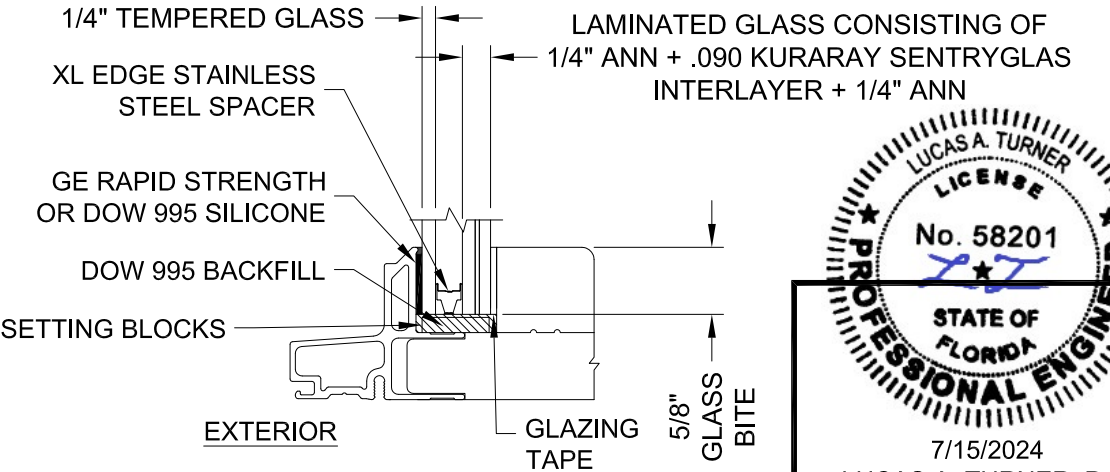
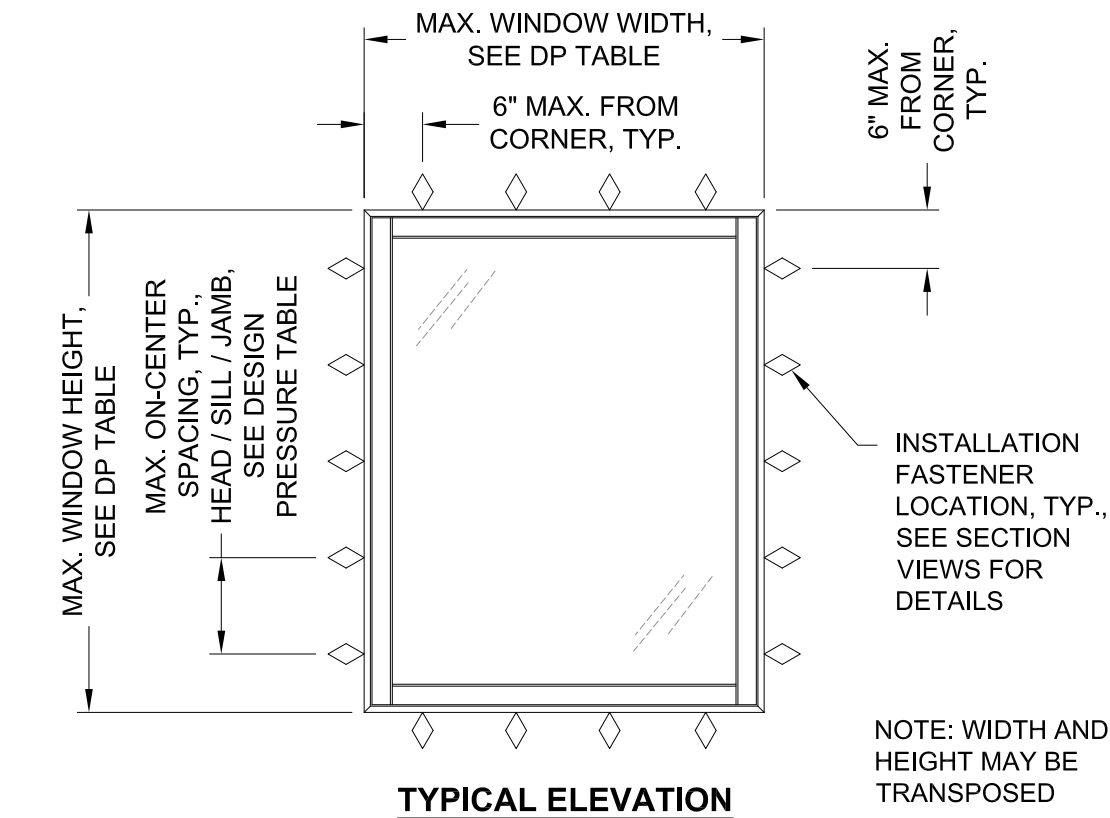


