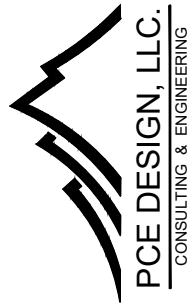


PRODUCT DEVELOPMENT

ALUMINUM PROJECT OUT WINDOW

PRODUCT APPROVAL DRAWINGS



6135 NW 167th St. STE E-1
Miami Gardends, FL 33015
Ph. (305) 698-0550

SERIES "MHV"
ALUMINIUM PROJECT
OUT WINDOW
SMALL MISSILE IMPACT (S.M.I.)

RC BES WINDOWS LLC
12900 NW 38th AVE.
OPA-LOCKA, FL 33054
Ph. 305-203-0780
Contact@BESmiami.com

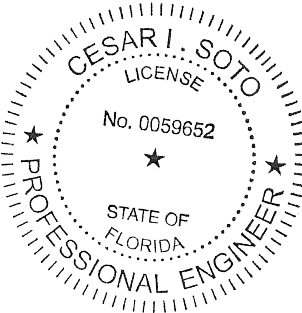
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24-0197P.8

REVISIONS:

No.	Date	Description

DATE:
May 31st, 2024

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Sheet No. 00 OF 07	SHEET NO. Cover



Digitally signed by Cesar I Soto
Contact Info: PE #59652
cesar.soto@paramountce.com
Date: 2025.01.28 15:39:24-05'00'

CONTACT: (305)698-0550 OR (786)877-2699

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY CESAR I. SOTO P.E. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNAURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

01/28/2025

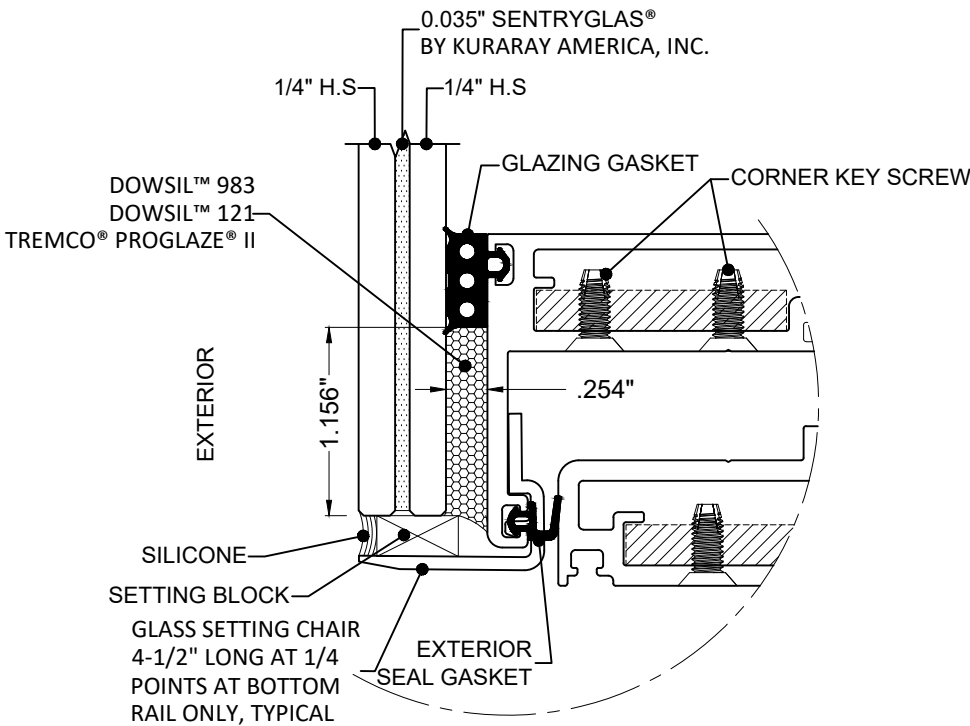
MHV ALUMINIUM OUT WINDOW

GENERAL NOTES

- A. THE PRODUCT SHOWN HEREIN IS DESIGNED AND TESTED TO COMPLY WITH THE FLORIDA BUILDING CODE 8TH EDITION 2023 (FBC 2023), INCLUDING HVHZ (HIGH VELOCITY HURRICANE ZONE)
- B. ADEQUACY OF THE EXISTING STRUCTURAL SUBSTRATE (METAL, CONCRETE, MASONRY, WOOD, ETC) NEEDS TO BE ABLE TO WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- C. WOODBUCKS EITHER 1BY OR 2BY (OPTIONAL) NEED TO BE DESIGNED AND SPECIFIED BY THE ARCHITECT OF RECORD OR THE ENGINEER OF RECORD AND NEED TO BE ABLE TO WITHSTAND ALL THE TRANSFERRED LOADS FROM THE GLAZING PRODUCT CORRECTLY.
- D. ALL ANCHORS NEED TO BE CORROSION RESISTANT, SEE PRODUCT APPROVAL FOR SPECIFIED ANCHORS REQUIRED.
- E. ALL DESIGN LOADS SHOWN IN APPROVAL ARE BASED ON ASD (ALLOWABLE STRESS DESIGN), TO GET ULTIMATE LOADS ASD LOADS NEED TO BE MULTIPLIED BY A FACTOR MULTIPLIER OF 1.6
- F. FINAL PRODUCT NEED TO HAVE LABEL.
- G. THESE GLAZING PRODUCTS ARE RATED FOR SMALL MISSILE IMPACT (S.M.I.)
- H. ALL SITE SPECIFIC CONDITIONS IN ANY PROJECT NEEDS TO BE PROCURED BY A LICENSED REGISTERED ENGINEERED OR ARCHITECT.
- I. WHEN USING THIS PRODUCT, SHUTTERS ARE NOT NECESSARY.
- J. SHIMS THAT ARE USED WITH THIS SYSTEM NEED TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.
- K. THIS PRODUCT APPROVAL COMPLIES WITH ALL WATER INFILTRATION REQUIREMENTS FOR IMPACT AND HVHZ SYSTEMS
- L. MANUFACTURER NEEDS TO SHOW PRODUCT LABEL IN ALL MANUFACTURED SYSTEMS.

