

ENGINEERING SERVICES - CA 32459
9249 CHELSEA DR. S
PLANTATION, FL 33324
PPMF@AOL.COM
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609



RHINO
ACCORDION SHUTTER



ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA
DATE:
09/18/2020
DRAWING #
20-160
SHEET
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GENERAL NOTES: (FLORIDA BUILDING CODE 2020 - 7th ED. - HVHZ & non HVHZ)

- 1- DEFINITION: THIS PRODUCT IS AN ACCORDION TYPE SHUTTER; DESIGNED, CONSTRUCTED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LEVEL D OR LARGE MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 2- CODE: THIS PRODUCT HAS BEEN TESTED AND DESIGNED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE UNDER TAS 201, 202 AND 203, ASTM E330, ASTM E1886 & ASTM E1996.
- 3- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER FBC SECTION 1703.5. IT SHALL BE ONE LABEL PER OPENING LOCATED ON THE BOTTOM OF THE CENTER MATE FACING THE EXTERIOR SIDE.
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7-16. IN HVHZ OR AS REQUIRED BY THE BUILDING OFFICIAL, PRESSURES MUST BE PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES FOR EACH SHUTTER COMPONENT TO BE USED.
- 5- MATERIAL: ALL EXTRUDED ALUMINUM SHAPES SHALL BE MADE OF 6063-T6 OR AS NOTED.
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS. INSTALLATION AND LOADS AS PER THIS APPROVAL.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
 - 7.1- THE STABILITY OF THE STRUCTURE WHERE THE SHUTTER IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
 - 7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, WIND LOADS, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
 - 7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.
- 8- 33 1/3% INCREASE IN ALLOWABLE LOADS HAVE NOT BEEN USED IN THE DESIGN OF THE ANCHORS FOR THIS PRODUCT APPROVAL. HOWEVER, WOOD ANCHORS WITH 1.6 LOAD DURATION INCREASE FOR WIND LOAD HAVE BEEN USED.

USER INSTRUCTIONS:

- 1- DETERMINE PROJECT DESIGN WIND LOAD PRESSURES AS PER ITEM 4 OF GENERAL NOTES.
- 2- CHECK BLADE SPAN ALLOWABLE DESIGN PRESSURE ON TABLE 1 OR TABLE 1A.
- 3- VERIFY GLASS SEPARATION ON TABLE 2 IF APPLICABLE.
- 4- DETERMINE MAXIMUM ANCHORAGE PRESSURE CAPACITY FUNCTION OF SECTION TYPE TO BE USED AS PER SHEET 13 AND 14.
- 5- THE LOWEST PRESSURE FROM ITEMS 2 AND 4 ABOVE MUST NOT EXCEED THE REQUIRED DESIGN PRESSURE FROM GENERAL NOTES 4

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17	LOCK UNIMATE SECTION "M" WITH PUSH BUTTON OR HANDLE SCREW LOCK

STANDARD COMPLIANCE:

ASTM E330, E1996 (LEVEL D MISSILE)
TAS 201, 202, 203 (LARGE & SMALL MISSILE)
ASCE 7-16, ADM-15, NDS-18

FLORIDA STATE APPROVAL

CODE VERSION: FLORIDA BUILDING CODE 2020 - 6th EDITION
APPROVED FOR USE IN HVHZ AND OUTSIDE HVHZ
CATEGORY: SHUTTERS -- SUBCATEGORY: ACCORDION
IMPACT RESISTANT: (LEVEL D) - LARGE & SMALL MISSILE

REV. SEPT/2020

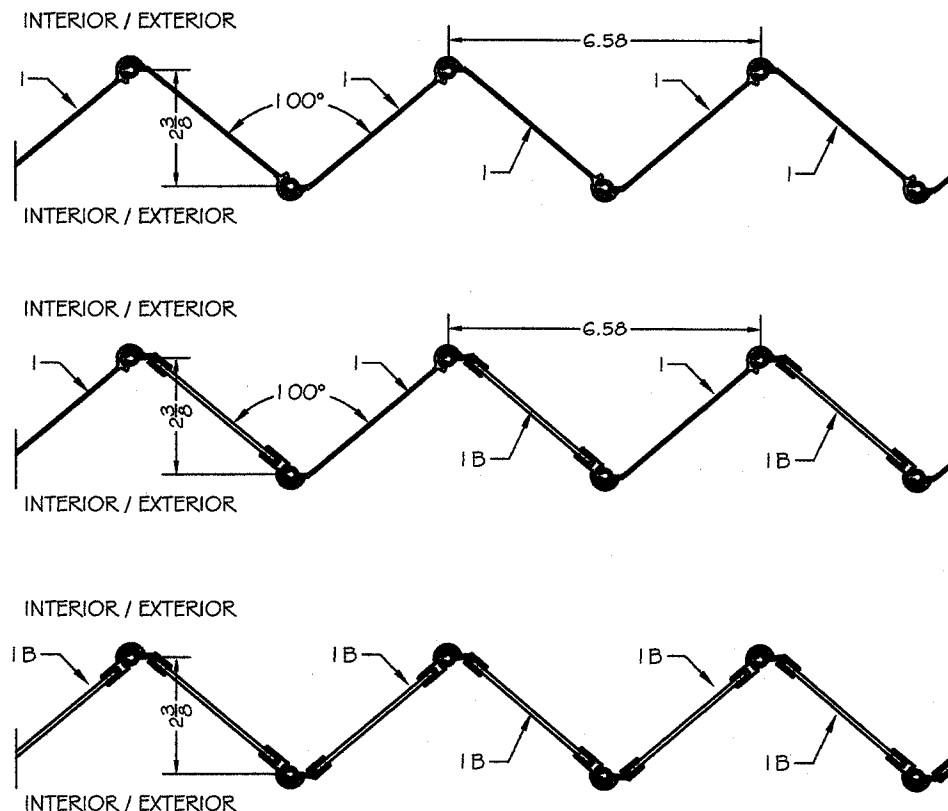
TABLE I
MAXIMUM ALLOWABLE #1 BLADE
SHUTTER SPAN X PRESSURE

BLADE SPAN INCHES	POS PRESSURE (PSF)	NEG PRESSURE (PSF)
60	160	160
66	158	158
72	144	144
78	133	133
84	124	124
90	116	116
96	108	108
104	100	100
108	93	93
114	83	83
120	75	75
126	68	68
132	62	62
138	57	57
144	48	52
150	41	48
162	30	40

NOTES:
1- ACCORDION SHUTTER BLADE SPAN (INCHES) FOR ALL CONDITIONS
2- PRESSURE - DESIGN WIND LOAD (PSF)
3- LINEAR INTERPOLATION IS ACCEPTABLE FOR DESIGN WIND LOADS AND BLADE SPAN BETWEEN TABULATED VALUES.
4- USE TABLE 1A WHEN ONE OR MORE TYPE 1B BLADE IS USED
5- BLADE REVERSED INSTALLATION IS ALLOWED FOR ALL MOUNTED CONDITIONS

TABLE 1A
MAXIMUM ALLOWABLE #1 & #1B BLADES
SHUTTER SPAN X PRESSURE

BLADE SPAN INCHES	POS PRESSURE (PSF)	NEG PRESSURE (PSF)
60	160	160
66	158	158
72	144	144
78	133	133
84	124	124
90	116	116
96	108	108
104	100	100
108	93	93
114	83	83
120	75	75
126	68	68
132	61	61
138	53	53
144	45	47
150	38	42
162	28	33

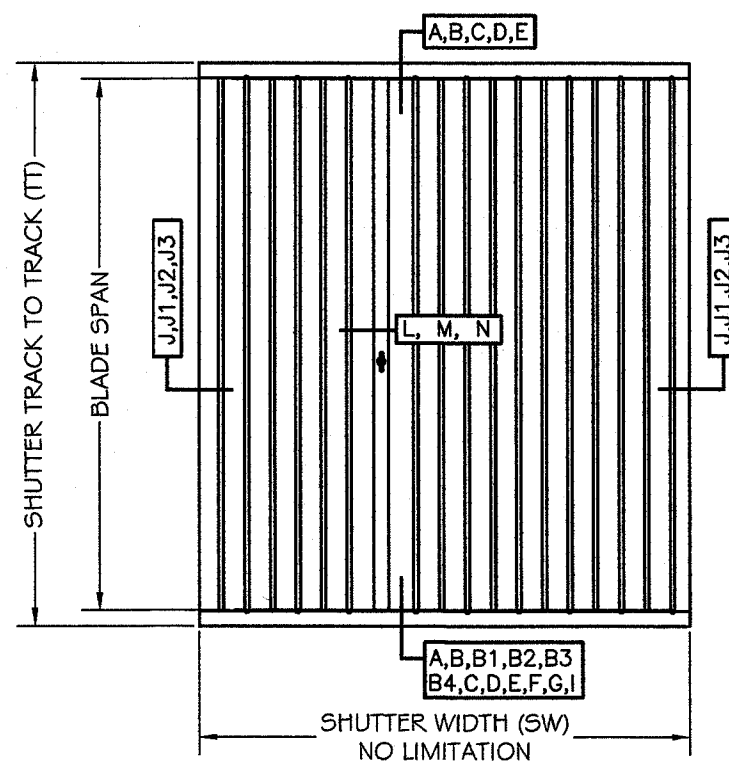


ALL ALUMINUM BLADES

COMBINATION
ALUMINUM / LEXAN BLADES
BLADES CAN BE ARRANGED IN MANY
COMBINATIONS AS REQUIRED

ALL LEXAN BLADES

TYPICAL ELEVATION



TYPICAL CROSS SECTION

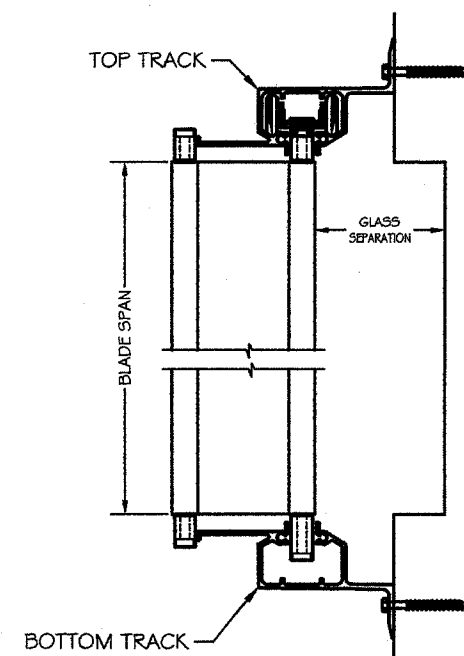
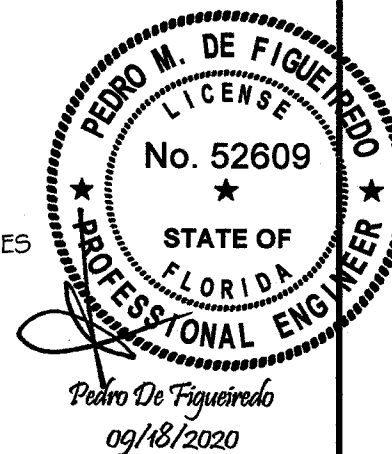


TABLE 2
MINIMUM SHUTTER SEPARATION FROM GLAZING

BLADE TYPE	GLAZING SEPARATION (INCHES)		
	BLADE SPAN		
	<=60"	<=104"	<=162"
ALUMINUM ALL ELEVATIONS	2"	2 3/4"	3"
LEXAN <=30' ELEVATION	3"	3"	3"
LEXAN >30' ELEVATION	2 1/8"	3"	3"

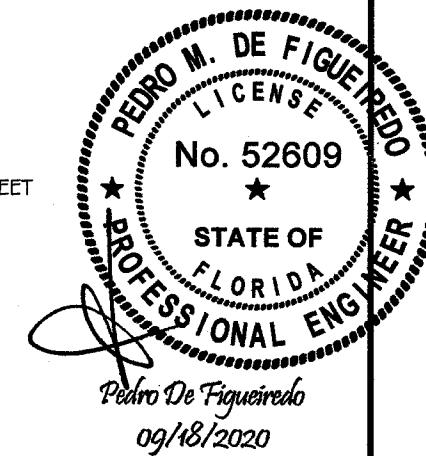
NOTES:
1- SEPARATION FROM GLAZING AREAS SHALL BE MEASURED FROM GLAZING SURFACE TO THE INNER MOST BLADE OR LOCK SURFACE.
2- GLASS SEPARATION IS APPLICABLE ONLY WITHIN THE HVHZ (BROWARD AND MIAMI-DADE COUNTIES), WIND ZONE 4 AS PER ASTM E1996 AND ESSENTIAL FACILITIES AS DEFINED ON ASCE 7-10.
3- WHEN SHUTTER IS ASSEMBLED WITH BOTH TYPES OF BLADES THE LARGEST GLASS SEPARATION SHALL APPLY.



