

6.8 ACCORDION SHUTTER

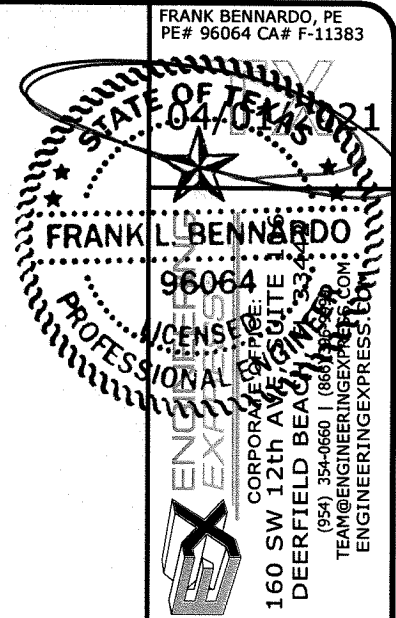
DESIGN WIND LOAD (PSF)	POSITIVE AND NEGATIVE WIND LOAD ALL MOUNTING CONDITIONS**
50.0	156"
55.0	155"
60.0	148"
65.0	143"
70.0	137"
75.0	133"
80.0	128"
85.0	125"
90.0	121"
95.0	118"
100.0	115"
105.0	112"
110.0	110"
115.0	107"
120.0	105"
125.0	103"
130.0	101"
135.0	99"
140.0	95"
145.0	92"
150.0	89"
155.0	86"
160.0	83"
165.0	81"
170.0	78"
175.0	76"
180.0	74"
185.0	72"
190.0	70"
195.0	68"
200.0	66"

** FOR BUILDOUT MOUNT MAXIMUM SPANS AND PRESSURES, SEE TABLE C ON SHEET 6/13

POSITIVE DESIGN PRESSURE (PSF)	SHUTTER SPAN	MINIMUM SEPARATION FROM GLASS	
		INSTALLATIONS ≤ 30' ABOVE GRADE (IN.)	INSTALLATIONS > 30' ABOVE GRADE (IN.)
30	60"	3.1"	1.1"
	99"	3.1"	1.4"
	120"	3.1"	1.9"
	156"	5.8"	3.5"
40	60"	3.1"	1.1"
	99"	3.1"	1.5"
	108"	3.1"	1.8"
	120"	3.1"	2.2"
	132"	5.8"	2.7"
50	156"	5.8"	4.3"
	60"	3.1"	1.1"
	99"	3.1"	1.7"
	108"	3.1"	2.0"
60	120"	3.1"	2.5"
	132"	5.8"	3.1"
	156"	5.8"	5.2"
	60"	3.1"	1.1"
	99"	3.1"	1.8"
70	108"	3.1"	2.1"
	120"	3.1"	2.7"
	148"	5.8"	5.0"
	60"	3.1"	1.1"
90	84"	3.1"	1.5"
	99"	3.1"	1.9"
	120"	3.1"	3.0"
	137"	5.8"	4.5"
	60"	3.1"	1.2"
110	84"	3.1"	1.6"
	99"	3.1"	2.2"
	120"	3.7"	3.6"
	121"	5.8"	3.7"
120	60"	3.1"	1.2"
	84"	3.1"	1.8"
	99"	3.1"	2.5"
	110"	3.3"	3.3"
120	60"	3.1"	1.2"
	84"	3.1"	1.8"
	99"	3.1"	2.6"
	105"	3.1"	3.0"

TABLE 1 AND 2 NOTES:

- DESIGN PRESSURES SHOWN IN "ACCORDION SHUTTER SPAN SCHEDULE" ABOVE ARE MAXIMUM ALLOWABLE DESIGN PRESSURES AT EACH RESPECTIVE SHUTTER SPAN.
- SEPARATION FROM GLAZING IS NOT REQUIRED IN WIND ZONES 1-3 UNLESS LOCAL MUNICIPALITY ADOPTS ADDITIONAL CRITERIA.
- THE 6.8 SYSTEM MAY BE MOUNTED WITH THE INSIDE AND OUTSIDE OF THE SHUTTER BEING REVERSED. FOR EXAMPLE: IT IS PERMISSIBLE TO MOUNT TO A WOOD OR CONCRETE BEAM WITH THE BACK OF THE SLAT FACING OUTWARD.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE DESIGN PRESSURES FOR THE NEXT HIGHER SPAN SHALL BE USED.



Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/01/15
2018 IBC	RWN	FLB	11/10/20

COPYRIGHT FRANK L. BENNARDO P.E.

20-24244.4

SCALE: -

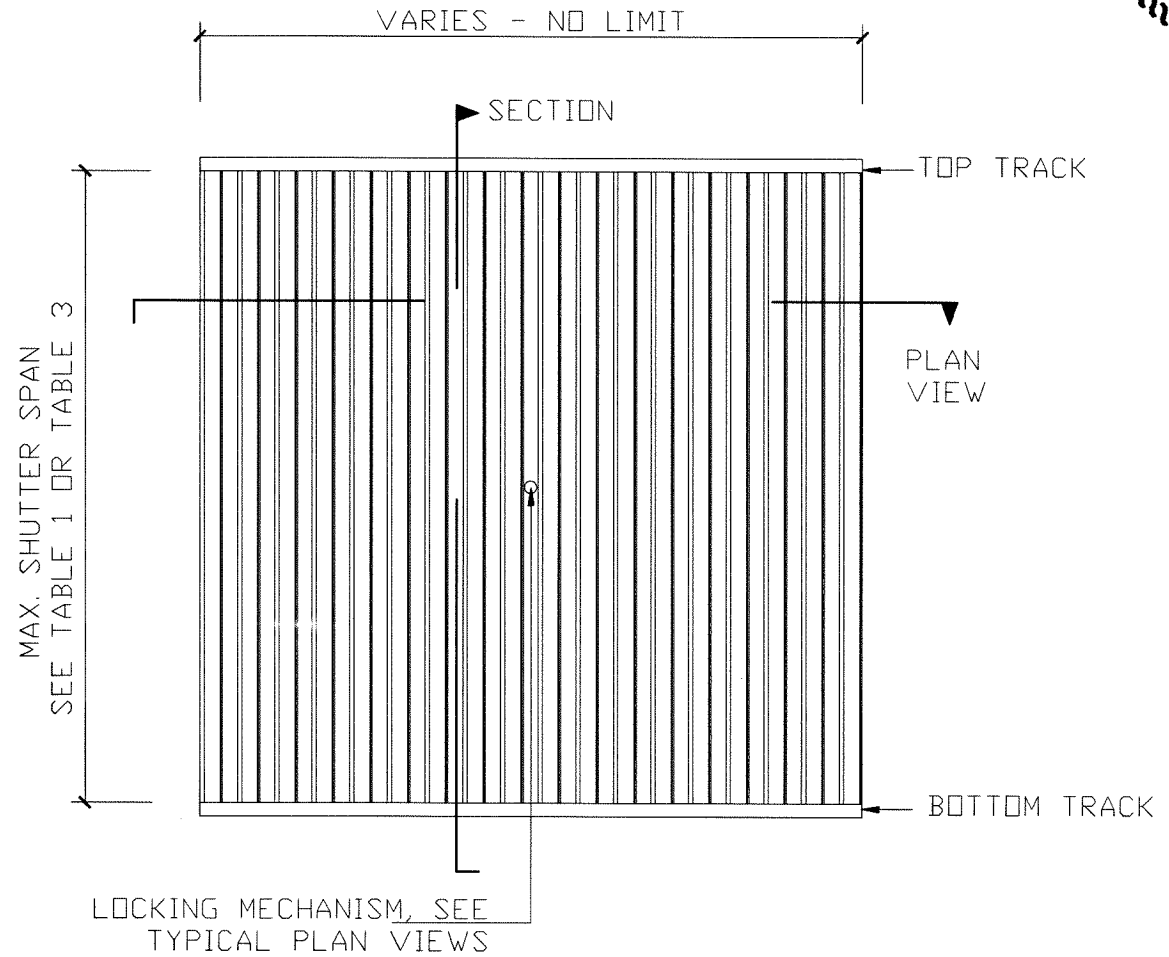
PAGE DESCRIPTION:

C:\Users\rickn\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244_4b_6.8 Accordion.dwg
 04/01/2021 - 10:02am rickn

GENERAL NOTES:

1. THIS SYSTEM HAS BEEN TESTED AND EVALUATED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (2018) AND THE INTERNATIONAL RESIDENTIAL CODE.
2. 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 AS DETERMINED IN ACCORDANCE WITH ASCE 7 AND CHAPTER 1609 OF THE INTERNATIONAL BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
3. TESTING WAS CONDUCTED IN ACCORDANCE WITH TAS 201/202/203 AND ASTM E1886/E1996/E330.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
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. 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.
7. 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 7-16, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ SHALL BE USED.
8. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE.
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. WHEN THE SITE CONDITIONS DEVIATE FROM THESE APPROVAL DOCUMENTS, THE BUILDING OFFICIAL MAY REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION, AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
11. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING MINIMUM INFORMATION:

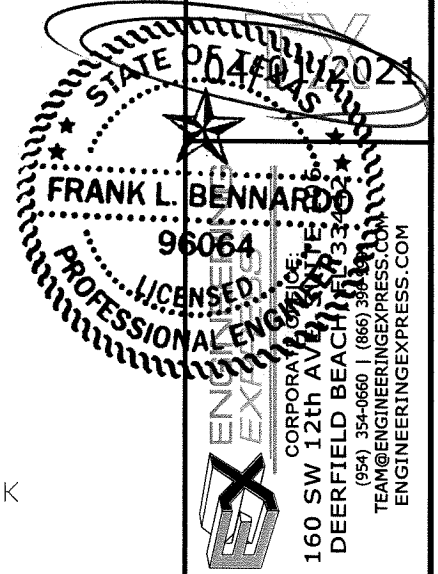
TOWN & COUNTRY INDUSTRIES
 FORT LAUDERDALE, FL
 9LB MISSILE LEVEL D - ASTM E1886, E1996 & E330
 TAS 201, 202 & 203
 TDI EVALUATED
12. ALL EXTRUSIONS SHOWN SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N., WITH A MINIMUM F_y OF 25 K.S.I.
13. ALL BOLTS AND WASHERS (EXCLUDING INSTALLATION) SHALL BE STAINLESS STEEL 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.
14. ALL SHUTTERS SHALL HAVE A LOCKING MECHANISM CONSISTING OF THUMBSCREW, PUSH LOCK OR BOX LOCK AT CENTER OR SIDE CLOSURE.
15. TOP AND BOTTOM DETAILS MAY BE INTERCHANGED AS FIELD CONDITIONS REQUIRE.
16. FLOOR TRACKS MAY BE REMOVABLE AT NON-STACKING LOCATIONS. USE REMOVABLE ANCHORS.
17. MOUNTING EXTRUSIONS MAY BE BENT TO FORM A CURVE WITH A MIN. RADIUS OF 10".
18. ALL DIMENSIONS SHOWN INCLUDE POWDER COATING FINISH.
19. SEALANT SHALL BE USED ON ANCHORS OR TRACKS WHEREVER WATER SEEPAGE IS POSSIBLE.
20. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED AS PRESCRIBED IN THE ABOVE-NOTED BUILDING CODE
21. THE 6.8 SYSTEM MAY BE MOUNTED WITH THE INSIDE AND OUTSIDE OF THE SHUTTER BEING REVERSED. FOR EXAMPLE: IT IS PERMISSIBLE TO MOUNT TO A WOOD OR CONCRETE BEAM WITH THE BACK OF THE SLAT FACING OUTWARD. FOR THIS CONDITION POSITIVE ALLOWABLE DESIGN PRESSURES AS NOTED IN TABLE 1 ARE IN THE DIRECTION TOWARDS THE HOST STRUCTURE AND NEGATIVE ALLOWABLE DESIGN PRESSURES ARE AWAY FROM THE HOST STRUCTURE.
22. SHUTTER MAY BE INSTALLED WITH UP TO (2) ADDITIONAL BLADES OF SLACK



TYPICAL ACCORDION SHUTTER ELEVATION

N.T.S.

FRANK BENNARDO, PE
 PE# 96064 CA# F-11383



Town & Country INDUSTRIES
 Wholesale Aluminum and Building Products
 A Division of PEC Supply Co., Inc.
 400 WEST MCNAB ROAD
 FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/01/15
2018 IBC	RWN	FLB	11/10/20

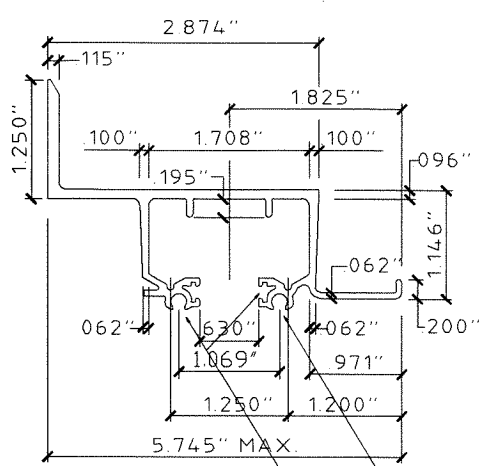
COPYRIGHT FRANK L. BENNARDO P.E.

20-24244.4

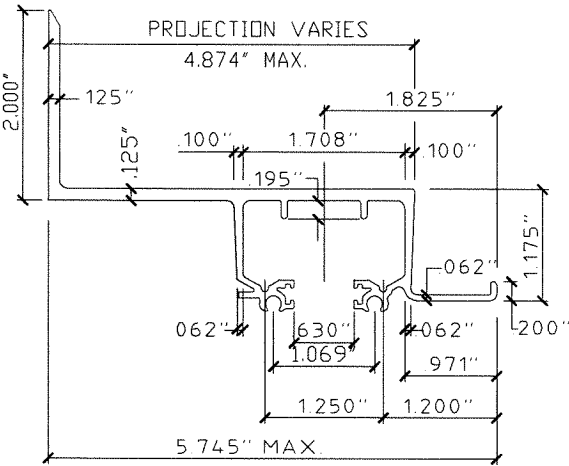
SCALE: -

PAGE DESCRIPTION: -

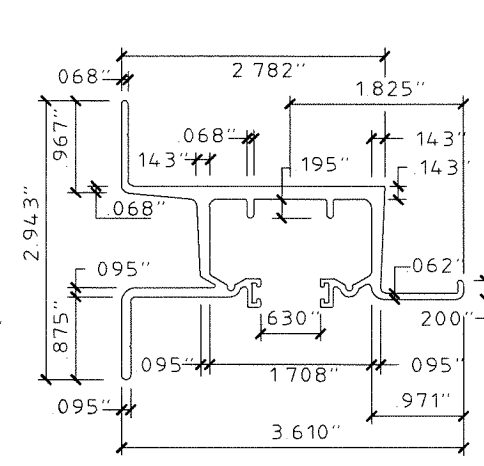
C:\Users\rickm\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244.4b 6.8 Accordion.dwg 04/01/2021 - 10:02am rickn



