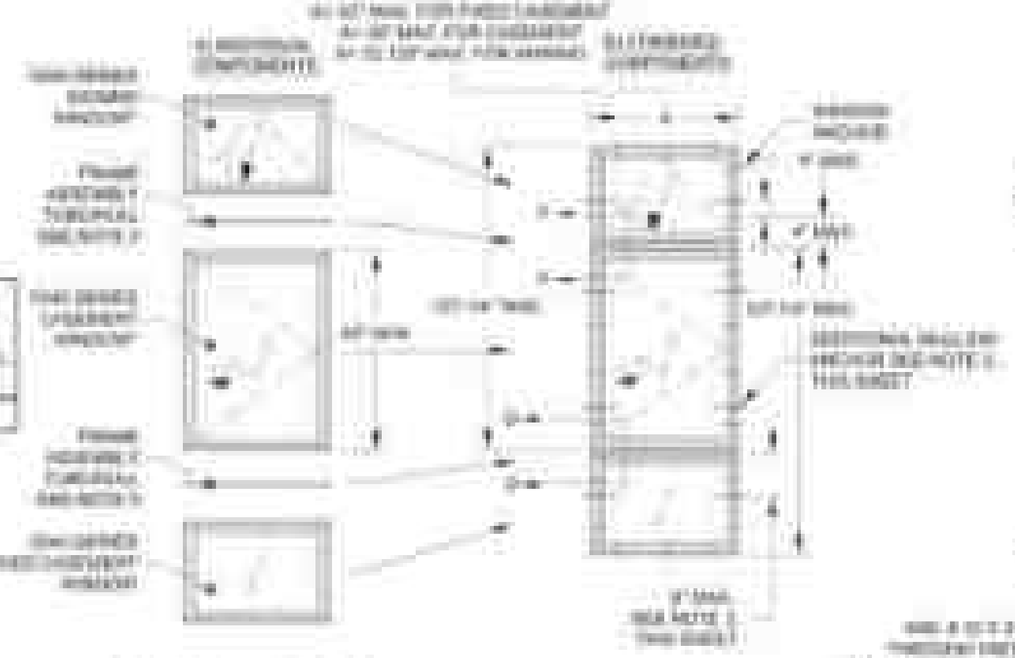
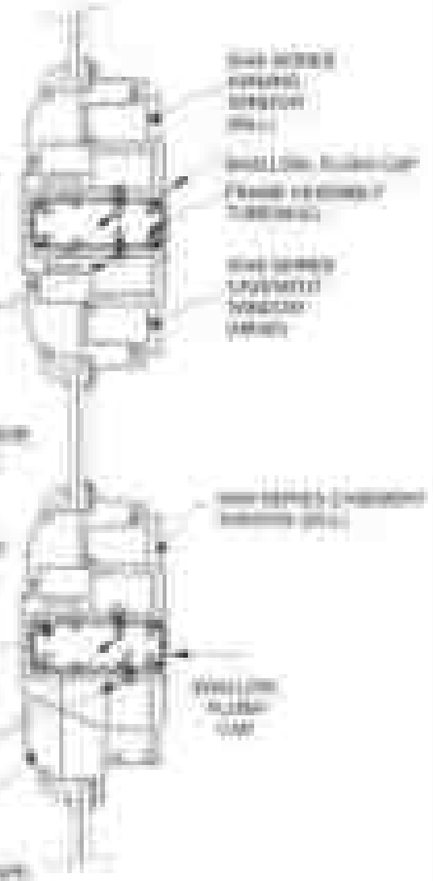
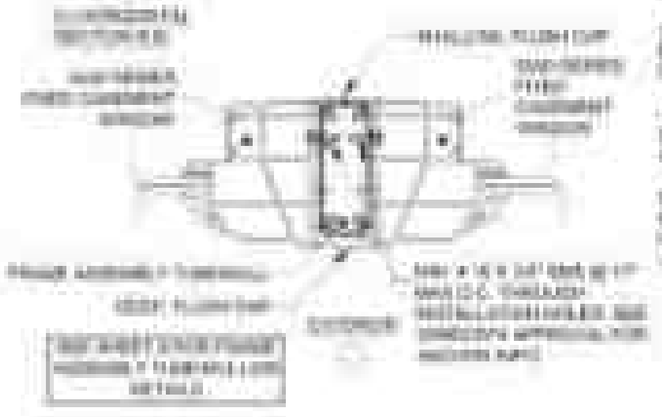