MAXIMUM DESIGN LOADS

- A. SHEET 02 CONTAINS THE MAXIMUM ALLOWABLE DESIGN LOAD CAPACITY FOR THIS WINDOW.
- B. ANCHORS SPACING ARE SHOWN IN ALL GLAZING ELEVATIONS.
- C. ANCHOR TYPES ARE SHOWN ON SHEET 04. THIS SHEET SHOWS THE EDGE DISTANCE, EMBEDMENT, TYPE OF ANCHOR, AND ALL REQUIREMENTS ANCHORES NEED TO COMPLY WITH THESE SPECIFIATIONS

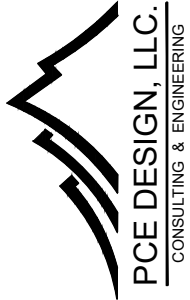


G1 GLAZING DETAIL (VENT BOTTOM SHOWN)
9/16\" NOMINAL OVERALL

GLASS CONFIGURATION FOR ALUMINUM OUT WINDOW

GLASS DESIGN NOTES

- A. ALL GLASS CAPACITIES ON THIS APPROVAL ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS)
- B. ALL GLASS SHOWN ON THIS APPROVAL HAS BEEN TESTED FOR LMI AND HVHZ REQUIREMENTS.
- C. ALL SETTING BLOCKS FOR THE GLASS TO BE LOCATED AT 25% OF THE SPAN WIDTH FOR GLASS WIDER THAN 36\" AS PER FBC CHAPTER 24
- D. SETTING BLOCK DUROMETER HARDNESS OF 70-90 (SHORE A) AS REFERENCED IN FBC CHAPTER 24
- E. GLASS TYPE SHALL COMPLY WITH APPLICABLE GLAZING REQUIREMENTS PER CHAPTER 24 OF THE FBC.



