



3911 W Newberry Road
Gainesville, Florida 32607

p: 352.363.6070
f: 352.363.6071

scorpioco.com

Submittal

JOB NAME: Lake County Fire Station Wind Mitigation **DATE:** 12/22/2025

OWNER/ARCHITECT JOB#: 25-923 **SCORPIO JOB #:** 25061

SPEC SECTION: Storefronts **SPEC NUMBER:** 08 43 00 **REV:** 0

SUBCONTRACTOR/VENDOR: Lake Glass & Mirror, Inc.

SUPPLIER: See Submittal

CONTRACTOR COMMENTS:	CONTRACTOR'S STAMP:								
<p>Florida Product Approval sheets for impact-resistant storefront windows.</p>	<div style="border: 2px solid black; padding: 10px;"> <p style="text-align: center;">SHOP DRAWINGS / SUBMITTAL REVIEW</p> <p style="font-size: 8px;">SUBMITTAL WAS REVIEWED FOR DESIGN AND GENERAL CONFORMANCE TO CONTRACT DOCUMENTS ONLY. THE SUBMITTING CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT THE JOB SITE FOR TOLERANCES, CLEARANCES, QUANTITIES, FABRICATION PROCESS AND TECHNIQUE OF CONSTRUCTION, COORDINATION OF HIS WORK WITH OTHER TRADES AND FULL COMPLIANCE WITH CONTRACT DOCUMENTS.</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: right;"> <p>Scorpio.</p> <p style="font-size: 8px;">3911 W. University Ave. Gainesville, FL 32607 f: 352.363.6070</p> </div> </div> <table style="width: 100%; border-top: 1px solid black; border-bottom: 1px solid black; margin: 10px 0;"> <thead> <tr> <th style="width: 25%;">REVIEWED</th> <th style="width: 25%;">REVIEWED W/ CHANGES</th> <th style="width: 25%;">REVISE AND RESUBMIT</th> <th style="width: 25%;">REJECTED</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between;"> <p>BY</p> <p>DATE</p> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <p>SUBMITTAL#</p> <p>SPEC</p> </div> </div>	REVIEWED	REVIEWED W/ CHANGES	REVISE AND RESUBMIT	REJECTED				
REVIEWED	REVIEWED W/ CHANGES	REVISE AND RESUBMIT	REJECTED						
ARCHITECT COMMENTS:	ARCHITECT'S STAMP:								
	<div style="border: 1px solid red; padding: 5px;"> <p style="font-size: 8px; margin: 0;"> <input checked="" type="checkbox"/> Reviewed – No Comments <input type="checkbox"/> Reviewed – See Comments <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Rejected – Re-Submittal Required </p> <p style="font-size: 8px; margin: 0;"> This review is only for general conformance with the design concept of the project and general compliance with the information give in the Contract Documents. Quantities and exact dimensions are the responsibility of the contractor and/or subcontractor. This review does not affect the requirements of any contract, nor imply any approval of construction methods and/or safety requirements. This review does not authorize a change in contract value. </p> <p style="font-size: 8px; margin: 0;"> Forefront Architecture & Engineering, LLC FL License No. AR102538 FL License No. CA30900 Signature Date 1/8/26 Project 25-10518 Fire Station Hazard Mitigation </p> </div>								
ENGINEER COMMENTS:	ENGINEER'S STAMP:								

GENERAL NOTES:

- THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
- OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
- ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
- THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS LARGE MISSILE IMPACT RATED.
- IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
- ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
- DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
- TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
- CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.

MAXIMUM D.L.O. HEIGHT (IN.)	MAXIMUM D.L.O. WIDTH (IN.)
115 1/4	43 3/4
108	46 1/2
102	49 1/4
96	52 1/2
92 3/4	54 1/4
90	56
84	60

CORNER CONSTRUCTION:

- FRAME CORNERS & VERTICAL INTERMEDIATE CORNERS:** HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED TO THE VERTICAL MEMBER, FASTENED WITH 3 TO 4 S.S. NO. 12 X 1" PHTFS FASTENERS THROUGH THE VERTICAL MEMBERS INTO THE HORIZONTAL MEMBER SCREW SPLINES & SEALED WITH SILICONE.
- PROJECT-OUT FRAME CORNERS:** MITERED, JOINED TOGETHER VIA A CORNER KEY (ITEM #24) & SEALED WITH SILICONE SEALANT.
- PROJECT-OUT SASH CORNERS:** MITERED, JOINED TOGETHER VIA A CORNER KEY (ITEM #25) & SEALED WITH SILICONE SEALANT.

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME/FIN TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME & STRAP ANCHOR SCREWS			
(1) MIN. 2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 14 SMS OR WOOD SCREW	1 3/8"	1"
MIN. 16 GA. 50 KSI METAL STUD	1/4" SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 0.100" THK 6063-T6 ALUM.	1/4" SELF TAP/DRILL SCREW	FULL	1/2"
(2) CONCRETE FILLED CMU	(3) 1/4" CONCRETE SCREW	1 3/4"	2 1/2"
3000 PSI CONCRETE	(3) 1/4" CONCRETE SCREW	1 3/4"	2 1/2"

- FRAME SCREW MOUNT REQUIRES MIN. 2X4; STRAP ANCHOR MOUNT REQUIRES MIN. 2X6.
- WHEN SUBSTRATE IS WOOD & FRAME SCREWS ARE REQUIRED AT SIDES OF OPENING, THE SHIM SPACE AT THE SIDES SHALL NOT BE GREATER THAN 1/4" UNLESS THE SCREWS ARE GRADE 5 (MAY BE UP TO 3/8" WITH GR. 5 SCREWS)
- CMU IS APPLICABLE AT SIDES ONLY & MUST BE CONCRETE FILLED WHEN SIDE JAMB ANCHORS ARE REQUIRED.
- CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

MULLION PRESSURE TABLE (VERTICAL INTERMEDIATE MULLION)

MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM LOAD WIDTH DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)	
		6 ANCHORS	4 ANCHORS
		121 1/4	62 3/4
	56 3/4	62.6	40.4
	50 3/4	70.0	45.2
	44 3/4	70.0	51.2
	38 3/4	70.0	59.2
	32 3/4	70.0	70.0
109 1/4	62 3/4	62.8	40.6
	56 3/4	69.5	44.8
	50 3/4	70.0	50.1
	44 3/4	70.0	56.9
	38 3/4	70.0	65.7
	35 3/4	70.0	70.0
97 1/4	62 3/4	70.0	45.6
	56 3/4	70.0	50.4
	50 3/4	70.0	56.3
	44 3/4	70.0	63.9
	40 3/4	70.0	70.0
90	62 3/4	70.0	49.2
	56 3/4	70.0	54.4
	50 3/4	70.0	60.9
	44 3/4	70.0	69.0
84	62 3/4	70.0	52.7
	56 3/4	70.0	58.3
	50 3/4	70.0	65.2
	46 3/4	70.0	70.0
78	62 3/4	70.0	56.8
	56 3/4	70.0	62.8
	50 3/4	70.0	70.0
72	62 3/4	70.0	61.5
	56 3/4	70.0	68.0
	54 3/4	70.0	70.0
66	62 3/4	70.0	67.1
	59 3/4	70.0	70.0
65	62 3/4	70.0	70.0

1. DIMENSIONS SHOWN ARE +/-1/4".

MULLION PRESSURE TABLE (5" SIDE JAMB)

MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM LOAD WIDTH DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)	
		3 ANCHORS PER END	2 ANCHORS PER END
		121 1/4	35
	32	63.4	42.1
	29	70.0	46.5
	26	70.0	51.8
	23	70.0	58.6
	20	70.0	67.4
	17	70.0	70.0
109 1/4	35	64.4	42.7
	32	70.0	46.7
	29	70.0	51.6
	26	70.0	57.5
	23	70.0	65.0
	20	70.0	70.0
97 1/4	35	70.0	48.0
	32	70.0	52.5
	29	70.0	57.9
	26	70.0	64.6
	23	70.0	70.0
90	35	70.0	51.9
	32	70.0	56.7
	29	70.0	62.6
	26	70.0	69.8
	25	70.0	70.0
84	35	70.0	55.6
	32	70.0	60.8
	29	70.0	67.1
	27	70.0	70.0
78	35	70.0	59.8
	32	70.0	65.4
	29	70.0	70.0
72	35	70.0	64.8
	32	70.0	70.0
66	35	70.0	70.0

1. DIMENSIONS SHOWN ARE +/-1/4".

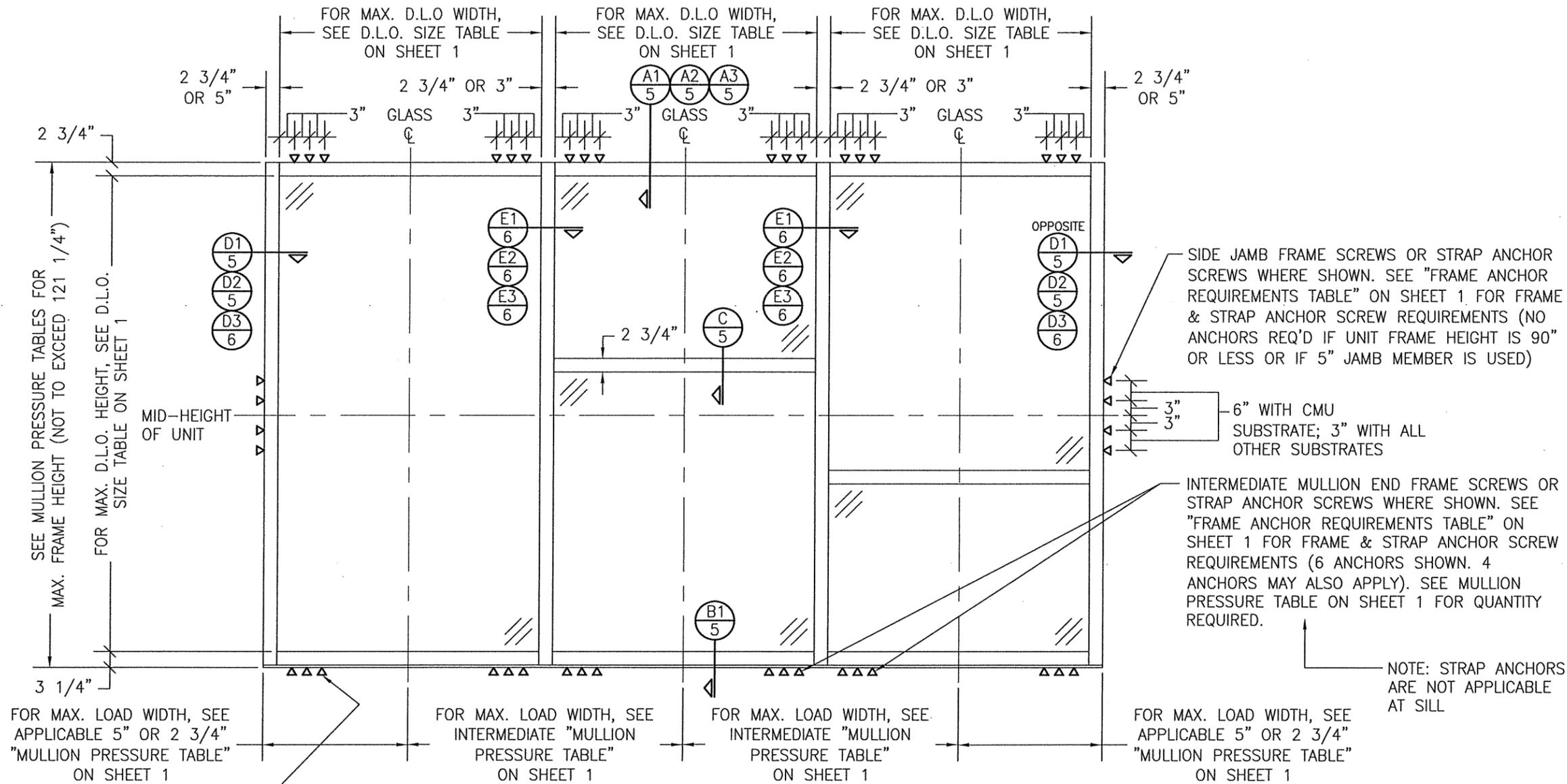
EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.

