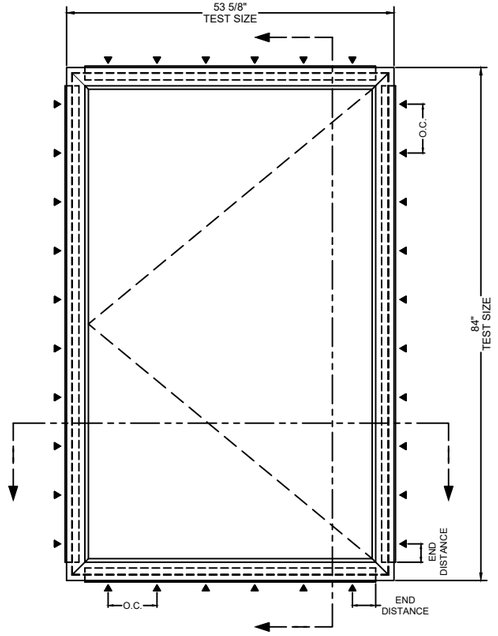
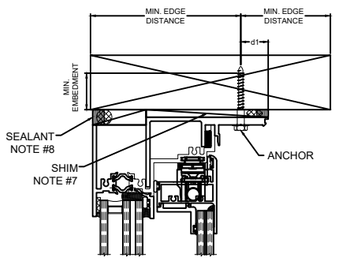
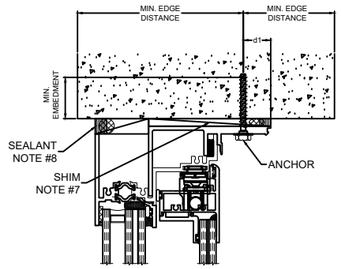
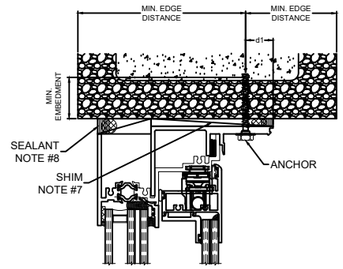
TABLE 1: ANCHOR TO SUBSTRATE CONDITION

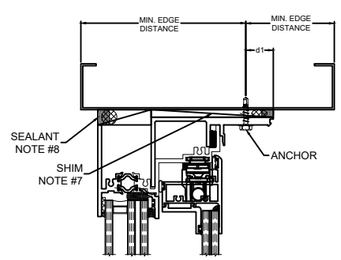
SUBSTRATE	LOCATION	HARDWARE (ACCEPTABLE TRADE NAME OR EQUIVALENT)	O.C. SPACING (MAX)	END DISTANCE (MAX)	EMBEDMENT (MIN)	SUBSTRATE EDGE DISTANCE (MIN)	d1 INSTALL DIMENSION (MIN)
WOOD S.G. = 0.42	HEAD	1/4" Ø LAG SCREW, FULL BODY	5"	4"	1-1/2"	1"	7/8"
	SILL						
	JAMB						
CONCRETE 3,000 PSI	HEAD	1/4" Ø HILTI KWIK HUS-EZ (KH-EZ)	6"	4"	2-1/2"	1-3/4"	7/8"
	SILL						
	JAMB						
CONCRETE 4,000 PSI	HEAD	1/4" Ø HILTI KWIK HUS-EZ (KH-EZ)	7"	4"	2-1/2"	1-3/4"	7/8"
	SILL						
	JAMB						
CMU (GROUT-FILLED f'm = 1,500 PSI)	HEAD	1/4" Ø HILTI KWIK HUS-EZ (KH-EZ)	6"	4"	2-1/2"	1-1/2"	7/8"
	SILL		4"				
	JAMB		6"				
STEEL STUD (18 GA., 33 KSI)	HEAD	1/4"-14 SAE GR. 5 HEX/HWH (HILTI KWIK FLEX, DEWALT DRIL-FLEX)	3"	4"	3 THREADS	1"	7/8"
	SILL						
	JAMB						



