

GAULHOFER INDUSTRIE-HOLDING GmbH

SERIES "425" COMBINATION FIXED WINDOWS (L.M. IMPACT)

INSTALLATION ANCHORAGE DETAILS

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

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 & 203 TEST PROTOCOLS.
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. 1 BY BUCK OVER MASONRY AND/OR CONCRETE IS OPTIONAL. WHERE 1 BY 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 OPENING PROTECTION IS NOT REQUIRED FOR THE PRODUCT(S) HEREIN.
7. MATERIALS:

7.1. FRAME: WOOD WITH SPECIFIC GRAVITY = 0.50
8. GLAZING:

8.1. GLASS MEETS THE REQUIREMENTS OF ASTM E1300-04e01.

8.2. SEE GLAZING DETAIL ON SHEET 5 OF 7.

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

8.3.1. GLAZING DETAIL 2 (TEMPERED EXTERIOR MONOLITHIC LITE) SHALL BE USED WHEN PRODUCT INSTALLED IN HVHZ LOCATIONS.

8.3.2. GLAZING DETAIL 1 (ANNEALED EXTERIOR MONOLITHIC LITE) SHALL BE USED WHEN PRODUCT INSTALLED IN NON-HVHZ LOCATIONS.

8.3.3. OPTIONALLY, GLAZING DETAIL 2 CAN BE USED WHEN PRODUCT INSTALLED IN NON-HVHZ LOCATIONS.INTERLAYER:

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

9.1. BOLTED SASH IS AN INOPERABLE (FIXED) PANEL.

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	GENERAL NOTES
2	ELEVATION & ANCHOR LAYOUTS
3-4	INSTALLATION DETAILS
5	COMBINATION MULLION AND GLAZING DETAILS
6	COMPONENTS
7	BILL OF MATERIALS AND CROSS SECTIONS

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 INSTALLATION CLIP (PROVIDED BY GAULHOFER) INTO MASONRY/CONCRETE USE 1/4" ADVANCED THREADFORM TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE THE FOLLOWING:

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 INSTALLATION CLIP (PROVIDED BY GAULHOFER) INTO WOOD FRAMING OR 2 BY BUCK USE #14 WOOD SCREWS (ANSI B18.6.1) WITH MINIMUM GRADE 2 STRENGTH AND WITH SUFFICIENT LENGTH TO ACHIEVE 1-1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1" MINIMUM EDGE DISTANCE.
4. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:

4.1. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.42 (NON-HVHZ) AND 0.55 (HVHZ).

4.2. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

4.3. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90 MEDIUM WEIGHT WITH COMPRESSIVE STRENGTH OF 1900 psi (DENSITY > 117 PCF).
5. ALL INSTALLATION ANCHORS SHALL HAVE A CORROSION RESISTANT COATING OR BE MADE OF CORROSION RESISTANT MATERIALS.

