

ES WINDOWS

SERIES 76 MD VINYL DBL TILT-TURN WINDOW

HVHZ, IMPACT ANCHORAGE DETAILS

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN EVALUATED TO COMPLY WITH THE CURRENT PROVISIONS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONES (HVHZ) AND IS BASED ON TESTING CONDUCTED TO TAS 202, TAS 201 & TAS 203 TEST PROTOCOLS PER TEST REPORT NO. NCTL-210-4100-01
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 FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 1X BUCK OVER MASONRY AND/OR CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED, DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF THE INSTALLATION METHODS DEVIATE FROM THESE APPROVED DETAILS THIS WOULD REQUIRE FURTHER INVESTIGATION BY A LICENSED OR REGISTERED DESIGN PROFESSIONAL.
5. ALL SETTING BLOCKS AND GASKET MATERIALS 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. GASKET MATERIALS SHALL BE EDPM WITH A MINIMUM 60 SHORE A DUROMETER.
6. IN HVHZ AND NON-HVHZ AREAS WHERE WINDBORNE DEBRIS PROTECTION REQUIREMENTS EXIST, USE OF AN IMPACT PROTECTIVE SYSTEM COMPLYING WITH THE FBC REQUIREMENTS FOR WINDBORNE DEBRIS REGIONS IS NOT REQUIRED FOR THE PRODUCT(S) HEREIN.
7. MATERIALS:

7.1 FRAME: RIGID VINYL-PVC BY PROFINE GmbH. SEE CURRENT PROFINE GmbH MIAMI-DADE NOTICE OF ACCEPTANCE (NOA) FOR COMPONENT APPROVAL.

7.2 REINFORCEMENT (FRAME & SASH): GALVANIZED STEEL
8. GLAZING:

8.1 GLASS MEETS THE REQUIREMENTS OF ASTM E1300-16.

8.2 SEE GLAZING DETAIL ON SHEET 8 OF 9.

8.3 GLASS SHALL MEET SAFETY GLAZING REQUIREMENTS PER CURRENT EDITION OF THE FLORIDA BUILDING CODE.

8.4 INTERLAYER: KURARAY AMERICA SENTRYGLAS PER CURRENT MIAMI DADE NOTICE OF ACCEPTANCE (N.O.A.)
9. PANEL OPERABILITY DESIGNATIONS:

9.1. (X) SASH VENT IS OPERABLE PANEL.

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
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2	ANCHOR ELEVATION & LAYOUT
3-6	INSTALLATION DETAILS
7	CROSS SECTIONS & COMPONENTS
8	BILL OF MATERIALS & GLAZING DETAIL
9	HARDWARE DETAIL

ANCHOR NOTES:

1. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH A LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
2. FOR ANCHORING THROUGH FRAME INTO MASONRY/CONCRETE USE 1/4" ITW ADVANCED THREADFORM TAPCONS, HEX HEAD (SHOWN), PAN HEAD OR FLAT HEAD WITH SUFFICIENT LENGTH TO ACHIEVE THE FOLLOWING. SEE NOTE 4 FOR ACCEPTABLE ALTERNATE ANCHOR TYPE FOR THROUGH FRAME INSTALLATION.

2.1. CONCRETE: 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1-1/2" MINIMUM EDGE DISTANCE.

2.2. CMU/MASONRY: 1" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE.
3. FOR ANCHORING THROUGH FRAME INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREWS (ANSI B18.6.1) OR #14 TAPPING SCREWS (ANSI B18.6.4), PAN HEAD (SHOWN) OR FLAT HEAD WITH MINIMUM GRADE 2 STRENGTH AND WITH SUFFICIENT LENGTH TO ACHIEVE 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1" MINIMUM EDGE DISTANCE. SEE NOTE 4 FOR ACCEPTABLE ALTERNATE ANCHOR TYPE FOR THROUGH FRAME INSTALLATION.
4. FOR ANCHORING THROUGH FRAME INTO MASONRY, CONCRETE OR WOOD FRAMING OR 2X WOOD BUCK, THE WURTH AMO III SPACING ASSEMBLY SCREW 7.5mm DIA. TYPE 2 CYLINDER HEAD GALVANIZED STEEL WITH MINIMUM EMBEDMENT AND MINIMUM EDGE DISTANCE BELOW CAN BE USED AS SUBSTITUTES TO ANCHORS IN ITEM NO. 2 AND 3 ABOVE.

4.1. CONCRETE: 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE.

4.2. CMU/MASONRY: 1" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2-1/2" MINIMUM EDGE DISTANCE.

4.3. WOOD SUBSTRATE: 2-3/8" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2-1/2" MINIMUM EDGE DISTANCE.

4.4. WURTH ANCHORS SUPPLIED BY MANUFACTURER WITH DOOR ASSEMBLY (ITEM NO. 11 IN BOM).
5. FOR ANCHORING THROUGH FRAME INTO STEEL STUD, USE #14 TAPPING SCREWS (ANSI B18.6.4) WITH MINIMUM GRADE 5 STRENGTH AND WITH SUFFICIENT LENGTH TO ACHIEVE MINIMUM 3 THREADS PAST INTERIOR OF STUD.
6. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:

6.1. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.42 (NON-HVHZ).

6.2. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

6.3. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF).

6.4. STEEL STUD - MIN. 20 GA. 33 MIL., 0.0329 INCH Fy = 33 KSI MIN. AND Fu = 45 KSI MIN.

This item has been digitally signed and sealed by Robert J. Amoruso, PE on the date adjacent to the seal. Signature must be verified on any electronic copies.

ES WINDOWS

3550 NW 49TH STREET

MIAMI, FL 33142

SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI

INSTALLATION ANCHORAGE DETAILS

NO.

REVISION DESCRIPTION

BY

DATE

DATE:

06/03/25

DWN BY:

RJA

CHK BY:

n/a

SCALE:

NONE

ROBERT J. AMORUSO, P.E. #49752

AMORUSO CONSULTING ENG., LLC

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ROBERT JAMES AMORUSO

STATE OF FLORIDA

PROFESSIONAL ENGINEER

No 49752

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Robert J Amoruso

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PROJECT#:

ACE-2025-204

DWG/REV:

SCS-0040, Rev 0

SHT:

1 of 9

SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI INSTALLATION ANCHORAGE DETAILS	DATE				
	BY				
	REVISION DESCRIPTION				
	NO.				