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TYPICAL SECTIONS

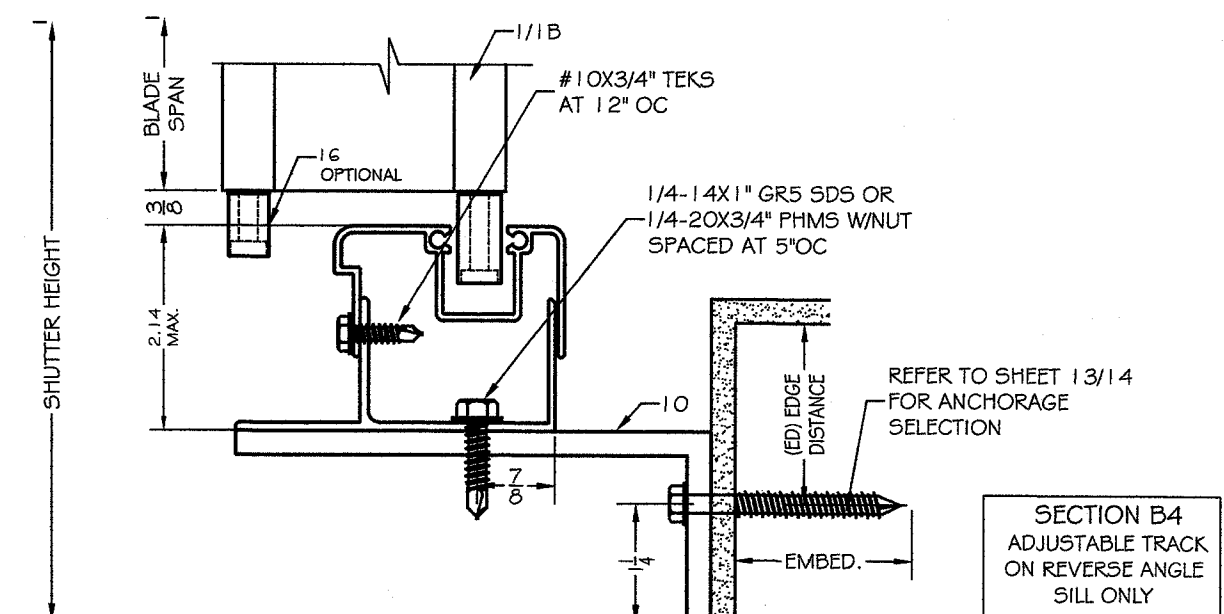
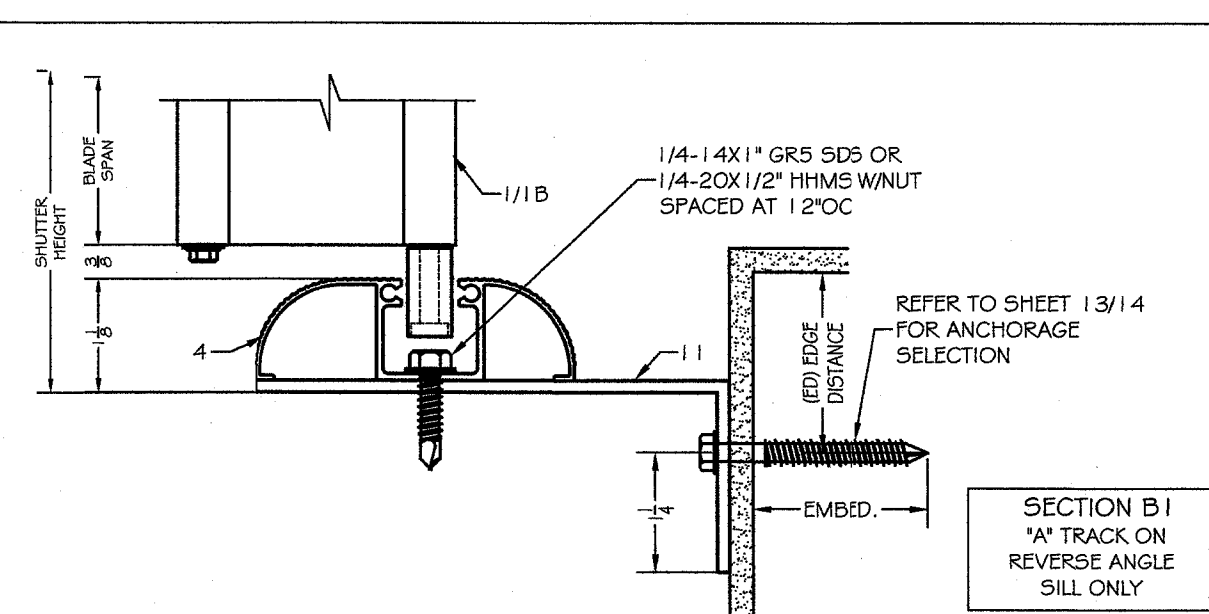
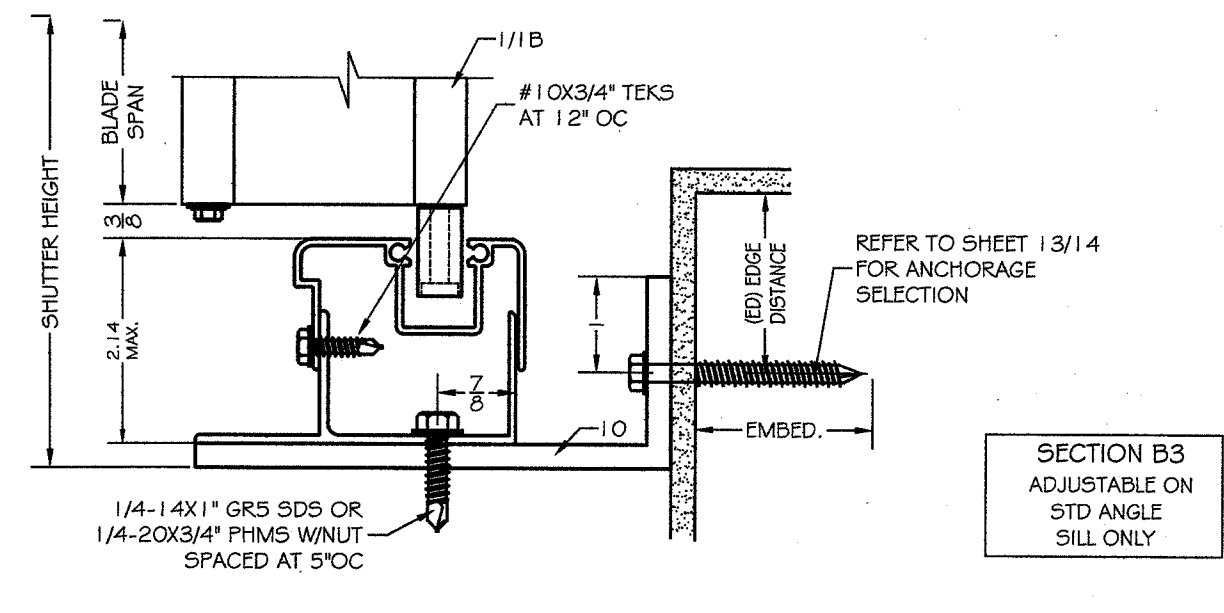
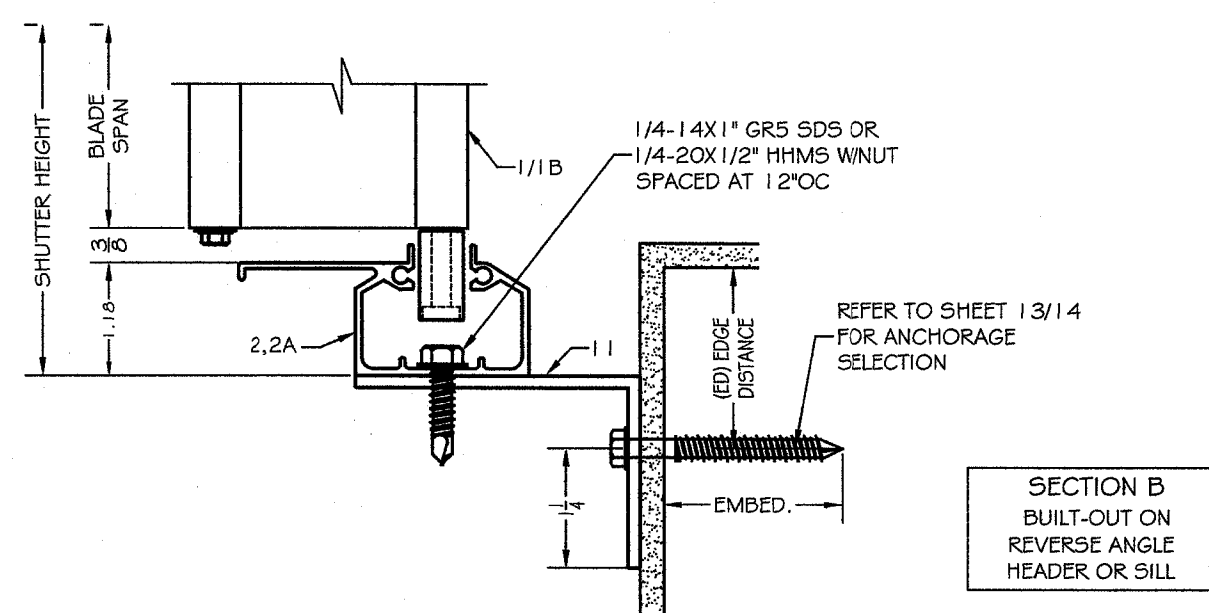
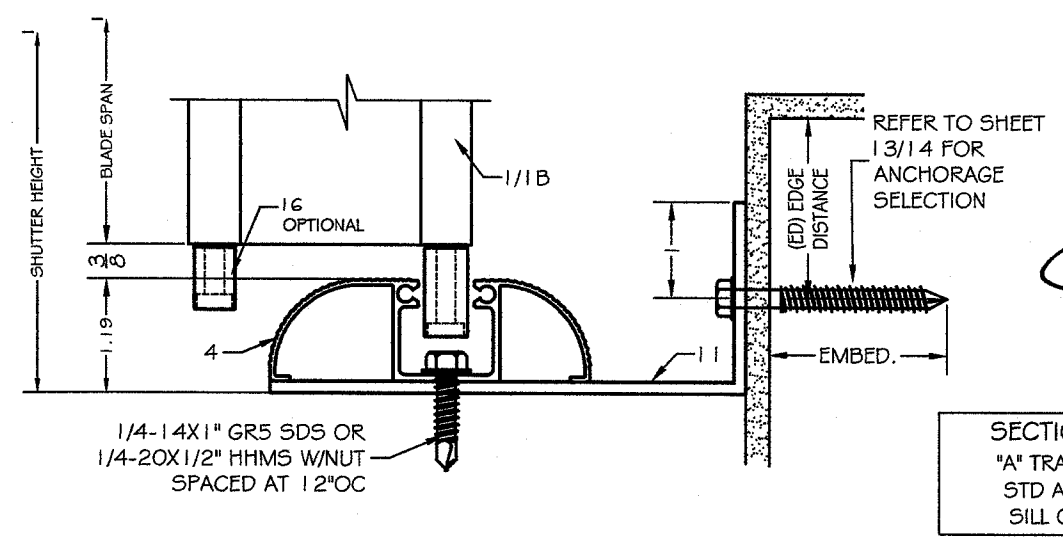
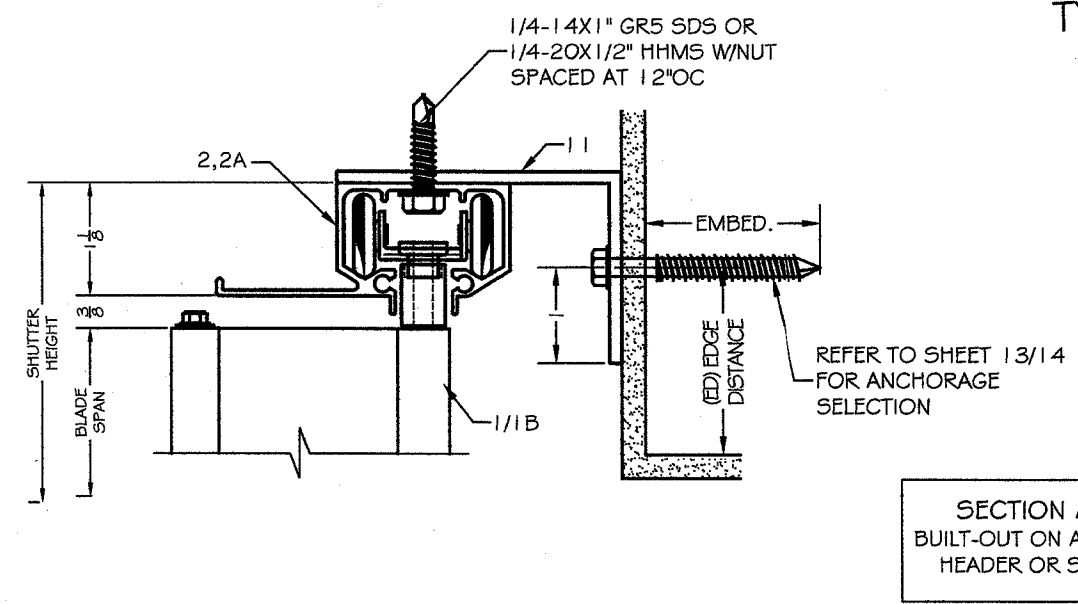


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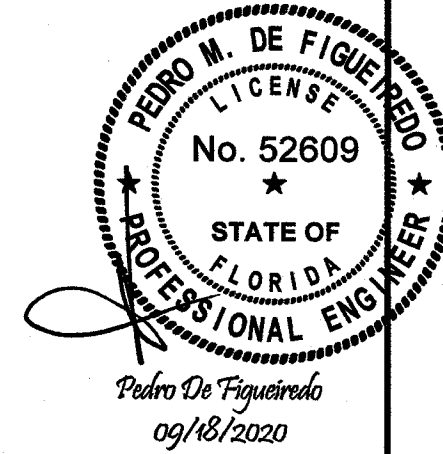
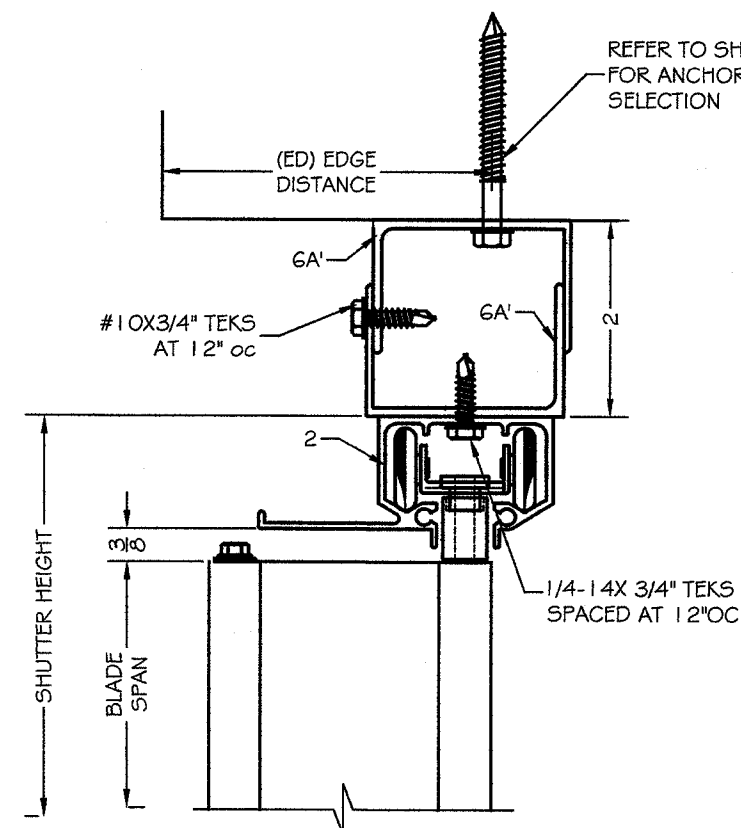
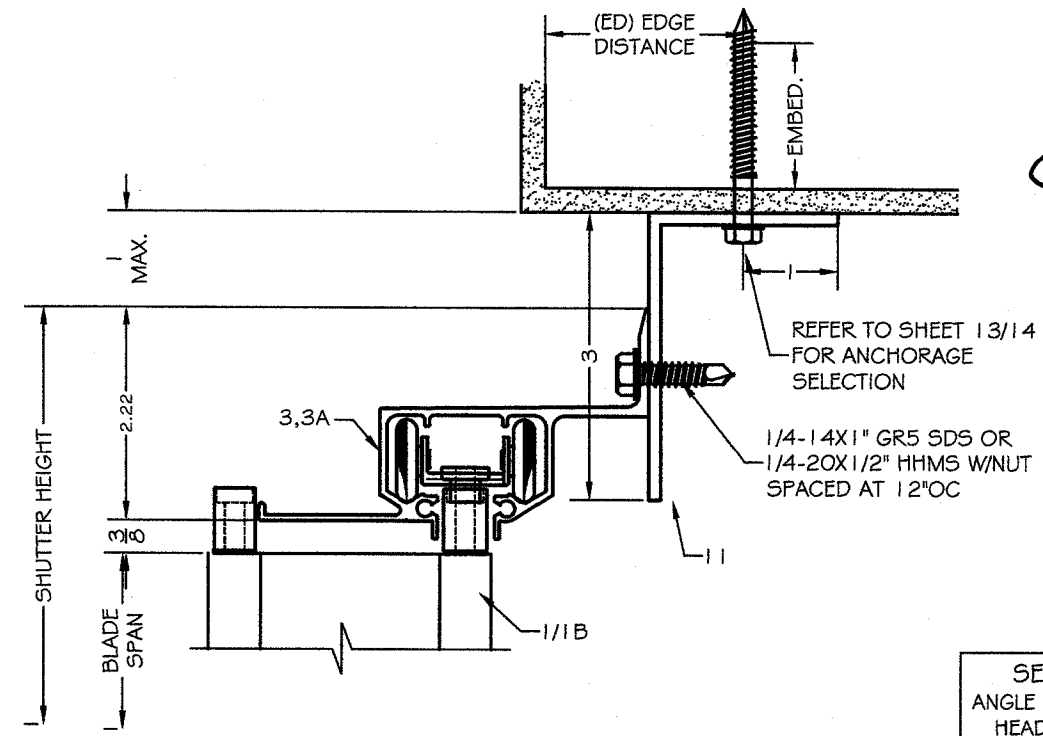
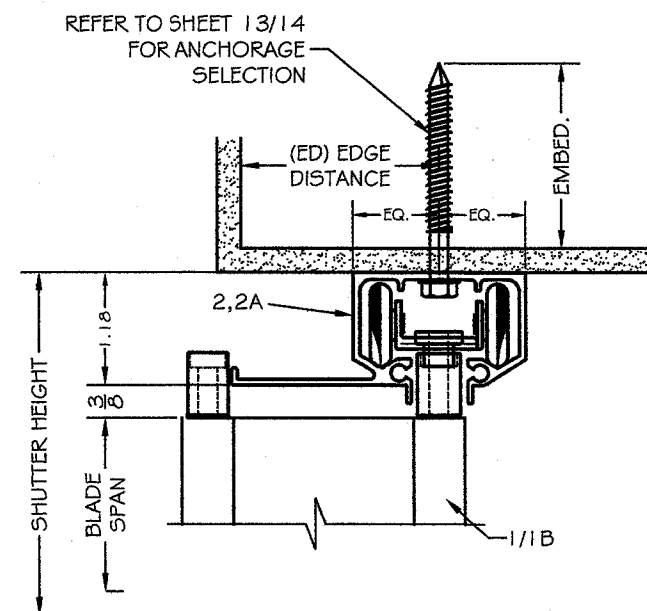
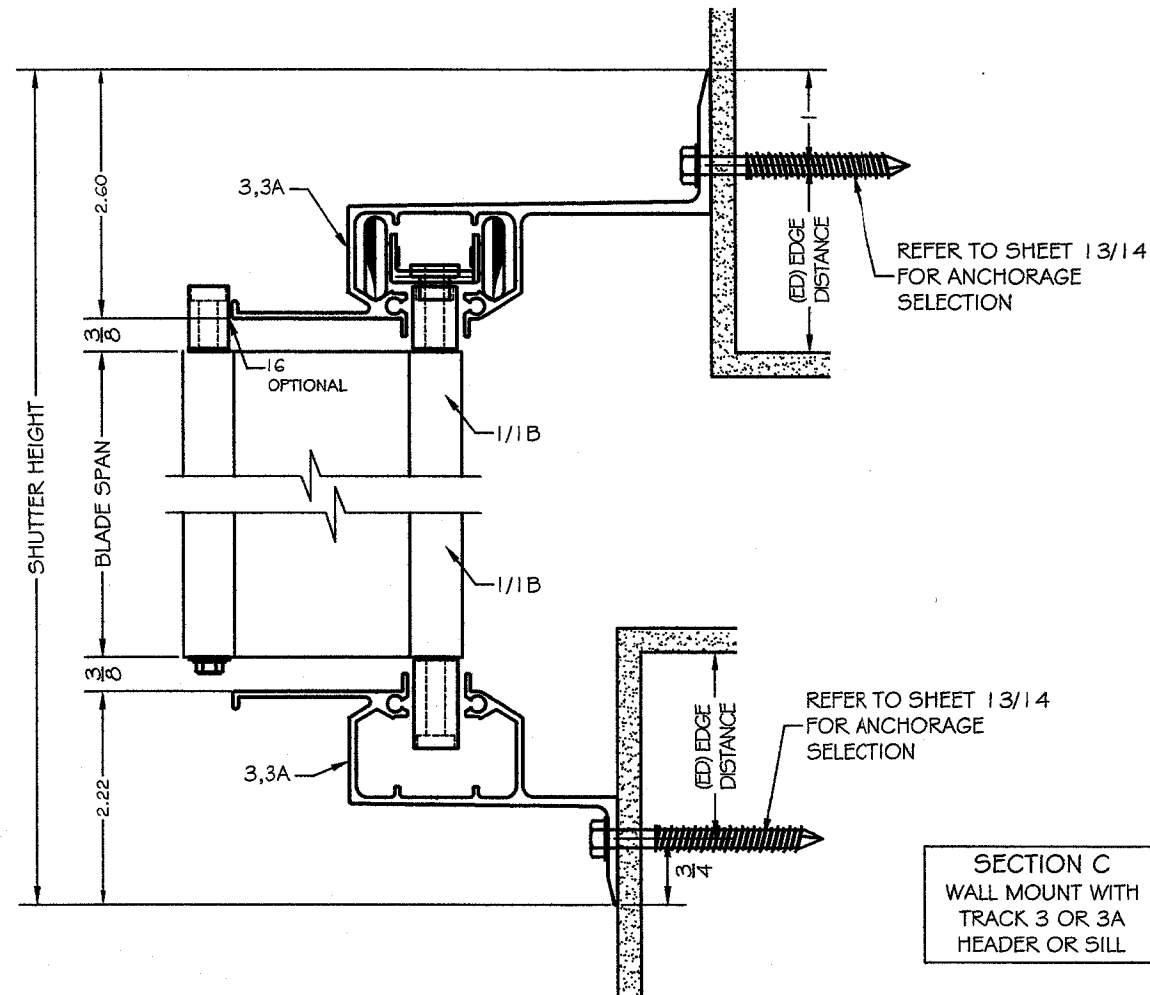