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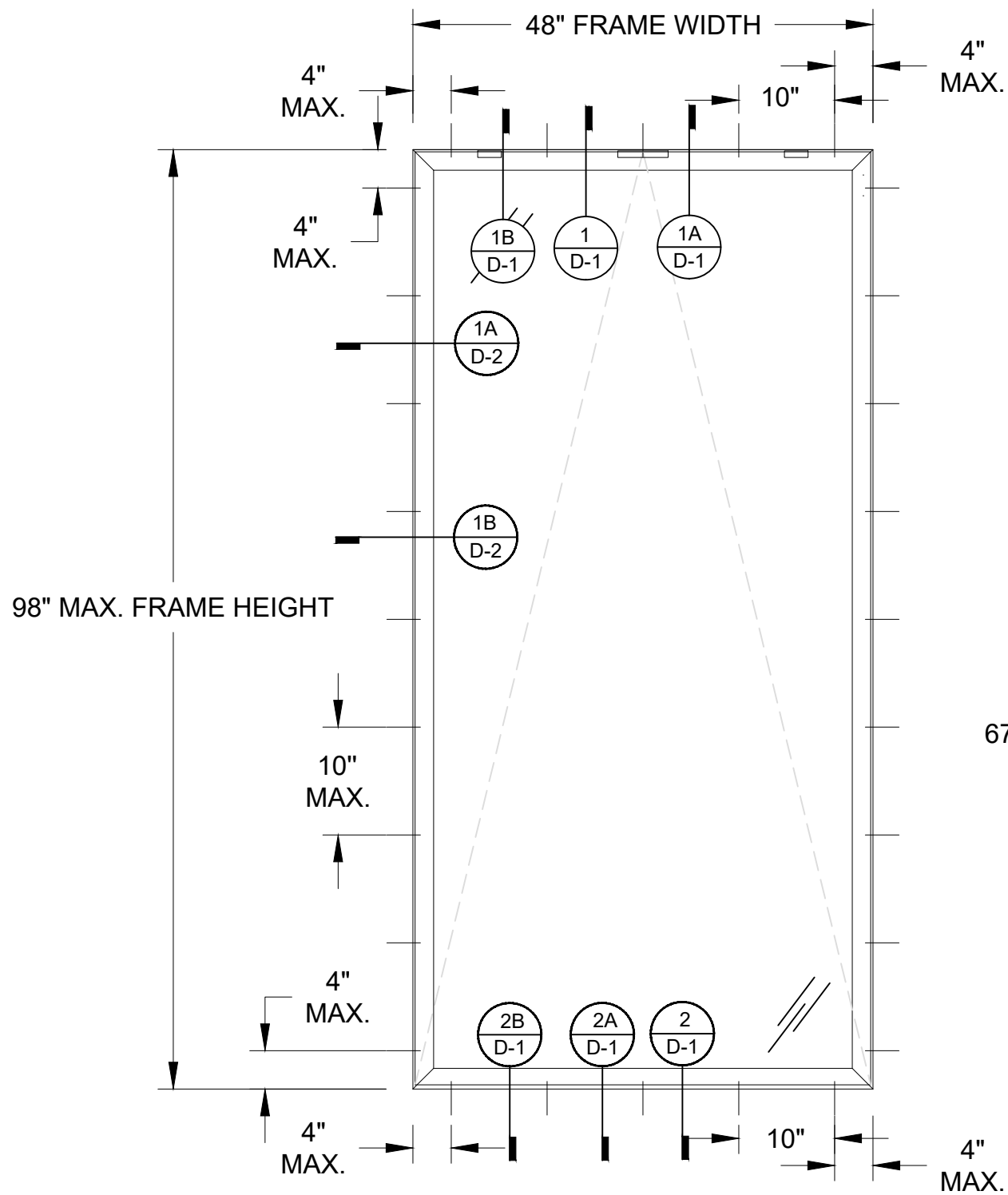
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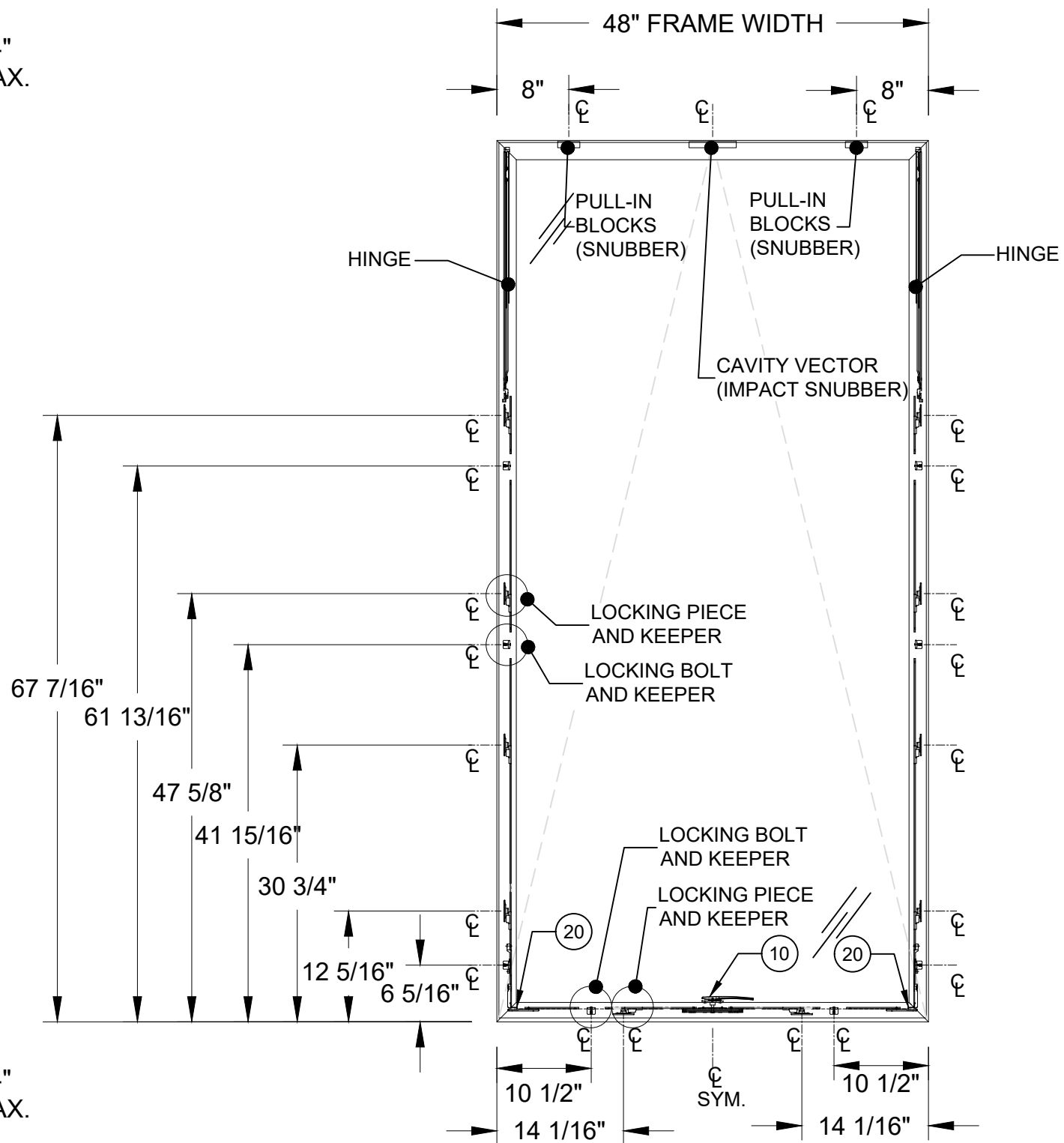
DATE:
May 31st, 2024

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Sheet No. 01 OF 07	SHEET NO. G-1



TYPICAL ANCHOR LAYOUT- WINDOWS ELEVATION

DESIGN LOADS: +/- 135 PSF



TYPICAL LOCKING POINT LAYOUT-WINDOWS ELEVATION

LOCKING POINT CHART (EACH JAMB)			
WINDOW HEIGHT UP TO	LOCKING PIECE & KEEPER	LOCKING BOLT & KEEPER	TOTAL POINT LOCK
50-5/8"	1	1	2
63"	2	1	3
72"	3	2	5
98"	4	3	7

LOCKING POINT CHART (AT SILL)			
WINDOW WIDTH	LOCKING PIECE & KEEPER	LOCKING BOLT & KEEPER	TOTAL POINT LOCK
37"	2	2	4
42"			
48"			