ILLUSTRATION OF AWNING-TO-CASEMENT-TO-FIXED CASEMENT (AXO)

(FLANGE FRAME WITH DIFFERENT MULL SERIES PRODUCTS COMBINED)







FRAME ASSEMBLY TUBE MULL NOTES: AUO SEE NEXT SHEET

1. DRAWINGS SHOWN ON THIS SHEET ARE EXAMPLES OF CONFIGURATIONS FOR ALL FRAME TYPES. ADDITIONAL CONFIGURATIONS SUCH AS WINDOW SIZE, TYPE, MAKE-UP, QUANTITY AND FRAME ASSEMBLY TUBE INSTALLATION FOR PERMISSIBLE FOLLOWING THE GUIDELINES OF THIS SHEET.

2. EACH MULLED SERIES CASEMENT UNDER DESIGNATE APPROVAL, AWNING UNDER ULTIMATE APPROVAL OR FIXED CASEMENT WINDOW MAY BE ATTACHED TO THE FRAME ASSEMBLY TUBE(S) AS MAY COMBINED TO THE DRAWING WITH LAST DIGIT FOR ALL WINDOWS IN THE ASSEMBLY. USE EACH WINDOW'S INDIVIDUAL APPROVAL FOR ANCHORAGE, SIZE AND DESIGN PRESSURE LIMITATIONS. THE LOWEST DESIGN PRESSURE OF THE WINDOWS OR FRAME ASSEMBLY TUBE(S) ALL APPLIES TO THE ENTIRE ASSEMBLY.

3. FOR ALL COMBINATIONS UNITS, ADDITIONAL ANCHOR LOCATIONS ARE REQUIRED TO BE INSTALLED THROUGH THE WINDOW FRAMES AS SHOWN ON THIS SHEET. ON EACH SIDE OF THE FRAME ASSEMBLY TUBE(S) ALL MULL ZONE FLANGE OR EQUAL DESIGN FRAMES FOR FIXED CASEMENT, FRAME ADDITIONAL ANCHORS ARE ONLY REQUIRED AS SHOWN ON SHEET 1.

4. FOR EQUAL OR UNEQUAL LEGGED FRAMES, THE FRAME ASSEMBLY TUBE TO BE FASTENED TO WINDOW AS SHOWN IN DETAILS WITH MIN. #10 X 3/4" SHEET METAL SCREWS AND THE SAME SPACING AND QUANTITY AS THE WINDOW WITH A LONG MULLED SIDE OR THAT PROVIDED APPROVAL UP TO 27 MAX. O.C. AND ADDITIONAL ANCHORS AS NEEDED. THE FRAME ASSEMBLY TUBE IS NOT REQUIRED TO BE CUPPED TO THE SUBSTRATE. ALL EXTERIOR JOINTS TO BE SEALED BY INSTALLER.

