Engineering Evaluation Report # DH5560-20200909

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:
DH5560 Series Impact-Resistant Vinyl Double Hung Window, (LMI), FL-29704

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).

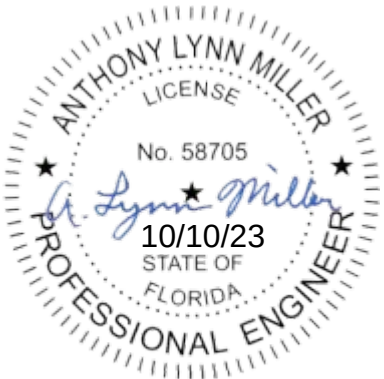
Supporting Technical Documentation:
1. Approval Document: Drawing number DH5560 LAMI, signed and sealed by A. Lynn Miller, P.E.
2. Test Report No.: FTL-8006, FTL-8007, FTL 19-9037 & 20-2107.1-4, signed and sealed by Idalmis Ortega, P.E. Fenestration Testing Laboratories, Medley, FL 33166

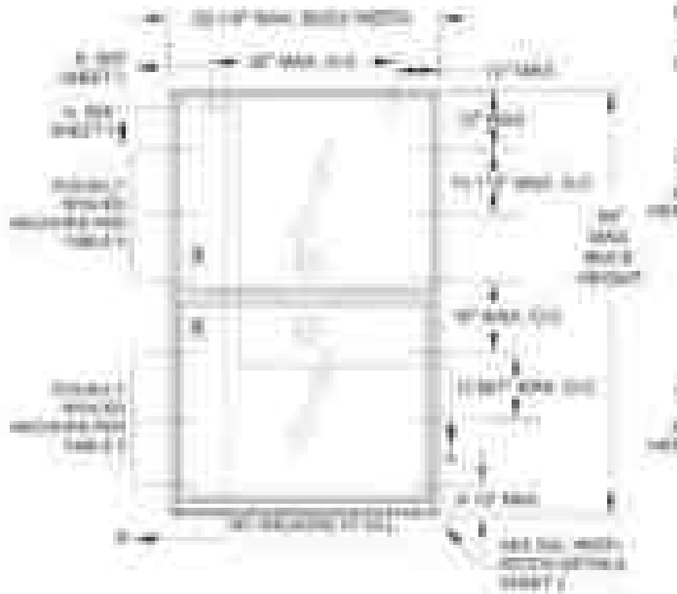
TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Calculations, signed and sealed by A. Lynn Miller, P.E., dated 07/30/15 & 3/13/20.

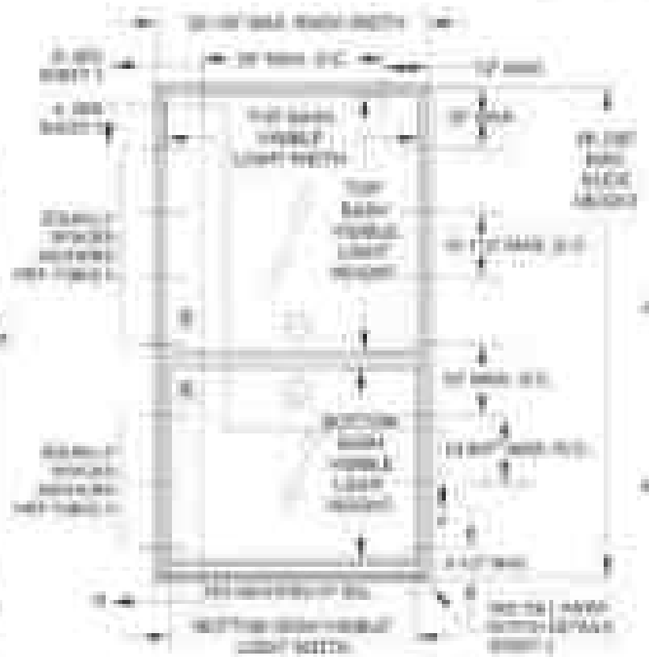
4. Miami-Dade RER Product Control Section NOA’s; PVB Interlayer by Kuraray America, Inc.

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, DH5560 LAMI.

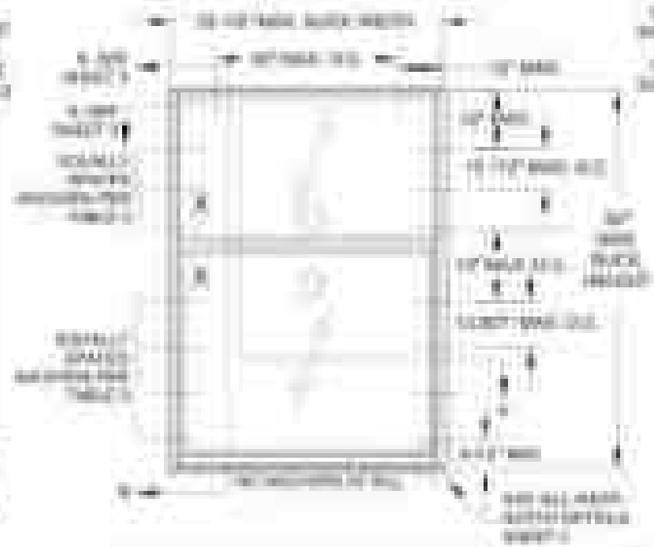




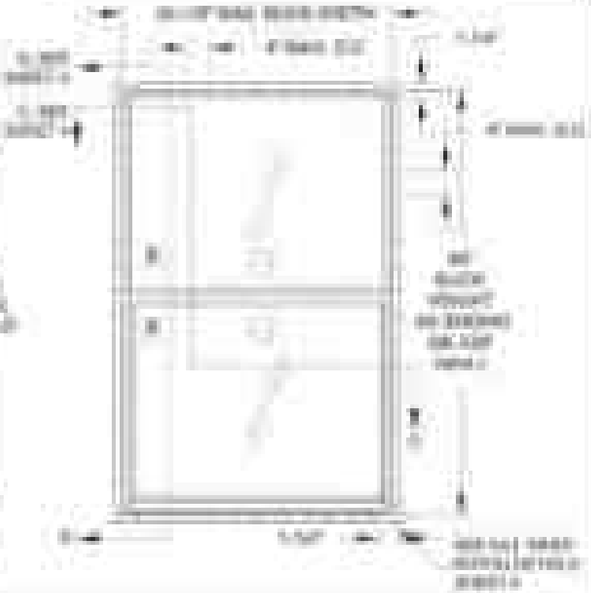
ELEVATION FOR TYP. EQUAL LEG FRAME
SHOWN WITH EQUAL LITE CONFIGURATION



ELEVATION FOR TYP. FLANGE FRAME
SHOWN WITH OXBOW/OXBOW CONFIGURATION



ELEVATION FOR TYP. FLANGE FRAME
SHOWN WITH STANDARD COTTAGE CONFIGURATION



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME
SHOWN WITH EQUAL LITE CONFIGURATION
ANCHORED THROUGH THE SAIL # 8N

SERIES 1000 IMPACT RESISTANT DOUBLE HUNG WINDOW

USER INSTRUCTIONS

GENERAL NOTES & ELEVATIONS	1
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1070 TECHNOLOGY DRIVE
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SERIES 1000 DOUBLE HUNG WINDOW (DH)					DESIGN PR
GENERAL NOTES & ELEVATIONS				J. ROSCHMANN	
UPDATED TITLE BLOCK - JR - 10/10/23					
DH-1000	NOTE	1 OF 10	DWGNO-1.dwg		B

TABLE 1: ALLOWABLE GLASS TYPES

Glass Type	Description	Tables #	Sheet #
1	7/16" Lami (3/16" A - .090" PVB - 3/16" A)	4	6
2	7/16" Lami (3/16" A - .090" PVB - 3/16" A)	4	6

NOTES:
1. ANNEALED
2. [illegible]
3. [illegible]
   BY NORDISTA AMERICA, INC.

