

LOEWEN WINDOWS

ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS

INSTALLATION ANCHORAGE DETAILS

GENERAL NOTES:

1. THIS PRODUCT IS DESIGNED TO COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE CURRENT EDITION OF THE FLORIDA BUILDING CODE (FBC) - BUILDING AND RESIDENTIAL VOLUMES. THE PRODUCT DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED TEST REPORT #89339.03-201-44, DATED 3/23/09 AND ASSOCIATED LABORATORY DRAWINGS.
- 1.1. PERFORMANCE STANDARDS USED IN TESTING:

1.1.1. HIGH VELOCITY HURRICANE ZONE (HVHZ)

1.1.1.1. TAS 201-94, LARGE MISSILE IMPACT

1.1.1.2. TAS-202-94

1.1.1.3. TAS 203-94
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE / MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE STRUCTURE IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.
3. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.
4. IN AREAS WHERE WIND-BORNE DEBRIS PROTECTION REQUIREMENTS EXIST USE OF AN APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED.
5. MATERIALS

5.1 DOOR FRAME & PANEL MATERIAL: DOUGLAS FIR OR MAHOGANY.

5.2 KURARAY AMERICA SENTRYGLAS INTERLAYER MATERIAL CERTIFICATION PER CURRENT MIAMI-DADE NOTICE OF ACCEPTANCE (NOA).

6. GLASS MEETS THE REQUIREMENTS OF ASTM E1300-12AE1.
7. DESIGNATIONS "X" AND "O" STAND FOR THE FOLLOWING:

X: OPERABLE PANEL

O: FIXED PANEL
8. IN ACCORDANCE WITH THE CURRENT EDITION OF THE FBC, WOOD BUCKING SHALL HAVE BEEN PRESERVATIVE TREATED OR SHALL BE A DURABLE SPECIES AS DEFINED IN THE CURRENT EDITION OF THE FBC.
9. ALL SETTING BLOCKS (WHEN USED) SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE. SETTING BLOCKS SHALL BE NEOPRENE WITH A 70 TO 90 SHORE A DUROMETER.

INSTALLATION NOTES:

1. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM SIZE IS 3/8 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
4. FOR INSTALLATION INTO WOOD FRAMING, USE #8 WOOD SCREWS OF SUFFICIENT LENGTH TO ACHIEVE 2 INCHES MINIMUM EMBEDMENT. MINIMUM EDGE DISTANCE IS 5/8 INCH AS SHOWN BASED ON NAILING FLANGE AND ALLOWABLE SHIM THICKNESS. SEE ANCHOR SCHEDULE.
5. FOR INSTALLATION DIRECTLY INTO CONCRETE, USE 1/4 INCH ITW ADVANCED THREADFORM TAPCONS OF SUFFICIENT LENGTH TO ACHIEVE 1 1/2 INCH MINIMUM EMBEDMENT AT A MINIMUM EDGE DISTANCE OF 3 INCHES OR 1-3/4 INCH MINIMUM EMBEDMENT AT A MINIMUM EDGE DISTANCE OF 1-1/2 INCH. SEE ANCHOR SCHEDULE.
6. #8 WOOD SCREW INSTALLATION ANCHORS ARE TO BE LOCATED THROUGH PERIMETER OF NAILING FLANGE AT HEAD AND JAMBS. SEE ANCHOR SCHEDULE.
7. MINIMUM EMBEDMENT AND EDGE DISTANCES EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER AND SIDING.
8. FOR CONCRETE BLOCK APPLICATIONS DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS.
9. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALLATION ANCHORS SHALL BE MADE OF CORROSION RESISTANT STEEL OR HAVE A CORRISION RESISTANT COATING.
10. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:

A. WOOD - MINIMUM -PRESSURE TREATED (PT) WITH A MINIMUM SPECIFIC GRAVITY OF 0.55.

B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, MEDIUM WEIGHT, DENSITY >117 PCF.

DESIGN PRESSURE VS. GLAZING DETAIL		
GLAZING DETAIL (SEE SHEET 4)	DESIGN PRESSURE RATING (PSF)	IMPACT RATING
1	+/-55	HVHZ LARGE MISSILE IMPACT
2	+/-70	

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4	VERTICAL SECTIONS, GLAZING DETAIL & ANCHOR DETAIL
5	HORIZONTAL SECTIONS
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ANCHOR SCHEDULE				
LOCATION	ANCHOR	MIN. EMBED.	MIN. EDGE DIST.	ANCHOR NOTES
SILL	1/4" ITW TAPCON (ITEM #34)	1-1/2"	3"	SPACING: 6" FROM CORNERS & 12" O.C. AT INTERLOCK: SEE DETAIL A ON SHEET 2 FOR GROUPED ARRANGEMENT
	1/4" ITW TAPCON (ITEM #34)	1-3/4"	1-1/2"	
HEAD & JAMBS	#8 X 2" WOOD OR SHEET METAL SCREW (ITEM #33)	2"	5/8"	SPACING: 6" FROM CORNERS & 6" O.C. AT INTERLOCK: SEE DETAIL B ON SHEET 2 FOR GROUPED ARRANGEMENT
HEAD & JAMBS (NAILING FLANGE TO FRAME)	#8 X 1/2" WOOD OR SHEET METAL SCREW (ITEM #29)	N/A	5/8"	SPACING: 1" FROM CORNERS & 8" O.C. AT INTERLOCK AT HEAD: SEE DETAIL C ON SHEET 4 FOR 12" GROUPED ARRANGEMENT, MINIMUM SEPARATION OF 1" AND MAXIMUM SEPARATION OF 2" PILOT HOLES: 5/64" DIA. FOR DOUGLAS FIR AND 3/32" DIA. FOR MAHOGANY

PROJECT NO. 423-0203			
D	UPDATED TO THE 8TH EDITION (2023) FBC	10/18/23	RJA
C	UPDATED TO THE 5TH EDITION (2014) FBC	4/16/14	RJA
B	GLAZING UPDATE TO 2010 FBC	10/26/12	RJA
REV	DESCRIPTION	DATE	BY

LOEWEN WINDOWS

77 HIGHWAY 52 WEST, BOX 2260
STEINBACH, MANITOBA R5G 1B2 CANADA

TITLE: ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS
NOTES, D.P. CHART & ANCHOR SCHEDULE

PREPARED BY:

DATE: 04/27/09

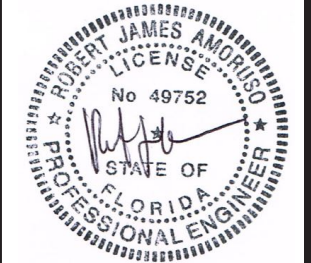
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SHEET: 1 OF 6

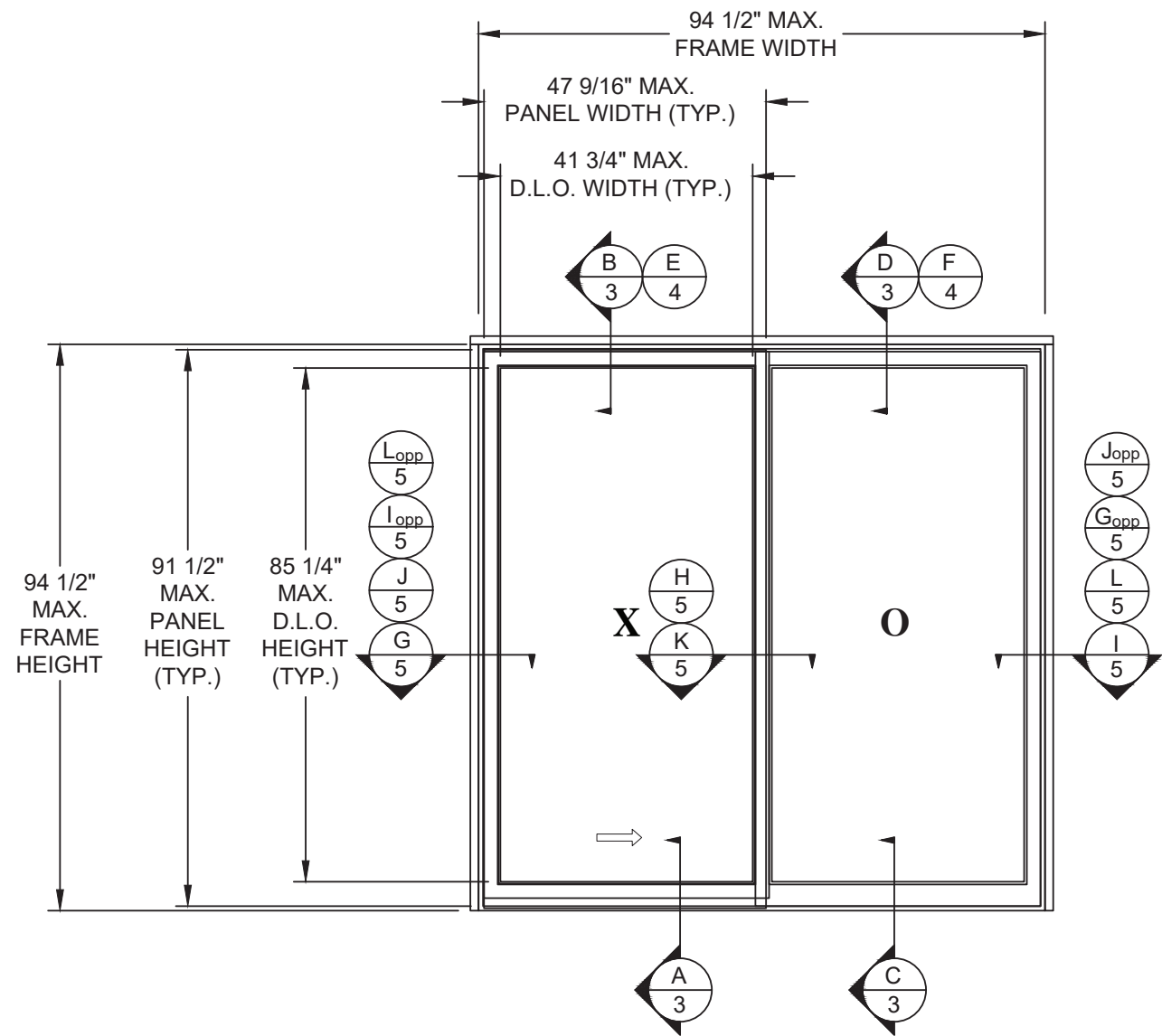
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SCALE: N.T.S.
REV: D

