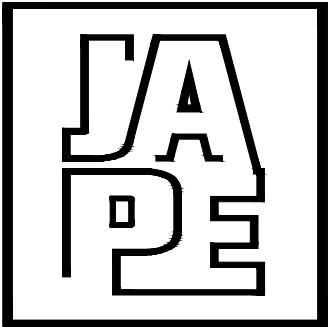


CRAWFORD TRACEY CORPORATION
PRO-TECH 9SG
STRUCTURALLY GLAZED CURTAINWALL SYSTEM
(LARGE AND SMALL MISSILE IMPACT RATED)

FL#29520.3



JAVAD AHMAD PE, inc

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

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING
ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

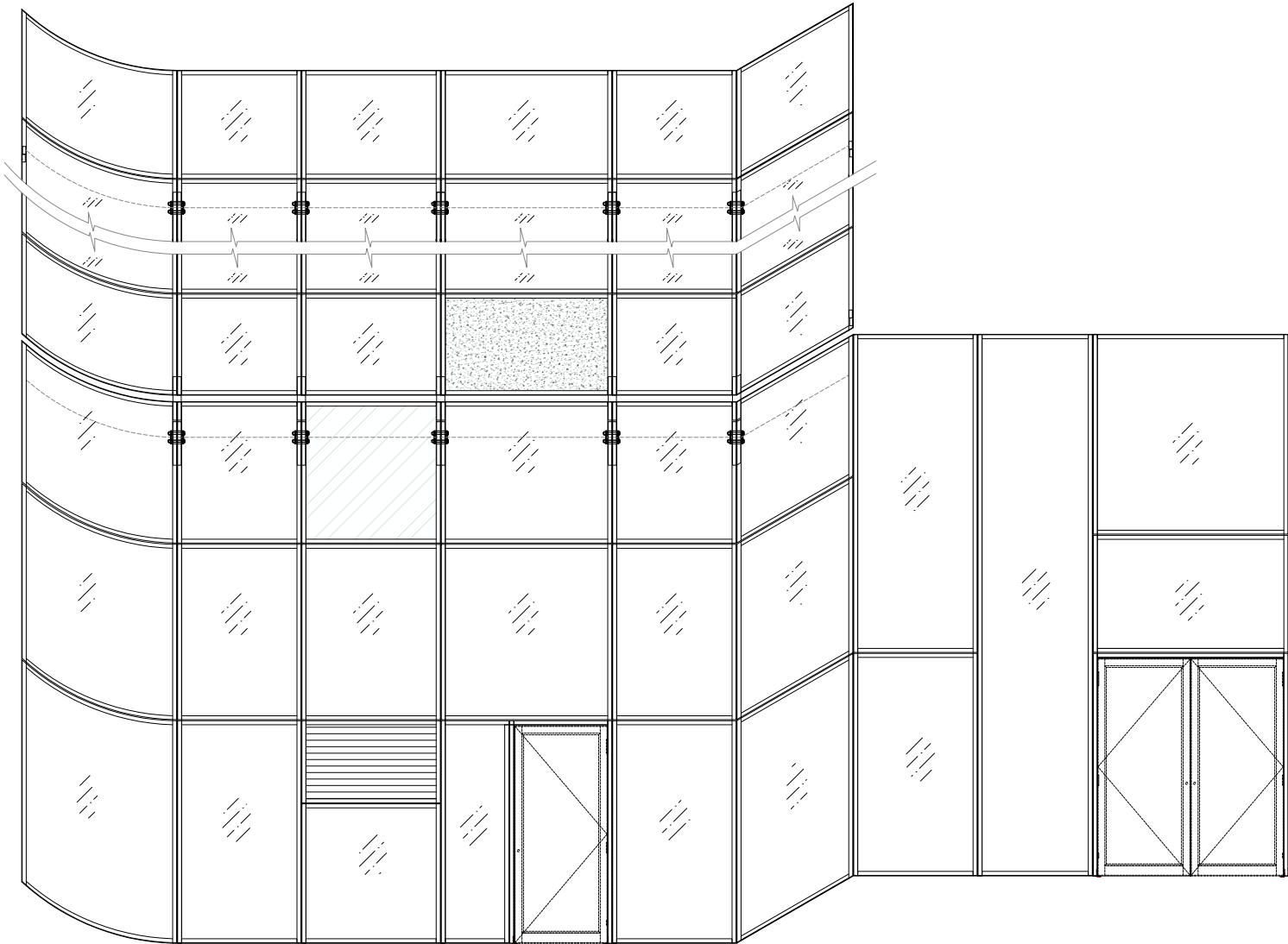
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



SEALED: 06-17-2026

01

OF 50



TYPICAL CURTAIN-WALL ELEVATION

THIS PRODUCT IS APPROVED FOR
SMALL AND LARGE MISSILE
IMPACT (LEVEL D & E)

THIS SYSTEM HAS BEEN TESTED
TO WITHSTAND UP TO A 100 PSF
WATER INFILTRATION

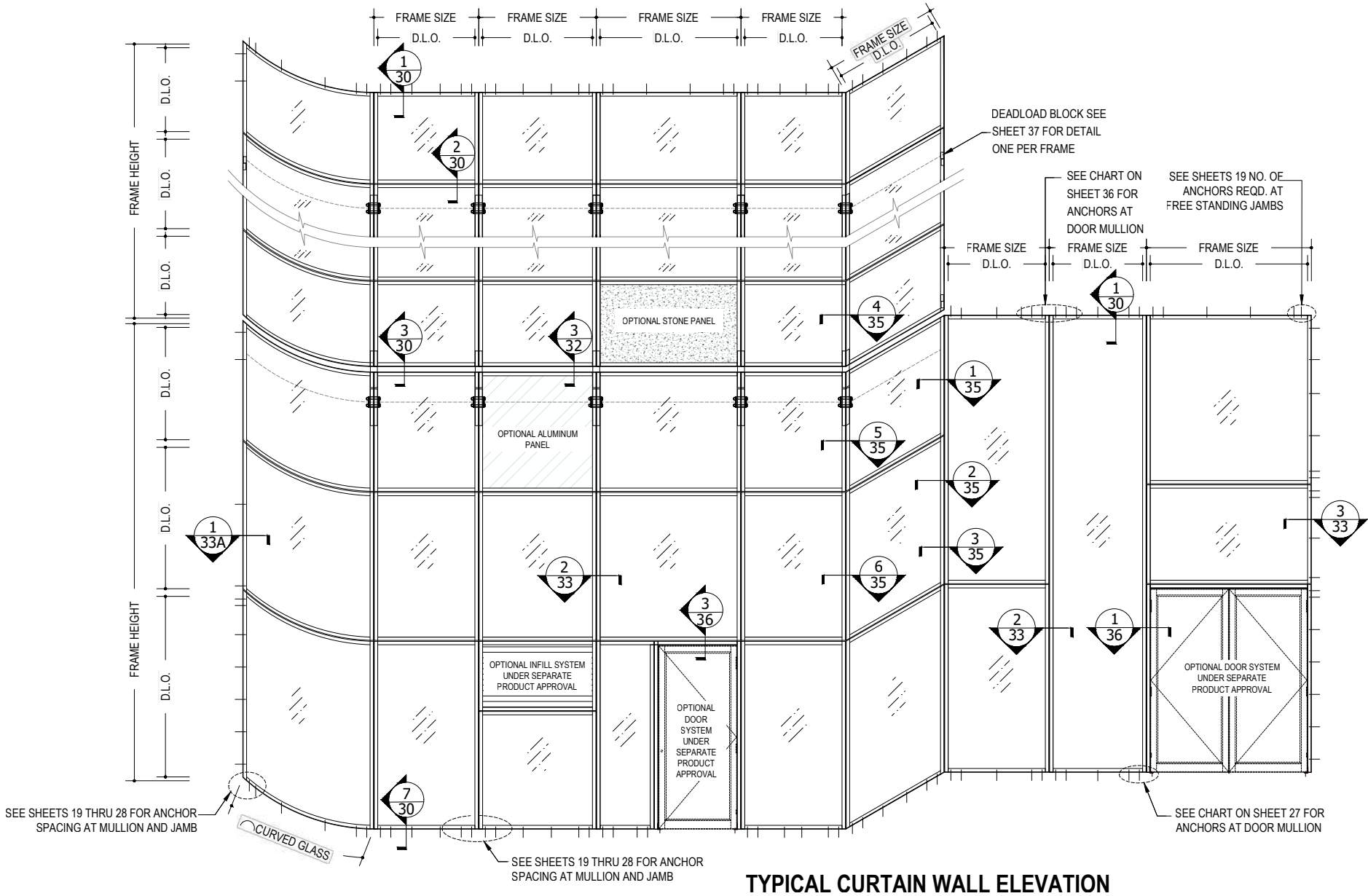
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03	GLASS TYPES (L.M.I.)
04	GLASS TYPES (L.M.I.) (CONT.)
05	GLASS LOAD TABLES (L.M.I.)
06	GLASS LOAD TABLES (L.M.I.) (CONT.)
07	GLASS LOAD TABLES (L.M.I.) (CONT.)
08	GLASS LOAD TABLES (L.M.I.) (CONT.)
09	GLASS LOAD TABLES (L.M.I.) (CONT.)
10	GLASS TYPES (S.M.I.)
11	GLASS LOAD TABLES (S.M.I.)
12	GLASS LOAD TABLES (S.M.I.) (CONT.)
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17	MULLION OPTIONS
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22	ANCHOR TYPE 'B' CAPACITY CHART
23	ANCHOR TYPE 'B' CAPACITY CHART (CONT.)
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25	ANCHOR TYPE 'C' CAPACITY CHART (CONT.)
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32	VERTICAL SECTION DETAILS (CONT.)
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38	DEAD LOAD / WIND LOAD INTERMEDIATE ANCHOR DETAILS
39	DEAD LOAD / WIND LOAD INTERMEDIATE ANCHOR DETAILS (CONT.)
40	DEAD LOAD / WIND LOAD INTERMEDIATE ANCHOR DETAILS (CONT.)
41	DEAD LOAD / WIND LOAD INTERMEDIATE ANCHOR DETAILS (CONT.)
42	APPLIED FIN CAPACITY CHARTS, DETAILS
43	APPLIED FIN CAPACITY CHART
44	TYPICAL SUNSHADE DETAILS
44A	POROUS SUNSHADE ELEVATION AND CHART
45	EXAMPLE POROUS SUNSHADE DETAILS
46	45SG, 7SG, 9SG, & 14SG SYSTEMS INTEGRATED
47	EXTRUSION DETAILS
48	EXTRUSION DETAILS (CONT.)
49	BILL OF MATERIALS
50	CORNER CONSTRUCTION DETAILS

GENERAL NOTES:

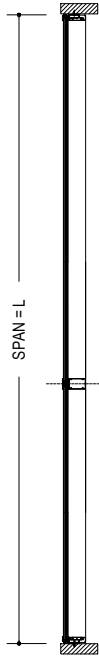
- THE SYSTEM AND GLASS TYPES DESCRIBED HEREIN COMPLY AND HAVE BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE EIGHTH EDITION (2023) PER:
 - ASTM E330-14, E331-00, E283-04, E1886-13a, E1996-14
 - TAS 201 / 202 / 203
 - AAMA 501
 - ANSI Z97.1-2015 (400 ft-lb. IMPACT)
- FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 FACTOR OF SAFETY.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d = 1.6$ 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.
- THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
- THE CONTRACTOR IS RESPONSIBLE TO ISOLATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.

- 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 SEAL AFFIXED HERE VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, ET. AL. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- PRESSURE VALUES ON THIS APPROVAL ARE ALLOWABLE DESIGN PRESSURES (ASD).
- ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATES THIS CERTIFICATION.
- SAFEGUARDS MUST BE OBSERVED (NOT IN THIS CERTIFICATION).
- IF SLOPED GLAZING IS NEEDED, IT SHALL BE ALLOWED UNDER SITE SPECIFIC ENGINEERING. DESIGN MUST BE CHECKED AND APPROVED BY A PROFESSIONAL ENGINEER AND MANUFACTURER.
- PRODUCT SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER SYSTEM CONTAINING THE FOLLOWING:

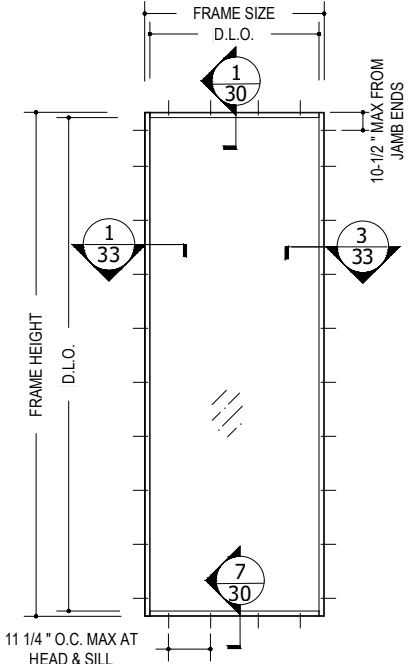
CRAWFORD TRACEY CORPORATION
3301 S.W. 13TH DRIVE
DEERFIELD BEACH, FLORIDA 33442
APPROVED BY FLORIDA BUILDING COMMISSION



TYPICAL CURTAIN WALL ELEVATION



TYPICAL FRAME SPAN SECTION



TYPICAL SINGLE PANEL OPENING

NOTE:
FRAME SIZE FOR SINGLE OPENINGS SHALL BE GOVERNED BY THE MAXIMUM ALLOWABLE D.L.O. DIMENSIONS DISPLAYED ON THE GLASS LOADING CHARTS.

PRO-TECH 9 SG ALUMINUM WINDOW WALL SYSTEM

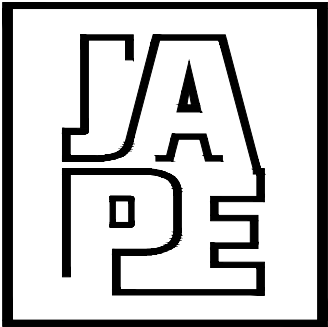
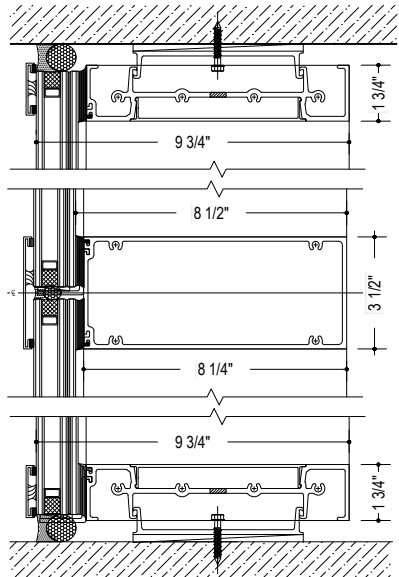
INSTRUCTIONS:

- STEP 1: WIND PRESSURE CALCULATION (BY OTHERS)**
- DETERMINE DESIGN WIND PRESSURE REQUIREMENT (PSF) BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND EXPOSURE, RISK CATEGORY, ETC. PER APPLICABLE ASCE 7 LATEST STANDARD.
- STEP 2: GLASS SELECTION**
- FOR L.M.I. RATING REQUIREMENT- SEE GLASS TYPES AND LOADING CHARTS ON SHEETS 03 TO 9
 - FOR S.M.I. RATING REQUIREMENT- SEE GLASS TYPES AND LOADING CHARTS ON SHEETS 10 TO 12
 - THIS VALUE SHOULD MEET OR EXCEED THE DESIGN WIND LOAD REQUIREMENT OBTAINED IN STEP 1 ABOVE.
- STEP 3: MULLION SELECTION**
- THIS SYSTEM IS AVAILABLE IN BOTH VERTICAL AND HORIZONTAL ORIENTATIONS.
 - FOR VERTICALLY LOADED SYSTEMS, SEE SHEET 13 TO 15.
 - FOR HORIZONTALLY LOADED SYSTEMS, SEE SHEET 16.
 - THE CAPACITY SHOULD EXCEED THE DESIGN LOAD. THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.
- STEP 4: ANCHOR SELECTION**
- SELECT APPROPRIATE ANCHOR DESCRIPTION FROM SHEET 18.
 - FOR ANCHOR CAPACITIES, SEE SHEETS 19 TO 28.
 - FOR ANCHORAGE USING L CLIPS AT JAMBS AND T CLIPS AT INTERMEDIATE MULLIONS - SEE SHEET 29

9 SG SYSTEM NOTES:

- INTERMEDIATE HORIZONTAL MULLION NOTES:**
- 125" MAX. SPAN FOR INTERMEDIATE HORIZONTAL MEMBERS.
 - SUNSHADES ARE ALLOWED UNDER SITE SPECIFIC ENGINEERING. FINAL SUNSHADE ATTACHMENT AND DESIGN SHALL BE APPROVED BY THE PRODUCT MANUFACTURER AND A LICENSED PROFESSIONAL ENGINEER.
- SLOPED GLAZING NOTE:**
- SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM LICENSED
 - PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
- SEPARATELY APPROVED DOOR SYSTEM & TRANSOM NOTES:**
- PRESSURES SHOWN ON SHEET 13 TO 15 APPLICABLE TO INTERMEDIATE VERTICAL MULLIONS RECEIVING DOORS, AS LONG AS THE MAXIMUM TRIBUTARY WIDTH, PER THE MULLION TYPE, IS NOT EXCEEDED.
 - IF ADDITIONAL TRANSOM ANCHORING IS NEEDED, IT SHALL BE DESIGNED PER SITE SPECIFIC ENGINEERING.
 - IF PANEL ABOVE DOOR EXCEEDS A GLAZING LOAD OF 750 LBS, THEN A STRUCTURAL BREAK SHALL BE REQUIRED TO SEPARATE THE DOOR AND CURTAINWALL SYSTEM.

9 SG SYSTEM TYPICAL PROFILE:



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REVISION

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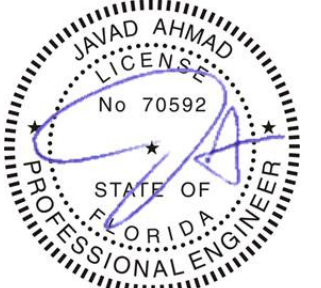
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Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



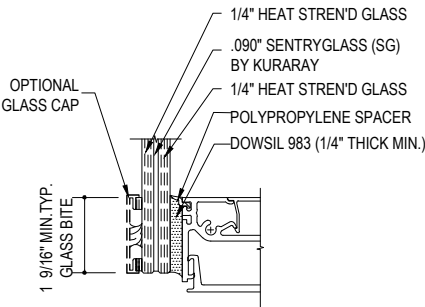
SEALED: 06-17-2026

GLASS TYPES (L.M.I.)

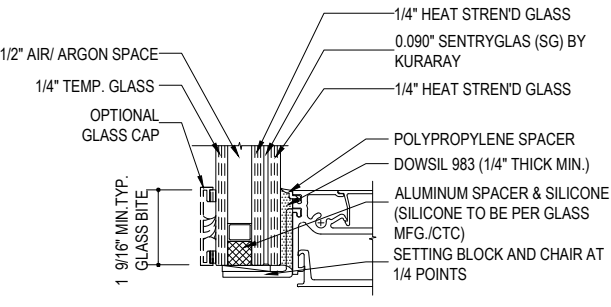
FL#29520.3

GLASS TYPE NOTES:

1. **ASTM E1300:** ALL GLASS TYPES SHOWN COMPLY WITH ASTM E1300.
2. **GEOMTRICAL SHAPES:** GLAZED GEOMTRICAL SHAPES MAY BE USED, PROVIDED THEY FIT INSIDE THE APPROVED INSCRIBED SIZES SHOWN ON THE GLASS LOADING TABLES.
3. **REDUCED GLASS BITE:** GLAZING DETAILS WITH A SILICONE BITE OF 1-9/16" ARE PERMITTED TO BE DECREASED TO A MINIMUM OF 1-3/8" SILICONE BITE, PROVIDED THE ALLOWABLE PRESSURES SHOWN ON THE GLASS LOADING TABLES ARE DECREASED BY 16%.
4. **CERAMIC FRIT:** OPTION OF .019" CERAMIC FRIT ON ROOM SIDE SURFACE OF INNER PANE OF GLASS IS ALLOWED.
5. **GLASS ORIENTATION:** GLASS MAY BE VERTICALLY OR HORIZONTALLY ORIENTED.
6. **SLOPED SYSTEMS:** SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
7. **CAPS & FINIS:** OPTIONAL GLASS CAPS, FINIS, OR SIMILAR ACCESSORIES OF VARIOUS SIZES MAY BE ATTACHED WITH STRUCTURAL SILICONE, BASED ON SITE SPECIFIC ENGINEERING FROM A LICENSED PROFESSIONAL ENGINEER.
8. **GLASS EXTENSIONS:** CONDITIONS WHERE GLASS EXTENDS PAST THE FRAME ARE ALLOWED. THIS CONDITION SHALL REQUIRE APPROVAL BY A LICENSED PROFESSIONAL ENGINEER.
9. **NON-IMPACT GLASS:** NON-IMPACT GLASS TO DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
10. **THICKER GLASS:** THICKER GLASS LITES MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, AS REQUIRED ON A SITE SPECIFIC BASIS AND SHALL BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
11. **CURVED GLASS:** CURVED OR BENT GLASS MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, IN ACCORDANCE WITH SITE SPECIFIC REQUIREMENTS. IF CURVED OR BENT GLASS IS USED, IT SHALL BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER. FINAL APPROVAL SHALL BE GIVEN BY AUTHORITY HAVING JURISDICTION.
12. **MONOLITHIC GLASS:** NON-LAMINATED MONOLITHIC GLASS MAY BE USED IN PLACE OF THE LAMINATED OPTIONS SHOWN GIVEN THAT THE GLASS TO BE USED IS LABELED AS "NON-IMPACT RESISTANT" AND IS DESIGNED TO MEET ASTM E1300 STANDARDS. THE SUBSTITUTED GLAZING MUST BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
13. **INSULATED GLASS UNIT (IGU) AIR SPACE:** FOR INSULATED GLASS UNITS, THE AIR SPACE WIDTH CAN BE INCREASED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.

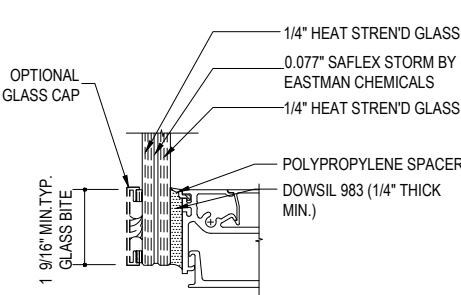


GLASS TYPE 'L1'
9/16" THK. LAM. GLASS
L.M.I. (LEVEL D)

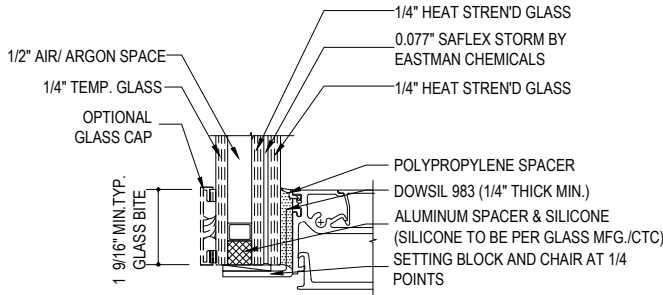


GLASS TYPE 'L1A'
1-5/16" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)

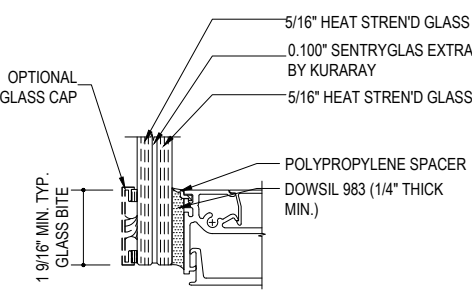
CURVED GLASS: GLASS TYPES 'L1' & 'L1A' ARE ALSO APPROVED FOR CURVED GLASS WITH A MIN. RADIUS OF 60" TO THE OUTSIDE FACE; MAX. GLASS LOAD OF ±120 PSF FOR D.L.O. SIZES UP TO 78.5 SQ.FT.



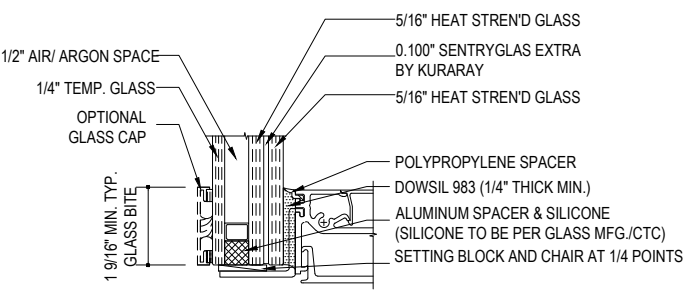
GLASS TYPE 'L2'
9/16" THK. LAM. GLASS
L.M.I. (LEVEL D)



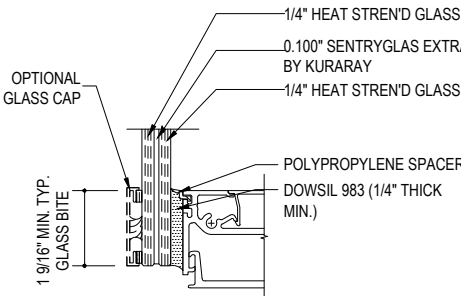
GLASS TYPE 'L2A'
1-5/16" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)



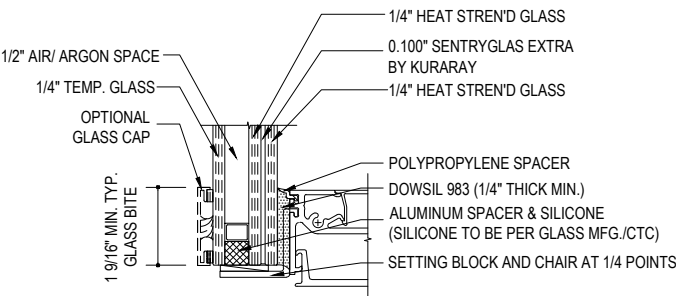
GLASS TYPE 'L4'
3/4" THK. LAM. GLASS
L.M.I. (LEVEL D)



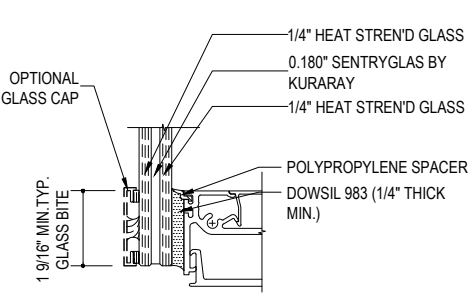
GLASS TYPE 'L4A'
1-1/2" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)



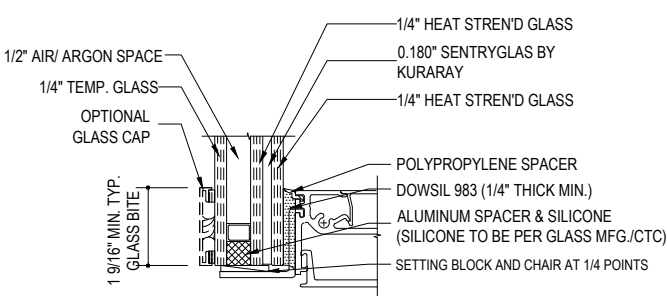
GLASS TYPE 'L3'
5/8" THK. LAM. GLASS
L.M.I. (LEVEL D)



GLASS TYPE 'L3A'
1-3/8" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)

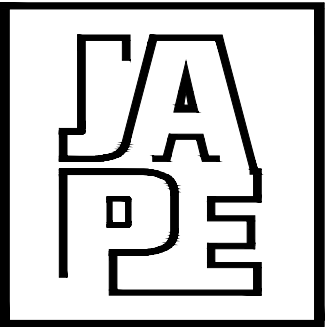


GLASS TYPE 'L5'
11/16" THK. LAM. GLASS
L.M.I. (LEVEL E)



GLASS TYPE 'L5A'
1-7/16" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL E)

CURVED GLASS: GLASS TYPES 'L5' & 'L5A' ARE ALSO APPROVED FOR CURVED GLASS WITH A MIN. RADIUS OF 60" TO THE OUTSIDE FACE; MAX. GLASS LOAD OF ±120 PSF FOR D.L.O. SIZES UP TO 78.5 SQ.FT.



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Check by:	PK		
Drawing no.	JA-1671-24		

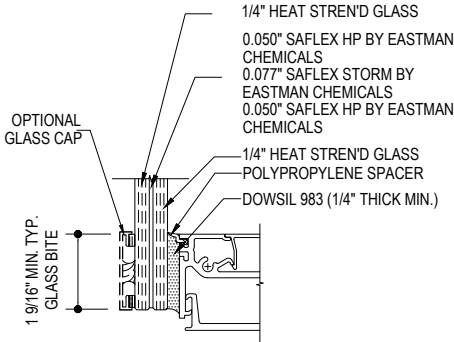
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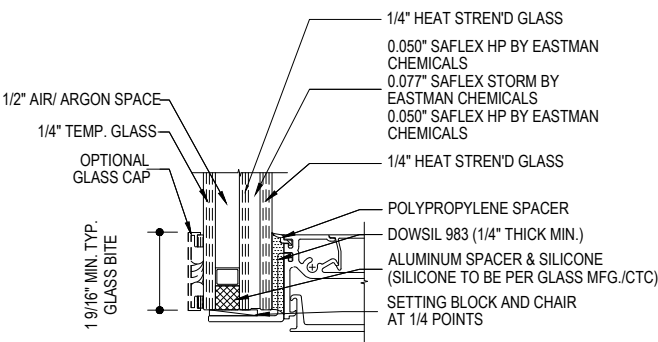
GLASS TYPES (L.M.I.) (CONT.)

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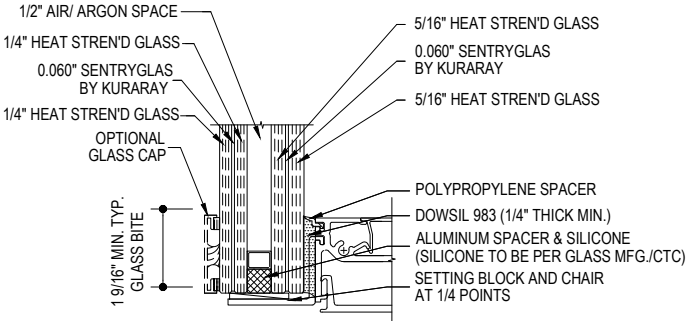
GLASS TYPE 'L6'

11/16" THK. LAM. GLASS
L.M.I. (LEVEL E)



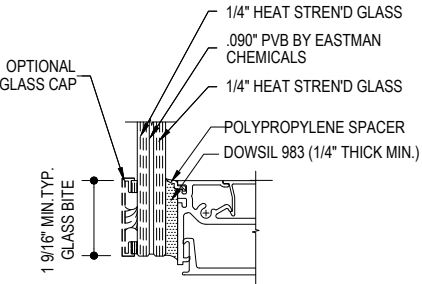
GLASS TYPE 'L6A'

1-7/16" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL E)



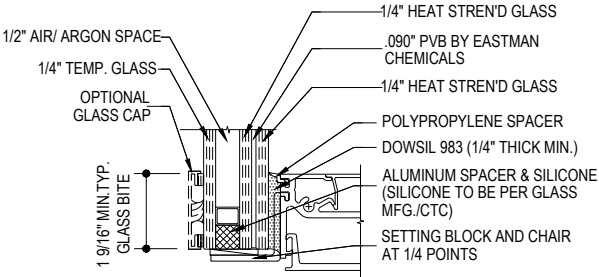
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1-3/4" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)



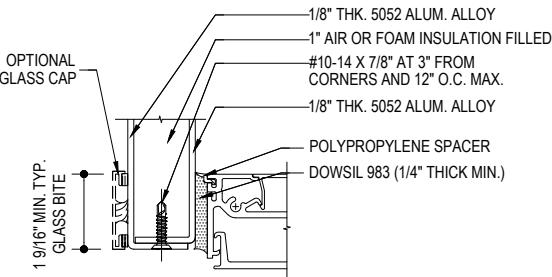
GLASS TYPE 'L8'

9/16" THK. LAM. GLASS
L.M.I. (LEVEL D)



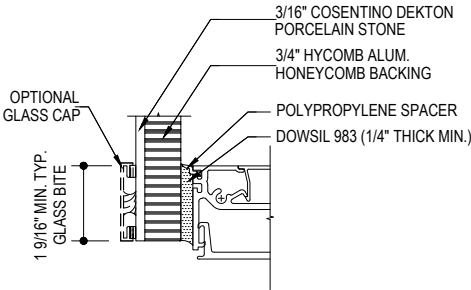
GLASS TYPE 'L8A'

1-5/16" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)



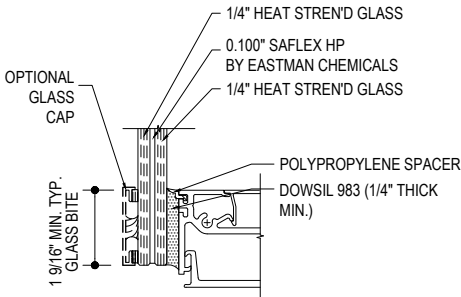
GLASS TYPE 'L9'

1-3/8" THK. ALUM. INFILL PANEL
L.M.I. (LEVEL E)



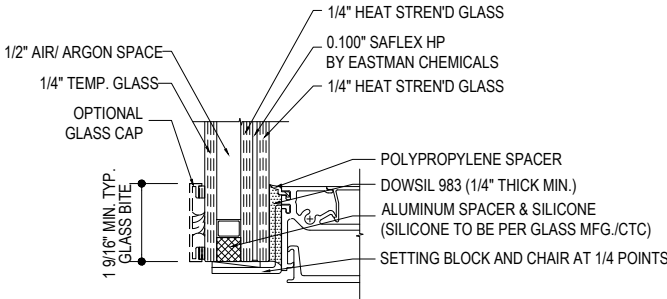
GLASS TYPE 'L10'

15/16" TO 1-7/16" THK.MIN. STONE INFILL PANEL
L.M.I. (LEVEL E)



GLASS TYPE 'L11'

5/8" THK. LAM. GLASS
L.M.I. (LEVEL D)

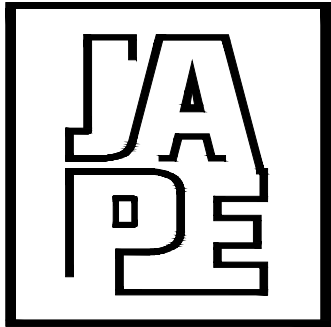


GLASS TYPE 'L11A'

1-3/8" THK. INSUL. LAM. GLASS
L.M.I. (LEVEL D)

GLASS TYPE NOTES:

- ASTM E1300:** ALL GLASS TYPES SHOWN COMPLY WITH ASTM E1300.
- GEOMETRICAL SHAPES:** GLAZED GEOMETRICAL SHAPES MAY BE USED, PROVIDED THEY FIT INSIDE THE APPROVED INSCRIBED SIZES SHOWN ON THE GLASS LOADING TABLES.
- REDUCED GLASS BITE:** GLAZING DETAILS WITH A SILICONE BITE OF 1-9/16" ARE PERMITTED TO BE DECREASED TO A MINIMUM OF 1-3/8" SILICONE BITE, PROVIDED THE ALLOWABLE PRESSURES SHOWN ON THE GLASS LOADING TABLES ARE DECREASED BY 16%.
- CERAMIC FRIT:** OPTION OF .019" CERAMIC FRIT ON ROOM SIDE SURFACE OF INNER PANE OF GLASS IS ALLOWED.
- GLASS ORIENTATION:** GLASS MAY BE VERTICALLY OR HORIZONTALLY ORIENTED.
- SLOPED SYSTEMS:** SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
- CAPS & FINS:** OPTIONAL GLASS CAPS, FINS, OR SIMILAR ACCESSORIES OF VARIOUS SIZES MAY BE ATTACHED WITH STRUCTURAL SILICONE, BASED ON SITE SPECIFIC ENGINEERING FROM A LICENSED PROFESSIONAL ENGINEER.
- GLASS EXTENSIONS:** CONDITIONS WHERE GLASS EXTENDS PAST THE FRAME ARE ALLOWED. THIS CONDITION SHALL REQUIRE APPROVAL BY A LICENSED PROFESSIONAL ENGINEER.
- NON-IMPACT GLASS:** NON-IMPACT GLASS TO DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
- THICKER GLASS:** THICKER GLASS LITES MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, AS REQUIRED ON A SITE SPECIFIC BASIS AND SHALL BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
- CURVED GLASS:** CURVED OR BENT GLASS MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, IN ACCORDANCE WITH SITE SPECIFIC REQUIREMENTS. IF CURVED OR BENT GLASS IS USED, IT SHALL BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER. FINAL APPROVAL SHALL BE GIVEN BY AUTHORITY HAVING JURISDICTION.
- MONOLITHIC GLASS:** NON-LAMINATED MONOLITHIC GLASS MAY BE USED IN PLACE OF THE LAMINATED OPTIONS SHOWN GIVEN THAT THE GLASS TO BE USED IS LABELED AS "NON-IMPACT RESISTANT" AND IS DESIGNED TO MEET ASTM E1300 STANDARDS. THE SUBSTITUTED GLAZING MUST BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
- INSULATED GLASS UNIT (IGU) AIR SPACE:** FOR INSULATED GLASS UNITS, THE AIR SPACE WIDTH CAN BE INCREASED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.



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PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

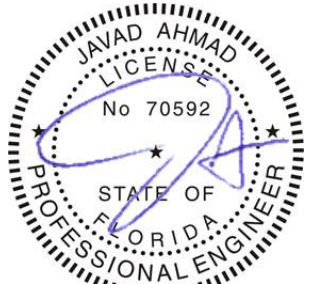
CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR.,
DEERFIELD BEACH, FL 33442
(954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION
Date:	06-15-2026		
Scale:	N/A		
Drawn by:	SA		
Check by:	PK		
Drawing no.	JA-1671-24		

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



SEALED: 06-17-2026

GLASS LOAD TABLES (L.M.I.)												FL#29520.3	
GLASS LOAD CAPACITY (PSF) - L.M.I.													
D.L.O		L1 & L1A EXT.(+) INT.(-)	L2 & L2A EXT.(+) INT.(-)	L3 & L3A EXT.(+) INT.(-)	L4 & L4A EXT.(+) INT.(-)	L5 & L5A EXT.(+) INT.(-)	L6 & L6A EXT.(+) INT.(-)	L7 EXT.(+) INT.(-)	L8 & L8A EXT.(+) INT.(-)	L9 EXT.(+) INT.(-)	L10 EXT.(+) INT.(-)	L11 & L11A EXT.(+) INT.(-)	
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)												
24"	24" to 120"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	+80 -80	+175 -175	+150 -150	+80 -80	
	126"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	+80 -80	
	132" to 168"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	+80 -80	
	174"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	+80 -80	
	180" to 189"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	192" to 198"	+120 -145	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	204"	+120 -126	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	210"	+120 -126	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	-	-	-	
216" to 252"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-		
30"	30" to 120"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	+80 -80	+175 -175	+150 -150	+80 -80	
	126"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	+80 -80	
	132"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	+80 -80	
	138" to 168"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	174" to 189"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	192" to 198"	+120 -145	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	204"	+120 -126	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	210"	+120 -126	+100 -100	-	+120 -126	+120 -120	-	+100 -100	-	-	-	-	
216" to 252"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-		
36"	36" to 108"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	+80 -80	+175 -175	+150 -150	+80 -80	
	114" to 126"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	-	
	132V to 162"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	168"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	174"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	-	+100 -100	-	+175 -175	-	-	
	180" to 189"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	192" to 204"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	210" to 252"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-	
42"	42" to 84"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	+80 -80	+175 -175	+150 -150	+68 -68	
	90" to 96"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	+68 -68	
	102" to 126"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	-	
	132" to 138"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	144" to 150"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	156" to 162"	+120 -126	+100 -100	+80 -80	+120 -126	-	+100 -100	+100 -100	-	+175 -175	-	-	
	168"	+120 -126	-	+80 -80	+120 -126	-	+100 -100	+100 -100	-	+175 -175	-	-	
	174" to 189"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	192" to 204"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	210" to 252"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-	
48"	48" to 78"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	+80 -80	+175 -175	+150 -150	+60 -60	
	84"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	+60 -60	
	90" to 120"	+120 -145	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	-	
	126V	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	+150 -150	-	
	132" to 138"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+100 -100	+100 -100	-	+175 -175	-	-	
	144"	+120 -126	+100 -100	+80 -80	+120 -126	-	+100 -100	+100 -100	-	+175 -175	-	-	
	150" to 168"	+120 -126	-	+80 -80	+120 -126	-	+100 -100	+100 -100	-	+175 -175	-	-	
	174" to 189"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	-	-	-	
	192" to 228"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-	
	233" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-	

D.L.O.
HEIGHT

D.L.O.
WIDTH

D.L.O.
HEIGHT

D.L.O.
WIDTH

NOTE:

GLASS CAPACITIES ON THIS SHEET ARE BASED
ON ASTM E1300-09 (3 SEC. GUSTS).

NOTE:

ALL PRESSURES SHOWN ON THIS SHEET ARE
ALLOWABLE PRESSURES (ASD).

J
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P
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PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

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REVISION

No.	DATE	BY	DESCRIPTION
Date:	06-15-2026		
Scale:	N/A		
Drawn by:	DK		
Check by:	PK		
Drawing no.	JA-1671-24		

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

JAVAD AHMAD
LICENSE
No 70592
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SEALED: 06-17-2026

05

OF 50

GLASS LOAD TABLES (L.M.I.) (CONT.)												FL#29520.3	
GLASS LOAD CAPACITY (PSF) - L.M.I.													
D.L.O		L1 & L1A EXT.(+) INT.(-)	L2 & L2A EXT.(+) INT.(-)	L3 & L3A EXT.(+) INT.(-)	L4 & L4A EXT.(+) INT.(-)	L5 & L5A EXT.(+) INT.(-)	L6 & L6A EXT.(+) INT.(-)	L7 EXT.(+) INT.(-)	L8 & L8A EXT.(+) INT.(-)	L9 EXT.(+) INT.(-)	L10 EXT.(+) INT.(-)	L11 & L11A EXT.(+) INT.(-)	
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)												
54"	54 "to 72"	+120 -136	+100 -100	+80 -80	+120 -126	+120 -120	+88 -88	+100 -100	+80 -80	+175 -175	+150 -150	+53 -53	
	78" to 108"	+120 -136	+100 -100	+80 -80	+120 -126	+120 -120	+88 -88	+100 -100	-	+175 -175	+150 -150	-	
	114"	+120 -126	+100 -100	+80 -80	+120 -126	+118 -118	+88 -88	+100 -100	-	+175 -175	+150 -150	-	
	120" to 126"	+120 -126	+100 -100	+80 -80	+120 -126	+114 -114	+88 -88	+100 -100	-	+175 -175	+150 -150	-	
	132" to 144"	+120 -126	-	+80 -80	+120 -126	-	+88 -88	+100 -100	-	+175 -175	-	-	
	150" to 168"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	174 "to 189"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	-	-	-	
	192" to 204"	+120 -126	-	-	+120 -126	-	-	+100 -100	-	-	-	-	
	210" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-	
58 1/2"	58 1/2"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+80 -80	+100 -100	+80 -80	+175 -175	+150 -150	+53 -53	
	60" to 66"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+80 -80	+100 -100	+80 -80	+175 -175	+150 -150	+48 -48	
	72" to 102"	+120 -126	+100 -100	+80 -80	+120 -126	+120 -120	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	108"	+120 -126	+100 -100	+80 -80	+120 -126	+118 -118	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	114"	+120 -126	+100 -100	+80 -80	+120 -126	+110 -110	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	120" to 126"	+120 -126	-	+80 -80	+120 -126	-	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	132"	+120 -126	-	+80 -80	+120 -126	-	+80 -80	+100 -100	-	+175 -175	-	-	
	138"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	+175 -175	-	-	
	144" to 189"	+120 -126	-	+80 -80	+120 -126	-	-	+100 -100	-	-	-	-	
192" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-		
60"	60"	+120 -123	+100 -100	+78 -78	+117 -122	+120 -120	+80 -80	+100 -100	+80 -80	+175 -175	+150 -150	+48 -48	
	66"	+120 -123	+100 -100	+78 -78	+117 -122	+120 -120	+80 -80	+100 -100	-	+175 -175	+150 -150	+48 -48	
	72" to 90"	+120 -123	+100 -100	+78 -78	+117 -122	+120 -120	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	96"	+117 -123	+100 -100	+78 -78	+117 -122	+120 -120	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	102"	+117 -122	+100 -100	+78 -78	+117 -122	+120 -120	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	108"	+117 -122	-	+78 -78	+117 -122	+112 -112	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	114" to 120"	+117 -122	-	+78 -78	+117 -122	-	+80 -80	+100 -100	-	+175 -175	+150 -150	-	
	126" to 132"	+117 -122	-	+78 -78	+117 -122	-	+80 -80	+100 -100	-	+175 -175	-	-	
	138"	+117 -122	-	+78 -78	+117 -122	-	-	+100 -100	-	+175 -175	-	-	
	144" to 180"	+117 -122	-	+78 -78	+117 -122	-	-	+100 -100	-	-	-	-	
186" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-		
66"	66"	+120 -123	+100 -100	+70 -70	+106 -111	+120 -120	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	72" to 84"	+120 -120	+100 -100	+70 -70	+106 -111	+120 -120	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	90"	+119 -119	+100 -100	+70 -70	+106 -111	+120 -120	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	96"	+106 -111	-	+70 -70	+106 -111	+118 -118	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	102"	+106 -111	-	+70 -70	+106 -111	+117 -117	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	108" to 114"	+106 -111	-	+70 -70	+106 -111	-	+72 -72	+100 -100	-	+175 -175	+150 -150	-	
	120"	+106 -111	-	+70 -70	+106 -111	-	+72 -72	+100 -100	-	+175 -175	-	-	
	126" to 132"	+106 -111	-	+70 -70	+106 -111	-	-	+100 -100	-	+175 -175	-	-	
	138" to 162"	+106 -111	-	+70 -70	+106 -111	-	-	+100 -100	-	-	-	-	
	168" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-	
72"	72" to 84"	+120 -120	+100 -100	+65 -65	+97 -102	+120 -120	+66 -66	+100 -100	-	+161 -161	+150 -150	-	
	90"	+112 -112	+100 -100	+65 -65	+97 -102	+120 -120	+66 -66	+100 -100	-	+161 -161	+150 -150	-	
	96" to 108"	+97 -102	-	+65 -65	+97 -102	-	+66 -66	+100 -100	-	+161 -161	+150 -150	-	
	114"	+97 -102	-	+65 -65	+97 -102	-	-	+100 -100	-	+161 -161	+150 -150	-	
	120" to 126"	+97 -102	-	+65 -65	+97 -102	-	-	+100 -100	-	+161 -161	-	-	
	132" to 150"	+97 -102	-	+65 -65	+97 -102	-	-	+100 -100	-	-	-	-	
	156" to 252"	-	-	-	-	-	-	+100 -100	-	-	-	-	

D.L.O.
HEIGHT

D.L.O.
WIDTH

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NOTE:
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NOTE:
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J
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PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

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REVISION

No.	DATE	BY	DESCRIPTION
Date:	06-15-2026		
Scale:	N/A		
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Drawing no.	JA-1671-24		

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

JAVAD AHMAD
LICENSE
No 70592
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SEALED: 06-17-2026

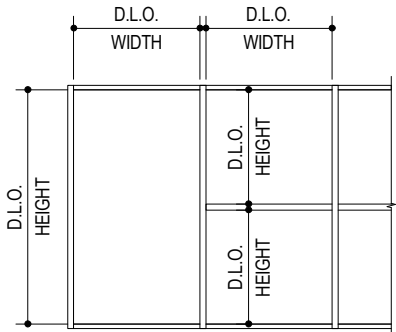
06

OF 50

GLASS LOAD TABLES (L.M.I.) (CONT.)	FL#29520.3
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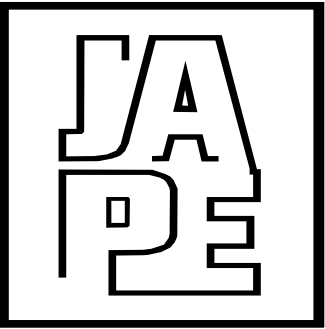
FL#29520.3

GLASS LOAD CAPACITY (PSF) - L.M.I.

