



SEMINOLE COUNTY FIRE STATION No. 11

CONSTRUCTION DOCUMENTS
OCTOBER 1, 2019



OWNER:

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

PRODUCT SUBMITAL DOCUMENTS FOR:

DIVISION 08 41 00 Aluminum Entrances, Storefront & Window Systems
DIVISION 08 7100 Door Hardware
DIVISION 08 8000 Glazing

Architect:

C.T. HSU + Associates, P.A.
820 Irma Avenue
Orlando, FL 32803

General Contractor:

APM Construction
208 Cessna Blvd
Port Orange, FL 32128



Robinson Glazing Solutions, LLC

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19985 NW 13 Street
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Prepared By: Robert F Moxham III rmoxham@robinsonglazing.com

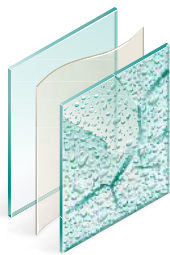
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**OldCastle Building Envelope FG-5100 2-1/2"x5"
Insulated Impact Storefront**

Series FG-5100 StormMax™ — impact-resistant storefront system

The FG-5100 system is an **impact-resistant** storefront system for **1-5/16" insulating laminated glass**. This system meets the most demanding requirements of the Florida and International Building Codes.



The system is unique in that it offers a dry-glaze option for large missile impact. StormMax™ products can also be glazed with our exclusive StormGlass™ hurricane-resistant glass for **maximum defense** against wind-borne debris.



Westlinks V Office Building, Ft. Myers, FL
Architect: McGarvey Development Company

Testing

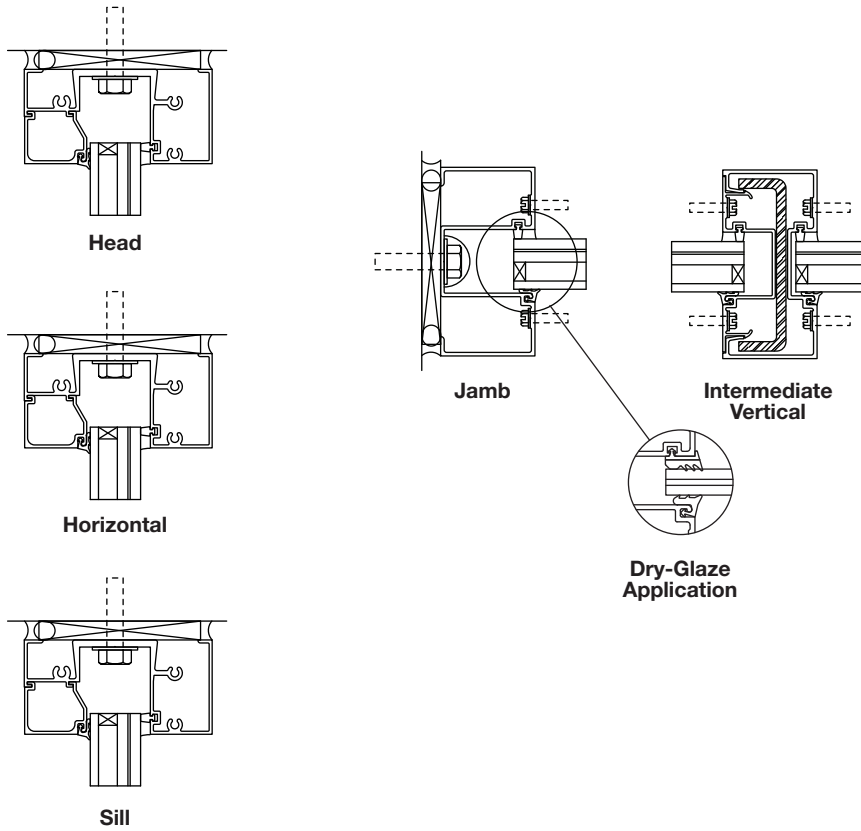
- Miami/Dade County
- Florida Building Code TAS-201, TAS-202, TAS-203
- ASTM E 1886, E 1996

Features

- Overall dimensions 2-1/2" x 5"
- Design Pressures up to +70 / -80 PSF
- Spans up to 10'-0" tall
- Vertical spacing up to 5'-0" C/L to C/L
- Screw spline assembly
- Dry-Glaze option (Large missile)
- Tested with the MSD-375 Impact-Resistant Entrance Door
- Corner Mullion option



Details (Wet-Glaze Application Shown)



Performance

Wet-Glaze Performance

- Air Infiltration: Passed at 1.57 PSF and 6.24 PSF per TAS-202 and ASTM E 283
- Static Water: 15 PSF per TAS-202 and ASTM E 331
- Structural Load: +70 / -80 PSF per TAS-202 and ASTM E 330
- Large Missile and Cycling: +70 / -80 per TAS-201, TAS-203 and ASTM E 1886, E 1996

Dry-Glaze Performance

- Air Infiltration: Passed at 1.57 PSF and 6.24 PSF per TAS-202 and ASTM E 283
- Static Water: 10 PSF per TAS-202 and ASTM E 331
- Structural Load: +70 / -80 PSF per TAS-202 and ASTM E 330
- Large Missile and Cycling: +70 / -80 per TAS-201, TAS-203 and ASTM E 1886, E 1996

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM FOR USE IN HURRICANE ZONES REQUIRING LARGE & SMALL MISSILE IMPACT PROTECTION. (LAMINATED OR INSULATED WET & INSULATED DRY GLAZED)

GENERAL NOTES:

1. SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT RESISTANT, SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. SERIES FG-5000 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM MAY BE INSTALLED WITHIN HIGH VELOCITY HURRICANE ZONES (HVHZ) AND OUT THEM (NHVHZ). DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 (HVHZ) & 1609 (NHVHZ) OF THE ABOVE MENTIONED CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THIS PRODUCT TO BE INSTALLED FOR A DIRECTIONALITY FACTOR $K_d=0.85$, USING ASCE 7-10 & SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATING INDICATED ON NOTE 2, AND DETERMINED AS PER STEP 6 AT INSTRUCTIONS ON THIS SHEET. IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2. IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING TO WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. 2015. THIS PRODUCT'S ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 & 1609.1.2 OF THE ABOVE MENTIONED CODE AS PER PROTOCOLS TAS-201, TAS-202, TAS-203, PER CERTIFIED TESTING LABORATORIES REPORT #CTA-1177W, ARCHITECTURAL TESTING REPORT #86107.02-401-18 & 88725.02-401-18 AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTIONS 1616 & 1604 OF THE FLORIDA BUILDING CODE.
2. MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR THIS WINDOW WALL SYSTEM SHALL BE AS SHOWN ON SHEETS 6, 7, 8, 9, 10, 11, 12 AND 14.
3. THIS PRODUCT WILL NOT REQUIRE A HURRICANE PROTECTION DEVICE.
4. THIS PRODUCT IS APPROVED FOR AIR/WATER INFILTRATION (13.5 p.s.f.)
5. SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT RESISTANT SHALL COMPLY WITH SECTIONS 2406 OF THE FLORIDA BUILDING CODE.
6. PROVIDE MAX. LOAD BEARING SHIM (TYP.), WHEN ALLOWED BY THIS DRAWING. (SEE SHEETS 15, 16 & 19)
7. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE, $G = 0.55$.
8. REMAINING COMPONENTS FOR THIS WINDOW WALL SYSTEM SHALL BE AS INDICATED ON BILL OF MATERIALS, SHEET 3 OF THIS DRAWING.
9. ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2015 ALUMINUM DESIGN MANUAL.
10. SHOP DRAWINGS PREPARED BASED ON THIS APPROVAL AND TAKING INTO ACCOUNT THE SPECIFIC JOB CONDITIONS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS PART OF THE PERMIT DOCUMENTS.
11. STRUCTURAL SUBSTRATES NOTED ON THIS DRAWING AS EXISTING STEEL, POURED CONCRETE, GROUT FILLED CONCRETE BLOCK AND WOOD ARE BY OTHERS, AND MUST WITHSTAND THE LOADS IMPOSED BY THIS PRODUCT.
12. THIS PRODUCT'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
13. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
(c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
(e) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

14. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1709.5 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

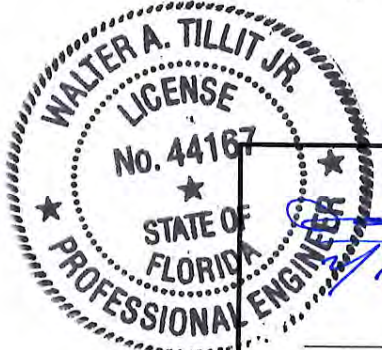
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- SHEET 1: GENERAL NOTES, INDEX AND INSTRUCTIONS.
- SHEET 2: COMPONENTS.
- SHEET 3: BILL OF MATERIALS.
- SHEET 4: ISOMETRIC ELEVATION FOR FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM.
- SHEET 5: TYPICAL GLAZING DETAILS & GLASS SCHEDULE.
- SHEET 6: MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR A GIVEN GLASS TYPE AND GLASS PANEL DIMENSIONS.
- SHEET 7: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS.
- SHEET 8: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS.
- SHEET 9: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR REINFORCED JAMB MULLION W/ LAMINATED OR INSULATED GLASS (WET GLASS).
- SHEET 10: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR HORIZONTAL W/ LAMINATED OR INSULATED GLASS.
- SHEET 11: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR MULLION CONNECTIONS. (CONTINUED).
- SHEET 12: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR MULLION CONNECTIONS. (CONTINUED).
- SHEET 13: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR JAMBS FASTENED W/ 3/8" FASTENERS.
- SHEET 14: MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR JAMBS FASTENED W/ 1/2" FASTENERS.
- SHEET 15: HEAD CONNECTION DETAILS.
- SHEET 16: SILL CONNECTION DETAILS.
- SHEET 17: HORIZONTAL SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS. (WET & DRY GLAZED).
- SHEET 18: HORIZONTAL SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS.
- SHEET 19: HORIZONTAL CONNECTIONS DETAIL AT JAMB.
- SHEET 20: CORNER DETAIL AT JAMB.

MANDATORY INSTRUCTIONS:

- STEP 1: DETERMINE A.S.D. DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE, USING APPLICABLE ASCE 7 STANDARDS.
- STEP 2: GO TO SCHEDULE ON SHEET 6 TO DETERMINE MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf.) OF DESIRED GLASS SIZE BASED ON GLASS PANEL DIMENSIONS WHEN WINDOW WALL CONSIST OF MULTIPLE LITES W/ JAMB (ATTACHED OR NOT TO BUILDING), STANDARD MULLION W/ OR W/O CORNER MULLIONS; AND WHEN WINDOW WALL CONSIST OF A SINGLE PANEL W/ JAMB ATTACHED OR NOT TO BUILDING.
- STEP 3: DETERMINE MAXIMUM MULLION SPAN "L"(FT) FOR A GIVEN MULLION EFFECTIVE SPACING "b", ON SCHEDULE ON SHEETS 7 & 8, AND SELECT ANCHOR OPTION W/ A.S.D. DESIGN PRESSURE RATING EQUAL OR GREATER THAN A.S.D. DESIGN LOAD SPECIFIED IN STEP 1 USING SCHEDULES ON SHEETS 11 AND 12.
- STEP 4: USE SCHEDULES ON SHEETS 13 AND 14, TO SELECT JAMB ANCHOR OPTION W/ ANCHORAGE OR SHEET 9, FOR W/O ANCHORAGE WITH A.S.D. DESIGN PRESSURE RATING EQUAL OR GREATER THAN DESIGN LOAD SPECIFIED IN STEP 1.
- STEP 5: USE SCHEDULE ON SHEET 10, TO VERIFY MAXIMUM A.S.D. DESIGN PRESSURE RATING OF HORIZONTALS (IF USED), TO BE EQUAL OR GREATER THAN A.S.D. DESIGN LOAD SPECIFIED IN STEP 1.
- STEP 6: THE LOWEST VALUE OF A.S.D. DESIGN PRESSURE RATING RESULTING FROM STEPS 2, 3, 4 AND 5 SHALL APPLY TO THE ENTIRE SYSTEM.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA



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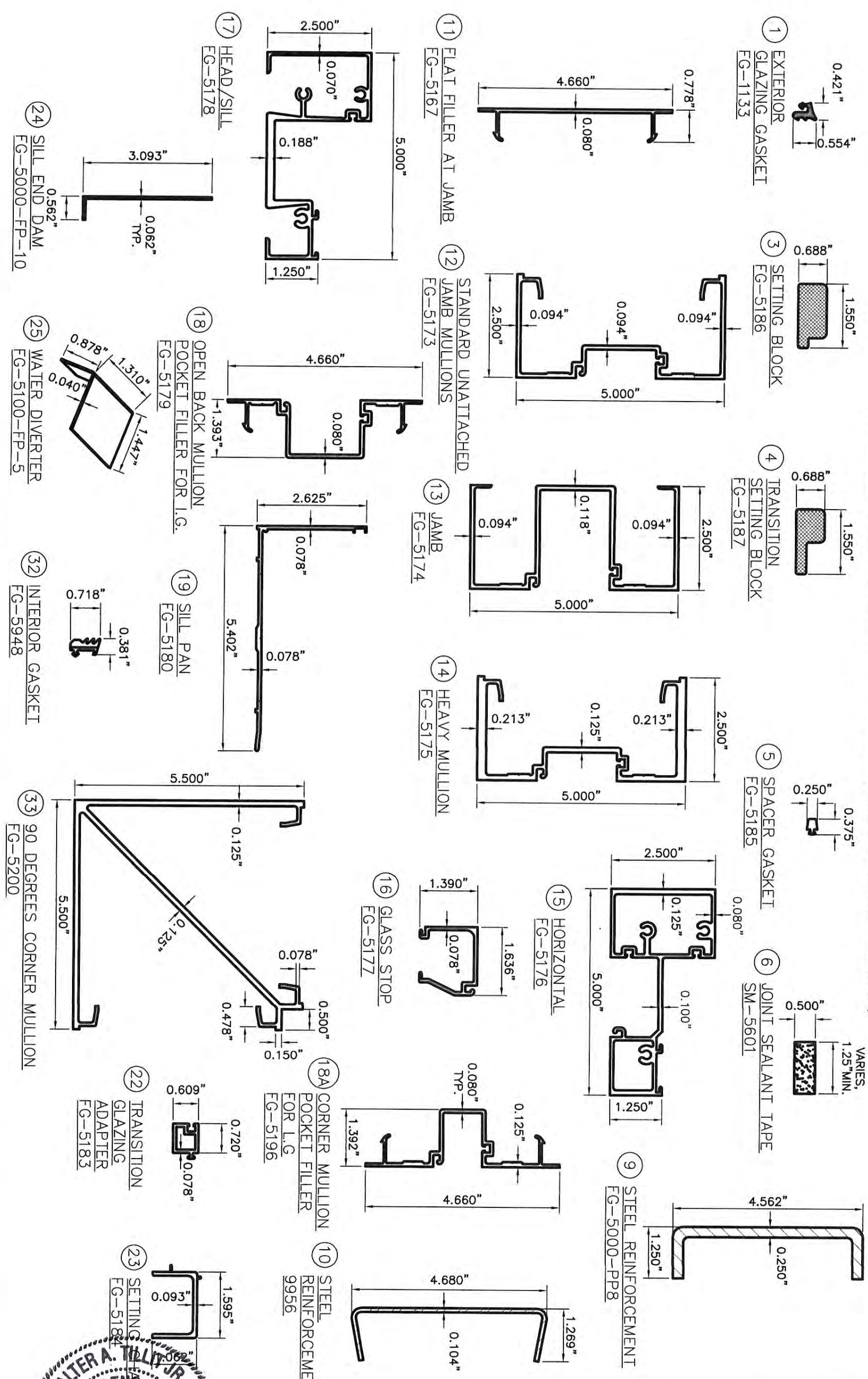
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WALTER A. TILLIT Jr. P.E.
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FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLAZED			
REV. No.	DESCRIPTION	DATE	REV. No.
	OLD 15-030	2/7/18	
DRAWN BY: M.L.		DATE: 02/07/18	
DRAWING No: 18-017		SHEET 1 OF 20	



SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM COMPONENTS:
(LAMINATED OR INSULATED WET & INSULATED DRY GLAZED)



WALTER A. TILLIT JR.
 LICENSE
 No. 44167
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER

[Signature]
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				02/07/18	
				DATE	
				18-017	
				DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
	OLD 15-039	2/7/18			
SHEET 2 OF 20					

Oldcastle BuildingEnvelope®
 803 AIRPORT RD. TERRELL TX 75160
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BILL OF MATERIALS

ITEM No.	PART NUMBER	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1.	FG-1133	EXTERIOR GLAZING GASKET	0.421" X .554"	70 DUROMETER EPDM	TRELLEBORG OR EPG	FOR 1 5/16" OR 5/8" GLAZING FOR WET & DRY GLAZED
3.	FG-5186	SETTING BLOCK	1.550" X .688"	SILICONE	VARIES	AT SILL & HORIZONTAL
4.	FG-5187	TRANSITION SETTING BLOCK	1.550" X .688"	EPDM	VARIES	AT SILL & HORIZONTAL
5.	FG-5185	SPACER GASKET	0.375 X .250	SILICONE	VARIES	
6.	SM-5601	JOINT SEALANT TAPE	.125" X .50" VARIES	BUTYL	SCHNEE-MOREHEAD	
7.	FS-8	SPLINE ASSEMBLY SCREW	#14 X 1 HHSTS	STEEL	VARIES	ZINC COATED PER ASTM B-633
8.	FS-38	ATTACH STEEL REINFORCEMENT	1/4-20 X 1/2" HH TYPE F	STEEL	VARIES	1" FROM EACH END, ZINC COATED PER ASTM B-633
9.	FG-5000-PP8	STEEL REINFORCEMENT FOR FG-5173 STANDARD MULLION	1.250" X 4.562" X .250"	A36 STEEL	VARIES	FULL MULLION LENGTH
10.	9956	STEEL REINFORCEMENT FOR FG-5173 UNATTACHED JAMB MULLION	1.269" X 4.680" X .104" GA.	A36 STEEL	VARIES	ALT. WALL JAMB, FULL MULLION LENGTH
11.	FG-5167	FLAT FILLER @ JAMB	.778" X 4.660" X .080"	6063-T6 ALUMINUM	OLDCASTLE BE	USE @ ALT. WALL JAMB
12.	FG-5173	STANDARD /UNATTACHED JAMB MULLIONS	2.50" X 5.00" X .094"	6063-T6 ALUMINUM	OLDCASTLE BE	
13.	FG-5174	JAMB	2.50" X 5.00" X .118" X .094"	6063-T6 ALUMINUM	OLDCASTLE BE	ATTACHED TO EXISTING WALL
14.	FG-5175	HEAVY MULLION	2.50" X 5.00" X .125" X .213"	6063-T6 ALUMINUM	OLDCASTLE BE	
15.	FG-5176	HORIZONTAL	2.50" X 5.00" X .125" X .080" X .100"	6063-T6 ALUMINUM	OLDCASTLE BE	
16.	FG-5177	GLASS STOP	1.39" X 1.63" X .078"	6063-T6 ALUMINUM	OLDCASTLE BE	
17.	FG-5178	HEAD/SILL	2.50" X 5.00" X .070" X 0.188"	6063-T6 ALUMINUM	OLDCASTLE BE	
18.	FG-5179	OPEN BACK MULLION POCKET FILLER FOR I.G.	1.39" X 4.66" X .080"	6063-T6 ALUMINUM	OLDCASTLE BE	FOR CORNER OR STANDARD MULLION
18A.	FG-5196	CORNER MULLION POCKET FILLER FOR L.G.	1.39" X 4.66" X .080" X .125"	6063-T5 ALUMINUM	OLDCASTLE BE	WET GLAZED, CORNER MULLION
19.	FG-5180	SILL PAN	2.62" X 5.40" X .078"	6063-T6 ALUMINUM	OLDCASTLE BE	
22.	FG-5183	TRANSITION GLAZING ADAPTER FOR L.G.	.609" X .720" X .078"	6063-T5 ALUMINUM	OLDCASTLE BE	
23.	FG-5184	SETTING CHAIR	1.062" X 1.595" X .093"	6063-T5 ALUMINUM	OLDCASTLE BE	CUT 4" LONG, AT SILL
24.	FG-5000-FP-10	SILL END DAM	0.562" X 3.093" X .062"	6063-T5 ALUMINUM	OLDCASTLE BE	5.00" LONG
25.	FG-5100-FP-5	WATER DIVERTER	.878" X 1.447" X .040"	RIGID PVC	OLDCASTLE BE	CUT 1.562 LONG & LOCATE @ EACH END
26.	#995	STRUCTURAL SILICONE	FILL SPACE	SILICONE	DOW CORNING	WET GLAZED
29.	FASTENER	FOR ATTACHING SILL PAN TO CONCRETE SUBSTRATE	3/16" X 2" SHWH	STAINLESS STEEL	TAPCON	1" MIN. EMBEDMENT NON-STRUCTURAL
30.	FASTENER	FOR ATTACHING SILL PAN FLASHING TO WOOD SUBSTRATE	3/16" X 2" LAG BOLT	STEEL	VARIES	1" MIN. EMBEDMENT NON-STRUCTURAL
31.	FASTENER	FOR ATTACHING SILL PAN FLASHING TO STL SUBSTRATE	3/16" X 1" DRILL FLEX #5	STEEL	VARIES	1" MIN. EMBEDMENT NON-STRUCTURAL
32.	FG-5948	INTERIOR GASKET	0.381" X 0.718"	EPDM	EPG	DRY GLAZED GASKET
33.	FG-5200	90 DEGREES CORNER MULLION	5.50" X 5.50" X 0.125"	6063-T6 ALUMINUM	OLDCASTLE BE	
38.	SPECTREM 2	STRUCTURAL SILICONE	FILL SPACE	SILICONE	TREMCO	
39.	FS-54	PHILLIPS FLAT HEAD MACHINE SCREW U.C.	#10-24 X 3/8"	STEEL	VARIES	ZINC COATED, PER ASTM B-633.
40.	#795	PERIMETER SEALANT	-	SILICONE	DOW CORNING	
41.	-	PHILLIPS PAN HEAD GLAZING SCREW @ (3)	#10 X 2 1/2"	STEEL	VARIES	(1) AT TOP & (1) AT BOTTOM TYP. EA SIDE FOR TOTAL OF (4) SCREWS



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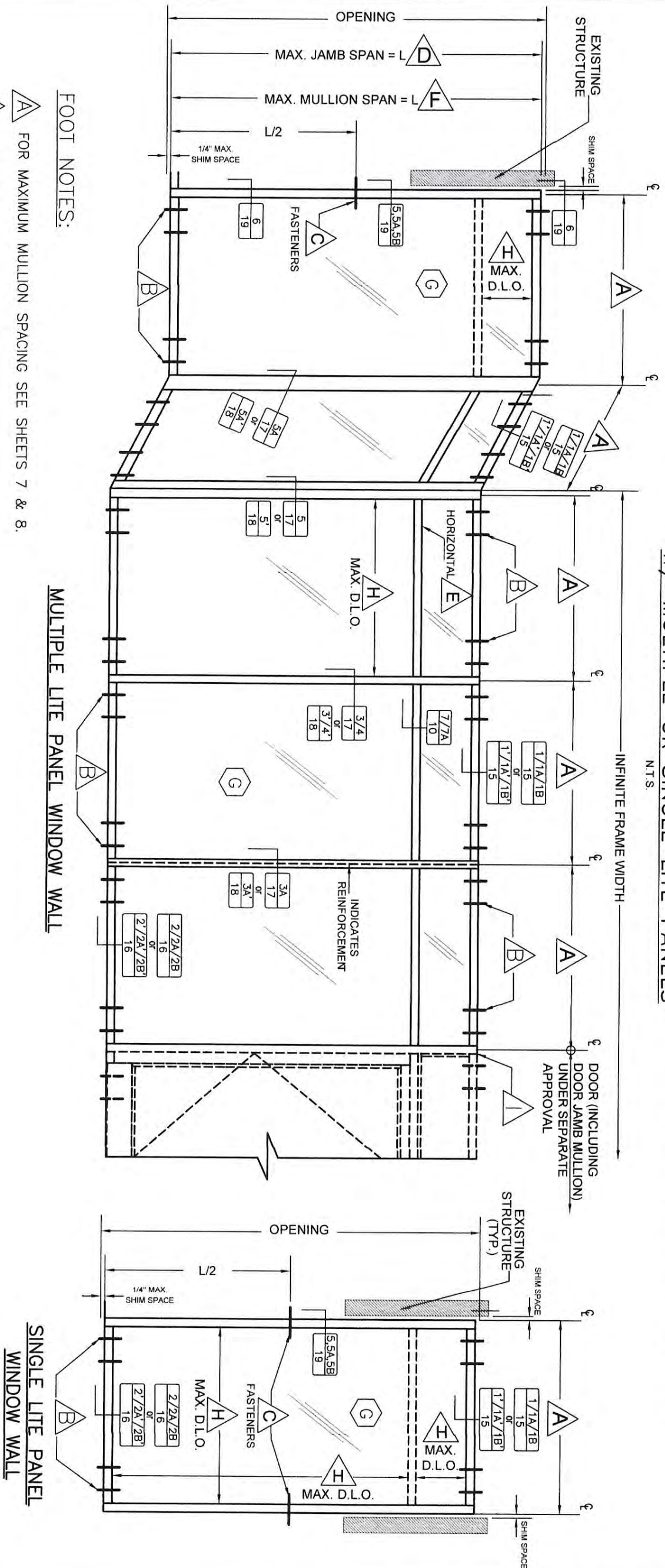
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ISOMETRIC ELEVATION FOR FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM (WET & DRY GLAZED)
 W/ MULTIPLE OR SINGLE LITE PANELS

N.T.S.



FOOT NOTES:

- A FOR MAXIMUM MULLION SPACING SEE SHEETS 7 & 8.
- B FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS FOR JAMB, STANDARD & CORNER MULLIONS SEE SHEETS 11 & 12.
- C SEE SHEETS 13 & 14 FOR MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR NON REINFORCED JAMB CONNECTED TO EXISTING STRUCTURE.
- D SEE SHEET 9 FOR MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STEEL REINFORCED JAMB MULLION (NOT CONNECTED TO EXISTING STRUCTURE).
- E USE OF HORIZONTALS (SEE SECTIONS 7 & 7A/10) IS LIMITED BY SCHEDULE ON SHEET 10.
- F FOR MAXIMUM STANDARD & CORNER MULLION SPAN SEE SHEETS 7 & 8.
- G FOR GLAZING DETAILS AND GLASS SCHEDULE SEE SHEETS 5 & 6.
- H FOR MAXIMUM D.L.O. A.S.D. DESIGN PRESSURE RATING FOR GLASS, SEE SCHEDULES ON SHEET 6.
- I AUTHORITY HAVING JURISDICTION (AHJ) TO REVIEW DOOR JAMB MULLION TRIBUTARY LOAD, CONNECTION TOP & BOTTOM & DOOR COMPATIBILITY RATINGS WHEN DOOR IS MULLED TO WINDOW WALL.

MULTIPLE LITE PANEL WINDOW WALL

SINGLE LITE PANEL WINDOW WALL



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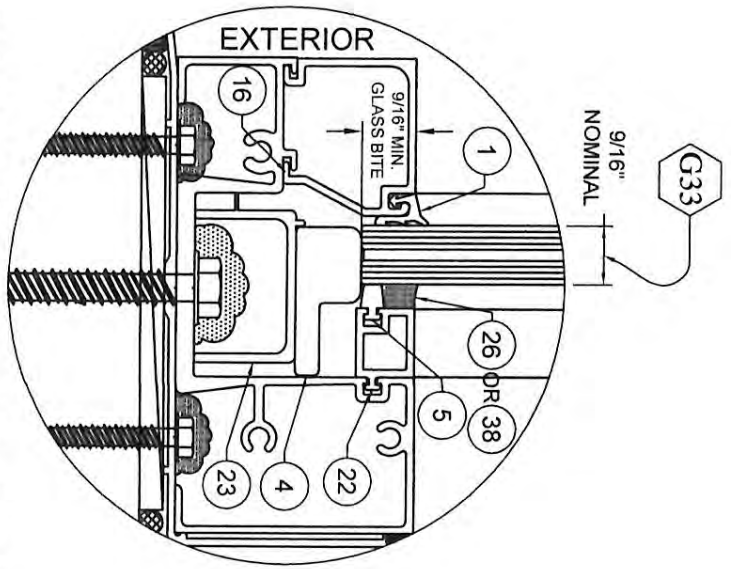
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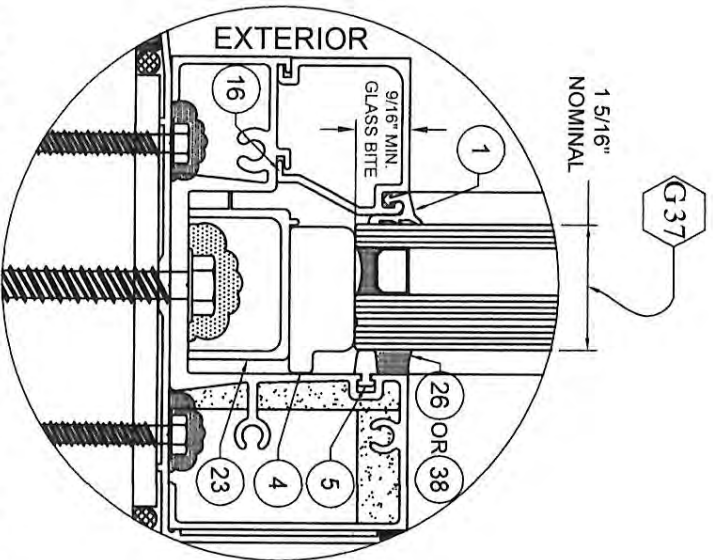
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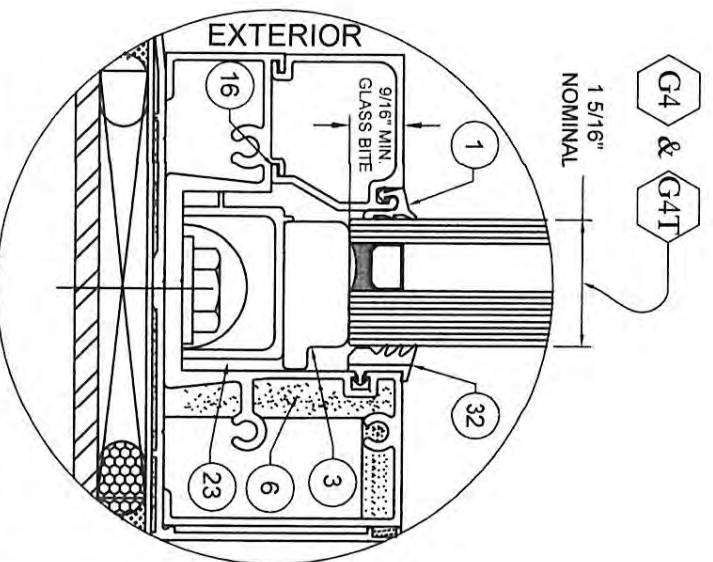
TYPICAL GLAZING DETAILS



LAMINATED GLASS WET GLAZED



INSULATED LAMINATED GLASS WET GLAZED

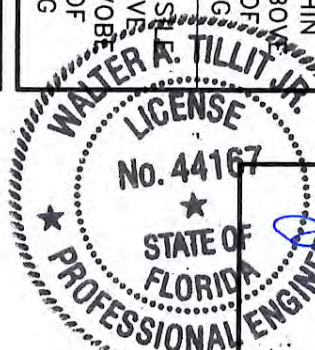


INSULATED LAMINATED GLASS DRY GLAZED

GLASS SCHEDULE WET GLAZED			
GLASS LABEL	GLASS COMPOSITION	MANUFACTURER NAME	MAXIMUM D.L.O.
G33	9/16" LAMINATED GLASS: 1/4" H.S. GLASS OUTBOARD .075" VANCEVA/STORMGLASS COMPOSITE INTERLAYER 1/4" H.S. GLASS INBOARD	OLDCASTLE	SEE SCHEDULE ON SHEET 6
G37	1 5/16" OVERALL THICKNESS INSULATED LAMINATED GLASS, CONSISTING OF 1/4" TEMPERED GLASS OUTBOARD 1/2" AIR SPACE 1/4" H.S. GLASS .075" VANCEVA/STORMGLASS COMPOSITE INTERLAYER 1/4" H.S. GLASS INBOARD	OLDCASTLE	SEE SCHEDULE ON SHEET 6

GLASS SCHEDULE DRY GLAZED				
GLASS LABEL	GLASS COMPOSITION	MANUFACTURER NAME	MAXIMUM D.L.O.	REQUIREMENTS FOR USE
G4	1 5/16" OVERALL THICKNESS INSULATED LAMINATED GLASS, CONSISTING OF 1/4" HS GLASS O.B., 1/2" SPACER AND 1/4" HS OVER 0.090 SENTRYGLASPLUS INTERLAYER OVER 1/4" HS GLASS	KURARAY AMERICA, INC.	SEE SCHEDULE ON SHEET 6	LARGE MISSILE USE WITHIN 30'-0" ABOVE GRADE OF BUILDING
G4T	1 5/16" OVERALL THICKNESS INSULATED LAMINATED GLASS, CONSISTING OF 1/4" TEMPERED GLASS O.B., 1/2" SPACER AND 1/4" HS OVER 0.090 SENTRYGLASPLUS INTERLAYER OVER 1/4" HS GLASS	KURARAY AMERICA, INC.	SEE SCHEDULE ON SHEET 6	SMALL MISSILE USE ABOVE 30'-0" ABOVE GRADE OF BUILDING

* LIMITED TO +70 -70 psf. FOR MAXIMUM A.S.D. DESIGN PRESSURE RATING.



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EB-0006719
WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLAZED

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**MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE FOR A GIVEN GLASS TYPE
AND GLASS PANEL DIMENSIONS "a" (in) x "b" (in) (SEE LEGEND)**

**LAMINATED GLASS TYPE G33:
WET GLAZED**

DIMENSION "d"	DIMENSION "b"	MAXIMUM A.S.D. DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 192"	+70,-80
30"	FROM 30" TO 192"	+70,-80
36"	FROM 36" TO 168"	+70,-80
42"	FROM 42" TO 144"	+70,-80
48"	FROM 48" TO 108"	+70,-80
48"	> 108" TO 114"	+70,-78.5
48"	> 114" TO 120"	+70,-75.7
48"	> 120" TO 126"	+70,-73.7
54"	FROM 54" TO 96"	+70,-80
54"	> 96" TO 102"	+70,-78.3
54"	> 102" TO 108"	+70,-73.7
54"	> 108" TO 112"	+70,-71.2
60"	FROM 60" TO 90"	+70,-80
60"	> 90" TO 96"	+70,-77.2
60"	> 96" TO 101"	+70,-73
66"	FROM 66" TO 90"	+70,-72.7
72"	FROM 72" TO 84"	+66.6,-66.6

**INSULATED GLASS TYPE G37:
WET GLAZED**

DIMENSION "d"	DIMENSION "b"	MAXIMUM A.S.D. DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 192"	+90,-90
30"	FROM 30" TO 192"	+90,-90
36"	FROM 36" TO 168"	+90,-90
42"	FROM 42" TO 144"	+90,-90
48"	FROM 48" TO 126"	+90,-90
54"	FROM 54" TO 112"	+90,-90
60"	FROM 60" TO 101"	+90,-90
66"	FROM 66" TO 90"	+81.8,-81.8
72"	FROM 72" TO 84"	+75,-75

**INSULATED GLASS TYPE G4 & G4T:
DRY GLAZED**

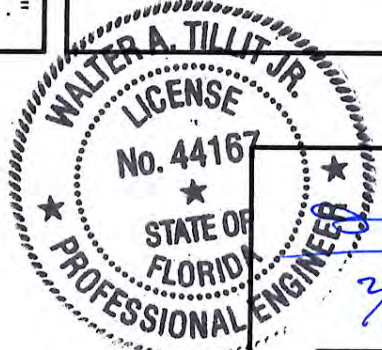
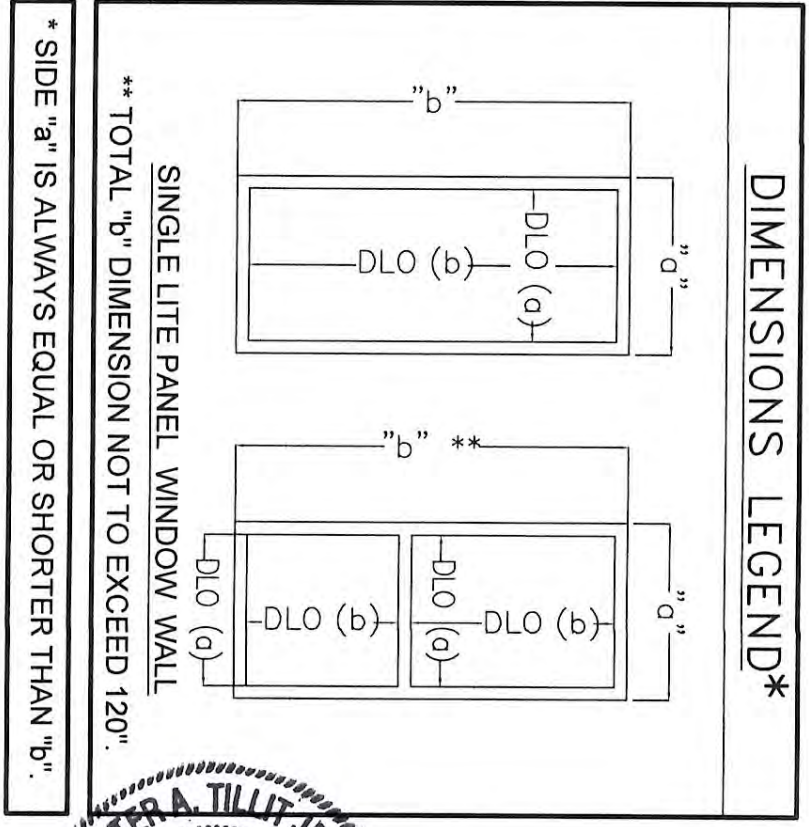
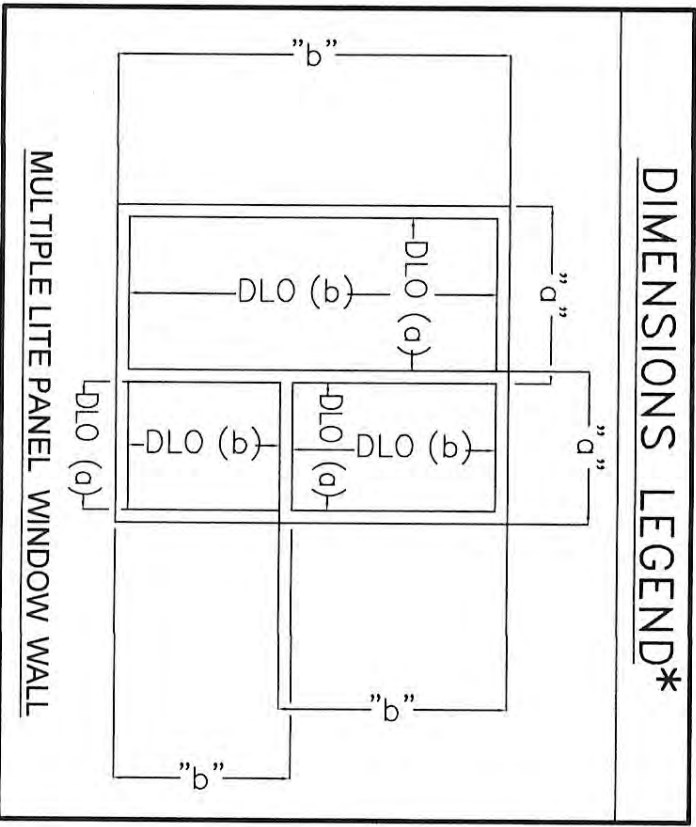
DIMENSION "d"	DIMENSION "b"	MAXIMUM A.S.D. DESIGN PRESSURE RATING(psf)
24"	FROM 24" TO 120"	+70,-70
30"	FROM 30" TO 120"	+70,-70
36"	FROM 36" TO 120"	+70,-70
42"	FROM 42" TO 120"	+70,-70
48"	FROM 48" TO 120"	+70,-70
54"	FROM 54" TO 112"	+70,-70
60"	FROM 60" TO 101"	+70,-70
66"	FROM 66" TO 90"	+63.6,-63.6
72"	FROM 72" TO 84"	+58.3,-58.3

DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b" AT MULTIPLE LITE PANEL WINDOW WALL

SIDE	MAXIMUM DAY LIGHT OPENING	(D.L.O.) Formula at Jamb, Head & Sill Frames
MAX. D.L.O. (SHORT SIDE)	"d" - 5.00"	"d" - 5.00"
MAX. D.L.O. (LONG SIDE)	"b" - 5.00"	"b" - 5.00"

DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b" AT SINGLE LITE PANEL WINDOW WALL

SIDE	MAXIMUM DAY LIGHT OPENING	(D.L.O.) Formula at Jamb, Head, Sill & Horizontal Frames
MAX. D.L.O. (SHORT SIDE)	"a" - 5.00"	"a" - 5.00"
MAX. D.L.O. (LONG SIDE)	"b" - 5.00"	"b" - 5.00"



WALTER A. TILLIT JR.
P.E. SEAL/SIGNATURE/DATE
2/7/18

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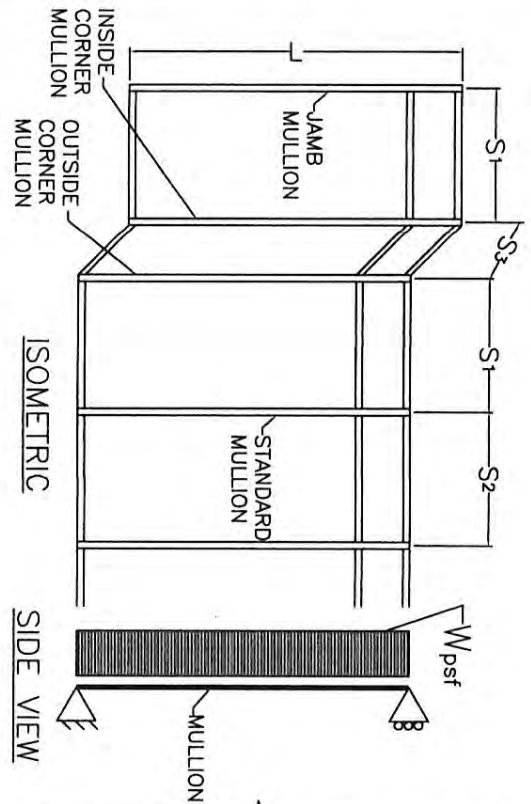
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STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS

MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD, HEAVY & 90° CORNER MULLIONS *
 MAXIMUM MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING AND A GIVEN MULLION EFFECTIVE SPACING "b" **



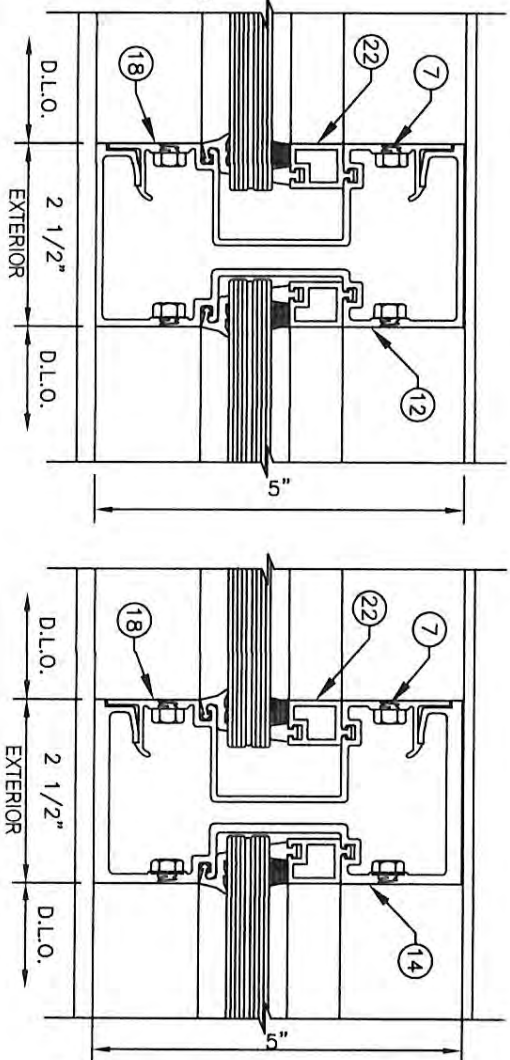
L = MULLION SPAN
 EFFECTIVE SPACING $b = \frac{S1 + S2}{2}$ (SEE SCHEDULE, (FOR STANDARD MULLION))
 EFFECTIVE SPACING $b = \frac{S1 + S3}{2}$ (SEE SCHEDULE) (FOR CORNER MULLION)

CASE DEFINITIONS

- CASE 1 : UNREINFORCED STANDARD MULLION A.
- CASE 2 : UNREINFORCED HEAVY MULLION B.
- CASE 3 : REINFORCED STANDARD MULLION C.
- CASE 4 : OUTSIDE/INSIDE CORNER MULLION D.
- CASE 4A : OUTSIDE/INSIDE CORNER MULLION D1.