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TYPICAL SECTIONS



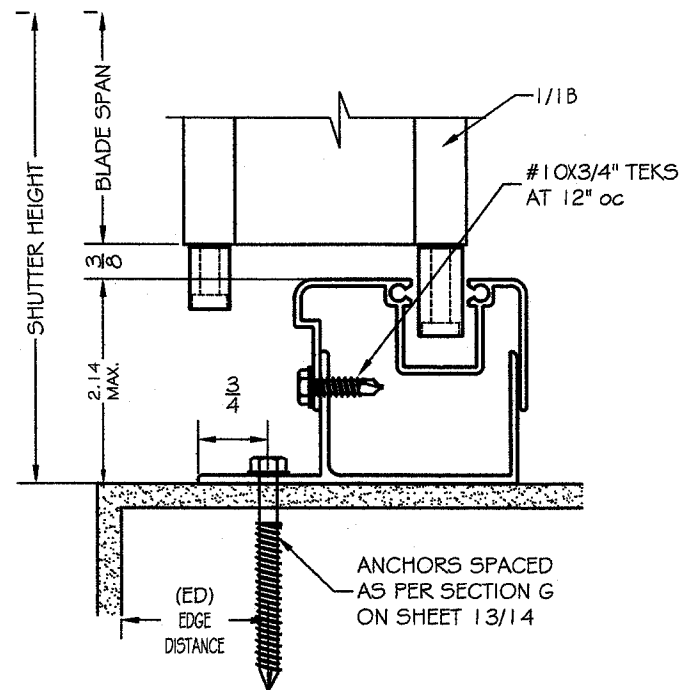
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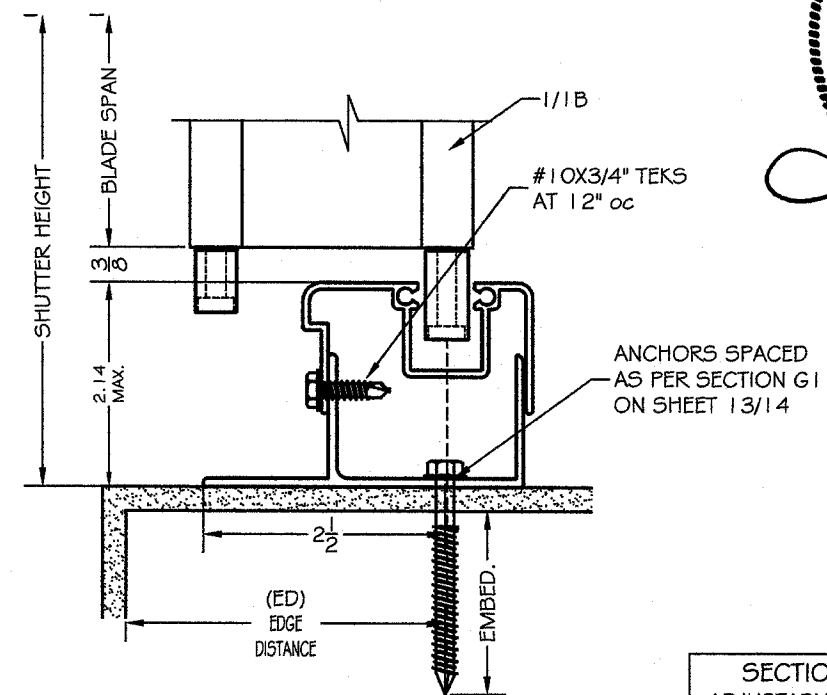
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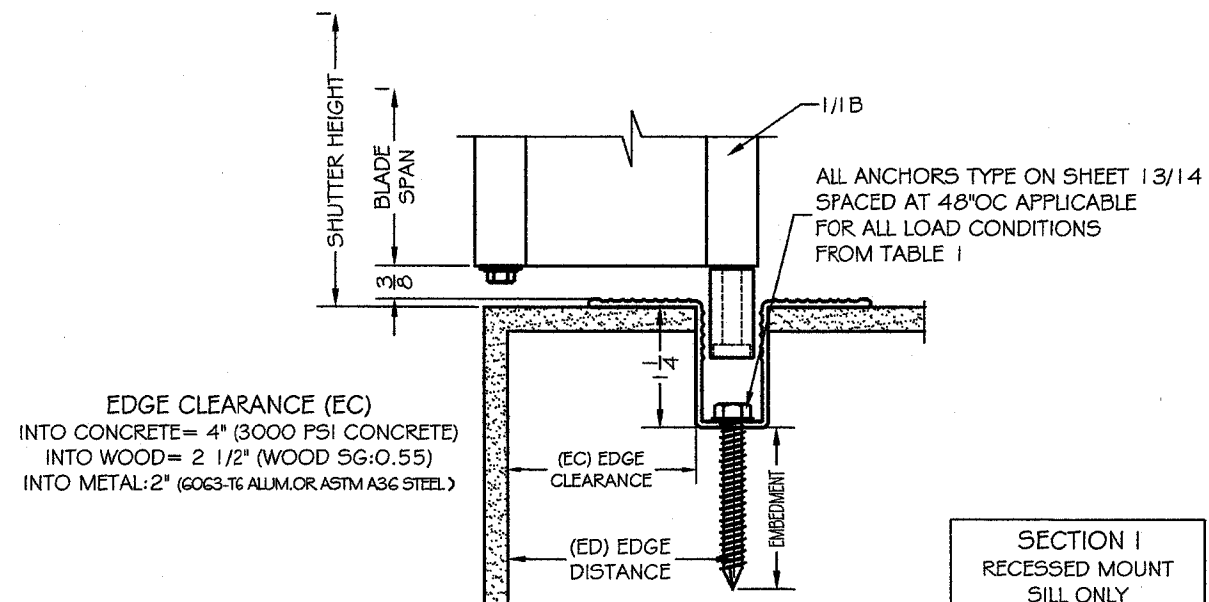
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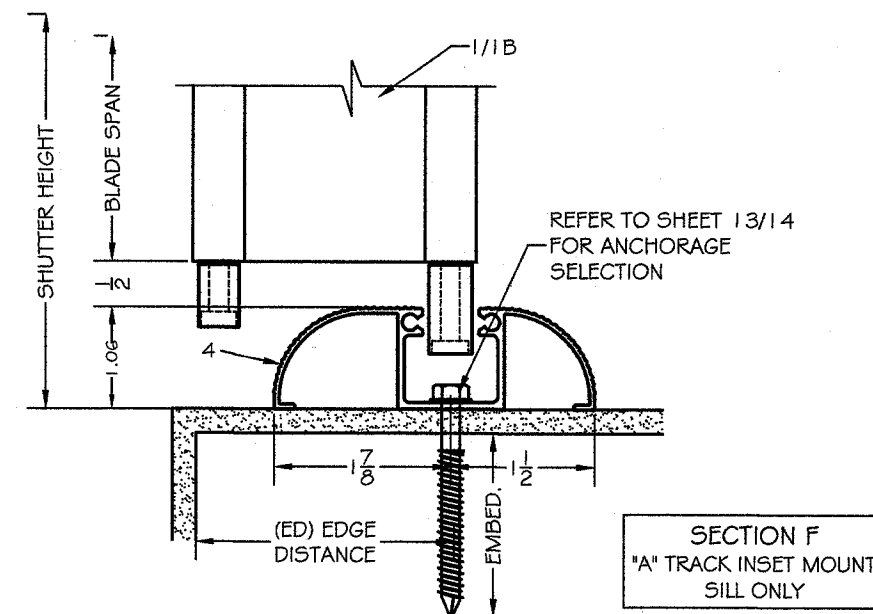
SECTION G
ADJUSTABLE MOUNT
SILL ONLY



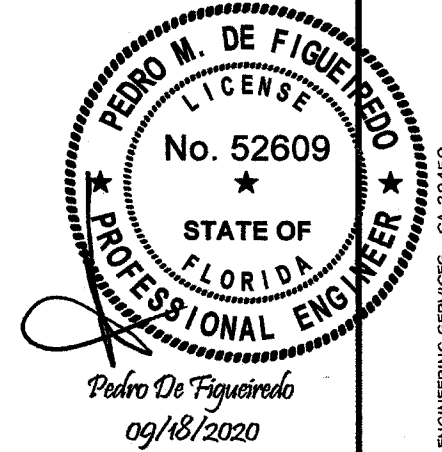
SECTION G1
ADJUSTABLE MOUNT
SILL ONLY



SECTION I
RECESSED MOUNT
SILL ONLY



SECTION F
"A" TRACK INSET MOUNT
SILL ONLY



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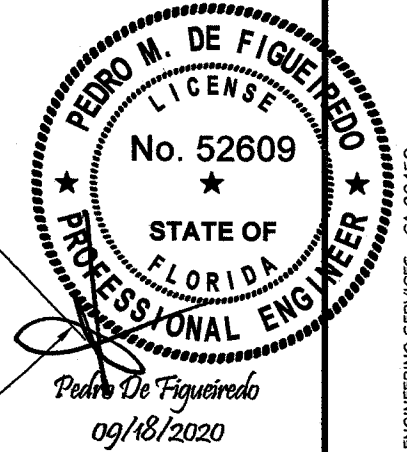
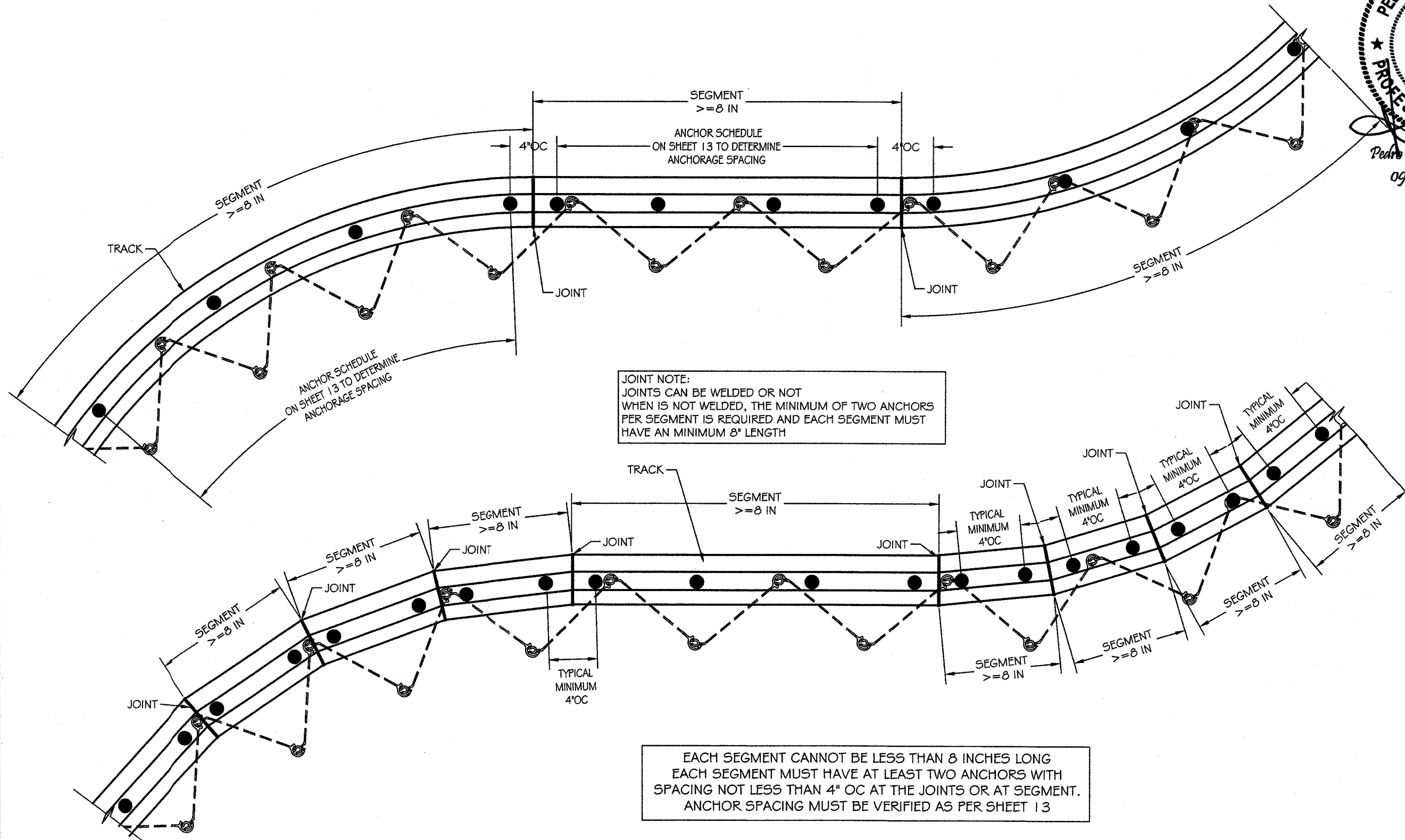
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OPTIONAL CURVED TRACK BENT TRACK OR SEGMENTED TRACK OPTIONS