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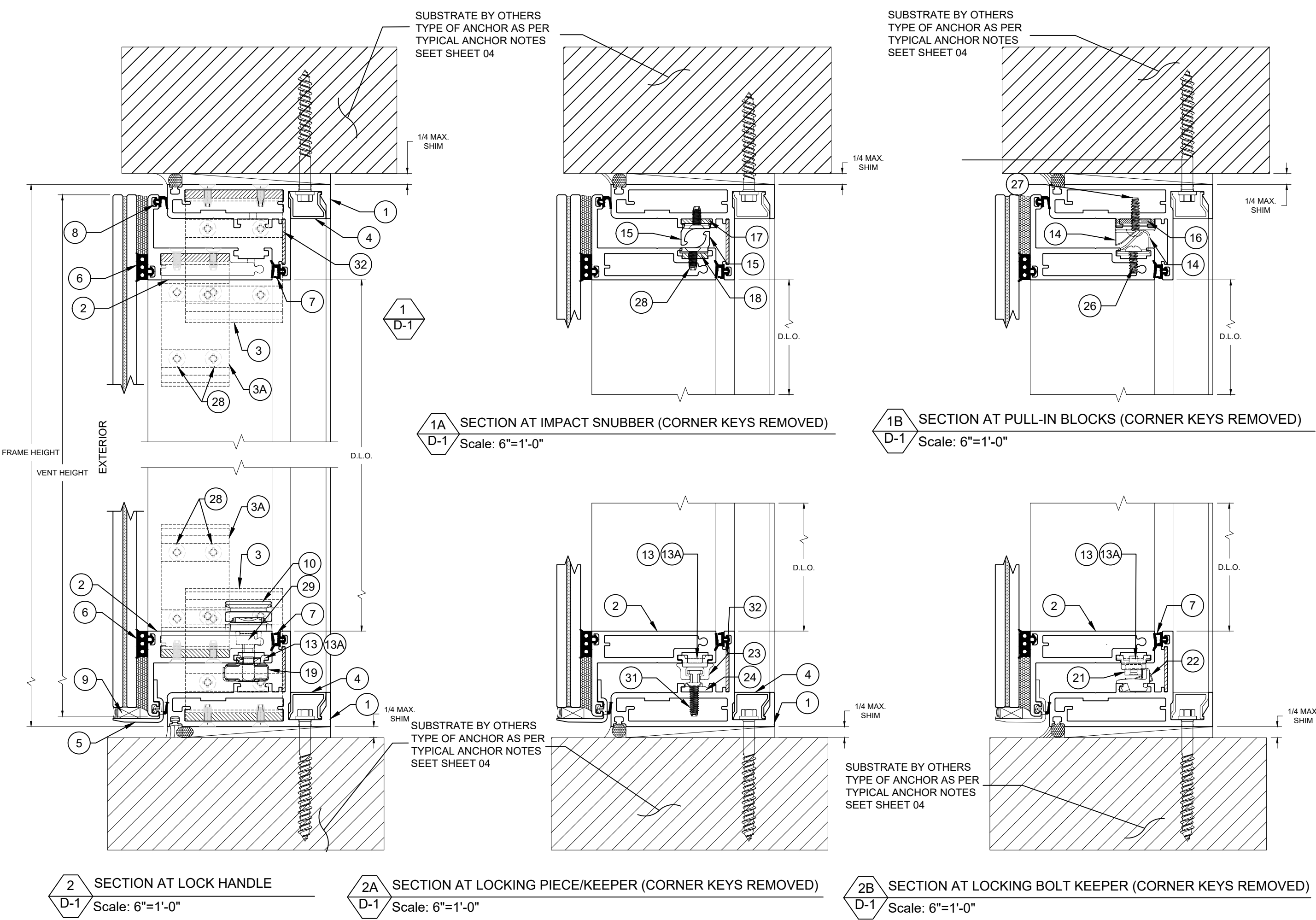
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MH
Sheet No.
02 OF 07
SCALE
3/4" = 1'-0"
SHEET NO.
WE-1



PCE DESIGN, LLC.
CONSULTING & ENGINEERING

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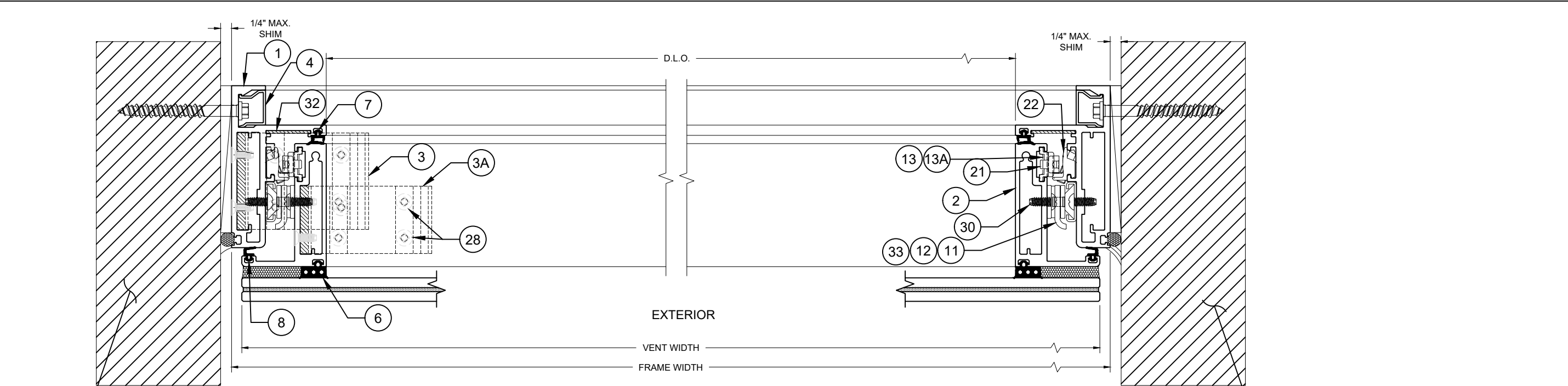
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Sheet No. 03 OF 07	SHEET NO. D-1