[illegible]

NOTE:
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PROJECT :

PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

CLIENT :

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CORPORATION

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REVISION

No.	DATE	BY	DESCRIPTION

Date:	06-15-2026
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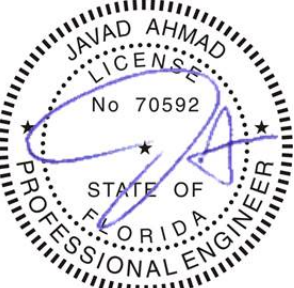
Scale:	N/A
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Drawn by:	DK
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Check by:	PK
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Drawing no.	JA-1671-24
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Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254

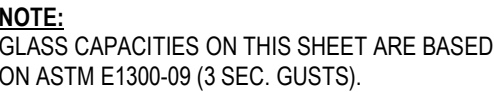


SEALED: 06-17-2026

07

OF 50

FL#29520.3



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Date:	06-15-2026
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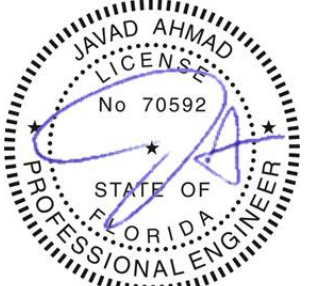
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Drawn by:	DK
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Check by:	PK
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Drawing no.	JA-1671-24
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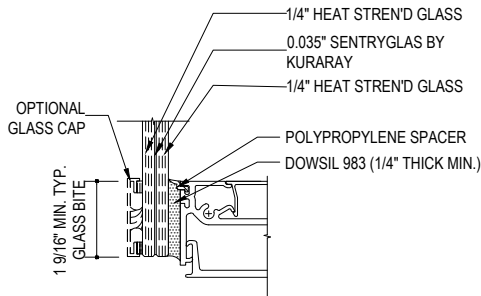
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



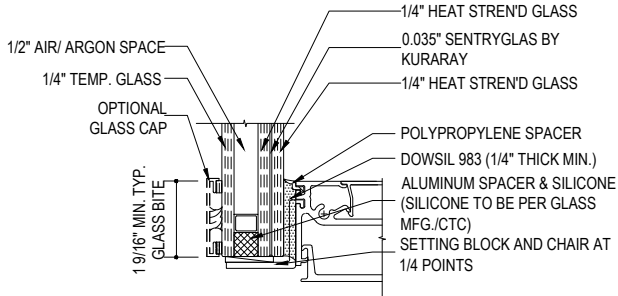
SEALED: 06-17-2026

GLASS TYPES (S.M.I.)

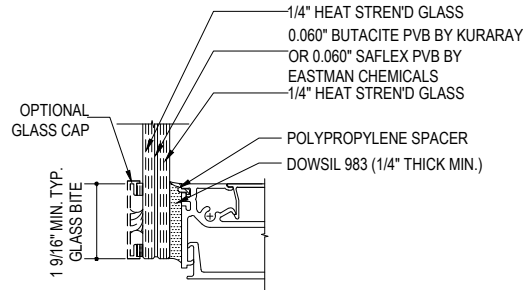
FL#29520.3



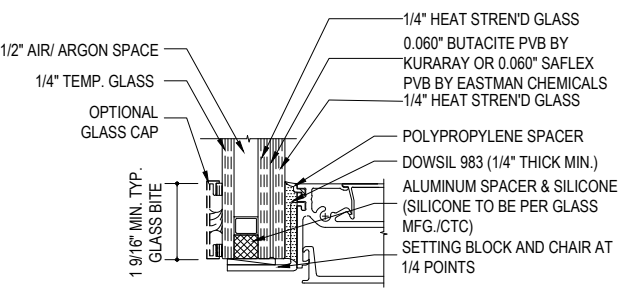
GLASS TYPE 'S1'
9/16" THK. LAM. GLASS
(S.M.I.)



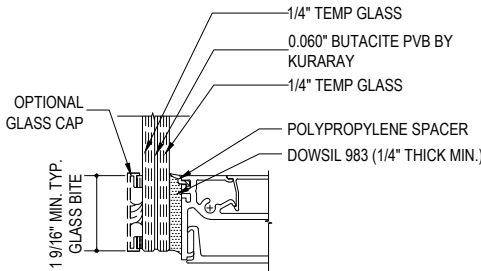
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(S.M.I.)



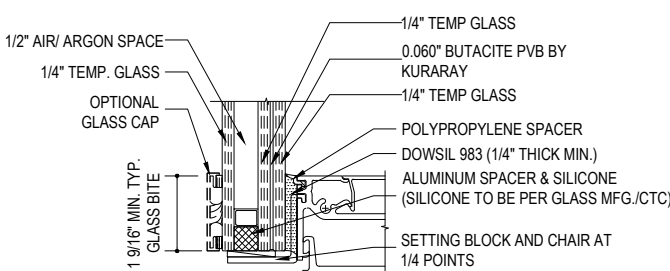
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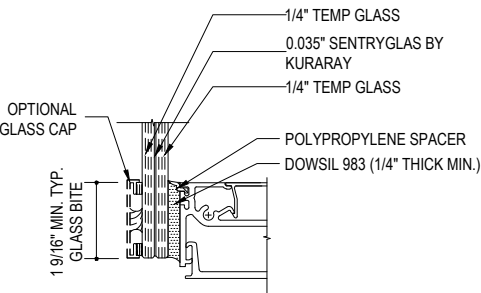
GLASS TYPE 'S2A'
1-5/16" THK. INSUL LAM. GLASS
(S.M.I.)



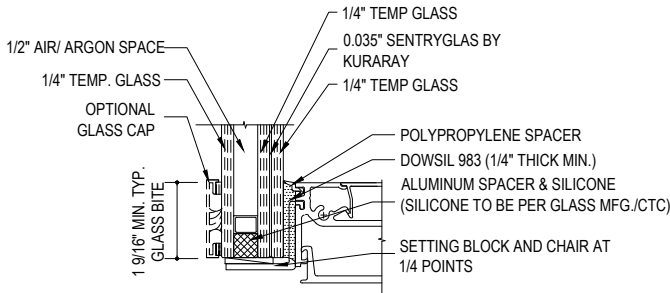
GLASS TYPE 'S3'
9/16" THK. LAM. GLASS
(S.M.I.)



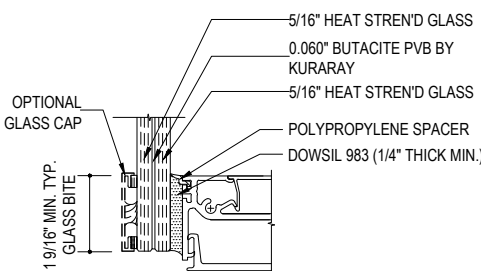
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(S.M.I.)



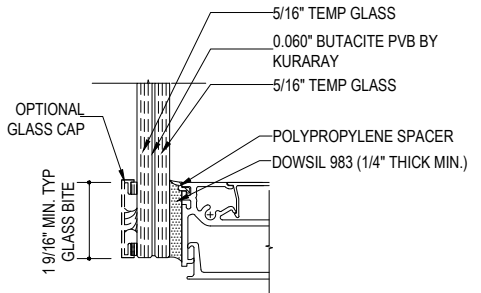
GLASS TYPE 'S4'
9/16" THK. LAM. GLASS
(S.M.I.)



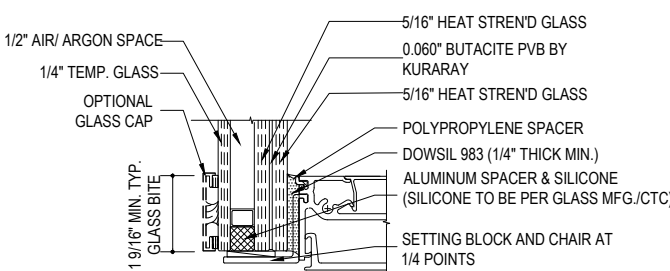
GLASS TYPE 'S4A'
1-5/16" THK. INSUL LAM. GLASS
(S.M.I.)



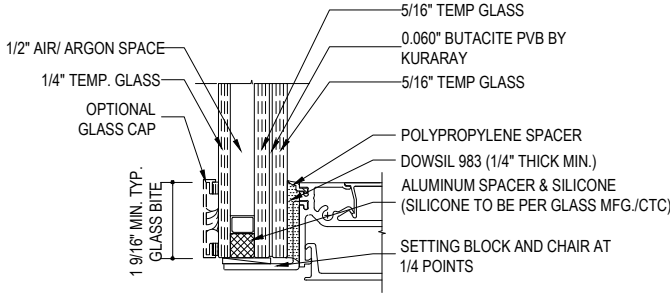
GLASS TYPE 'S5'
11/16" THK. LAM. GLASS
(S.M.I.)



GLASS TYPE 'S6'
11/16" THK. LAM. GLASS
(S.M.I.)



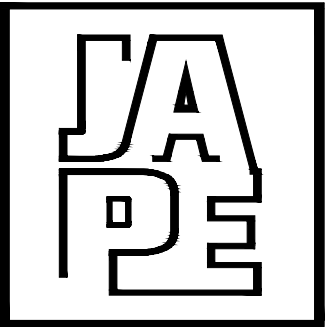
GLASS TYPE 'S5A'
1-7/16" THK. INSUL LAM. GLASS
(S.M.I.)



GLASS TYPE 'S6A'
1-7/16" THK. INSUL LAM. GLASS
(S.M.I.)

GLASS TYPE NOTES:

- ASTM E1300:** ALL GLASS TYPES SHOWN COMPLY WITH ASTM E1300.
- GEOMTRICAL SHAPES:** GLAZED GEOMTRICAL SHAPES MAY BE USED, PROVIDED THEY FIT INSIDE THE APPROVED INSCRIBED SIZES SHOWN ON THE GLASS LOADING TABLES.
- REDUCED GLASS BITE:** GLAZING DETAILS WITH A SILICONE BITE OF 1-9/16" ARE PERMITTED TO BE DECREASED TO A MINIMUM OF 1-3/8" SILICONE BITE, PROVIDED THE ALLOWABLE PRESSURES SHOWN ON THE GLASS LOADING TABLES ARE DECREASED BY 16%.
- CERAMIC FRIT:** OPTION OF .019" CERAMIC FRIT ON ROOM SIDE SURFACE OF INNER PANE OF GLASS IS ALLOWED.
- GLASS ORIENTATION:** GLASS MAY BE VERTICALLY OR HORIZONTALLY ORIENTED.
- SLOPED SYSTEMS:** SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
- CAPS & FINS:** OPTIONAL GLASS CAPS, FINS, OR SIMILAR ACCESSORIES OF VARIOUS SIZES MAY BE ATTACHED WITH STRUCTURAL SILICONE, BASED ON SITE SPECIFIC ENGINEERING FROM A LICENSED PROFESSIONAL ENGINEER.
- GLASS EXTENSIONS:** CONDITIONS WHERE GLASS EXTENDS PAST THE FRAME ARE ALLOWED. THIS CONDITION SHALL REQUIRE APPROVAL BY A LICENSED PROFESSIONAL ENGINEER.
- NON-IMPACT GLASS:** NON-IMPACT GLASS TO DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
- THICKER GLASS:** THICKER GLASS LITES MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, AS REQUIRED ON A SITE SPECIFIC BASIS AND SHALL BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER.
- CURVED GLASS:** CURVED OR BENT GLASS MAY BE USED IN THE SAME CONFIGURATIONS AS SHOWN, IN ACCORDANCE WITH SITE SPECIFIC REQUIREMENTS. IF CURVED OR BENT GLASS IS USED, IT SHALL BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER. FINAL APPROVAL SHALL BE GIVEN BY AUTHORITY HAVING JURISDICTION.
- MONOLITHIC GLASS:** NON-LAMINATED MONOLITHIC GLASS MAY BE USED IN PLACE OF THE LAMINATED OPTIONS SHOWN GIVEN THAT THE GLASS TO BE USED IS LABELED AS "NON-IMPACT RESISTANT" AND IS DESIGNED TO MEET ASTM E1300 STANDARDS. THE SUBSTITUTED GLAZING MUST BE CHECKED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.
- INSULATED GLASS UNIT (IGU) AIR SPACE:** FOR INSULATED GLASS UNITS, THE AIR SPACE WIDTH CAN BE INCREASED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.



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ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR.,
DEERFIELD BEACH, FL 33442
(954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

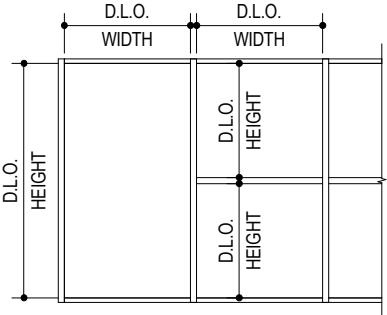
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



SEALED: 06-17-2026

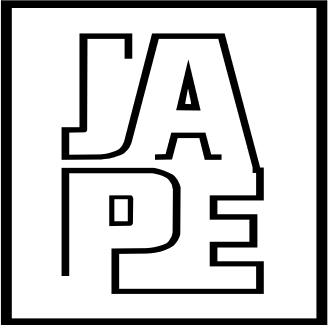
GLASS LOAD CAPACITY (PSF) - S.M.I.							
D.L.O		S1 & S1A EXT.(+) INT.(-)	S2 & S2A EXT.(+) INT.(-)	S3 & S3A EXT.(+) INT.(-)	S4 & S4A EXT.(+) INT.(-)	S5 & S5A EXT.(+) INT.(-)	S6 & S6A EXT.(+) INT.(-)
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)						
24"	24" to 114"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120" to 126"	+120 -145	+120 -132	+120 -126	-	+120 -132	+120 -132
	132 "to 162"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132
	168" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240" to 252"	-	+120 -132	+120 -126	-	-	+120 -132
30"	30" to 114"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120" to 126"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	132" to 162"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132
	168" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240" to 252"	-	+120 -132	+120 -126	-	-	+120 -132
36"	36" to 108"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	114"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120" to 162"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132
	168" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240" to 252"	-	+120 -132	+120 -126	-	-	+120 -132
42"	42" to 90"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	96" to 114"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120" to 150"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132
	156" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240 to 252	-	+120 -132	+120 -126	-	-	+120 -132
48"	48" to 90"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	96" to 114"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120" to 126"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132
	132"	+116 -116	+120 -132	+120 -126	-	+120 -132	+120 -132
	138"	+112 -112	+120 -132	+120 -126	-	+120 -132	+120 -132
	144" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240"	-	+120 -132	+120 -126	-	-	+120 -132
	246" to 252"	-	+120 -132	-	-	-	+120 -132
54"	54" to 78"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	84" to 108"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	114"	+116 -116	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	120"	+112 -112	+120 -132	+120 -126	-	+120 -132	+120 -132
	126"	+108 -108	+120 -132	+120 -126	-	+120 -132	+120 -132
	132" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240"	-	+120 -132	+120 -126	-	-	+120 -132
	246" to 252"	-	+120 -132	-	-	-	+120 -132
58 1/2"	58 1/2" to 72"	+120 -145	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	78" to 96"	+120 -120	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	102"	+119 -119	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	108"	+113 -113	+120 -132	+120 -126	+160 -150	+120 -132	+120 -132
	114" to 233"	-	+120 -132	+120 -126	-	+120 -132	+120 -132
	240"	-	+120 -132	+120 -126	-	-	+120 -132

GLASS LOAD CAPACITY (PSF) - S.M.I.							
D.L.O		S1 & S1A EXT.(+) INT.(-)	S2 & S2A EXT.(+) INT.(-)	S3 & S3A EXT.(+) INT.(-)	S4 & S4A EXT.(+) INT.(-)	S5 & S5A EXT.(+) INT.(-)	S6 & S6A EXT.(+) INT.(-)
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)						
60"	60" to 66"	+120 -145	+120 -132	+120 -126	+160 -150	+117 -128	+120 -132
	72" to 96"	+120 -120	+120 -132	+120 -126	+160 -150	+117 -128	+120 -132
	102"	+119 -119	+120 -132	+120 -126	+160 -150	+117 -128	+120 -132
	108"	+110 -110	+120 -132	+120 -126	+160 -150	+117 -128	+120 -132
	114" to 222"	-	+120 -132	+120 -126	-	+117 -128	+120 -132
	228" to 240"	-	+120 -132	+120 -126	-	-	+120 -132
66"	66"	+120 -145	+111 -123	+111 -117	+160 -150	+106 -117	+111 -123
	72" to 96"	+120 -120	+111 -123	+111 -117	+160 -150	+106 -117	+111 -123
	102"	+115 -115	+111 -123	+111 -117	-	+106 -117	+111 -123
	108" to 204"	-	+111 -123	+111 -117	-	+106 -117	+111 -123
72"	210" to 216"	-	+111 -123	+111 -117	-	-	+111 -123
	72" to 90"	+120 -120	+102 -112	+102 -107	+160 -150	+97 -107	+102 -112
	96" to 189"	-	+102 -112	+102 -107	-	+97 -107	+102 -112
78"	192"	-	+102 -112	+102 -107	-	-	+102 -112
	78"	+120 -120	+94 -104	+94 -99	+160 -150	+90 -99	+94 -104
	84"	+115 -115	+94 -104	+94 -99	+160 -150	+90 -99	+94 -104
84"	90" to 174"	-	+94 -104	+94 -99	-	+90 -99	+94 -104
	180"	-	+94 -104	+94 -99	-	-	+94 -104
	84" to 162"	-	+87 -96	+87 -92	-	+83 -91	+87 -96
90"	168"	-	+87 -96	+87 -92	-	-	+87 -96
	90" to 150"	-	+82 -90	+82 -86	-	+78 -85	+82 -90
96"	156"	-	+82 -90	+82 -86	-	-	+82 -90
	96" to 138"	-	+76 -84	+76 -80	-	+73 -80	+76 -84
102"	144" to 150"	-	+76 -84	+76 -80	-	-	+76 -84
	102" to 132"	-	+72 -79	+72 -75	-	+68 -75	+72 -79
108"	108" to 126"	-	+68 -75	+68 -71	-	+65 -71	+68 -75
	132"	-	+68 -75	+68 -71	-	-	+68 -75
114"	114"	-	+64 -71	+64 -67	-	+61 -67	+64 -71
	120"	-	+64 -71	+64 -67	-	-	+64 -71
120"	120"	-	+61 -67	+61 -64	-	-	+61 -67



NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED
ON ASTM E1300-09 (3 SEC. GUSTS).

NOTE:
ALL PRESSURES SHOWN ON THIS SHEET ARE
ALLOWABLE PRESSURES (ASD).



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REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

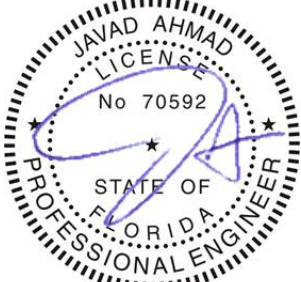
Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



SEALED: 06-17-2026

GLASS LOAD TABLES (S.M.I.) (CONT.)										FL#29520.3		
GLASS LOAD CAPACITY (PSF) - S.M.I.												
D.L.O		S1 & S1A EXT.(+) INT.(-)	S2 & S2A EXT.(+) INT.(-)	S3 & S3A EXT.(+) INT.(-)	S4 & S4A EXT.(+) INT.(-)	S5 & S5A EXT.(+) INT.(-)	S6 & S6A EXT.(+) INT.(-)					
D.L.O	WIDTH OR HEIGHT (IN.)											
126"	24 "to 30"	+120 -145	+120 -132	+120 -126	-	+120 -132	+120 -132					
	36" to 48"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132					
	54"	+108 -108	+120 -132	+120 -126	-	+120 -132	+120 -132					
	58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132					
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132					
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123					
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112					
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104					
	84"	-	+87 -96	+87 -92	-	+83 -91	+87 -96					
	90"	-	+82 -90	+82 -86	-	+78 -85	+82 -90					
	96"	-	+76 -84	+76 -80	-	+73 -80	+76 -84					
	102"	-	+72 -79	+72 -75	-	+68 -75	+72 -79					
132"	24" to 42"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132					
	48"	+116 -116	+120 -132	+120 -126	-	+120 -132	+120 -132					
	54" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132					
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132					
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123					
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112					
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104					
	84"	-	+87 -96	+87 -92	-	+83 -91	+87 -96					
	90"	-	+82 -90	+82 -86	-	+78 -85	+82 -90					
	96"	-	+76 -84	+76 -80	-	+73 -80	+76 -84					
	102"	-	+72 -79	+72 -75	-	+68 -75	+72 -79					
	108"	-	+68 -75	+68 -71	-	-	+68 -75					
138"	24" to 42"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132					
	48"	+112 -112	+120 -132	+120 -126	-	+120 -132	+120 -132					
	54" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132					
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132					
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123					
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112					
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104					
	84"	-	+87 -96	+87 -92	-	+83 -91	+87 -96					
	90"	-	+82 -90	+82 -86	-	+78 -85	+82 -90					
	96"	-	+76 -84	+76 -80	-	+73 -80	+76 -84					
	144"	24" to 42"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132				
		42" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
60"		-	+120 -132	+120 -126	-	+117 -128	+120 -132					
66"		-	+111 -123	+111 -117	-	+106 -117	+111 -123					
72"		-	+102 -112	+102 -107	-	+97 -107	+102 -112					
78"		-	+94 -104	+94 -99	-	+90 -99	+94 -104					
84"		-	+87 -96	+87 -92	-	+83 -91	+87 -96					
90"		-	+82 -90	+82 -86	-	+78 -85	+82 -90					
96"		-	+76 -84	+76 -80	-	-	+76 -84					

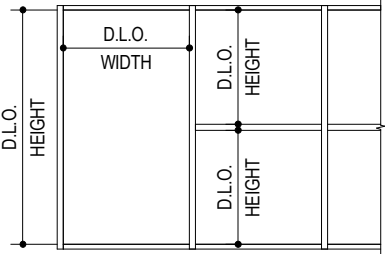
GLASS LOAD CAPACITY (PSF) - S.M.I.											
D.L.O		S1 & S1A EXT.(+) INT.(-)	S2 & S2A EXT.(+) INT.(-)	S3 & S3A EXT.(+) INT.(-)	S4 & S4A EXT.(+) INT.(-)	S5 & S5A EXT.(+) INT.(-)	S6 & S6A EXT.(+) INT.(-)				
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)										
150"	24" to 42"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132				
	42" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132				
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123				
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112				
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104				
	84"	-	+87 -96	+87 -92	-	+83 -91	+87 -96				
	90"	-	+82 -90	+82 -86	-	+78 -85	+82 -90				
	96"	-	+76 -84	+76 -80	-	-	+76 -84				
	156"	24" to 36"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132			
42" to 58 1/2"		-	+120 -132	+120 -126	-	+120 -132	+120 -132				
60"		-	+120 -132	+120 -126	-	+117 -128	+120 -132				
66"		-	+111 -123	+111 -117	-	+106 -117	+111 -123				
72"		-	+102 -112	+102 -107	-	+97 -107	+102 -112				
78"		-	+94 -104	+94 -99	-	+90 -99	+94 -104				
84"		-	+87 -96	+87 -92	-	+83 -91	+87 -96				
168"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132				
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123				
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112				
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104				
	84"	-	+87 -96	+87 -92	-	-	+87 -96				
	174" to 180"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132			
60"		-	+120 -132	+120 -126	-	+117 -128	+120 -132				
66"		-	+111 -123	+111 -117	-	+106 -117	+111 -123				
72"		-	+102 -112	+102 -107	-	+97 -107	+102 -112				
78"		-	+94 -104	+94 -99	-	-	+94 -104				
186" to 192"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132				
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123				
	72"	-	+102 -112	+102 -107	-	-	+102 -112				
198" to 216"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132				
	66"	-	+111 -123	+111 -117	-	-	+111 -123				
222" to 233"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132				
	60"	-	+120 -132	+120 -126	-	-	+120 -132				
240"	24" to 60"	-	+120 -132	+120 -126	-	-	+120 -132				
246" to 252"	24" to 42"	-	+120 -132	+120 -126	-	-	+120 -132				
	48" to 54"	-	+120 -132	-	-	-	+120 -132				

D.L.O.
WIDTH

L.O.
HEIGHT

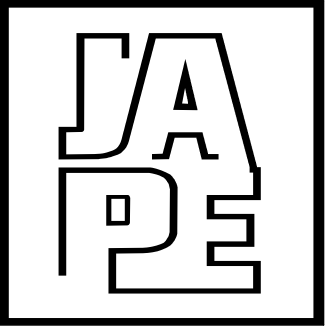
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED

GLASS LOAD CAPACITY (PSF) - S.M.I.									
D.L.O		S1 & S1A EXT.(+) INT.(-)	S2 & S2A EXT.(+) INT.(-)	S3 & S3A EXT.(+) INT.(-)	S4 & S4A EXT.(+) INT.(-)	S5 & S5A EXT.(+) INT.(-)	S6 & S6A EXT.(+) INT.(-)		
WIDTH OR HEIGHT (IN.)	WIDTH OR HEIGHT (IN.)								
150"	24" to 42"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132		
	42" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123		
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112		
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104		
	84"	-	+87 -96	+87 -92	-	+83 -91	+87 -96		
	90"	-	+82 -90	+82 -86	-	+78 -85	+82 -90		
	96"	-	+76 -84	+76 -80	-	-	+76 -84		
156"	24" to 36"	+120 -120	+120 -132	+120 -126	-	+120 -132	+120 -132		
	42" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123		
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112		
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104		
168"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123		
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112		
	78"	-	+94 -104	+94 -99	-	+90 -99	+94 -104		
	84"	-	+87 -96	+87 -92	-	-	+87 -96		
174" to 180"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123		
	72"	-	+102 -112	+102 -107	-	+97 -107	+102 -112		
	78"	-	+94 -104	+94 -99	-	-	+94 -104		
186" to 192"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	+106 -117	+111 -123		
	72"	-	+102 -112	+102 -107	-	-	+102 -112		
198" to 216"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	+117 -128	+120 -132		
	66"	-	+111 -123	+111 -117	-	-	+111 -123		
222" to 233"	24" to 58 1/2"	-	+120 -132	+120 -126	-	+120 -132	+120 -132		
	60"	-	+120 -132	+120 -126	-	-	+120 -132		
240"	24" to 60"	-	+120 -132	+120 -126	-	-	+120 -132		
246" to 252"	24" to 42"	-	+120 -132	+120 -126	-	-	+120 -132		
	48" to 54"	-	+120 -132	-	-	-	+120 -132		



NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS).

NOTE:
ALL PRESSURES SHOWN ON THIS SHEET ARE ALLOWABLE PRESSURES (ASD).



JAVAD AHMAD PE, inc

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

CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING
ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR.,
DEERFIELD BEACH, FL 33442
(954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

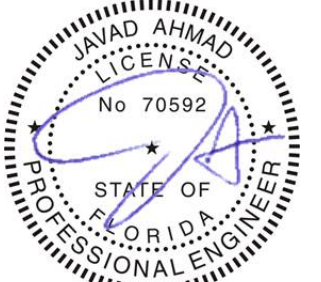
Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



SEALED: 06-17-2026

MULLION CAPACITY CHART, SINGLE SPANS										FL#29520.3																																															
SINGLE SPANS MULLION LOAD CAPACITY - PSF						SINGLE SPANS MULLION LOAD CAPACITY - PSF						JAVAD AHMAD PE, inc 7875 NW 12 Street, Suite 102 Doral, FL 33126 Ph: (305) 424-8001 support@ja-pe.com CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS PROJECT : PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM CLIENT : CRAWFORD TRACEY CORPORATION 3301 S.W. 13TH DR., DEERFIELD BEACH FL 33442 (954) 698-6888 REVISION <table><tr><th>No.</th><th>DATE</th><th>BY</th><th>DESCRIPTION</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>Date:</td><td colspan="3">06-15-2026</td></tr><tr><td>Scale:</td><td colspan="3">N/A</td></tr><tr><td>Drawn by:</td><td colspan="3">DK</td></tr><tr><td>Check by:</td><td colspan="3">PK</td></tr><tr><td>Drawing no.</td><td colspan="3">JA-1671-24</td></tr><tr><td colspan="4">Eng: JAVAD AHMAD, PE CIVIL FLA. PE # 70592 - C.A.N.34254</td></tr><tr><td colspan="4"> JAVAD AHMAD LICENSE No 70592 STATE OF FLORIDA PROFESSIONAL ENGINEER SEALED: 06-17-2026 </td></tr><tr><td>13</td><td colspan="3">OF 50</td></tr></table>		No.	DATE	BY	DESCRIPTION									Date:	06-15-2026			Scale:	N/A			Drawn by:	DK			Check by:	PK			Drawing no.	JA-1671-24			Eng: JAVAD AHMAD, PE CIVIL FLA. PE # 70592 - C.A.N.34254				JAVAD AHMAD LICENSE No 70592 STATE OF FLORIDA PROFESSIONAL ENGINEER SEALED: 06-17-2026				13	OF 50		
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13	OF 50																																																								
NOMINAL DIMS.		UNREINFORCED	ALUM REINF.	STEEL REINF.	HEAVY STEEL REINF.	NOMINAL DIMS.		UNREINFORCED	ALUM REINF.	STEEL REINF.	HEAVY STEEL REINF.																																														
WIDTH (W)	SPAN (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	WIDTH (W)	SPAN (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)																																														
36" to 96"	102"	+160 -160	+160 -160	+160 -160	+160 -160	36" to 42"	132"	+160 -160	+160 -160	+160 -160	+160 -160																																														
102" to 138"		-	+120 -120	+120 -145	+120 -145	48"		+158 -158	+158 -158	+158 -158	+158 -158																																														
144" to 180"		-	+120 -120	+120 -120	+120 -120	51" to 54"		+142 -145	+142 -145	+142 -145	+142 -145																																														
36" to 78"	+160 -160	+160 -160	+160 -160	+160 -160	60"	+130 -145		+130 -145	+130 -145	+130 -145																																															
84"	+158 -158	+158 -158	+158 -158	+158 -158	62"	+126 -145		+126 -145	+126 -145	+126 -145																																															
90"	+154 -154	+154 -154	+154 -154	+154 -154	66"	+120 -145		+120 -145	+120 -145	+120 -145																																															
96" to 132"	108"	-	+120 -120	+120 -145	+120 -145	69"	+120 -120	+120 -120	+120 -145	+120 -145																																															
138" to 180"		-	+120 -120	+120 -120	+120 -120	72"	+112 -112	+120 -120	+120 -145	+120 -145																																															
36" to 69"		+160 -160	+160 -160	+160 -160	+160 -160	78" to 108"	-	+120 -120	+120 -145	+120 -145																																															
72"	114"	+156 -156	+156 -156	+156 -156	+156 -156	114" to 162"	-	+120 -120	+120 -120	+120 -120																																															
78"		+148 -148	+148 -148	+148 -148	+148 -148	36" to 42"	+160 -160	+160 -160	+160 -160	+160 -160																																															
84"		+141 -141	+141 -141	+141 -145	+141 -145	48"	+144 -145	+144 -145	+144 -145	+144 -145																																															
90" to 126"		-	+120 -120	+120 -145	+120 -145	51" to 54"	+129 -145	+129 -145	+129 -145	+129 -145																																															
132" to 180"	120"	-	+120 -120	+120 -120	+120 -120	60" to 66"	+120 -145	+120 -145	+120 -145	+120 -145																																															
36" to 60"		+160 -160	+160 -160	+160 -160	+160 -160	69"	+105 -105	+120 -120	+120 -145	+120 -145																																															
62"		+155 -155	+155 -155	+155 -155	+155 -155	72"	+101 -101	+120 -120	+120 -145	+120 -145																																															
66"		+148 -148	+148 -148	+148 -148	+148 -148	78" to 102"	-	+120 -120	+120 -145	+120 -145																																															
69"		+143 -145	+143 -145	+143 -145	+143 -145	108" to 156"	-	+120 -120	+120 -120	+120 -120																																															
72"		+138 -145	+138 -145	+138 -145	+138 -145	36"	+160 -160	+160 -160	+160 -160	+160 -160																																															
78"		+131 -145	+131 -145	+131 -145	+131 -145	42"	+143 -160	+143 -160	+143 -160	+143 -160																																															
84"		+125 -125	+125 -125	+125 -145	+125 -145	48"	+126 -145	+126 -145	+126 -145	+126 -145																																															
90" to 120"	126"	-	+120 -120	+120 -145	+120 -145	51" to 60"	+120 -145	+120 -145	+120 -145	+120 -145																																															
126" to 180"		-	+120 -120	+120 -145	+120 -120	62"	+120 -144	+120 -144	+120 -145	+120 -145																																															
36" to 48"		+160 -160	+160 -160	+160 -160	+160 -160	66"	+96 -96	+120 -120	+120 -145	+120 -145																																															
51" to 54"		+157 -157	+157 -157	+157 -157	+157 -157	69"	+92 -92	+120 -120	+120 -145	+120 -145																																															
60"		+143 -145	+143 -145	+143 -145	+143 -145	72" to 96"	-	+120 -120	+120 -145	+120 -145																																															
62"		+140 -145	+140 -145	+140 -145	+140 -145	102"	-	+120 -120	+120 -120	+120 -132																																															
66"		+133 -145	+133 -145	+133 -145	+133 -145	108" to 150"	-	+120 -120	+120 -120	+120 -120																																															
69"		+128 -145	+128 -145	+128 -145	+128 -145	36"	+146 -146	+146 -146	+146 -146	+146 -146																																															
72"		+124 -145	+124 -145	+124 -145	+124 -145	42"	+126 -145	+126 -145	+126 -145	+126 -145																																															
78"		+117 -117	+120 -120	+120 -145	+120 -145	48"	+120 -145	+120 -145	+120 -145	+120 -145																																															
84" to 114"			+120 -120	+120 -145	+120 -145	51"	+120 -145	+120 -145	+120 -145	+120 -145																																															
120" to 168"		-	+120 -120	+120 -145	+120 -120	54"	+120 -140	+120 -140	+120 -145	+120 -145																																															
INTERPOLATION BETWEEN WIDTHS OR SPANS IS ALLOWED						55"	+120 -140	+120 -140	+120 -145	+120 -145																																															
THE PRESSURES ABOVE FOR THE "ALUMINUM" REINFORCED, "STEEL" REINFORCED AND "HEAVY STEEL" REINFORCED MULLIONS CAN BE APPLIED TO TWIN SPAN, OR MULTISPAN SYSTEMS.						60"	+113 -136	+120 -136	+120 -145	+120 -145																																															
						MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT SUNSHADE. MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT HORIZONTALS.						62"	+84 -84	+120 -120	+120 -145	+120 -145																																									
						66"	-	+120 -120	+120 -145	+120 -145	+120 -145																																														
						69" to 96"	-	+120 -120	+120 -145	+120 -145	+120 -145																																														
						102" to 144"	-	+120 -120	+120 -120	+120 -120	+120 -120																																														

ANCHOR

END REACTION = $\frac{WL}{2} P_d$

SPAN = L

ANCHOR

END REACTION = $\frac{WL}{2} P_d$

INTERMEDIATE VERTICAL

INTERMEDIATE HORIZONTAL

FRAME HEIGHT

W1

W2

INTERMEDIATE VERTICAL

FRAME HEIGHT

W1

W2

WIDTH (W) = $\frac{W1 + W2}{2}$

NOTE

SIDE LOADED SYSTEMS MAY BE USED GIVEN THE SYSTEM IS DESIGNED AND APPROVED BY A PROFESSIONAL ENGINEER BASED ON SITE SPECIFIC CONDITIONS

MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT HORIZONTALS.

SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

ALL PRESSURES SHOWN ON THIS SHEET ARE ALLOWABLE PRESSURES.

NOTE

- SIDE LOADED SYSTEMS MAY BE USED GIVEN THE SYSTEM IS DESIGNED AND APPROVED BY A PROFESSIONAL ENGINEER BASED ON SITE SPECIFIC CONDITIONS
- MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT HORIZONTALS.
- SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

ALL PRESSURES SHOWN ON THIS SHEET ARE ALLOWABLE PRESSURES.

MULLION CAPACITY CHART, SINGLE SPANS											FL#29520.3				
SINGLE SPANS MULLION LOAD CAPACITY - PSF						SINGLE SPANS MULLION LOAD CAPACITY - PSF									
NOMINAL DIMS.		UNREINFORCED	ALUM REINF.	STEEL REINF.	HEAVY STEEL REINF.	NOMINAL DIMS.		UNREINFORCED	ALUM REINF.	STEEL REINF.	HEAVY STEEL REINF.				
WIDTH (W)	SPAN (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	WIDTH (W)	SPAN (L)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)	EXT.(+) INT.(-)				
36"	156"	+130 -145	+130 -145	+130 -145	+130 -145	36"	174"	+120 -145	+120 -145	+120 -145	+120 -145				
42" to 51"		+120 -145	+120 -145	+120 -145	+120 -145	42"		+120 -142	+120 -142	+120 -145	+120 -145				
54"		+120 -131	+120 -131	+120 -145	+120 -145	48"		+106 -125	+120 -125	+120 -145	+120 -145				
60"		+120 -131	+120 -131	+120 -145	+120 -145	51"		+100 -118	+120 -120	+120 -145	+120 -145				
62"		+78 -78	+120 -120	+120 -145	+120 -145	54" to 72"		-	+120 -120	+120 -145	+120 -145				
66" to 90"		-	+120 -120	+120 -145	+120 -145	78"		-	+120 -120	+120 -140	+120 -140				
96" to 120"		-	+120 -120	+120 -120	+120 -120	84"		-	+120 -120	+120 -120	+120 -132				
126"		-	+118 -118	+118 -118	+118 -118	90"		-	+119 -119	+119 -119	+119 -119				
132"		-	+117 -117	+117 -117	+117 -117	96"		-	+115 -115	+115 -115	+115 -115				
138"		-	+115 -115	+115 -115	+115 -115	102"		-	+110 -110	+110 -110	+110 -110				
36" to 48"	162"	+120 -145	+120 -145	+120 -145	+120 -145	108"	180"	-	+106 -106	+106 -106	+106 -106				
51"		+116 -141	+120 -141	+120 -145	+120 -145	114"		-	+98 -98	+102 -102	+102 -102				
54"		+79 -79	+120 -120	+120 -145	+120 -145	120"		-	+94 -94	+99 -99	+99 -99				
60"		+72 -72	+120 -120	+120 -145	+120 -145	36"		+120 -145	+120 -145	+120 -145	+120 -145				
62"		+70 -70	+120 -120	+120 -145	+120 -145	42"		+113 -128	+120 -120	+120 -145	+120 -145				
66" to 84"		-	+120 -120	+120 -145	+120 -145	48"		+99 -112	+120 -120	+120 -145	+120 -145				
90"		-	+120 -120	+120 -120	+120 -132	51"		+94 -106	+120 -120	+120 -145	+120 -145				
96" to 102"		-	+120 -120	+120 -120	+120 -120	54" to 69"		-	+120 -120	+120 -145	+120 -145				
108"		-	+119 -119	+119 -119	+119 -119	72"		-	+120 -120	+120 -142	+120 -142				
114"		-	+116 -116	+116 -116	+116 -116	78"		-	+120 -120	+120 -134	+120 -134				
120"		-	+115 -115	+115 -115	+115 -115	84"		-	+120 -120	+120 -120	+120 -120				
126"		-	+111 -111	+111 -111	+111 -111	90"		-	+113 -113	+113 -113	+113 -113				
132"		-	+109 -109	+109 -109	+109 -109	96"		-	+107 -107	+107 -107	+107 -107				
36" to 42"	168"	+120 -145	+120 -145	+120 -145	+120 -145	102"	186"	-	+100 -100	+102 -102	+102 -102				
48"		+114 -138	+120 -138	+120 -145	+120 -145	108"		-	+94 -94	+98 -98	+98 -98				
51"		+116 -141	+120 -141	+120 -145	+120 -145	114"		-	+89 -89	+94 -94	+94 -94				
54"		+108 -131	+120 -131	+120 -145	+120 -145	120"		-	+70 -70	+91 -91	+91 -91				
60"		+70 -70	+120 -120	+120 -145	+120 -145	36" to 69"		-	-	+120 -145	+120 -145				
62" to 78"		+64 -64	+120 -120	+120 -145	+120 -145	72"		-	-	+120 -137	+120 -137				
84"		-	+120 -120	+120 -139	+120 -139	78"		-	-	+110 -110	+120 -120				
90" to 102"		-	+120 -120	+120 -120	+120 -120	84"		-	-	+102 -102	+111 -111				
108"		-	+115 -115	+115 -115	+115 -115	90"		-	-	+96 -96	+104 -104				
114"		-	+109 -109	+109 -109	+109 -109	96"		-	-	+90 -90	+97 -97				
120"		-	+107 -107	+107 -107	+107 -107	102"		-	-	+84 -84	+91 -91				
126"		-	+104 -104	+104 -104	+104 -104	108"		-	-	+80 -80	+86 -86				
INTERPOLATION BETWEEN WIDTHS OR SPANS IS ALLOWED						114"		-	-	+78 -78	+82 -82				
						116"		-	-	+74 -74	+80 -80				
						ANCHOR END REACTION = $\frac{WL}{2} P_d$ SPAN = L INTERMEDIATE VERTICAL INTERMEDIATE HORIZONTAL FRAME HEIGHT W1 W2 WIDTH (W) = $\frac{W1 + W2}{2}$ ANCHOR END REACTION = $\frac{WL}{2} P_d$ SPAN = L INTERMEDIATE VERTICAL FRAME HEIGHT W1 W2 WIDTH (W) = $\frac{W1 + W2}{2}$ NOTE - SIDE LOADED SYSTEMS MAY BE USED GIVEN THE SYSTEM IS DESIGNED AND APPROVED BY A PROFESSIONAL ENGINEER BASED ON SITE SPECIFIC CONDITIONS - MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT HORIZONTALS. - SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER. ALL PRESSURES SHOWN ON THIS SHEET ARE ALLOWABLE PRESSURES.									

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PROJECT :

PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY CORPORATION

3301 S.W. 13TH DR., DEERFIELD BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION
Date:		06-15-2026	
Scale:		N/A	
Drawn by:		DK	
Check by:		PK	
Drawing no.		JA-1671-24	

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

JAVAD AHMAD
LICENSE
No 70592
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SEALED: 06-17-2026

14	OF 50
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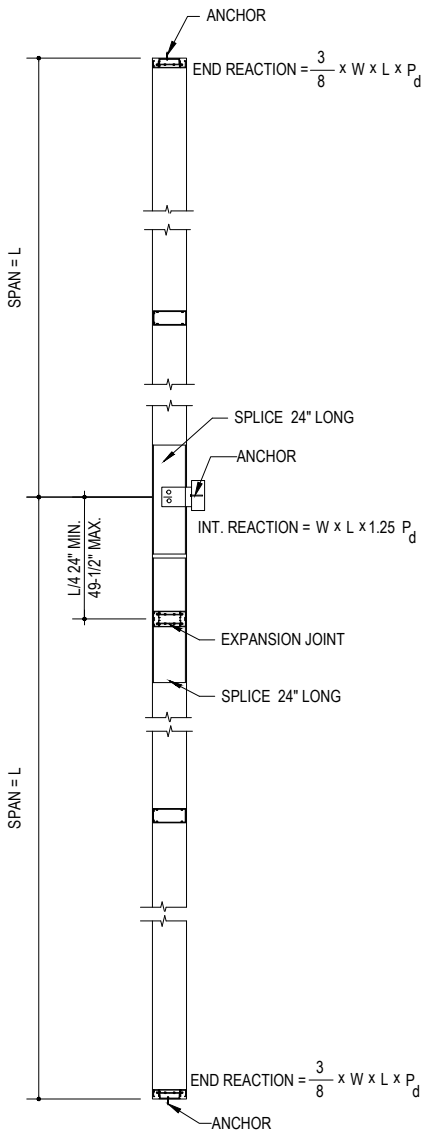
MULLION CAPACITY CHART, SINGLE SPANS										FL#29520.3			
SINGLE SPANS MULLION LOAD CAPACITY - PSF						SINGLE SPANS W/O CANTILEVER MULLION LOAD CAPACITY - PSF						</	

MULLION CAPACITY CHART, MULTIPLE SPANS

FL#29520.3

MULTIPLE SPANS MULLION LOAD CAPACITY - PSF			
WIDTH (W)	SPAN (L)	UNREINFORCED	ALUM REINF.
		EXT.(+) INT.(-)	EXT.(+) INT.(-)
36" to 60"	150"	+120 -120	+120 -145
66" to 78"		+120 -120	+120 -120
36" to 66"	156"	+120 -120	+120 -145
72" to 76"		+120 -120	+120 -120
36" to 66"	162"	+120 -120	+120 -145
72"		+120 -120	+120 -120
36" to 60"	168"	+120 -120	+120 -145
66" to 69"		+120 -120	+120 -120
36" to 60"	172"	+120 -120	+120 -145
66"		+120 -120	+120 -120
36" to 60"	180"	+120 -120	+120 -145
66"		+120 -120	+120 -120
36" to 54"	186"	+120 -120	+120 -145
60" to 63"		+120 -120	+120 -120
36" to 54"	192"	+120 -120	+120 -145
60"		+120 -120	+120 -120
36" to 60"	198"	+120 -120	+120 -145

INTERPOLATION BETWEEN WIDTHS OR SPANS IS ALLOWED

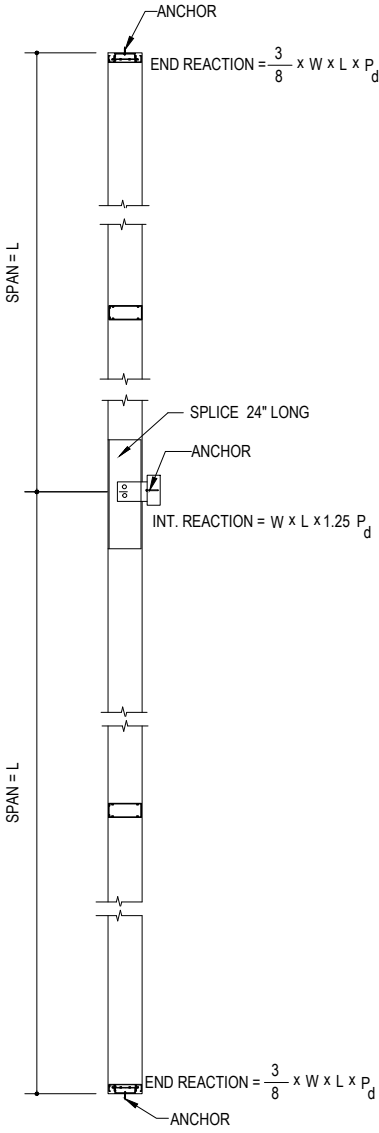


TWO SPANS

- TWO SPANS WITHOUT CANTILEVER AND WITH SPLICE / EXPANSION JOINT

NOTE:

PRESSURE VALUES FOR ANCHOR CHARTS ON SHEETS 20 THRU 28 PERMITTED TO BE INCREASED BY 1.33X UP TO A MAXIMUM OF 145 PSF FOR TWO-SPAN UNIT WITHOUT CANTILEVER ONLY.