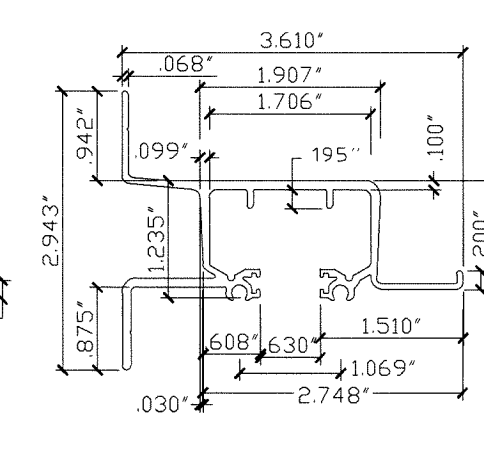
1 WALL
SCALE: HALF SIZE



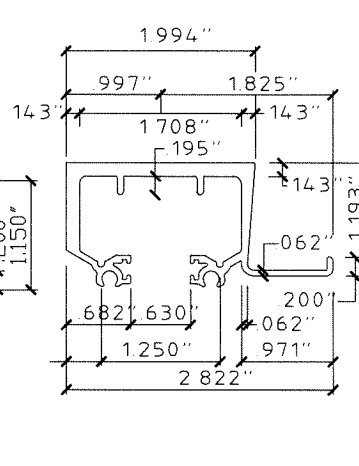
2 BUILD OUT WALL
SCALE: HALF SIZE



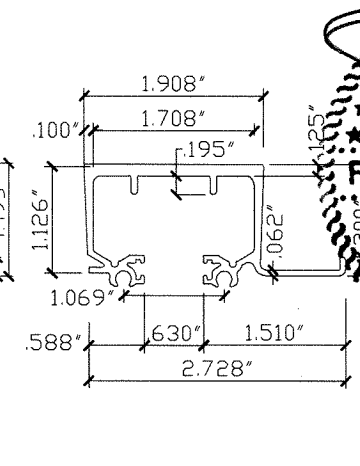
3 HEAVY 2-LEG WALL
SCALE: HALF SIZE



4 LITE 2-LEG WALL
SCALE: HALF SIZE

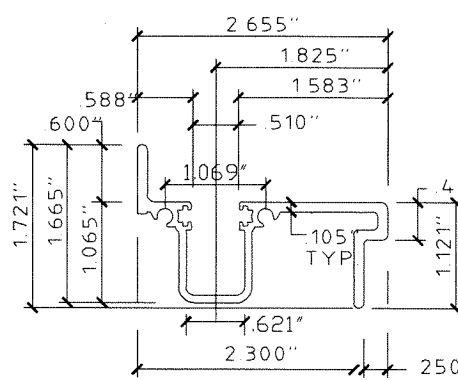


5 HEAVY HEADER/SILL
SCALE: HALF SIZE

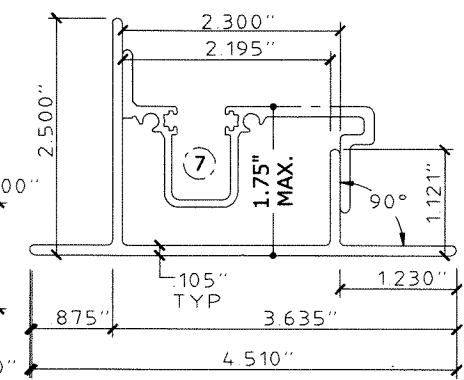


6 LITE HEADER/SILL
SCALE: HALF SIZE

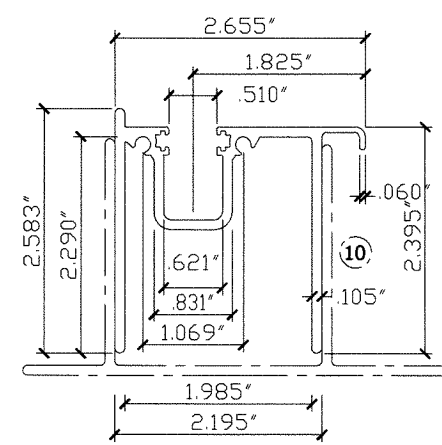
WHERE SHOWN SCREW BOSSES & FELT GROOVES ARE OPTIONAL ON ALL EXTRUSIONS



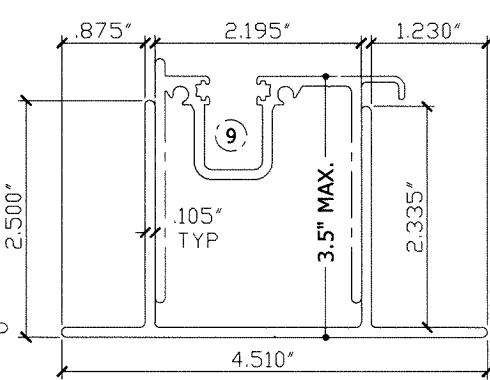
7 SILL
SCALE: HALF SIZE



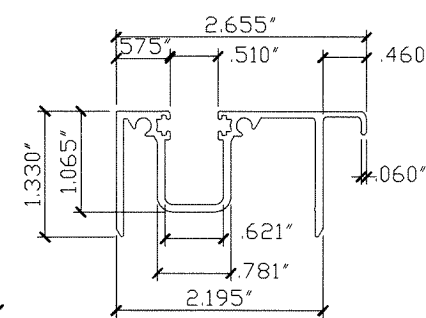
8 SILL ADAPTER
SCALE: HALF SIZE



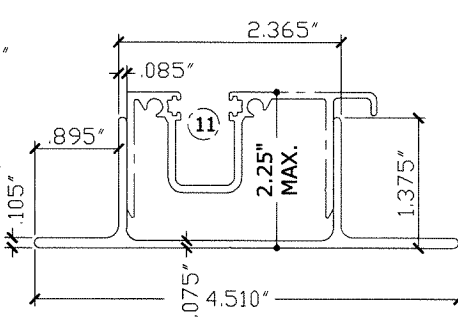
9 EXTENDED SILL
SCALE: HALF SIZE



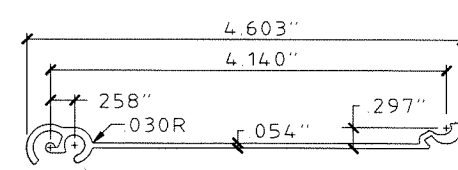
10 EXTENDED SILL ADAPTOR
SCALE: HALF SIZE



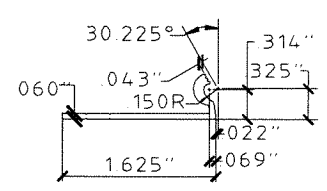
11 MID SILL
SCALE: HALF SIZE



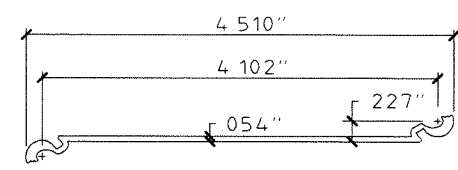
12 MID SILL ADAPTOR
SCALE: HALF SIZE



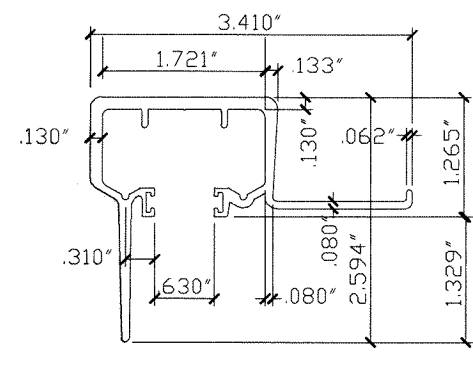
13 TYP. 6.8 SLAT/BLADE
SCALE: HALF SIZE



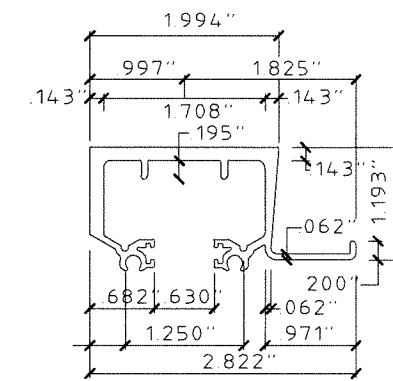
17 6.8 STARTER
SCALE: HALF SIZE



15 6.8 STACK/CONECTOR SLAT/BLADE
SCALE: HALF SIZE



14 CEILING HEADER/SILL
SCALE: HALF SIZE



16 RADIUS CEILING HEADER/SILL
SCALE: HALF SIZE

FRANK BERNARDO, PE
PE# 06064 CA# F-11383

04/01/2021

FRANK L. BERNARDO
96064
LICENSED PROFESSIONAL ENGINEER
CORPORATE OFFICE
160 SW 12th AVE SUITE 110
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 354-0660
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

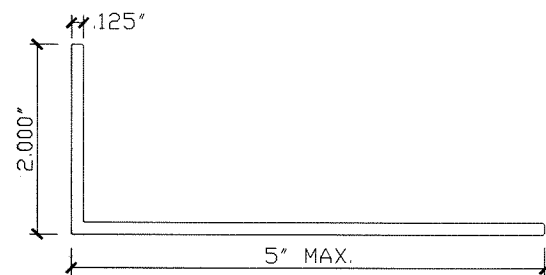
Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/01/15
2018 IBC	RWN	FLB	11/10/20

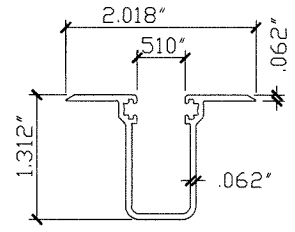
COPYRIGHT FRANK L. BERNARDO P.E.

20-24244.4

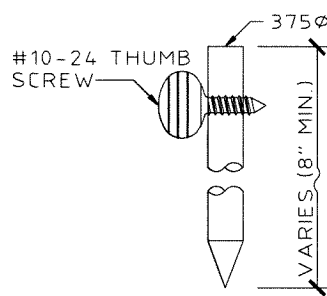
SCALE: -
PAGE DESCRIPTION:



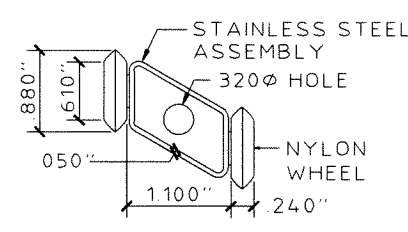
19 ANGLE
SCALE: HALF SIZE



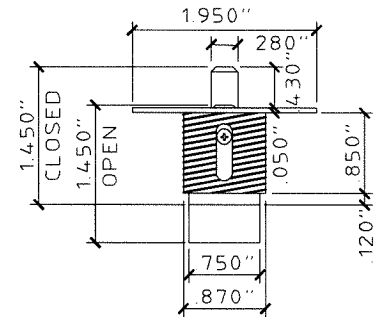
20 RECESS SILL
SCALE: HALF SIZE



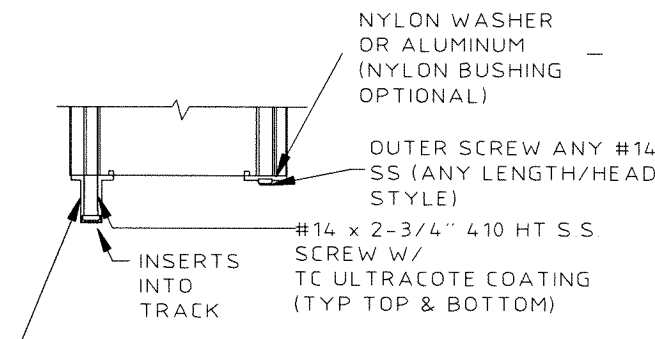
21 SLIDE ROD
SCALE: HALF SIZE



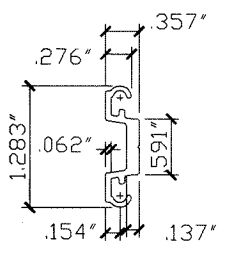
22 ROLLER ASSEMBLY
SCALE: HALF SIZE



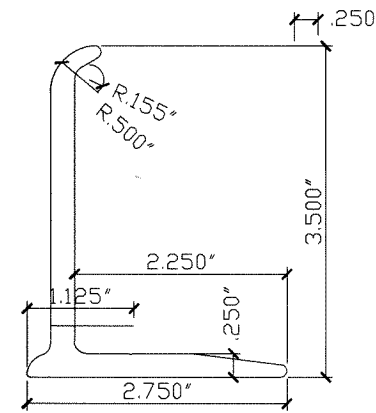
23 BRASS PUSH LOCK
SCALE: HALF SIZE



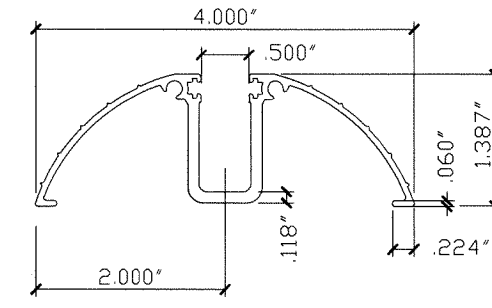
24 BUSHING ASSEMBLY DETAIL
SCALE: HALF SIZE



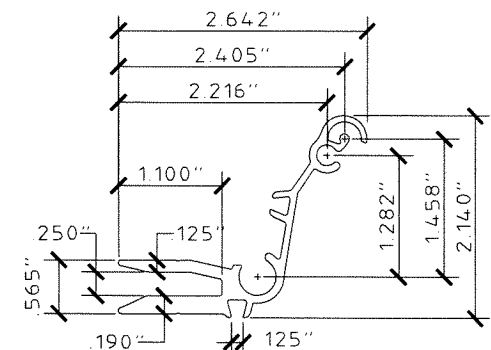
26 BOX CENTER INSERT
SCALE: HALF SIZE



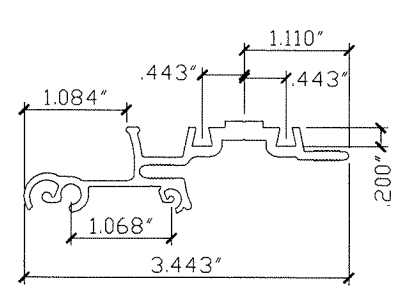
27 RAINGUARD
SCALE: HALF SIZE



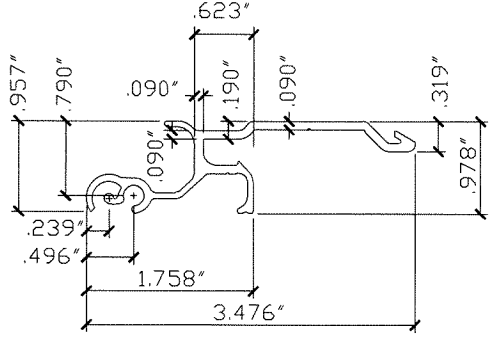
28 DECORATIVE FLOOR TRACK
SCALE: HALF SIZE



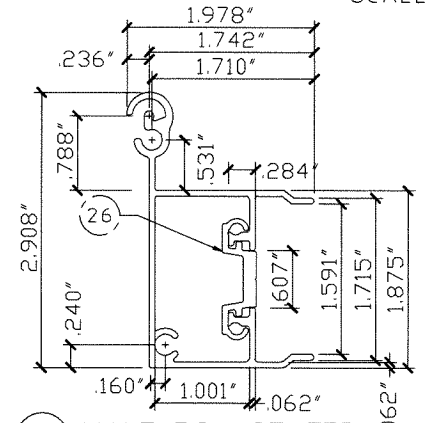
34 INSIDE CENTER MATE
SCALE: HALF SIZE



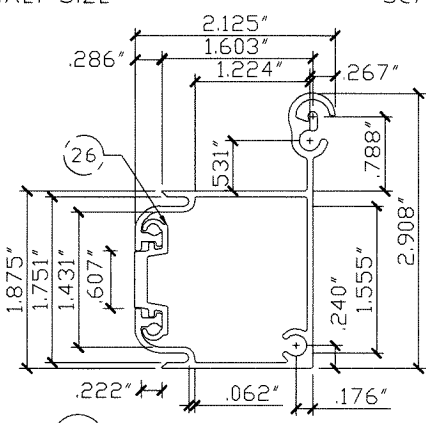
29 2003 6.8 CENTER MATE
SCALE: HALF SIZE



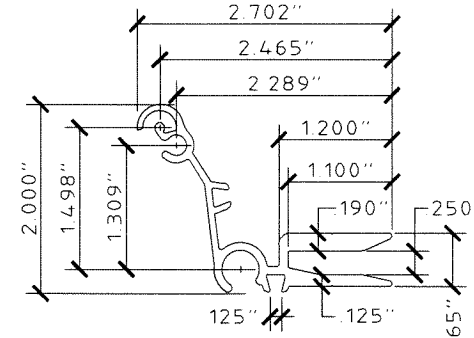
30 UNIMATE LOCK
SCALE: HALF SIZE



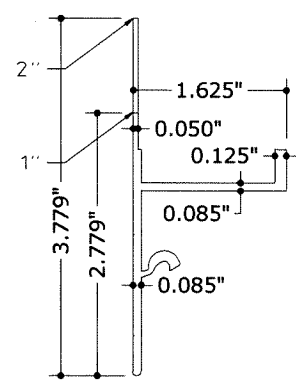
31 MALE BOX CENTER
SCALE: HALF SIZE



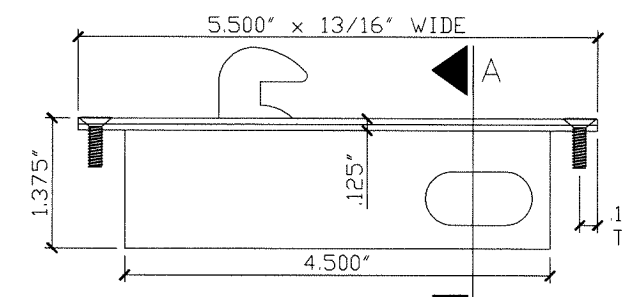
32 FEMALE BOX CENTER
SCALE: HALF SIZE



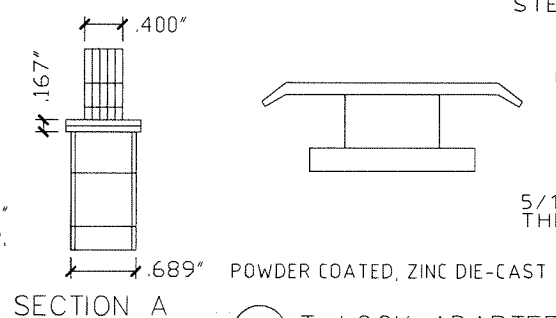
33 OUTSIDE CENTER MATE
SCALE: HALF SIZE



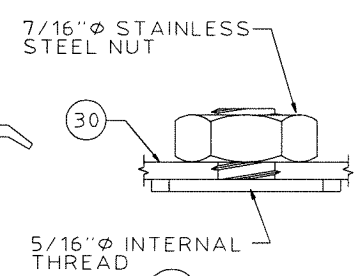
40d ALT. 1" OR 2" END STRIP
SCALE: HALF SIZE



