

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2017 EDITION INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
2. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY WITH MINIMUM YIELD STRENGTH OF $F_y=31.0$ KSI UNLESS IT IS SPECIFIED.
3. ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
4. ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
5. WOOD BUCKS BY OTHERS MUST BE SOUTHERN PINE, $G = 0.55$ AND MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
6. ALL ALUMINUM BLIND RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.
7. BOLTS TO BE GALVANIZED OR STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.
9. A PERMANENT SHUTTER MANUFACTURER'S LABEL SHOULD BE PLACED ON THE EXPOSED SURFACE OF THE CENTERMATE BLADE (COMPONENT 10) UNDER LOCK. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:

NCCL CORPORATION
 9960 NW 79TH AVE., HIALEAH GARDENS, FL. 33016
 MISSILE LEVEL D - ASTM E1886, E1996 & E330
 TAS-201, TAS-202, AND TAS-203.

10. (a) THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC.
 (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
 (c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.
 (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.A.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
 (e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

11. HEAD & SILL MAY BE INTERCHANGED WHERE NOTED IN MOUNTING SECTIONS TO FIT FIELD CONDITIONS.
12. WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY, FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD, FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
13. ULTIMATE LOAD OBTAINED FROM ASCE 7-10, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

NOTES:

WHEN EDGE DISTANCE EQUAL OR GREATER THAN 2" AND LESS THAN MIN. EDGE DISTANCE SPECIFIED ABOVE, THE ANCHOR SPACE IN ANCHOR CHARTS ON THE DRAWINGS MUST MULTIPLY BY FOLLOWING REDUCTION FACTOR:

- ANCHOR TYPE A, & A1: REDUCTION FACTOR = 0.80
- ANCHOR TYPE B & B1: REDUCTION FACTOR = 0.67
- ANCHOR TYPE C & C1: REDUCTION FACTOR = 0.80
- ANCHOR TYPE E: REDUCTION FACTOR = 0.80
- ANCHOR TYPE F: REDUCTION FACTOR = 0.67

PLEASE NOTE THIS INSTALLATION ARE ONLY VALID FOR THE RESULTING ANCHOR SPACE EQUAL OR GREATER THAN 3".
 REDUCTION FACTOR MULTIPLY DESIGN LOAD ON SHEET 5 THRU SHEET 16, HAS TO BE GREATER THAN PROJECT DESIGN LOAD.

TYPICAL ANCHORS: (SEE CHARTS FOR ANCHOR SPACING)

- TYPE A.** 1/4" DIA. TAPCON BY ITW BUILDEX ($F_u = 120$ KSI, $F_y = 92$ KSI)
 INTO CONCRETE $f_c'=3000$ PSI
 1-3/4" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE A1.** INTO CONCRETE BLOCK
 1-1/4" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE A2.** INTO WOOD
 1-1/2" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE B.** 1/4"-20 CALK-IN BY 'POWERS' FASTENERS
 INTO CONCRETE $f_c'=3000$ PSI
 7/8" MIN. EMBED
 3" MIN. EDGE DISTANCE
- TYPE B1.** INTO CONCRETE BLOCK
 7/8" MIN. EMBED
 3" MIN. EDGE DISTANCE
- TYPE C.** 1/4" CRETE-FLEX SS4 MASONRY ANCHOR BY "ELCO"
 INTO CONCRETE $f_c'=3000$ PSI
 1 3/4" MIN. EMBED
 2 1/2" MIN. EDGE DISTANCE
- TYPE C1.** INTO CONCRETE BLOCK
 1 1/4" MIN. EMBED
 2 1/2" MIN. EDGE DISTANCE
- TYPE D.** 1/4" DIA. ULTRACON BY ELCO ($F_u = 177$ KSI, $F_y = 155$ KSI)
 INTO CONCRETE $f_c'=3000$ PSI
 1-3/4" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE D1.** INTO CONCRETE BLOCK
 1-1/4" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE D2.** INTO WOOD
 1-1/2" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE E.** 1/4" DIA. TAPPER+ BY "POWERS"
 INTO CONCRETE $f_c' = 3000$ PSI
 1-3/4" MIN. EMBED
 2-1/2" MIN. EDGE DISTANCE
- TYPE E1.** INTO CONCRETE BLOCK
 1-1/4" MIN. EMBED
 2" MIN. EDGE DISTANCE
- TYPE E2.** INTO WOOD
 1-1/2" MIN. EMBED
 2" MIN. EDGE DISTANCE
- TYPE F.** 1/4" - 20 "ALL POINTS" SOLID - SET ANCHORS
 INTO CONCRETE $f_c' = 3000$ PSI
 7/8" MIN. EMBED
 3" MIN. EDGE DISTANCE
- TYPE F1.** INTO CONCRETE BLOCK
 7/8" MIN. EMBED
 3" MIN. EDGE DISTANCE
- TYPE G** 1/4" DIA. LAG SCREWS ($F_y = 60$ KSI)
 INTO WOOD STRUCTURAL
 1-1/2" MIN. THREADED EMBED
 1-1/2" MIN. EDGE DISTANCE
- TYPE H.** 5/16" DIA. ULTRACON BY ELCO ($F_u = 177$ KSI, $F_y = 155$ KSI)
 INTO WOOD STRUCTURE
 1-1/2" MIN. EMBED
 1-5/8" MIN. EDGE DISTANCE