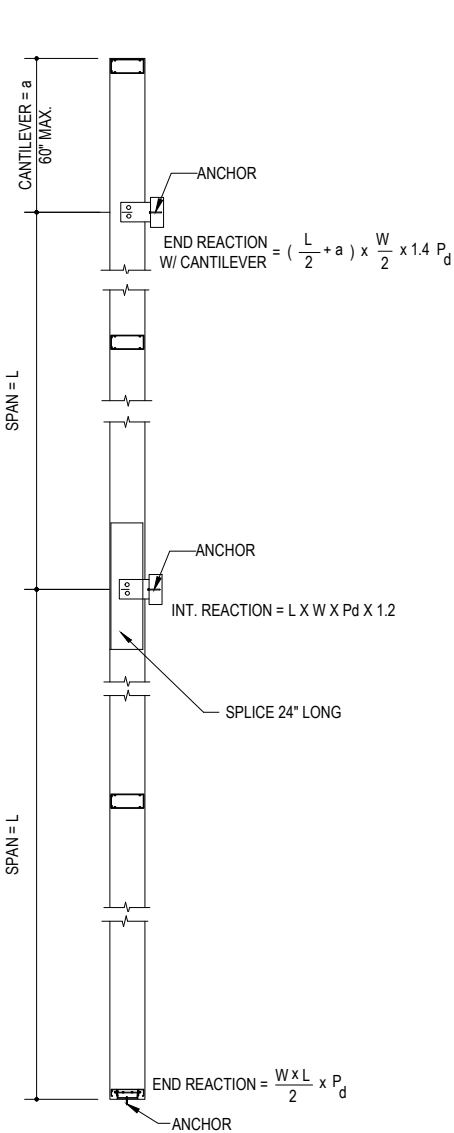


TWO SPANS

- TWO SPANS WITHOUT CANTILEVER AND WITH SPLICE / EXPANSION JOINT

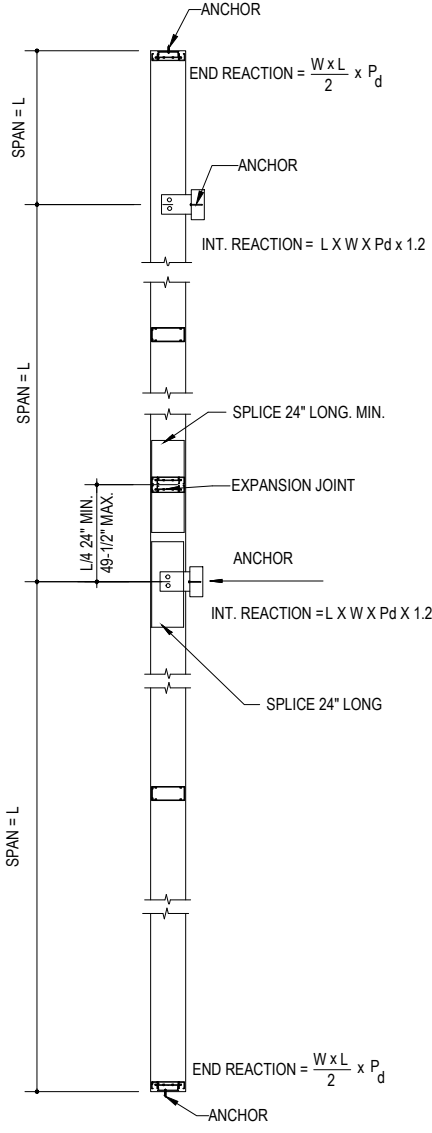
NOTE:

UNEQUAL SPANS TO BE CHECKED ON JOB TO JOB BASIS



MULTIPLE SPANS

- MULTIPLE SPANS WITH CANTILEVER AND WITH SPLICE / EXPANSION JOINT



MULTIPLE SPANS

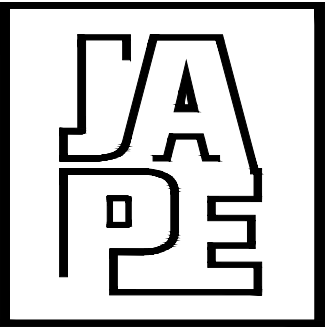
- MULTIPLE SPANS WITHOUT CANTILEVER AND WITH SPLICE / EXPANSION JOINT

NOTE

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THE PRESSURES ABOVE FOR THE "ALUMINUM" REINFORCED, "STEEL" REINFORCED AND "HEAVY STEEL" REINFORCED MULLIONS CAN BE APPLIED TO TWIN SPAN, OR MULTISPAN SYSTEMS.

MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT SUNSHADE.
MULLION CAPACITIES ARE EQUAL WITH OR WITHOUT HORIZONTALS.



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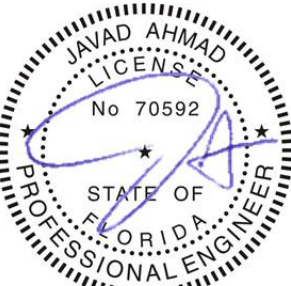
Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



SEALED: 06-17-2026

MULLION CAPACITY CHART FOR ROTATED SYSTEM, HORIZONTAL BAR CAPACITY CHART

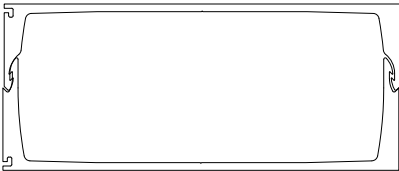
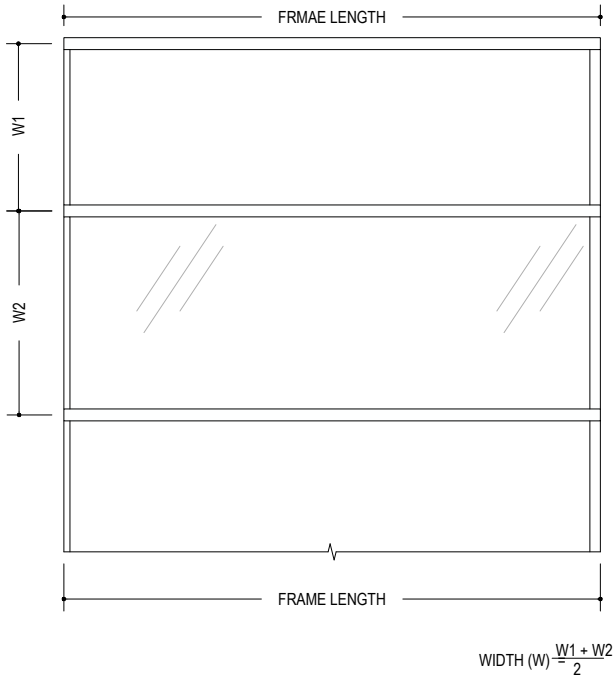
FL#29520.3

HORIZONTAL MULLION LOAD CAPACITY -(PSF)SINGLE SPAN		
NOMINAL DIMS.		HORIZONTAL MULLION
WIDTH (W)	FRAME LENGTH	EXT.(+) INT.(-)
36"	72"	+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45		+90.0 -90.0
48"		+90.0 -90.0
51"		+90.0 -90.0
54"		+90.0 -90.0
57"		+90.0 -90.0
60"		+90.0 -90.0
63"		+90.0 -90.0
66"		+90.0 -90.0
69"		+90.0 -90.0
72"		+90.0 -90.0
36"	78"	+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45		+90.0 -90.0
48"		+90.0 -90.0
51"		+90.0 -90.0
54"		+90.0 -90.0
57		+90.0 -90.0
60"		+90.0 -90.0
63"		+90.0 -90.0
66"		+90.0 -90.0
36	84"	+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45"		+90.0 -90.0
48"		+90.0 -90.0
51'		+90.0 -90.0
54"		+90.0 -90.0
57"		+90.0 -90.0
60*		+90.0 -90.0

HORIZONTAL MULLION LOAD CAPACITY -(PSF)SINGLE SPAN		
NOMINAL DIMS.		HORIZONTAL MULLION
WIDTH (W)	FRAME LENGTH	EXT.(+) INT.(-)
36"	90"	+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45"		+90.0 -90.0
48"		+90.0 -90.0
51*		+90.0 -90.0
54"		+90.0 -90.0
57"		+90.0 -90.0
36	96"	+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45"		+90.0 -90.0
48"		+90.0 -90.0
51*		+90.0 -90.0
54*	108"	+90.0 -90.0
36		+90.0 -90.0
39"		+90.0 -90.0
42"		+90.0 -90.0
45"		+90.0 -90.0
48"		+90.0 -90.0

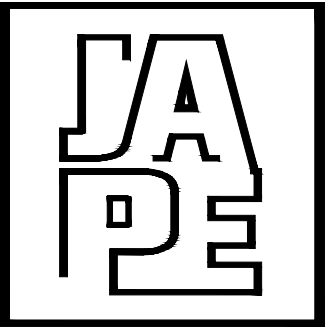
HORIZONTAL BAR LOAD CAPACITY		
NOMINAL DIMS.		HORIZONTAL BAR
WIDTH (W)	FRAME LENGTH	EXT.(+) INT.(-)
120	54-1/2"	+120.0 -145.0
36"	84"	+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60"		+120.0 -120.0
66		+120.0 -120.0
72"		+120.0 -120.0
78"		+120.0 -120.0
80"	90"	+120.0 -120.0
84"		+120.0 -120.0
90"		+120.0 -120.0
36"		+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60"		+120.0 -120.0
66"	96"	+120.0 -120.0
72"		+120.0 -120.0
78"		+120.0 -120.0
80"		+120.0 -120.0
36"		+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60"		+120.0 -120.0
66"		+120.0 -120.0
72"		+120.0 -120.0

HORIZONTAL BAR LOAD CAPACITY		
NOMINAL DIMS.		HORIZONTAL BAR
WIDTH (W)	FRAME LENGTH	EXT.(+) INT.(-)
36"	102"	+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60*		+120.0 -120.0
66"	108"	+120.0 -120.0
36"		+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60"	114"	+120.0 -120.0
66"		+120.0 -120.0
36"		+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"	120"	+120.0 -120.0
60"		+120.0 -120.0
36"		+120.0 -120.0
42"		+120.0 -120.0
48"		+120.0 -120.0
54"		+120.0 -120.0
60"		+100.0 -100.0



	Lx(in^4)	Sx(in^3)
MULLION	50.026	11.999
ALUM. REINF.	-	-
STEEL. REINF.	-	-

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CURTAINWALL SYSTEM

CLIENT :

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CORPORATION

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BEACH FL 33442 (954) 698-6888

REVISION

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Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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

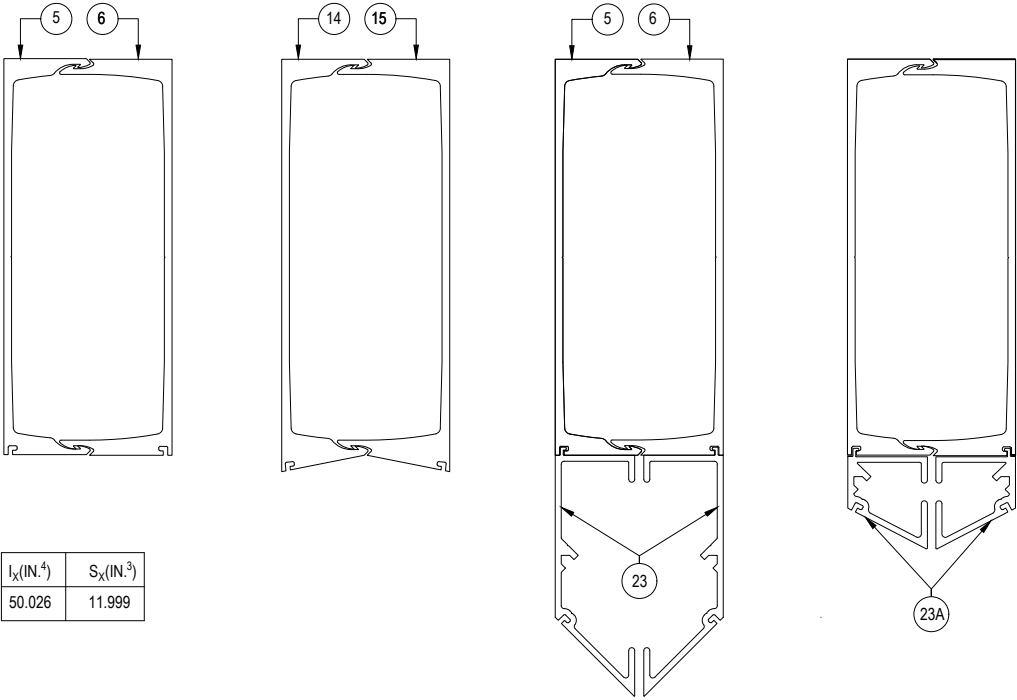


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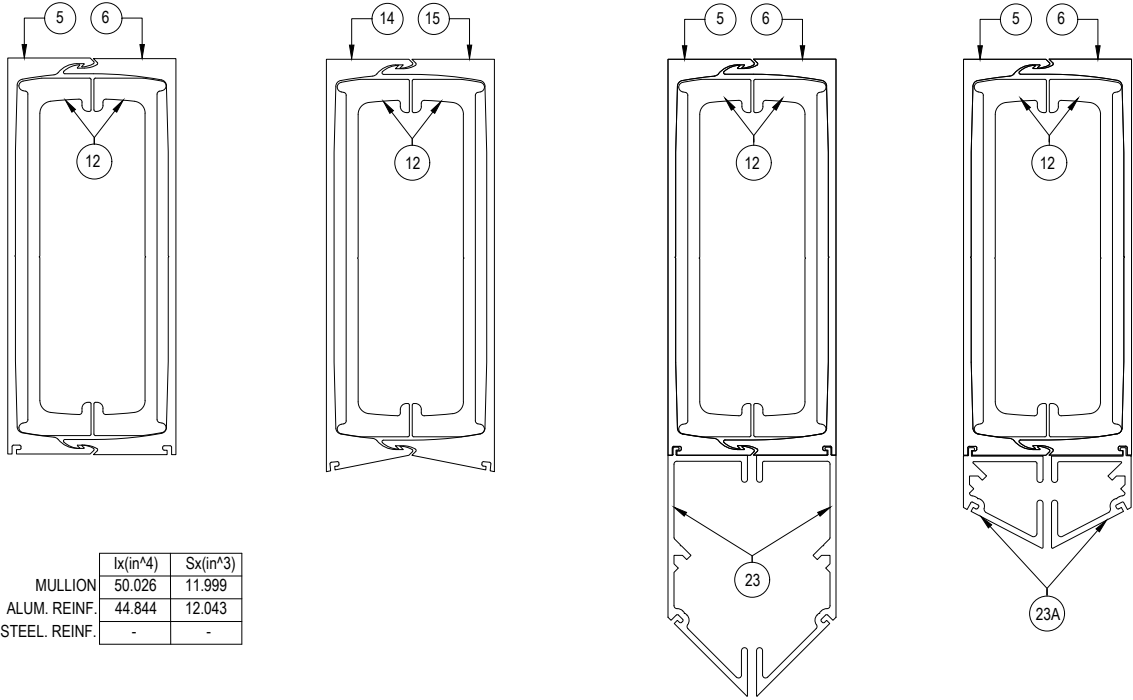
MULLION OPTIONS

FL#29520.3

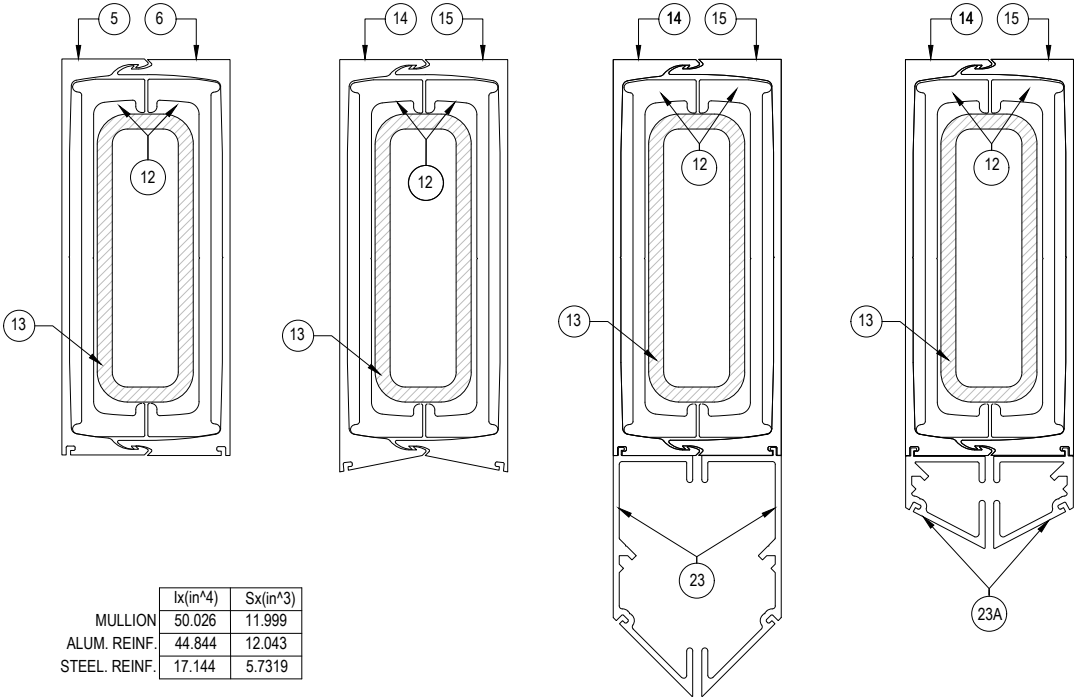
UNREINFORCED MULLION



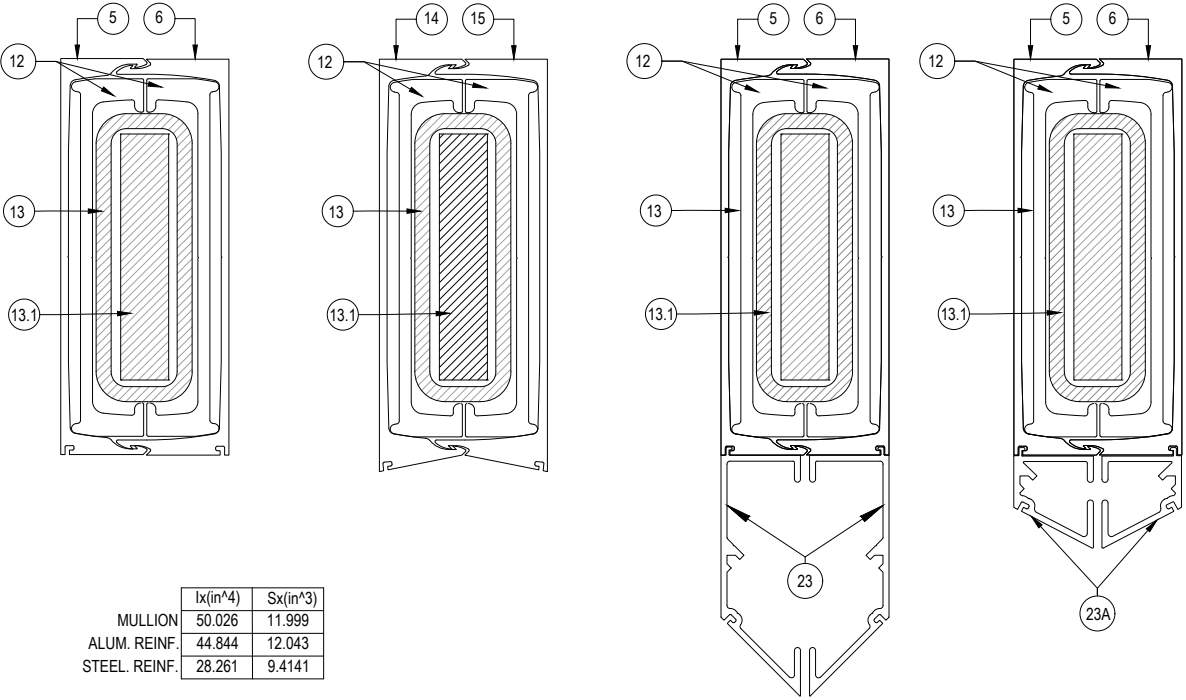
ALUMINUM REINFORCED MULLION



STEEL REINFORCED MULLION



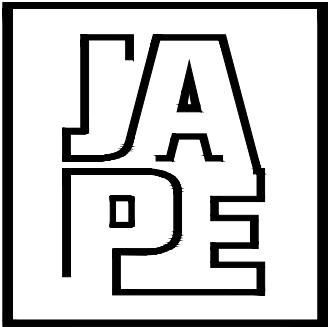
HEAVY STEEL REINFORCED MULLION



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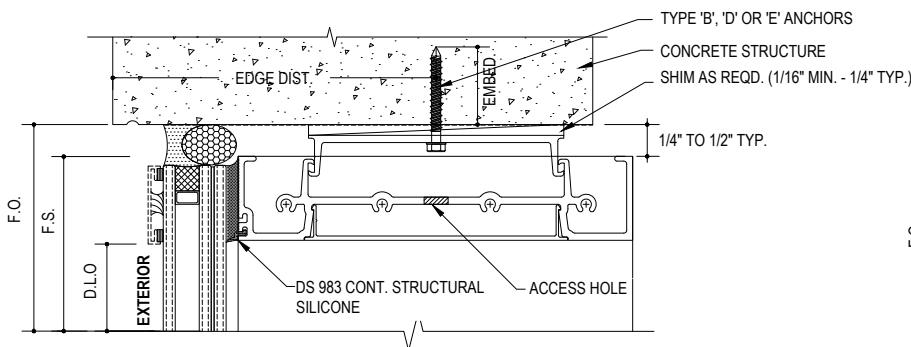
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



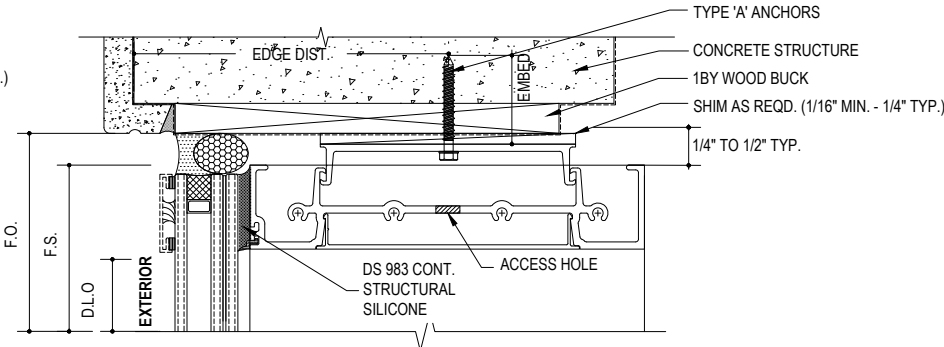
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ANCHOR DETAILS AND DESCRIPTION

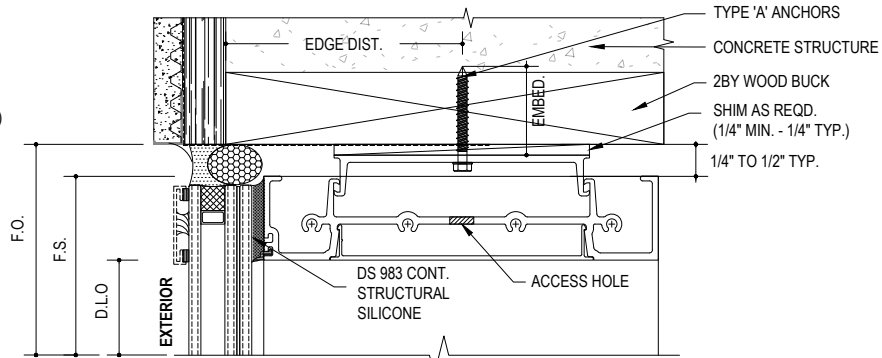
FL#29520.3



1 HEAD DETAIL INTO STRUCTURE



2 HEAD DETAIL THROUGH 1BY WOOD BUCK



3 HEAD DETAIL INTO 2BY WOOD BUCK

TYPICAL ANCHOR TYPES:

TYPE 'A' 5/16" DIA ULTRACON BY DEWALT (Fu=177 KSI, Fy=155 KSI)

- INTO 2BY WOOD BUCKS OR WOOD STRUCTURES (SG = 0.55 MIN.) WITH 1-7/8" MIN. PENETRATION INTO WOOD
- THRU 1BY WOOD BUCKS INTO CONCRETE (F'C = 3 KSI MIN.) OR CMU BLOCKS (F'M = 2 KSI MIN.) WITH 1-1/4" MIN. EMBED

ANCHOR EDGE DISTANCES

- INTO CONCRETE = 3" MIN.
- INTO BLOCKS = 3-1/8" MIN.
- INTO WOOD STRUCTURES = 1-1/4" MIN.

TYPE 'B' 5/16" DIA ULTRACON BY DEWALT (Fu=177 KSI, Fy=155 KSI)

- DIRECTLY INTO CONCRETE WITH 1-3/4" MIN. EMBED
- DIRECTLY INTO CMU BLOCKS WITH 1-1/4" MIN. EMBED

ANCHOR EDGE DISTANCES

- INTO CONCRETE AND BLOCKS = 3" MIN.

TYPE 'C' 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)

- INTO ALUMINUM (MIN. 3/16" THK.; 6063-T5 MIN.) WITH (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
- INTO STEEL (MIN. 1/8" THK.; A36 MIN.) WITH (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS

ANCHOR EDGE DISTANCES

- INTO METAL STRUCTURE = 3/4" MIN.

TYPE 'D' 3/8" DIA. POWERS WEDGE-BOLT ANCHOR

- DIRECTLY INTO CONCRETE WITH 2" MIN. EMBED

ANCHOR EDGE DISTANCES

- INTO CONCRETE = 3-3/4" MIN.

TYPE 'E' 3/8" DIA. POWERS WEDGE-BOLT ANCHOR

- DIRECTLY INTO CONCRETE WITH 3" MIN. EMBED

ANCHOR EDGE DISTANCES

- INTO CONCRETE = 4" MIN.

ANCHOR / SUBSTRATE ANCHOR / SUBSTRATE NOTES:

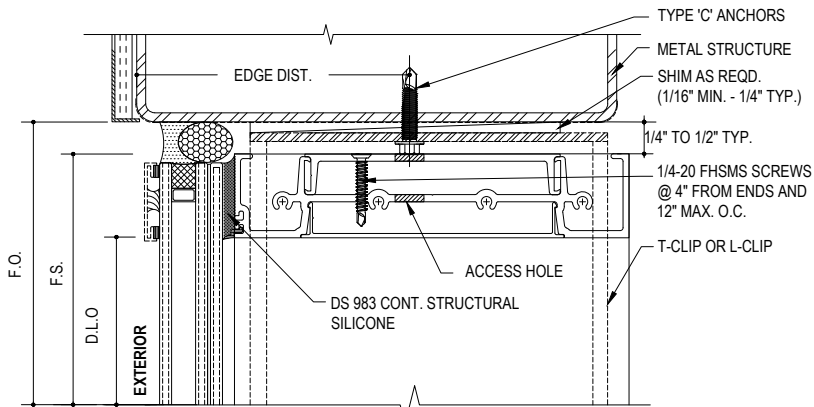
- WOOD MUST BE MIN. SOUTHERN YELLOW PINE #1 (SG=0.55 MIN.)
- CONCRETE MUST BE MIN. f'c= 3000 PSI
- C-90 HOLLOW/GROUT FILLED MASONRY UNITS MUST BE MIN. f'M= 2000 PSI
- STEEL MUST BE MIN. 1/8" THK., MIN. A36 GRADE
- ALUMINUM MUST BE MIN. 3/16" THK., MIN. 6063-T5 GRADE)
- CONTACT WITH DISSIMILAR METALS TO BE ISOLATED

SUBSTRATE NOTE:

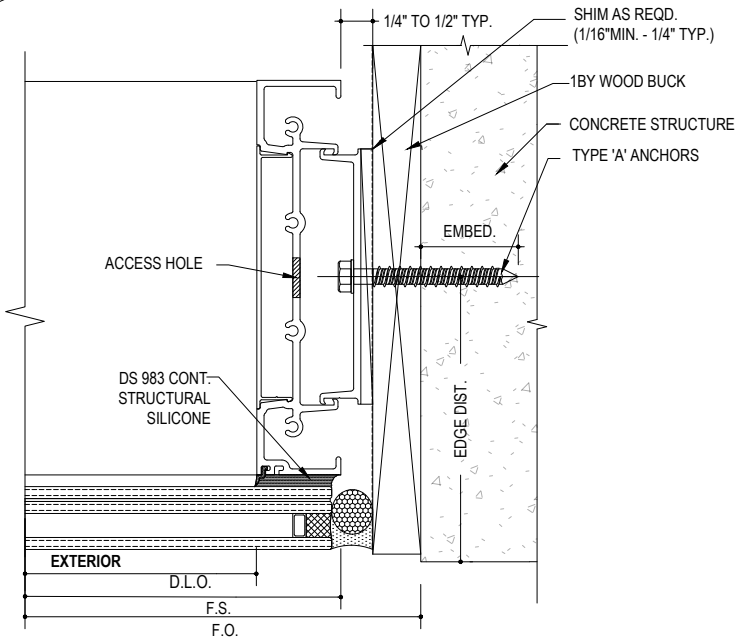
THE WOOD BUCKS, CONCRETE, AND METAL STRUCTURE SHOWN ON THIS SHEET SHALL BE DESIGNED BY OTHERS AND ARE NOT PART OF THIS APPROVAL. THEY MUST BE CAPABLE OF WITHSTANDING THE LOADS IMPOSED BY THE GLAZING SYSTEM AND TRANSFERRING THEM TO THE BUILDING STRUCTURE.

GREATER SHIM SIZES:

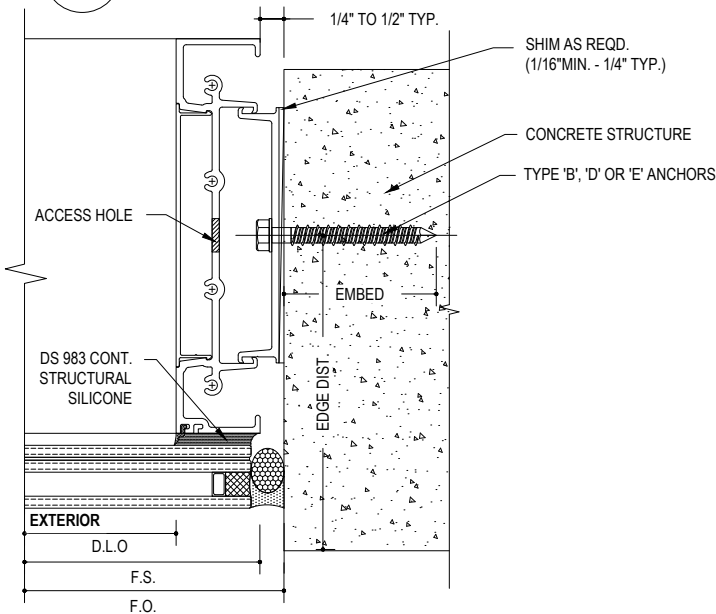
SHIM SIZES GREATER THAN THE ONES SHOWN IN THE DETAILS ARE PERMITTED UNDER SITE SPECIFIC CONDITIONS WHEN APPROVED BY A LICENSED PROFESSIONAL ENGINEER.



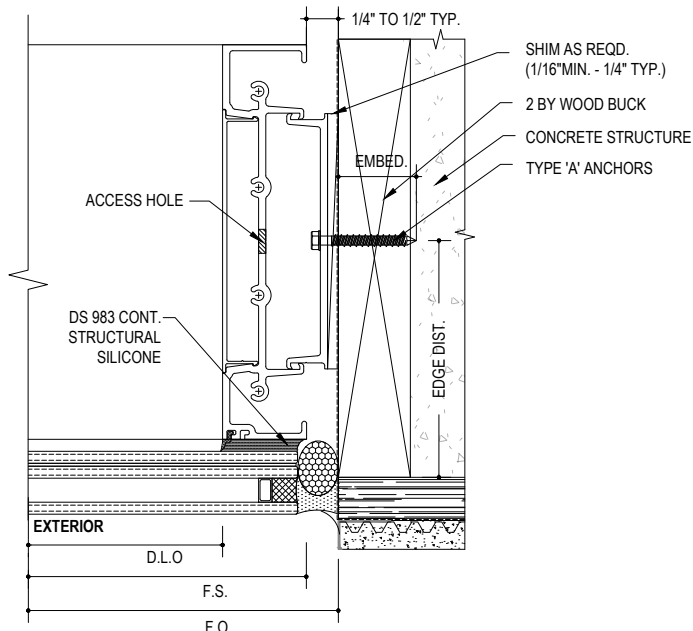
4 HEAD DETAIL W/ T-CLIP OR L-CLIP



6 JAMB DETAIL THROUGH 1BY WOOD BUCK



5 JAMB DETAIL INTO STRUCTURE



7 JAMB DETAIL INTO 2BY WOOD BUCK



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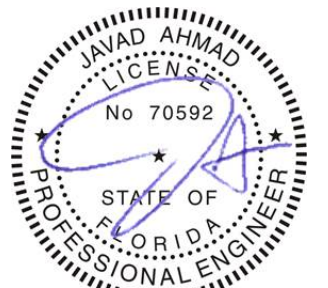
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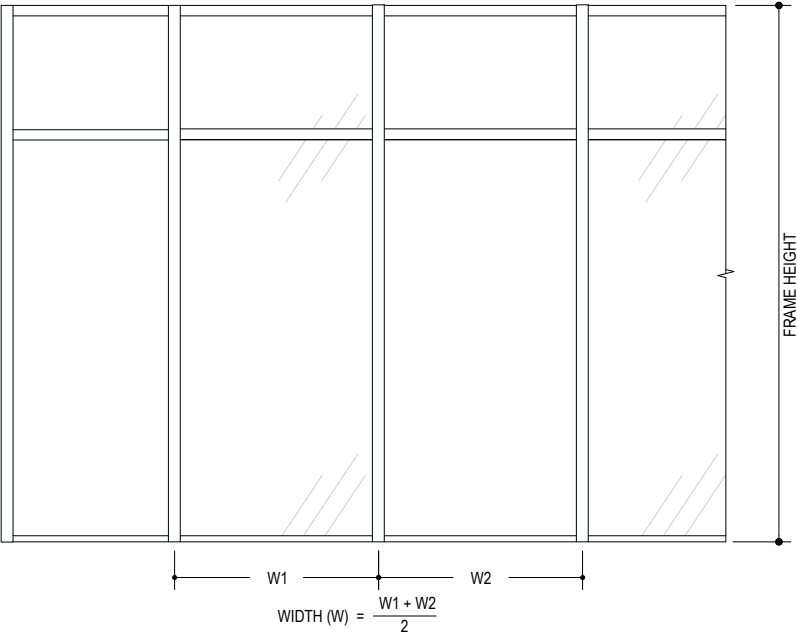
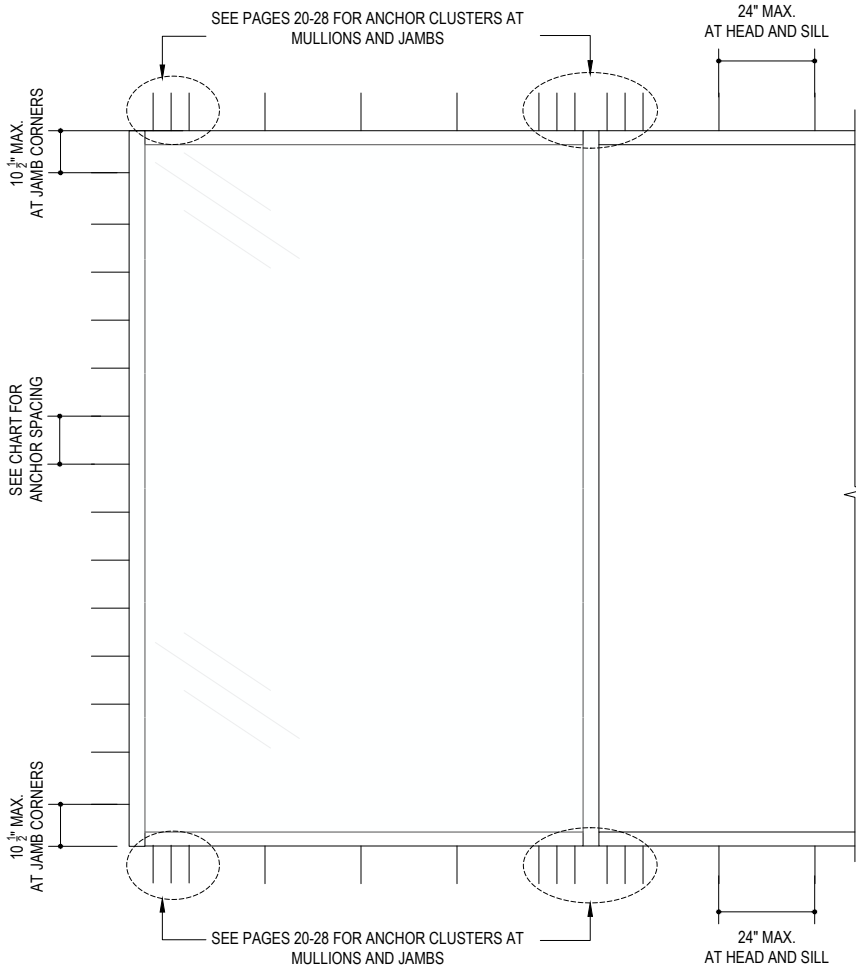
Eng: JAVAD AHMAD, PE
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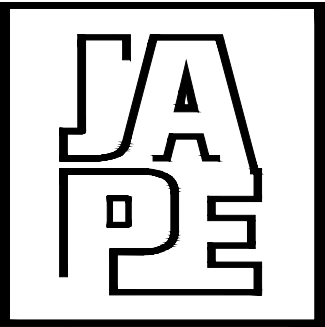
SEALED: 06-17-2026

JAMB ANCHOR CAPACITY CHART

FL#29520.3



JAMB ANCHORS DESIGN LOAD CAPACITY - PSF			
WIDTH (W)	ANCHORS AT 12" O.C.		ANCHORS AT 6" O.C.
	TYPE 'A' & 'B'	TYPE 'C'	TYPE 'A' & 'B'
	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
54"	124.0	145.0	145.0
57"	117.5	145.0	145.0
60"	111.6	145.0	145.0
63"	106.3	145.0	145.0
66"	101.5	145.0	145.0
69"	97.0	145.0	145.0
72"	93.0	145.0	145.0
75"	89.3	145.0	145.0
78"	85.8	145.0	145.0
81"	82.7	145.0	145.0
84"	79.7	145.0	145.0
90"	74.4	145.0	145.0
96"	69.8	145.0	139.5
102"	65.6	137.9	131.3
108"	62.0	130.2	124.0
114"	58.7	123.4	117.5
120"	55.8	117.2	111.6
126"	53.1	117.6	106.3



JAVAD AHMAD PE, inc

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CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING
ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



SEALED: 06-17-2026

ANCHOR TYPE 'A' CAPACITY CHART		FL#29520.3
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PA

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



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PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

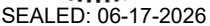
CRAWFORD TRACEY
CORPORATION

REVISION

Date:	06-15-2026
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Drawn by:	DK
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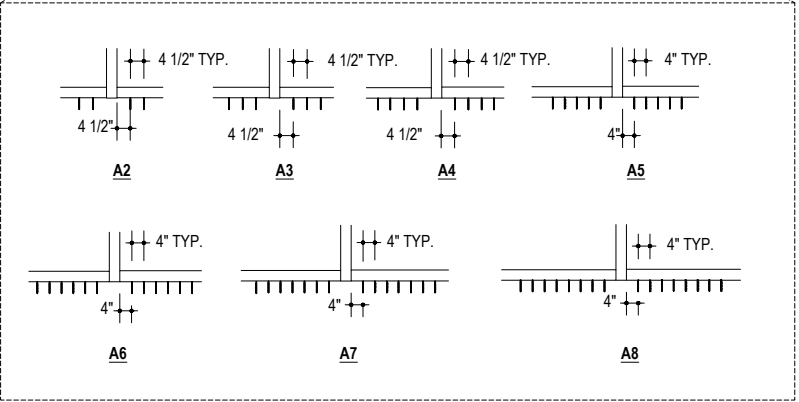
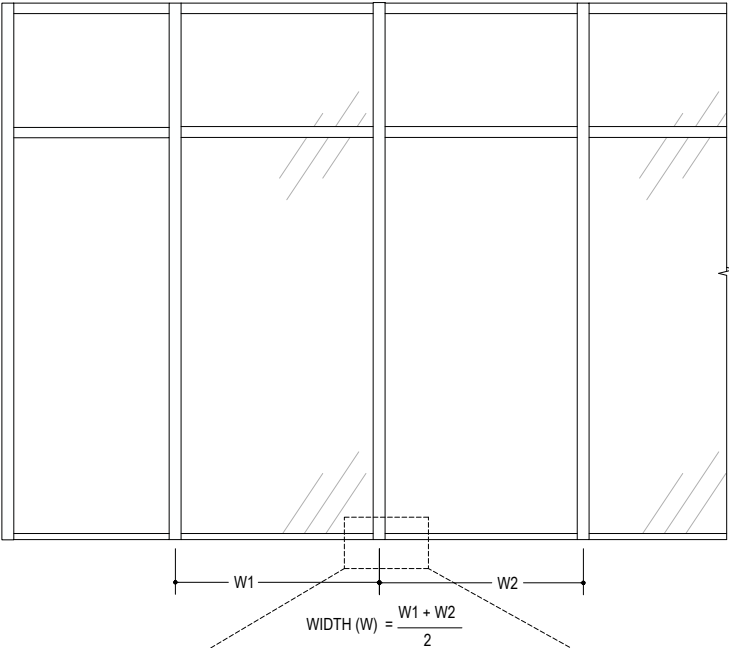
Drawing no.	JA-1671-24
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ANCHOR DESIGN LOAD CAPACITY - PSF EXT. (+) INT. (-)								
NOMINAL DIMS.		A2	A3	A4	A5	A6	A7	A8
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	156"	73.4	110.2	145	145	145	145	145
48"		55.1	82.6	110.2	137.7	145	145	145
60"		44.1	66.1	88.1	110.2	132.2	145	145
72"		36.7	55.1	73.4	91.8	110.2	128.5	145
84"		31.5	47.2	62.9	78.7	94.4	110.2	125.9
96"		27.5	41.3	55.1	68.8	82.6	95.4	120
108"		24.5	36.7	49	61.2	73.4	85.7	97.9
120"		22	33	44.1	55.1	66.1	77.1	88.1
36"	162"	70.7	106.1	141.4	145	145	145	145
48"		53	79.6	106.1	132.6	145	145	145
60"		42.4	63.6	84.9	106.1	127.3	145	145
72"		35.4	53	70.7	88.4	106.1	123.8	141.4
84"		30.3	45.5	60.6	75.8	90.9	106.1	121.2
96"		26.5	39.8	53	66.3	79.6	92.8	106.1
108"		23.6	35.4	47.1	58.9	70.7	82.5	94.3
120"		21.2	31.8	42.4	53	63.6	74.3	84.9
36"	168"	68.2	102.3	136.4	145	145	145	145
48"		51.1	76.7	102.3	127.9	145	145	145
60"		40.9	61.4	81.8	102.3	122.7	143.2	145
72"		34.1	51.1	68.2	85.2	102.3	119.3	136.4
84"		29.2	43.8	58.4	73.1	87.7	102.3	120
96"		25.6	38.4	51.1	63.9	76.7	89.5	102.3
108"		22.7	34.1	45.5	56.8	68.2	79.6	90.9
120"		20.5	30.7	40.9	51.1	61.4	71.6	81.8
36"	174"	65.8	98.8	131.7	145	145	145	145
48"		49.4	74.1	98.8	123.4	145	145	145
60"		39.5	59.3	79	98.8	118.5	138.3	145
72"		32.9	49.4	65.8	82.3	98.8	115.2	131.7
84"		28.2	42.3	56.4	70.5	84.7	98.8	112.9
96"		24.7	37	49.4	61.7	74.1	86.4	98.8
108"		21.9	32.9	43.9	54.9	65.8	76.8	87.8
120"			29.6	39.5	49.4	59.3	69.1	70.0
36"	180"	63.6	95.5	127.3	145	145	145	145
48"		47.7	71.6	95.5	119.3	143.2	145	145
60"		38.2	57.3	76.4	95.5	114.6	133.7	145
72"		31.8	47.7	63.6	79.6	95.5	111.4	127.3
84"		27.3	40.9	54.6	68.2	81.8	95.5	120
96"		23.9	35.8	47.7	59.7	71.6	83.5	95.5
108"		21.2	31.8	42.4	53	63.6	74.3	84.9
120"			28.6	38.2	47.7	57.3	66.8	76.4
36"	186"	61.6	92.4	123.2	145	145	145	145
48"		46.2	69.3	92.4	115.5	138.6	145	145
60"		37	55.4	73.9	92.4	110.9	129.3	145
72"		30.8	46.2	61.6	77	92.4	107.8	123.2
36"	192"	59.7	89.5	119.3	145	145	145	145
48"		44.8	67.1	89.5	111.9	134.3	145	145
60"		35.8	53.7	71.6	89.5	107.4	125.3	143.2
72"		29.8	44.8	59.7	74.6	89.5	104.4	119.3
36"	198"	57.9	86.8	115.7	144.6	145	145	145
48"		43.4	65.1	86.8	108.5	130.2	145	145
60"		34.7	52.1	69.4	86.8	104.1	121.5	138.9
72"		28.9	43.4	57.9	72.3	86.8	101.3	115.7
36"	204"	56.2	84.2	112.3	140.4	145	145	145
48"		42.1	63.2	84.2	105.3	126.4	145	145
60"		33.7	50.5	67.4	84.2	101.1	117.9	145
72"		28.1	42.1	56.2	70.2	84.2	98.3	112.3
36"	216"	53	79.6	106.1	132.6	145	145	145
48"		39.8	59.7	79.6	99.4	119.3	139.2	145
60"		31.8	47.7	63.6	79.6	95.5	111.4	145
72"		26.5	39.8	53	66.3	79.6	92.8	106.1

ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)								
NOMINAL DIMS		A2	A3	A4	A5	A6	A7	A8
WIDTH (w)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	228"	50.2	75.4	100.5	125.6	145.0	145.0	145.0
48"		37.7	56.5	75.4	94.2	113.1	131.9	145.0
60"		30.1	45.2	60.3	75.4	90.4	105.5	120.6
36"	240"	47.7	71.6	95.5	119.3	143.2	145.0	145.0
48"		35.8	53.7	71.6	89.5	107.4	125.3	143.2
60"		28.6	43.0	57.3	71.6	85.9	100.2	114.6

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



ANCHORS TYPES: SEE SHEET 18 FOR DESCRIPTION

A2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A5 = (5) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A6 = (6) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A7 = (7) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
A8 = (8) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

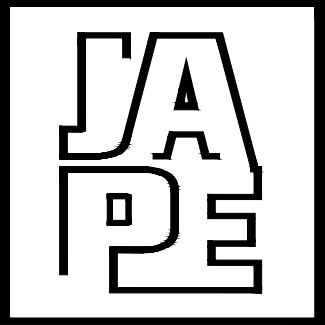
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

SLOPED SYSTEMS NOTE:

- ANCHORING FOR SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

ANCHOR SPECIFICATIONS NOTE:

- IF A LESSER EDGE DISTANCE, EMBEDMENT AND/OR SPACING IS DESIRED TO ACHIEVE THE DESIGN INTENT THEN THE PRODUCT ANCHORING SHALL BE DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.



