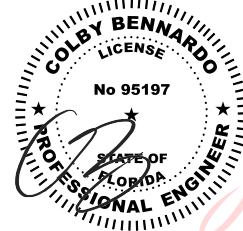


COLONIAL SHUTTER

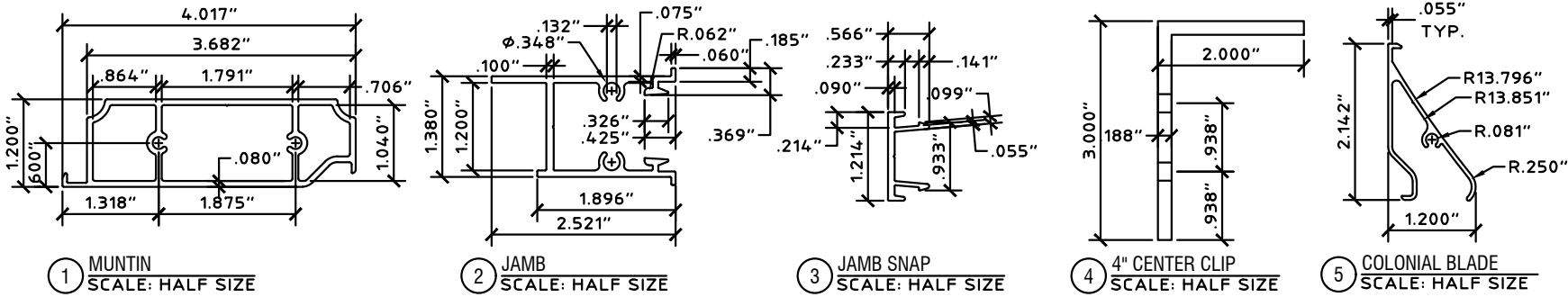
ABC SUPPLY OUTDOOR SOLUTIONS - PATENT #8126298

LARGE MISSILE IMPACT RESISTANT - VALID FOR USE **OUTSIDE THE HVHZ ONLY** (SEE LIMITATIONS HEREIN)
THIS IS A NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

COLBY BENNARDO, P.E.
PE# 95197 CA# 9885



Digitally signed by
Colby Bennardo
Date: 2026.08.19
12:38:42 -04'00'



NOTE REGARDING USE OF THIS DOCUMENT & USE OUTSIDE FLORIDA:
THIS IS A NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. THIS PRODUCT EVALUATION IS VALID FOR USE IN **FLORIDA ONLY**. USE OF THIS EVALUATION REQUIRES A REVIEW & CERTIFICATION BY A LOCAL DESIGN PROFESSIONAL WHO SHALL BE RESPONSIBLE FOR THE PROPER ADAPTATION OF THIS GENERAL PERFORMANCE EVALUATION TO ANY SITE-SPECIFIC PROJECT. CONTACT THIS OFFICE AT ENGINEERINGEXPRESS.COM/QUOTE FOR ASSISTANCE WITH YOUR PROJECT-SPECIFIC NEEDS & FOR ADAPTATION & CERTIFICATION OF THIS DOCUMENT OUTSIDE OF FLORIDA.

ENGINEER SIGNATURE & SEAL NOTICE:
*PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED & SEALED. SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
*FOR FLORIDA STATEWIDE PRODUCT APPROVALS (FSAs) REGISTERED & APPROVED WITH THE STATE OF FLORIDA: ORIGINAL, SEALED COPIES OF APPROVED FLORIDA PRODUCT APPROVALS ARE NOT REQUIRED FOR PERMIT. SEE ECALC.IO/SEAL TO LEARN MORE.

DESIGN NOTES:

1. MAXIMUM ALLOWABLE DESIGN PRESSURE IN CLOSED POSITION PROVIDING WIND LOAD & IMPACT RESISTANCE = **+57.2/-66.2 PSF** FOR ALL SHUTTER SYSTEM CONFIGURATIONS SHOWN HEREIN.
2. MAXIMUM ALLOWABLE DESIGN PRESSURE IN OPEN POSITION = **+/- 28 PSF**.
3. THIS SYSTEM HAS BEEN TESTED AND EVALUATED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE NINTH EDITION (2026), FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, AND THE INTERNATIONAL BUILDING CODE (IBC) AND INTERNATIONAL RESIDENTIAL CODE (IRC). THIS SYSTEM MEETS MISSILE LEVEL "D" AND INCLUDES WIND WIND ZONE 4 AS DEFINED IN ASTM E1996. SEE EVALUATION REPORT FOR MORE INFORMATION.
4. TESTING WAS CONDUCTED IN ACCORDANCE WITH TAS 201/202/203 AND ASTM E1886/E1996/E330.
5. THIS SYSTEM HAS BEEN DESIGNED WITH NO SEPARATION FROM GLAZING REQUIRED FOR WIND ZONES 1-3, IN ACCORDANCE WITH ASTM E1996. IT IS ACCEPTABLE BY CODE UNLESS OPTIONAL CRITERIA IS INDEPENDENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
6. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
7. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THESE PRODUCTS. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD ANCHOR DESIGN.

GENERAL NOTES:

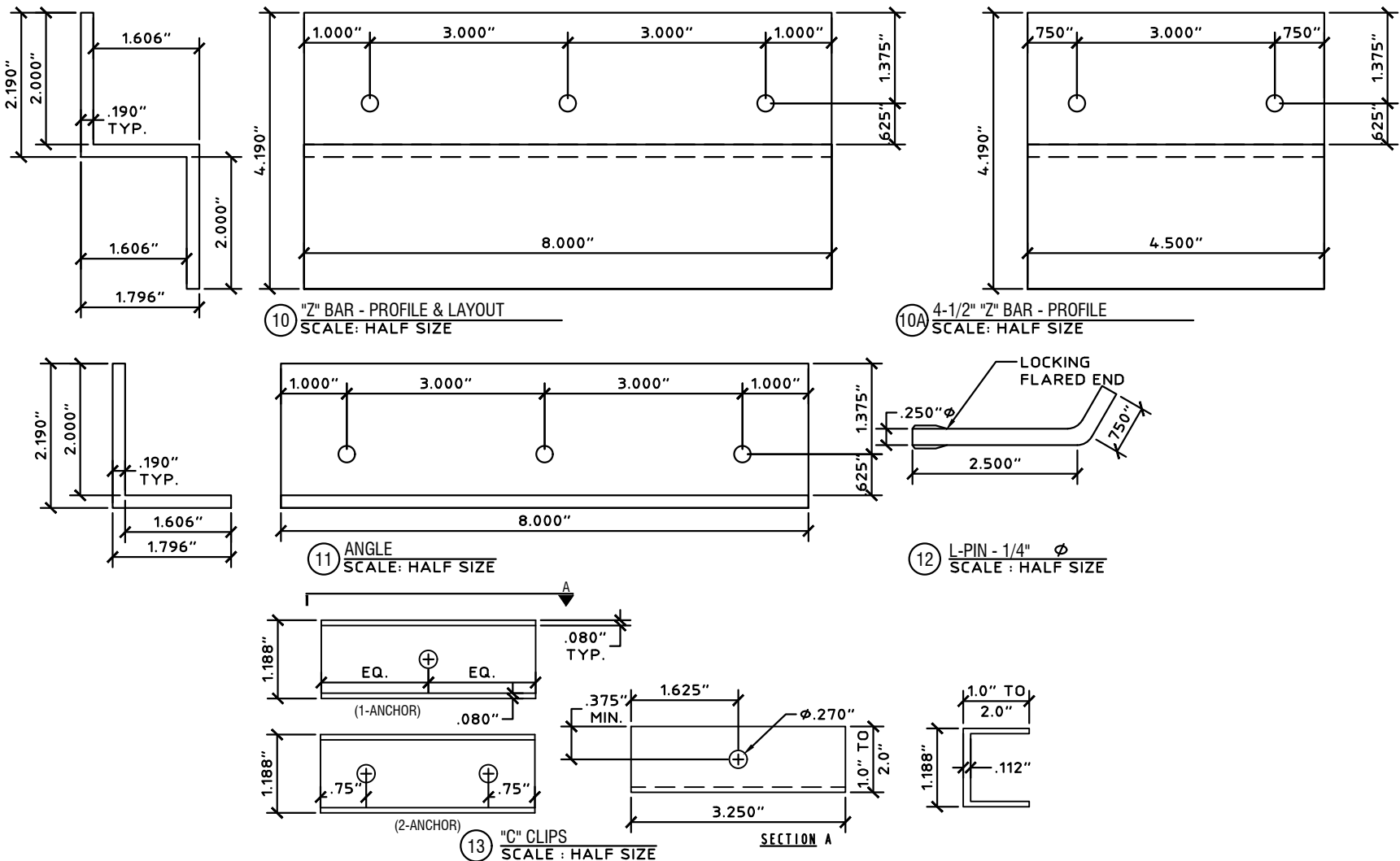
3. THESE INSTALLATION INSTRUCTIONS ARE PART OF A PRODUCT APPROVAL EVALUATION AND SHALL ONLY BE USED IN CONJUNCTION WITH THE EVALUATION REPORT SUBMITTED FOR THE SAME PRODUCT APPROVAL.
4. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
5. DETERMINE THE POSITIVE AND 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 ASCE 7, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ SHALL BE USED.
6. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS.
7. ANCHORS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
8. USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15 OF THE FLORIDA ADMINISTRATIVE CODE.
9. THESE APPROVAL DOCUMENTS ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN.
10. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED WITH THE SPECIFICATIONS LISTED BY THE FLORIDA DBPR.
11. ALL EXTRUSIONS SHOWN SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N., WITH A MINIMUM F_y OF 25 K.S.I.
12. ALL BOLTS AND WASHERS (EXCLUDING INSTALLATION) SHALL BE STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 K.S.I., U.O.N. POP RIVETS SHALL BE 1/4"Ø OR 3/16"Ø 5052 ALUM. ALLOY.
13. FOR PERMANENT OUTDOOR INSTALLATIONS, ALL EXPOSED ANCHORS, FASTENERS, CONNECTORS, AND METAL PLATES SHALL BE CORROSION RESISTANT. CORROSION RESISTANCE MAY BE PROVIDED BY INHERENT MATERIAL COMPOSITION OR, WHERE PERMITTED BY CODE, BY AN APPROVED PROTECTIVE COATING OR GALVANIZATION. WHERE APPLICABLE NEAR A SALTWATER COASTLINE, SUCH COMPONENTS SHALL COMPLY WITH FBC SECTION 1711, INCLUDING APPLICABLE REQUIREMENTS FOR EXPOSED, PROTECTED, OR ENCLOSED CONDITIONS. MATERIALS, COATINGS, AND FINISHES SHALL BE COMPATIBLE WITH CONNECTED MATERIALS, AND PROTECTIVE COATINGS SHALL BE CONTINUOUS OVER EXPOSED SURFACES. FASTENERS USED WITH ALUMINUM MEMBERS SHALL ALSO COMPLY WITH SECTION J.3.7.2 OF THE ALUMINUM DESIGN MANUAL, "SPECIFICATION FOR ALUMINUM STRUCTURES." SUBSTITUTION OF COMPONENTS FROM ALTERNATE MANUFACTURERS, OR WITH DIFFERENT MATERIALS, COATINGS, OR FINISHES, SHALL NOT BE ASSUMED EQUIVALENT AND MAY REQUIRE ADDITIONAL ENGINEERING REVIEW OR SITE-SPECIFIC ANALYSIS.
14. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.
15. THIS SHUTTER SYSTEM SHALL NOT BE INSTALLED IN ESSENTIAL FACILITIES AS DEFINED IN ASTM E1996.
16. SHUTTER ASSEMBLY MUST BE CLOSED AND SECURED AND SHALL NOT BE LEFT IN THE OPEN POSITION IN THE EVENT OF A WIND STORM EVENT.
17. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE.
18. ENGINEER SEAL AFFIXED HERETO VALIDATE 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.
19. ALTERATIONS ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
20. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

FL 16219.1

ENGINEERING
EXPRESS

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC
Supply Outdoor Solutions
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309
COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)



VISIT ECALC.IO/ABCSUPPLY

FOR SITE SPECIFIC DEVIATIONS
& MORE INFORMATION ABOUT THIS DOCUMENT
OR SCAN THIS QR CODE

VISIT ENGINEERINGEXPRESS.COM/STORE
FOR ADDITIONAL PLANS, REPORTS & RESOURCES



26-99113

SCALE: NTS UNLESS NOTED

1 OF 1

**ENGINEERING
EXPRESS®**

POSTAL ADDRESS:

2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

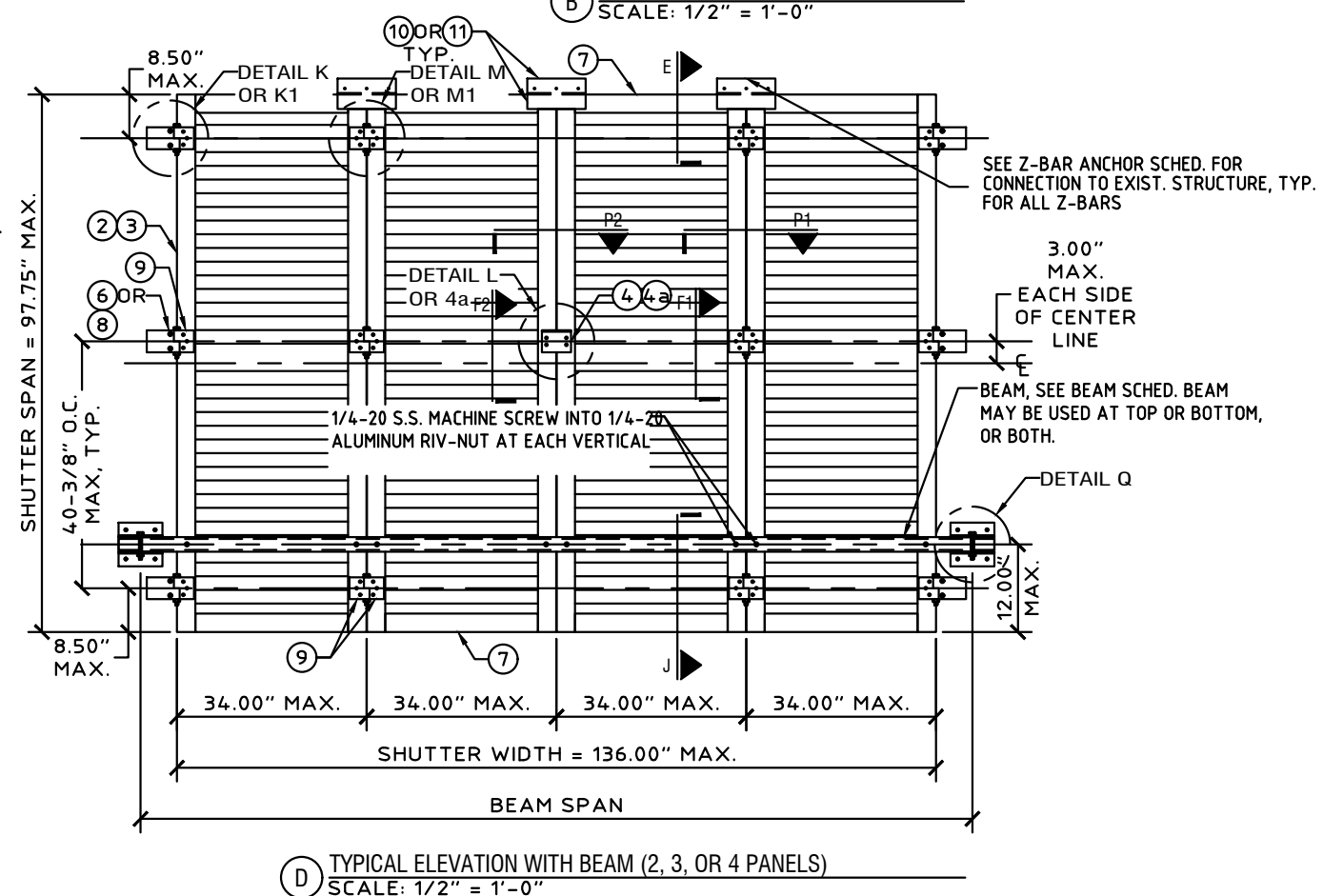
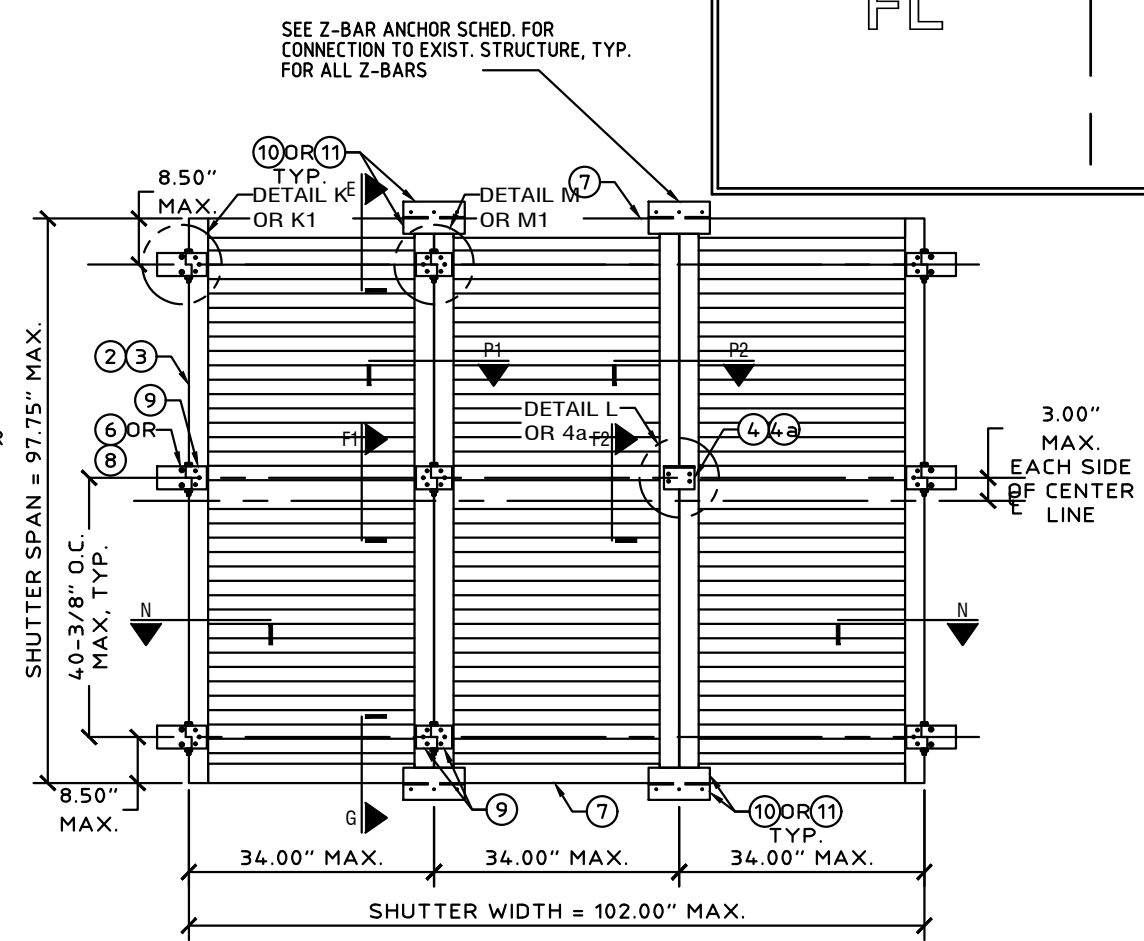
ABC
Supply / Outdoor Solutions™
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309

COLONIAL SHUTTER

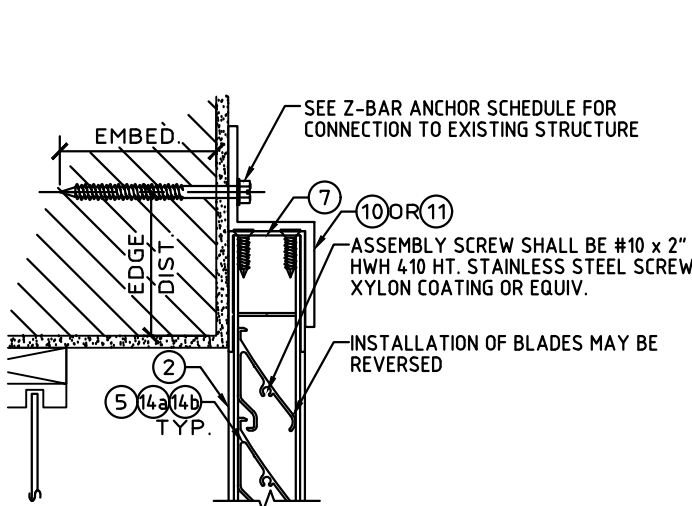
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

[illegible]

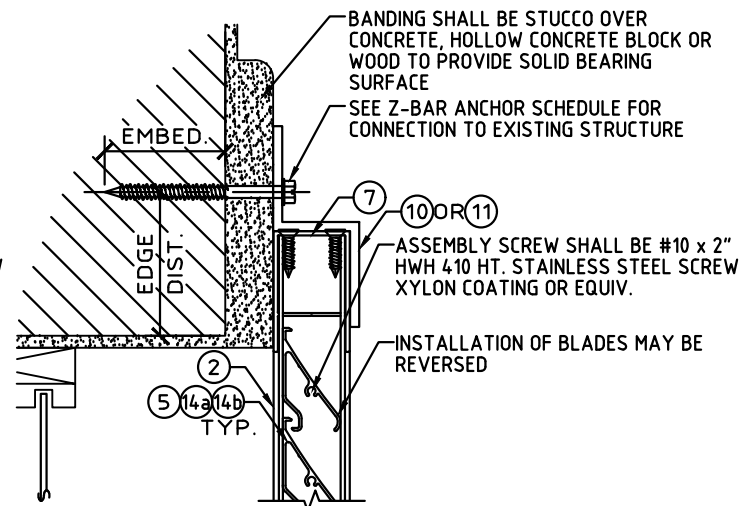
2 OF 9



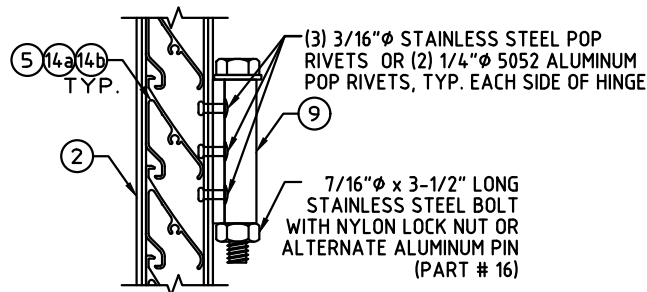
8/19/2026 10:56 AM COLBYBENNARD\Bennard\Projects\26-99113\26-99113b - drawings & cad\26-99113b - fl16219.1 - dwg1.dwg



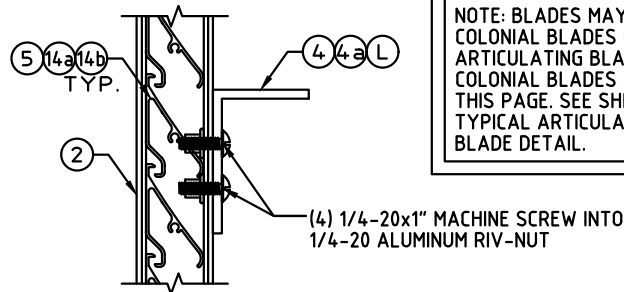
E1 TYPICAL TOP WALL MOUNT
SCALE: 3" = 1'-0"



E2 ALTERNATE TOP WALL MOUNT
SCALE: 3" = 1'-0"

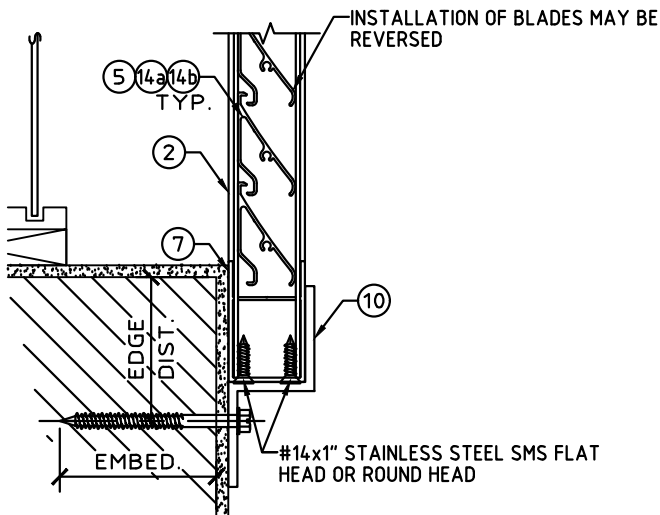


F1 TYPICAL PANEL HINGE CONNECTION
SCALE: 3" = 1'-0"