FIGURE 1: FRAME CONFIGURATIONS

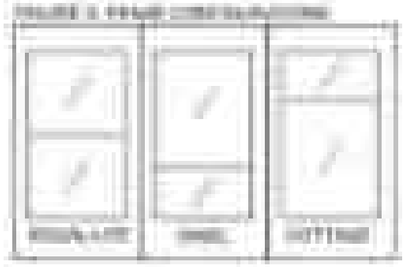


FIGURE 2: FRAME TYPES

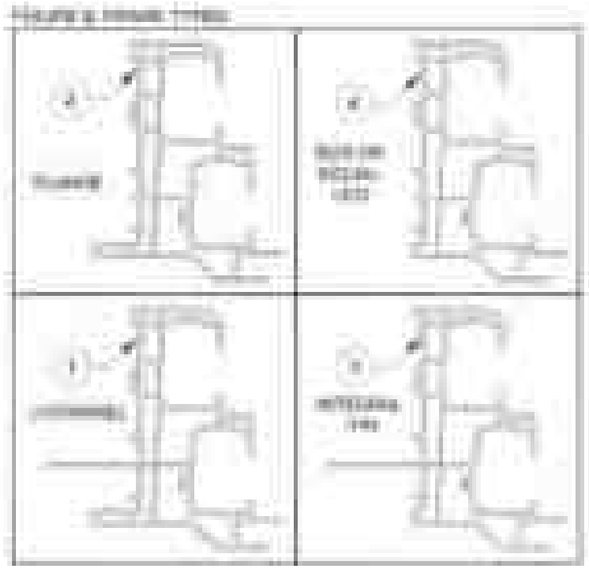


TABLE 2: ALLOWABLE ANCHORS THROUGH VINYL FRAME

Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment*
A	#10 (.190") Aluminum Bulb Type	6" Southern Pine (SG=.55)	3/8"	1 1/2"
	#10 (.190") Stainless Steel Pan Head Screw	6" Southern Pine (SG=.55)	1/2"	1 1/2"
		Aluminum, 6061-T6	1/8"	1 1/4"
		Steel, 33 ksi	1/8"	1 1/4"
		Steel, 4.5K	1/8"	1 1/4"
B	#8 (.164") Stainless Steel Pan Head Screw (ASTM F593, Alloy Group 1 or 2)	6" Southern Pine (SG=.55)	5/16"	1 1/4"
		Aluminum, 6061-T6	1/8"	1 1/4"
		Steel, 33 ksi	1/8"	1 1/4"
		Steel, 4.5K	1/8"	1 1/4"

*MIN. EMBED. IS THREADED DEPTH INTO THE METAL SUBSTRATE. FOR STEEL STUDS USE MIN. #8 (.164") SCREW & MIN. 33 KSI STEEL. ALL HEAD TYPES ARE ACCEPTABLE.

TABLE 3: ALLOWABLE ANCHORS THROUGH FIN INTEGRAL FIN

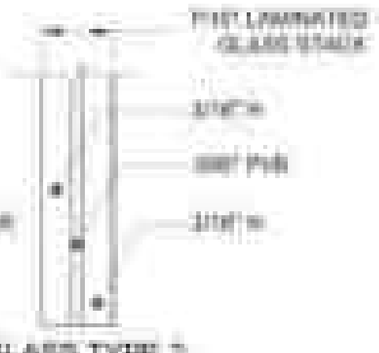
Group	Anchor	Substrate	Min. Edge Distance	Min. Embedment*
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	#10 (.190") Stainless Steel Pan Head Screw (ASTM F593, Alloy Group 1 or 2)	6" Southern Pine (SG=.55)	1/2"	1 1/2"
		Aluminum, 6061-T6	1/8"	1 1/4"
		Steel, 33 ksi	1/8"	1 1/4"
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*MIN. EMBED. IS THREADED DEPTH INTO THE METAL SUBSTRATE. FOR STEEL STUDS USE MIN. #8 (.164") SCREW & MIN. 33 KSI STEEL. ALL HEAD TYPES ARE ACCEPTABLE.

NOTES:
1. SEE TABLE 2 FOR APPROPRIATE ANCHORS LISTED ON TABLES 4 & 5. TYPE SPACING, EDGE DISTANCE AND EDGE DISTANCE LIMITS MAY BE USED ON ANY SIDE OF THE WINDOW.



GLASS TYPE 1



GLASS TYPE 2



TYP. GLAZING DETAIL

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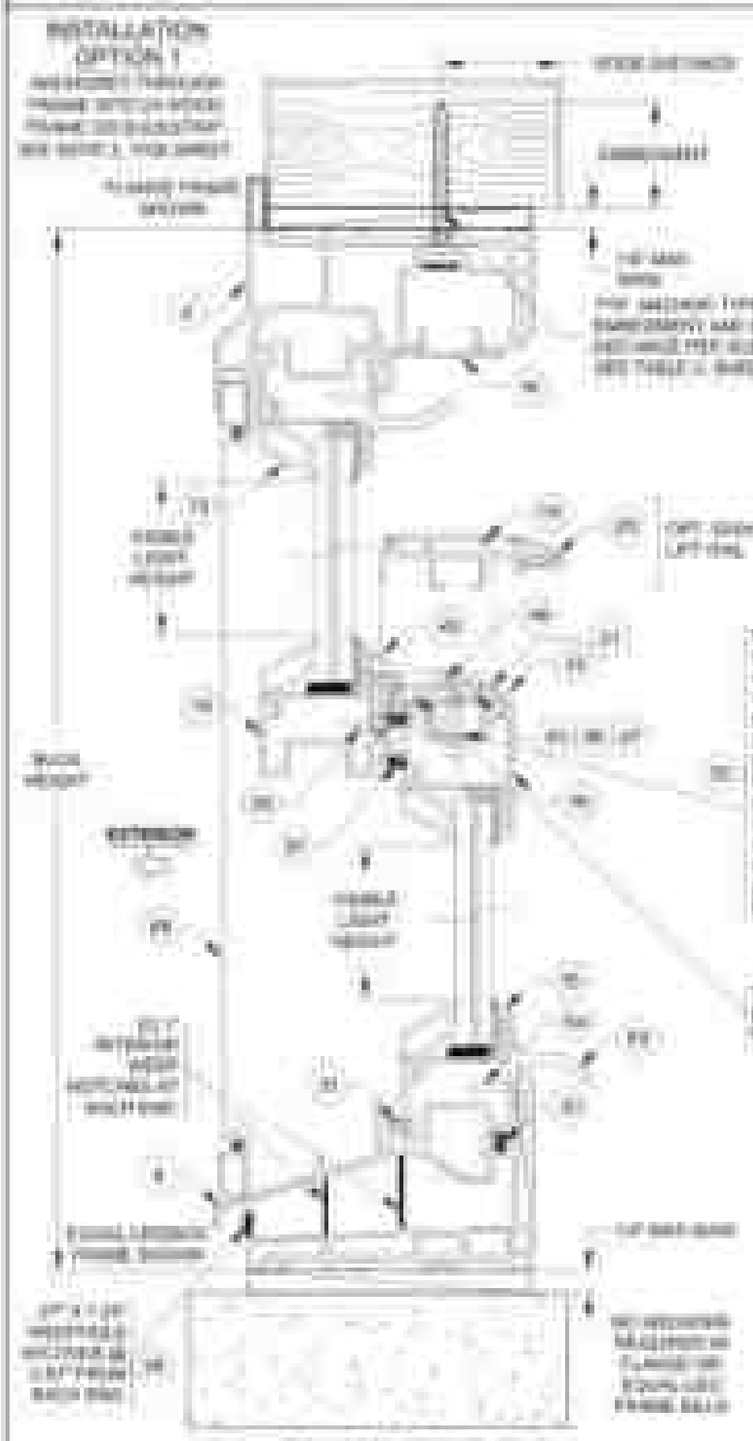
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VINYL DOUBLE HUNG WINDOW (UM)				06/04/15
GLASS AND HORIZONTAL RAIL OPTIONS				/ ROSSOVISH
DH-6080	NTS	9 OF 10	DH6080-UM06	B