NO.	DATE	DESCRIPTION
2	02.26.15	UPDATE TO 2014FBC
3	04.23.2019	UPDATE TO 2017FBC

MCY ENGINEERING, INC.
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 MIAMI, FL. 33183 P: 786.360.2786
 www.MCYEngineering.com

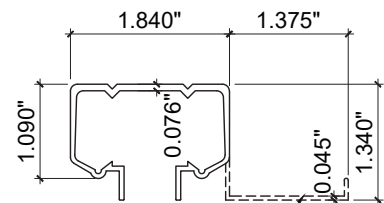
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 NCCL CORPORATION
 9960 NW 79 AVE.
 HIALEAH GARDENS, FL. 33016
 P: (305) 883 - 9940

LIMITATIONS OF USE

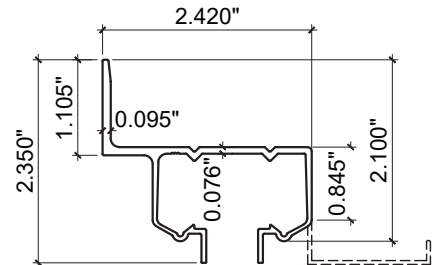
- A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT. I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- B- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- C- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- D- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D.
- E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

YIPING WANG
 FLORIDA REGISTRATION
 No. 55983
 APRIL 23, 2019
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

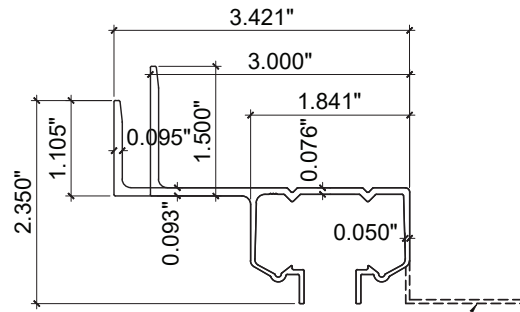
FL#17552	
DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO. AD15-11	
1 OF 16	



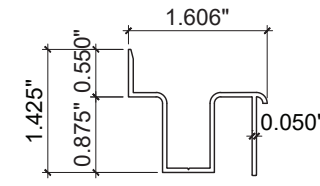
OPTIONAL
 ① NFC100-01 6063-T6
 STANDARD CEILING TRACK



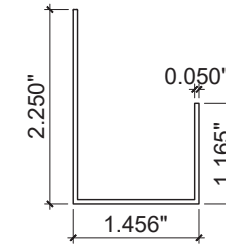
OPTIONAL
 ② NFC100-02 6063-T6
 STANDARD WALL TRACK



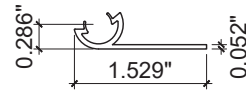
OPTIONAL
 ③ NFC100-03 6063-T6
 STANDARD 1" & 2" BUILD OUT



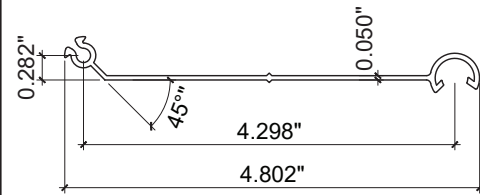
④ NFC100-04 6063-T6
 STANDARD ADJ. TOP SILL



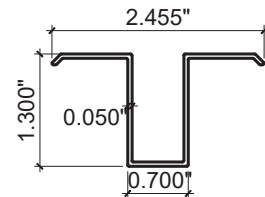
⑤ NFC100-05 6063-T6
 STANDARD ADJ. BOT. SILL



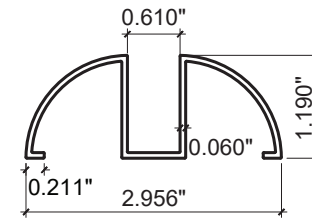
⑥ NFC100-06 6063-T6
 180° STARTER



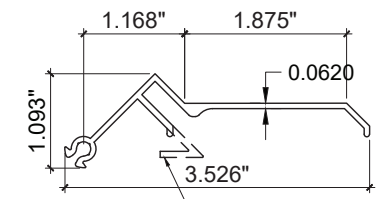
⑦ NFC100-07 6063-T6
 $F_y = 27.7 \text{ ksi}$ $F_u = 30.85 \text{ ksi}$



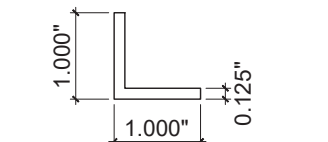
⑧ NFC100-08 6063-T6
 TRENCH TRACK
 STANDARD TRACK (S.T.)



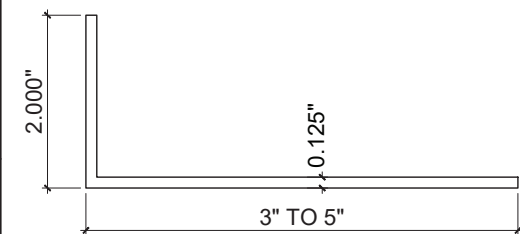
⑨ NFC100-09 6063-T6
 WALK OVER TRACK
 STANDARD TRACK (S.T.)