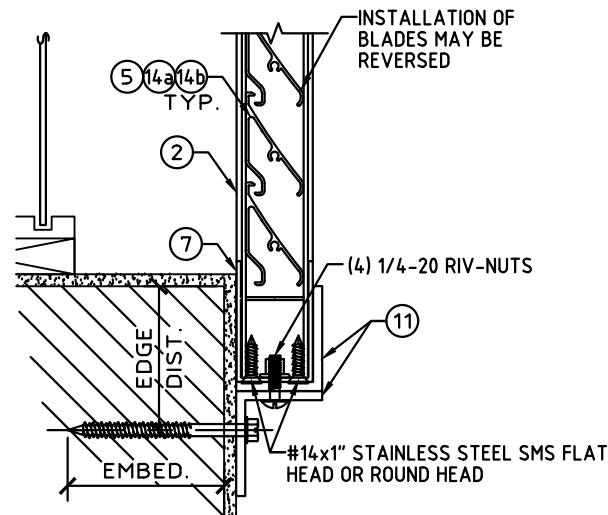


F2 TYPICAL CENTER CLIP CONNECTION
SCALE: 3" = 1'-0"

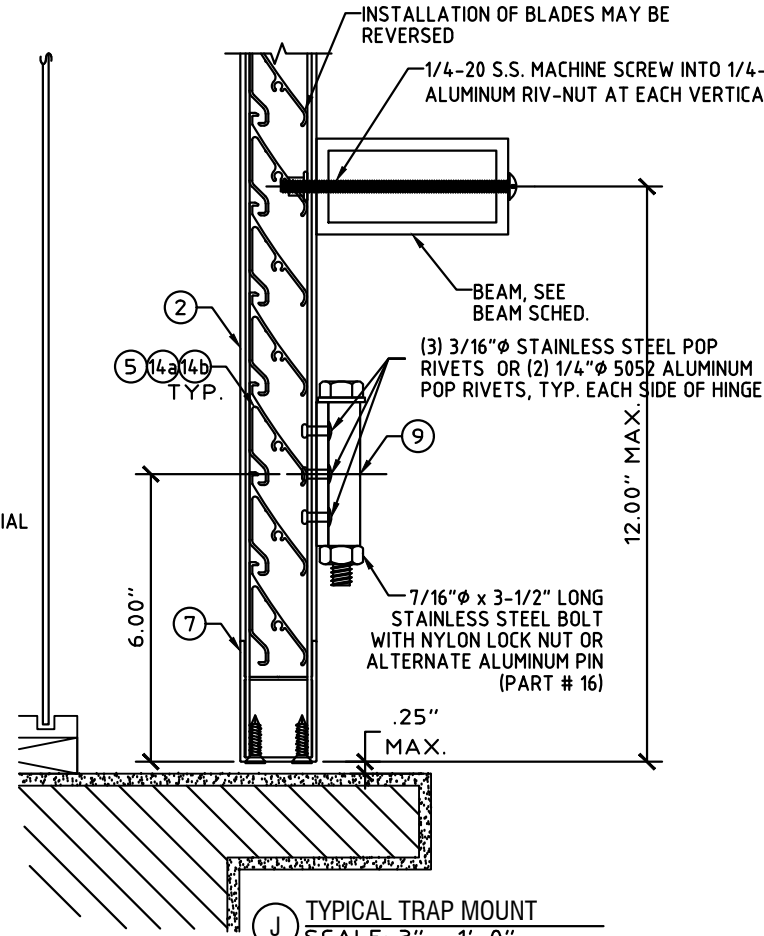
NOTE: BLADES MAY BE COLONIAL BLADES OR ARTICULATING BLADES. COLONIAL BLADES SHOWN ON THIS PAGE. SEE SHEET 4 FOR TYPICAL ARTICULATING BLADE DETAIL.



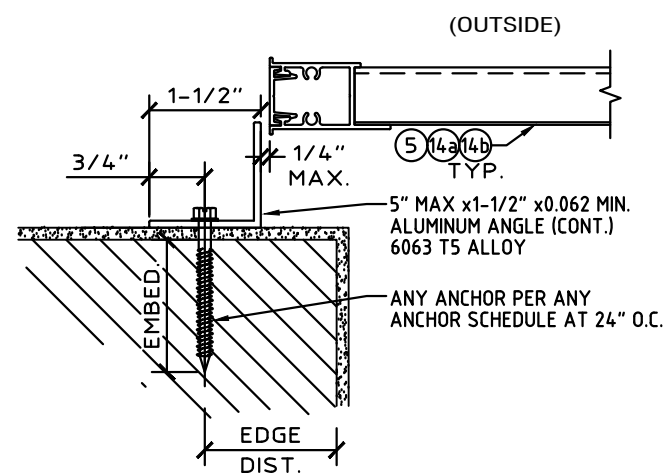
G1 TYPICAL BOTTOM WALL MOUNT
SCALE: 3" = 1'-0"



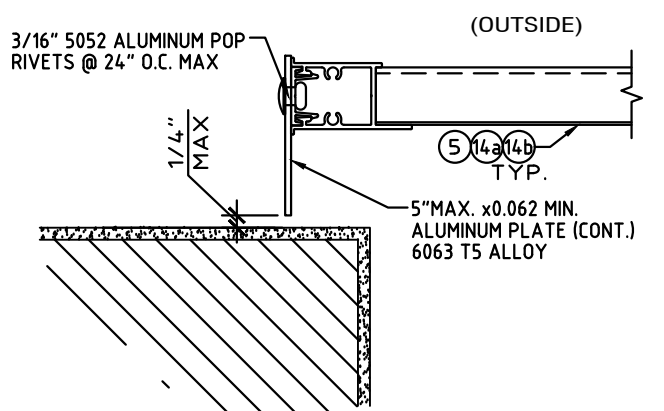
G2 ALTERNATE WALL MOUNT
SCALE: 3" = 1'-0"



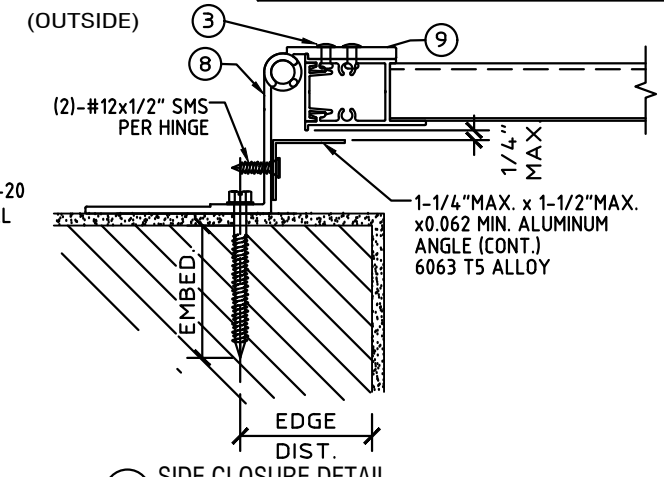
J TYPICAL TRAP MOUNT
SCALE: 3" = 1'-0"



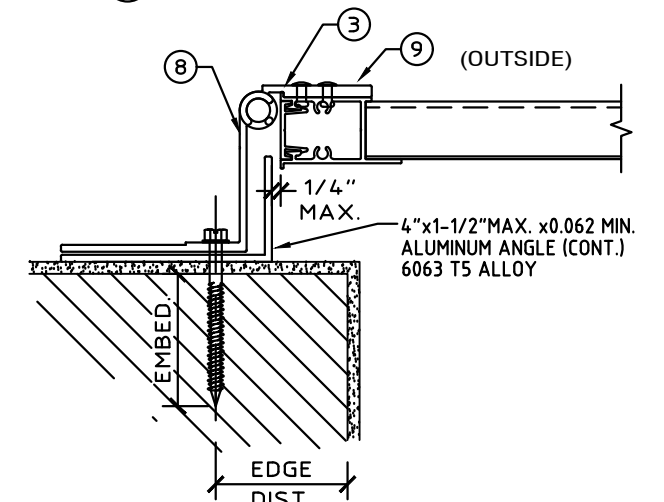
Kb SLIDING PANEL SIDE CLOSURE DETAIL
N.T.S.



Kc SLIDING PANEL SIDE ALTERNATE CLOSURE DETAIL
N.T.S.



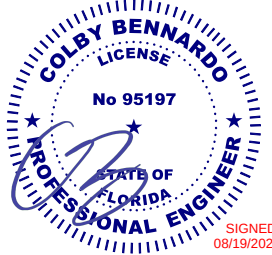
K SIDE CLOSURE DETAIL
SCALE: 3" = 1'-0"



Ka ALTERNATE SIDE CLOSURE DETAIL
SCALE: 3" = 1'-0"

COLBY BENNARD, P.E.
PE# 95197 CA# 9885

FL



FL 16219.1

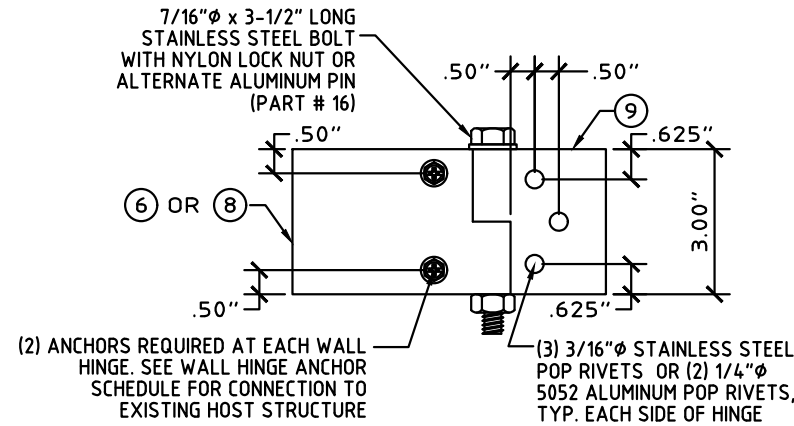
ENGINEERING
EXPRESS
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC
Supply / Outdoor Solutions
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309
COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

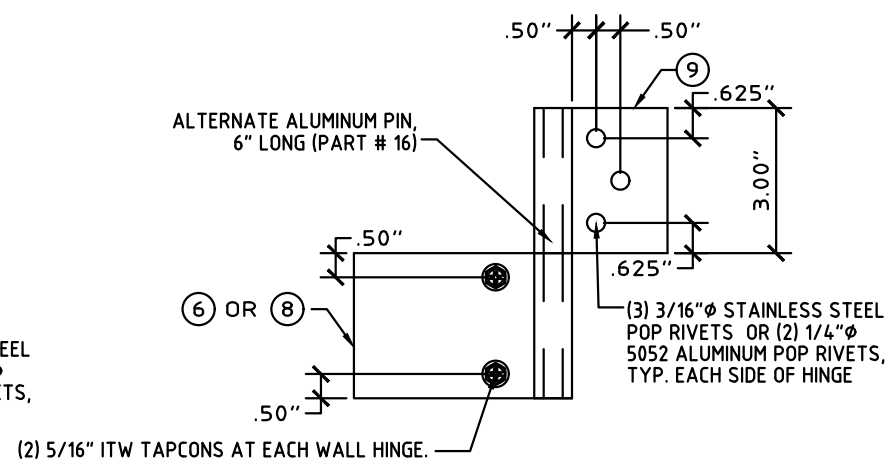
REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64631)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

26-99113

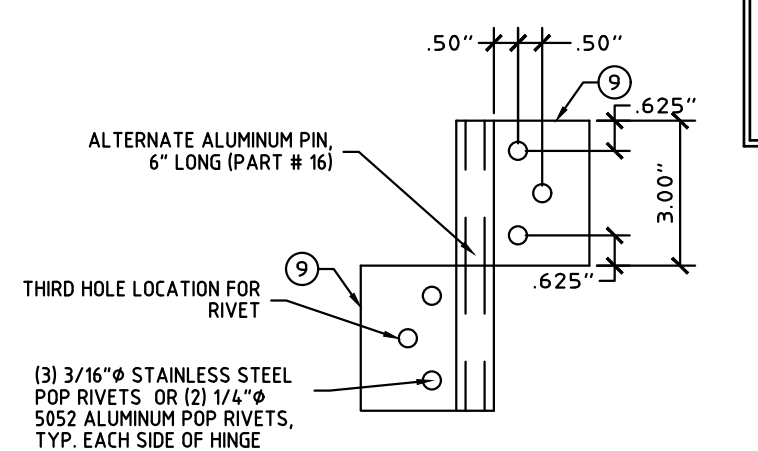
SCALE: NTS UNLESS NOTED



(K) TYPICAL WALL HINGE
SCALE: 3" = 1'-0"



(K1) ALTERNATE STACKED WALL HINGE
SCALE: 3" = 1'-0"



(M1) ALTERNATE STACKED PANEL HINGE
SCALE: 3" = 1'-0"

WALL HINGE ANCHOR SCHEDULE:

TO 3192 PSI MIN. CONCRETE:

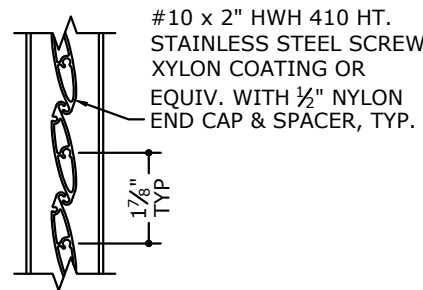
- 1/4" ITW SS TAPCON W/ 1 3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE.
- 5/16" ITW TAPCON XL W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE.