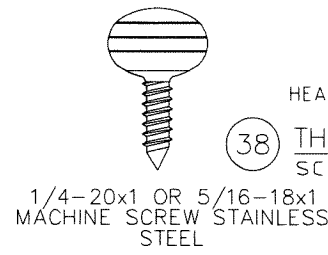
35 BOX LOCK
SCALE: HALF SIZE



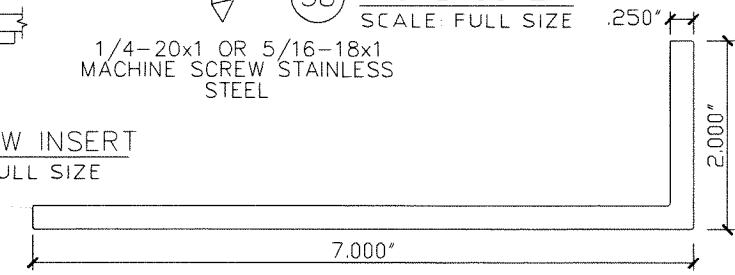
36 T-LOCK ADAPTER (OPTIONAL)
SCALE: HALF SIZE



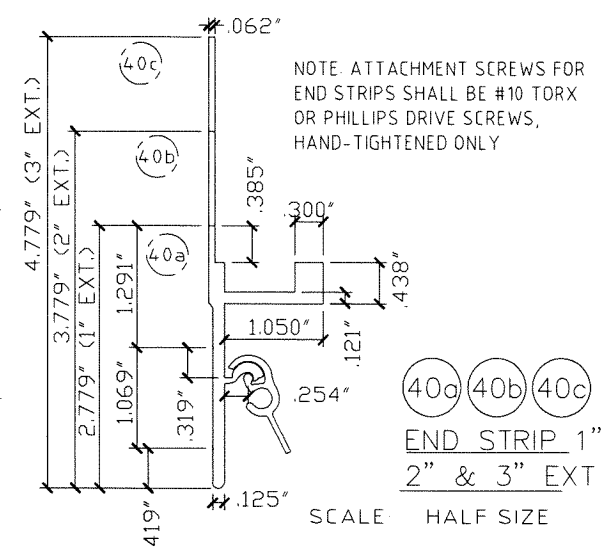
37 T-SCREW INSERT
SCALE: FULL SIZE



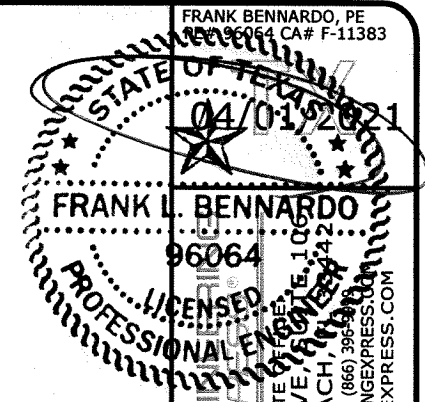
38 THUMB SCREW
SCALE: FULL SIZE



39 2X7 ANGLE
SCALE: HALF SIZE



40a 40b 40c
END STRIP 1" 2" & 3" EXT
SCALE: HALF SIZE



FRANK L. BENNARDO
CORPORATE ENGINEER
160 SW 12th AVE, SUITE 106
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 396-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

DRWN	CHKD	DATE
KL	FLB	12/20/11
KL	FLB	2/22/12
KL	FLB	10/25/13
RWN	CSL	4/01/15
RWN	FLB	11/10/20

COPYRIGHT FRANK L. BENNARDO P.E.

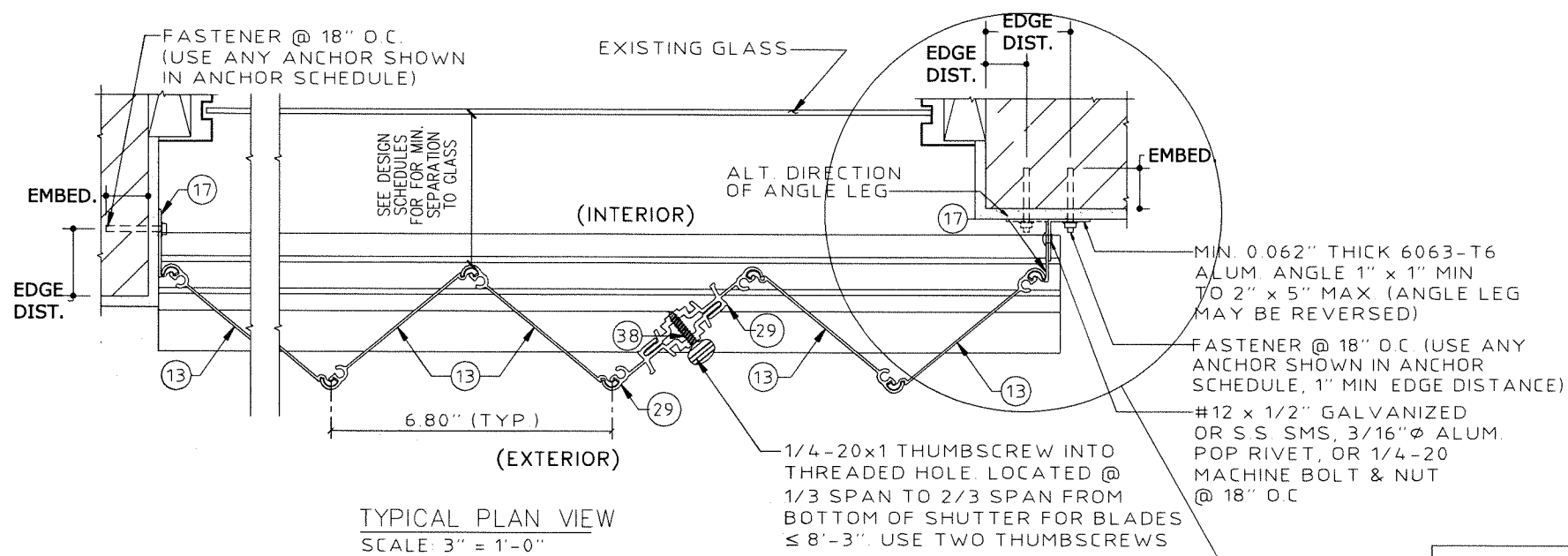
20-24244.4

SCALE: -

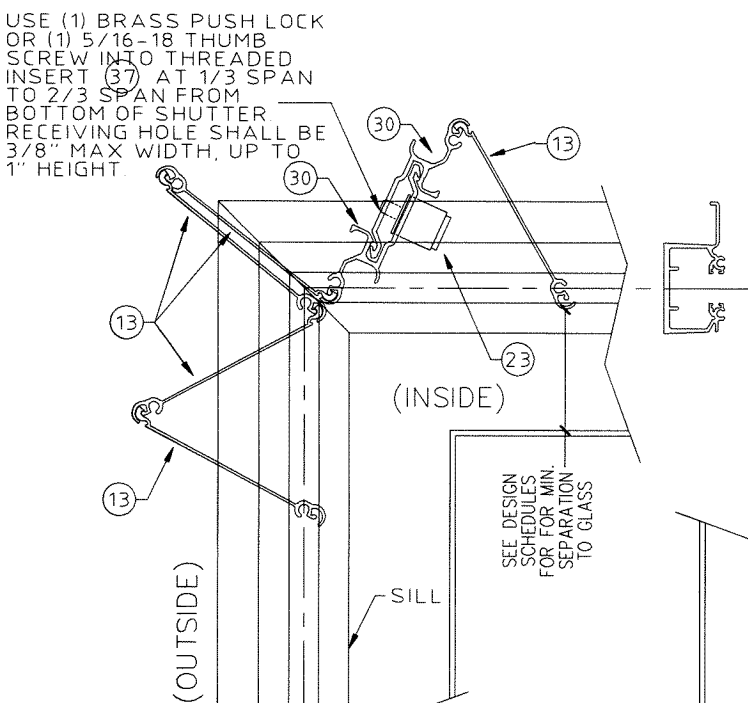
PAGE DESCRIPTION: -

C:\Users\rickn\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244.4b 6.8 Accordion.dwg 04/01/2021 - 10:02am rickn

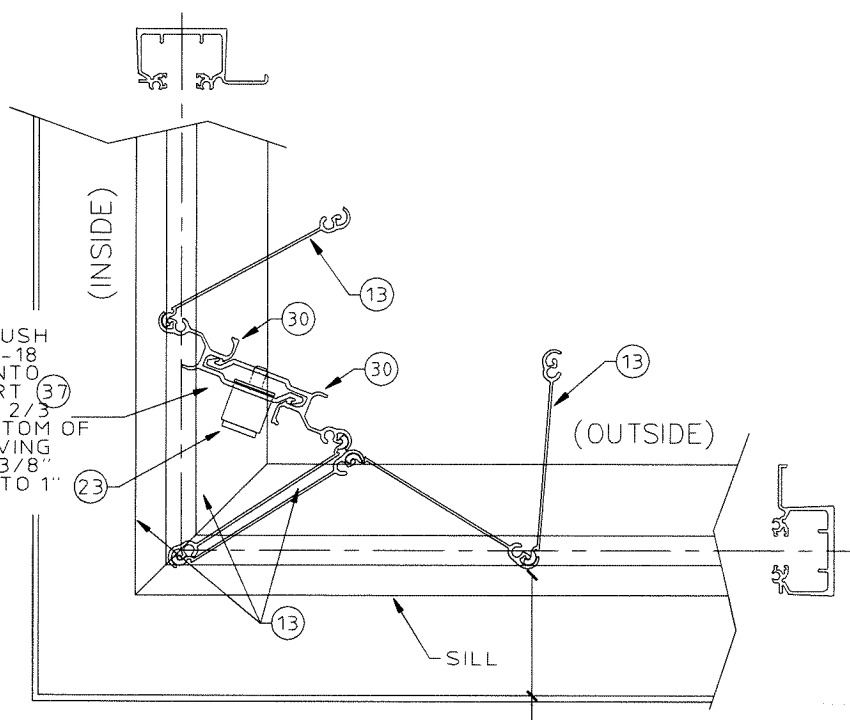
C:\Users\rickm\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244.4b 6.8 Accordion.dwg 04/01/2021 - 10:02am rickm



TYPICAL PLAN VIEW
SCALE: 3" = 1'-0"

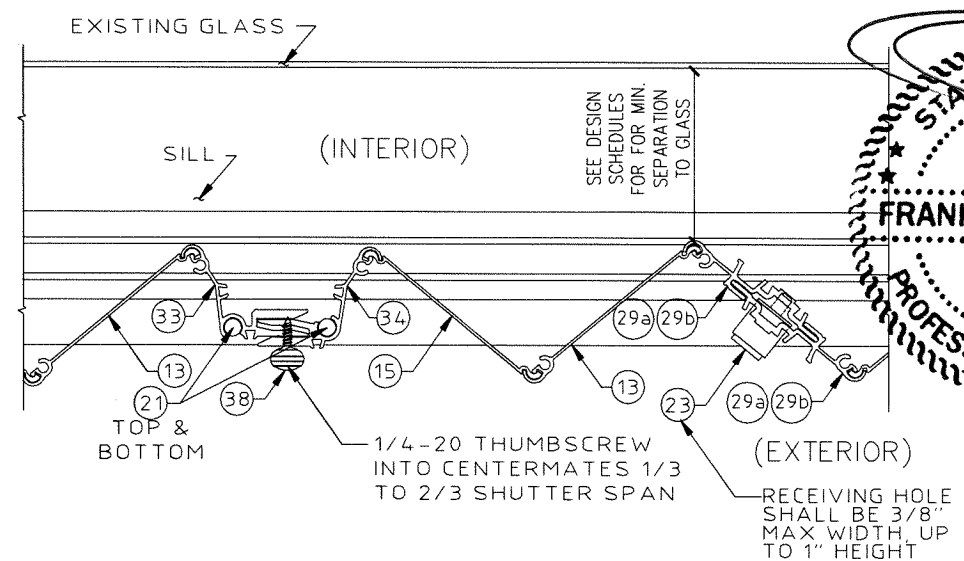


CC1 TYPICAL OUTSIDE CORNER CLOSURE
DETAILS WO/CORNER POST
NTS

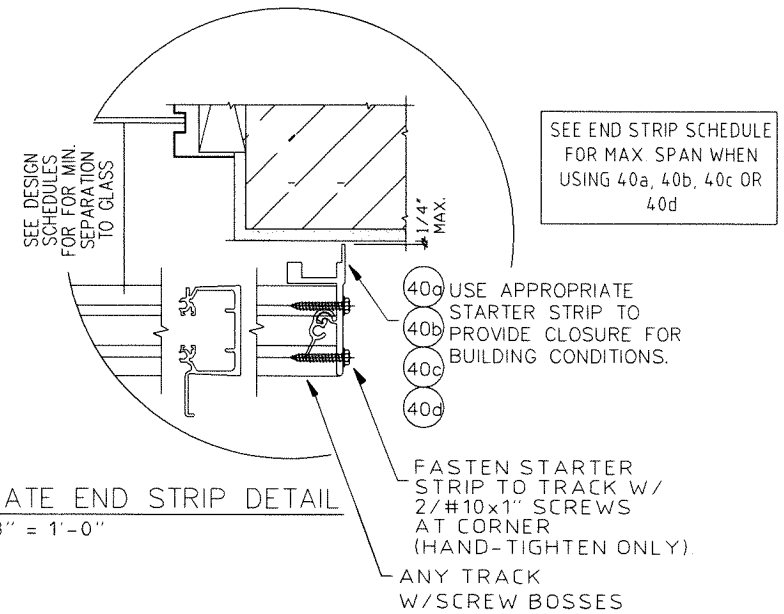


CC2 TYPICAL INSIDE CORNER CLOSURE
DETAILS WO/CORNER POST
NTS

LOCKING DETAILS FOR CENTER MATES SHOWN ON RANDOM DETAILS



MULTIPLE SHUTTER ASSEMBLY
SCALE: 3" = 1'-0"

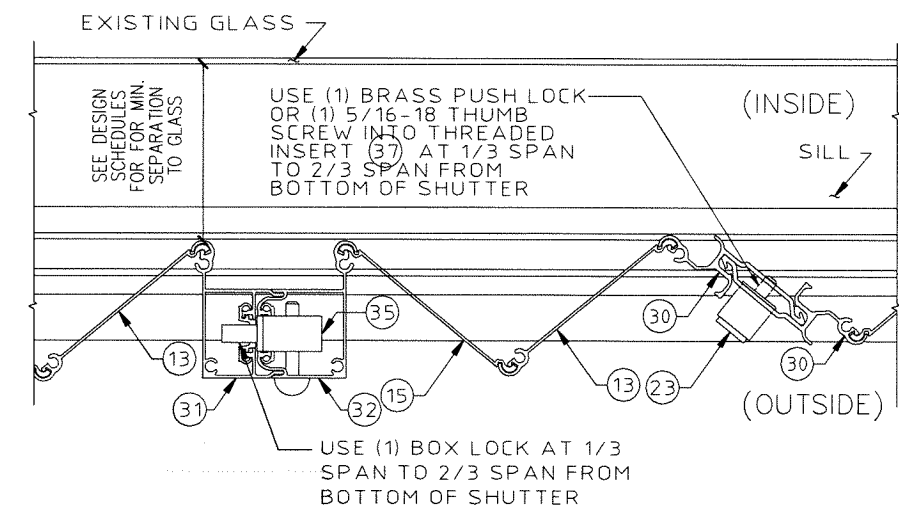


ALTERNATE END STRIP DETAIL
SCALE: 3" = 1'-0"

END STRIP SCHEDULE

	PSF	SPAN
1" B/O (2.7") (40g)	62	108"
	72	100"
	82	94"
	112	80"
	132	75"
2" B/O (3.7") (40b)	62	95"
	72	88"
	82	83"
	112	70"
	132	65"
3" B/O (4.7") (40c)	62	86"
	72	79"
	82	74"
	112	61"
	132	56"
ALT. B/O (40d)	62	110"
	72	102"
	82	95"
	112	81"
	132	75"
1.5"x3" x0.093" ANGLE	45	93"
	52	87"
	57	83"
	60	81"
	64	78"
2"x3" x0.125" ANGLE	45	139"
	52	129"
	57	123"
	60	120"
	64	116"
2"x4" x0.125" ANGLE	45	145"
	52	135"
	57	129"
	60	125"
	64	121"
	70	116"
	73	114"

FOR GREATER SPANS OR LOADS THAN SHOWN IN END STRIP SCHEDULE, END STRIPS REQUIRE A 1"x1" .090" CLIP ANGLE MID SPAN USING ANY ANCHOR ON THE ANCHOR SCHEDULE & #14x3/4" TEK SCREW OR 1/4-20 BOLT TO END STRIP.