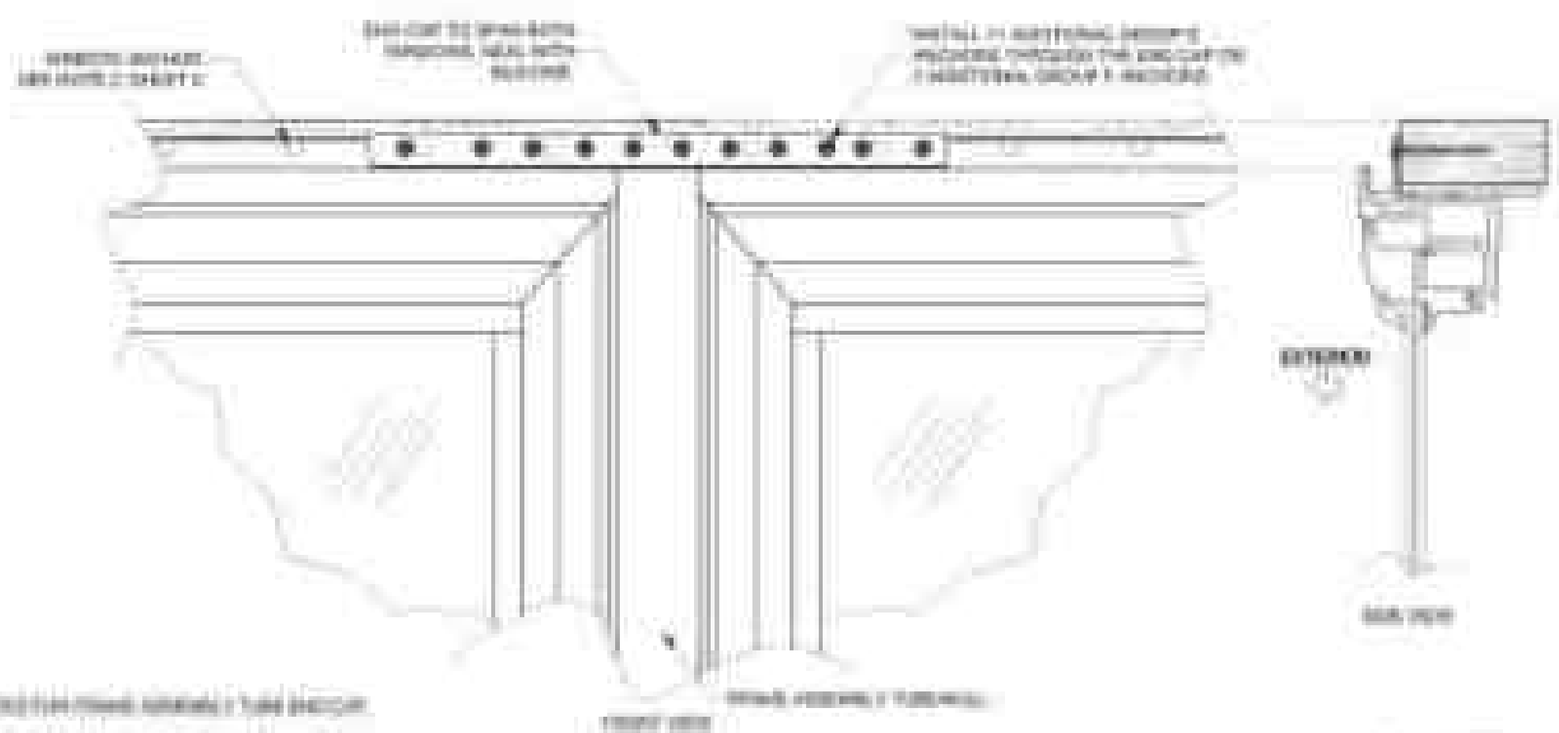
5. THE FRAME ASSEMBLY TUBE(S) ALL MAY NOT EXCEED 21'-6" LENGTH OR 96 AREA IN TYPE OR 4 MODE COMBINATIONS. THIS ASSEMBLY TUBE(S) MAY NOT EXCEED IN TOTAL OF 21'-6" OR 96 SQ FT. (WHICHEVER) FROM WINDOW BLOCK TO WINDOW BLOCK, INCLUDING THE FRAME ASSEMBLY TUBE(S) MULL.

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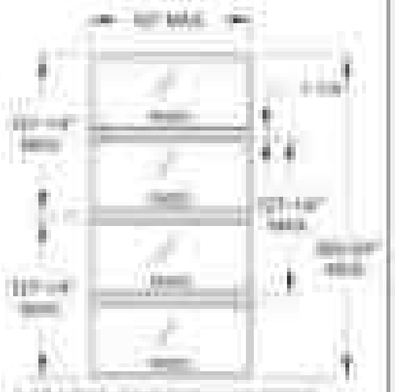
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VINYL FIXED CASEMENT WINDOW (LSK)	(SERIES)
FRAME ASSEMBLY TUBE DETAILS A	/ ROSCHER
PAN ISSUE	NOTE:	SCALE:	PROGRAM LAMA	E