TO GROUT-FILLED CONCRETE BLOCK:

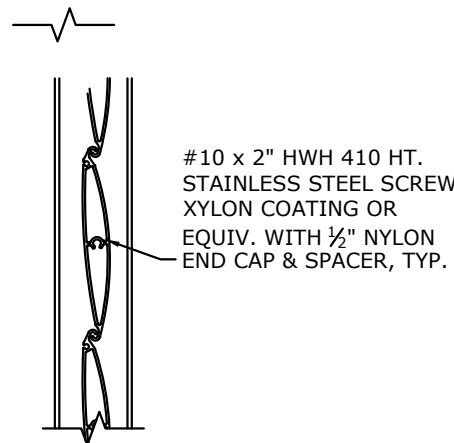
- 1/4" DEWALT ULTRACON W/ 2-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE.
- 5/16" ITW TAPCON XL W/ 1-3/4" MIN. EMBEDMENT AND 4" MIN. EDGE DISTANCE.

TO G=0.42 MIN. WOOD HOST STRUCTURE:

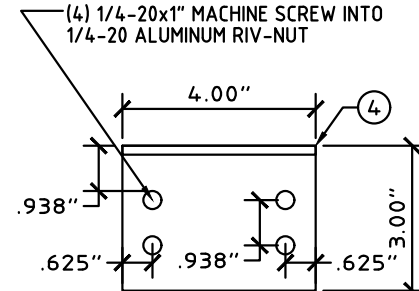
- 1/4" LAG SCREWS WITH 1-1/2" MIN. THREAD PENETRATION AND 3/4" MIN. EDGE DISTANCE.
- #14 WOOD SCREW OR SMS W/ 1-1/2" MIN. THREAD PENETRATION AND 3/4" MIN. EDGE DISTANCE.



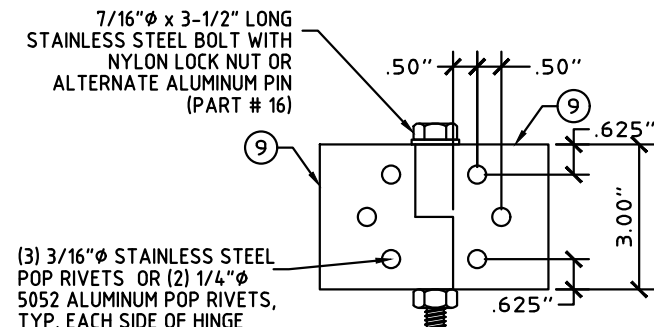
(BH1) TYPICAL 2" ARTICULATING LOUVER ATTACHMENT
SCALE: N.T.S.



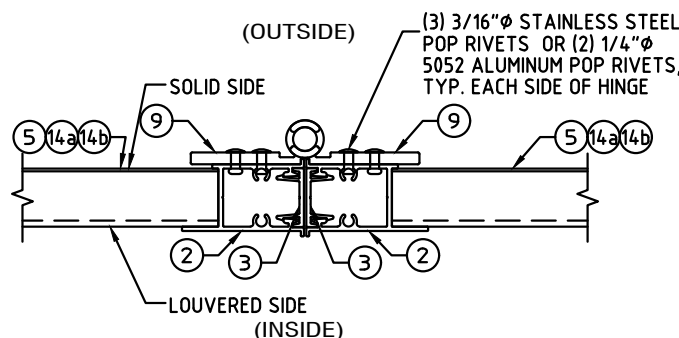
(BH2) TYPICAL 4" ARTICULATING LOUVER ATTACHMENT
SCALE: N.T.S.



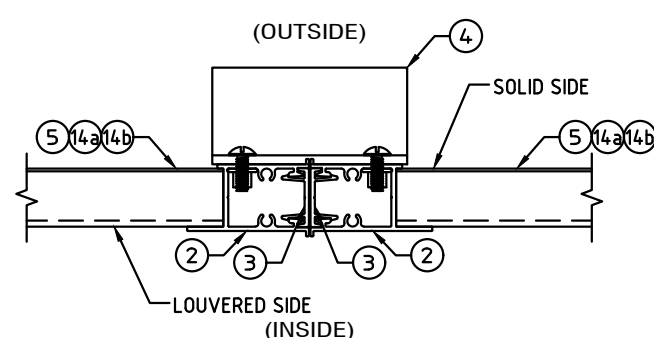
(L) TYPICAL CENTER CLIP
SCALE: 3" = 1'-0"



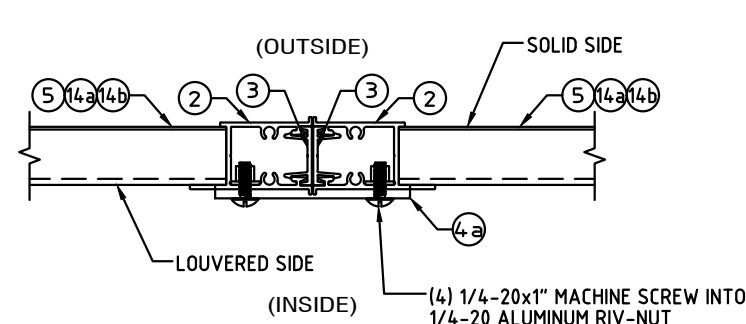
(M) TYPICAL PANEL HINGE
SCALE: 3" = 1'-0"



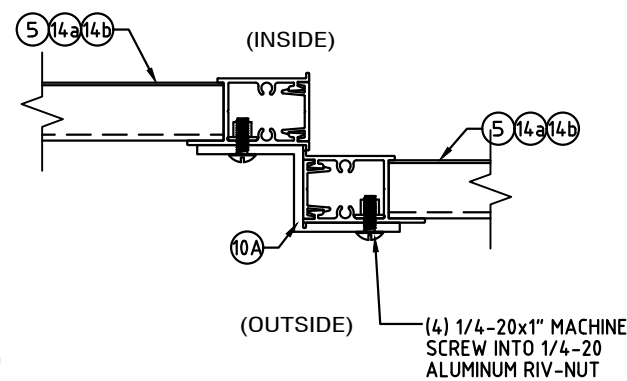
(P1) TYPICAL PANEL HINGE CONNECTION
SCALE: 3" = 1'-0"



(P2) TYPICAL CENTER CLIP CONNECTION
SCALE: 3" = 1'-0"



(P2) ALTERNATE CENTER CLIP CONNECTION
SCALE: 3" = 1'-0"



(L1) SLIDING PANEL OFFSET CLIP
N.T.S.

FL 16219.1

ENGINEERING
EXPRESS
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC
Supply / Outdoor
Solutions™
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309
COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

COPYRIGHT ENGINEERING EXPRESS®

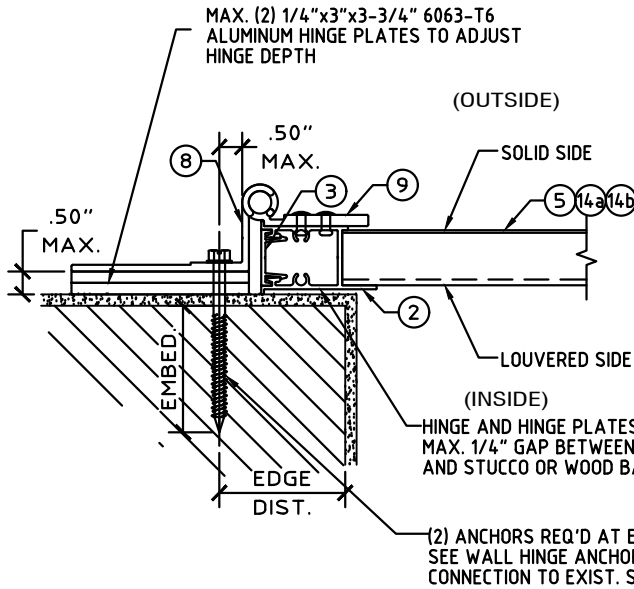
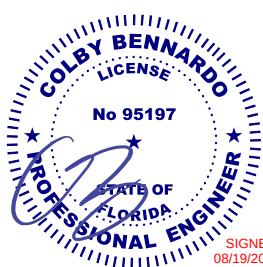
26-99113

SCALE: NTS UNLESS NOTED

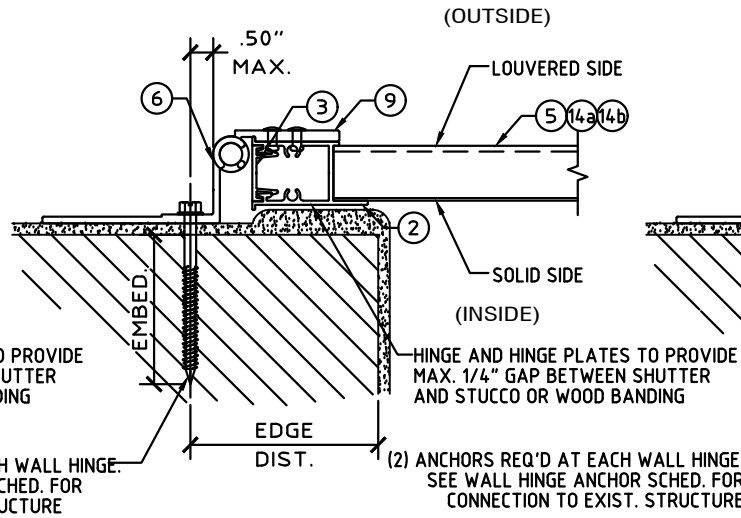
8/19/2026 10:56 AM COLBYBENNARD@BennardRed\projects\26-99113 - drawings & cad\26-99113b - fl16219.1 - dwg1.dwg

COLBY BENNARDO, P.E.
PE# 95197 CA# 9885

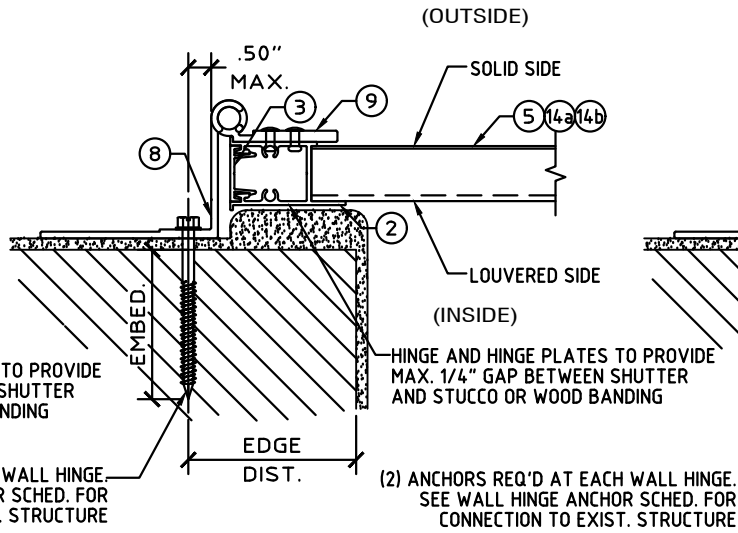
FL



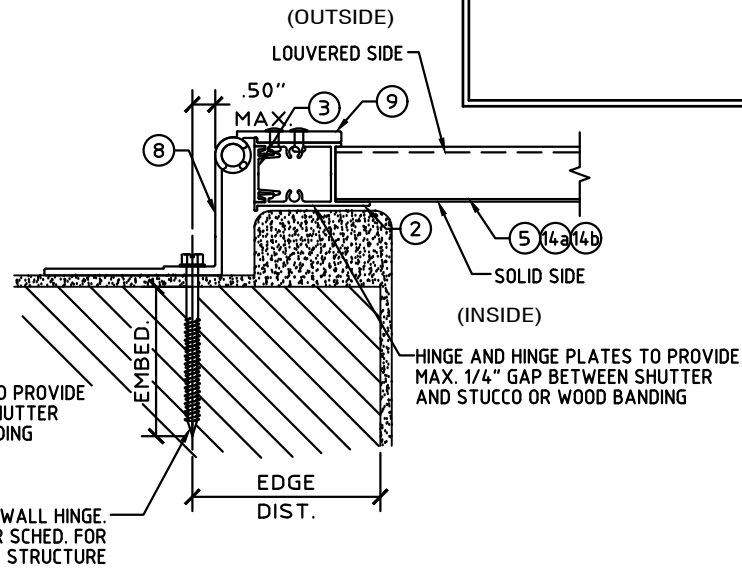
N1 TYPICAL WALL HINGE CONNECTION
SCALE: 3" = 1'-0"