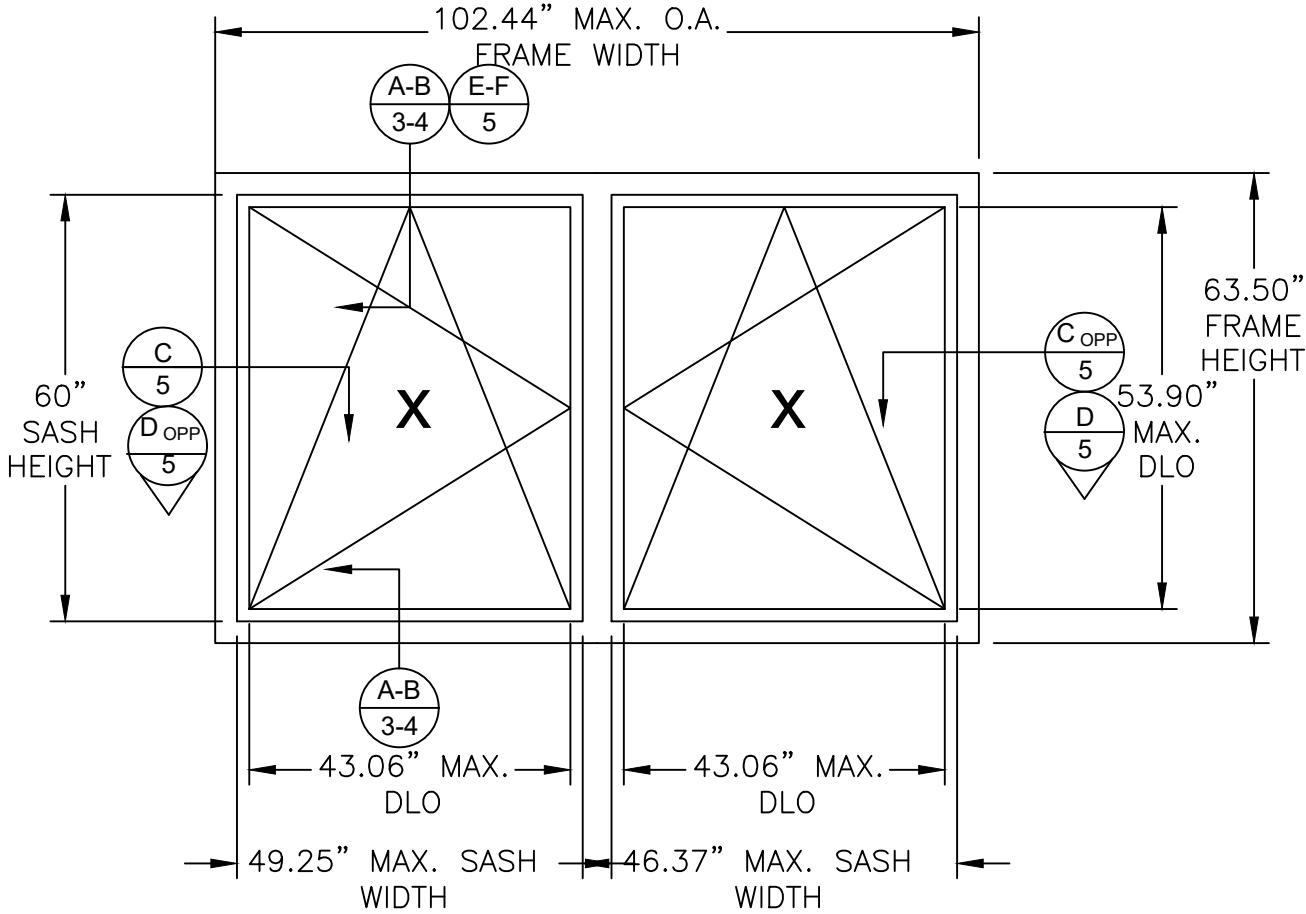
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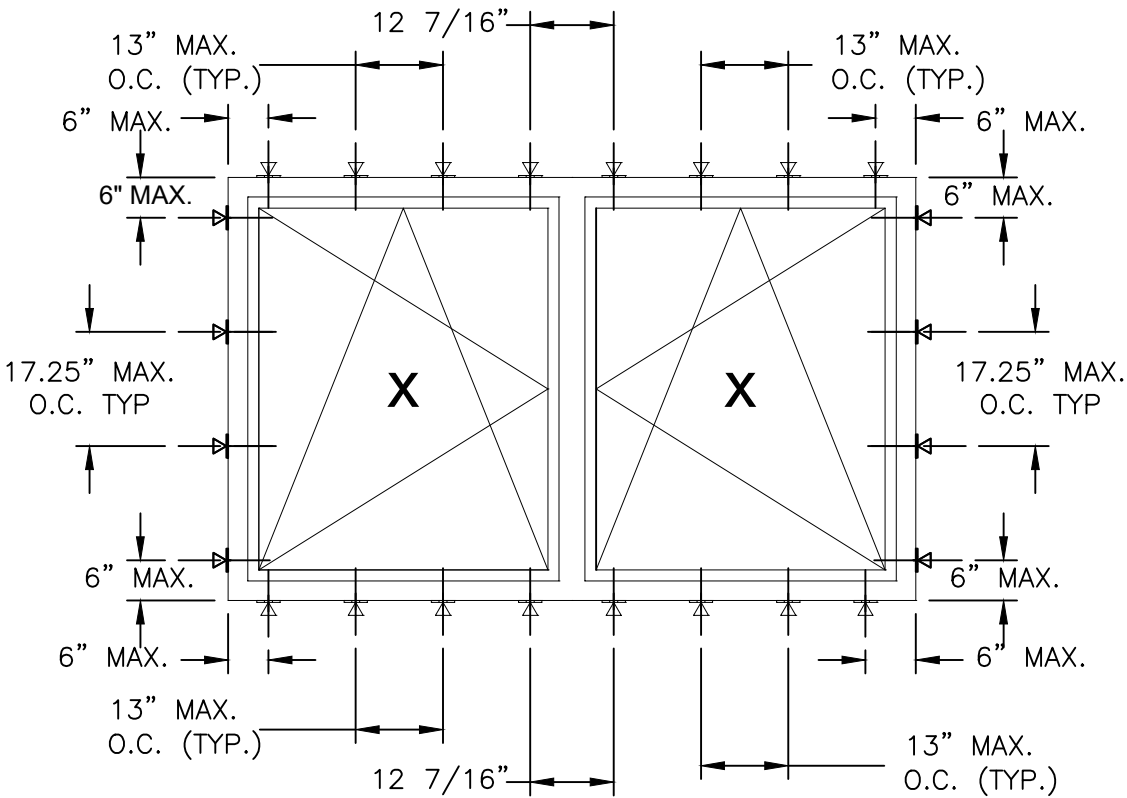


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SERIES 76 MD VINYL DBL TILT-TURN
ELEVATION VIEW
INTERIOR VIEW



ANCHOR LAYOUT THROUGH FRAME
& STRAP ANCHOR INSTALLATION



ANCHORAGE INSTALLATION REQUIREMENTS TO MEET
DESIGN PRESSURE OF ± 65 PSF

DESIGN PRESSURE RATING (PSF)		
LARGE MISSILE IMPACT RATING		
MAX. OVERALL TESTED FRAME SIZE (IN)	MAX. DESIGN PRESSURE (PSF)	QUALIFIED CONFIGURATION
102.44" X 63.50"	± 65.0	XX
SEE GLAZING DETAIL ON SHT. 7		

SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI INSTALLATION ANCHORAGE DETAILS	DATE				
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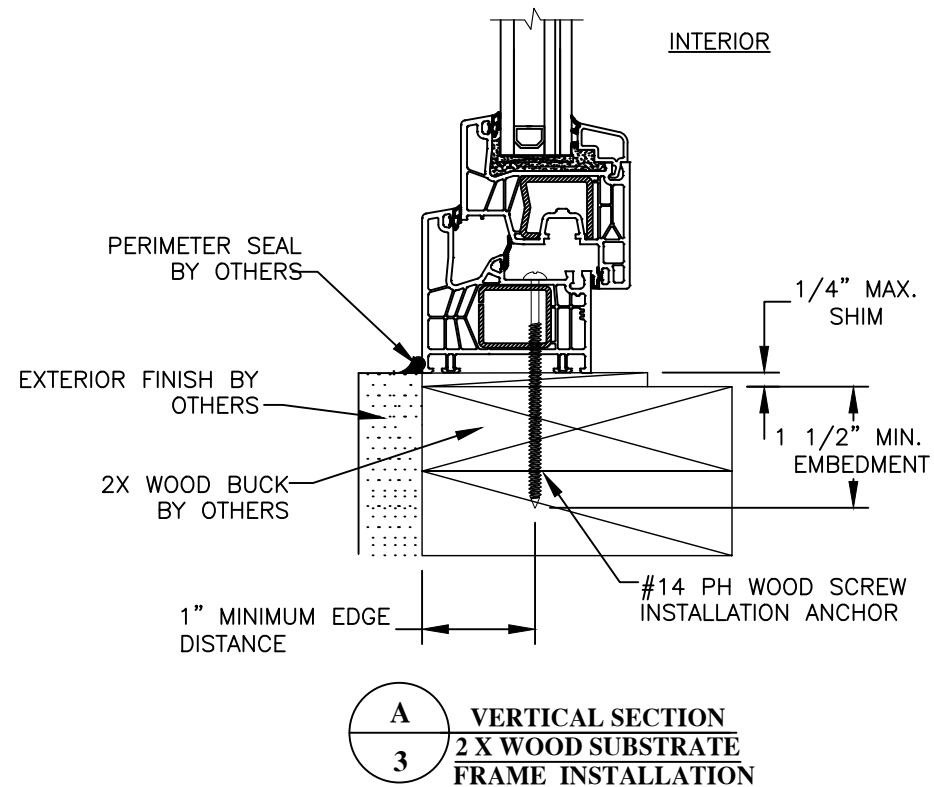
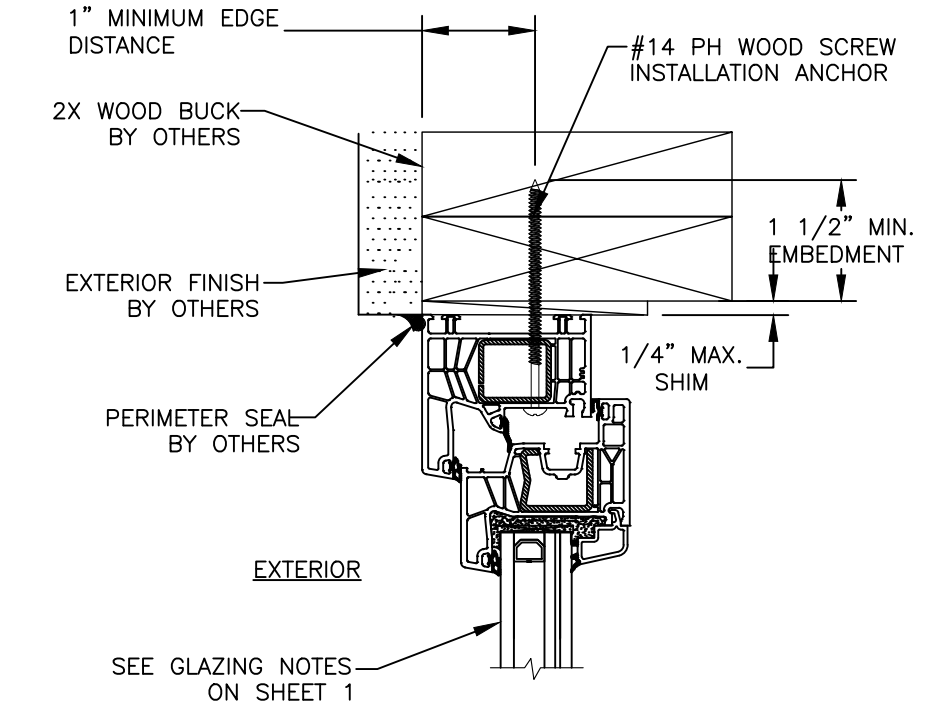
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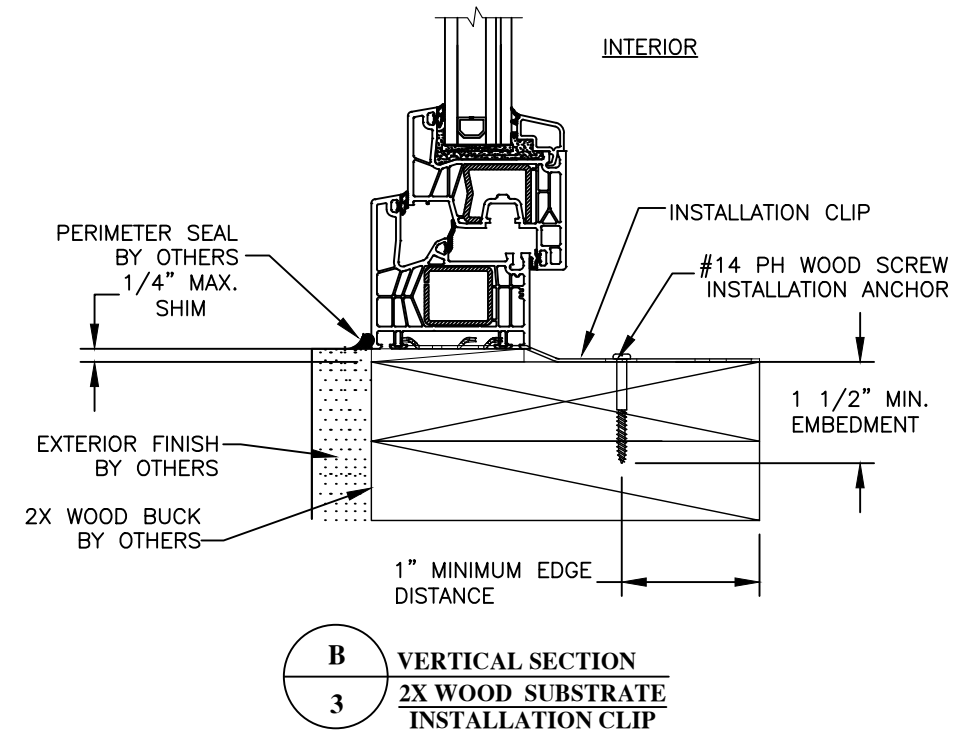
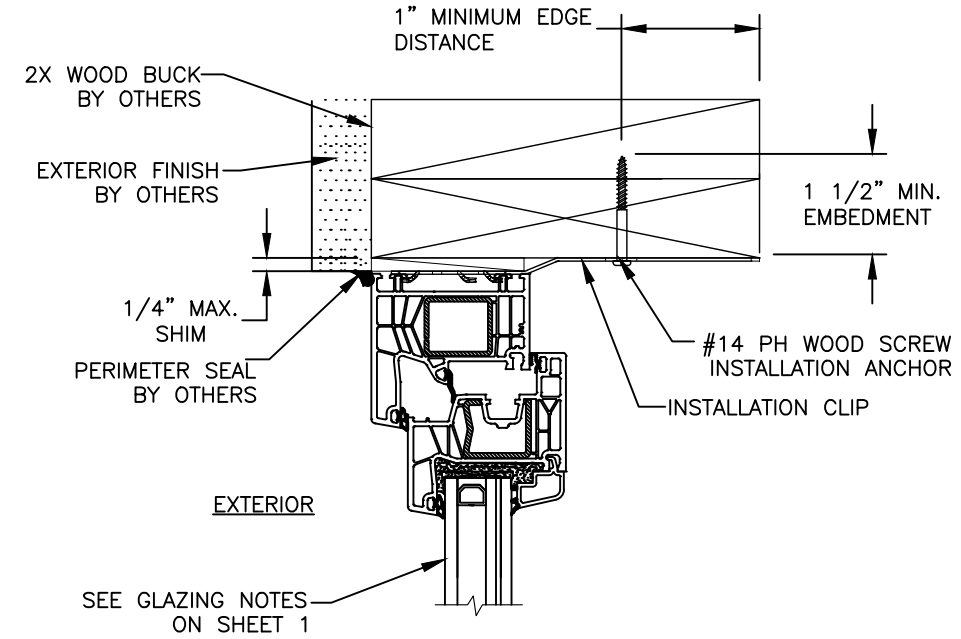


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A
3
VERTICAL SECTION
2 X WOOD SUBSTRATE
FRAME INSTALLATION



B
3
VERTICAL SECTION
2X WOOD SUBSTRATE
INSTALLATION CLIP

SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI
INSTALLATION ANCHORAGE DETAILS

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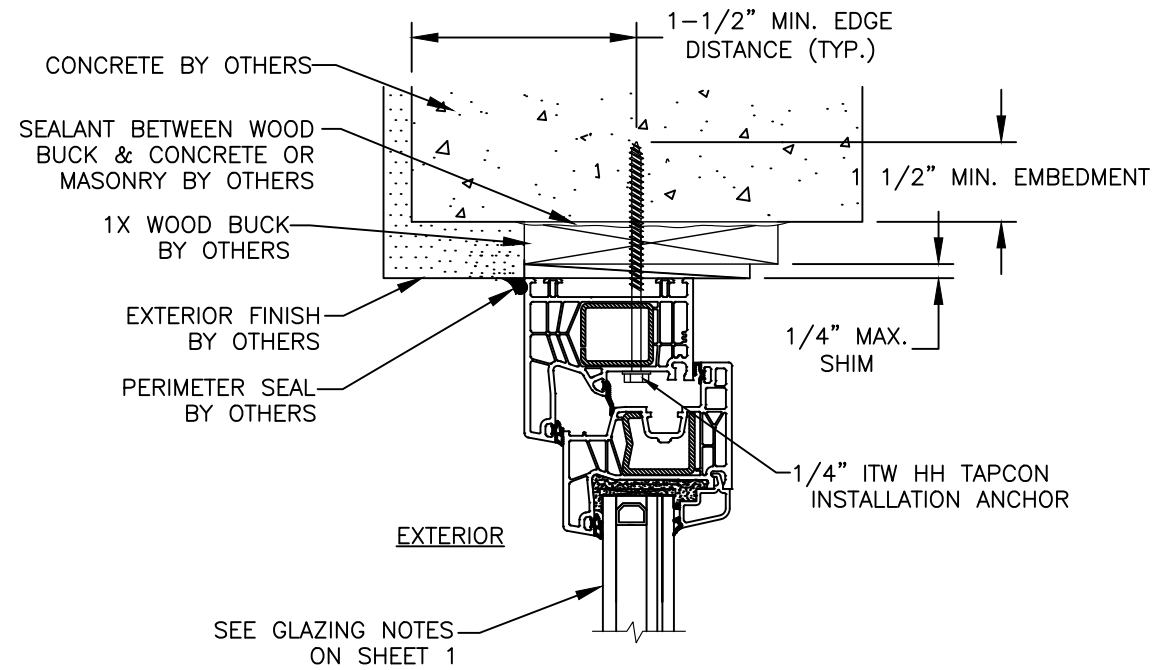