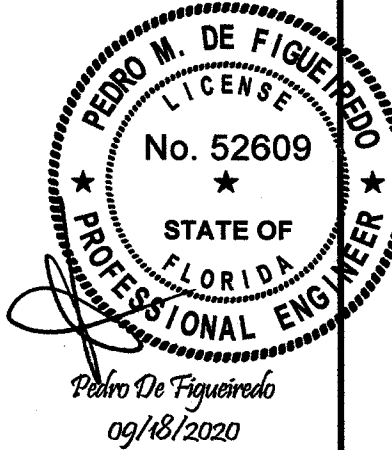
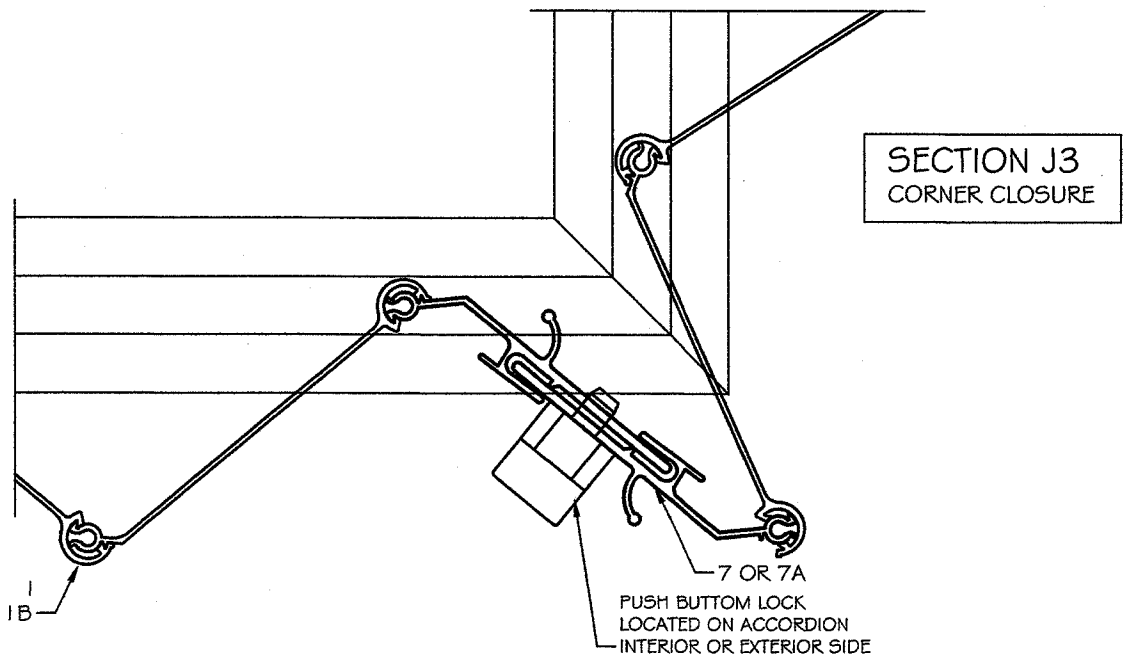
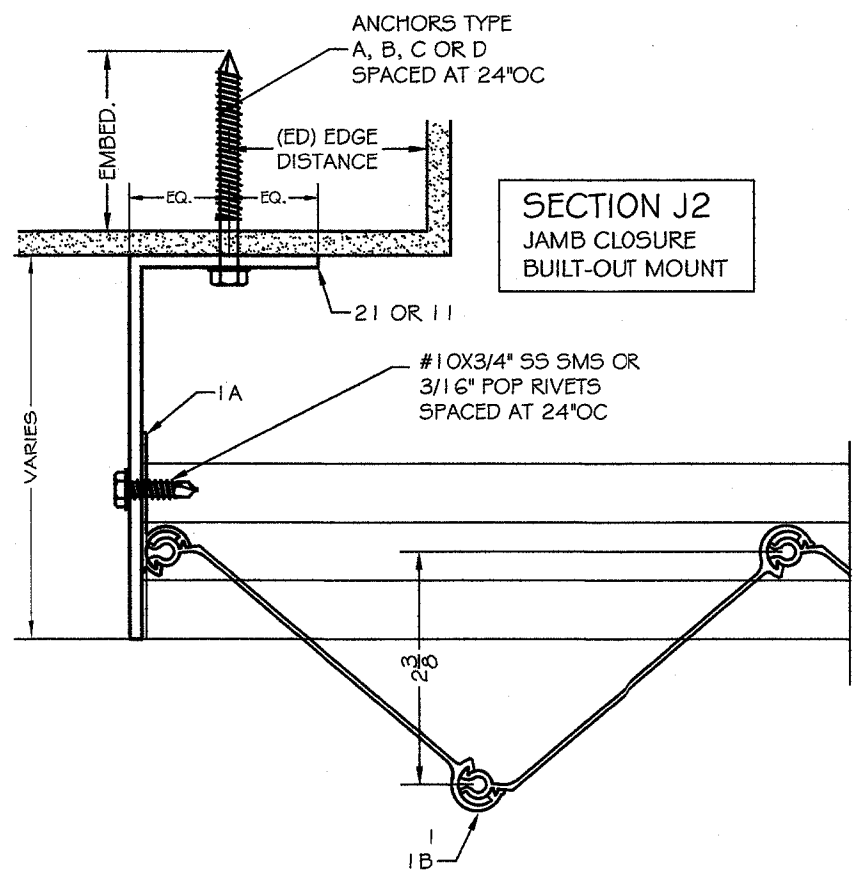
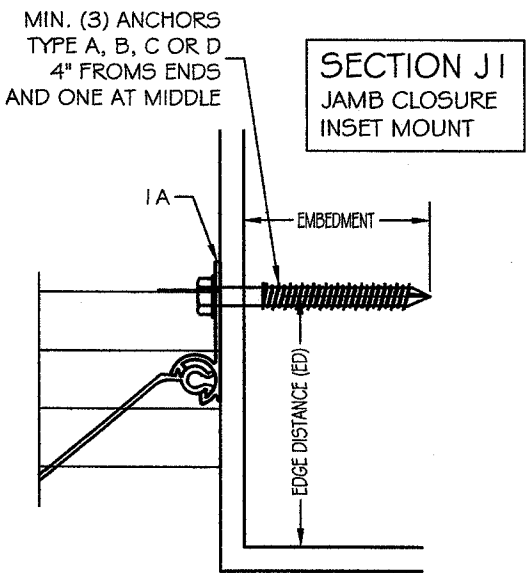
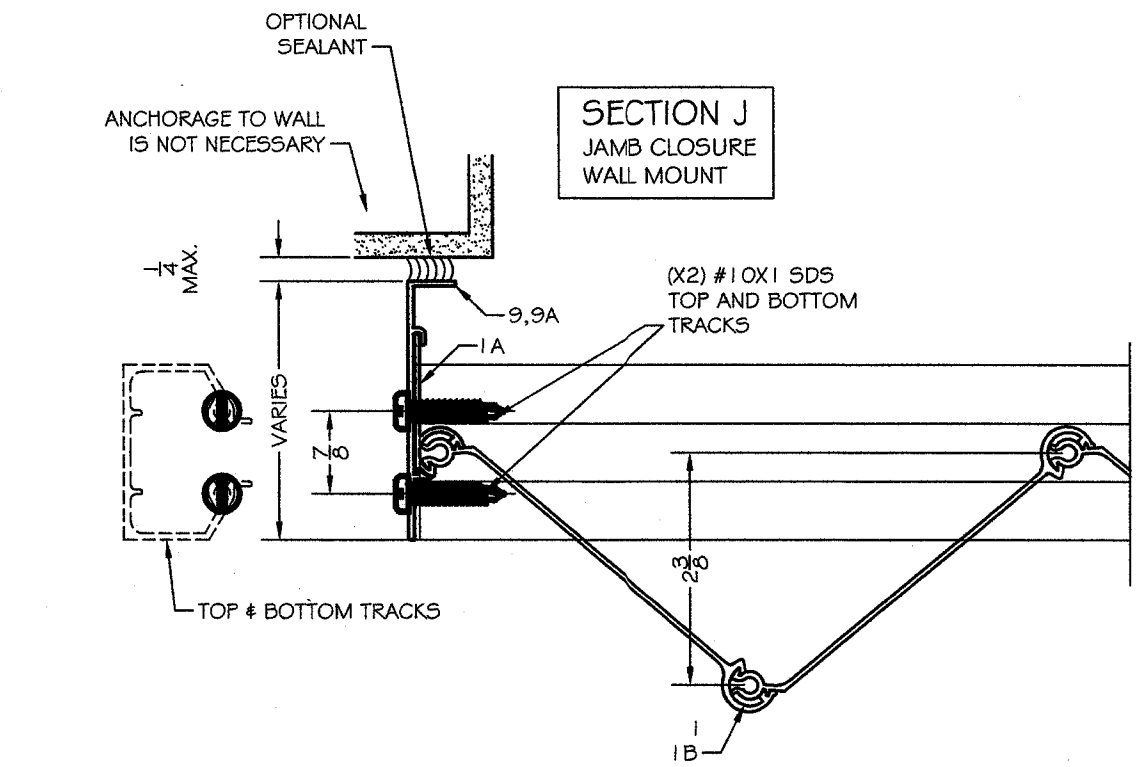
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TYPICAL HORIZONTAL JAMB AND CORNER SECTIONS J



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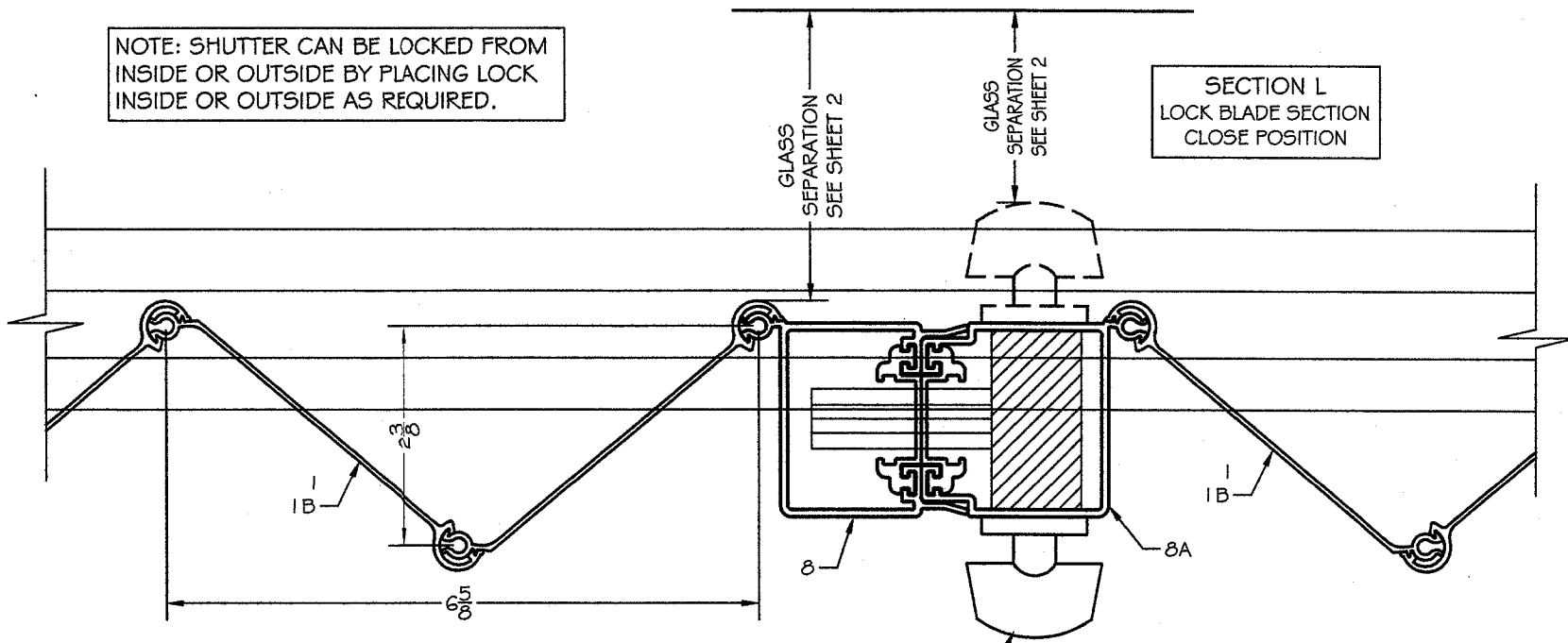


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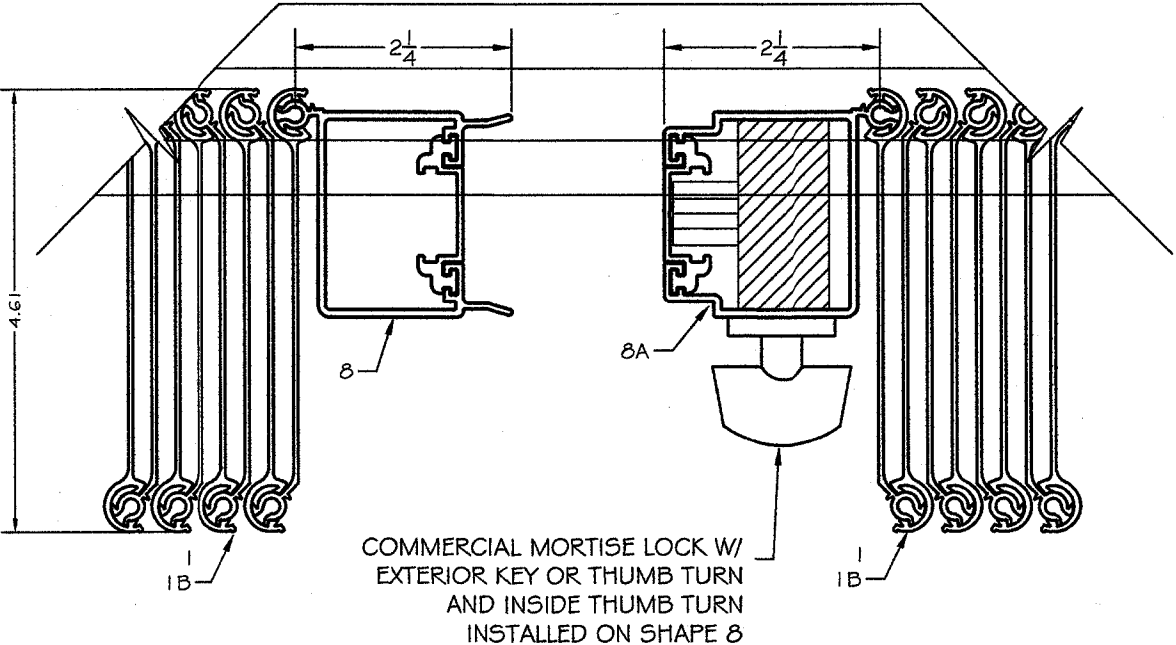
TYPICAL HORIZONTAL SECTIONS HD LOCK SECTIONS L

NOTE: SHUTTER CAN BE LOCKED FROM
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INSIDE OR OUTSIDE AS REQUIRED.

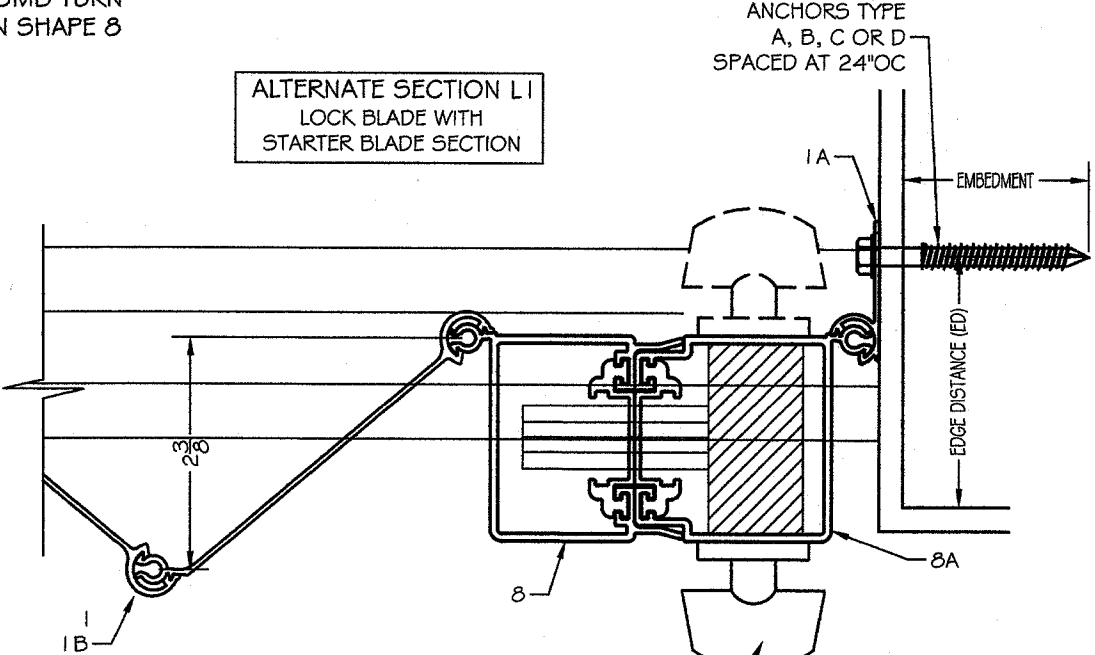


COMMERCIAL MORTISE LOCK W/
EXTERIOR KEY OR THUMB TURN
AND INSIDE THUMB TURN
INSTALLED ON SHAPE 8

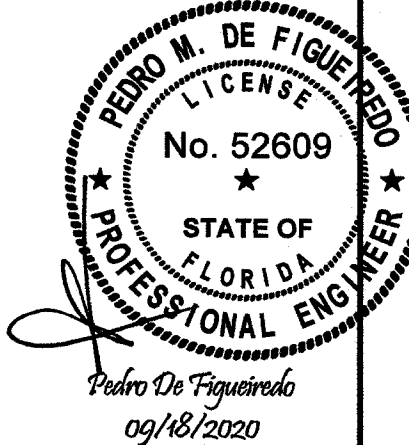
SECTION L
LOCK BLADE SECTION
OPEN POSITION