MULLION PRESSURE TABLE (2 3/4" SIDE JAMB)

MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM LOAD WIDTH DIMENSION (IN.)	ALLOWABLE PRESSURE (PSF)	
		3 ANCHORS PER END	2 ANCHORS PER END
		90	32 3/4
	29 3/4	70.0	51.1
	26 3/4	70.0	56.9
	23 3/4	70.0	64.1
	20 3/4	70.0	70.0
84	32 3/4	70.0	49.8
	29 3/4	70.0	54.8
	26 3/4	70.0	60.9
	23 3/4	70.0	68.6
	22 3/4	70.0	70.0
78	32 3/4	70.0	53.6
	29 3/4	70.0	59.0
	26 3/4	70.0	65.6
	23 3/4	70.0	70.0
72	32 3/4	70.0	58.1
	29 3/4	70.0	63.9
	26 3/4	70.0	70.0
66	32 3/4	70.0	63.4
	29 3/4	70.0	69.7
	28 3/4	70.0	70.0
60	32 3/4	70.0	69.7
	31 3/4	70.0	70.0

- DIMENSIONS SHOWN ARE +/-1/4".
- FRAME HEIGHTS CONSIDERED ARE FOR SINGLE SPAN JAMBS ONLY. WHEN JAMB HAS MID-SPAN ANCHORS & IS SPLIT INTO 2 SPANS, THIS TABLE DOES NOT APPLY, ALLOWABLE PRESSURE ON THE 2-SPAN JAMB IS +/-70 PSF FOR ALL UNIT SIZE CONDITIONS & ONLY 2 ANCHORS ARE REQUIRED AT JAMB ENDS.

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.		
PLOT: 1-24	DATE: 06/28/11		
NO.	DATE	BY	REVISION DESCRIPTION
A1	09/13/12	W.R.M.	UPDATE PER NEW TESTING
B1	12/15/14	W.W.S.	UPDATE TO CURRENT STANDARDS
C1	03/25/15	W.W.S.	ADD NEW DEBRIDING OPTION
D1	09/28/17	W.W.S.	UPDATE PER NEW TESTING
E1	07/15/20	W.W.S.	CHANGE PARTS 21A & B
IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)			
MANUFACTURER			
KAWNEER COMPANY, INC.			
555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS			
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)			
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION			
JUL 16 2020			
WARREN W. SCHAEFER P.E. P.E. NO. 44135			
DRAWING NO.	REV.		
1758	F		
SHEET NO.			
1 OF 10			



SIDE JAMB END FRAME SCREWS OR STRAP ANCHORS WHERE SHOWN. SEE "FRAME ANCHOR SCREW REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR REQUIREMENTS (3 ANCHORS SHOWN. 2 ANCHORS MAY ALSO APPLY). SEE MULLION PRESSURE TABLE ON SHEET 1 FOR QUANTITY REQUIRED.

NOTE: WHEN ANCHORS EXIST AT MID-SPAN OF SIDE JAMB, THE JAMB ENDS REQUIRE JUST 2 ANCHORS REGARDLESS OF UNIT SIZE

NOTE: STRAP ANCHORS ARE NOT APPLICABLE AT SILL

**EXTERIOR ELEVATION:
MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY**

SCALE: 1/2" = 1'-0"

(HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED PROVIDING DIMENSIONS SPECIFIED ARE NOT EXCEEDED. NUMBER OF VERTICAL STACKED GLASS PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM UNIT HEIGHT SHOWN)
NOTE: IT IS RECOMMENDED TO USE AN EXPANSION MULLION EVERY 20 FT. MAXIMUM ACROSS ALL OPENINGS OVER 20 FT. WIDE.

**ALLOWABLE DESIGN PRESSURE
(STORE FRONT ASSEMBLY)**

PRESSURE IS CONTROLLED BY VERTICAL FRAMING MEMBERS/MULLIONS & THEIR END ANCHOR QUANTITIES. SEE MULLION PRESSURE TABLES ON SHEET 1 FOR ALLOWABLE MULLION PRESSURE CONDITIONS.

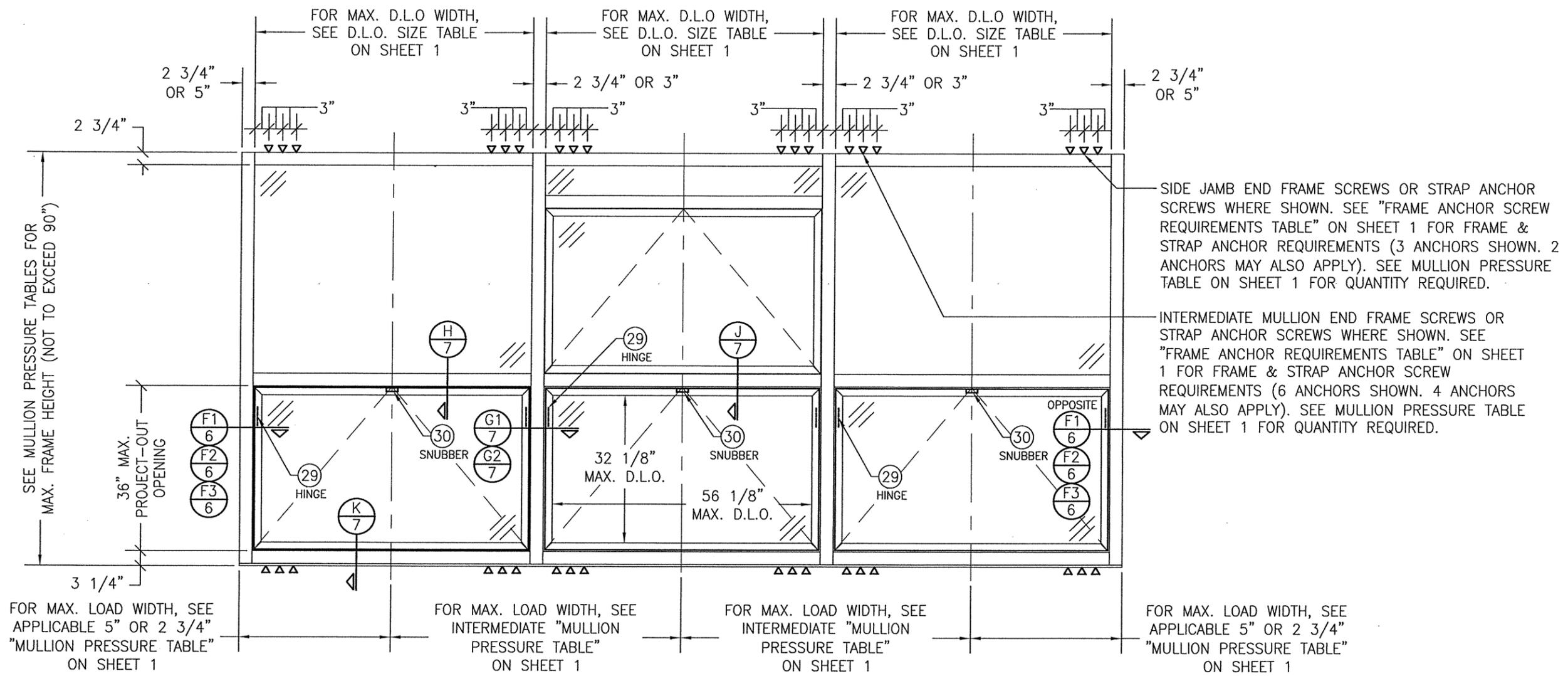
SIDE JAMB FRAME SCREWS OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR SCREW REQUIREMENTS (NO ANCHORS REQ'D IF UNIT FRAME HEIGHT IS 90" OR LESS OR IF 5" JAMB MEMBER IS USED)

6" WITH CMU SUBSTRATE; 3" WITH ALL OTHER SUBSTRATES

INTERMEDIATE MULLION END FRAME SCREWS OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR SCREW REQUIREMENTS (6 ANCHORS SHOWN. 4 ANCHORS MAY ALSO APPLY). SEE MULLION PRESSURE TABLE ON SHEET 1 FOR QUANTITY REQUIRED.

NOTE: STRAP ANCHORS ARE NOT APPLICABLE AT SILL

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 08/28/11	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE: IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)			
MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION	JUL 16 2020		P.E.
DRAWING NO. 1758		REV. F	
SHEET NO. 2 OF 10			



SIDE JAMB END FRAME SCREWS OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR SCREW REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR REQUIREMENTS (3 ANCHORS SHOWN. 2 ANCHORS MAY ALSO APPLY). SEE MULLION PRESSURE TABLE ON SHEET 1 FOR QUANTITY REQUIRED.

INTERMEDIATE MULLION END FRAME SCREWS OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR SCREW REQUIREMENTS (6 ANCHORS SHOWN. 4 ANCHORS MAY ALSO APPLY). SEE MULLION PRESSURE TABLE ON SHEET 1 FOR QUANTITY REQUIRED.

**EXTERIOR ELEVATION:
STORE FRONT ASSEMBLY WITH PROJECT-OUT WINDOWS**

SCALE: 1/2" = 1'-0"
(FOR STORE FRONT DETAIL & INSTALLATION NOT SHOWN, SEE ELEVATION ON SHEET 2)

**ALLOWABLE DESIGN PRESSURE
(STORE FRONT ASSEMBLY WITH PROJECT-OUT WINDOWS)**

PRESSURE IS CONTROLLED BY VERTICAL FRAMING MEMBERS/MULLIONS & THEIR END ANCHOR QUANTITIES. SEE MULLION PRESSURE TABLES ON SHEET 1 FOR ALLOWABLE MULLION PRESSURE CONDITIONS.

STORE FRONT ASSEMBLY WITH PROJECT-OUT WINDOW NOTES:

1. PROJECT-OUT WINDOWS MAY BE PLACED ANYWHERE WITHIN THE STORE FRONT FRAMING.
2. THERE IS NO LIMIT ON THE NUMBER OF PROJECT-OUT WINDOWS THAT MAY BE PLACED IN ANY ONE BAY OF THE STORE FRONT SYSTEM. NOTE: IT IS RECOMMENDED TO USE AN EXPANSION MULLION EVERY 20 FT. MAXIMUM ACROSS ALL OPENINGS OVER 20 FT. WIDE.
3. WHEN PROJECT-OUT WINDOWS EXIST, OVERALL FRAME HEIGHT SHALL BE LIMITED AS SHOWN. POTENTIAL INCREASED HEIGHTS SHALL BE REVIEWED & APPROVED BASED ON SEPARATE CERTIFICATION FOR ONE-TIME JOB APPROVAL IF NECESSARY.

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 06/28/11
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555
CERTIFICATION WARREN W. SCHAEFER P.E. NO. 44135	JUL 16 2020
DRAWING NO. 1758	REV. E
SHEET NO. 3 OF 10	

CORNER MULLION PRESSURE TABLE (135 DEG. CORNER)