PRODUCT APPROVAL
No. 15010
STATE OF FLORIDA
DEPARTMENT OF
BUSINESS AND
PROFESSIONAL REGULATION

INSTALLATION DETAILS FOR FLANGE & EQUAL-LEG/BOX FRAMES

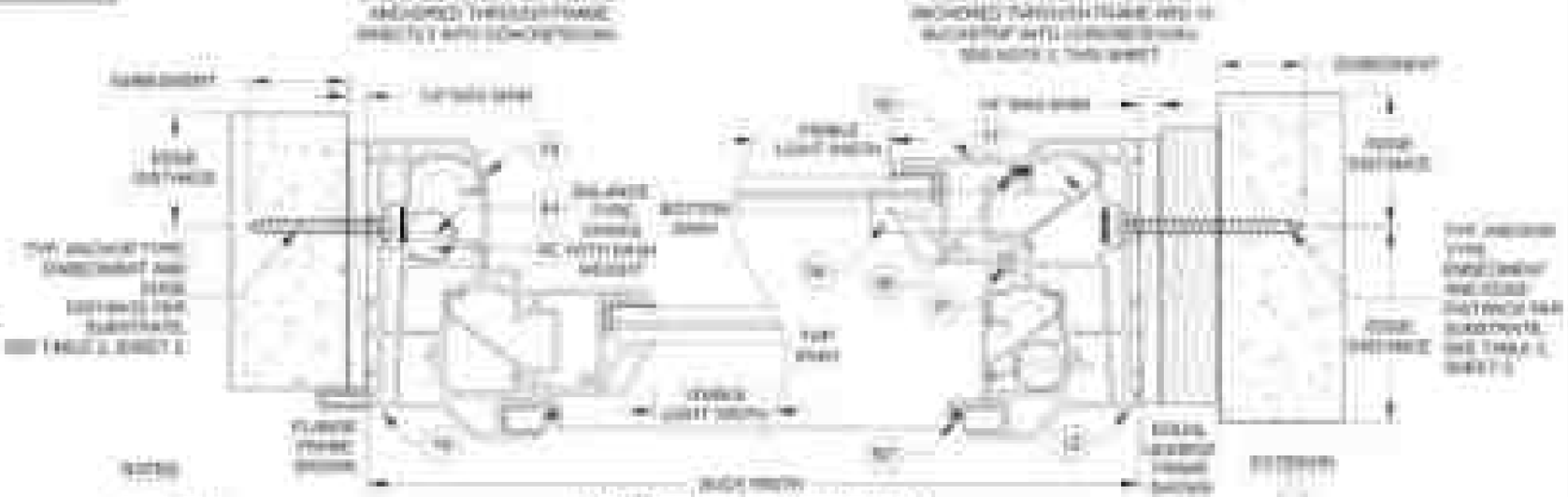
INSTALLATION OPTION 1



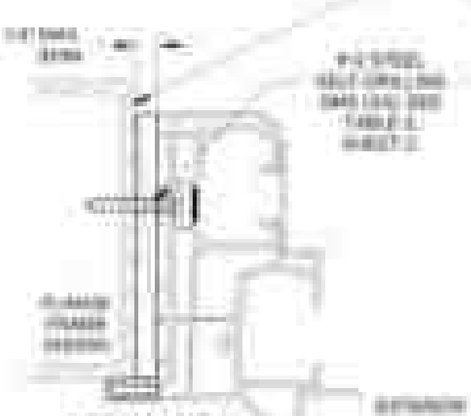
VERTICAL SECTION B-B

INSTALLATION OPTION 2

INSTALLATION OPTION 3



HORIZONTAL SECTION A-A