ALTERNATE SECTION L I
LOCK BLADE WITH
STARTER BLADE SECTION



COMMERCIAL MORTISE LOCK W/
EXTERIOR KEY OR THUMB TURN
AND INSIDE THUMB TURN
INSTALLED ON SHAPE 8



RHINO
ACCORDION SHUTTER



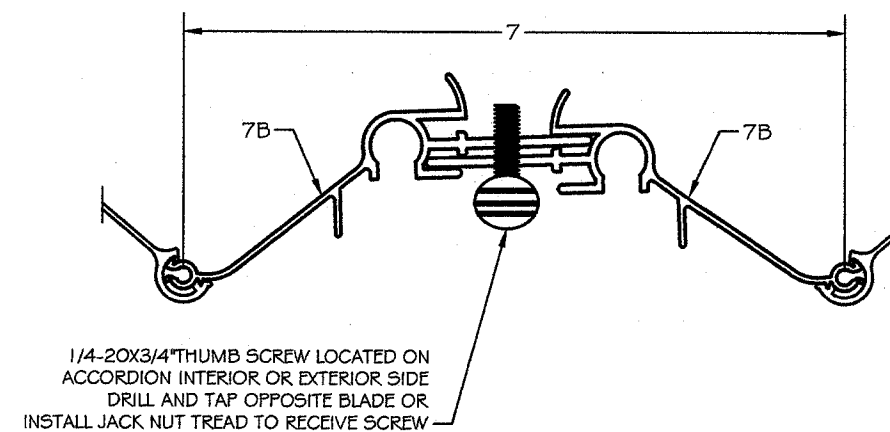
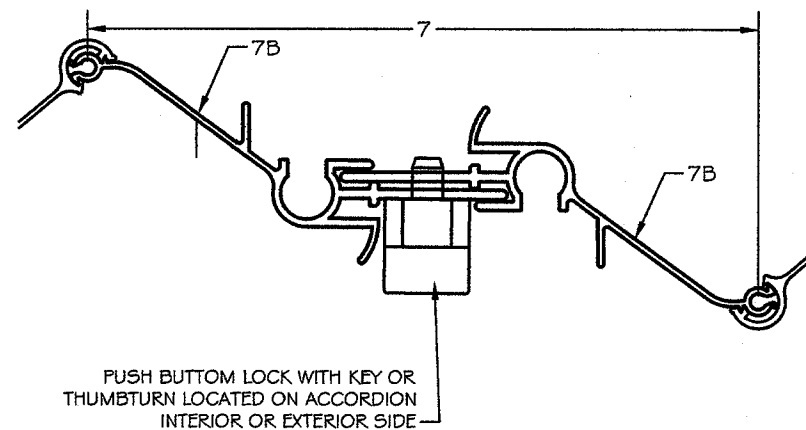
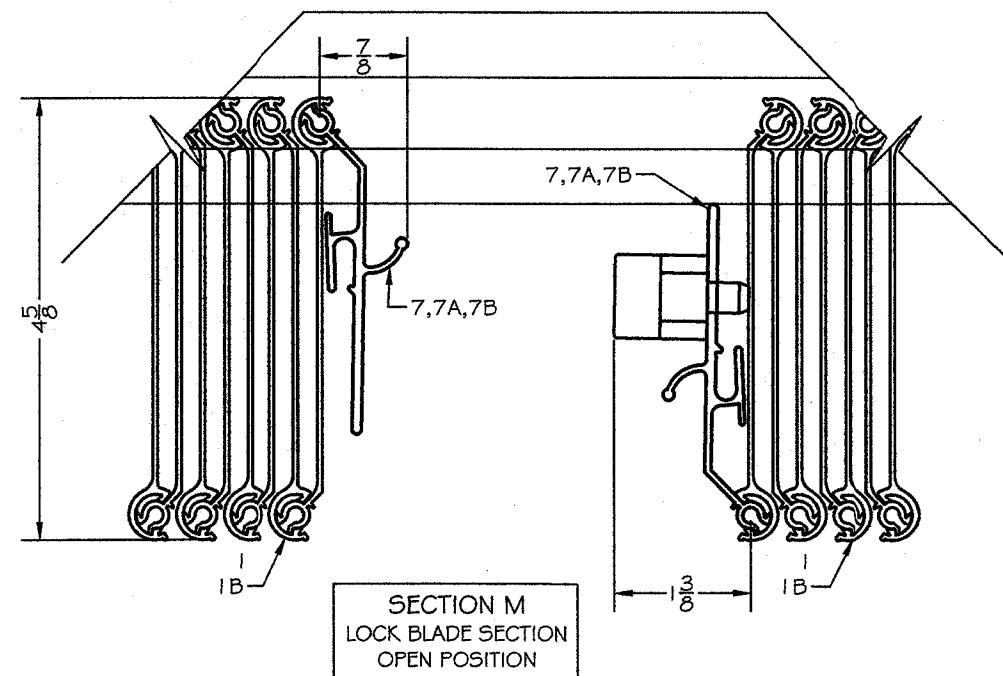
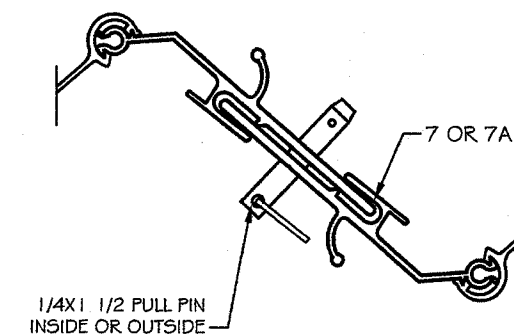
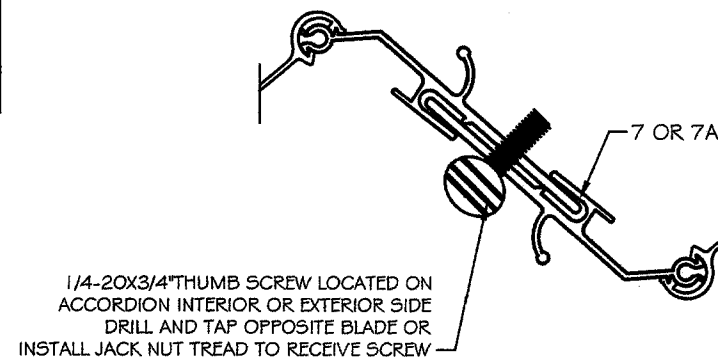
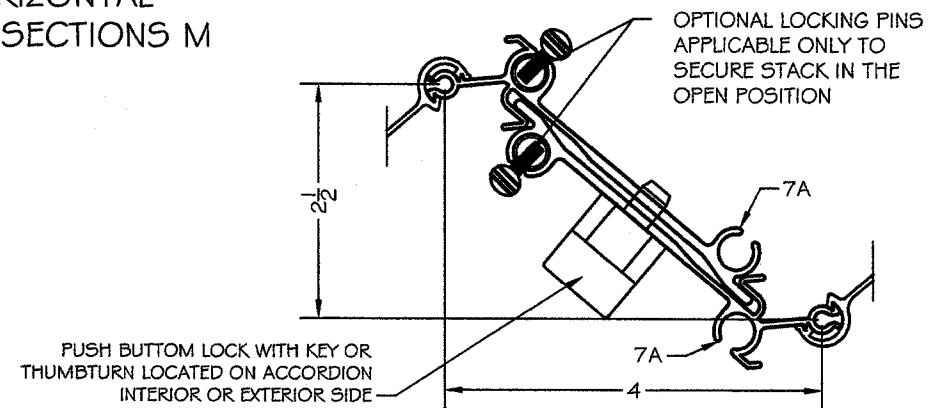
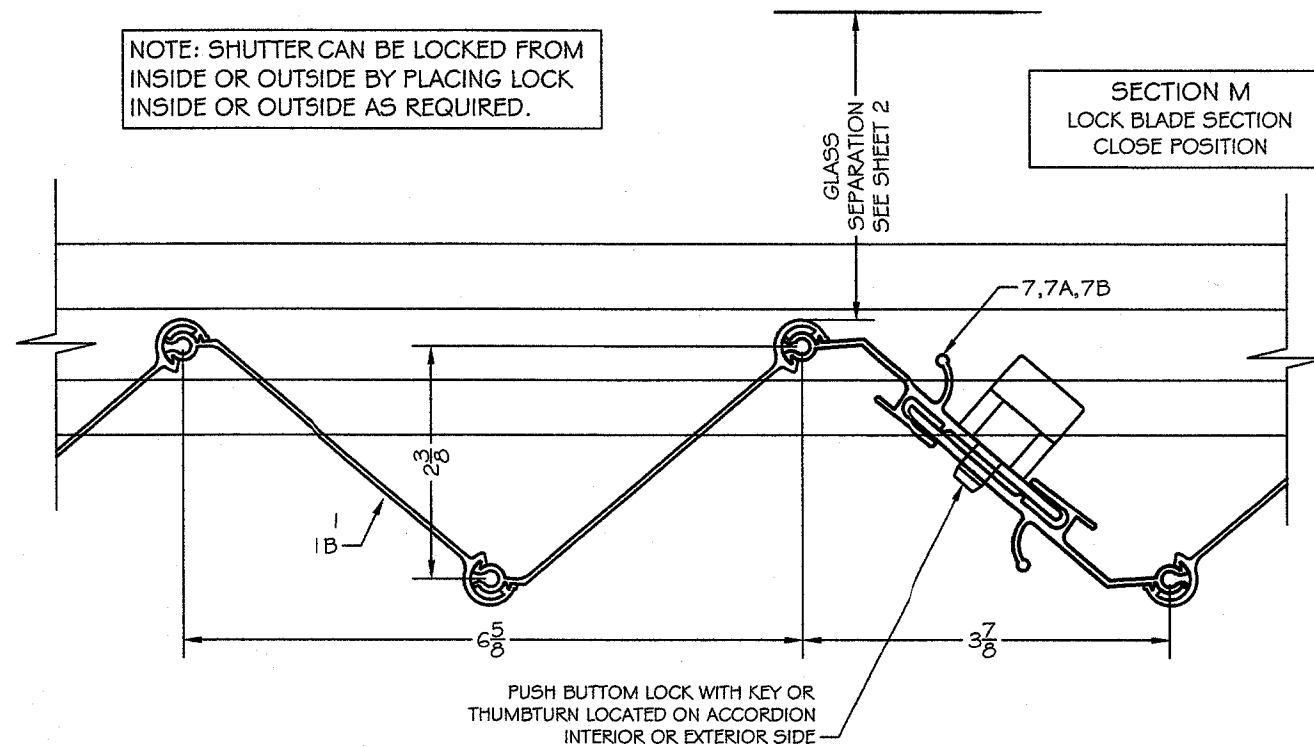
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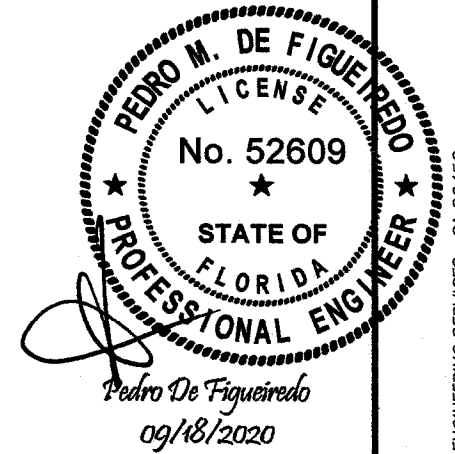
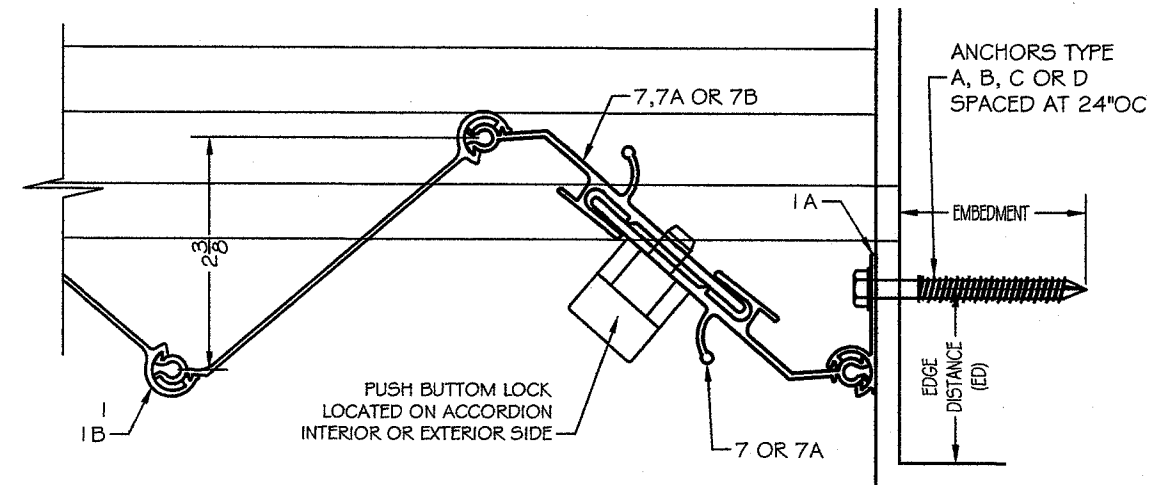
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TYPICAL HORIZONTAL UNIMATE LOCK SECTIONS M

NOTE: SHUTTER CAN BE LOCKED FROM
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ALTERNATE SECTION M I
LOCK BLADE WITH
STARTER BLADE SECTION



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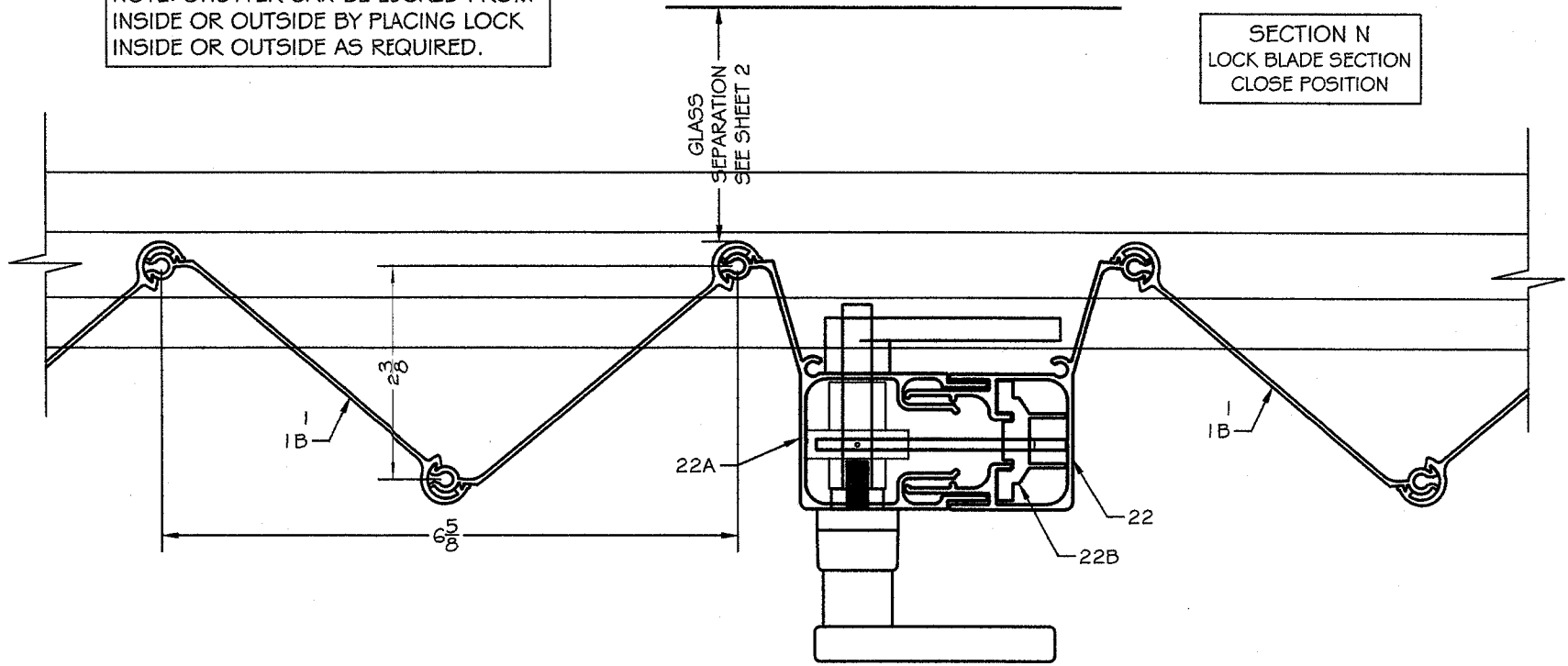
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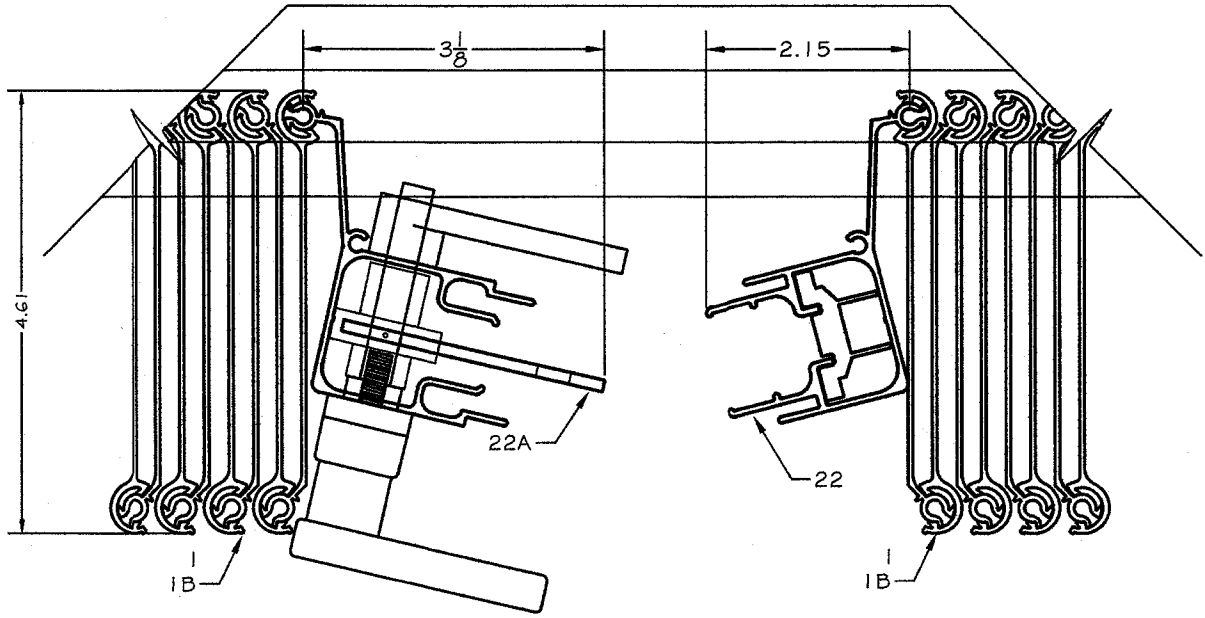
TYPICAL HORIZONTAL SECTIONS
STD LOCK SECTIONS N

