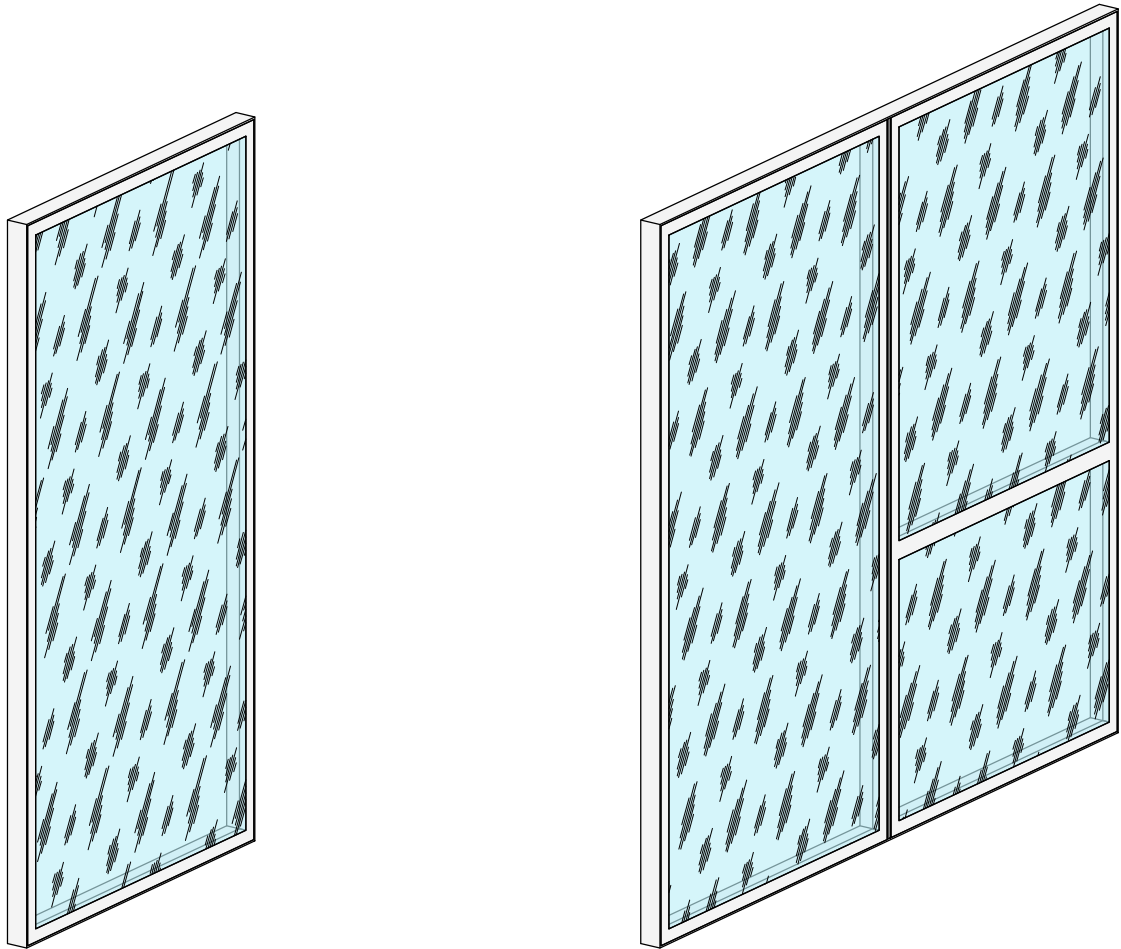


SHEET INDEX	
101	COVER PAGE
102	TYPICAL ELEVATIONS & GLAZING DETAILS
103	SECTIONAL DETAILS
104	SECTIONAL DETAILS
105	SECTIONAL DETAILS
106	ANCHORAGE LAYOUT

NOTE:

- THIS PRODUCT CAN BE COMBINED WITH OTHER FBC APPROVED OPTIMUM FIRE RATED WINDOWS AND DOORS WHEN MULLED COMBINATIONS ARE USED, THE LOWER DESIGN PRESSURE FROM EACH PRODUCT WILL APPLY TO THE ENTIRE SYSTEM. FINAL APPROVAL OF ALL DESIGNS SHALL BE GRANTED BY THE GOVERNING MUNICIPALITY.
- IF THE DESIGN PRESSURES / FRAME DIMENSIONS ON SITE EXCEEDS THE PRESSURES GIVEN IN THIS APPROVAL, PLEASE CONTACT OPTIMUM WINDOWS FOR SPECIAL APPROVALS.



FIXED WINDOWS

DESIGN PRESSURE RATING		
DESIGN PRESSURE		MISSILE IMPACT RATING
FRAME SIZE		
50-1/4" X 98-3/4"	+75/-75 PSF	LMI AND SMI IMPACT RATED
101-7/16" X 98-3/4"		

- GENERAL NOTES**
- THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE EIGHTH EDITION (2023), FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ) PER:
 - TAS 201 / 202 / 203
 - GLASS CAPACITIES MENTIONED IN THE PRESSURE CHARTS IN THIS CERTIFICATION ARE BASED ON ASTM E1300-16 (3 SEC. GUSTS).
 - DESIGN PRESSURES MENTIONED IN THIS CERTIFICATION ARE ALLOWABLE PRESSURES (ASD) BASED ON TESTED PRESSURE DIVIDED BY A FACTOR OF SAFETY OF 1.5.
 - THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH THE STANDARDS IN NOTE 1 OF THE GENERAL NOTES AND IS LARGE MISSILE IMPACT RESISTANT AND DOES NOT REQUIRE IMPACT RESISTANT SHUTTERS.
 - NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
 - THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
 - 1BY OR 2BY WOOD BUCK & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE ANY SITE SPECIFIC INSTALLATION INFORMATION. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A QUALIFIED ENGINEER LICENSED IN THE STATE OF FLORIDA SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- THE CONTRACTOR IS RESPONSIBLE FOR INSULATING ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- FASTENERS DESCRIBED IN THIS CERTIFICATION ARE PERMITTED TO BE SUBSTITUTED PROVIDED THE STRENGTH OF THE ALTERNATIVE ANCHOR IS EQUAL TO OR GREATER THAN THE ORIGINALLY SPECIFIED ANCHOR. FINAL APPROVAL OF SUBSTITUTED ANCHORS SHALL BE BY OTHERS.
- FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3.7.2 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES..
- ENGINEER'S SEAL AFFIXED HERE VALIDATES THE STRUCTURAL DESIGN AS SHOWN ONLY. THE USE OF THIS SPECIFICATION BY THE CONTRACTOR, ET AL., INDEMNIFIES AND SAVES HARMLESS THIS ENGINEER FROM ALL COSTS AND DAMAGES, INCLUDING LEGAL FEES AND APPELLATE FEES, RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, AND CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, AND FEDERAL CODES, AND FROM DEVIATIONS OF THIS PLAN.
- THIS PRODUCT IS APPROVED FOR FORCED ENTRY RESISTANCE AS PER ASTM F588-17.

- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
- SAFEGUARDS MUST BE OBSERVED (NOT IN THIS CERTIFICATION).
- PRODUCT SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER SYSTEM CONTAINING THE FOLLOWING:

OPTIMUM FIRE-RATED WINDOWS & DOORS
28 CANAL ST. ELLENVILLE, NY 12428
APPROVED BY FLORIDA BUILDING COMMISSION
FLORIDA PRODUCT APPROVAL NUMBER FL# 47842

THIS SYSTEM IS APPROVED FOR INSTALLATION WHERE WATER INFILTRATION RESISTANCE IS REQUIRED

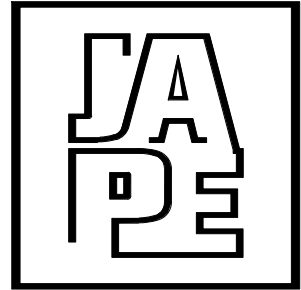
THIS SYSTEM IS RATED FOR LMI AND SMI IMPACT RATED (LEVEL D & E)

FL# 47842



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SERIES :	FR55i
MODEL :	OPTIMUM FIRE RATED FIXED WINDOW SYSTEM



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7875 NW 12 Street, Suite 102
Doral, FL 33126
Ph: (305) 424-8001
support@ja-pe.com

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Eng. JAVAD AHMAD, PE
CIVIL FLA. PE #70592 - C.A.N.34254



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CUSTOMER:	OPTIMUM FIRE RATED WINDOWS & DOORS
PROJECT:	FR55i FIXED WINDOW
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TYPICAL ELEVATIONS & GLAZING DETAILS

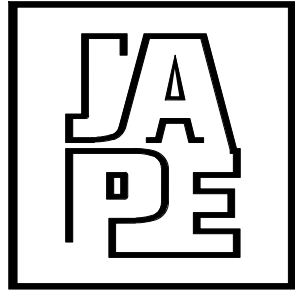
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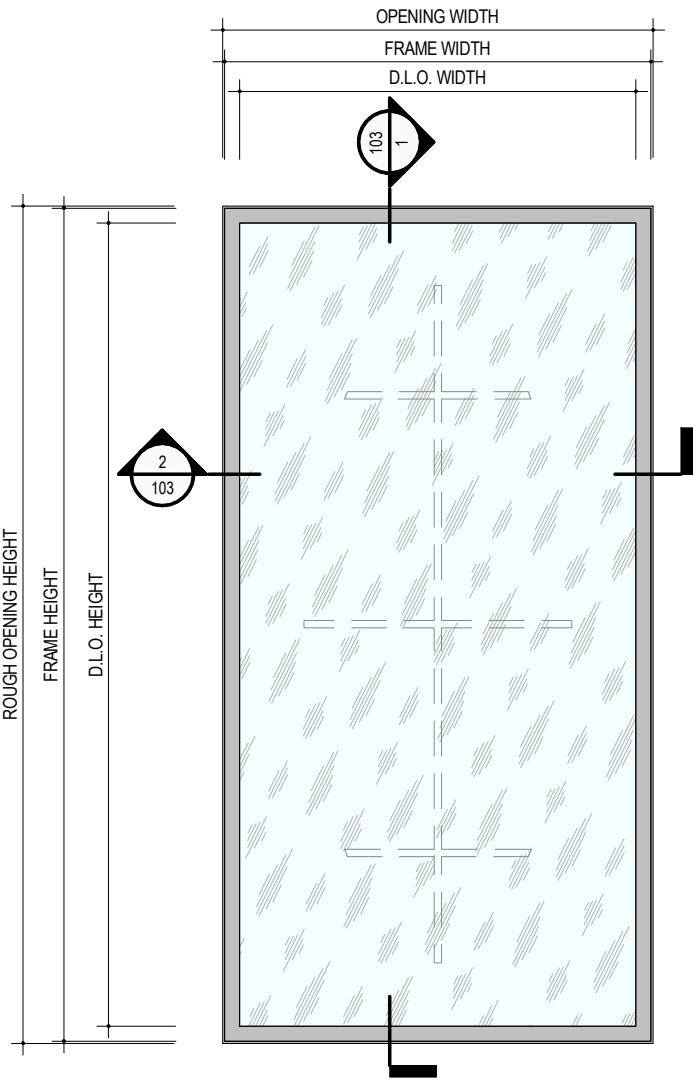
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CUSTOMER:
OPTIMUM FIRE RATED WINDOWS & DOORS