GAULHOFER INDUSTRIE-HOLDING GmbH

A-8124 UBELBACH/STIERMARK

AUSTRIA

NATURELINE-78 FEN 425 COMPOSITE MULLED

FIXED/CA L.M. IMPACT HVHZ

GENERAL NOTES

DRAWN: JRM

DWG NO. NL-0077

REV -

SCALE NTS

DATE 12/07/2016

SHEET 1 OF 7

ROBERT J. AMORUSO

FL. P.E. NO. 49752

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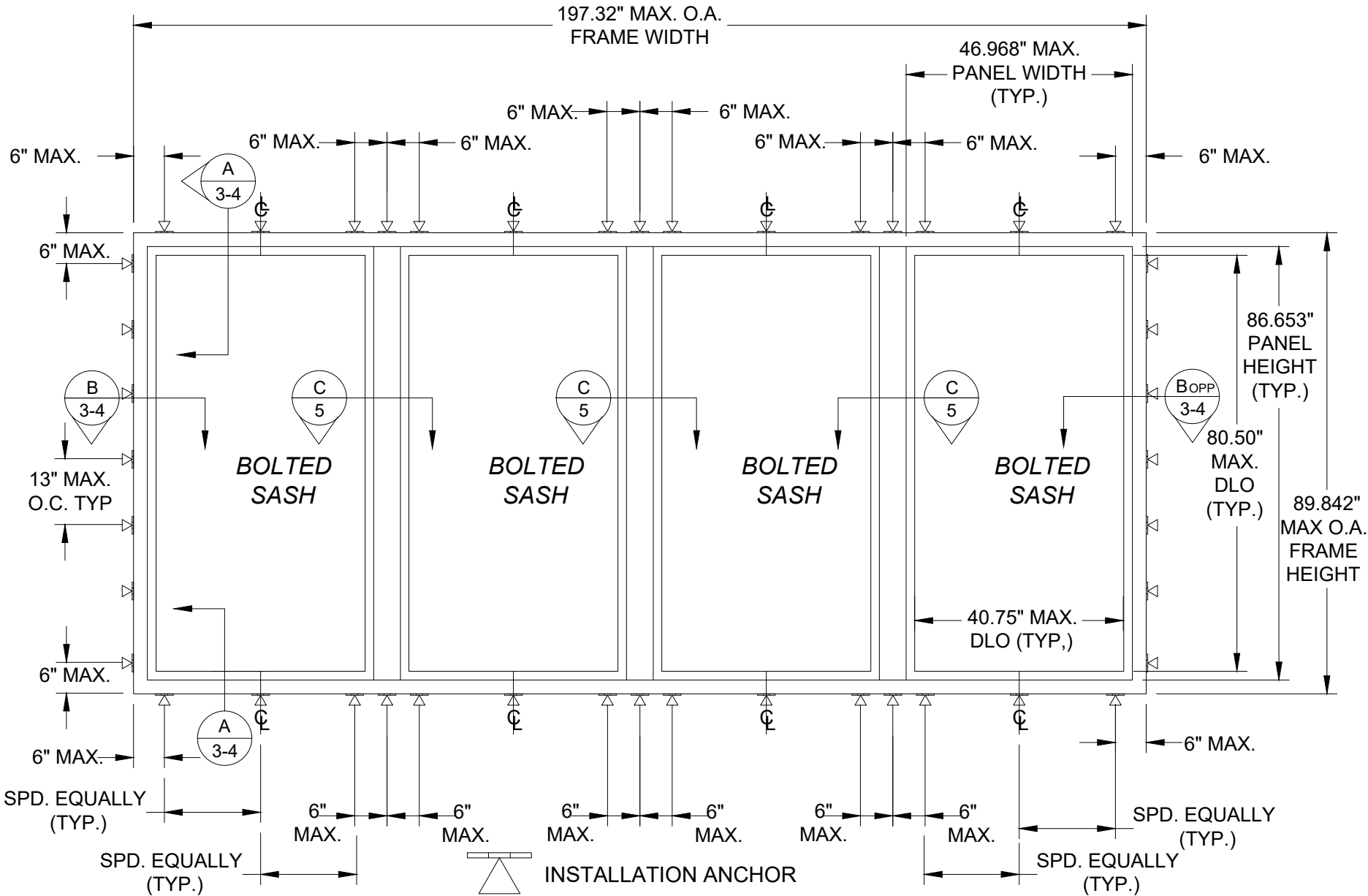
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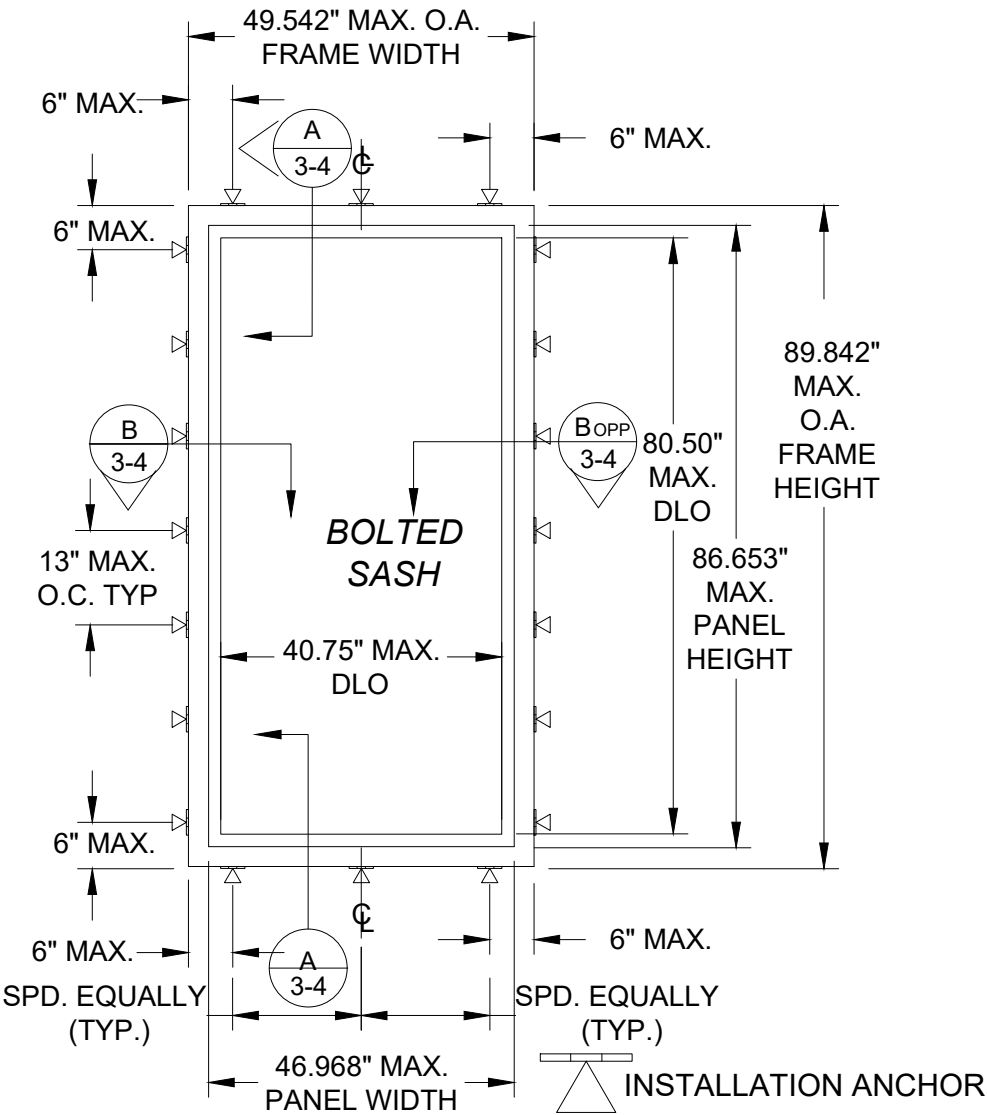


COMPOSIT ASSEMBLY
132MM INTEGRAL MULLION
ANCHOR LAYOUT
INTERIOR VIEW

- NOTES
1. MAXIMUM PANEL D.L.O.: 40.75" X 80.5"
 2. MAXIMUM PANEL SIZE: 46.968" X 86.653"

