Engineering Evaluation Report # 8100-012825

Prepared by:
A. Lynn Miller, P.E.
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(941) 480-1600
Registration Number: #29296

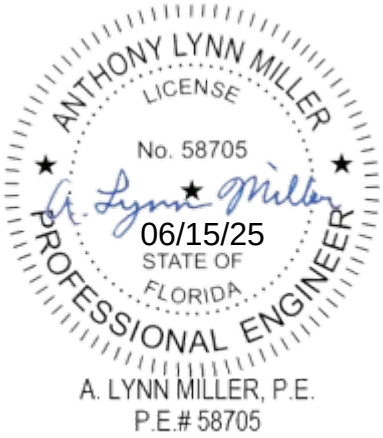
Manufacturer:
WinDoor, LLC
104 Triple Diamond Blvd.
North Venice, FL 34275
(833) 554-5432

Product Description:
8100 Ultra-Narrow Series Aluminum, Large Missile Impact Resistant, HVHZ Sliding Glass Door – FL16755

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 8100FPA-LM-5, signed and sealed by A. Lynn Miller, P.E., signed 06/15/25
2. Anchor & Comparative Analysis Calculations, prepared, signed and sealed by A. Lynn Miller, P.E., signed 06/15/25
3. Test Report No.:
   a. NOK 0111, signed and sealed by Idalmis Ortega P.E.; QAI Laboratories, Nokomis, FL.
      TAS 201-94, TAS 202-94, TAS 203-94

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 and panel material to be extruded aluminum 6063-T6.
- Units must be installed in accordance 06/15/25with Approval Documents.



SERIES SGD8100A ULTRA-NARROW, IMPACT-RESISTANT, 2, 3, 4 & 5 TRACK SLIDING GLASS DOOR

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

2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.

3) ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.

4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO (USE ANCHORS OF SUFFICIENT LENGTH). ANCHORS AND FRAME CORNERS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

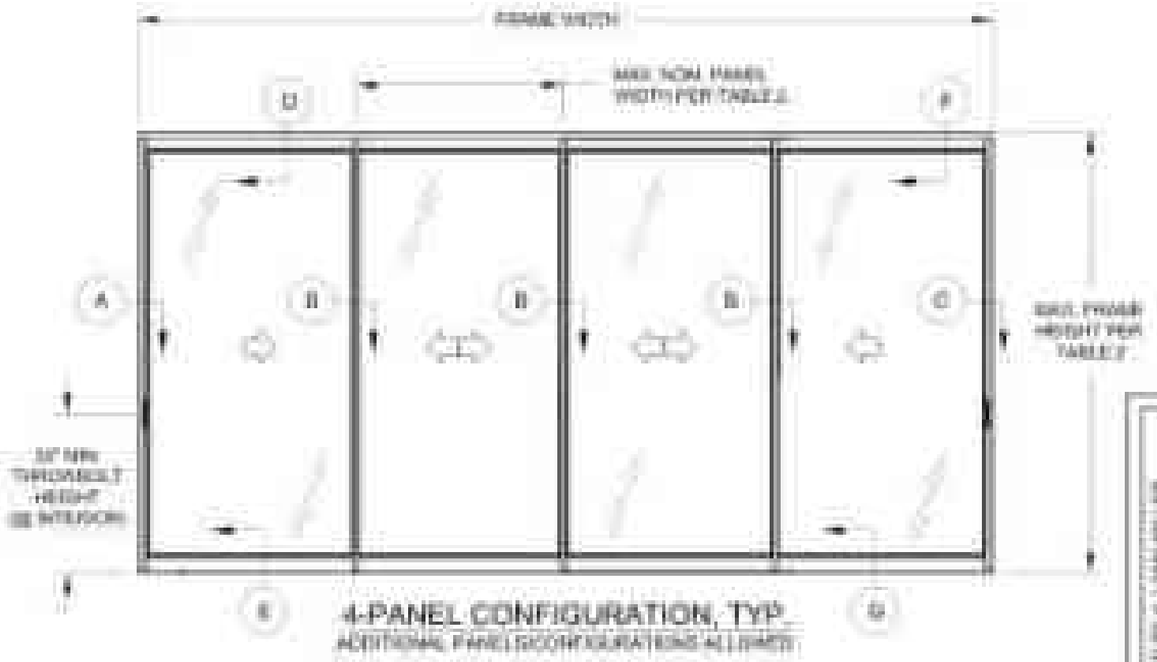
5) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATIONS WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE DOOR.

6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

7) DOOR SIZES MUST BE VERIFIED FOR COMPLIANCE WITH EGRESS REQUIREMENTS OF THE FBC, AS APPLICABLE. IN THE HVHZ, ANY PANEL QUANTITY MAY BE USED PROVIDED THAT THE OVERALL FRAME SQUARE FOOTAGE OF 270.00 FT² IS NOT EXCEEDED. OUTSIDE THE HVHZ, ANY PANEL QUANTITY MAY BE USED REGARDLESS OF THE OVERALL FRAME SQUARE FOOTAGE.

