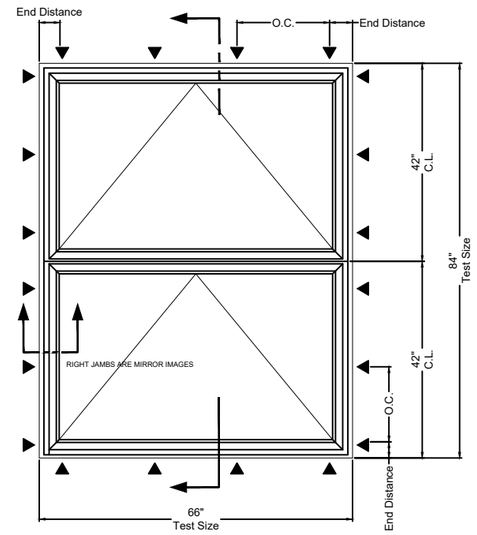
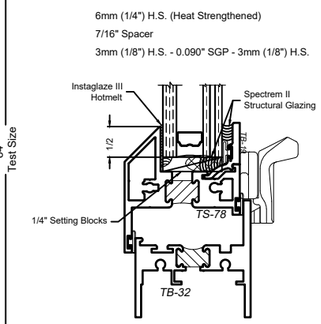
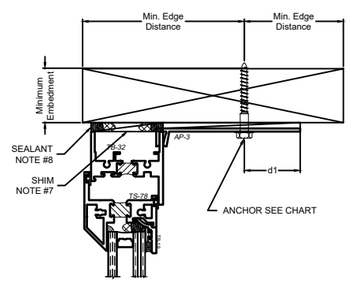
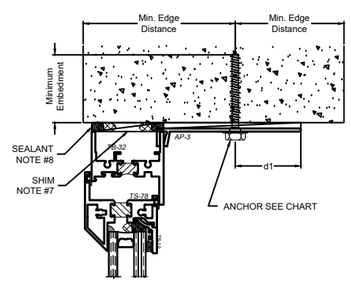
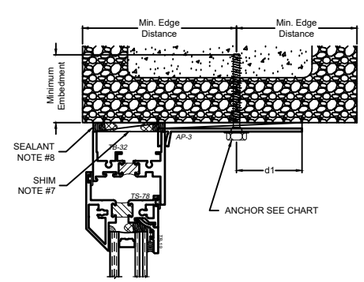
PRIMARY ANCHOR (TO SUBSTRATE CONDITION)							
SUBSTRATE	LOCATION	HARDWARE (ACCEPTABLE TRADENAME OR EQUIVALENT)	O.C. SPACING (MAX)	END DISTANCE (MAX)	EMBED-MENT (MIN)	SUBSTRATE EDGE DISTANCE (MIN)	d1 COMPONENT EDGE INSTALL DISTANCE (MIN)
WOOD SG = 0.42	HEAD	1/4" Ø LAG SCREW, FULL BODY	15"	4"	1-1/2"	1"	1"
	SILL		15"				
	JAMB		8"				
CONCRETE 3,000 PSI	HEAD	1/4" Ø HILTI KWIK HUS-EZ (CS)	22"	4"	2-1/2"	1-3/4"	1-3/4"
	SILL		22"				
	JAMB		14"				
CONCRETE 4,000 PSI	HEAD	1/4" Ø HILTI KWIK HUS-EZ (CS)	24"	4"	2-1/2"	1-3/4"	1-3/4"
	SILL		24"				
	JAMB		16"				
CMU (GROUT FILLED) f'm = 1,500 PSI	HEAD	1/4" Ø HILTI KWIK HUS-EZ (CS)	20"	4"	2-1/2"	2"	1-3/4"
	SILL		12"				
	JAMB		12"				
STEEL STUD (18 ga. 33ksi)	HEAD	1/4"-14 SAE GR. 5 HEX/HWH HILTI KWIK FLEX OR DEWALT DRIL-FLEX	14"	4"	3 THREADS	1"	1"
	SILL		14"				
	JAMB		8"				

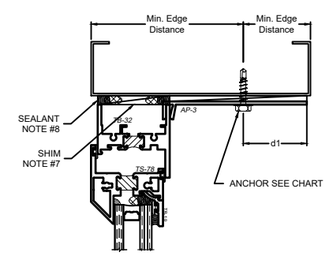




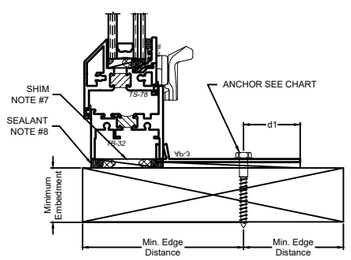


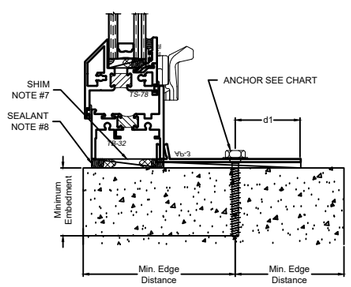


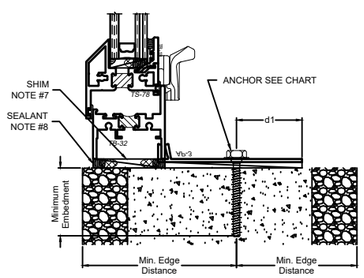


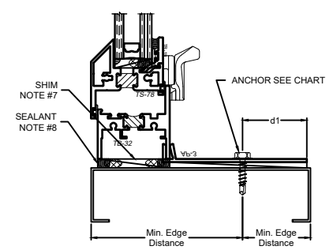


HEAD

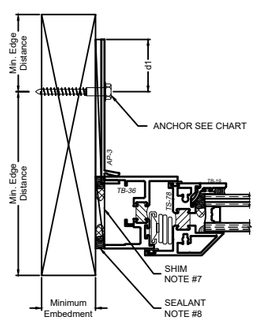


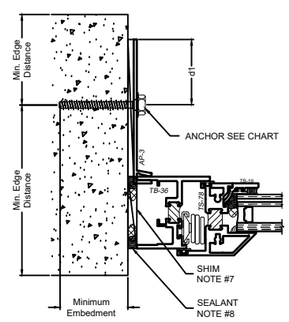


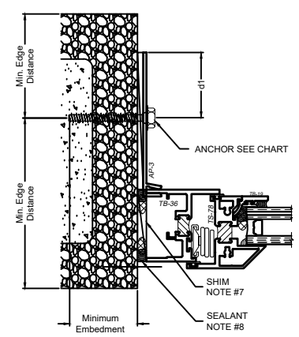


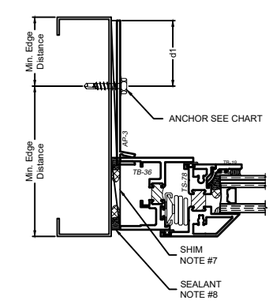


SILL









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 wind-borne debris per ASTM E1886 and ASTM E1996.

   Test size: **66" x 84"** Awning Test Size: **66" x 42"** Design pressure: **+/- 80 psf**

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.

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. Screw materials and dimensions shall meet the requirements of SAE Grade 5 Carbon Steel. 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. 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: 2024.03.01 09:05:23-06'00'

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Wayne K. Helmila
Registration No: 59092

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

03/01/2024
COA: 9090

Rev.	Description	Date
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Scale:	Drawn by:
NONE	A. KEARNEY

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

WINCO Product:
1150S AWNING OVER AWNING

Installation:
ANCHORAGE: F-CLIPS

Certification:
LMI - 1150S AWNING