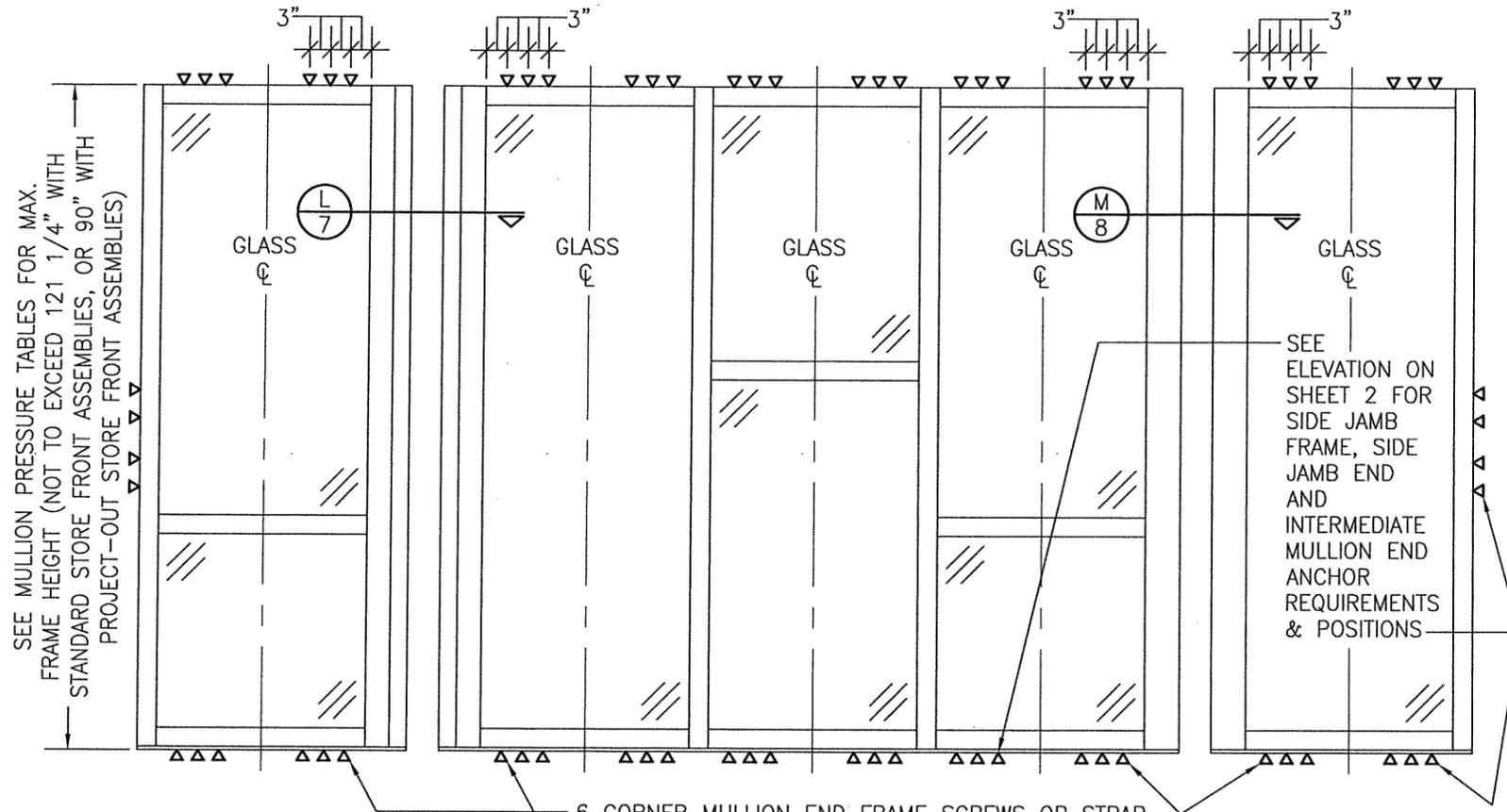
MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM LOAD WIDTH "A" OR "B" (IN.)	ALLOWABLE PRESSURE (PSF)
121 1/4	33.5	38.7
	30.5	42.5
	27.5	47.1
	24.5	52.9
	21.5	60.2
	18.5	70.0
109 1/4	33.5	47.6
	30.5	52.3
	27.5	58.0
	24.5	65.1
	21.5	70.0
97 1/4	33.5	60.1
	30.5	66.0
	27.5	70.0
90	33.5	70.0

(1) DIMENSIONS SHOWN ARE +/-1/4".
 (2) LOAD WIDTH DIMENSION TO BE CONSIDERED FOR USE WITH THIS LOAD TABLE SHALL BE THE GRATER VALUE OF "A" & "B".

CORNER MULLION PRESSURE TABLE (90 DEG. CORNER)

MAXIMUM FRAME HEIGHT DIMENSION (IN.)	MAXIMUM LOAD WIDTH "A" OR "B" (IN.)	ALLOWABLE PRESSURE (PSF)
121 1/4	35	40.0
	32	43.8
	29	48.3
	26	53.8
	23	60.9
	20	70.0
109 1/4	35	49.3
	32	53.9
	29	59.5
	26	66.3
	23	70.0
97 1/4	35	62.2
	32	68.0
	29	70.0
90	35	70.0

(1) DIMENSIONS SHOWN ARE +/-1/4".
 (2) LOAD WIDTH DIMENSION TO BE CONSIDERED FOR USE WITH THIS LOAD TABLE SHALL BE THE GRATER VALUE OF "A" & "B".



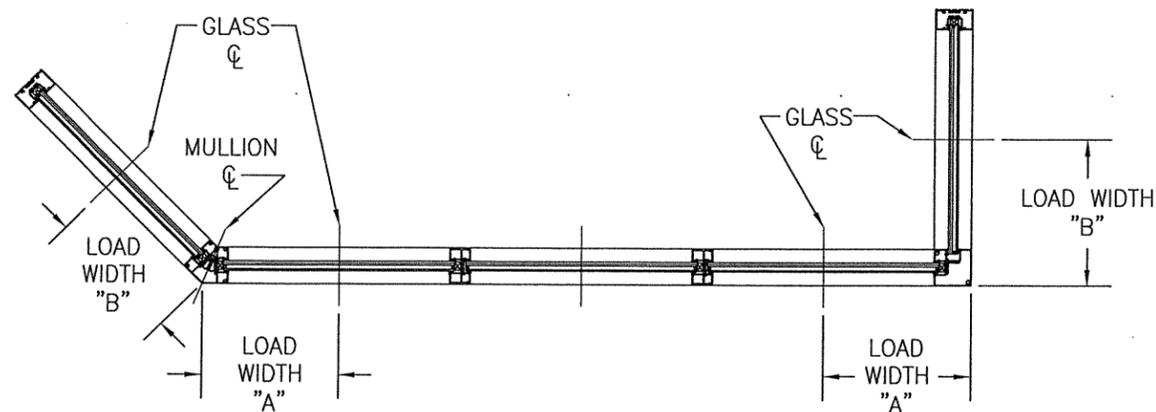
6 CORNER MULLION END FRAME SCREWS OR STRAP ANCHOR SCREWS WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR FRAME & STRAP ANCHOR SCREW REQUIREMENTS (STRAP ANCHORS ARE NOT APPLICABLE AT SILL)

EXTERIOR ELEVATION:

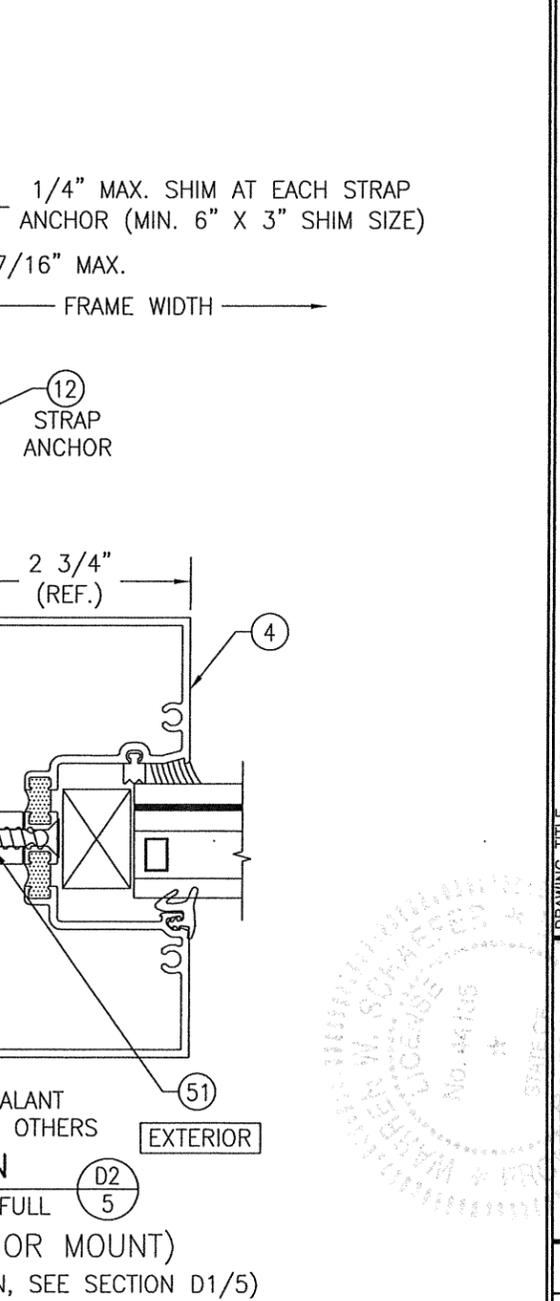
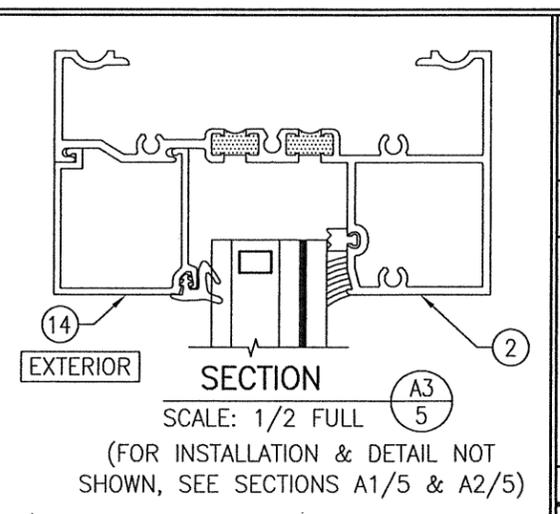
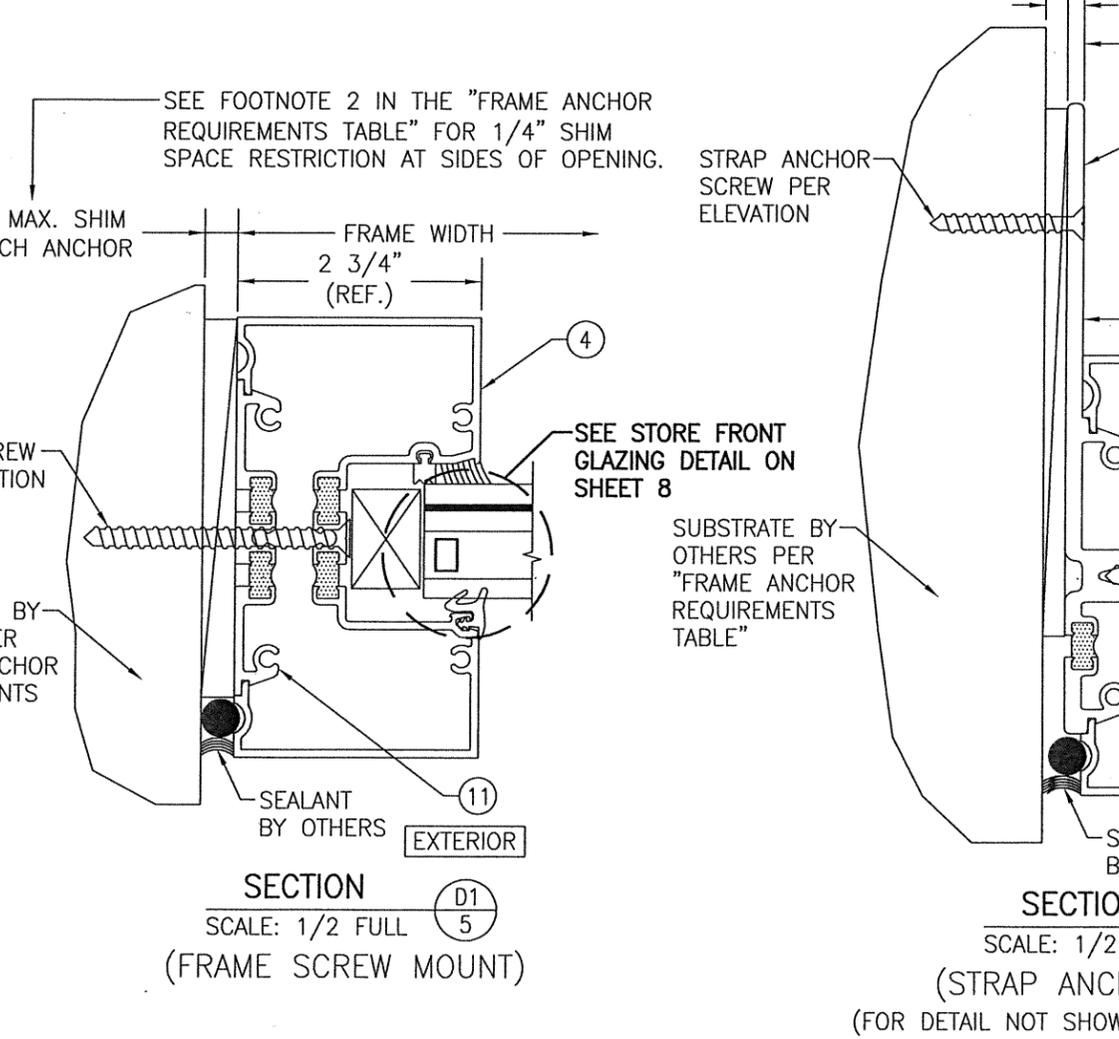
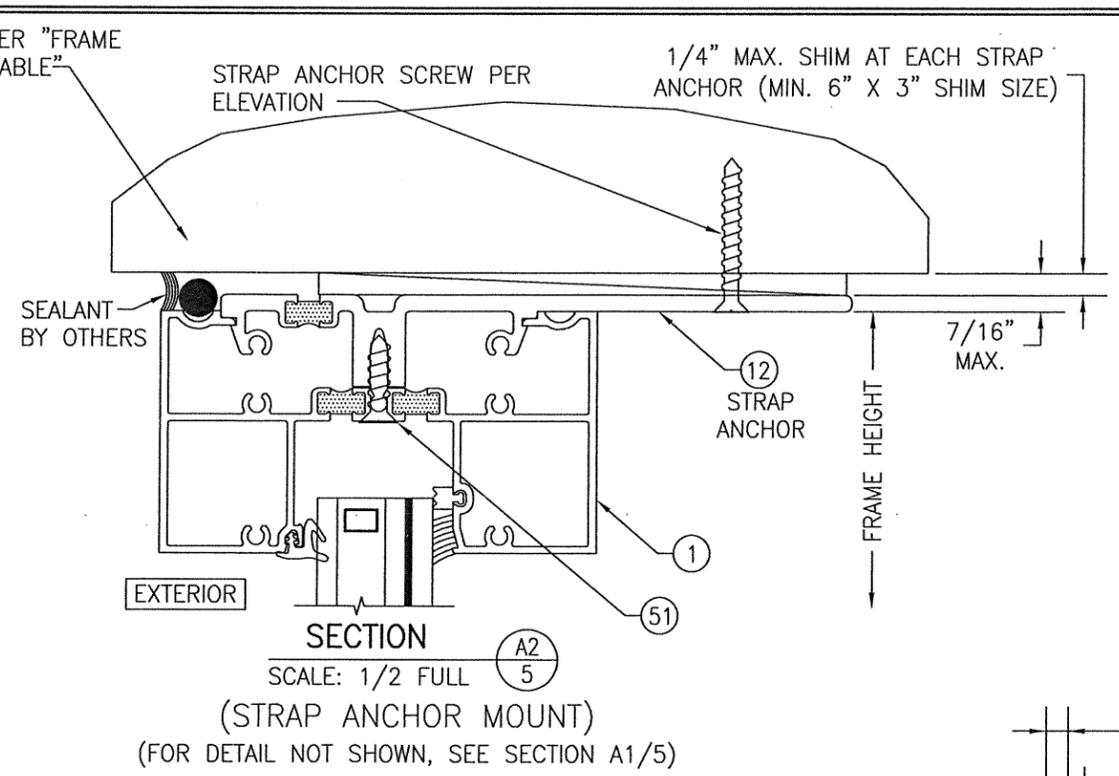
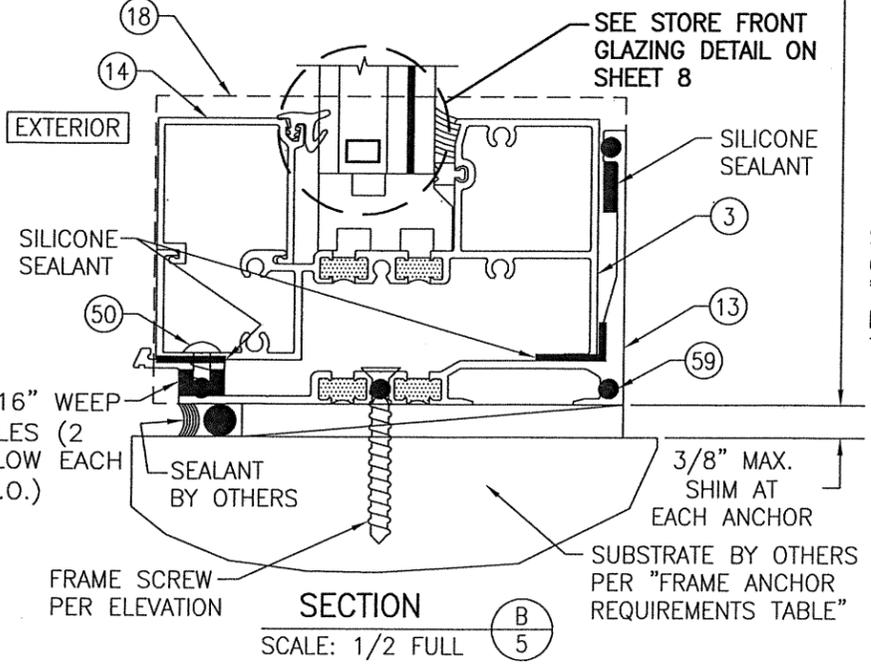
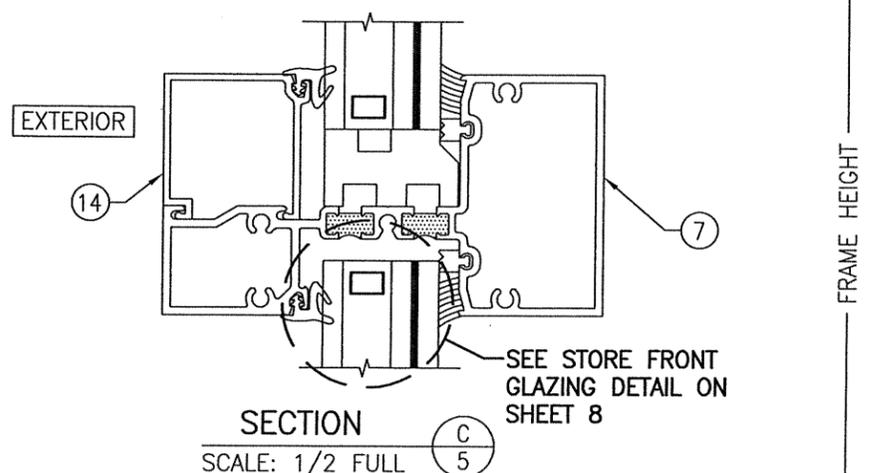
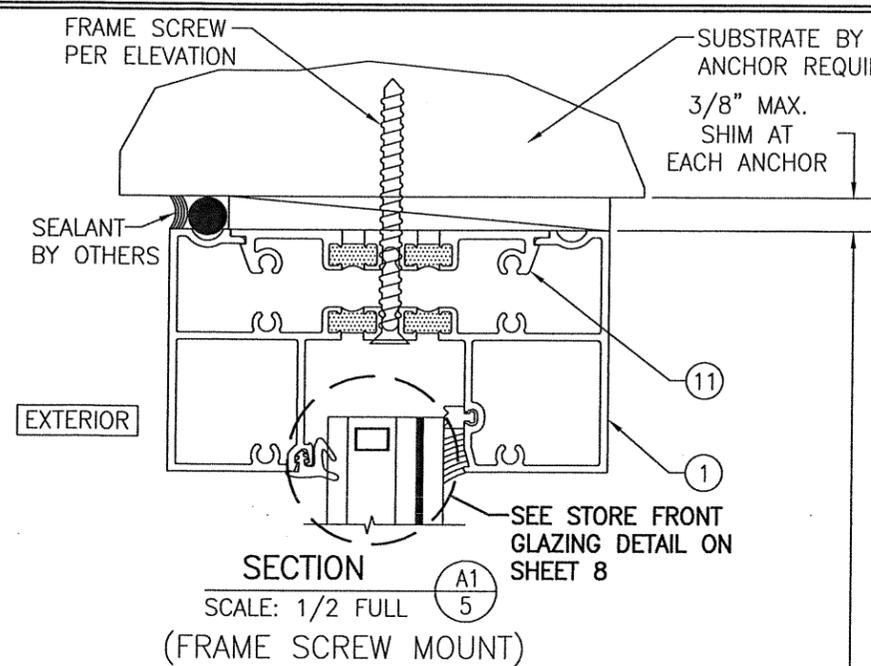
MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY WITH 90° AND/OR 135° CORNERS

SCALE: 1/2" = 1'-0"

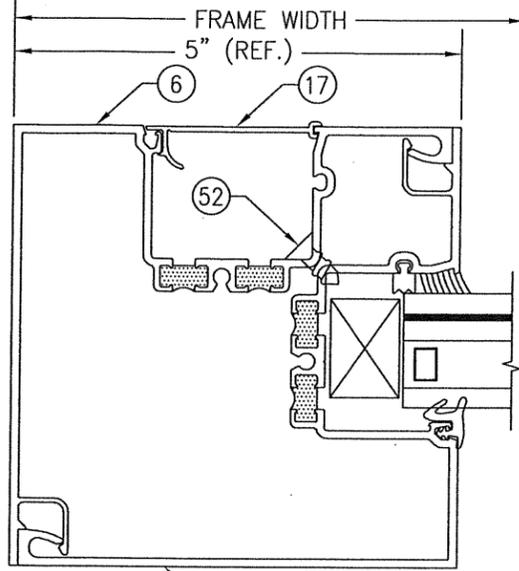
(FOR ALL DETAIL INSTALLATION & MULLION LOAD TABLES NOT SHOWN, SEE LOAD TABLES & ELEVATIONS ON SHEETS 1, 2 & 3)
 (WHILE SHOWN WITH BOTH 90° AND 135° CORNERS, ONE OR BOTH MAY APPLY ON ANY JOB)
 (PROJECT-OUT WINDOWS ALSO APPLY TO THIS ELEVATION)



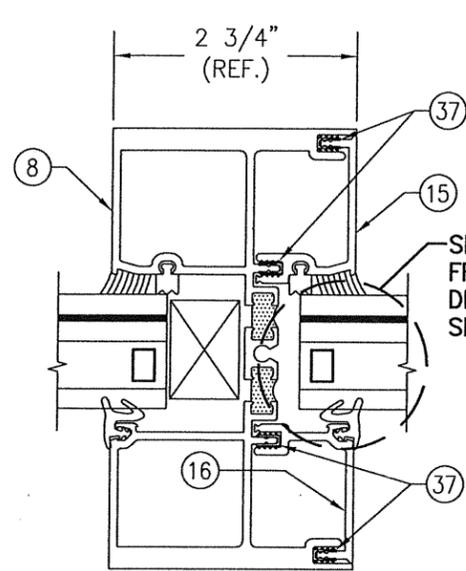
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PLOT: 1=24	DATE: 06/28/11
DATE	BY
REVISION DESCRIPTION	NO.
IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED) MANUFACTURER KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION JUL 16 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1758	REV. F
SHEET NO. 4 OF 10	



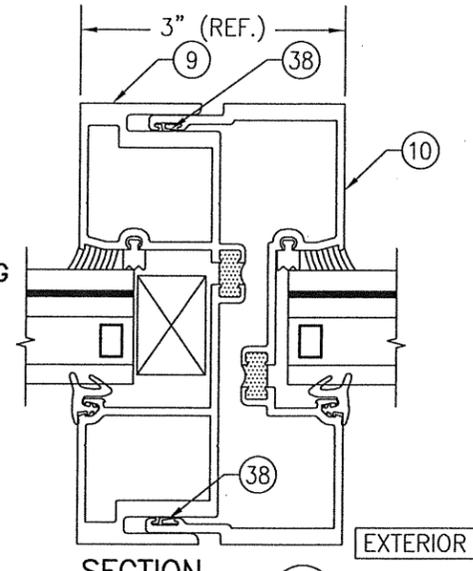
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DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: KAWNEER COMPANY, INC.	
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CERTIFICATION	JUL 16 2020		
WARREN W. SCHAEFER, P.E.	P.E. NO. 44135		
DRAWING NO. 1758	REV. F	SHEET NO. 5 OF 10	