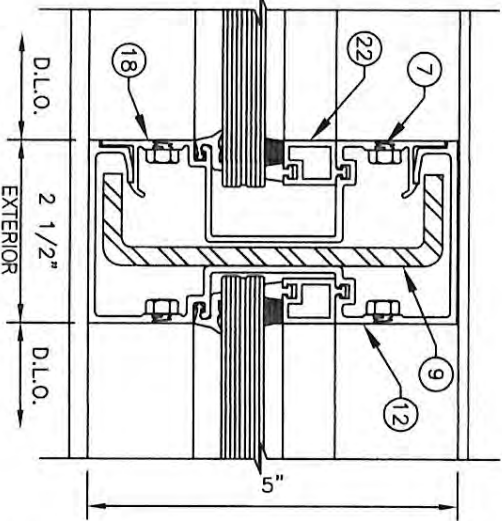
* MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD & CORNER MULLION WILL AUTOMATICALLY QUALIFY A.S.D. DESIGN PRESSURE RATINGS FOR JAMBS W/ ANCHORAGE FOR ANY GIVEN MULLION SPACING. FOR MAX. JAMB SPAN W/O ANCHORAGE SEE SCHEDULE ON SHEET 9. JAMB ANCHORAGE (WHEN USED) SHALL BE PERFORMED AT MID HEIGHT OF JAMBS.

** MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR DRY GLAZED MULLION INSTALLATIONS IS +70, -70 psf.

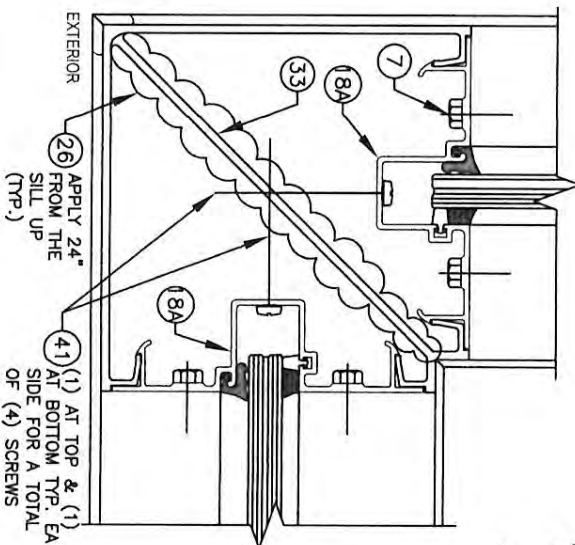


A CASE:1 STANDARD MULLION
 (12) + (18) + (22)

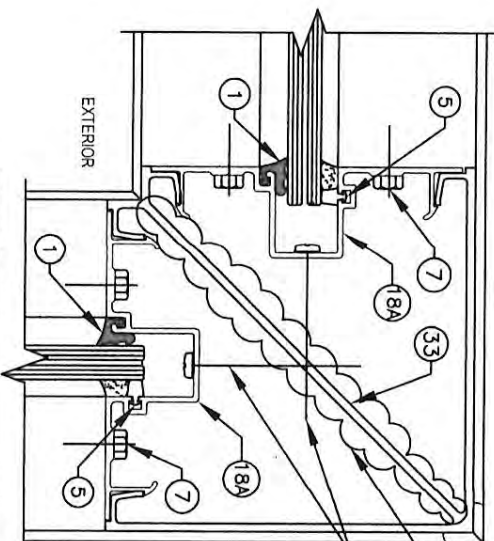
B CASE:2 HEAVY MULLION
 (14) + (18) + (22)



C CASE:3 STANDARD MULLION
 (12) + (18) + (22) W/
 STEEL REINFORCEMENT (9)



D CASE:4 OUTSIDE 90° CORNER MULLION
 (33) + (18A)
 LIMITED TO +70.0, -80.0psf ASD



D1 CASE:4A INSIDE 90° CORNER MULLION
 (33) + (18A)
 LIMITED TO +70.0, -70.0psf ASD

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING "b" (FT-IN)	CASE 1 UNREINFORCED STANDARD MULLION A "L" (FT-IN)	CASE 2 UNREINFORCED HEAVY MULLION B "L" (FT-IN)	CASE 3 REINFORCED STANDARD MULLION C "L" (FT-IN)	CASE 4 OUTSIDE CORNER MULLION D "L" (FT-IN)	CASE 4A INSIDE CORNER MULLION D1 "L" (FT-IN)
90.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
85.0	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	5'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
80.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
75.0	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	5'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
70.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
65.0	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	5'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
60.0	3'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
50.0	4'-6"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"
	5'-0"	7'-5"	10'-0"	10'-0"	10'-0"	10'-0"

▲ SPANS ONLY VALID FOR UP TO 80psf ASD NEGATIVE DESIGN LOAD. MAXIMUM SPANS FOR POSITIVE LOADS SHALL BE LIMITED BY 70.0psf ASD LOAD.
 ▲ SPANS ONLY VALID FOR UP TO 65psf ASD NEGATIVE DESIGN LOAD. MAX. SPAN FOR POSITIVE LOADS SHALL BE LIMITED BY 60.0psf ASD LOAD.

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 LICENSE No. 44167
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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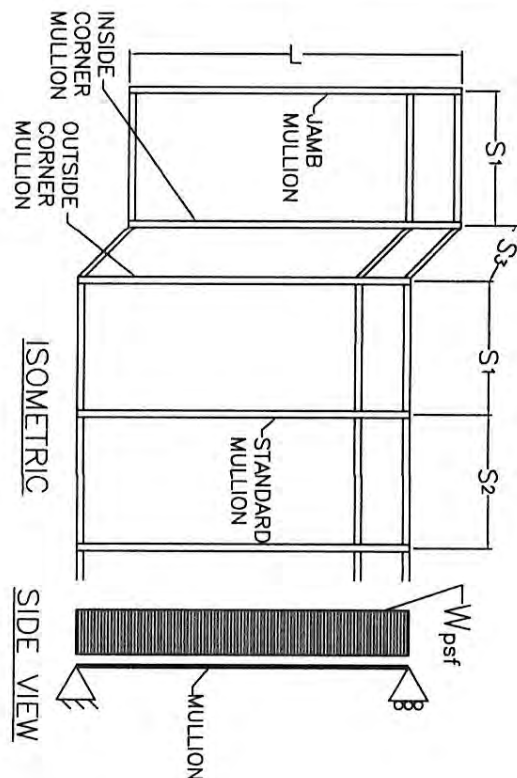
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STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS



$L = \text{MULLION SPAN}$
 $\text{EFFECTIVE SPACING } b = \frac{S_1 + S_2}{2}$ (SEE SCHEDULE)
 (FOR STANDARD MULLION)
 $\text{EFFECTIVE SPACING } b = \frac{S_1 + S_3}{2}$ (SEE SCHEDULE)
 (FOR CORNER MULLION)

CASE DEFINITIONS

- CASE 1 : UNREINFORCED STANDARD MULLION A'
- CASE 2 : UNREINFORCED HEAVY MULLION B'
- CASE 3 : REINFORCED STANDARD MULLION C'
- CASE 4 : OUTSIDE/INSIDE CORNER MULLION D'.
- CASE 4A : OUTSIDE/INSIDE CORNER MULLION D1'.

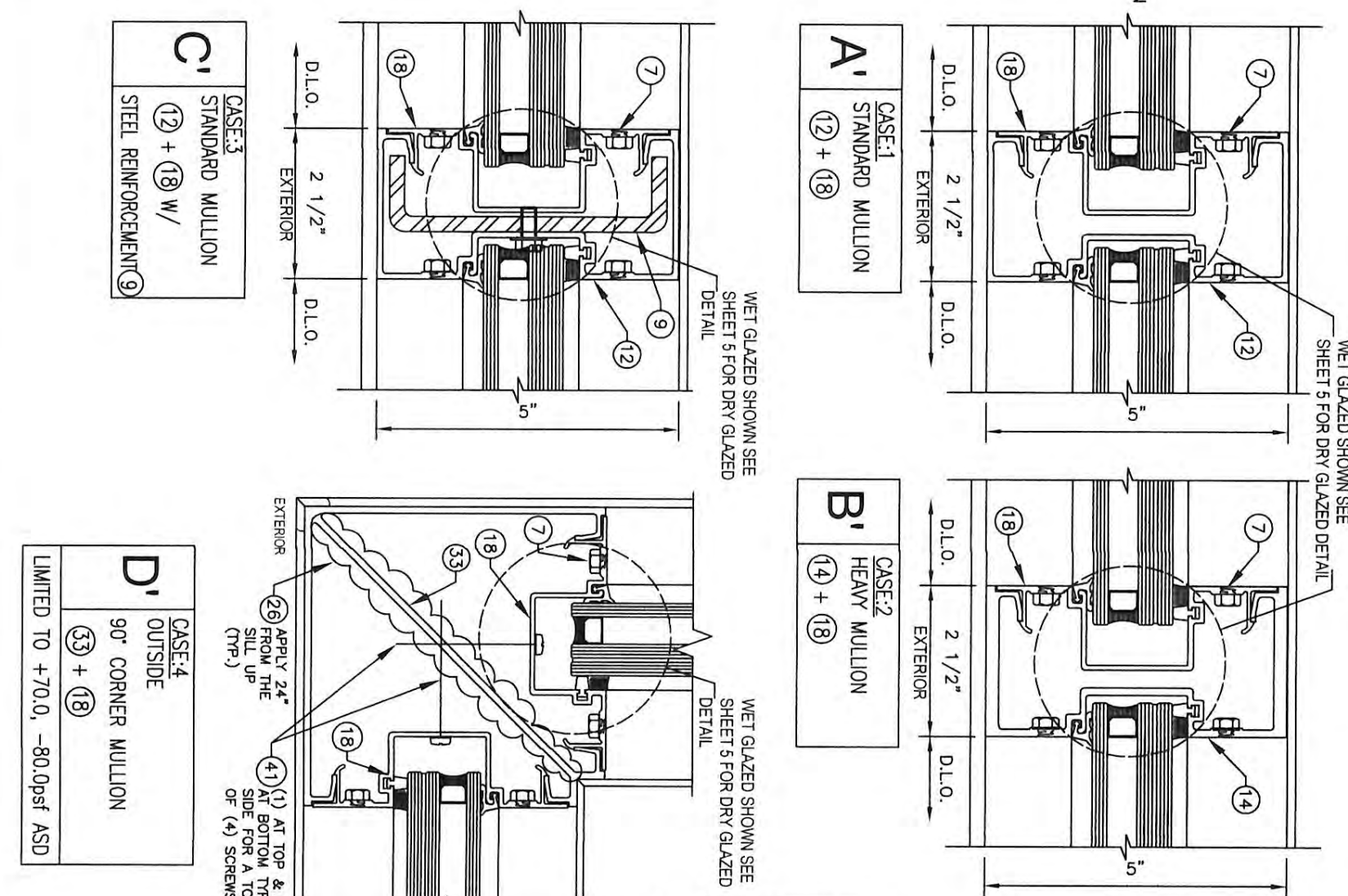
* MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR STANDARD & CORNER MULLION WILL AUTOMATICALLY QUALIFY A.S.D. DESIGN PRESSURE RATINGS FOR JAMBS W/ ANCHORAGE FOR ANY GIVEN MULLION SPACING. FOR MAX. JAMB SPAN W/O ANCHORAGE SEE SCHEDULE ON SHEET 9. JAMB ANCHORAGE (WHEN USED) SHALL BE PERFORMED AT MID HEIGHT OF JAMBS.

** MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR DRY GLAZED MULLION INSTALLATIONS IS +70, -70 psf.

MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR
 STANDARD, HEAVY & 90° CORNER MULLIONS *
 MAXIMUM MULLION SPAN "L"(FT) SCHEDULE FOR A
 GIVEN A.S.D. DESIGN PRESSURE RATING
 AND A GIVEN MULLION EFFECTIVE SPACING "b" **

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING UNREINFORCED STANDARD MULLION A' (FT-IN)	EFFECTIVE SPACING UNREINFORCED HEAVY MULLION B' (FT-IN)	EFFECTIVE SPACING REINFORCED STANDARD MULLION C' (FT-IN)	EFFECTIVE SPACING OUTSIDE CORNER MULLION D' (FT-IN)	EFFECTIVE SPACING INSIDE CORNER MULLION D' (FT-IN)
90.0	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"
85.0	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"
80.0	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"
75.0	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"
70.0	5'-6"	5'-6"	5'-6"	5'-6"	5'-6"
65.0	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"
60.0	6'-6"	6'-6"	6'-6"	6'-6"	6'-6"
55.0	7'-0"	7'-0"	7'-0"	7'-0"	7'-0"
50.0	7'-6"	7'-6"	7'-6"	7'-6"	7'-6"
45.0	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
40.0	8'-6"	8'-6"	8'-6"	8'-6"	8'-6"
35.0	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"
30.0	9'-6"	9'-6"	9'-6"	9'-6"	9'-6"
25.0	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
20.0	10'-6"	10'-6"	10'-6"	10'-6"	10'-6"
15.0	11'-0"	11'-0"	11'-0"	11'-0"	11'-0"
10.0	11'-6"	11'-6"	11'-6"	11'-6"	11'-6"
5.0	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"

* SPANS ONLY VALID FOR UP TO 80psf ASD NEGATIVE DESIGN LOAD. MAXIMUM SPANS FOR POSITIVE LOADS SHALL BE LIMITED BY 70.0psf ASD LOAD.
 ** SPANS ONLY VALID FOR UP TO 65.0psf ASD NEGATIVE DESIGN LOAD. MAX. SPAN FOR POSITIVE LOADS SHALL BE LIMITED BY 60.0psf ASD LOAD.



C' CASE:3
 STANDARD MULLION
 (12) + (18) W/
 STEEL REINFORCEMENT (9)

D1' CASE:4A
 INSIDE 90° CORNER MULLION
 (33) + (18)

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 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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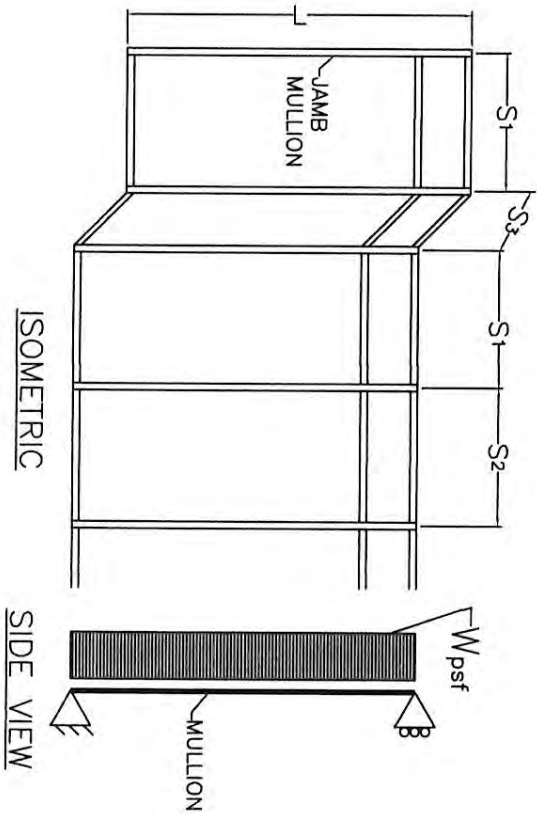
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REINFORCED JAMB MULLION W/ LAMINATED OR INSULATED GLASS (WET GLAZED) *

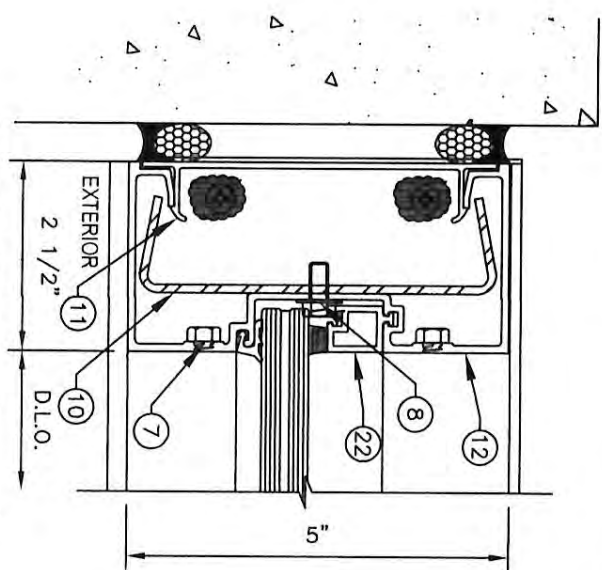


L = MULLION SPAN
 EFFECTIVE SPACING $b = \frac{S1}{2}$ (SEE SCHEDULE)

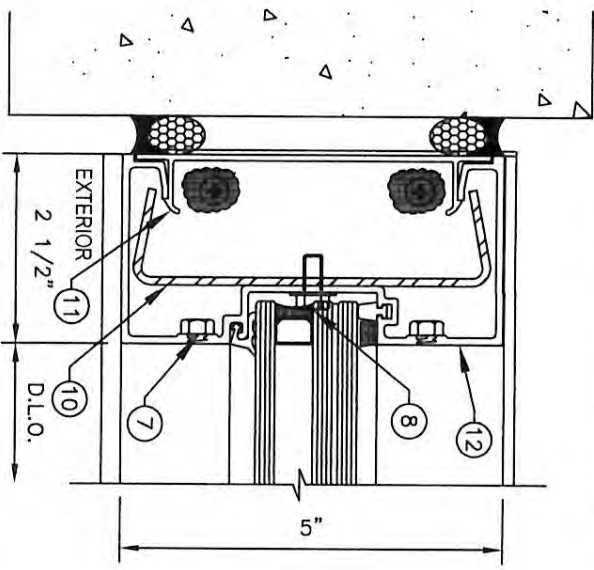
CASE DEFINITIONS

- CASE 1 : REINFORCED JAMB MULLION FOR LAMINATED GLASS E.
- CASE 2 : REINFORCED JAMB MULLION FOR INSULATED GLASS E'.

* SEE SHEETS 13 & 14 FOR SPECS FOR JAMB ATTACHED TO EXISTING WALL W/WET OR DRY GLAZED WITH LAMINATED OR INSULATED GLASS.
 -JAMBS ATTACHED TO EXISTING WALL HOLDING INSULATED GLASS MAY BE WET OR DRY GLAZED.
 -JAMBS ATTACHED TO EXISTING WALL HOLDING LAMINATED GLASS MUST ALWAYS BE WET GLAZED.



CASE:1
 JAMB MULLION
 (12) + (11) + (22) W/
 STEEL REINFORCEMENT (10)



CASE:2
 JAMB MULLION
 (12) + (11) W/
 STEEL REINFORCEMENT (10)

MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR REINFORCED JAMB MULLION UNATTACHED
 MAXIMUM JAMB MULLION SPAN "L"(FT)
 SCHEDULE FOR A GIVEN
 A.S.D. DESIGN PRESSURE RATING
 AND A GIVEN JAMB MULLION EFFECTIVE SPACING "b"

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	EFFECTIVE SPACING "b" (FT-IN)	CASE 1 REINFORCED JAMB MULLION E' (FT-IN)	CASE 2 REINFORCED JAMB MULLION E' (FT-IN)
60.0	1'-9"	10'-0"	10'-0"
60.0	2'-0"	10'-0"	10'-0"
60.0	2'-3"	10'-0"	10'-0"
65.0	2'-6"	10'-0"	10'-0"
65.0	1'-9"	10'-0"	10'-0"
65.0	2'-0"	10'-0"	10'-0"
65.0	2'-3"	10'-0"	10'-0"
70.0	2'-6"	10'-0"	10'-0"
70.0	1'-9"	10'-0"	10'-0"
70.0	2'-0"	10'-0"	10'-0"
70.0	2'-3"	10'-0"	10'-0"
75.0	2'-6"	10'-0"	10'-0"
75.0	1'-9"	10'-0"	10'-0"
75.0	2'-0"	10'-0"	10'-0"
75.0	2'-3"	10'-0"	10'-0"
80.0	2'-6"	10'-0"	10'-0"
80.0	1'-9"	10'-0"	10'-0"
80.0	2'-0"	10'-0"	10'-0"
80.0	2'-3"	10'-0"	10'-0"
85.0	2'-6"	10'-0"	10'-0"
85.0	1'-9"	10'-0"	10'-0"
85.0	2'-0"	10'-0"	10'-0"
85.0	2'-3"	10'-0"	10'-0"
90.0	2'-6"	10'-0"	10'-0"
90.0	1'-9"	10'-0"	10'-0"
90.0	2'-0"	10'-0"	10'-0"
90.0	2'-3"	10'-0"	10'-0"

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 PROFESSIONAL ENGINEER

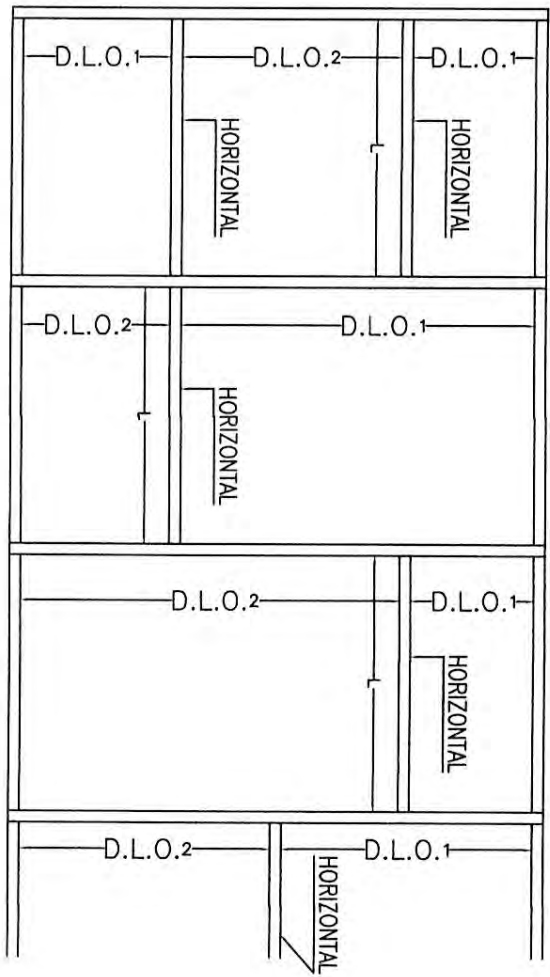
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 e-mail: tilteco@aol.com
 EB-0006719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLAZED			
DRAWN BY: M.L.		DATE: 02/07/18	
DRAWING No: 18-017		DATE: 2/7/18	
SHEET 9 OF 20			

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HORIZONTAL W/ LAMINATED OR INSULATED GLASS

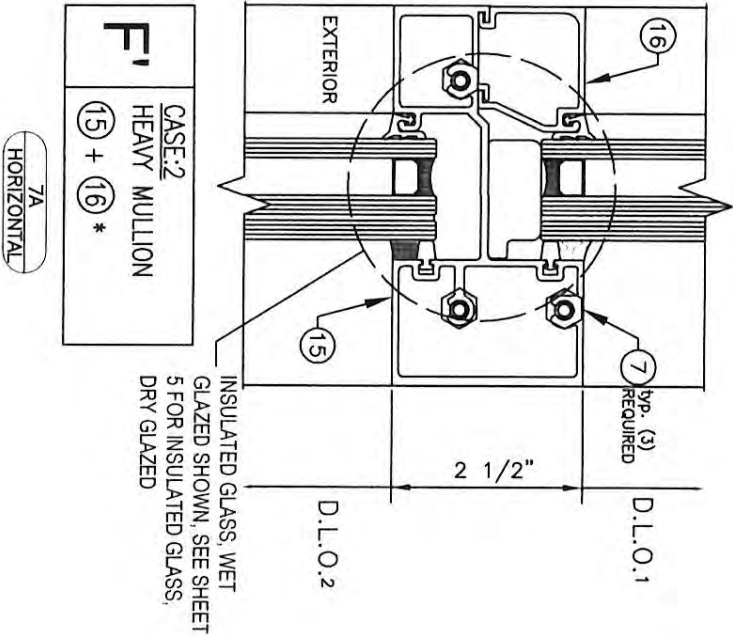
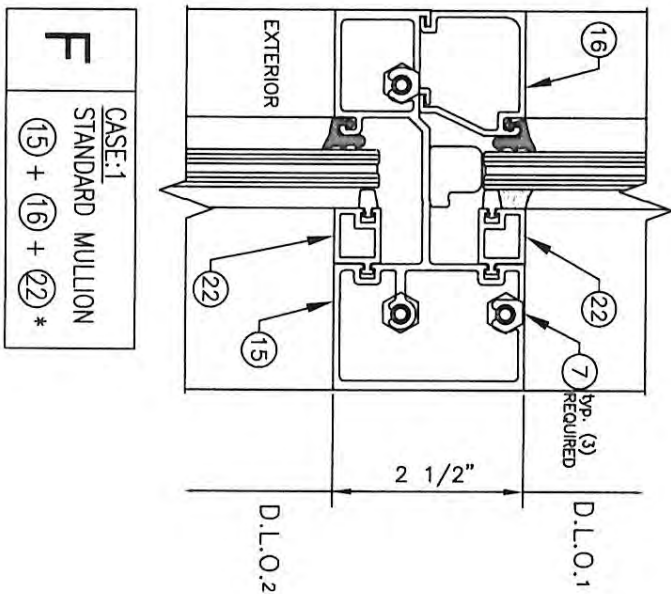


MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR HORIZONTAL

MAXIMUM SPAN "L"(FT)
 SCHEDULE FOR A GIVEN
 A.S.D. DESIGN PRESSURE RATING
 AND A GIVEN EFFECTIVE SPACING "b" **

MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)	EFFECTIVE DAY LIGHT OPENING "D.L.O."(FT-IN)	CASE 1 MAXIMUM UNREINFORCED HORIZONTAL "L" (FT-IN)	CASE 2 MAXIMUM UNREINFORCED HORIZONTAL "L" (FT-IN)
90.0	2'-0"	5'-0"	5'-0"
	2'-6"	5'-0"	5'-0"
	3'-0"	5'-0"	5'-0"
	3'-6"	5'-0"	5'-0"
	4'-0"	5'-0"	5'-0"
	4'-6"	5'-0"	5'-0"
	5'-0"	5'-0"	5'-0"

** MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR DRY GLAZED HORIZONTALS INSTALLATIONS IS +70, -70 psf.



WINDOW WALL ELEVATION W/ HORIZONTALS

"L" = MAXIMUM SPAN FOR HORIZONTAL

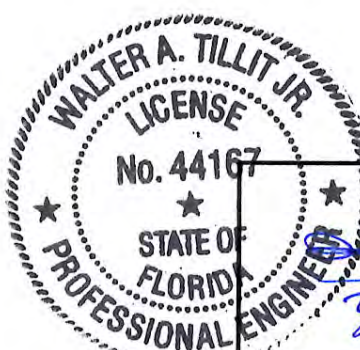
"D.L.O." = EFFECTIVE DAY LIGHT OPENING = $\frac{D.L.O.1}{2} + \frac{D.L.O.2}{2}$

CASE DEFINITIONS

CASE 1 : UNREINFORCED HORIZONTAL FOR LAMINATED GLASS F.
 CASE 2 : UNREINFORCED HORIZONTAL FOR INSULATED GLASS F.

* PROVIDE WATER DIVERTER AT HORIZONTALS.

7A HORIZONTAL



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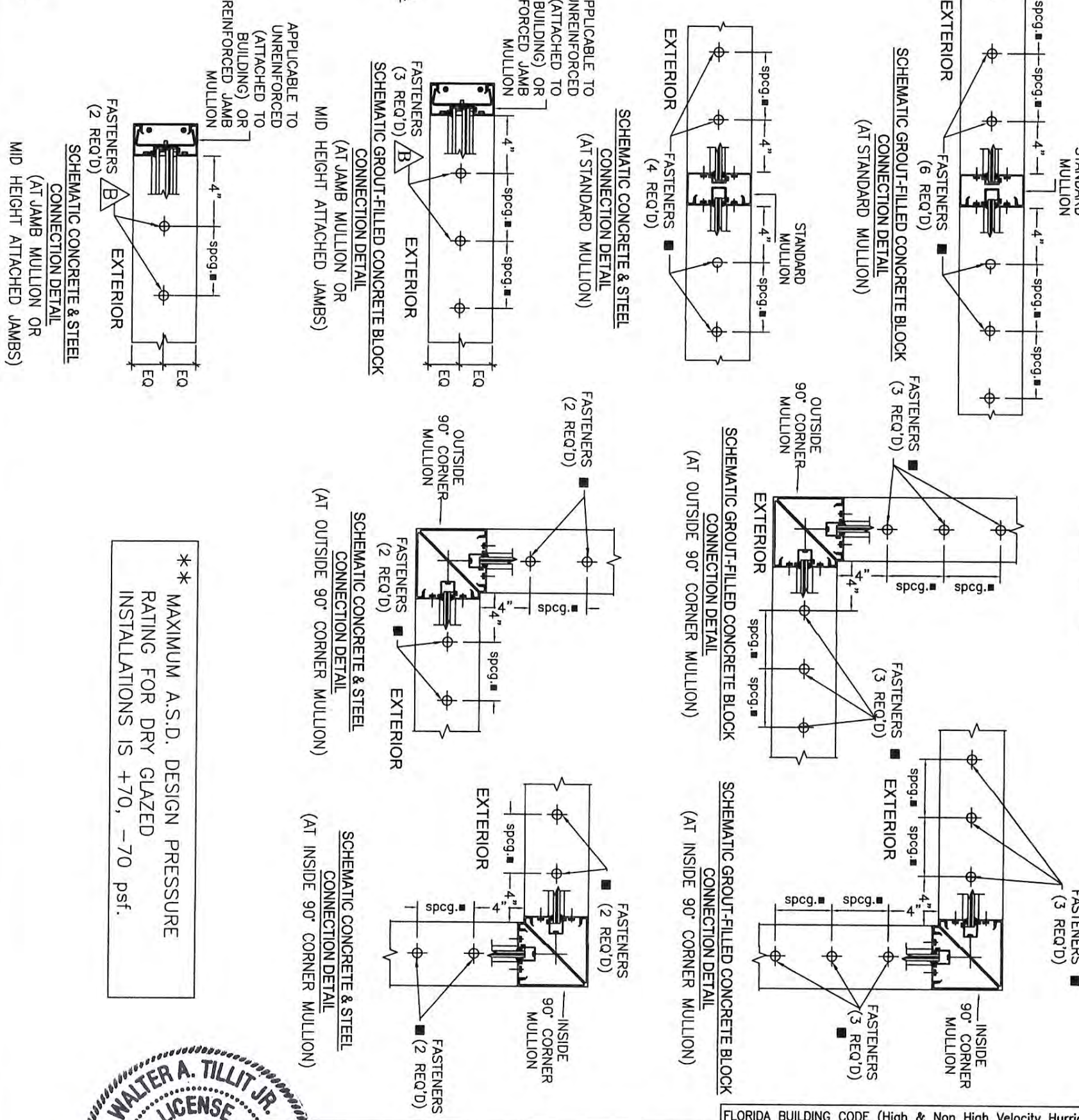
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**MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR JAMB
(MULLION OR MID HEIGHT ATTACHED),
STANDARD & CORNER MULLIONS END CONNECTIONS****

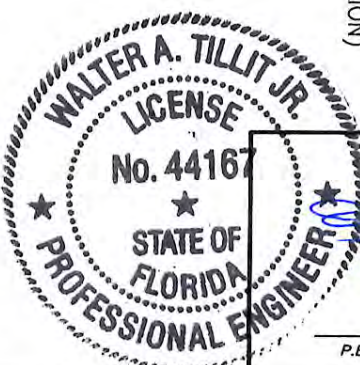
**JAMB, STANDARD & CORNER MULLIONS END CONNECTIONS
(CONTINUED)**

MAXIMUM MULLION SPAN "L" (F-H)	EFFECTIVE SPACING FOR MULLION "a" (F-H)	EFFECTIVE SPACING FOR JAMB MULLION "b" (F-H)	MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)					
			F	G	H	G'	H'	I
6'-2"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
6'-6"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
7'-0"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
7'-6"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
8'-0"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
8'-6"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
9'-0"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
9'-6"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0
10'-0"	3'-6" 4'-0" 4'-6"	1'-9" 2'-0" 2'-3"	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0	90.0 90.0 90.0

- F - 3/8"Ø HILTI KMK BOLT TZ ANCHOR W/ 2" Min. EMBEDMENT INTO 6" Min. THICK POURED CONCRETE (Min. f_c = 3 ksi) W/ 2 3/4" Min. E.D. & 4" Min. SPACING.
- G - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3 ksi) W/ 2 3/4" Min. E.D. & 4 1/2" Min. SPACING.
- H - 3/8"Ø HILTI HUS-H SCREW ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3 ksi) W/ 2 3/4" Min. E.D. & 4" Min. SPACING.
- I - 3/8"Ø TYPE "F" BOLT OR 3/8"Ø - 13 SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER & 2" Min. EDGE DISTANCE & 2" Min. SPACING TO 12 GAGE (0.108" Min. THK.) F_y=33 ksi STEEL.



** MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR DRY GLAZED INSTALLATIONS IS +70, -70 psf.



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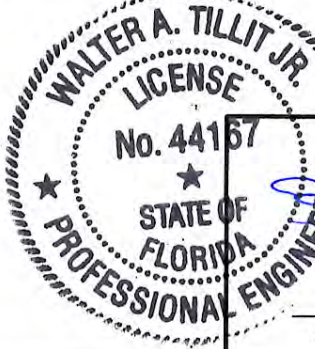
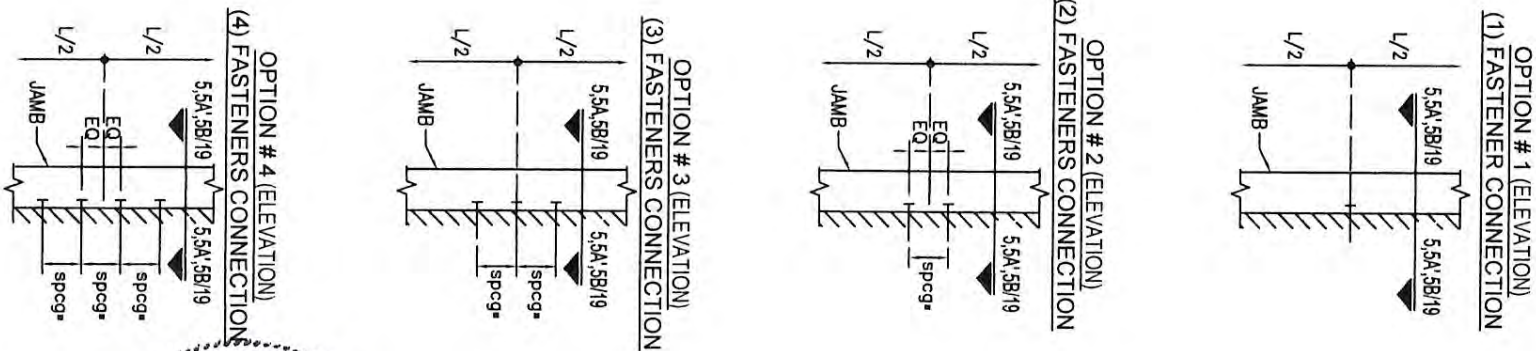
MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR JAMBS FASTENED W/ 1/2" Ø FASTENERS*, ** SEE SHEET 9 FOR DEFINITION OF "b"

MAXIMUM MULLION SPAN "L" (Ft-In)	EFFECTIVE SPACING b = S/2 "b" (Ft-In)	OPTION #1: (1) FASTENERS CONNECTION						OPTION #2: (2) FASTENERS CONNECTION						OPTION #3: (3) FASTENERS CONNECTION						OPTION #4: (4) FASTENERS CONNECTION					
		POURED CONCRETE	GROUT FILLED C. BLOCK	STEEL	WOOD	POURED CONCRETE	GROUT FILLED C. BLOCK	STEEL	WOOD	POURED CONCRETE	GROUT FILLED C. BLOCK	STEEL	WOOD	POURED CONCRETE	GROUT FILLED C. BLOCK	STEEL	WOOD	POURED CONCRETE	GROUT FILLED C. BLOCK	STEEL	WOOD				
6'-2"	1'-9"	90.0	90.0	57.5	88.0	90.0	54.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-0"	90.0	90.0	50.3	77.0	90.0	47.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
6'-6"	2'-3"	90.0	90.0	44.7	68.5	90.0	42.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-6"	84.8	79.1	40.2	61.6	90.0	37.8	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
7'-0"	1'-9"	90.0	90.0	54.5	83.5	90.0	51.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-0"	90.0	90.0	47.7	73.1	90.0	44.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
7'-6"	2'-3"	89.4	83.4	42.4	65.0	90.0	39.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-6"	80.5	75.0	38.2	58.5	90.0	35.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
8'-0"	1'-9"	90.0	90.0	50.6	77.6	90.0	47.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-0"	90.0	90.0	44.3	67.9	90.0	41.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
8'-6"	2'-3"	83.0	77.4	39.4	60.3	90.0	37.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-6"	74.7	69.7	35.4	54.3	90.0	33.3	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
9'-0"	1'-9"	90.0	90.0	47.2	72.4	90.0	44.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-0"	90.0	90.0	41.3	63.3	90.0	38.9	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
9'-6"	2'-3"	87.2	81.3	36.7	56.3	90.0	34.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-6"	77.5	72.2	33.1	50.7	90.0	31.1	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
10'-0"	1'-9"	90.0	90.0	43.3	67.9	90.0	41.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-0"	81.7	76.2	38.8	59.4	90.0	36.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
10'-6"	2'-3"	75.4	69.7	35.0	52.8	90.0	32.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			
	2'-6"	65.4	61.0	31.0	47.5	90.0	29.2	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0			

* SEE SHEETS 13 & 14 FOR SPECS FOR JAMBS ATTACHED TO EXISTING WALL W/WET OR DRY GLAZED WITH LAMINATED OR INSULATED GLASS. JAMBS ATTACHED TO EXISTING WALL HOLDING INSULATED GLASS MAY BE WET OR DRY GLAZED. JAMBS ATTACHED TO EXISTING WALL HOLDING LAMINATED GLASS MUST ALWAYS BE WET GLAZED.

- FASTENERS TYPES AND SUBSTRATES REQUIREMENTS W/ INDICATED E.D. & SPACING (spcg), BEYOND ANY FINISH MATERIAL.
 - R - 1/2" Ø HILTI KWIK BOLT 3 ANCHOR W/ 2" Min. EMBEDMENT INTO 6" Min. THICK POURED CONCRETE (Min. f_c = 3 ksi) W/ 2 3/4" Min. E.D. & 8" Min. SPACING.
 - S - 1/2" Ø HILTI HUS-H SCREW ANCHOR W/ 3" Min. EMBEDMENT INTO POURED CONCRETE (Min. f_c = 3 ksi) W/ 2 3/4" Min. E.D. & 6" Min. SPACING.
 - T - 1/2" Ø HILTI KWIK BOLT 3 ANCHOR W/ 2 1/4" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK W/ 4" Min. E.D. & 8" Min. SPACING.
 - U - 1/2" Ø HILTI HUS-H SCREW ANCHOR W/ 3" Min. EMBEDMENT INTO GROUT FILLED CONCRETE BLOCK W/ 4" Min. E.D. & 8" Min. SPACING.
 - V - 1/2" Ø TYPE "F" BOLT, 2" MIN. EDGE DISTANCE & 2" Min. SPACING TO 1/4" Min. THK. ASTM A-36 OR 12 GAGE (0.108" MIN. THK.) F_y=33 ksi STEEL.
 - W - 1/2" Ø LAG SCREWS TO DOUBLE 2 x WOOD BUCK (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, 2" MIN. EDGE DISTANCE & 2" Min. SPACING, BEYOND ANY FINISH MATERIAL.

** MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR DRY GLAZED INSTALLATIONS IS +70, -70 psf.



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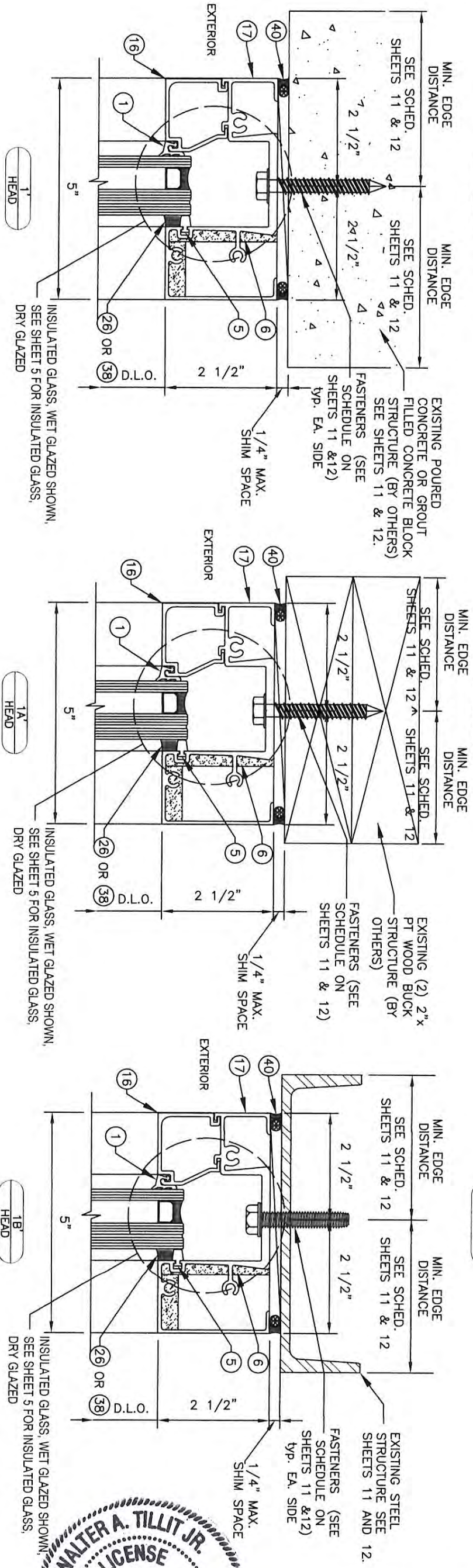
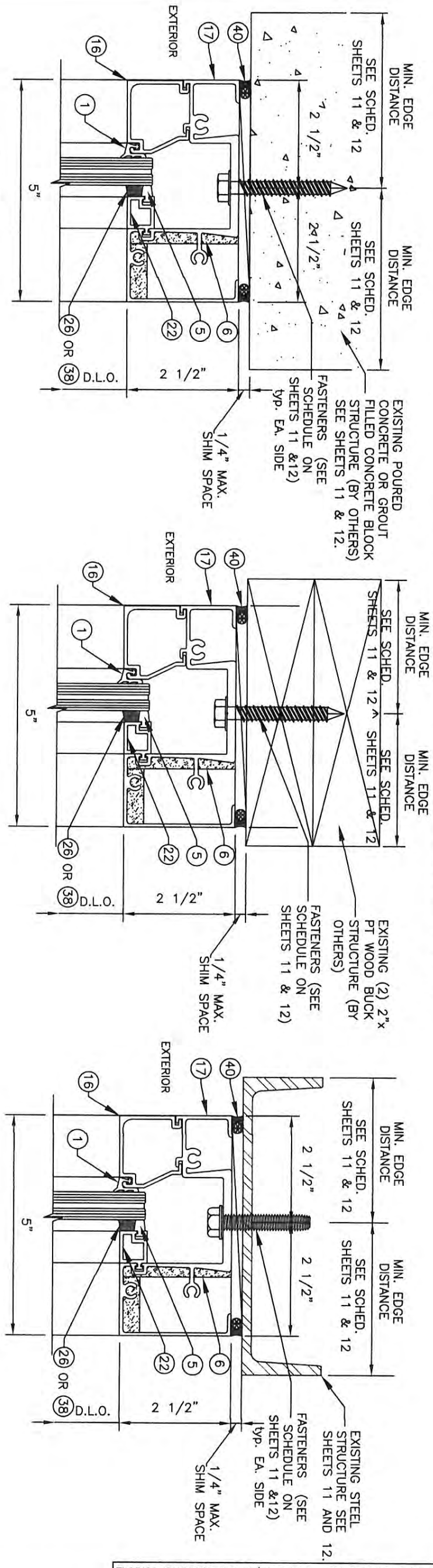
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HEAD CONNECTIONS DETAILS LAMINATED & INSULATED GLASS



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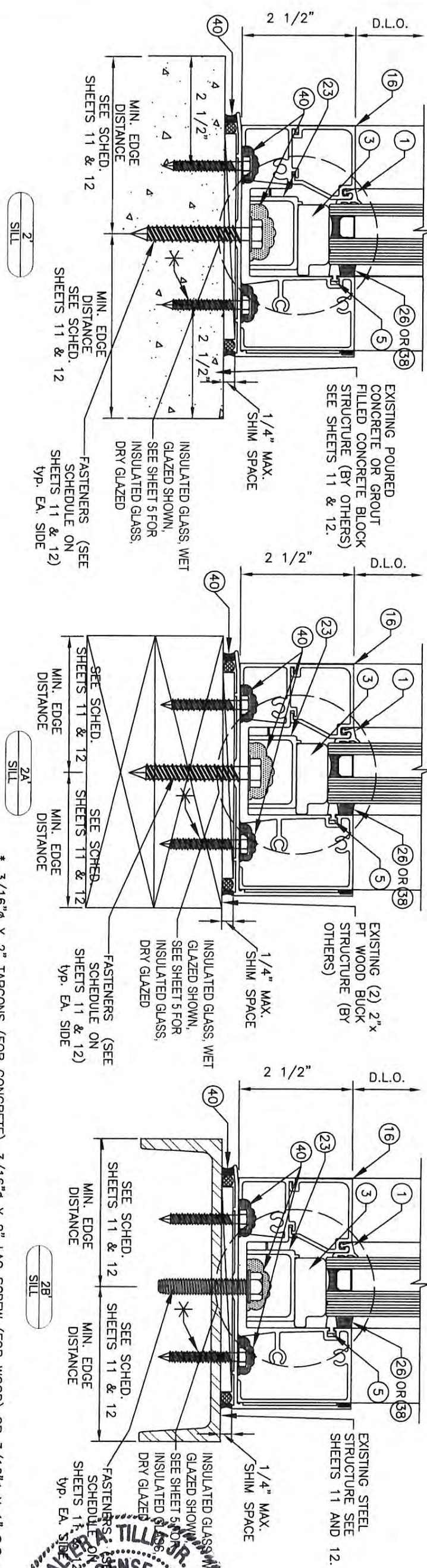
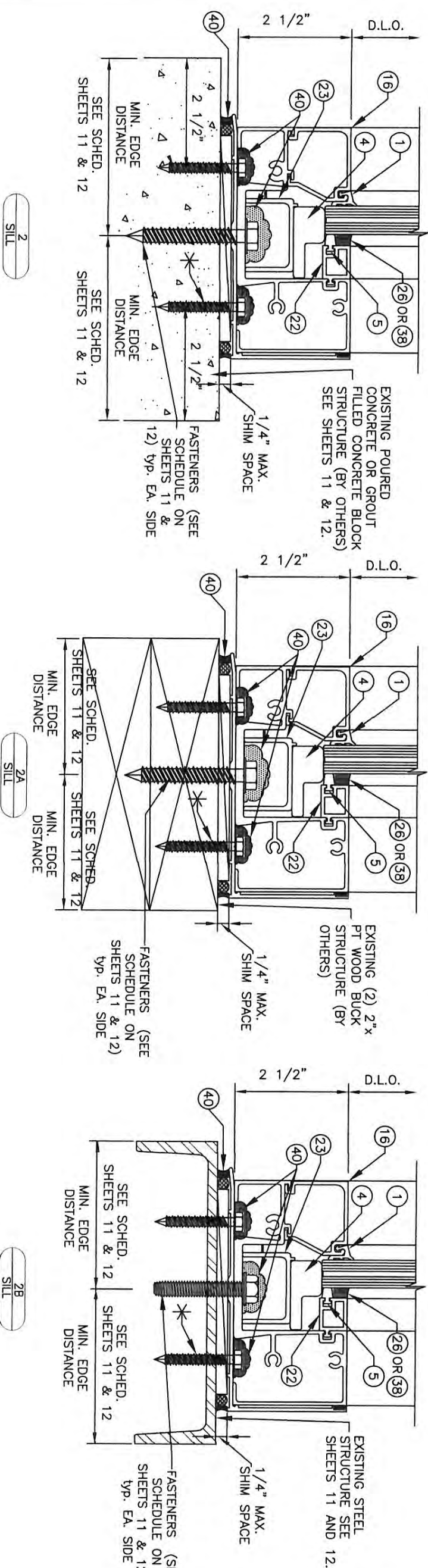
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SILL CONNECTION DETAILS LAMINATED & INSULATED GLASS



* 3/16"Ø X 2" TAPCONS (FOR CONCRETE), 3/16"Ø X 2" LAG SCREW (FOR WOOD) OR 3/16"Ø X 1" S.S. SCREWS NON STRUCTURAL FASTENERS, LOCATE (1) AT EACH END AND (1) AT MID LENGTH TO SECURE FLASHING UNTIL FASTENERS ARE INSTALLED.

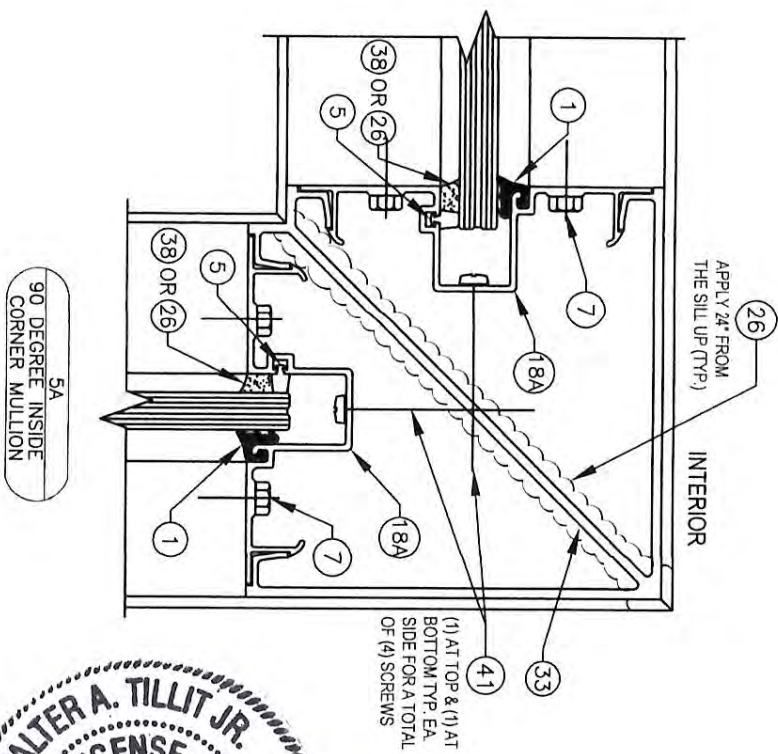
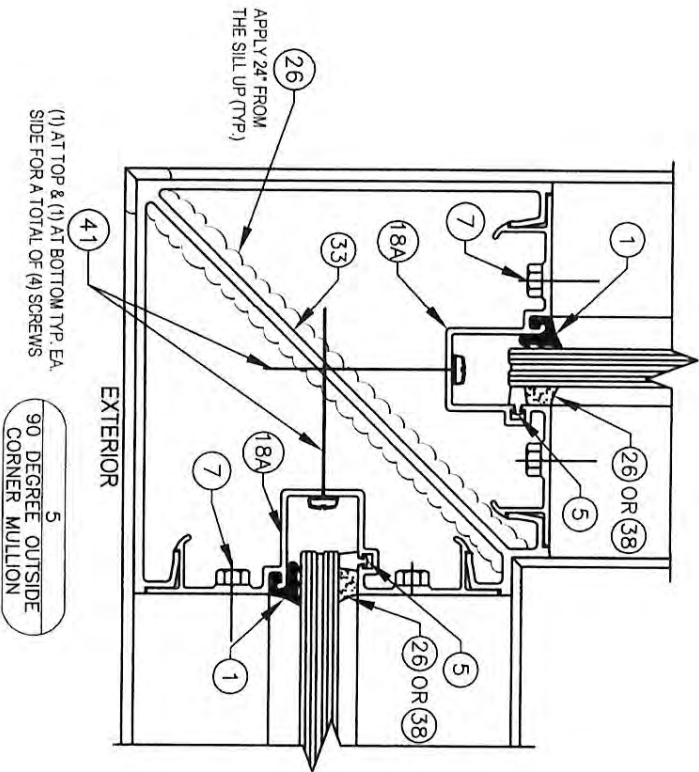
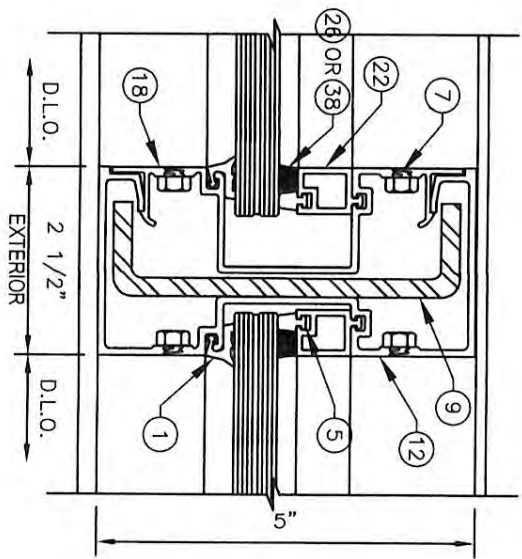
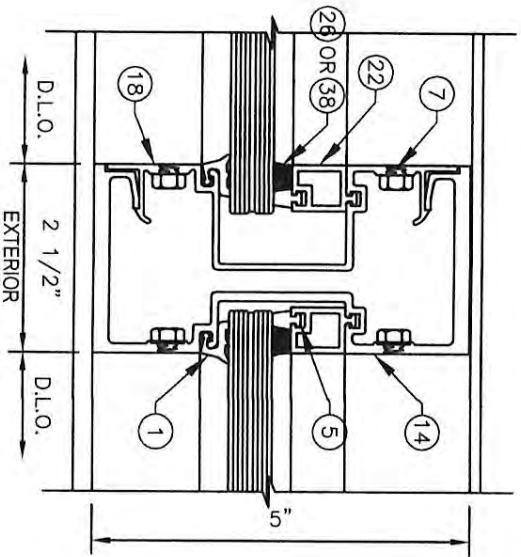
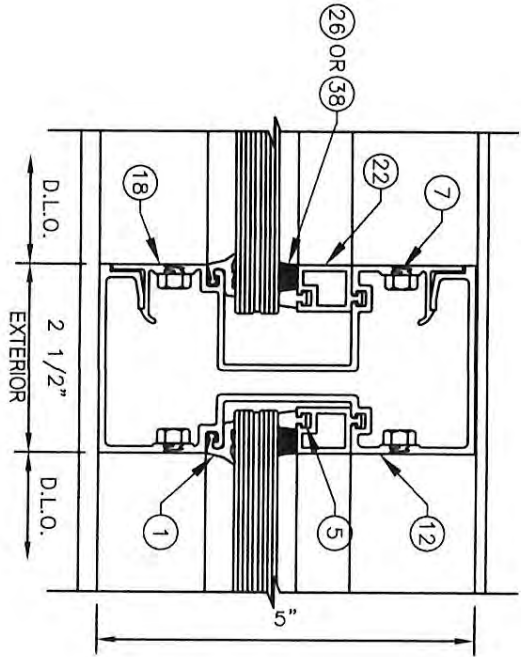
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 WALTER A. TILLET JR., P.E.
 FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES FG-5100 FLUSH GLAZED ALUMINUM WINDOW WALL SYSTEM LARGE & SMALL MISSILE IMPACT LAMINATED OR INSULATED WET & INSULATED DRY GLAZED		DRAWN BY: M.L.	DATE 02/07/18
Oldcastle BuildingEnvelope® 803 AIRPORT RD. TERRELL TX 75160 www.OldcastleBE.com-Phone 800-869-4567		18-017 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
	OLD 15-039	2/7/18	
			SHEET 16 OF 20

SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ LAMINATED GLASS (WET GLAZED)



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 No. 44167
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

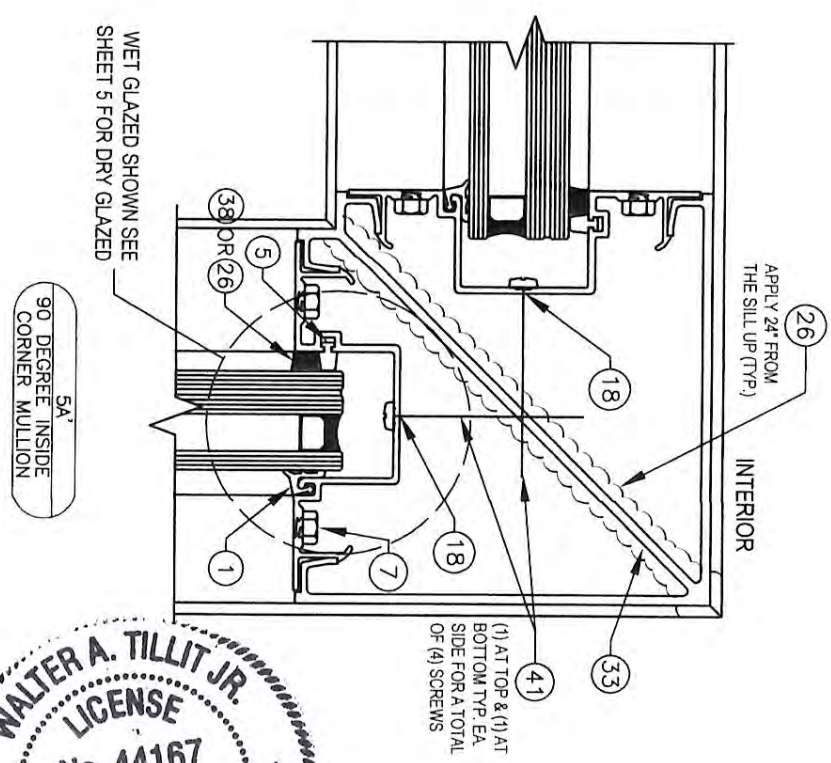
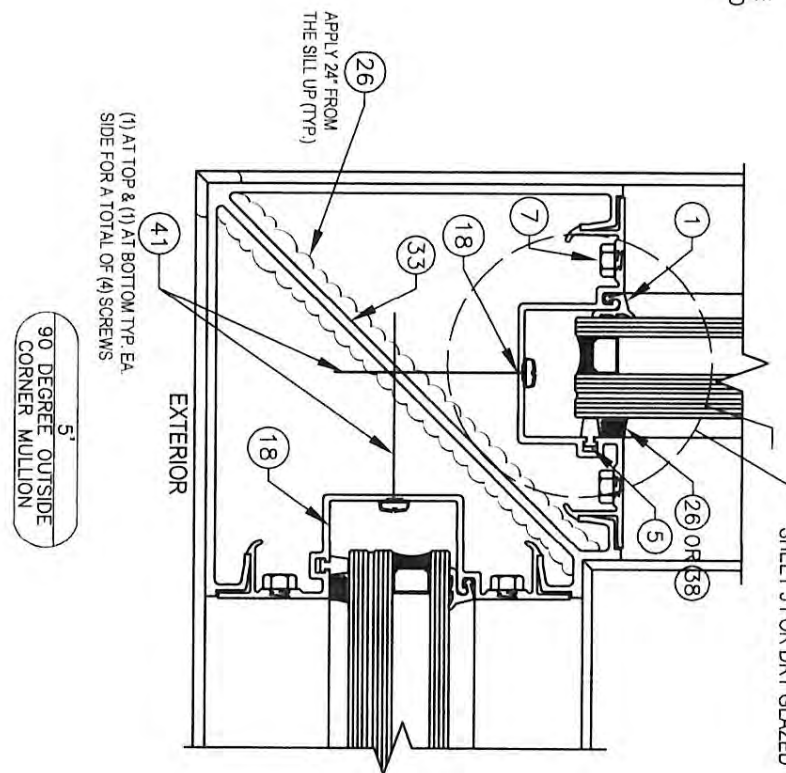
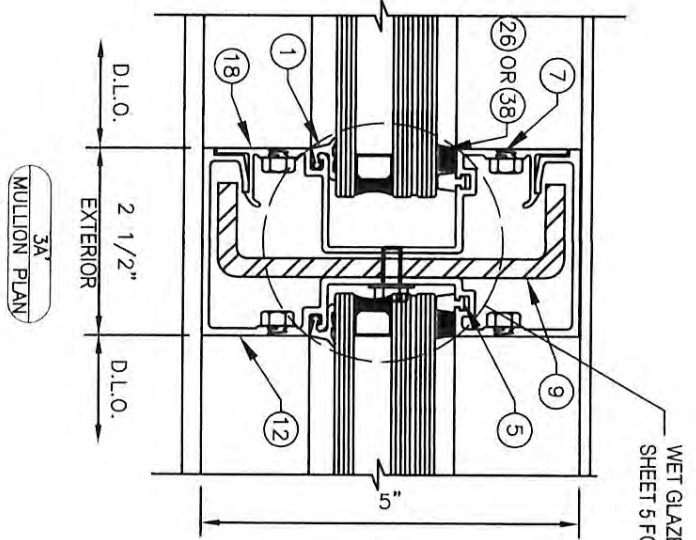
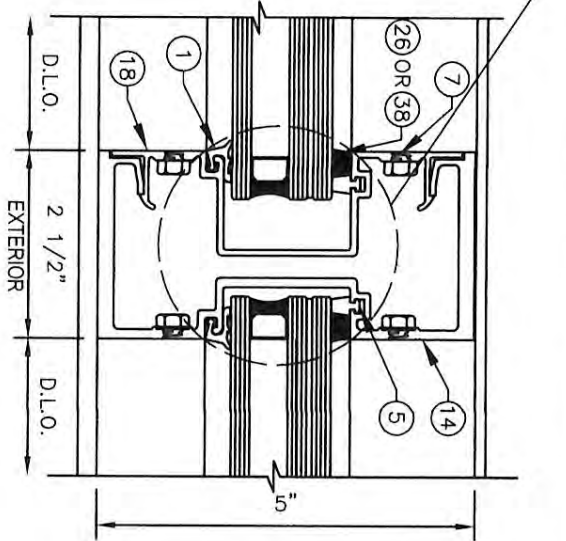
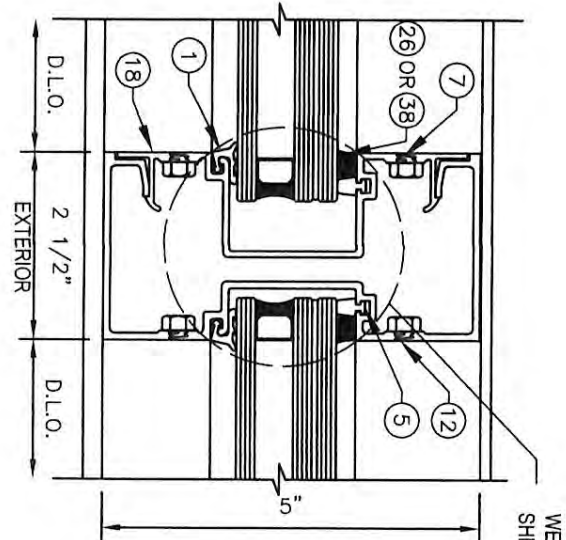
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 EB-0006719
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SECTIONS AT STANDARD, HEAVY & CORNER MULLION W/ INSULATED GLASS (WET & DRY GLAZED)



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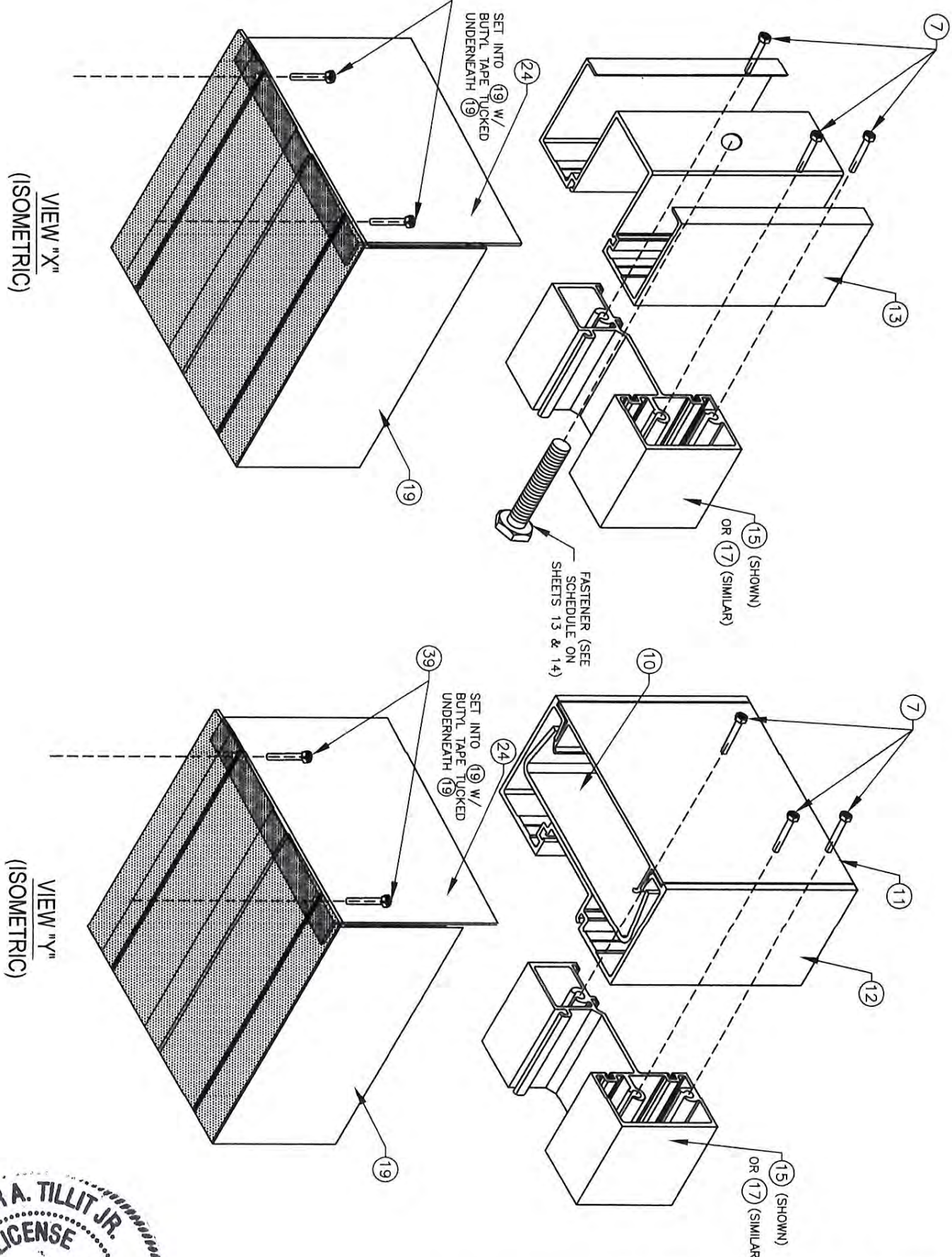
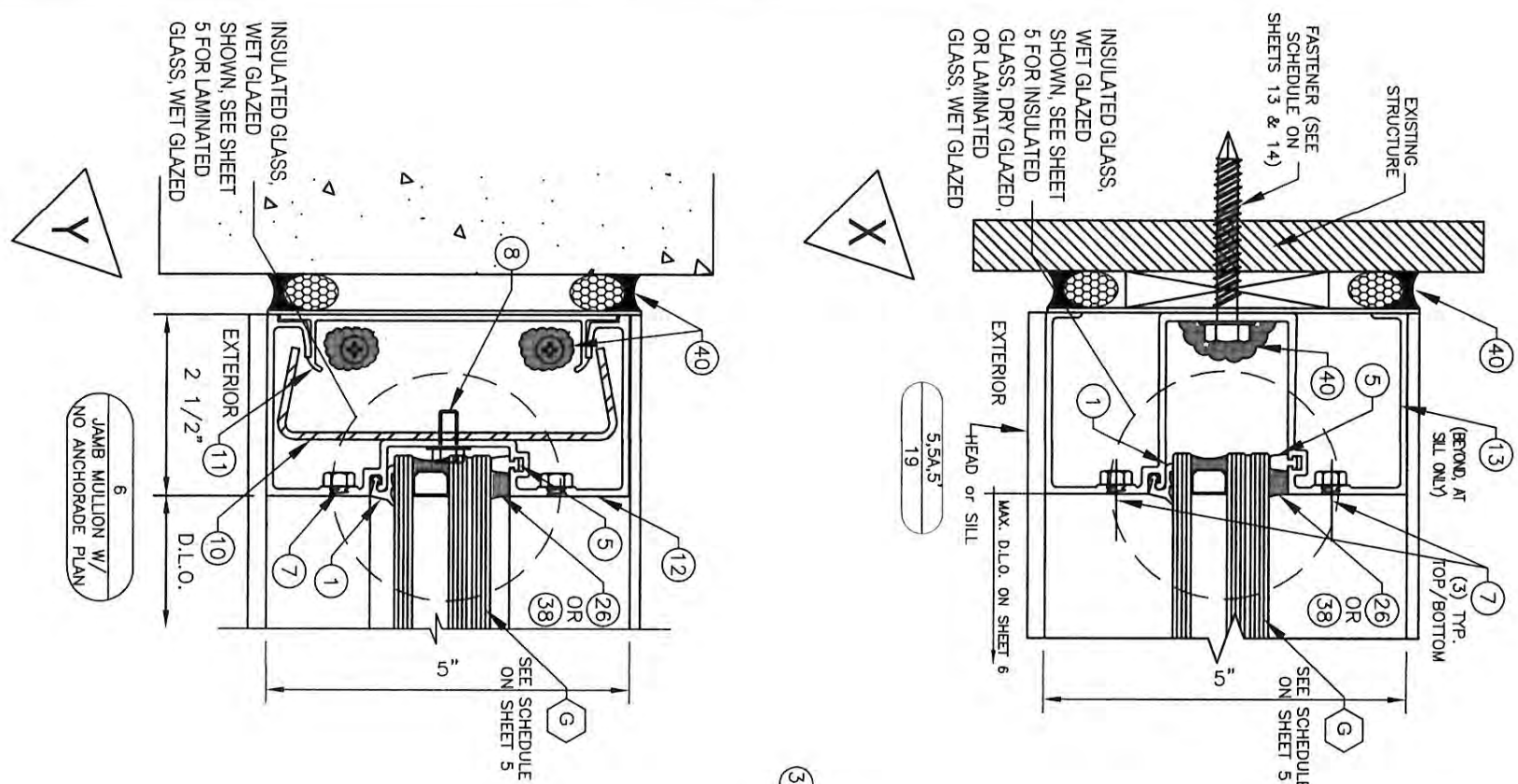
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CORNER DETAIL AT JAMB



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STATE OF FLORIDA
PROFESSIONAL ENGINEER

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		SHEET 20 OF 20	

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**OldCastle Building Envelope MSD-375
Medium Stile Impact Door**

Series MSD-375/ WSD-500 StormMax® — impact-resistant entrance doors by Oldcastle BuildingEnvelope®



The Series MSD-375/WSD-500 StormMax® is an **impact-resistant entrance door** available in medium and wide stile configurations. This entrance system meets the most demanding requirements of both Florida and International building codes. The MSD-375/WSD-500 offers the largest variety of hardware options in the industry. The most prominent names in retail and corporate America rely on **Oldcastle BuildingEnvelope®** to make an unforgettable first impression with our standard, custom and impact-resistant storefronts, curtain walls and entrances.

Testing

- Miami/Dade County
- Florida Building Code TAS-201, TAS-202, TAS-203
- ASTM E 1886, E 1996

Features



Myrtle Beach Convention Center, Myrtle Beach, SC
Architect: Cannon Design

Standard

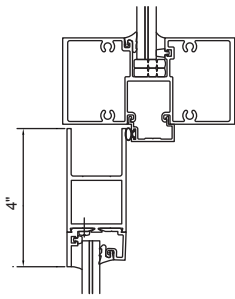
- 3-point lock mechanism
- 1-1/2" pair of stainless steel butt hinges
- MIG welded corner construction
- 1-3/4" deep rail and stile
- 4-3/4" or 6" vertical stile, 4" top rail, 9" bottom rail
- Available for use with the FG-5000/FG-5100 StormMax® storefront systems and the HR-250/HR-251/Reliance™ StormMax® curtain wall systems

Optional

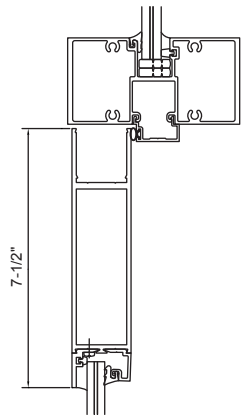
- Panic Devices: A variety of options available
- Continuous gear hinge
- 7-1/2" top rail
- 8-1/2" or 10" mid rail
- Concealed overhead closer



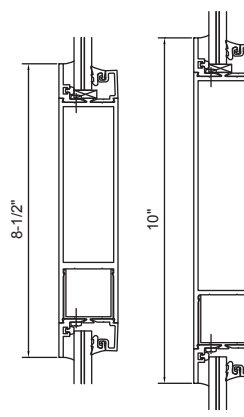
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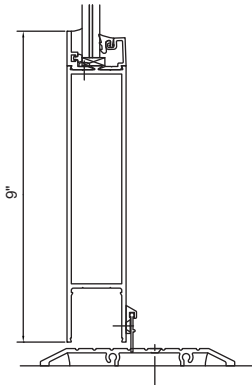
Standard Top Rail



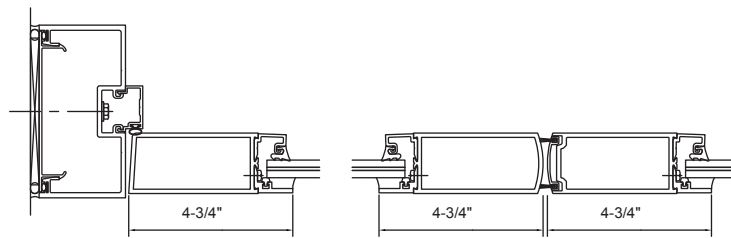
Optional Top Rail



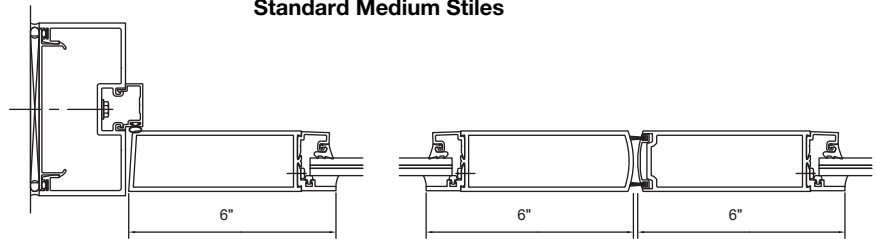
Optional Mid Rails



Standard Threshold



Standard Medium Stiles



Standard Wide Stiles

Performance

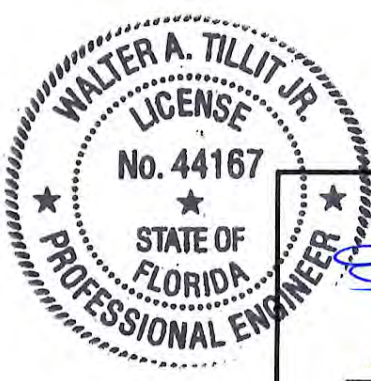
- Air Infiltration: Passed per TAS-202 and ASTM E 283
- Forced Entry Resistance Test: Passed at 300 lbs. Per SFBC 3603.2
- Structural Load: +70 / -80 PSF per TAS-202 and ASTM E 330
- Large Missile and Cycling: +70 / -80 per TAS-201, TAS-203 and ASTM E 1886, E 1996

**SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE OUT SWING ALUMINUM ENTRANCE DOORS
W/ LARGE & SMALL MISSILE IMPACT RESISTANT GLASS**

GENERAL NOTES:

1. ALUMINUM ENTRANCE DOOR SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. PRODUCT MAY BE INSTALLED WITHIN HIGH VELOCITY HURRICANE ZONES (HVHZ) AND OUT OF THEM (NHVHZ).
DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 (HVHZ) & 1609 (NHVHZ) OF THE ABOVE MENTIONED CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THIS PRODUCT TO BE INSTALLED FOR A DIRECTIONALITY FACTOR $K_d=0.85$, USING ASCE 7-10 & SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATING INDICATED ON NOTE 2.
IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2.
IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING TO WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. 2015.
THIS PRODUCT'S ADEQUACY FOR IMPACT AND WIND RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 & 1609.1.2 OF THE ABOVE MENTIONED CODE AS PER PROTOCOLS TAS-201, TAS-202, TAS-203, PER HURRICANE TESTING LABORATORY REPORTS # HTL-0105-1030-02, HTL-0105-0712-03, HTL-0105-0205-03, HTL-0105-0810-03, HTL-0105-0210-04 AND HTL-0105-0407-04; PER CERTIFIED TESTING LABORATORIES REPORT # CTLA-1177W (FOR DOOR CERTIFICATION INSTALLATION WITH FG-5000 AND FG-5100 WINDOW WALL SYSTEM); PER ARCHITECTURAL TESTING LAB REPORTS # C0344.01-450-18, 95631.01-401-18 (NEW PANIC HARDWARE) PER CONSTRUCTION CONSULTING LABORATORY REVISED REPORT # CCL-14-128r, AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTIONS 1616 & 1604 OF THE FLORIDA BUILDING CODE.
2. MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR 3'-6"x8'-0" SINGLE OR 7'-0"x8'-0" PAIR OF DOORS SHALL BE +70 psf, -80 psf. WHEN USED WITH LAMINATED GLASS, AND MAX. +70 psf, -70 psf WHEN USED WITH INSULATED GLASS. MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR 3'-6"x8'-0" SINGLE OR 7'-0"x8'-0" PAIR OF DOORS SHALL BE +60 psf, -60 psf. WHEN SARGENT OR CORBIN RUSSWIN EXIT DEVICES ARE USED (SEE SHEETS 6 & 7). USE SEALANT #37 FOR UP TO +70 psf, -80 psf A.S.D. DESIGN PRESSURE RATING. USE SEALANT # 37A FOR UP TO +70 psf, -70 psf A.S.D. DESIGN PRESSURE RATING.
3. MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR 4'-0"x8'-0" SINGLE OR 8'-0"x8'-0" PAIR OF DOORS SHALL BE +70 psf, -70 psf AND SHALL ONLY BE USED WITH EITHER LAMINATED OR INSULATED GLASS. USE SEALANTS #37 AND #37A FOR THESE DOORS.
4. THIS PRODUCT WILL NOT REQUIRE A HURRICANE PROTECTION DEVICE.
5. THIS PRODUCT IS NOT APPROVED FOR WATER INFILTRATION.
6. PROVIDE 1/4" MAX. LOAD BEARING SHIM (TYP.), WHEN ALLOWED BY THIS DRAWING.
7. ALL SCREWS USED FOR ASSEMBLY CONNECTIONS (METAL TO METAL TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 AND SECTION 2411.3.3.4 OF THE FLORIDA BUILDING CODE WITH 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH.
8. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE, G = 0.55, AND SHALL COMPLY WITH SECTIONS 2411.3.3.3 & 2326 OF THE FLORIDA BUILDING CODE.
9. REMAINING COMPONENTS FOR THIS PRODUCT SHALL BE AS INDICATED ON BILL OF MATERIALS, SHEETS 4 & 5 OF THIS DRAWING AND AT HARDWARE SCHEDULES ON SHEETS 6 & 7 OF THE DRAWING.
10. ALL ALUMINUM EXTRUSIONS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2015 ALUMINUM DESIGN MANUAL.
11. SHOP DRAWINGS PREPARED BASED ON THIS APPROVAL AND TAKING INTO ACCOUNT THE SPECIFIC JOB CONDITIONS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS PART OF THE PERMIT DOCUMENTS.
12. SUBSTRATE MATERIAL NOTED ON THIS DRAWING AS EXISTING BY OTHERS, POURED CONCRETE, GROUT FILLED CONCRETE BLOCK AND WOOD MUST WITHSTAND THE LOADS IMPOSED BY THIS PRODUCT.
13. THIS PRODUCT'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
14. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
(c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
(e) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
15. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1709.5 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA



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 04/10/18

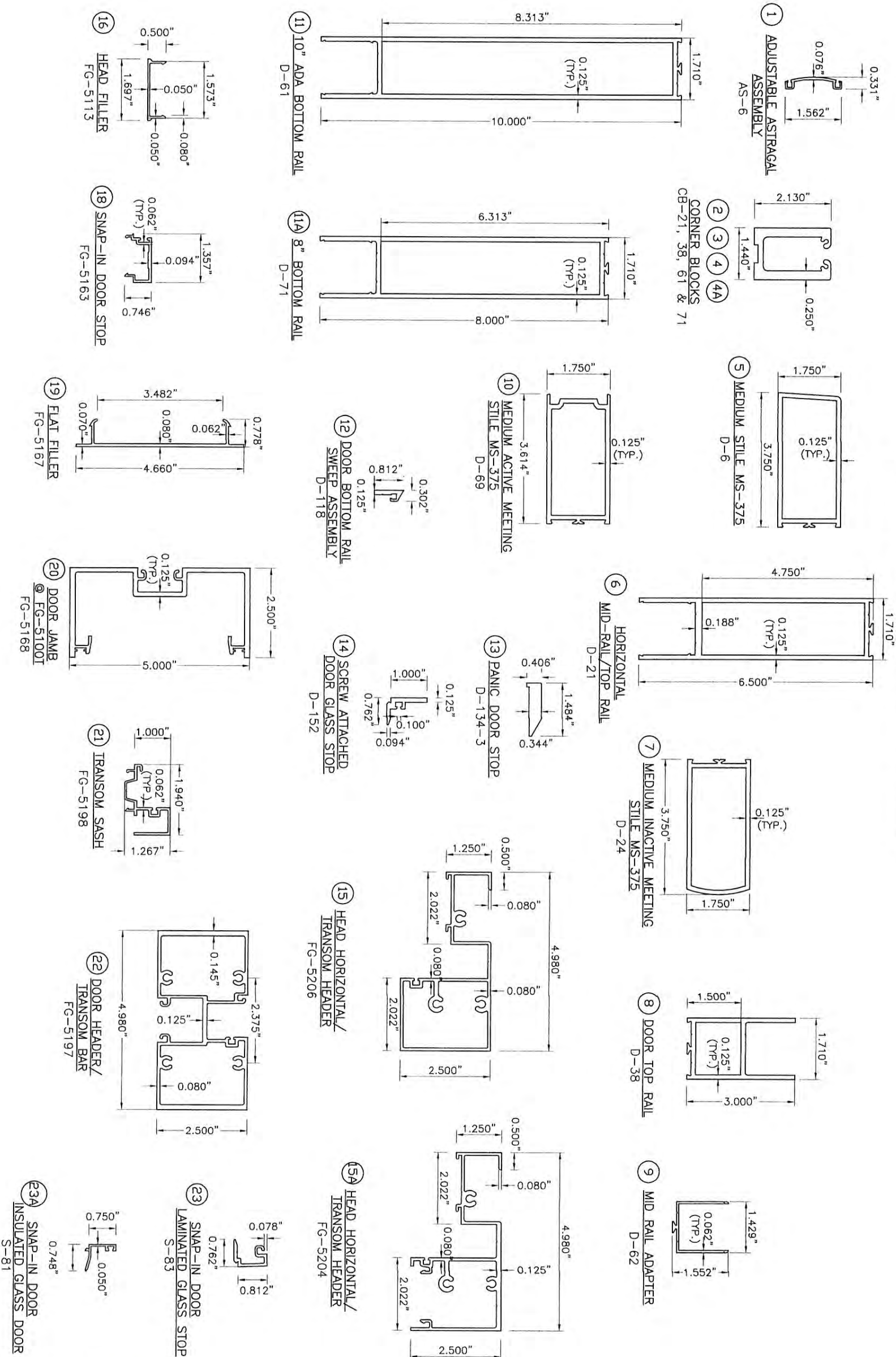
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FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT		DRAWN BY: M.L	
		04/10/18 DATE	
		18-019 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
	OLD 15-028	04/10/18	