PTC PRODUCT DESIGN GROUP, LLC
P.O. BOX 550775
PHOENIX 851-480-1700, INFO@PTC-CORP.COM

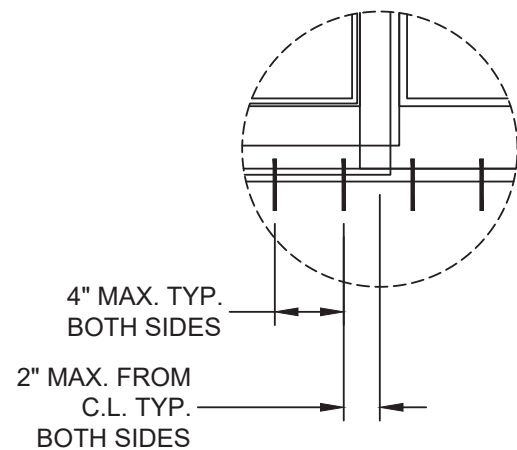
Robert J. Amoruso, P.E.
Florida P.E. No. 49752
FBPE Cert. of Auth. No. 25935



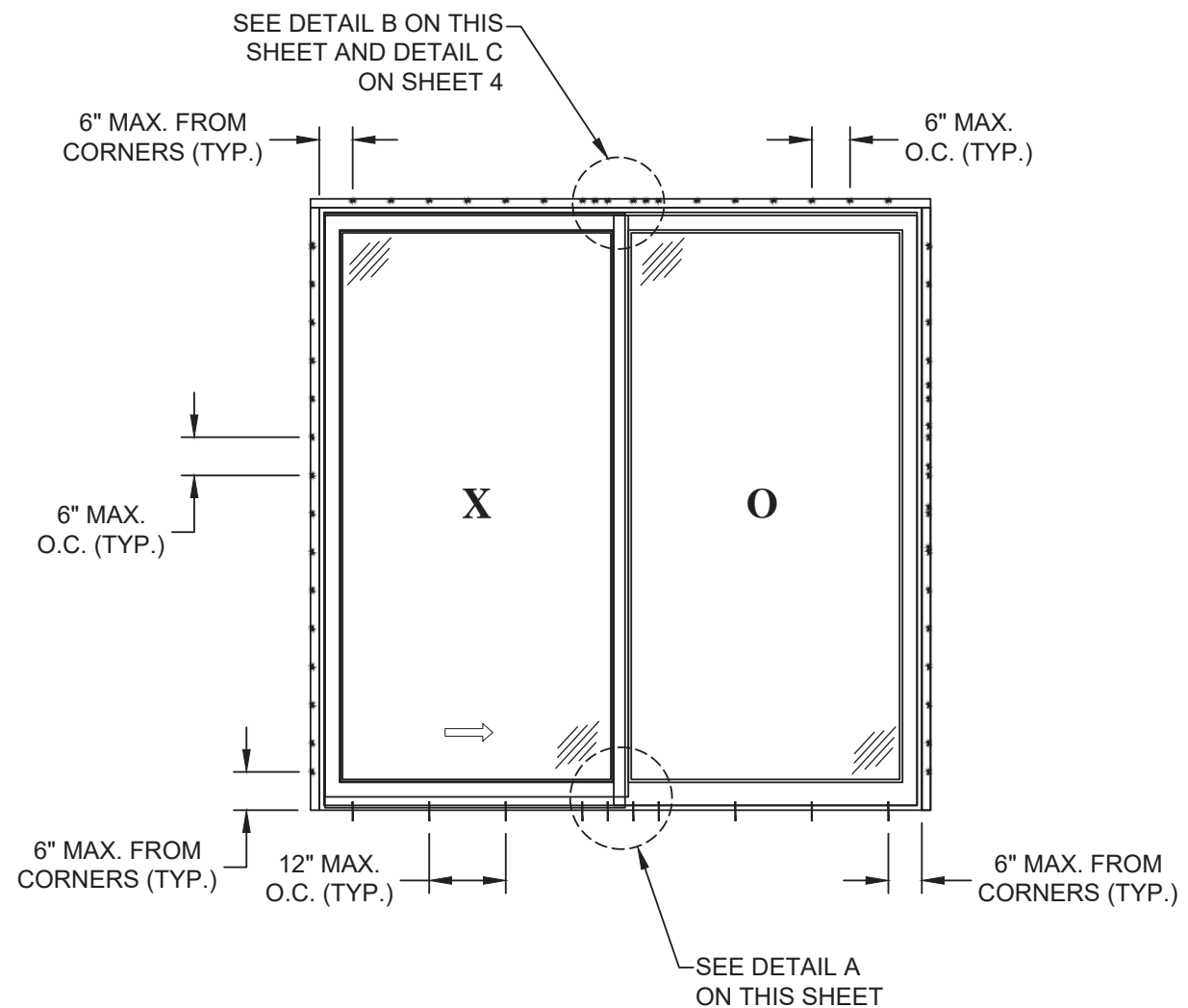
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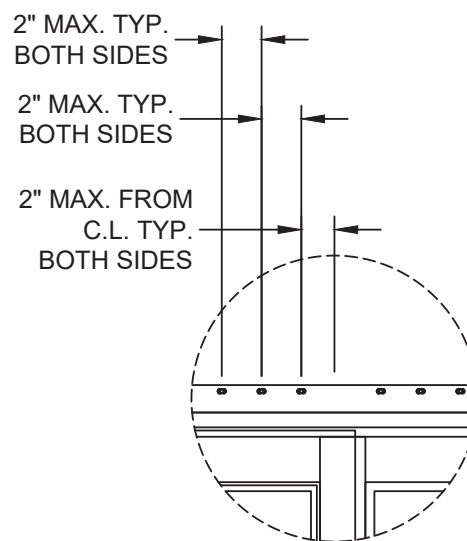
ELEVATION
EXTERIOR VIEW