N2 ALTERNATE WALL HINGE CONNECTION
SCALE: 3" = 1'-0"



N3 ALTERNATE WALL HINGE CONNECTION
SCALE: 3" = 1'-0"



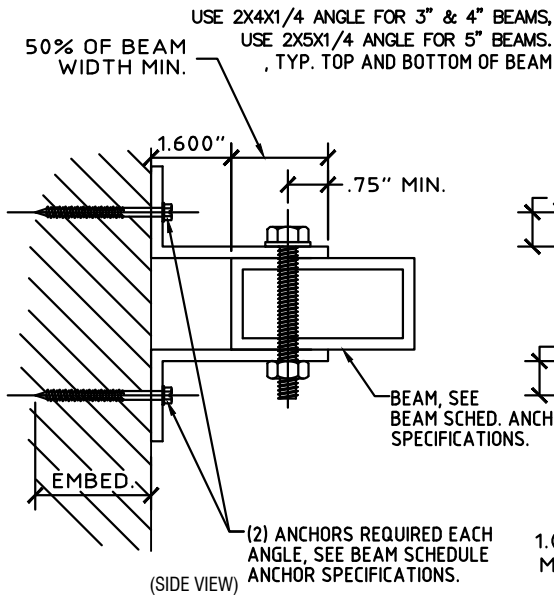
N4 ALTERNATE WALL HINGE CONNECTION
SCALE: 3" = 1'-0"

BEAM SCHEDULE

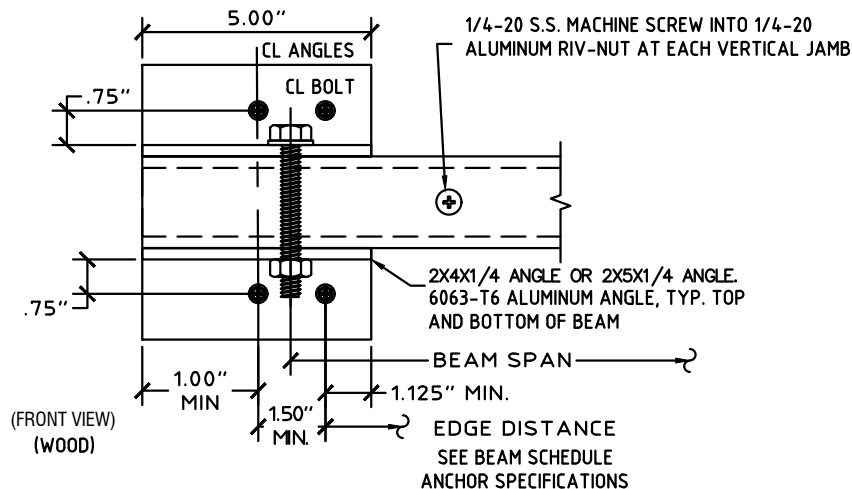
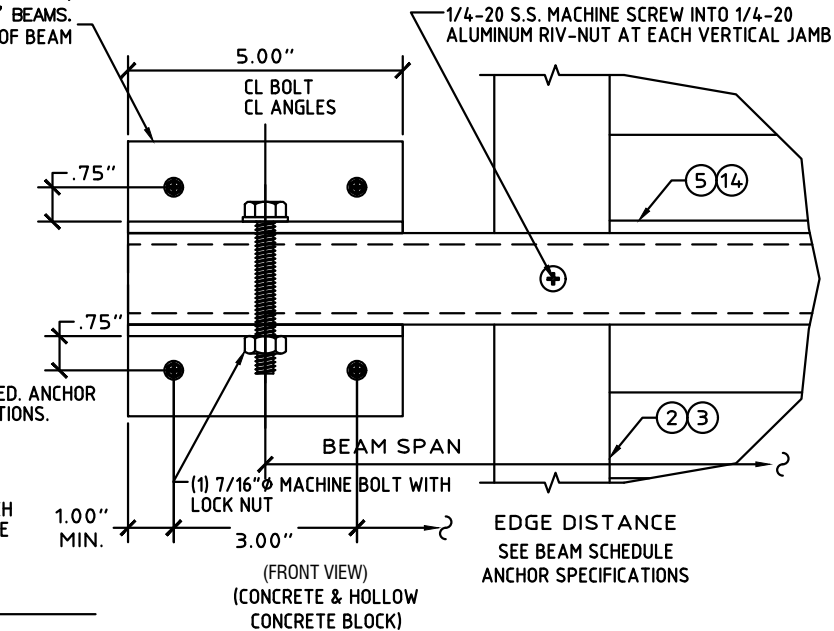
BEAM SIZE	SHUTTER SPAN	BEAM SPAN	WALL BRACKET ANCHOR TYPES		
			CONCRETE (3323 PSI MIN)	HOLLOW CONCRETE BLOCK	WOOD (G=0.42 MIN.)
2"x3"x1/8" (6063-T6)	8'-1.75"	6'-0"	A, B, C	A, B, C	B, C
	6'-8"	6'-8"	A, B, C	A, B, C	B, C
	5'-10"	7'-0"	A, B, C	A, B, C	B, C
2"x4"x1/8" (6063-T6)	8'-1.75"	7'-5"	A, B, C	A, C	B, C
	6'-8"	8'-1"	A, B, C	A, C	B, C
	5'-10"	8'-6"	A, B, C	A, B, C	B, C
2"x5"x1/8" (6063-T6)	8'-1.75"	8'-8"	A, B, C	A, C	B, C
	6'-8"	9'-5"	A, B, C	A, C	B, C
	5'-10"	9'-11"	A, B, C	A, C	B, C
2"x4"x1/4" (6061-T6)	8'-1.75"	11'-3"	A, B, C	C	B, C
	6'-8"	12'-2"	A, B, C	C	B, C
	5'-10"	12'-6"	A, B, C	A, C	B, C

ANCHOR TYPES FOR USE WITH BEAM SCHEDULE, (4) ANCHORS PER BEAM END

- A. 1/4" ALL POINTS SOLID-SET ANCHORS
FOR CONCRETE: 7/8" MIN. EMBEDMENT, 3" MIN. EDGE DISTANCE, AND 3" MIN. SPACING.
FOR HOLLOW CONCRETE BLOCK: 7/8" MIN. EMBEDMENT, 3" MIN. EDGE DISTANCE, AND 3" MIN. SPACING.
- B. 1/4" EYEWALL ARMOR MALE BOLT OR DEWALT MALE/FEMALE PANELMATE
FOR CONCRETE: 2" MIN. EMBEDMENT, 3" MIN. EDGE DISTANCE, AND 3" MIN. SPACING.
FOR HOLLOW CONCRETE BLOCK: 1-1/4" MIN. EMBEDMENT, 3" MIN. EDGE DISTANCE, AND 3" MIN. SPACING.
FOR WOOD: 1-7/8" MIN. EMBEDMENT. 3/4" MIN. EDGE DISTANCE, 1.5" MIN. SPACING.
- C. 1/4" ITW TAPCON SG
FOR CONCRETE: 1-3/4" MIN. EMBEDMENT, 2-1/2" MIN. EDGE DISTANCE, 3" MIN. SPACING.
FOR HOLLOW CONCRETE BLOCK: 1-1/4" MIN. EMBEDMENT, 2-1/2" MIN. EDGE DISTANCE, 3" MIN. SPACING.
FOR WOOD: 1-1/2" MIN. EMBEDMENT, 3/4" MIN. EDGE DISTANCE, 1.5" MIN. SPACING.



Q TYPICAL WALL BRACKET CONNECTION DETAIL
SCALE: 3" = 1'-0"



FL 16219.1

ENGINEERING
EXPRESS

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC
Supply Outdoor Solutions™
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309

FLORIDA SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

COPYRIGHT ENGINEERING EXPRESS®

26-99113

SCALE: NTS UNLESS NOTED

5

SIGNED
08/19/202

EX ENGINEERING
EXPRESS®

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM



Supply i Connect Solutions™
A DIVISION OF ABC SUPPLY CO., INC.

COLONIAL SHUTTER

FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26
-	-	-	-
-	-	-	-

SCALE: NTS UNLESS NOTED

6

	OF
--	----

SEE SHEET 9 FOR ALL PLAN VIEW
INSTALLATION POSITIONS

(R) PLAN VIEW 1
SCALE: 1-1/2" = 1'-0"

CLOSED POSITION

(S) **PLAN VIEW 2**
SCALE: 1-1/2" = 1'-0"

NOTE: USE (3) ANCHORS PER 8" Z BAR AND
(2) PER 4.5" Z BAR

- (2) 1/4" WOOD SCREWS OR SHEET METAL SCREWS W/ 1-3/4" MIN. THREAD PENETRATION AND 3/4" MIN. EDGE DISTANCE.
- (2) 1/4" LAG SCREWS W/ 1-1/2" MIN. THREAD PENETRATION AND 3/4" MIN. EDGE DISTANCE.

- (1) 1/4" WOOD SCREWS OR SHEET METAL SCREWS W/ 1-3/4" MIN. THREAD PENETRATION AND 3/4" MIN. EDGE DISTANCE.

(HINGES NOT SHOWN FOR CLARITY)

(DOUBLE "C" CLIP)

(SINGLE "C" CLIP)

NOTE:
CLIPS REQ'D TOP & BOTTOM FOR SPANS > 69". ONE CLIP REQ'D AT MID-SPAN (±3") FOR SPANS < 69"

(X1) OPEN POSITION LOCK W/ "C" CLIP
SCALE: 3" = 1'-0"

NOTE:
BULLET CLIPS SPACED 24" MAX
FROM ENDS AND 48" O.C. MAX

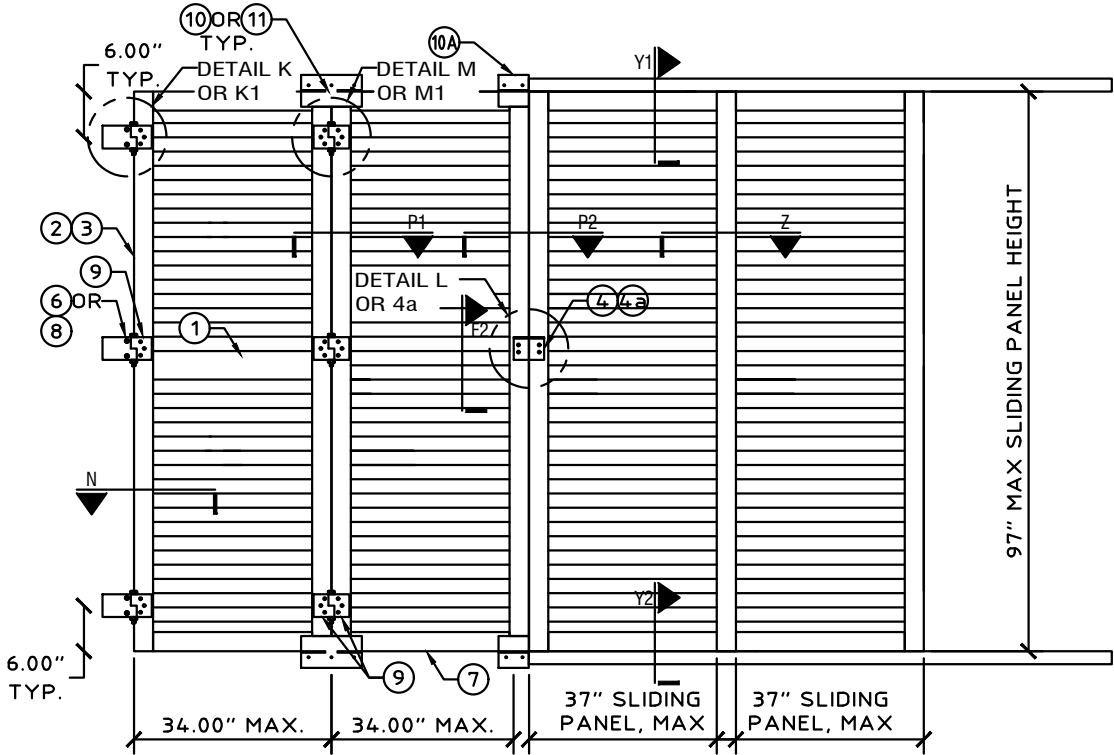
(X2) OPEN POSITION LOCK W/ BULLET CLIP
SCALE: 3" = 1'-0"