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**SERIES MSD-375 & WSD-500 ALUMINUM MEDIUM & WIDE STILE ENTRANCE DOORS
(WET GLAZED) COMPONENTS**

SCALE: 4" = 1"



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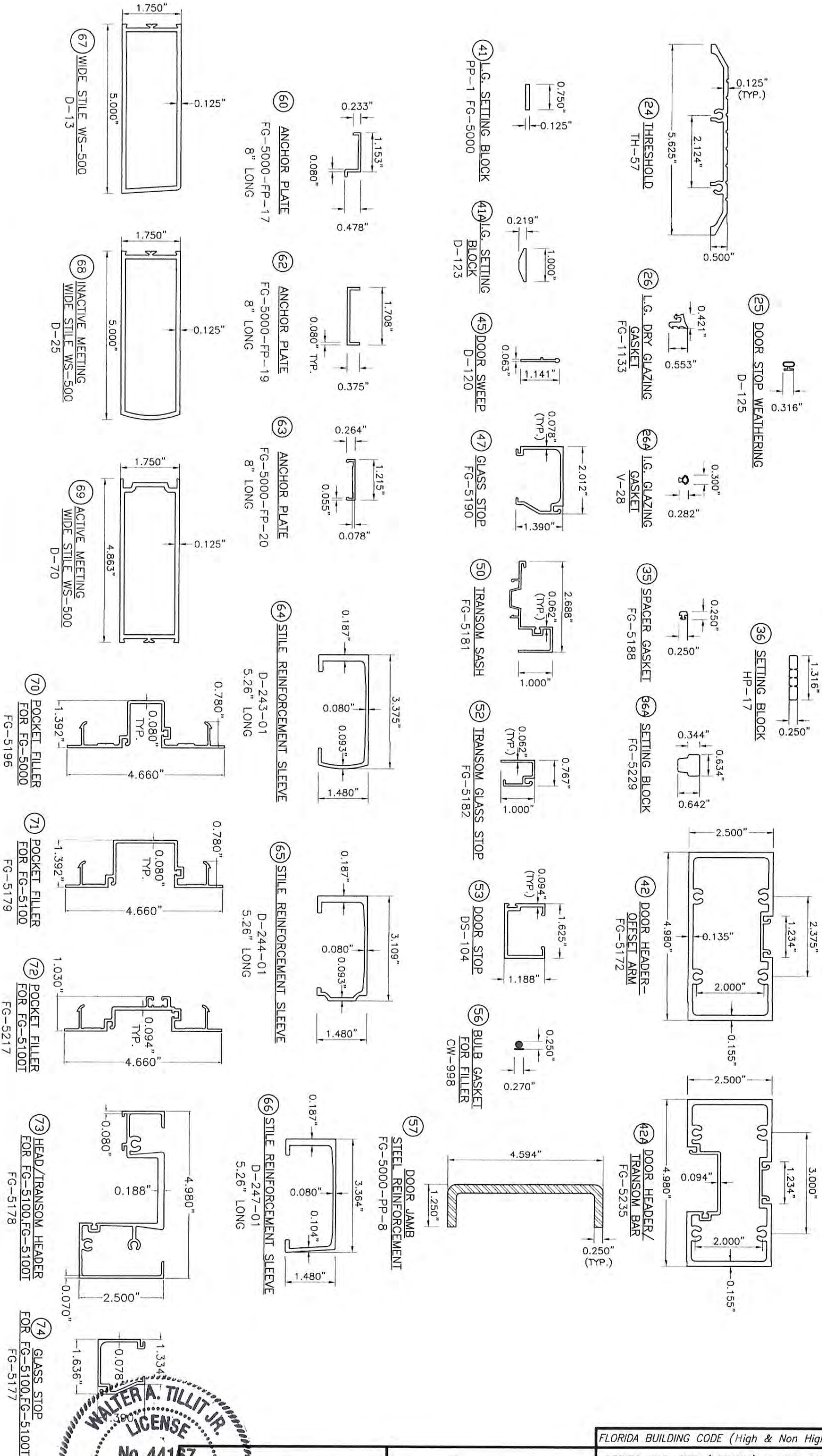
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BILL OF MATERIALS MSD-375 & WSD-500 DOORS

ITEM No.	PART NUMBER	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1.	AS-6	ADJUSTABLE ASTRAGAL ASSEMBLY	.331' X 1.562' X .076'	6063-T6 ALUMINUM	DBE	
2.	CB-21	CORNER BLOCK	2.130' X 1.44' X .25'	6063-T5 ALUMINUM	DBE	4.437' LONG
3.	CB-38	DOOR CORNER BLOCK	2.130' X 1.44' X .25'	6063-T5 ALUMINUM	DBE	1.23' LONG
4.	CB-61	DOOR CORNER BLOCK	2.130' X 1.44' X .25'	6063-T5 ALUMINUM	DBE	8' LONG
4A.	CB-71	DOOR CORNER BLOCK	2.130' X 1.44' X .25'	6063-T5 ALUMINUM	DBE	6' LONG
5.	D-6	MEDIUM STILE MS-375	3.75' X 1.75' X .125'	6063-T5 ALUMINUM	DBE	
6.	D-21	HORIZONTAL MID-RAIL/TOP RAIL	6.50' X 1.71' X .125'	6063-T5 ALUMINUM	DBE	
7.	D-24	INACTIVE MEETING MEDIUM STILE MS-375	3.75' X 1.75' X .125'	6063-T5 ALUMINUM	DBE	
8.	D-38	DOOR TOP RAIL	3.00' X 1.71' X .125'	6063-T5 ALUMINUM	DBE	
9.	D-62	MID-RAIL ADAPTER	1.429' X 1.552' X .062'	6063-T5 ALUMINUM	DBE	
10.	D-69	ACTIVE MEETING MEDIUM STILE MS-375	3.614' X 1.75' X .125'	6063-T5 ALUMINUM	DBE	
11.	D-61	10' ADA BOTTOM RAIL	10.00' X 1.71' X .125'	6063-T6 ALUMINUM	DBE	
11A.	D-71	8' BOTTOM RAIL	8.00' X 1.71' X .125'	6063-T6 ALUMINUM	DBE	
12.	D-118	DOOR BOTTOM RAIL SWEEP ASSEMBLY	.812' X .302' X .125'	6063-T5 ALUMINUM	DBE	CUT TO DOOR WIDTH MINUS 5/8"
13.	D-134-3	PANIC DOOR STOP	.344' X 1.484' X 3.00'	6063-T5 ALUMINUM	DBE	
14.	D-152	SCREW ATTACHED DOOR GLASS STOP	1.00' X .762' X .125'	6063-T6 ALUMINUM	DBE	ATTACH W/ (30) 12' DN CENTER
15.	FG-5206	HEAD HORIZONTAL/TRANSOM HEADER	2.50' X 4.98' X .080'	6063-T6 ALUMINUM	DBE	FOR FG-5000 SYSTEMS
15A.	FG-5204	HEAD HORIZONTAL/TRANSOM HEADER	2.50' X 4.98' X .080'	6063-T6 ALUMINUM	DBE	FOR FG-5000 SYSTEMS
16.	FG-5113	HEAD FILLER	.50' X 1.69' X .050'	6063-T5 ALUMINUM	DBE	
18.	FG-5163	SNAP-IN DOOR STOP	.746' X 1.357' X .062'	6063-T6 ALUMINUM	DBE	
19.	FG-5167	FLAT FILLER	.778' X 4.66' X .080'	6063-T6 ALUMINUM	DBE	RUNS FULL LENGTH
20.	FG-5168	DOOR JAMB @ FG-5000, FG-5100 & FG-5100T	2.50' X 5.00' X .125'	6063-T6 ALUMINUM	DBE	
21.	FG-5198	TRANSOM SASH	1.00' X 1.940' X .062'	6063-T6 ALUMINUM	DBE	
22.	FG-5197	DOOR HEADER/TRANSOM BAR	2.50' X 4.90' X .080'	6063-T6 ALUMINUM	DBE	
23.	S-83	SNAP-IN DOOR LAMINATED GLASS STOP	.812' X .762' X .078'	6063-T6 ALUMINUM	DBE	
23A.	S-81	SNAP-IN DOOR INSULATED GLASS STOP	.748' X .75' X .050'	6063-T5 ALUMINUM	DBE	
24.	TH-57	THRESHOLD	.50' X 5.625' X .125'	6063-T5 ALUMINUM	DBE	
25.	D-125	DOOR STOP WEATHERING	.125' SPACE	SANTOPRENE	UNIVERSAL RUBBER	
26.	FG-1133	GLAZING GASKET	.197' SPACE	EPDM	VARIES	70 DURDMETER, USE AT LAMINATED GLASS
26A.	V-28	GLAZING GASKET	.30' X .282'	VINYL	DBE	USE AT INSULATED GLASS
27.	FS-2	ATTACH D-118 SWEEP TO DOOR BOTTOM	#8 X 3/8" PPHSMS	STEEL	VARIES	
28.	FS-7	ATTACH RAILS TO CORNER BLOCKS	#10 X 3/4" PFH	STEEL	VARIES	
29.	FS-8	SPLINE ASSEMBLY SCREW	#14 X 1" HHSTS	STEEL	VARIES	
30.	FS-114	ATTACH D-152 TO DOOR	#8 X 3/8" PPHSMS	STEEL	VARIES	SPACED @ 12" O.C.
31.	SM-5601	JOINT SEALANT TAPE	.125' X .50' VARIES	BUTYL	SCHNEE-MOREHEAD	
32.	WP-085	ADJUSTABLE ASTRAGAL WEATHERING	VARIABLE SPACE	WOOL PILE	SCHLEGEL	
33.	FS-56	ATTACH D-134-2 PANIC STOP	#12 X 3/4" PPHSMS	STEEL	VARIES	
34.	FS-49	ADJUSTABLE ASTRAGAL SCREW	#8 X 1/2" PPHSMS	STEEL	VARIES	
35.	FG-5188	SPACER GASKET	.25' X .25'	EPDM	VARIES	85 DURDMETER
36.	HP-17	SETTING BLOCK	1.316' X .25' X 4' LONG	EPDM	VARIES	90 DURDMETER
36A.	FG-5229	SETTING BLOCK	.634' X .642' X 4' LONG	EPDM	VARIES	85 DURDMETER



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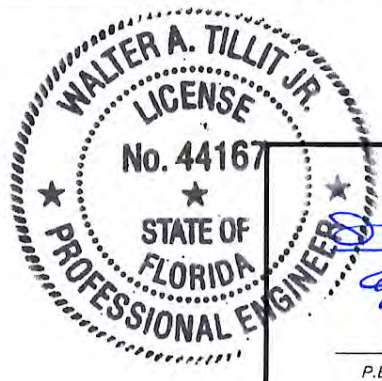
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone : (305)871-1530, Fax : (305)871-1531
 e-mail: tilteco@aol.com
 EB-0006719
 WALTER A. TILLIT Jr. P.E.
 FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)					
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT				DRAWN BY: M.L	
				04/10/18 DATE	
803 AIRPORT RD. TERRELL TX 75160 www.OldcastleBE.com-Phone 800-869-4567				18-019 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
	OLD 15-029	04/10/18			

BILL OF MATERIALS MSD-375 & WSD-500 DOORS (CONTINUED)

ITEM No.	PART NUMBER	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
37.	995 SEALANT	STRUCTURAL SILICONE	FILL SPACE	SILICONE	DDV CORNING 995	USE FOR UP TD +70, -80 psf. ASD PRESSURE RATING
37A.	SEALANT	STRUCTURAL SILICONE PROGLAZE II	FILL SPACE	SILICONE	TREMCO	USE FOR UP TD +70, -70 psf. ASD PRESSURE RATING
38.	921	USED AS PERIMETER SEALANT	FILL SPACE	POLYURETHANE	VULKEM	
40.	FS-39	ATTACH CORNER BLOCK TO STILES	1/4" X 20 X 3/4" HHMS	STEEL	VARIES	
41.	FG-5000-PP1	SETTING BLOCK	1/8" X 3/4" X 4"	EPDM	VARIES	USE FOR LAMINATED GLASS
41A.	D-123	SETTING BLOCK	1.00" X 0.219"	RIGID PVC	VARIES	USE FOR INSULATED GLASS
42.	FG-5172	DDDR HEADER-OFFSET ARM	2.50" X 4.98" X .135"	6063-T6 ALUMINUM	DBE	
42A.	FG-5235	DDDR HEADER/TRANSDM BAR	2.50" X 4.98" X .135"	6063-T6 ALUMINUM	DBE	
43.	DS-104	OFFSET ARM COVER	1.188" X 1.625" X .094"	6063-T6 ALUMINUM	DBE	
44.	FASTENER	ATTACH DS-104 TO FG-5172	#10 X 2" FHPSMS	STEEL	VARIES	SINGLE DDOR: 1 EA. 6" FROM LOCK STILE PAIR OF DRS: 1 EA. 6" EACH SIDE OF DR C/L
45.	D-120	DDDR WEATHERING STRIP	VARIABLE SPACE	VINYL	DBE	DDOR WIDTH MINUS 5/8"
46.	FG-5185	SPACER GASKET	.25" X .25"	SILICONE	VARIES	
47.	FG-5190	GLASS STOP	2.01" X 1.39" X .080"	6063-T6 ALUMINUM	DBE	FOR FG-5000 SYSTEMS
50.	FG-5181	TRANSDM SASH	1.00" X 2.69" X .062"	6063-T5 ALUMINUM	DBE	
51.	FS-55	ATTACH SC-1 CLIP	#10 X 1/2" PH ROUND	STEEL	VARIES	9" D.C.
52.	FG-5182	TRANSDM GLASS STOP	1.00" X .767" X .062"	6063-T5 ALUMINUM	DBE	
53.	DS-104	DDDR STOP	1.625" X 1.188" X .094"	6063-T5 ALUMINUM	DBE	USES SC-1 CLIP
56.	CW-998	BULB GASKET FOR FILLER	VARIES	FOAM-TITE	AMESBURY	
57.	FG-5000-PP-8	DDDR JAMB MULLION STL REINFORCING	1 1/4" X 4 9/16" X 1/4"	A-36 STEEL(ZINC PLATED)	VARIES	FULL LENGTH OF MULLION. COAT RICH PRIMER
58.	FS-38	ATTACH STL. REINFORCEMENT	1/4"-20 X 1/2" HH TYPE "F"	STEEL	VARIES	
59.	SC-1	STAINLESS STEEL CLIP	.281" X .968" X .032"	STAINLESS STEEL	DBE	9" D.C.
60.	FG-5000-FP-17	ANCHDR PLATE	1.153" X .478" X .080" X 8" LONG	6063-T5 ALUMINUM	DBE	USED @ 22
62.	FG-5000-FP-19	ANCHDR PLATE	1.708" X .375" X .080" X 8" LONG	6063-T5 ALUMINUM	DBE	USED @ 24
63.	FG-5000-FP-20	ANCHDR PLATE	1.215" X .264" X .078" X 8" LONG	6063-T5 ALUMINUM	DBE	USED @ 42
64.	D-243-01	STILE REINFORCEMENT SLEEVE	3.375" X 1.480" X .093" X 5.26LG	6063-T6 ALUMINUM	DBE	USED AT DDOR STILE SILL WITH REGENT HARDWARE
65.	D-244-01	STILE REINFORCEMENT SLEEVE	3.109" X 1.480" X .093" X 5.26LG	6063-T6 ALUMINUM	DBE	USED AT DDOR STILE SILL WITH REGENT HARDWARE
66.	D-247-01	STILE REINFORCEMENT SLEEVE	3.364" X 1.480" X .104" X 5.26LG	6063-T6 ALUMINUM	DBE	USED AT DDOR STILE SILL WITH REGENT HARDWARE
67.	D-13	WIDE STILE WS-500	5.000" X 1.75" X .125"	6063-T5	DBE	
68.	D-25	INACTIVE MEETING WIDE STILE WS-500	5.000" X 1.75" X .125"	6063-T5	DBE	
69.	D-70	ACTIVE MEETING WIDE STILE WS-500	4.863" X 1.75" X .125"	6063-T5	DBE	
70.	FG-5196	POCKET FILLER FOR FG-5000	4.660" X 1.392" X .080"	6063-T5	DBE	
71.	FG-5179	POCKET FILLER FOR FG-5100	4.660" X 1.392" X .080"	6063-T5	DBE	
72.	FG-5217	POCKET FILLER FOR FG-5100T	4.660" X 1.030" X .094"	6063-T5	DBE	
73.	FG-5178	HEAD/TRANSDM HEADER	2.500" X 4.980" X VARIES	6063-T6 ALUMINUM	DBE	FOR FG-5100, FG-5100T SYSTEMS
74.	FG-5177	GLASS STOP	1.390" X 1.636" X .078"	6063-T6 ALUMINUM	DBE	FOR FG-5100, FG-5100T SYSTEMS



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 LICENSE
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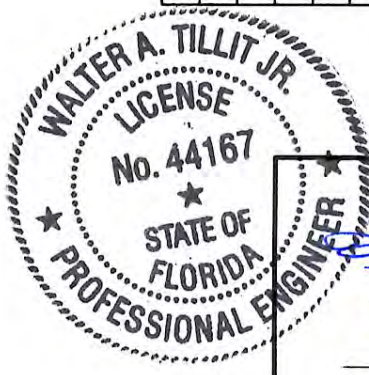
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TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
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 e-mail: tilteco@aol.com
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 WALTER A. TILLIT Jr. P.E.
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FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)															
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 803 AIRPORT RD. TERRELL TX 75160 www.OldcastleBE.com-Phone 800-869-4567		<table border="1"> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>01</td> <td>OLD 15-029</td> <td>04/10/18</td> <td></td> <td></td> <td></td> </tr> </table>		REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	01	OLD 15-029	04/10/18			
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE										
01	OLD 15-029	04/10/18													
SHEET 5 OF 26															

HARDWARE SCHEDULE 3'-6" X 8'-0" OR 4'-0" X 8'-0" (Max.) SINGLE MSD-375 & WSD-500 DOORS

HARDWARE TYPE	HARDWARE MODEL AND DESCRIPTION	MANUFACTURER	MAX. DESIGN PRESSURE	MAX. DOOR SIZE	NOTES
3-POINT LOCK	MS 1850 DEADLOCK	ADAMS RITE	+70 / -80 PSF	3'-6" X 8'-0"	
3-POINT LOCK	MS 1850S + 4015 + 4016 DEADLOCK	ADAMS RITE	+70 / -70 PSF	4'-0" X 8'-0"	
RIM PANIC	ED4200S RIM PANIC	CORBIN RUSSWIN	+60 / -60 PSF	3'-6" X 8'-0"	
CONCEALED PANIC	1285 CONCEALED VERTICAL ROD PANIC	JACKSON	+70 / -80 PSF	3'-6" X 8'-0"	
CONCEALED PANIC	2086 CONCEALED VERTICAL ROD PANIC	JACKSON	+70 / -80 PSF	3'-6" X 8'-0"	
CONCEALED PANIC	5770 CONCEALED VERTICAL ROD PANIC	REGENT	+70 / -80 PSF	3'-6" X 8'-0"	ONLY ALLOWED TO USED FOR MEDIUM STILES ⑤, ⑦ & ⑩
CONCEALED PANIC	8410 CONCEALED VERTICAL ROD PANIC	SARGENT	+70 / -80 PSF	3'-6" X 8'-0"	OPTION FOR 4' X 8' ALLOWED UP TO +70 / -70 psf
RIM PANIC	AD8500 RIM PANIC	SARGENT	+60 / -60 PSF	3'-6" X 8'-0"	
SURFACE PANIC	9927 SURFACE PANIC VERTICAL ROD	VON DUPRIN	+70 / -80 PSF	3'-6" X 8'-0"	
CONCEALED PANIC	9947 CONCEALED PANIC VERTICAL ROD	VON DUPRIN	+70 / -80 PSF	3'-6" X 8'-0"	
SURFACE CLOSER	MODEL VARIES BY MANUFACTURER	VARIES	N/A	N/A	
CONCEALED CLOSER	21-211 HVY DUTY W/OFFSET SWING ARM	JACKSON	N/A	N/A	
BUTT HINGES 4' X 4 1/2'	4001 BALL BEARING STAINLESS STEEL	REGENT	+70 / -80 PSF	3'-6" X 8'-0"	(3) PER DOOR LEAF
BUTT HINGES 4' X 4 1/2'	BB1199 BALL BEARING STAINLESS STEEL	HAGER	+70 / -70 PSF	4'-0" X 8'-0"	(4) PER DOOR LEAF
BUTT HINGES 4' X 4 1/2'	RCTA2314 BALL BEARING STAINLESS	MC KINNEY	+60 / -60 PSF	3'-6" X 8'-0"	(3) PER DOOR LEAF
PULL HANDLES	PH-20 FORMED ALUMINUM	DBE	N/A	N/A	
PUSH BARS	PB-21 FORMED ALUMINUM	DBE	N/A	N/A	
CYLINDER	CY-1 LOCK CYLINDER	DBE	N/A	N/A	
KEY CONTROL	106 KEY CONTROL FOR SARGENT	SARGENT	N/A	N/A	
THUMB TURN	CY-3	DBE	N/A	N/A	
CYLINDER	CY-5 FOR VON DUPRIN DEVICES	DBE	N/A	N/A	
LOCK INDICATOR	AR-4089 OPTIONAL DEVICE	ADAMS RITE	N/A	N/A	
PANIC STOP	D-134-2 LOCATED AT THRESHOLD	DBE	N/A	N/A	
THRESHOLD	TH-57 COMPONENT (24)	DBE	+70 / -80 PSF	3'-6" X 8'-0"	OPTION FOR 4' X 8' ALLOWED UP TO +70 / -70 psf
DOOR BOTTOM SWEEP	D-118 / D120	DBE	N/A	N/A	
TOP PIVOTS	DP-6 / DP-7	DBE	+70 / -80 PSF	3'-6" X 8'-0"	
INTERMEDIATE PIVOTS	M-19	RIXON	+70 / -80 PSF	3'-6" X 8'-0"	
BOTTOM PIVOTS	DP-9 / DP-10	DBE	+70 / -80 PSF	3'-6" X 8'-0"	
CONT. GEAR HINGE	780-224 HD CONTINUOUS GEAR HINGES	ROTON	+70 / -80 PSF	3'-6" X 8'-0"	
THRESHOLD	TH-43	DBE	+70 / -80 PSF	3'-6" X 8'-0"	
CONT. GEAR HINGE	CFM83SLI HDI CONTINUOUS GEAR HINGES	PEMKO	+70 / -70 PSF	4'-0" X 8'-0"	



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 WALTER A. TILLIT Jr., P.E.
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FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT		DRAWN BY: M.L.	
Oldcastle BuildingEnvelope™		04/10/18 DATE	
803 AIRPORT RD. TERRELL, TX 75160 www.OldcastleBE.com-Phone 800-869-4567		18-019 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
	OLD 15-029	04/10/18	

HARDWARE SCHEDULE 7'-0" X 8'-0" OR 8'-0" X 8'-0" (Max.) PAIRS MSD-375 & WSD-500 DOORS

HARDWARE TYPE	HARDWARE MODEL AND DESCRIPTION	MANUFACTURER	MAX. DESIGN PRESSURE	MAX. DOOR SIZE	NOTES
3-POINT LOCK	MS 1850 DEADLOCK	ADAMS RITE	+70 / -80 PSF	7'-0" X 8'-0"	ACTIVE DOOR
FLUSH BOLTS	FB-1201-VRM TDP & BOTTOM-STEEL TIPS	DBE	+70 / -80 PSF	7'-0" X 8'-0"	INACTIVE DOOR
3-POINT LOCK	MS 1850S + 4015 + 4016 DEADLOCK	ADAMS RITE	+70 / -70 PSF	8'-0" X 8'-0"	ACTIVE DOOR
2-POINT LOCK	MS 2180 AUTO RELEASE FLUSH BOLT	ADAMS RITE	+70 / -70 PSF	8'-0" X 8'-0"	INACTIVE DOOR
RIM PANIC	ED4200S RIM PANIC	CORBIN RUSSWIN	+60 / -60 PSF	7'-0" X 8'-0"	
REMOVABLE MULLION	VS708AKM REMOVABLE MULLION	CORBIN RUSSWIN	+60 / -60 PSF	7'-0" X 8'-0"	TO BE USED WITH ED4200S RIM DEVICE EXCLUSIVELY
CNCEALED PANIC	1285 CNCEALED VERTICAL ROD PANIC	JACKSON	+70 / -80 PSF	7'-0" X 8'-0"	
CNCEALED PANIC	2086 CNCEALED VERTICAL ROD PANIC	JACKSON	+70 / -80 PSF	7'-0" X 8'-0"	
CNCEALED PANIC	5770 CNCEALED VERTICAL ROD PANIC	REGENT	+70 / -80 PSF	7'-0" X 8'-0"	ONLY ALLOWED TO BE USED FOR MEDIUM STILES ⑤, ⑦ & ⑩
CNCEALED PANIC	8410 CNCEALED VERTICAL ROD PANIC	SARGENT	+70 / -80 PSF	7'-0" X 8'-0"	OPTION FOR 8' X 8' ALLOWED UP TO +70 / -70 psf
RIM PANIC	AD8500 RIM PANIC	SARGENT	+60 / -60 PSF	7'-0" X 8'-0"	
REMOVABLE MULLION	HC L980 REMOVABLE MULLION	CORBIN RUSSWIN	+60 / -60 PSF	7'-0" X 8'-0"	TO BE USED WITH AD8500 RIM DEVICE EXCLUSIVELY
SURFACE PANIC	9927 SURFACE PANIC VERTICAL ROD	VON DUPRIN	+70 / -80 PSF	7'-0" X 8'-0"	
CNCEALED PANIC	9947 CNCEALED PANIC VERTICAL ROD	VON DUPRIN	+70 / -80 PSF	7'-0" X 8'-0"	
SURFACE CLOSER	MODEL VARIES BY MANUFACTURER	VARIES	N/A	N/A	
CNCEALED CLOSER	21-211 HVY DUTY W/OFFSET SWING ARM	JACKSON	N/A	N/A	
BUTT HINGES 4' X 4 1/2'	4001 BALL BEARING STAINLESS STEEL	REGENT	+70 / -80 PSF	7'-0" X 8'-0"	(3) PER DOOR LEAF
BUTT HINGES 4' X 4 1/2'	BB1199 BALL BEARING STAINLESS STEEL	HAGER	+70 / -70 PSF	8' X 8'	(4) PER DOOR LEAF
BUTT HINGES 4' X 4 1/2'	RCTA2314 BALL BEARING STAINLESS	MC KINNEY	+60 / -60 PSF	3'-6" X 8'-0"	(3) PER DOOR LEAF
PULL HANDLES	PH-20 FORMED ALUMINUM	DBE	N/A	N/A	
PUSH BARS	PH-21 FORMED ALUMINUM	DBE	N/A	N/A	
CYLINDER	CY-1 LOCK CYLINDER	DBE	N/A	N/A	
KEY CONTROL	106 KEY CONTROL FOR SARGENT	SARGENT	N/A	N/A	
THUMB TURN	CY-3	DBE	N/A	N/A	
CYLINDER	CY-5 FOR VON DUPRIN DEVICES	DBE	N/A	N/A	
LOCK INDICATOR	AR-4089 OPTIONAL DEVICE	ADAMS RITE	N/A	N/A	
PANIC STOP	D-134-2 LOCATED AT THRESHOLD	DBE	N/A	N/A	
THRESHOLD	TH-57 COMPONENT ②⑨	DBE	+70 / -80 PSF	7'-0" X 8'-0"	OPTION FOR 4' X 8' ALLOWED UP TO +70 / -70 psf
DOOR BOTTOM SWEEP	D-118 / D120	DBE	N/A	N/A	
TDP PIVOTS	DP-6 / DP-7	DBE	+70 / -80 PSF	7'-0" X 8'-0"	
INTERMEDIATE PIVOTS	M-19	RIXON	+70 / -80 PSF	7'-0" X 8'-0"	
BOTTOM PIVOTS	DP-9 / DP-10	DBE	+70 / -80 PSF	7'-0" X 8'-0"	
CONT. GEAR HINGE	780-224 HD CONTINUOUS GEAR HINGES	ROTON	+70 / -80 PSF	7'-0" X 8'-0"	
THRESHOLD	TH-43	DBE	+70 / -80 PSF	7'-0" X 8'-0"	
CONT. GEAR HINGE	CFM83SLI HDI CONTINUOUS GEAR HINGES	PEMKD	+70 / -70 PSF	8'-0" X 8'-0"	



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LARGE & SMALL MISSILE IMPACT

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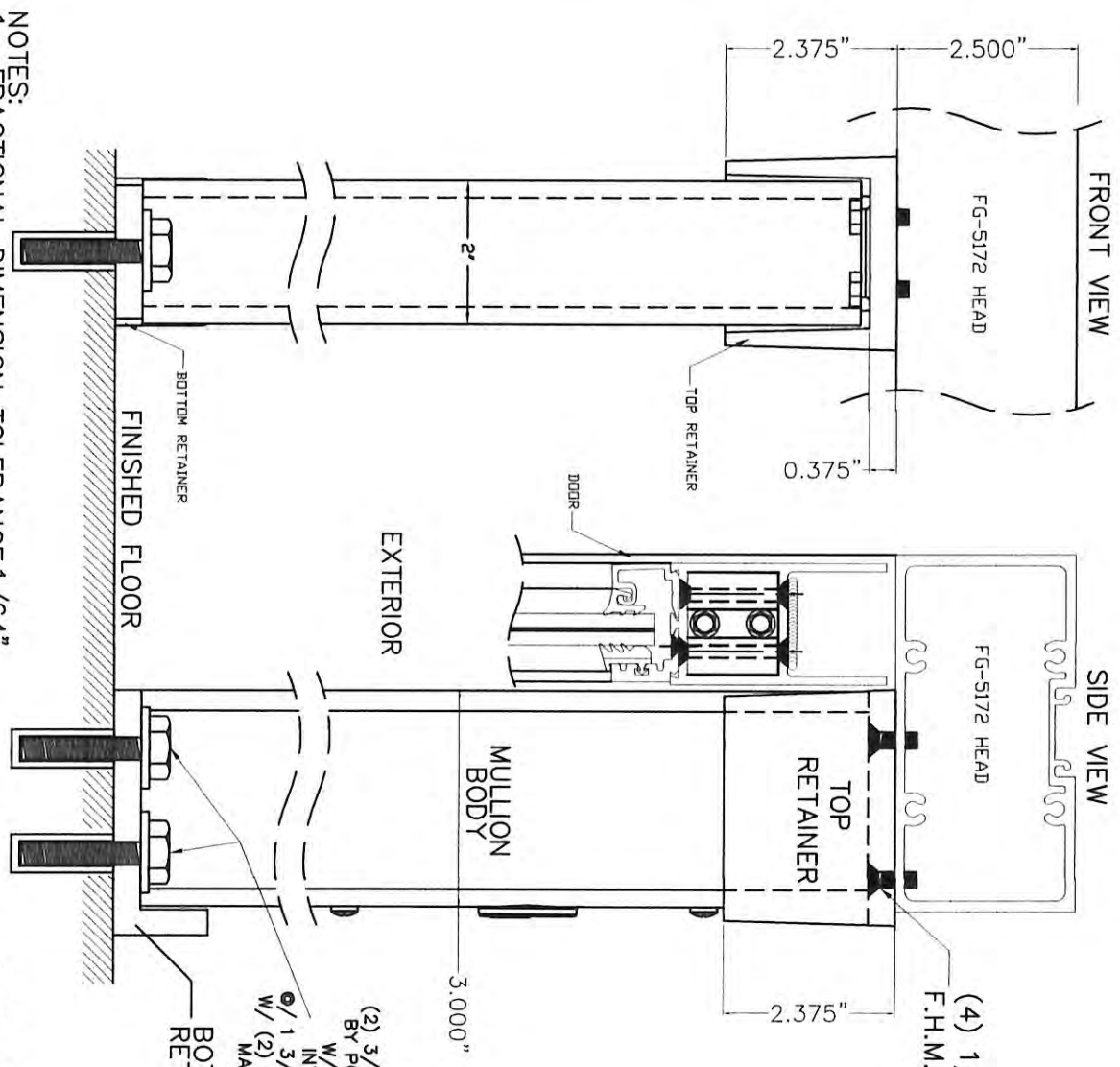
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DRAWING No 18-019	SHEET 7 OF 26

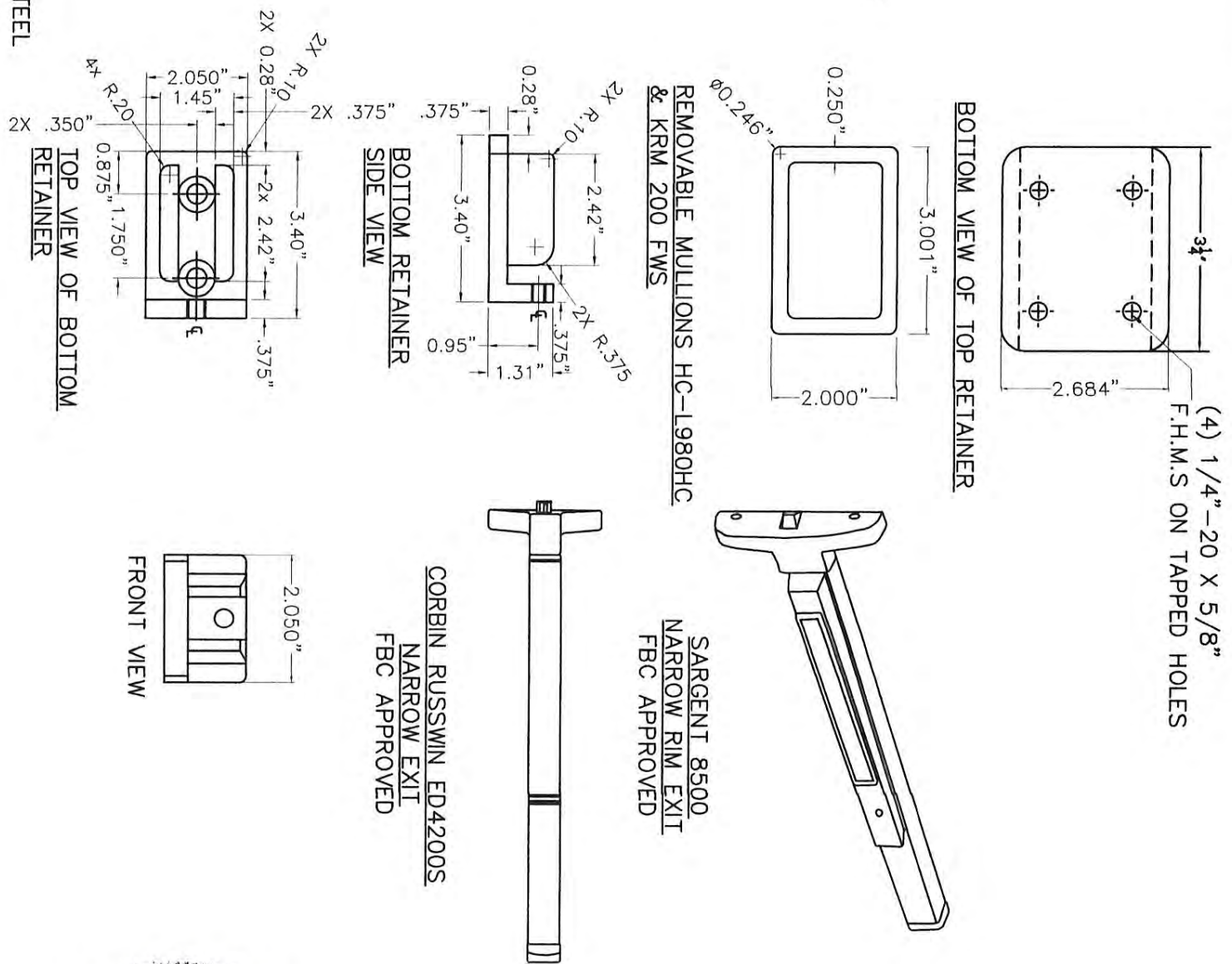
**REMOVABLE MULLION ASSEMBLY DETAILS FOR SARGENT & CORBIN RUSSWIN EXIT DEVICES:
 MAX. A.S.D DESIGN PRESSURE RATING IS +60, -60 psf. FOR THESE EXIT DEVICES
 TO BE USED ONLY AT 3'-6" X 8'-0" SINGLE OR 7'-0" X 8'-0" PAIR OF DOORS**

SARGENT HC L980
 REMOVABLE MULLION
 OR CORBIN RUSSWIN
 KRM 200 FWS
 REMOVABLE MULLION



NOTES:
 1. FRACTIONAL DIMENSION TOLERANCE 1/64\"/>

MATERIALS:
 MULLION BODY - CARBON STEEL
 HOT ROLLED, WELDED SEAM
 PER ASTM A500 GRADE B
 FINISH: PRIME COAT RED PAINT
 TOP & BOTTOM RETAINER - CAST IRON, PRIMED.



WALTER A. TILLIT JR.
 LICENSE
 No. 44167
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

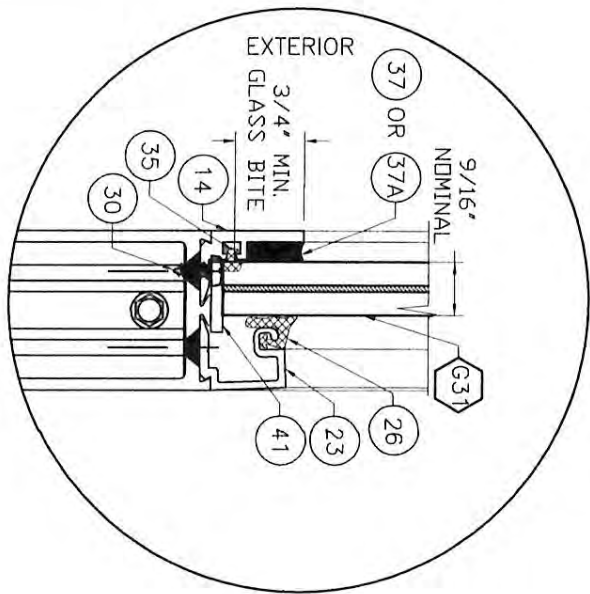
CORBIN RUSSWIN ED4200S
 NARROW EXIT
 FBC APPROVED

SARGENT 8500
 NARROW RIM EXIT
 FBC APPROVED

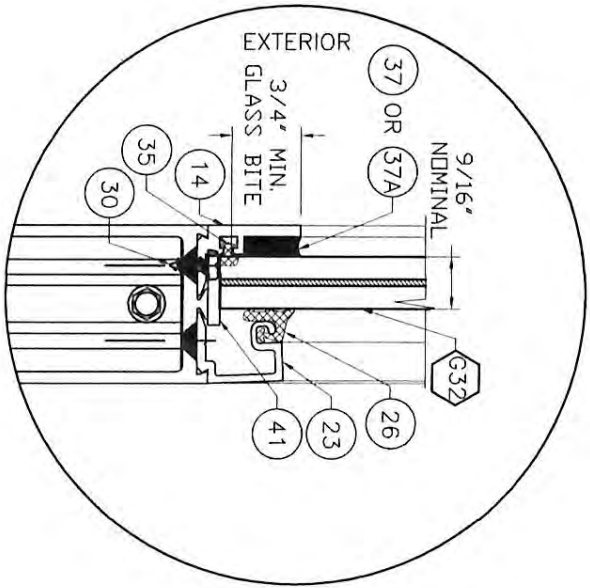
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REV. No. DESCRIPTION DATE		DRAWING No. 18-019	
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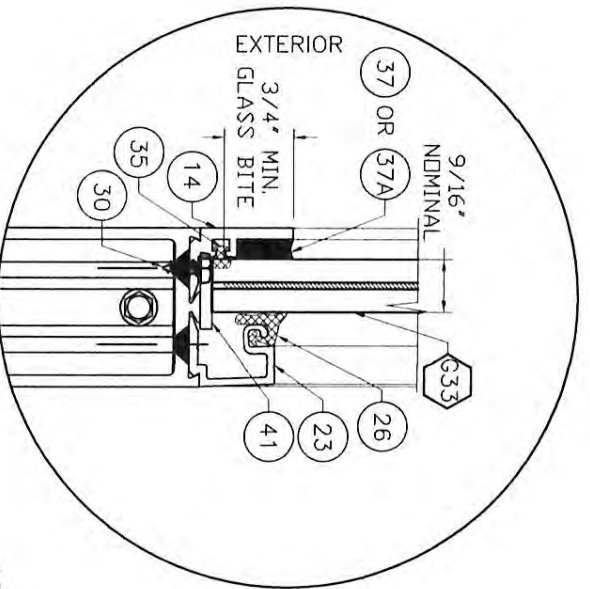
TYPICAL GLAZING DETAILS AT DOORS



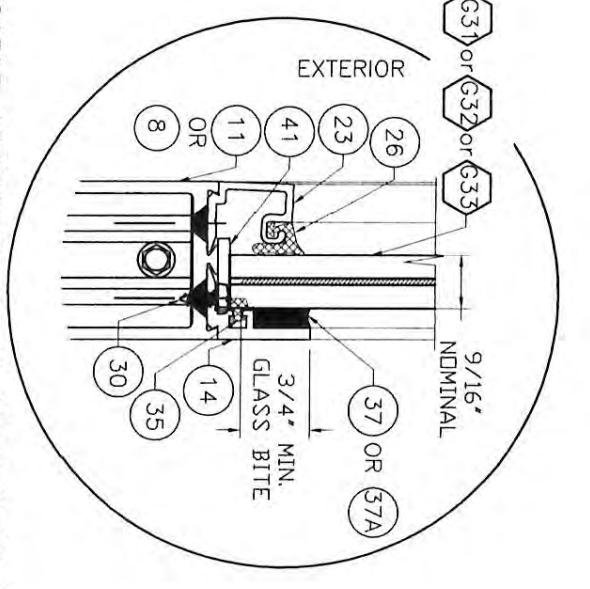
GLASS TYPE **G31**
SCALE: 6" = 1"



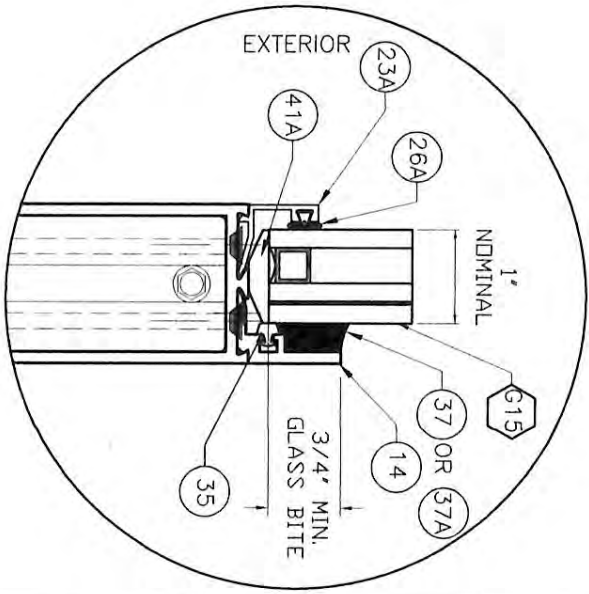
GLASS TYPE **G32**



GLASS TYPE **G33**



APPLICABLE ALTERNATE DETAIL WITH DOOR GLASS STOPS REVERSED FOR ALL GLASS TYPES
VALID ONLY FOR 3'-6" X 7'-0" OR 7'-0" X 7'-0" SINGLE/PAIR OF DOORS RESPECTIVELY



GLASS TYPE **G15**

GLASS SCHEDULE FOR 3'-6" X 8'-0" OR 7'-0" X 8'-0" DOORS *

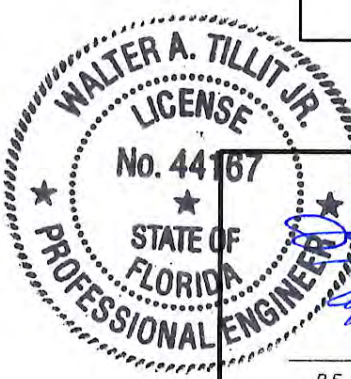
GLASS LABEL	GLASS COMPOSITION	INTERLAYER MANUFACTURER NAME	MAXIMUM D.L.O.	MAX. ASD DESIGN PRESSURE RATING FOR GLASS (P.S.F) W/ (57) SILICONE	MAX. ASD DESIGN PRESSURE RATING FOR GLASS (P.S.F) W/ (57A) SILICONE
G31	9/16" NOMINAL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS, AND A 0.090" SAFLEX PVB INTERLAYER	EASTMAN CHEMICAL COMPANY		+70, -80	+70, -70
G32	9/16" NOMINAL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS, AND A 0.100" SAFLEX PVB INTERLAYER	EASTMAN CHEMICAL COMPANY	32 5/16" x 82 3/16"	+70, -80	+70, -70
G33	9/16" NOMINAL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS, AND A 0.075" SAFLEX C.P. STORM GLASS INTERLAYER	EASTMAN CHEMICAL COMPANY		+70, -80	+70, -70
G15	1" NOMINAL THICKNESS INSULATED GLASS CONSISTING OF 3/16" TEMPERED GLASS ON 5/16" SPACER & 3/16" H.S. GLASS OVER 0.075" SAFLEX C.P. STORM GLASS INTERLAYER OVER 3/16" H.S. GLASS	EASTMAN CHEMICAL COMPANY		+70, -70	+70, -70

TYPICAL DOOR GLASS SIZE= D10 +1 1/2"

* SEE SHEET 1, GENERAL NOTE #3, FOR MAX. ASD PRESSURE RATING WHEN SPECIFIC HARDWARE IS USED.