DETAIL A
AT SILL



ANCHOR LAYOUT
EXTERIOR VIEW

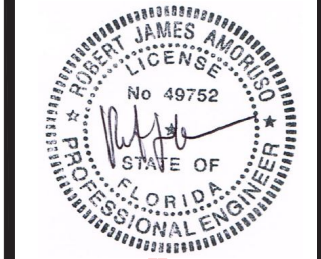


DETAIL B
AT HEAD

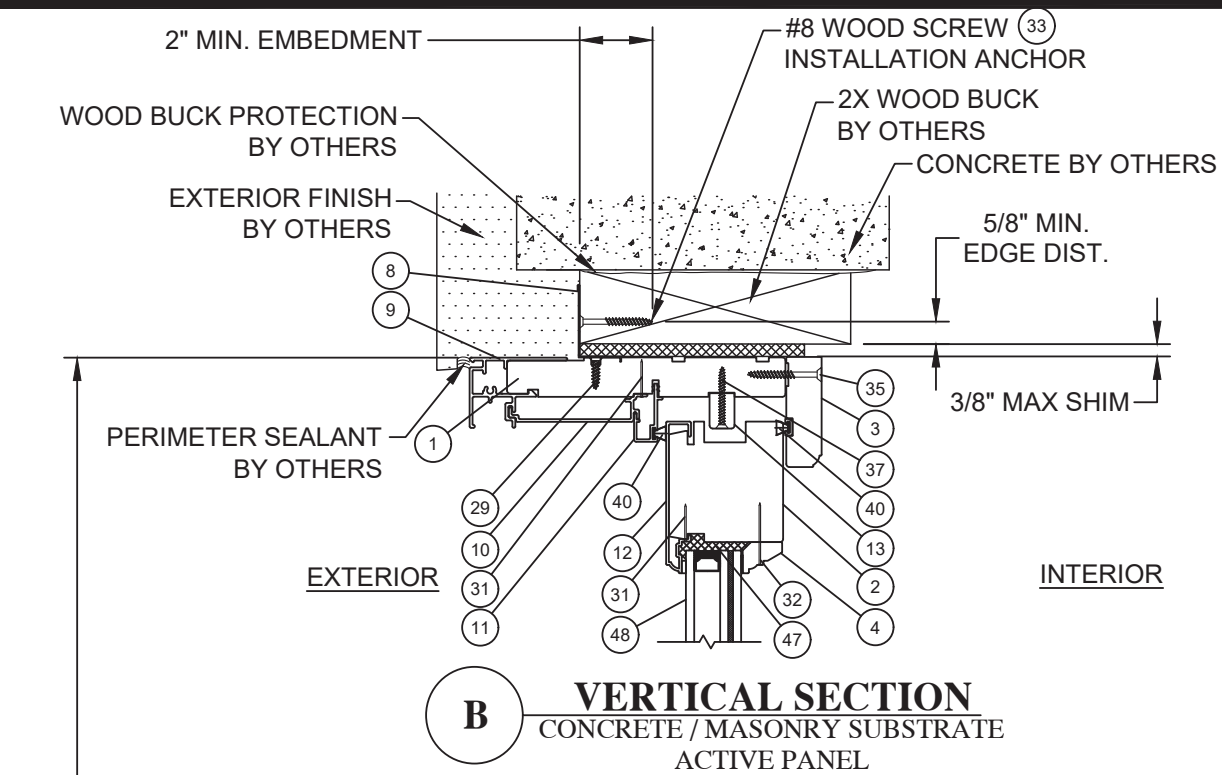
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UPDATED TO THE 8TH EDITION (2023) FBC	10/18/23	RJA	DATE
UPDATED TO THE 5TH EDITION (2014) FBC	4/16/14	RJA	
GLAZING UPDATE TO 2010 FBC	10/26/12	RJA	
REV		DESCRIPTION	

LOEWEN WINDOWS		DATE: 04/27/09	
77 HIGHWAY 52 WEST, BOX 2260		DRAWING NO: LOEW0002	
STEINBACH, MANITOBA R5G 1B2 CANADA		SHEET: 2 OF 6	
ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS		REV: D	
ELEVATION, ANCHOR LAYOUT & ANCHOR DETAILS		PREPARED BY: PTC PRODUCT DESIGN GROUP, LLC	
		P.O. BOX 150075, OMAHA, NE 68115-0075	
		PHONE: 321-484-1788, INFO@PTC-CORP.COM	

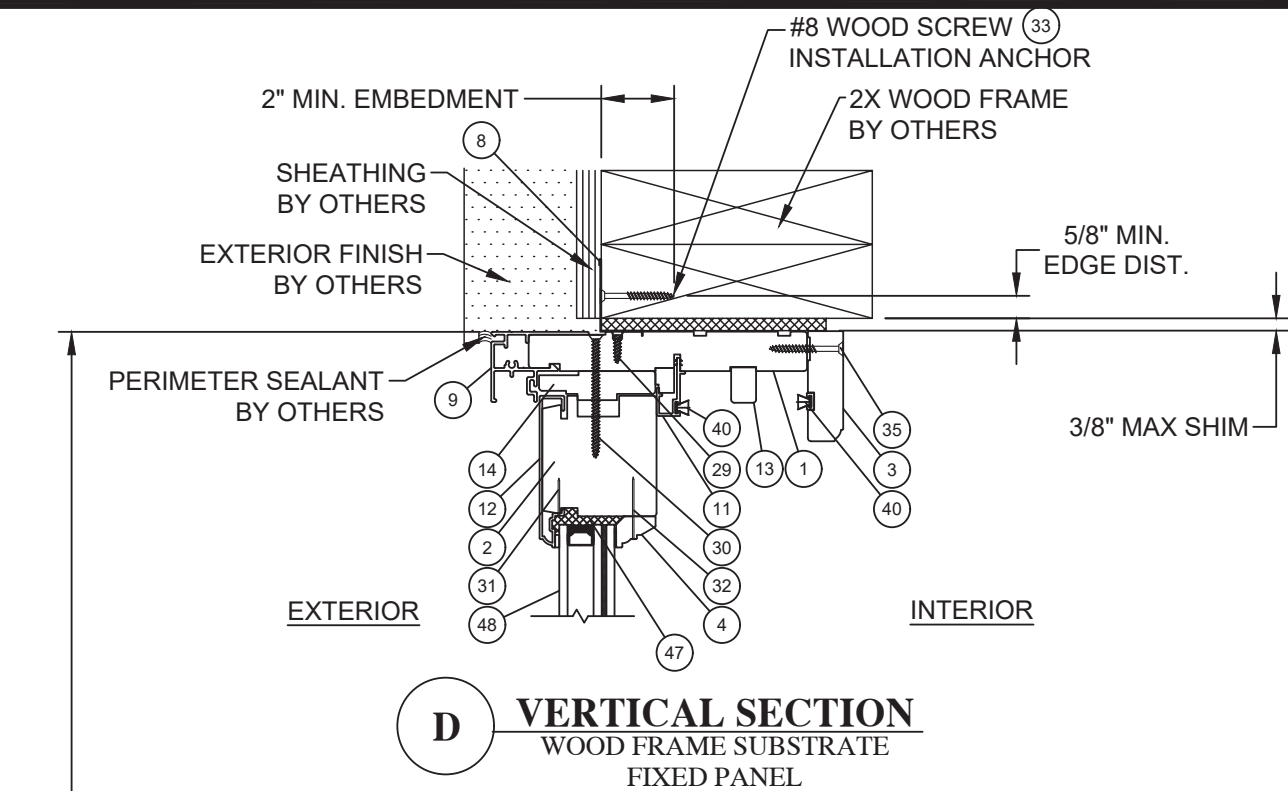
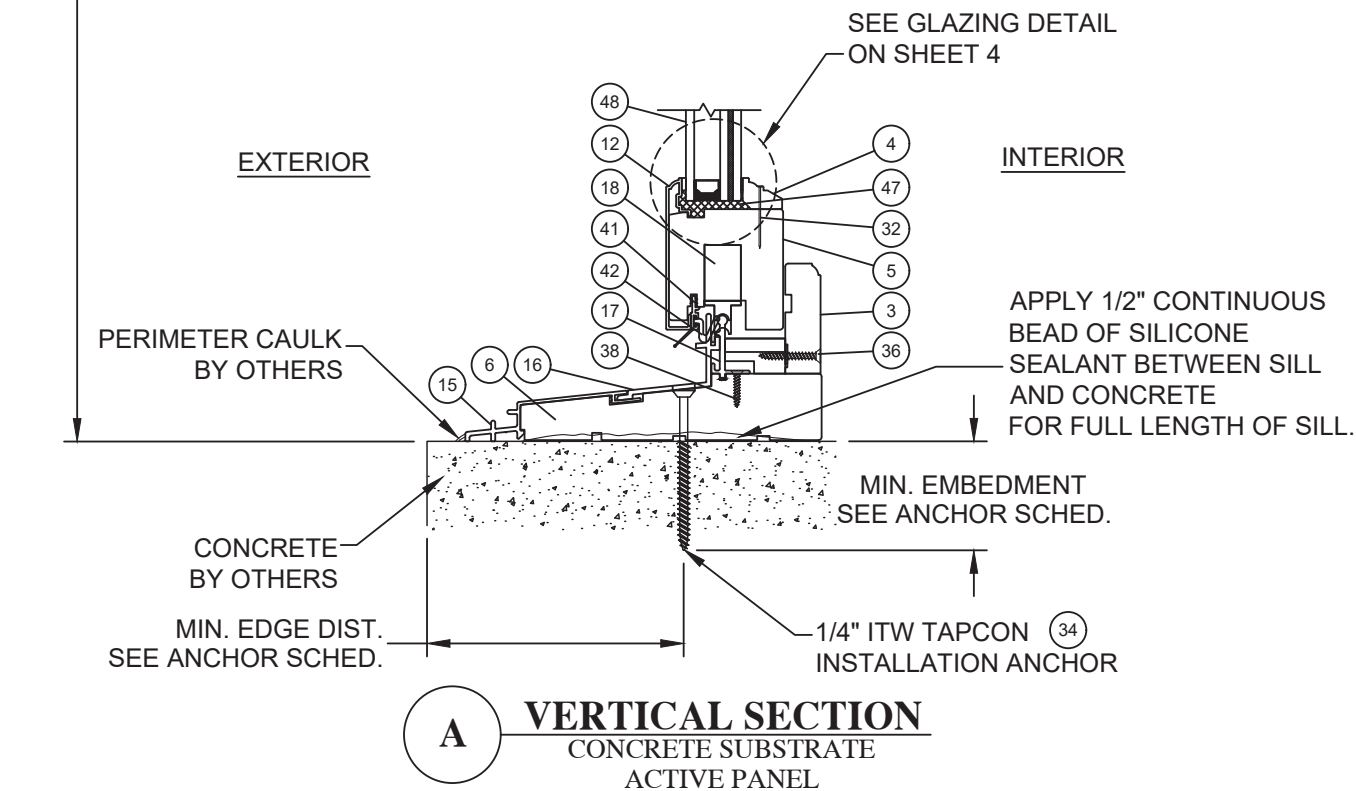
Robert J. Amoruso, P.E.
Florida P.E. No. 49752
FBPE Cert. of Auth. No. 25935