JAVAD AHMAD PE, inc

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PROJECT :

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CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

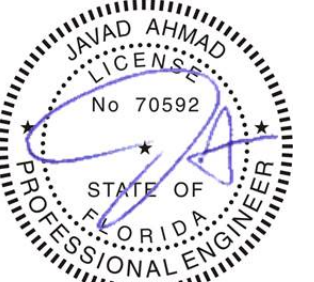
Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

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



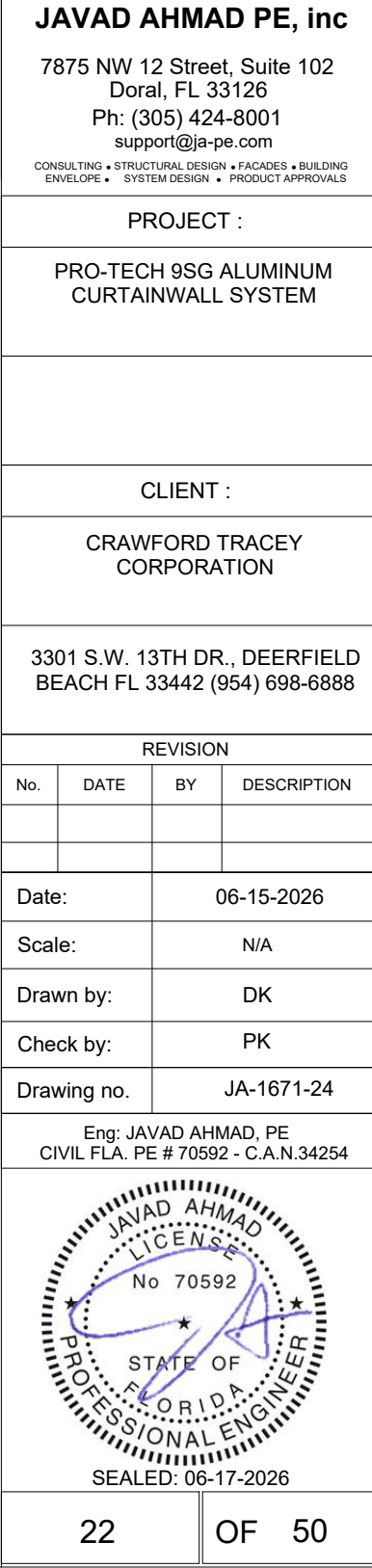
SEALED: 06-17-2026

ANCHOR TYPE 'B' CAPACITY CHART		FL#29520.3
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PA

ANCHOR DESIGN LOAD CAPACITY - PSF						
NOMINAL DIMS		B2	B3	B4	B5	B6
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	114"	145.0	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0	145.0
60"		121.3	145.0	145.0	145.0	145.0
72"		101.1	145.0	145.0	145.0	145.0
84"		86.6	129.9	145.0	145.0	145.0
96"		75.8	113.7	145.0	145.0	145.0
108"		67.4	101.1	134.7	145.0	145.0
120"		60.6	90.9	121.3	145.0	145.0
36	120"	145.0	145.0	145.0	145.0	145.0
45"		144.0	145.0	145.0	145.0	145.0
60*		115.2	145.0	145.0	145.0	145.0
72"		96.0	144.0	145.0	145.0	145.0
84"		82.3	123.4	145.0	145.0	145.0
96"		72.0	108.0	144.0	145.0	145.0
108"		64.0	96.0	128.0	145.0	145.0
120		57.6	86.4	115.2	144.0	145.0
36"	126"	145.0	145.0	145.0	145.0	145.0
48"		137.1	145.0	145.0	145.0	145.0
60"		109.7	145.0	145.0	145.0	145.0
72"		91.4	137.1	145.0	145.0	145.0
84"		78.4	117.6	145.0	145.0	145.0
96"		68.6	102.9	137.1	145.0	145.0
108"		61.0	91.4	121.9	145.0	145.0
120		54.9	82.3	109.7	137.1	145.0
36"	132"	145.0	145.0	145.0	145.0	145.0
48"		130.9	145.0	145.0	145.0	145.0
60		104.7	145.0	145.0	145.0	145.0
72"		87.3	130.9	145.0	145.0	145.0
84"		74.8	112.2	145.0	145.0	145.0
96"		65.5	98.2	130.9	145.0	145.0
108"		58.2	87.3	116.4	145.0	145.0
120		52.4	78.5	104.7	130.9	145.0
36"	138"	145.0	145.0	145.0	145.0	145.0
48"		125.2	145.0	145.0	145.0	145.0
60"		100.2	145.0	145.0	145.0	145.0
72"		83.5	125.2	145.0	145.0	145.0
84"		71.6	107.3	143.1	145.0	145.0
96"		62.6	93.9	125.2	145.0	145.0
108"		55.7	53.5	111.3	139.1	145.0
120"		50.1	75.1	100.2	125.2	145.0
36"	144"	145.0	145.0	145.0	145.0	145.0
48"		120.0	145.0	145.0	145.0	145.0
60"		96.0	144.0	145.0	145.0	145.0
72"		80.0	120.0	145.0	145.0	145.0
84"		68.6	102.9	137.1	145.0	145.0
96"		60.0	90.0	120.0	145.0	145.0
108"		53.3	80.0	106.7	133.3	145.0
120"		48.0	72.0	96.0	120.0	144.0
36"	150"	145.0	145.0	145.0	145.0	145.0
48"		115.2	145.0	145.0	145.0	145.0
60"		92.2	138.2	145.0	145.0	145.0
72"		76.8	115.2	145.0	145.0	145.0
84"		65.8	98.7	131.7	145.0	145.0
96"		57.6	86.4	115.2	144.0	145.0
108"		51.2	76.8	102.4	128.0	145.0
120"		46.1	69.1	92.2	115.2	138.2

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



ANCHOR TYPE 'B' CAPACITY CHART (CONT.)	FL#29520.3
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PA



PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CRAWFORD TRACEY
CORPORATION

REVISION			
No.	DATE	BY	DESCRIPTION

Scale:	N/A
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Check by:	PK
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Eng: JAVAD AHMAD, PE
CIVIL E.A. PE # 70592 - C.A.N 34254

OF 50

ANCHOR DESIGN LOAD CAPACITY - PSF						
NOMINAL DIMS		B2	B3	B4	B5	B6
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	228"	101.1	145.0	145.0	145.0	145.0
48"		75.8	113.7	145.0	145.0	145.0
60"		60.6	90.9	121.3	145.0	145.0
36"	240"	96.0	144.0	145.0	145.0	145.0
48"		72.0	108.0	144.0	145.0	145.0
60"		57.6	86.4	115.2	144.0	145.0

Diagram illustrating the calculation of the average width (W) for a window with multiple panes.

The diagram shows a window with four panes. The width of the first pane is labeled $W1$ and the width of the second pane is labeled $W2$.

The formula for the average width (W) is given as:

$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

Below the main diagram, five detailed cross-sections (B2, B3, B4, B5, B6) show the reinforcement details for different window configurations, including top and bottom reinforcement bars and stirrups.

- B2**: Shows a cross-section with top reinforcement bars (4 1/2" TYP.) and bottom reinforcement bars (4 1/2").
- B3**: Shows a cross-section with top reinforcement bars (4 1/2" TYP.) and bottom reinforcement bars (4 1/2").
- B4**: Shows a cross-section with top reinforcement bars (4 1/2" TYP.) and bottom reinforcement bars (4").
- B5**: Shows a cross-section with top reinforcement bars (4" TYP.) and bottom reinforcement bars (4").
- B6**: Shows a cross-section with top reinforcement bars (4" TYP.) and bottom reinforcement bars (4").

B2 = (2) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B4 = (4) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B5 = (5) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
B6 = (6) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

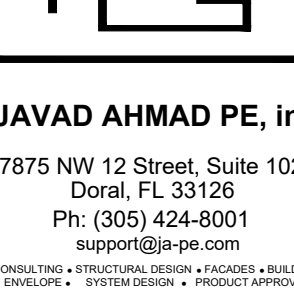
- ANCHORING FOR SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

- IF A LESSER EDGE DISTANCE, EMBEDMENT AND/OR SPACING IS DESIRED TO ACHIEVE THE DESIGN INTENT THEN THE PRODUCT ANCHORING SHALL BE DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

ANCHOR TYPE 'C' CAPACITY CHART		FL#29520.3
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PA

DESIGN LOAD CAPACITY - PSF							
NOMINAL DIMS		C2	C3	C4	C5	C6	C7
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	114"	145.0	145.0	145.0	145.0	145.0	145.0
48"		123.4	145.0	145.0	145.0	145.0	145.0
60"		98.7	145.0	145.0	145.0	145.0	145.0
72"		82.2	123.4	145.0	145.0	145.0	145.0
84"		70.5	105.7	141.0	145.0	145.0	145.0
96"		61.7	92.5	123.4	145.0	145.0	145.0
108"		54.8	82.2	109.7	137.1	145.0	145.0
120"		49.3	74.0	98.7	123.4	145.0	145.0
36"	120"	145.0	145.0	145.0	145.0	145.0	145.0
48"		117.2	145.0	145.0	145.0	145.0	145.0
60"		93.8	140.6	145.0	145.0	145.0	145.0
72"		78.1	117.2	145.0	145.0	145.0	145.0
84"		67.0	100.5	133.9	145.0	145.0	145.0
96"		58.6	87.9	117.2	145.0	145.0	145.0
108"		52.1	78.1	104.2	130.2	145.0	145.0
120"		46.9	70.3	93.8	117.2	140.8	145.0
36"	126"	145.0	145.0	145.0	145.0	145.0	145.0
48"		111.6	145.0	145.0	145.0	145.0	145.0
60"		89.3	133.9	145.0	145.0	145.0	145.0
72"		74.4	111.6	145.0	145.0	145.0	145.0
84"		63.8	95.7	127.6	145.0	145.0	145.0
96"		55.8	83.7	111.6	139.5	145.0	145.0
108"		49.6	74.4	99.2	124.0	145.0	145.0
120"		44.6	67.0	89.3	111.6	133.9	145.0
36"	132"	142.1	145.0	145.0	145.0	145.0	145.0
48"		105.5	145.0	145.0	145.0	145.0	145.0
60"		85.2	127.9	145.0	145.0	145.0	145.0
72"		71.0	106.5	142.1	145.0	145.0	145.0
84"		60.9	91.3	121.8	145.0	145.0	145.0
96"		53.3	79.9	106.5	133.2	145.0	145.0
108"		47.4	71.0	94.7	118.4	142.1	145.0
120"		42.6	63.9	85.2	106.5	127.9	145.0
36"	138"	135.9	145.0	145.0	145.0	145.0	145.0
48"		101.9	145.0	145.0	145.0	145.0	145.0
60"		81.5	122.3	145.0	145.0	145.0	145.0
72"		67.9	101.9	135.9	145.0	145.0	145.0
84"		58.2	87.4	116.5	145.0	145.0	145.0
96"		51.0	76.4	101.9	127.4	145.0	145.0
108"		45.3	67.9	90.6	113.2	135.9	145.0
120"		40.8	61.1	81.5	101.9	122.3	142.7
36"	144"	130.2	145.0	145.0	145.0	145.0	145.0
48"		97.7	145.0	145.0	145.0	145.0	145.0
60"		78.1	117.2	145.0	145.0	145.0	145.0
72"		65.1	97.7	130.2	145.0	145.0	145.0
84"		55.8	83.7	111.6	139.5	145.0	145.0
96"		48.8	73.3	97.7	122.1	145.0	145.0
108"		43.4	65.1	86.8	108.5	130.2	145.0
120"		39.1	58.6	78.1	97.7	117.2	136.7
36"	150"	125.0	145.0	145.0	145.0	145.0	145.0
48"		93.8	140.6	145.0	145.0	145.0	145.0
60"		75.0	112.5	145.0	145.0	145.0	145.0
72"		62.5	93.8	125.0	145.0	145.0	145.0
84"		53.6	80.4	107.2	133.9	145.0	145.0
96"		46.9	70.3	93.8	117.2	140.6	145.0
108"		41.7	62.5	83.3	104.2	125.0	145.0
120"		37.5	56.3	75.0	93.8	112.5	131.3

			
JAVAD AHMAD PE, inc			
7875 NW 12 Street, Suite 102 Doral, FL 33126 Ph: (305) 424-8001 support@ja-pe.com			
CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS			
PROJECT :			
PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM			
CLIENT :			
CRAWFORD TRACEY CORPORATION			
3301 S.W. 13TH DR., DEERFIELD BEACH FL 33442 (954) 698-6888			
REVISION			
No.	DATE	BY	DESCRIPTION
Date:		06-15-2026	
Scale:		N/A	
Drawn by:		DK	
Check by:		PK	
Drawing no.		JA-1671-24	
Eng: JAVAD AHMAD, PE CIVIL FLA. PE # 70592 - C.A.N.34254			
			
SEALED: 06-17-2026			

24 OF 50

ANCHOR TYPE 'C' CAPACITY CHART (CONT.)							FL#29520.3
ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)							
NOMINAL DIMS.		C2	C3	C4	C5	C6	C7
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	156"	120.2	145.0	145.0	145.0	145.0	145.0
48"		90.2	135.2	145.0	145.0	145.0	145.0
60"		72.1	108.2	144.2	145.0	145.0	145.0
72"		60.1	90.2	120.2	145.0	145.0	145.0
84"		51.5	77.3	103.0	128.8	145.0	145.0
96"		45.1	67.6	90.2	112.7	135.2	145.0
108"		40.1	60.1	80.1	100.2	120.2	140.2
120		36.1	54.1	72.1	90.2	108.2	126.2
36"	162"	115.8	145.0	145.0	145.0	145.0	145.0
48"		86.8	130.2	145.0	145.0	145.0	145.0
60"		69.5	104.2	138.9	145.0	145.0	145.0
72"		57.9	86.8	115.8	144.7	145.0	145.0
84"		49.6	74.4	99.2	124.0	145.0	145.0
96		43.4	65.1	86.8	108.5	130.2	145.0
108'		38.6	57.9	77.2	96.5	115.8	135.0
120		34.7	52.1	69.5	86.8	104.2	121.5
36"	168"	111.6	145.0	145.0	145.0	145.0	145.0
48"		83.7	125.6	145.0	145.0	145.0	145.0
60"		67.0	100.5	133.9	145.0	145.0	145.0
72"		55.8	83.7	111.6	139.5	145.0	145.0
84"		47.8	71.8	95.7	119.6	143.5	145.0
96"		41.9	62.8	83.7	104.6	125.6	145.0
108"		37.2	55.8	74.4	93.0	111.6	130.2
120		33.5	50.2	67.0	83.7	100.5	117.2
36"	174"	107.8	145.0	145.0	145.0	145.0	145.0
48"		50.8	121.2	145.0	145.0	145.0	145.0
60"		64.7	97.0	129.3	145.0	145.0	145.0
72"		53.9	80.8	107.8	134.7	145.0	145.0
84"		46.2	69.3	92.4	115.5	138.6	145.0
96"		40.4	60.6	80.8	101.0	121.2	141.4
108*		35.9	53.9	71.8	59.8	107.8	125.7
120		32.3	45.5	64.7	80.8	97.0	113.2
36"	180"	104.2	145.0	145.0	145.0	145.0	145.0
48"		78.1	117.2	145.0	145.0	145.0	145.0
60"		62.5	93.8	125.0	145.0	145.0	145.0
72"		52.1	78.1	104.2	130.2	145.0	145.0
84"		44.6	67.0	89.3	111.6	133.9	145.0
96"		39.1	58.6	78.1	97.7	117.2	136.7
108'		34.7	52.1	69.5	86.8	104.2	121.5
120		31.3	46.9	62.5	78.1	93.8	109.4
36"	186"	100.8	145.0	145.0	145.0	145.0	145.0
48		75.6	113.4	145.0	145.0	145.0	145.0
60"		60.5	90.7	121.0	145.0	145.0	145.0
72"		50.4	75.6	100.8	125.0	145.0	145.0
36	192"	97.7	145.0	145.0	145.0	145.0	145.0
48		73.3	109.9	145.0	145.0	145.0	145.0
60*		58.6	87.9	117.2	145.0	145.0	145.0
72"		48.8	73.3	97.7	122.1	145.0	145.0
36"	198"	94.7	142.1	145.0	145.0	145.0	145.0
48"		71.0	106.5	142.1	145.0	145.0	145.0
60"		56.8	85.2	113.6	142.1	145.0	145.0
72"		47.4	71.0	94.7	118.4	142.1	145.0
36	204"	91.9	137.9	145.0	145.0	145.0	145.0
45		68.9	103.4	137.9	145.0	145.0	145.0
60"		55.2	82.7	110.3	137.9	145.0	145.0
72"		46.0	68.9	91.9	114.9	137.9	145.0
36"	216"	86.8	130.2	145.0	145.0	145.0	145.0
48"		65.1	97.7	130.2	145.0	145.0	145.0
60"		52.1	78.1	104.2	130.2	145.0	145.0
72"		43.4	65.1	86.8	108.5	130.2	145.0

W1

W2

WIDTH (W) = $\frac{W1 + W2}{2}$

C2

C3

C4

C5

C6

C7

4 1/2"

4 1/2"

4 1/2"

4 1/2"

4 1/2" TYP.

4 1/2"

4 1/2"

4 1/2"

4 1/2"

4 1/2" TYP.

4 1/2"

4 1/2"

4 1/2"

4 1/2"

4 1/2" TYP.

4"

4"

4"

4"

4" TYP.

4"

4"

4"

4"

4" TYP.

4"

4"

4"

4"

4" TYP.

ANCHORS TYPES: SEE SHEET 18 FOR DESCRIPTION

C2 = (2) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C5 = (5) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C6 = (6) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
C7 = (7) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

ANCHOR SPECIFICATIONS NOTE:

IF A LESSER EDGE DISTANCE, EMBEDMENT AND/OR SPACING IS DESIRED TO ACHIEVE THE DESIGN INTENT THEN THE PRODUCT ANCHORING SHALL BE DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

SLOPED SYSTEMS NOTE:

ANCHORING FOR SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

JAVAD AHMAD PE, inc

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Doral, FL 33126
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CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY CORPORATION

3301 S.W. 13TH DR., DEERFIELD BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date:

06-15-2026

Scale:

N/A

Drawn by:

DK

Check by:

PK

Drawing no.

JA-1671-24

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

JAVAD AHMAD
LICENSE
No 70592
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SEALED: 06-17-2026

25

OF 50

ANCHOR TYPE 'D' CAPACITY CHART		FL#29520.3
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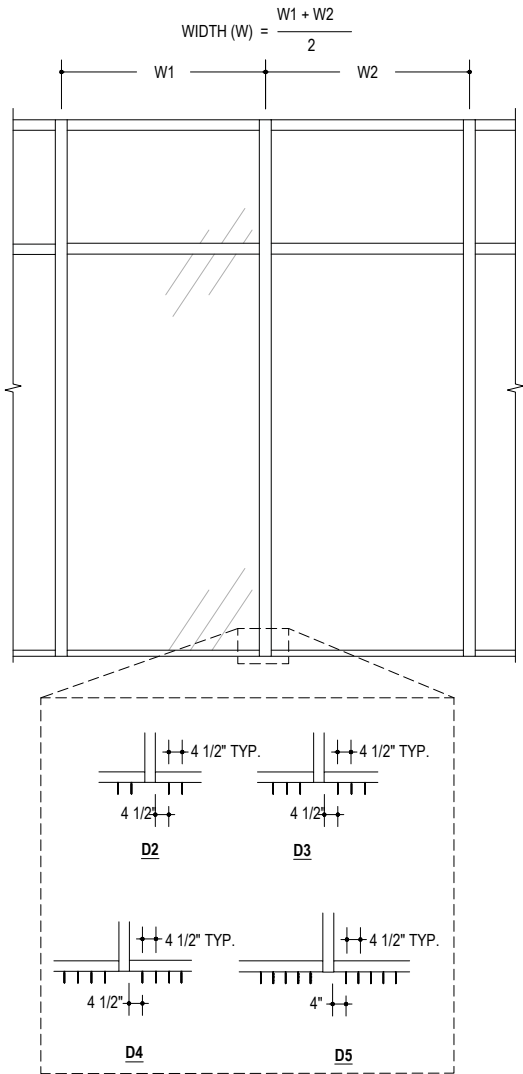
ANCHOR DESIGN LOAD CAPACITY - PSF EXT(+) & INT(-)					
NOMINAL DIMS.		ANCHORS TYPE 'D'			
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D5
36"	72"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		145.0	145.0	145.0	145.0
84"		145.0	145.0	145.0	145.0
96"		138.7	145.0	145.0	145.0
108"		123.3	145.0	145.0	145.0
120"		110.9	145.0	145.0	145.0
36"	78"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		145.0	145.0	145.0	145.0
84"		145.0	145.0	145.0	145.0
96"		128.0	145.0	145.0	145.0
108"		113.8	145.0	145.0	145.0
120"		102.4	145.0	145.0	145.0
36"	84"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		145.0	145.0	145.0	145.0
84"		135.8	145.0	145.0	145.0
96"		118.9	145.0	145.0	145.0
108"		105.7	145.0	145.0	145.0
120"		95.1	142.6	145.0	145.0
36"	90"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		145.0	145.0	145.0	145.0
84"		126.8	145.0	145.0	145.0
96"		110.9	145.0	145.0	145.0
108"		98.6	145.0	145.0	145.0
120"		88.7	133.1	145.0	145.0
36"	96"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		138.7	145.0	145.0	145.0
84"		118.9	145.0	145.0	145.0
96"		104.0	145.0	145.0	145.0
108"		92.4	138.7	145.0	145.0
120"		83.2	124.8	145.0	145.0
36"	102"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		130.5	145.0	145.0	145.0
84"		111.9	145.0	145.0	145.0
96"		97.9	145.0	145.0	145.0
108"		87.0	130.5	145.0	145.0
120"		78.3	117.5	145.0	145.0
36"	108"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		145.0	145.0	145.0	145.0
72"		123.3	145.0	145.0	145.0
84"		105.7	145.0	145.0	145.0
96"		92.4	138.7	145.0	145.0
108"		82.2	123.3	145.0	145.0
120"		74.0	110.9	145.0	145.0

ANCHOR DESIGN LOAD CAPACITY - PSF EXT(+) & INT(-)					
NOMINAL DIMS.		ANCHORS TYPE 'D'			
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D5
36"	114"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		140.1	145.0	145.0	145.0
72"		116.8	145.0	145.0	145.0
84"		100.1	145.0	145.0	145.0
96"		87.6	131.4	145.0	145.0
108"		77.8	116.8	145.0	145.0
120"		70.1	105.1	140.1	145.0
36'	120"	145.0	145.0	145.0	145.0
48		145.0	145.0	145.0	145.0
60'		133.1	145.0	145.0	145.0
72'		110.9	145.0	145.0	145.0
84'		95.1	142.6	145.0	145.0
96"		83.2	124.8	145.0	145.0
108'		74.0	110.9	145.0	145.0
120"		66.6	99.8	133.1	145.0
36"	126"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		126.8	145.0	145.0	145.0
72"		105.7	145.0	145.0	145.0
84"		90.6	135.8	145.0	145.0
96"		79.2	118.9	145.0	145.0
108'		70.4	105.7	140.9	145.0
120"		63.4	95.1	126.8	145.0
36"	132"	145.0	145.0	145.0	145.0
48"		145.0	145.0	145.0	145.0
60"		121.0	145.0	145.0	145.0
72"		100.8	145.0	145.0	145.0
84"		86.4	129.7	145.0	145.0
96"		75.6	113.5	145.0	145.0
108"		67.2	100.8	134.5	145.0
120"		60.5	90.8	121.0	145.0
36"	138"	145.0	145.0	145.0	145.0
48"		144.7	145.0	145.0	145.0
60"		115.8	145.0	145.0	145.0
72"		96.5	144.7	145.0	145.0
84"		82.7	124.0	145.0	145.0
96"		72.3	108.5	144.7	145.0
108"		64.3	96.5	128.6	145.0
120"		57.9	86.8	115.8	144.7
36"	144"	145.0	145.0	145.0	145.0
48"		138.7	145.0	145.0	145.0
60"		110.9	145.0	145.0	145.0
72"		92.4	138.7	145.0	145.0
84"		79.2	118.9	145.0	145.0
96"		69.3	104.0	138.7	145.0
108"		61.6	92.4	123.3	145.0
120"		55.5	83.2	110.9	138.7
36"	150"	145.0	145.0	145.0	145.0
48"		133.1	145.0	145.0	145.0
60"		106.5	145.0	145.0	145.0
72"		88.7	133.1	145.0	145.0
84"		76.1	114.1	145.0	145.0
96"		66.6	99.8	133.1	145.0
106"		59.2	88.7	118.3	145.0
120"		53.2	79.9	106.5	133.1

ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)					
NOMINAL DIMS.		ANCHORS TYPE 'D'			
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D5
36"	156"	145.0	145.0	145.0	145.0
48"		128.0	145.0	145.0	145.0
60"		102.4	145.0	145.0	145.0
72"		85.3	128.0	145.0	145.0
84"		73.1	109.7	145.0	145.0
96"		64.0	96.0	128.0	145.0
108"		56.9	85.3	113.8	145.0
120"		51.2	76.8	102.4	128.0
36"	162"	145.0	145.0	145.0	145.0
48"		123.3	145.0	145.0	145.0
60"		98.6	145.0	145.0	145.0
72"		82.2	123.3	145.0	145.0
84"		70.4	105.7	140.9	145.0
96"		61.6	92.4	123.3	145.0
108"		54.8	82.2	109.6	137.0
120"		49.3	74.0	98.5	123.0
36"	168"	145.0	145.0	145.0	145.0
48"		118.9	145.0	145.0	145.0
60"		95.1	142.6	145.0	145.0
72"		79.2	118.9	145.0	145.0
84"		67.9	101.9	135.8	145.0
96"		59.4	89.1	118.9	145.0
108"		52.8	79.2	105.7	132.1
120"		47.5	71.3	95.1	118.9
36"	174"	145.0	145.0	145.0	145.0
48"		114.8	145.0	145.0	145.0
60"		91.8	137.7	145.0	145.0
72"		76.5	114.8	145.0	145.0
84"		65.6	98.4	131.2	145.0
96"		57.4	86.1	114.8	143.4
108"		51.0	76.5	102.0	127.5
120"		45.9	68.9	91.8	114.8
36"	180"	145.0	145.0	145.0	145.0
48"		110.9	145.0	145.0	145.0
60"		88.7	133.1	145.0	145.0
72"		74.0	110.9	145.0	145.0
84"		63.4	95.1	126.8	145.0
96"		55.5	83.2	110.9	138.7
108"		49.3	74.0	98.6	123.3
120"		44.4	66.6	88.7	110.9
36"	186"	143.1	145.0	145.0	145.0
48"		107.4	145.0	145.0	145.0
60"		85.9	128.8	145.0	145.0
72"		71.6	107.4	143.1	145.0
36"	192"	138.7	145.0	145.0	145.0
48"		104.0	145.0	145.0	145.0
60"		83.2	124.8	145.0	145.0
72"		69.3	104.0	138.7	145.0
36"	198"	134.5	145.0	145.0	145.0
48"		100.8	145.0	145.0	145.0
60"		80.7	121.0	145.0	145.0
72"		67.2	100.8	134.5	145.0
36"	204"	130.5	145.0	145.0	145.0
48"		97.9	145.0	145.0	145.0
60"		78.3	117.5	145.0	145.0
72"		65.3	97.9	130.5	145.0
36"	216"	123.3	145.0	145.0	145.0
48"		92.4	138.7	145.0	145.0
60"		74.0	110.9	145.0	145.0
72"		61.6	92.4	123.3	145.0

ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)					
NOMINAL DIMS.		ANCHORS TYPE 'D'			
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D5
36"	228"	116.8	145.0	145.0	145.0
48"		87.6	131.4	145.0	145.0
60"		70.1	105.1	140.1	145.0
36"	240"	110.9	145.0	145.0	145.0
48"		83.2	124.8	145.0	145.0
60"		66.6	99.8	133.1	145.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



ANCHORS TYPES: SEE SHEET 18 FOR DESCRIPTION

D2 = (2) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION
D3 = (3) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION
D4 = (4) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION
D5 = (5) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION

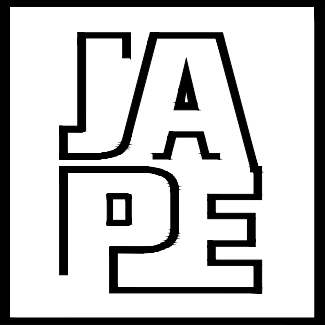
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

SLOPED SYSTEMS NOTE:

- ANCHORING FOR SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

ANCHOR SPECIFICATIONS NOTE:

- IF A LESSER EDGE DISTANCE, EMBEDMENT AND/OR SPACING IS DESIRED TO ACHIEVE THE DESIGN INTENT THEN THE PRODUCT ANCHORING SHALL BE DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.



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7875 NW 12 Street, Suite 102
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support@ja-pe.com

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ENVELOPE • SYSTEM DESIGN • PRODUCT APPROVALS

PROJECT :

PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date:	06-15-2026
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Scale:	N/A
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Drawn by:	DK
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Check by:	PK
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Drawing no.	JA-1671-24
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Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254

CIVIL FLA. PE # 70592 - C.A.N.34254



SEALED: 06-17-2026

ANCHOR TYPE 'E' CAPACITY CHART		FL#29520.3
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FL#29520.3

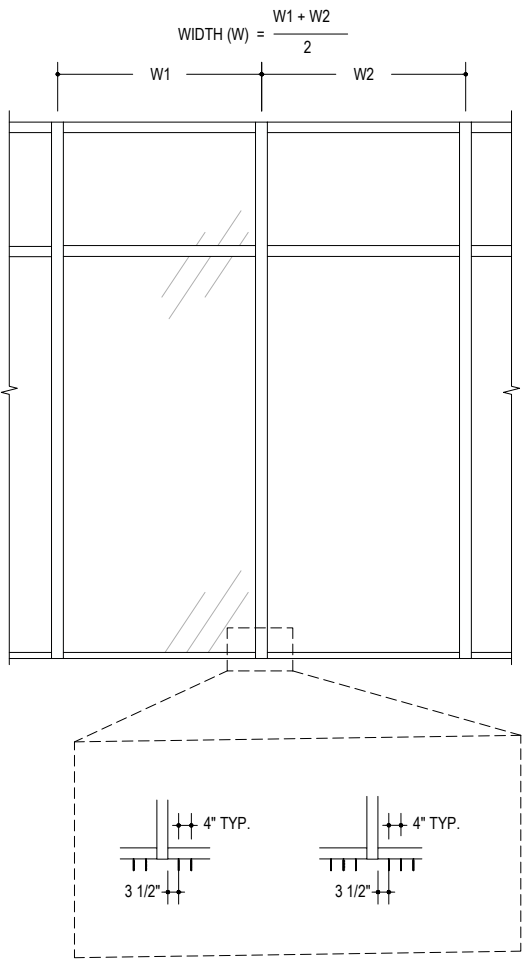
ANCHOR DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		E2	E3
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	72"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		145.0	145.0
108"		145.0	145.0
120"		145.0	145.0
36"	78"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		145.0	145.0
108"		145.0	145.0
120"		138.5	145.0
36"	84"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		145.0	145.0
108"		142.9	145.0
120"		128.6	145.0
36"	90"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		145.0	145.0
108"		133.3	145.0
120"		120.0	145.0
36"	96"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		140.6	145.0
108"		125.0	145.0
120"		112.5	145.0
36"	102"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		145.0	145.0
96"		132.4	145.0
108"		117.6	145.0
120"		105.9	145.0
35"	108"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		142.9	145.0
96"		125.0	145.0
108"		111.1	145.0
120"		100.0	145.0

ANCHOR DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		E2	E3
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	114"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		135.3	145.0
96"		118.4	145.0
108"		105.3	145.0
120"		94.7	142.1
36"	120"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		145.0	145.0
84"		128.6	145.0
96"		112.5	145.0
108"		100.0	145.0
120"		90.0	135.0
36"	126"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		142.9	145.0
84"		122.4	145.0
96"		107.1	145.0
108"		95.2	142.9
120"		85.7	128.6
36"	132"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		136.4	145.0
84"		116.9	145.0
96"		102.3	145.0
108"		90.9	136.4
120"		81.8	122.7
36"	138"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		130.4	145.0
84"		111.8	145.0
96"		97.8	145.0
108"		87.0	130.4
120"		78.3	117.4
36"	144"	145.0	145.0
48"		145.0	145.0
60"		145.0	145.0
72"		125.0	145.0
84"		107.1	145.0
96"		93.8	140.6
108"		83.3	125.0
120"		75.0	112.5
36"	150"	145.0	145.0
48"		145.0	145.0
60"		144.0	145.0
72"		120.0	145.0
84"		102.9	145.0
96"		90.0	135.0
108"		80.0	120.0
120"		72.0	108.0

ANCHOR DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		E2	E3
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	156"	145.0	145.0
48"		145.0	145.0
60"		138.5	145.0
72"		115.4	145.0
84"		98.9	145.0
96"		86.5	129.8
108"		76.9	115.4
120"		69.2	103.8
36"	162"	145.0	145.0
48"		145.0	145.0
60"		133.3	145.0
72"		111.1	145.0
84"		95.2	142.9
96"		83.3	125.0
108"		74.1	111.1
120"		66.7	100.0
36"	168"	145.0	145.0
48"		145.0	145.0
60"		128.6	145.0
72"		107.1	145.0
84"		91.8	137.8
96"		83.4	120.5
108"		71.4	107.1
120"		64.3	96.4
36"	174"	145.0	145.0
48"		145.0	145.0
60"		124.1	145.0
72"		103.4	145.0
84"		88.7	133.0
96"		77.5	116.4
108"		69.0	103.4
120"		62.1	93.1
36"	180"	145.0	145.0
48"		145.0	145.0
60"		120.0	145.0
72"		100.0	145.0
84"		85.7	128.6
96"		75.0	112.5
108"		65.7	100.0
120"		60.0	90.0
36"	186"	145.0	145.0
48"		145.0	145.0
60"		116.1	145.0
72"		95.8	145.0
36"	192"	145.0	145.0
48"		140.5	145.0
60"		112.5	145.0
72"		93.8	140.6
36"	198"	145.0	145.0
48"		136.4	145.0
60"		109.1	145.0
72"		90.9	136.4
36"	204"	145.0	145.0
48"		132.4	145.0
60"		105.9	145.0
72"		88.2	132.4

ANCHOR DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		E2	E3
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	216"	145.0	145.0
48"		125.0	145.0
60"		100.0	145.0
72"		83.3	125.0
36"	240"	145.0	145.0
48"		112.5	145.0
60"		90.0	135.0
36"		145.0	145.0
48"	228"	118.4	145.0
60"		94.7	142.1

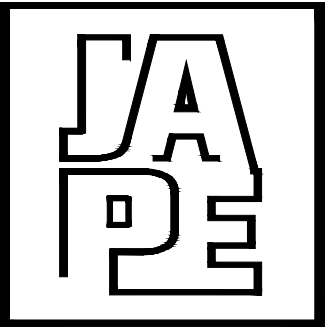
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



ANCHORS TYPES: SEE SHEET 18 FOR DESCRIPTION

E2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
E3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

**JAVAD AHMAD PE, inc**

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support@ja-pe.com

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PROJECT :

PRO-TECH 9SG ALUMINUM CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date:	06-15-2026
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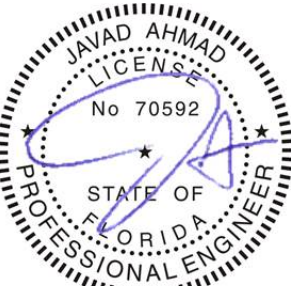
Scale:	N/A
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Drawn by:	DK
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Check by:	PK
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Drawing no.	JA-1671-24
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Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



SEALED: 06-17-2026

27

OF 50

SLOPED SYSTEMS NOTE:

- ANCHORING FOR SLOPED SYSTEMS SHALL BE DESIGNED ON A SITE SPECIFIC BASIS WITH APPROVAL FROM A LICENSED PROFESSIONAL ENGINEER, AND THE PRODUCT MANUFACTURER.

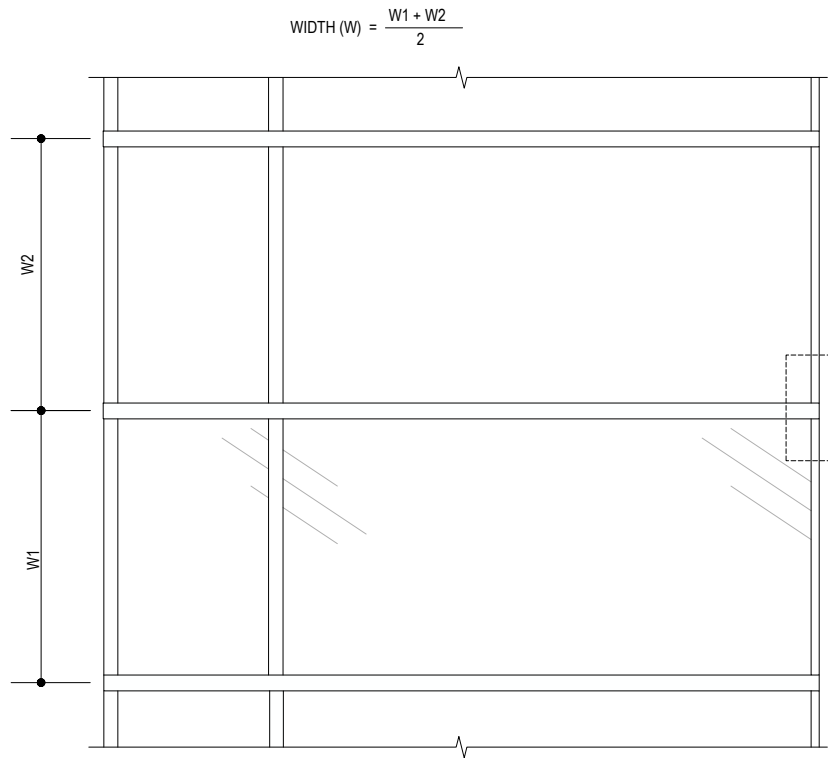
ANCHOR SPECIFICATIONS NOTE

- IF A LESSER EDGE DISTANCE, EMBEDMENT AND/OR SPACING IS DESIRED TO ACHIEVE THE DESIGN INTENT THEN THE PRODUCT ANCHORING SHALL BE DESIGNED ON A SITE SPECIFIC BASIS AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

HORIZONTAL ANCHOR DESIGN LOAD CAPACITY - PSF					
NOMINAL DIMS		AA2 & BB2	AA3 & BB3	AA4 & BB4	AA5 & BB5
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	72"	124.0	145.0	145.0	145.0
48"		93.0	139.5	145.0	145.0
60"		74.4	111.6	145.0	145.0
72"		62.0	93.0	124.0	145.0
84"		53.1	79.7	106.3	132.9
95"		46.5	69.8	93.0	116.3
108"		41.3	62.0	82.7	103.3
120"		37.2	55.8	74.4	93.0
36"	78"	114.5	145.0	145.0	145.0
48"		85.8	128.8	145.0	145.0
60"		68.7	103.0	137.4	145.0
72"		57.2	85.8	114.5	143.1
84"		49.1	73.6	98.1	122.6
96"		42.9	64.4	85.8	107.3
108"		38.2	57.2	76.3	95.4
120"		34.3	51.5	68.7	85.8
36"	84"	106.3	145.0	145.0	145.0
48"		79.7	119.6	145.0	145.0
60"		63.8	95.7	127.5	145.0
72"		53.1	79.7	106.3	132.9
84"		45.6	68.3	91.1	113.9
96"		39.9	59.8	79.7	99.6
105"		35.4	53.1	70.9	88.6
120"		31.9	47.8	63.8	79.7
36"	90"	99.2	145.0	145.0	145.0
48"		74.4	111.6	145.0	145.0
60"		59.5	89.3	119.0	145.0
72"		49.6	74.4	99.2	124.0
84"		42.5	63.8	85.0	106.3
96"		37.2	55.8	74.4	93.0
108"		33.1	49.6	66.1	82.7
120"		29.8	44.6	59.5	74.4
36"	96"	93.0	139.5	145.0	145.0
48"		59.8	104.6	139.5	145.0
60"		55.8	83.7	111.6	139.5
72"		46.5	69.8	93.0	116.3
84"		39.9	59.8	79.7	99.5
95"		34.9	52.3	69.8	87.2
108"		31.0	46.5	62.0	77.5
120"		27.9	41.9	55.8	69.8
36"	102"	87.5	131.3	145.0	145.0
48"		65.6	98.5	131.3	145.0
60"		52.5	78.8	105.0	131.3
72"		43.8	65.6	87.5	109.4
54"		37.5	56.3	75.0	93.8
96"		32.8	49.2	65.6	82.1
108"		29.2	43.8	58.4	72.9
120"		26.3	39.4	52.5	65.6
36"	108"	82.7	124.0	145.0	145.0
48"		62.0	93.0	124.0	145.0
60"		49.6	74.4	99.2	124.0
72"		41.3	62.0	82.7	103.3
84"		35.4	53.1	70.9	88.6
96"		31.0	46.5	62.0	77.5
108"		27.6	41.3	55.1	68.9
120"		24.8	37.2	49.6	62.0

HORIZONTAL ANCHOR DESIGN LOAD CAPACITY - PSF					
NOMINAL DIMS		AA2 & BB2	AA3 & BB3	AA4 & BB4	AA5 & BB5
WIDTH (W)	FRAME HEIGHT	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)	EXT.(+) & INT.(-)
36"	114"	78.3	117.5	145.0	145.0
48"		58.7	88.1	117.5	145.0
60"		47.0	70.5	94.0	117.5
72"		39.2	58.7	78.3	97.9
84"		33.6	50.3	67.1	83.9
96"		29.4	44.1	58.7	73.4
108"		26.1	39.2	52.2	65.3
120"		23.5	35.2	47.0	58.7
36"	120"	74.4	111.6	145.0	145.0
48"		55.8	83.7	111.6	139.5
60"		44.5	67.0	89.3	111.6
72"		37.2	55.8	74.4	93.0
84"		31.9	47.8	63.8	79.7
96"		27.9	41.9	55.8	69.8
108"		24.8	37.2	49.6	62.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS IS ALLOWED



ANCHORS TYPES:

AA2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
AA3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
AA4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
AA5 = (5) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION

BB2 = (2) ANCHORS TYPE 'BB' AT EACH SIDE OF HORIZONTAL
BB3 = (3) ANCHORS TYPE 'BB' AT EACH SIDE OF HORIZONTAL
BB4 = (4) ANCHORS TYPE 'BB' AT EACH SIDE OF HORIZONTAL
BB5 = (5) ANCHORS TYPE 'BB' AT EACH SIDE OF HORIZONTAL

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION

HORIZONTAL ANCHORS:

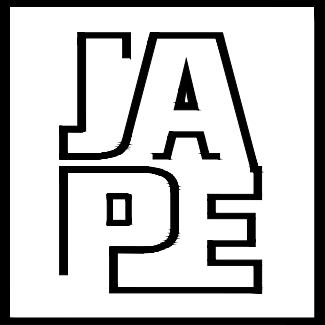
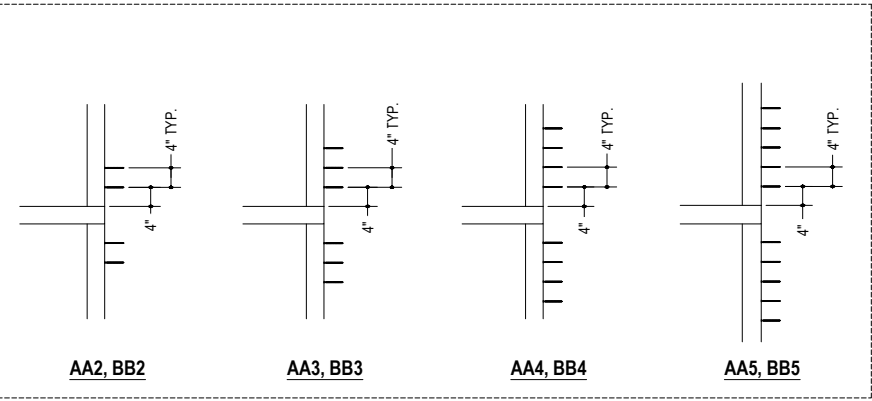
• TYPE "AA" – 5/16" DIA ULTRACON BY 'DEWALT' (Fu = 177 KSI, Fy = 155 KSI)
THRU 1BY OR 2BY WOOD BUCKS INTO BLOCKS.
1-1/4" MIN. EMBED INTO BLOCKS.

ANCHOR EDGE DISTANCES
INTO BLOCKS = 3-1/8" MIN.
INTO WOOD STRUCTURE = 1-1/4" MIN.