ULTIMATE DIRECT GLAZE IZ3 WINDOW

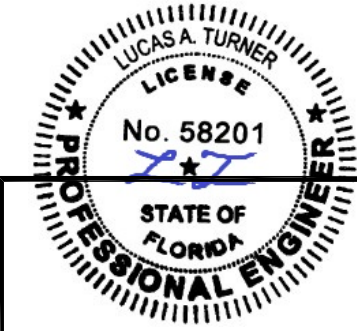
DESIGN PRESSURES (ASD, PSF) AND FRAME ANCHOR SPACING (in.)															
Frame Height (in.)		45	48	51	54	57	60	63	66	69	72	75	78	81	84
42	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	15	15	15	15	15	15	15	15	15	15	15	15	15
48	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	14	14	14	14	14	14	14	14	14	14	14	14
54	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2
60	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4
66	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	10 1/4	10 1/4	10 1/4	10 1/4	10 1/4	10 1/4
72	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9 1/2	9 1/2	9 1/2	9 1/2
78	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9	8 3/4	8 3/4	8 3/4
84	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9	8 3/4	8 1/4	8
86	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9	8 3/4	8 1/4	8
90	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+54.7/-64.7	+54/-63.8	+53.5/-63.2	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9	8 3/4		
96	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+54.6/-64.5	+53.5/-63.2	+52.5/-62.1	+51.7/-61.1	N/A	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/2	9			
102	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+54.3/-64.1	+52.9/-62.6	+51.8/-61.2	N/A	N/A	N/A	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4					
108	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+53/-62.6	+51.6/-61	N/A	N/A	N/A	N/A	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4	10 1/4						
114	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+52.4/-61.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4	10 3/4							
120	DP	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	+55/-65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Spacing	15	14	13 1/4	12 1/2	11 3/4	11 1/4								

GENERAL NOTES

1. THIS DOCUMENT ADDRESSES ONLY PRODUCT ANCHORAGE TO ACHIEVE THE INDICATED DESIGN PRESSURES AT THE INDICATED SIZES, IN THE CONFIGURATION SHOWN IN THE ELEVATIONS. INSTALL PRODUCTS WITH MAXIMUM SHIM GAP, MINIMUM EDGE DISTANCE AND EMBEDMENT, AND WITH FASTENER TYPE AS SHOWN IN THE DETAILS. FOR FULL PRODUCT CONSTRUCTION DETAILS SEE ATI/INTERTEK TEST REPORTS Q3191.01/02-201-47 AND Q3192.01/02-201-47. FOR FULL PRODUCT INSTALLATION INSTRUCTIONS SEE WWW.MARVIN.COM. THIS DOCUMENT PROVIDES ANCHORAGE AND SIZES IN ALTERNATIVE CONFIGURATIONS IN ACCORDANCE WITH FBC SECT. 1709.5.1 exc. 3.ii. AS-TESTED CONFIGURATIONS IN WOOD SUBSTRATES WITHIN THE TESTED SIZE LIMITS MAY USE MARVIN AS-TESTED INSTALLATION INSTRUCTIONS.
2. THIS PRODUCT AS SHOWN AND GLAZED IN THIS DRAWING, IS WIND ZONE 3 MISSILE LEVEL D LARGE MISSILE IMPACT RESISTANT AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WIND ZONE 3 AND BELOW WINDBORNE DEBRIS REGIONS. THIS PRODUCT HAS BEEN TESTED TO AAMA/WDMA/CSA101/I.S.2/A440 AND ASTM E 1886/1996, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, CURRENT EDITION, FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
3. THE DESIGN PRESSURE RATINGS IN THIS DRAWING ARE AS LIMITED BY ASTM E-1300 COMPLIANT GLASS CALCULATIONS, TESTED WATER, STRUCTURAL, AND CYCLIC PRESSURES, AND FBC 1709.5.1 AND WDMA I.S. 11 COMPLIANT ANALYSIS.
4. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
5. THE OPENING SUBSTRATE MATERIALS (FRAMING, MASONRY, BUCKS) AND ATTACHMENT OF BUCKS TO THE SUBSTRATE ARE BY OTHERS AND SHALL BE VERIFIED BY THE ARCHITECT OR ENGINEER OF RECORD OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE.
6. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED PER FBC CHAPTER 20 TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED, WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH THIS PRODUCT. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE PRESSURE TREATED WOOD BUCKS AND ALL OTHER WINDOW MATERIALS.
7. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, OR AS APPROVED, SIGNED, AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS.
8. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT SHALL BE THE RESPONSIBILITY OF OTHERS AND ARE NOT ADDRESSED BY THIS DOCUMENT.