INSTALLATION OPTION 4



INSTALLATION OPTION 4

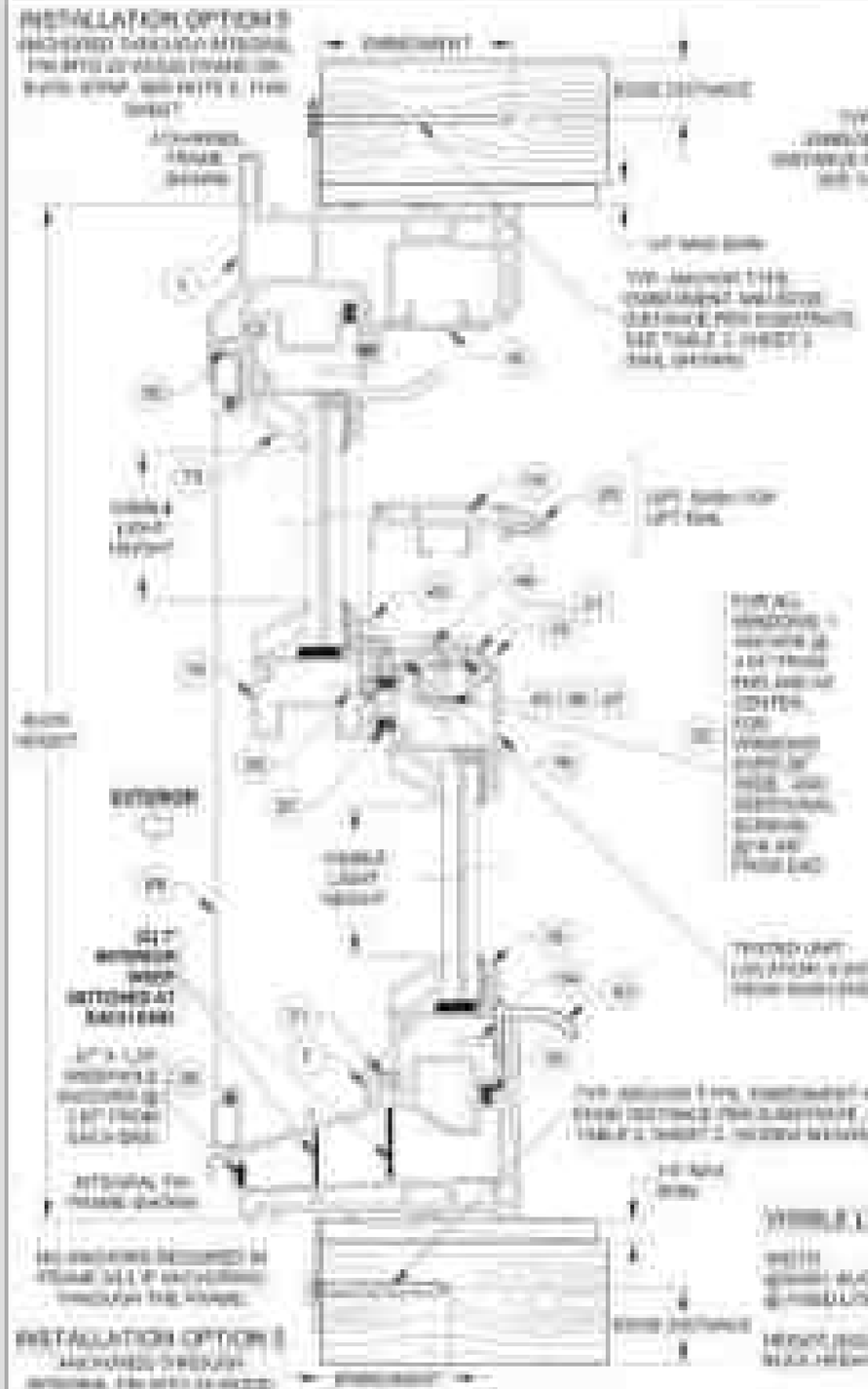
VISIBLE LIGHT FORMULAS

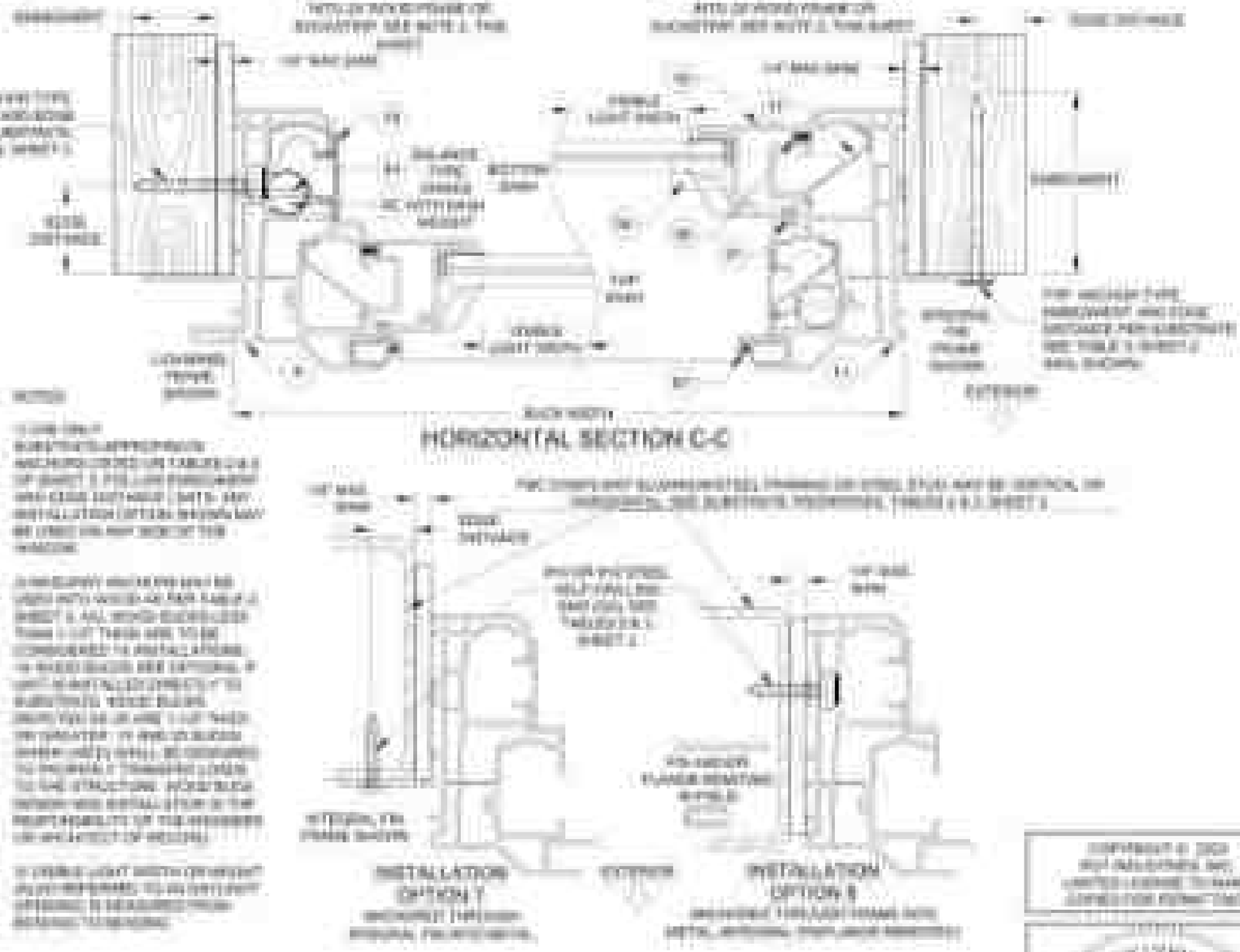
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VINYL DOUBLE HUNG WINDOW (LM)	SERIES 70
FLANGE & EQUAL LEG/BOX FRAMES	ROSEWOOD
DRAWING NO.	NOTE
SHEET NO.	3 OF 10
DRAWING NAME	B