MULTIPLE SHUTTER ASSEMBLY
SCALE: 3" = 1'-0"

FRANK BENNARDO, PE
PE# 96064 CA# F-11383

STATE OF TEXAS
FRANK L. BENNARDO
96064
PROFESSIONAL ENGINEER
CORPORATE OFFICE:
160 SW 12th Avenue, Suite 300
Deerfield Beach, FL 33442
(954) 354-0660 | (866) 686-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

Town & Country
INDUSTRIES
A Division of ABC Supply Co., Inc.
Wholesale Aluminum and Building Products
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/01/15
2018 IBC	RWN	FLB	11/10/20

COPYRIGHT FRANK L. BENNARDO P.E.
20-24244.4
SCALE: -
PAGE DESCRIPTION: -
OF 13
5

C:\Users\rickn\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244.4b 6.8 Accordion.dwg
04/01/2021 - 10:03am rickn

2 FASTENERS EACH ANGLE
1" x 2" x 1/8" OR 2" x 2" x 1/8" ALUM ANGLE
THREE 3/16" Ø ALUM POP RIVETS
OR THREE #12 SMS, TYP

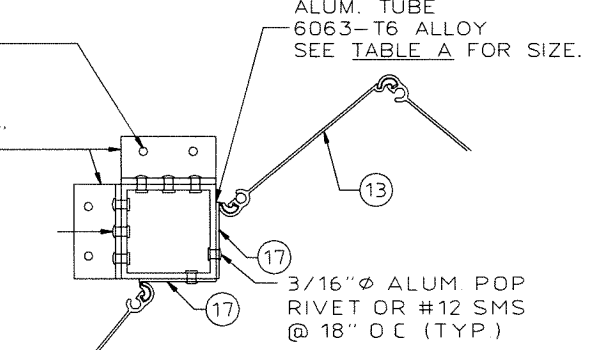


TABLE A (CC3)
PRESSURE VS ALLOWABLE LENGTH

PSF	2"x2"x1/8" No B/O	3"x3"x1/8" No B/O
62	130"	188"
72	124"	179"
82	119"	172"
92	114"	165"
102	110"	160"
120	104"	147"
150	97"	131"
200	88"	114"

TABLE B (CC4)
PRESSURE VS ALLOWABLE LENGTH

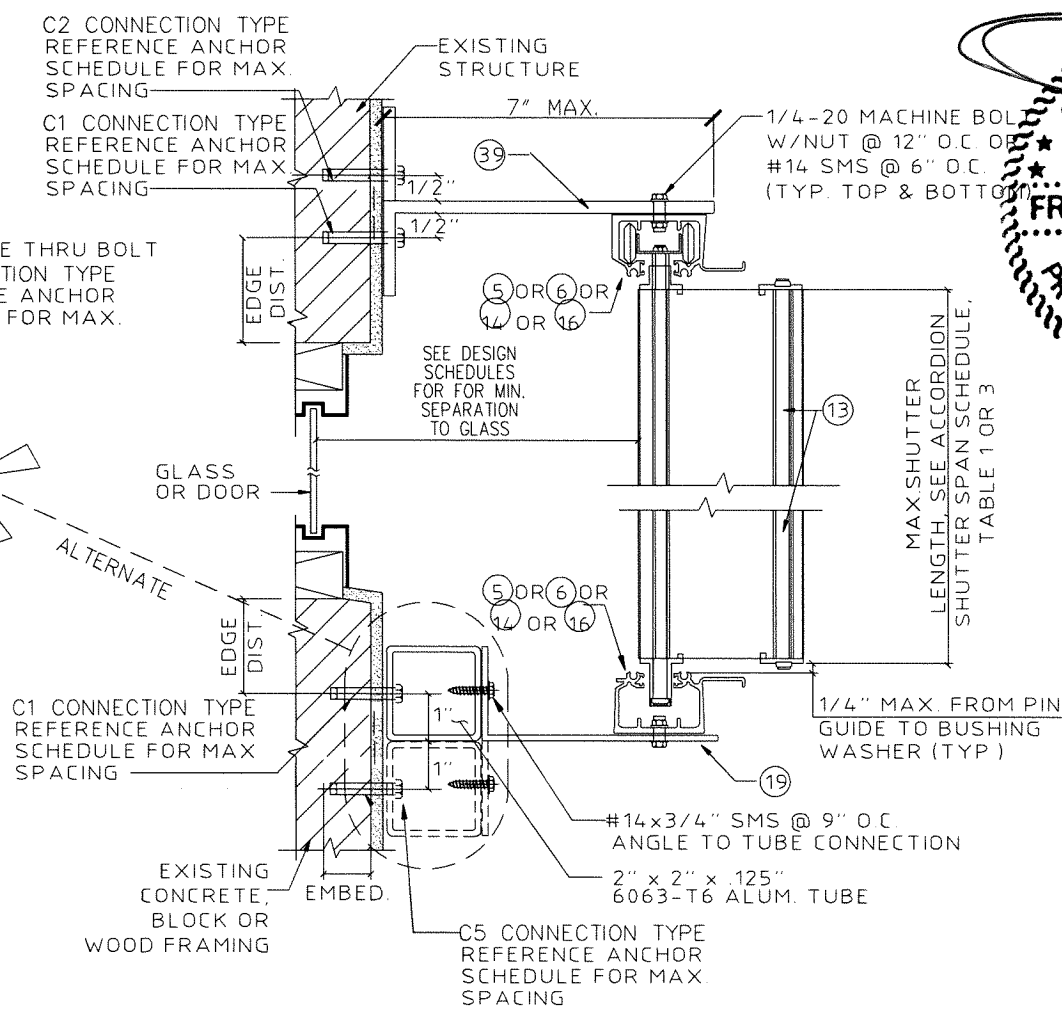
PSF	2"x2"x1/8" WITH B/O	3"x3"x1/8" WITH B/O
62	113"	166"
72	107"	157"
82	101"	147"
92	95"	139"
102	90"	132"
120	83"	122"
150	74"	109"
200	64"	94"

CC3 TYPICAL CORNER CLOSURE DETAILS
NTS

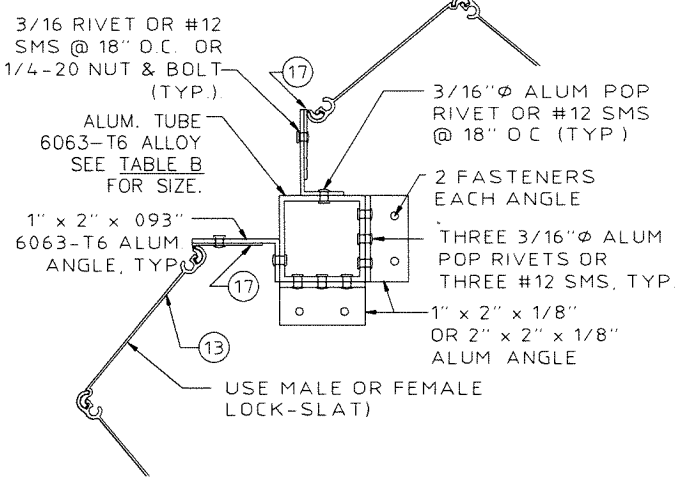
ALTERNATE THRU BOLT C5 CONNECTION TYPE REFERENCE ANCHOR SCHEDULE FOR MAX. SPACING

TABLE C: ALLOWABLE SPAN SCHEDULE FOR BUILDOUT MOUNT (DETAIL F)

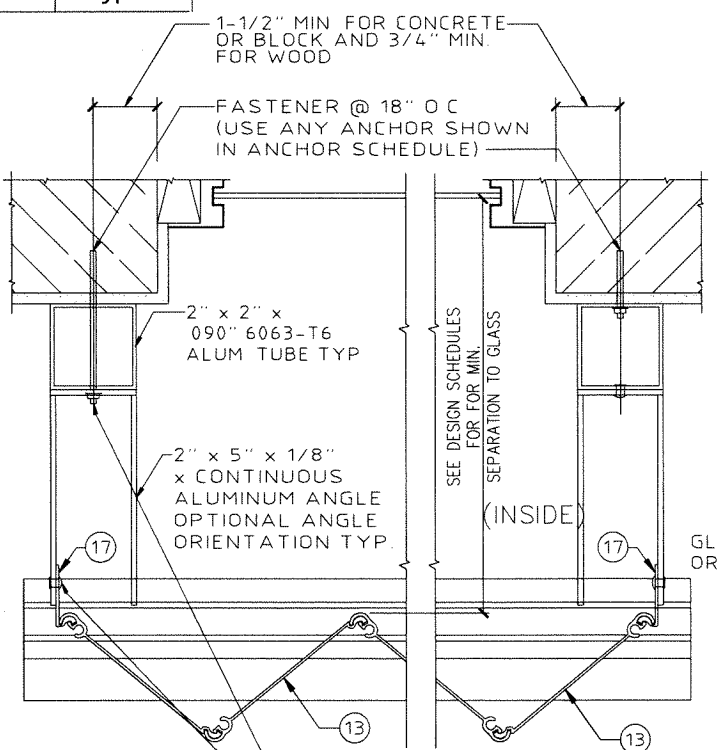
MAX SHUTTER SPAN	MAX DESIGN PRESSURE
125 IN.	+/-30.1 PSF
121 IN.	+/-31.1 PSF
118 IN.	+/-31.9 PSF
115 IN.	+/-32.7 PSF
112 IN.	+/-33.6 PSF
110 IN.	+/-34.2 PSF
107 IN.	+/-35.2 PSF
105 IN.	+/-35.9 PSF
103 IN.	+/-36.5 PSF
101 IN.	+/-37.3 PSF
99 IN.	+/-38.0 PSF
95 IN.	+/-39.6 PSF
92 IN.	+/-40.9 PSF
89 IN.	+/-42.3 PSF
86 IN.	+/-43.8 PSF
83 IN.	+/-45.4 PSF
81 IN.	+/-46.5 PSF
78 IN.	+/-48.3 PSF
76 IN.	+/-49.5 PSF
74 IN.	+/-50.9 PSF
72 IN.	+/-52.3 PSF
70 IN.	+/-53.8 PSF
68 IN.	+/-55.4 PSF
66 IN.	+/-57.0 PSF



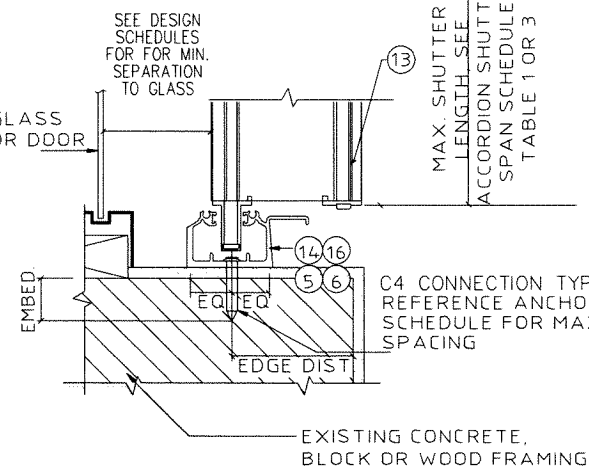
Cb ALTERNATE BUILD OUT MOUNT SECTION
SCALE: 3" = 1'-0"



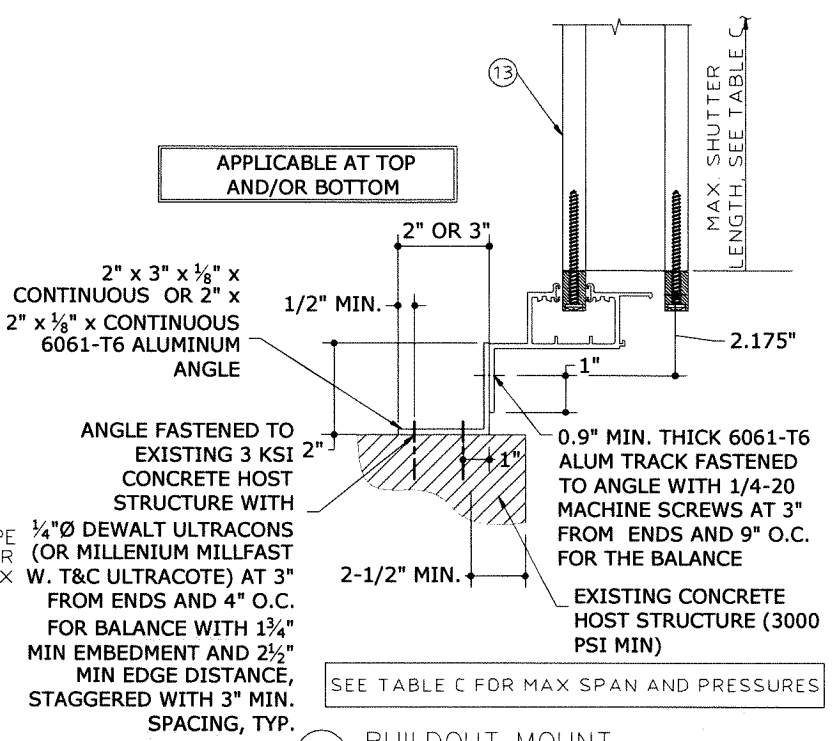
CC4 TYPICAL CORNER CLOSURE DETAILS
NTS



CC4 SIDE CLOSURE OPTIONS
SCALE: 3" = 1'-0"



EE INSIDE SILL MOUNT SECTION
SCALE: 3" = 1'-0"



F BUILDOUT MOUNT
SCALE: NTS

FRANK BENNARDO, PE
PE# 96064 CA# F-11383

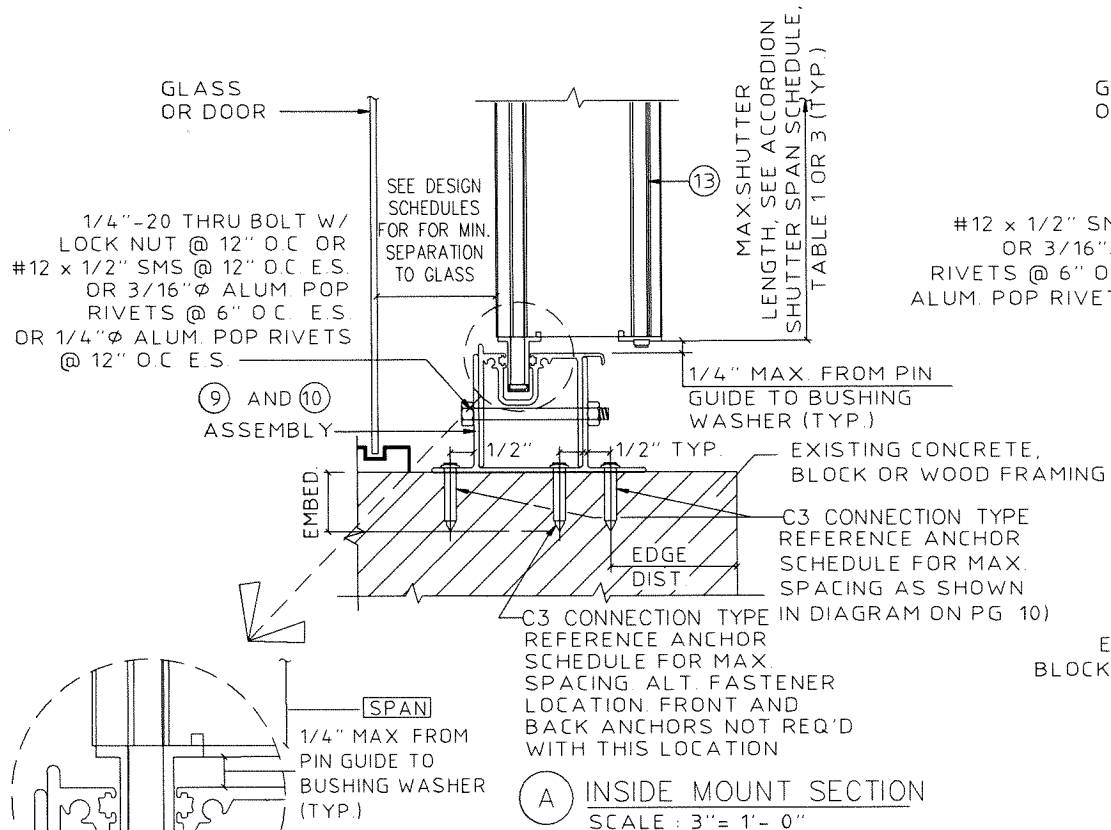
PROFESSIONAL ENGINEER
CORPORATE OFFICE
160 SW 12th Avenue, Suite 1144
Deerfield Beach, FL 33442
(954) 354-0660
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