FLORIDA PRODUCT APPROVAL #(S):

DESIGN PRESSURE RATING	WATER PRESSURE RATING	IMPACT RATING
+50.0 / -50.0 PSF	7.5 PSF	RATED FOR LARGE & SMALL MISSILE IMPACT RESISTANCE



4-PANEL CONFIGURATION, TYP.
ADDITIONAL PANEL CONFIGURATIONS ALLOWED

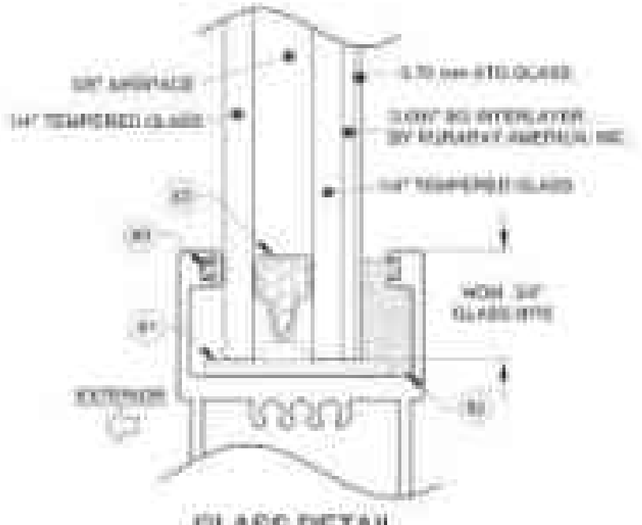
TABLE 1

Anchor Group	Anchor Type	Substrate	Min. Edge Distance	Min. O.C. Distance	Min. Substrate or Metal Thickness
A	#8 Steel SMS (Qty. 5) or #10 SS SMS	Southern Pine (SG = 0.55)	5/8"	3"	1-1/4"
		6063-T6 Aluminum	3/8"	3"	0.077"
		ASTM Class	3/8"	3"	0.059"
		Sheet Steel, Gr. 33	3/8"	3"	0.044" (16 Gauge)
	1/4" Dynabolt UltraCon+	Southern Pine (SG = 0.55)	1"	3"	1-3/8"
	1/4" #18 SS Ezy-Drive/Plus	Southern Pine (SG = 0.55)	1"	3"	1-3/8"
	1/4" Dynabolt UltraCon+	Concrete (min. 3.0 ksi)	1-1/8"	1-1/2"	1-3/4"
		Hollow or Grout-filled CMU (3.0 ksi CMU)	1-1/2"	3-5/8"	1-1/4"
B	1/4" Dynabolt UltraCon+	Concrete (min. 3.0 ksi)	2-1/2"	4-1/2"	1-3/4"
		Hollow or Grout-filled CMU (ASTM C90)	2-1/2"	3-5/8"	1-1/4"
	1/4" #18 SS Ezy-Drive/Plus	Concrete (min. 3.00 ksi)	2-1/2"	3"	1-3/4"
		Hollow or Grout-filled CMU (ASTM C90)	2-1/2"	4-5/8"	1-1/4"

1) WHERE SUBSTRATE CONDITIONS REQUIRE ANCHORAGE FROM MORE THAN ONE ANCHOR GROUP, CHOOSE THE ANCHOR GROUP THAT REQUIRES THE GREATEST QUANTITY OF ANCHORS IN TABLE 2.

2) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

3) ANCHORS MUST BE OF SUFFICIENT LENGTH SO THAT A MINIMUM OF 3 THREADS EXTEND BEYOND METAL SUBSTRATE.



GLASS DETAIL
1" NOM. GLASS STACK

WINDOOR

ARCHITECT LYNN MILLER
LICENSE
No. 56708
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DRAWN BY:	JENS ROSOWSKI
SCALE:	1/8" = 1'-0" (when plotted on 24x36)
DATE:	8/26/2019
SHEET:	1 OF 2
DRAWING #:	SGD8100A

ALUM. ULTRA-NARROW ROLLER SLIDING GLASS DOOR

ELEVATION & GENERAL NOTES

TABLE 2:

All Sizes +50.0/-55.9 psf		Anchor Quantities Required																				
		Nominal Panel Width / Panel DLO Width / Anchor Location																				
		36" (Nom.)			42" (Nom.)			48" (Nom.)			54" (Nom.)			60" (Nom.)			63-1/2" (Nom.)			72" (Nom.)		
		33-5/8" (DLO)			39-5/8" (DLO)			45-5/8" (DLO)			51-5/8" (DLO)			57-5/8" (DLO)			61-1/8" (DLO)			69-5/8" (DLO)		
Frame Height	Anchor Group	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb	MidPanel	Cluster	Jamb
80"	A	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	6	4	10
	B	2	4	10	2	4	10	2	2	10	4	4	10	4	4	10	4	4	10	4	4	10
84"	A	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	6	4	10
	B	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	4	4	10
90"	A	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	6	4	10
	B	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	4	4	10
96"	A	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	6	6	10
	B	2	4	10	2	4	10	2	4	10	4	4	10	4	4	10	4	4	10	4	4	10
102"	A	2	4	12	2	4	12	2	4	12	4	4	12	4	6	12	4	6	12	6	6	12
	B	2	4	12	2	4	12	2	4	12	4	4	12	4	4	12	4	4	12	4	4	12
108"	A	2	4	12	2	4	12	2	4	12	4	6	12	4	6	12	4	6	12	6	6	12
	B	2	4	12	2	4	12	2	4	12	4	4	12	4	4	12	4	4	12	4	4	12
114"	A	2	4	12	2	4	12	2	6	12	4	6	12	4	6	12	4	6	12	6	6	12
	B	2	4	12	2	4	12	2	4	12	4	4	12	4	4	12	4	4	12	4	6	12
120"	A	2	4	12	2	4	12	2	6	12	4	6	12	4	6	12	4	6	12	6	6	12
	B	2	4	12	2	4	12	2	4	12	4	4	12	4	4	12	4	6	12	4	6	12
126"	A	2	4	14	2	6	14	2	6	14	4	6	14	4	6	14	4	6	14			
	B	2	4	14	2	4	14	2	4	14	4	4	14	4	6	14	4	6	14			
130"	A	2	4	14	2	6	14	2	6	14	4	6	14	4	6	14	4	6	14			
	B	2	4	14	2	4	14	2	4	14	4	6	14	4	6	14	4	6	14			

JAMB = TOTAL # OF ANCHORS THROUGH THE JAMB.