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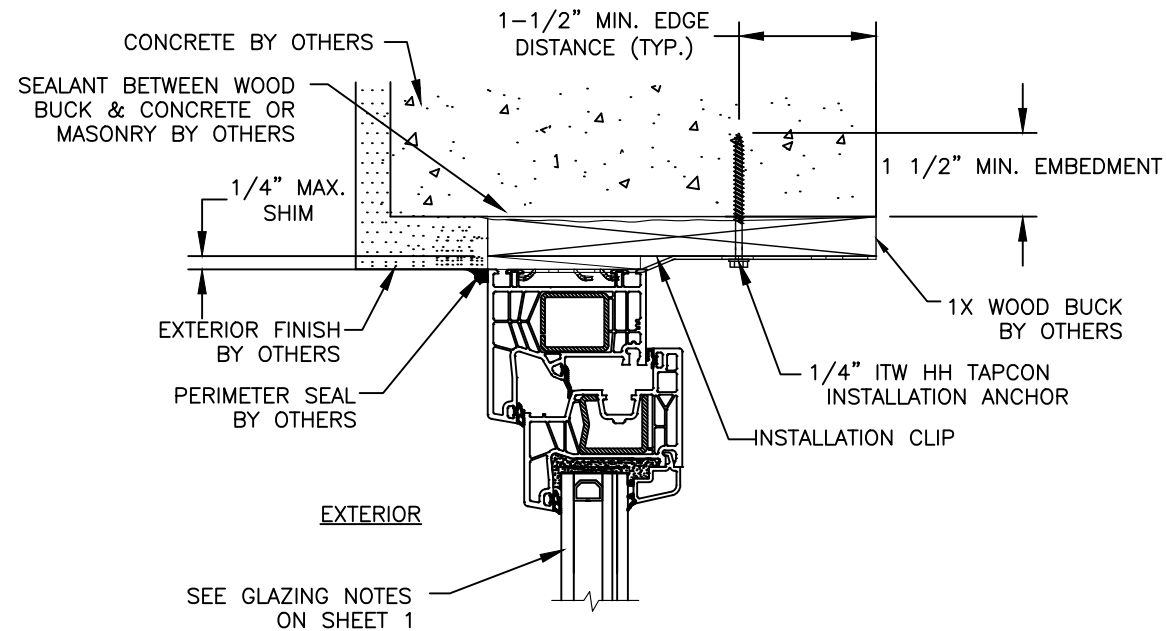
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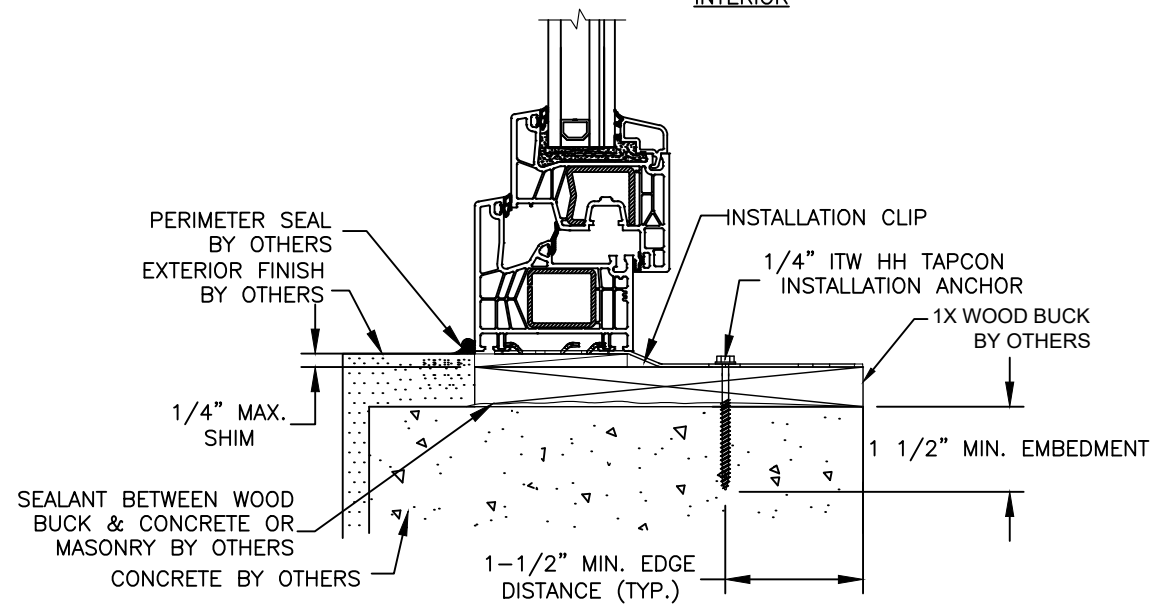
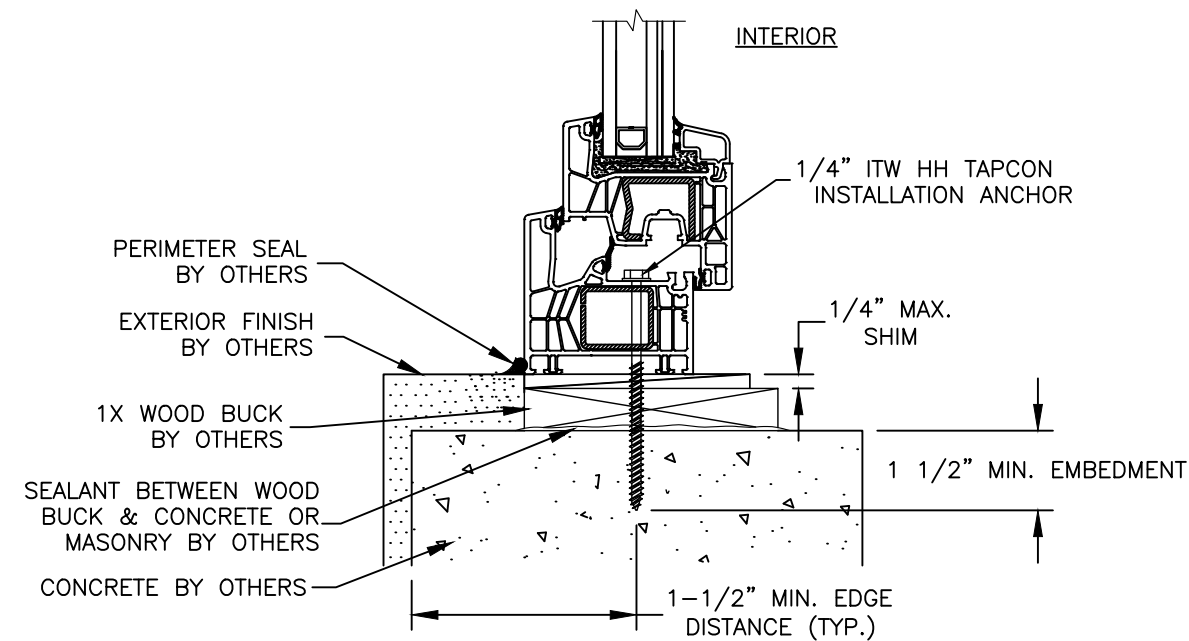
SHT: 4 of 9