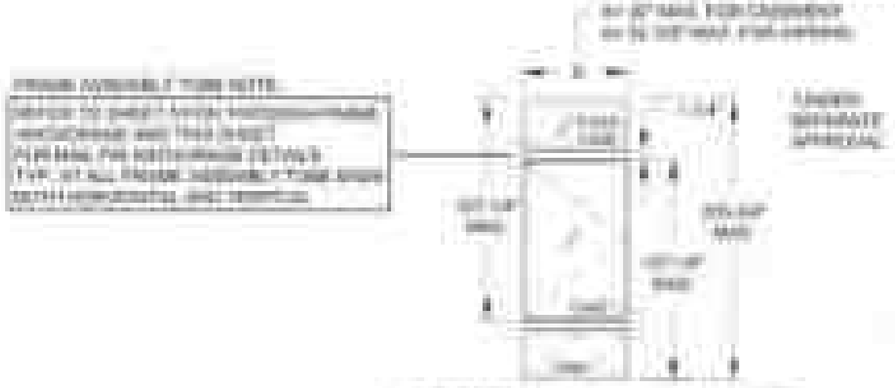
ILLUSTRATION OF END CAP USE WITH FIN AND J-CHANNEL FRAMES



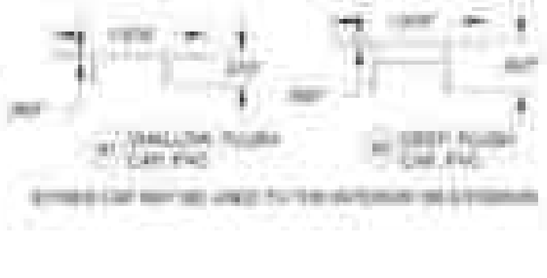


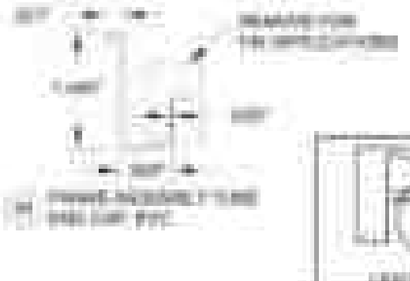












	VINYL FIXED CASEMENT WINDOW (LC60)			SHEET No.
	FRAME ASSEMBLY TUBE DETAILS III			/ ROSCHYSH
PAY ITEMS	NOTES	SHEET No.	PROGRAM LAMA	III

LEAD OF AUTH ROSH

1975 TECHNOLOGY DRIVE
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TABLE 1

Window Design Pressure, (+/- psf)

Window Dimensions	Long Side (in)											
	Min Size	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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Min Size	[illegible]											

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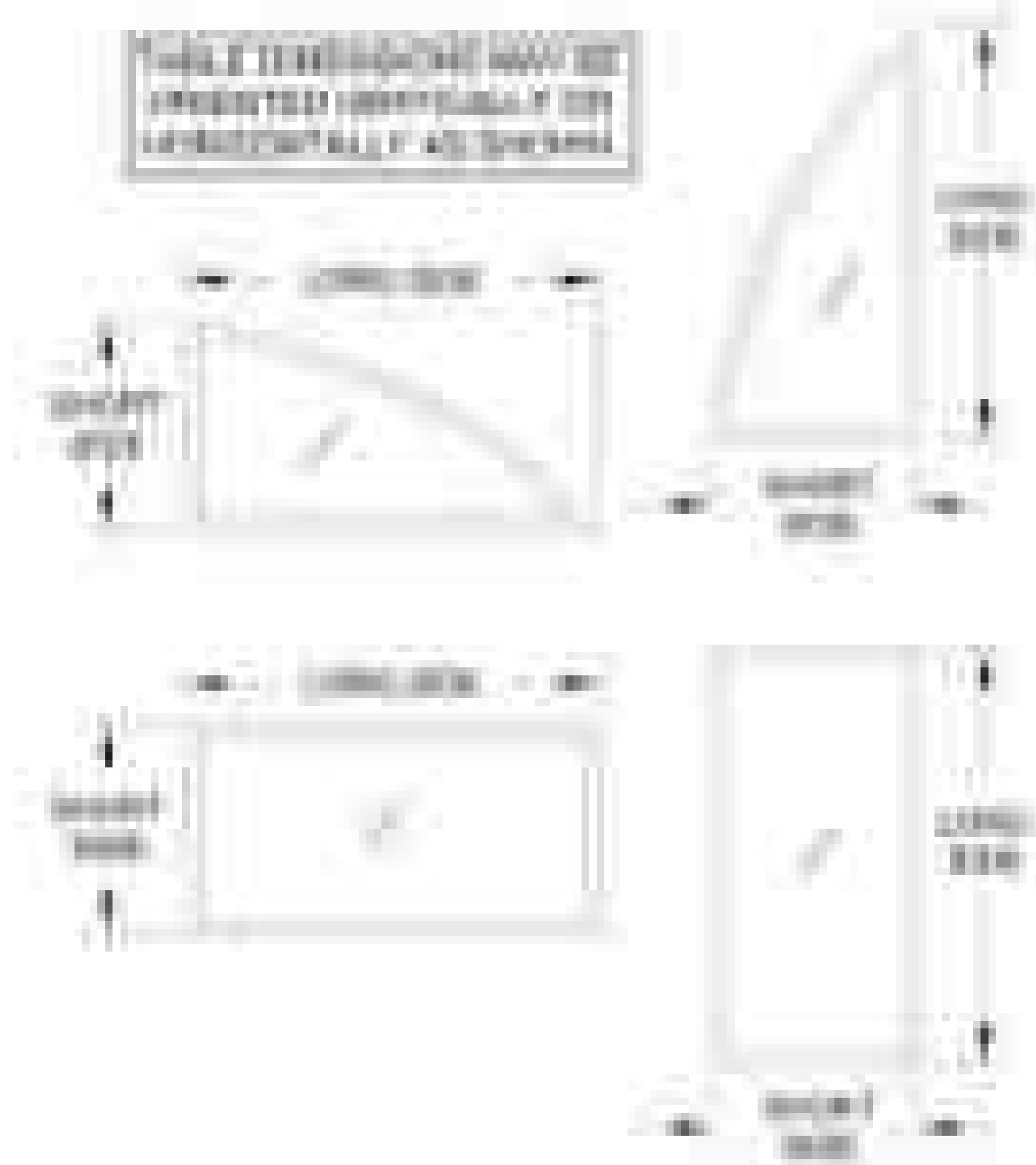
TABLE 2