CLUSTER = TOTAL # OF ANCHORS THROUGH THE HEAD & SILL AT THE MEETING POINT OF 2 PANELS.

MIDPANEL = TOTAL # OF ANCHORS THROUGH THE HEAD & SILL REQUIRED AT THE MIDSPAN OF PANEL.

TABLE NOTES:

1) SEE SHEET 5 FOR ANCHOR LOCATIONS & SPACING.

2) TABLE APPLIES TO ALL FRAMES WITH 2-6 TRACKS AND ALL PANEL CONFIGURATIONS.



PREPARED BY: A. LYNN MILLER
STATE REGISTERED ENGINEER
CERTIFICATE OF AUTHORIZATION #
PREPARED FOR:
ADDRESS
CITY, STATE, ZIP
PHONE #

ALUM. ULTRA-NARROW ROLLER

ANCHOR QUANTITY TABLE

BRIDGEPALOMA

JENS ROSOWSKY

3 OF 7

SSDE/WA



INSTALLATION NOTES

1) DETAILS APPLY TO 2, 3, 6 AND 8 TRACK CONFIGURATIONS. INSTALLATION ANCHORS AND SUBSTRATE DETAILS MAY APPLY TO ANY FRAME LOCATION.

2) SEE TABLE 1 FOR SPECIFIC REQUIREMENTS PER THE ANCHOR AND SUBSTRATE BEING USED.

3) SEE SHEET 5 FOR ANCHOR LOCATIONS & SPACING. FOR ANCHOR QUANTITIES, SEE TABLE 2.

4) METAL SUBSTRATE TO MEET MIN STRENGTH AND THICKNESS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE AND TO BE REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

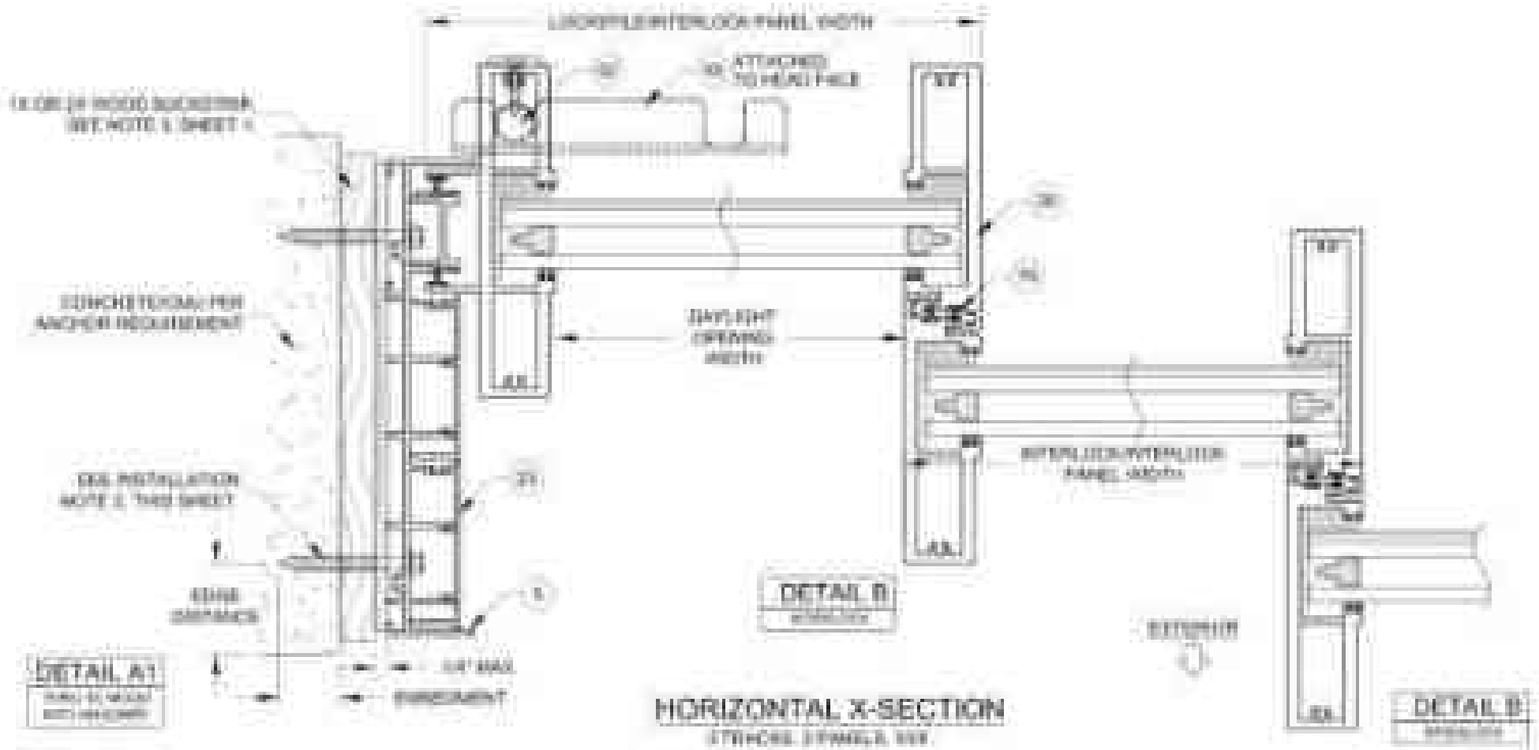
5) SILL RISER MUST BE FULLY SEALED BETWEEN THE SILL RISER, SILL AND JAMBS.