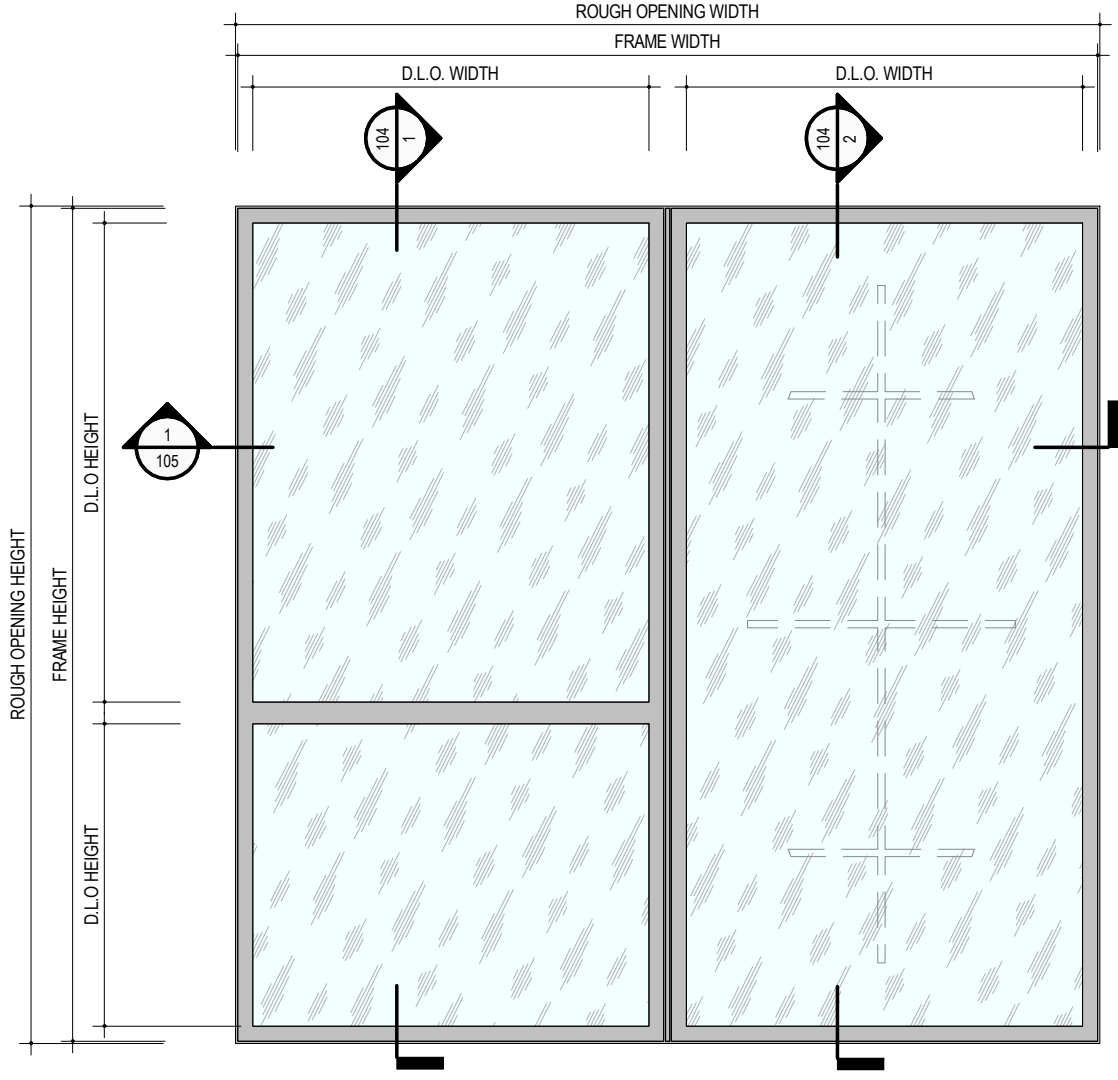
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1 TYPICAL SINGLE PANEL ELEVATION
102 NOT TO SCALE

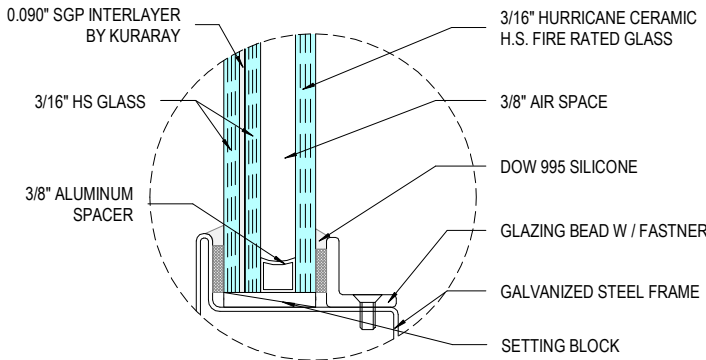


2 TYPICAL MULTI -PANEL ELEVATION
102 NOT TO SCALE

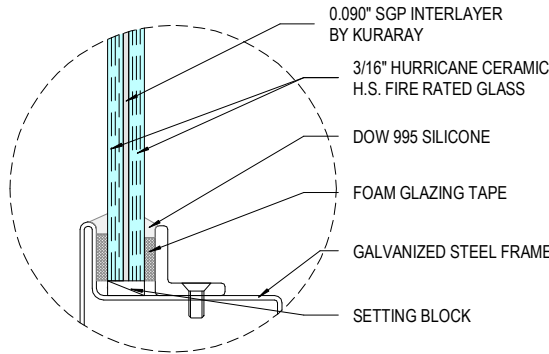
SYSTEM	MAX. D.L.O WIDTH	MAX. D.L.O HEIGHT	MAX. FRAME WIDTH	MAX. FRAME HEIGHT
SINGLE PANEL SYSTEM	46-3/4"	94-3/4"	50-1/4"	98-3/4"
MULTI- PANEL SYSTEM	46-3/4"	94-3/4"	101-7/16"	98-3/4"

D.L.O. CALCULATION

- SINGLE PANEL FIXED WINDOW - D.L.O. HEIGHT = FRAME HEIGHT - 3-1/2"
D.L.O. WIDTH = FRAME WIDTH - 3-1/2"
- MULTI-PANEL FIXED WINDOW - D.L.O. HEIGHT= FRAME HEIGHT - 3-1/2"
D.L.O. WIDTH = $\frac{\text{FRAME WIDTH}}{2}$ - 3-15/16"