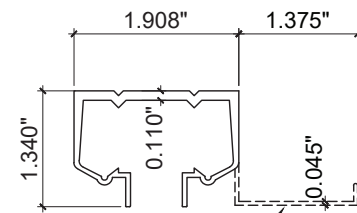
OPTIONAL
 ⑩ NFC100-10 6063-T6
 CENTER MATE
 OPTION 1



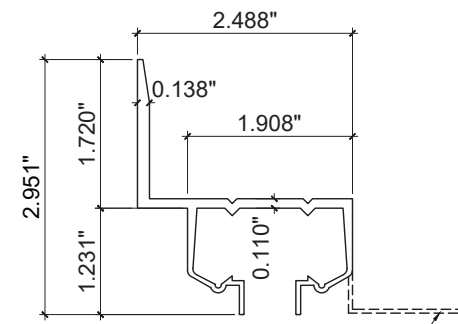
⑪ 1"x1" Alum. Angle 6063-T6
 STANDARD TRACK (S.T.)



⑫ 2" x 1/8" THK. Alum. Angle
 6063-T6



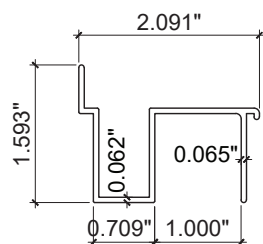
OPTIONAL
 ⑬ NFC100-11 6005-T5
 HEAVY DUTY CEILING TRACK



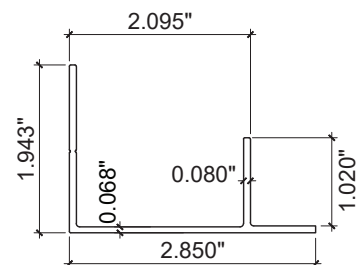
OPTIONAL
 ⑭ NFC100-12 6005-T5
 HEAVY DUTY WALL TRACK



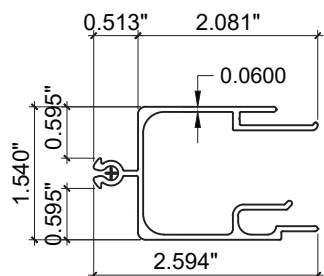
⑬ 1"x1/16" THK. Alum. Angle
 6063-T6



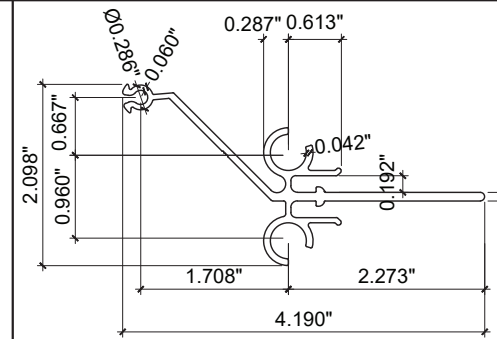
⑰ NFC100-13 6063-T6
 HEAVY DUTY ADJ. TOP SILL



⑱ NFC100-14 6063-T6
 HEAVY DUTY ADJ. BOT. SILL



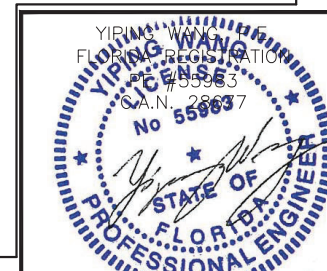
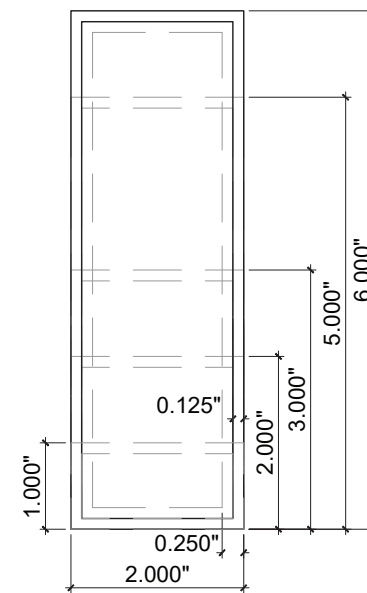
⑲ T-11963 / 6063-T6
 UNIBOX CENTER MATE
 OPTION 2



⑳ // 6063-T6
 UNIMATE CENTER MATE
 OPTION 3

㉑ ALUMINUM TUBE
 6063-T6

1X2X1/8"; 2X2X1/8";
 2X3X1/8"; 2X5X1/8";
 2X5X1/4"; 2X6X1/8"