INSTALLATION DETAILS FOR INTEGRAL FIN & J-CHANNEL FRAMES

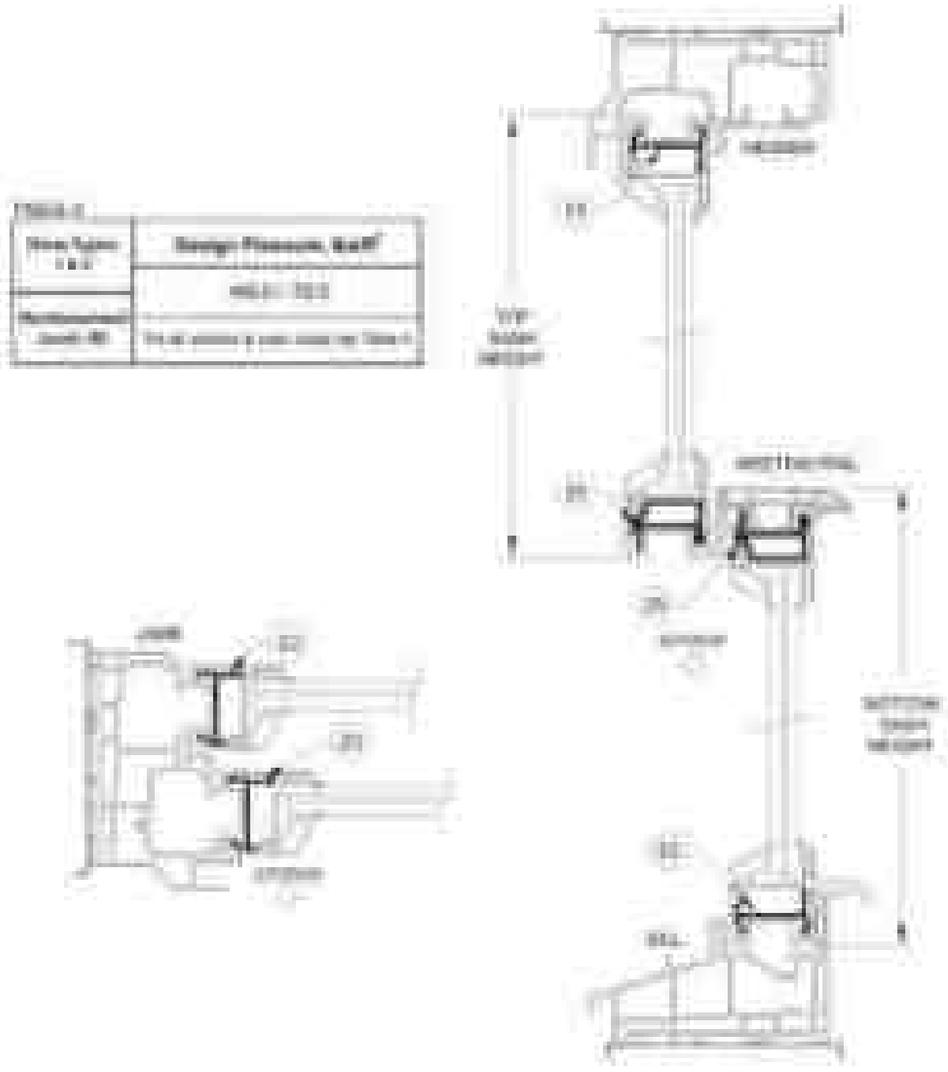




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VINYL DOUBLE HUNG WINDOW (LM)				06/04/15
J-CHANNEL & INTEGRAL FIN FRAMES				/ WD5DH5IN
DH-5060	NTS	4 OF 10	DH5060-LM08	B



SECTION DETAIL FOR WINDOWS WITH
LEVEL R2 REINFORCEMENT
(REINFORCEMENT SHOWN IN HIGHLAND)
NOTE: APPLY TO ALL FRAME TYPES &

NOTES:

1. USE TABLE 1 FOR ALL WINDOWS INSTALLED THROUGH THE HOMEOWNER PA-
2. FRAME DIMENSIONS ARE BLOCK. MASH HEIGHT & LEGEND THE FIGURE
3. FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION SHOWN ON THE TABLE

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VINYL DOUBLE HUNG WINDOW (DH)				SERIES 70
DESIGN PRESSURES & GLAZING				J WOODGRAIN
DH-0060	NTS	5 OF 10	DH0060-L-R68	B

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FLORIDA PRODUCT APPROVAL
STATE OF FLORIDA

Table 3

Anchorage Requirements
"Designated" Installation

Maximum Unit Design Pressure (psf)	Minimum Number of Anchors Required per Frame	Minimum Total Anchor Strength (lbs)
15		
20		
25		
30		
35		
40		
45		
50		
55		
60		
65		
70		
75		
80		
85		
90		
95		
100		
105		
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410		
415		
420		
425		
430		
435		
440		
445		
450		
455		
460		
465		
470		
475		
480		
485		
490		
495		
500		

* MIN. ANCHOR STRENGTH = MAXIMUM WIND PRESSURE x AREA

NOTES:

1) USE THE ABOVE MINIMUM QUANTITIES REQUIRED ..... TABLE FOR ANCHORS INSTALLED THROUGH THE FRAME

2) USE THE ABOVE TABLE ONLY WHEN (I.E. SPACING) ..... TABLE FOR ANCHORS INSTALLED THROUGH THE INTERIOR FIN

3) POWER DRIVEN RIVETS ARE ALSO ACCEPTABLE FASTENERS.

4) FOR ASSEMBLIES SHOWN ABOVE UP TO THE MOST VULNERABLE WIDTH OR HEIGHT COMBINATION SHOWN ON THE TABLE.

5) REFER TO TABLE 2.1.2.1, SECT. 2.1.2 FOR ANCHOR DESIGN SPECIFICATIONS

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VINYL DOUBLE HUNG WINDOW (LM)