GL-1 : 1" INSULATED GLASS UNIT

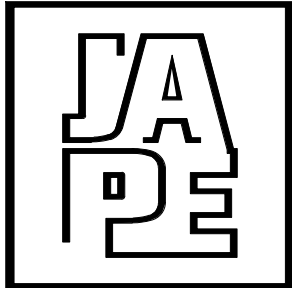


GL-2 : 7/16" LAMINATED GLASS UNIT



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MODEL : OPTIMUM FIRE RATED FIXED WINDOW SYSTEM



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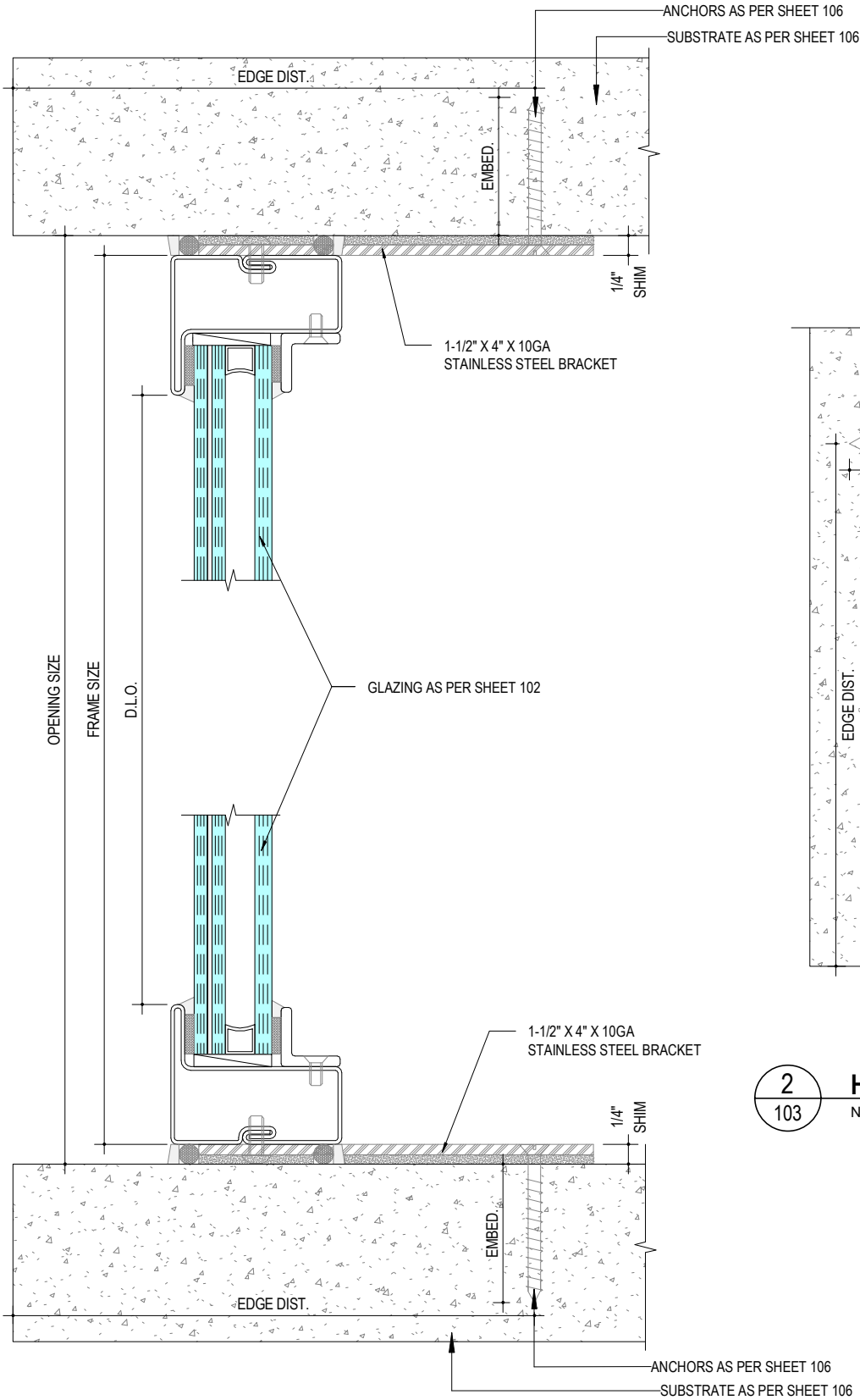
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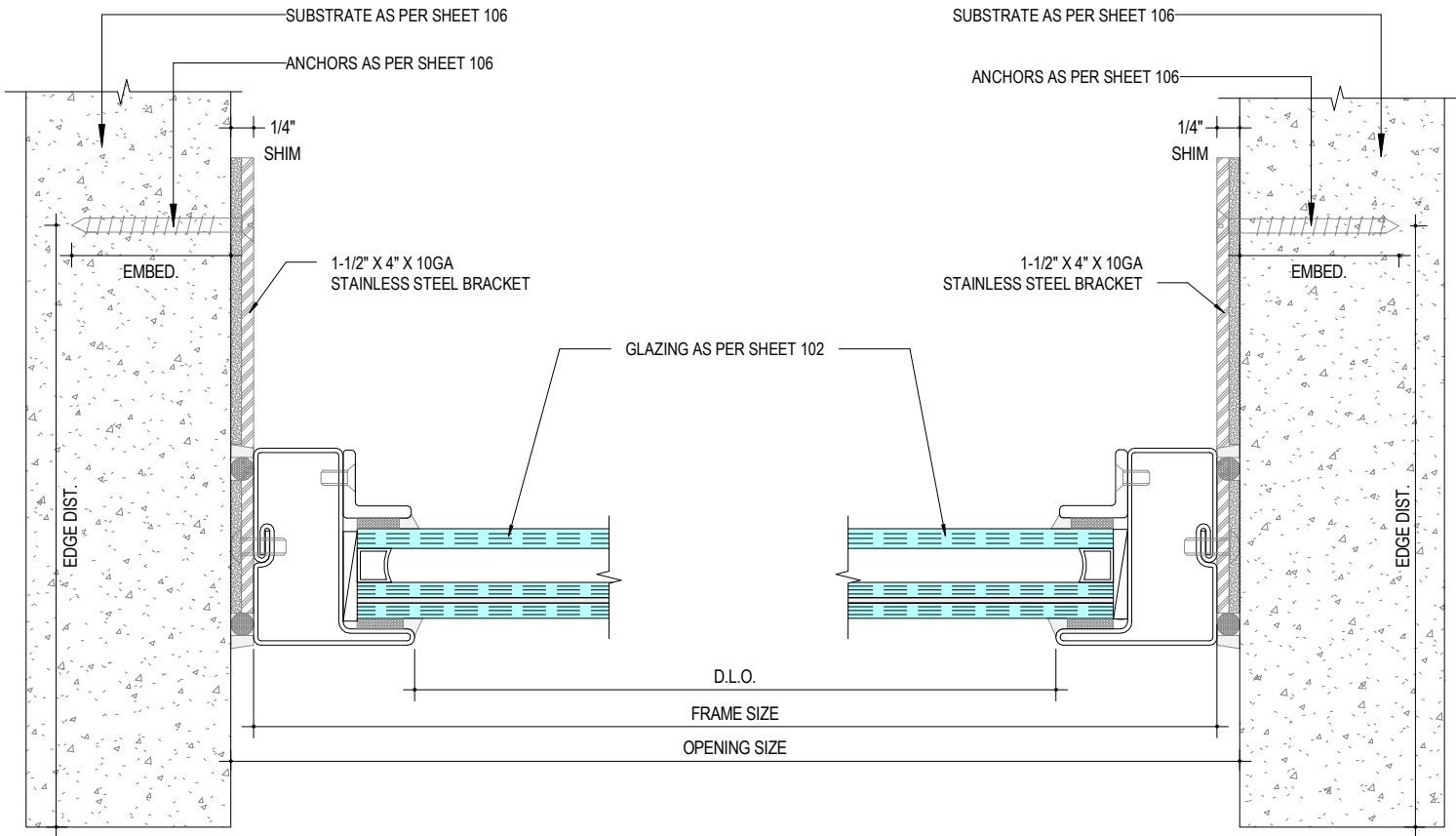
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1
103
VERTICAL SINGLE PANEL SECTION
NOT TO SCALE