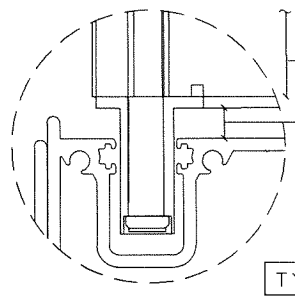
DRWN	CHKD	DATE
KL	FLB	12/20/11
KL	FLB	2/22/12
KL	FLB	10/25/13
FRWN	CSL	4/07/15
FRWN	FLB	11/10/20

REMARKS
INITIALS
CLIENT REVISIONS
CLIENT REVISIONS
2014 FBC
2018 IBC

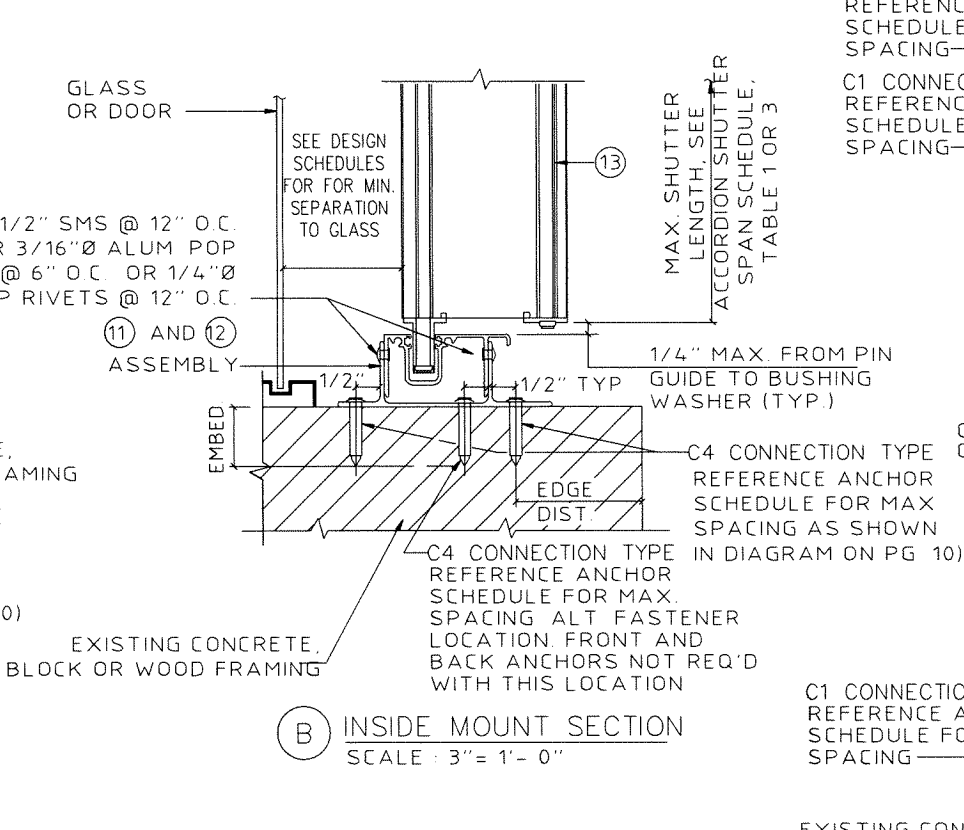
20-24244.4
SCALE:
PAGE DESCRIPTION:
OF 13



A INSIDE MOUNT SECTION
SCALE : 3" = 1'- 0"

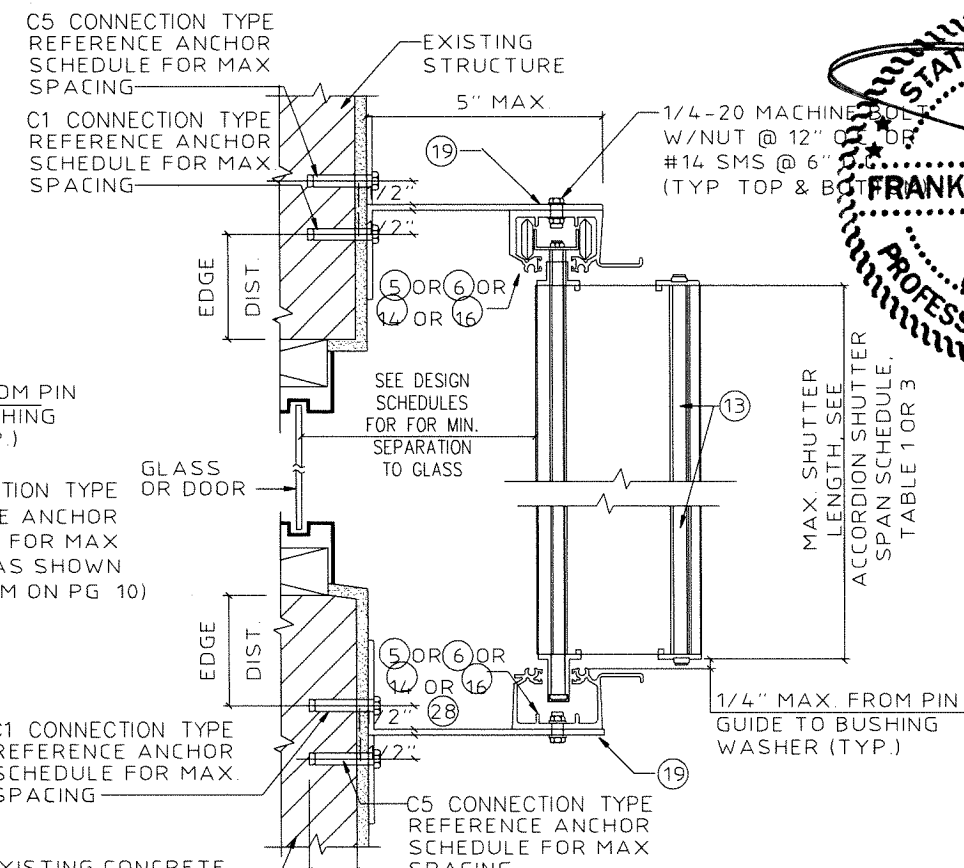


TYP. BOTTOM

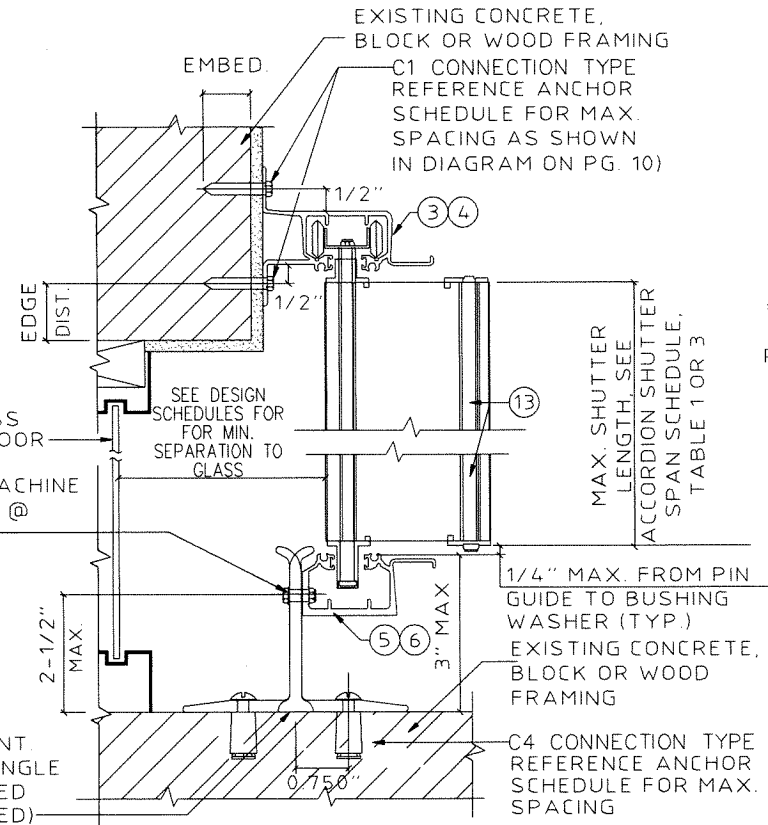


B INSIDE MOUNT SECTION
SCALE : 3" = 1'- 0"

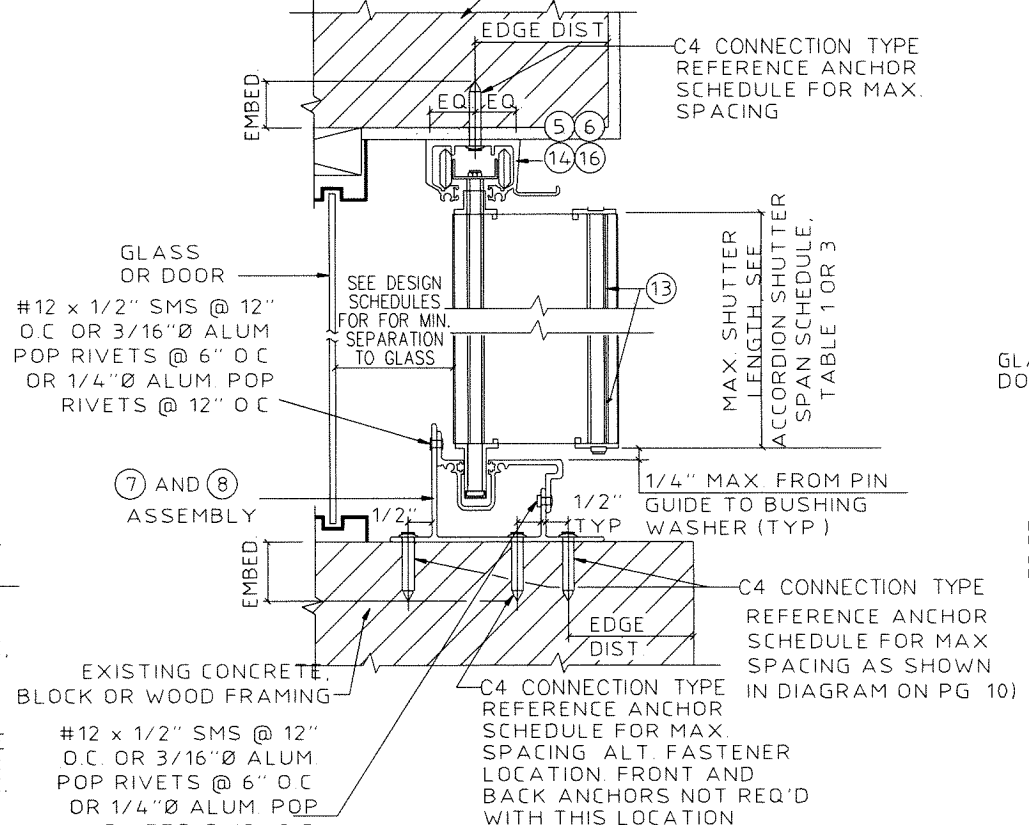
NOTE: FOR DETAILS A, B, D, AND E ON THIS SHEET, THE BASE TRACK MAY BE INSTALLED IN SECTIONS WITH 1/4" GAPS, PROVIDED THAT EACH SECTION HAS A MINIMUM OF TWO SETS OF ANCHORS AND IS A MINIMUM OF 12" LONG. THE SILL OR CEILING TRACK USED WITH THE BASE TRACK MUST BE CONTINUOUS OVER THE GAPS BETWEEN SECTIONS



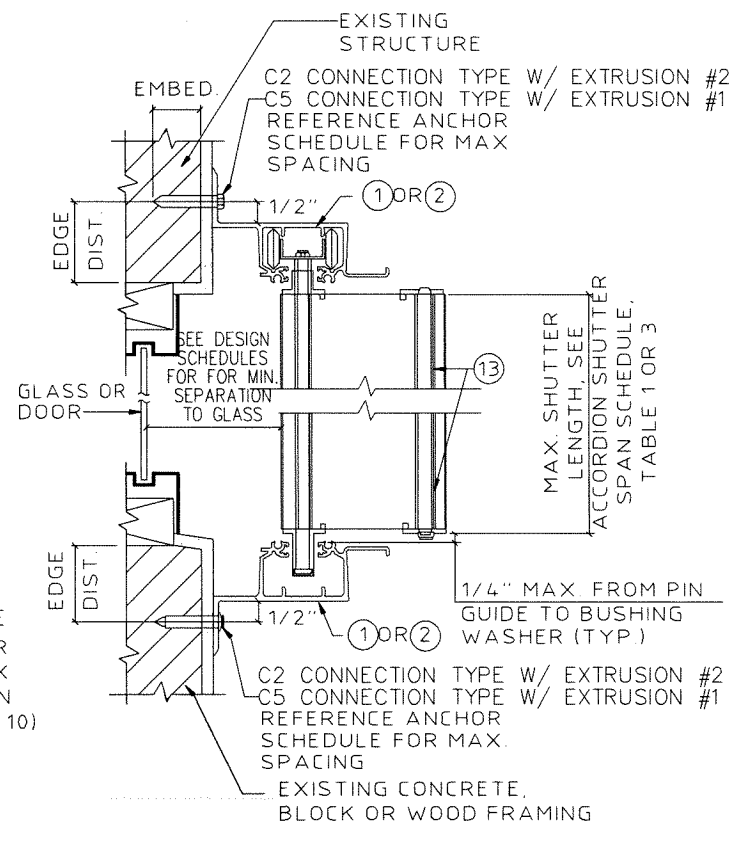
C BUILD OUT MOUNT SECTION
SCALE : 3" = 1'- 0"



D WALL MOUNT SECTION
SCALE : 3" = 1'- 0"



E CEILING / INSIDE MOUNT SECTION
SCALE : 3" = 1'- 0"



F WALL/BUILD OUT SECTION
SCALE : 3" = 1'- 0"

FRANK BENNARDO, PE
Professional Engineer
No. 96064
State of Florida
Professional Engineer
CORPORATE OFFICE
160 SW 12th Ave, Suite 106
Deerfield Beach, FL 33442
(954) 354-0660 | (866) 996-9900
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