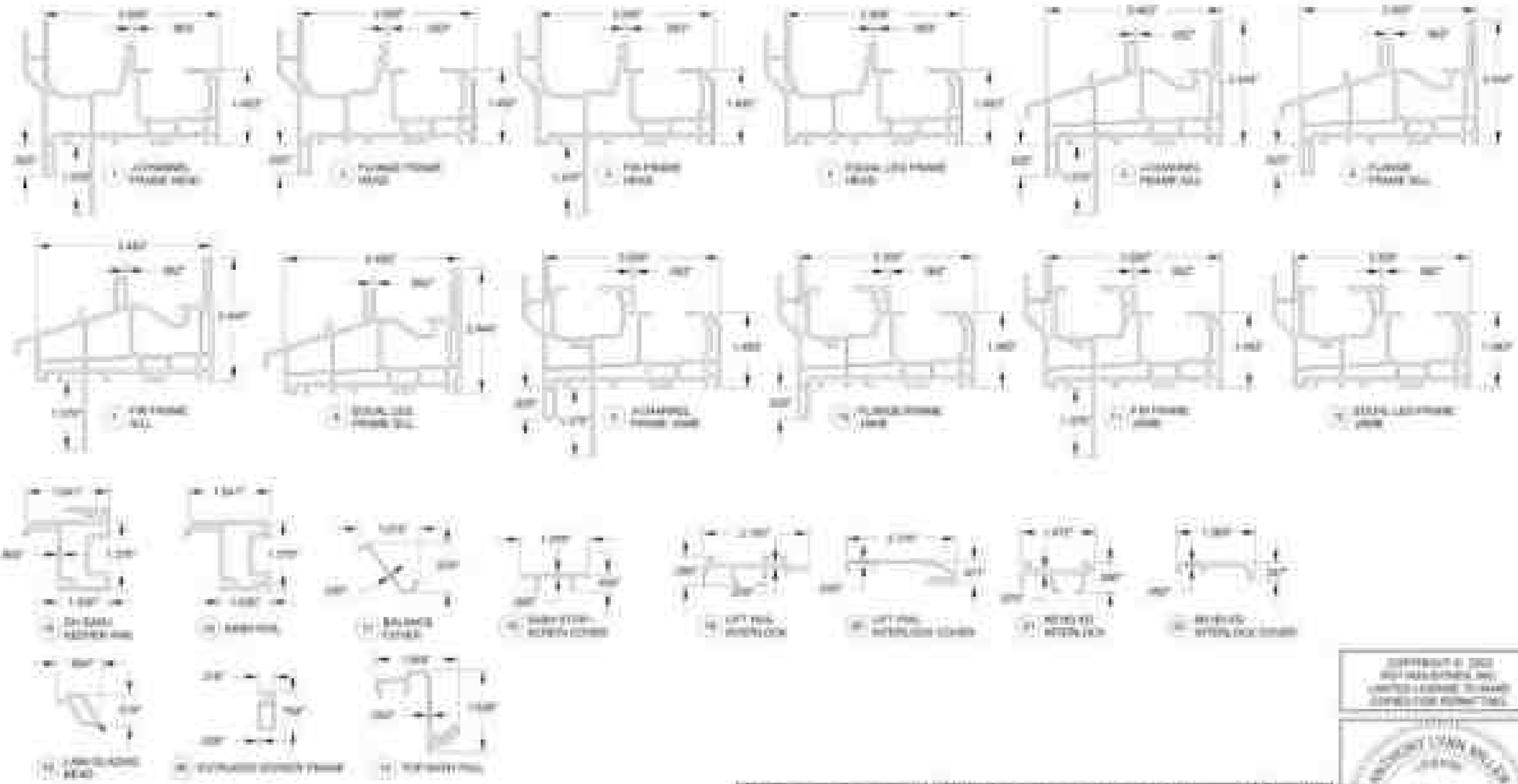
ANCHOR QUANTITY TABLE

DRAWING NUMBER

SCALE

SHEET NO.

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VINYL DOUBLE HUNG WINDOW (LHS) | SHEET 5
WINDOW EXTRUSIONS | 1 / ROSEWIND
DH-5060 | NTS | 7 OF 10 | DH5060-LHS | B

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Table 1

Bill of Materials

#	Part #	Description	Material
1	[illegible]	Frame Main - 2 Channel	[illegible]
2	[illegible]	Frame Main - Flange	[illegible]
3	[illegible]	Frame Main - Pin	[illegible]
4	[illegible]	Frame Main - Cord Captive	[illegible]
5	[illegible]	Frame Sill - 2 Channel	[illegible]
6	[illegible]	Frame Sill - Flange	[illegible]
7	[illegible]	Frame Sill - Pin	[illegible]
8	[illegible]	Frame Sill - Cord Captive	[illegible]
9	[illegible]	Frame Jamb - 2 Channel	[illegible]
10	[illegible]	Frame Jamb - Flange	[illegible]
11	[illegible]	Frame Jamb - Pin	[illegible]
12	[illegible]	Frame Jamb - Cord Captive	[illegible]
13	[illegible]	Top Sash Pull (qty.)	[illegible]
14	[illegible]	Keeper Pad	[illegible]
15	[illegible]	Check Rail (Sizes, Top & Bottom)	[illegible]
16	[illegible]	Subsill Dam	[illegible]
17	[illegible]	Sash Weatherstrip Gasket	[illegible]
18	[illegible]	Lift Rail Interlock	[illegible]
19	[illegible]	Lift Rail Interlock Cover	[illegible]
20	[illegible]	Sweep Interlock	[illegible]
21	[illegible]	Screen Interlock Strap	[illegible]
22	[illegible]	Lower Sash Reinforcement	[illegible]
23	[illegible]	Tilt Latch Reinforcement	[illegible]
24	[illegible]	Weatherstrip, 180° x .220" Fin Flex	
25	[illegible]	Weatherstrip, 180° x .220" Foam Seal	
26	[illegible]	Weatherstrip, 180° x .220" PBT/PM	
27	[illegible]	Weatherstrip Plug .687" PP/EPDM	
28	[illegible]	#8 x 1" Pan, 410 SS Hookjack Mounting Screw	SS
29	[illegible]	Vinyl Hole Cover	PVC
30	[illegible]	Tilt Latch Reinforcement Clip	Steel
31	[illegible]	Sweep Pile Material	
32	[illegible]	#8 x 1/2" PK F/I SMS Zinc Pozi Pan Subsill Screw	SS
33		Spacer Balance	
34	[illegible]	Subsill Balance Shoe	Nylon
35	[illegible]	#8 x 1-1/2" PK F/I SMS (Sash Balance Screw)	SS
36	[illegible]	Sash Lock Mechanism	Zinc Alloy
37	[illegible]	Sweep Lock	Cast Zinc
38	[illegible]	Adjustable Check Restrictor	Cast Zinc
39	[illegible]	#8 x 1-1/2" PK F/I #20 (Hook/Sweep Lock Screw)	SS

Table 1 (cont.)

Bill of Material (cont.)

#	Part #	Description	Material
40	[illegible]	Tube and Pulley Lock Assembly	Cast Zinc
41	[illegible]	#8 x 3/4" PK F/I #20 (Keeper Screw)	SS
42	[illegible]	Sweep Tilt Latch Corner Key	PVC
43	[illegible]	Sash Bar Tilt Latch Corner Key	PVC
44	[illegible]	#8 x 1-1/4" PK F/I SMS (Pan Flat & Oval Latch Screw)	SS
45	[illegible]	Tilt Latch	PVC
46	[illegible]	Tilt Latch Retainer	PVC
47	[illegible]	Sill Corner Fitting	PVC
48	[illegible]	Sweep Tilt Latch Finger Kit	PVC
49	[illegible]	Sash Tilt Latch Finger Kit	Cast Zinc
50	[illegible]	Sash Bar Corner Key (Top & Bottom Sash)	PVC
51	[illegible]	Pivot Bar Top & Bottom Sash	SS
52	[illegible]	Tilt Sash Fill Latch (Left)	PVC
53	[illegible]	#8 x 1/2" PK F/I SMS (Tilt Latch Fillister Pan Head Screw)	SS
54	[illegible]	Latch Pull Handle (set)	Cast Zinc
55	[illegible]	#8 x 1/2" PK F/I SMS (Pull Handle Screw)	SS
56	[illegible]	Jamb Top Cap Right	PVC
57		Counterbalance, DC 7150 in Dbl. Hung 90"	Spring
58		Balance Shoe, DH 4 1/2" x 4"	Nylon
59	[illegible]	Serrated Screen Frame	Alloy
60	[illegible]	Screen Corner Bar	Alloy
61	[illegible]	Screen Clamp Bar for Extrusion Frame	Alloy
62	[illegible]	Screen Corner Bar	Alloy
63	[illegible]	Screen Cloth	Fiberglass
64	[illegible]	#8 Screen Cloth Retainer Rail Rubber	Vinyl

NOTES:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]