A
4
VERTICAL SECTION
CONCRETE SUBSTRATE
FRAME INSTALLATION



B
4
VERTICAL SECTION
CONCRETE SUBSTRATE
INSTALLATION CLIP



SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI INSTALLATION ANCHORAGE DETAILS	REVISION DESCRIPTION				
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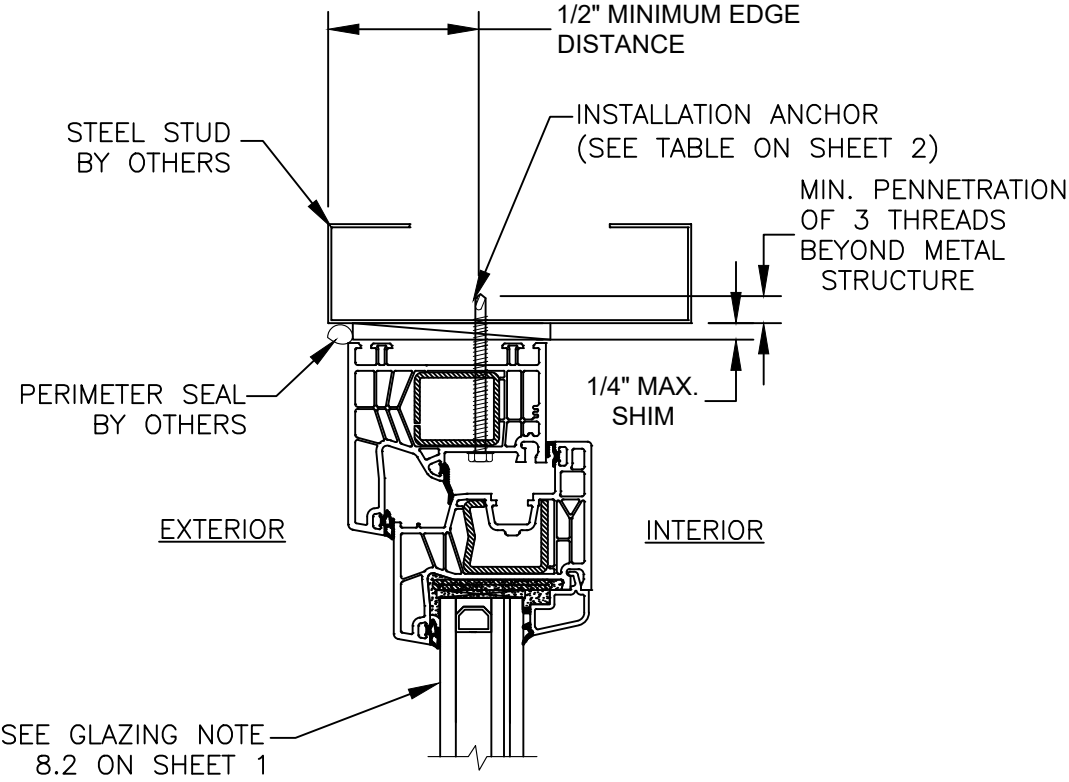


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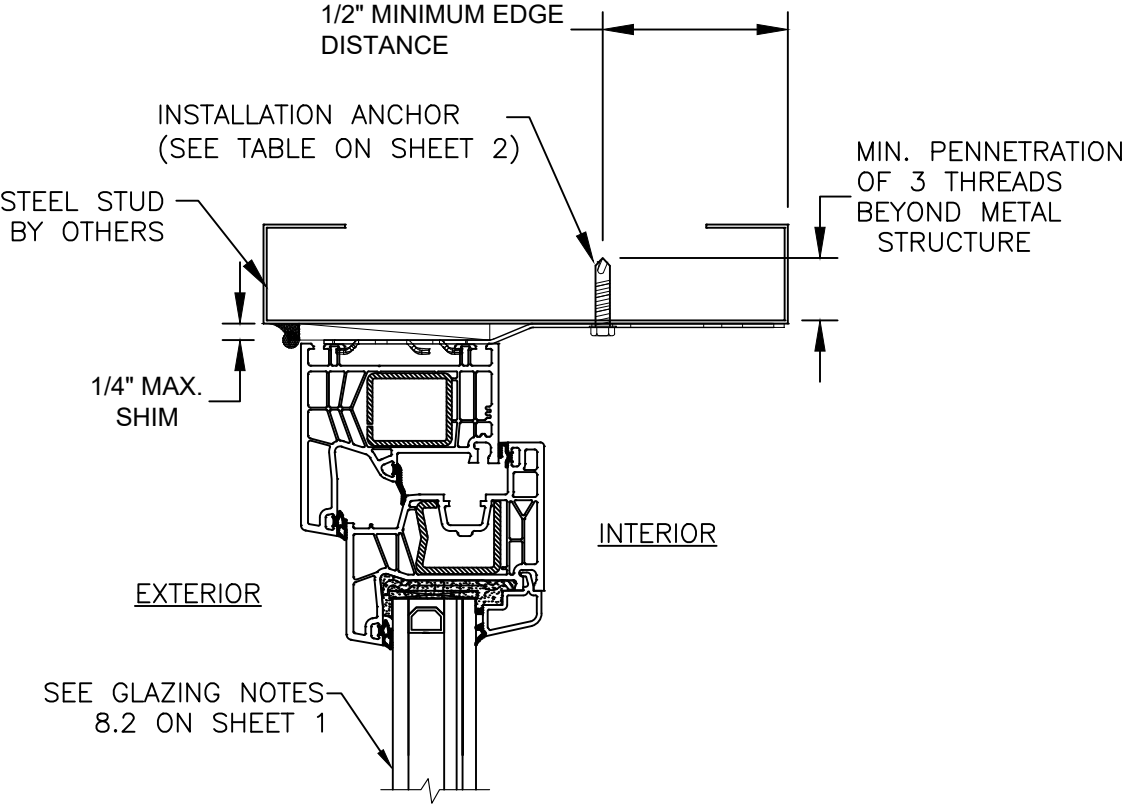
PROJECT#: ACE-2025-204