Window Design Pressure, (+/- psf)

Window Dimensions	Long Side (in)											
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Min Size	[illegible]											

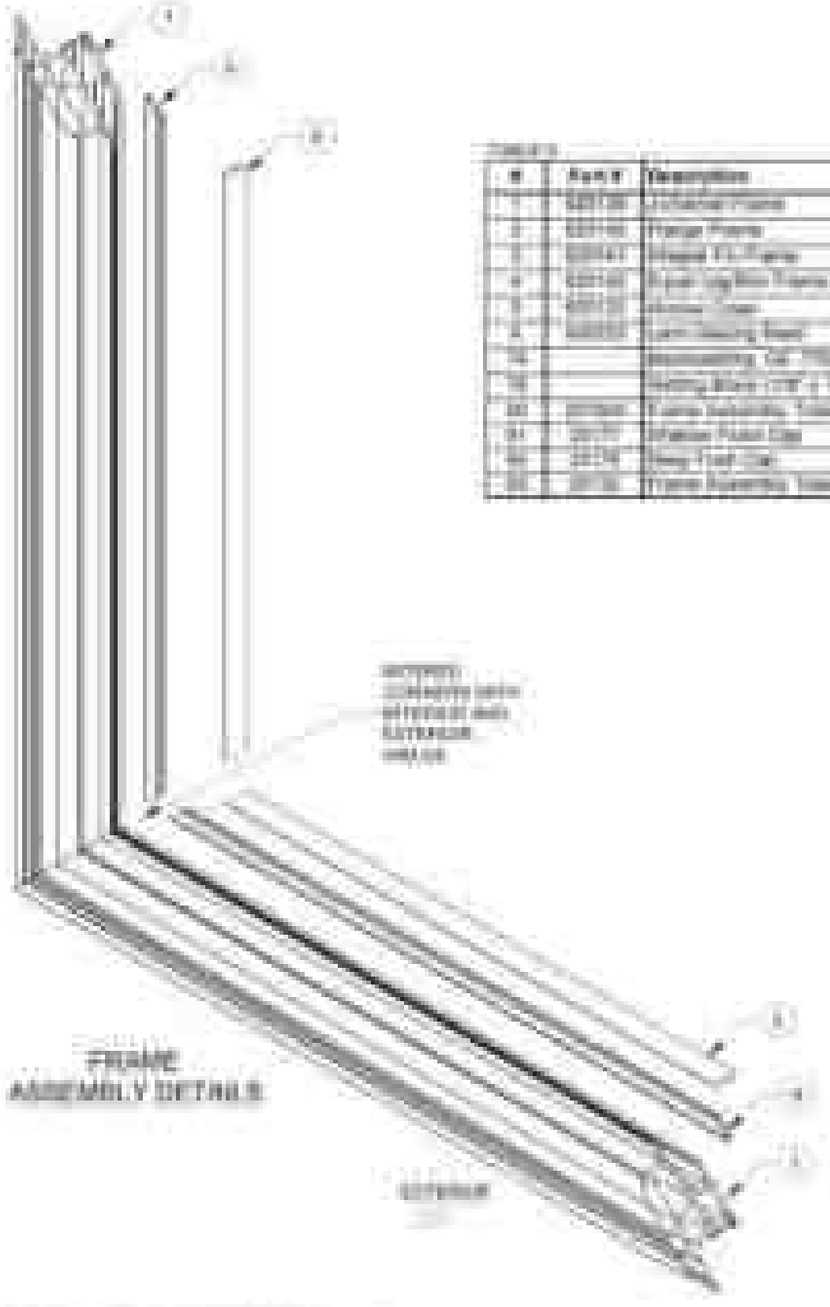
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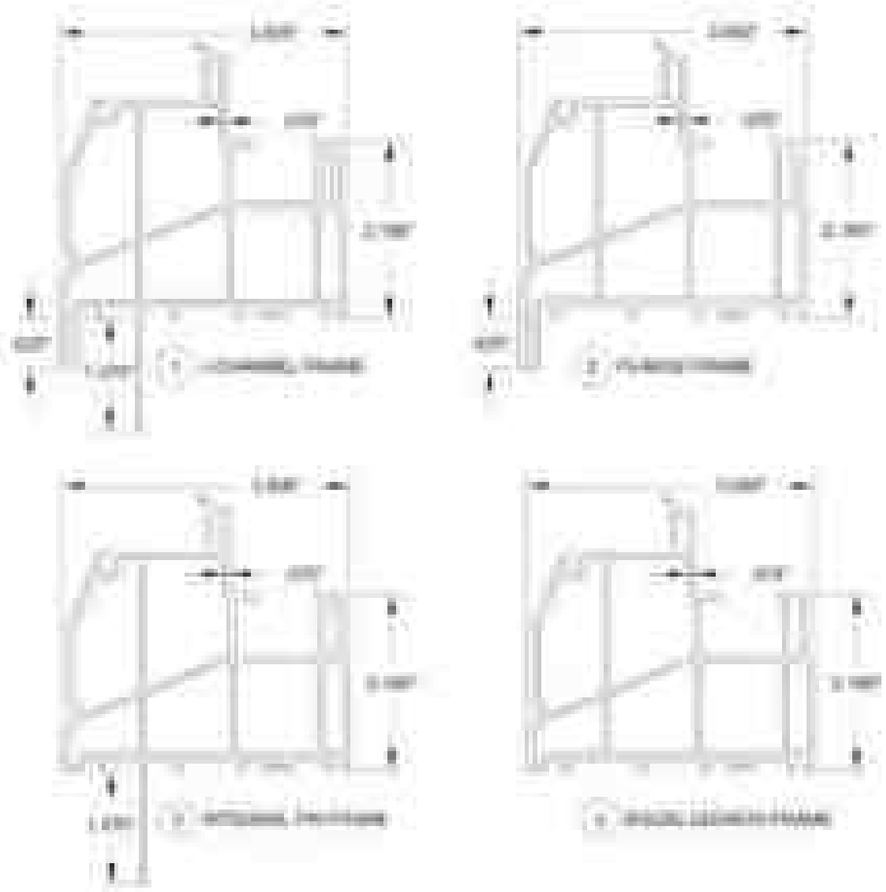
NOTES:

[illegible]



FRAME
ASSEMBLY DETAILS

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4	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]
7A		[illegible]	[illegible]
7B		[illegible]	[illegible]
8A	[illegible]	[illegible]	[illegible]
9A	[illegible]	[illegible]	[illegible]
9B	[illegible]	[illegible]	[illegible]
10A	[illegible]	[illegible]	[illegible]





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1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	BOM & ASSEMBLY		/ ROSEWIND
	PRV. ISSUE	NOTE	SHEET #	PROGRAM	