2
103
HORIZONTAL SINGLE PANEL SECTION
NOT TO SCALE

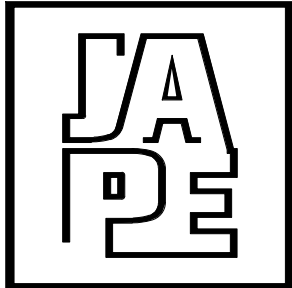
SECTIONAL DETAILS

FL# 47842



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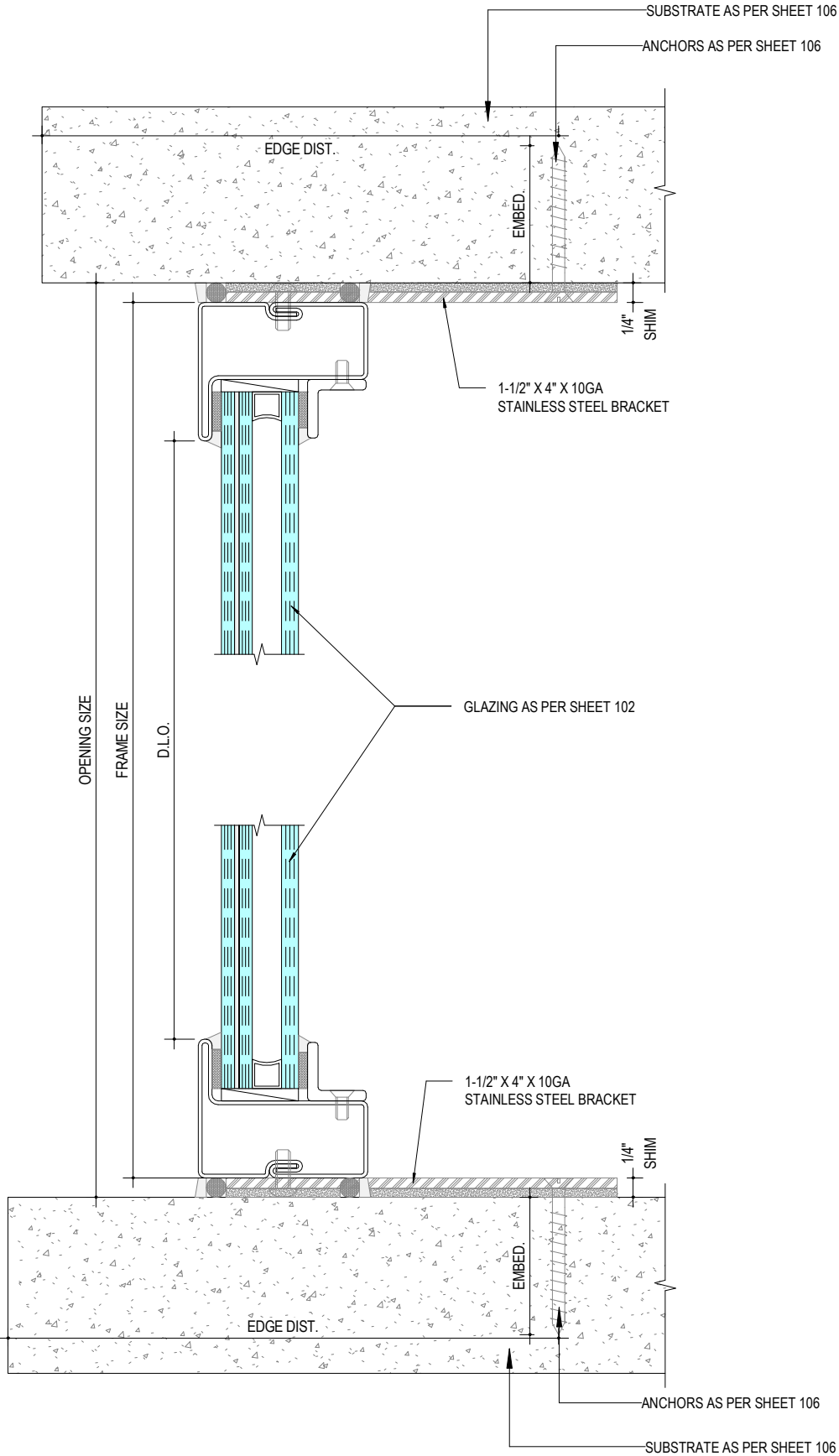