8/19/2026 10:56 AM COLBYBENNARDOPBRed\projects\26-99113 2026 multiple product fbc update fl16219\work\2026 fbc\2 - drawings & cad\26-99113b - fl16219.1 - dwg1.dwg

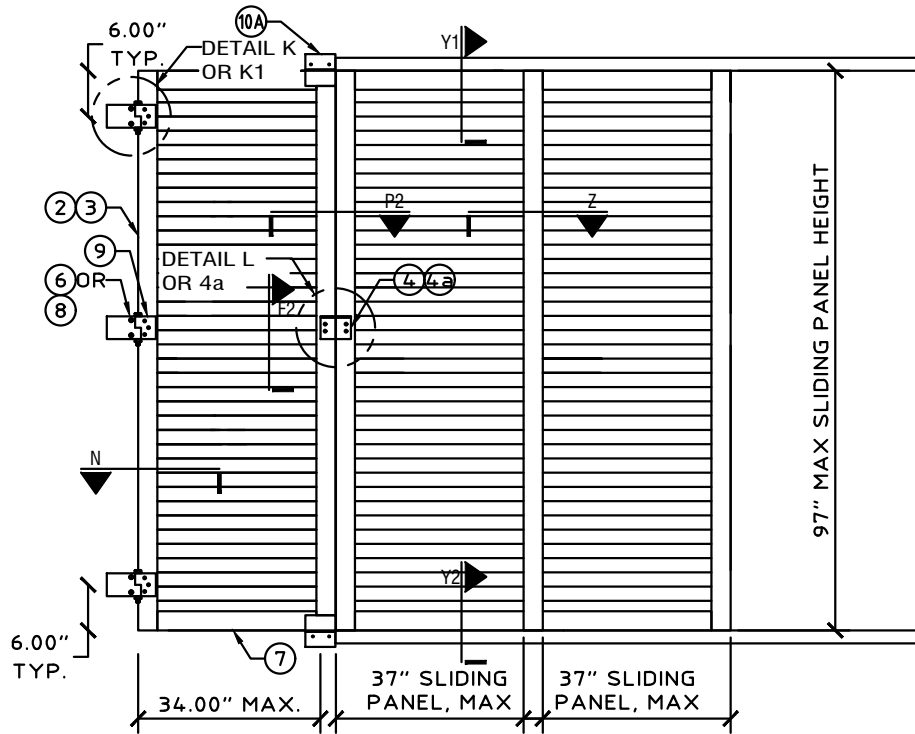
COLBY BENNARDO, P.E.
PE# 95197 CA# 9885

FL

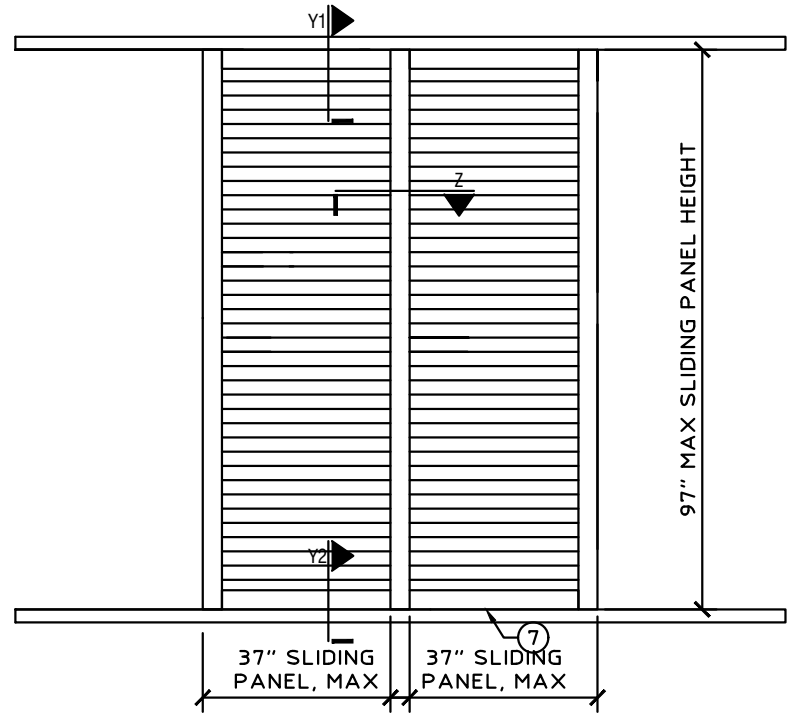
COLBY BENNARDO
LICENSE
No 95197
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SIGNED: 08/19/2026



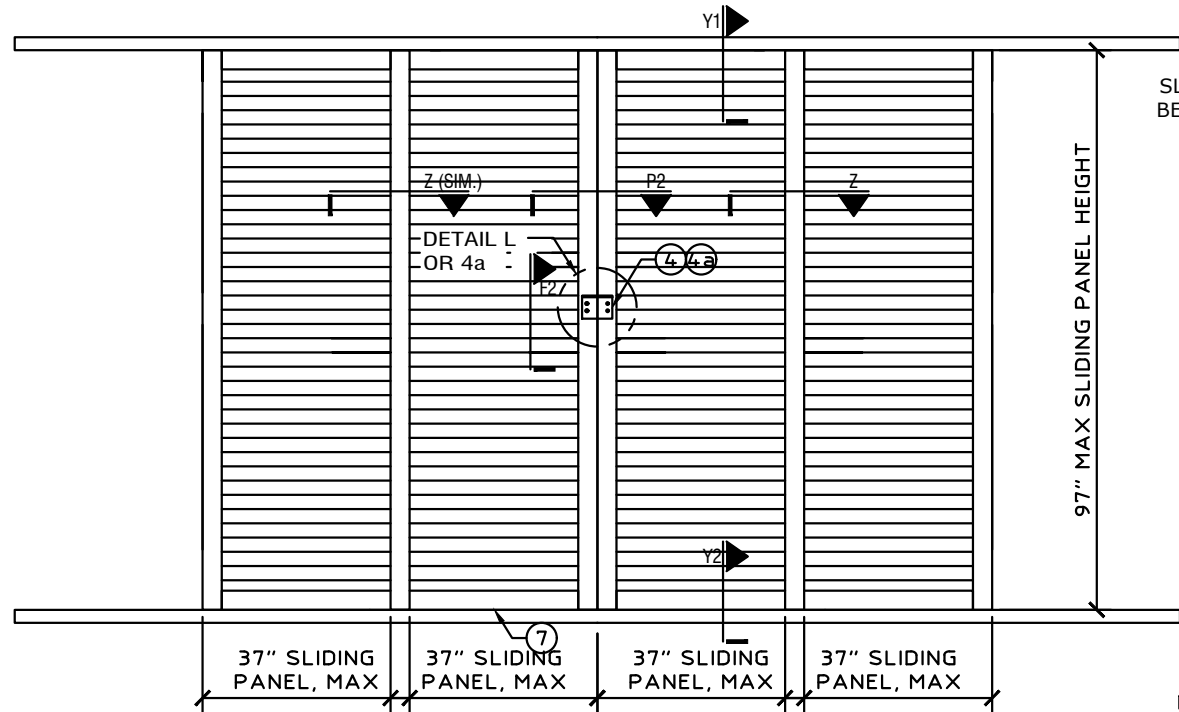
X1 ELEVATION: 2 HINGED AND 2 SLIDING PANELS
SCALE: N.T.S.



X2 ELEVATION: 1 HINGED AND 2 SLIDING PANELS
SCALE: N.T.S.



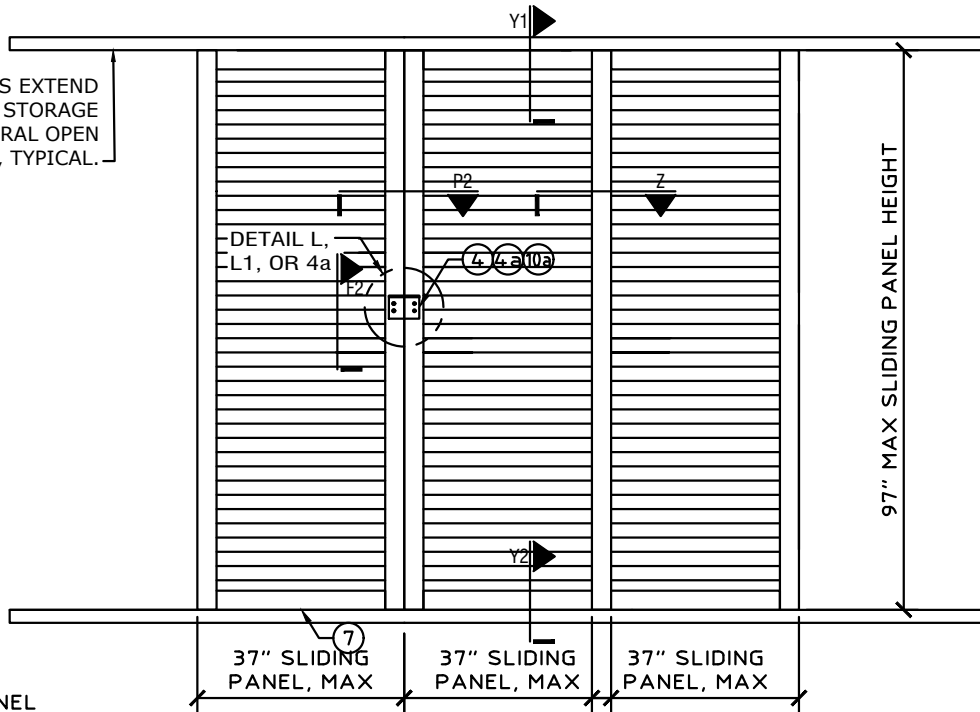
X5 ELEVATION: 2 SLIDING PANELS
SCALE: N.T.S.



X3 ELEVATION: 4 SLIDING PANELS
SCALE: N.T.S.

SLIDING PANEL TRACKS EXTEND BEYOND FOR SHUTTER STORAGE IN NON-STRUCTURAL OPEN POSITION, TYPICAL.

NOTE: SLIDING PANEL CONSTRUCTION SAME AS HINGED PANELS.



X4 ELEVATION: 3 SLIDING PANELS
SCALE: N.T.S.