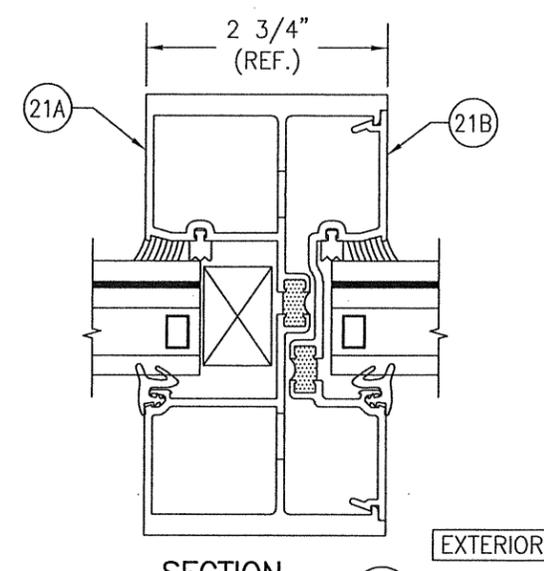
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SCALE: 1/2 FULL 6



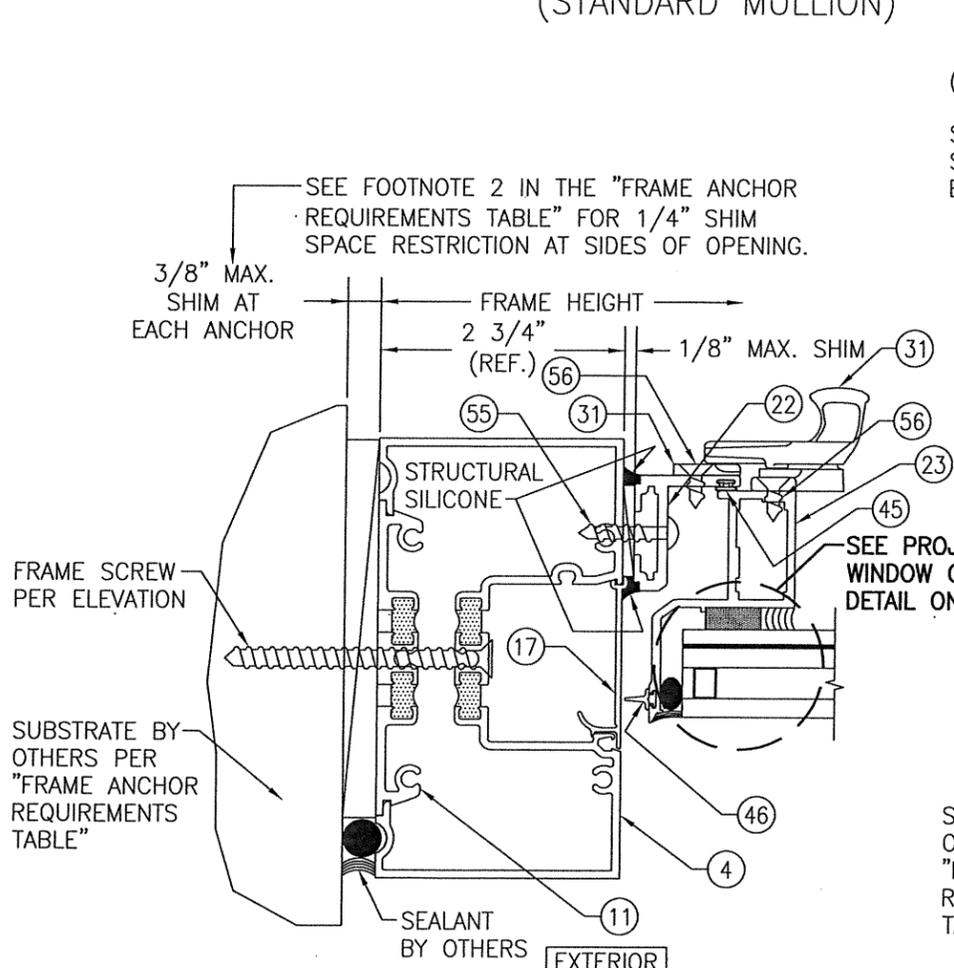
SECTION E1
SCALE: 1/2 FULL 6
(STANDARD MULLION)



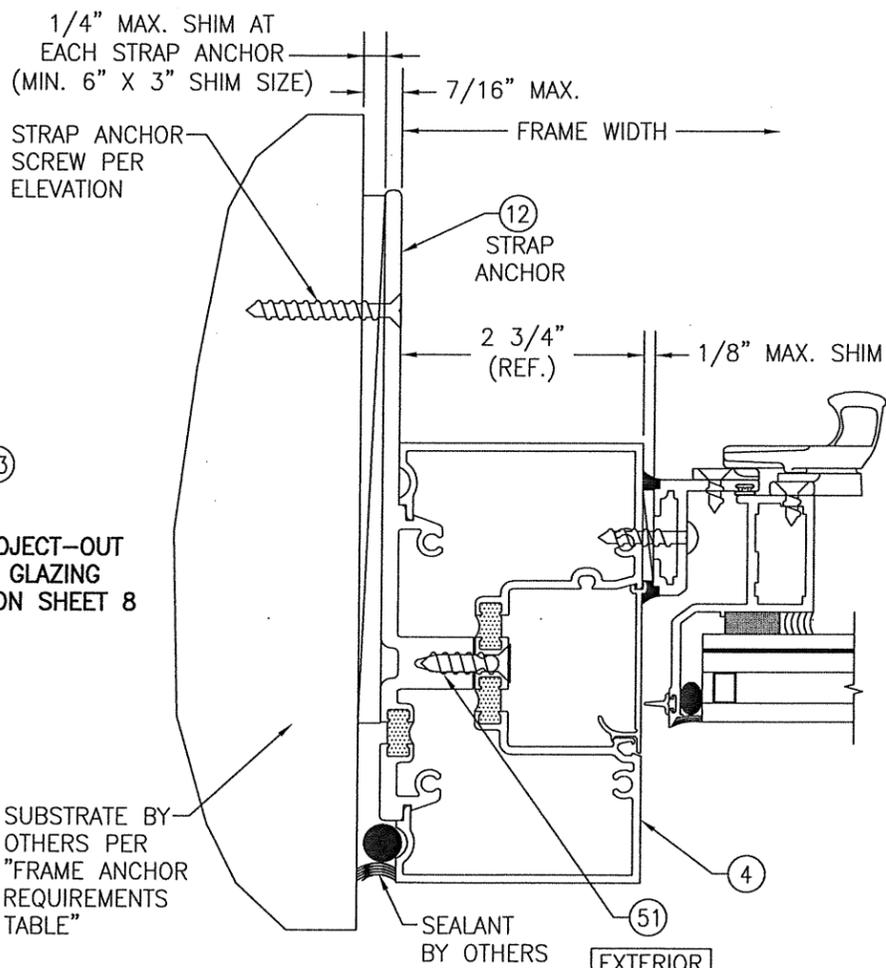
SECTION E2
SCALE: 1/2 FULL 6
(EXPANSION MULLION)
(FOR DETAIL NOT SHOWN, SEE SECTION E1/6)



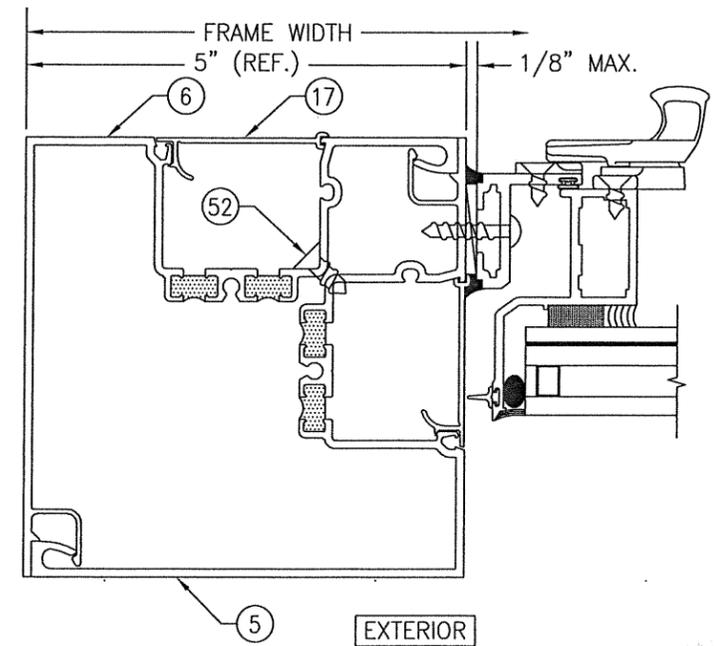
SECTION E3
SCALE: 1/2 FULL 6
(2 PIECE MULLION)
(FOR DETAIL NOT SHOWN, SEE SECTION E1/6)



SECTION F1
SCALE: 1/2 FULL 6
(FRAME SCREW MOUNT)

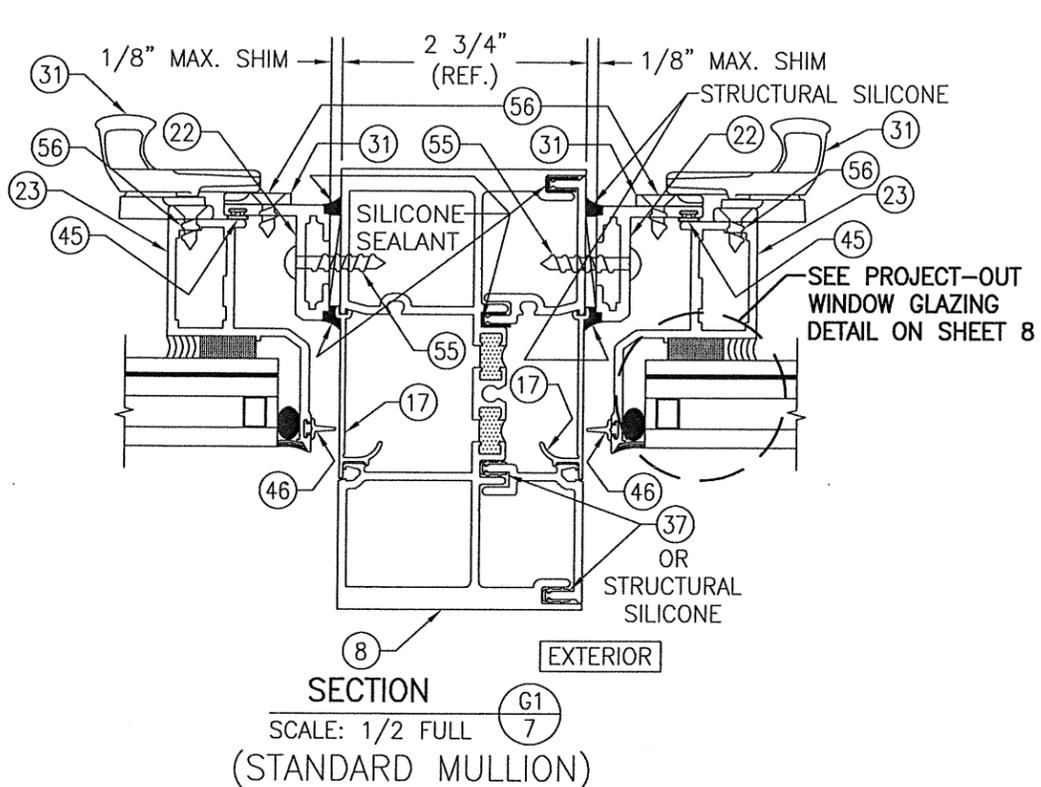


SECTION F2
SCALE: 1/2 FULL 6
(STRAP ANCHOR MOUNT)
(FOR DETAIL NOT SHOWN, SEE SECTION F1/6)