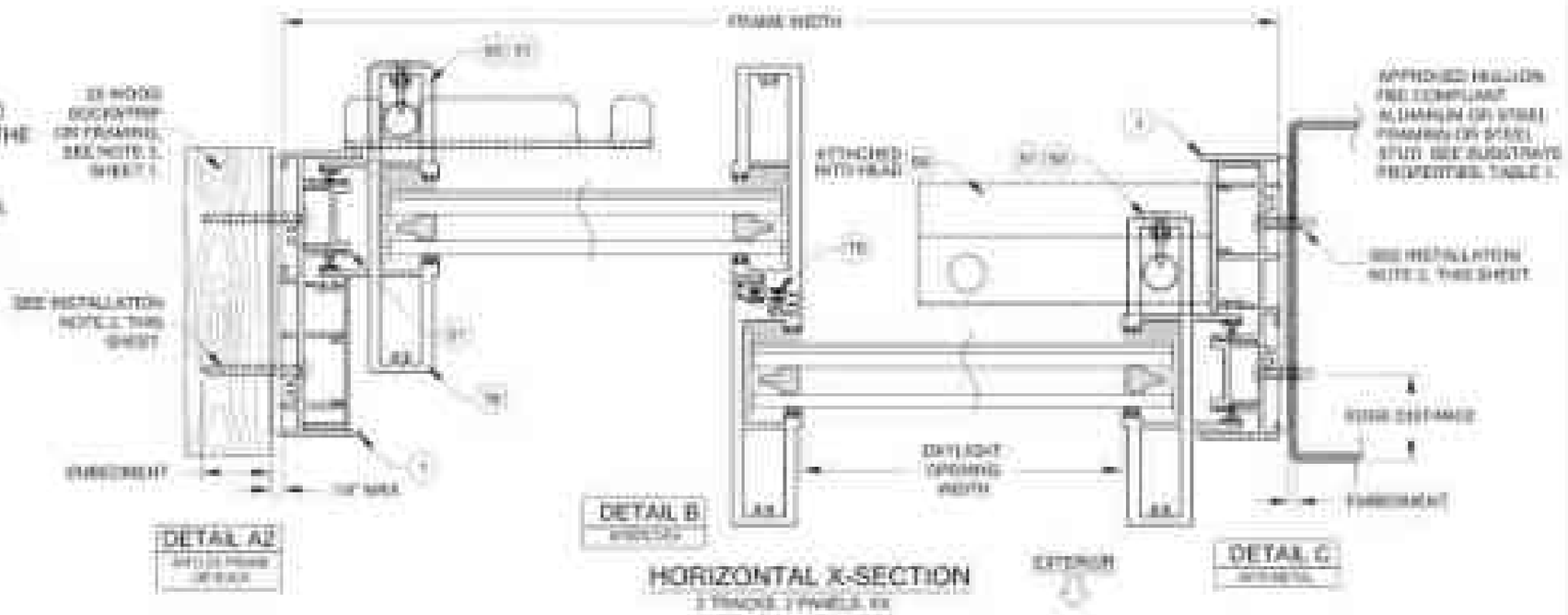
6) IF SILL IS TIGHT TO SUBSTRATE, GROUT OR OTHER MATERIAL IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, MAX. 1/4" THICK & 3400 PSI MIN., (DONE BY OTHERS) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT TIGHT TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, 30# FELT PAPER OR MASTIC IS REQUIRED BETWEEN THE GROUT AND WOOD SUBSTRATE. OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

7) SILL WEEPHOLES ARE 1" X 3/16" AND ARE LOCATED AT 6" FROM EACH JAMB AND AT THE MEETING POINT OF 2 ADJACENT PANELS.

8) STANDARD ANCHOR LOCATIONS SHOWN. ANCHORS MAY BE LOCATED IN ANY ADJACENT TRACK AS REQUIRED TO MEET MIN. EDGE DISTANCE CONSTRAINTS.

9) ATTACH SILL INSERT TO SILL PAN AT 4" FROM EACH END AND MAX 18" O.C.