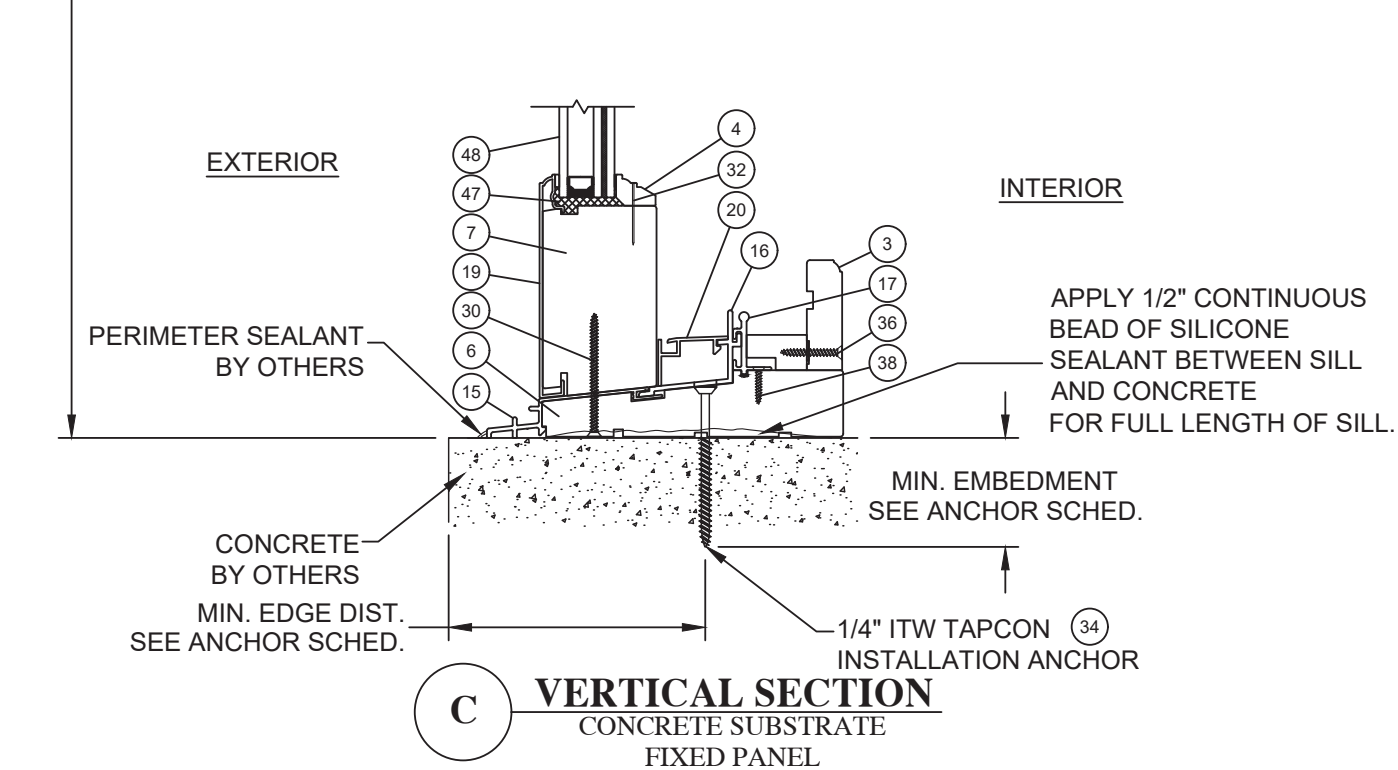
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MAX. O.A.
FRAME
HEIGHT



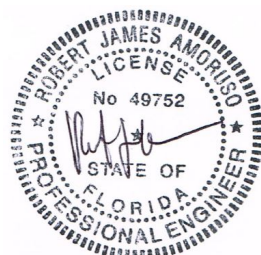
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HEIGHT



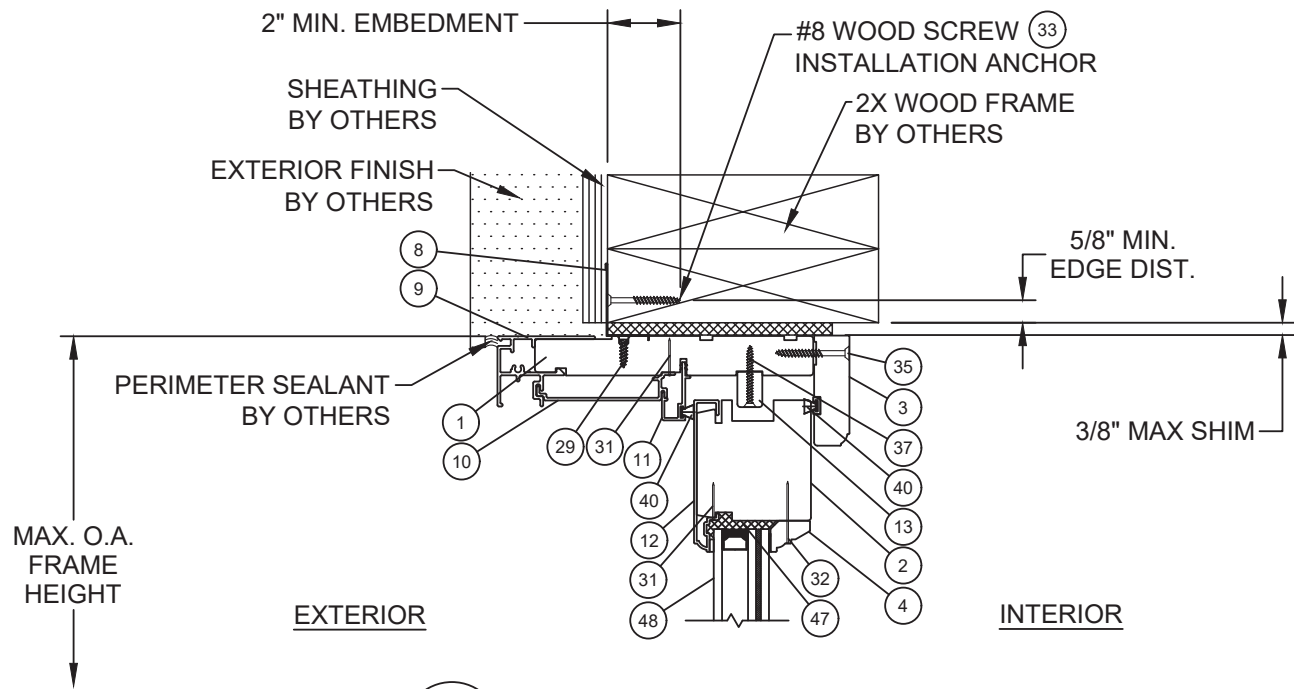
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UPDATED TO THE 8TH EDITION (2023) FBC		10/18/23	DATE
UPDATED TO THE 5TH EDITION (2014) FBC		4/16/14	REV
GLAZING UPDATE TO 2010 FBC		10/26/12	DESCRIPTION
D			

LOEWEN WINDOWS		DATE:	04/27/09
77 HIGHWAY 52 WEST, BOX 2260		DRAWING NO:	LOEW0002
STEINBACH, MANITOBA R5G 1B2 CANADA		SCALE:	N.T.S.
ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS		REV:	D
VERTICAL SECTIONS		SHEET:	3 OF 6
DRAWN BY: SMC		D	
PREPARED BY:		PTC PRODUCT DESIGN GROUP, LLC	
		P.O. BOX 550075, MIAMI, FL 33155	
		PHONE: 321-480-1788, INFO@PTC-CORP.COM	