April 23rd, 2019

REVISIONS	
NO.	DESCRIPTION
1	DATE
2	02.26.15 UPDATE TO 2014FBC
3	04.23.2019 UPDATE TO 2017FBC

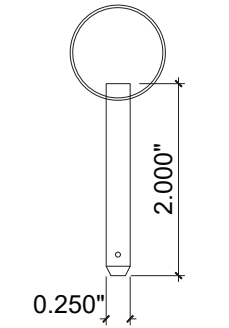
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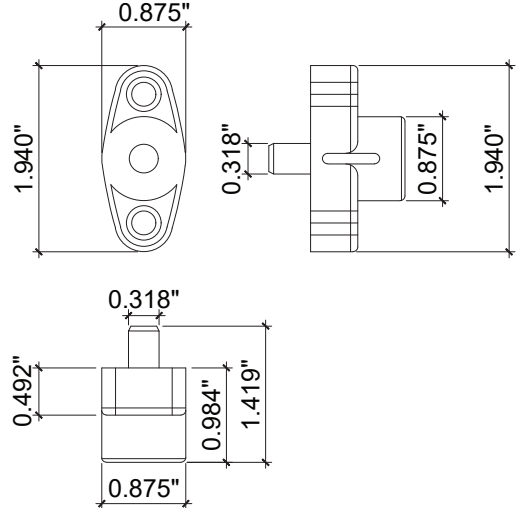
FL#17552

DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO.	AD15-11
	2 OF 16

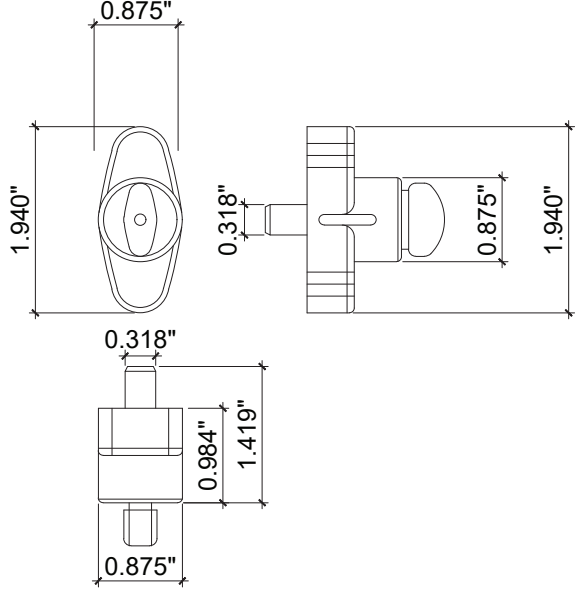
WITH UNIMATE CENTER MATES



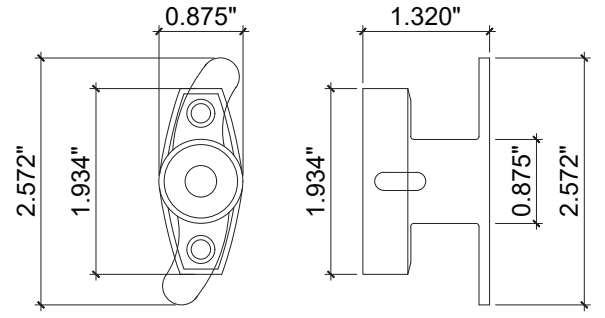
14 HITCH PIN



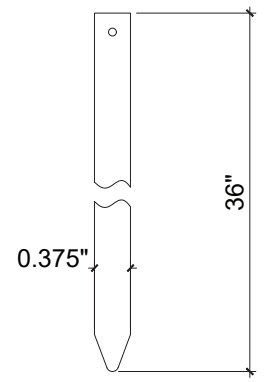
19 PUSH LOCK



20 EGRESS PUSH LOCK

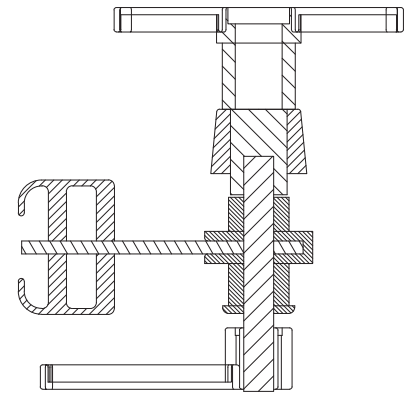


23 PUSH LOCK W / HANDLE

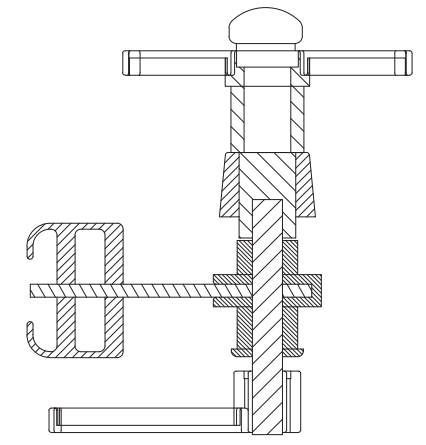


29 ALUM. LOCKING PIN

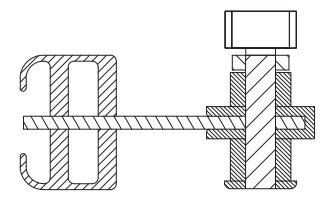
WITH UNI-BOX CENTER MATES



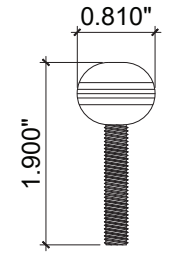
27 TURN LOCK



28 EGRESS TURN LOCK
OPTION 1 WITH HANDLE



EGRESS TURN LOCK
OPTION 2 WITHOUT HANDLE



22 THUMB SCREW



30 #10 SCREW ST/ST
(Fu = 184 KSI, Fy = 169 KSI)