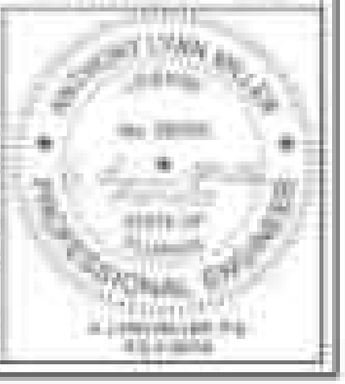
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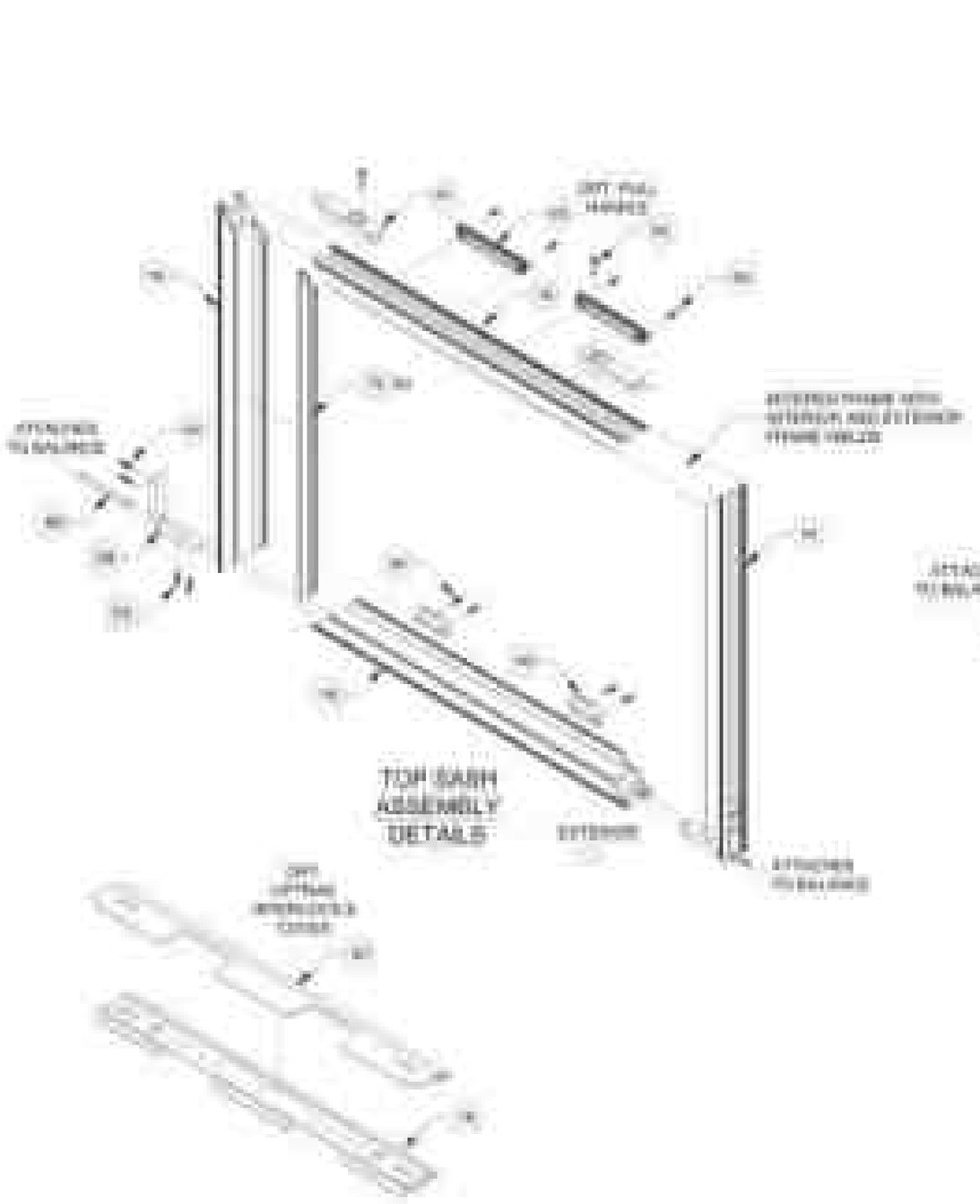
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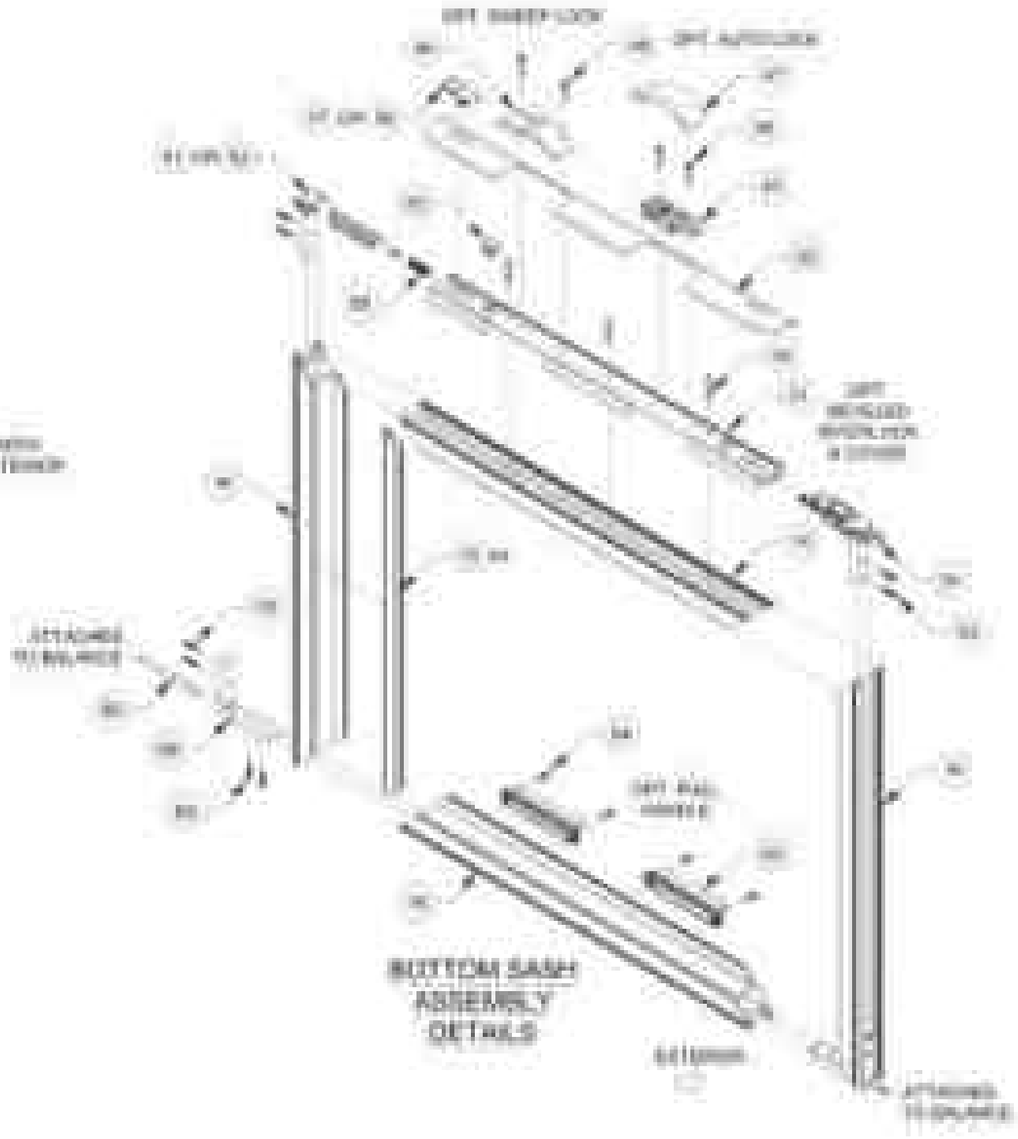
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VINYL DOUBLE HUNG WINDOW (LHS)				07/08/19
BOM			/ ROSEWIN	
DH-5060	NTS	9 OF 10	DH5060-LHS	B