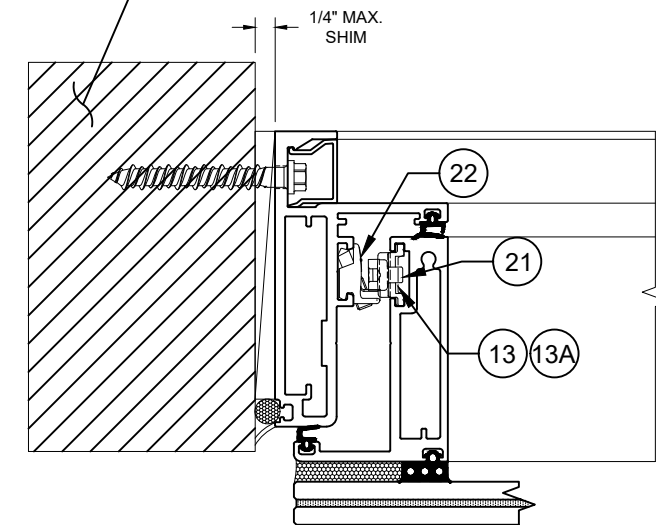
SUBSTRATE BY OTHERS
TYPE OF ANCHOR AS PER
TYPICAL ANCHOR NOTES
SEET SHEET 04

1
D-2

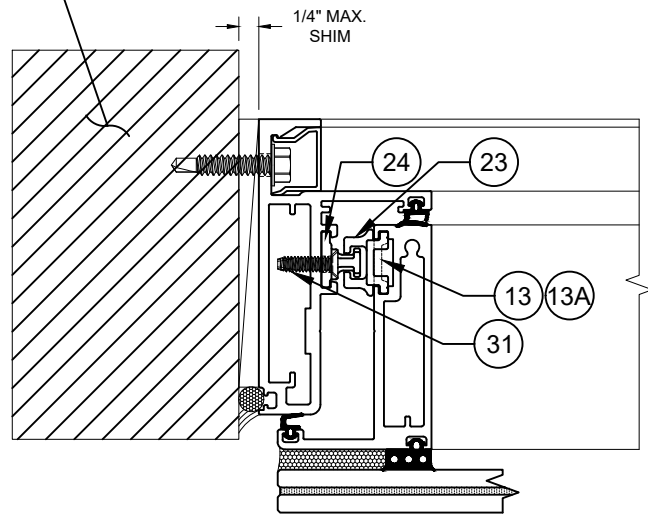
SUBSTRATE BY OTHERS
TYPE OF ANCHOR AS PER
TYPICAL ANCHOR NOTES
SEET SHEET 04

2
D-2

SUBSTRATE BY OTHERS
TYPE OF ANCHOR AS PER
TYPICAL ANCHOR NOTES
SEET SHEET 04



1A SECTION AT LOCKING BOLT/KEEPER (CORNER KEYS REMOVED)
D-2 Scale: 4"=1'-0"



1B SECTION AT LOCKING PIECE/KEEPER (CORNER KEYS REMOVED)
D-2 Scale: 4"=1'-0"

SUBSTRATE NOTES:

- SUBSTRATE IS BY ENGINEER OF RECORD (E.O.R.) OR ARCHITECT OF RECORD (A.O.R.)
- THIS GLAZING SYSTEM CAN IS APPROVED TO BE ANCHORED TO:
 - a. CONCRETE OR MASONRY
 - b. CONCRETE OR MASONRY THRU 1X WOOD BUCK
 - c. WOOD SUBSTRATE OR 2X BUCK
 - d. METAL (STEEL FRAMING OR STUD / ALUMINUM)

TYPICAL ANCHORS:

TYPE 'A'- **Ø5/16" ELCO® ULTRACON®** (Fu = 177 KSI , Fy = 155 KSI)

INTO "2X" WOOD BUCK OR WOOD STRUCTURES:
1-1/2" MIN. EMBEDMENT INTO WOOD (HEAD/SILL/JAMBS)

THRU "1X" WOOD BUCK INTO CONCRETE OR BLOCKS:
1-1/4" MIN. EMBEDMENT INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBEDMENT INTO BLOCKS (JAMBS)

DIRECTLY INTO CONCRETE OR BLOCKS:
1-1/4" MIN. EMBEDMENT INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. INTO BLOCKS (JAMBS)

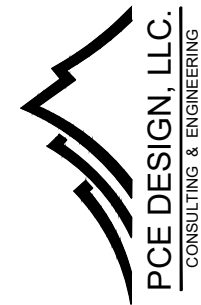
TYPE 'B'- **Ø1/4" TEK OR SELF-DRILLING SCREW** (GRADE 5 CRS)

INTO METAL STRUCTURES OR MIAMI-DADE APPROVED MULLIONS (HEAD/SILL/JAMBS)
(ANCHORS MUST EXTEND A MINIMUM OF (3) THREADS BEYOND ANY METAL SUBSTRATE AND MAY BE HEX HEAD, PAN HEAD OR FLAT HEAD)
STEEL: 1/8" THK. (11 GA) MIN. (Fy = 36 KSI MIN.)
ALUMINUM: 1/8" THK. MIN. (ALLOY 6063-T5)

CRITICAL EDGE DISTANCE

INTO CONCRETE AND MASONRY = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1-1/4" MIN.
INTO METAL STRUCTURES = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f_c - 3000 PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS f_m = 2000 PSI MIN.