ALL LOCKS MADE BY ALL POINTS

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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM

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FLORIDA REGISTRATION
No. 55983
P.E. 00000000
STATE OF FLORIDA
PROFESSIONAL ENGINEER

April 23rd, 2019

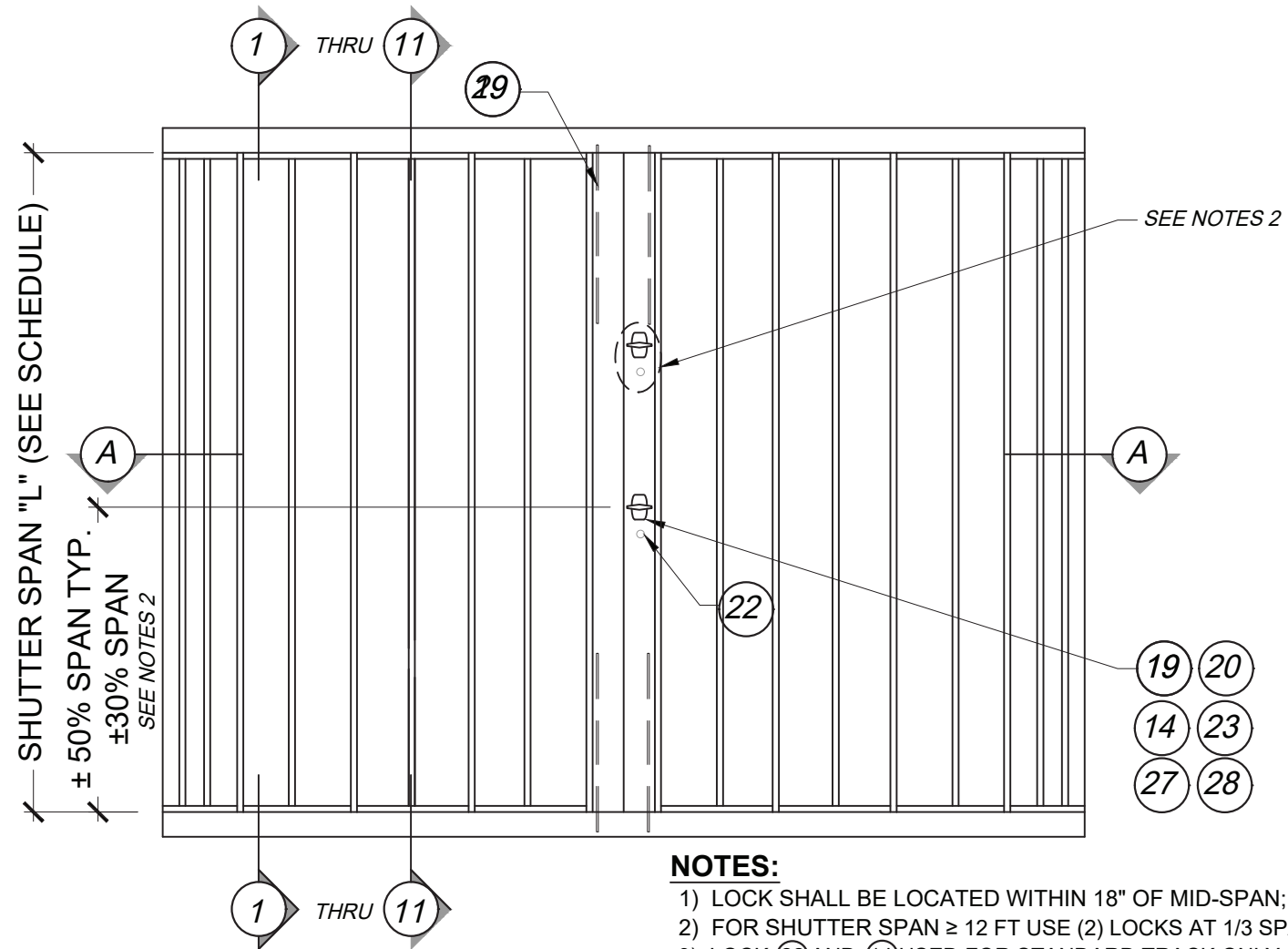
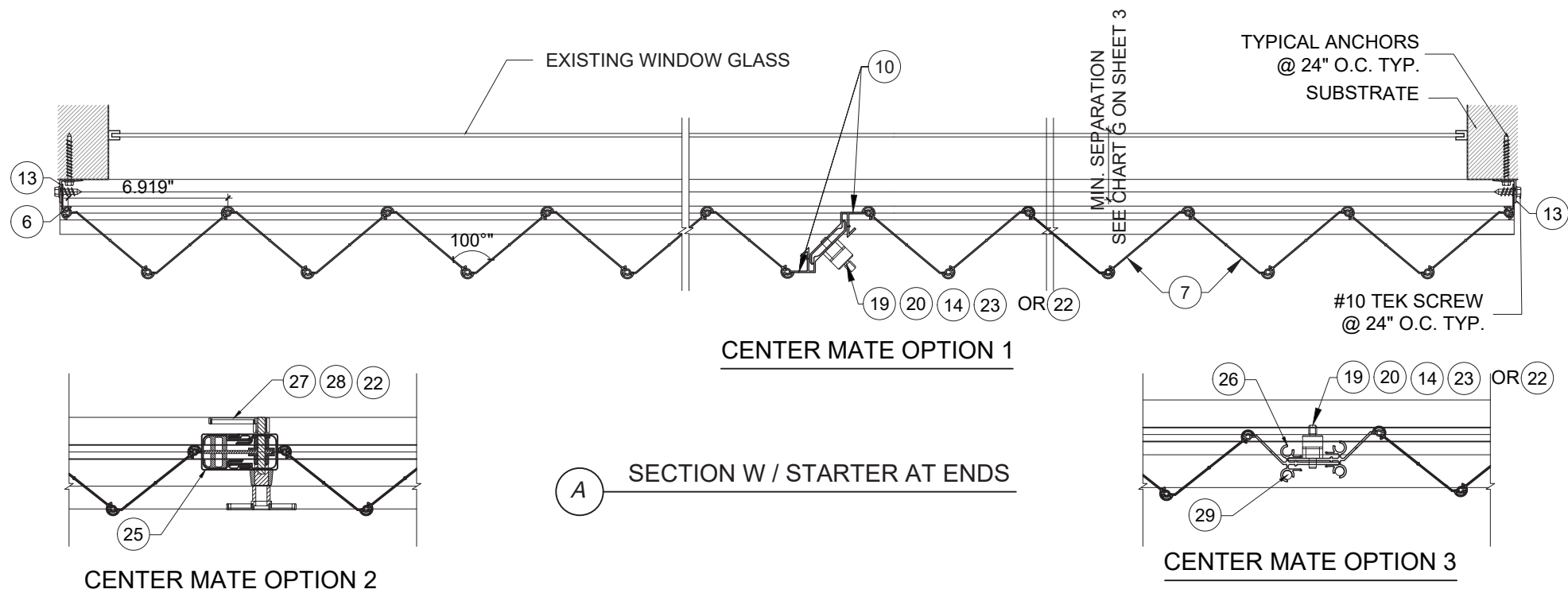
MAX. SHUTTER SPAN(L)	ALLOWABLE DESIGN LOAD	
	POSITIVE	NEGATIVE
IN	PSF	PSF
<=52	150	200
60	150	200
66	134	178
72	122	158
78	113	142
84	106	128
90	101	116
96	96	105
102	92	97
108	90	90
114	85	83
120	81	78
126	76	73
132	71	68
138	65	64
144	60	60
150	53	55
156	46	50
162	40	45
168	33	38
174	28	32
180	25	25