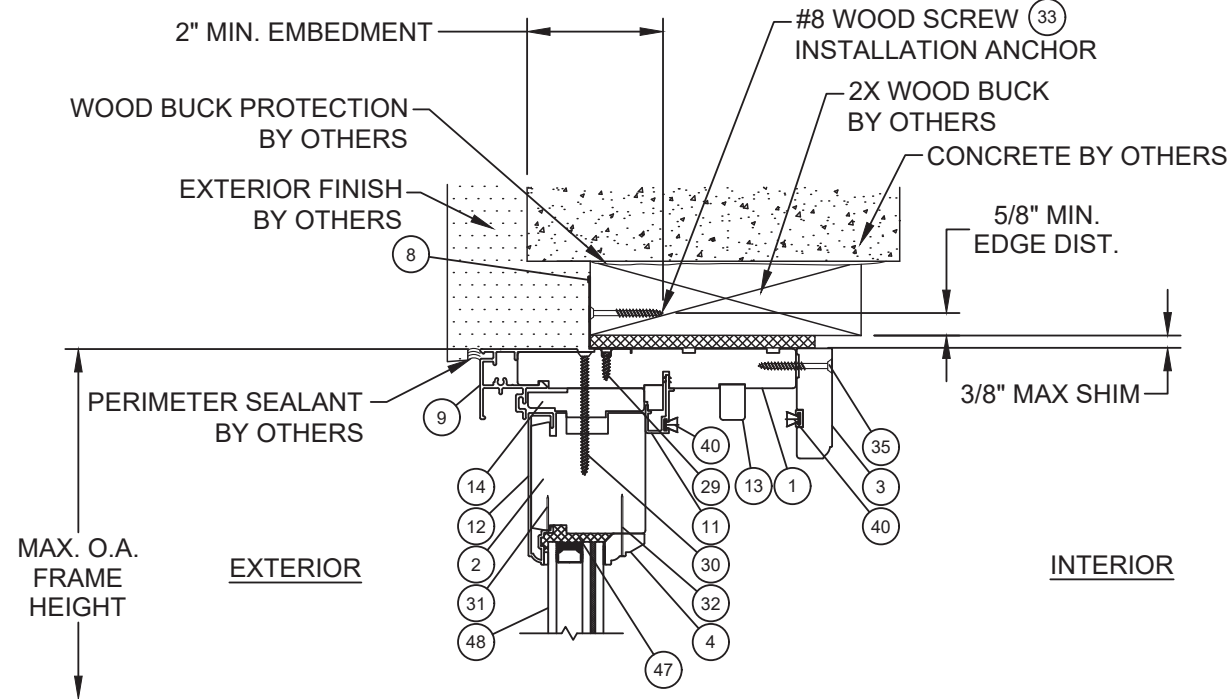
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FBPE Cert. of Auth. No. 25935



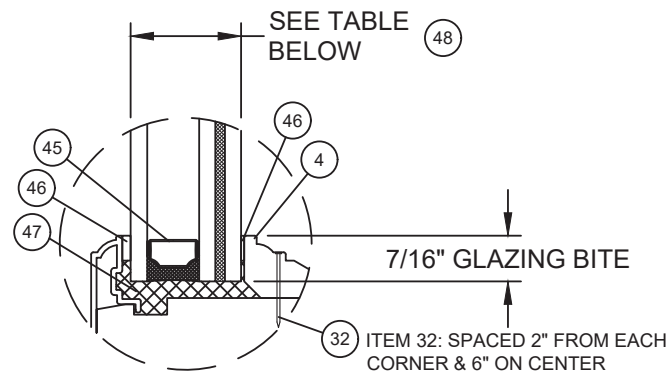
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E VERTICAL SECTION
WOOD FRAME SUBSTRATE
ACTIVE PANEL

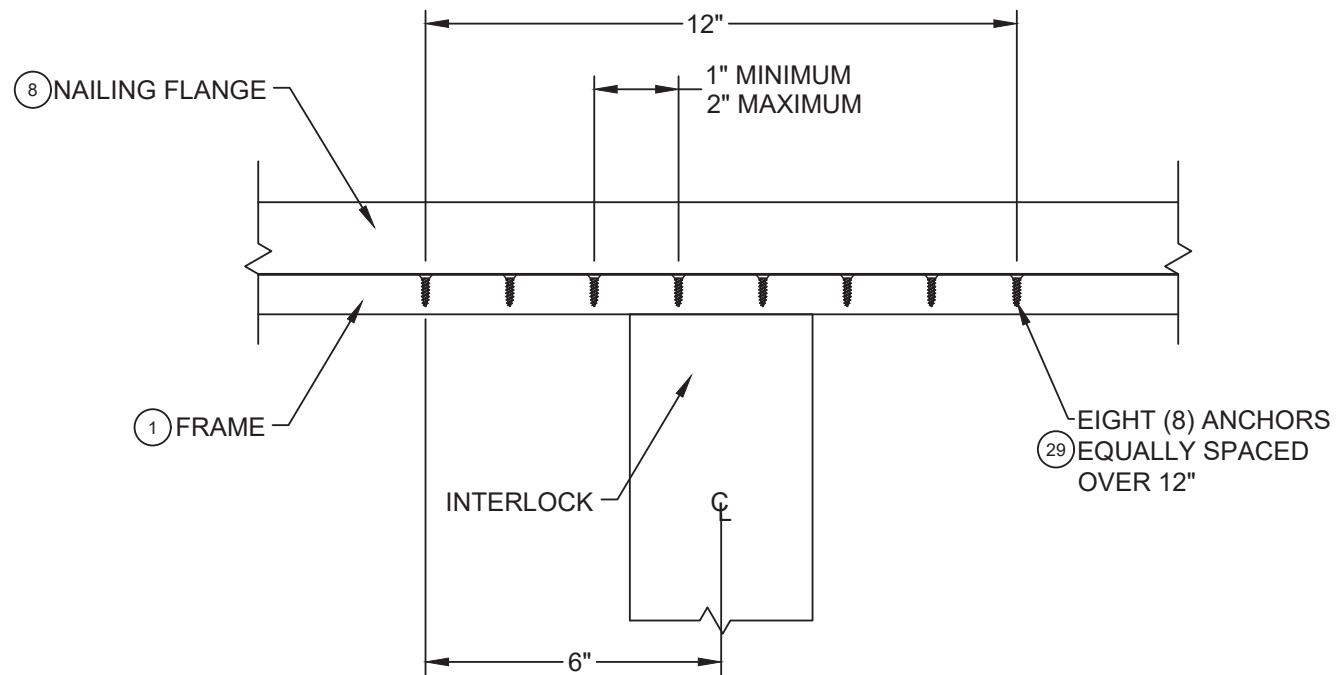


F VERTICAL SECTION
CONCRETE / MASONRY SUBSTRATE
FIXED PANEL



GLAZING DETAIL

GLAZING DETAIL DESIGN PRESSURE (PSF)			
GLAZING DETAIL	DESIGN PRESSURE	US OR SI UNITS	GLAZING CONFIGURATION
¹ (3/4" O.A.)	55	US	[EXTERIOR: 5/32" TEMPERED GLASS] x METAL SPACER x [INTERIOR: 1/8" ANNEALED GLASS x 0.090" KURARAY AMERICA SENTRYGLAS INTERLAYER x 1/8" ANNEALED GLASS]
		SI	[EXTERIOR: 4MM TEMPERED GLASS] x METAL SPACER x [INTERIOR: 3.1MM ANNEALED GLASS x 2.3MM KURARAY AMERICA SENTRYGLAS INTERLAYER, x 3.1MM ANNEALED GLASS]
² (1-1/6" O.A.)	70	US	[EXTERIOR: 3/16" TEMPERED GLASS] x METAL SPACER x [INTERIOR: 5/32" ANNEALED GLASS x 0.090" KURARAY AMERICA SENTRYGLAS INTERLAYER x 5/32" ANNEALED GLASS]
		SI	[EXTERIOR: 5MM TEMPERED GLASS] x METAL SPACER x [INTERIOR: 4MM ANNEALED GLASS x 2.3MM KURARAY AMERICA SENTRYGLAS INTERLAYER, x 4MM ANNEALED GLASS]
KURARAY AMERICA SENTRYGLAS INTERLAYER APPROVED UNDER CURRENT MIAMI-DADE NOTICE OF ACCEPTANCE (NOA).			



DETAIL C
NAILING FLANGE
TO FRAME

PROJECT NO. 423-0203

REV	DESCRIPTION	DATE	BY
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REV			

LOEWEN WINDOWS

77 HIGHWAY 52 WEST, BOX 2260

STEINBACH, MANITOBA R5G 1B2 CANADA

TITLE: ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS

VERTICAL SECTIONS, GLAZING DETAIL & ANCHOR DETAIL

PREPARED BY:



PTC PRODUCT DESIGN GROUP, LLC
P.O. BOX 150775, TAMPA, FL 33615
PHONE: 321-480-1700, INFO@PTC-CORP.COM

DRAWN BY: SMC

SCALE: N.T.S.