• TYPE "BB" – 5/16" DIA ULTRACON BY 'DEWALT' (FU = 177 KSI, FY = 155 KSI)
DIRECTLY INTO BLOCKS
1-1/4" MIN. EMBED INTO BLOCKS

ANCHOR EDGE DISTANCES
INTO BLOCKS = 3" MIN.

WOOD AT JAMBS SG = 0.55 MIN.
C-90 HOLLOW/FILLED BLOCK AT JAMB M = 2000 PSI MIN.



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REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

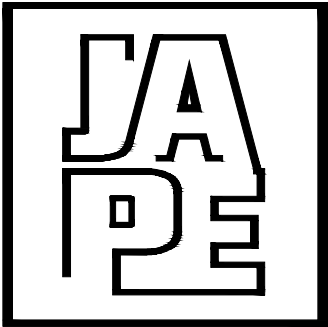
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



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T- AND L-CLIP DETAIL AT HEAD/SILL (OPTIONAL ALTERNATIVE TO SUB BUCK)

FL#29520.3



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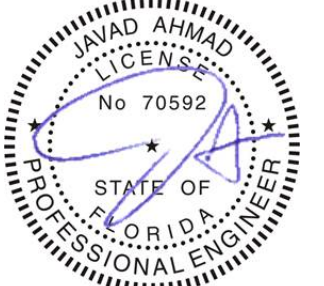
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Drawn by: DK

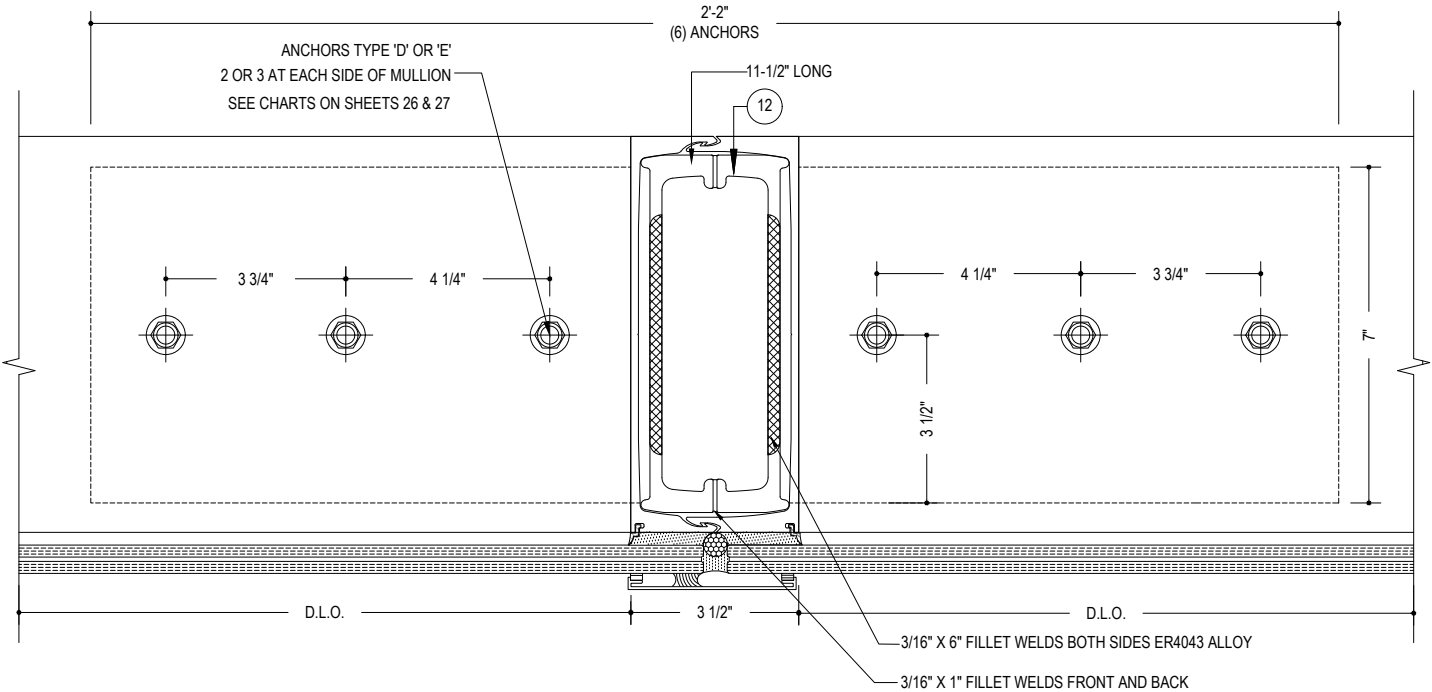
Check by: PK

Drawing no. JA-1671-24

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

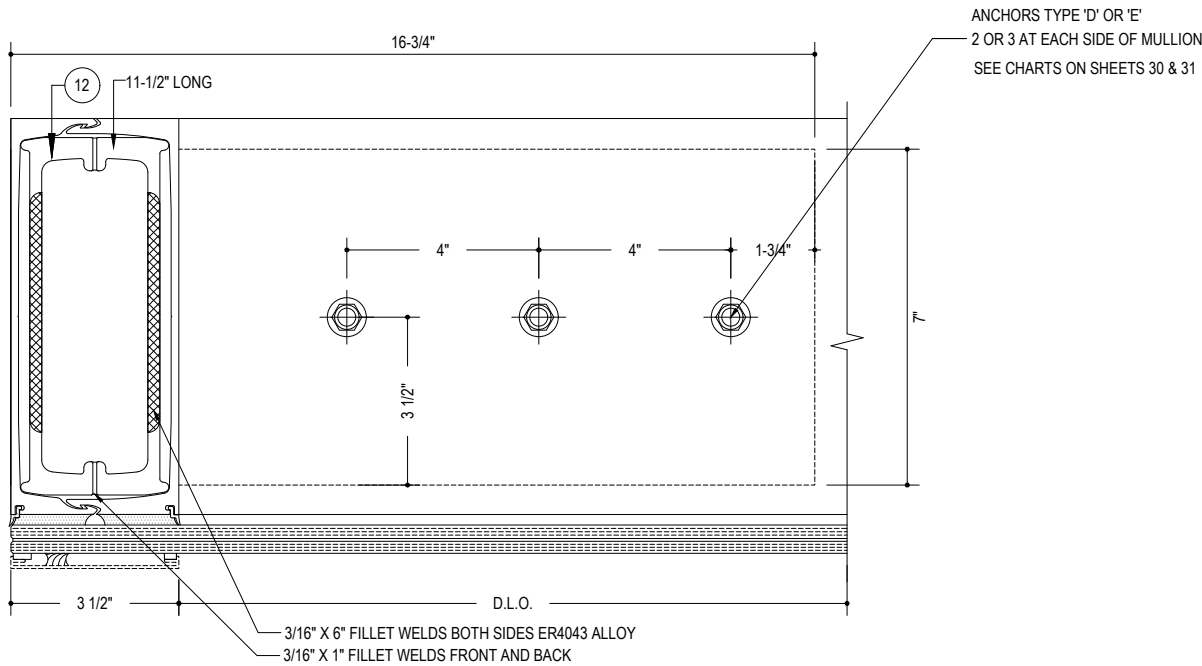


SEALED: 06-17-2026



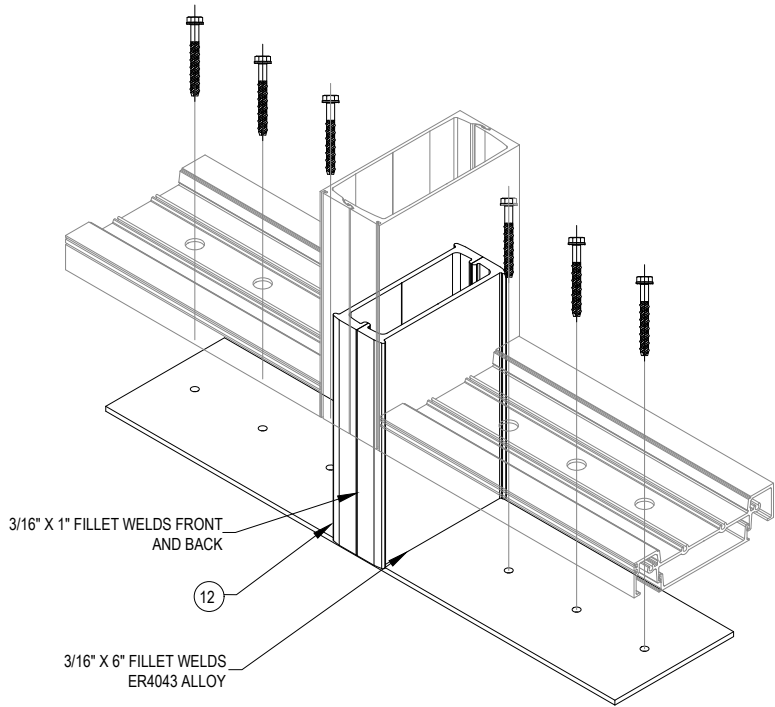
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INTERMEDIATE JAMB MULLION WITH T-CLIP CONDITION



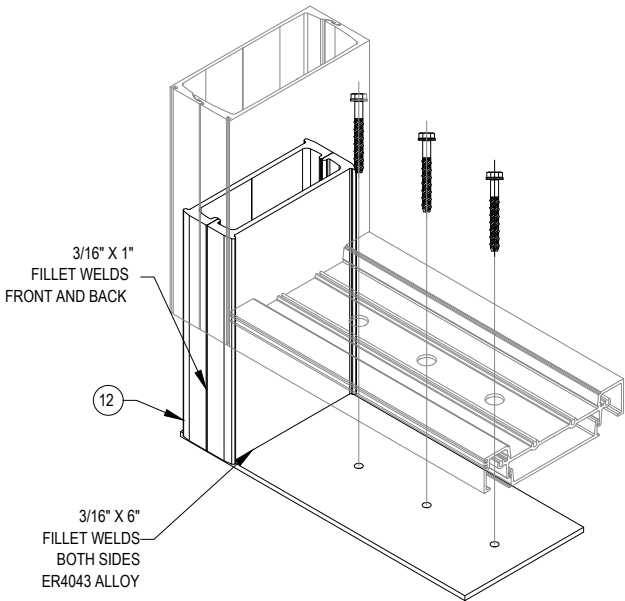
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LEFT / RIGHT JAMB MULLION WITH L-ANCHOR CONDITIONS



3

T-CLIP 3D VIEW

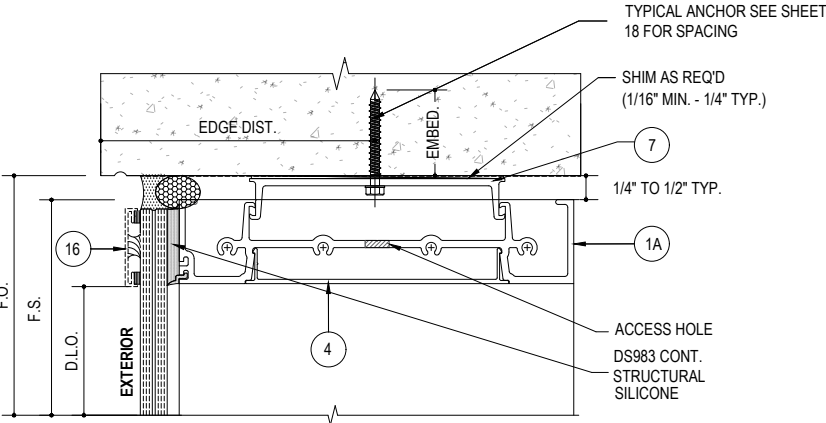


4

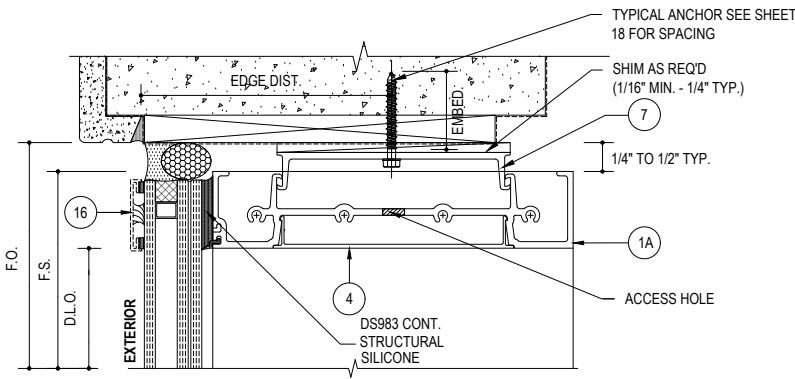
L-CLIP 3D VIEW

VERTICAL SECTION DETAILS

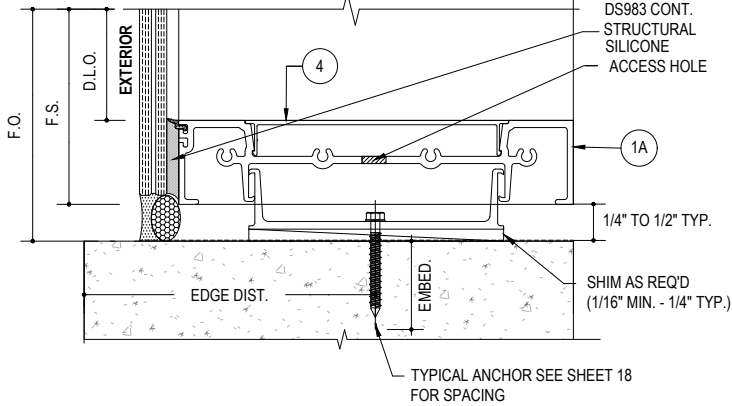
FL#29520.3



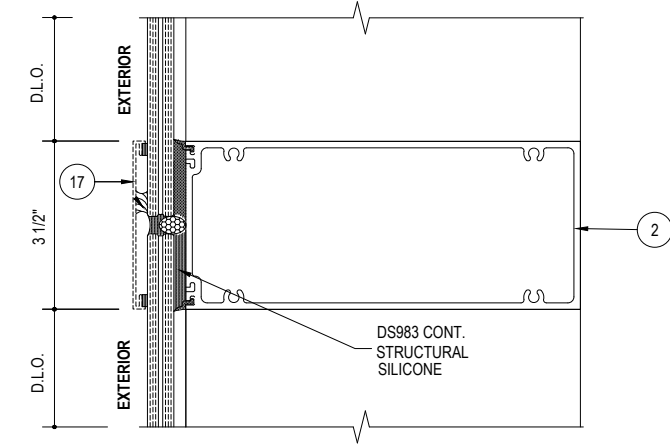
1 LAMINATED GLASS HEAD DETAIL



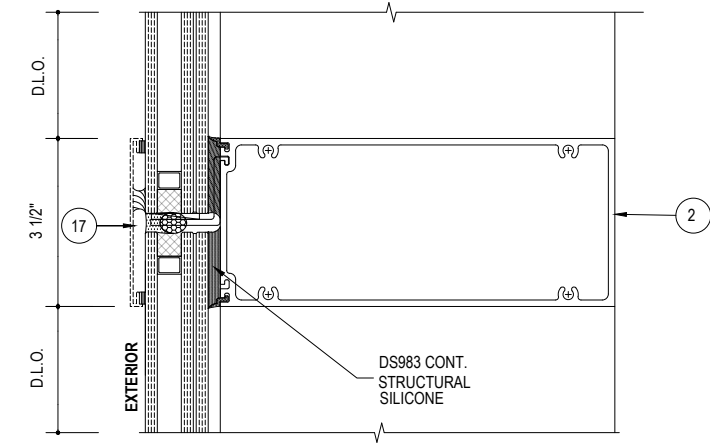
4 INSUL. LAMI. GLASS HEAD DETAIL



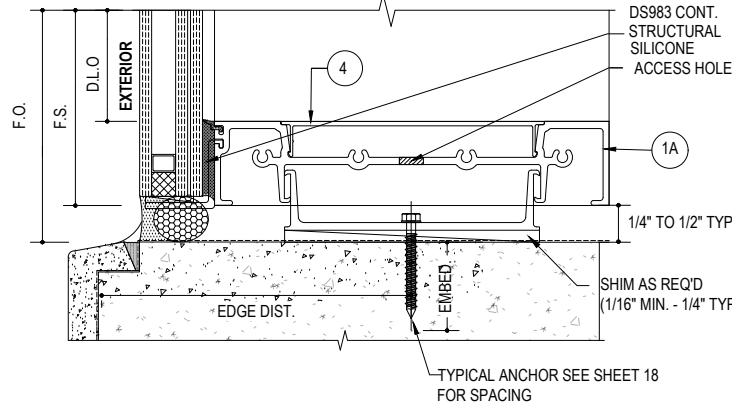
7 LAMINATED GLASS SILL DETAIL



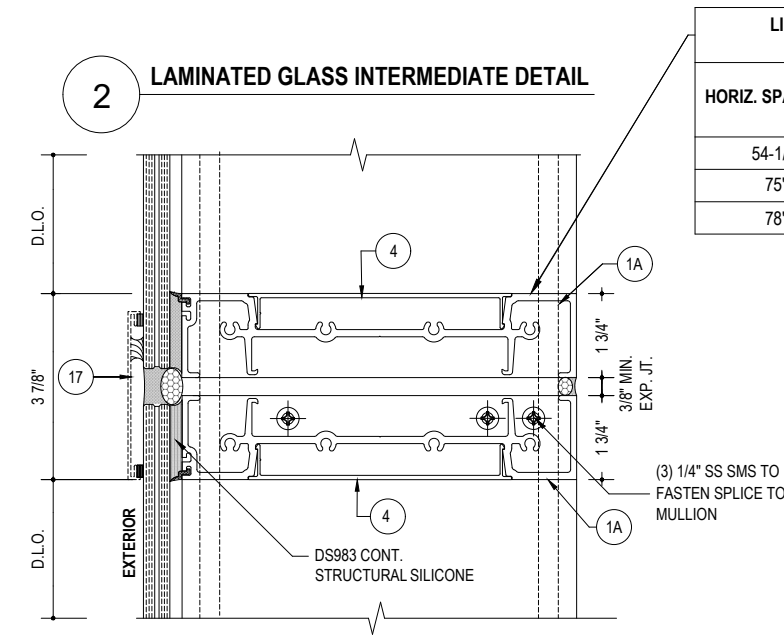
2 LAMINATED GLASS INTERMEDIATE DETAIL



5 INSUL. LAMI. GLASS INTERMEDIATE DETAIL

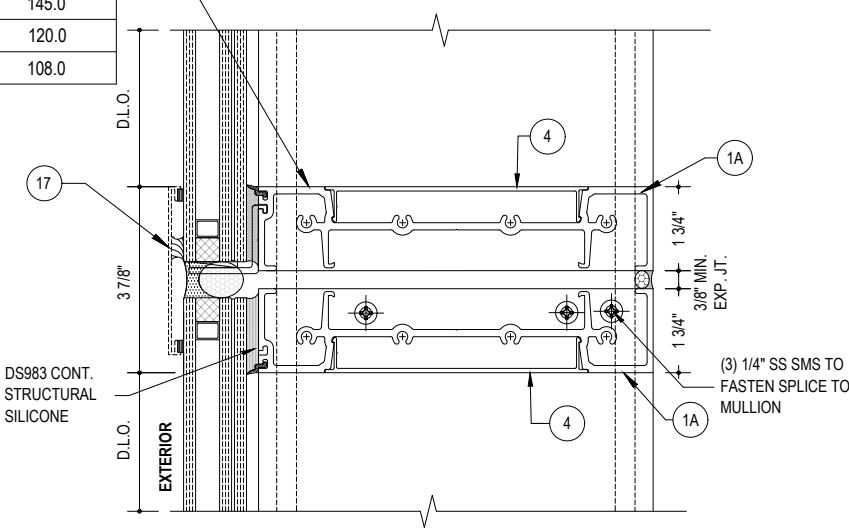


8 INSUL. LAMI. GLASS SILL DETAIL



3 LAMINATED GLASS STACK JOINT DETAIL

LIMIT MAX. DESIGN LOADS FOR STACK JOINT HORIZONTALS AS FOLLOWS		
HORIZ. SPAN MAX.	DESIGN LOADS - PSF	
	EXT.(+)	INT.(-)
54-1/2"	120.0	145.0
75"	120.0	120.0
78"	108.0	108.0



6 INSUL. LAMI. GLASS STACK JOINT DETAIL



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No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

Check by: PK

Drawing no. JA-1671-24

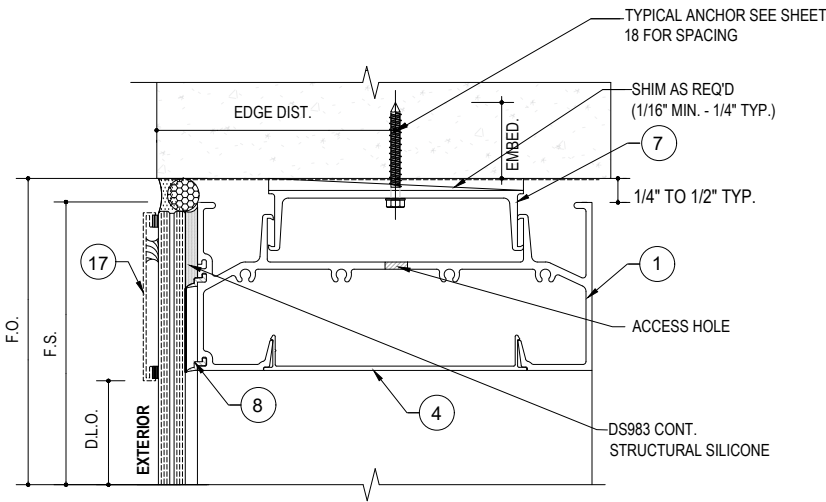
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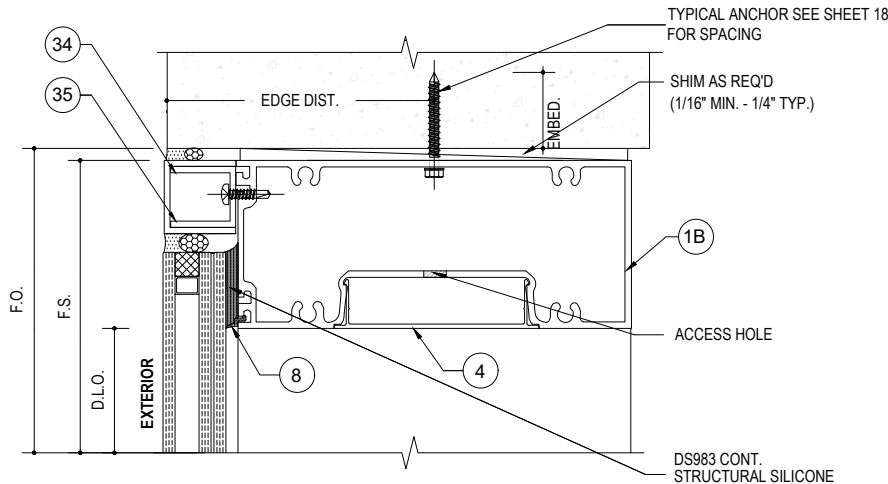
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VERTICAL SECTION DETAILS (CONT.)

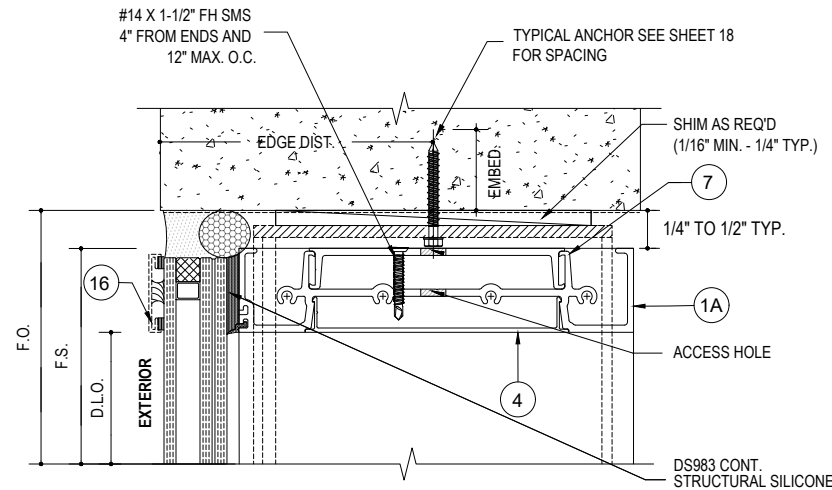
FL#29520.3



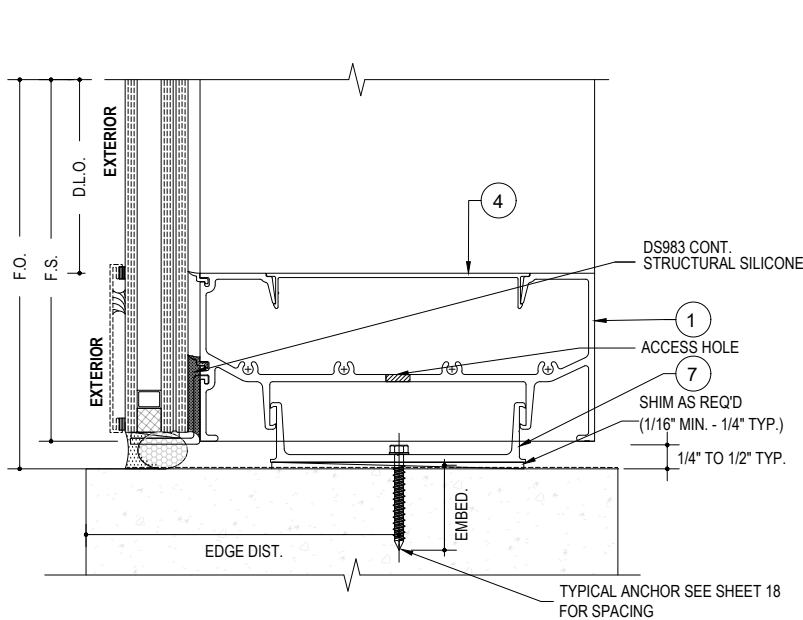
1 ALTERNATE HEAD DETAIL



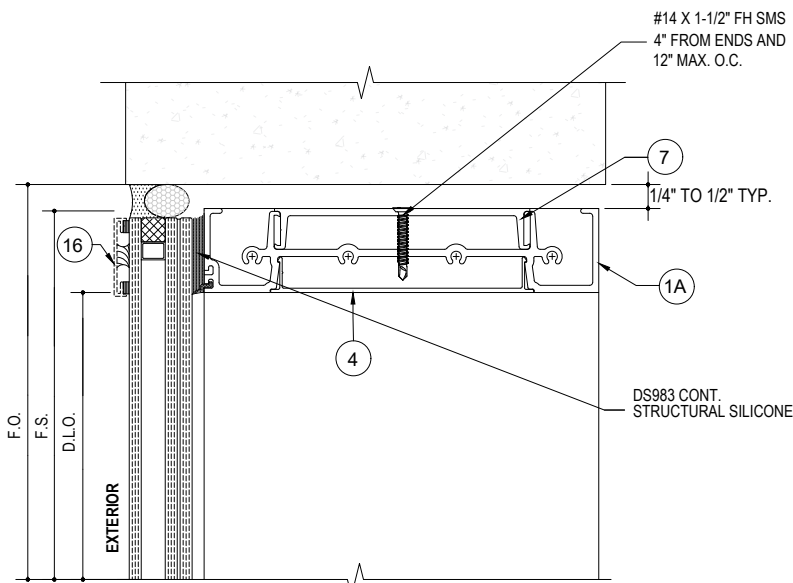
2 ALTERNATE HEAD DETAIL



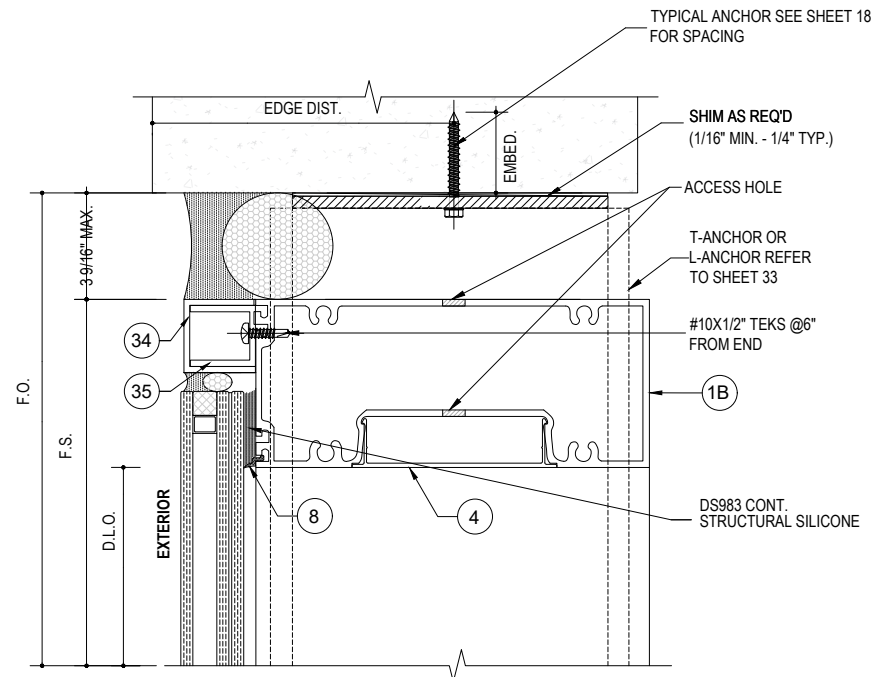
3 HEAD W/ T-CLIP OR L-CLIP DETAIL



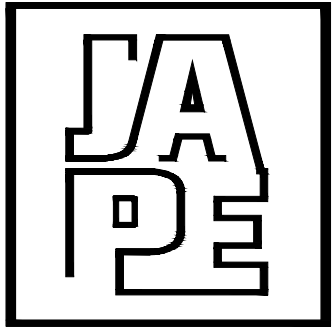
4 ALTERNATE SILL DETAIL



5 CANTILEVER HEAD DETAIL



6 ALTERNATE HEAD W/ T-CLIP OR L-CLIP DETAIL



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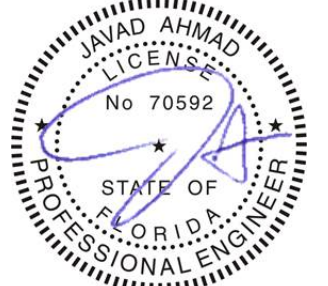
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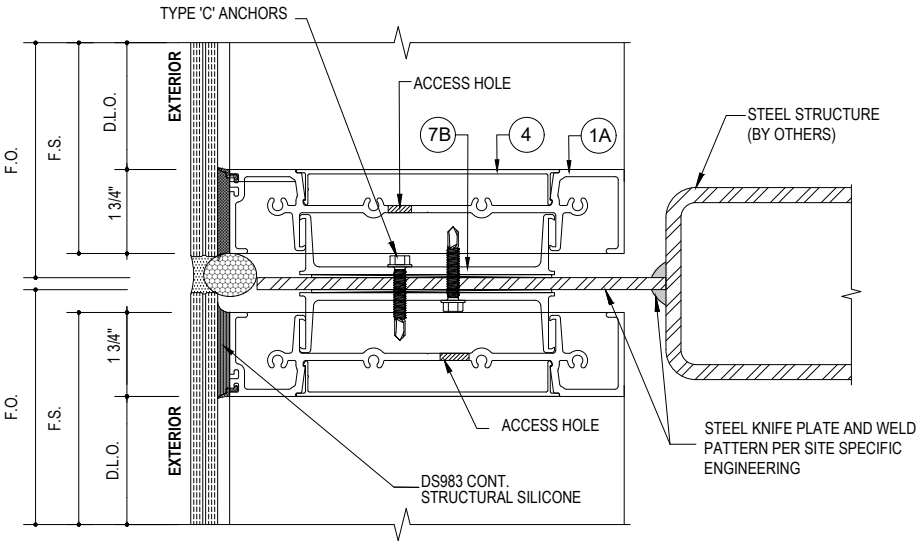
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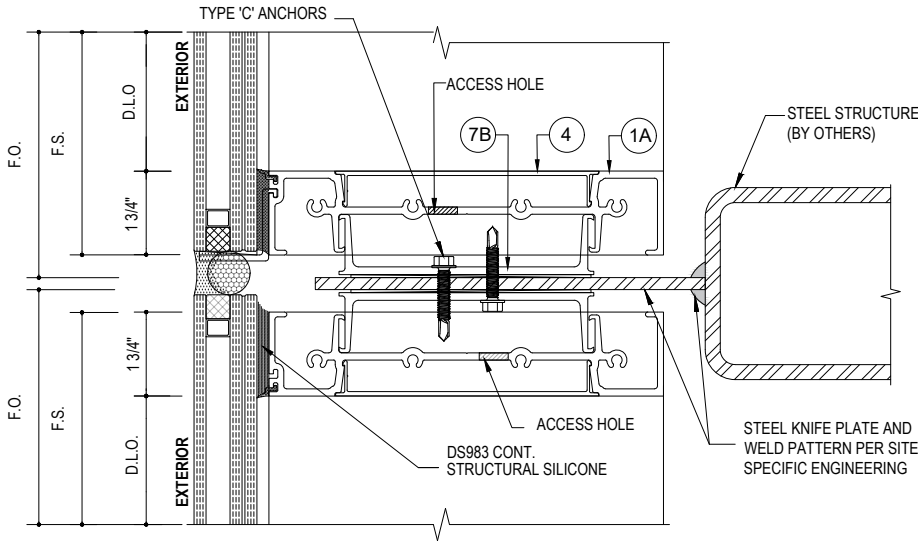
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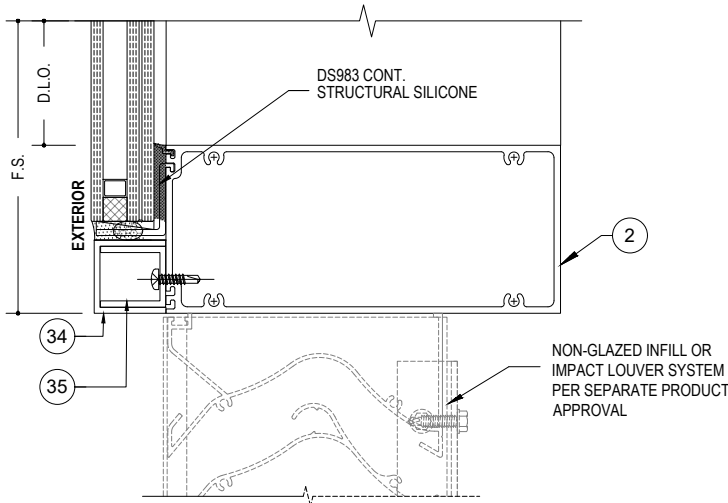
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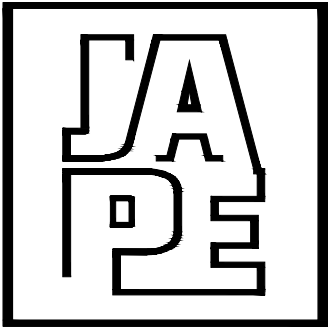
1 LAMINATED GLASS KNIFE PLATE DETAIL



2 INSUL. LAMI. GLASS KNIFE PLATE DETAIL



3 LOUVER HEAD DETAIL



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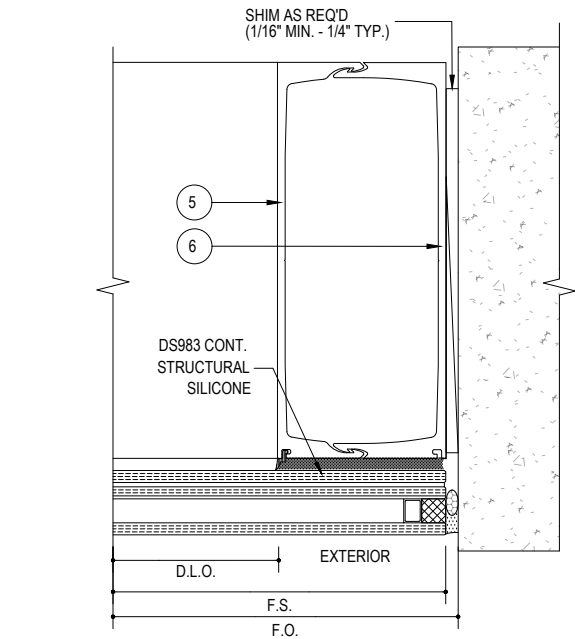
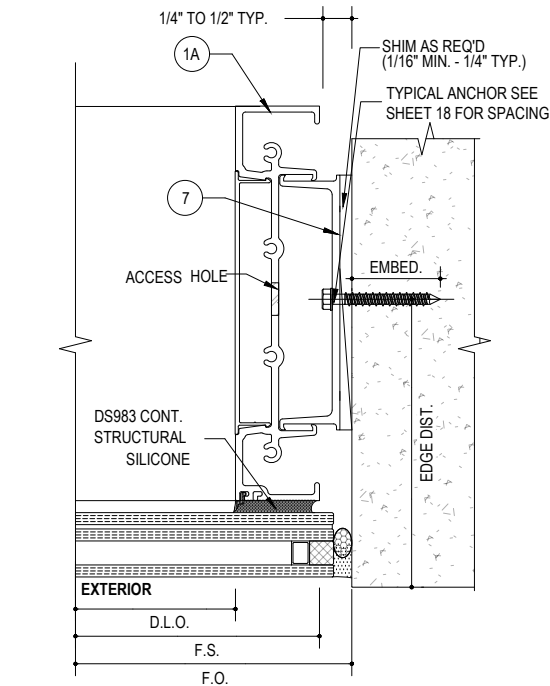
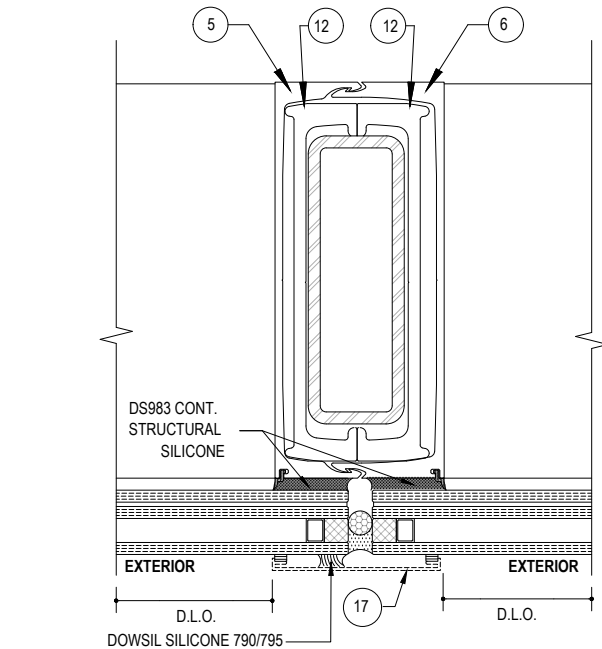
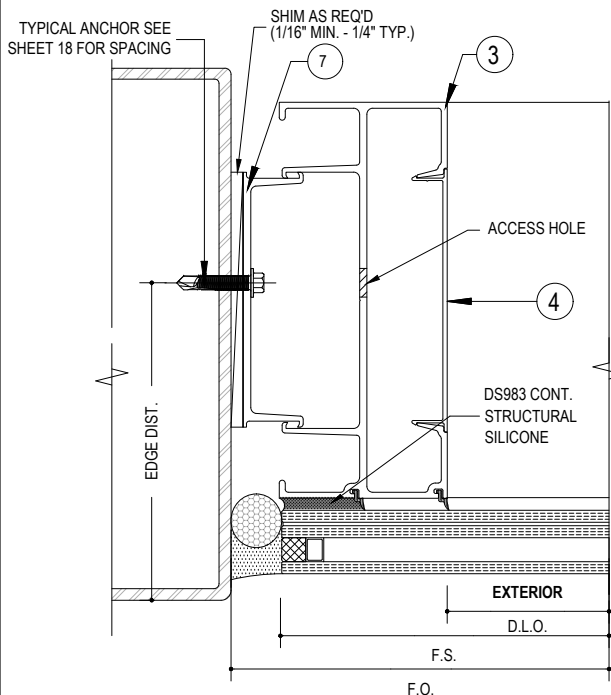
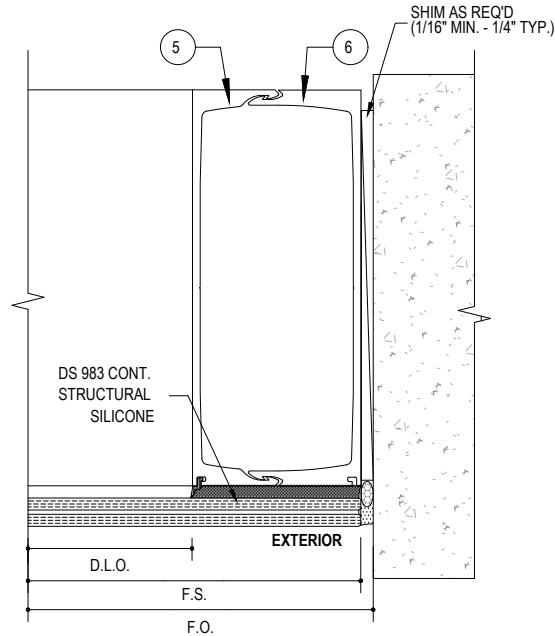
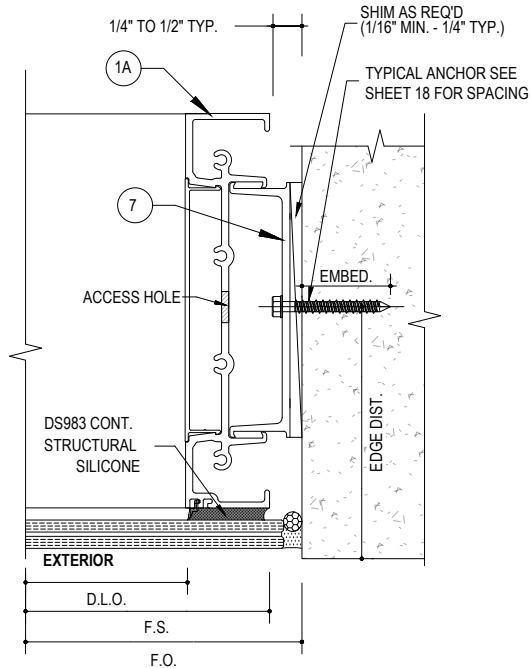
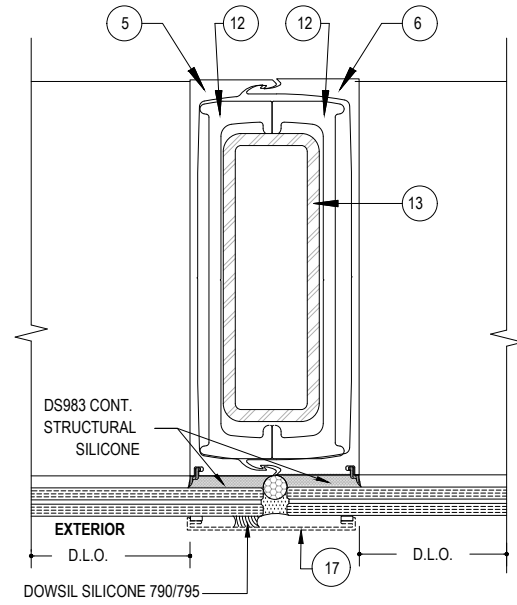
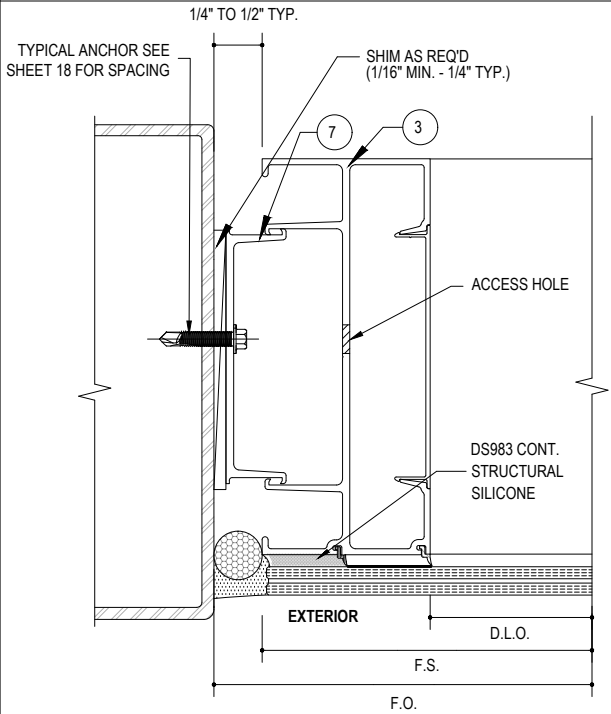
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HORIZONTAL SECTION DETAILS

FL#29520.3



1 LAMINATED GLASS JAMB DETAIL

2 LAMINATED GLASS MULLION DETAIL

3 LAMINATED GLASS JAMB DETAIL

7 LAMINATED GLASS UNANCHORED JAMB DETAIL

4 INSUL. LAMI. GLASS JAMB DETAIL

5 INSUL. LAMI. GLASS MULLION DETAIL

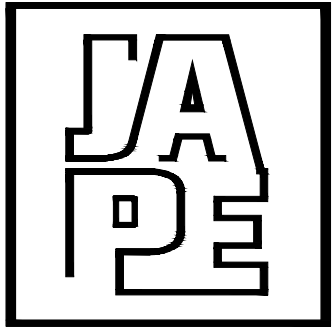
6 INSUL. LAMI. GLASS JAMB DETAIL

8 INSUL. LAMI. GLASS UNANCHORED JAMB DETAIL

NOTE:

- SHIM SIZES GREATER THAN THE ONE SHOWN IN THE DETAILS ARE PERMITTED UNDER SITE SPECIFIC CONDITIONS.
- MODIFICATION TO THE ANCHORING REQUIRED TO MEET SITE SPECIFIC CONDITIONS SHALL BE DONE BY A LICENSED PROFESSIONAL ENGINEER.
- SHIM SPACE BETWEEN JAMB AND SUBSTRATE IN EXCESS OF 1/2" THICKNESS MAY BE USED GIVEN CLIP AND BALANCE ANCHORING IS DESIGNED PER SITE SPECIFIC PARAMETER. ANCHOR / ATTACHMENT DESIGN MUST BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER AND THE PRODUCT MANUFACTURER.

NOTE: ALTERNATE JAMB MAY ALSO BE USED WITHOUT ANCHORS AND SHOULD BE DESIGNED BY A LICENCED PROFESSIONAL ENGINEER ON SITE SPECIFIC BASIS.