INSTRUCTION:

STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON APPLICABLE ASCE 7 STANDARD.

STEP 2 CHECK SHUTTER CAPACITY FOR A GIVEN SHUTTER SPAN USING CHARTS ON SHEET 4. MAX. DESIGN LOAD FROM CHART HAS TO BE EQUAL OR GREATER THAN DESIGN WIND LOAD FROM STEP 1.

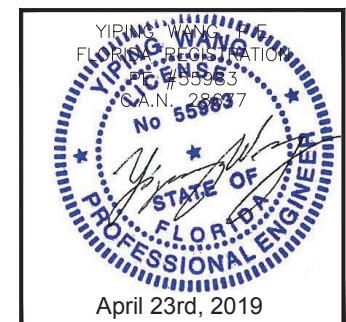
STEP 3 USING CHARTS ON SHEET 6 THRU SHEET 15 SELECT ANCHOR TYPE AND SPACING BASED ON DESIGN LOAD AND SHUTTER SPAN FOR THE ANCHOR DETAIL USED.



TYPICAL ELEVATION
STANDARD TRACK

NOTES:

- 1) LOCK SHALL BE LOCATED WITHIN 18" OF MID-SPAN;
- 2) FOR SHUTTER SPAN ≥ 12 FT USE (2) LOCKS AT 1/3 SPAN;
- 3) LOCK (22) AND (14) USED FOR STANDARD TRACK ONLY.
- 4) LOCK (14) USED FOR SHUTTER SPAN LESS THAN 85" ONLY.
- 5) LOCK (22) MUST BE USED WHEN LOCKS (27) OR (28) ARE USED ON SHUTTER SPANS GREATER THAN 144".
- 6) LOCK PIN (29) USED WITH (26) IS OPTIONAL EXCEPT ON SHUTTER SPAN GREATER THAN 144".