NOTE: SHUTTER CAN BE LOCKED FROM
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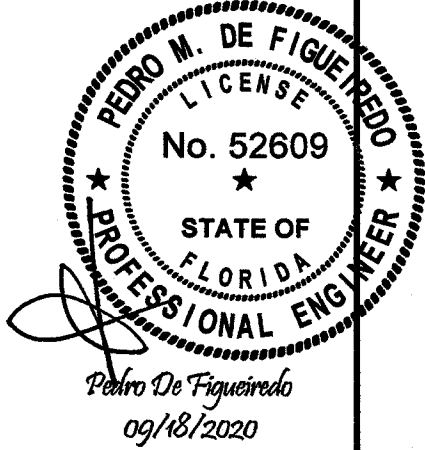
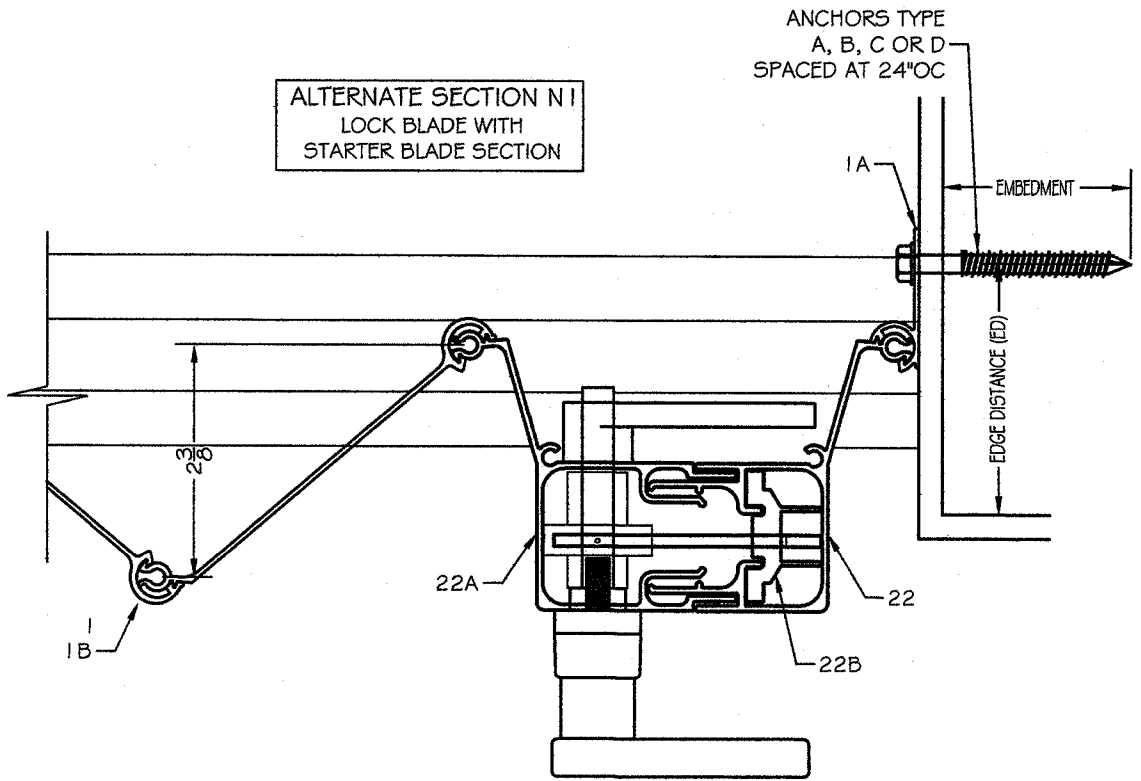
SECTION N
LOCK BLADE SECTION
CLOSE POSITION



SECTION N
LOCK BLADE SECTION
OPEN POSITION



ALTERNATE SECTION N I
LOCK BLADE WITH
STARTER BLADE SECTION



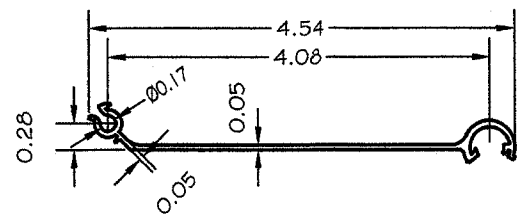
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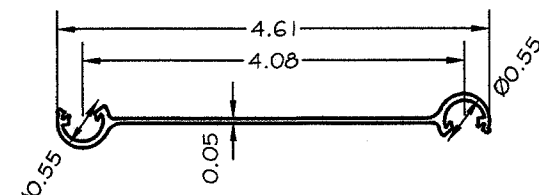
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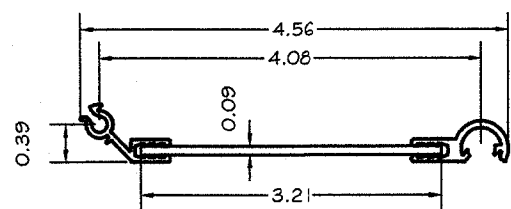
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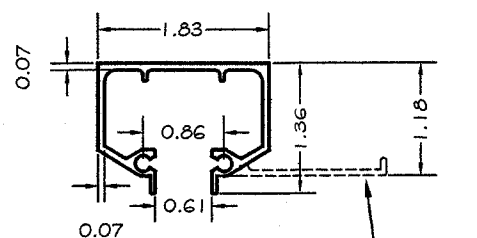
1- 0.05" ACCORDION BLADE



1C- 0.05" FLOATING STACK BLADE

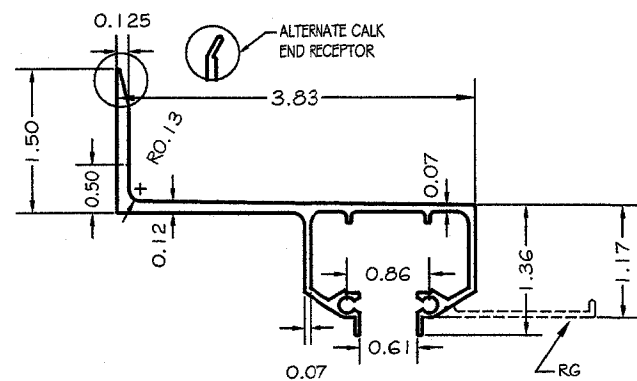


1B- COMPOSITE
ALUMINUM / LEXAN BLADE
LEXAN POLYCARBONATE APPROVED
AS PER NOA 13-0717.01
XL102UV



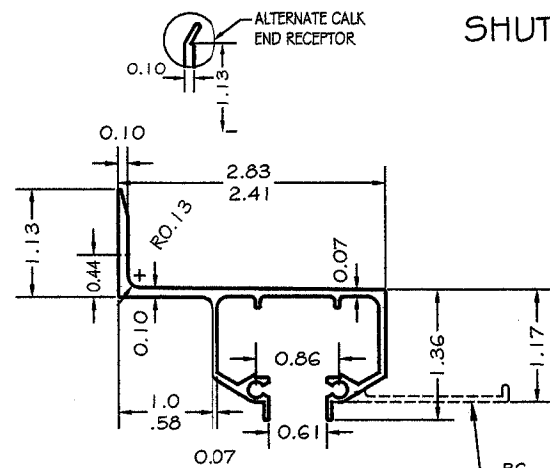
2- INSET TRACK W/ RG
HEADER / SILL MOUNT

2.1- INSET TRACK W/O RG
HEADER / SILL MOUNT



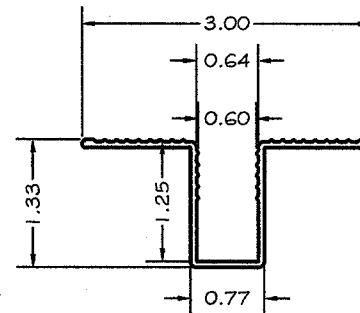
3A- 2" BUILD-OUT TRACK
HEADER / SILL MOUNT

3A.1- 2" BO TRACK W/O
RAIN GUARD (RG)

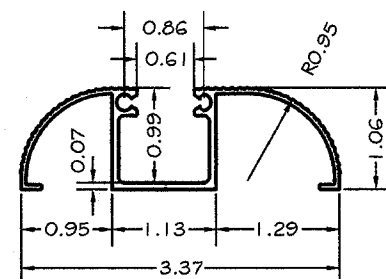


3- 1" \parallel $\frac{1}{2}$ " BUILT-OUT TRACK
HEADER / SILL MOUNT

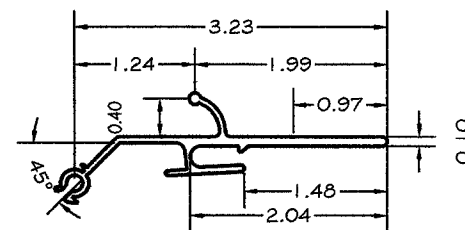
3.1- 1" \parallel $\frac{1}{2}$ " BO TRACK W/O
RAIN GUARD (RG)



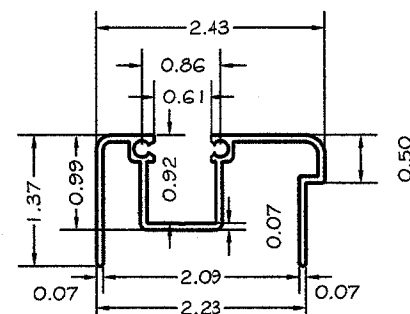
5- RECESSED TRACK
SILL MOUNT ONLY



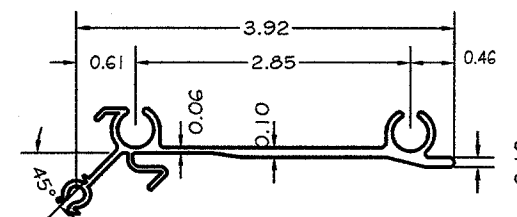
4- "A" TRACK
SILL MOUNT ONLY



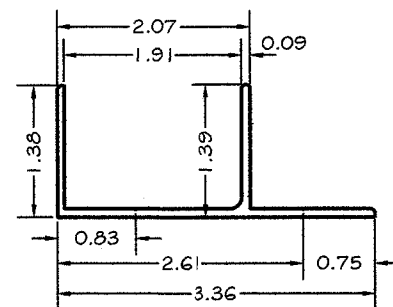
7- UNIMATE W/O LP
LOCKING BLADES



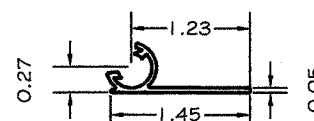
6- ADJUSTABLE FEMALE
HEADER/ SILL MOUNT



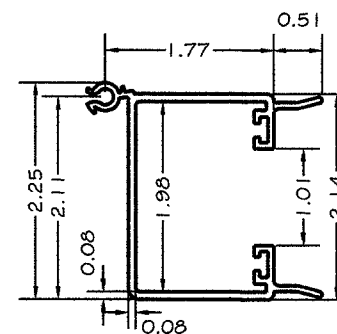
7A- UNIMATE W/ LP
LOCKING BLADES



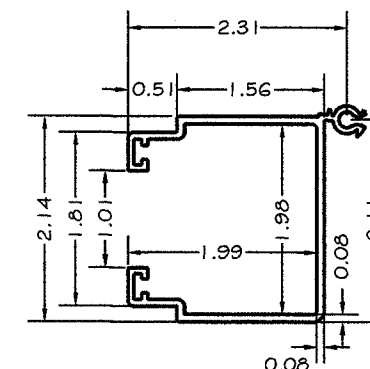
6A- ADJUSTABLE MALE
HEADER/ SILL MOUNT



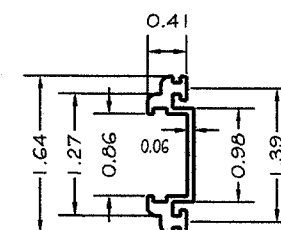
1A- STARTER BLADE



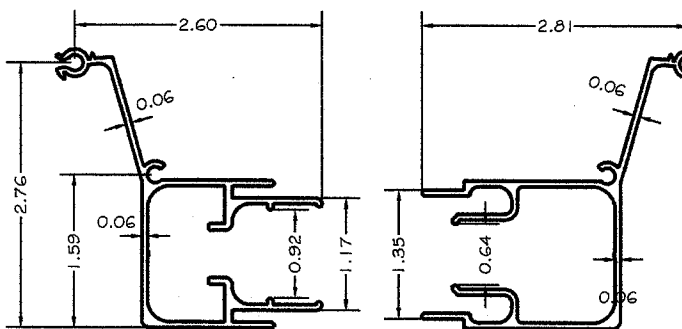
8- FEMALE HD
LOCKING BLADE



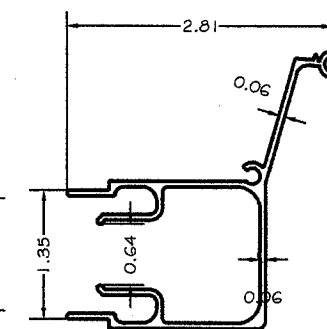
8A- MALE HD
LOCKING BLADE



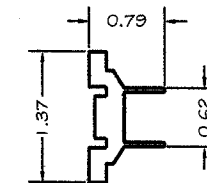
8B- ADAPTOR FILLER
USE WITH 8 AND 8A



22- FEMALE STD
LOCKING BLADE

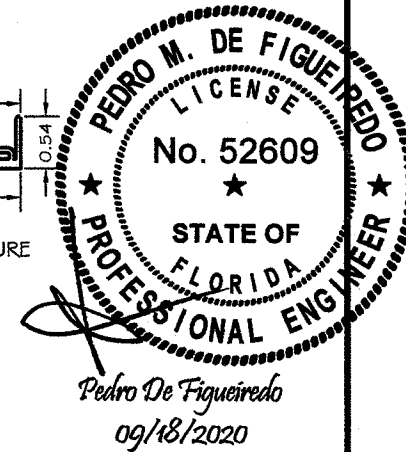


22A- MALE STD
LOCKING BLADE



22B- LOCK KEEPER INSERT

SHUTTER COMPONENTS



ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC.
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA

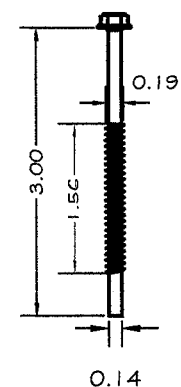
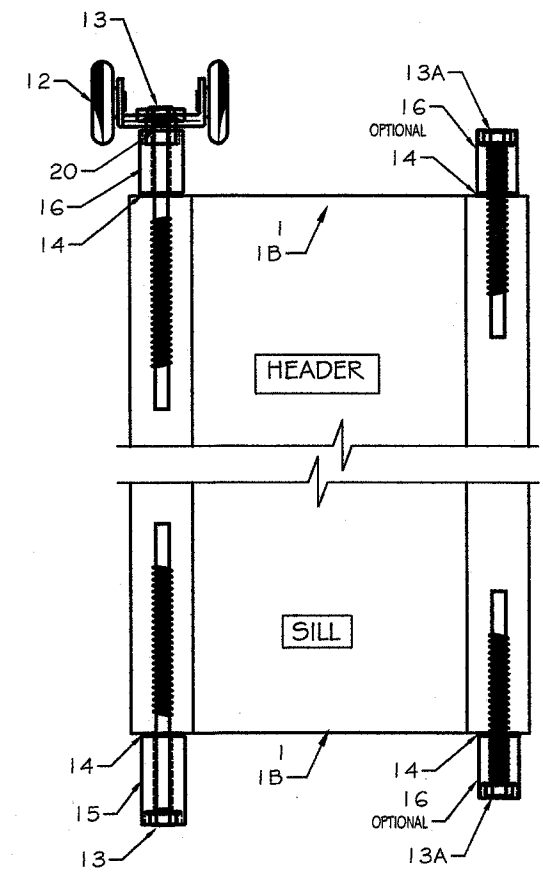
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09/18/2020

DRAWING #
20-160

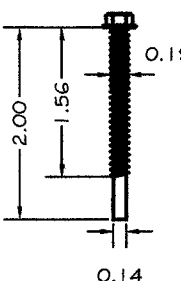
SHEET
11 OF 17

ENGINEERING SERVICES - CA 32459
9249 CHELSEA DR. S
PLANTATION, FL 33324
PEDRO DE FIGUEIREDO
PE 52609
PPMF@AOL.COM

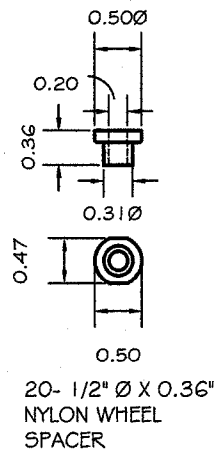
TYPICAL BLADE ASSEMBLY



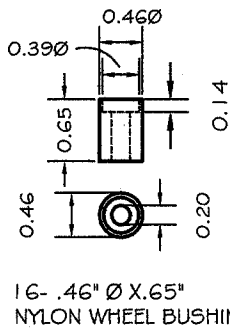
13- #10X3" HH
BLADE SCREW
410 STAINLESS STEEL



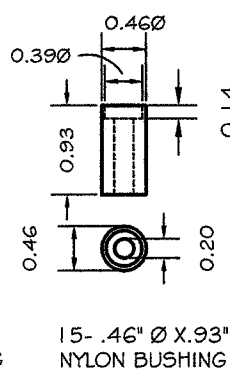
13A- #10X2" HH
BLADE SCREW
410 STAINLESS STEEL