FL 16219.1

ENGINEERING
EXPRESS

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC
Supply Outdoor
Solutions

A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309

COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

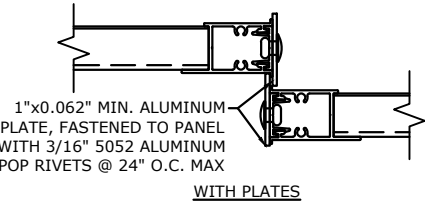
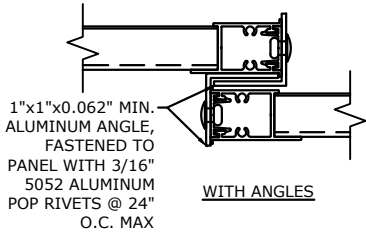
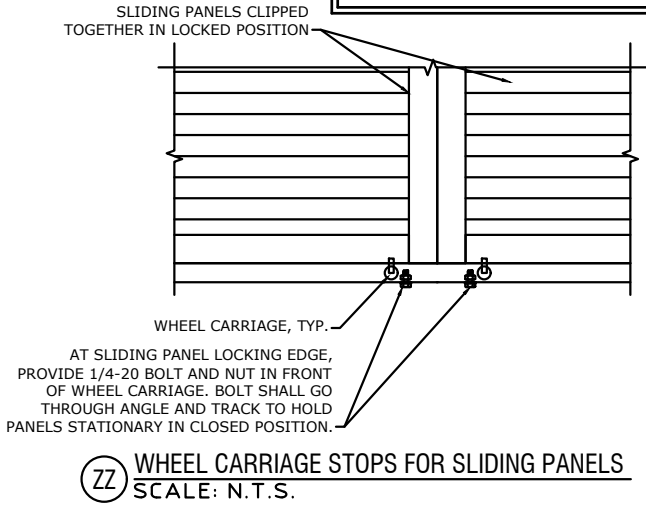
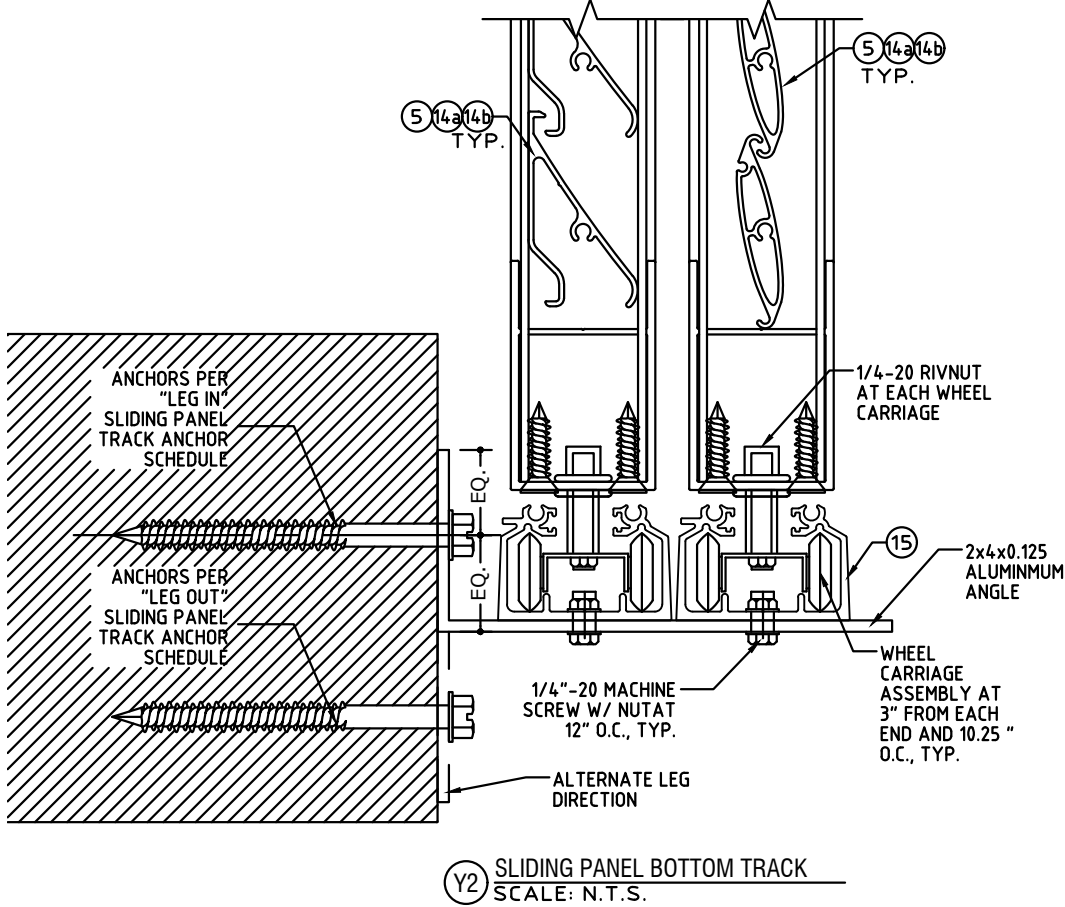
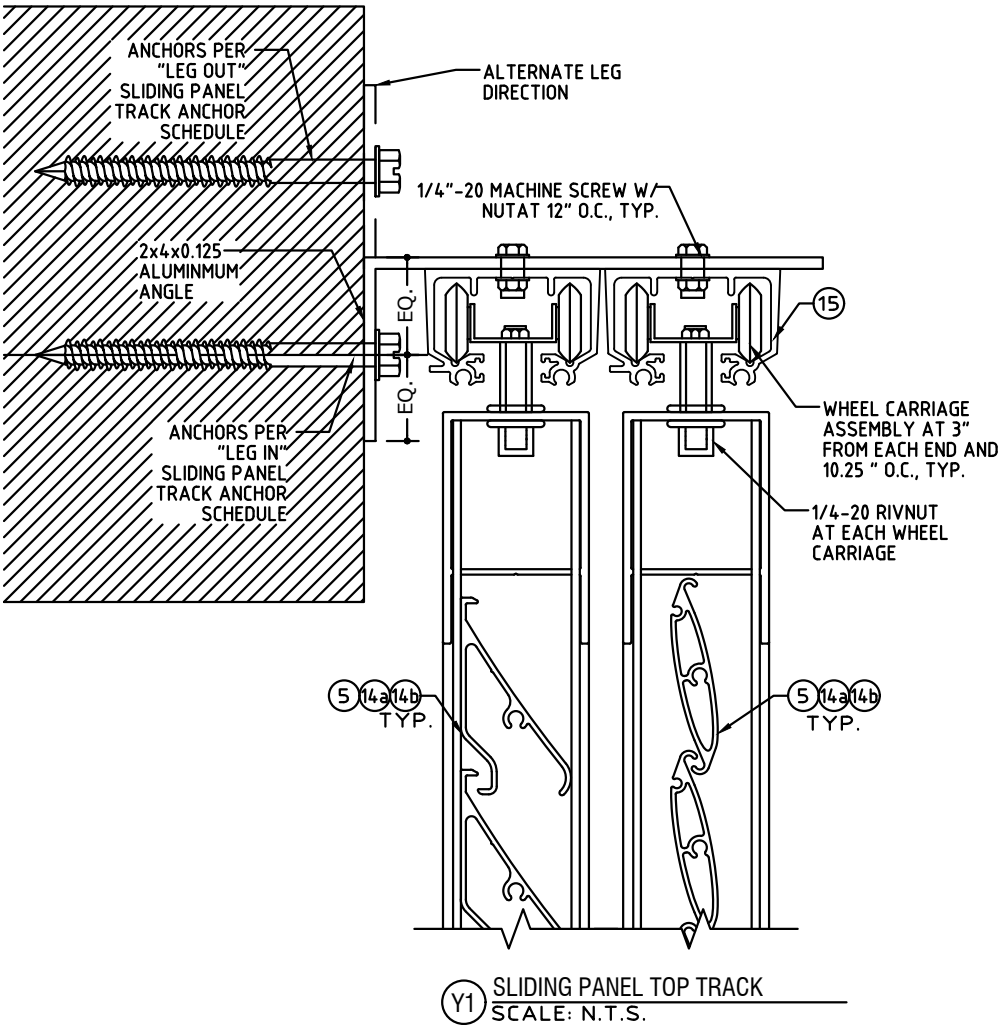
REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

26-99113

SCALE: NTS UNLESS NOTED

7

OF 9



"LEG IN" SLIDING PANEL TRACK ANCHOR SCHEDULE:

HOST STRUCTURE	ANCHOR	SLIDING PANEL VERTICAL SPAN					
		36"	48"	60"	72"	84"	97"
CONCRETE (3192 PSI MIN.)	1/4" ITW SS TAPCONS W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
	1/4" DEWALT ULTRACON W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
CONCRETE (3500 PSI MIN.)	1/4" MILLENNIUM MILLFAST W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
HOLLOW CONCRETE BLOCK	1/4" MILLENNIUM MILLFAST W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	13" O.C.	11" O.C.	9" O.C.	8" O.C.	7" O.C.
	1/4" ITW SS TAPCONS W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	15" O.C.	12" O.C.	9" O.C.	8" O.C.	7" O.C.	6" O.C.
	1/4" DEWALT ULTRACON W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	13" O.C.	10" O.C.	8" O.C.	7" O.C.	6" O.C.
	5/16" ITW TAPCON XL W/ 1-3/4" MIN. EMBEDMENT AND 4" MIN. EDGE DISTANCE.	16" O.C.	16" O.C.	15" O.C.	13" O.C.	11" O.C.	9" O.C.
	5/16" DEWALT ULTRACON W/ 1-1/4" MIN. EMBEDMENT AND 3-1/8" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	16" O.C.	14" O.C.	12" O.C.	10" O.C.
WOOD (G=0.42 MIN.)	1/4" LAG SCREW W/ 1-1/2" MIN. EMBEDMENT AND 3/4" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	16" O.C.
	#14 SMS OR WOOD SCREW W/ 1-1/2" MIN. EMBEDMENT AND 3/4" MIN. EDGE DISTANCE.	16" O.C.	16" O.C.	16" O.C.	16" O.C.	15" O.C.	13" O.C.

NOTES: TABLE PROVIDES MAXIMUM ANCHOR SPACING FOR INDICATED ANCHOR TYPES AND SLIDING PANEL VERTICAL SPANS FOR "LEG IN" CONDITION. ANCHORS SHALL BE LOCATED 2" MAX FROM TRACK ENDS.
*ALL MILLENNIUM MILLFAST SCREWS SHALL HAVE T&C ULTRACOTE

"LEG OUT" SLIDING PANEL TRACK ANCHOR SCHEDULE:

HOST STRUCTURE	ANCHOR	SLIDING PANEL VERTICAL SPAN					
		36"	48"	60"	72"	84"	97"
CONCRETE (3192 PSI MIN.)	1/4" ITW SS TAPCONS W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	13" O.C.	10" O.C.	9" O.C.	7" O.C.	6" O.C.
	1/4" DEWALT ULTRACON W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	16" O.C.	13" O.C.	11" O.C.	9" O.C.	8" O.C.
CONCRETE (3500 PSI MIN.)	1/4" MILLENNIUM MILLFAST W/ 1-3/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	16" O.C.	13" O.C.	10" O.C.	9" O.C.	7" O.C.	6" O.C.
HOLLOW CONCRETE BLOCK	1/4" MILLENNIUM MILLFAST W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	7" O.C.	5" O.C.	4" O.C.			
	1/4" ITW SS TAPCONS W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	6" O.C.	4" O.C.	4" O.C.	3" O.C.	3" O.C.	
	1/4" DEWALT ULTRACON W/ 1-1/4" MIN. EMBEDMENT AND 2-1/2" MIN. EDGE DISTANCE	6" O.C.	5" O.C.	4" O.C.	3" O.C.	3" O.C.	
	5/16" ITW TAPCON XL W/ 1-3/4" MIN. EMBEDMENT AND 4" MIN. EDGE DISTANCE.	10" O.C.	7" O.C.	6" O.C.	5" O.C.	4" O.C.	4" O.C.
	5/16" DEWALT ULTRACON W/ 1-1/4" MIN. EMBEDMENT AND 3-1/8" MIN. EDGE DISTANCE	10" O.C.	8" O.C.	6" O.C.			
WOOD (G=0.42 MIN.)	1/4" LAG SCREW W/ 1-1/2" MIN. EMBEDMENT AND 3/4" MIN. EDGE DISTANCE	16" O.C.	14" O.C.	11" O.C.	10" O.C.	8" O.C.	7" O.C.
	#14 SMS OR WOOD SCREW W/ 1-1/2" MIN. EMBEDMENT AND 3/4" MIN. EDGE DISTANCE.	13" O.C.	10" O.C.	8" O.C.	7" O.C.	6" O.C.	5" O.C.