GLASS SCHEDULE FOR 4'-0" X 8'-0" OR 8'-0" X 8'-0" DOORS

GLASS LABEL	GLASS COMPOSITION	INTERLAYER MANUFACTURER NAME	MAXIMUM D.L.O.	MAX. ASD DESIGN PRESSURE RATING FOR GLASS (P.S.F) W/ (57) OR (57A) SILICONE
G33	9/16" NOMINAL THICKNESS LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. GLASS, AND A 0.075" SAFLEX C.P. STORM GLASS INTERLAYER	EASTMAN CHEMICAL COMPANY	38 3/4" x 82 9/16"	+70, -70
G15	1" NOMINAL THICKNESS INSULATED GLASS CONSISTING OF 3/16" TEMPERED GLASS ON 5/16" SPACER & 3/16" H.S. GLASS OVER 0.075" SAFLEX C.P. STORM GLASS INTERLAYER OVER 3/16" H.S. GLASS	EASTMAN CHEMICAL COMPANY		+70, -70



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 EB-0006719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT

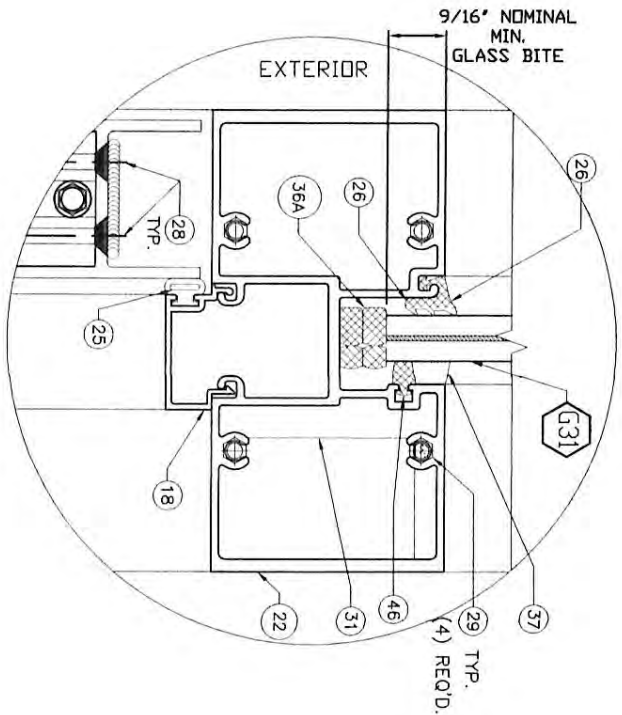
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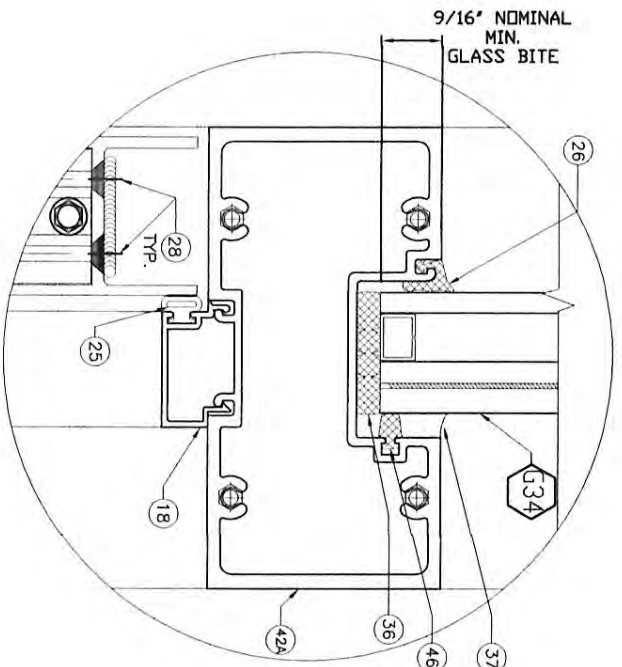
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 DATE: 04/10/18
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SHEET 9 OF 26

TYPICAL GLAZING DETAILS FOR TRANSOMS
VALID ONLY FOR 3'-6" x 8'-0" & 7'-0" x 8'-0" SINGLE/PAIR OF DOORS RESPECTIVELY



GLASS TYPE G31
 SCALE: 6" = 1"



GLASS TYPE G34
 SCALE: 6" = 1"

GLASS SCHEDULE FOR 3'-6" x 8'-0" (MAX.) OR 7'-0" x 8'-0" (MAX.) DOORS TRANSOMS		INTERLAYER MANUFACTURER NAME	MAXIMUM D.L.O.	MAX. ASD DESIGN PRESSURE RATING FOR GLASS (P.S.F.) W/ SILICONE
GLASS LABEL	GLASS COMPOSITION			
G31	9/16" NOMINAL THICKNESS LAMINATED GLASS, CONSISTING OF TWO 1/4" H.S. GLASS, AND A 0.090" SAFLEX PVB INTERLAYER	EASTMAN CHEMICAL COMPANY	SEE SCHEDULE ON SHEET 16	+70, -80
G34	1 5/16" NOMINAL THICKNESS INSULATED LAMINATED GLASS CONSISTING OF TWO 1/4" H.S. + 1/2" AIR SPACE + 1/4" H.S. + 0.090" SAFLEX PVB INTERLAYER + 1/4" H.S.	EASTMAN CHEMICAL COMPANY		+70, -80



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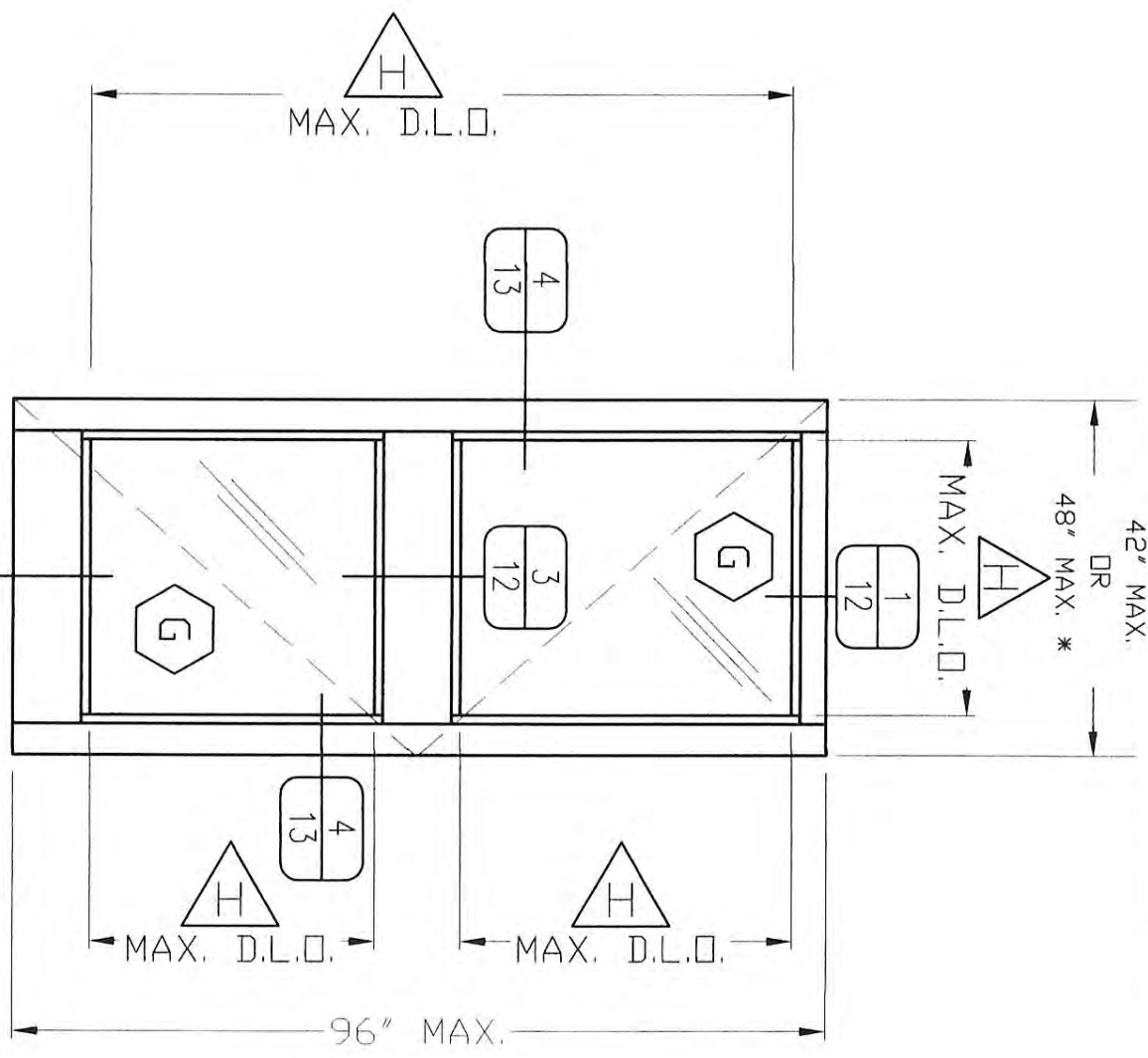
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**TYPICAL PANEL ELEVATIONS FOR MSD-375 & WSD-500 IMPACT SINGLE/PAIR OF DOORS
(WET GLAZED)**



FOOT NOTES:

SINGLE PANEL

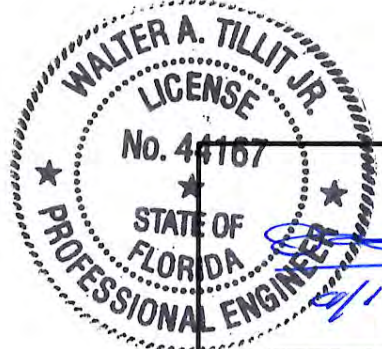
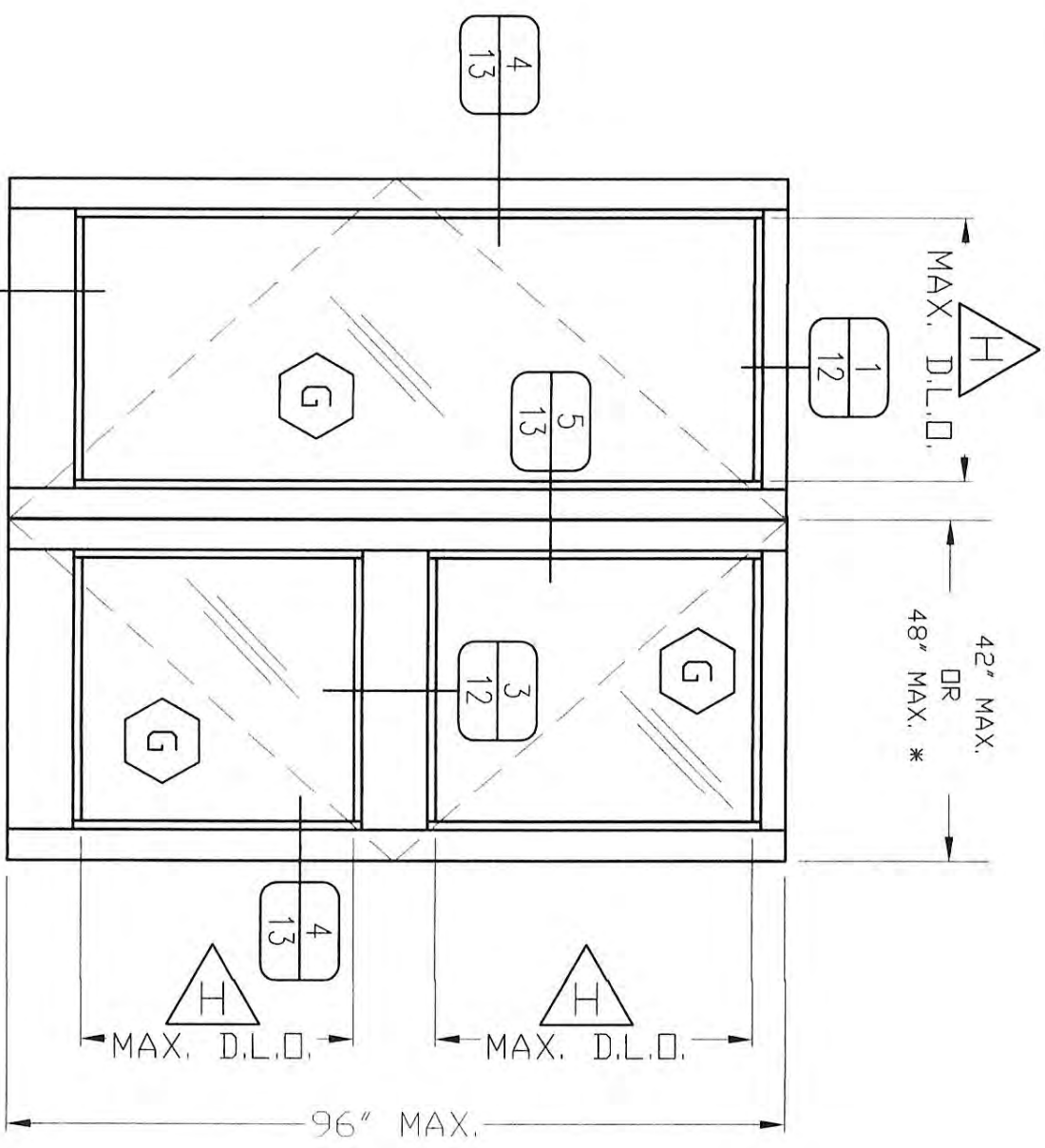
DOUBLE PANEL

G FOR GLAZING DETAILS AND GLASS SCHEDULE SEE SHEET 9.

H FOR MAXIMUM DAYLIGHT OPENING (D.L.O.) SEE SCHEDULE ON SHEET 9.

* SEE GENERAL NOTES #2 & 3 ON SHEET 1 FOR LIMITATIONS ON MAX. A.S.D. PRESSURE RATINGS, USABLE GLASS & HARDWARE.

L.H. SHOWN
R.H. OPPOSITE



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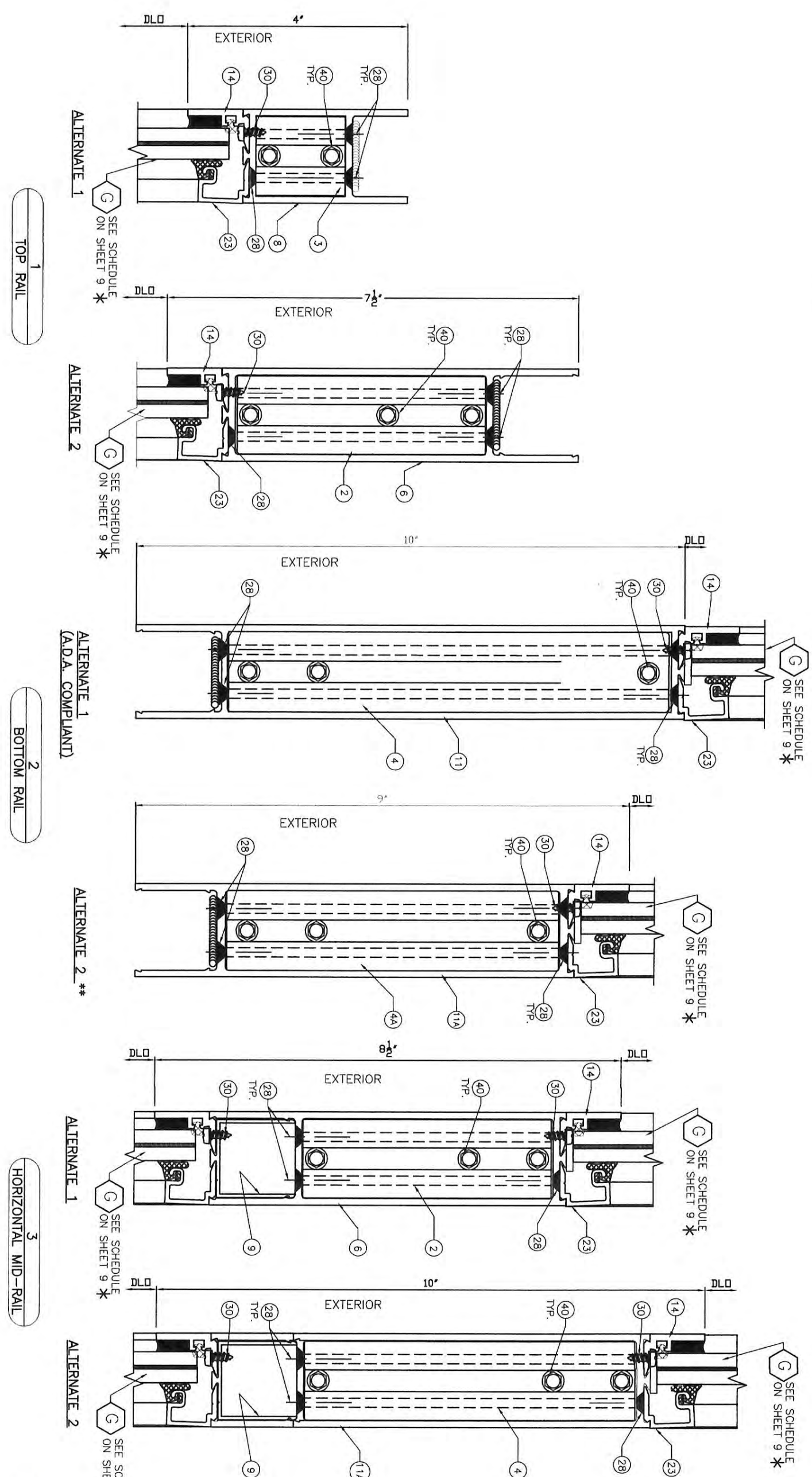
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			SHEET 11 OF 26

DOOR'S TOP AND BOTTOM RAILS AND HORIZONTAL MID-RAIL DETAILS (SIDE VIEWS)

SCALE: 6" = 1"



* LAMINATED GLASS SHOWN. SEE GLAZING DETAIL FOR G15 INSULATED GLASS ON SHEET 9.
 * * BOTTOM RAIL (11A) ONLY ALLOWED AT 3'-6" WIDE DOOR PANELS (SINGLE OR PAIR OF DOORS).

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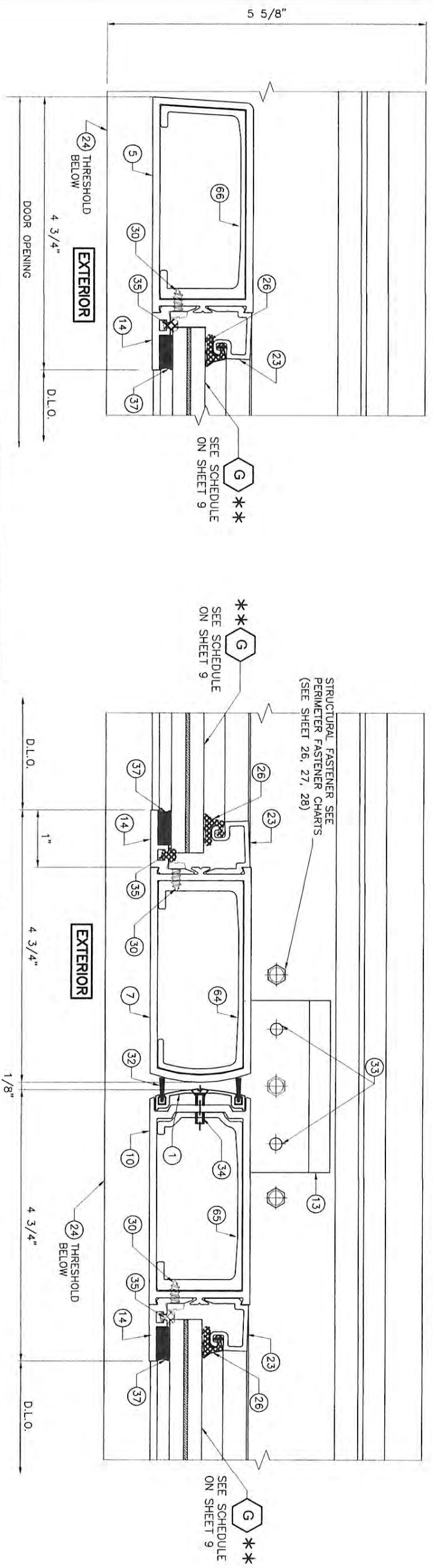
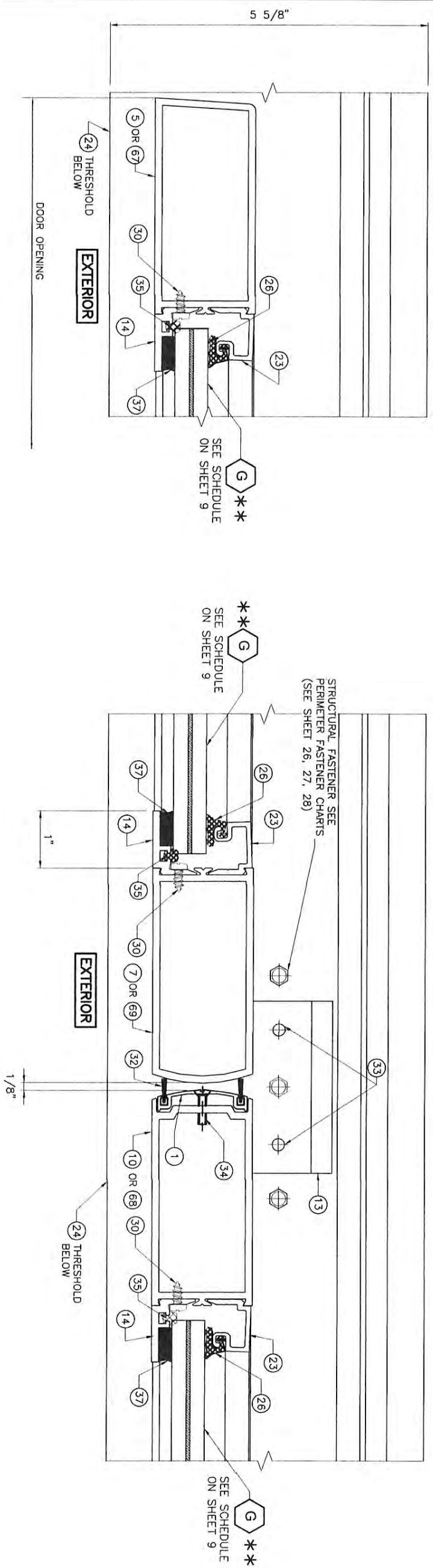
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DOOR'S HINGE/LOCK/MEETING STILES AND THRESHOLD CONNECTION DETAILS (PLAN VIEWS)

SCALE: 6" = 1"



4A*
LOCK STILE AT SINGLE DOOR ONLY

* DETAILS 4A AND 5A ARE ONLY REQUIRED AND APPLICABLE WHEN A REGENT 5770 CONCEALED PANIC DEVICE IS USED.
* LAMINATED GLASS SHOWN, SEE GLAZING DETAIL FOR G15 INSULATING GLASS ON SHEET 9.

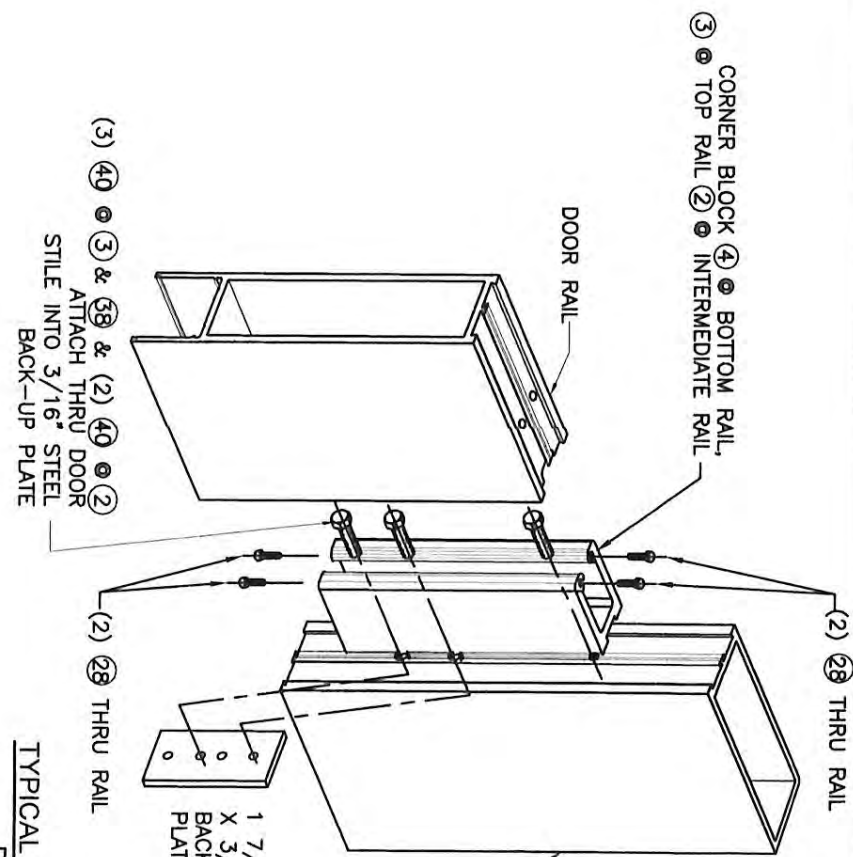
5A*
MEETING STILES & THRESHOLD CONNECTION

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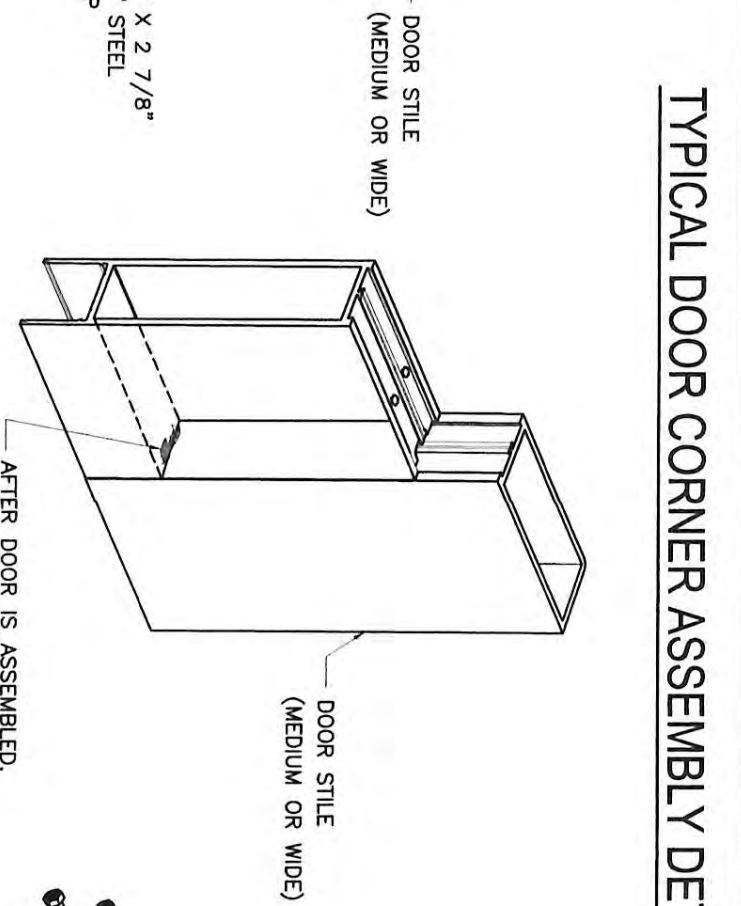
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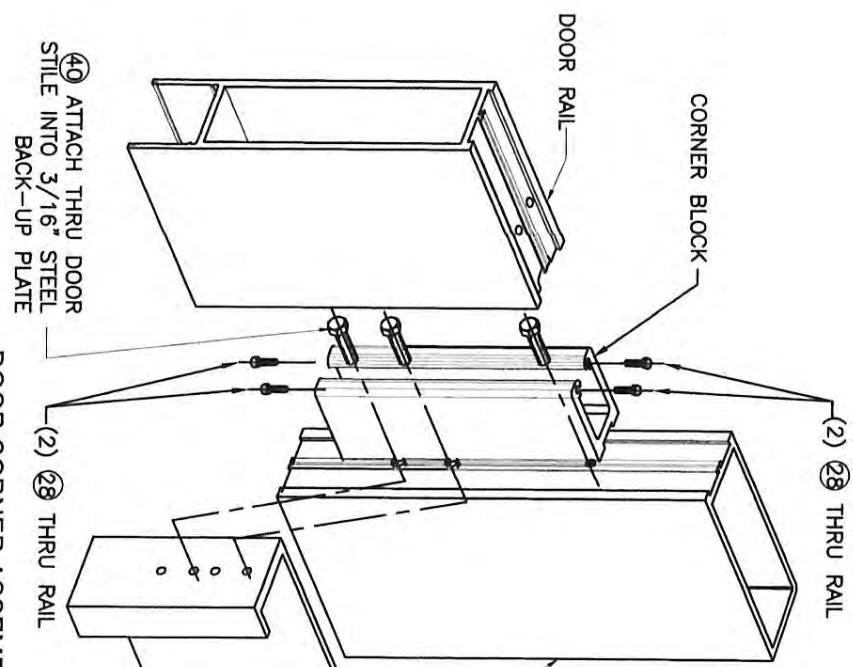
TYPICAL DOOR CORNER ASSEMBLY DETAILS (ISOMETRIC)



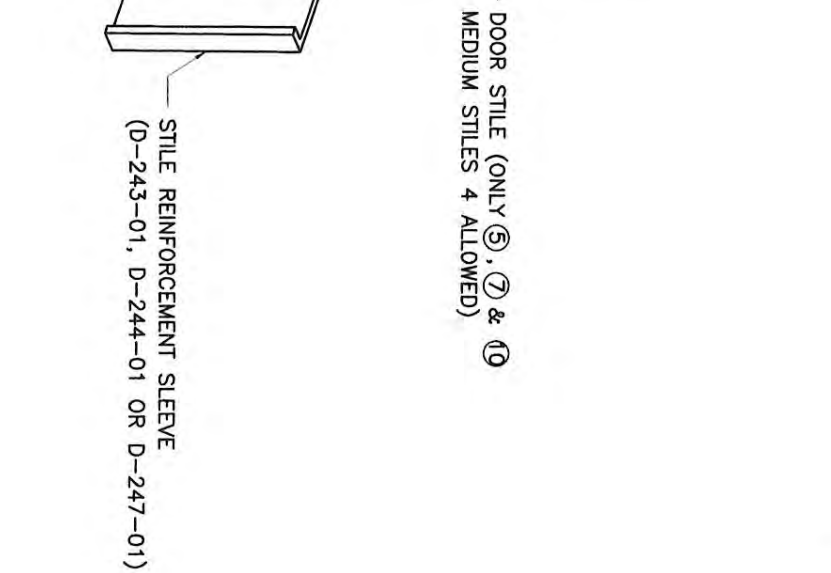
TYPICAL DOOR CORNER ASSEMBLY
DETAIL (ISOMETRIC)



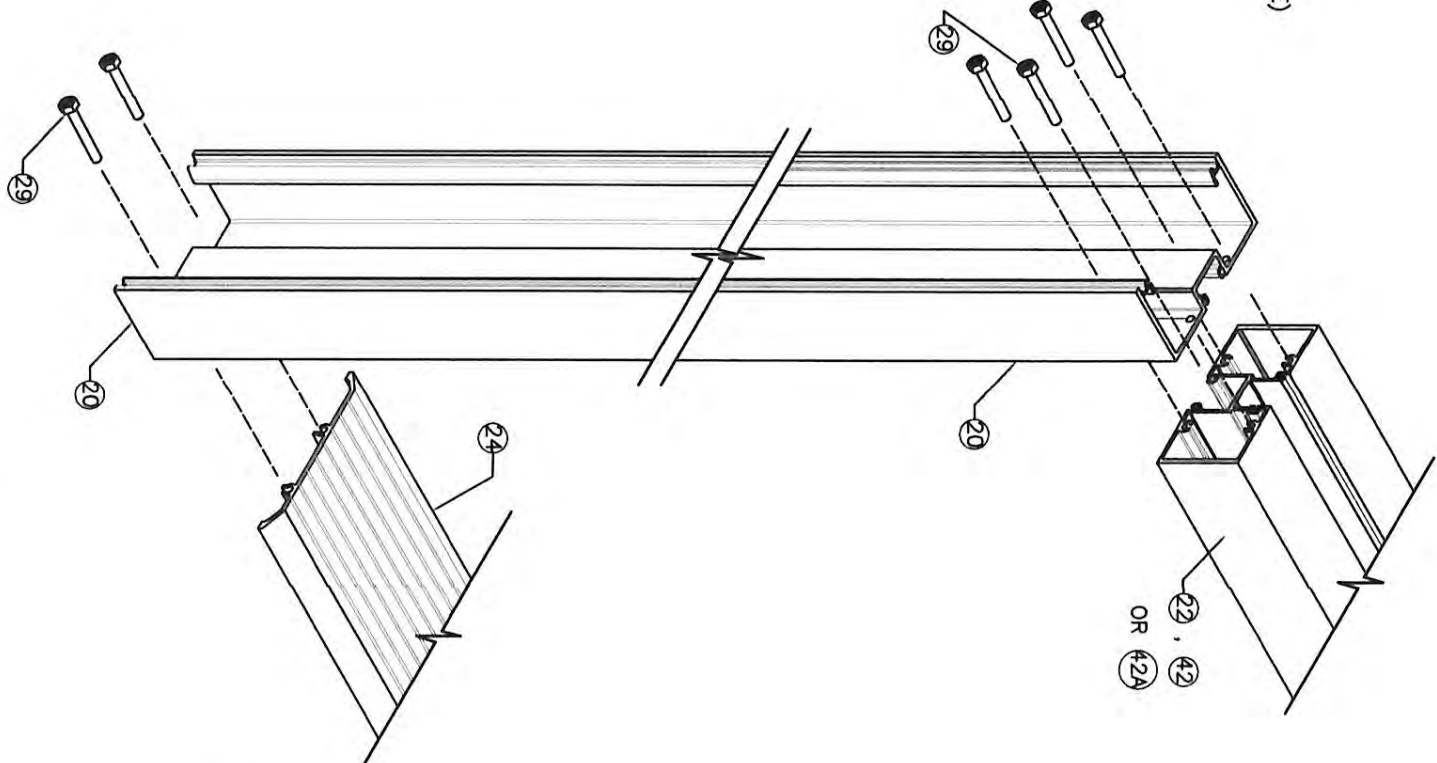
AFTER DOOR IS ASSEMBLED, DOORS WILL BE WELDED ON THE OUTSIDE INTERSECTION BETWEEN THE RAIL AND STILE AT W/1/8" x 1/2" LONG ER 5356 FILLET WELD



DOOR CORNER ASSEMBLY DETAIL (ISOMETRIC), ONLY FOR
REGENT 5770 CVR PANIC DEVICE HARDWARE



HEAD AND THRESHOLD ASSEMBLY



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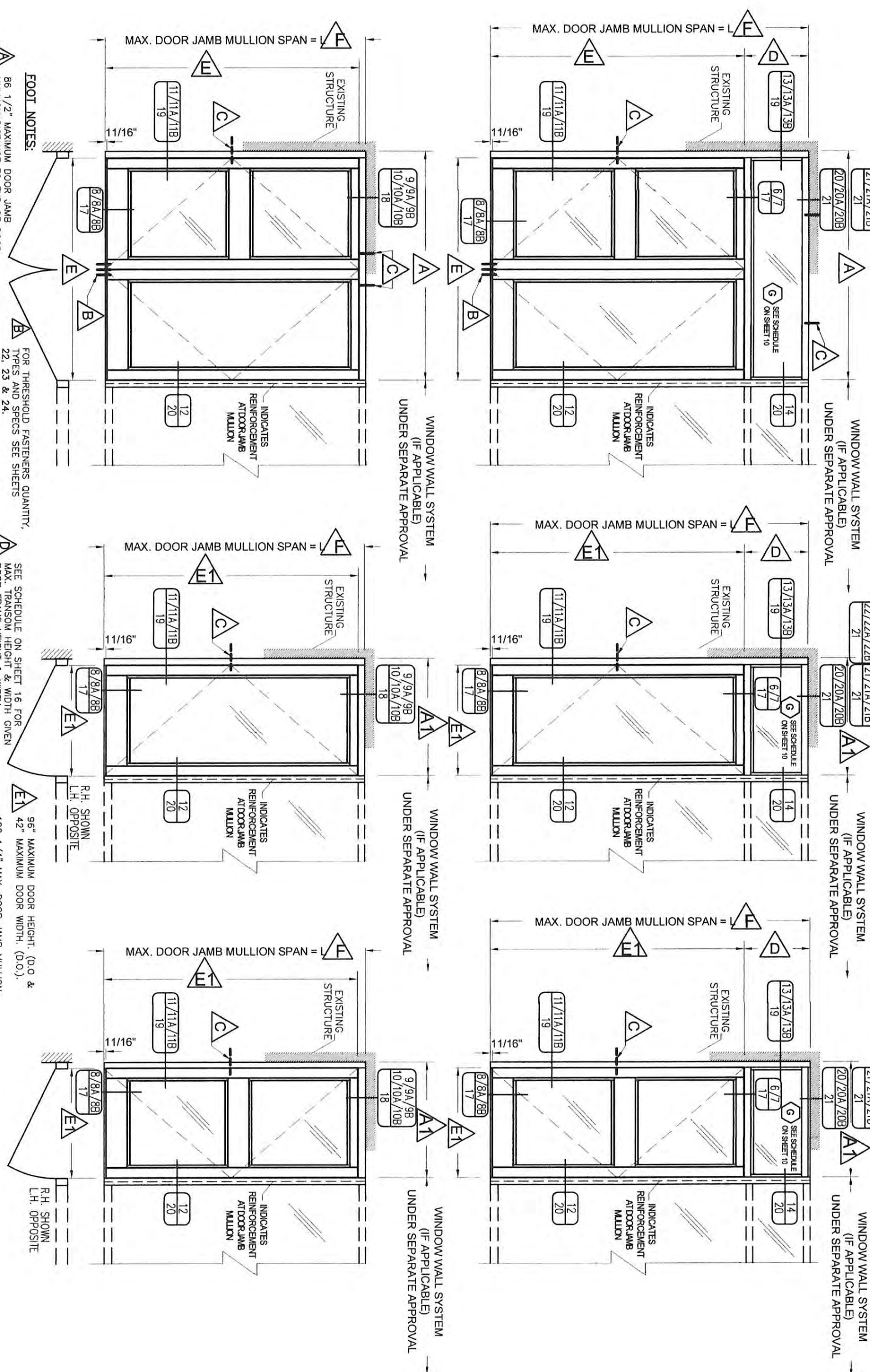
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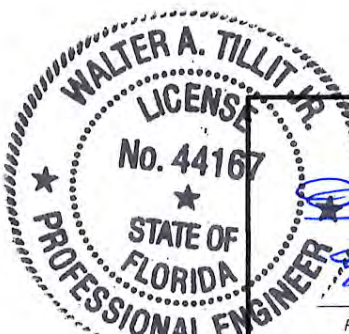
TYPICAL EXTERIOR ELEVATIONS FOR MSD-375 & WSD-500 IMPACT DOOR (WET GLAZED) 3'-6"x8'-0" (SINGLE) & 7'-0"x8'-0" (PAIR)
 CONNECTED TO EXISTING STRUCTURE OR FG-5000, FG-5100 OR FG-5100T ALUMINUM WINDOW WALL SYSTEM FRAMING

MAX. ASD DESIGN PRESSURE RATING WITH LAMINATED GLASS IS +70, -80 psf.
 MAX. ASD DESIGN PRESSURE RATING WITH INSULATED GLASS IS +70, -70 psf.
 MAX. ASD DESIGN PRESSURE RATING WITH RIM PANIC HARDWARE IS +60, -60 psf.