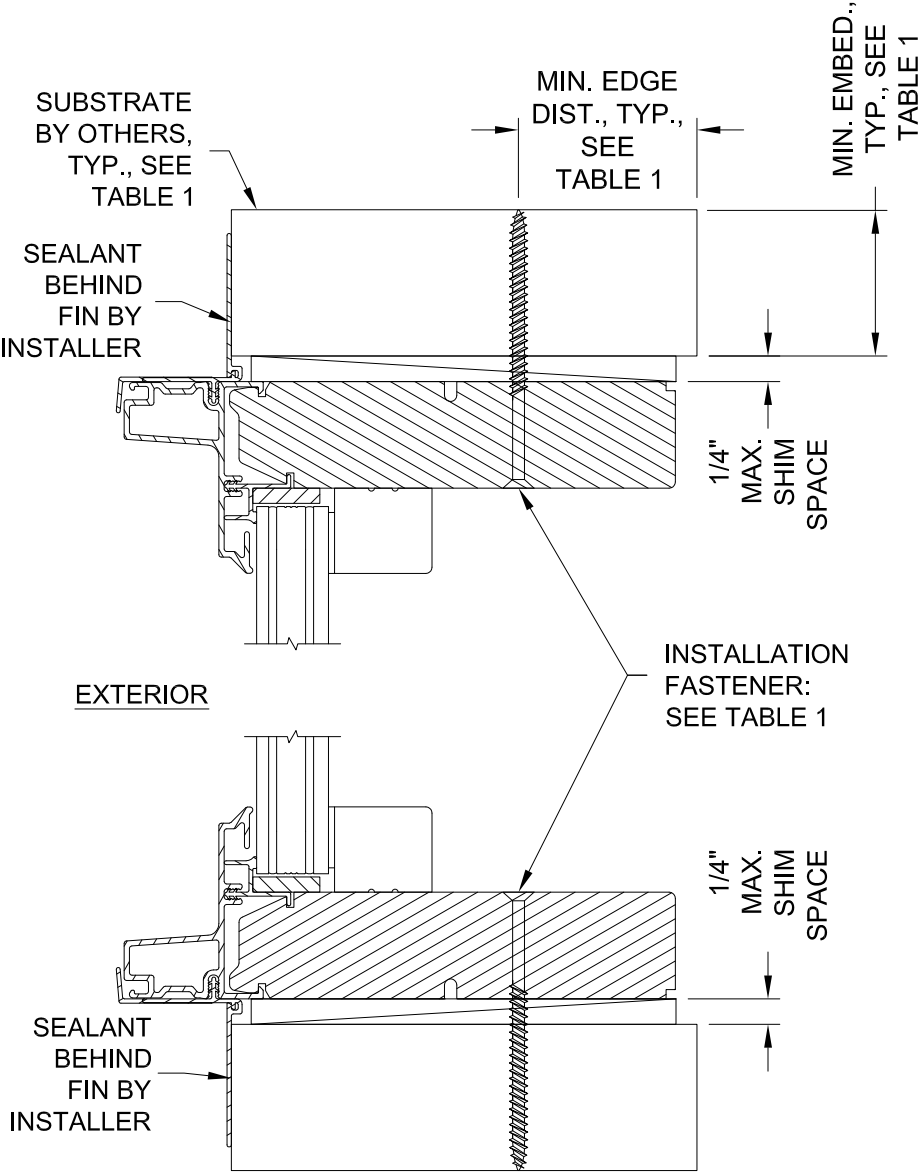
Lucas Turner, PE 58201
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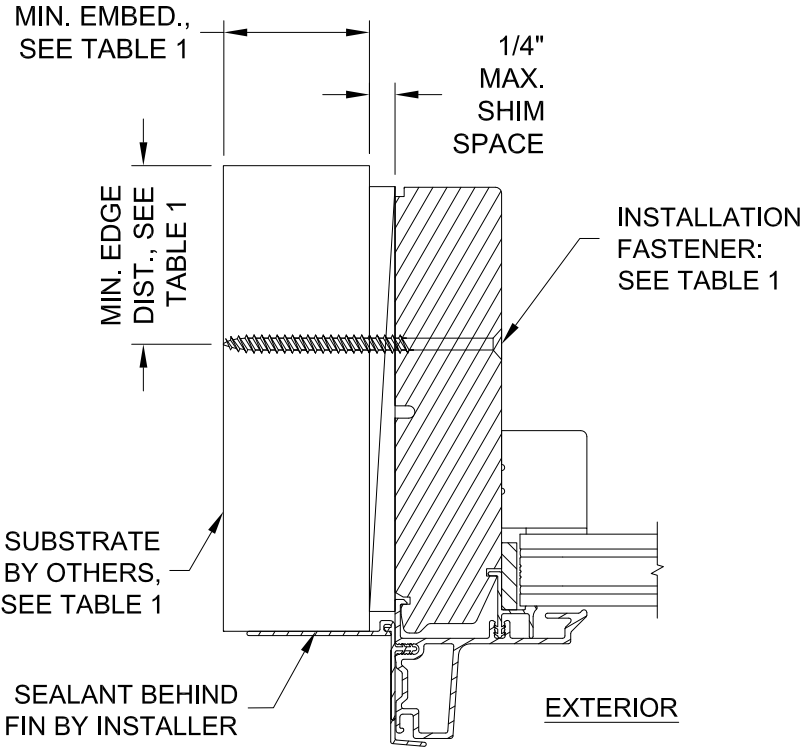
7/15/2024
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING & CONSULTING, INC.
2428 OLD NATCHEZ TRC. TRL.
CAMDEN, TN 38320
PH. 941-380-1574