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SHT: 5 of 9



E
5 **VERTICAL SECTION**
STEEL STUD STRUCTURE
FRAME INSTALLATION
HEAD SHOWN, SILL & JAMBS
SIMILAR



F
5 **VERTICAL SECTION**
STEEL STUD STRUCTURE
CLIP INSTALLATION
HEAD SHOWN, SILL & JAMBS
SIMILAR

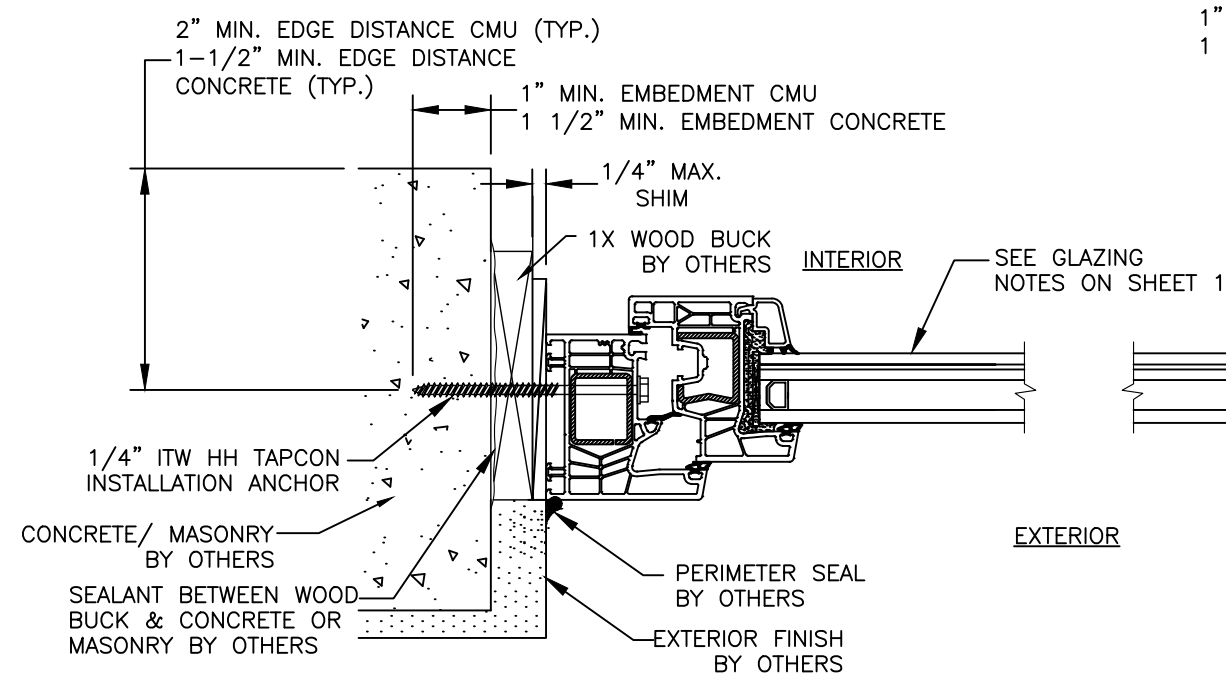
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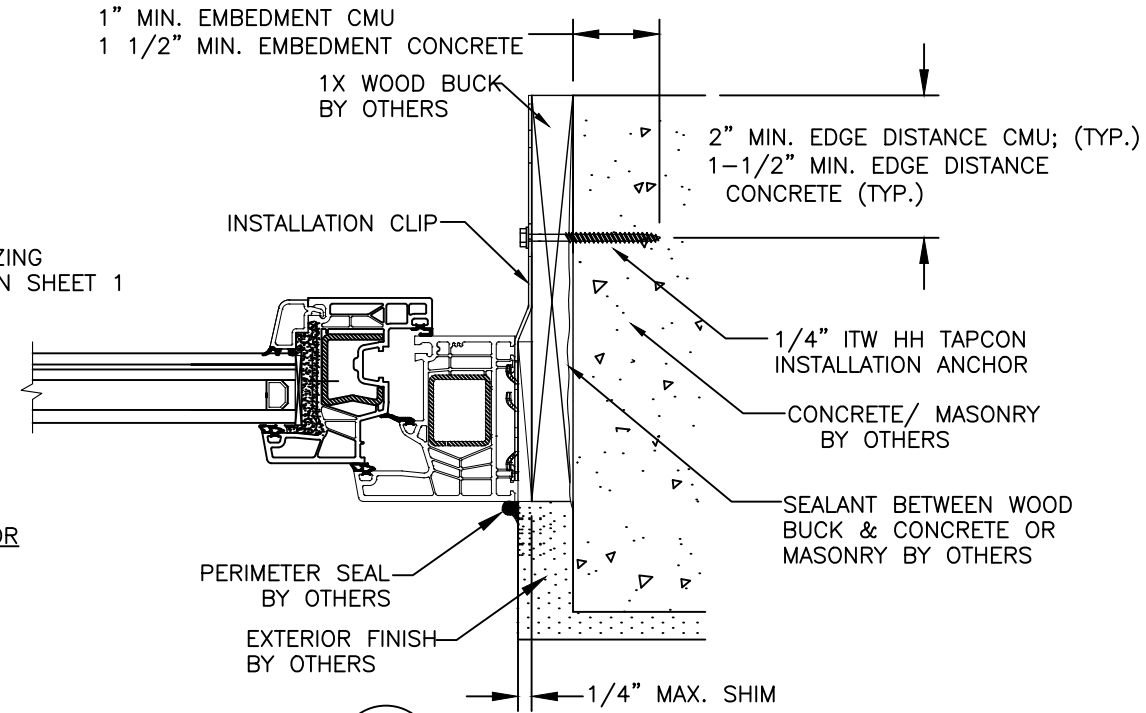
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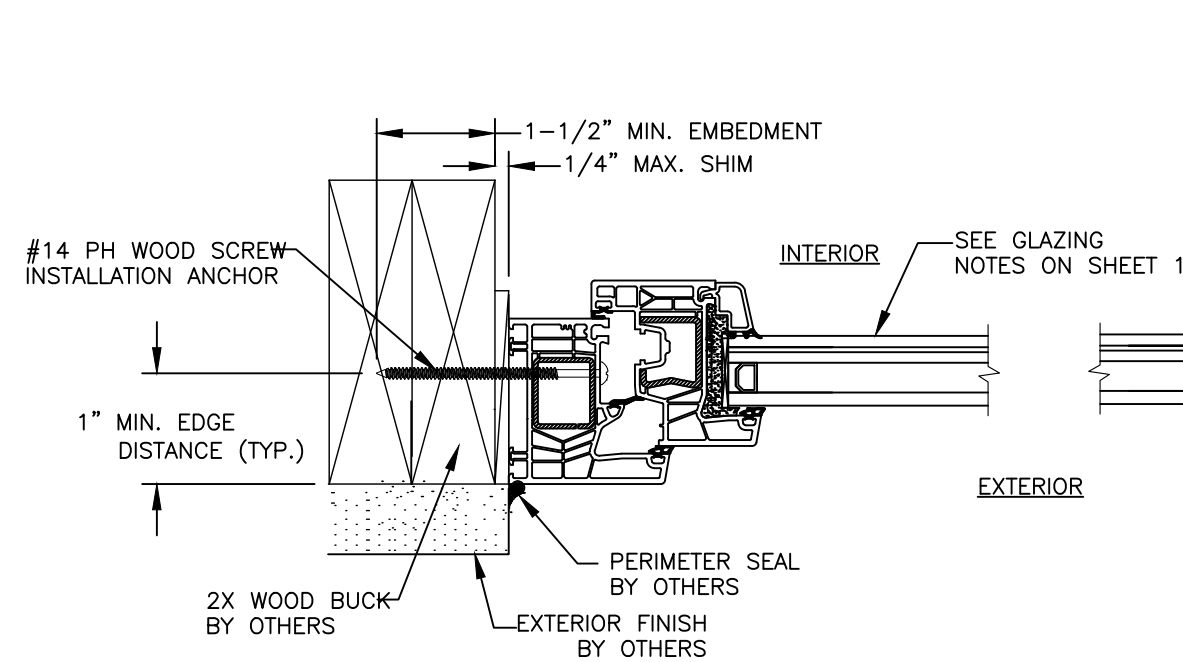
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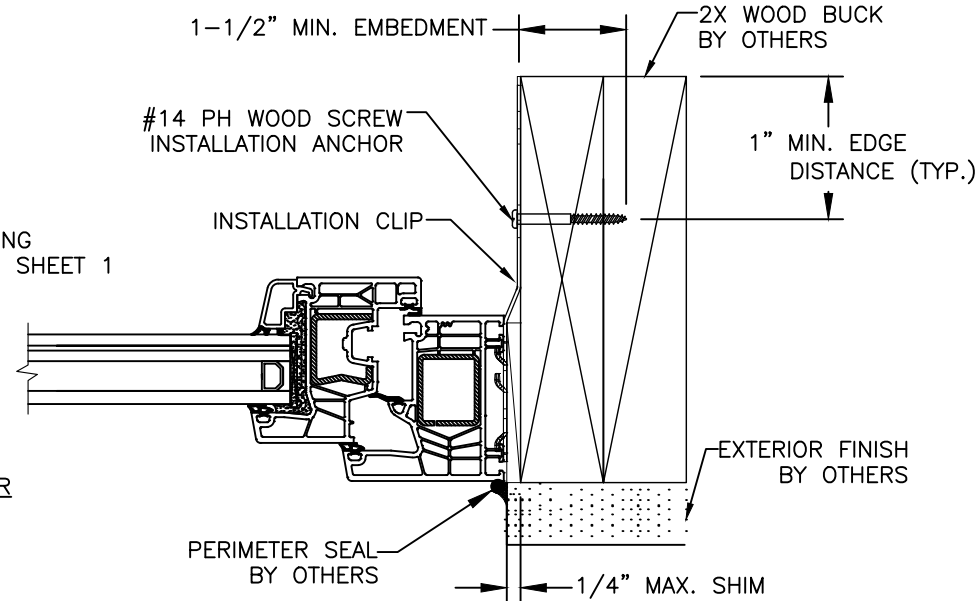
C
6
HORIZONTAL SECTION
CONCRETE/MASONRY SUBSTRATE
FRAME INSTALLATION