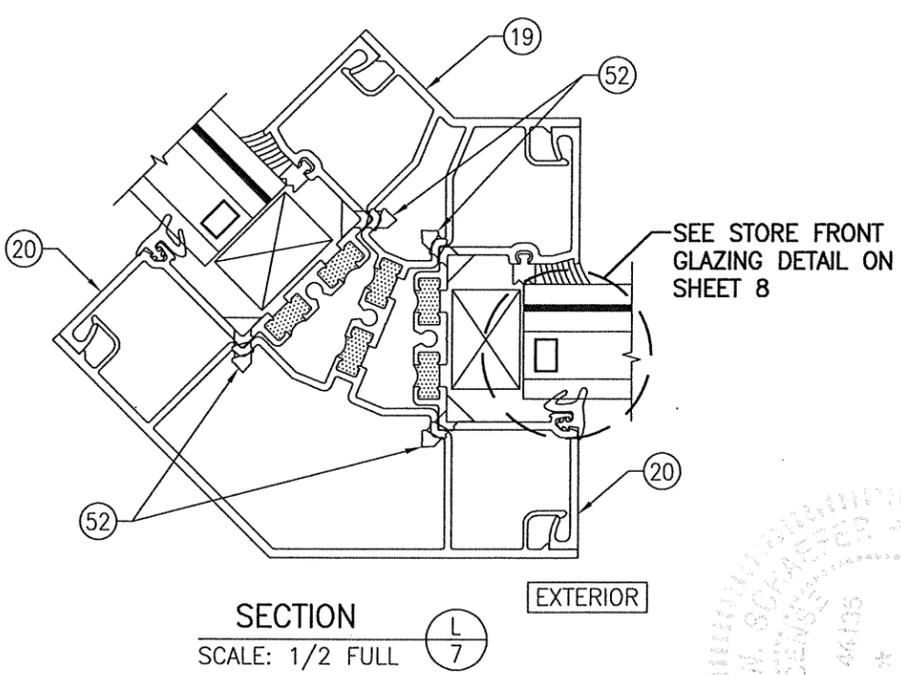
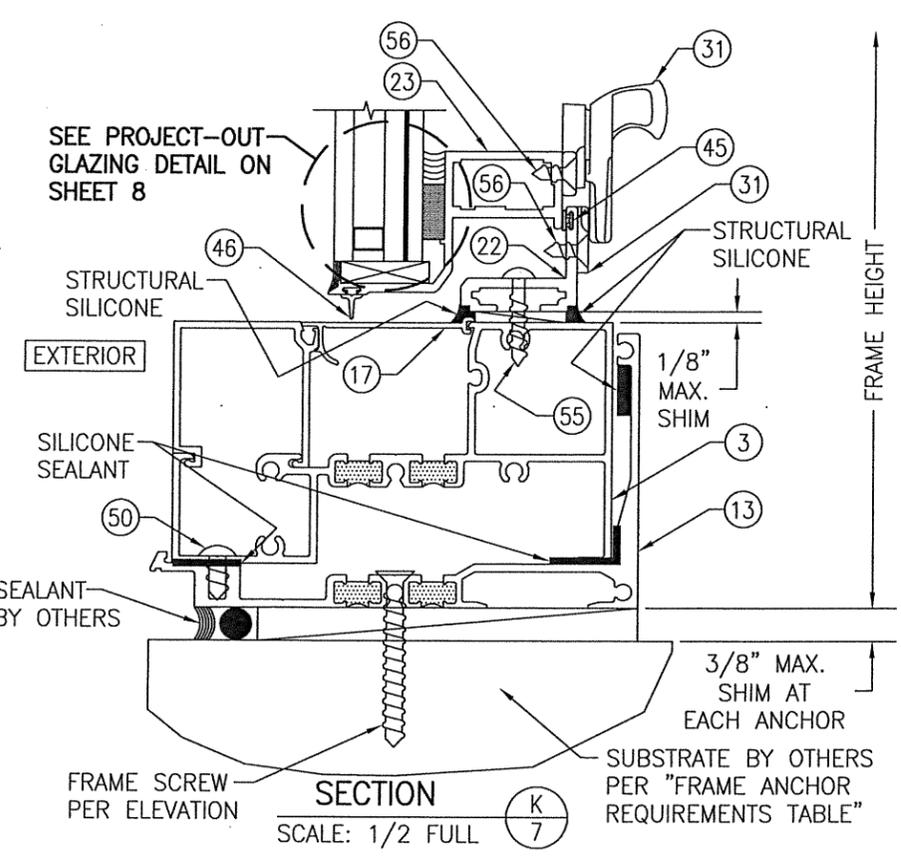
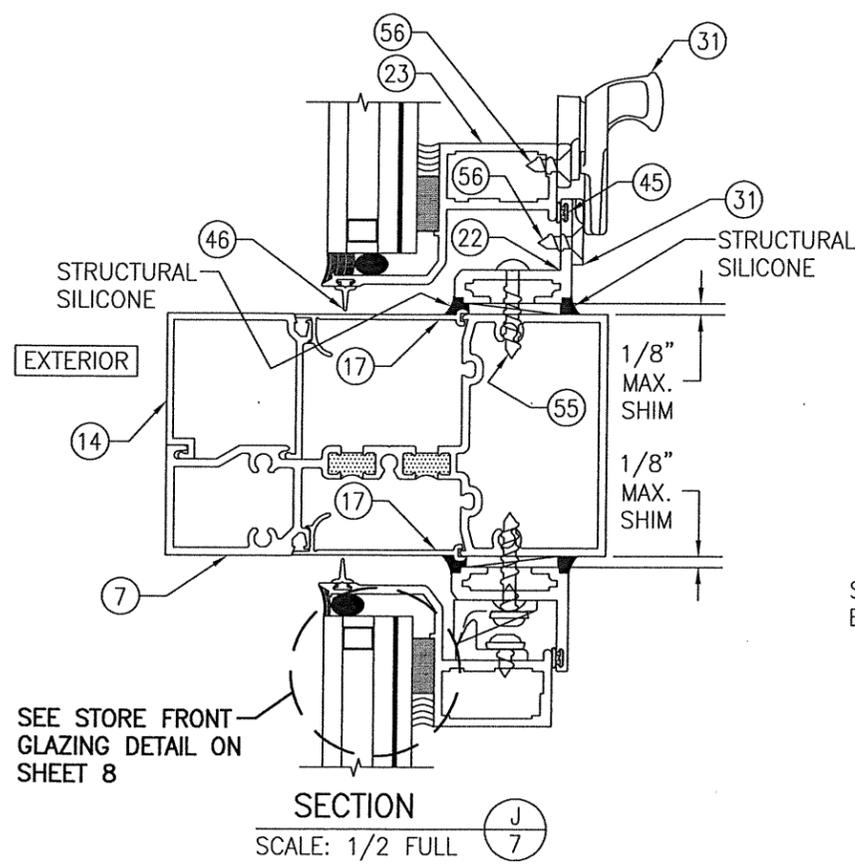
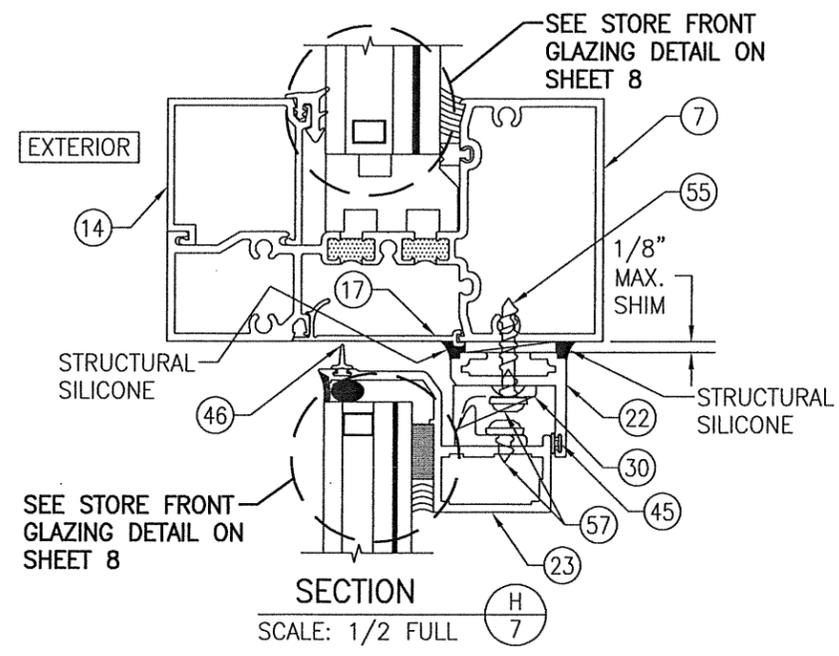
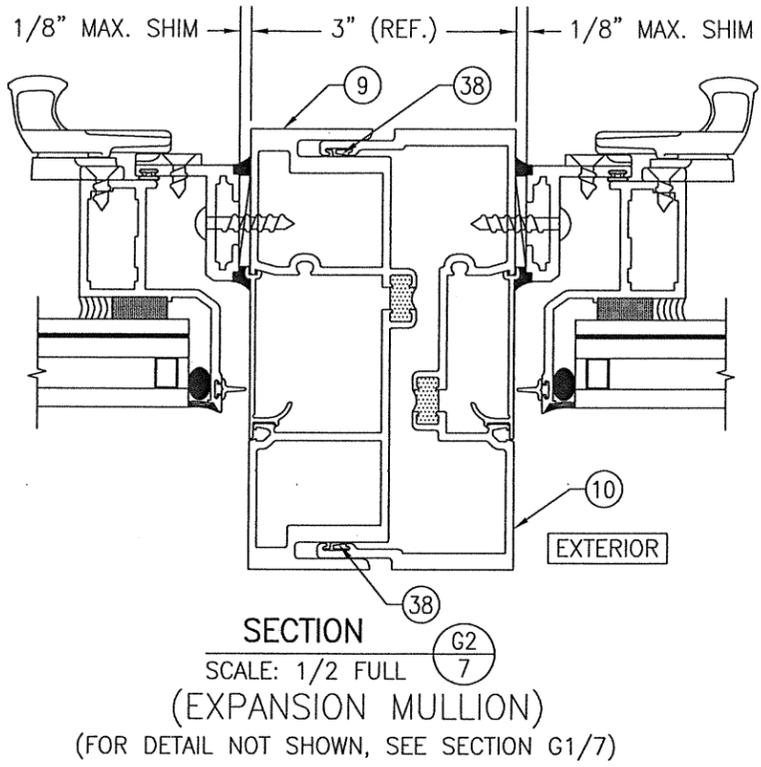


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(FOR DETAIL NOT SHOWN, SEE SECTION F1/6)

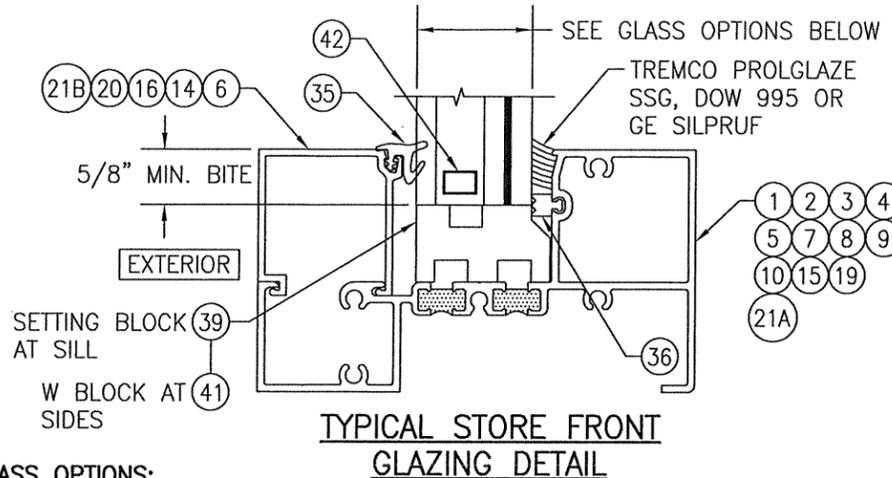
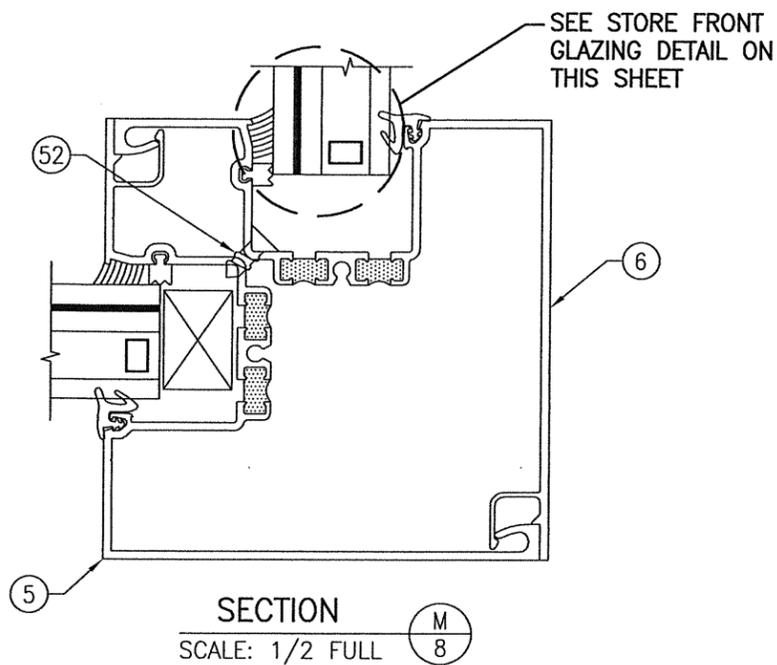
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 06/28/11	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)			
MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION: JUL 16 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1758		REV. F	
SHEET NO. 6 OF 10			



(STANDARD MULLION SHOWN. 2 PIECE MULLION ALSO APPLIES WITH THE PROJECT WINDOW ATTACHMENT BEING THE SAME.)