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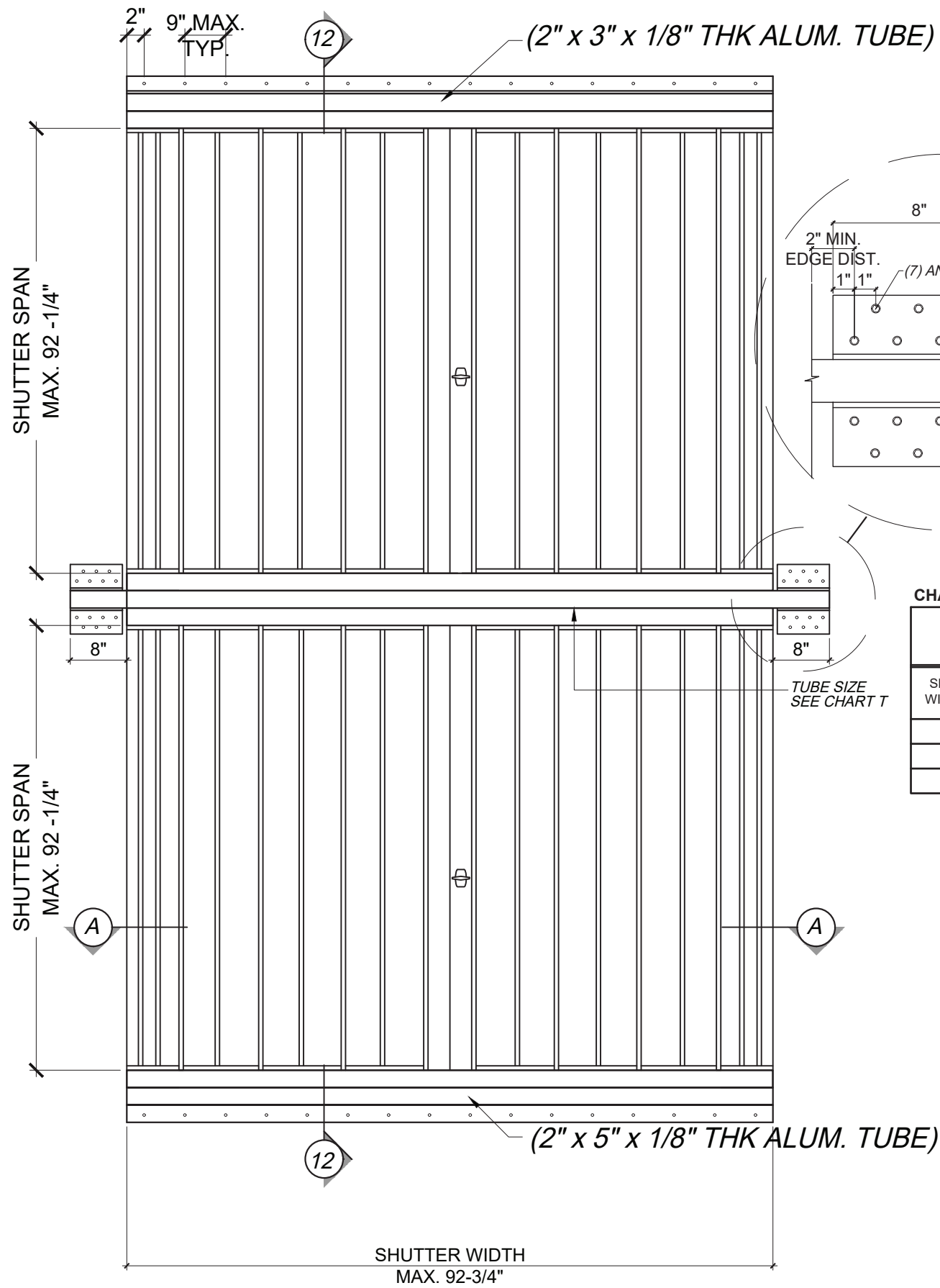
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SCALE AS NOTED
DRAWN A.O.
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DRAWING NO. AD15-11
4 OF 16



ELEVATION OPTION 1

SHUTTER SPAN
MAX. 92 -1/4"

SHUTTER SPAN
MAX. 92 -1/4"

SHUTTER WIDTH
MAX. 92-3/4"

(2" x 3" x 1/8" THK ALUM. TUBE)

(2" x 5" x 1/8" THK ALUM. TUBE)