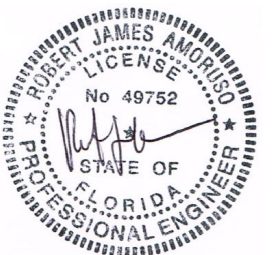
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DATE: 04/27/09

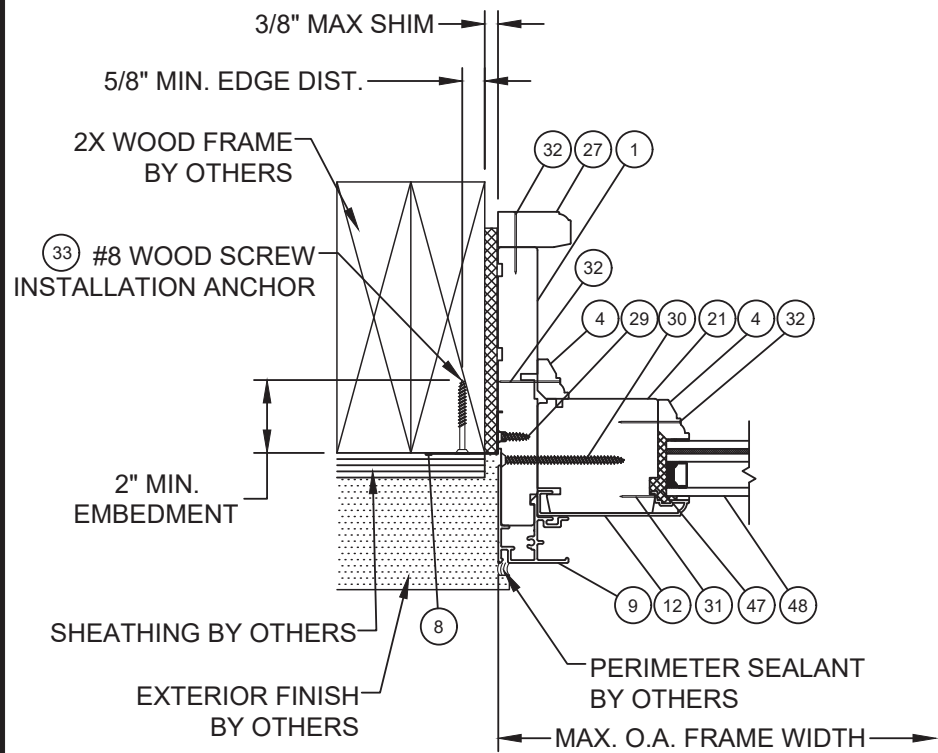
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SHEET: 4 OF 6

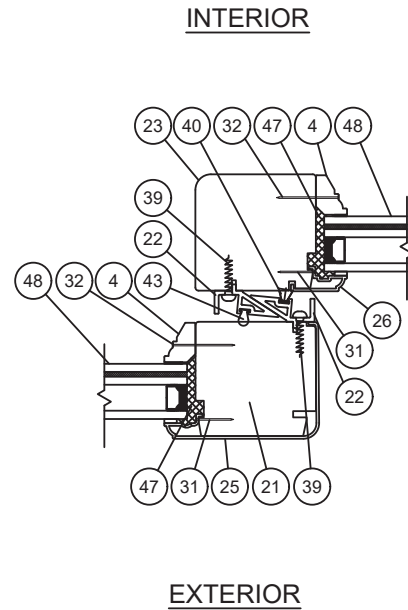
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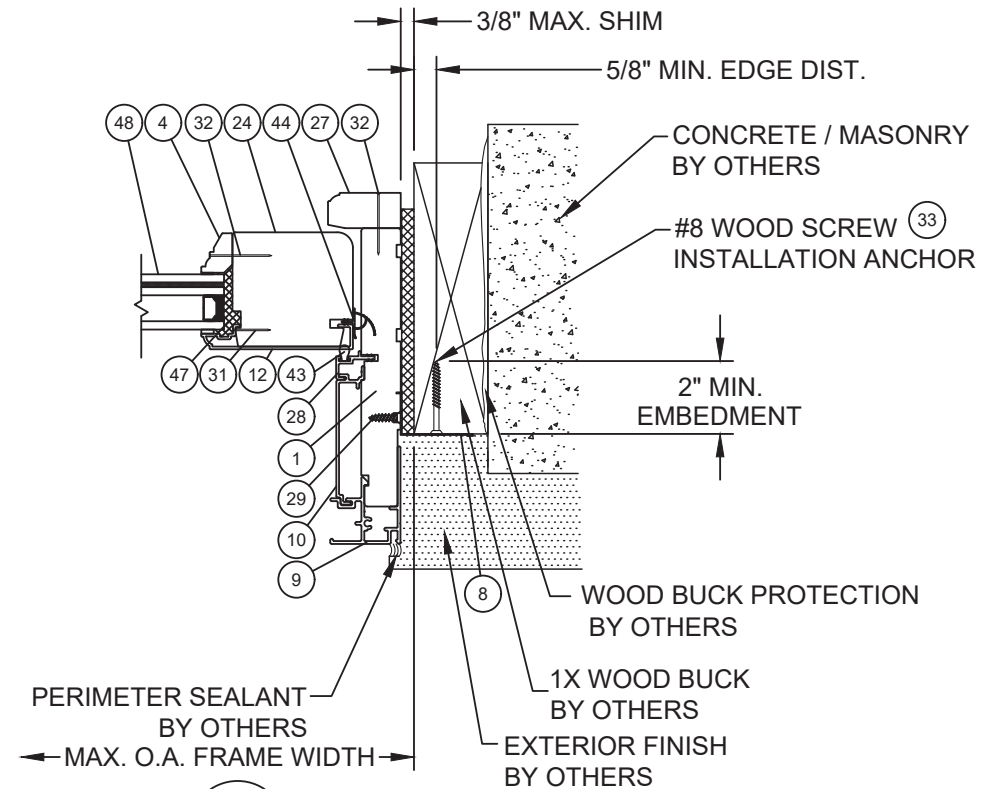
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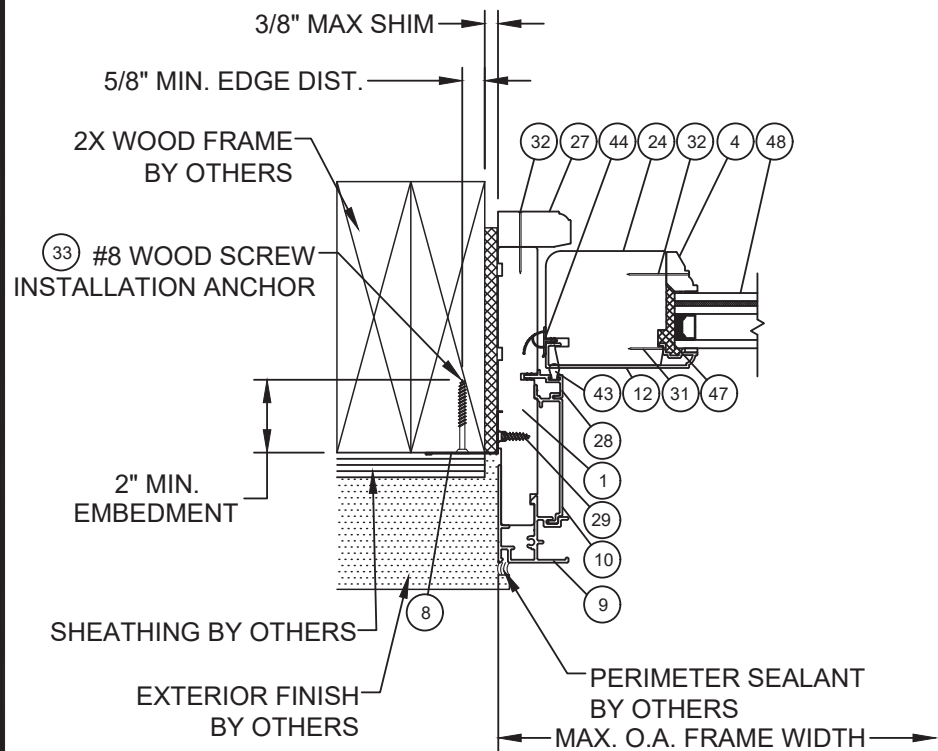
G **HORIZONTAL SECTION**
WOOD FRAME SUBSTRATE
FIXED PANEL



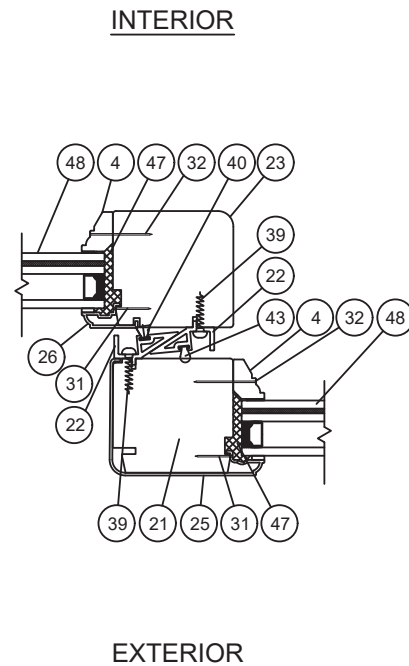
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MEETING STILE