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MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION		JUL 16 2020	
WARREN W. SCHAEFER, P.E.		P.E. NO. 44135	
DRAWING NO. 1758		REV. F	
SHEET NO. 7 OF 10			

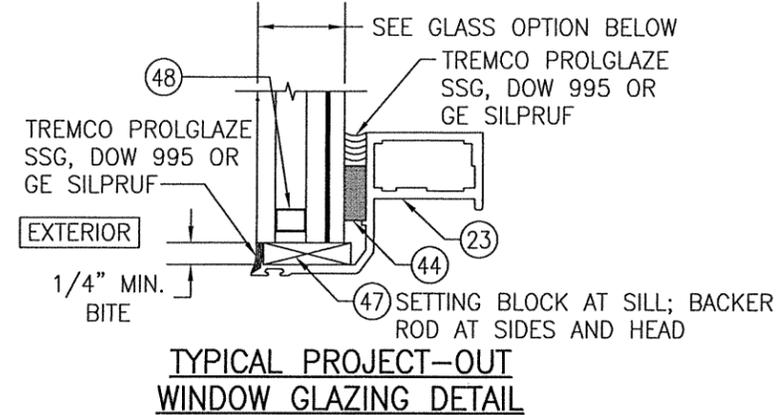


GLASS OPTIONS:

OPTION 1: 1 5/16" THICK I.G. GLASS (1/4" HT. ST. OR TEMP. EXTERIOR; 1/2" SPACER/1/4" HT. ST./0.09 DUPONT BUTACITE PVB/1/4" HT. ST. INTERIOR)

OPTION 2: 1 5/16" THICK I.G. GLASS (1/4" HT. ST. OR TEMP. EXTERIOR; 1/2" SPACER/1/4" HT. ST./0.09 EASTMAN CHEM. CO. SAFLEX/1/4" HT. ST. INTERIOR)

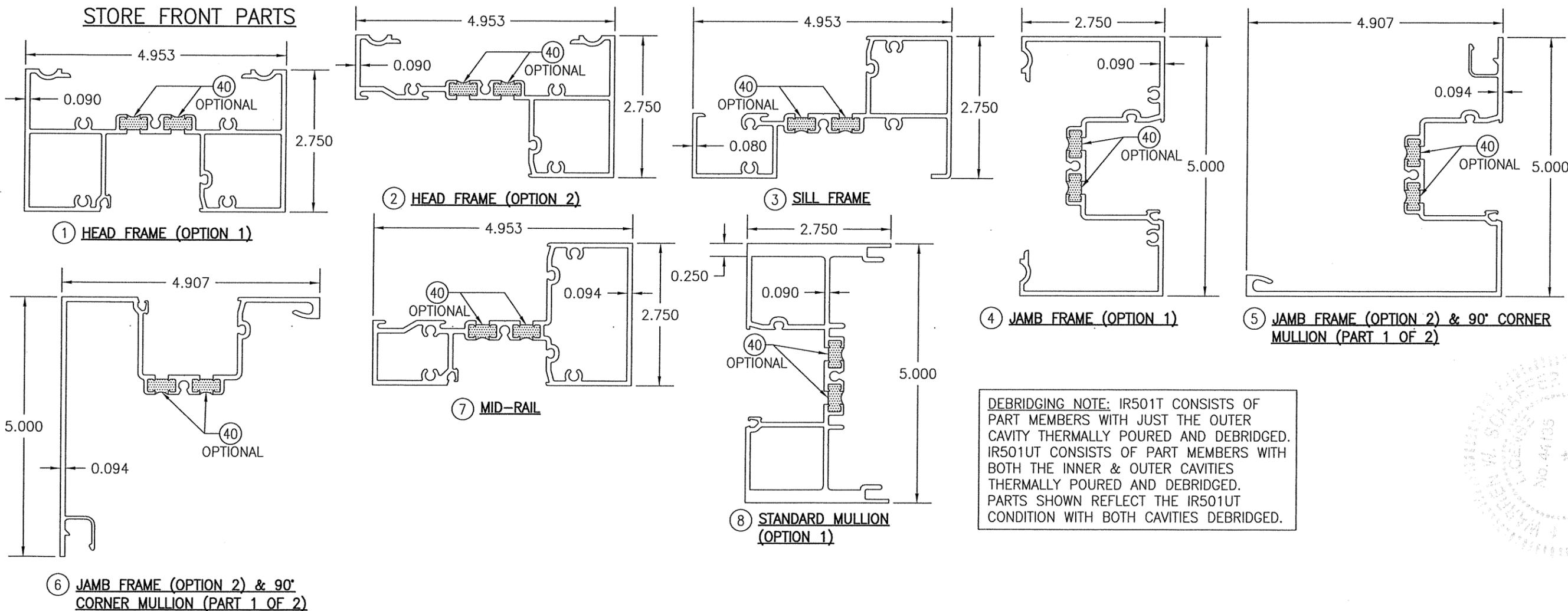
NOTE: THE SINGLE PANE OF THE IG GLASS SHALL BE TEMPERED WHEN REQUIRED TO CONFORM WITH THE FLORIDA BUILDING CODE FOR USE OF GLASS IN HAZARDOUS LOCATIONS (APPLICABLE FOR GLASS OPTIONS 1 & 2).



GLASS OPTION:

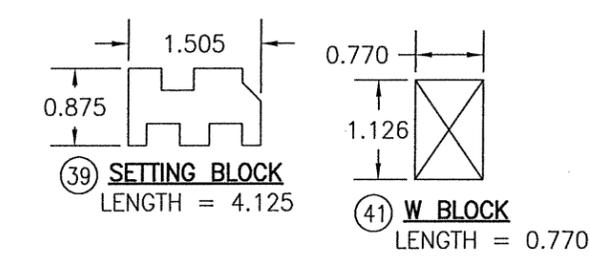
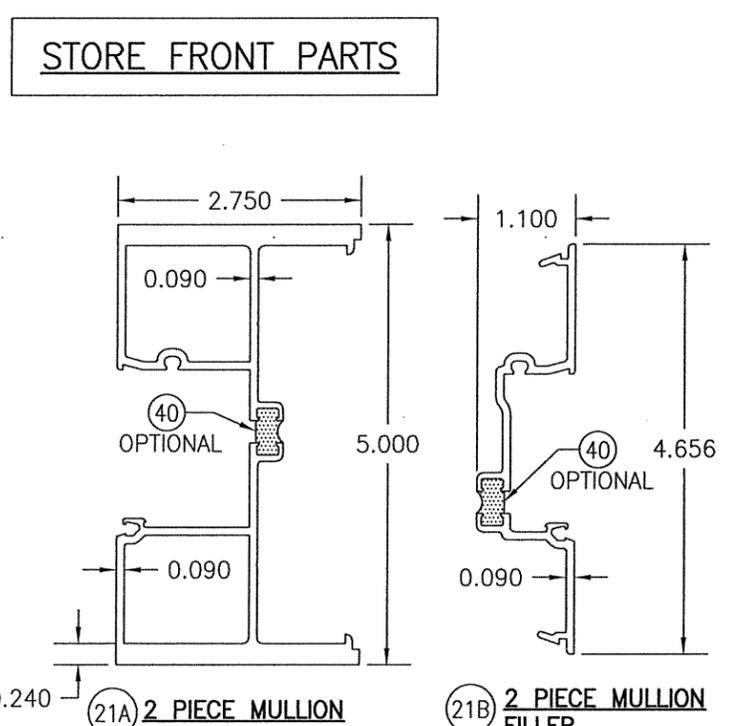
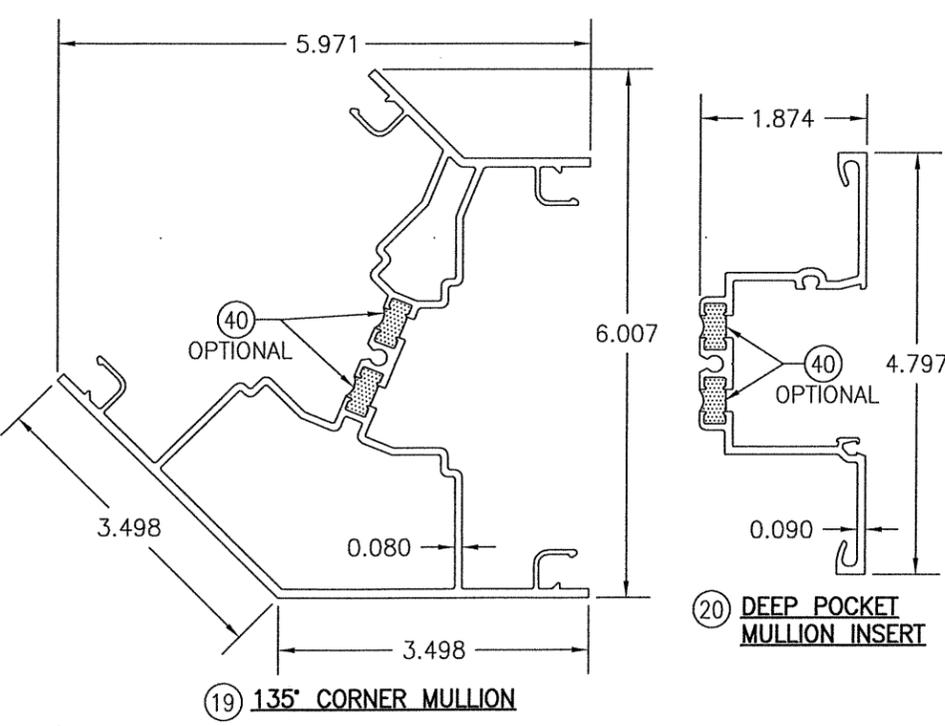
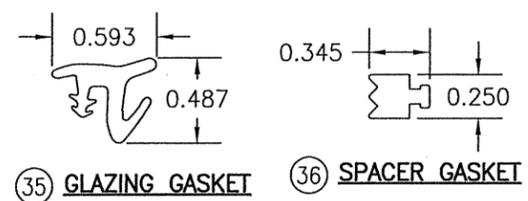
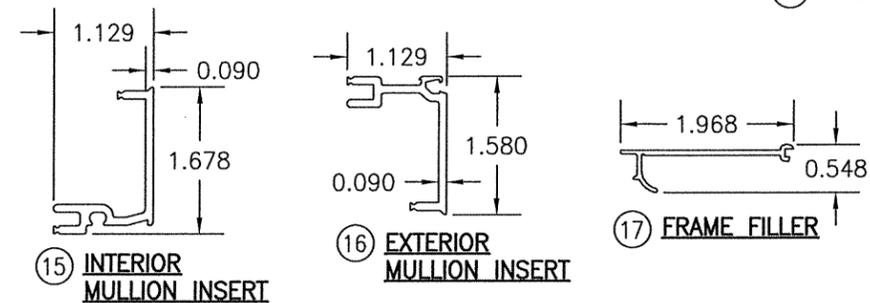
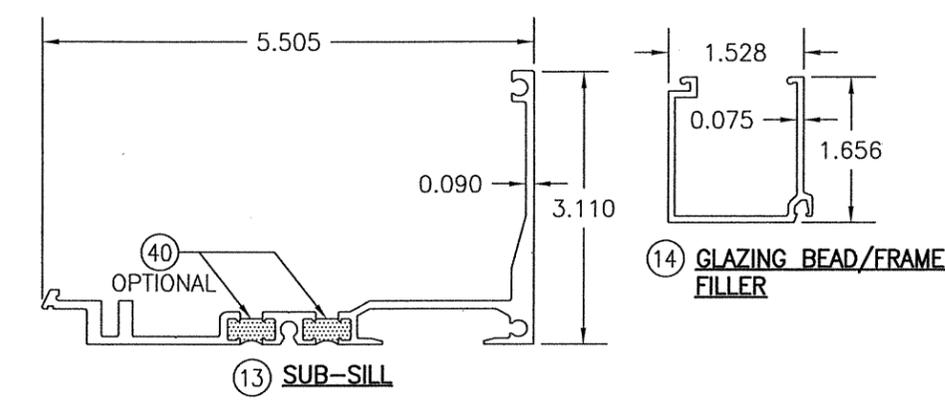
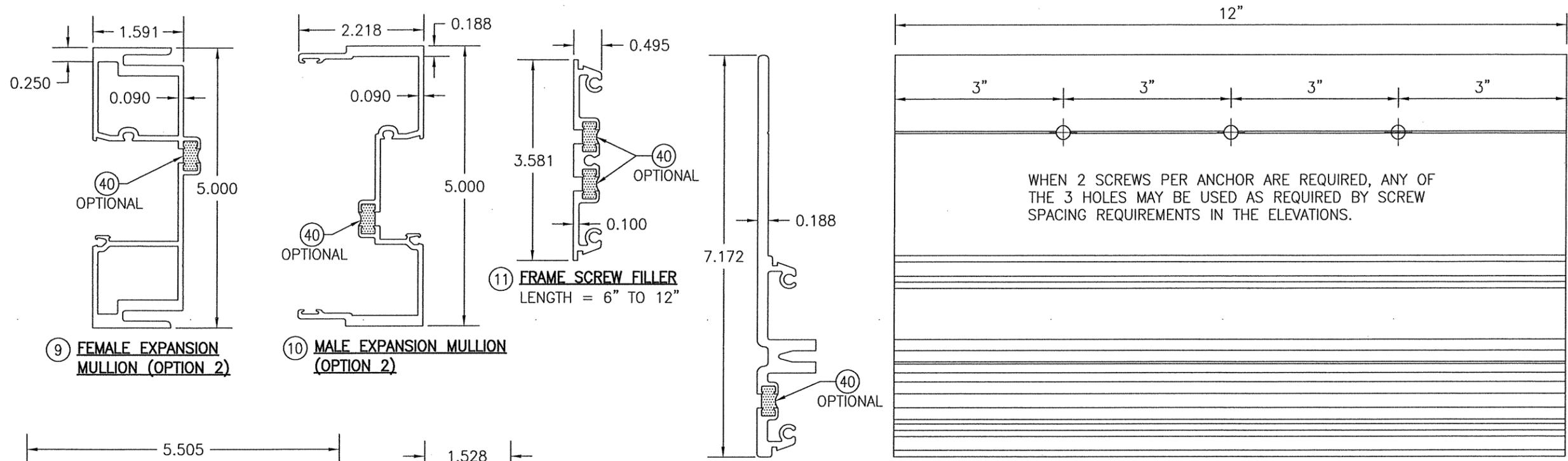
OPTION 1: 1" THICK I.G. GLASS (3/16" TEMP. EXTERIOR; 3/8" SPACER/3/16" HT. ST./0.09 DUPONT BUTACITE PVB/3/16" HT. ST. INTERIOR)