D
6
HORIZONTAL SECTION
CONCRETE/MASONRY SUBSTRATE
INSTALLATION CLIP



C
6
HORIZONTAL SECTION
2X WOOD SUBSTRATE
FRAME INSTALLATION



D
6
HORIZONTAL SECTION
2X WOOD SUBSTRATE
INSTALLATION CLIP

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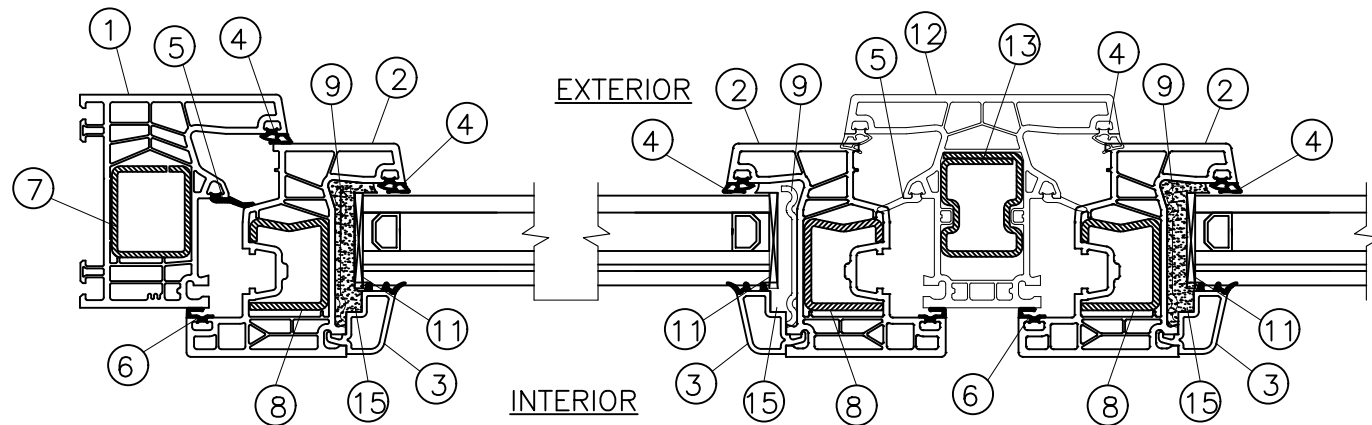
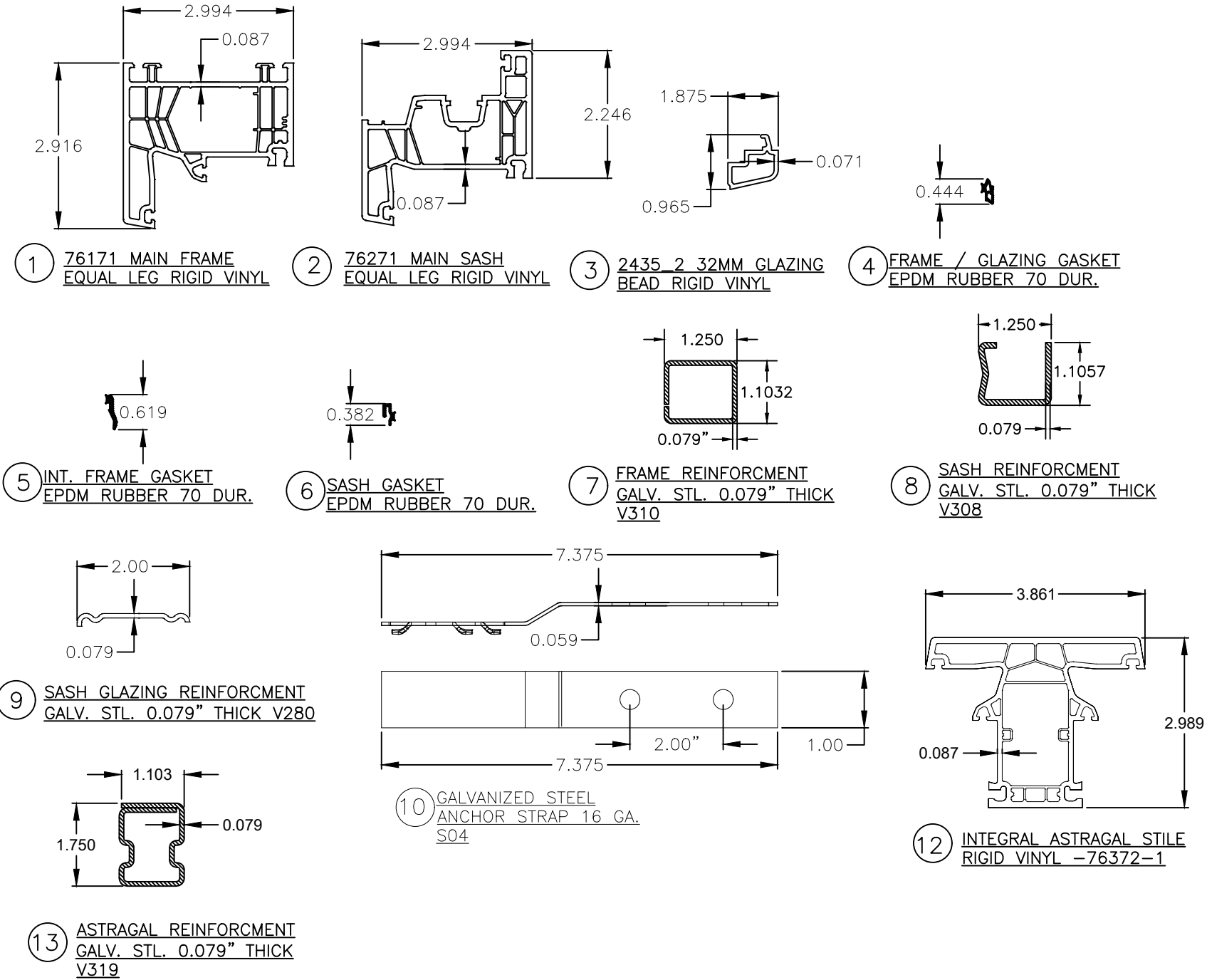
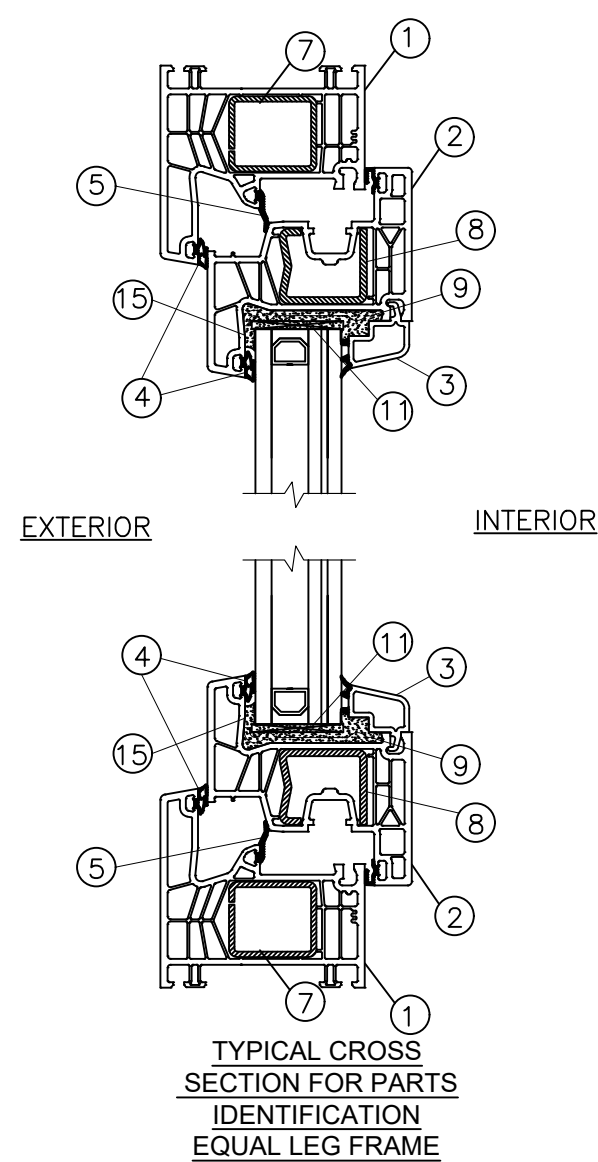
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SHT:	7 of 9