DESIGN PRESSURE RATING	HVHZ IMPACT RATING
+ 55.0 PSF / -55.0 PSF	LARGE AND SMALL MISSILE IMPACT

APPROVED ELEVATIONS OOOO, OOO, OO and O



SINGLE ASSEMBLY
ANCHOR LAYOUT
INTERIOR VIEW

GAULHOFER INDUSTRIE-HOLDING GmbH A-8124 UBELBACH/STIERMARK AUSTRIA		
NATURELINE-78 FEN 425 COMPOSITE MULLED FIXED/CA L.M. IMPACT HVHZ ELEVATION AND ANCHOR LAYOUTS		
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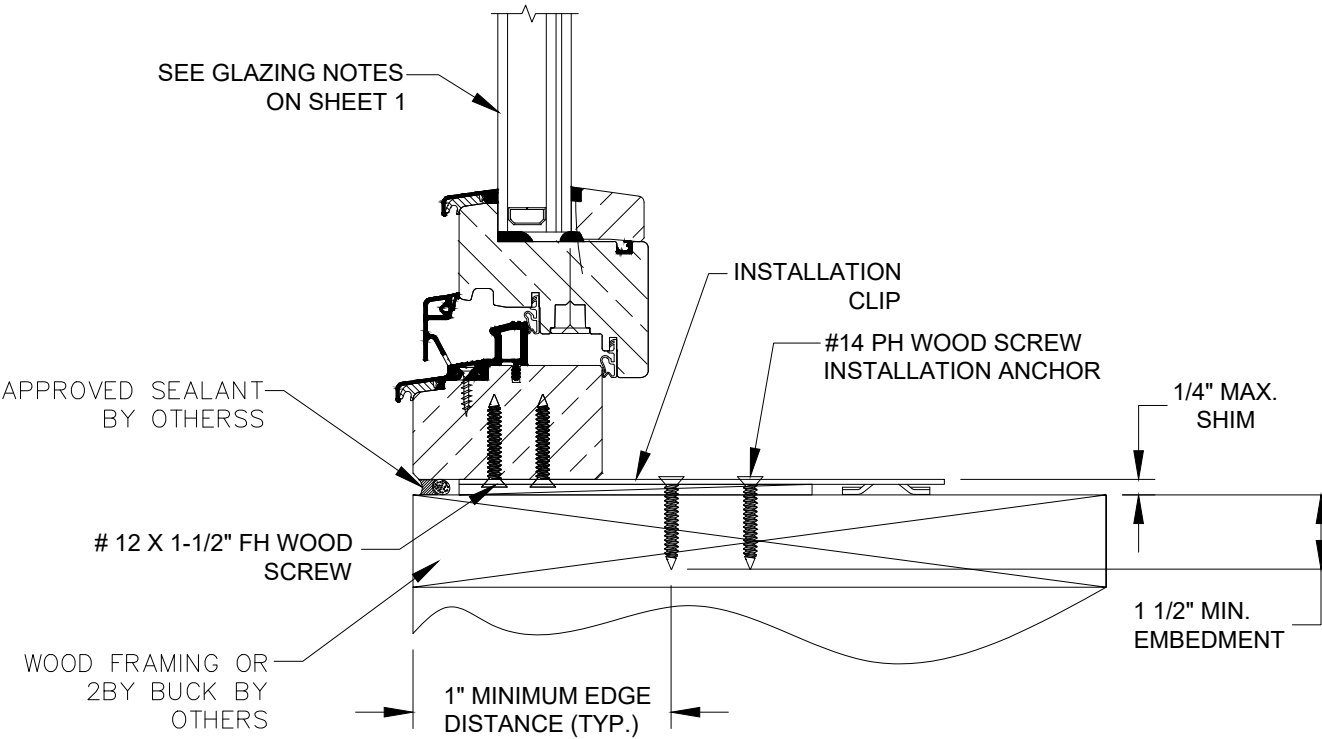
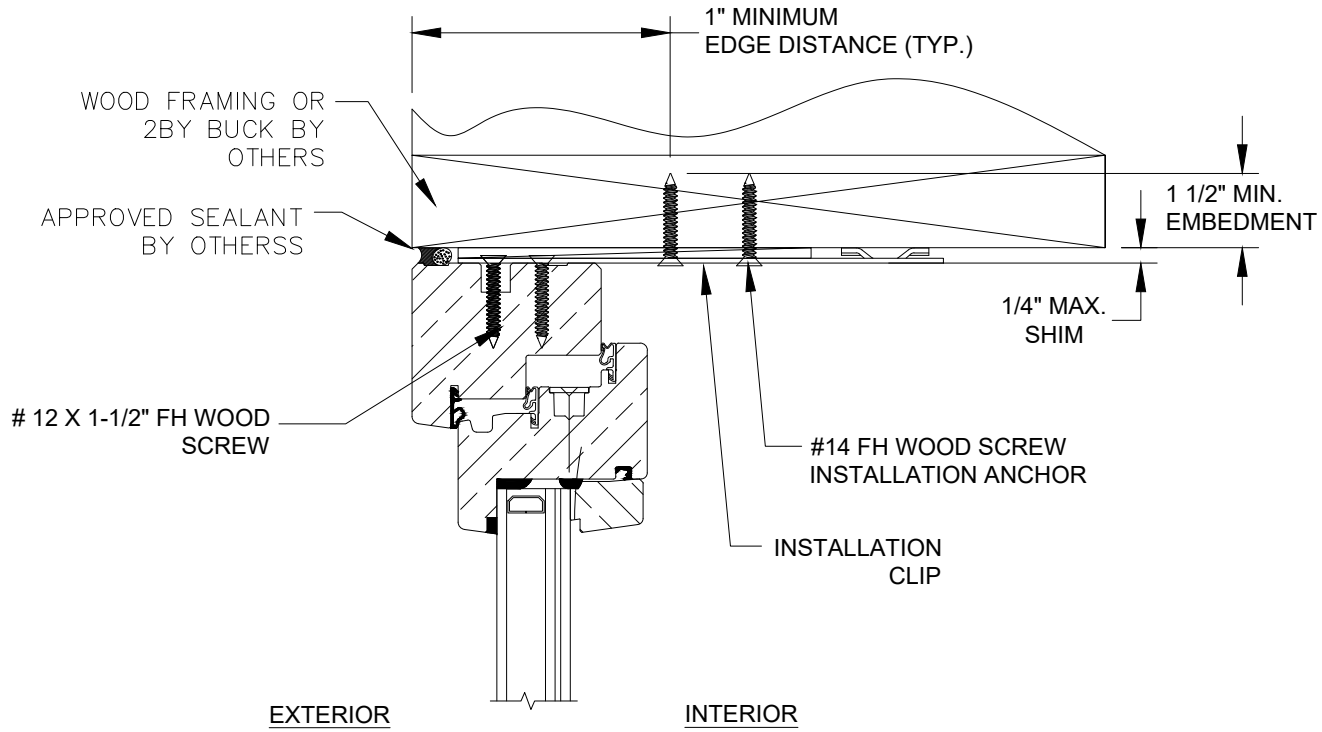
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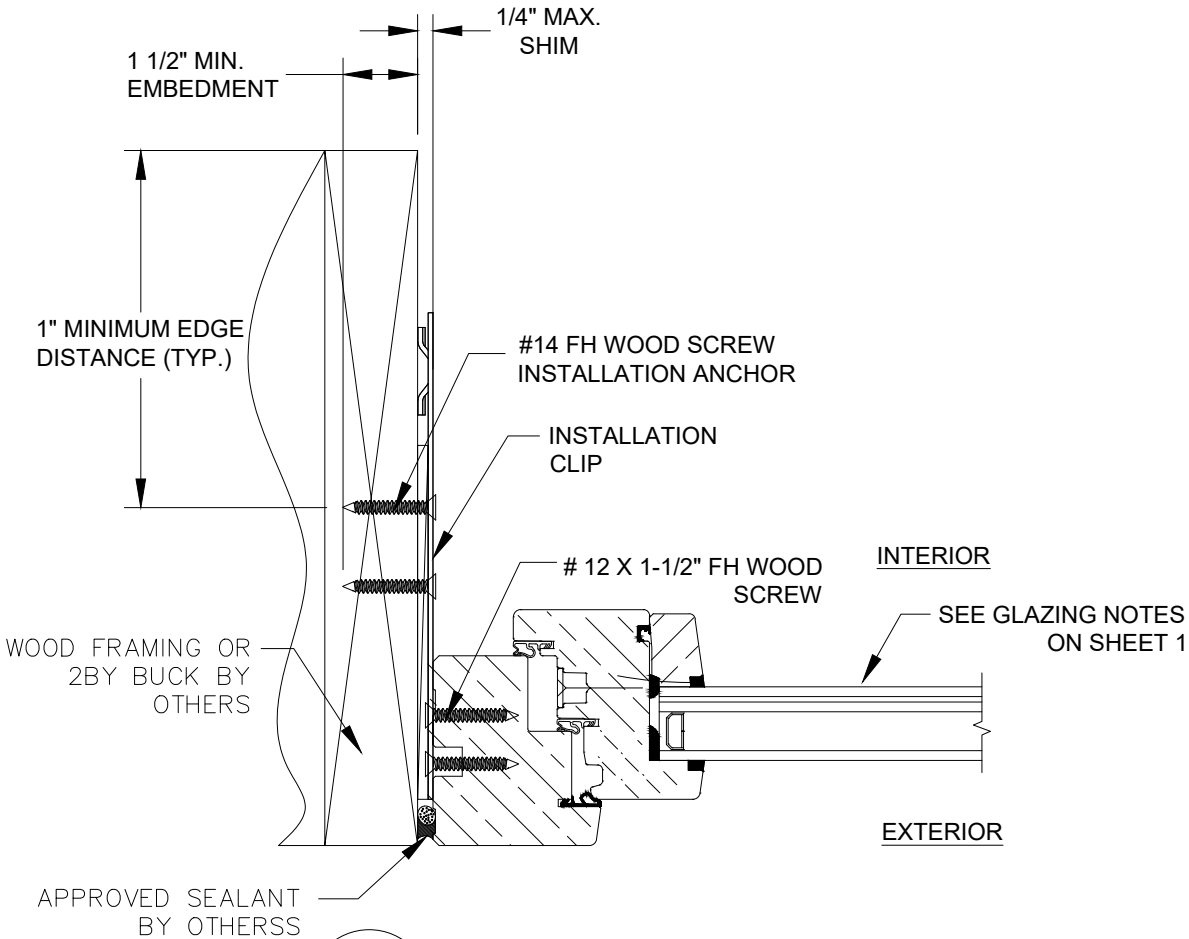
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A
3 **VERTICAL SECTION**
2 BY WOOD SUBSTRATE
CLIP INSTALLATION