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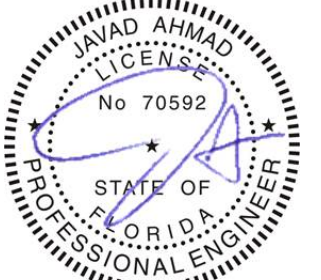
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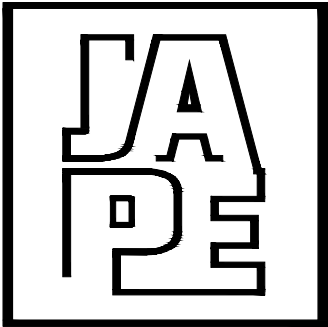
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HORIZONTAL SECTION DETAILS

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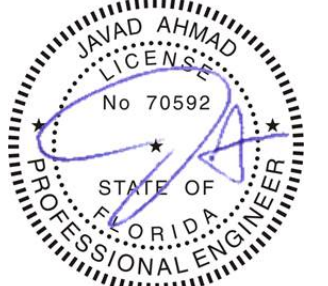
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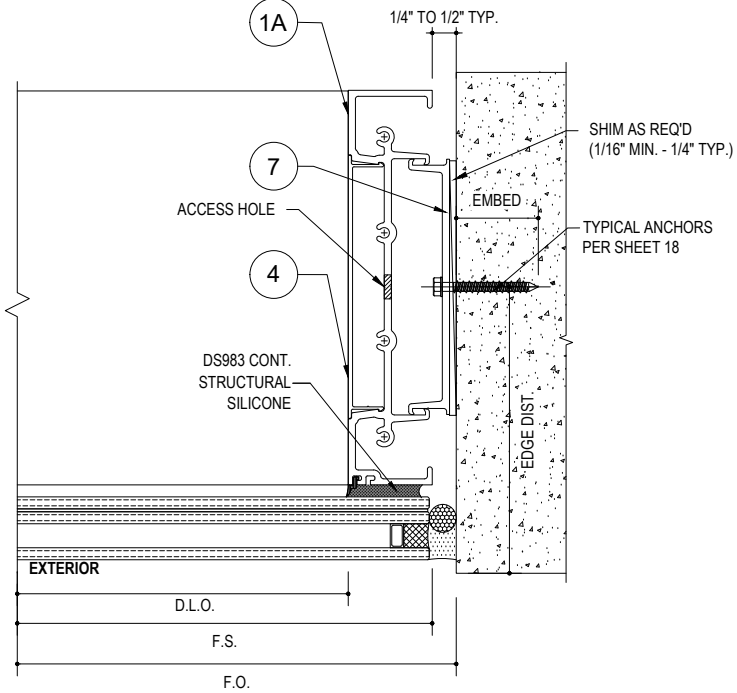
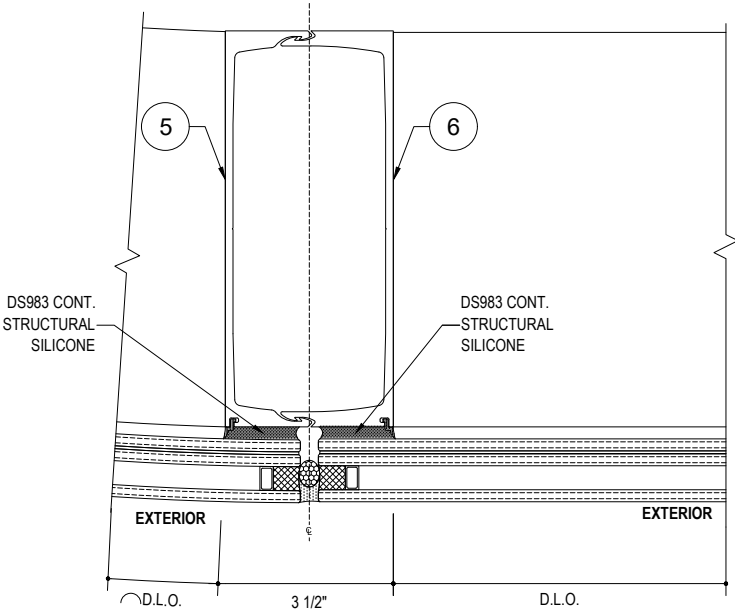
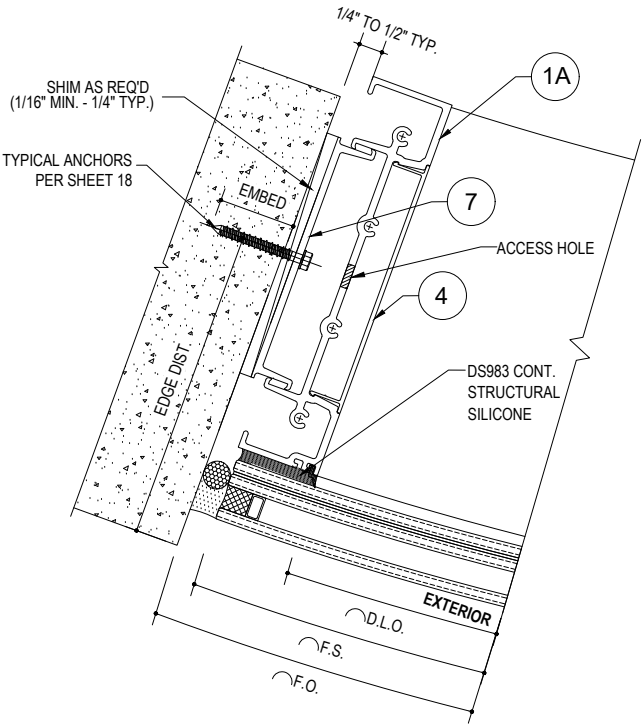
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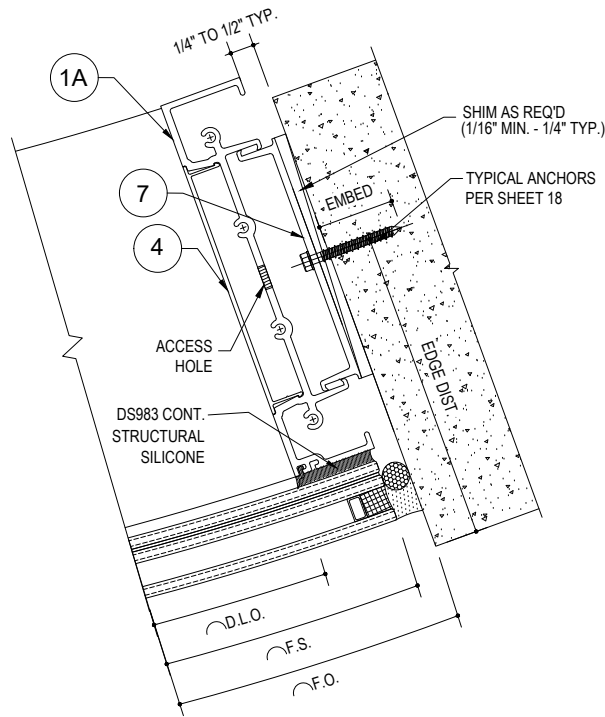
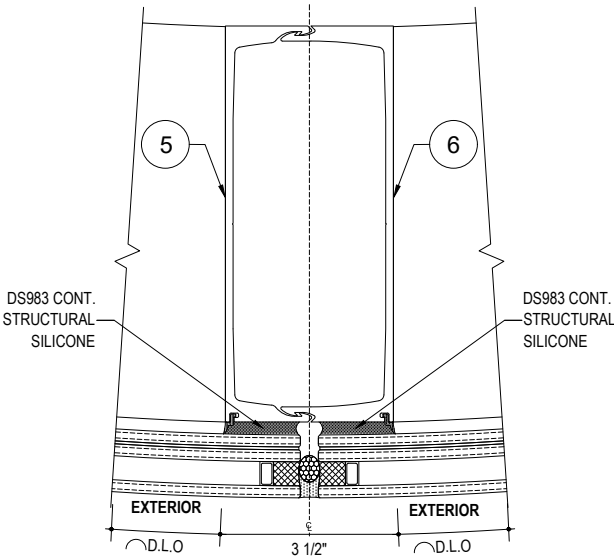
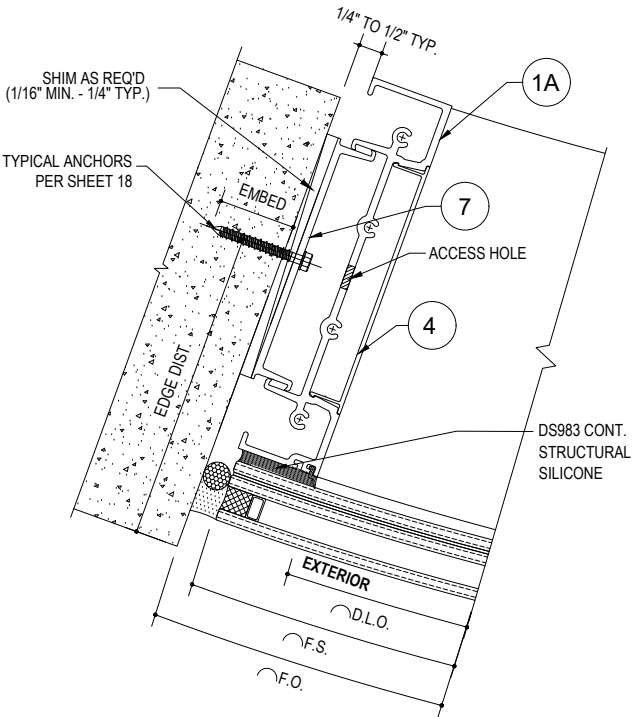
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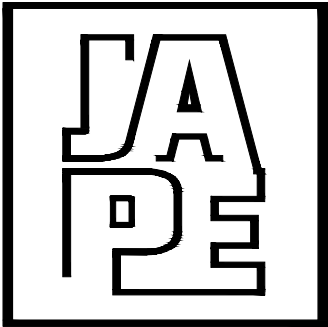
1 CURVED GLASS TO STRAIGHT SEGMENT HORIZONTAL SECTION DETAIL



2 CURVED GLASS HORIZONTAL SECTION DETAIL

HORIZONTAL SECTION DETAILS

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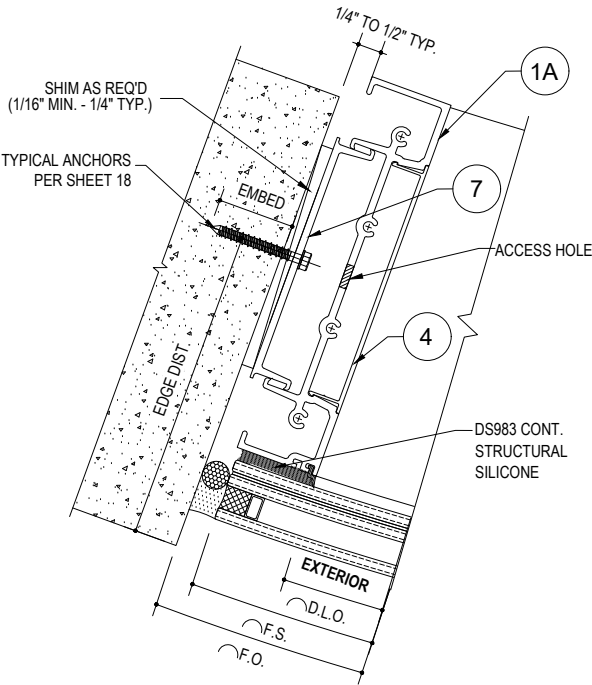
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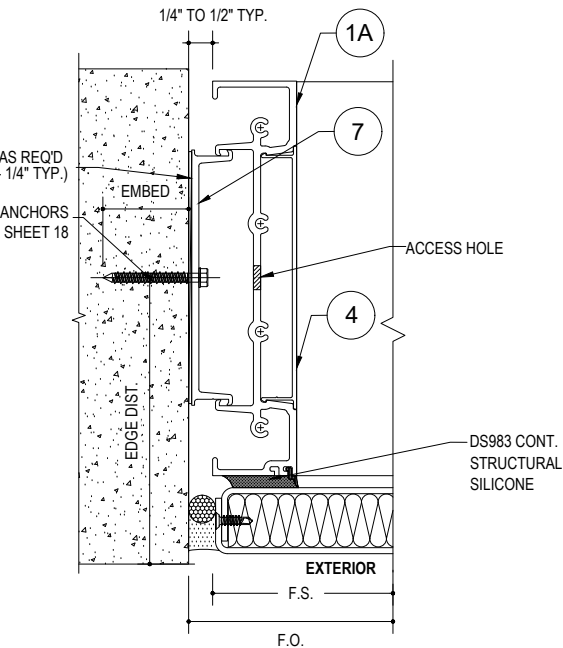
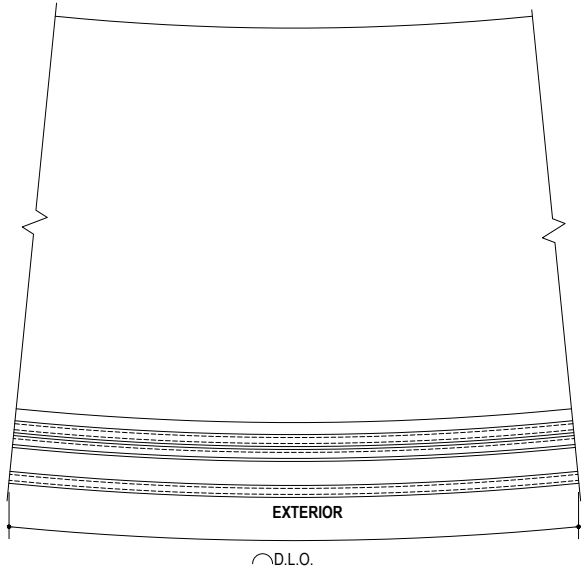
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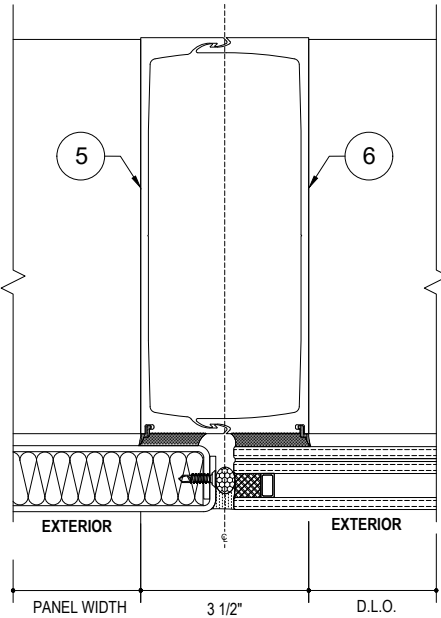
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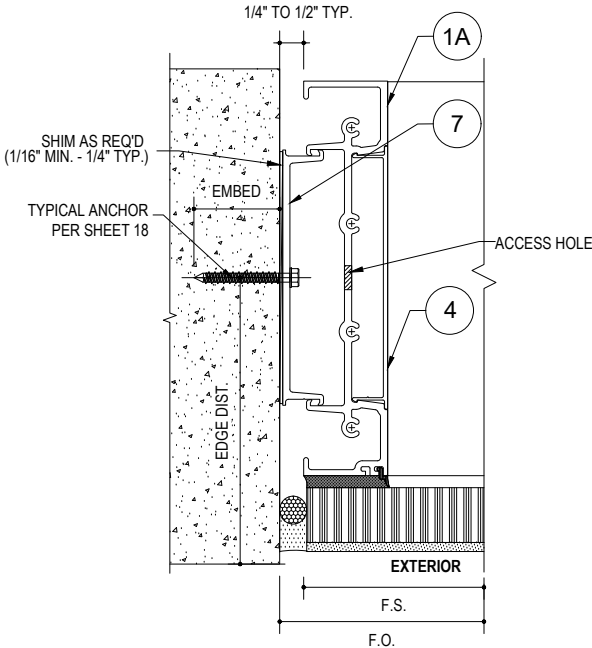
1 CURVED GLASS HORIZONTAL SECTION



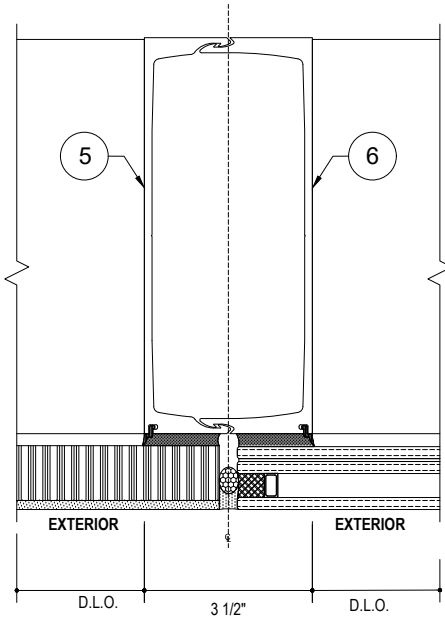
2 JAMB DETAIL (ALUMINUM PANEL)



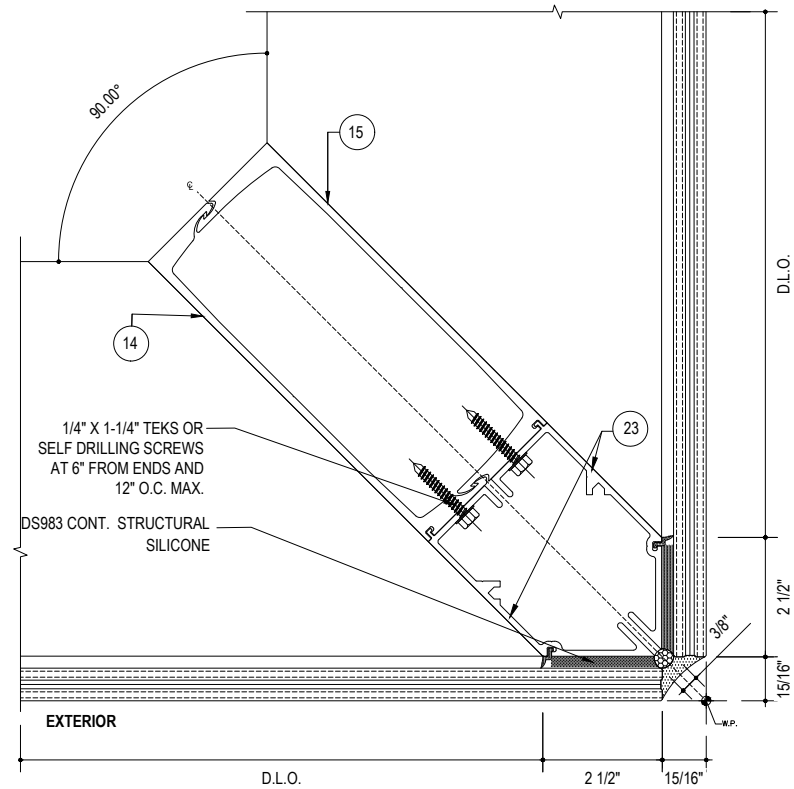
3 MULLION DETAIL (ALUMINUM PANEL)



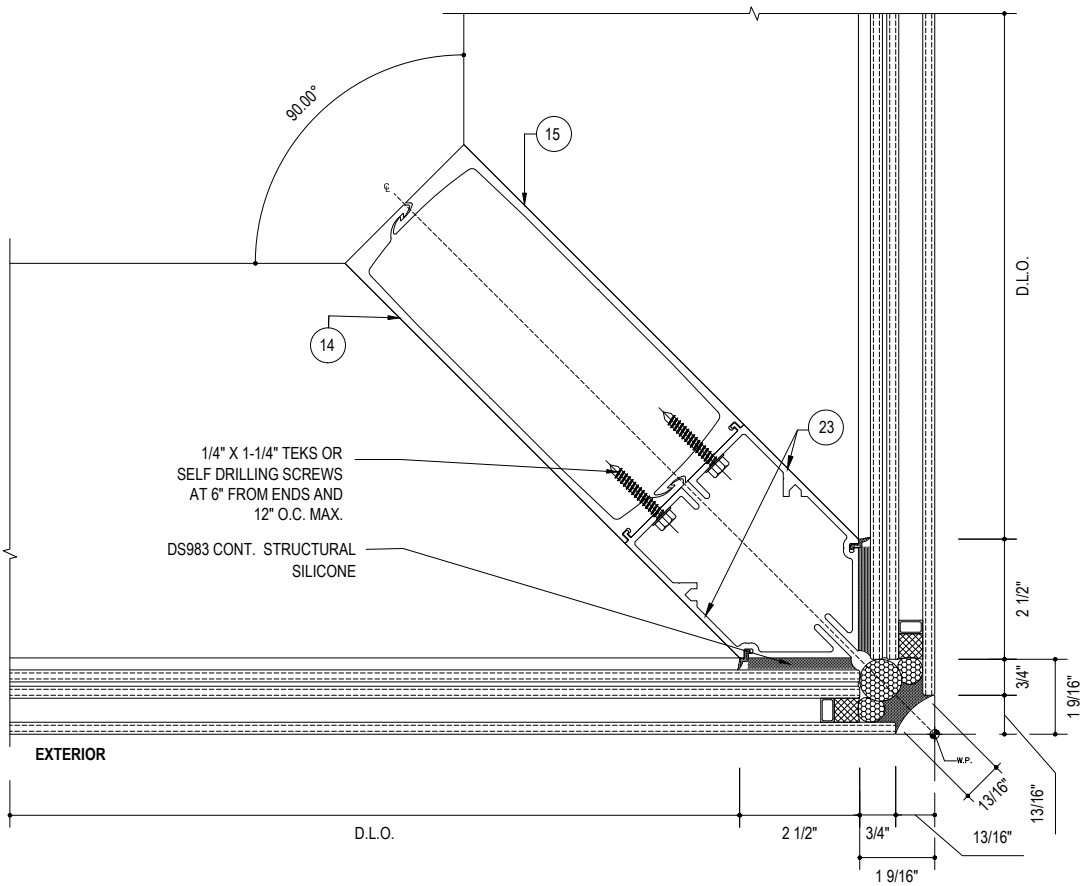
4 JAMB DETAIL (STONE PANEL)



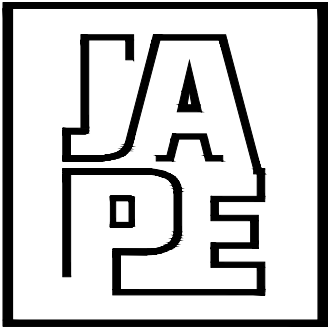
5 MULLION DETAIL (STONE PANEL)



1 LAMINATED GLASS CORNER MULLION DETAIL



2 INSUL. LAMI. GLASS CORNER MULLION DETAIL



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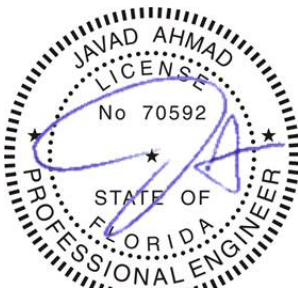
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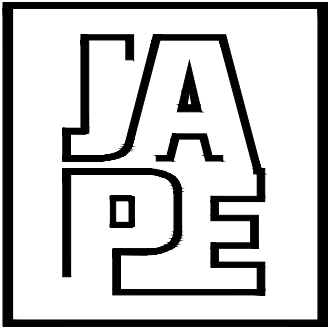
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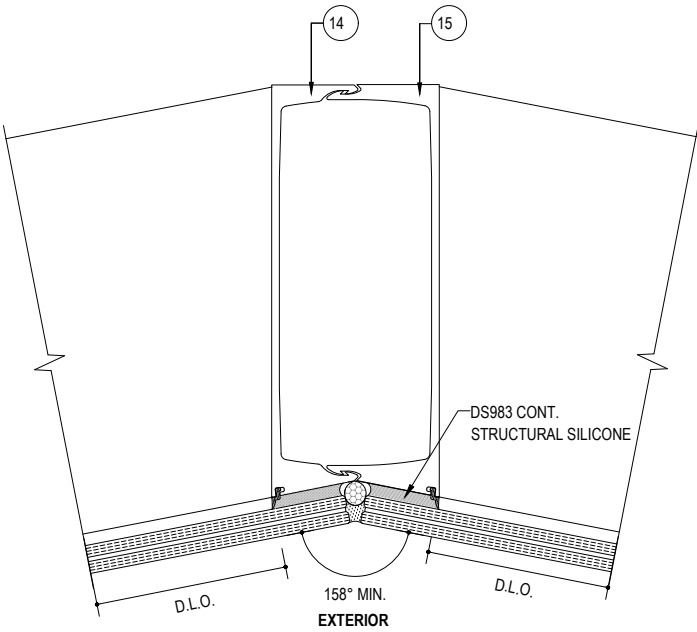
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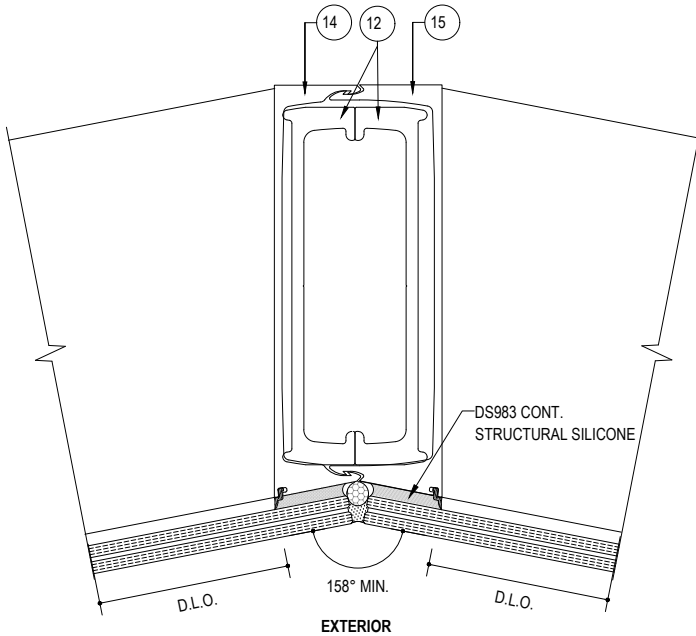
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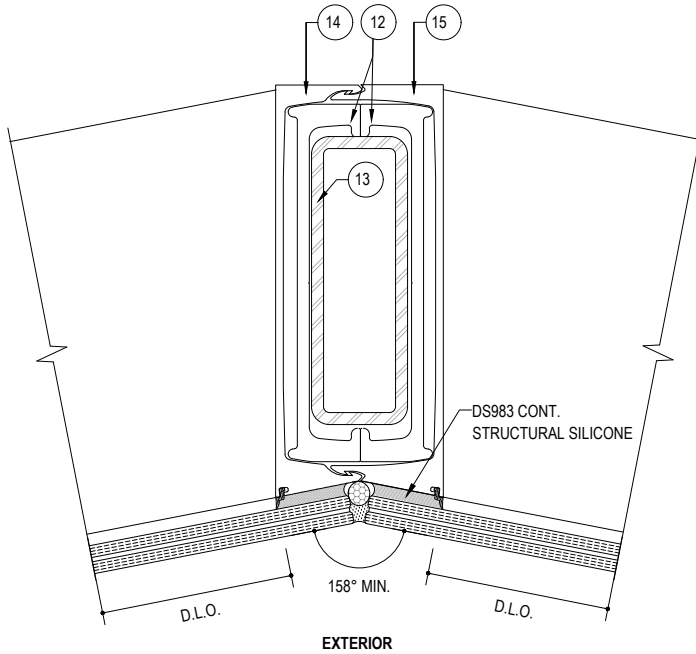
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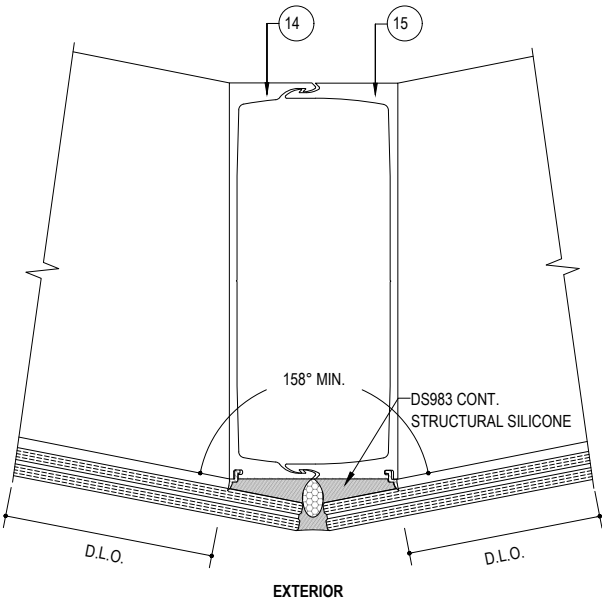
1 CORNER UNREINFORCED MULLION DETAIL



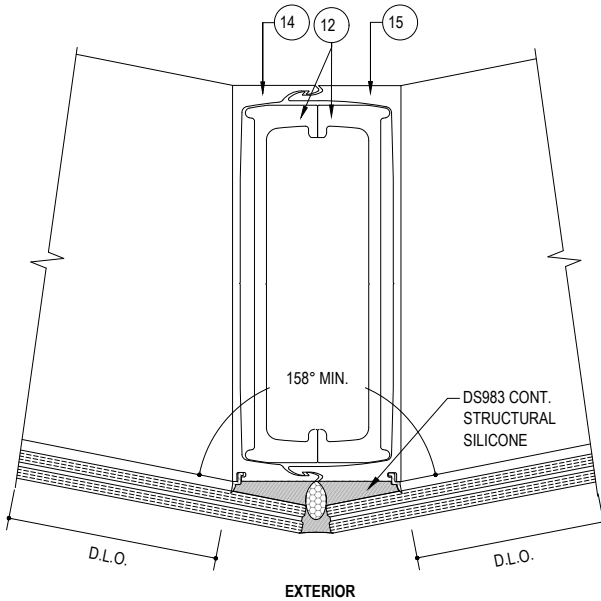
2 CORNER ALUMINUM REINFORCED MULLION DETAIL



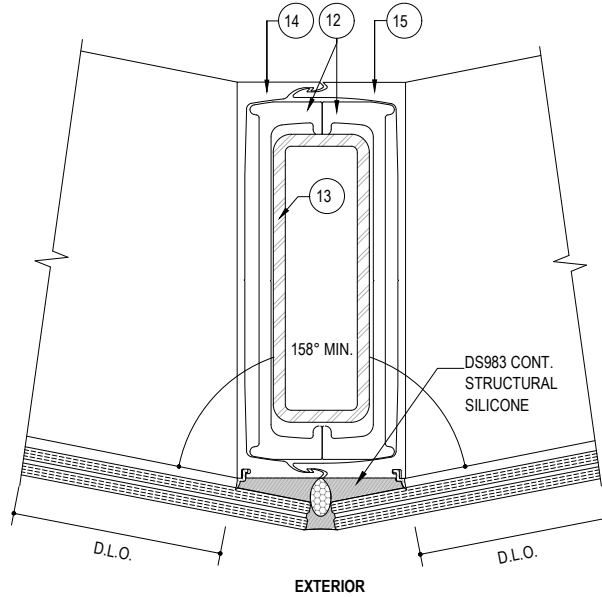
3 CORNER STEEL REINFORCED MULLION DETAIL



4 CORNER UNREINFORCED MULLION DETAIL



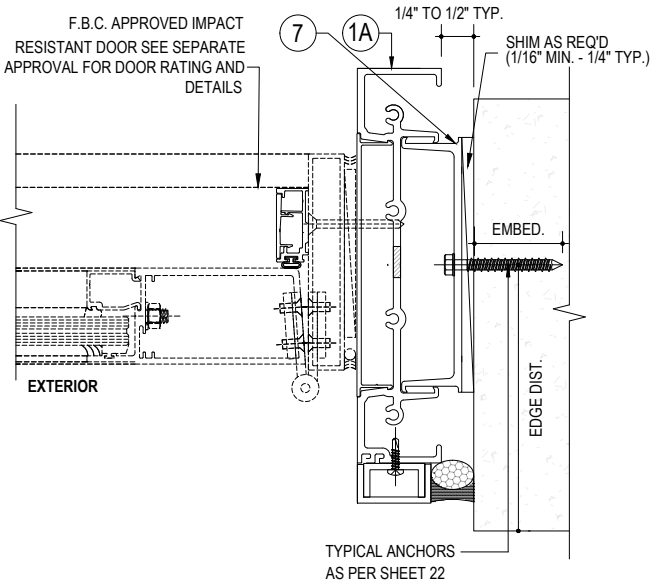
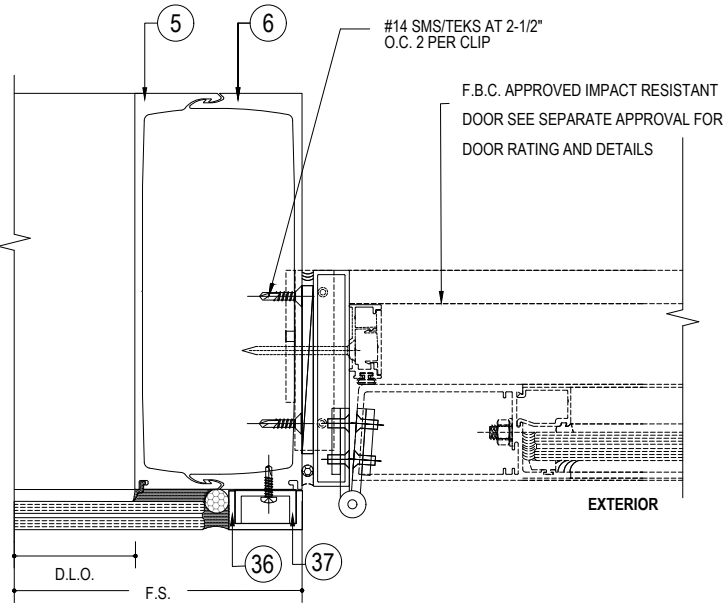
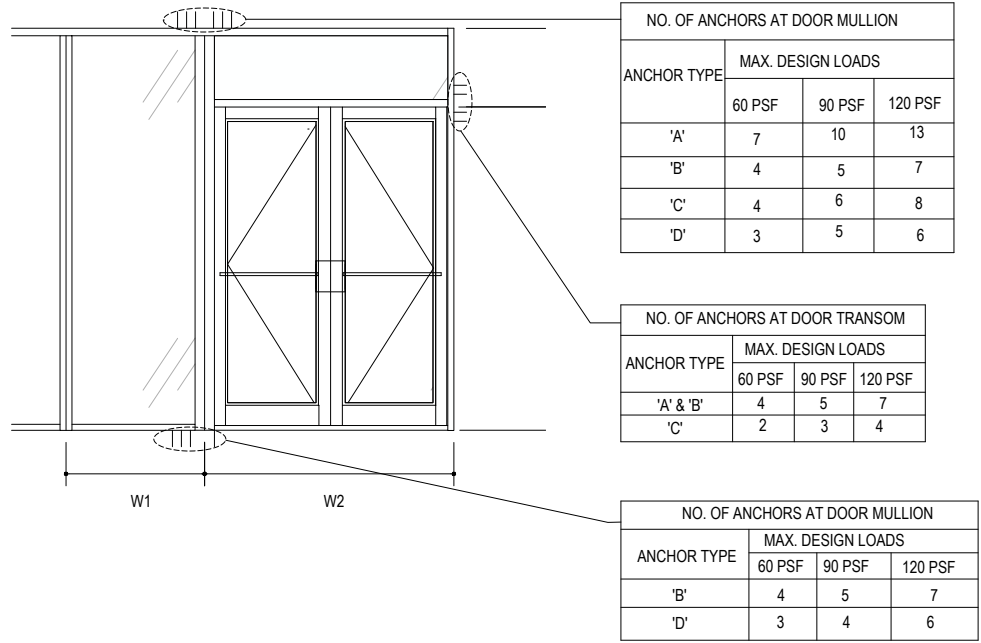
5 CORNER ALUMINUM REINFORCED MULLION DETAIL



6 CORNER STEEL REINFORCED MULLION DETAIL

DOOR MULLION CAPACITY CHART, DETAILS AND ANCHORS

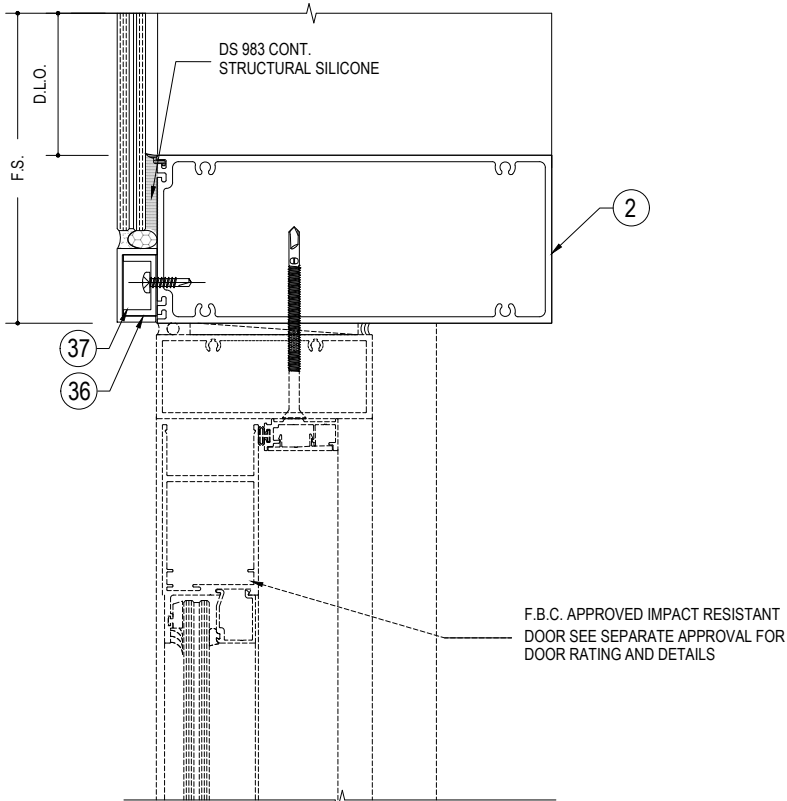
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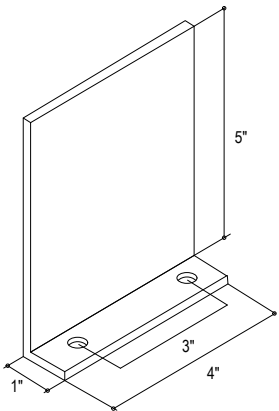
1 VERTICAL AT DOOR JAMB DETAIL

2 ALTERNATIVE JAMB DETAIL - AT DOOR

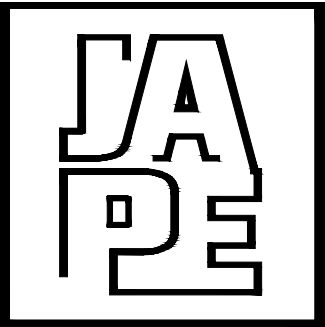
DOOR MULLION DESIGN LOAD CAPACITY - PSF					
FRAME HEIGHT (B)	DOOR HEIGHT (A)	WIDTH (W1)	WIDTH (W2)	UNREINFORCED	ALUM. REINF.
				EXT.(+) INT.(-)	EXT.(+) INT.(-)
120"	80"	66"	78"	+120.0 -120.0	+120.0 -120.0
	84"			+120.0 -120.0	+120.0 -120.0
	90"			+120.0 -120.0	+120.0 -120.0
	96"			+120.0 -120.0	+120.0 -120.0
132"	80"	60"	78"	+120.0 -120.0	+120.0 -120.0
	84"			+120.0 -120.0	+120.0 -120.0
	90"			+120.0 -120.0	+120.0 -120.0
	96"			+120.0 -120.0	+120.0 -120.0
138"	80"	54"	78"	+120.0 -120.0	+120.0 -120.0
	84"			+120.0 -120.0	+120.0 -120.0
	90"			+120.0 -120.0	+120.0 -120.0
	96"			+120.0 -120.0	+120.0 -120.0
144"	80"	48"	78"	+120.0 -120.0	+120.0 -120.0
	84"			+120.0 -120.0	+120.0 -120.0
	90"			+120.0 -120.0	+120.0 -120.0
	96"			+120.0 -120.0	+120.0 -120.0
147-1/2"	80"	48"	78"	+120.0 -120.0	+120.0 -120.0
	84"			+120.0 -120.0	+120.0 -120.0
	90"			+120.0 -120.0	+120.0 -120.0
	96"			+120.0 -120.0	+120.0 -120.0
156"	80"	48"	78"	-	+120.0 -120.0
	84"			-	+120.0 -120.0
	90"			-	+120.0 -120.0
	96"			-	+120.0 -120.0
162"	80"	44"	78"	-	+120.0 -120.0
	84"			-	+120.0 -120.0
	90"			-	+120.0 -120.0
	96"			-	+120.0 -120.0
168"	80"	40"	78"	-	+120.0 -120.0
	84"			-	+120.0 -120.0
	90"			-	+120.0 -120.0
	96"			-	+120.0 -120.0



3 DOOR HEAD DETAIL



DOOR MULLION INSTALLATION CLIP
1" X 5" X 3/16" ALUM. ANGLE



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Scale: N/A

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Drawing no. JA-1671-24

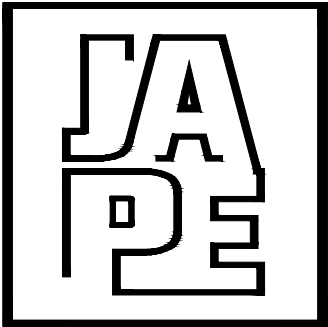
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DEAD BLOCK DETAILS

FL#29520.3



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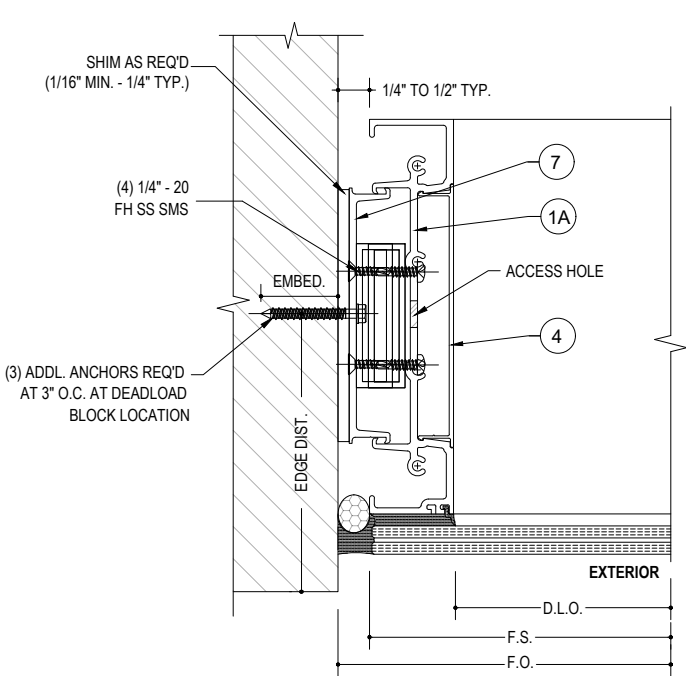
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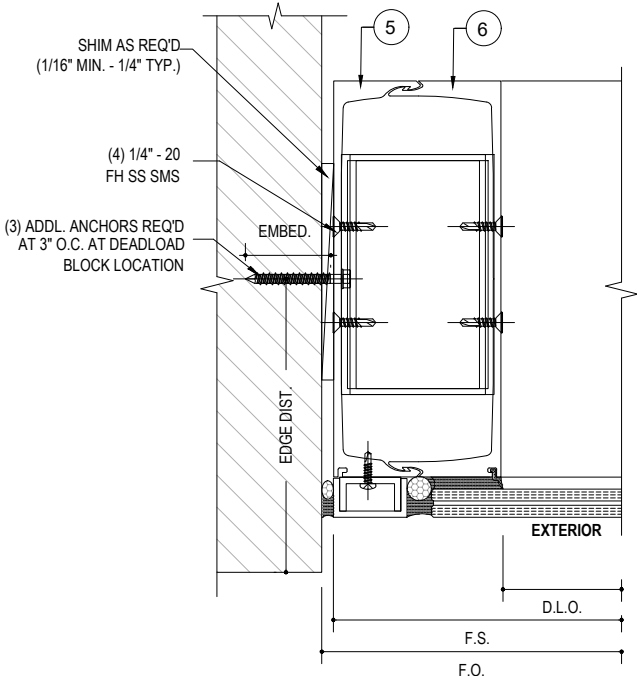
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