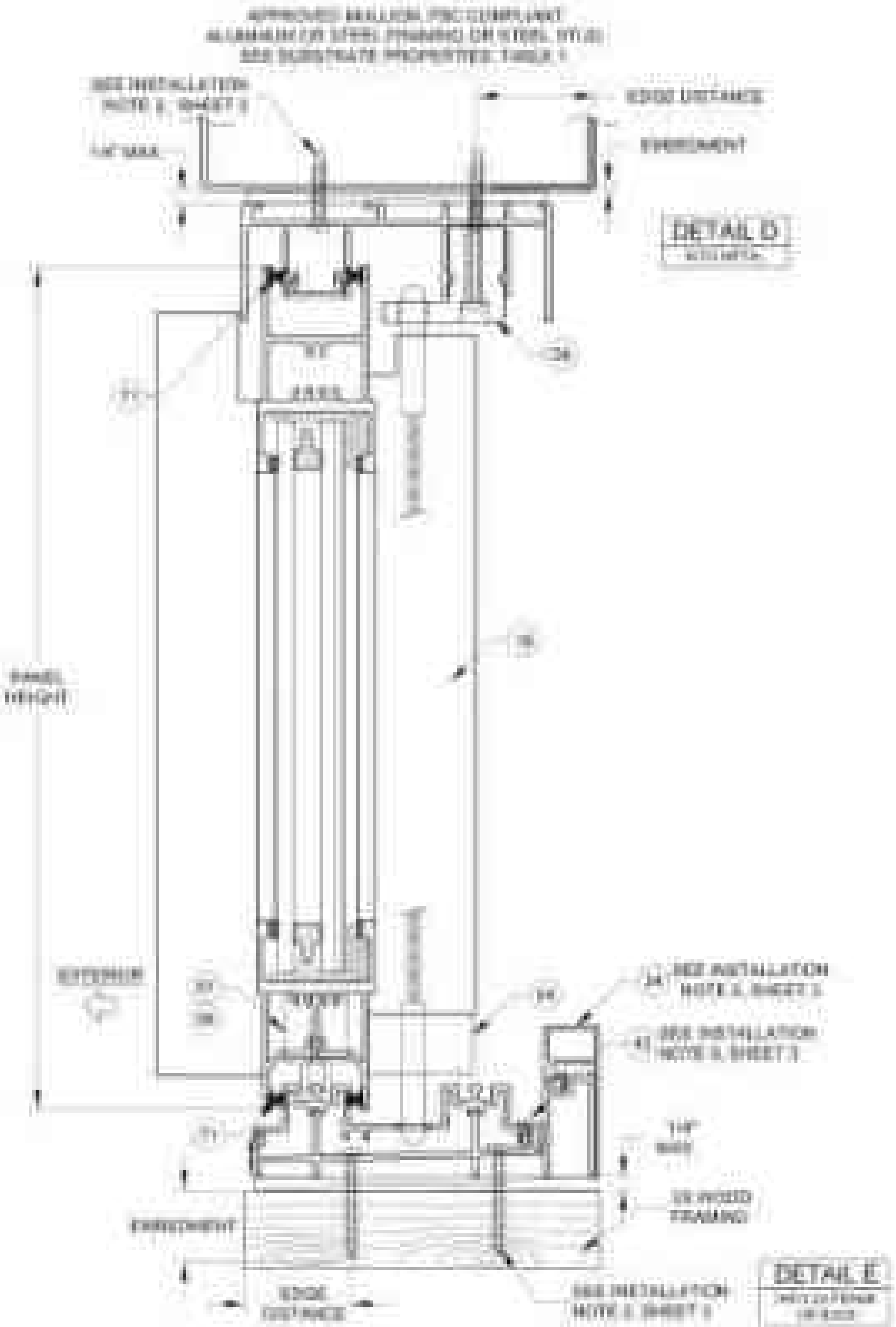
PREPARED BY:	JENS ROSOWSKY
DRAWN BY:	
CHECKED BY:	
DATE:	01/11/21
SCALE:	
JOB NO.	
DRAWING NO.	
REVISIONS	
ALUM. ULTRA-NARROW ROLLER	
HOME DETAIL DETAILS	
SSSERIA	5 OF 7

AMERICAN LYNN INC.
LICENSE
No. 50705
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