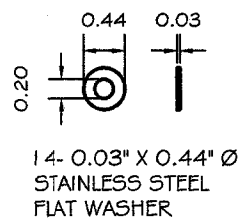
20- 1/2" Ø X 0.36"
NYLON WHEEL
SPACER



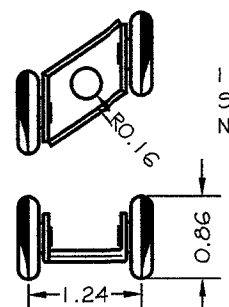
16- .46" Ø X 0.65"
NYLON WHEEL BUSHING



15- .46" Ø X 0.93"
NYLON BUSHING



14- 0.03" X 0.44" Ø
STAINLESS STEEL
FLAT WASHER



12- WHEEL CARRIER
STAMPED SS WITH
NYLON WHEELS

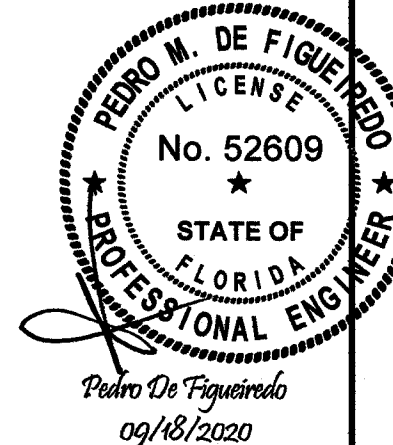
BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL	SUPPLIER
1	BLADE	6063-T6 ALUMINUM	M.S.S. INC.
1A	STARTER BLADE	6063-T6 ALUMINUM	M.S.S. INC.
1B	COMPOSITE BLADE	6063-T6 / LEXAN	M.S.S. INC.
1C	FLOATING STACK BLADE	6063-T6 ALUMINUM	M.S.S. INC.
2	CEILING TRACK	6063-T6 ALUMINUM	M.S.S. INC..
3	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	M.S.S. INC..
3A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	M.S.S. INC..
4	"A" TRACK	6063-T6 ALUMINUM	M.S.S. INC..
5	RECESSED TRACK	6063-T6 ALUMINUM	M.S.S. INC..
6	ADJUSTABLE FEMALE TRACK	6063-T6 ALUMINUM	M.S.S. INC..
6A	ADJUSTABLE MALE TRACK	6063-T6 ALUMINUM	M.S.S. INC..
7	UNIMATE LOCK BLADE W/O LP	6063-T6 ALUMINUM	M.S.S. INC..
7A	UNIMATE LOCK BLADE W/ LP	6063-T6 ALUMINUM	M.S.S. INC..
8	HD FEMALE LOCK BLADE	6063-T6 ALUMINUM	M.S.S. INC..
8A	HD MALE LOCK BLADE	6063-T6 ALUMINUM	M.S.S. INC..
8B	HD ADAPTOR FILLER	6063-T6 ALUMINUM	M.S.S. INC..
9	1" JAMB CLOSURE	6063-T6 ALUMINUM	M.S.S. INC..
9A	2" JAMB CLOSURE	6063-T6 ALUMINUM	M.S.S. INC..
10	1/4-2X ANGLE	6063-T6 ALUMINUM	M.S.S. INC..
11	1/8-2X ANGLE	6063-T6 ALUMINUM	M.S.S. INC..
12	WHEEL CARRIER	PLATED STEEL/ NYLON	M.S.S. INC..
13	#10X3" HH BLADE SCREW	410 STAINLESS STEEL	M.S.S. INC..
13A	#10X2" HH BLADE SCREW	410 STAINLESS STEEL	M.S.S. INC..
14	0.44" Ø FLAT WASHER	STAINLESS STEEL	M.S.S. INC..
15	0.46" Ø x 0.93" BUSHING	NYLON	M.S.S. INC..
16	0.46" Ø x 0.65" WHEEL BUSHING NYLON		M.S.S. INC..
19	PUSH-BUTTON LOCK		
20	1/2"x 3/8" WHEEL SPACER	NYLON	M.S.S. INC..
21	1/16"-1X2, 1X2.5, 1X4, 1.5X3 ANGLES	6063-T5 ALUMINUM	M.S.S. INC..
22	STD FEMALE LOCK BLADE	6063-T6 ALUMINUM	M.S.S. INC..
22A	STD MALE LOCK BLADE	6063-T6 ALUMINUM	M.S.S. INC..
22B	STD LOCK KEEPER	6063-T6 ALUMINUM	M.S.S. INC..

ANCHOR SCHEDULE

TYPE	DESCRIPTION	EMB	E.D.
A	1/4" ITW TAPCON INTO 3000 PSI CONCRETE	1.75	3.0
	1/4" ELCO ULTRACON INTO 2700 PSI CONCRETE	1.75	2.5
A1	1/4" ITW TAPCON INTO CONCRETE BLOCK	1.25	3.0
	1/4" ELCO ULTRACON INTO CONCRETE BLOCK	1.25	2.5
B	1/4-20X1 ALL POINTS SOLID-SET INTO 3.0 KSI CONCRETE	0.875	3.0
B1	1/4-20X1 ALL POINTS SOLID-SET INTO CONCRETE BLOCK	0.875	3.0
C	1/4" WOOD LAG SCREW INTO G=.55 WOOD	1.50	0.75
D	1/4"-14 SELF DRILLING SCREWS INTO 1/8" STEEL OR ALUMINUM	---	0.75
E	1/4" CRETE-FLEX 554 INTO 3000 PSI CONCRETE	1.75	3.0
E1	1/4" CRETE-FLEX 554 INTO CONCRETE BLOCK (2000 PSI)	1.25	3.0

- NOTES:
- 1- ED: EDGE DISTANCE SHALL BE BEYOND WALL DRESSING
 - 2- EMB: EMBEDMENT SHALL BE BEYOND WALL DRESSING
 - 3- 1/4" TAPCON, 1/4" CRETE-FLEX, #14 WOOD SCREWS CAN BE USED IN REPLY OF 1/4" LAG SCREWS
 - 4- ANCHORS TYPE A CAN BE USED WITH REDUCED EDGE DISTANCE (3.0>E.D.>=1 1/4") WHEN THE TABLE ANCHOR SPACING VALUES ON SHEET 13/14 ARE MULTIPLIED BY 0.95. THIS IS APPLICABLE ONLY FOR MOUNTS TYPE A, B, B1, B2, B3, B4 AND C
 - 5- THE ANCHOR TYPE A1 CAN BE USE WITH REDUCED EDGE DISTANCE OF 1" FOR ITW TAPCONS AND 2" FOR ULTRACONS FOR INSTALLATIONS WITH MOUNTS TYPE A, B, B1, B2, B3, B4 AND C. THE TABLE VALUES ON SHEET 13 CAN BE USED W/O REDUCTION.



ENGINEERING SERVICES - CA 32459
9249 CHELSEA DR. S
PLANTATION, FL 33324
PPMF@AOL.COM
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609



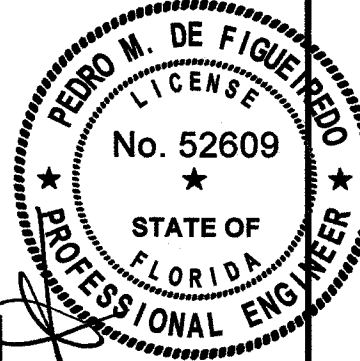
ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA
DATE:
09/18/2020
DRAWING #
20-160
SHEET
12 OF 17

ANCHOR SPACING TABLE
30 PSF <= PD <= 70 PSF

			MOUNT TYPE																																								
			A, B1, B2, B3, B4								B, C								D					E					GH					G					G1, F				
			ANCHOR TYPES								ANCHOR TYPES								ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES				
PD	SPAN		A	A1	B	B1	C	D	E	E1	A	A1	B	B1	C	D	E	E1	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E					
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ANCHOR SPACING TABLE
80 PSF <= PD <= 160 PSF



Pedro De Figueiredo
09/18/2020



RHINO
ACCORDION SHUTTER



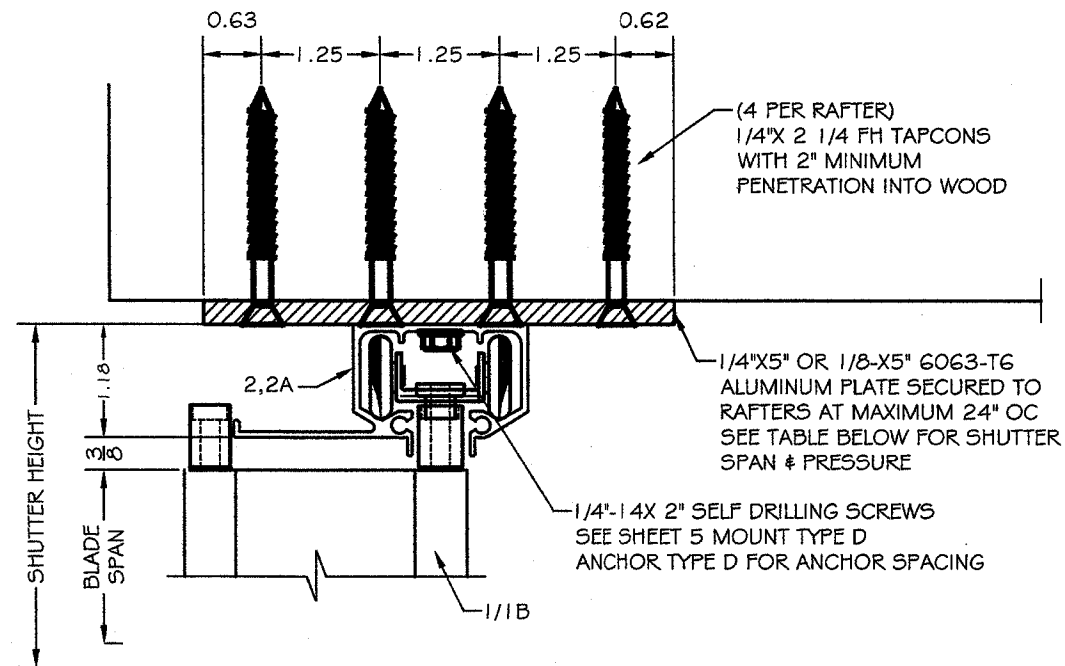
ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA
DATE:
09/18/2020
DRAWING #
20-160
SHEET
14 OF 17

		MOUNT TYPE																																									
		A, B1, B2, B3, B4								B, C								D					E					GH					G					G1, F					
		ANCHOR TYPES								ANCHOR TYPES								ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					
PD	SPAN	A	A1	B	B1	C	D	E	E1	A	A1	B	B1	C	D	E	E1	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
80	120	14	—	14	9	14	9	14	7	6	—	7	—	6	—	7	—	6	7	—	4	7	—	—	—	—	4	—	—	—	—	—	—	4	—	—	5	8	9	4	6	9	
	96	14	4	14	12	14	12	14	9	14	4	14	12	14	12	14	9	8	9	4	5	9	4	5	—	—	5	—	4	—	—	4	5	6	—	—	6	10	12	5	7	12	
	84	14	5	14	14	14	13	14	10	14	5	14	14	14	14	13	14	10	9	10	5	6	11	5	6	—	—	6	4	5	—	—	5	5	6	—	—	7	11	13	6	8	14
	72	14	6	14	14	14	14	14	12	14	6	14	14	14	14	14	14	12	10	12	6	7	12	6	7	4	—	7	5	6	—	—	6	6	7	4	4	8	13	15	7	9	16
	60	14	7	14	14	14	14	14	14	14	7	14	14	14	14	14	14	14	12	14	7	9	15	7	8	5	5	8	6	7	4	4	7	8	9	5	5	9	15	16	8	11	16
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90	120	13	—	14	8	13	8	14	7	5	—	6	—	5	—	6	—	5	6	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	7	8	—	5	8	
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NOTE: SEE SHEET 12 FOR ANCHOR TYPE AND SELECTION

SECTION X
 TRACK 2 OR 2A INSET MOUNT
 SECURED TO AN ALUMINUM PLATE
 BETWEEN WOOD TRUSSES



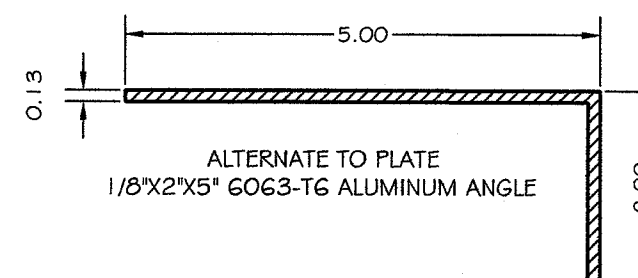
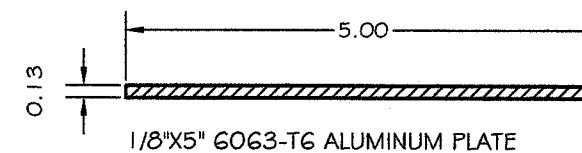
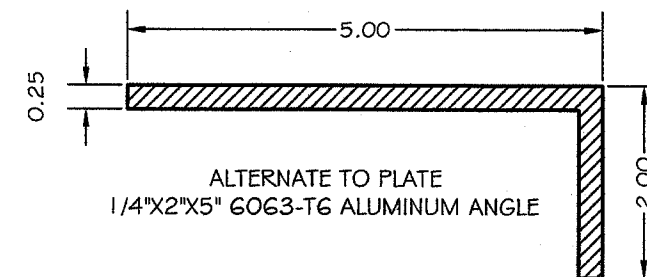
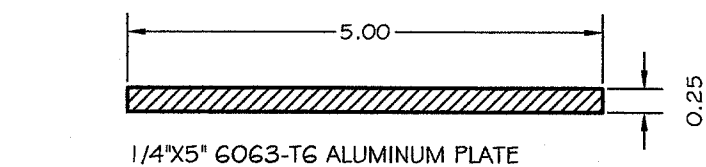
ALLOWABLE DESIGNED PRESSURES
 FOR SECTION X WITH 1/4" ALUMINUM PLATE

BLADE SPAN (IN)	MAXIMUM DESIGNED PRESSURE (PSF)	
	BLADE 1	BLADE 1B
60	±159	±159
72	±132	±132
84	±113	±113
90	±106	±106
108	± 88	± 88
126	± 68	± 68
132	± 62	± 61
144	+48, -52	+45, -47
162	+30, -40	+28, -33

ALLOWABLE DESIGNED PRESSURES
 FOR SECTION X WITH 1/8" ALUMINUM PLATE

BLADE SPAN (IN)	MAXIMUM DESIGNED PRESSURE (PSF)	
	BLADE 1	BLADE 1B
60	±99	±99
72	±82	±82
84	±71	±71
90	±66	±66
108	±55	±55
126	±47	±47
132	±45	±45
144	±41	±41
162	±30	+28, -30

NOTE: 1- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES



RHINO
 ACCORDION SHUTTER



ASSOCIATION MEMBER:
 MAXIMUM SHUTTER SYSTEMS, INC.
 2070 #G TIGERTAIL BLVD.
 DANIA BEACH - FL 33004

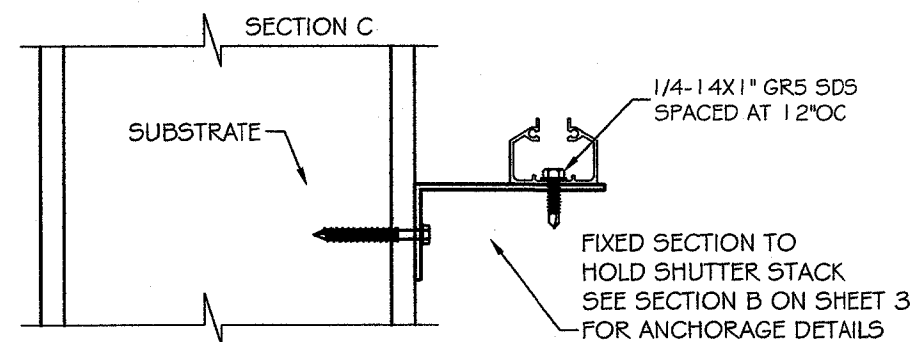
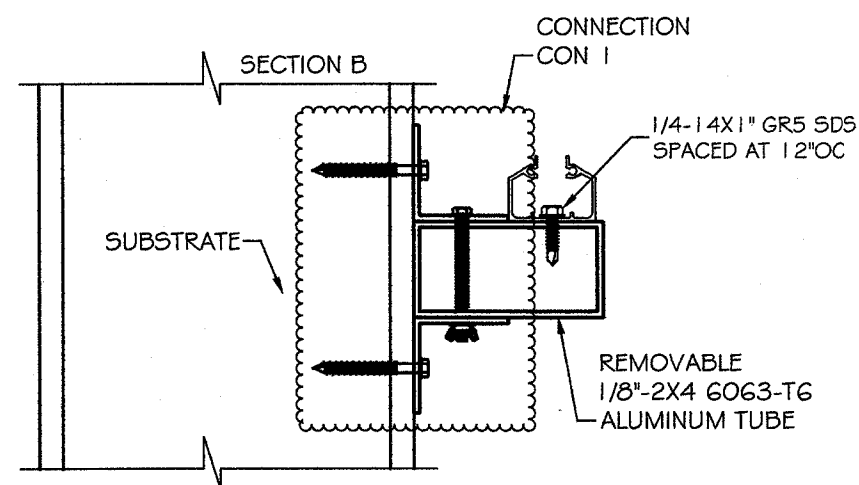
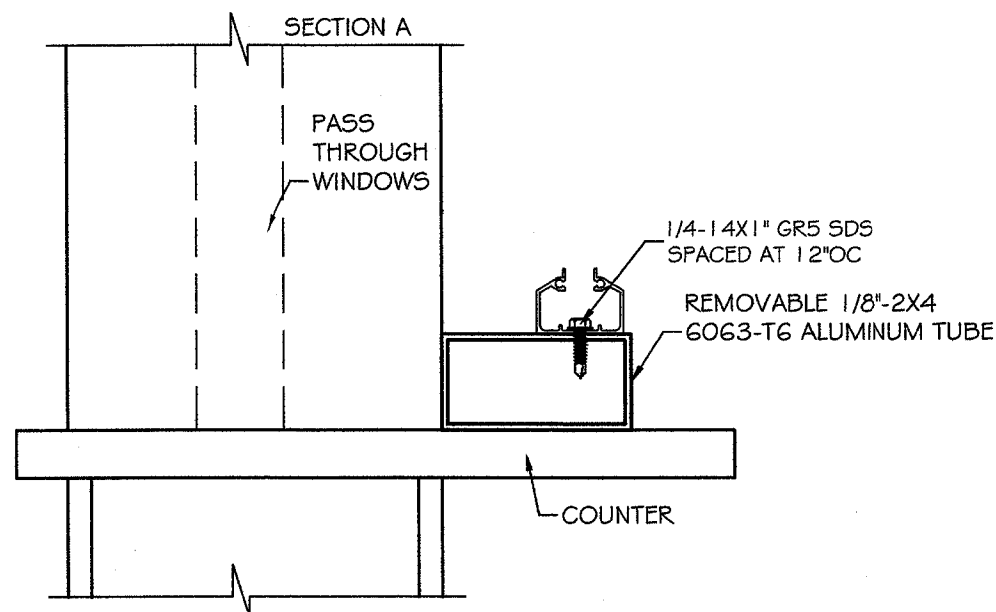
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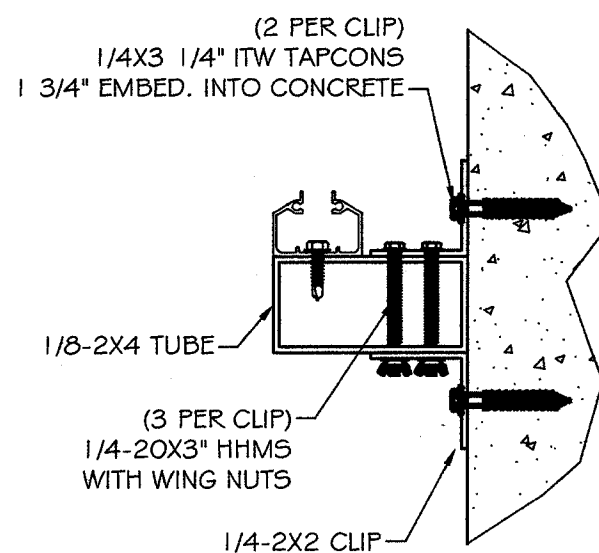
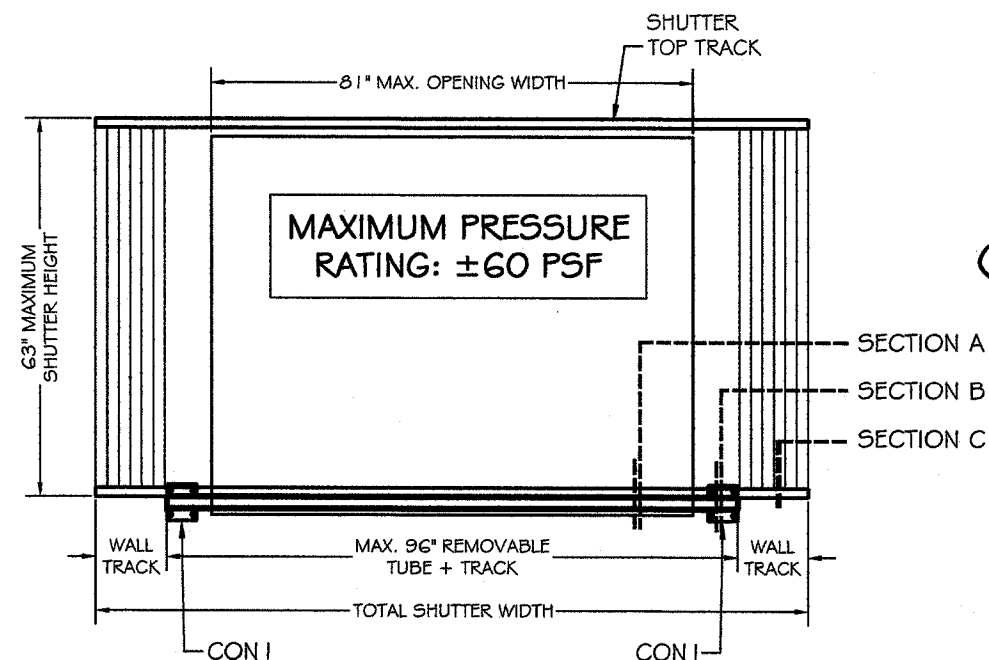
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 20-160