B
3 **HORIZONTAL SECTION**
2 BY WOOD SUBSTRATE
CLIP INSTALLATION

- NOTES:
1. INTERIOR AND EXTERIOR FINISHES BY OTHERS NOT SHOWN FOR CLARITY.
 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112.

GAULHOFER INDUSTRIE-HOLDING GmbH A-8124 UBELBACH/STEIERMARK AUSTRIA		
NATURELINE-78 FEN 425 COMPOSITE MULLED FIXED/CA L.M. IMPACT HVHZ ANCHOR STRAP INSTALLATION-WOOD FRAME		
DRAWN: JRM	DWG NO. NL-0077	REV -
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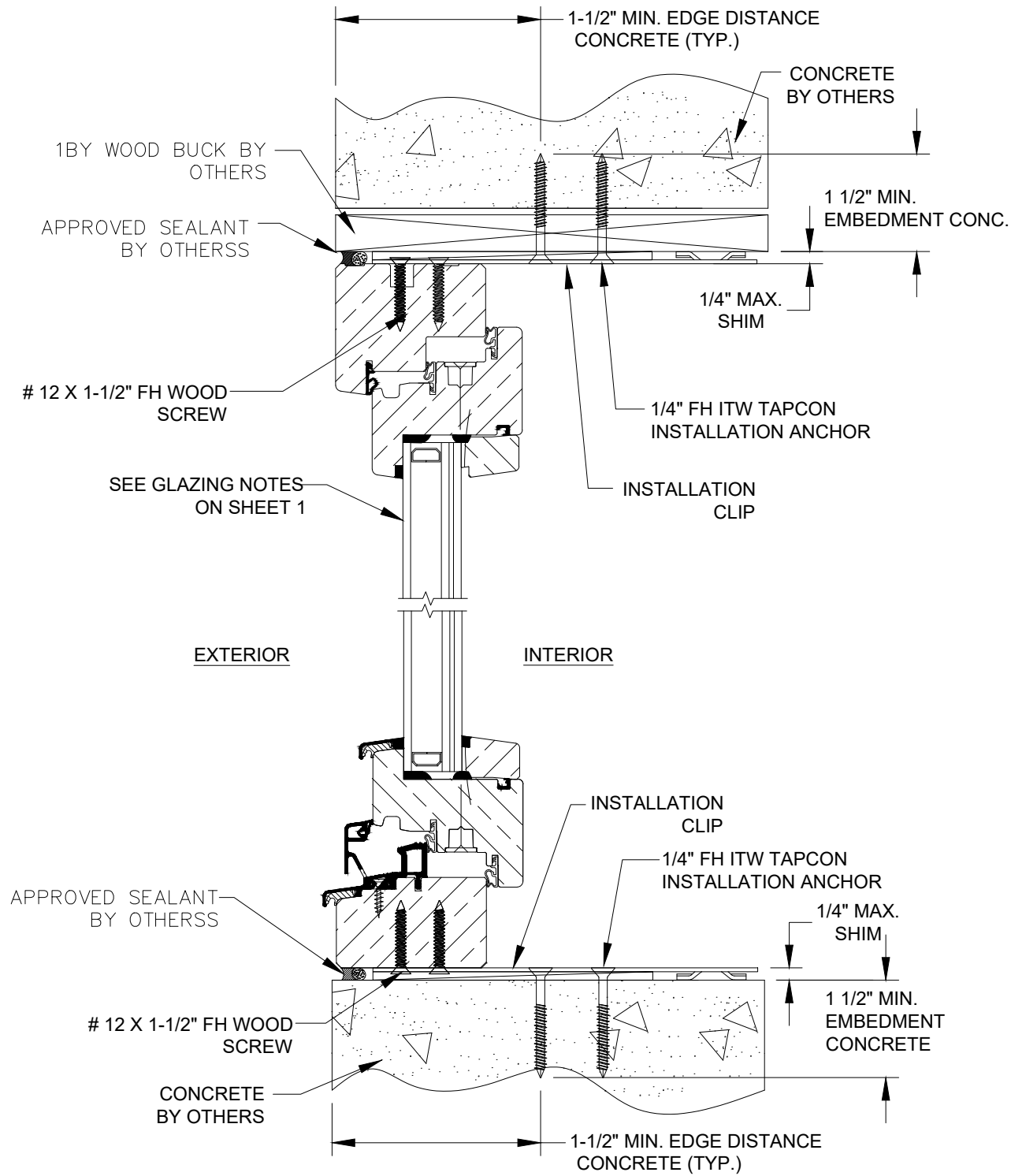
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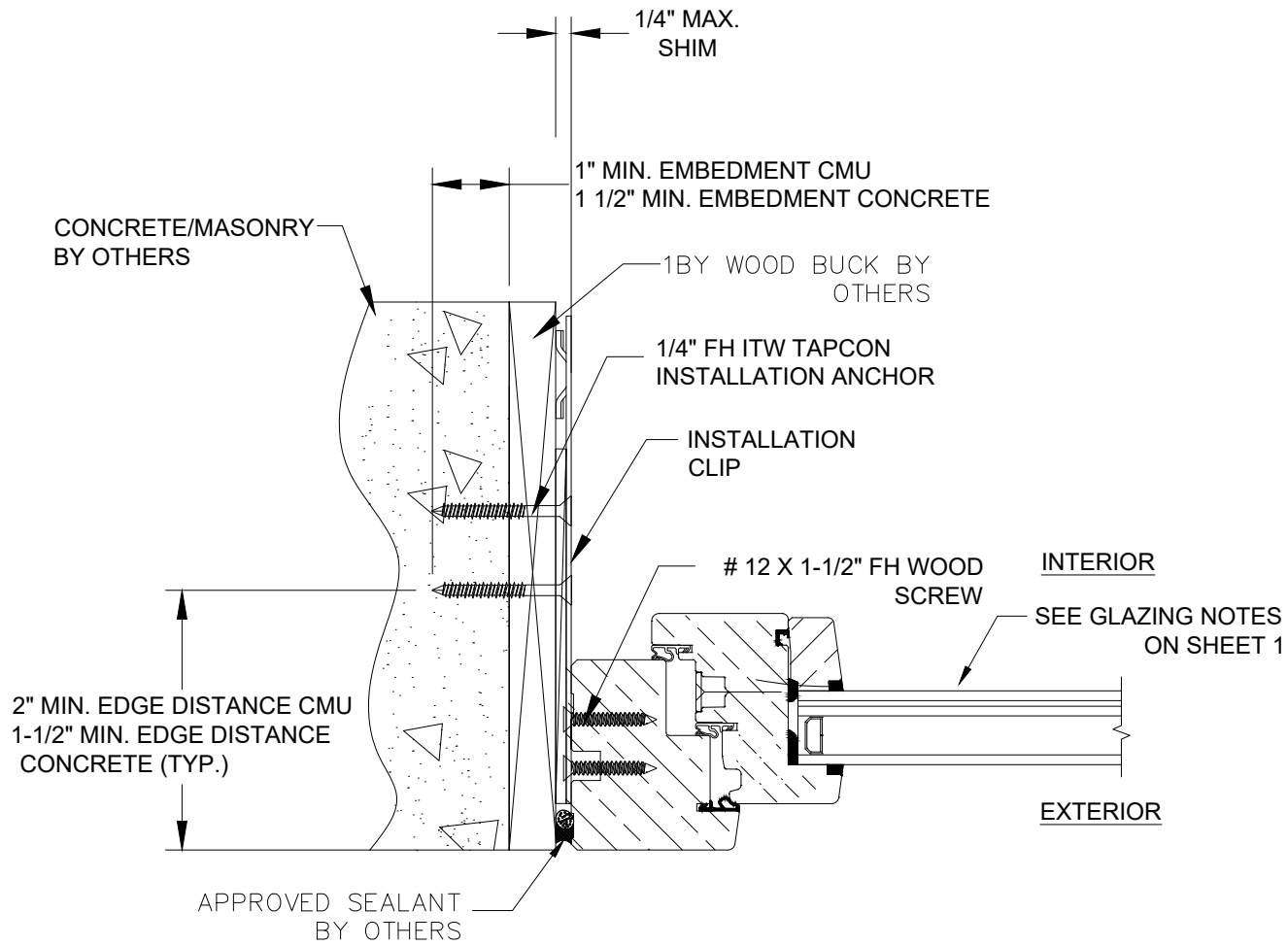
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A
4 **VERTICAL SECTION**
CONCRETE SUBSTRATE
CLIP INSTALLATION