STORE FRONT PARTS



DEBRIDGING NOTE: IR501T CONSISTS OF PART MEMBERS WITH JUST THE OUTER CAVITY THERMALLY Poured AND DEBRIDGED. IR501UT CONSISTS OF PART MEMBERS WITH BOTH THE INNER & OUTER CAVITIES THERMALLY Poured AND DEBRIDGED. PARTS SHOWN REFLECT THE IR501UT CONDITION WITH BOTH CAVITIES DEBRIDGED.

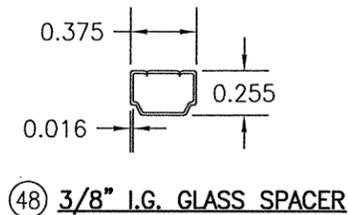
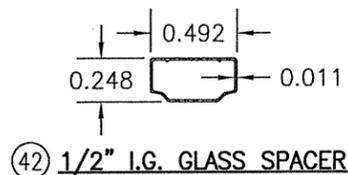
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 06/28/11
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED)	
MANUFACTURER KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
JUL 16 2020	
DRAWING NO. 1758	REV. F
SHEET NO. 8	OF 10



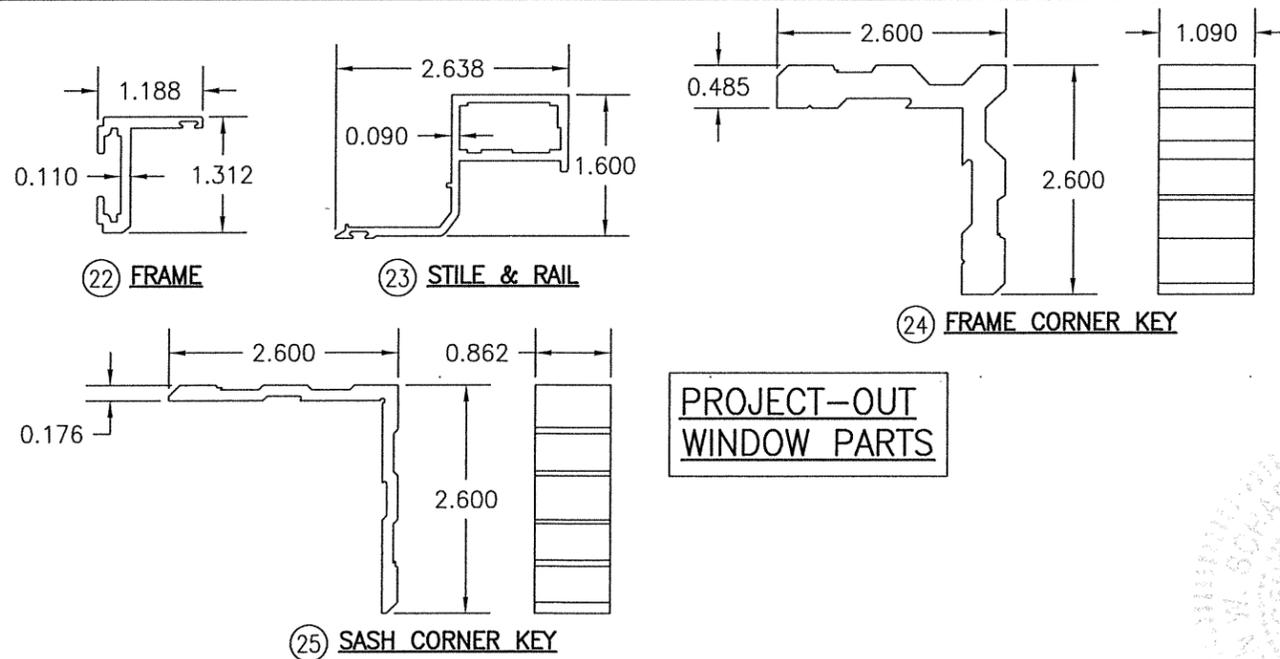
STORE FRONT PARTS

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PLOT: 1=2		DATE: 06/28/11	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: IR501T & IR501UT ALUMINUM LARGE MISSILE IMPACT STORE FRONT SYSTEM (WET GLAZED) CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555			
CERTIFICATION: JUL 16 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1758		REV. F	
SHEET NO. 9 OF 10			

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
STORE FRONT PARTS		
1	HEAD FRAME (OPTION 1)	6063-T6 ALUMINUM
2	HEAD FRAME (OPTION 2)	6063-T6 ALUMINUM
3	SILL FRAME	6063-T6 ALUMINUM
4	JAMB FRAME (OPTION 1)	6063-T6 ALUMINUM
5	JAMB FRAME (OPTION 2) & 90° CORNER MULLION (PART 1 OF 2)	6063-T6 ALUMINUM
6	JAMB FRAME (OPTION 2) & 90° CORNER MULLION (PART 2 OF 2)	6063-T6 ALUMINUM
7	MID-RAIL	6063-T6 ALUMINUM
8	STANDARD MULLION (OPTION 1)	6063-T6 ALUMINUM
9	FEMALE EXPANSION MULLION (OPTION 2)	6063-T6 ALUMINUM
10	MALE EXPANSION MULLION (OPTION 2)	6063-T6 ALUMINUM
11	FRAME SCREW FILLER	6063-T6 ALUMINUM
12	STRAP ANCHOR	6063-T6 ALUMINUM
13	SUB-SILL	6063-T6 ALUMINUM
14	GLAZING BEAD/FRAME FILLER	6063-T6 ALUMINUM
15	INTERIOR MULLION INSERT	6063-T6 ALUMINUM
16	EXTERIOR MULLION INSERT	6063-T6 ALUMINUM
17	POCKET FILLER	ABS PLASTIC
18	SILL END DAM PLATE (5.281"x3.5"x0.062" THICK)	PLASTIC
19	135° CORNER MULLION	6063-T6 ALUMINUM
20	DEEP POCKET MULLION INSERT	6063-T6 ALUMINUM
21A	2 PIECE MULLION (KAWNEER #575-523)	6063-T6 ALUMINUM
21B	2 PIECE MULLION FILLER (KAWNEER #575-524)	6063-T6 ALUMINUM
PROJECT-OUT GLASS VENT PARTS		
22	FRAME	6063-T6 ALUMINUM
23	STILE & RAIL	6063-T6 ALUMINUM
24	FRAME CORNER KEY	6063-T6 ALUMINUM
25	SASH CORNER KEY	6063-T6 ALUMINUM
PROJECT-OUT GLASS VENT HARDWARE		
29	4" BAR HINGE	ADVANTAGE 316-AT
30	SNUBBER DRIVER & VENT DEFLECTION STOP	KENCO PLASTICS; NYLON WITH GLASS FILL
31	CAM LOCK & LOCK STRIKE	BRONZE CRAFT US-25-D; WHITE BRONZE 3 REQ'D AT BOTTOM RAIL; 1 REQ'D EACH STILE



ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
STORE FRONT SEALS & SEALANTS		
35	GLAZING GASKET	70 +/-5 DUROMETER EPDM (KAWNEER PART #027-074)
36	SPACER GASKET	POLYPROPYLENE & SANDOPRENE; KRP 60 +/-5 DUROMETER
37	MATING GASKET	POLYPROPYLENE
38	FIXED GASKET	KRP POLYPROPYLENE & TPV
39	SETTING BLOCK	EPDM (DUROMETER = 85 +/-5)
40	OPTIONAL POURED IN DEBRIDGING/THERMAL BREAK	STRUCTURAL THERMAL BARRIER POLYMER (UNIVERSAL NO-TAPE 303-12T BY AZON)
41	W BLOCK	EPDM (DUROMETER = 85 +/-5)
42	1/2" I.G. SPACER	3005 OR 3105 ALUMINUM
PROJECT-OUT GLASS VENT SEALS & SEALANTS		
44	GLAZING TAPE	POLYURETHANE FOAM
45	BULB GASKET	AMESBURY #32005 POLYPROPYLENE
46	KERF GASKET	ASTRO PLASTICS #C-9131 POLYPROPYLENE & SANDOPRENE
47	SETTING BLOCK	EPDM (DUROMETER = 85 +/-5)
48	3/8" I.G. SPACER	3005 OR 3105 ALUMINUM
STORE FRONT FASTENERS		
50	1/4-20 X 7/16" PHTC	QTY = 3 EACH SIDE OF EACH VERTICAL FRAMING MEMBER 2" FROM THE VERTICAL MEMBER & 2.5" O.C.
51	1/4-20 X 1" PHTC TYPE "D" OR "F"	QUANTITY TO MATCH THAT OF STRAP ANCHOR INSTALLATION SCREWS (SPACED 2.5" O.C.)
52	1/4-20 X 5/8" FHTC TYPE "D"	WITHIN 6" FROM MULL ENDS & 18" MAX. O.C.
PROJECT-OUT GLASS VENT FASTENERS		
55	NO. 10 X 1" PHTF "AB"	WITHIN 6" FROM EA. END & 18" MAX. O.C.
56	NO. 10 X 1/2" FHTF TYPE "B"	2 PER EACH CAM LOCK & KEEPER
57	NO. 10-16 X 5/16" CRIMPTITE TYPE "B"	2 PER EACH SNUBBER DRIVER & KEEPER
58	NO. 10-16 X 7/16" PHTF TYPE "B"	3 PER HINGE BAR
59	NO. 12 X 1" PHTF "AB"	4 PER END DAM



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
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CERTIFICATION JUL 16 2020 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1758	REV. E
SHEET NO. 10 OF 10	