DRWN	CHKD	DATE
KL	FLB	12/20/11
KL	FLB	2/22/12
KL	FLB	10/25/13
RWN	CSL	4/01/15
RWN	FLB	11/10/20

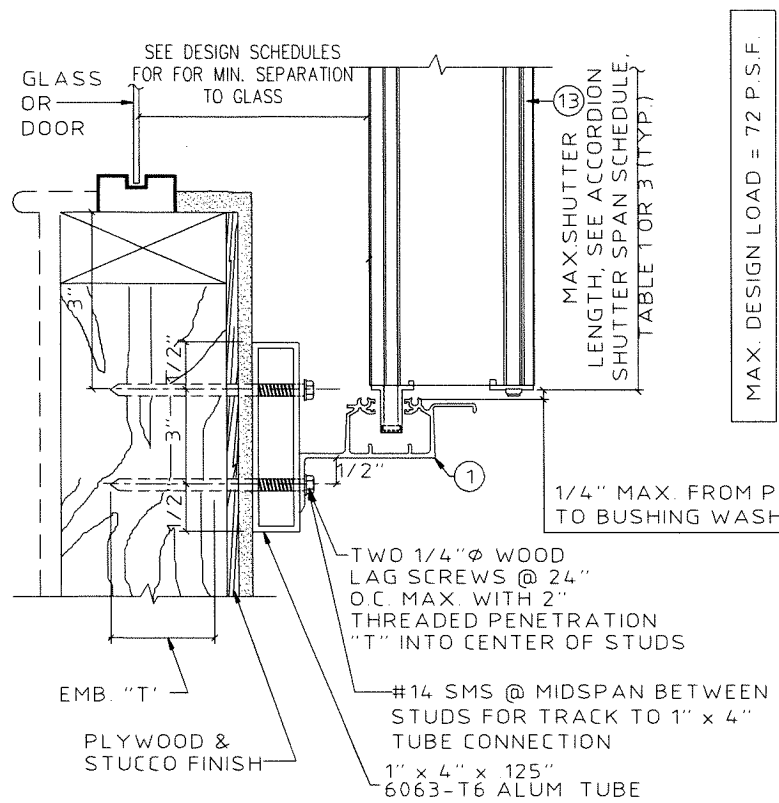
REMARKS
INITIALS
CLIENT REVISIONS
CLIENT REVISIONS
2014 FBC
2018 IBC

DATE
12/20/11
2/22/12
10/25/13
4/01/15
11/10/20

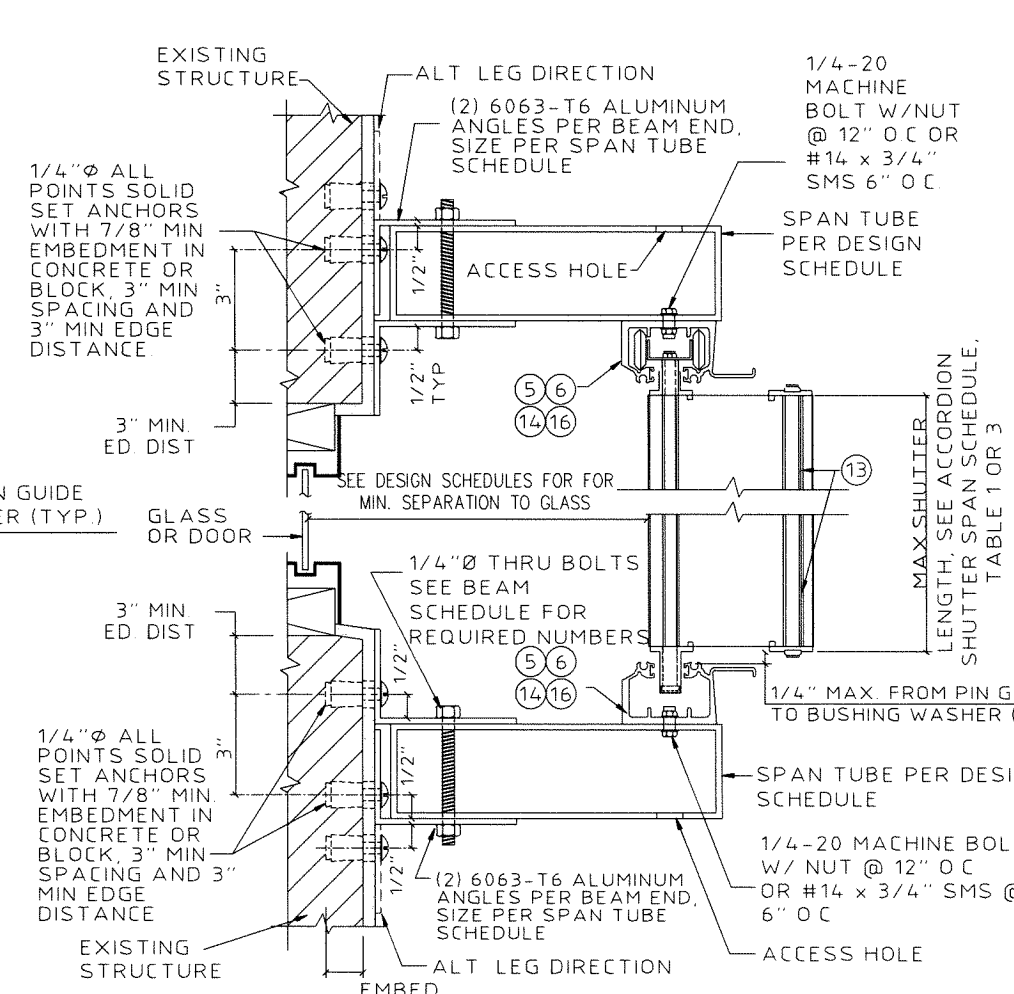
INITIALS
KL
FLB
KL
RWN
RWN

SCALE: 20-24244.4
PAGE DESCRIPTION:
7 OF 13

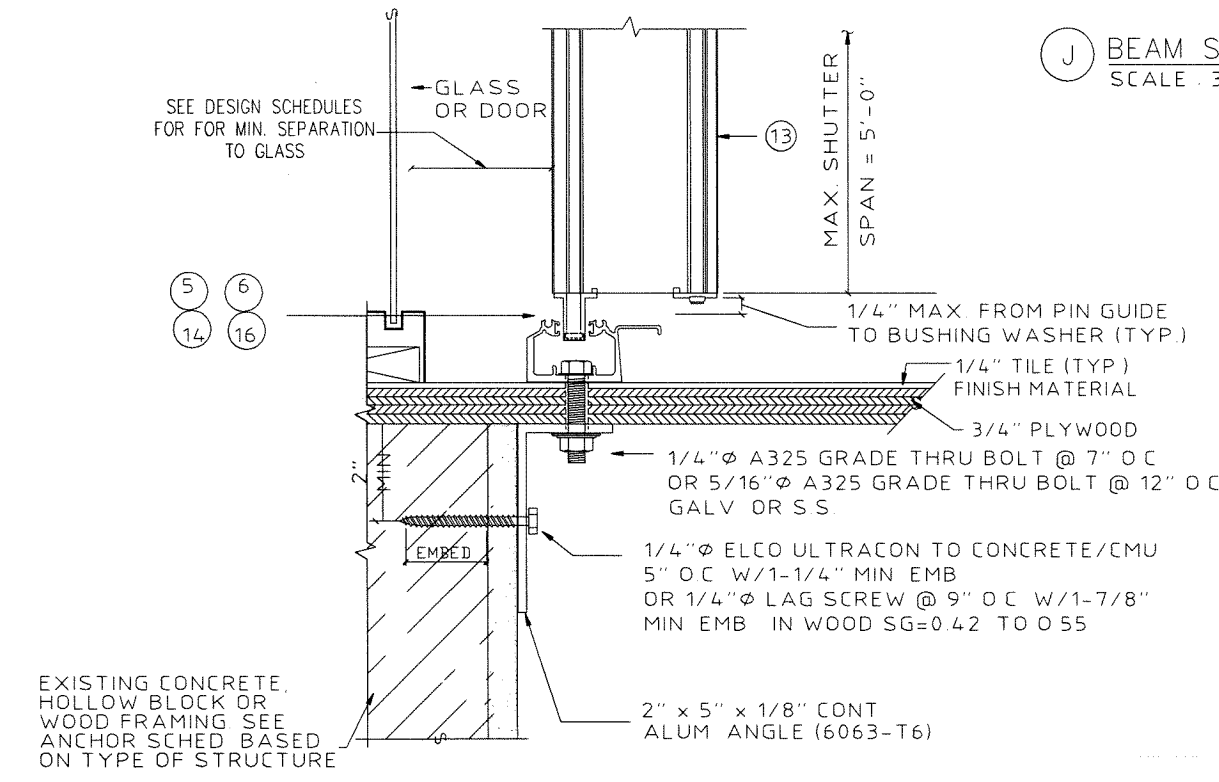
C:\Users\rickm\Engineering\Express\Production - Documents\Projects\20-24244_Town & Country - TDI Updates\WP14 - SHU-176 6.8 Accordion\20-24244_4b 6.8 Accordion.dwg 04/01/2021 - 10:03am rickn



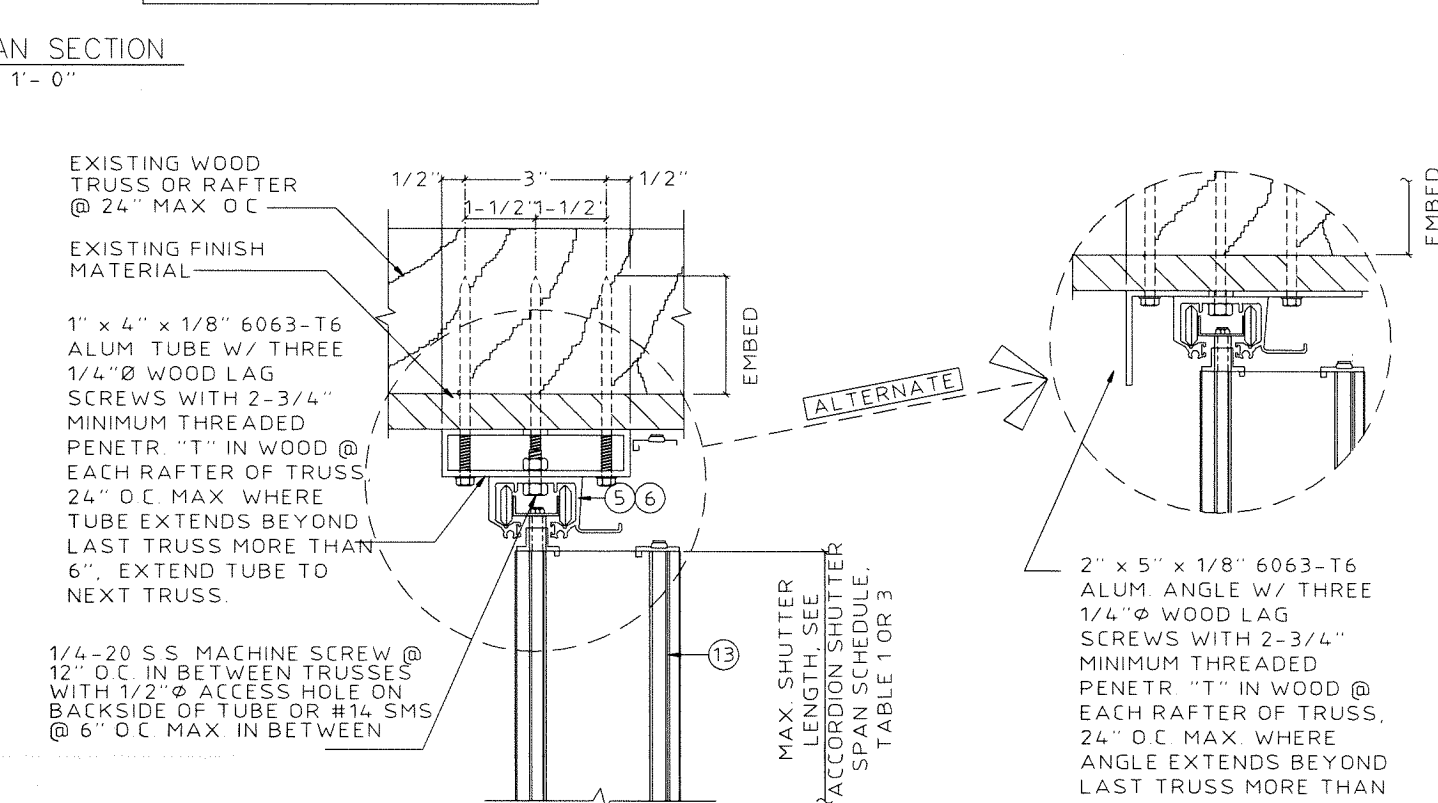
G WALL MOUNT SECTION
SCALE: 3" = 1'-0"
THIS DETAIL TO BE USED WHEN STUD SPACING EXCEEDS THE MAX ALLOWABLE ANCHOR SPACING
THIS DETAIL MAY ALSO BE USED AT TOP



J BEAM SPAN SECTION
SCALE: 3" = 1'-0"
MAX DESIGN LOAD = ± 72 PSF



H PASS THRU DETAIL
SCALE: 3" = 1'-0"
(MAX DESIGN LOAD ± 72 P.S.F.)



K TRUSS MOUNT SECTION
SCALE: 3" = 1'-0"
(MAX DESIGN LOAD ± 72 P.S.F.)

SPAN TUBE SCHEDULE									
TUBE SIZE	SHUTTER SPAN	ALLOWABLE TUBE SPAN		NUMBER OF THRU-BOLTS		NUMBER OF ANCHORS PER ANGLE		MINIMUM ANGLE LENGTH	
		TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE
2"x5"x 0.125"	60"	123.8"	135.2"	2	2	2	3	4"	7"
	96"	101.7"	106.9"	2	2	3	3	7"	7"
	123"	89.9"	94.4"	2	2	3	3	7"	7"
2"x6"x 0.125"	60"	129.1"	157.0"	2	2	2	3	4"	7"
	96"	114.8"	124.1"	2	2	3	3	7"	7"
	123"	102.8"	109.6"	2	2	4	4	10"	10"
2"x8"x 0.125"	60"	138.0"	196.9"	2	2	3	3	7"	7"
	96"	122.7"	155.7"	2	2	3	4	7"	10"
	123"	115.4"	137.5"	2	3	4	5	10"	13"
2"x10"x 0.1875"	60"	158.1"	240.0"	2	2	3	4	7"	10"
	96"	140.6"	229.9"	2	3	4	6	10"	16"
	123"	132.2"	203.1"	3	4	5	7	13"	19"

- SPAN TUBE SCHEDULE NOTES:**
1. USE 2"x3"x1/4" OR 2"x5"x1/4" ANGLES FOR 2"x5" & 2"x6" BEAMS.
 2. USE 2"x5"x1/4" ANGLES FOR 2"x8" & 2"x10" BEAMS.
 3. USE BEAM SCHEDULE FOR DETAIL J.
 4. TOP & BOTTOM BEAMS MAY BE USED TOGETHER OR IN COMBINATION WITH OTHER CONNECTION DETAILS. WHERE USED TOGETHER, BEAM MUST BE LIMITED TO TOP BEAM SPANS.
 5. SPAN TUBES MAY BE USED IN A MID-SPAN CONDITION WITH SHUTTERS SPANNING ABOVE AND BELOW THE BEAM. MID-SPAN TUBES SHALL HAVE TOP BEAM LIMITATIONS (INCLUDING SPANS, ANCHORS, ANGLES AND BOLTS), WITH THE SHUTTER SPAN TAKEN AS THE SUM OF THE SPANS ABOVE AND BELOW THE BEAM.
 6. LAP BEAMS ARE NOT ALLOWED.
 7. ALL BEAMS AND ANGLES TO BE 6063-T6 ALUMINUM.

FRANK BERNARDO, PE
REG. # 96064 CA# F-11383

STATE OF TEXAS
04/01/2021

FRANK BERNARDO
96064
CORPORATE OFFICE
160 SW 12th AVE SUITE 100
DEERFIELD BEACH, FL 33442
(954) 354-0660
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

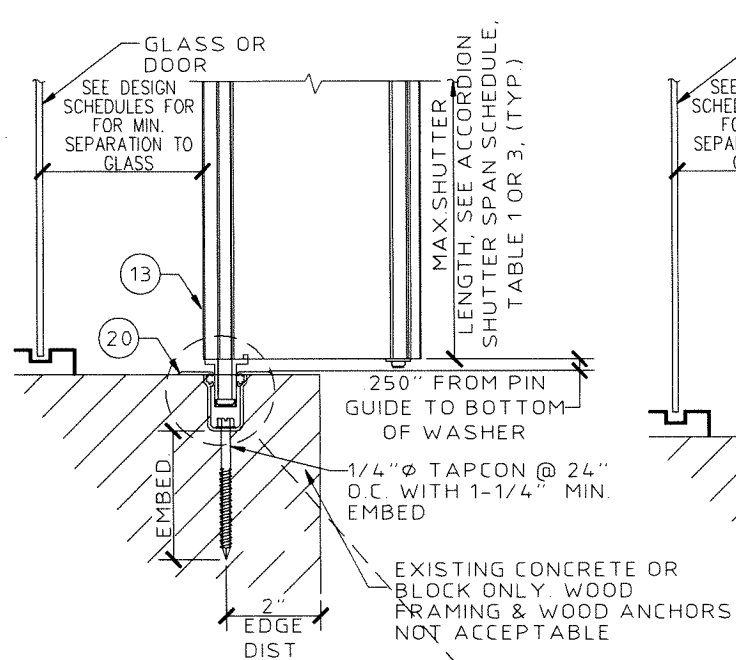
Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

DRWN	CHKD	DATE
KL	FLB	12/20/11
KL	FLB	2/22/12
KL	FLB	10/25/13
RWN	CSL	4/01/15
RWN	FLB	11/10/20

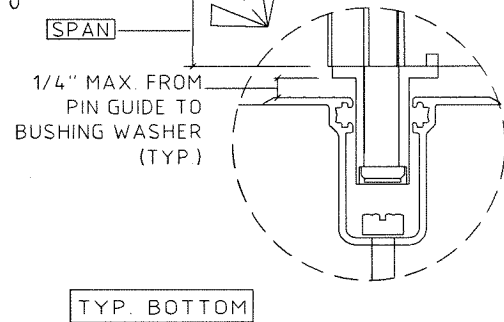
REMARKS
INITIALS
CLIENT REVISIONS
CLIENT REVISIONS
2014 FBC
2018 IBC

COPYRIGHT FRANK L BERNARDO P.E.