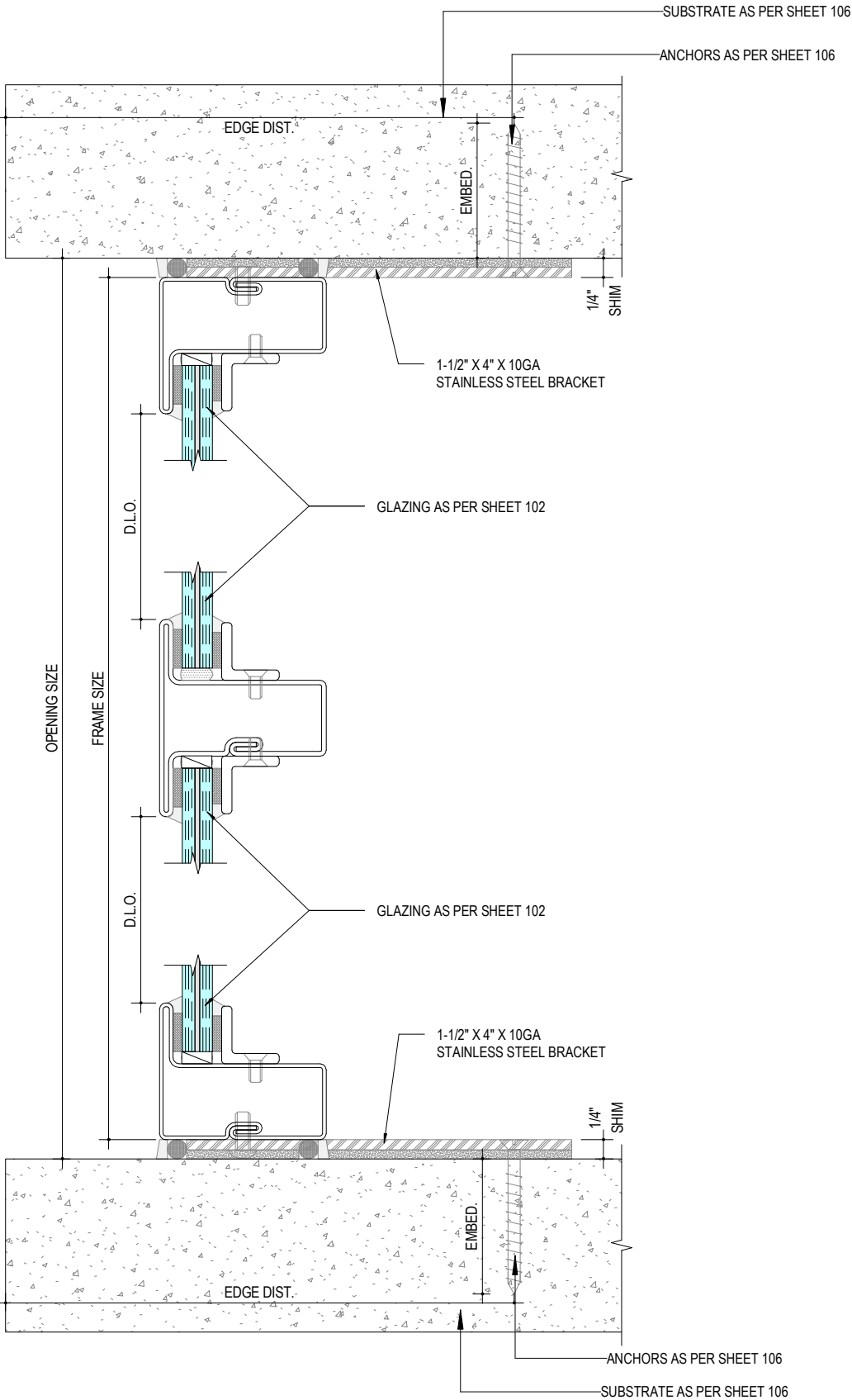
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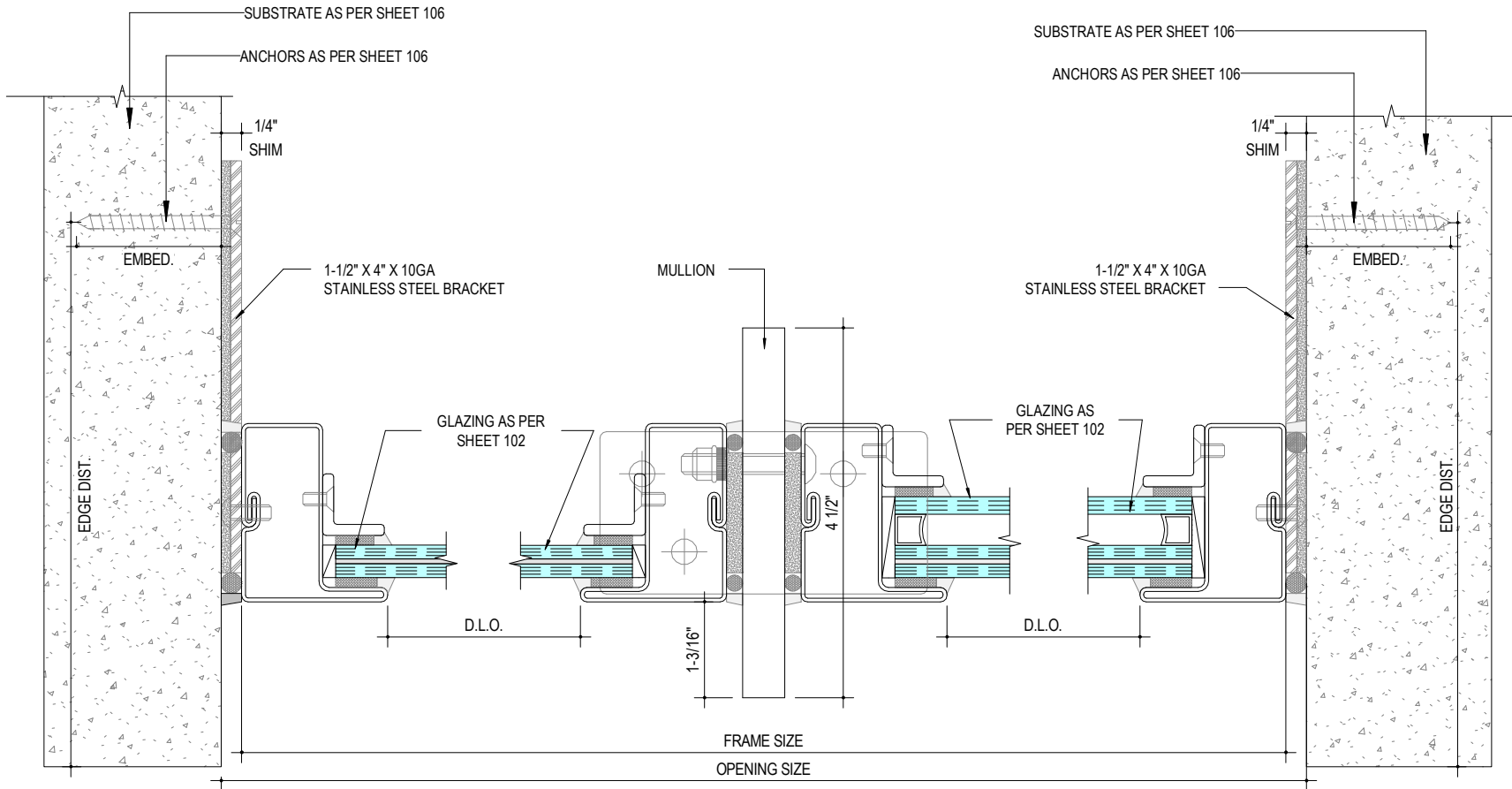
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1 VERTICAL MULTI- PANEL SECTION
104 NOT TO SCALE