NOTES: TABLE PROVIDES MAXIMUM ANCHOR SPACING FOR INDICATED ANCHOR TYPES AND SLIDING PANEL VERTICAL SPANS FOR ALTERNATE "LEG OUT" CONDITION. ANCHORS SHALL BE LOCATED 2" MAX FROM TRACK ENDS.
*ALL MILLENNIUM MILLFAST SCREWS SHALL HAVE T&C ULTRACOTE

COLBY BENNARD, P.E.
PE# 95197 CA# 9885

FL



FL 16219.1

ENGINEERING
EXPRESS

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM



A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309
COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWN	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

COPYRIGHT ENGINEERING EXPRESS®

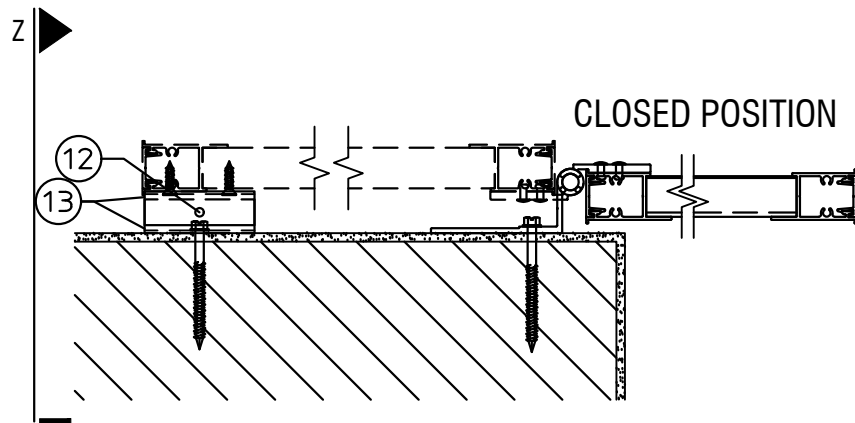
26-99113

SCALE: NTS UNLESS NOTED

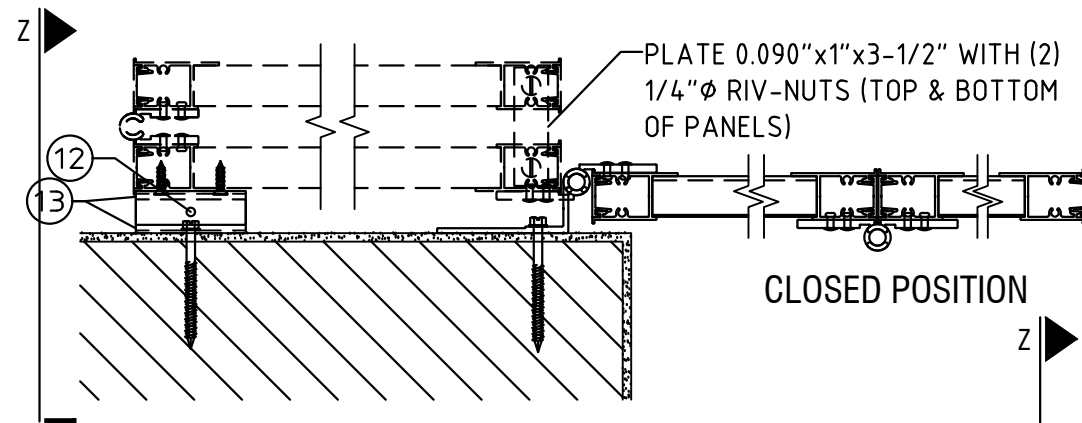
88

OF 9

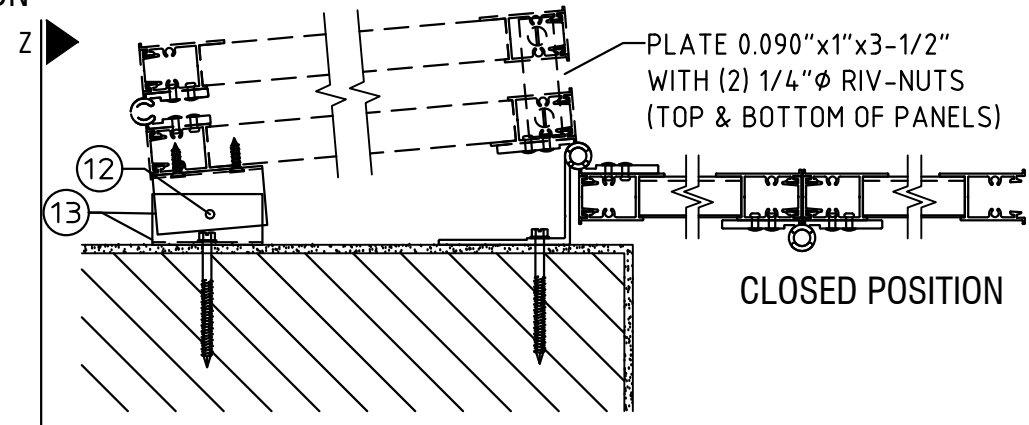
8/19/2026 10:56 AM COLBYBENNARDOPROJECTS\26-99113 2026 multiple product fbc update fl16219\work\2026 fbc\2 - drawings & cad\26-99113b - fl16219.1 - dwg1.dwg



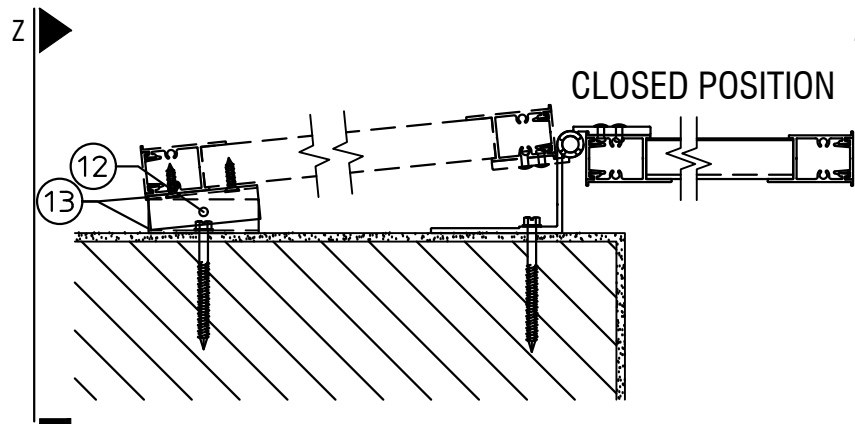
R PLAN VIEW 1
SCALE: 1-1/2" = 1'-0"



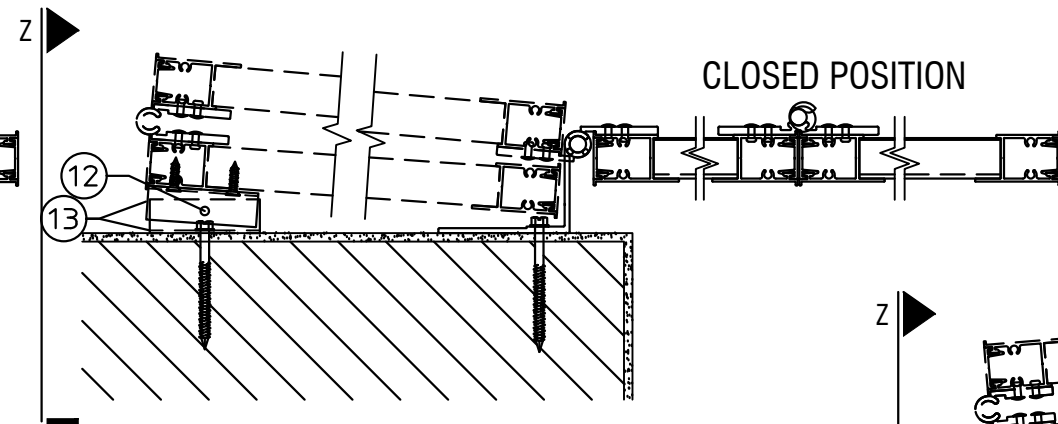
S PLAN VIEW 2
SCALE: 1-1/2" = 1'-0"



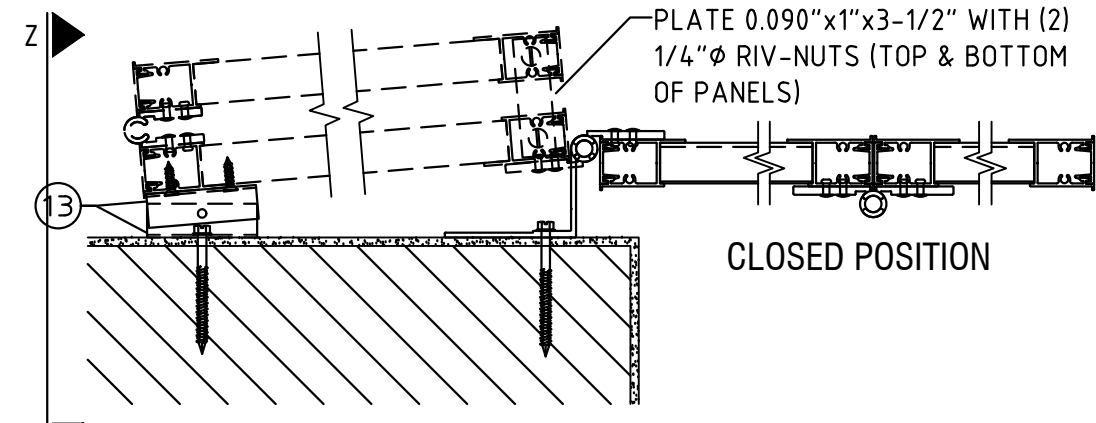
T PLAN VIEW 3
SCALE: 1-1/2" = 1'-0"



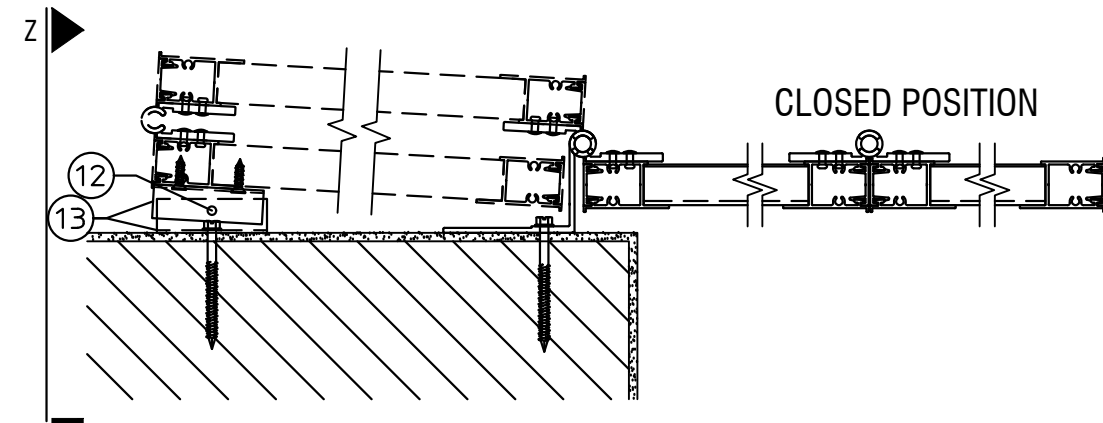
U PLAN VIEW 4
SCALE: 1-1/2" = 1'-0"



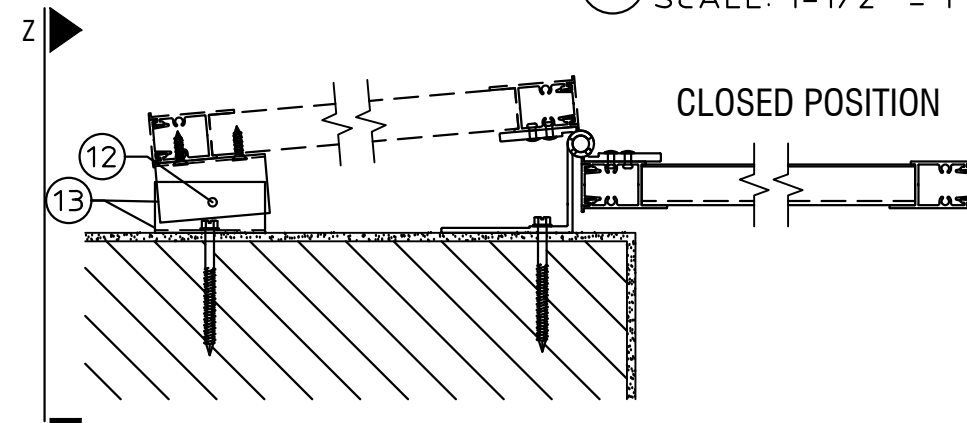
V PLAN VIEW 5
SCALE: 1-1/2" = 1'-0"



Y PLAN VIEW 8
SCALE: 1-1/2" = 1'-0"



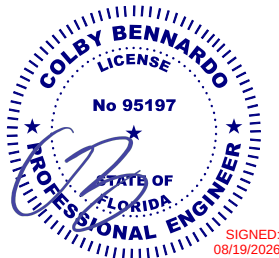
W PLAN VIEW 7
SCALE: 1-1/2" = 1'-0"



X PLAN VIEW 6
SCALE: 1-1/2" = 1'-0"

COLBY BENNARD, P.E.
PE# 95197 CA# 9885

FL



FL 16219.1

ENGINEERING EXPRESS
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

ABC Supply / Outdoor Solutions
A DIVISION OF ABC SUPPLY CO., INC.
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309
COLONIAL SHUTTER
FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA FL#16219.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26168)	CCB	RWV	07/01/20
2023 FBC (23-64831)	MLD	CCB	08/21/23
2026 FBC	MEF	CCB	08/15/26

COPYRIGHT ENGINEERING EXPRESS®

26-99113

SCALE: NTS UNLESS NOTED