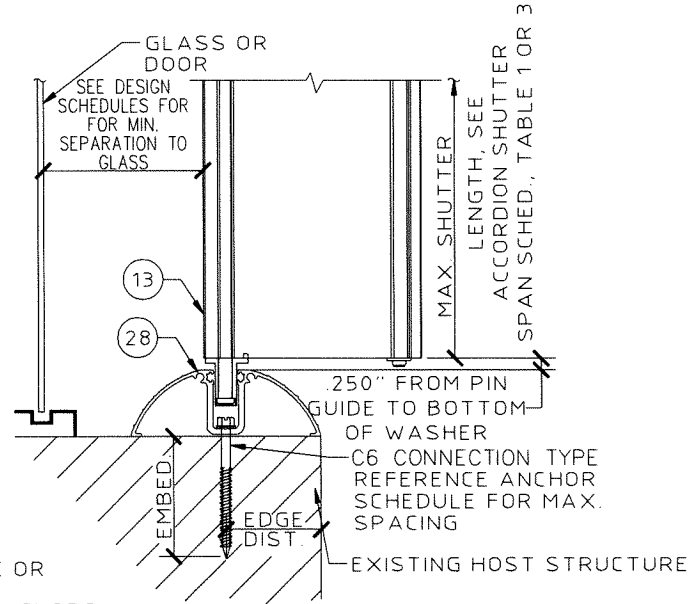
20-24244.4
SCALE: -
PAGE DESCRIPTION:
OF 13



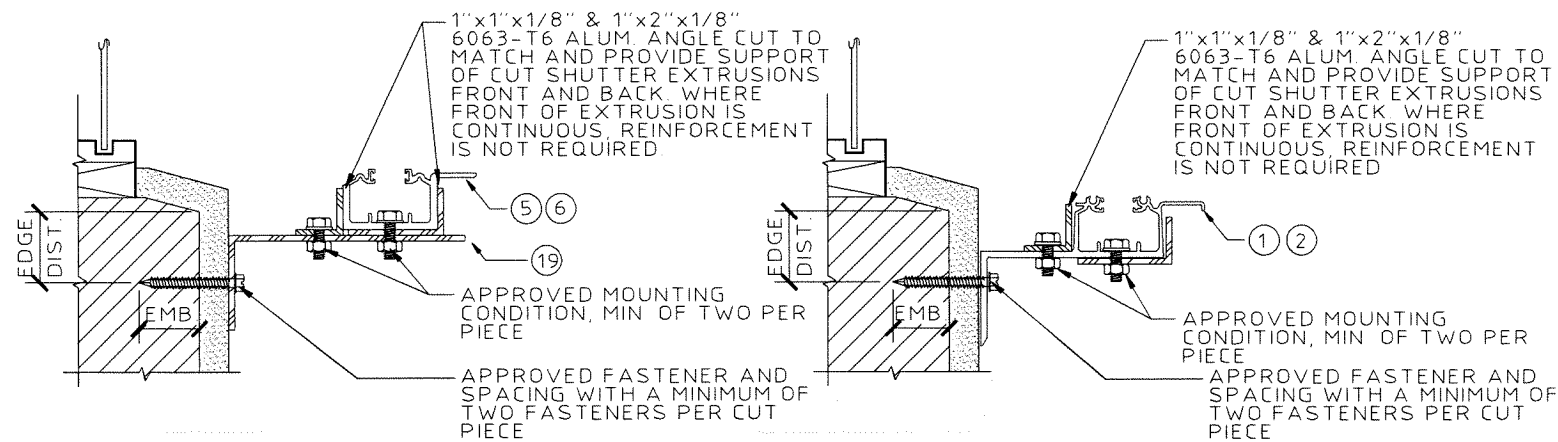
(M) RECESS SILL DETAIL
SCALE: 3" = 1'-0"



TYP. BOTTOM

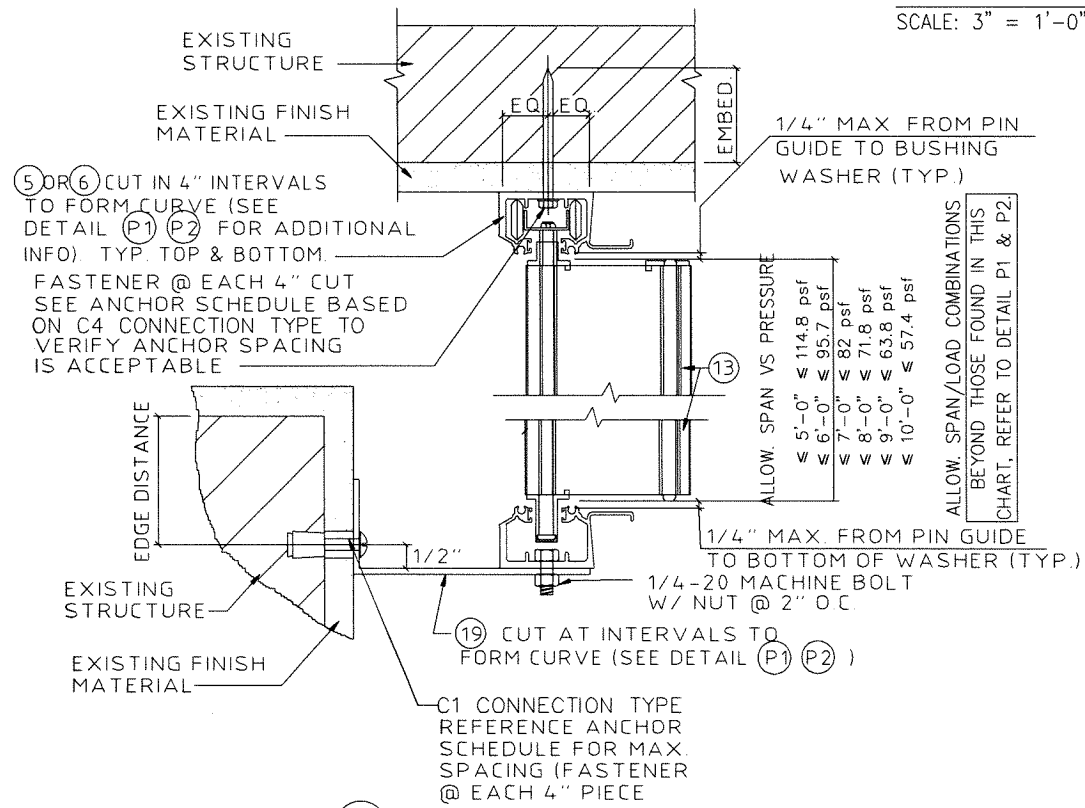


(N) DECORATIVE FLOOR TRACK DETAIL
SCALE: 3" = 1'-0"

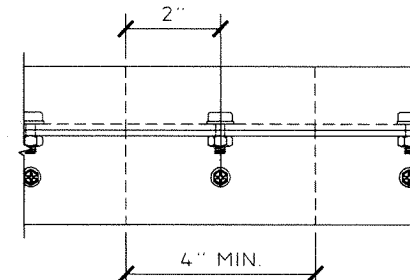


(P1) TYP. SECTION FOR SHUTTERS
SCALE: 3" = 1'-0"

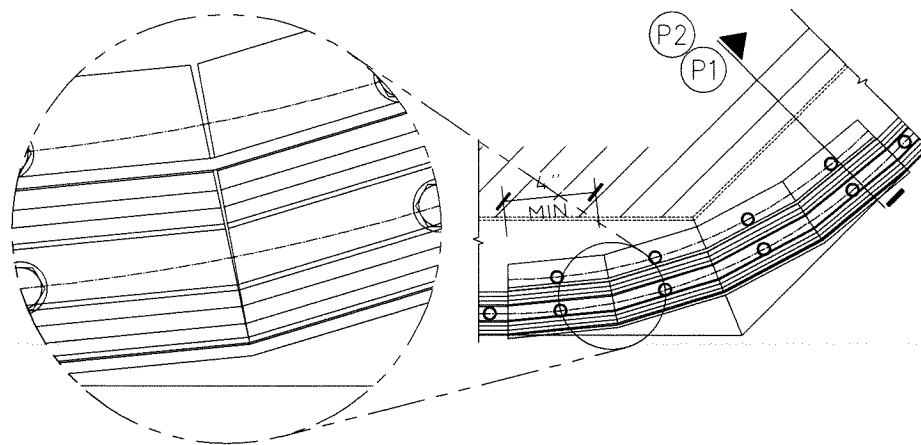
(P2) TYP. ALTERNATE SECTION FOR SHUTTERS
SCALE: 3" = 1'-0"



(P) CURVED TRACK SECTION DETAIL
SCALE: 3" = 1'-0"



RADIUS HEADER MOUNTED
PARTIAL ELEVATION
SCALE: 3" = 1'-0"



STATE OF TEXAS
04/01/2021
FRANK L. BENNARDO
96064
PROFESSIONAL ENGINEER
CORPORATE OFFICE:
160 SW 12th AVE, SUITE 3344
DEERFIELD BEACH, FL 33442
(954) 354-0660 | (866) 999-9999
TEAM@ENGINEERINGEXPRESS.COM
ENGINEERINGEXPRESS.COM

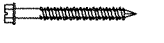

Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of AEC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/07/15
2018 IBC	RWN	FLB	11/10/20




COPYRIGHT FRANK L. BENNARDO P.E.
20-24244.4
SCALE: -
PAGE DESCRIPTION: -

C:\Users\vickn1\Engineering Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP4 - SHU-176 6.8 Accordion\20-24244_4b 6.8 Accordion.dwg
04/01/2021 - 10:03am nckn

ANCHOR SCHEDULE: HOLLOW CONCRETE BLOCK (CONT.)

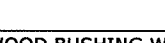

HOST STRUCT.	ANCHOR	LOAD (psf)	2" MIN EDGE DISTANCE																	
			Spans Up To 6'-0"					Spans Up To 8'-8"					Spans Up To 13'-0"							
			CONN TYPE					CONN TYPE					CONN TYPE							
HOLLOW CONCRETE BLOCK	1/4" DEWALT TAPPER+ W/ 1-1/4" EMBED 	48	15.5"	15.5"	6.5"	6.5"	15.5"	10.5"	10.5"	4.0"	4.0"	10.5"	6.0"	6.0"						
		62	12.0"	12.0"	4.5"	4.5"	12.0"	7.5"	8.0"			5.0"	4.5"	4.0"						
		72	10.5"	10.5"	4.0"		9.0"	6.0"	6.0"											
		110	5.5"	5.5"																
		200																		
HOLLOW CONCRETE BLOCK	#12 SMS W/ 2" EYEWALL ARMOR INSERT W/ 1-1/4" EMBED 	48	16.0"	16.0"	8.5"	8.5"	16.0"	13.0"	13.0"	5.0"	5.0"	12.5"	7.5"	7.5"	3.0"	3.0"	4.5"			
		62	14.5"	14.5"	6.0"	6.0"	14.5"	9.5"	10.0"	4.0"	3.5"	6.0"	5.0"	4.5"						
		72	12.5"	12.5"	5.0"	4.5"	11.0"	7.5"	7.5"	3.0"	3.0"	4.5"	4.5"	3.5"						
		110	7.0"	7.0"	3.0"		4.0"	4.0"	3.5"				3.5"	3.0"						
		200	3.5"	3.0"			3.5"	3.0"					3.5"	3.0"						

ANCHOR SCHEDULE: GROUT-FILLED CONCRETE BLOCK

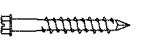
HOST STRUCT.	ANCHOR	LOAD (psf)	4" MIN EDGE DISTANCE																
			Spans Up To 6'-0"					Spans Up To 8'-8"					Spans Up To 13'-0"						
			CONN TYPE					CONN TYPE					CONN TYPE						
GROUT-FILLED CONCRETE BLOCK	5/16" ITW TAPCON XL W/ 2-1/4" MIN. EMBED 	48	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	10.5"	9.5"	15.5"		
		62	16.0"	16.0"	16.0"	16.0"	16.0"	16.0"	12.5"	11.5"	16.0"	16.0"	16.0"	8.0"	7.0"	10.0"			
		72	16.0"	16.0"	16.0"	15.5"	16.0"	16.0"	16.0"	10.5"	9.5"	15.5"	14.5"	12.5"	6.5"	5.5"	8.0"		
		110	16.0"	16.0"	10.0"	9.0"	14.0"	14.5"	12.5"	6.5"	5.5"	7.5"	12.0"	10.0"	5.5"	4.5"	6.0"		
		200	12.0"	10.0"	5.5"	4.5"	6.0"	12.0"	10.0"	5.5"	4.5"	6.0"	12.0"	10.0"	5.5"	4.5"	6.0"		
GROUT-FILLED CONCRETE BLOCK	5/16" DEWALT ULTRACON W/ 2-1/4" MIN. EMBED 	48	16.0"	16.0"	13.5"	13.5"	16.0"	16.0"	16.0"	8.0"	7.5"	16.0"	9.5"	9.5"			6.0"		
		62	16.0"	16.0"	9.5"	8.5"	16.0"	12.0"	12.5"	5.5"	5.0"	8.0"	6.5"	6.0"					
		72	16.0"	16.0"	7.5"	7.0"	14.0"	9.5"	9.5"			6.0"	5.5"						
		110	8.5"	8.5"		5.0"	5.5"												
		200																	
GROUT-FILLED CONCRETE BLOCK	#12 SMS W/ 2" EYEWALL ARMOR INSERT W/ 2" EMBED 	48	16.0"	16.0"	10.5"	10.5"	16.0"	16.0"	16.0"	6.5"	6.5"	16.0"	12.5"	12.5"	4.0"	3.5"	7.5"		
		62	16.0"	16.0"	7.5"	7.5"	16.0"	15.5"	16.0"	5.0"	4.5"	10.5"	9.0"	8.0"	3.0"		5.0"		
		72	16.0"	16.0"	6.5"	6.0"	16.0"	12.5"	12.5"	4.0"	3.5"	7.5"	7.0"	6.5"			4.0"		
		110	11.5"	11.5"	4.0"	3.5"	7.0"	7.0"	6.0"			3.5"	6.0"	5.0"			3.0"		
		200	6.0"	5.0"			3.0"	6.0"	5.0"			3.0"	6.0"	5.0"			3.0"		

ANCHOR NOTES: SEE SHEET 10 FOR ANCHOR NOTES.

ANCHOR SCHEDULE: WOOD (G=0.55)

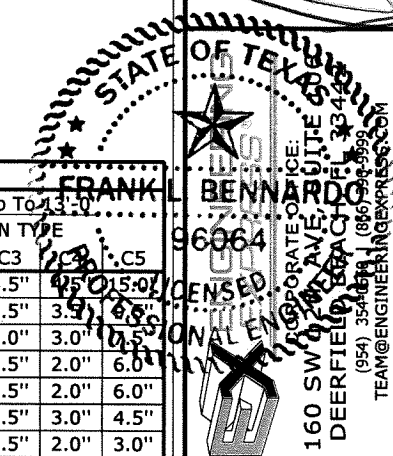
HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE															
			Spans Up To 6'-0"					Spans Up To 8'-8"					Spans Up To 13'-0"					
			CONN TYPE					CONN TYPE					CONN TYPE					
WOOD (G=0.55)	1/4" LAG SCREW WITH 1-3/4" MIN THREAD PENETRATION 	48	16.0"	16.0"	11.5"	11.5"	16.0"	16.0"	16.0"	7.5"	7.0"	16.0"	16.0"	16.0"	4.5"	4.5"	15.0"	15.0"
		62	16.0"	16.0"	8.5"	8.5"	16.0"	16.0"	16.0"	5.5"	5.5"	16.0"	16.0"	15.5"	3.5"	3.5"	14.0"	15.0"
		72	16.0"	16.0"	7.0"	7.0"	16.0"	16.0"	16.0"	4.5"	4.5"	15.0"	14.0"	12.5"	3.0"	3.0"	12.5"	14.0"
		110	16.0"	16.0"	4.5"	4.0"	13.5"	14.0"	12.0"	3.0"	2.5"	7.5"	11.5"	9.5"	2.5"	2.0"	6.0"	6.0"
		200	11.5"	9.5"	2.5"	2.0"	6.0"	11.5"	9.5"	2.5"	2.0"	6.0"	11.5"	9.5"	2.5"	2.0"	6.0"	6.0"
		48	16.0"	16.0"	9.5"	9.5"	16.0"	13.0"	13.0"	5.5"	5.0"	13.0"	7.5"	7.5"	3.5"	3.0"	4.5"	4.5"
	62	14.5"	14.5"	6.5"	6.0"	14.5"	9.5"	10.0"	4.0"	3.5"	6.5"	5.5"	5.0"	2.5"	2.0"	3.0"	3.0"	
	72	12.5"	12.5"	5.5"	5.0"	11.0"	7.5"	7.5"	3.5"	3.0"	4.5"	4.5"	3.5"	2.0"	2.0"	2.0"	2.0"	
	110	7.0"	7.0"	3.0"	2.5"	4.0"	4.0"	3.5"	2.0"		2.0"	3.5"	3.0"					
	200	3.5"	3.0"				3.5"	3.0"				3.5"	3.0"					
	#14 SMS, #14 WOOD SCREW OR 1/4" DEWALT TAPPER+ WITH 1-3/4" MIN THREAD PENETRATION 	48	16.0"	16.0"	13.0"	13.0"	16.0"	16.0"	16.0"	8.5"	8.0"	16.0"	16.0"	16.0"	5.0"	5.0"	12.0"	
		62	16.0"	16.0"	9.5"	9.5"	16.0"	16.0"	16.0"	6.0"	6.0"	16.0"	13.5"	12.5"	4.0"	3.5"	7.5"	
72		16.0"	16.0"	8.0"	7.5"	16.0"	16.0"	16.0"	5.0"	5.0"	12.0"	11.5"	10.0"	3.5"	3.0"	6.0"		
110		16.0"	16.0"	5.0"	4.5"	10.5"	11.0"	9.5"	3.0"	3.0"	6.0"	9.0"	7.5"	2.5"	2.5"	4.5"		
200		9.0"	7.5"	2.5"	2.5"	4.5"	9.0"	7.5"	2.5"	2.5"	4.5"	9.0"	7.5"	2.5"	2.5"	4.5"		