2 VERTICAL MULTI-PANEL SECTION
104 NOT TO SCALE

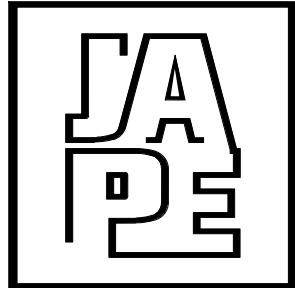


1
105 HORIZONTAL MULTI-PANEL SECTION
NOT TO SCALE



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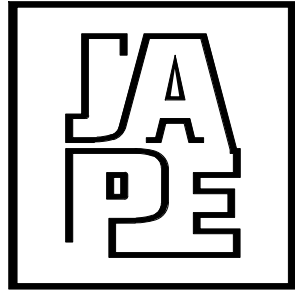
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CUSTOMER:	
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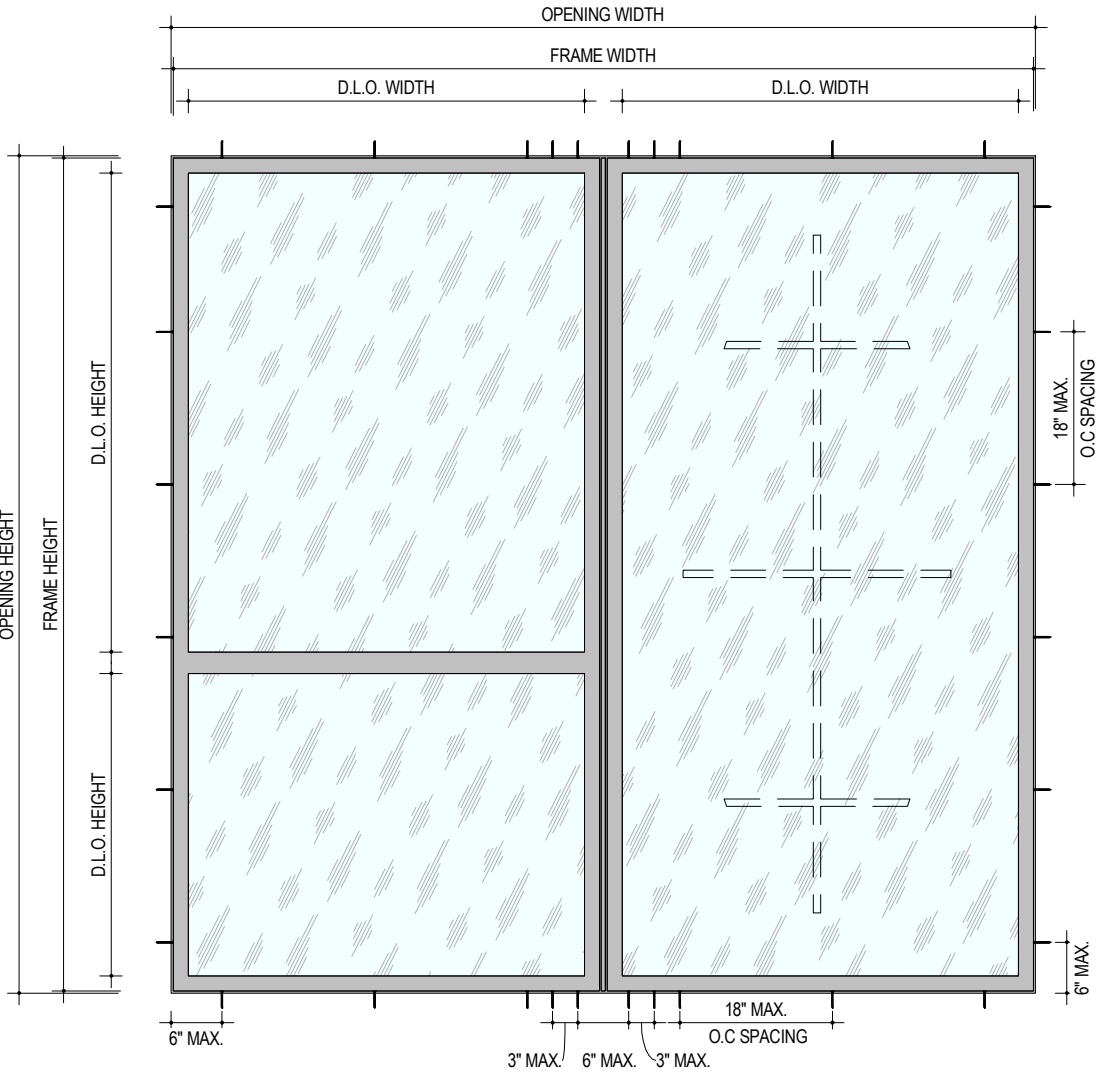
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CUSTOMER:
OPTIMUM FIRE RATED WINDOWS & DOORS