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SCALE
4" = 1'-0"

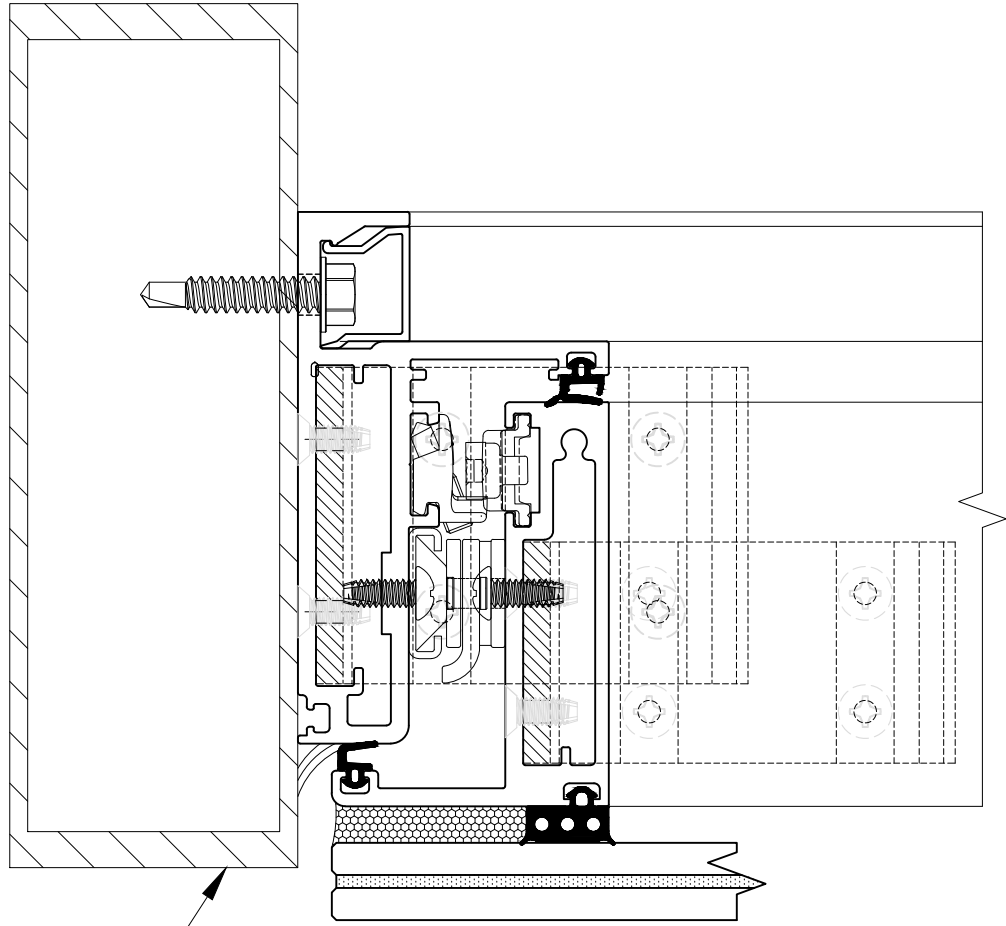
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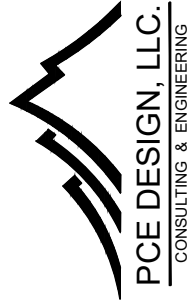
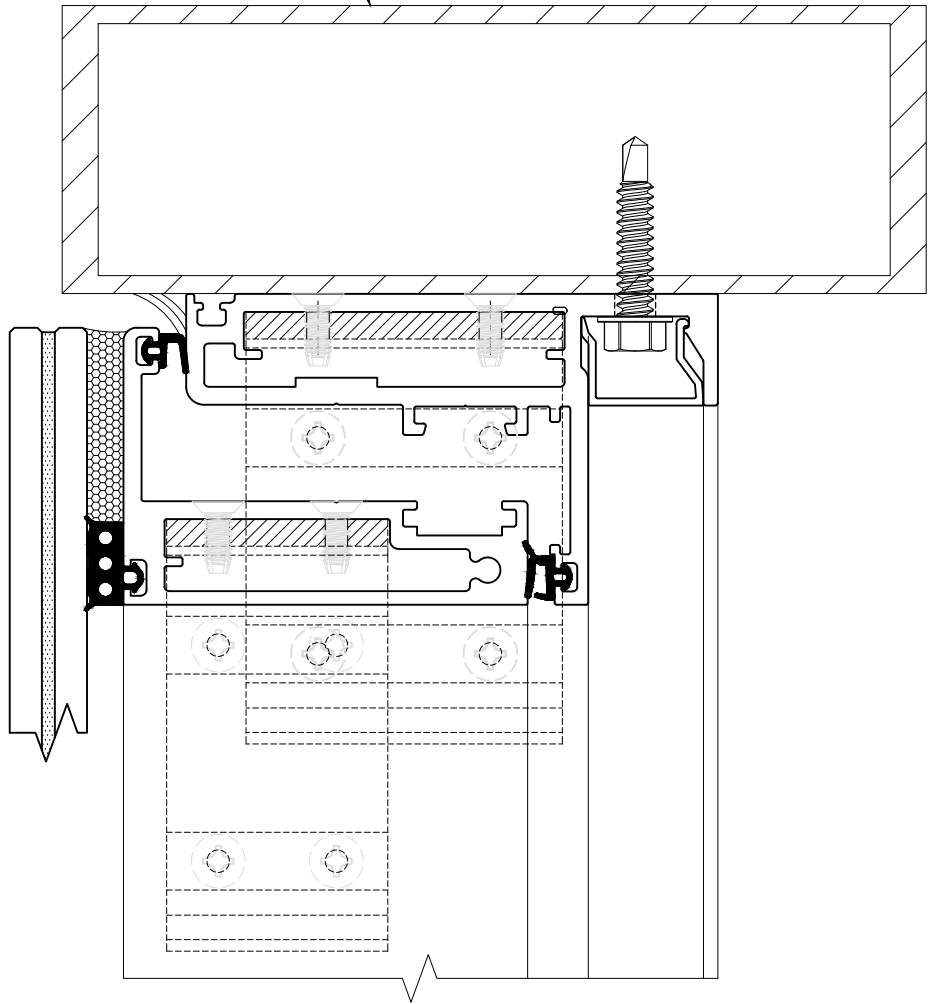
SHEET NO.