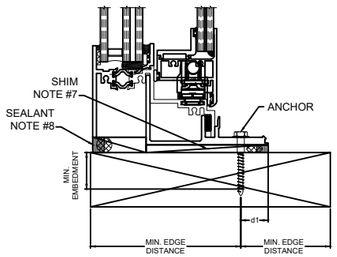


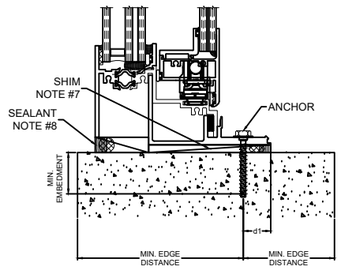


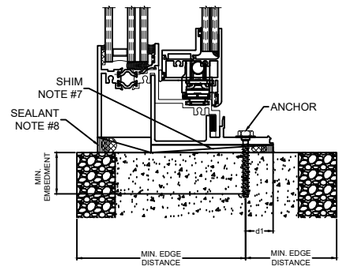


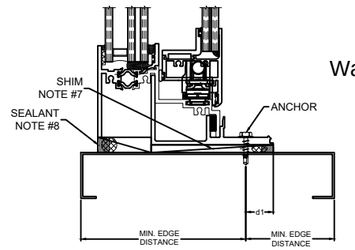


HEAD









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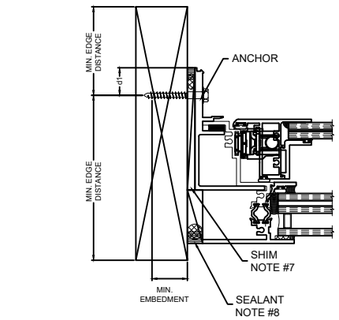
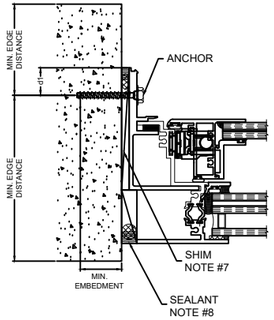
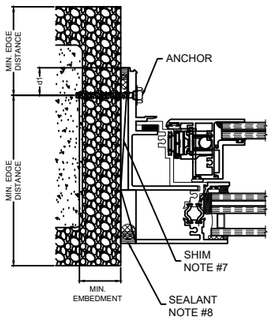
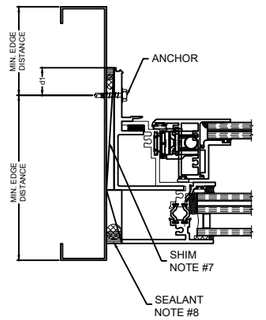








JAMBS

1. Installations depicted comply with:
   Florida Building Code - 8th Ed. (FBC 2023)
   International Building Code (IBC 2021)
   National Design Specifications (ANSI/AWC NDS 2018)
   Aluminum Design Manual (ADM 2020)
   Cold-Formed Steel Design Manual (AISI-S100 2020)

2. The installation depicted in this drawing and all calculations are based on a maximum size and design wind pressure rating listed below. The products **have** been proven for resistance to Large Missile Impact per ASTM E1886 / E1996 Missile Level E and AAMA 501.8 Human Impact for the interior blind sash.

   Test Size: **53-5/8" x 84"** Design pressure: **+/- 80 psf**
   Human Impact Rating: **2,000 ft-lb**

3. Lag screws shall be used for a wood substrate. Screw materials and dimensions shall meet the requirements of ANSI / ASME Standard B18.2.1. All lag screw conditions must be pre-drilled with hole diameters of 40-70% of the fastener diameter. Wood buck installations are assumed to use 2 X S-P-F (G= 0.42) or denser. Tapered or partial bucks are not allowed.

4. Approved screw anchors shall be used for concrete substrate. Anchor embedment shall be as indicated herein. Install per ESR-3027 requirements. Concrete installations are assumed to be at least f'c = 3,000 (or 4,000) psi, normal weight concrete, with a minimum thickness of _____".

5. Approved screw anchors shall be used for CMU substrate. Anchor materials and dimensions shall meet the requirements of ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in masonry elements. Anchor embedment shall be as indicated herein. Install per ESR-3056 requirements. Concrete masonry installations are assumed at least ASTM C90, Type II, Grade N, with f'm = 1,500 psi, and type M or S mortar.

6. Approved self-drilling screws shall be used for steel stud substrate. All fasteners installed in steel studs shall be SAE grade 5 or better. Steel stud installations assume 18 gauge, 33 ksi studs and follow AISI-S100 rules and procedures.

7. Maximum shim thickness of 1/4" permitted at each fastener location. Thickness of shims at exterior leg of window frame shall be as required. Shims shall be non-compressible and load-bearing type.

8. Drawings depict details necessary to meet structural load requirements, but do not address air infiltration, water penetration, intrusion or thermal performance requirements of the installation. See manufacturer's Installation Instructions for sealing, flashing, drainage and other requirements.

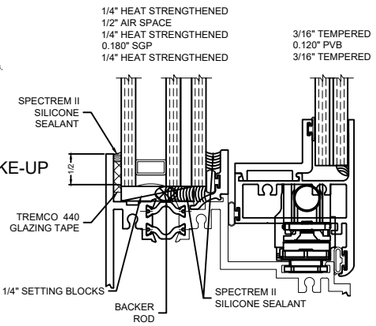
9. Minimum fastener on center spacing to be coordinated with fastener manufacturer's technical data for the expected substrate.

10. All substrate types shall be secured to the building structure to resist all design loads, and shall have widths that exceed the window frame widths.

Wayne K Helmila

Digitally signed by Wayne K Helmila
DN: CN=Wayne K Helmila, dnQualifier=A01410C0000018CDB8F4AFB001A652B, O=Wisconsin, C=US
Date: 2024.10.18 13:12:45-05'00'

GLAZING MAKE-UP



WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

10/18/2024
COA: 9090

RICE
ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

Rev.	Description	Date

Scale: NONE
Drawn by: B. FOOTE

Winco Window Co.
6200 Maple Ave.
St. Louis, MO 63130
PHONE: 314-725-8088

WINCO Product: 8800 FIXED W/ HUMAN IMPACT SASH
Installation: ANCHORAGE: MU-06 CLIP
Certification: LMI - 8800 - E MISSILE