FOOT NOTES:
 A 86 1/2" MAXIMUM DOOR JAMB MULLION DISTANCE TO END OF DOOR.
 A1 44 1/2" MAX. DOOR JAMB MULLION DISTANCE TO END OF DOOR.
 B FOR THRESHOLD FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 22, 23 & 24.
 C FOR JAMB & HEAD FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 22, 23 & 24.

D SEE SCHEDULE ON SHEET 16 FOR MAX. TRANSOM HEIGHT & WIDTH GIVEN DOOR FRAME HEIGHT & WIDTH.
 E 96" MAXIMUM DOOR HEIGHT (D.O.) & 84" MAXIMUM DOOR WIDTH (D.O.).
 E1 96" MAXIMUM DOOR HEIGHT (D.O.) & 42" MAXIMUM DOOR WIDTH (D.O.).
 F 120 1/4" MAX. DOOR JAMB MULLION SPAN FOR DOOR W/ TRANSOM & 98 1/2" MAX. DOOR JAMB MULLION SPAN FOR DOOR W/O TRANSOM.



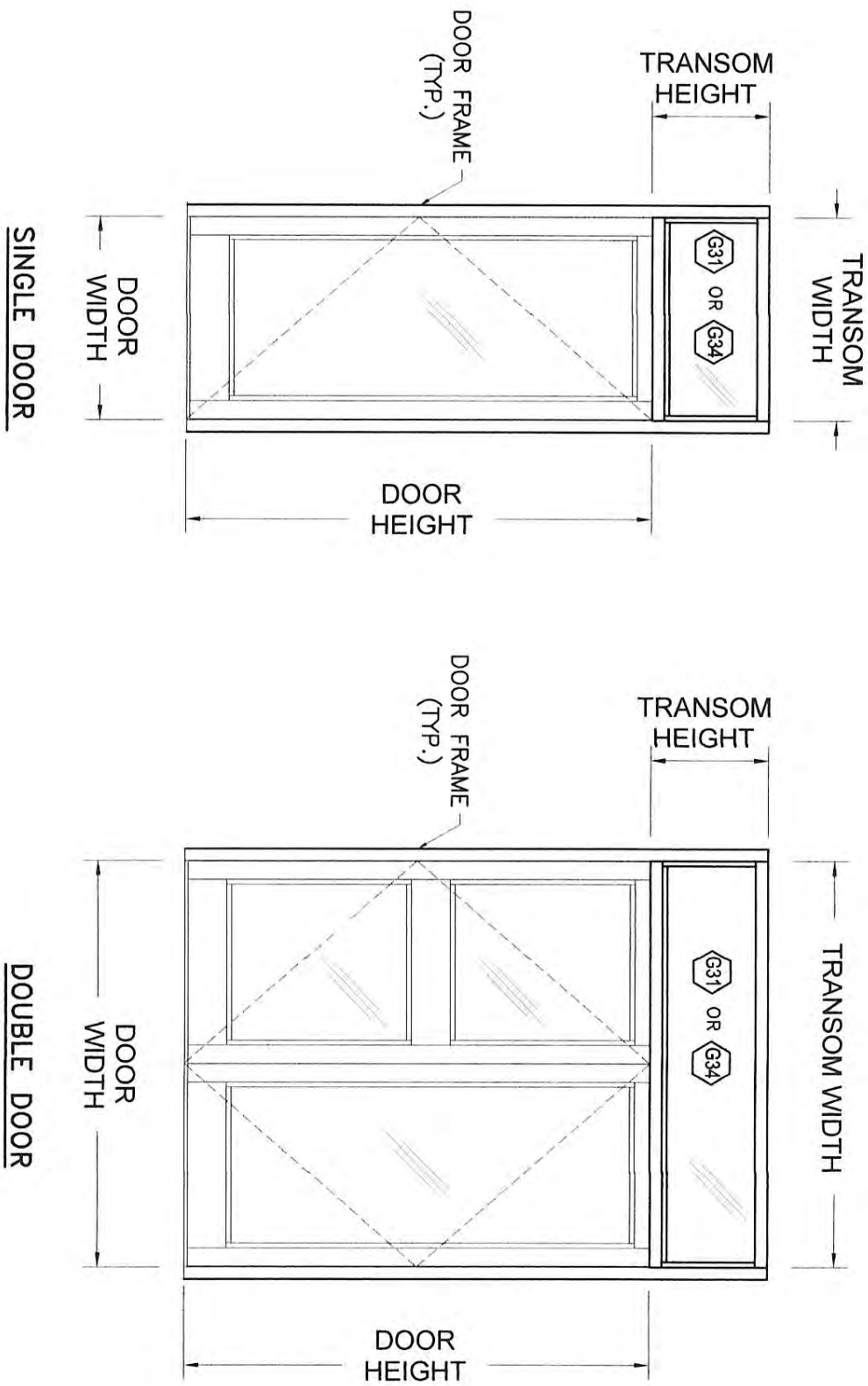
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**MAXIMUM TRANSOM WIDTH & HEIGHT SCHEDULE GIVEN MAX. WIDTH & HEIGHT FOR DOOR
(VALID ONLY FOR 3'-6"x8'-0" (MAX) OR 7'-0"x8'-0" (MAX) SINGLE & PAIR OF DOORS RESPECTIVELY)**

DOOR WIDTH (IN)	DOOR HEIGHT (IN)	TRANSOM WIDTH (IN)		TRANSOM HEIGHT (IN)
		SINGLE	DOUBLE	
30"	60"	30"	60"	36"
30"	60"	30"	60"	24"
36"	72"	36"	72"	36"
36"	72"	36"	72"	24"
42"	84"	42"	84"	30"
42"	84"	42"	84"	24"



SINGLE DOOR

DOUBLE DOOR



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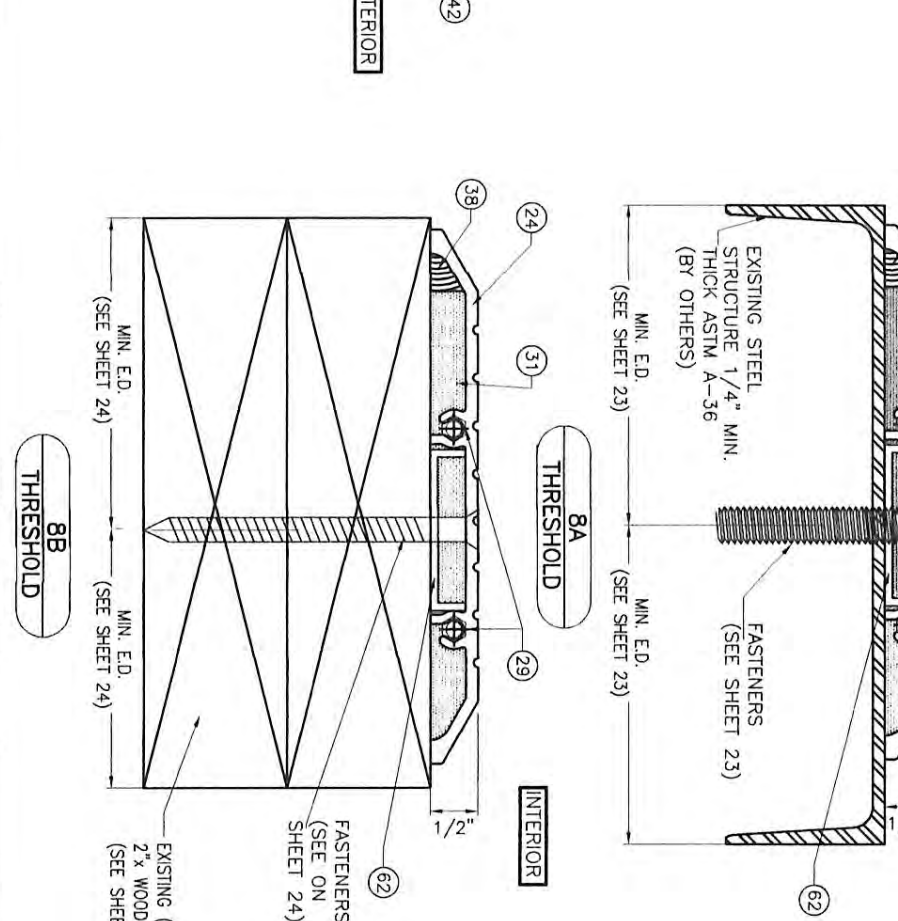
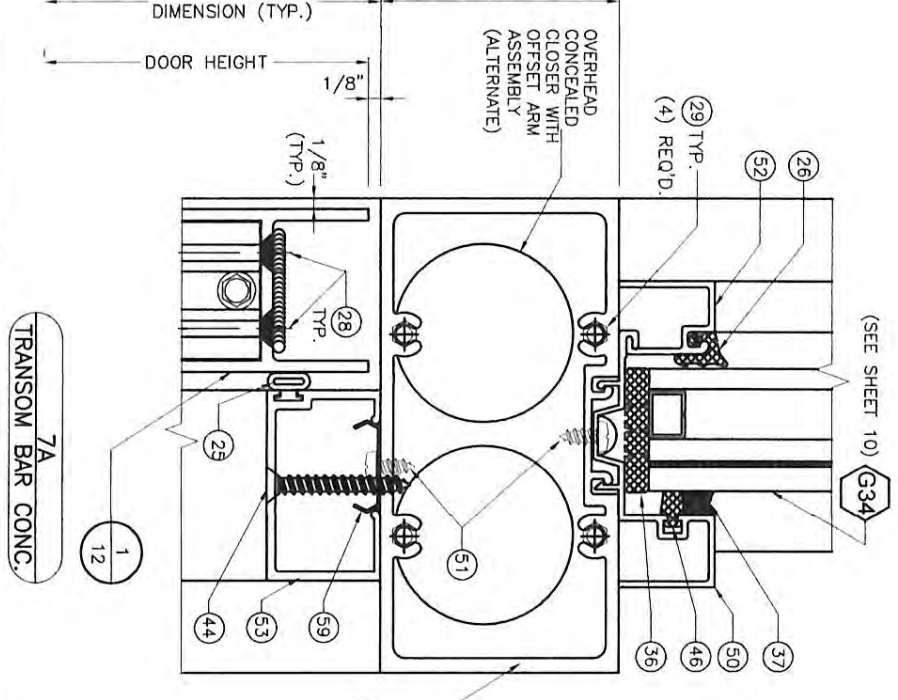
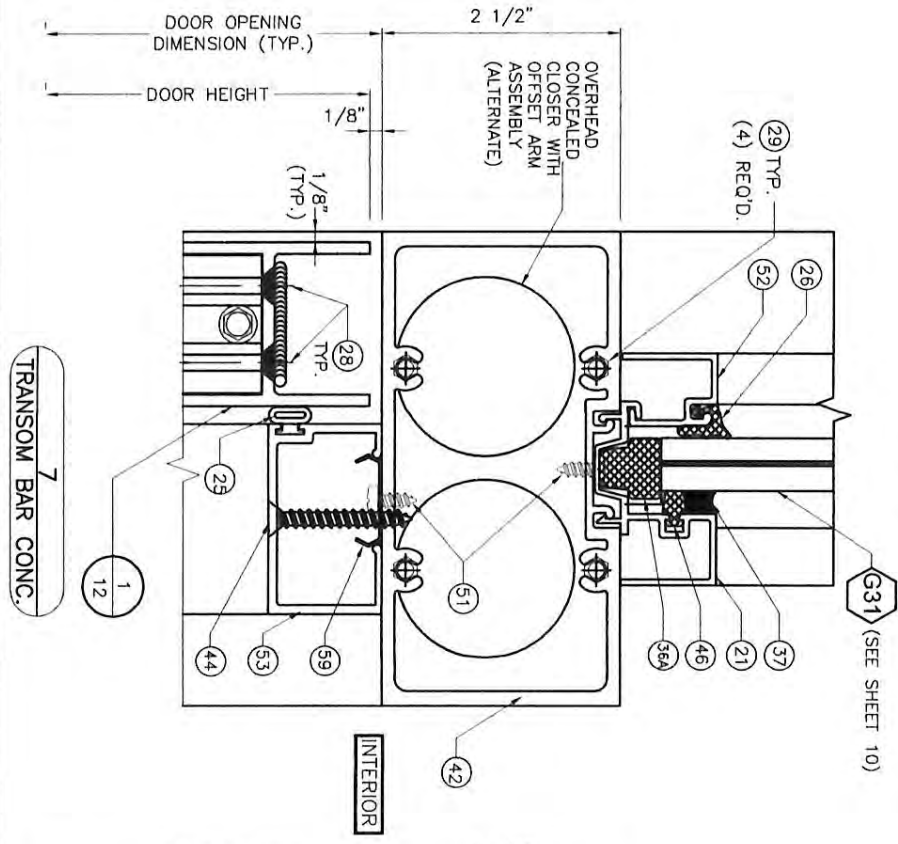
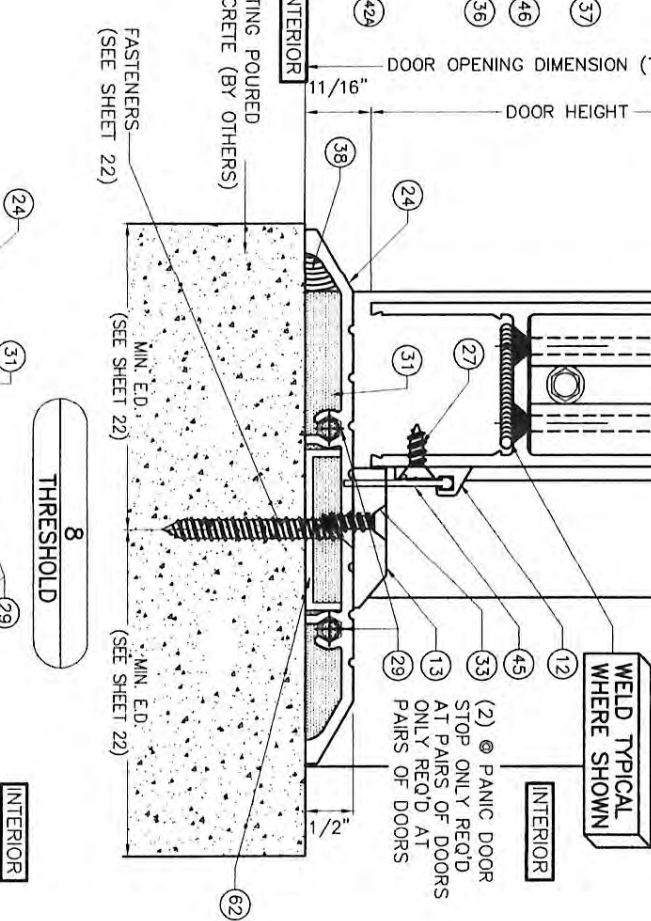
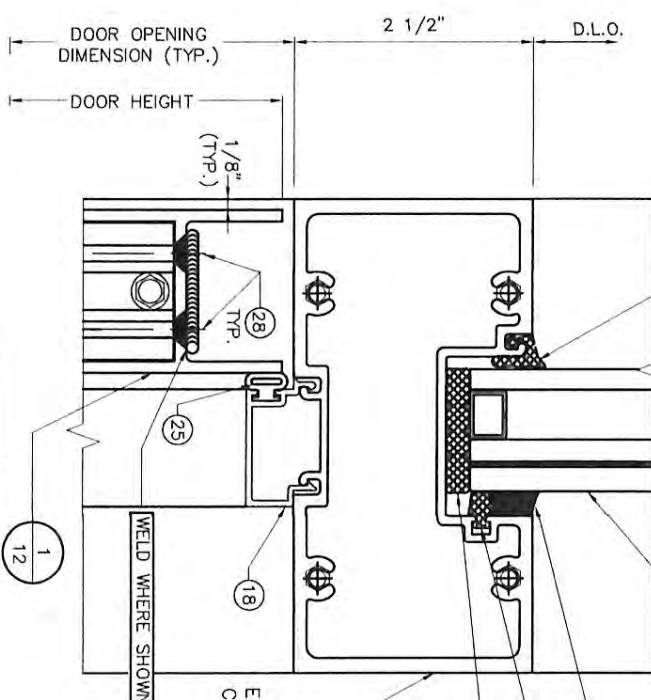
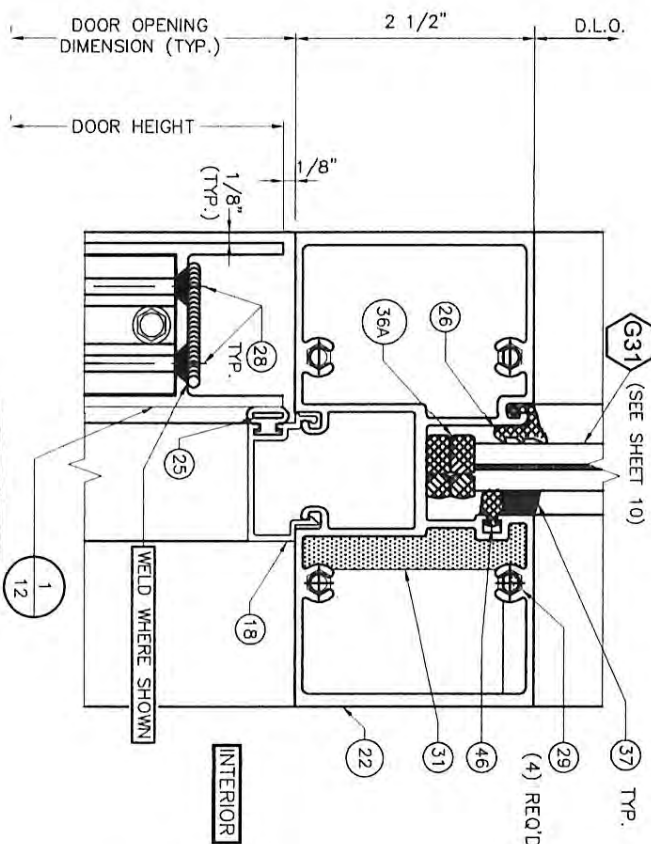
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TRANSOM BAR CONNECTION DETAILS TO FG-5000, FG-5100 AND FG-5100T *
*** VALID ONLY FOR 3'-6"X7'-0" OR 7'-0"X8'-0" DOORS AT FG-500, FG-5100 & FG-5100T**

THRESHOLD CONNECTION DETAILS
TO FG-5000, FG-5100 & FG-5100T



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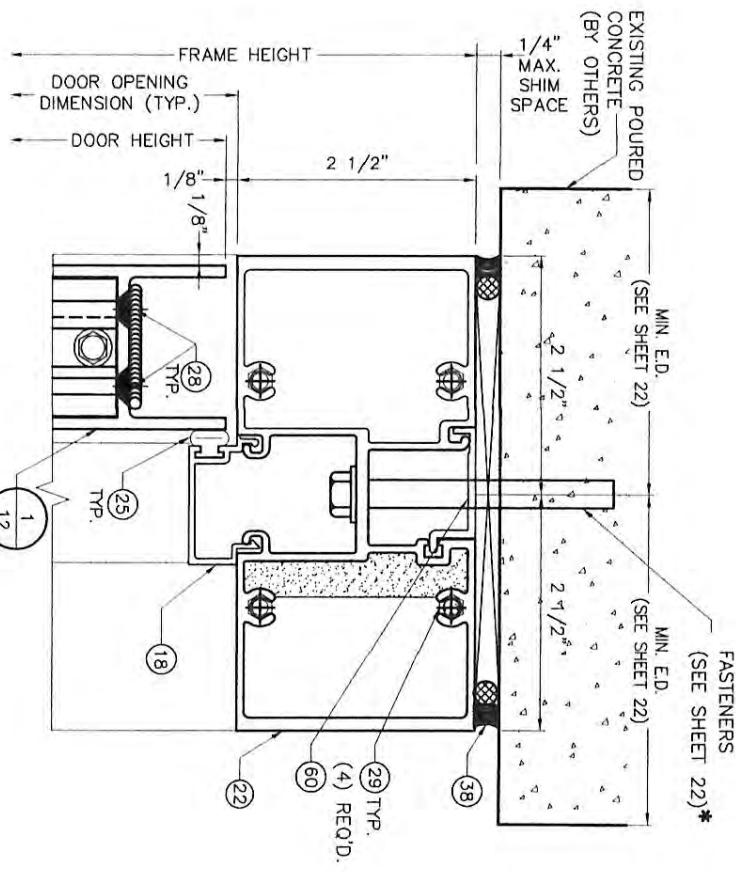
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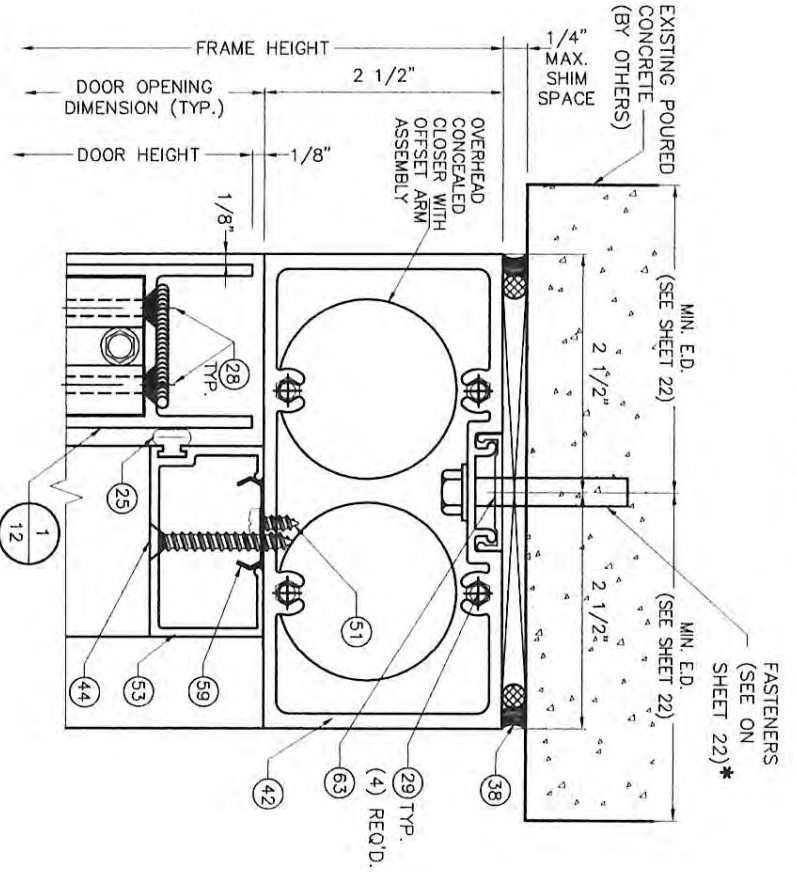
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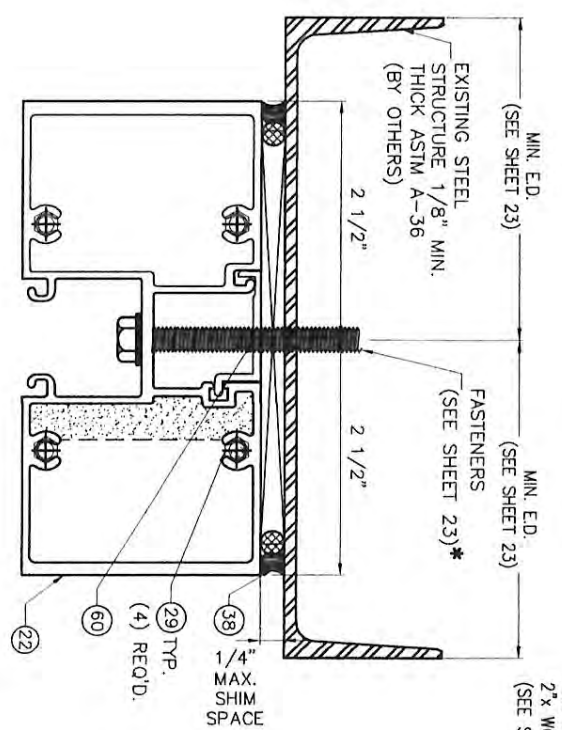
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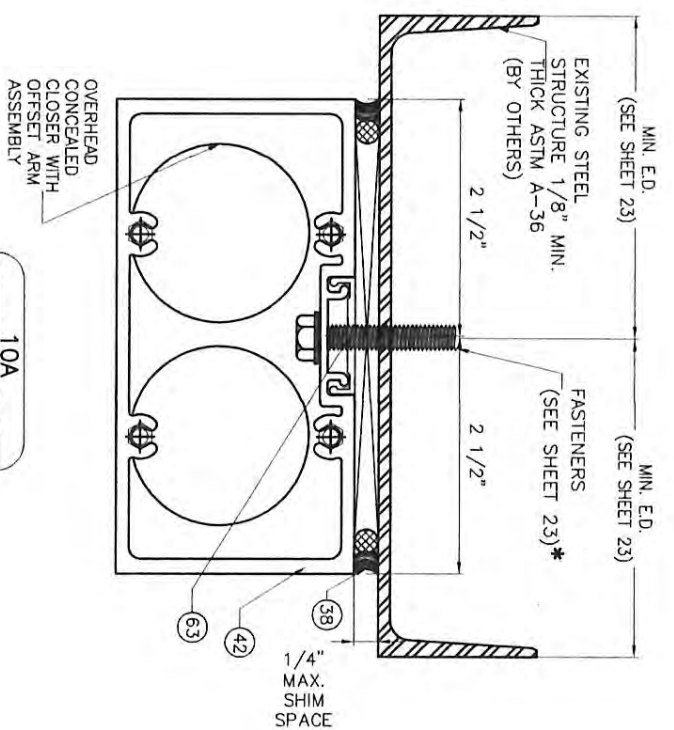
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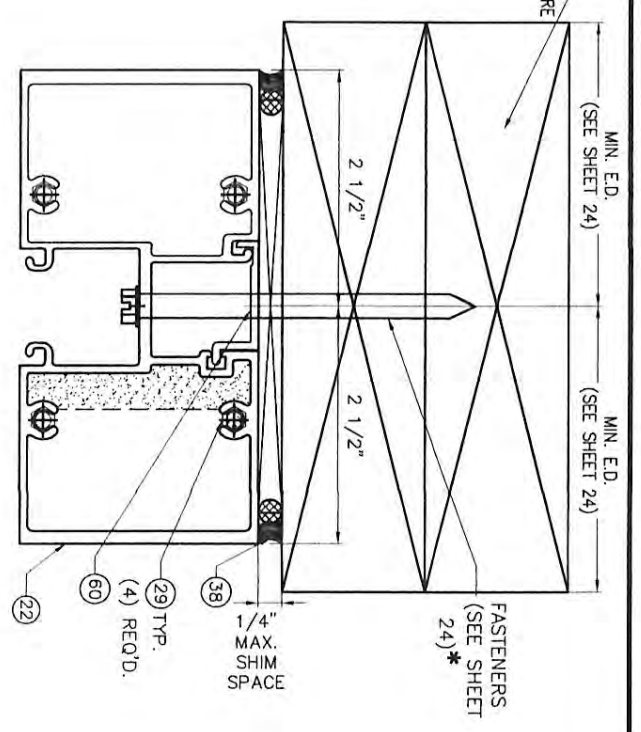
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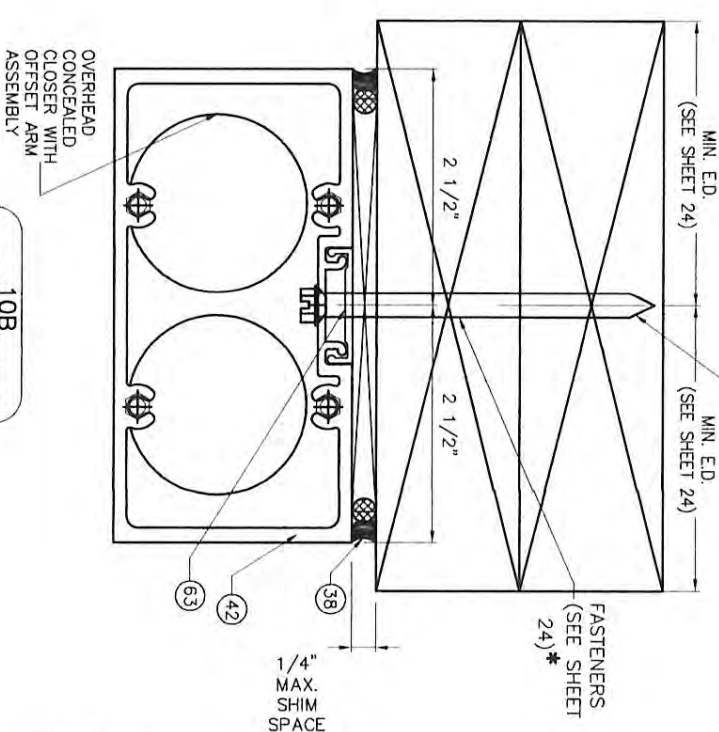
9A
HEADER



10A
HEADER CONC.



9B
HEADER



10B
HEADER CONC.

* ONLY REQUIRED AT PAIRS OF DOORS

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WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

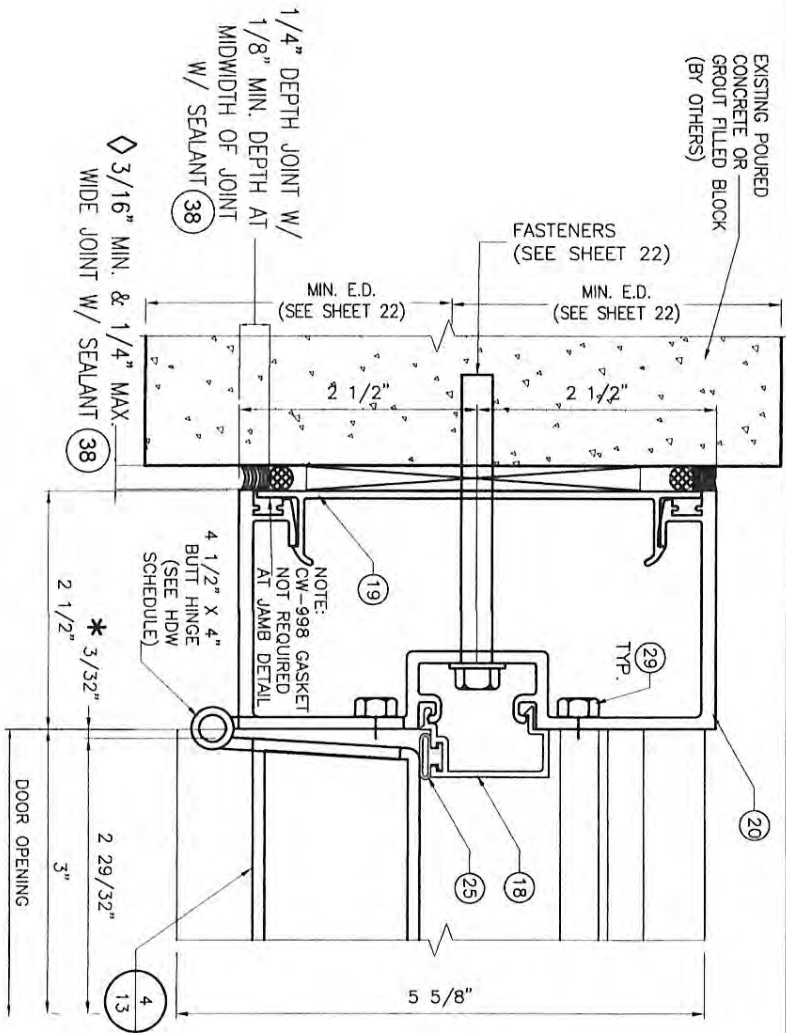
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE)
STILE ALUMINUM ENTRANCE DOOR (WET GLAZED)
LARGE & SMALL MISSILE IMPACT

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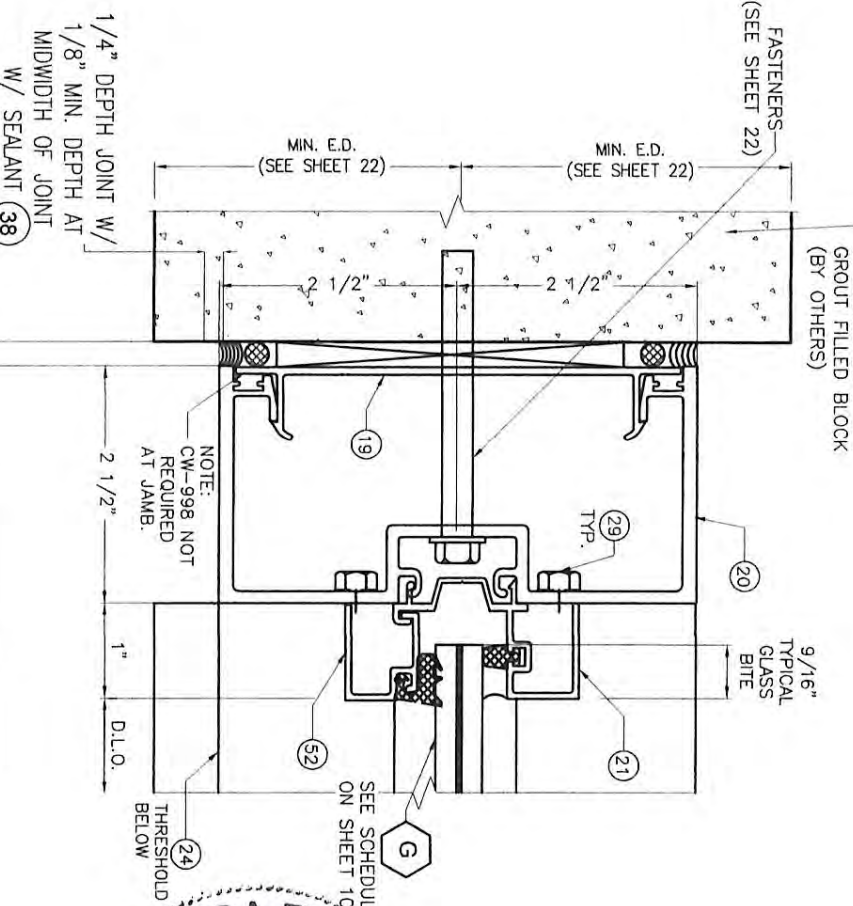
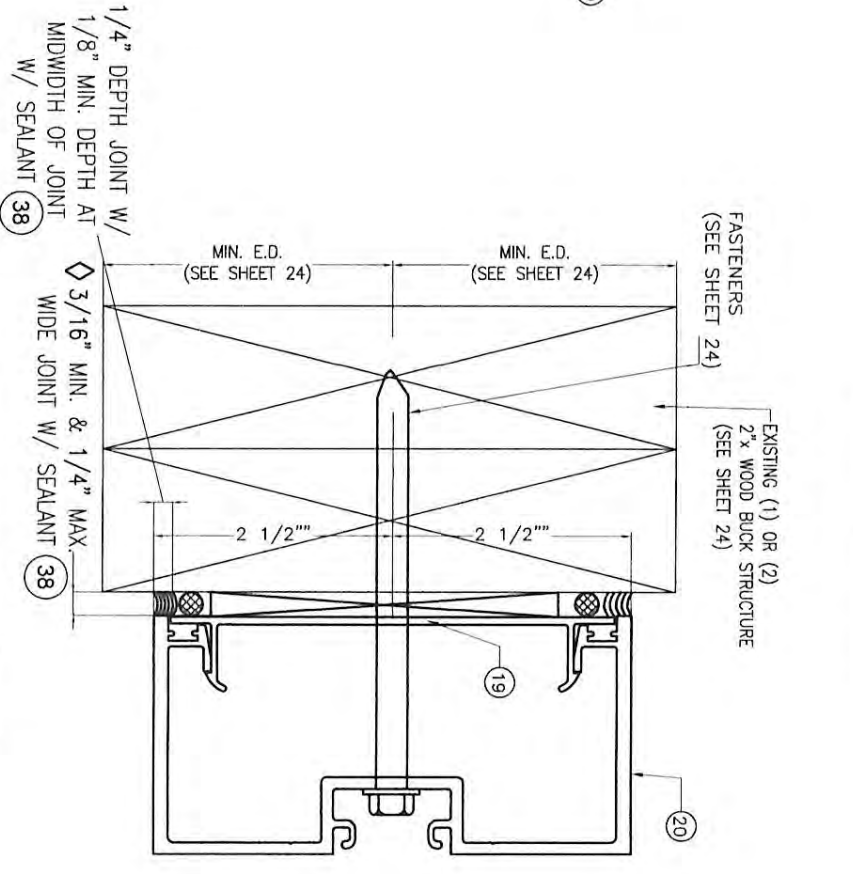
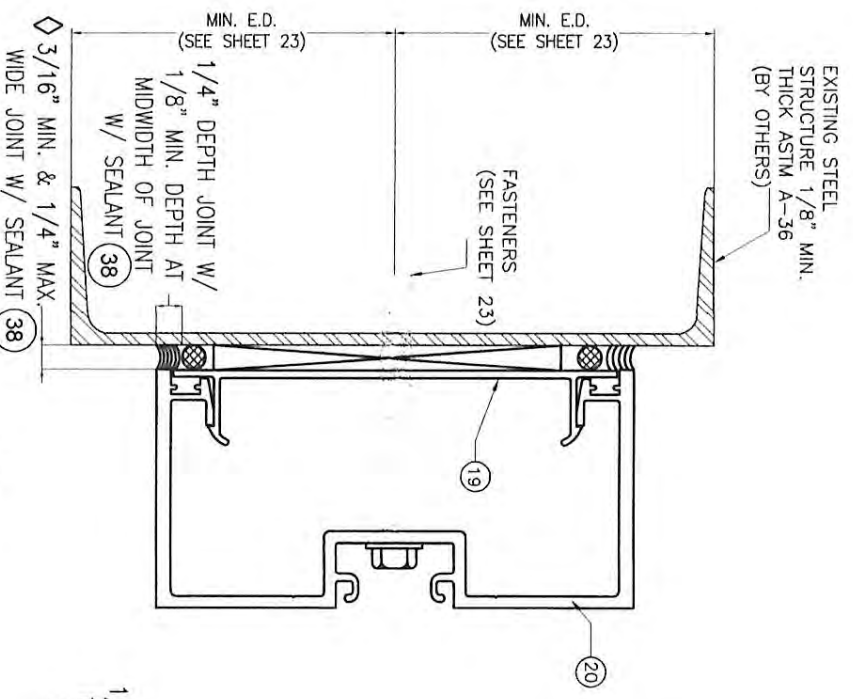
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DRAWN BY: M.L.
DATE: 04/10/18
DRAWING No: 18-019
SHEET 18 OF 26

NOTE:
INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS CONNECTED TO WALL HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.