D-2

MIAMI-DADE COUNTY
APPROVED MULLION
(SEE SEPARATE NOA)



MIAMI-DADE COUNTY
APPROVED MULLION
(SEE SEPARATE NOA)



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CHART 1

ITEM LIST				
ITEM	PART No.	MATERIAL	DESCRIPTION	MANUFACTURER / REMARKS
1	MHV-01	ALUM. ALLOY 6005-T5	FRAME HEAD / SILL / JAMB	FISA
2	MHV-02	ALUM. ALLOY 6005-T5	VENT TOP / BOTTOM / SIDES	FISA
3	MHV-03	ALUM. ALLOY 6063-T6	CORNER KEY (FRAME)	FISA
3A	MHV-03	ALUM. ALLOY 6063-T6	CORNER KEY (VENT)	FISA
4	MHV-05	ALUM. ALLOY 6005-T5	SNAP IN SCREW COVER	FISA
5	MHV-06	ALUM. ALLOY 6005-T5	GLASS SETTING CHAIR, (2) AT BOTTOM VENT QUARTER POINTS	4-1/2" LONG
6	GL-008	SILICONE, BLACK	GLAZING GASKET (DUROM. 75±5%)	TREMCO
7	GL-006	TPV, BLACK	INTERIOR SEAL GASKET (DUROM. 55±5%)	MELPOINT PLASTICS
8	GL-007	TPV, BLACK	EXTERIOR SEAL GASKET (DUROM. 55±5%)	MELPOINT PLASTICS
9	SB-003	TPV, BLACK	SETTING BLOCK 1/4 x 1/2 x 4-1/2" LG. (DUROM. 85±5%)	AT QUARTER POINTS (VENT BOTTOM)
10	BF01-6509-077	STAINLESS STEEL	LEVER LOCK HANDLE (7 x 28mm SPINDLE)	INTERLOCK USA
11	SPT26	304 STAINLESS STEEL	26" FOUR-BAR FRICTION HINGE ASSY.	INTERLOCK USA
12	SOR300	304 STAINLESS STEEL	STAY-OPEN RESTRICTOR ASSY., 1 AT EACH JAMB (OPTIONAL)	INTERLOCK USA
13	PL0250-PA66	POLYAMIDE	DRIVE BAR (OPTIONAL)	IDh
13A	MHV-09	ALUMINUM	DRIVE BAR	-
14	CPB1	DIECAST	PULL IN BLOCKS, AT TOP WINDOW, 8" FROM EACH CORNER	INTERLOCK USA
15	ASD2	DIECAST	CAVITY VECTOR (IMPACT SNUBBER), AT TOP WINDOW MIDSPAN	INTERLOCK USA
16	-	ALUMINUM	.906 x 1.965 x .125" THK. PULL IN BLOCK SHIM (FRAME SIDE)	-
17	-	ALUMINUM	.688 x 3.750 x .100" THK. CAVITY VECTOR SHIM (FRAME SIDE)	-
18	-	ALUMINUM	.563 x 3.750 x .125" THK. CAVITY VECTOR SHIM (VENT SIDE)	-
19	SLT1506R	STAINLESS STEEL	GEAR BOX, (1) AT CENTER OF VENT BOTTOM RAIL	INTERLOCK USA
20	MMEU0020-100050	DIECAST	CORNER DRIVE W/RETAINER CLIP, (1) AT EACH VENT BOTTOM CORNER	INTERLOCK USA
21	717875	DIECAST	LOCKING BOLT MV TS PC1	INTERLOCK USA
22	859322	DIECAST	KEEPER (STRIKER) TS PC1	INTERLOCK USA
23	838396	DIECAST	KEEPER (STRIKER) E A0004 TS PC1	INTERLOCK USA
24	838402	DIECAST	LOCKING PIECE E TS PC1	INTERLOCK USA
25	S7280	DIECAST	CAM ADJUSTING DEVICE, AT HINGE BOTTOM END (OPTIONAL)	INTERLOCK USA
26	-	STAINLESS STEEL	#10-16 x 1/2" PHP. PH. MS. PULL IN BLOCK SCREW (VENT SIDE)	-
27	-	STAINLESS STEEL	#10-16 x 3/4" PHP. PH. MS. PULL IN BLOCK SCREW (FRAME SIDE)	-
28	-	STAINLESS STEEL	#10-24 x 1/2" PHP. FH. UC. TF. CORNER KEY/IMPACT SNUBBER SCREW	-
29	-	STAINLESS STEEL	M5 x 0.8 x 30 mm PHP. FH. MS. LOCK HANDLE TO GEAR BOX SCREW	-
30	-	STAINLESS STEEL	#10-24 x 1/2" PHP. PH. MS. HINGE/RESTRICTORS SCREW	-
31	-	STAINLESS STEEL	#10-24 x 3/4" PHP. FH. UC. TF. LOCKING PIECE E TS PC1 SCREW	-
32	-	ALUMINUM	2 x 2 x .063" THK. CHEVRON (FRAME ALIGNMENT), 1/CORNER (OPTIONAL)	-
33	SDR6	304 STAINLESS STEEL	KEY RELEASE DETACHABLE RESTRICTOR ASSY., 2 EA. (OPTIONAL)	INTERLOCK USA

LOCK:

SURFACE MOUNT METALLIC LEVER TYPE HANDLE LOCK AND STAINLESS STEEL GEAR BOX, LOCATED AT CENTER OF VENT BOTTOM RAIL, FASTENED WITH (2) M5 x 0.8 x 30mm PHP. FH. MS.