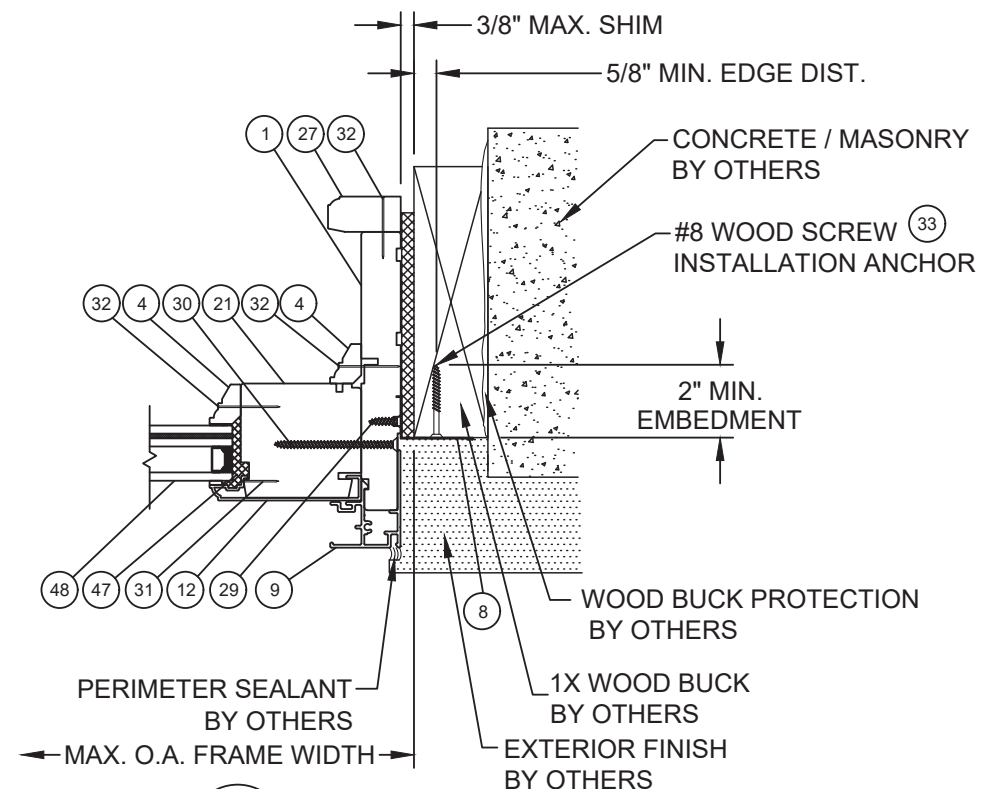
I **HORIZONTAL SECTION**
CONCRETE / MASONRY SUBSTRATE
ACTIVE PANEL



J **HORIZONTAL SECTION**
WOOD FRAME SUBSTRATE
ACTIVE PANEL



K **HORIZONTAL SECTION**
MEETING STILE



L **HORIZONTAL SECTION**
CONCRETE / MASONRY SUBSTRATE
FIXED PANEL

PROJECT NO. 423-0203

REV	DESCRIPTION	DATE	BY
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LOEWEN WINDOWS

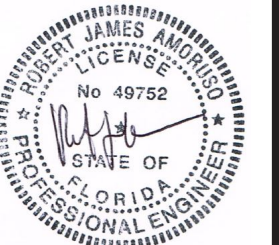
77 HIGHWAY 52 WEST, BOX 2260
STEINBACH, MANITOBA R5G 1B2 CANADA

TITLE: ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS
HORIZONTAL SECTIONS

DATE: 04/27/09
DRAWING NO: LOEW0002
SHEET: 5 OF 6



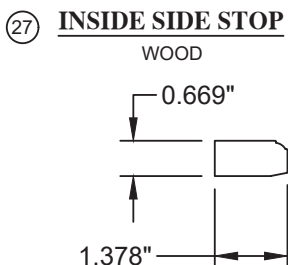
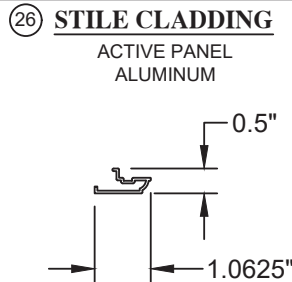
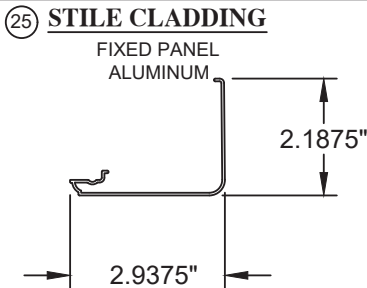
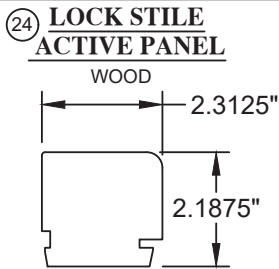
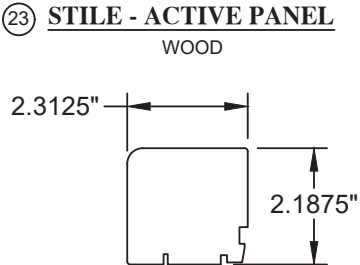
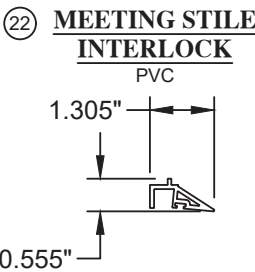
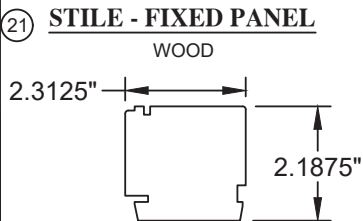
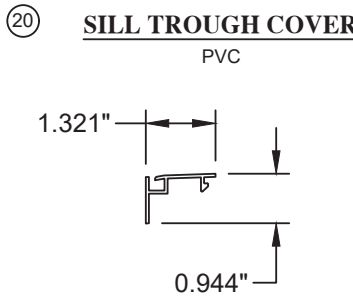
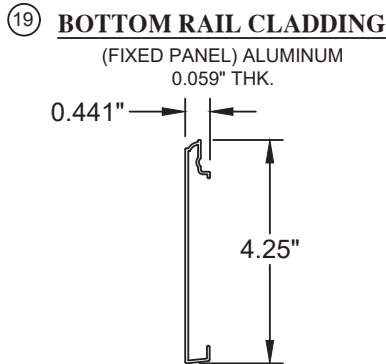
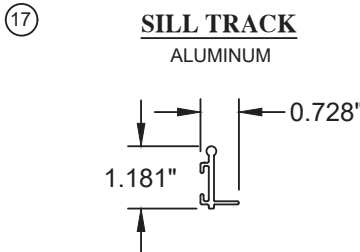
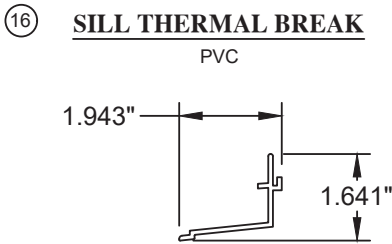
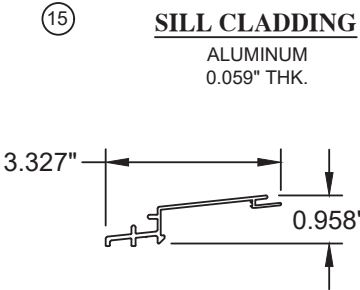
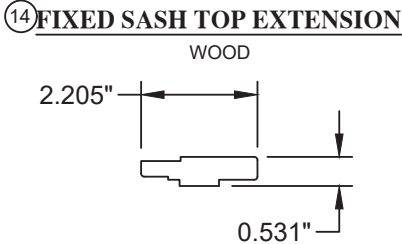
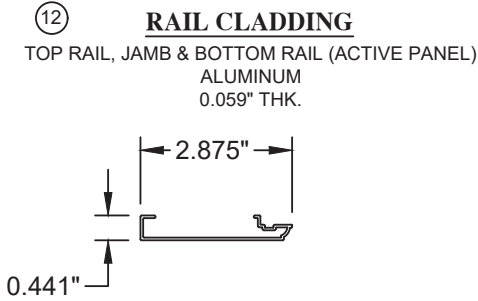
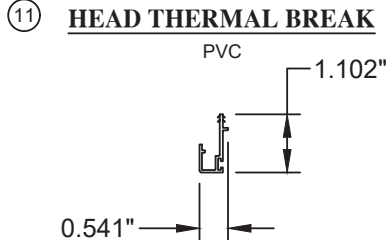
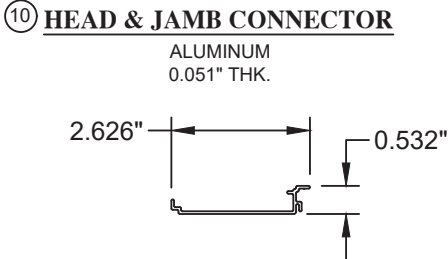
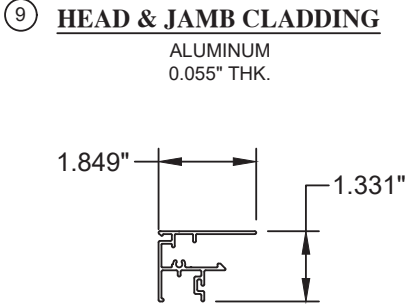
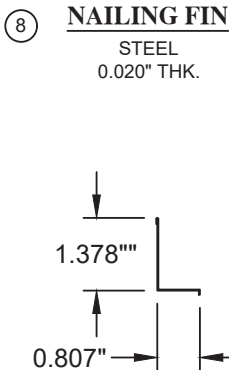
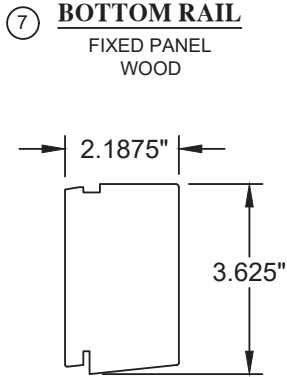
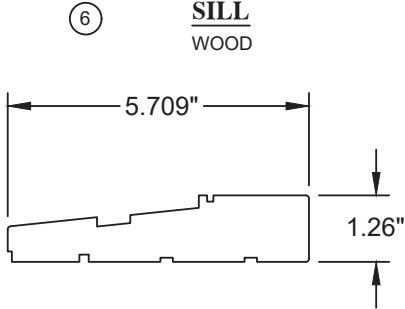
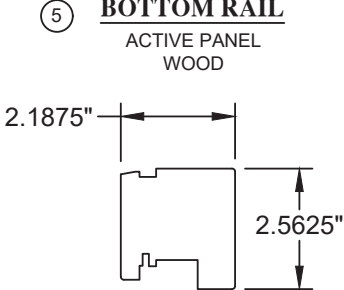
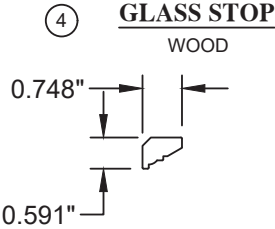
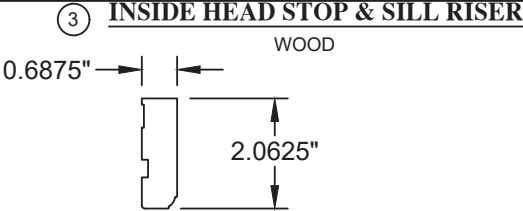
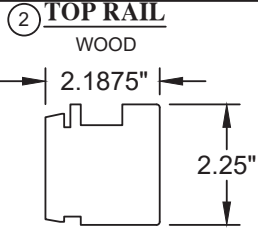
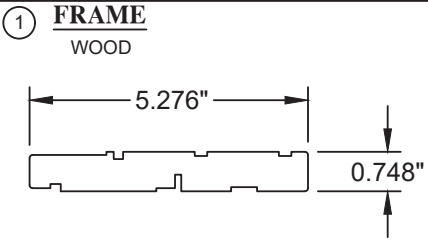
Robert J. Amoruso, P.E.
Florida P.E. No. 49752
FBPE Cert. of Auth. No. 25935