* NOTE:
3/32\"/>



11A OR 13A
JAMB TO WALL @ TRANSOM

11B OR 13B
JAMB TO WALL @ TRANSOM

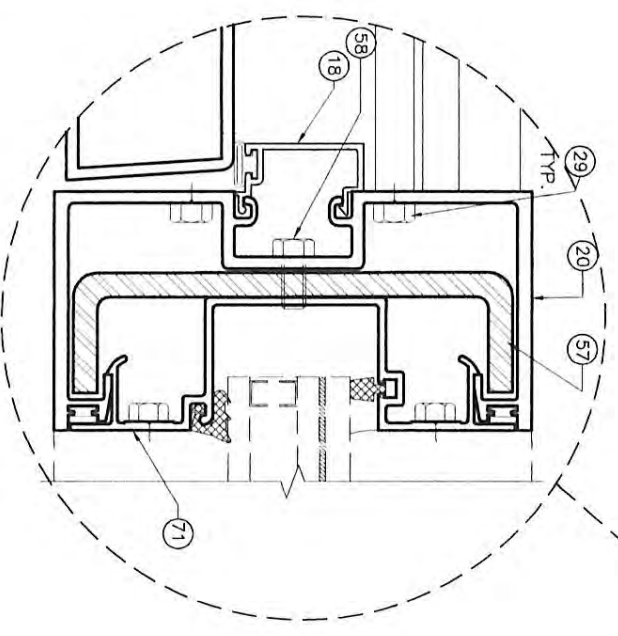
13
JAMB TO WALL @ TRANSOM

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LICENSE
No. 44167
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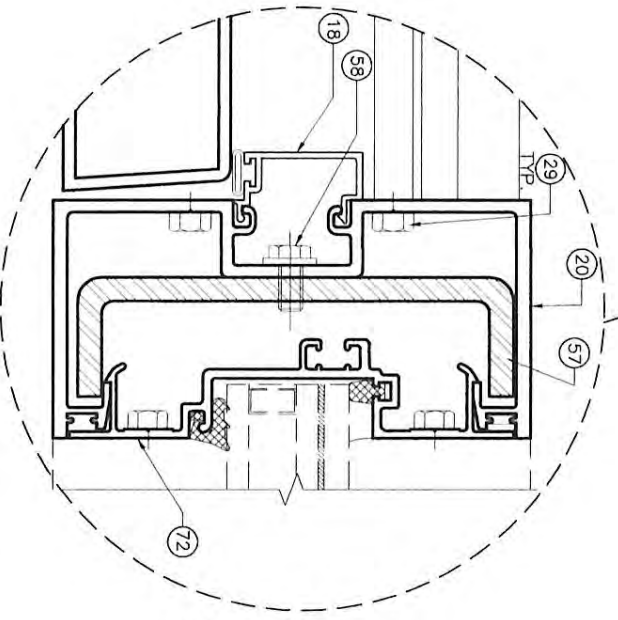
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FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT		DRAWN BY: M.L.	
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	OLD 15-029	04/10/18	

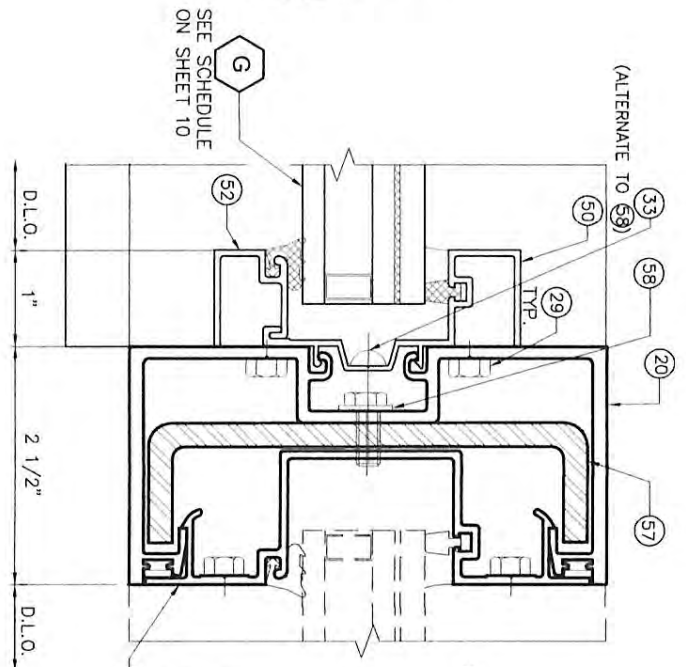
DOOR JAMB MULLION @ DOOR W/FG-5100



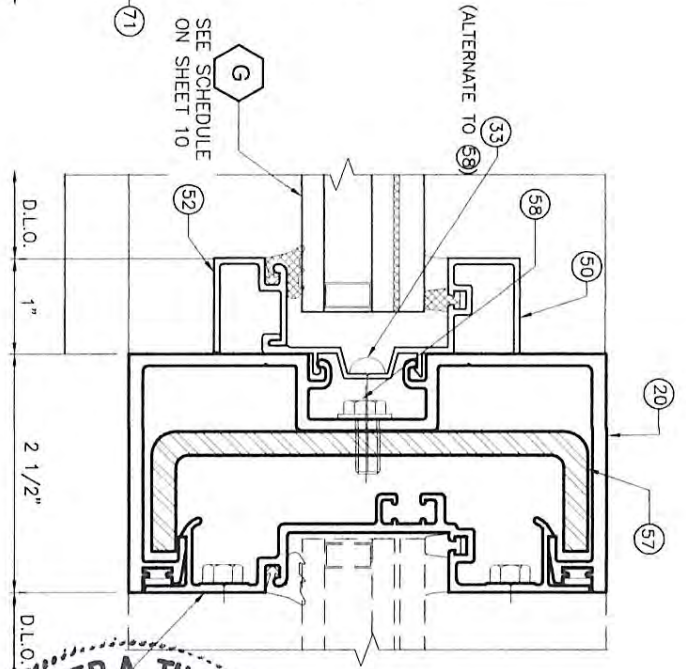
DOOR JAMB MULLION @ DOOR W/FG-5100T



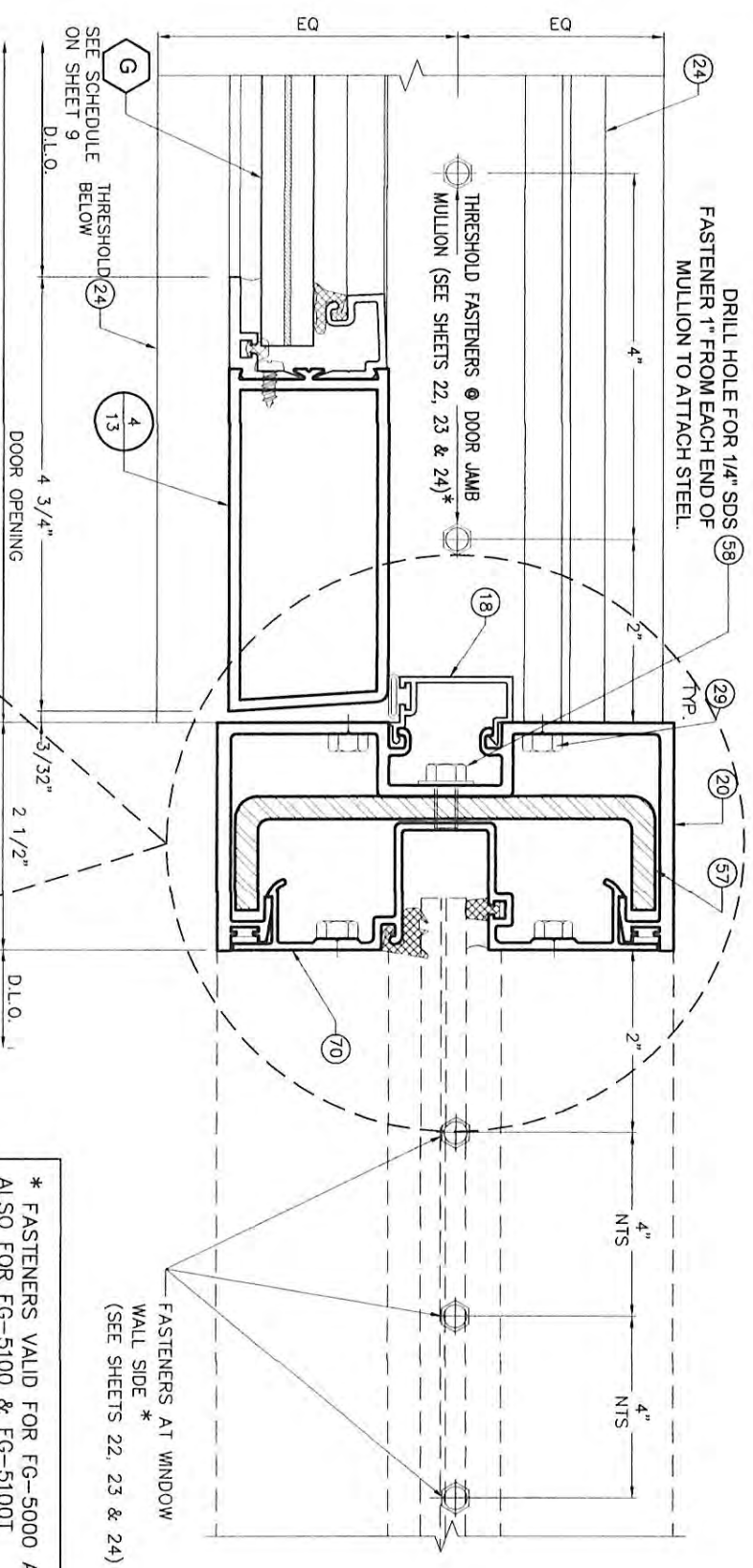
DOOR JAMB MULLION @ TRANSOM W/FG-5100



DOOR JAMB MULLION @ TRANSOM W/FG-5100T

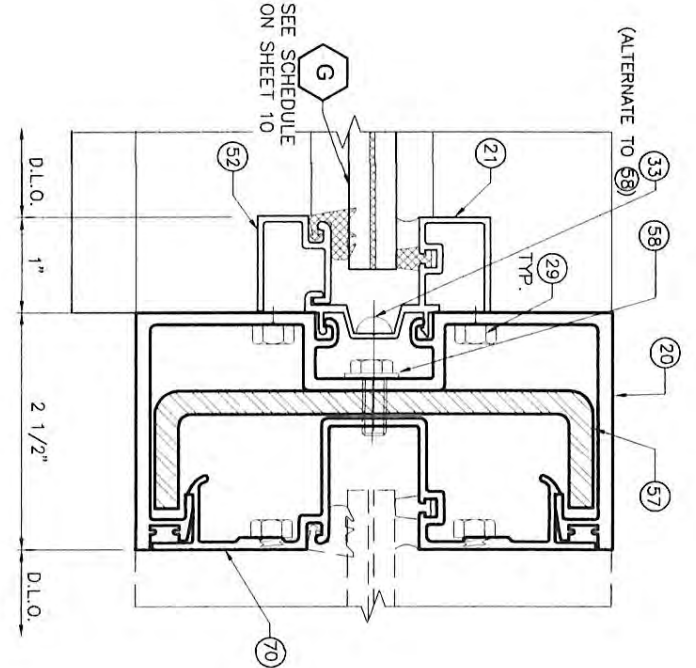


DOOR JAMB MULLION @ DOOR W/FG-5000



* FASTENERS VALID FOR FG-5000 AND ALSO FOR FG-5100 & FG-5100T

DOOR JAMB MULLION @ TRANSOM W/FG-5000



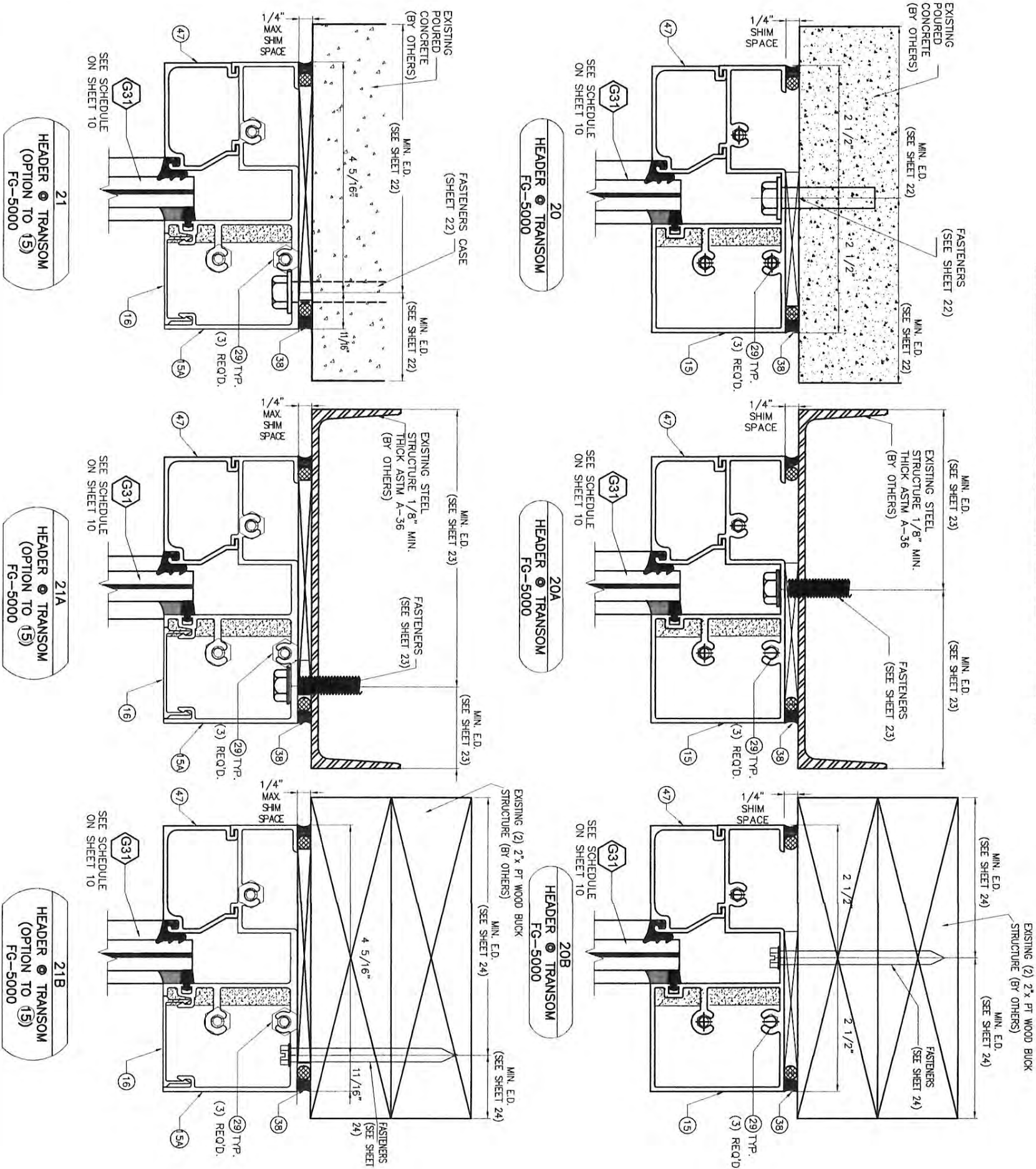
WALTER A. TILLIT JR.
LICENSE
No. 4416
STATE OF FLORIDA
PROFESSIONAL ENGINEER

[Signature]
P.E. SEAL/SIGNATURE/DATE

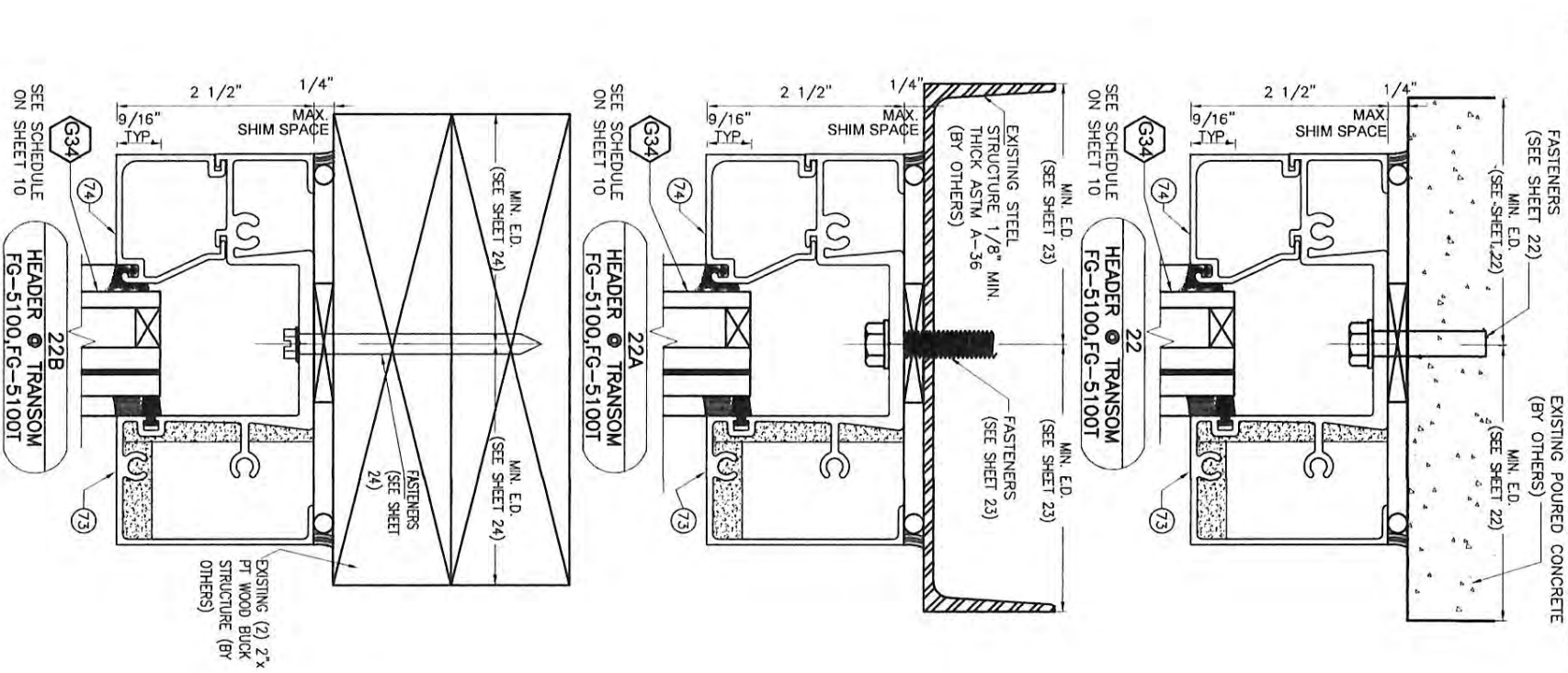
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e-mail: tilteco@aol.com
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FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
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HEADER @ TRANSOM CONNECTION DETAILS AT FG 5000 SYSTEM TO EXISTING STRUCTURE
 (VALID ONLY FOR 3'-6"X8'-0" OR 7'-0"X8'-0" DOORS)



HEADER @ TRANSOM CONN. DETAILS AT FG 5100, FG 5100T SYSTEM TO EXISTING STRUCTURE
 (VALID ONLY FOR 3'-6"X8'-0" OR 7'-0"X8'-0" DOORS)



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 LICENSE
 No. 44167
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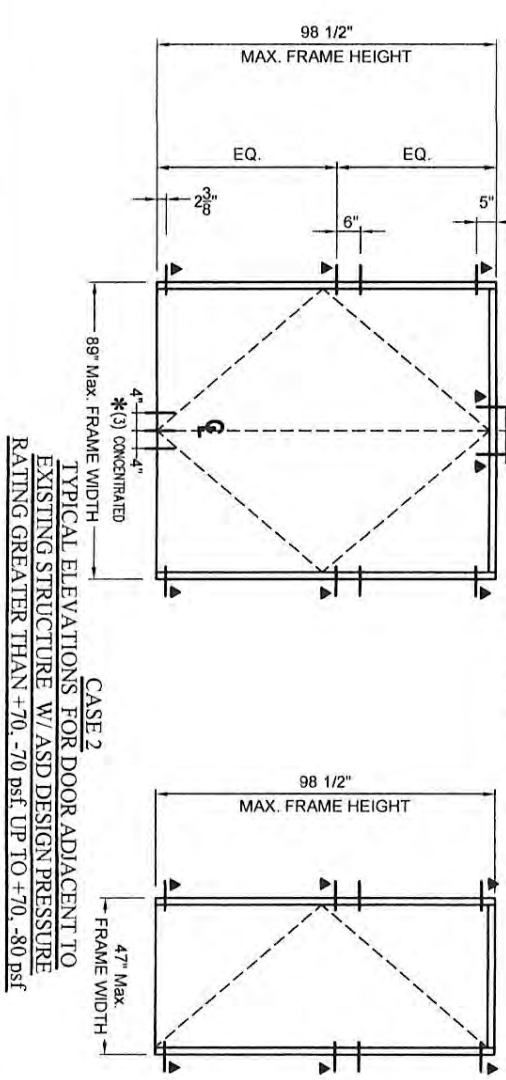
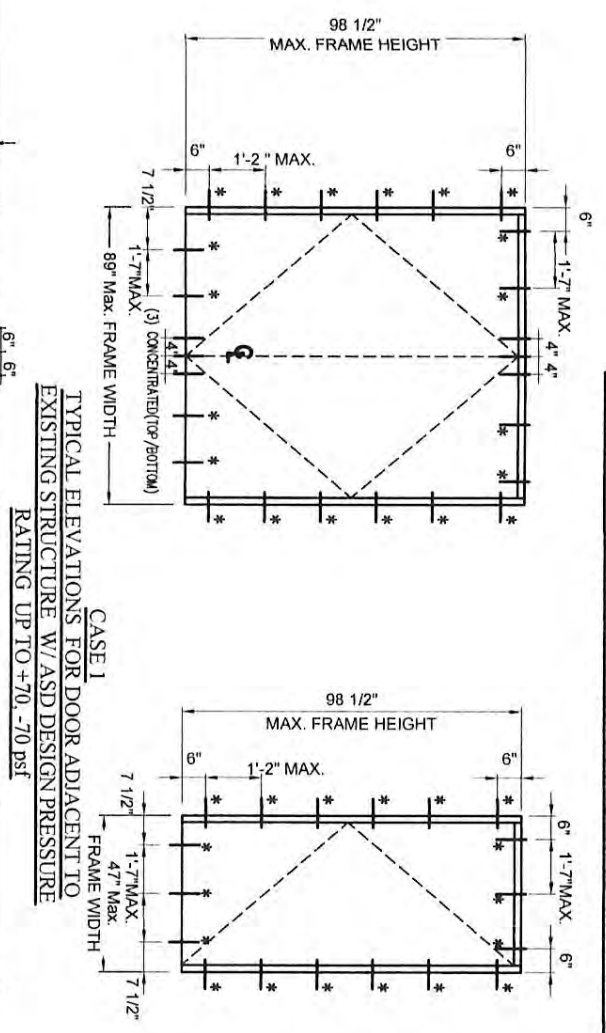
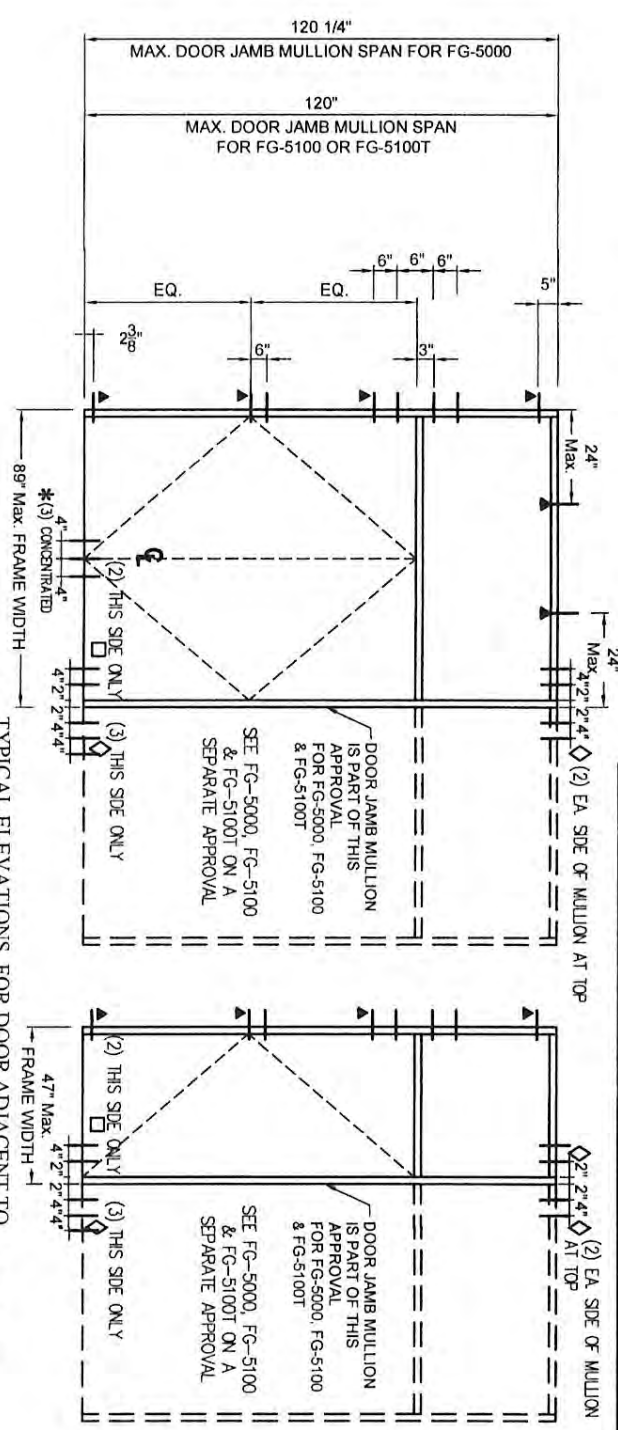
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 SHEET 21 OF 26

**DOOR & DOOR JAMB MULLION ANCHORAGE TO CONCRETE (MIN $f'_c=3\text{KSI}$) & GROUT FILLED CONCRETE BLOCK
(VALID FOR 3'-6" X 8'-0" & 7'-0" X 8'-0" DOORS)**



FASTENERS LEGEND

- ▲ : AT JAMB AT HEADER
- * : AT THRESHOLD, JAMB & HEAD (CASE 1)
AT THRESHOLD (CASE 2)
- ◇ : AT MULLION AT TOP OR AT MULLION AT BOTTOM WINDOW WALL SIDE
- : AT MULLION THRESHOLD SIDE

**FASTENERS TYPES AT ▲
(VALID FOR CONCRETE & GROUTED BLOCK)**

B - 3/8"Ø POWER FASTENERS TAPPER ANCHOR W/ 1 3/4" MIN. EMBEDMENT, W/ 6" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

C - 3/8"Ø LTD ITW/RED HEAD SCREW ANCHOR W/ 1 1/2" MIN. EMBEDMENT, W/ 3" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

**FASTENERS TYPE AT *
(VALID FOR CONCRETE & GROUTED BLOCK)**

F - 1/4"Ø F.H. ELCO ULTRACON ANCHOR W/ 1 3/4" MIN. EMBEDMENT, W/ 2 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

**FASTENERS TYPE AT ◇
(VALID FOR CONCRETE)**

A - 3/8"Ø F.H. POWERS FASTENERS TAPPER SCREW ANCHOR W/ 2" MIN. EMBEDMENT INTO POURED CONCRETE (MIN. $f'_c = 3 \text{ KSI}$), W/ 4 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

C - 3/8"Ø LTD ITW/RED HEAD SCREW ANCHOR W/ 2" MIN. EMBEDMENT, W/ 4" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

**FASTENERS TYPE AT □
(VALID FOR CONCRETE)**

I - 3/8"Ø F.H. POWERS FASTENERS TAPPER SCREW ANCHOR W/ 1 3/4" MIN. EMBEDMENT INTO POURED CONCRETE (MIN. $f'_c = 3 \text{ KSI}$), W/ 6" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.



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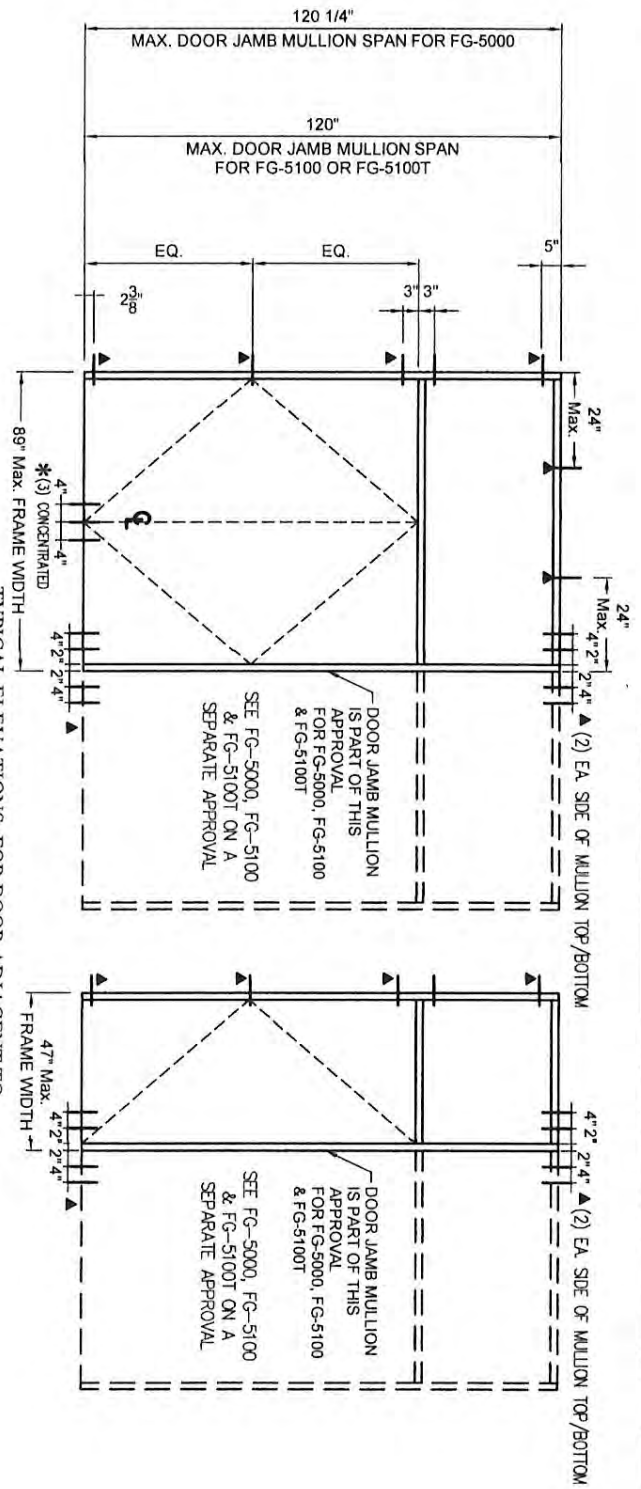
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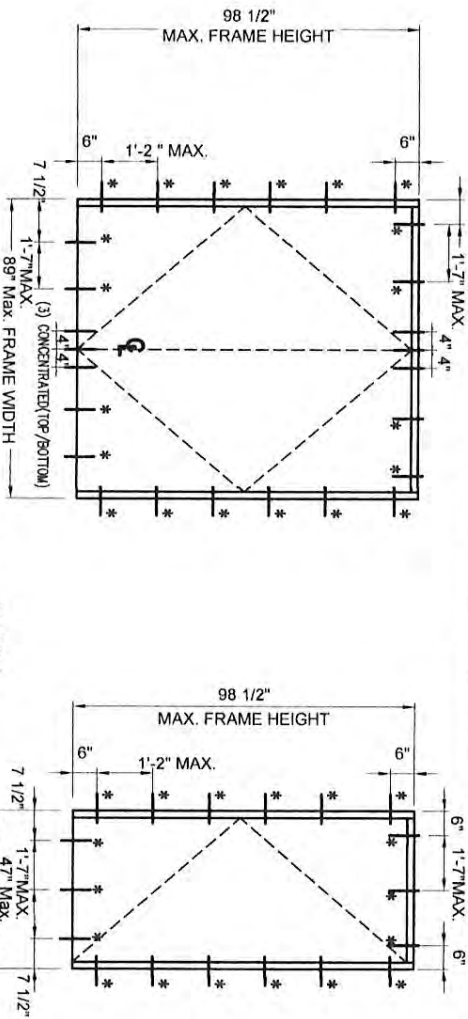
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e-mail: tilteco@aol.com
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SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT		DRAWN BY: M.L			
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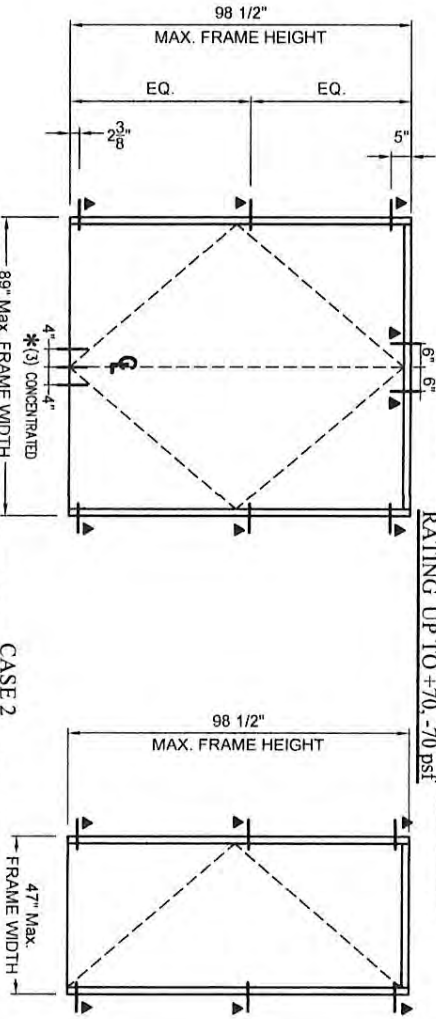
**DOOR & DOOR JAMB MULLION ANCHORAGE TO MIN 1/8" THICK ASTM A-36 STEEL OR 12 GAGE ASTM-653, GRADE 33 STEEL
(VALID FOR 3'-6"x8'-0" & 7'-0"x8'-0" DOORS)**



TYPICAL ELEVATIONS FOR DOOR ADJACENT TO FG-5000 & FG-5100 ALUMINUM WINDOW/WALL SYSTEM FRAMING



TYPICAL ELEVATIONS FOR DOOR ADJACENT TO EXISTING STRUCTURE W/ ASD DESIGN PRESSURE



TYPICAL ELEVATIONS FOR DOOR ADJACENT TO EXISTING STRUCTURE W/ ASD DESIGN PRESSURE RATING GREATER THAN +70, -70 psf, UP TO +70, -80 psf

FASTENERS LEGEND

- ▲ : AT JAMB & HEADER
- * : AT THRESHOLD, JAMB & HEAD (CASE 1)
- * : AT THRESHOLD (CASE 2)

FASTENERS TYPES AT ▲

D - 3/8"Ø H.H. TYPE "F" BOLT W/
3/4" MIN. EDGE DISTANCE, BEYOND
ANY FINISH MATERIAL. BOLT TO BE
MIN. FULLY ENGAGED INTO PROFILE
THICKNESS

FASTENERS TYPE AT *

G - 1/4"Ø-20 ELCO DRILL FLEX SELF
DRILLING SCREWS W/ 1/2" MIN.
EDGE DISTANCE, BEYOND ANY FINISH
MATERIAL. FULLY ENGAGED INTO
PROFILE THICKNESS

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
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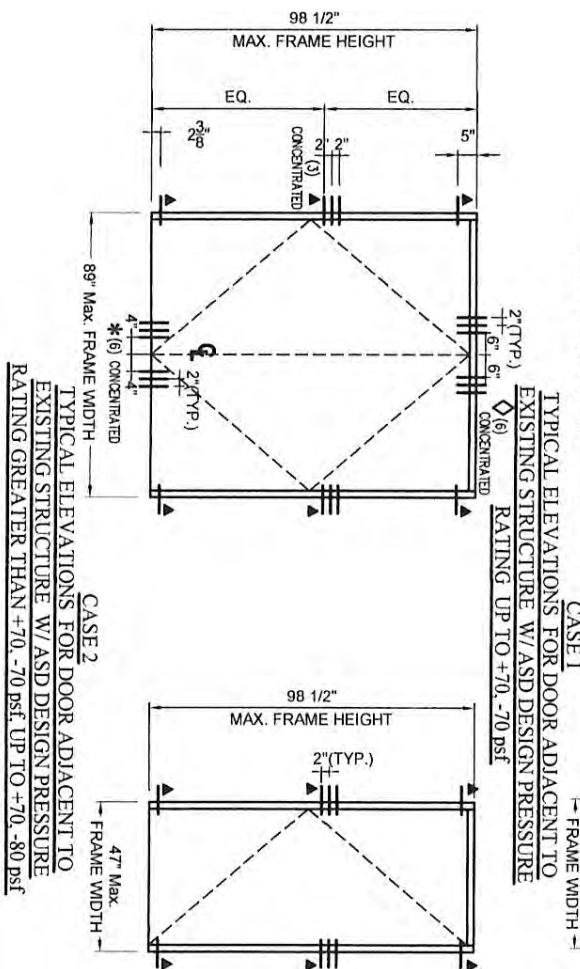
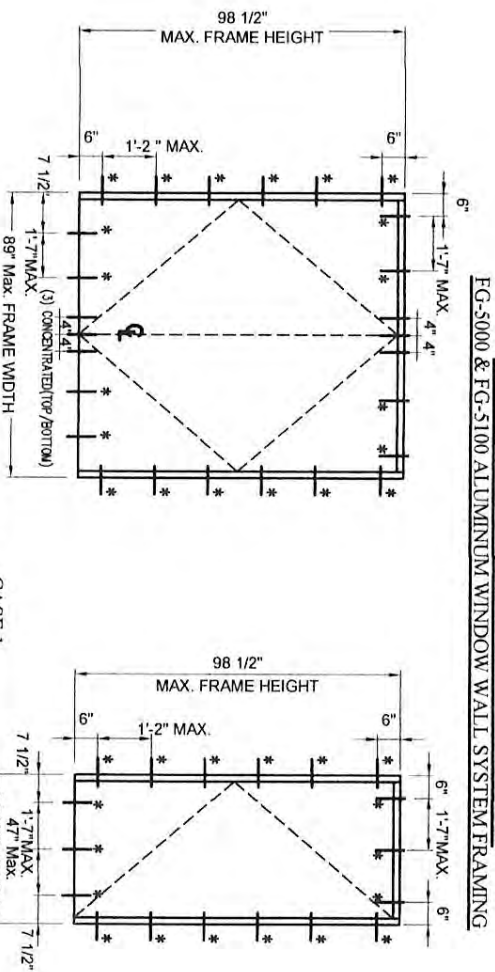
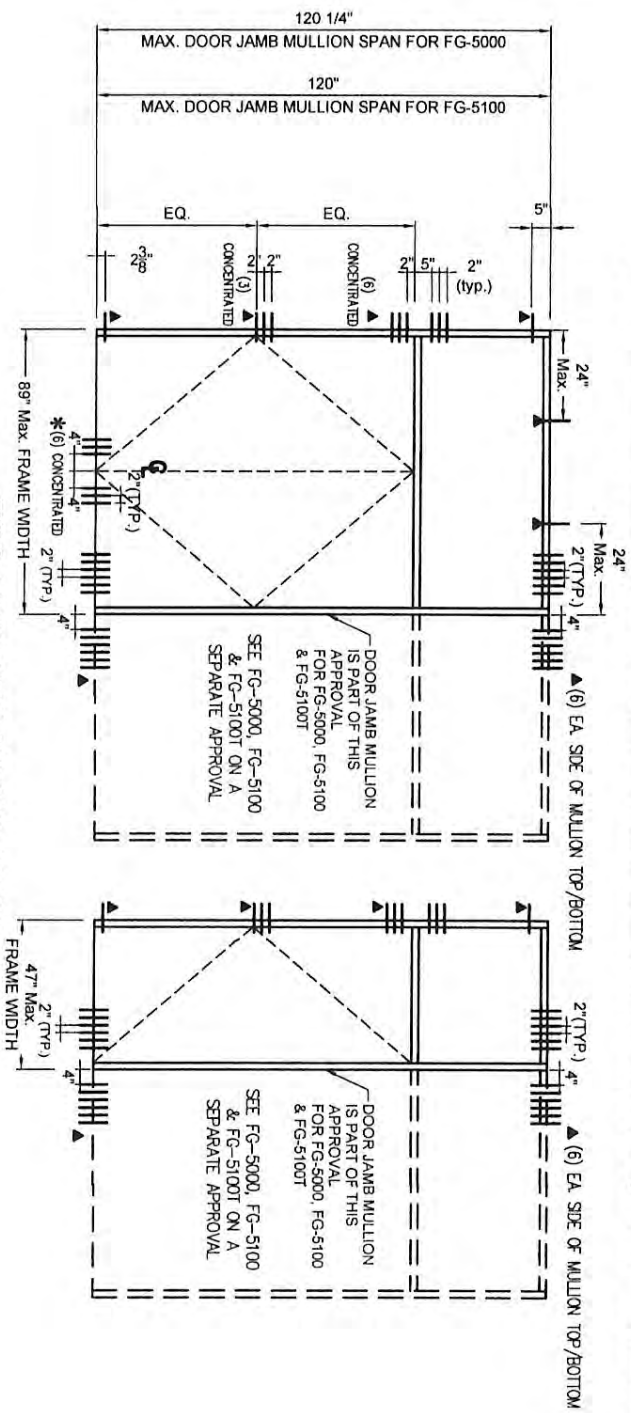
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LICENSE
No. 44167
STATE OF
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PROFESSIONAL ENGINEER

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DOOR & DOOR JAMB MULLION ANCHORAGE TO WOOD (VALID FOR 3'-6"X8'-0" & 7'-0"X8'-0" DOORS)



FASTENERS LEGEND

- ▲ : AT JAMB, HEADER AND AT DOOR JAMB MULLION (TOP/BOTTOM)
- * : AT THRESHOLD, JAMB & HEAD (CASE 1), INTO SINGLE 2x BUCK AT THRESHOLD (CASE 2), INTO DOUBLE 2x BUCK

FASTENERS TYPE

▲

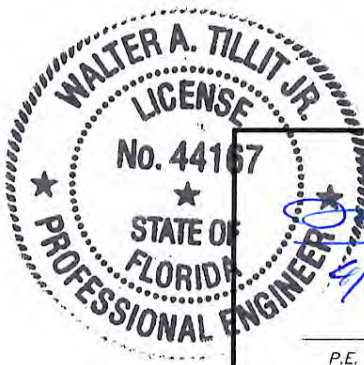
E - 5/16" Ø LAG SCREWS TO DOUBLE 2x BUCK (G=0.55) W/ 3" MIN. PENETRATION INTO WOOD W/ 1 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL, OR 5/16" Ø ELCO ULTRACONS W/ 3" MIN. PENETRATION INTO DOUBLE 2xBUCK (G=0.55) W/ 1 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL

FASTENERS TYPE

*

H - 1/4" Ø ELCO ULTRACONS W/ 1 1/2" MIN. PENETRATION INTO SINGLE 2x BUCK W/ 3" MIN. PENETRATION INTO DOUBLE 2x BUCK W/ 1" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)			
SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE) STILE ALUMINUM ENTRANCE DOOR (WET GLAZED) LARGE & SMALL MISSILE IMPACT		DRAWN BY: M.L.	
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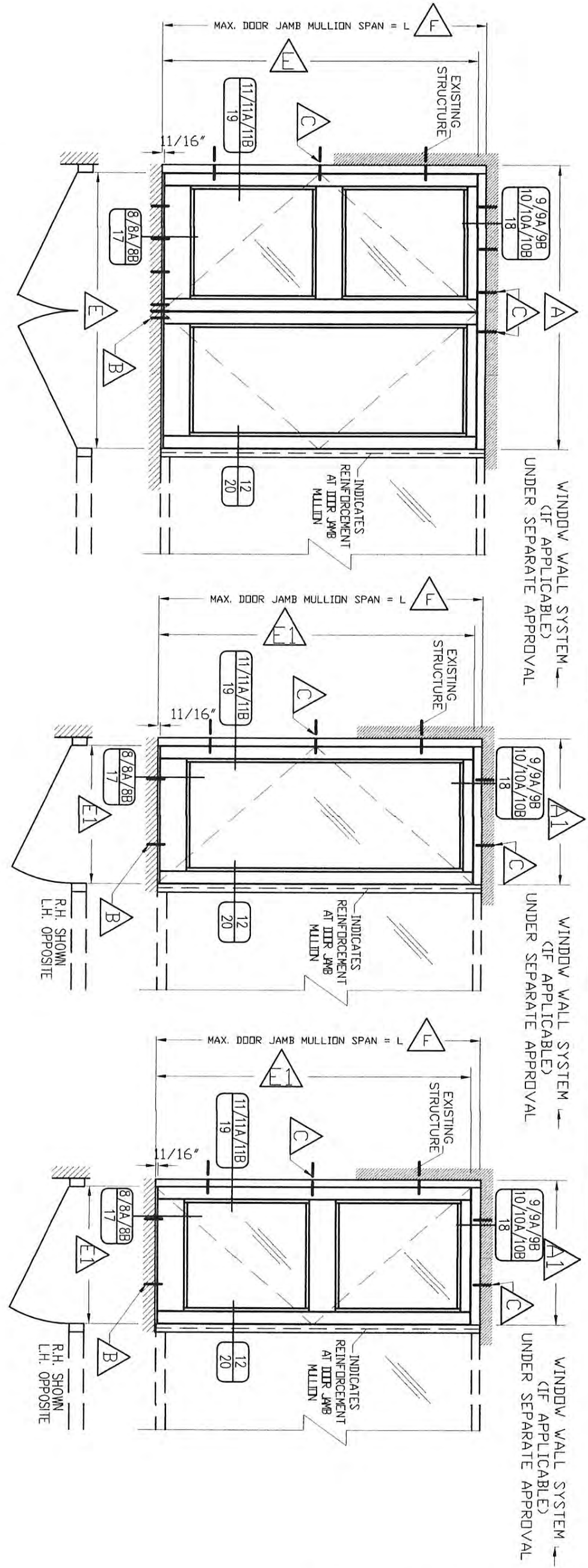
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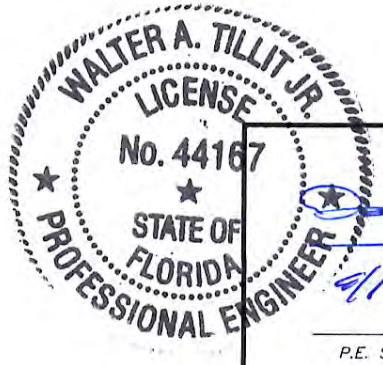
TYPICAL EXTERIOR ELEVATIONS FOR MSD-375 & WSD-500 IMPACT DOOR (WET GLAZED) 4'-0" X 8'-0" (SINGLE) & 8'-0" X 8'-0" (PAIR OF DOORS) CONNECTED TO EXISTING STRUCTURE OR FG-5000, FG-5100 OR FG-5100T ALUMINUM WINDOW WALL SYSTEM FRAMING