O		ORIGINAL RELEASE		7/9/2024	
MARVIN				WARROAD, MN, USA (218) 386-4021	
PRODUCT CATEGORY: ULTIMATE DIRECT GLAZE IZ3					
UNIT TYPE: UDG IZ3					
SHEET DESCRIPTION: DESIGN PRESSURES, ELEVATION, GLAZING DETAIL					
SIZE: B		CLASS: ANCHOR		DWG NO: UDG-IZ3-FPA	
SCALE: NTS		DWG BY: LAT		DATE: 7/9/2024	
				SHEET: 1 of 2	

ULTIMATE DIRECT GLAZE IZ3 THROUGH-FRAME NSTALLATION

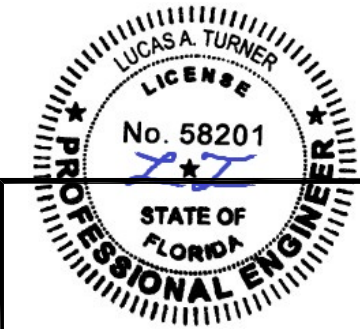


TYPICAL FRAME VERTICAL SECTION



TYPICAL JAMB HORIZONTAL SECTION

- ANCHOR NOTES:
- 1. INSTALL ONE ANCHOR AT EACH LOCATION SHOWN IN THE ELEVATION, SHT 1.
 - 2. INSTALL SHIMS AT EACH ANCHOR LOCATION WHERE A GAP OF 1/16" OR GREATER EXISTS BETWEEN PRODUCT FRAME AND SUBSTRATE.
 - 3. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING LOADS TO SUBSTRATE.
 - 4. SPECIFIED ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL FINISH OR STUCCO.
 - 5. ENSURE 3-3/8" MIN. SPACING BETWEEN ANY TWO INSTALLATION FASTENERS



7/15/2024
LUCAS A. TURNER, P.E.
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PH. 941-380-1574

TABLE 1: FRAME INSTALLATION ANCHOR REQUIREMENTS TABLE

SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBED.	MIN. EDGE DIST.
SPRUCE-PINE-FIR (G=0.42 MIN)	#10 WOOD SCREW	1-1/2"	1"
CONCRETE (3.05 KSI MIN)	3/16" DEWALT ULTRACON+	1-3/4"	1"
HOLLOW OR GROUT-FILLED CMU (ASTM C 90)	3/16" DEWALT ULTRACON+	1-1/4"	2-1/2"
16 GAUGE (0.060") MIN. STEEL STUD, 33KSI YIELD MIN., OR 1/8" ALUM. 6063-T5 MIN.	#10-16 HILTI KWIK-FLEX OR ITW TEKS SELF-DRILLING SCREW	3 THREADS BEYOND METAL WALL	1/2"

O		ORIGINAL RELEASE		7/9/2024	
MARVIN				WARROAD, MN, USA (218) 386-4021	
PRODUCT CATEGORY: ULTIMATE DIRECT GLAZE IZ3					
UNIT TYPE: UDG IZ3					
SHEET DESCRIPTION: THROUG-FRAME INSTALLATION					
SIZE: B		CLASS: ANCHOR		DWG NO: UDG-IZ3-FPA	
SCALE: NTS		DWG BY: LAT		DATE: 7/9/2024	
				SHEET: 2 of 2	