- NOTES:
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 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112.

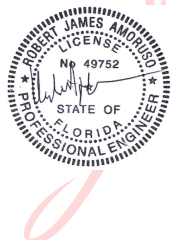


B
4 **HORIZONTAL SECTION**
CONC. / MASONRY SUBSTRATE
CLIP INSTALLATION

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NATURELINE-78 FEN 425 COMPOSITE MULLED FIXED/CA L.M. IMPACT HVHZ ANCHOR STRAP INSTALLATION -CONCRETE/MASONRY		
DRAWN: JRM	DWG NO. NL-0077	REV -
SCALE NTS	DATE 12/07/2016	SHEET 4 OF 7

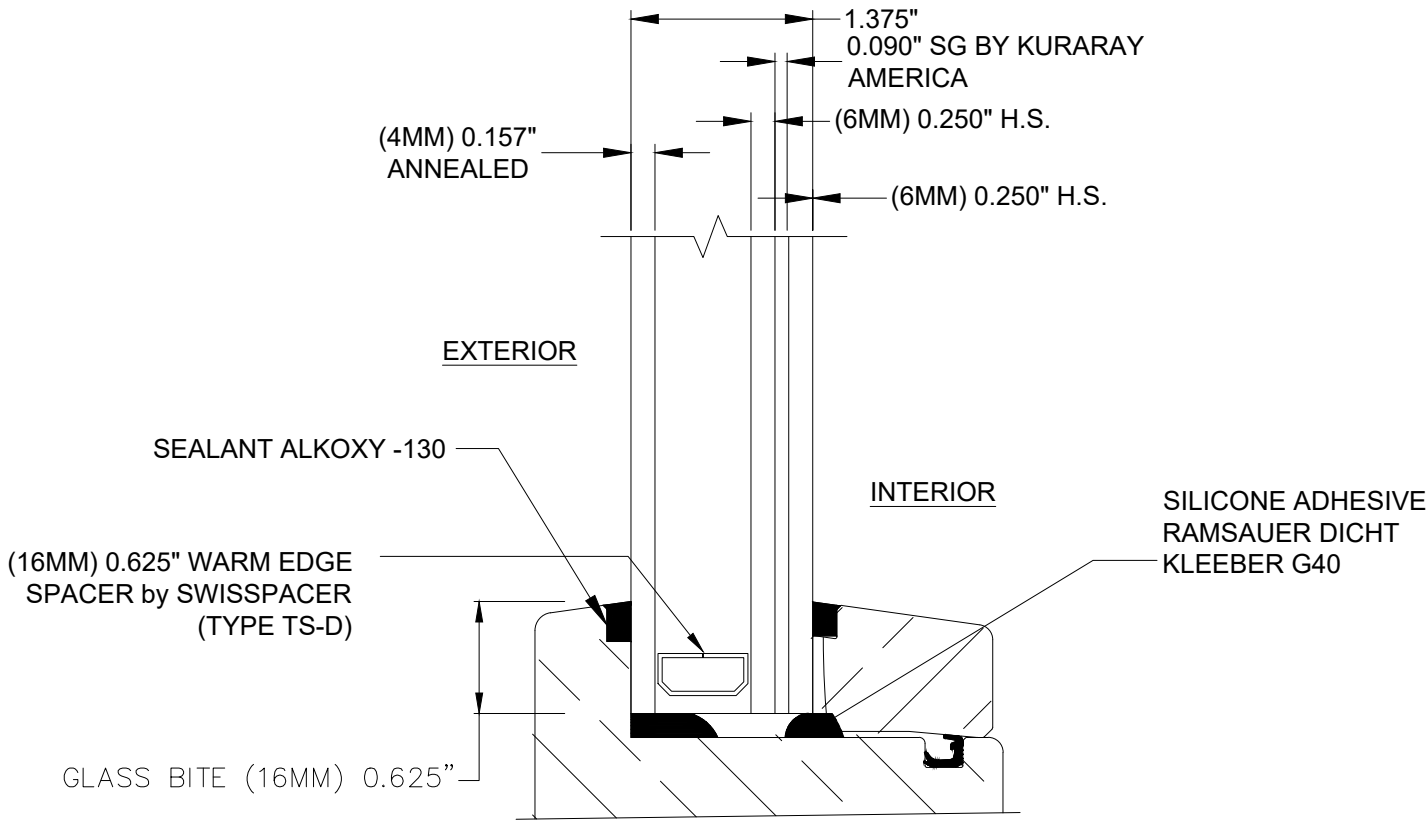
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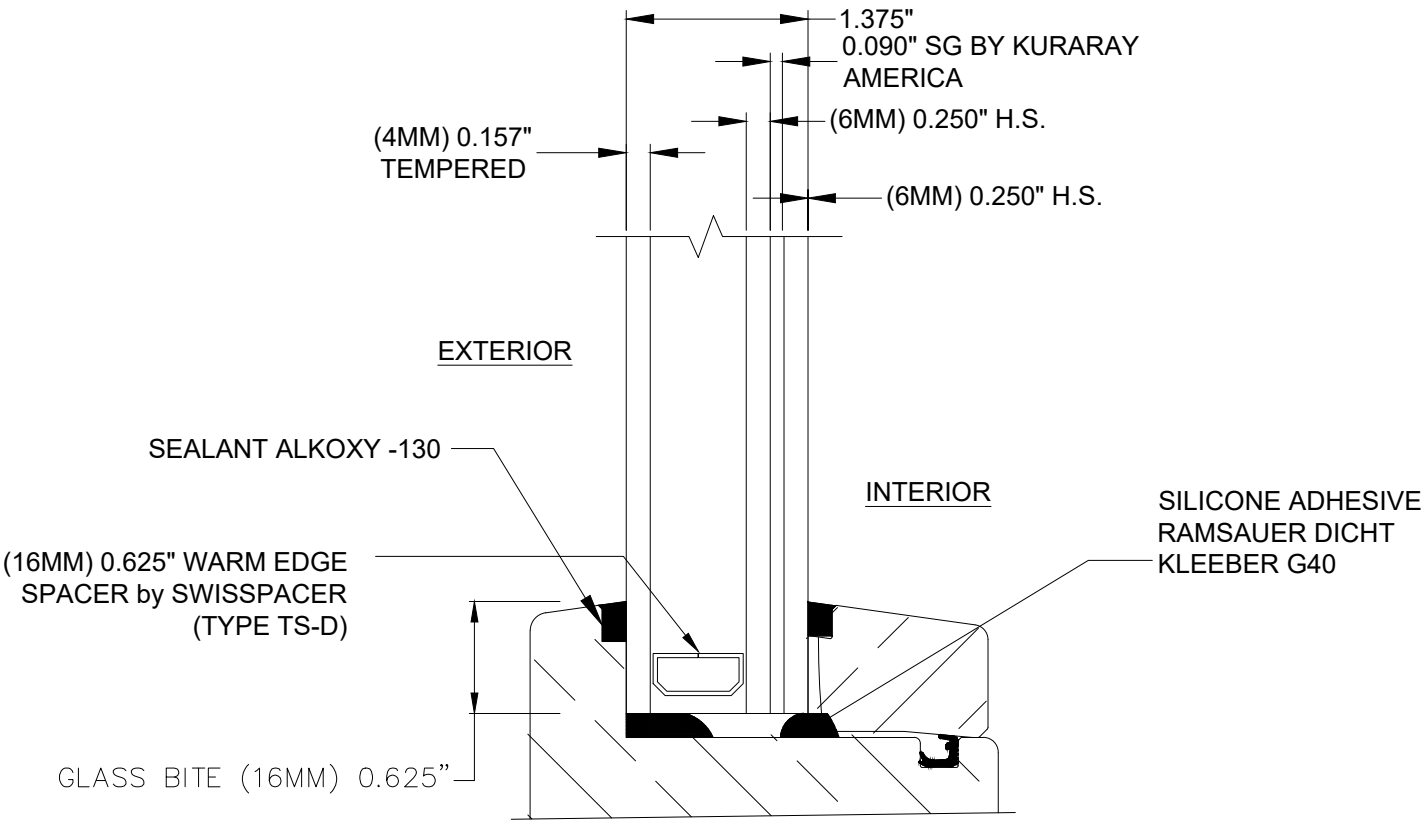


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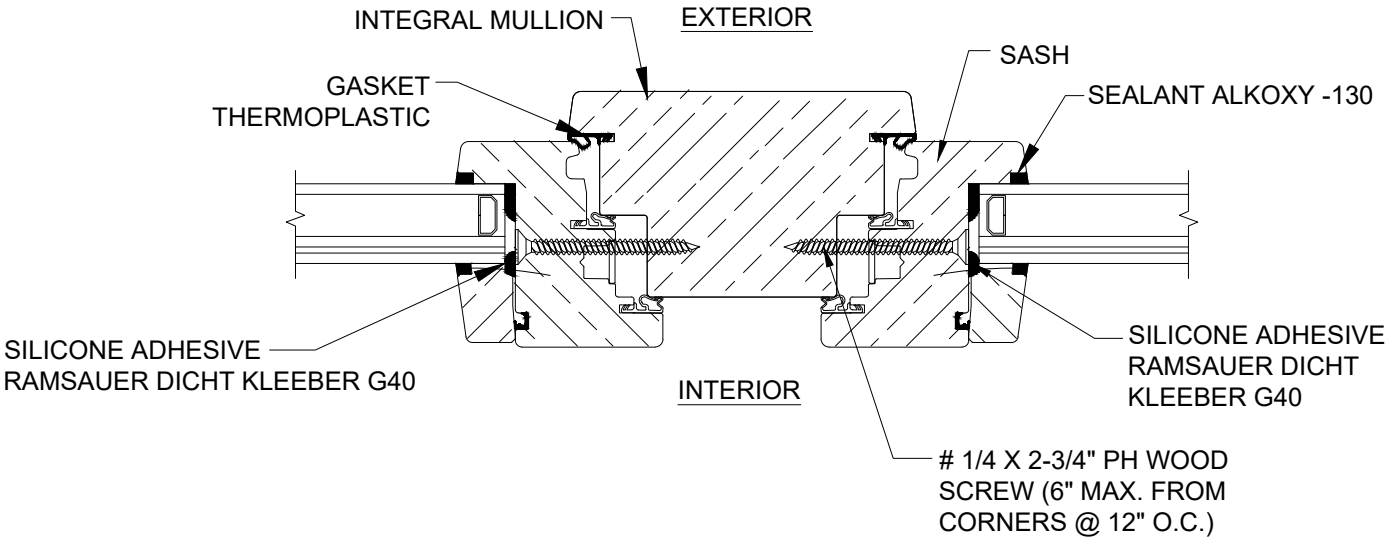
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GLAZING DETAIL 1
BOLTED SASH WINDOWS
NON-HVHZ (ONLY)