SURFACE MOUNT METALLIC KEEPERS, LOCATED 12-5/16", 30-3/4", 45-5/8" AND 67-7/16" FROM BOTTOM AT FRAME JAMBS AND AT 14-1/4" FROM EACH END AT FRAME SILL, EACH FASTENED WITH (2) #10-24 x 3/4" PHP. FH. UC. MS.

SURFACE MOUNT METALLIC COMPRESSION KEEPERS, LOCATED 6-1/2", 42" AND 62" FROM BOTTOM AT FRAME JAMBS AND 10-1/4" FROM EACH END AT FRAME SILL, EACH FASTENED WITH (1) #8-32 x 3/8" CONE POINT SET SCREW

PULL-IN BLOCKS & IMPACT SNUBBERS:

SURFACE MOUNT METALLIC PULL-IN BLOCKS AT FRAME HEAD & VENT TOP, LOCATED 8" FROM EACH END, FASTENED TO FRAME WITH (2) #10-16 x 3/4" PHP. PH. MS. AND TO THE VENT WITH (2) #10-16 x 1/2" PHP. PH. MS.

SURFACE MOUNT METALLIC CAVITY VECTOR (IMPACT SNUBBER), LOCATED AT FRAME HEAD & VENT TOP MIDSPAN, EACH FASTENED WITH (2) #10-24 x 1/2" PHP. FH. UC. MS.

HINGES:

SURFACE MOUNT STAINLESS STEEL 4-BAR FRICTION HINGE BY 'SECURISTYLE', LOCATED AT LEFT AND RIGHT WINDOW UPPER CORNERS, FASTENED TO FRAME WITH (3) AND TO VENT WITH (4) #10-24 x 1/2" PHP. PH. MS.

OPTIONAL HARDWARE:

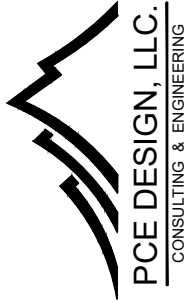
SURFACE MOUNT STAINLESS STEEL KEY-RELEASE DETACHABLE RESTRICTOR, LOCATED 51-1/2" FROM BOTTOM AT LEFT AND RIGHT JAMBS, FASTENED TO FRAME AND VENT WITH (2) #10-24 x 1/2" PHP. PH. MS.

SURFACE MOUNT STAINLESS STEEL STAY-OPEN RESTRICTOR, LOCATED 5" FROM BOTTOM AT LEFT AND RIGHT JAMBS, FASTENED TO FRAME WITH (4) AND TO VENT WITH (3) #10-24 x 1/2" PHP. PH. MS.

SURFACE MOUNT METALLIC CAM ADJUSTING DEVICE FOR VENT ALIGNMENT, LOCATED AT BOTTOM END OF HINGE, SECURED TO FRAME USING THE SAME SCREW FASTENING THE HINGE TO FRAME

SEALANTS:

ALL FRAME AND VENT CORNERS, CORNER KEY FASTENERS AND LOCK HANDLE SCREWS SEALED WITH DOWSIL™ 795



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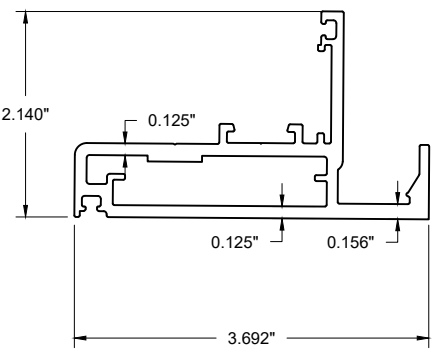
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Sheet No. 06 OF 07	SHEET NO. D-4

DOOR EXTRUSIONS

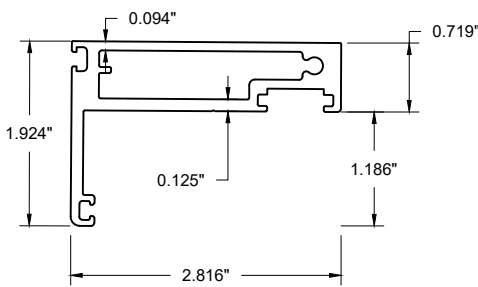
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FRAME HEAD/ SILL/ JAMB



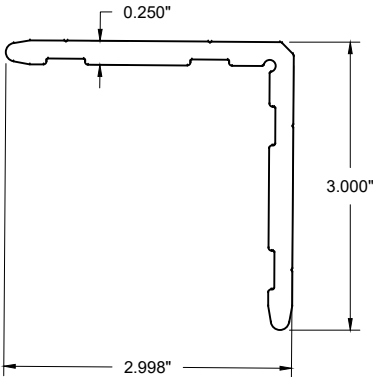
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VENT TOP/ BOTTOM/SIDE



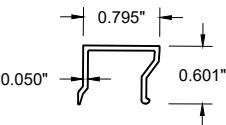
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FRAME/ VENT CORNER KEY



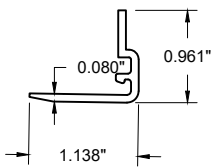
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SNAP IN SCREW COVER



5

GLASS SETTING CHAIR



#10-24 x 1/2" PHP.
FH. UC. MS.

CORNER KEY

#10-24 x 1/2" PHP.
FH. UC. MS.

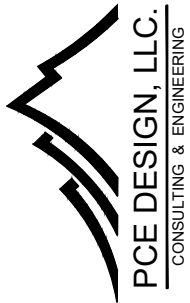
#10-24 x 1/2" PHP.
FH. UC. MS.

CORNER KEY

#10-24 x 1/2" PHP.
FH. UC. MS.

FRAME CORNER DETAIL

VENT CORNER DETAIL



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1:2

Sheet No.
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SHEET NO.
E-1