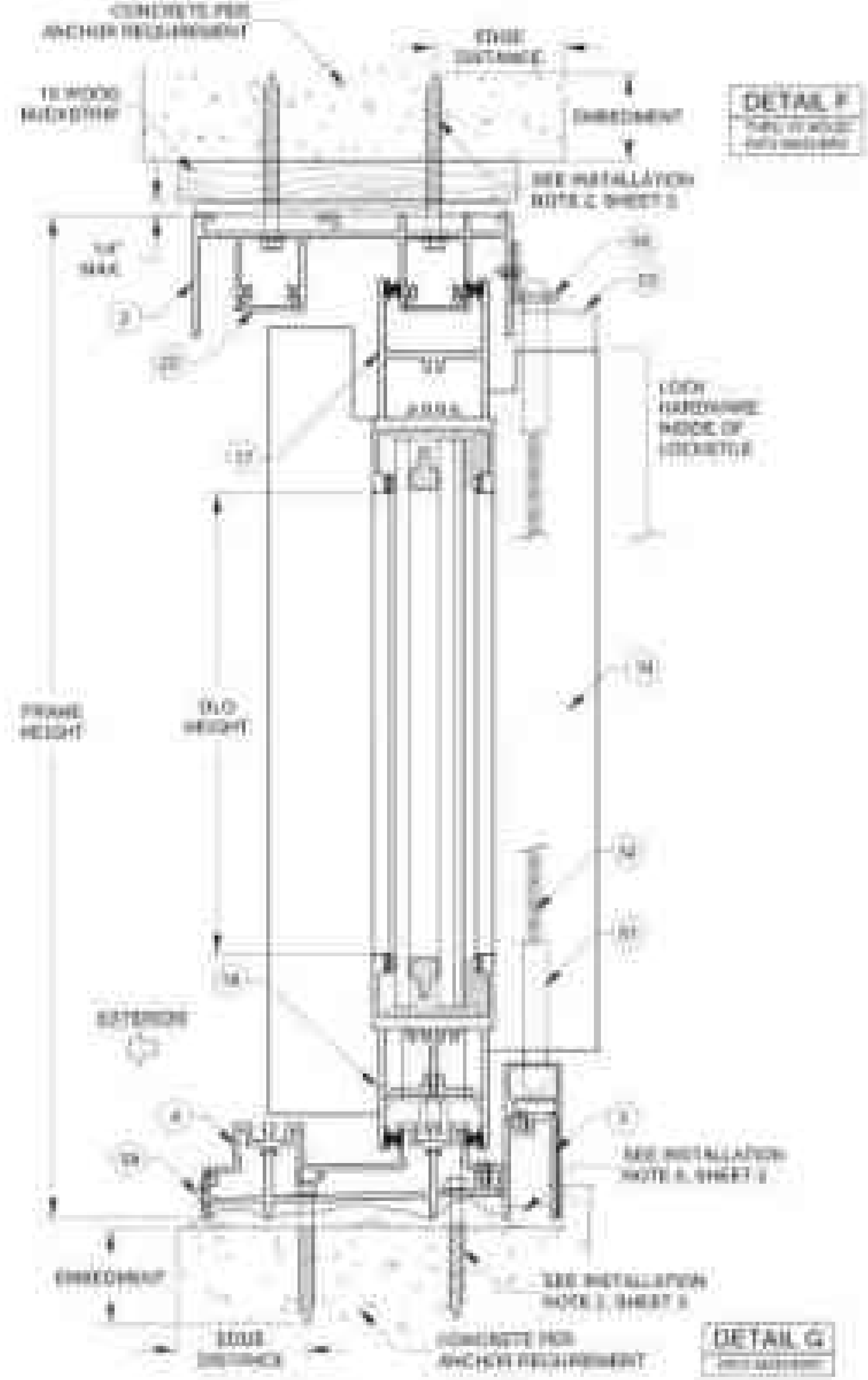
- DLO HEIGHT = FRAME HEIGHT - [illegible]
- PANEL HEIGHT = FRAME HEIGHT - [illegible]
- DLO WIDTH = INT. INT. PANEL WIDTH - [illegible]
- DLO WIDTH = LOCKSTILE/INT. PANEL WIDTH - [illegible]
- DLO WIDTH = NOMINAL PANEL WIDTH - [illegible]