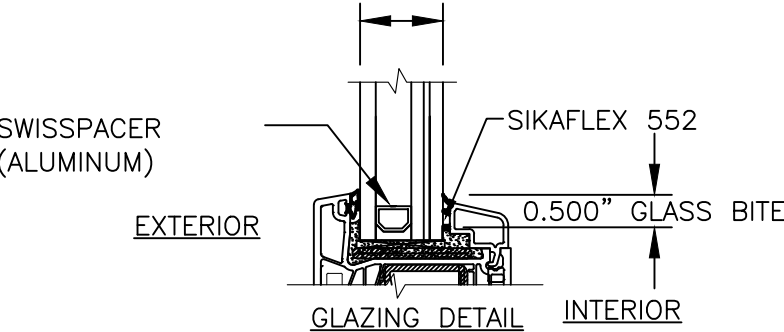


TYPICAL CROSS SECTION FOR PARTS
IDENTIFICATION EQUAL LEG

QTY.	PART NO.	DESCRIPTION	MANUFACTURER
1	76171	MAIN FRAME, RIGID VINYL	PROFINE
2	76271	SASH, RIGID VINYL	PROFINE
3	2435_2	1-1/4" I.G. LAMINATED GLAZING BEAD, RIGID VINYL	PROFINE
4	PURCHASE	FRAME/ GLAZING GASKET, EPDM RUBBER 70 DUR	PURCHASE
5	PURCHASE	INT. FRAME GASKET, EPDM RUBBER 70 DUR	PURCHASE
6	PURCHASE	SASH GASKET, EPDM RUBBER 70 DUR	PURCHASE
7	V310	1.00" X 1.00" X 0.079" FRAME REINF., GALV. STEEL	PROFINE
8	V308	1.00" X 1.035" X 0.079" SASH REINF., GALV. STEEL	PROFINE
9	V280	1.08" X 0.079" SASH GLAZING REINF., GALV. STEEL	PROFINE
10	S041	1.00" X 7.00" X 0.059" GALV. STL. ANCHOR STRAP	PROFINE
11	PURCHASE	ALUMINUM GLASS SPACER	SWISS
12	76372-1	INTEGRAL ASTRAGAL, RIGID VINYL	PROFINE
13	V319	1.18" X 1.45" X 0.079" ASTRAGAL REINF., GALV. STEEL	PURCHASE
14	----- -----	AMO III 7.5MM DIA. CYLINDER HEAD SCREW, VARIABLE LENGTH BASED ON USAGE	WURTH *
15	PURCHASE	#14 PH OR FH WOOD SCREW	-----
16	PURCHASE	1/4" DIAM. HH OR FH I.T.W. MASONRY ANCHOR	I.T.W.
17	PURCHASE	GLAZING SEALANT, SIKAFLEX 552	SIKA CORP.
18	PURCHASE	SEE GLAZING DETAIL	----- -

* SUPPLIED BY DOOR MANUFACTURER KOMMERLING

1.20" O.A. INSULATED GLASS CONSISTING OF:
EXT. 1/4" TEMP. GLASS, 0.380" AIR-SPACER, LAMI:
3/16" H.S. GLASS, 0.090" SENTRY GLASS KURARAY, 3/16" H.S. GLASS INT.



ES WINDOWS
3550 NW 49TH STREET
MIAMI, FL 33142

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INSTALLATION ANCHORAGE DETAILS

DATE	BY	REVISION DESCRIPTION	NO.
06/03/25	RJA		

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SHT: 8 of 9

SERIES 76 MD DBL VINYL TILT-TURN WINDOW, HVHZ, LMI
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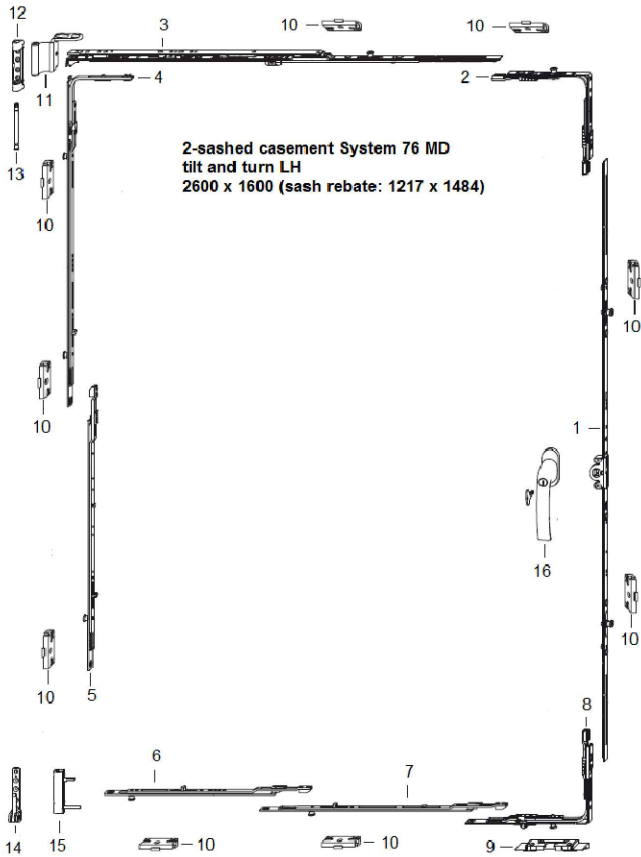
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Pos.	part description	part code
1	gear 15 AF sz 120 2RS 70	TGMK4160-...
2	corner drive AF VSO 1RS	TEUL4010-...
3	stay AF sz.4 1RS	TSKK2040-...
4	corn.drive BS/K3 sz 2+ 2RS	TEUL2390-...
5	linkage BS/FH sz 1+ 1RS	TZBS0180-...
6	extension sz 3+ 1RS	TVSL0330-...
7	linkage BS/FH sz 2+ 1RS	TZBS0190-...
8	corn.drive AF VSU/K+ FH 1S	TEUL5010-...
9	tilt lock bearing S-ES FH A4460	FRKA0100-...
10	striker plate S-RS 3SL A4460	TRSK0600-...
11	stay hinge 12/20-13 DH	TBWB6050-...
12	top hinge KF D6x24 DH	TBSL6140-...
13	top hinge pin poly	TBSB6020-...
14	bottom hinge KF D6x3/24	TBEL6120-...
15	corner hinge KF D6x16/36 D5 ADV	TBEB6140-...
16	handle Globe 35/12 ABS100 SEC	ZHGA0060-...

Pos.	part description	part code
1	gear 15 AF sz 120 2RS 70	TGMK4160-...
2	corner drive AF VSO 1RS	TEUL4010-...
3	stay AF sz.4 1RS	TSKK2040-...
4	corn.drive BS/K3 sz 2+ 2RS	TEUL2390-...
5	linkage BS/FH sz 1+ 1RS	TZBS0180-...
6	extension sz 3+ 1RS	TVSL0330-...
7	linkage BS/FH sz 2+ 1RS	TZBS0190-...
8	corn.drive AF VSU/K+ FH 1S	TEUL5010-...
9	tilt lock bearing S-ES FH A4460	FRKA0100-...
10	striker plate S-RS 3SL A4460	TRSK0600-...
11	stay hinge 12/20-13 DH	TBWB6050-...
12	top hinge KF D6x24 DH	TBSL6140-...
13	top hinge pin poly	TBSB6020-...
14	bottom hinge KF D6x3/24	TBEL6120-...
15	corner hinge KF D6x16/36 D5 ADV	TBEB6140-...
16	handle Globe 35/12 ABS100 SEC	ZHGA0060-...