Digitally signed
by Robert J
Amoruso
Date:
2023.11.22
09:02:44 -05'00'

BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL	MANUFACTURER
1	FRAME	Douglas Fir or Mahogany	LOEWEN
2	TOP RAIL	Douglas Fir or Mahogany	LOEWEN
3	INSIDE HEAD STOP AND SILL RISER	Douglas Fir or Mahogany	LOEWEN
4	GLAZING STOP	Douglas Fir or Mahogany	LOEWEN
5	BOTTOM RAIL (ACTIVE PANEL)	Douglas Fir or Mahogany	LOEWEN
6	SILL	Douglas Fir or Mahogany	LOEWEN
7	BOTTOM RAIL (FIXED PANEL)	Douglas Fir or Mahogany	LOEWEN
8	NAILING FIN	STEEL (Fy = 50 KSI MIN.)	LOEWEN
9	HEAD & JAMB CLADDING	ALUMINUM 6063-T5	LOEWEN
10	HEAD & JAMB CONNECTORS	ALUMINUM 6063-T5	LOEWEN
11	HEAD THERMAL BREAK	PVC	LOEWEN
12	TOP RAIL CLADDING	ALUMINUM 6063-T5	LOEWEN
13	SECURITY RAIL	Douglas Fir or Mahogany	LOEWEN
14	FIXED SASH TOP EXTENSION	Douglas Fir or Mahogany	LOEWEN
15	SILL CLADDING	ALUMINUM 6063-T5	LOEWEN
16	SILL THERMAL BREAK	PVC	LOEWEN
17	SILL TRACK	ALUMINUM 6063-T5	LOEWEN
18	PATIO DOOR ROLLERS	---	TRUTH HARDWARE
19	BOTTOM RAIL CLADDING (FIXED PANEL)	ALUMINUM 6063-T5	LOEWEN
20	SILL TROUGH COVER	PVC	LOEWEN
21	STILE - FIXED PANEL	Douglas Fir or Mahogany	LOEWEN
22	MEETING STILE INTERLOCK	FIBERGLASS	ALL-ROVING
23	STILE - ACTIVE PANEL	Douglas Fir or Mahogany	LOEWEN
24	LOCK STILE - ACTIVE PANEL	Douglas Fir or Mahogany	LOEWEN
25	STILE CLADDING - FIXED PANEL	ALUMINUM 6063-T5	LOEWEN
26	STILE CLADDING - ACTIVE PANEL	ALUMINUM 6063-T5	LOEWEN
27	INSIDE SIDE STOP	Douglas Fir or Mahogany	LOEWEN
28	SIDE JAMB THERMAL BREAK	PVC	LOEWEN
29	#8 X 1/2" SCREW	STEEL	---
30	#8 X 2-1/2" SCREW	STEEL	---
31	3/4" BRAD NAIL	STEEL	---
32	1-1/4" BRAD NAIL (SPACED 2" FROM EACH CORNER & 6" ON CENTER)	STEEL	---
33	#8 X 2" WOOD SCREW - INSTALLATION ANCHOR	STEEL	---
34	1/4" ITW ADVANCED THREADFORM TAPCON - INSTALLATION ANCHOR	STEEL	ITW
35	#8 X 1-1/2" SCREW	STEEL	---
36	#8 X 1-1/4" SCREW	STEEL	---
37	#6 X 1-1/4" SCREW	STEEL	---
38	#6 X 3/4" SCREW	STEEL	---
39	#6 X 1" TRUSS HEAD SCREW	STEEL	---
40	PILE AND TRI-FIN WEATHER STRIP	---	SCHLEGGEL (80041)
41	SASH "T" SLOT	PVC	SPARTECH
42	WEATHER SEAL	---	QLON (QEZ-376)
43	WEATHER SEAL	---	QLON (SSI-C200X190)
44	COMPRESSION SEAL	---	INTEK PLASTICS
45	METAL SPACER	---	---
46	DOUBLE SIDED GLAZING TAPE	---	---
47	SILICONE SEALANT	SILICONE	DOW CORNING (995)
48	INSULATED GLASS (SEE GLAZING DETAIL AND TABLE ON SHEET 4)	GLASS	---



PROJECT NO. 423-0203

10/18/23
4/16/14
10/26/12

10/18/23
4/16/14
10/26/12

10/18/23
4/16/14
10/26/12

DATE

UPDATED TO THE 8TH EDITION (2023) FBC

UPDATED TO THE 5TH EDITION (2014) FBC

GLAZING UPDATE TO 2010 FBC

DESCRIPTION

REV

LOEWEN WINDOWS

77 HIGHWAY 52 WEST, BOX 2260
STEINBACH, MANITOBA R5G 1B2 CANADA

ALUMINUM CLAD STORMFORCE SLIDING PATIO DOORS

BILL OF MATERIALS & COMPONENTS

DATE: 04/27/09

DRAWING NO: LOEW0002

SHEET: 6 OF 6

PREPARED BY: PTC PRODUCT DESIGN GROUP, LLC
P.O. BOX 1775
PHONE: 321-484-1782, INFO@PTC-CORP.COM

Robert J. Amoruso, P.E.
Florida P.E. No. 49752
FBPE Cert. of Auth. No. 25935

Robert JAMES AMORUSO

No 49752

STATE OF FLORIDA

PROFESSIONAL ENGINEER

Digitally signed
by Robert J Amoruso
Date:
2023.11.22
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