NOTES:

1) SEE INSTALLATION NOTES, SHEET 1.
2) OTHER TRACK CONFIGURATIONS SIMILAR.



VERTICAL X-SECTION



VERTICAL X-SECTION

ALUM. ULTRA-NARROW ROLLER SGD (LM)

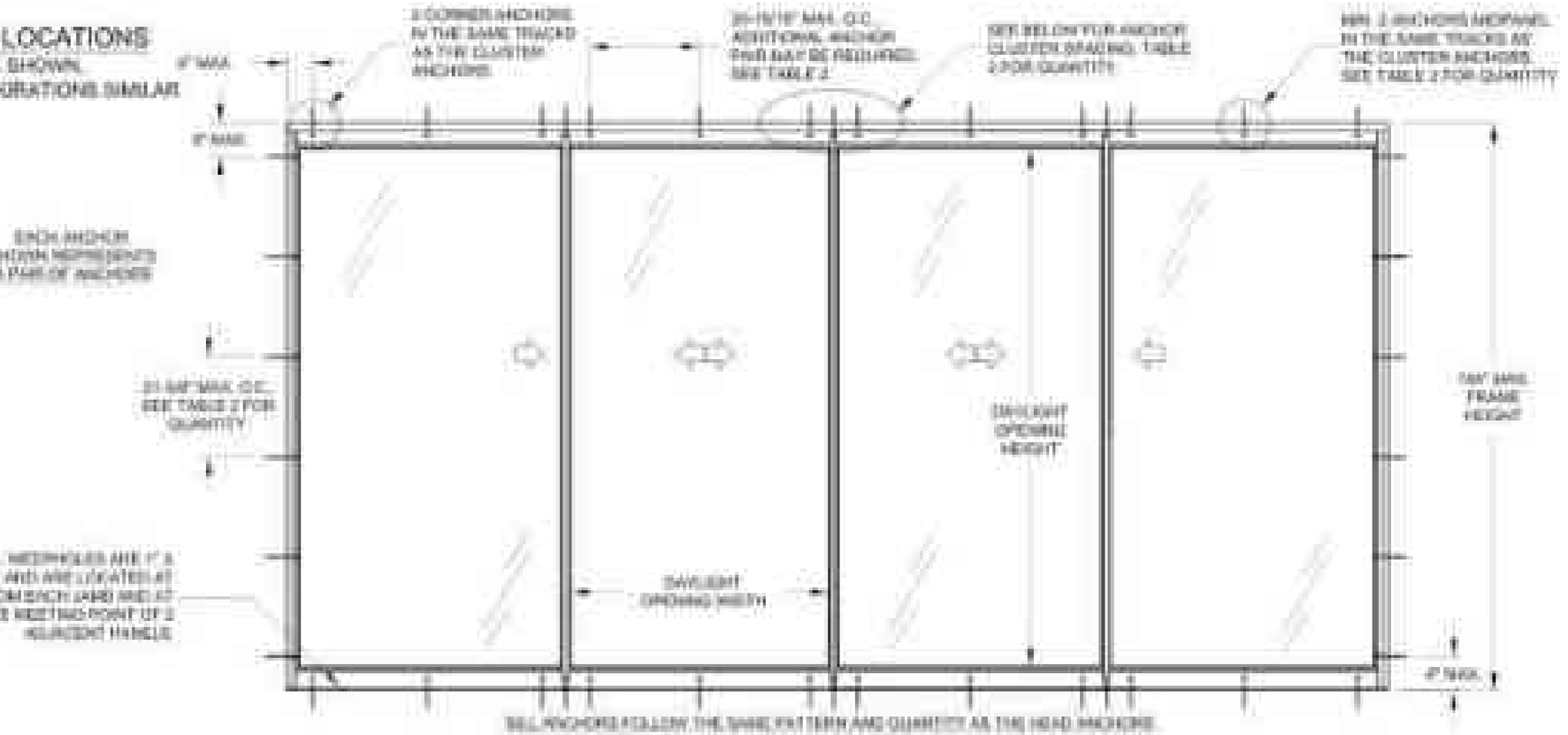
VERTICAL INSTALL DETAILS

4 OF 7

PROFESSIONAL ENGINEER — STATE OF FLORIDA

ANCHOR LOCATIONS

DOOR SHOWN.
OTHER CONFIGURATIONS SIMILAR





2 TRACK CLUSTER SPACING
4 ANCHORS TOTAL



3 TRACK CLUSTER SPACING
4 ANCHORS TOTAL



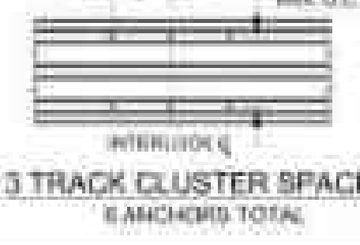
4 TRACK CLUSTER SPACING
4 ANCHORS TOTAL



5 TRACK CLUSTER SPACING
4 ANCHORS TOTAL



2 TRACK CLUSTER SPACING
8 ANCHORS TOTAL



3 TRACK CLUSTER SPACING
8 ANCHORS TOTAL



4 TRACK CLUSTER SPACING
8 ANCHORS TOTAL



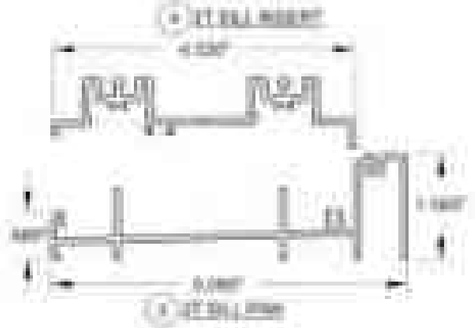
5 TRACK CLUSTER SPACING
8 ANCHORS TOTAL

PREPARED BY: U.S. TRIM MANUFACTURING, LLC
5775 TECHNOLOGY DRIVE
N. VENICE, FL 34275
941-488-1000
941-488-1001 (FAX)
ENGINEERING ADDRESS
941-488-1000
941-488-1001 (FAX)
941-488-1000
941-488-1001 (FAX)
941-488-1000
941-488-1001 (FAX)

ALUM. U.S. TRIM HARDWOOD ROLLER SHUTTER
ANCHOR LOCATIONS

DRAWN: RGR/SWM (mm/yy)
CHECKED: JWS (mm/yy)
SCALE: NTS
SHEET: 3 OF 7
SEQUENCE: 8

PREPARED BY: ANTHONY LYNN MILLER
LICENSE
No. 66708
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E. #66708