MAX. ASD PRESSURE RATING W/ LAMINATED & INSULATED GLASS IS +70, -70 psf



FOOT NOTES:

- A** 101" MAX. DOOR FRAME WIDTH.
- A1** 53" MAX. DOOR FRAME WIDTH.
- B** FOR THRESHOLD FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 26.
- C** FOR JAMB & HEAD FASTENERS QUANTITY, TYPES AND SPECS SEE SHEET 26.
- E** 96" MAXIMUM DOOR HEIGHT (D.O.) & 96" MAXIMUM DOOR WIDTH (D.O.).
- E1** 96" MAXIMUM DOOR HEIGHT (D.O.) & 48" MAXIMUM DOOR WIDTH (D.O.).
- F** 96" MAXIMUM DOOR JAMB MULLION SPAN



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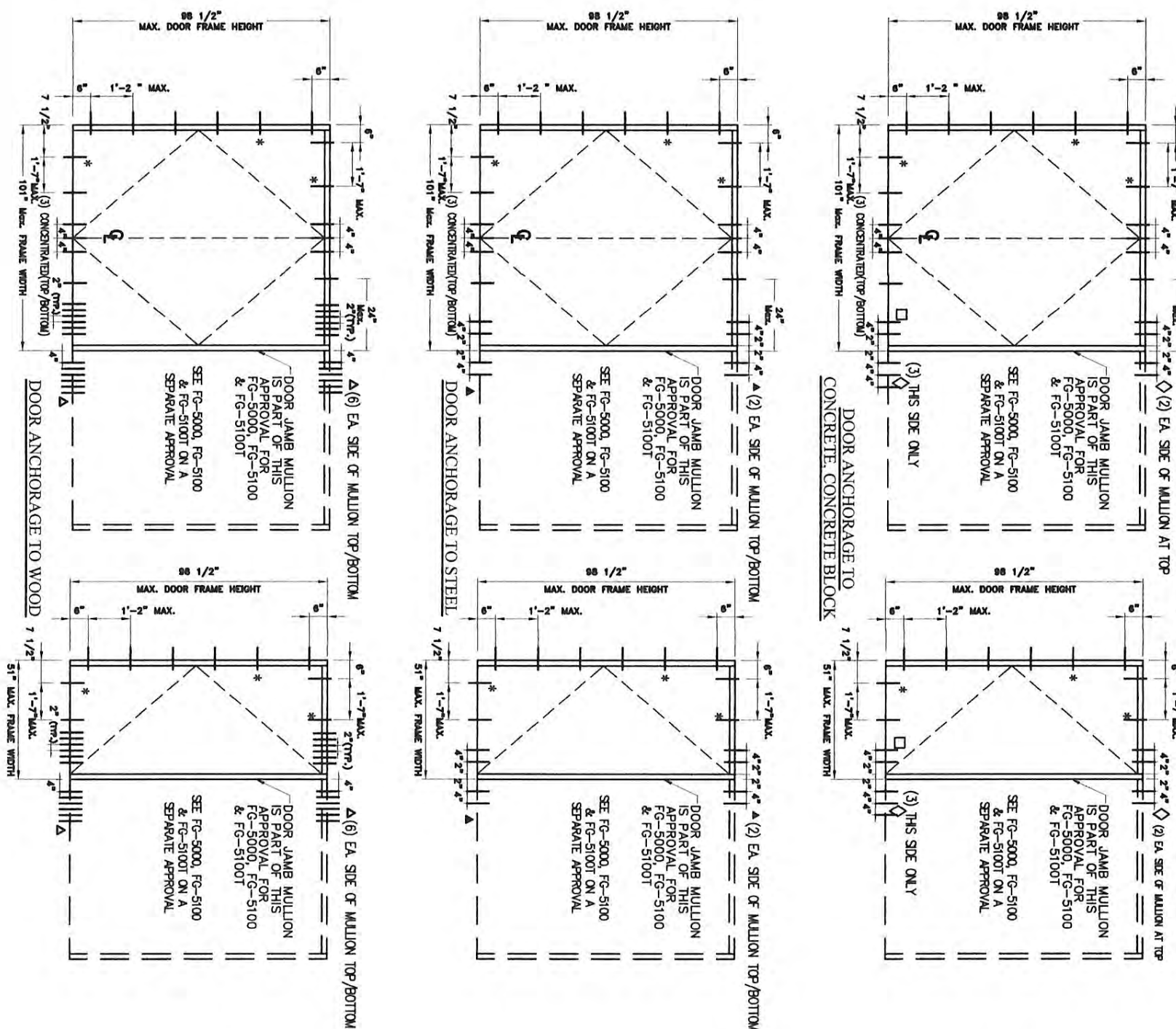
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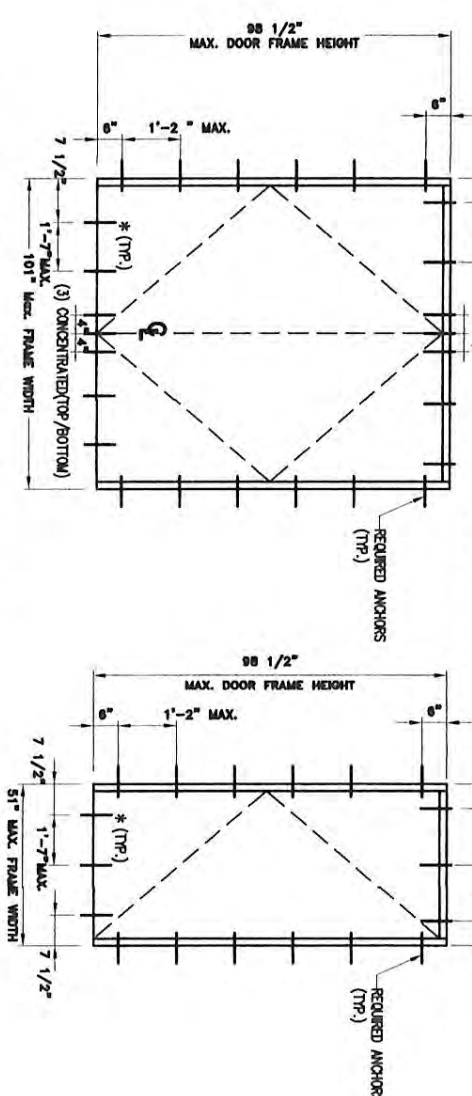
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DOOR ANCHORAGE TO CONCRETE, CONCRETE BLOCK, STEEL AND WOOD SUBSTRATES
 (VALID FOR 8'-0"x8'-0" & 4'-0"x8'-0" DOORS)

TYPICAL ELEVATIONS FOR DOOR ADJACENT TO FG-5000, FG-5100 & FG-5100T ALUMINUM WINDOW WALL SYSTEM FRAMING



TYPICAL ELEVATIONS FOR DOOR ADJACENT TO EXISTING STRUCTURE W/ ASD DESIGN PRESSURE RATING UP TO +70, -70 psf



ANCHORAGE TO (Min. f'c=3ksi) CONCRETE OR ASTM C-90 GROUTED FILLED CONCRETE BLOCK

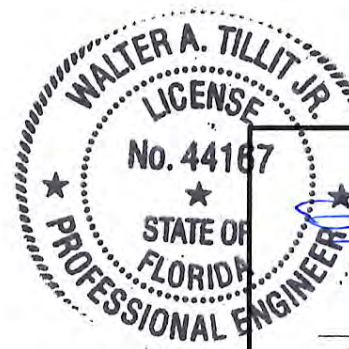
REQUIRED ANCHOR:	LOCATION:
* 1/4" Ø F.H. ELCO ULTRACON ANCHOR W/ 1 3/4" MIN. EMBEDMENT W/ 2 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD, SILL & JAMBS OF DOOR
◇ 3/8" Ø F.H. POWERS FASTENERS TAPPER SCREW ANCHOR W/ 2" MIN. EMBEDMENT INTO POURED CONCRETE (MIN. F.C = 3 KSI) W/ 4 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD & SILL OF DOOR JAMB MULLION AT WINDOW WALL SIDE
◇ 3/8" Ø LTD TW/RED HEAD SCREW ANCHOR W/ 2" MIN. EMBEDMENT, W/ 4" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD & SILL OF DOOR JAMB MULLION AT WINDOW WALL SIDE
□ 3/8" Ø F.H. POWERS FASTENERS TAPPER SCREW ANCHOR W/ 1 3/4" MIN. EMBEDMENT INTO POURED CONCRETE (MIN. F.C = 3 KSI) W/ 6" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD & SILL OF DOOR JAMB MULLION AT DOOR SIDE

ANCHORAGE TO 1/8" THICK ASTM A-36 STEEL OR 12 GAGE, ASTM A-653, GRADE 33 STEEL

REQUIRED ANCHOR:	LOCATION:
* 1/4" Ø-20 F.H. ELCO DRILL FLEX SELF DRILLING SCREWS W/ 1/2" MIN. EDGE DISTANCE BEYOND ANY FINISH MATERIAL. SCREWS TO BE MIN. FULLY ENGAGED INTO PROFILE THICKNESS.	AT HEAD, SILL & JAMBS OF DOOR
▲ 3/8" Ø H.H. TYPE "F" BOLT W/ 3/4" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL. BOLT TO BE MIN. FULLY ENGAGED INTO PROFILE THICKNESS.	AT HEAD & SILL OF DOOR JAMB MULLION AT EITHER SIDE OF MULLION

ANCHORAGE INTO G=0.55 MIN. WOOD

REQUIRED ANCHOR:	LOCATION:
* #14 F.H. WOOD SCREWS OR 1/4" Ø ELCO ULTRACON TO SINGLE 2x BUCK W/ 1 1/2" MIN. PENETRATION W/ 1" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD, SILL & JAMBS OF DOOR
△ 5/16" Ø LAG SCREWS TO DOUBLE 2x BUCK (G=0.55) W/ 3" MIN. PENETRATION INTO WOOD W/ 1 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL, OR 5/16" Ø ELCO ULTRACONS W/ 3" MIN. PENETRATION INTO DOUBLE 2x BUCK (G=0.55) W/ 1 1/2" MIN. EDGE DISTANCE, BEYOND ANY FINISH MATERIAL.	AT HEAD & SILL OF DOOR JAMB MULLION AT EITHER SIDE OF MULLION



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 FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High & Non High Velocity Hurricane Zone)

SERIES MSD-375 (MEDIUM) & WSD-500 (WIDE)
 STILE ALUMINUM ENTRANCE DOOR (WET GLAZED)
 LARGE & SMALL MISSILE IMPACT

Oldcastle BuildingEnvelope™

803 AIRPORT RD. TERRELL TX 75160
 www.OldcastleBE.com-Phone 800-869-4567

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
	OLD 15-029	04/10/18			

DRAWN BY: M.L.
 DATE: 04/10/18
 18-019
 DRAWING No

SHEET 26 OF 26



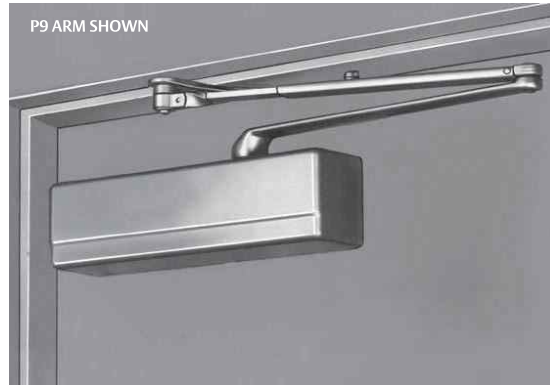
FINISH: US32D

Custom Pull Handle Active	ETJ US32D W/ PANIC	SARGENT LEVER TRIM (OBE)
Custom CVR Panic Active	55 56 AD8504 ETJ US32D	SARGENT ELEC RIM PANIC (OBE)

P10 - Heavy Duty Parallel Arm



- Forged Steel Arm, 11-1/4" (286mm) long
 - Non-handed
 - Easily installed
 - Permits 120° opening at standard mounting
 - Permits 180° opening at alternate mounting
- Order as 25-P10 x finish for arm only
Includes: 63-0641 - Main arm
63-3727 - Arm and bracket assembly
63-3481 & 63-2392 - Screw packs



FINISH: CLEAR TO MATCH

Cust SMC Closer Part	281 CPS EN	SARGENT SURFACE CLOSER (OBE)
Cust SMC Drop Plate	281D EN	SARGENT DROP PLATE (OBE)



Oldcastle BuildingEnvelope™

2425 Olympic Boulevard, Suite 525-East • Santa Monica, CA 90404
1-866-OLDCASTLE (653-2278) • oldcastlebe.com

BH-1 Butt Hinge



FINISH: STAINLESS STEEL

Butt Hinge Interm Qty		1
SM Butt Hinge Part	14042	REGENT 4001SS HINGE 4.5 Z

CY-1 Cylinder



FINISH: CLEAR ANODIZED

SM Act Panic Ext Trim	199	CY-5 1-5/32 RIM CYLINDE Z
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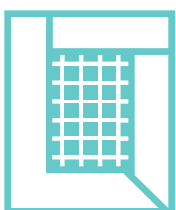
NOTE: DOOR RAILS, WEATHER STRIPING, DOOR GASKETS, and THRESHOLD WILL BE ILUSTRATED IN SHOP DRAWINGS TO FOLLOW. THE ABOVE WILL BE MANUFACTURES STANDARD.

Lansing Screen Enclosure

Live Outside



**A Complete Line of Products for
Patio and Pool Enclosures**



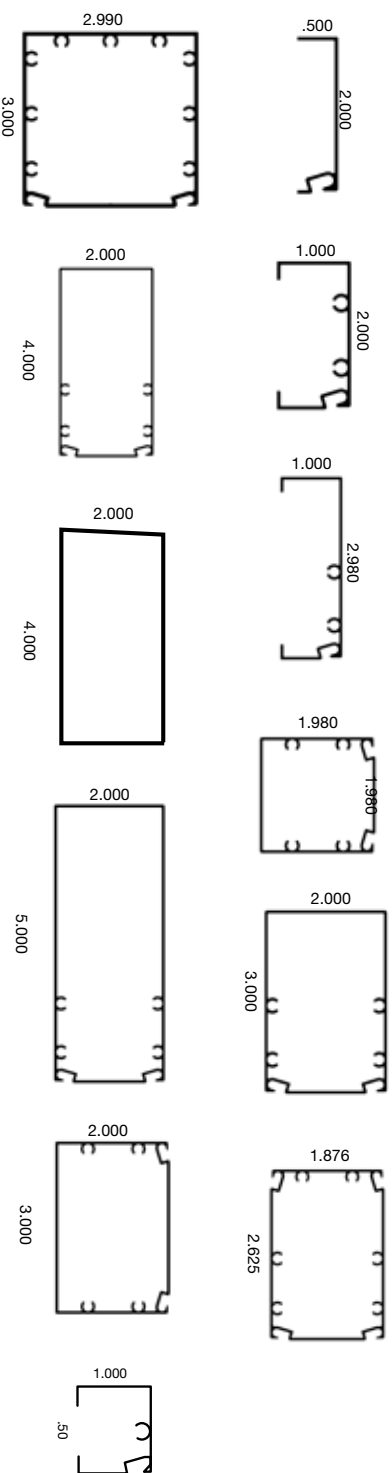
LANSING
PATIO & POOL ENCLOSURES

Extrusions

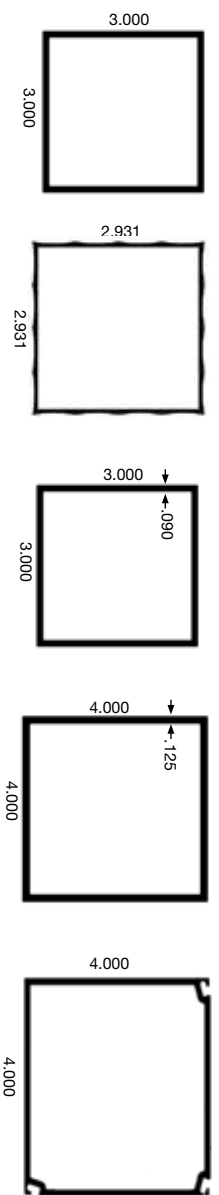
Lansing carries an expansive inventory so you can get the job done **quickly** and **on time**.



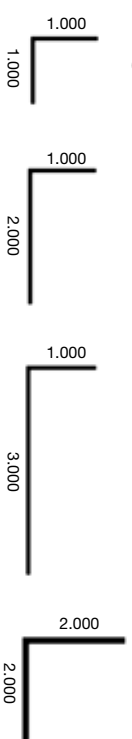
Patio Shapes



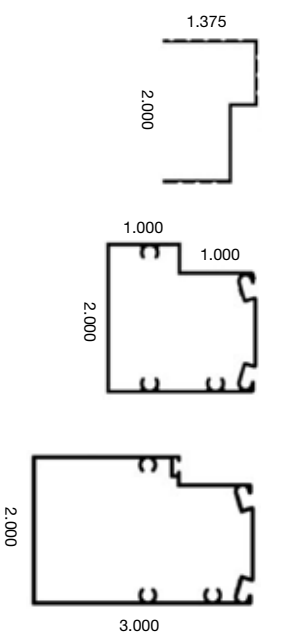
Square Tubes



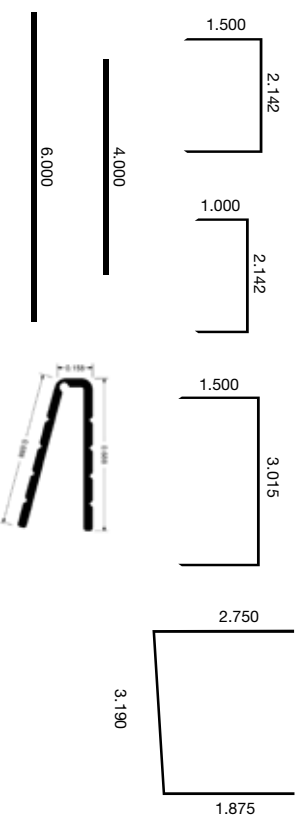
Angles



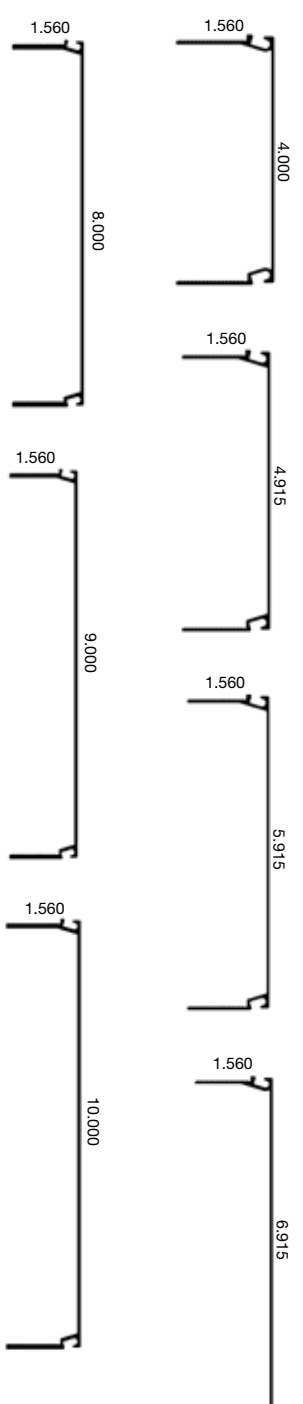
Door Jambs



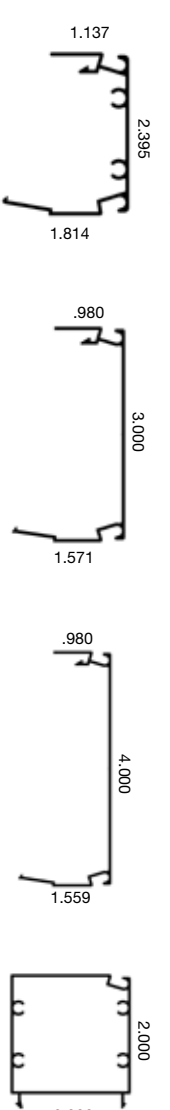
Channels Flat Bars



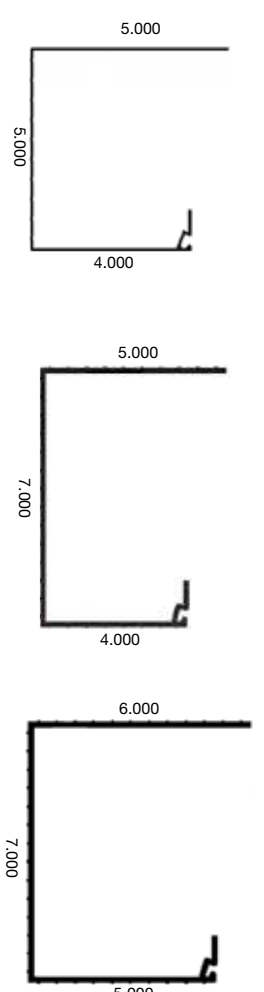
Self Mating Beams



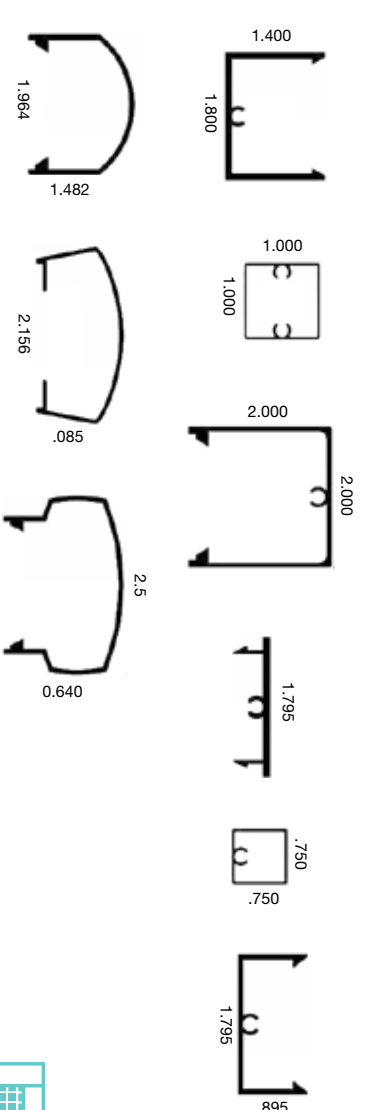
Self Mating Snaps



Super Gutters



Mechanical Railing



LANSING
PATIO & POOL ENCLOSURES



LANSING
PATIO & POOL ENCLOSURES

Clam Shell Awnings



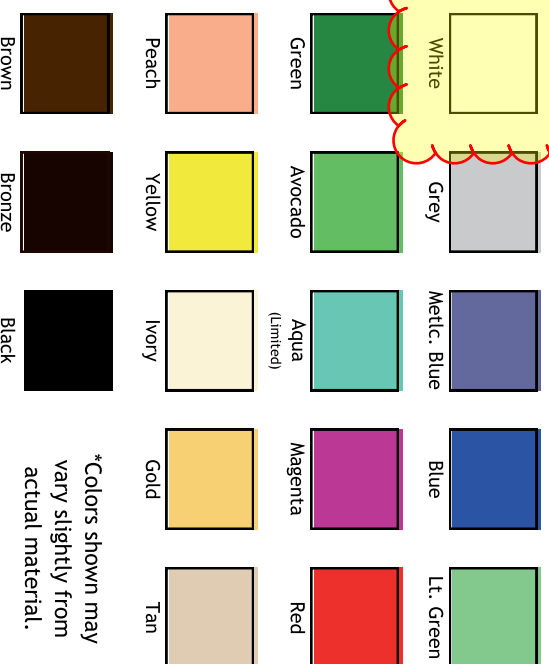
Custom-made to your color and size specifications, our aluminum awnings are the practical choice for protecting doors and windows from the elements. Affordable and long-lasting, they feature adjustable side arms that can be folded down for shade protection. Our unique slat panel design includes a side valance and full 1" cross members for added strength.

- Reduce summer cooling costs
- No maintenance enamel finish
- Resistant to chalking and fading

CREATE YOUR OWN LOOK

You can design your awnings in a solid color, select a base color and add accent stripes, or choose your own configuration. With such a wide variety of colors, the options are almost endless.

18 Colors to Choose From



*Colors shown may vary slightly from actual material.



CONE WITH ARM AND SLIP COLLAR W/SCREW

TRAILER PLATE WITH WING NUT

LEFT/RIGHT EARS

TIE DOWN BRACKET

"S" BRACKET AND SLIP COLLAR WITH SCREW



LANSING
PATIO & POOL ENCLOSURES

Patio & Pool Enclosure Fasteners

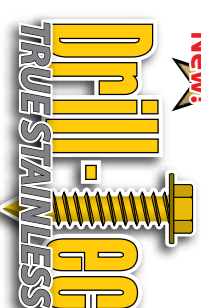
All your fastener needs for the patio market



Miami-Dade Co. approved for installations in hurricane zones
Excellent for fastening into concrete, brick, block and wood
Specially engineered 304 stainless steel
As strong as carbon steel
High performance ceramic coating



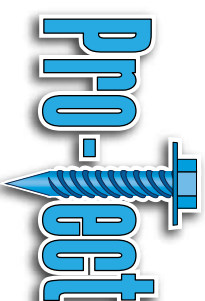
TRUESTAINLESS®



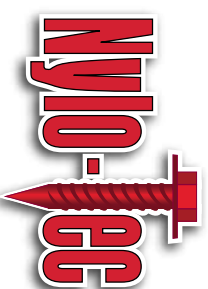
True Marine grade 316 stainless steel
Specially designed for aluminum screen enclosures
Full range of SDS & SMS in bronze and white
High performance ceramic coating minimizes electrolysis



TRUESTAINLESS®



Unique protection system for Blue-Tap fasteners
Specially designed cap and sleeve system
Eliminates electrolysis associated with dissimilar metals
Easy to install and carries a 10 year warranty
UV stabilized for years of outdoor performance
Protect any screw from harsh chemicals, weather, sunlight, saltwater and more



Nylo-Tec is a unique industrial nylon-headed fastener
Specially designed head eliminates unsightly corrosion
High performance ceramic coating
Never see rust again!!!
A perfect direct replacement for original installed fasteners



Top-Cap range of reinforced, nylon headed fascia nails
Stainless steel affords years of life expectancy
Specially designed annular ring shank
UV stabilized to prevent fading in extreme conditions
Modified point for easy starting and driving



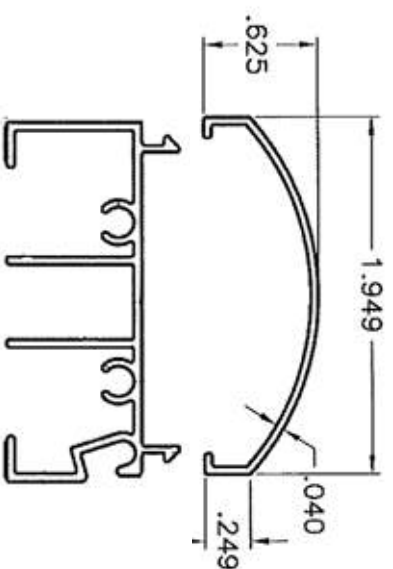
LANSING
PATIO & POOL ENCLOSURES

Anchors Away



Our exclusive Anchors Away product conceals unsightly anchors around your patio or pool giving you a clean finished look.

When water settles on an extrusion it accelerates the weathering process on the paint finish. The dome shaped profile of Anchors Away does not allow water to settle, extending the life of the patio or pool enclosure.



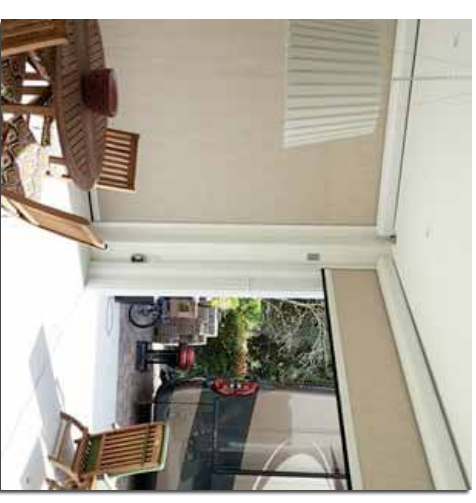
Eliminate unsightly hardware and beams with Anchors Away.



Motorized Screens

Top 10 Features of the Lansing Motorized Screen System

1. The strength of the motor tube coupled with the extruded box allows for spans of 21' without sagging.
2. The extruded aluminum recessed track system which is 2.2" wide and 1.5" thick allows for easy adjustments on imperfect walls.
3. Our extruded hood system 66% thicker than the standard sheet metal hoods. The integrated hooking lip allows for the hood to be installed easily by one person.
4. Our 5.5" rounded hood system is aesthetically pleasing to the eye.
5. The recessed track system allows you to mount the tracks either on the face or inside the opening.
6. The contoured bottom bar, designed to retract into the hood assembly, accommodates a ½ x ½ stainless steel weighted bar to assist in keeping the screen taut and operating smoothly while adding rigidity at the same time on wider spans.
7. The continuous zipper system allows the screen to be tensioned and still run smoothly without ever needing adjustment.
8. Plastic entry guides provide for a smooth clean entry of the zipper into the side rails, assuring smooth operation for the lifetime of the assembly.
9. The heavy duty spring loaded idler allows for smooth and quiet operation. While making it easier to service if required.
10. Industry leading warranties:
 - 10 Years on powder coatings (1 year in coastal regions within 1 mile of the saltwater coastline)
 - 3 year full replacement on Smart Series motors with internal receivers (5 years on hard wired motors)
 - 1 Year on the mesh from Phifer Wire. (Ten year warranty prior to welding)



LANSING
PATIO & POOL ENCLOSURES

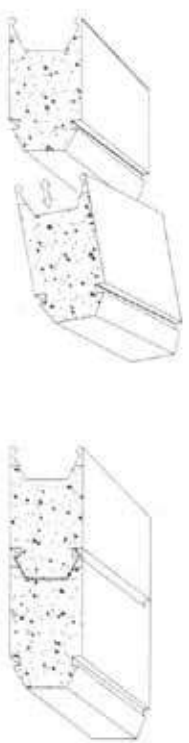


LANSING
PATIO & POOL ENCLOSURES

Roof Panels



Our versatile roof panels from Elite Aluminum are the only roof panel in the industry allowing you to choose the method that best suits your needs. Elite's patented interlocking designs are attractive, structurally sound and engineered to withstand the most extreme weather conditions. What's more, Elite panels are affordable, easily installed and guaranteed to last.



Our panels use a high-density polystyrene core designed to our specifications for superior strength and exceptional thermal insulation. Our insulated roof systems carry a full 10-year warranty against cracking, crazing, chipping, peeling, blistering or delaminating.



- Highly insulated
- Aesthetically pleasing
- Skylight & ceiling fan adaptable
- Widths: 4', 2'
- Thickness: 3", 4", 6", 8"
- Lengths: to 40'
- Variety of colors
- Variety of facing options
- Light weight, yet extremely strong

**Ideal for Patio Covers • Car Ports
Walkway Covers • Commercial Uses**



LANSING
PATIO & POOL ENCLOSURES

Wall Systems



Add-a-Room custom-built room enclosures from Elite Aluminum Corporation are an energy efficient and structurally superior alternative to conventional stick-framed additions. An Elite Add-a-Room lets you expand your home for a fraction of the cost and time compared to conventional construction methods.

Your Add-a-Room is easily customized to meet your needs, and is readily adaptable for existing roofs, foundations, porches and decks and is available in a variety of colors and finishes. Elite's Add-a-Room can be ordered with a variety of options to make your addition truly unique. Our panels use a high-density polystyrene core designed to our specifications for superior strength and exceptional thermal insulation.



LANSING
PATIO & POOL ENCLOSURES

Product Finish Samples

NOTE:

The physical samples will be sent out this week with glass samples. I have submitted within this document the Storefront and Door finish data. The screened enclosure is to be white paint.

Anodized Finishes

The Aluminum Association Designation System is considered the standard of the industry for standard anodized finishes. The Aluminum Association, however, lists many finishes, some of which are not often used in architectural applications. In order to keep costs down and

to maintain optimum shipping schedules while still providing the finest in architectural aluminum, Oldcastle BuildingEnvelope® currently offers seven standard finishes. For internal record keeping, a 3-digit designation has been assigned to our standard finishes.

Trade Names		Oldcastle BuildingEnvelope®	AA
CLEAR	CLASS II	204	AA-M12C22A31
CLEAR	CLASS I	215	AA-M12C22A41
BRONZE	CLASS I	740	AA-M12C22A44
BLACK	CLASS I	760	AA-M12C22A44
LIGHT BRNZ	CLASS I	700	AA-M12C22A44
MED BRNZ	CLASS I	710	AA-M12C22A44
CHAMPAGNE	CLASS I	699	AA-M12C22A44

Class I - .7 mils
Class II - .4 mils



Cleaning, Care and Maintenance of Anodized Finishes

Architectural aluminum finishes, whether painted or anodized, require care before and during installation and periodic maintenance after installation. Although resistant to corrosion, discoloration and general wear, both types of finishes can be damaged by neglect, abuse and harsh chemicals. Also, exterior surfaces collect various amounts of dirt and soil—of course, the amount depends on the environmental conditions, the building elevation and the type of finish.

Glass Specifications

NOTE:

The physical samples are expected to arrive Wednesday, April 15 and will send out for approval. The basis of design is below, which has a blue hue to it and the specs called out green. So all three samples will be sent to match your basis of design. The specs are included with this document on all (3) types. 9/16" Glass sample not sent. Once low-e type is selected will send 9/16" glass data for door.

1. Provide BASIS OF DESIGN – 1 5/16" VUE 1-50 Insulating Laminated Coated Glass as MFR. By Viracon. Performance Requirements:
 - a. Shading Coefficient: 0.29.
 - b. Solar Heat Gain Coefficient: 0.25.
 - c. Exterior (Vis-Out) Reflectance 11%
 - d. Winter U-Value: 0.28.
 - e. Summer U-Value: 0.25
 - f. Visible Light Transmittance 46%

ARCHITECTURAL GUIDE SPECIFICATION
SECTION 08 81 00 GLASS GLAZING

Note to Specifiers:

The specifications below are suggested as desirable inclusions in glass and glazing specifications (section 08 81 00), but are not intended to be complete. An appropriate and qualified Architect or Engineer must verify suitability of a particular product for use in a particular application as well as review final specifications. Oldcastle BuildingEnvelope® assumes no responsibility or liability for the information included or not included in these specifications.

PRODUCTS

Approved Glass Fabricator Oldcastle BuildingEnvelope®
Glass Description FLOAT GLASS

1. USA - Annealed float glass shall comply with ASTM C1036, Type I, Class 1 (clear), Class 2 (tinted), Quality-Q3. Canada - Annealed float glass shall comply with CAN/CGSB-12.3-M, Quality-Glazing.

2. USA- Heat-strengthened float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind HS. Canada - Heat-strengthened float glass shall comply with CAN/CGSB-12.9-M, Type 2-Heat-Strengthened Glass, Class A-Float Glass.

3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.

4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.

5. Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.

Sealed Insulating Glass (IG) Vision Glass (Vertical) GENERAL

1. IG units consist of glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB) and a secondary seal of silicone or an organic sealant depending on the application.

2. USA - Insulating glass units are certified through the Insulating Glass Certification Council (IGCC) to ASTM E2190. Canada - Insulating Glass units are certified through the Insulating Glass Manufacturers Alliance (IGMA) to either the IGMAC certification program to CAN/CGSB-12.8, or through the IGMA program to ASTM E2190.

IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite

1/4" PPG Solarban® 90 on Clear Low-E #2

2. Interior Lite

19/32" Laminate - 1/4" Clear - 0.090" Clear PVB - 1/4" Clear

3. 1/2" Cavity

1/2 inch (Air Fill)

4. Performance Characteristics

Thermal		Optical	
Winter U-factor/U-value:	0.28	Visible Light Transmittance:	50%
Summer U-factor/U-value:	0.26	Visible Light Reflectance (outside):	12%
Solar Heat Gain Coefficient:	0.23	Visible Light Reflectance (inside):	18%
Shading Coefficient:	0.27	Total Solar Transmittance:	18%
Relative Heat Gain (Btu/hr-ft ²):	57	Total Solar Reflectance (outside):	37%
Light to Solar Gain:	2.17	Ultraviolet Transmittance:	<1%

Contact Oldcastle BuildingEnvelope® at 866-Oldcastle (653-2278) for samples or additional information concerning performance, strength, deflection, thermal stress or application guidelines. GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 7.4 program (version 7.4.8.0) with Environmental Conditions set at NFRC 100-2010. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 53.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 53.0; 2. LBNL Optics 6 (version 6.0 Maintenance Pack 1); 3. Vendor supplied spectral data files; 4. Vendor supplied data. 5. Based on vendor testing, clear acid-etched glass performance data is estimated using regular clear glass of equivalent thickness. Thermal values are in Imperial units.

ARCHITECTURAL GUIDE SPECIFICATION
SECTION 08 81 00 GLASS GLAZING

Note to Specifiers:

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2. USA- Heat-strengthened float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind HS. Canada - Heat-strengthened float glass shall comply with CAN/CGSB-12.9-M, Type 2-Heat-Strengthened Glass, Class A-Float Glass.

3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.

4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.

5. Glass shall be annealed, heat-strengthened or tempered as required by codes, or as required to meet thermal stress and wind loads.

Sealed Insulating Glass (IG) Vision Glass (Vertical) GENERAL

1. IG units consist of glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB) and a secondary seal of silicone or an organic sealant depending on the application.

2. USA - Insulating glass units are certified through the Insulating Glass Certification Council (IGCC) to ASTM E2190. Canada - Insulating Glass units are certified through the Insulating Glass Manufacturers Alliance (IGMA) to either the IGMAC certification program to CAN/CGSB-12.8, or through the IGMA program to ASTM E2190.

IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite

1/4" PPG Solarban® z75 Low-E #2

2. Interior Lite

19/32" Laminate - 1/4" Clear - 0.090" Clear PVB - 1/4" Clear

3. 1/2" Cavity

1/2 inch (Air Fill)

4. Performance Characteristics

Thermal

Winter U-factor/U-value:

0.27

Summer U-factor/U-value:

0.26

Solar Heat Gain Coefficient:

0.24

Shading Coefficient:

0.28

Relative Heat Gain (Btu/hr-ft²):

59

Light to Solar Gain:

1.96

Optical

Visible Light Transmittance:

47%

Visible Light Reflectance (outside):

8%

Visible Light Reflectance (inside):

11%

Total Solar Transmittance:

18%

Total Solar Reflectance (outside):

29%

Ultraviolet Transmittance:

<1%

ARCHITECTURAL GUIDE SPECIFICATION
SECTION 08 81 00 GLASS GLAZING

Note to Specifiers:

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3. USA - Tempered float glass shall comply with ASTM C1048, Type I, Class 1 (clear), Class 2 (tinted), Quality Q3, Kind FT. Canada - Tempered float glass shall comply with CAN/CGSB-12.1-M, Type 2-Tempered Glass, Class B-Float Glass.

4. USA - Laminated glass to comply with ASTM C1172. Canada - Laminated glass to comply with CAN/CGSB-12.1-M, Type 1-Laminated Glass, Class B-Float Glass.

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1. IG units consist of glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB) and a secondary seal of silicone or an organic sealant depending on the application.

2. USA - Insulating glass units are certified through the Insulating Glass Certification Council (IGCC) to ASTM E2190. Canada - Insulating Glass units are certified through the Insulating Glass Manufacturers Alliance (IGMA) to either the IGMAC certification program to CAN/CGSB-12.8, or through the IGMA program to ASTM E2190.

IG VISION UNIT PERFORMANCE CHARACTERISTICS

1. Exterior Lite

1/4" Guardian SunGuard® SNX 51/23 on Clear Low-E #2

2. Interior Lite

19/32" Laminate - 1/4" Clear - 0.090" Clear PVB - 1/4" Clear

3. 1/2" Cavity

1/2 inch (Air Fill)

4. Performance Characteristics

Thermal		Optical	
Winter U-factor/U-value:	0.28	Visible Light Transmittance:	49%
Summer U-factor/U-value:	0.26	Visible Light Reflectance (outside):	14%
Solar Heat Gain Coefficient:	0.23	Visible Light Reflectance (inside):	12%
Shading Coefficient:	0.27	Total Solar Transmittance:	18%
Relative Heat Gain (Btu/hr-ft ²):	57	Total Solar Reflectance (outside):	34%
Light to Solar Gain:	2.13	Ultraviolet Transmittance:	<1%

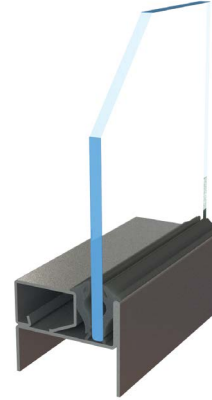
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KERALITE® FILMED

Fire-Rated Safety Glass Ceramic

CLASSIFICATION

PRODUCT FEATURES



TECHNICAL SPECIFICATIONS

Fire Rating	20-90, 180 Minute
US Testing	Listed and labeled with Underwriters Laboratories Inc. File #R14515 Tested in accordance with UL 9, UL 10B, UL 10C, NFPA 80, NFPA 252, NFPA 257
Canadian Testing	CAN/ULC-S106, S104
Impact Safety Rating	CPSC 16CFR Part 1201 (CATEGORIES I & II), ANSI Z97.1, CAN/CGSB-12.1-M
Nominal Thickness	3/16" (5 mm)
Thickness Tolerance	+1/64" to -1/64" (+0.4 mm to -0.4 mm)
U value BTU/(hr*sqft*degF)	0.88
STC Rating	35
Weight (lbs/sq ft.)	2.4
Approx. Visible Light Transmission	86%

AUTHORIZED DIMENSIONS

RATING	WINDOW/TRANSOM/SIDELIGHT			DOOR - NON-TEMPERATURE RISE			DOOR - TEMPERATURE RISE		
	AREA (Max.)	WIDTH (Max.)	HEIGHT (Max.)	AREA (Max.)	WIDTH (Max.)	HEIGHT (Max.)	AREA (Max.)	WIDTH (Max.)	HEIGHT (Max.)
20	4,500	95-3/8	95-3/8	3,627	46-1/2	78	N/A		
45	4,500	95-3/8	95-3/8	3,627	46-1/2	78	N/A		
60	4,500	95-3/8	95-3/8	3,627	46-1/2	78	100	10	33
90	4,500	95-3/8	95-3/8	3,627	46-1/2	76	100	10	33
180	N/A			N/A			100	10	33

Maximum sheet size for this product is 46" x 96".
Height multiplied by width cannot exceed maximum exposed area.

Rev. 1.116 The information published in this document is correct at the time of going to press. Such information may be subject to change and products may be modified.