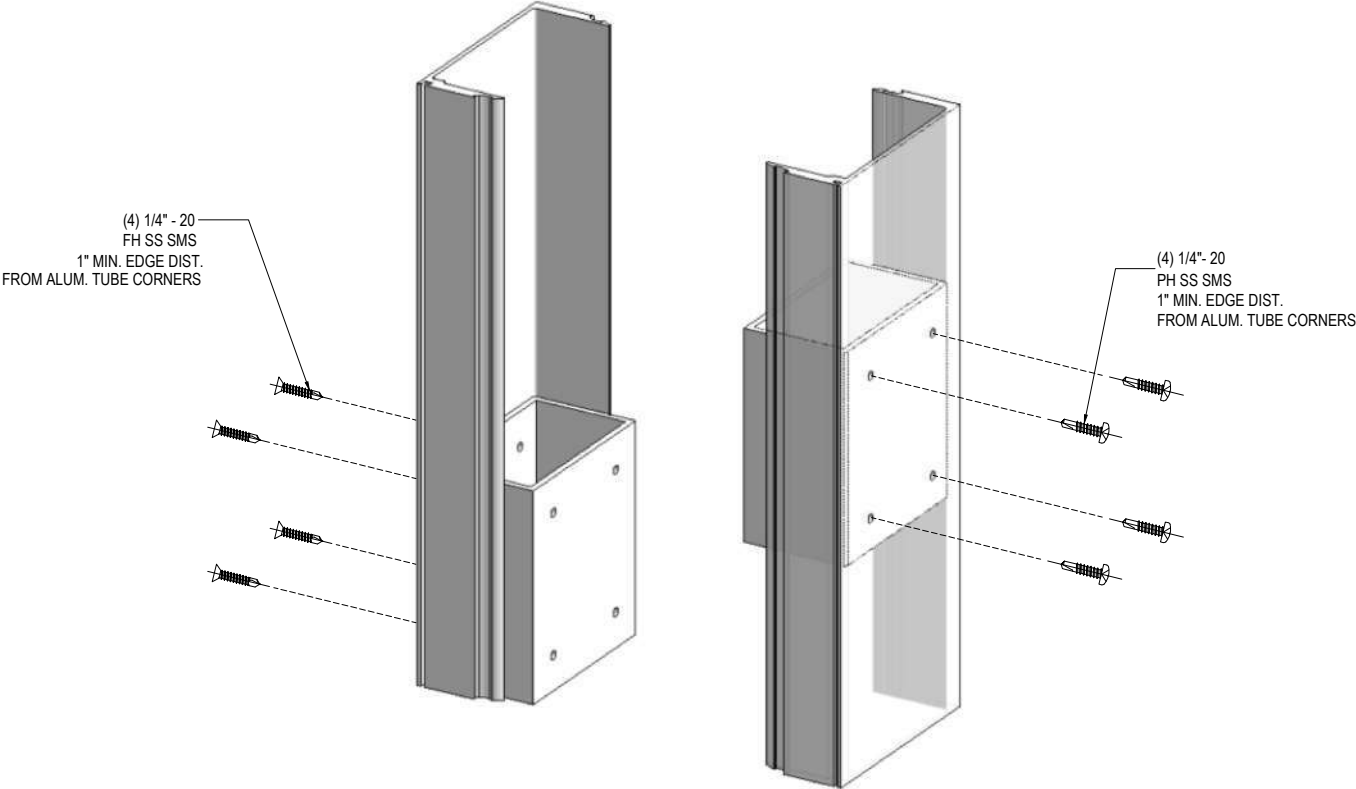
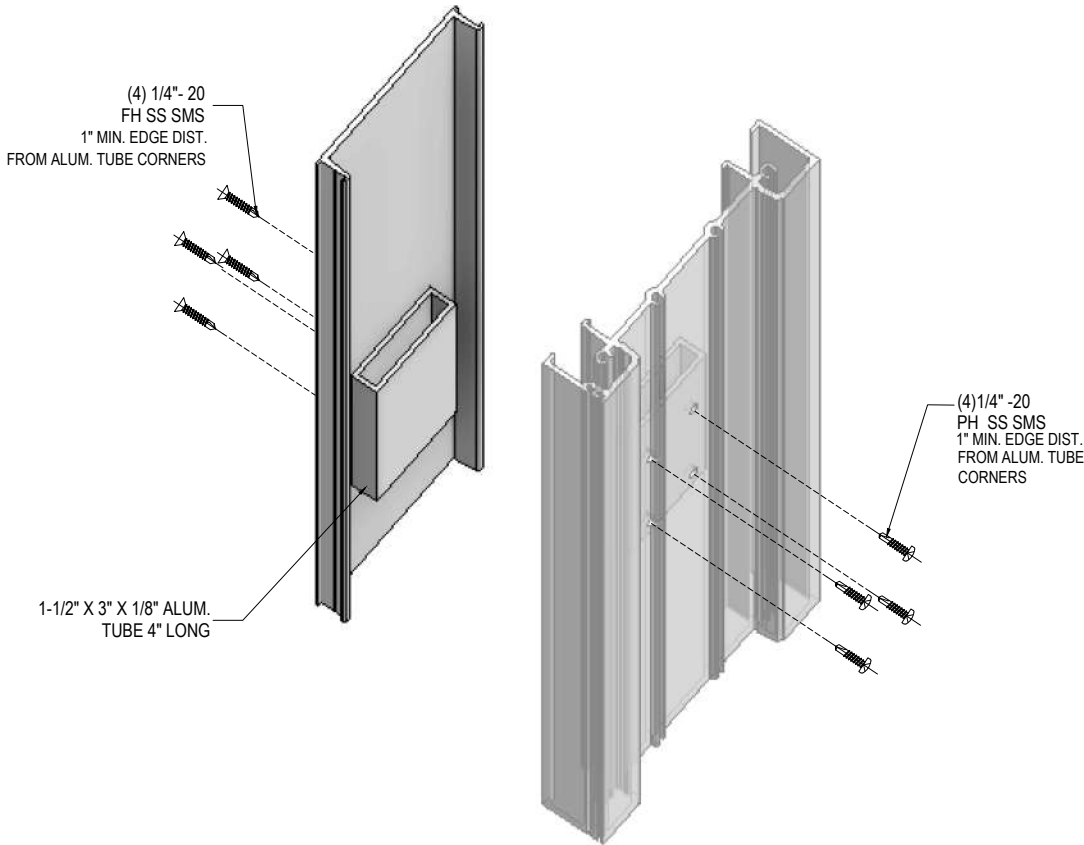
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1 DEAD LOAD BLOCK AT TYPICAL JAMB DETAIL

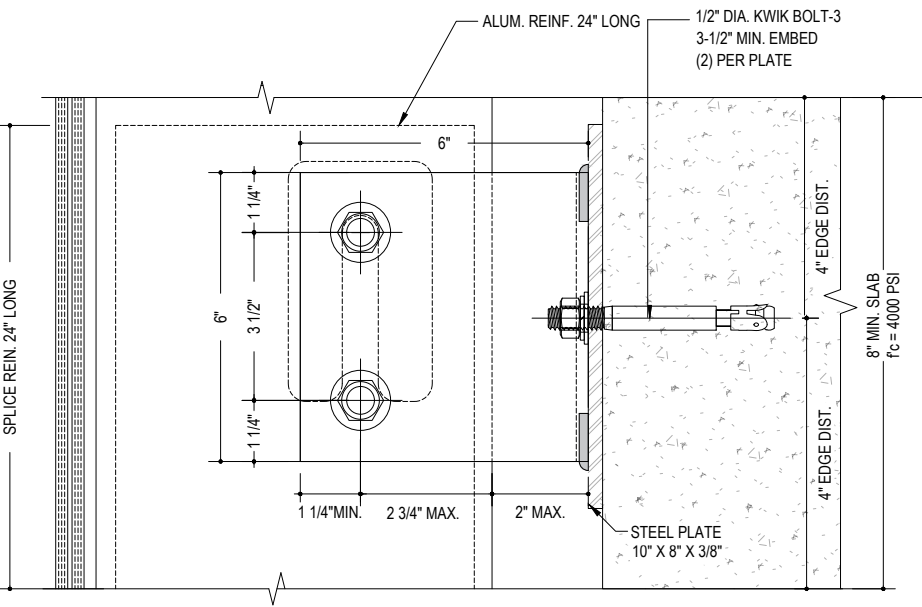


2 DEAD LOAD BLOCK AT ANCHORED MULLION DETAIL

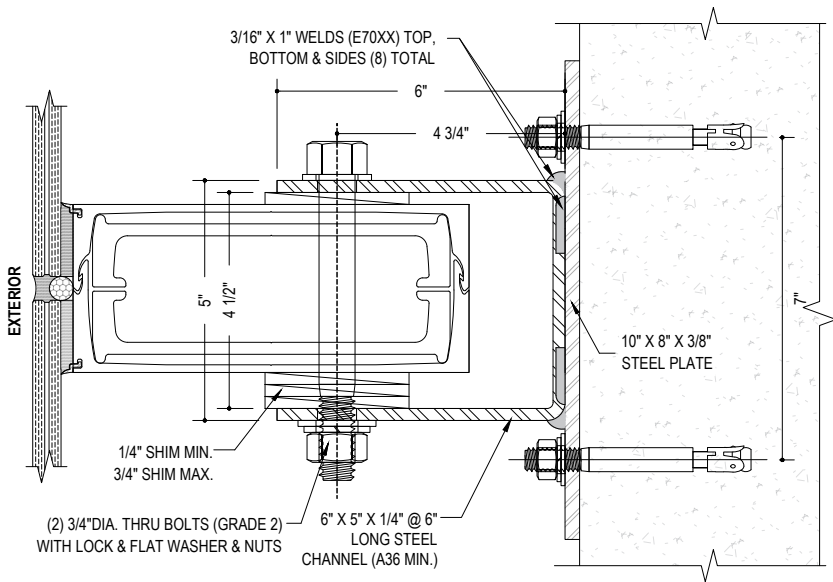


DEAD LOAD / WIND LOAD INTERMEDIATE ANCHOR DETAILS

FL#29520.3



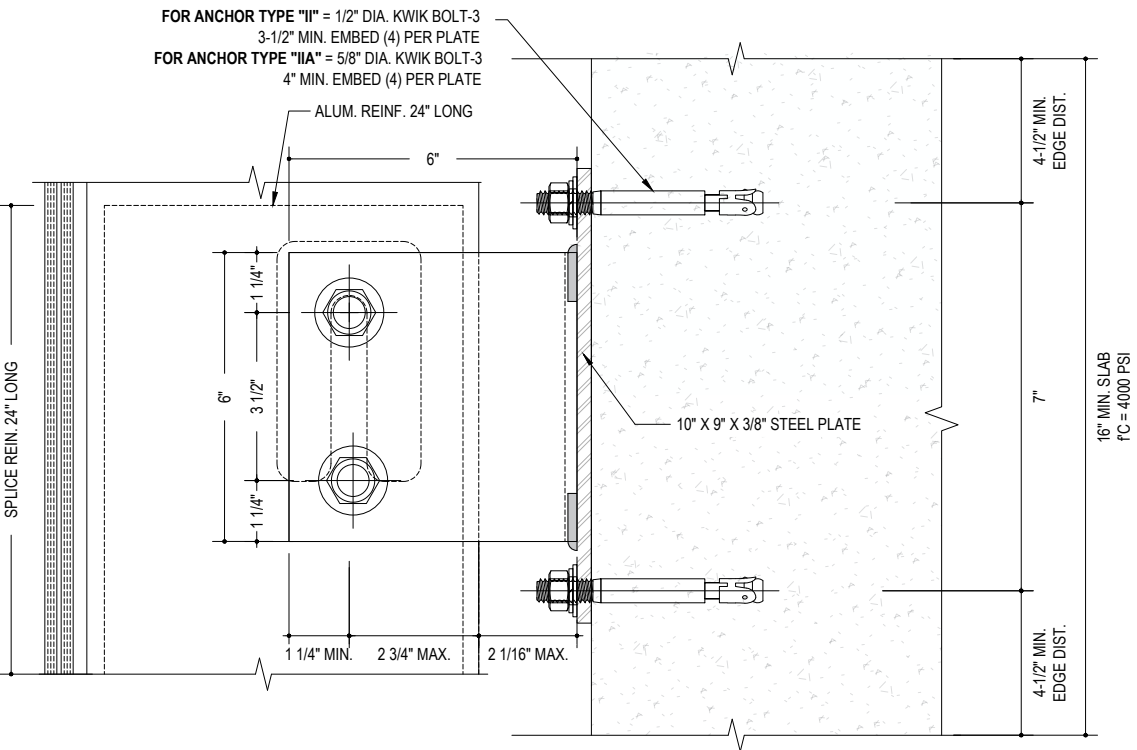
1 ANCHOR CLIP TYPE 'I' VERTICAL DETAIL



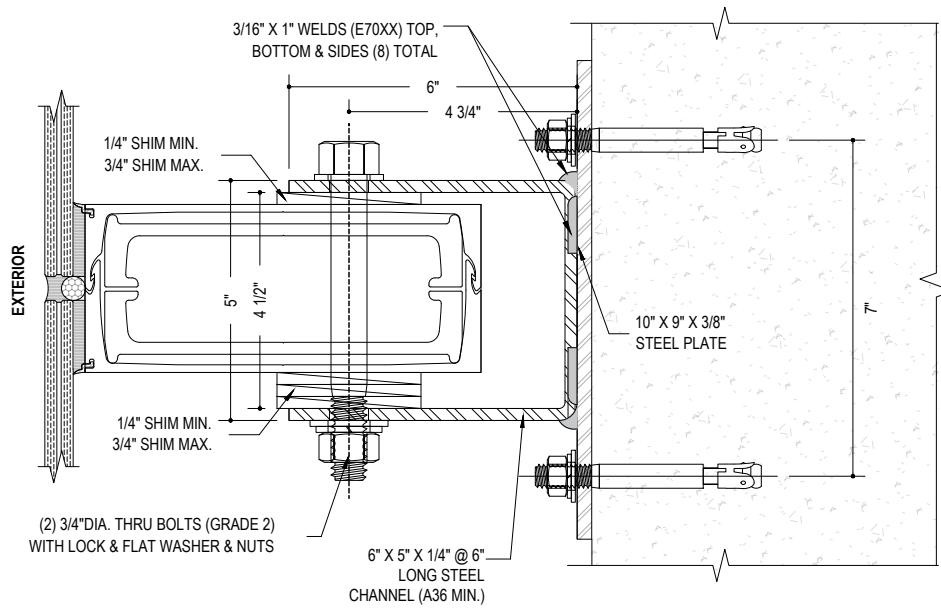
2 ANCHOR CLIP TYPE 'I' HORIZONTAL DETAIL

ANCHOR CLIP MAX. LOADS			
	TYPE 'I'	TYPE 'II'	TYPE 'IIA'
MAX. WINDLOAD	2100 LBS	5500 LBS	6700 LBS
MAX. DEADLOAD	700 LBS	1050 LBS	1250 LBS

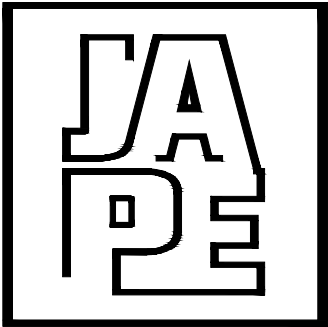
- NOTES:
- IF HIGHER CONNECTION CAPACITIES ARE NEEDED, THEN APPROPRIATE ANCHORING SHALL BE DETERMINED PER SITE SPECIFIC ENGINEERING BY A LICENSED PROFESSIONAL ENGINEER.
 - IF A LARGER CLEARANCE FROM BACK OF MULLION TO FACE OF SUBSTRATE IS REQUIRED, THEN THE MID ANCHOR CONNECTON SHALL BE DESIGNED PER SITE SPECIFIC CONDITIONS AND SHALL BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER.



3 ANCHOR CLIP TYPE 'II' & 'IIA' VERTICAL DETAIL



4 ANCHOR CLIP TYPE 'II' & 'IIA' HORIZONTAL DETAIL



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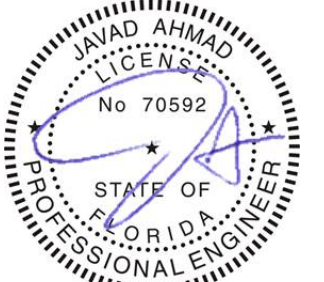
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Drawn by: DK

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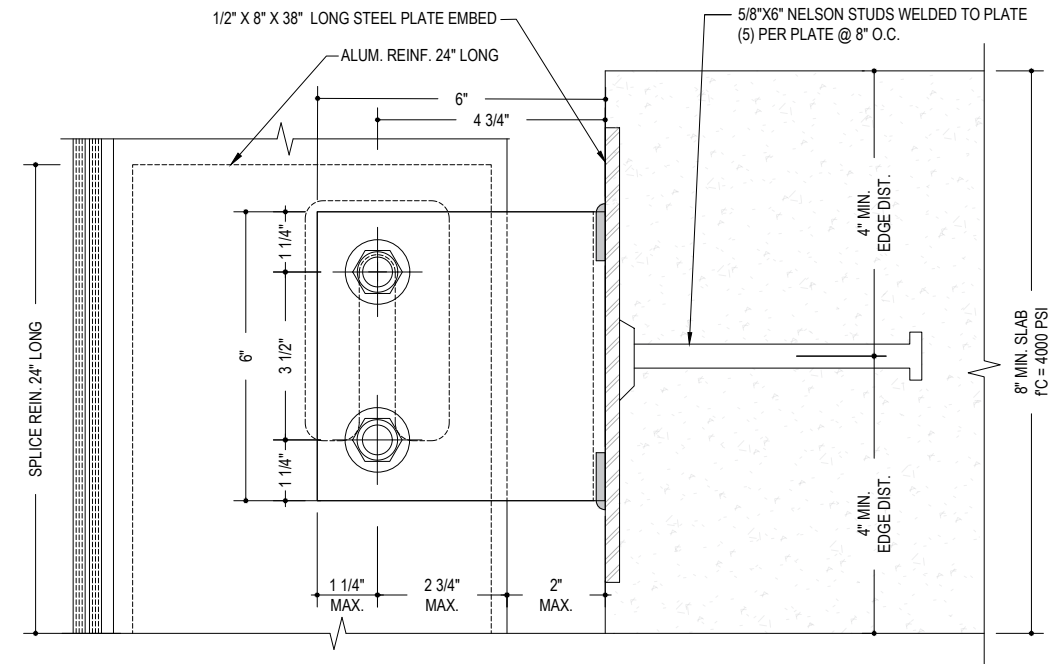
Drawing no. JA-1671-24

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

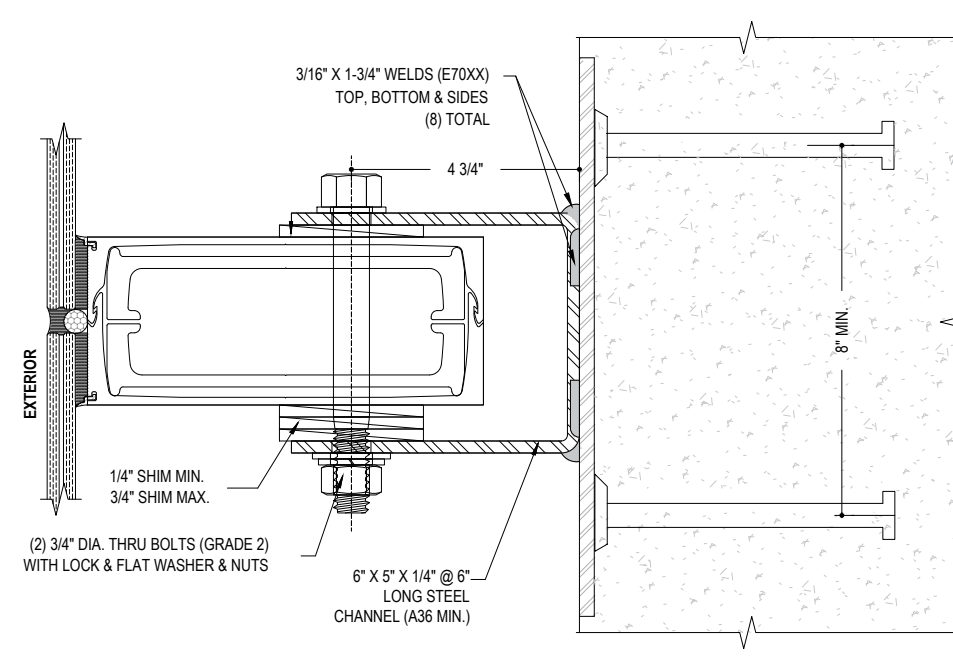


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3 ANCHOR CLIP TYPE 'V' VERTICAL DETAIL



4 ANCHOR CLIP TYPE 'V' HORIZONTAL DETAIL

NOTES:

1. IF HIGHER CONNECTION CAPACITIES ARE NEEDED, THEN APPROPRIATE ANCHORING SHALL BE DETERMINED PER SITE SPECIFIC ENGINEERING BY A LICENSED PROFESSIONAL ENGINEER.
2. IF A LARGER CLEARANCE FROM BACK OF MULLION TO FACE OF SUBSTRATE IS REQUIRED, THEN THE MID ANCHOR CONNECTION SHALL BE DESIGNED PER SITE SPECIFIC CONDITIONS AND SHALL BE APPROVED BY A LICENSED PROFESSIONAL ENGINEER.



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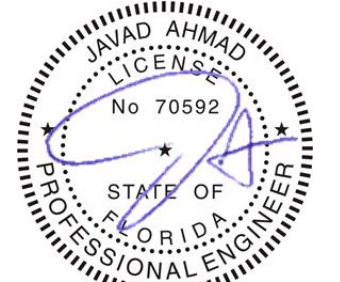
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Drawn by:	DK
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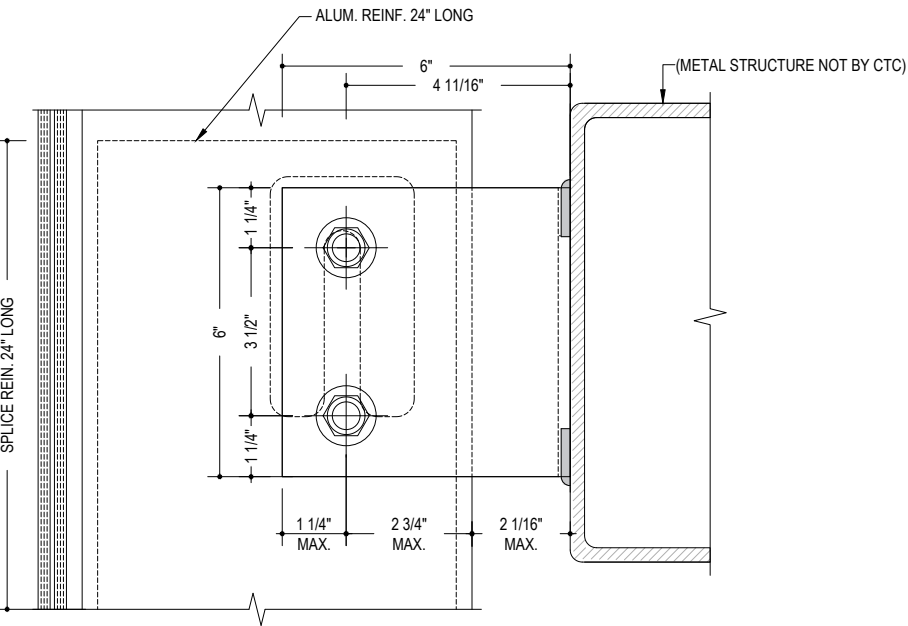
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Drawing no.	JA-1671-24
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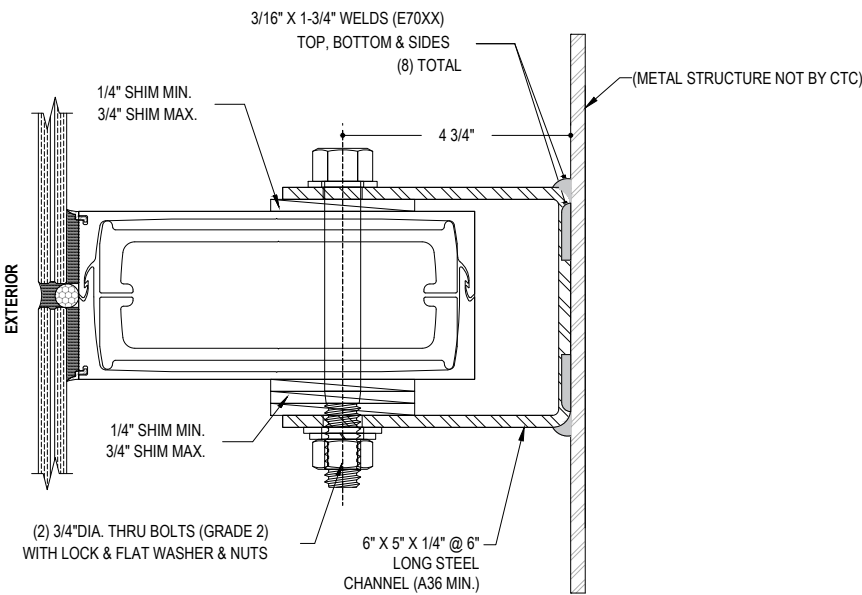
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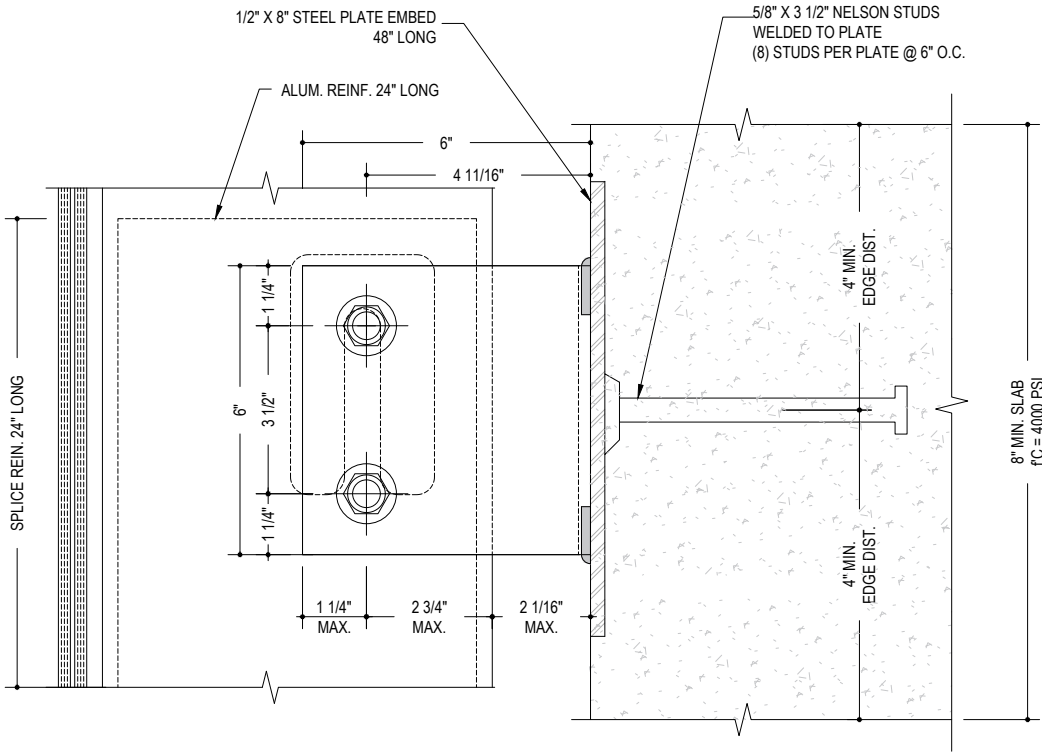
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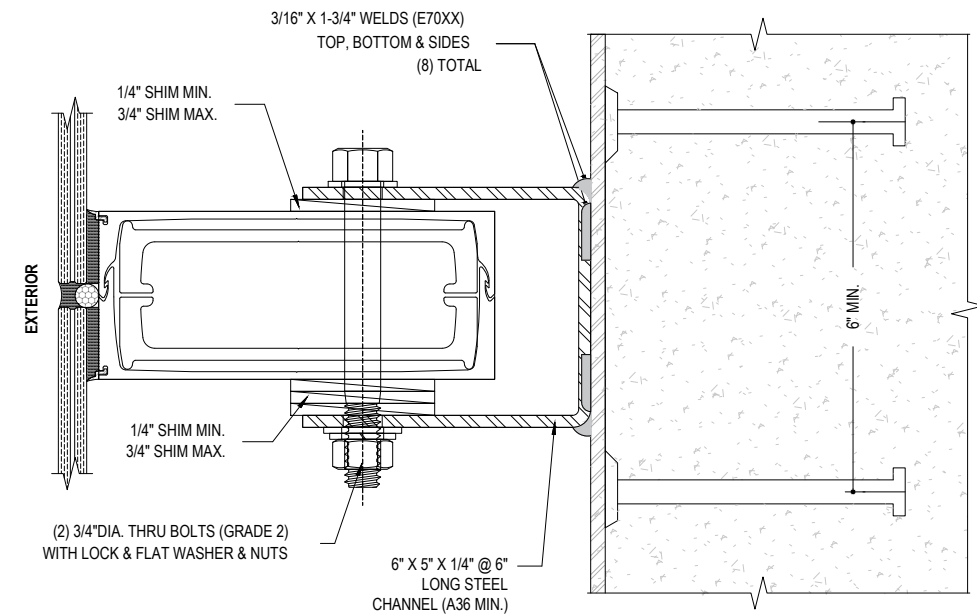
1 ANCHOR CLIP TYPE 'VI' VERTICAL DETAIL



2 ANCHOR CLIP TYPE 'VI' HORIZONTAL DETAIL



3 ANCHOR CLIP TYPE 'VII' VERTICAL DETAIL



4 ANCHOR CLIP TYPE 'VII' HORIZONTAL DETAIL

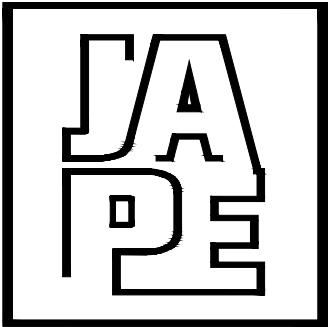
ANCHOR CLIP MAX. LOADS		
	TYPE 'VI'	TYPE 'VII'
MAX. WINDLOAD	13585 LBS	13585 LBS
MAX. DEADLOAD	2000 LBS	2000 LBS

NOTES:

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NOTE:

- METAL STRUCTURES NOT BY CRAWFORD TRACEY MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE
- CONCRETE STRUCTURES MUST HAVE A MIN. COMPRESSIVE STRENGTH OF 4000 PSI



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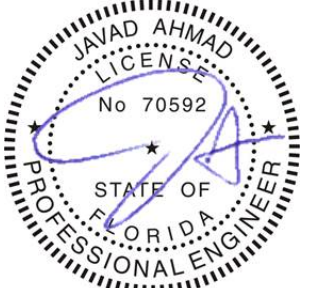
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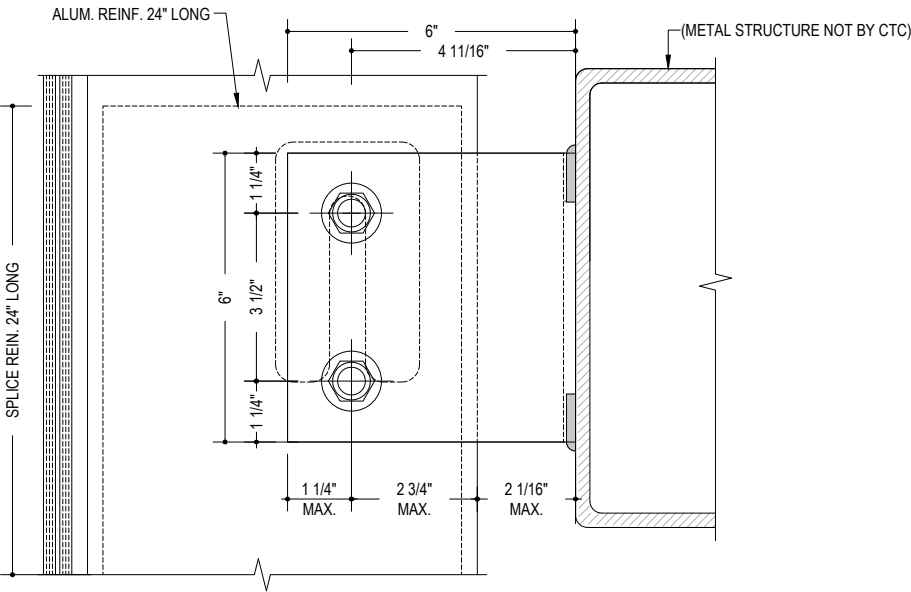
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Drawing no. JA-1671-24

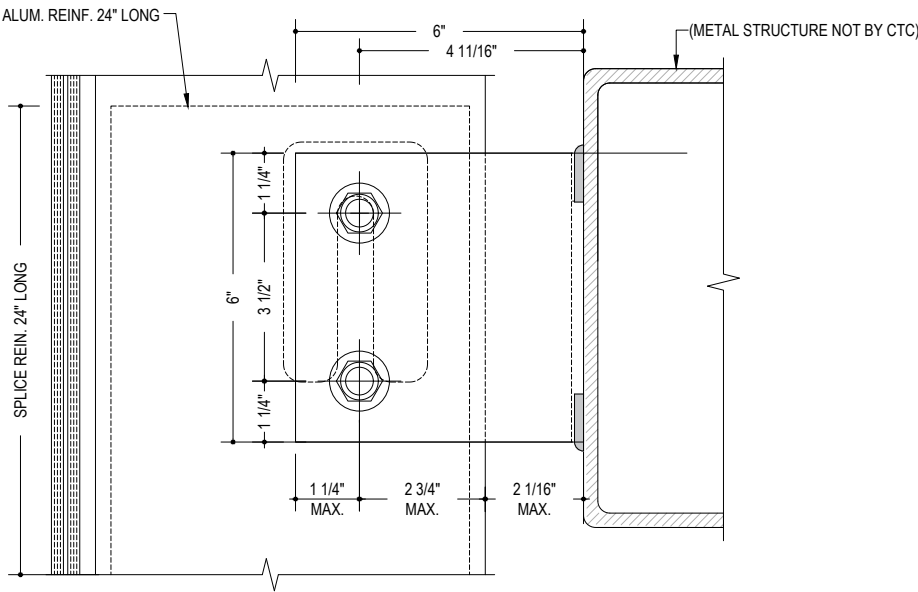
Eng: JAVAD AHMAD, PE
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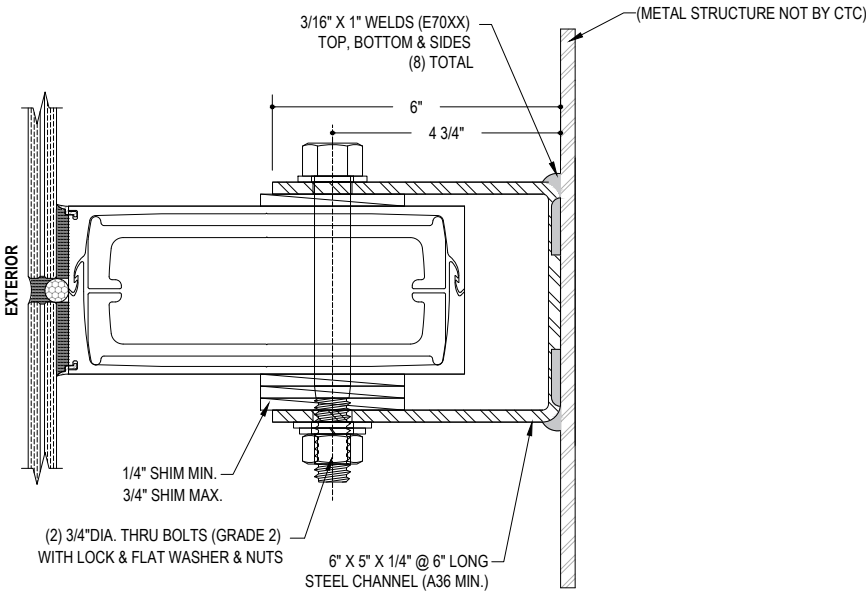
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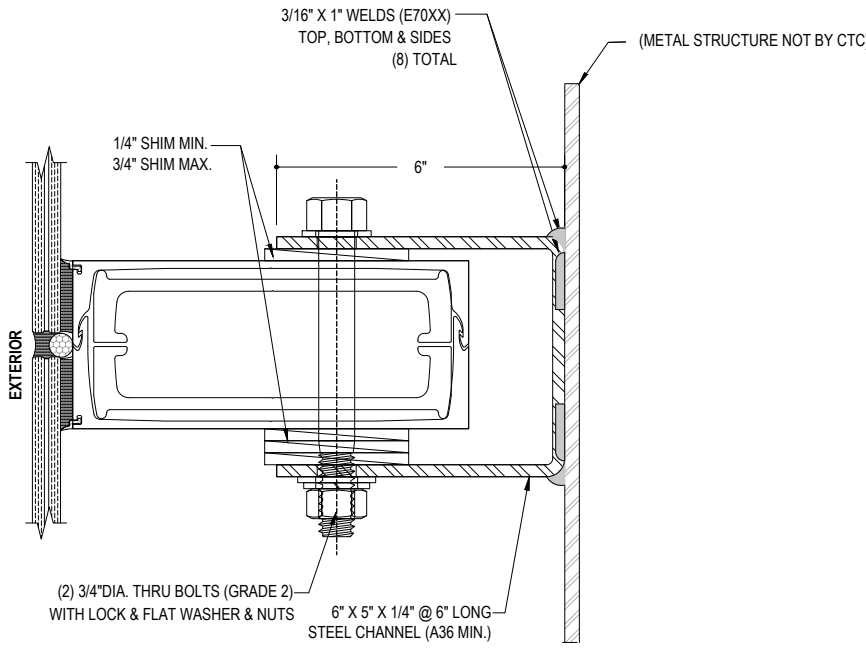
1 ANCHOR CLIP TYPE 'III' VERTICAL DETAIL



2 ANCHOR CLIP TYPE 'IIIA' VERTICAL DETAIL



3 ANCHOR CLIP TYPE 'III' HORIZONTAL DETAIL

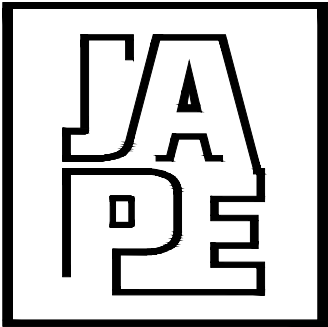


4 ANCHOR CLIP TYPE 'IIIA' HORIZONTAL DETAIL

ANCHOR CLIP MAX. LOADS		
	TYPE 'III'	TYPE 'IIIA'
MAX. WINDLOAD	7500 LBS	11700 LBS
MAX. DEADLOAD	1760 LBS	2500 LBS

- NOTES:**
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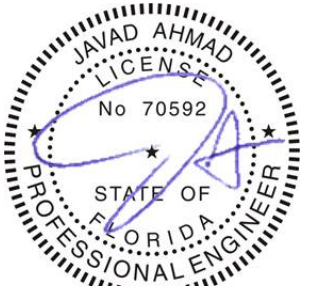
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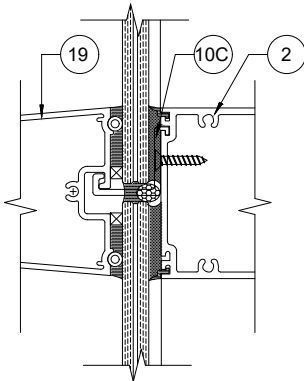
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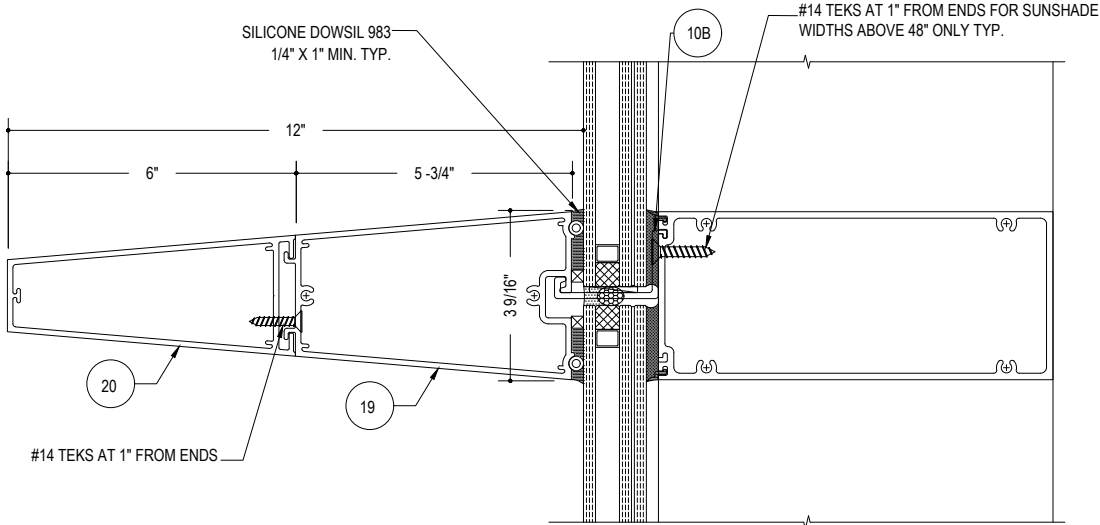


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12" FIN RATING CHART					
MAXIMUM SUNSHADE WIDTH	MAXIMUM FRAME HEIGHT	UPLIFT = 150		UPLIFT = 204.7	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
60"	96"	120.0	145.0	120.0	145.0
66"		120.0	145.0	116.5	145.0
68"		120.0	145.0	105.7	145.0
60"	108"	120.0	145.0	120.0	145.0
66"		120.0	145.0	111.5	145.0
68"		120.0	145.0	100.8	145.0
60"	120"	120.0	145.0	120.0	145.0
66"		120.0	145.0	108.7	145.0
68"		120.0	145.0	97.9	145.0

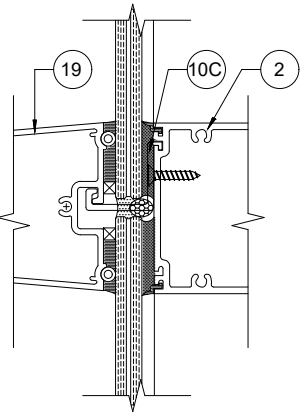


1 INTERMEDIATE HORIZONTAL LAMI. WITH 12" APPLIED FIN

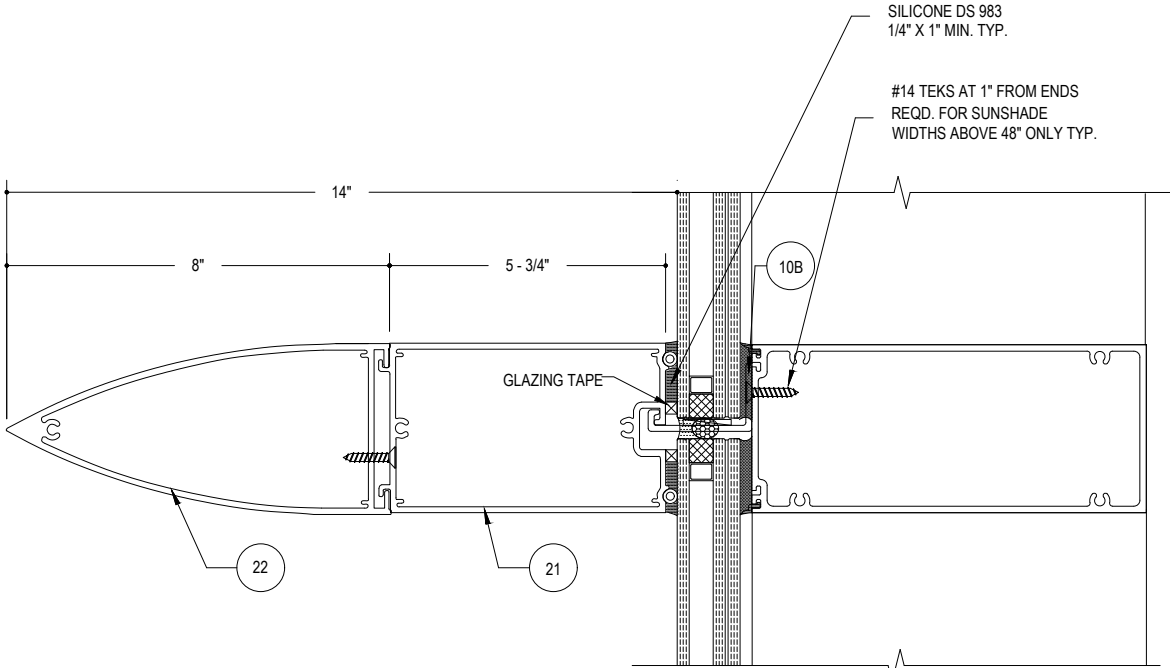


2 INTERMEDIATE HORIZONTAL I.G.U. WITH 12" APPLIED FIN

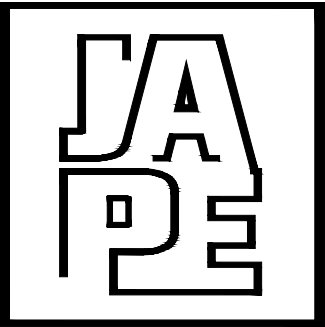
14" FIN RATING CHART					
MAXIMUM SUNSHADE WIDTH	MAXIMUM FRAME HEIGHT	UPLIFT = 110		UPLIFT = 150	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
60"	96"	120.0	145.0	120.0	145.0
66"		118	145.0	116.5	145.0
68"		106.7	145.0	105.7	145.0
60"	108"	120.0	145.0	120.0	145.0
66"		113	145.0	111.5	145.0
68"		101.8	145.0	100.8	145.0
60"	120"	120.0	145.0	120.0	145.0
66"		110.1	145.0	108.7	145.0
68"		98.8	145.0	97.9	145.0



3 INTERMEDIATE HORIZONTAL LAMI. WITH 14" APPLIED FIN



4 INTERMEDIATE HORIZONTAL I.G.U. WITH 14" APPLIED FIN



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APPLIED FIN CAPACITY CHART

FL#29520.3

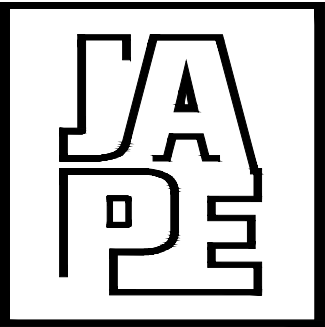
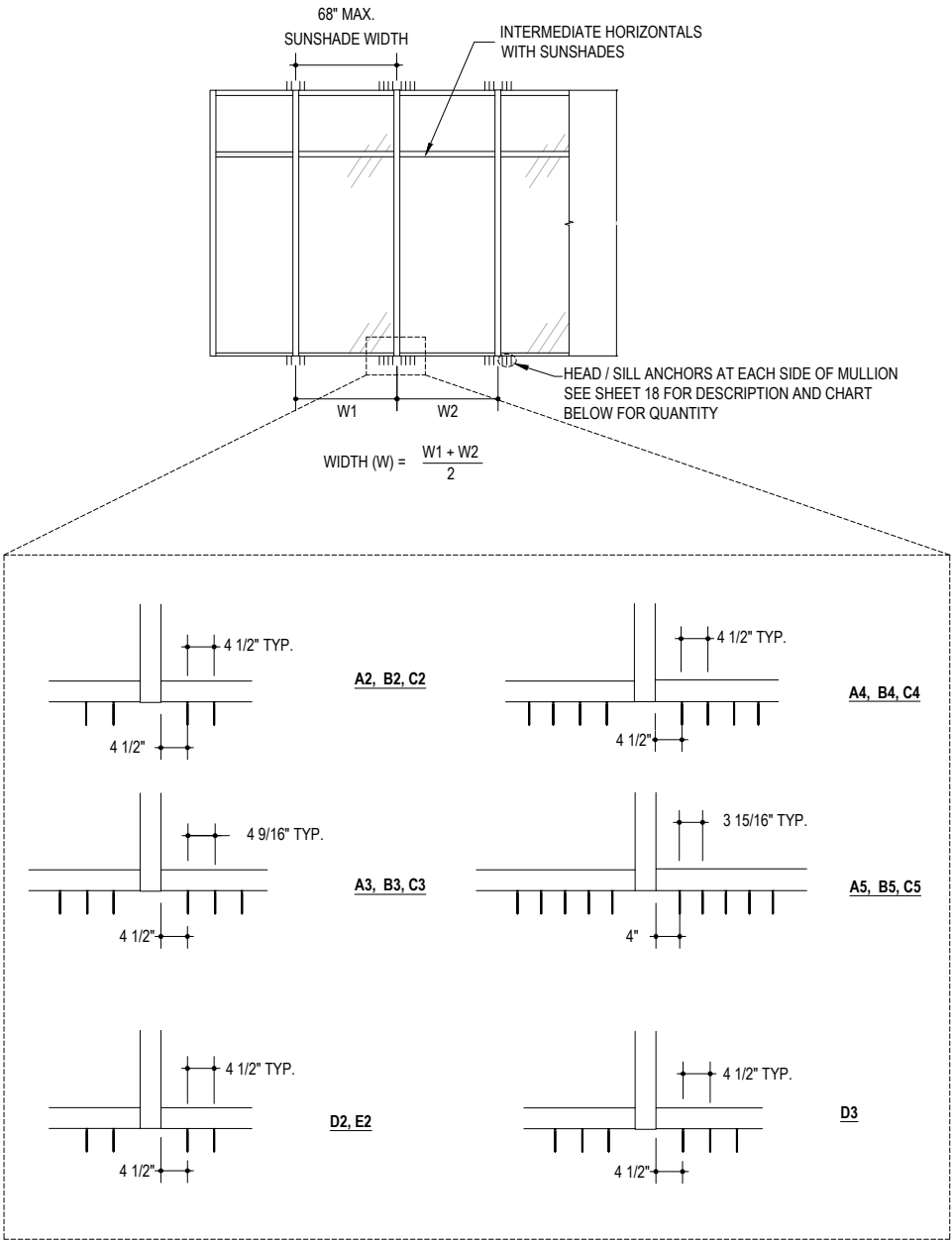
ANCHOR DESIGN LOAD CAPACITY AT MULLION WITH FIN - PSF EXT.(+) & INT. (-)													
NOMINAL DIMS.		ANCHORS TYPE 'A'				ANCHORS TYPE 'B'		ANCHORS TYPE 'C'			ANCHORS TYPE 'D'		ANCHORS TYPE 'E'
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	A5	B2	B3	C2	C3	C4	D2	D3	E2
36"	96"	115.1	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0
42"		98.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0
48"		85.2	130.0	145.0	145.0	145.0	145.0	142.2	145.0	145.0	145.0	145.0	145.0
54"		75.3	115.1	145.0	145.0	145.0	145.0	125.9	145.0	145.0	145.0	145.0	145.0
60"		67.3	103.1	138.9	145.0	139.7	145.0	112.9	145.0	145.0	145.0	145.0	145.0
66"		60.8	93.4	125.9	145.0	126.6	145.0	102.3	145.0	145.0	145.0	145.0	145.0
68"		58.9	90.5	122.1	145.0	122.8	145.0	99.1	145.0	145.0	142.5	145.0	145.0
36"	120"	92.7	140.5	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0
42"		79.1	120.0	145.0	145.0	145.0	145.0	131.2	145.0	145.0	145.0	145.0	145.0
48"		68.9	104.7	140.5	145.0	141.3	145.0	114.5	145.0	145.0	145.0	145.0	145.0
54"		60.9	92.7	124.6	145.0	125.3	145.0	101.4	145.0	145.0	145.0	145.0	145.0
60"		54.5	83.2	111.8	140.5	112.5	145.0	91.0	137.9	145.0	130.4	145.0	145.0
66"		49.3	75.4	101.4	127.4	102.0	145.0	82.5	125.1	145.0	118.3	145.0	145.0
68"		47.8	73.1	98.3	123.6	98.9	145.0	80.0	121.4	145.0	114.7	145.0	145.0

INSTRUCTIONS:
USE SUNSHADES AS FOLLOWS FOR SINGLE SPANS ONLY.