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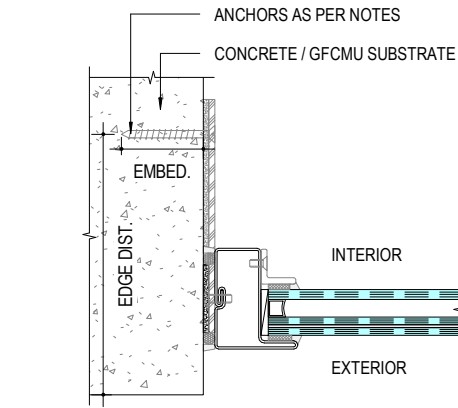
1
106
ANCHORAGE LAYOUT
NOT TO SCALE

TYPICAL ANCHOR TYPES:

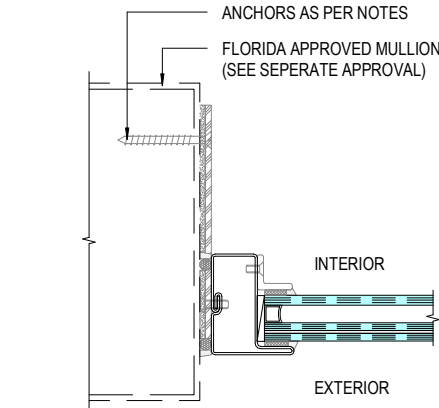
- TYPE A - 1/4" DEWALT ULTRACON+ (Fu = 177,000 PSI, Fy = 155,000 PSI)**
- INTO 2BY WOOD WITH 1-1/2" MIN PENETRATION, AND 1-3/4" MIN EDGE DISTANCE AND @18" O.C. SPACING.
 - DIRECTLY INTO CONCRETE OR GROUT FILLED MASONRY WITH 1-3/4" EMBEDMENT, 2-1/2" MIN EDGE DISTANCE AND @18" O.C. SPACING
 - DIRECTLY INTO HOLLOW MASONRY WITH 1-1/4" EMBEDMENT, 2-1/2" MIN EDGE DISTANCE, AND @18" O.C. SPACING

- TYPE B - #12-24 SS SCREWS (GRADE 5 MIN)**
- INTO 1/8" MIN. THK. ALUMINUM / STEEL WITH (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS, AND 3/4" MIN EDGE DISTANCE AND @18" O.C. SPACING.
 - INTO MIN. 1/8" THK. APPROVED MULLIONS WITH (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS, AND 3/4" MIN EDGE DISTANCE AND @18" O.C. SPACING.

- TYPE C - #12X2" WOOD SCREWS**
- INTO WOOD WITH 1-1/2" EMBEDMENT, 1-3/4" MIN. EDGE DISTANCE AND 18" O.C. SPACING



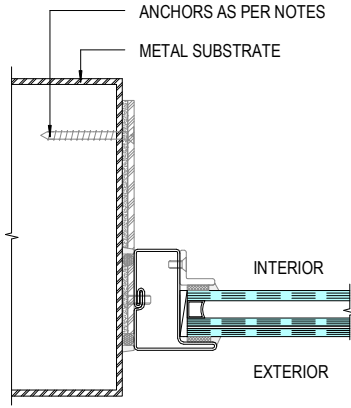
2
106
ANCHORAGE IN CONCRETE / GFCMU
NOT TO SCALE



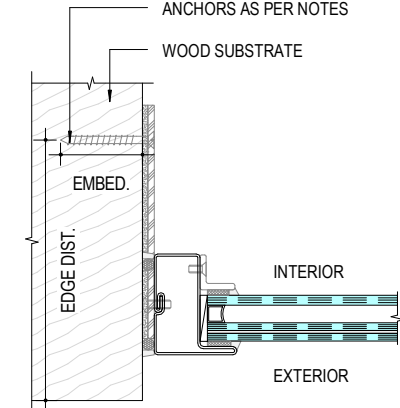
4
106
ANCHORAGE IN ALUMINIUM MULLION
NOT TO SCALE

- ANCHOR / SUBSTRATE NOTES:**
- WOOD AT HEAD OR JAMBS IS SOUTHERN YELLOW PINE #2 (SG=0.55 MIN.)
 - CONCRETE AT HEAD OR JAMBS f'c= 3000 PSI
 - C-90 HOLLOW/GROUT FILLED MASONRY UNITS AT JAMBS f'm= 2000 PSI
 - STEEL (1/8" THK., A36 MIN) AT HEAD OR JAMBS
 - ALUMINUM (1/8" THK., 6063-T6 MIN) AT HEAD OR JAMBS
 - STEEL IN CONTACT WITH ALUMINUM TO BE PAINTED

NOTE:
THE WOOD BUCKS, CONCRETE AND METAL STRUCTURE SHOWN ON THIS SHEET SHALL BE DESIGNED BY OTHERS AND ARE NOT PART OF THIS APPROVAL. THEY MUST BE CAPABLE OF WITHSTANDING THE LOADS IMPOSED BY THE GLAZING SYSTEM AND TRANSFERRING THEM TO THE BUILDING STRUCTURE.



3
106
ANCHORAGE IN METAL STRUCTURE
NOT TO SCALE



5
106
ANCHORAGE IN WOOD STRUCTURE
NOT TO SCALE