GLAZING DETAIL 2
BOLTED SASH WINDOWS
HVHZ (REQUIRED) AND NON-HVHZ (OPTIONAL)



C
5
INTEGRAL MULLION SECTION
BOLTED SASH WINDOWS

GAULHOFER INDUSTRIE-HOLDING GmbH A-8124 UBELBACH/STEIERMARK AUSTRIA		
NATURELINE-78 FEN 425 COMPOSITE MULLED FIXED/CA L.M. IMPACT HVHZ MULLION DETAILS AND GLAZING		
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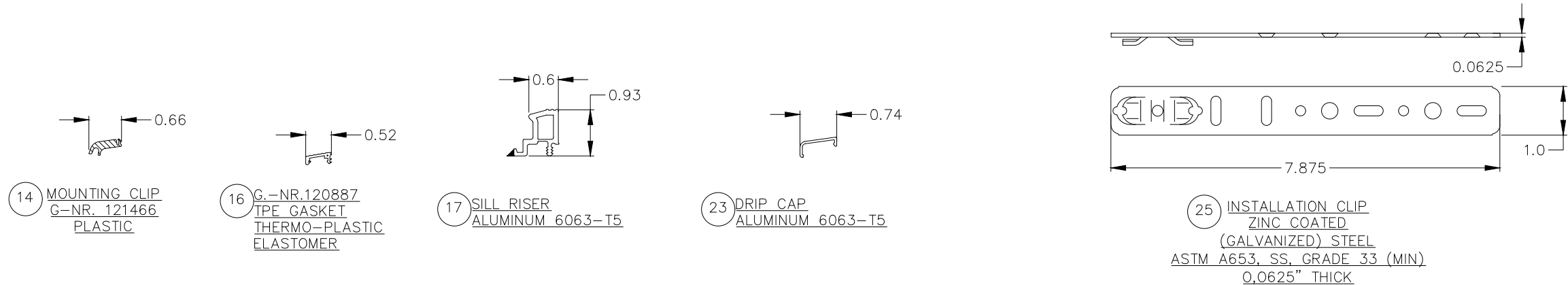
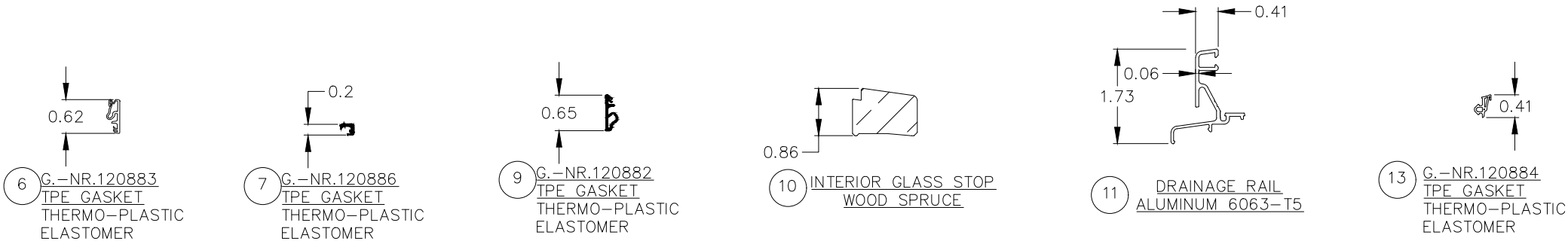
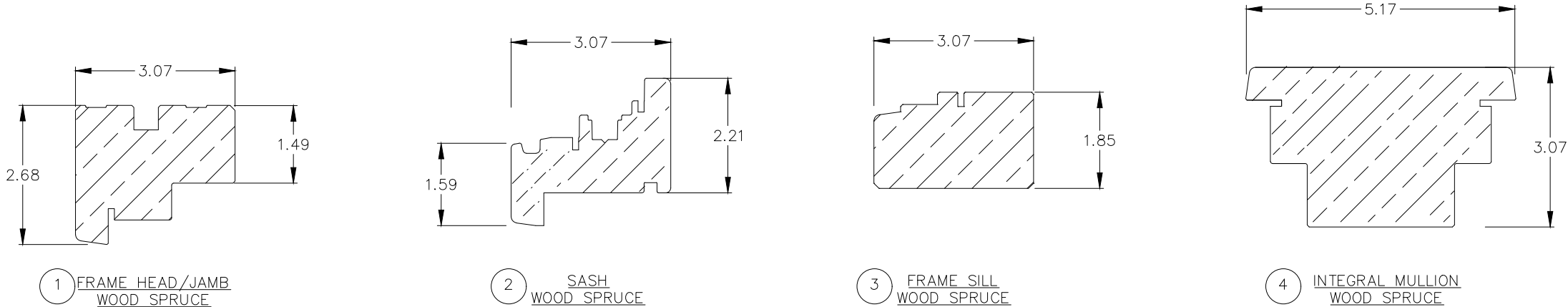
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NATURELINE-78 FEN 425 COMPOSITE MULLED FIXED/CA L.M. IMPACT HVHZ COMPONENTS		
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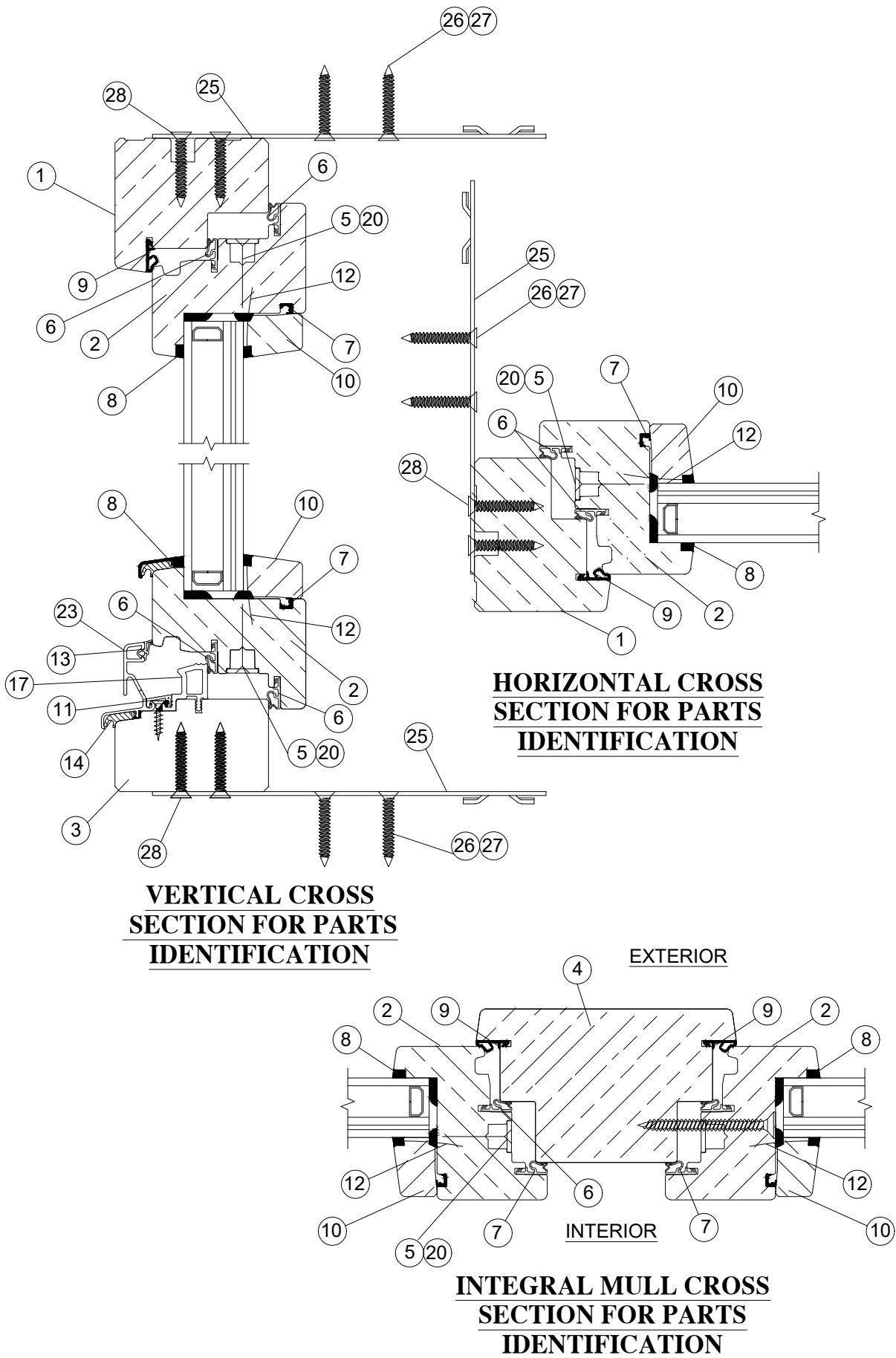
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QTY.	PART NO.	DESCRIPTION	MANUFACTURER
1	-----	FRAME HEAD / JAMB-WOOD SPRUCE	GAULHOFER
2	-----	SASH, WOOD SPRUCE	GAULHOFER
3	-----	FRAME SILL, WOOD SPRUCE	GAULHOFER
4	-----	INTEGRAL MULLION, WOOD SPRUCE	GAULHOFER
5	-----	OPERATOR, MULTI-MATIC MULTI-POWER	MACO
6	G.-NR 120883	GASKET, THERMOPLASTIC ELASTOMER	PURCHASE
7	G.-NR 120886	GASKET, THERMOPLASTIC ELASTOMER	PURCHASE
8	-----	SEALANT, ALKOXY 130	PURCHASE
9	G.-NR 120882	GASKET, THERMOPLASTIC ELASTOMER	PURCHASE
10	-----	INTERIOR GLASS STOP, WOOD SPRUCE	GAULHOFER
11	G.-NR 120992	DRAINAGE RAIL, ALUMINUM 6063-T5	GAULHOFER
12	-----	1-1/2" 18 GAUGE BRAD NAIL	PURCHASE
13	G.-NR 120884	GASKET, THERMOPLASTIC ELASTOMER	PURCHASE
14	G.-NR 121466	MOUNTING CLIP, PLASTIC	GAULHOFER