1. 12" AND 14" SUNSHADES ARE QUALIFIED FOR A MAXIMUM WIDTHS OF 68". LIMIT MAX. FRAME HEIGHT TO 120" WHEN SUNSHADES ARE USED.
2. FOR SUNSHADES WIDTHS UPTO 48" USE 2 SETTING PIECES AT 1/4 POINTS, FOR WIDTHS ABOVE 48" USE 2 SETTING PIECES AT 1/5 POINTS AND 1 AT MID WIDTH.
3. USE 'SUNSHADE RATING CHART' TO DETERMINE MAXIMUM POSITIVE LOAD BASED ON MAXIMUM UPLIFT AND FRAME DIMENSIONS.
4. USE 'ANCHOR LOAD CAPACITY CHART' TO DETERMINE MAXIMUM LOADS FOR ANCHOR TYPES USED AT MULLIONS WITH SUNSHADES.
5. LOWEST VALUE FROM STEPS 3, 4 AND REST OF APPROVAL WILL APPLY TO ENTIRE SYSTEM.

MULTIPLE SPAN CONDITIONS TO BE CHECKED ON JOB TO JOB BASIS.
ALSO VERIFY SUPPORT CONDITIONS AT INTERMEDIATE SUPPORTS.

NOTE:
SEE SHEET 42 FOR FIN RATING CHARTS



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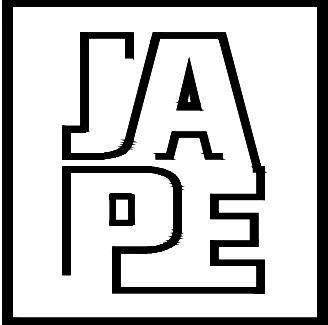
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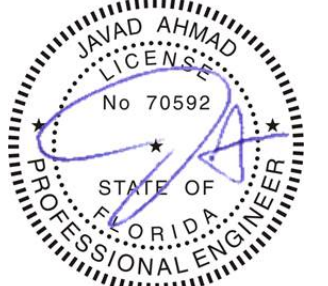
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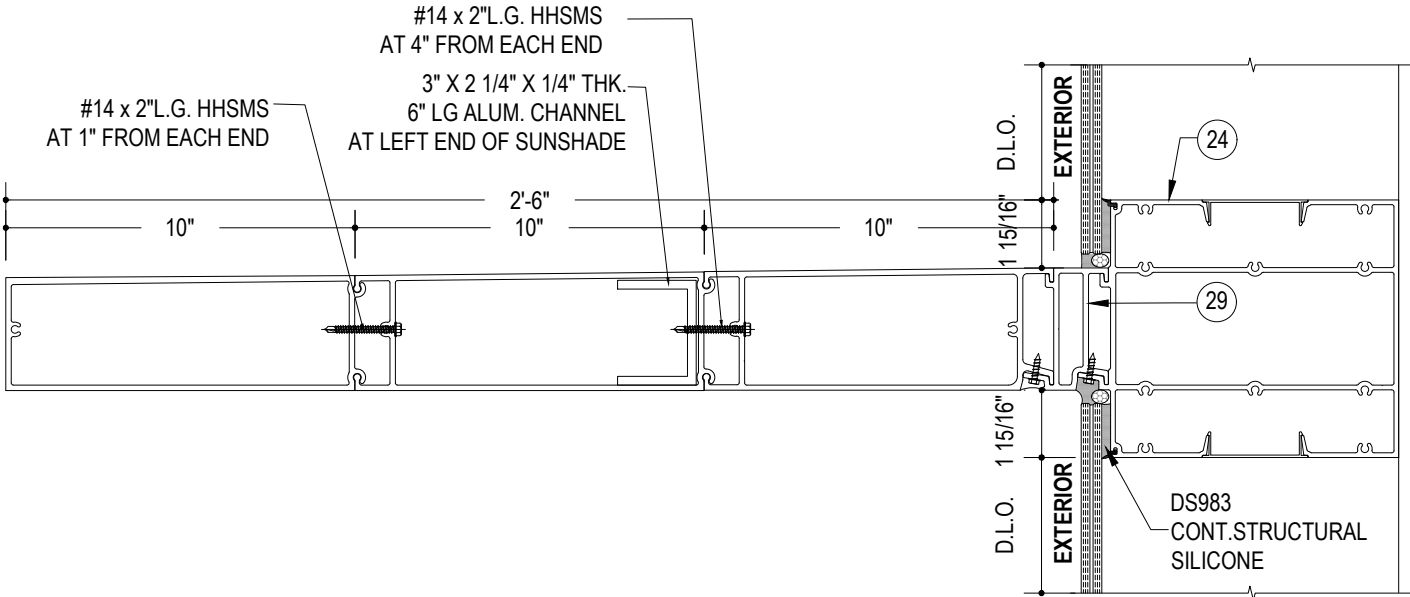
Check by: PK

Drawing no. JA-1671-24

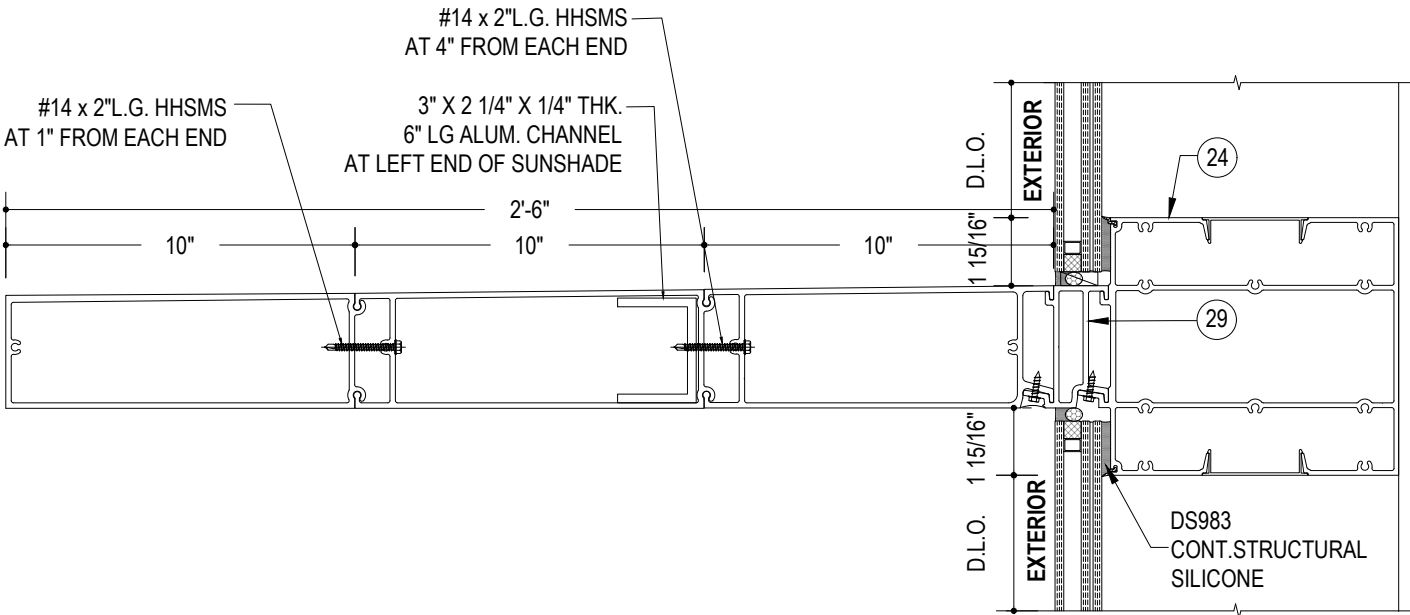
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



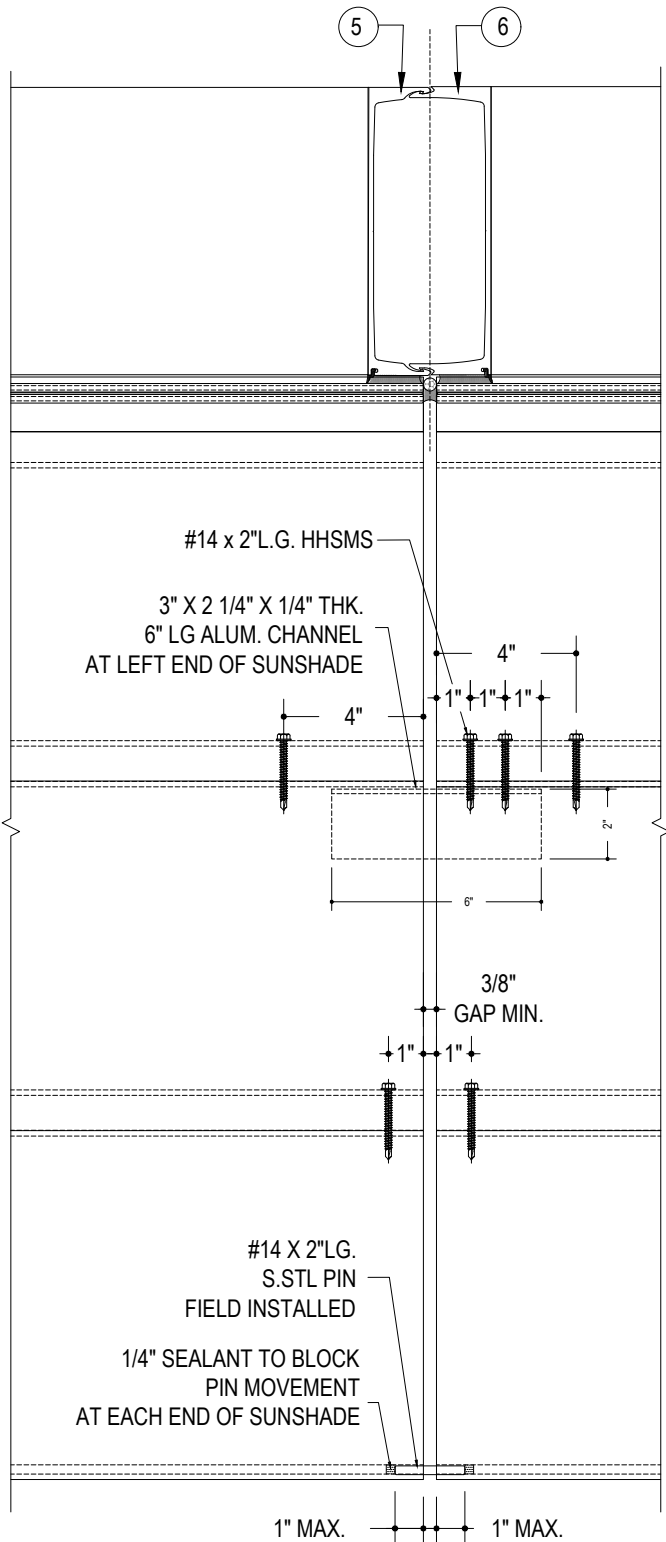
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1 SUNSHADE AT LAMINATED GLASS DETAIL



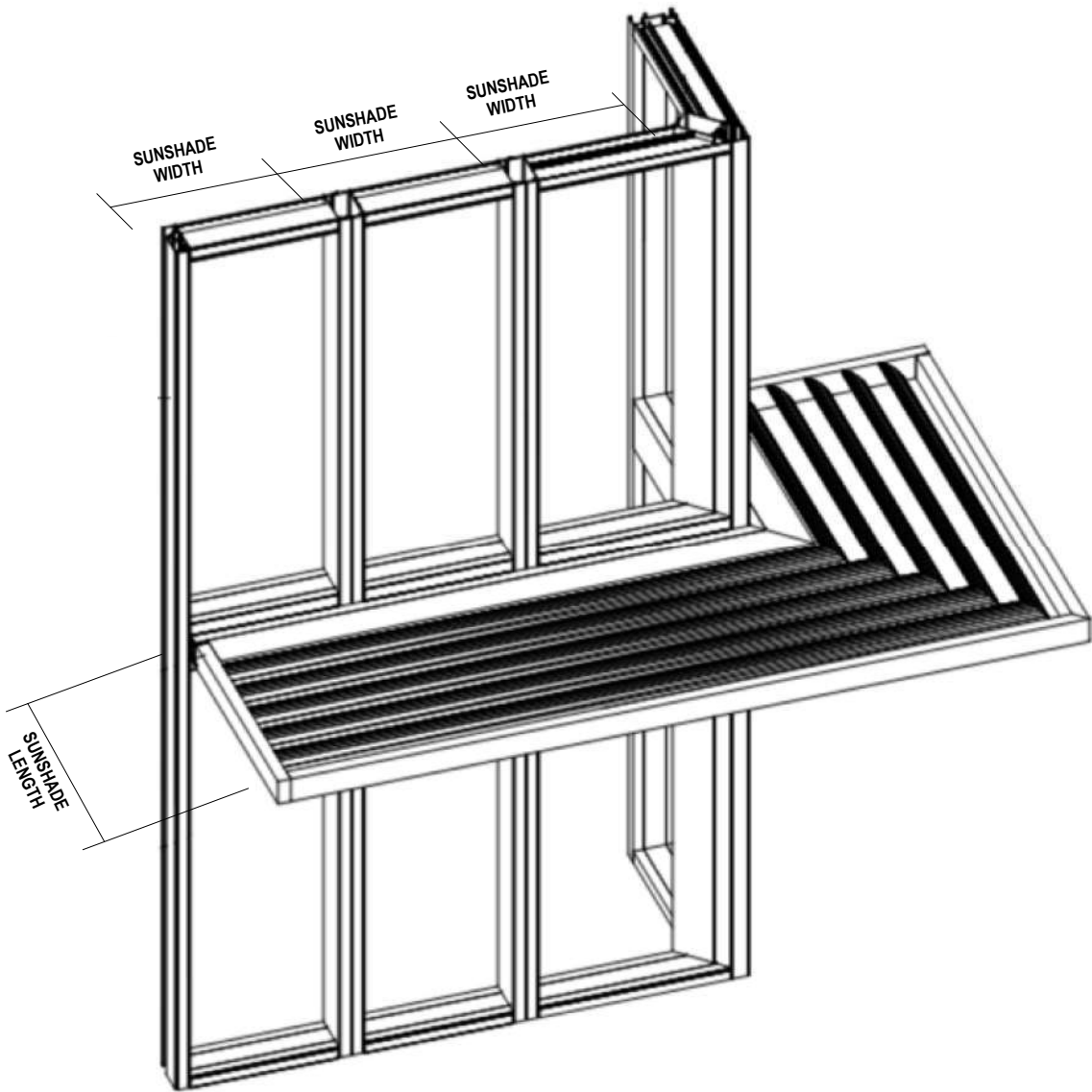
2 SUNSHADE AT INSUL. LAMI. GLASS DETAIL



3 SUNSHADE JOINT DETAIL

POROUS SUNSHADE ELEVATION AND CHART

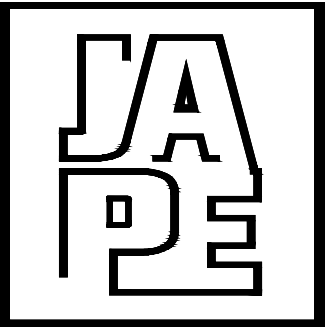
FL#29520.3



MAX PRESSURE WITH POROUS SUNSHADE - PSF EXT.(+) & INT. (-)				
SUNSHADE WIDTH	SUNSHADE LENGTH	0% POROSITY	25% POROSITY	50% POROSITY
30" - 60"	12"	120	120	120
	18"	120	120	120
	24"	120	120	120
	30"	120	120	120
	36"	83	111	120
	42"	61	82	120
	48"	47	63	94
	54"	37	49	74
	60"	30	40	60

INTERPOLATION BETWEEN SUNSHADE WIDTH OR SUNSHADE LENGTH IS ALLOWED

- NOTE:
- SUNSHADES AT CANTILEVERED CONDITIONS ARE ACCEPTABLE IN BOTH HEAD AND SILL LOCATIONS. IF THEY OCCUR SIMULTANEOUSLY, SITE-SPECIFIC ENGINEERING IS REQUIRED.



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CURTAINWALL SYSTEM

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Date:		06-15-2026	
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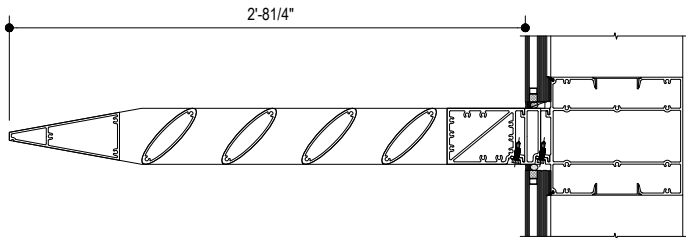
Eng: JAVAD AHMAD, PE
CIVIL FLA. PE # 70592 - C.A.N.34254



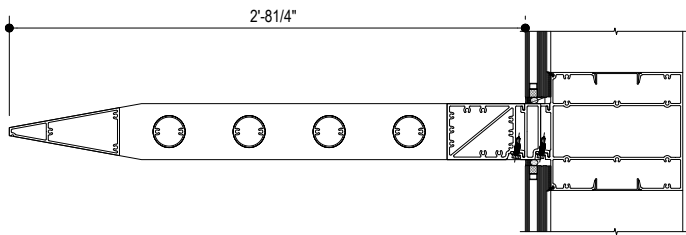
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TYPICAL SUNSHADE DETAILS

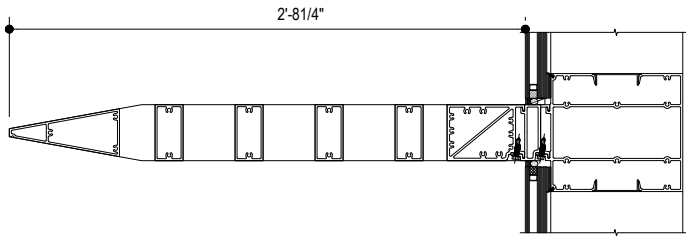
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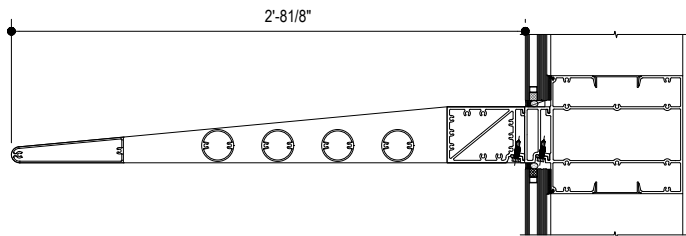
22% POROSITY



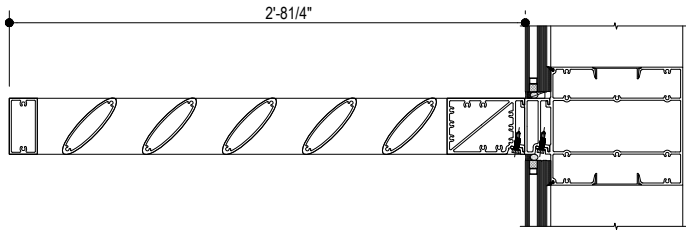
39% POROSITY



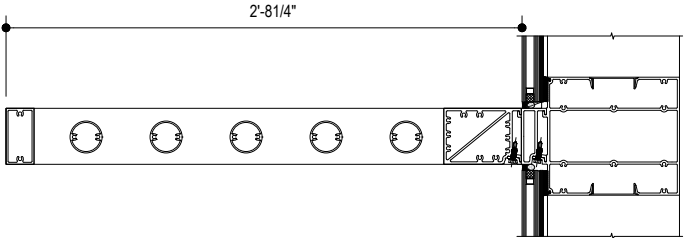
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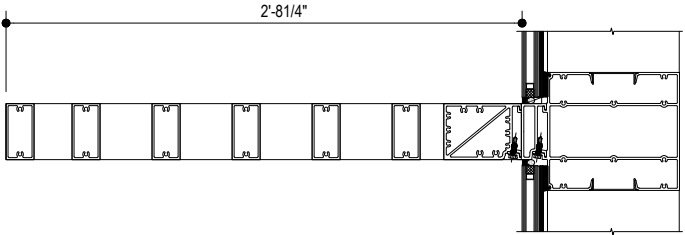
38% POROSITY



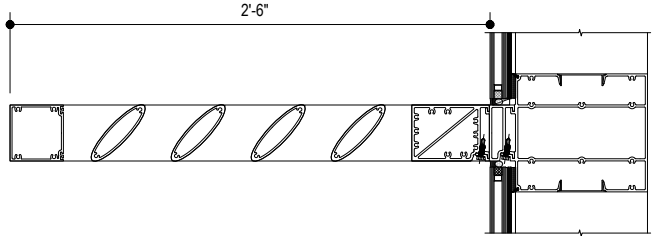
27% POROSITY



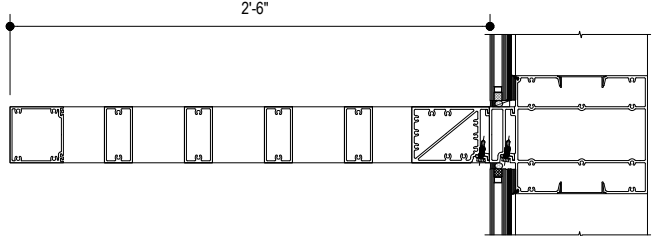
48% POROSITY



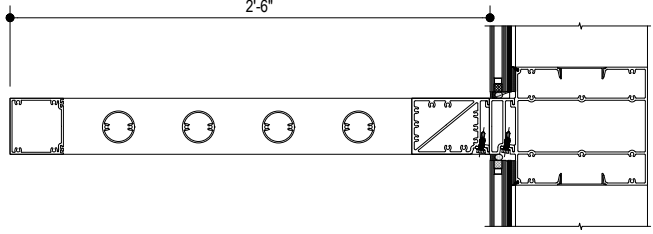
50% POROSITY



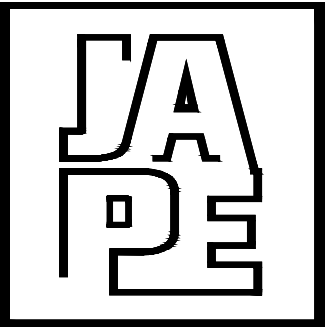
28% POROSITY



49% POROSITY



46% POROSITY



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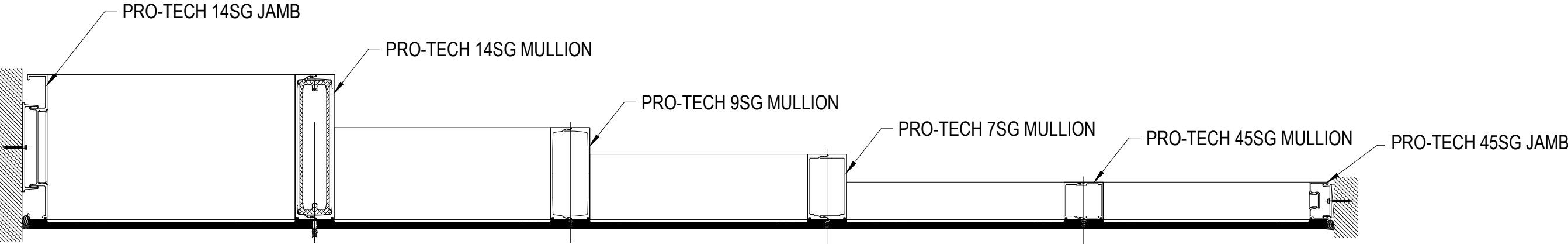


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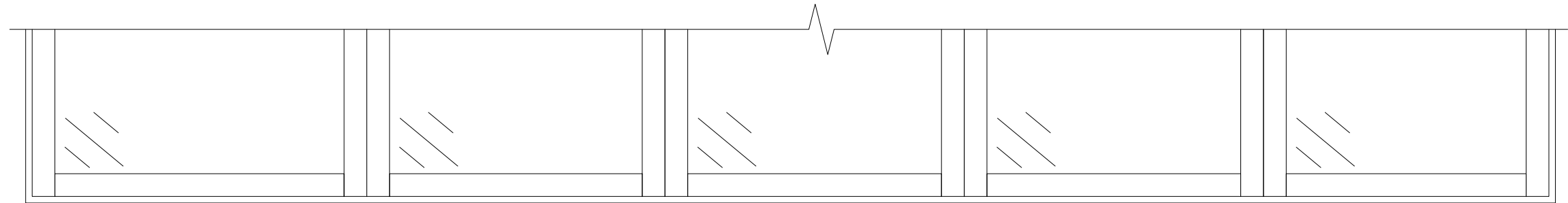
THE CTC PRO-TECH SERIES 45SG, 7SG, 9SG, & 14SG, ARE APPROVED TO BE INTEGRATED AND CAN TRANSITION BETWEEN SYSTEMS AS SHOWN BELOW.

PRO-TECH SYSTEMS INTEGRATION NOTES: SHALL BE REVIEWED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

1. MULLION CAPACITY: SHALL BE BASED ON THE DESIGN PRESSURES AND TRIBUTARY AREA APPLIED TO THE MULLION AND GOVERNED BY THE MULLION'S SYSTEM PRODUCT APPROVAL.
2. ANCHOR QUANTITY & SPACING: SHALL BASED ON THE LARGER SYSTEM PRODUCT APPROVAL
3. SUNSHADE MAX. WIDTH: SHALL BE BASED ON THE HORIZONTAL MEMBER PER SYSTEM'S PRODUCT APPROVAL.



EXAMPLE PLAN VIEW OF INTEGRATED SYSTEMS



EXAMPLE ELEVATION VIEW OF INTEGRATED SYSTEMS

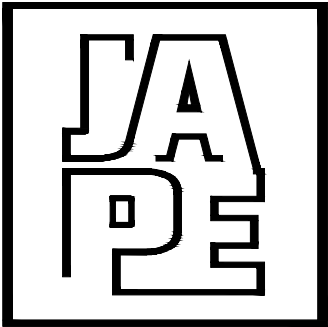
PRO-TECH SYSTEMS HORIZONTAL MEMBER INTEGRATION NOTES: SHALL BE REVIEWED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER.

1. HORIZONTAL MEMBER: HORIZONTAL AND TRANSOMS FROM SMALLER SYSTEMS CAN BE INTEGRATED INTO LARGER SYSTEMS. SHALL BE BASED ON THE DESIGN PRESSURES AND TRIBUTARY AREA APPLIED TO THE HORIZONTAL MEMBER AND GOVERNED BY THE HORIZONTAL'S SYSTEM PRODUCT APPROVAL.

MAX. HORIZONTAL TRANSOM
SIZE PER SYSTEM

SYSTEM	WIDTH
45SG	96"
7SG	125" / 68" *
9SG	125" / 68" *
14SG	125"

* : FOR MEMBERS WITH SUNSHADE



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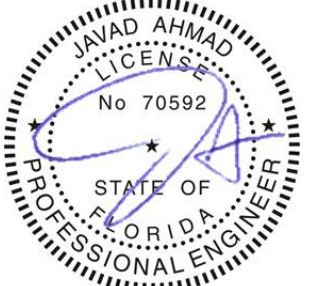
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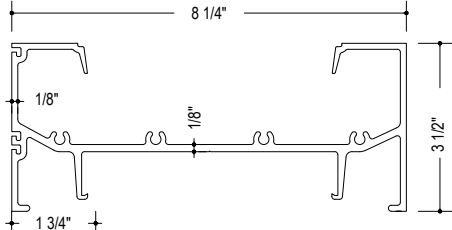
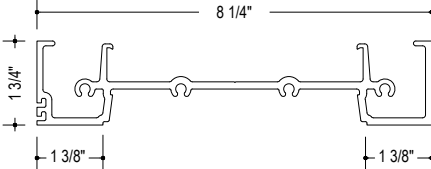
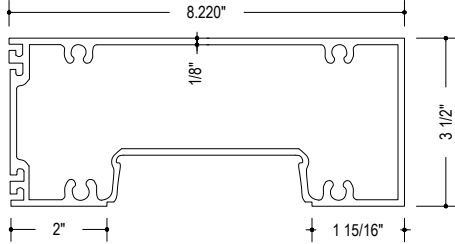
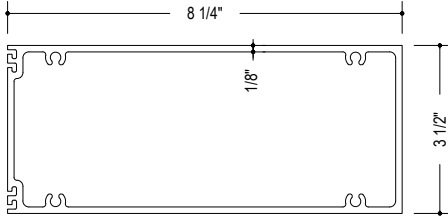
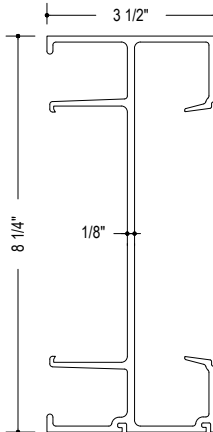
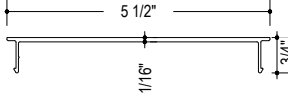
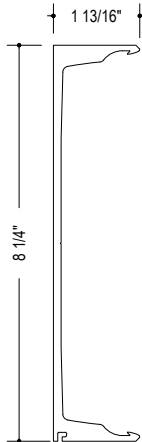
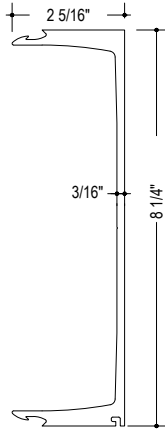
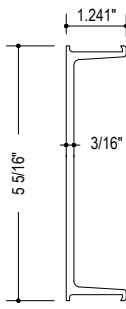
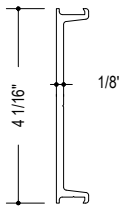
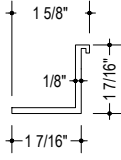
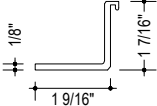
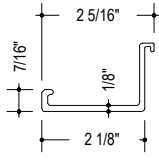
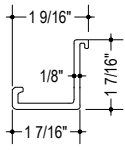
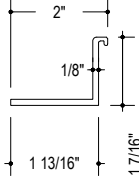
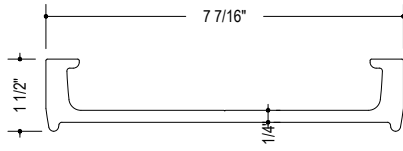
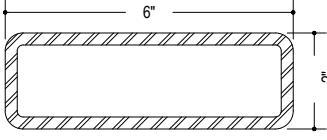
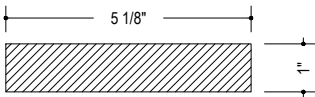
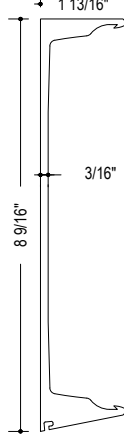
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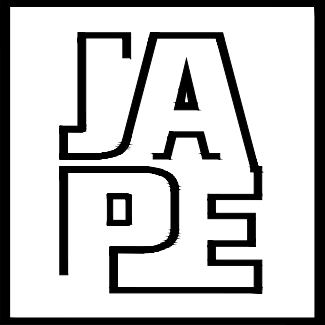
Drawing no. JA-1671-24

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



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EXTRUSION DETAILS				FL#29520.3
1 FRAME HEAD / HORIZONTAL  6005A-T61 I90P176	1A ALT. FRAME HEAD  6005A-T61 I90P177	1B ALT. FRAME HEAD/SILL  6005A-T61 H17176	2 ALT. FRAME HEAD / SILL  6005A-T61 I70H342	3 FRAME JAMB  6005A-T61 I90J176
4 SNAP IN COVER  6063 - T6 T55U19	5 FEMALE MULLION  6005A-T61 I90M114	6 MALE MULLION  6005A-T61 I90M113	7 SUB BUCK  6005A-T61 B50B090	7A ALT. SUB BUCK  6005A-T61 B38B092
7B ALT. SUB BUCK  6005A-T61 B50B091	10 SETTING PIECE  6005A-T61 170X116	10A SETTING PIECE  6005A-T61 170X121	10B SETTING PIECE  6005A-T61 170X120	10C SETTING PIECE LEVEL 'E' GLASS  6005A-T61 I70X119
10.1 SETTING PIECE INSUL. LAM. GLASS  6005A-T61 I70X118M	12 SPLICE / REINFORCING  6005A-T61 I90R140	13 MULLION REINFORCING  STEEL S15F227	13.1 REINFORCING  STEEL	14 CONCAVE FEMALE MULLION  6005A-T61 I90M116



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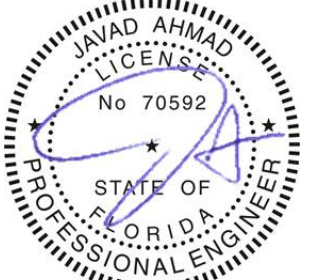
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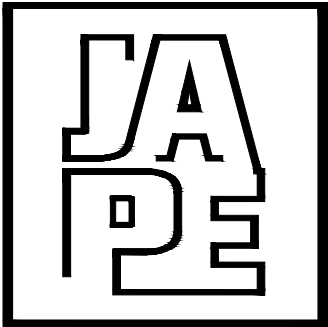
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EXTRUSION DETAILS (CONT.)

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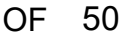
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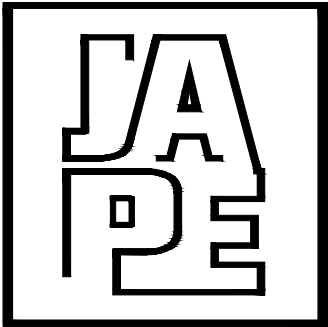
15 CONCAVE MALE MULLION 6005A-T61 I90M115	16 APPLIED TRIM CAPS (OPTIONAL) 6063-T6 S15F227	17 APPLIED TRIM CAPS (OPTIONAL) 6063-T6 S134F227	19 12" FIN RETAINER 6005A-T61	20 12" APPLIED FIN 6005A-T61	21 14" FIN RETAINER 6005A-T61
22 14" FIN RETAINER 6005A-T61	23 270° CORNER ADAPTER 6005A-T61 190C270	24 INTERMEDIATE 6005A-T61 I90H342	25 HORIZONTAL SUNSHADE ELLIPSE 6005A-T61 I70H471	26 SUNSHADE 2" DIAM. CIRCLE TUBE 6005A-T61 I70T200	
27 SUNSHADE TUBE 6005A-T61 I70H742	28 SUNSHADE TUBE (45SG TRANSOM) 6063-T6 I44H432	29 HORIZONTAL ADAPTOR 6005A-T61 I70A739	30 HORIZONTAL ADAPTOR 6005A-T61 I70H743	34 EXT. FILLER CHANNEL(INSU. LAM. GLASS) ALUMINUM	35 INT. FILLER CHANNEL(INSU. LAM. GLASS) ALUMINUM
31 EXTERIOR COVER 6005A-T61 T34F300	32 EXTERIOR COVER 6005A-T61 T34M300	33 EXTERIOR COVER 6005A-T61 T34R300	36 EXT. FILLER CHANNEL(LAM. GLASS) ALUMINUM	37 INT. FILLER CHANNEL(LAM. GLASS) ALUMINUM	

BILL OF MATERIALS		FL#29520.3
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PA

ITEM NO.	PART NO.	QUANTITY	DESCRIPTION	MATERIAL	MANF. / SUPPLIER / REMARKS
1	I90P176	AS REQD.	FRAME HEAD / SILL	6005A - T61	-
1A	I90P177	AS REQD.	ALT. FRAME HEAD / SILL / JAMB	6005A - T61	-
1B	H17176	AS REQD.	ALT. FRAME HEAD / SILL	6005A - T61	-
2	I90H342	AS REQD.	FRAME HORIZONTAL	6005A - T61	-
3	I90J176	AS REQD.	FRAME JAMB	6005A - T61	-
4	T55U19	AS REQD.	SNAP IN COVER	6063 - T6	-
5	I90M114	AS REQD.	FEMALE MULLION	6005A - T61	-
6	I90M113	AS REQD.	MALE MULLION	6005A - T61	-
7	B50B090	AS REQD.	SUB-BUCK	6005A - T61	-
7A	B38B092	AS REQD.	ALT. SUB-BUCK	6005A - T61	-
7B	B50B091	AS REQD.	ALT. SUB-BUCK	6005A - T61	-
8	#2	AS REQD.	GLAZING SPACER	POLYPROPYLENE	-
9	1/4"X1-1/4"	AS REQD.	FRAME ASSEMBLY SCREWS	ST. STEEL	PAN HEAD PHILLIPS
10	I70X116	AS REQD.	5" LONG SETTING PIECE (INSUL. LAM. GLASS)	6005A - T61	AT 1/4 POINTS
10.1	I70X118M	AS REQD.	5" LONG SETTING PIECE (INSUL. LAM. GLASS)	6005A - T61	AT 1/4 POINTS
10A	I70X121	AS REQD.	5" LONG SETTING PIECE (LEVEL 'E' GLASS)	6005A - T61	AT 1/4 POINTS
10B	I70X120	AS REQD.	5" LONG SETTING PIECE (INSUL. LAM. GLASS)	6005A - T61	-
10C	I70X119	AS REQD.	5" LONG SETTING PIECE (LAM. GLASS)	6005A - T61	-
11	-	AS REQD.	SETTING BLOCK (1/16" OR 1/8" X 5"),AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
11.1	-	AS REQD.	SETTING BLOCK (1/16" OR 1/8" X 5"),AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
12	I90R140	AS REQD.	SPLICE, 24" LONG	6005A - T61	-
12A	I90R140	AS REQD.	MULLION REINFORCING, FULL LENGTH	6005A - T61	-
12B	I90R140	AS REQD.	ANCHOR BLOCK	6005A - T61	-
13	-	AS REQD.	MULLION REINFORCING, FULL LENGTH	STEEL	FY = 36 KSI MIN.
14	I90M116	AS REQD.	CONCAVE FEMALE MULLION	6005A - T61	-
15	I90M115	AS REQD.	CONCAVE MALE MULLION	6005A - T61	-
16	S15F227	AS REQD.	APPLIED TRIM CAP (OPTIONAL)	6063 - T6	-
17	S34F227	AS REQD.	APPLIED TRIM CAP (OPTIONAL)	6063 - T6	-
18	-	AS REQD.	DOUBLE SIDED GLAZING TAPE	FOAM	-
19	-	AS REQD.	12" FIN RETAINER	6005A - T61	-
20	-	AS REQD.	12" APPLIED FIN	6005A - T61	-
21	-	AS REQD.	14" FIN RETAINER	6005A - T61	-
22	-	AS REQD.	14" APPLIED FIN	6005A - T61	-
23	I90C270	AS REQD.	270° CORNER ADAPTER	6005A - T61	-
23A	I90C125	AS REQD.	125° CORNER ADAPTER	6005A - T61	-
24	I90H342	AS REQD.	INTERMEDIATE	6005A - T61	-
25	I70H471	AS REQD.	HORIZONTAL SUNSHADE ELLIPSE	6005A - T61	-
26	I70T200	AS REQD.	SUNSHADE 2" DIAM. CIRCLE TUBE	6005A - T61	-
27	I70H742	AS REQD.	SUNSHADE TUBE	6005A - T61	-
28	I44H432	AS REQD.	SUNSHADE TUBE (45SG TRANSOM)	6005A - T61	-
29	I70A739	AS REQD.	HORIZONTAL ADAPTOR	6005A - T61	-
30	I70H743	AS REQD.	HORIZONTAL ADAPTOR	6105-T5 - T61	-
31	T34F300	AS REQD.	EXTERIOR COVER	6005A - T61	-
32	T34M300	AS REQD.	EXTERIOR COVER	6005A - T61	-
33	T34R300	AS REQD.	EXTERIOR COVER	6105-T5 - T61	-
34	-	AS REQD.	EXT. FILLER CHANNEL(INSUL. LAM. GLASS)	ALUMINUM	-
35	-	AS REQD.	INT. FILLER CHANNEL(INSUL. LAM. GLASS)	ALUMINUM	-
36	-	AS REQD.	EXT. FILLER CHANNEL(LAM. GLASS)	ALUMINUM	-
37	-	AS REQD.	INT. FILLER CHANNEL(LAM. GLASS)	ALUMINUM	-





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CONSULTING • STRUCTURAL DESIGN • FACADES • BUILDING
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PROJECT :

PRO-TECH 9SG ALUMINUM
CURTAINWALL SYSTEM

CLIENT :

CRAWFORD TRACEY
CORPORATION

3301 S.W. 13TH DR., DEERFIELD
BEACH FL 33442 (954) 698-6888

REVISION

No.	DATE	BY	DESCRIPTION

Date: 06-15-2026

Scale: N/A

Drawn by: DK

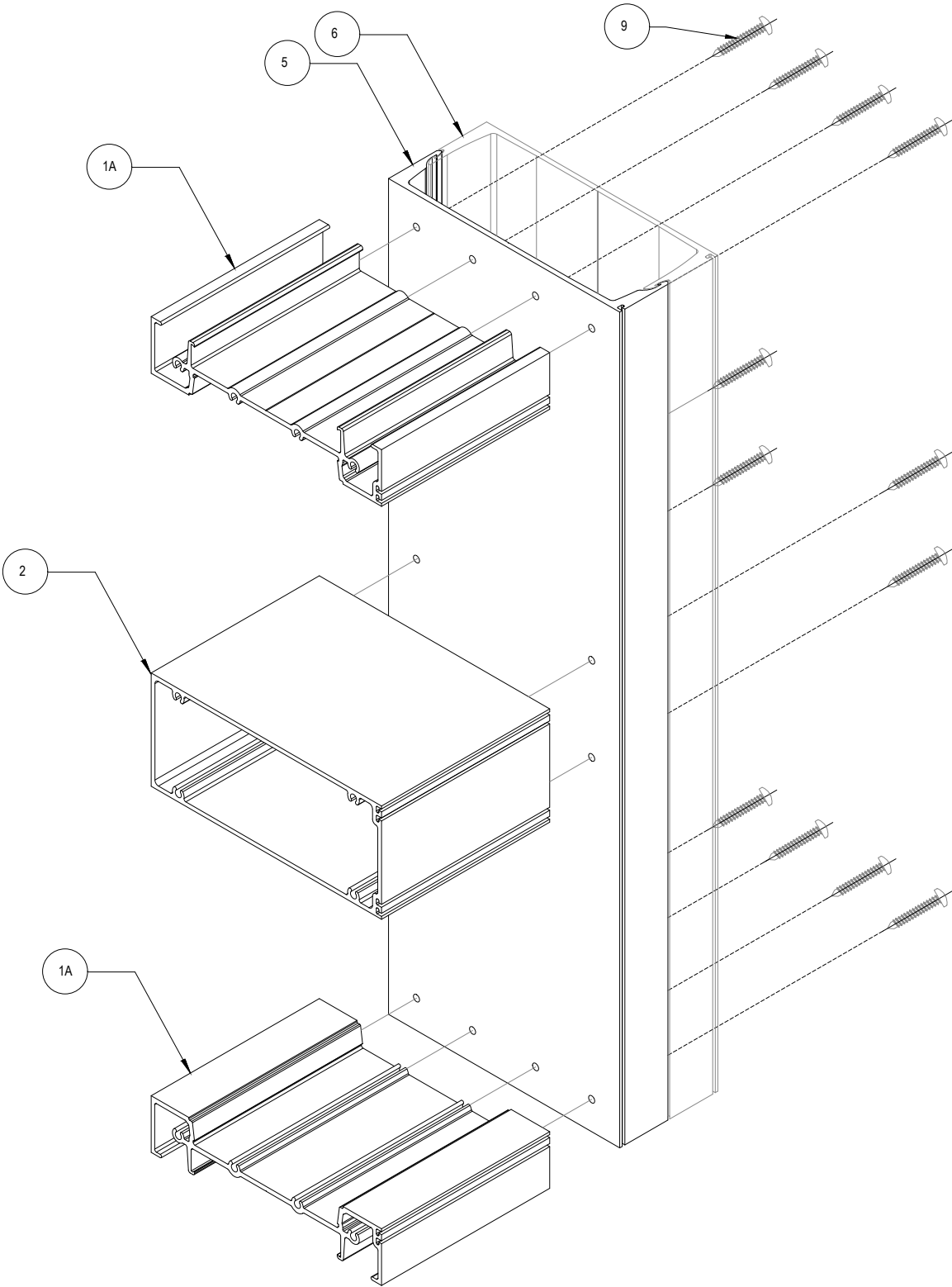
Check by: PK

Drawing no. JA-1671-24

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



SEALED: 06-17-2026



CORNER CONSTRUCTION DETAILS