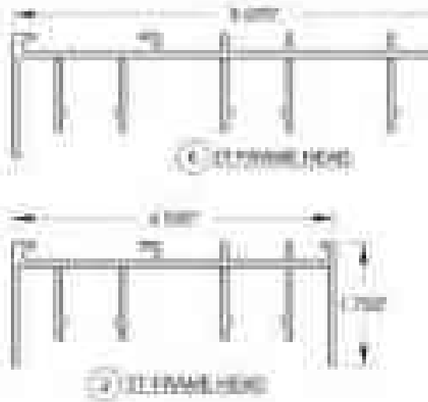




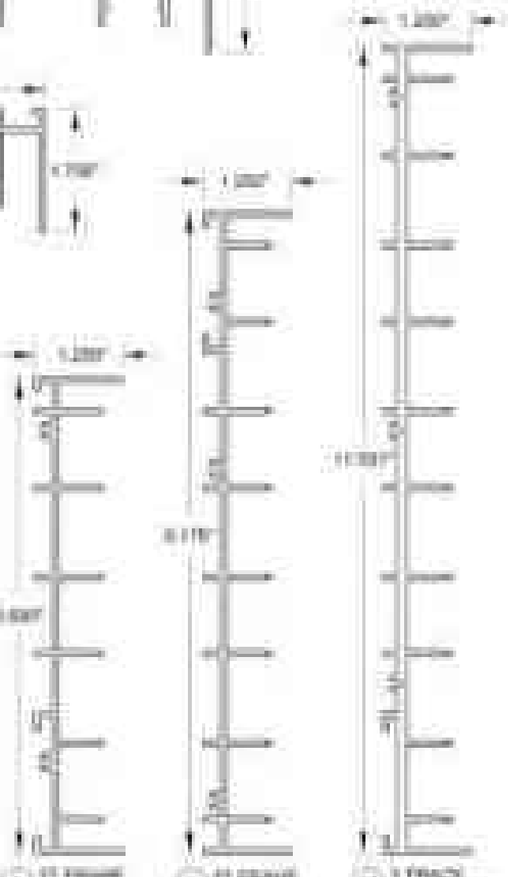


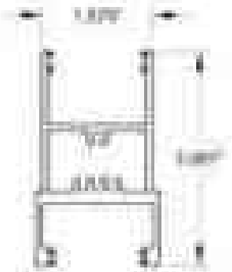


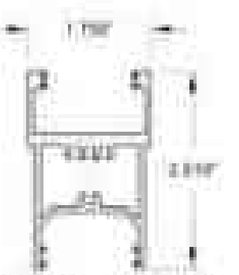


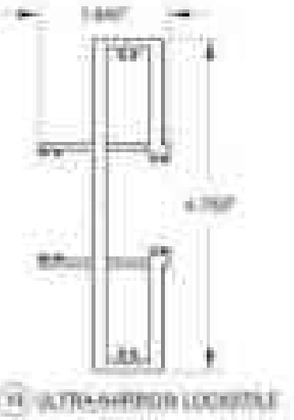




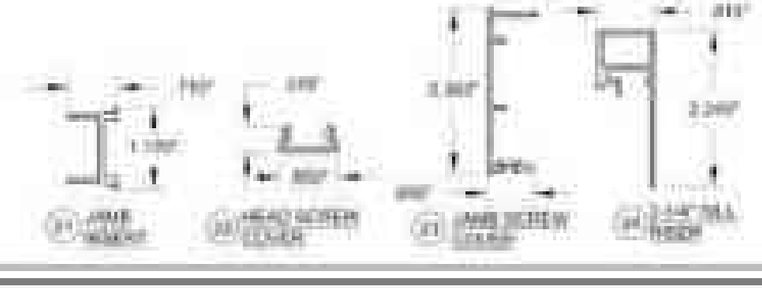












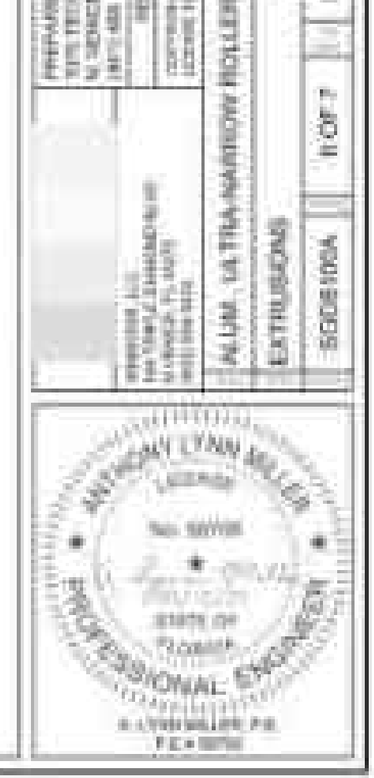


TABLE 3

ITEM #	PART #	DESCRIPTION	MATERIAL
1	11002087	2T FRAME JAMB	ALUM. 6063-T6
2	11002088	2T FRAME HEAD	ALUM. 6063-T6
3	11044116	2T SILL PAN	ALUM. 6063-T6
4	11044122	2T SILL INSERT	ALUM. 6063-T6
5	11002181	3T FRAME JAMB	ALUM. 6063-T6
6	11002180	3T FRAME HEAD	ALUM. 6063-T6
7	11044123	3T SILL PAN	ALUM. 6063-T6
8	11044117	3T SILL INSERT	ALUM. 6063-T6
9	11002070	4T FRAME JAMB	ALUM. 6063-T6
10	11002071	4T FRAME HEAD	ALUM. 6063-T6
11	11044118	4T SILL PAN	ALUM. 6063-T6
12	11044134	4T SILL INSERT	ALUM. 6063-T6
13	11010484	5T FRAME JAMB	ALUM. 6063-T6
14	11010483	5T FRAME HEAD	ALUM. 6063-T6
15	11010446	5T SILL PAN	ALUM. 6063-T6
16	11010485	5T SILL INSERT	ALUM. 6063-T6
17	32008	TOP RAIL	ALUM. 6063-T6
18	32002	BOTTOM RAIL	ALUM. 6063-T6
19	32000	ULTRA-NARROW LOCKSTILE	ALUM. 6063-T6
20	32001	ULTRA-NARROW INTERLOCK	ALUM. 6063-T6
21	11002736	JAMB INSERT	ALUM. 6063-T6
22	11001882	HEAD SCREW COVER	ALUM. 6063-T6
23	11008679	JAMB SCREW COVER	ALUM. 6063-T6
24	12003942	2 1/4" SILL RISER	ALUM. 6063-T6
40	131018	#7 X 1" PH SMS (FRAME ASSEMBLY)	STAINLESS STEEL
41	7100X1PHPT18 SX	#10 X 1" PH SDS @ PANEL RAIL TO LOCKSTILE	STAINLESS STEEL
42	7100X1PTX	#10 X 1" FH SDS @ PANEL RAIL TO INTERLOCK	STAINLESS STEEL
43	131018	#8 X 3/8" PH TYPE B SMS @ SILL INSERT	STAINLESS STEEL
49	33001	MANUAL THROW LOCK	STAINLESS STEEL
50		MANUAL THROW LOCK SCREW (#8 X 1/2" FH)	STAINLESS STEEL
51		SHOOT BOLT (TOP & BOTTOM)	STAINLESS STEEL
52	32004	SHOOT BOLT THREADED ROD (LENGTH VARIES)	STAINLESS STEEL
53	32016	SHOOT BOLT CAP @ TOP RAIL	NYLON
54	32015	SHOOT BOLT CAP @ BOTTOM RAIL	NYLON
55	32013	FACE KEEPER	ALUM. 6063-T6
56	32014	HEAD KEEPER	ALUM. 6063-T6
57	32012	QUAD ROLLER	STAINLESS STEEL
58		QUAD ROLLER SCREW (#10 X 3/4" FH)	STAINLESS STEEL
59		WEEPHOLE COVER	
70		FINSEAL 0.187" X 0.250" @ PANEL STILES	
71		FINSEAL 0.187" X 0.350" @ PANEL RAILS	
80	21005	GLAZING VINYL, 0.250" X 0.150"	VINYL 80-85 DURO
81	121003	SETTING BLOCK, 1/8" X 1-1/4" X 2"	VINYL 80-85 DURO
82		RGS 7700, SIKA 552, DOW 791 OR 983	SILICONE
83		3D GLASS SPACER	VARIES