15	-----	SEALANT, KRAFT ELAST KLEEGER-635	PURCHASE
16	G.-NR 120887	GASKET, THERMOPLASTIC ELASTOMER	PURCHASE
17	G.-NR 116853	SILL RISER, ALUMINUM 6063-T5	GAULHOFER
18	PURCHASE	HINGE, MULTIMATIC MULTIPOWER	MACO
19	PURCHASE	LOCK, MULTIMATIC MULTIPOWER	MACO
20	PURCHASE	HARDWARE SCREW	MACO
21	G.-NR 121390, 121391	END CAP SILL RISER, THERMOPLASTIC ELASTOMER	PURCHASE
22	G.-NR 121395, 121397	END CAP DRAIN RAIL, THERMOPLASTIC ELASTOMER	PURCHASE
23	G.-NR 116838	DRIP CAP, THERMOPLASTIC ELASTOMER	PURCHASE
24	G.-NR 121388, 121389	END CAP FOR DRIP CAP, THERMOPLASTIC ELASTOMER	PURCHASE
25	PURCHASE	ANCHOR STRAP, 1/8" x 1" x 7-7/8" MIN. ZINC-COATED (GALVANIZED) STEEL, ASTM A653, SS, Grade 33 MIN.	PURCHASE
26	PURCHASE	1/4" ITW TAPCON (ADVANCED THREADFORM), FH, CARBON STEEL, BLUE CLIMASEAL FINISH. LENGTH AS REQUIRED TO MEET/EXCEED MINIMUM EMBEDMENT REQUIREMENTS.	PURCHASE
27	PURCHASE	#14 FH WOOD SCREW (ANSI B18.6.1), GRADE 2 (57 KSI YIELD STRENGTH). LENGTH AS REQUIRED TO MEET/EXCEED MINIMUM EMBEDMENT REQUIREMENTS.	PURCHASE
28	PURCHASE	#12 X 1-1/2" FH WOOD SCREW (ANSI B18.6.1), GRADE 2 (57 KSI YIELD STRENGTH).	PURCHASE

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A-8124 UBELBACH/STIERMARK
AUSTRIA

NATURELINE-78 FEN 425 COMPOSITE MULLED
FIXED/CA L.M. IMPACT HVHZ
BILL OF MATERIALS & CROSS SECTIONS

DRAWN: JRM

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SHEET 7 OF 7

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