ANCHOR SCHEDULE: WOOD (G=0.42)

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE															
			Spans Up To 6'-0"					Spans Up To 8'-8"					Spans Up To 13'-0"					
			CONN TYPE					CONN TYPE					CONN TYPE					
WOOD (G=0.42)	1/4" LAG SCREW WITH 1-3/4" MIN THREAD PENETRATION 	48	16.0"	16.0"	9.0"	9.0"	16.0"	16.0"	16.0"	6.0"	5.5"	16.0"	16.0"	16.0"	3.5"	3.5"	10.0"	
		62	16.0"	16.0"	6.5"	6.5"	16.0"	16.0"	16.0"	4.5"	4.0"	13.5"	11.5"	10.5"	2.5"	2.5"	6.0"	
		72	16.0"	16.0"	5.5"	5.5"	16.0"	16.0"	16.0"	3.5"	3.5"	10.0"	9.5"	8.0"	2.5"	2.0"	5.0"	
		110	15.0"	14.5"	3.5"	3.0"	9.0"	9.0"	8.0"	2.0"	2.0"	5.0"	7.5"	6.0"	2.0"		4.0"	
		200	7.5"	6.0"	2.0"		4.0"	7.5"	6.0"	2.0"		4.0"	7.5"	6.0"	2.0"		4.0"	
		48	16.0"	16.0"	9.5"	9.5"	16.0"	16.0"	16.0"	6.0"	5.5"	16.0"	11.0"	11.5"	3.5"	3.5"	7.0"	
	62	16.0"	16.0"	7.0"	6.5"	16.0"	14.0"	15.0"	4.5"	4.0"	9.5"	8.0"	7.0"	2.5"	2.5"	4.5"		
	72	16.0"	16.0"	5.5"	5.5"	16.0"	11.0"	11.5"	3.5"	3.5"	7.0"	6.5"	5.5"	2.0"	2.0"	3.5"		
	110	10.5"	10.0"	3.5"	3.0"	6.0"	6.5"	5.5"	2.0"	2.0"	3.5"	5.0"	4.5"	2.0"		2.5"		
	200	5.0"	4.5"	2.0"		2.5"	5.0"	4.5"	2.0"		2.5"	5.0"	4.5"	2.0"		2.5"		

FRANK BENNARDO, PE
PE# 96064 CA# F-11383

04/01/2021



Town & Country
INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	KL	FLB	10/25/13
2014 FBC	RWN	CSL	4/07/15
2018 IBC	RWN	FLB	11/10/20

COPYRIGHT FRANK L. BENNARDO P.E.

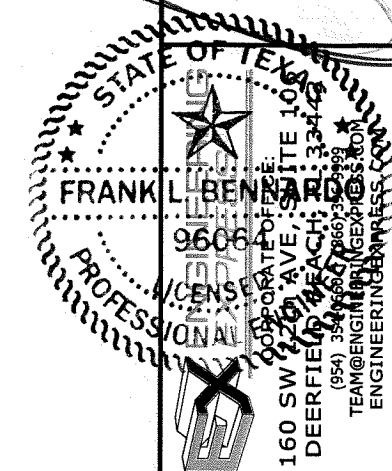
20-24244.4

SCALE: -
PAGE DESCRIPTION:

ALTERNATE MOUNTING OPTION

FRANK BENNARDO, PE
PE# 96064 CA# F-11383

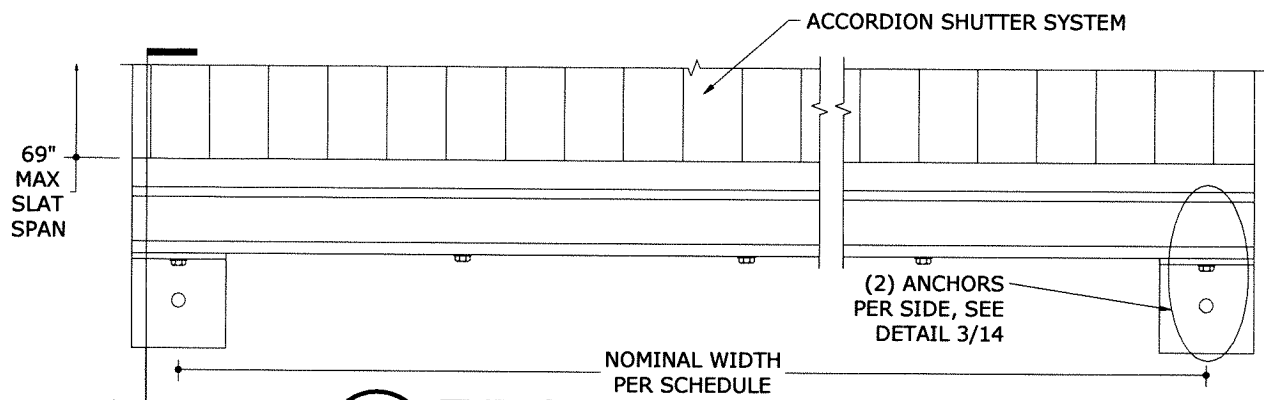
04/01/2021



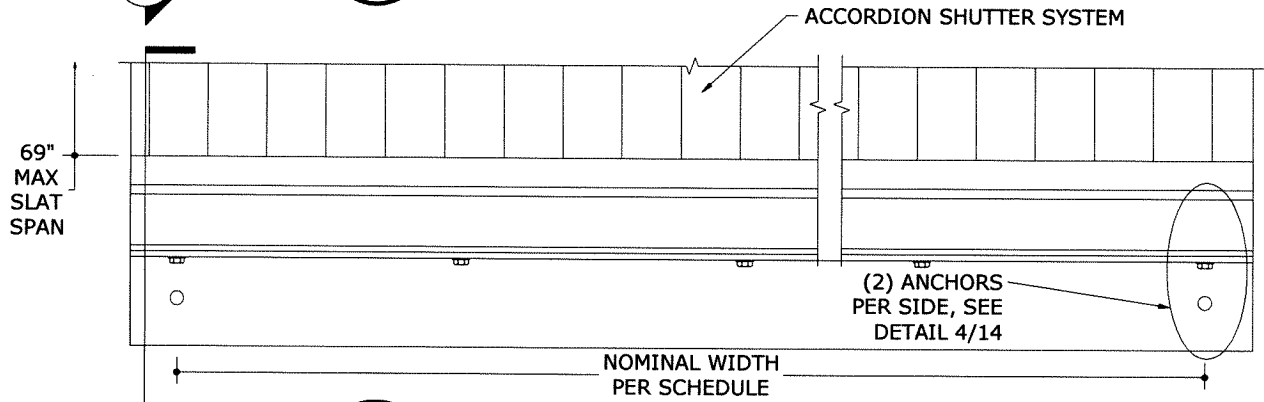
DESIGN SCHEDULES

OPTION 1 (1) 2x3x0.25 ANGLE (6063-T6)			OPTION 2 (2) 2x3x0.125 ANGLES (6063-T6)		
NOMINAL WIDTH	ALLOWABLE DESIGN PRESSURE		NOMINAL WIDTH	ALLOWABLE DESIGN PRESSURE	
	POSITIVE (+)	NEGATIVE (-)		POSITIVE (+)	NEGATIVE (-)
42"	151 psf	200 psf	42"	80 psf	173 psf
45"	131 psf	200 psf	45"	69 psf	151 psf
48"	116 psf	177 psf	48"	61 psf	132 psf
51"	102 psf	147 psf	51"	54 psf	117 psf
54"	91 psf	124 psf	54"	48 psf	105 psf
57"	82 psf	106 psf	57"	43 psf	94 psf
60"	74 psf	91 psf	60"	39 psf	85 psf
63"	67 psf	78 psf	63"	35 psf	77 psf
66"	61 psf	68 psf	66"	32 psf	70 psf
69"	56 psf	60 psf	69"	30 psf	63 psf
72"	51 psf	52 psf	72"	27 psf	56 psf
75"	46 psf	46 psf	75"	25 psf	49 psf
78"	41 psf	41 psf	78"	23 psf	44 psf
81"	37 psf	37 psf	81"	21 psf	39 psf

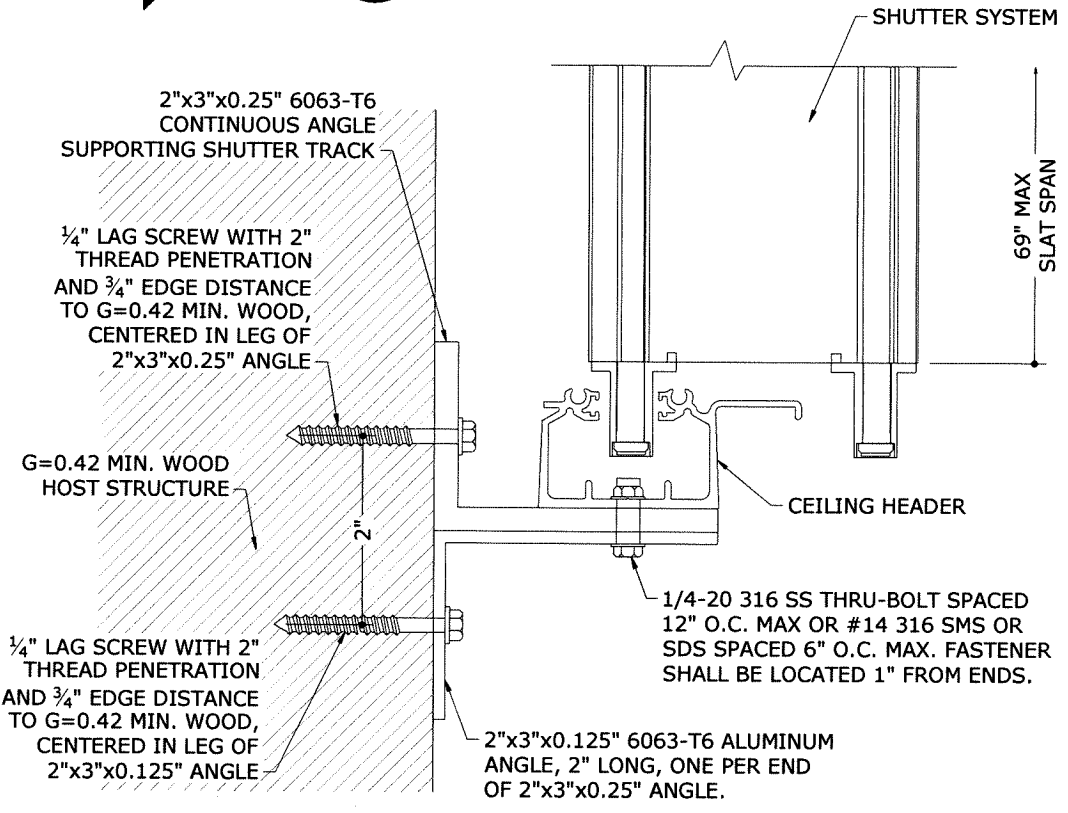
NOTE: DESIGN PRESSURES SHOWN IN DESIGN SCHEDULE ARE FOR DETERMINING MAXIMUM ALLOWABLE HORIZONTAL SUPPORT ANGLE SPAN. SHUTTER SPANS AND ALLOWABLE LOADS SHALL NOT EXCEED THOSE PERMITTED IN DESIGN SCHEDULES.



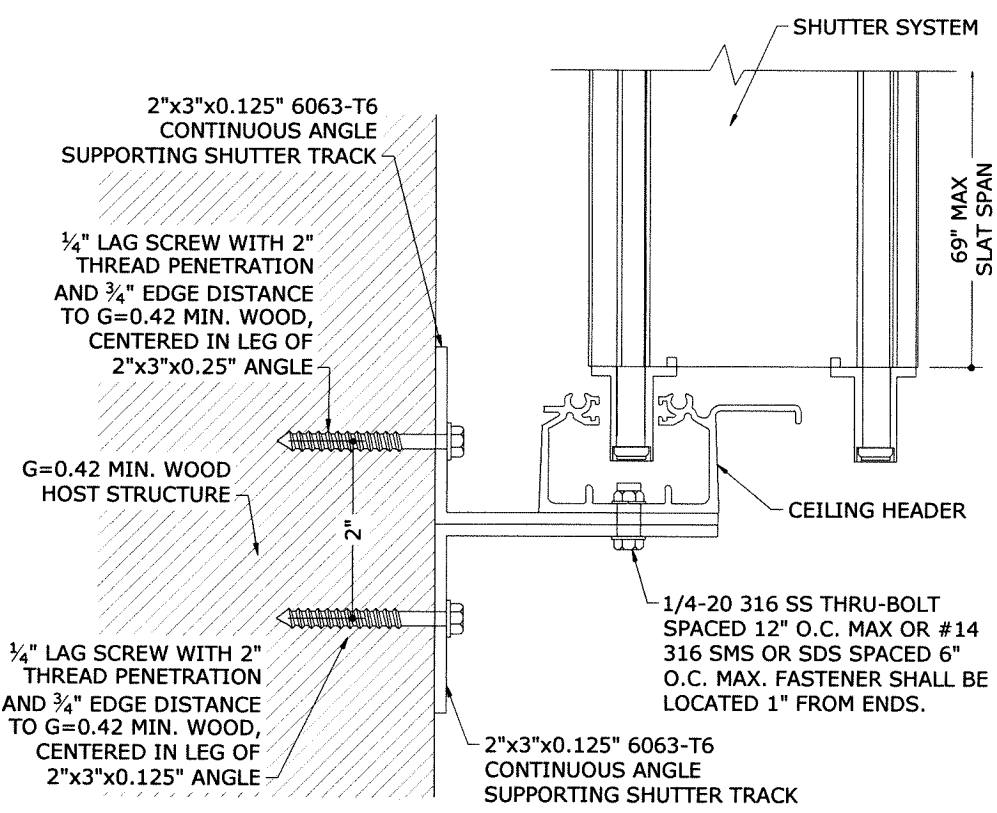
1 TYPICAL ELEVATION (OPTION 1)
14 N.T.S. EXTERIOR ELEV



2 TYPICAL ELEVATION (OPTION 2)
14 N.T.S. EXTERIOR ELEV



3 TYPICAL END ATTACHMENT (OPTION 1)
14 N.T.S. VERT SECTION



4 TYPICAL END ATTACHMENT (OPTION 2)
14 N.T.S. VERT SECTION

ANCHOR NOTE: 1/4" MILLENIUM MILLFAST SCREWS W/ T&C ULTRACOTE MAY BE USED IN LIEU OF THE LAG SCREWS CALLED OUT ON THIS SHEET UTILIZING THE SAME CRITERIA.

Town & Country INDUSTRIES
Wholesale Aluminum and Building Products
A Division of ABC Supply Co., Inc.
400 WEST MCNAB ROAD
FT. LAUDERDALE, FL 33309

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	KL	FLB	12/20/11
CLIENT REVISIONS	KL	FLB	2/22/12
CLIENT REVISIONS	RWN	CSL	10/25/13
2014 FBC	RWN	FLB	4/01/15
2018 IBC	RWN	FLB	11/10/20

COPYRIGHT FRANK L. BENNARDO P.E.

20-24244.4

SCALE: -

PAGE DESCRIPTION:

C:\Users\rickn\Engineering\Express\Production - Documents\Projects\20-24244 Town & Country - TDI Updates\WP14 - SHU-176 6.8 Accordion\20-24244.dwg 6.8 Accordion.dwg 04/01/2021 - 10:03am rickn