SHEET
 15 OF 17

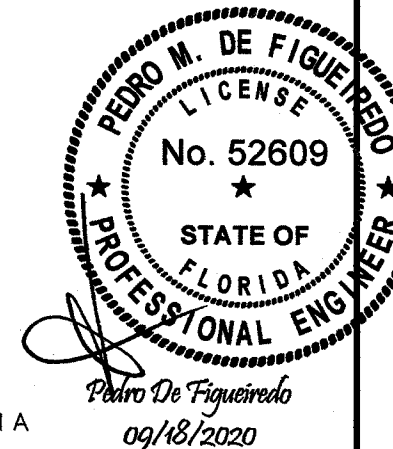
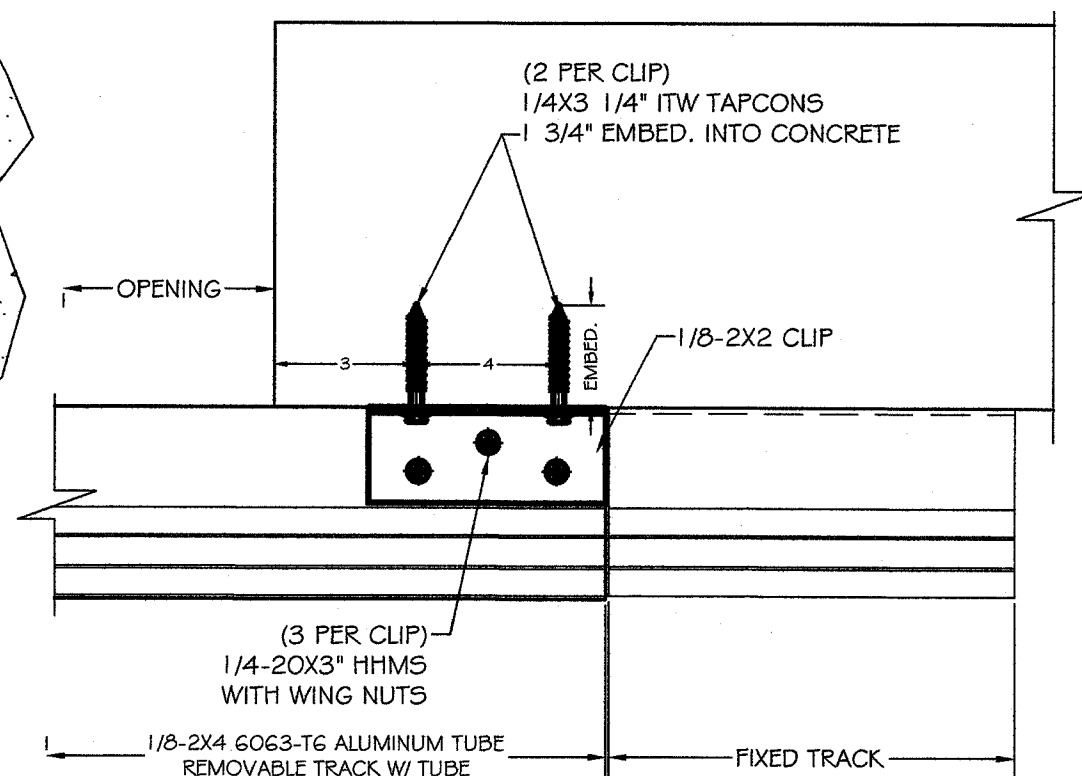
ENGINEERING SERVICES - CA 32459
 9249 CHELSEA DR. 5
 PLANTATION, FL 33324
 PEDRO DE FIGUEIREDO
 PE 52609
 PPMF@AOL.COM



SECTION CT
REMOVABLE SILL
OVER COUNTER TOP



**TUBE ANCHORAGE
CON 1**



RHINO
ACCORDION SHUTTER

ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA

DATE:
09/18/2020

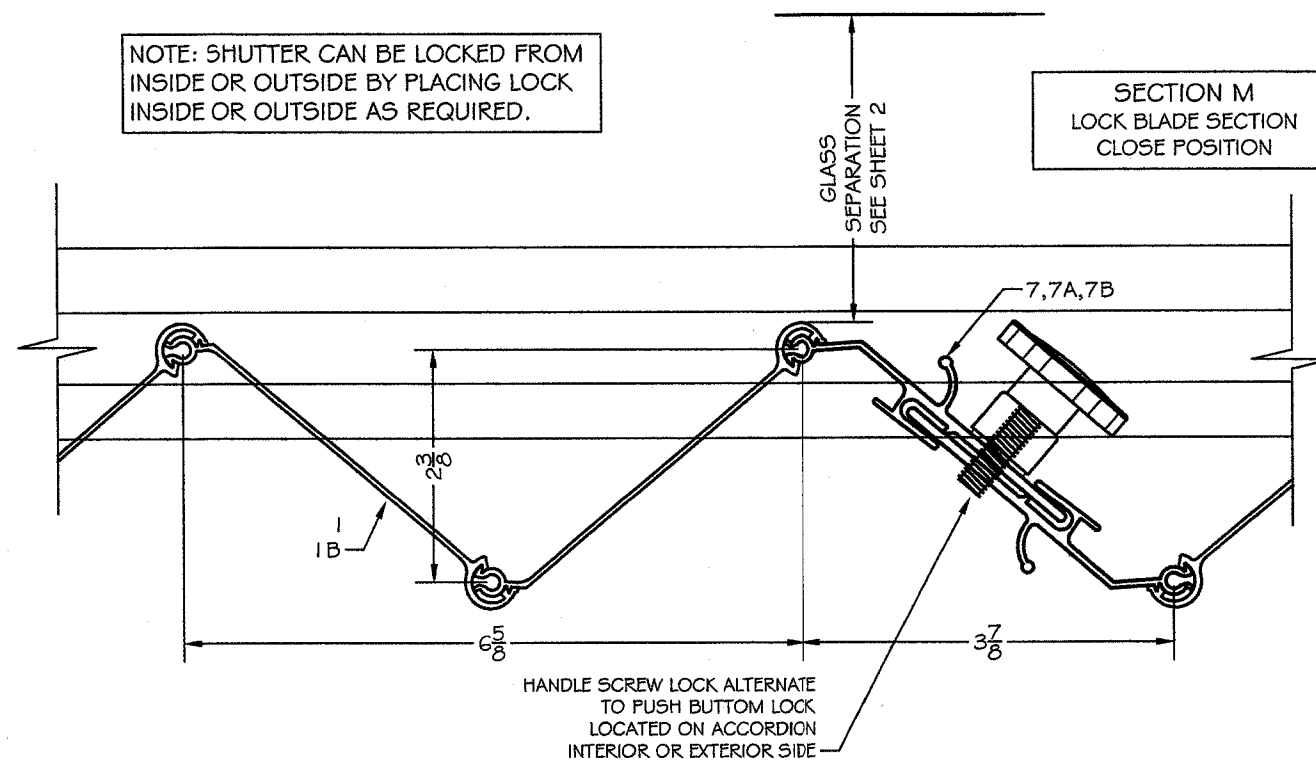
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20-160

SHEET
16 OF 17

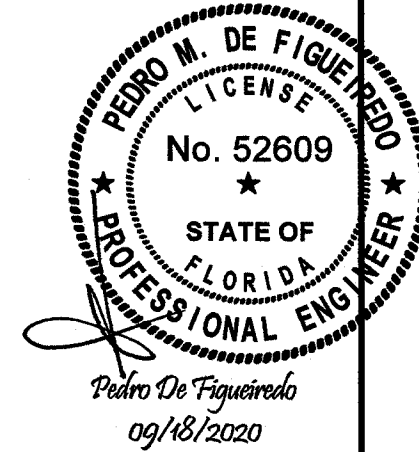
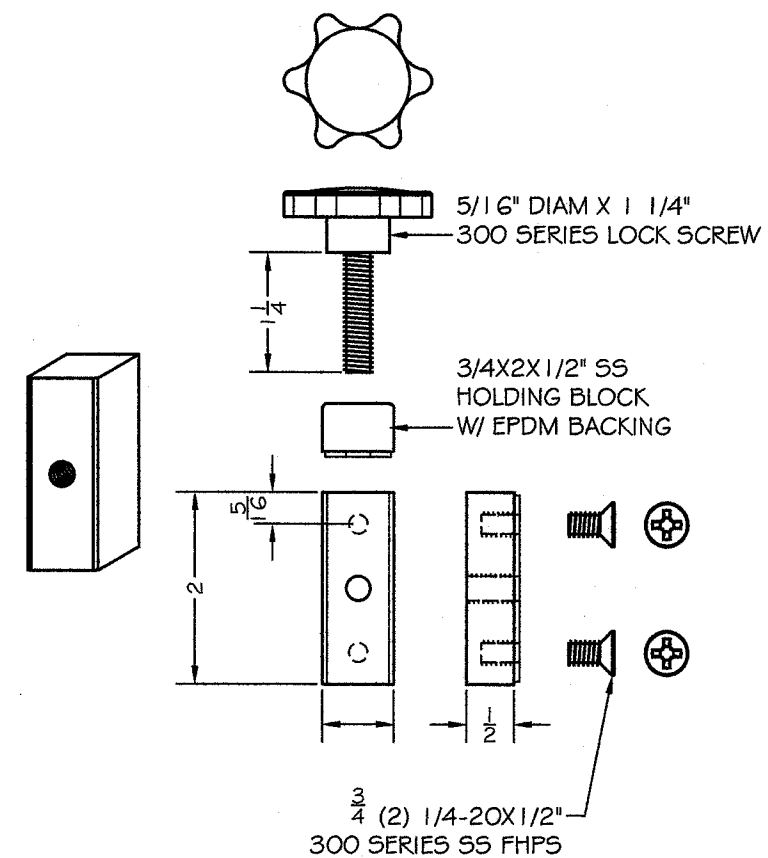
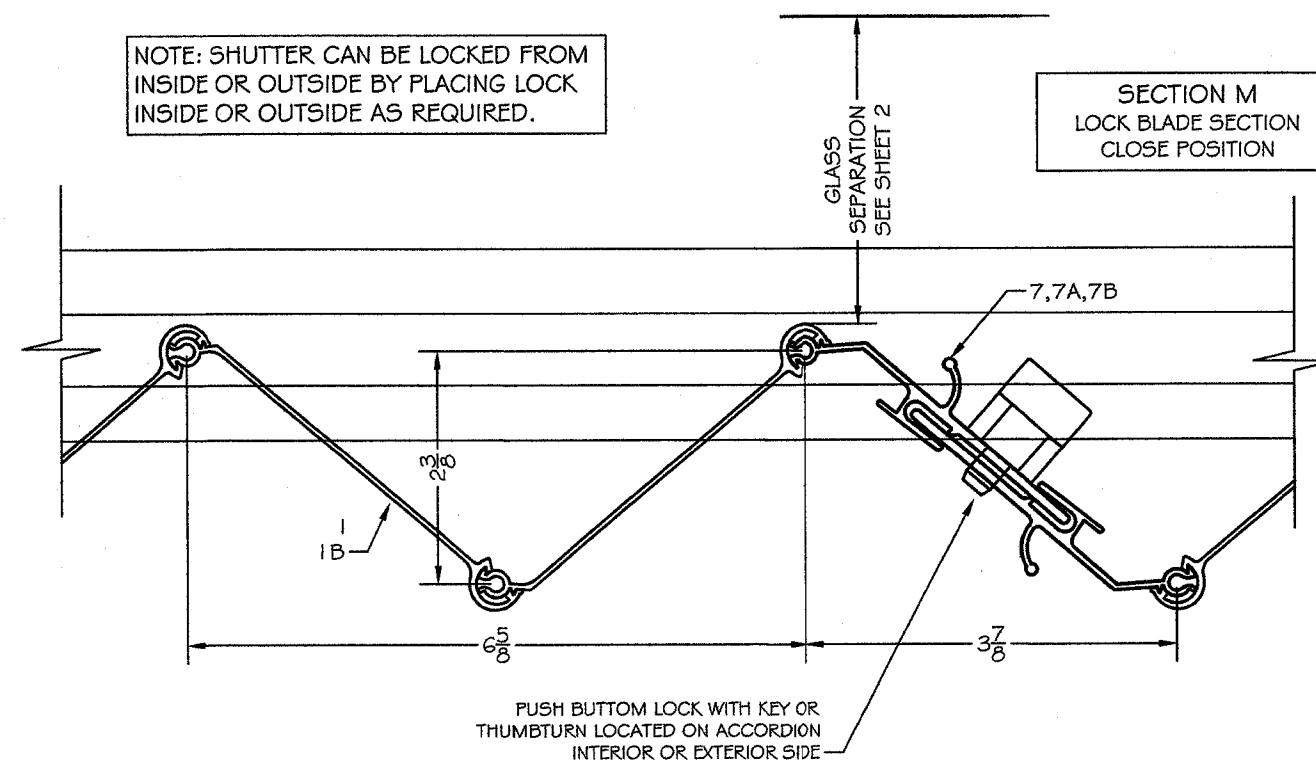
ENGINEERING SERVICES - CA 32459
9249 CHELSEA DR. S
PLANTATION, FL 33324
PPMF@AOL.COM
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

TYPICAL HORIZONTAL
UNIMATE LOCK SECTIONS M
WITH PUSH BUTTON LOCK OR HANDLE SCREW LOCK

NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING LOCK
INSIDE OR OUTSIDE AS REQUIRED.



NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING LOCK
INSIDE OR OUTSIDE AS REQUIRED.



ASSOCIATION MEMBER:
MAXIMUM SHUTTER SYSTEMS, INC.
2070 #G TIGERTAIL BLVD.
DANIA BEACH - FL 33004

SCALE:
NA

DATE:
09/18/2020

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SHEET
17 OF 17

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9249 CHELSEA DR. S
PLANTATION, FL 33324
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ENGINEER SEAL
PEDRO DE FIGUEIREDO
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