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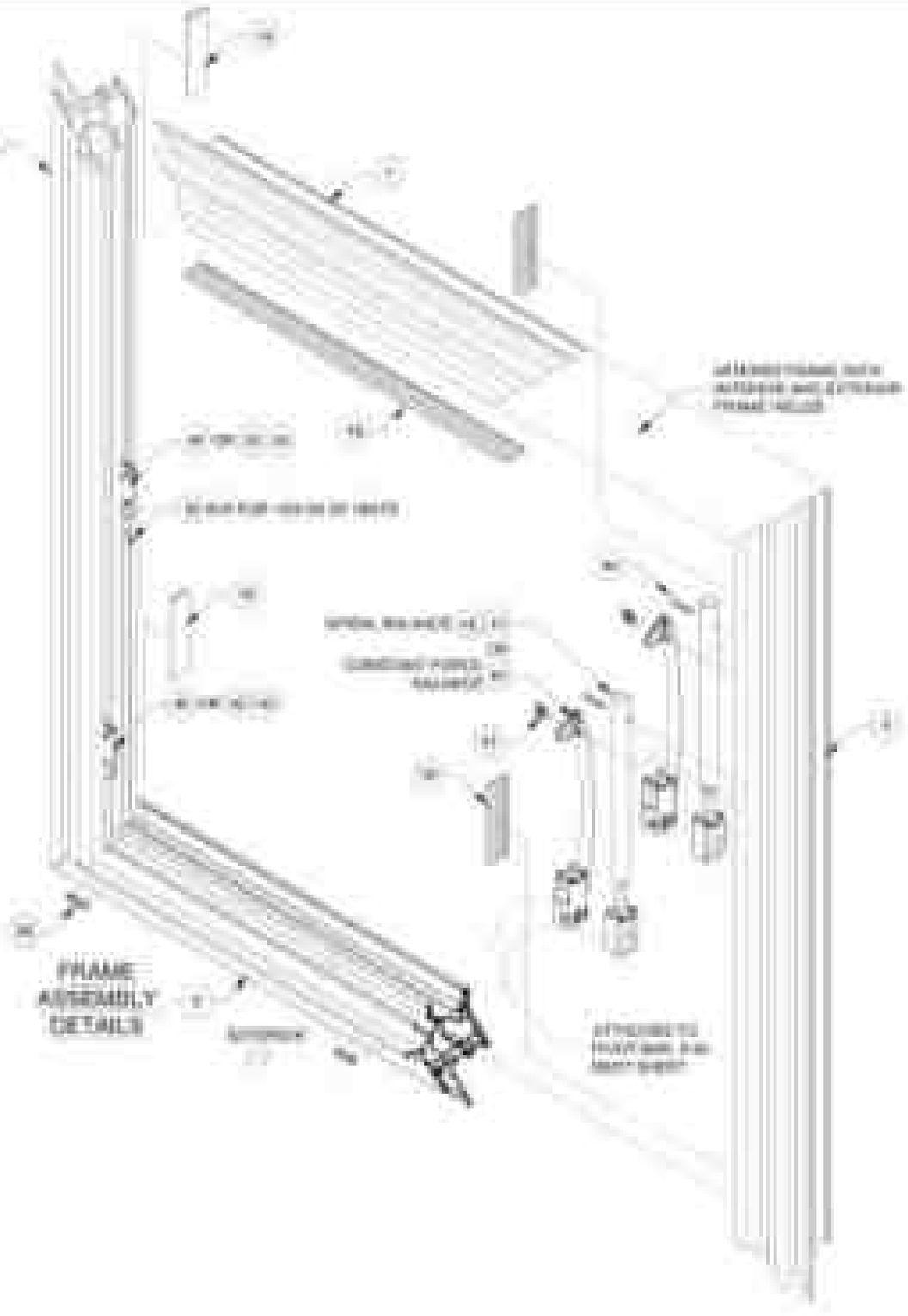




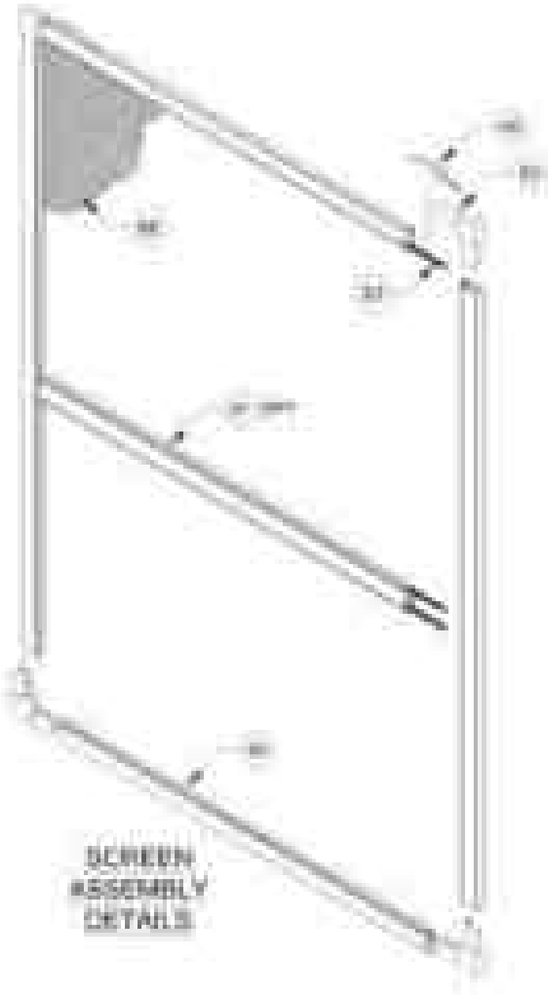
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VINYL DOUBLE HUNG WINDOW (LHS)				06/06/19
SASH ASSEMBLIES				/ ROSCHMAN
DH-6068	NTS	9 OF 10	DH6068-LHS	B



FRAME ASSEMBLY DETAILS



SCREEN ASSEMBLY DETAILS

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VINYL DOUBLE HUNG WINDOW (LM)

FRAME & SCREEN ASSEMBLY

/ WOODGRAIN

DH-6060 | NTS | 10 OF 10 | DH6060-LM08 | B

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