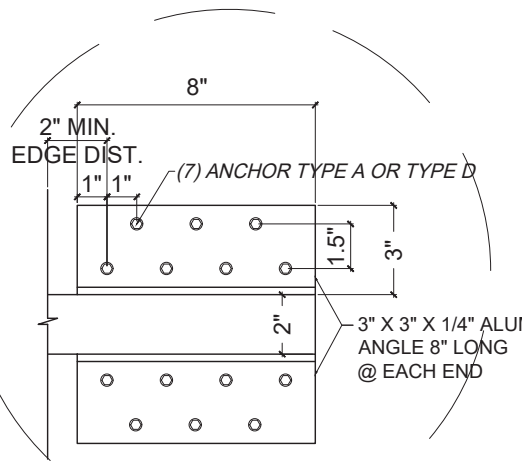
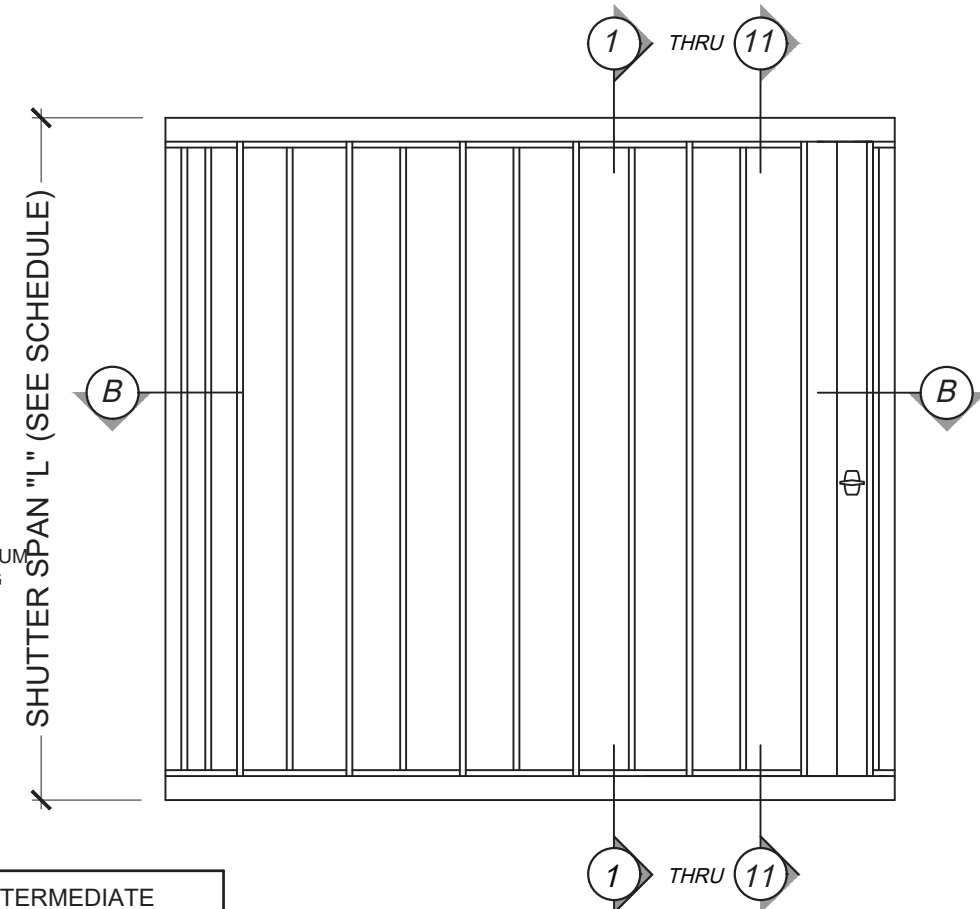


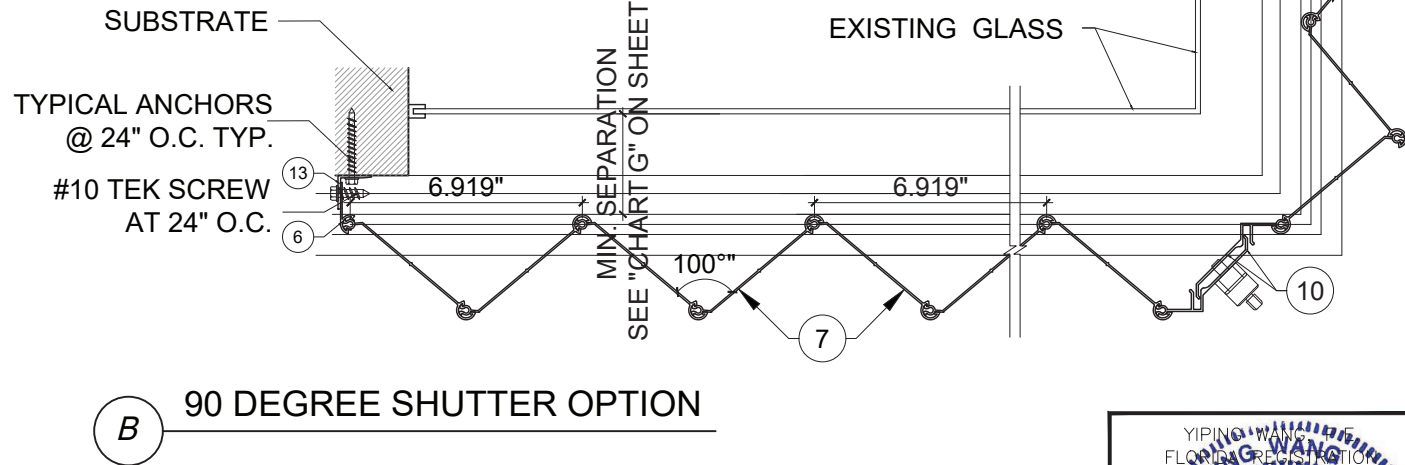
CHART T

DESIGN LOAD FOR INTERMEDIATE ALUMINUM TUBE			
SHUTTER WIDTH (IN.)	TUBE 2" x 5" x 1/8"	TUBE 2" x 6" x 1/8"	TYPE 2" x 5" x 1/4"
92.75	--	55 PSF	70 PSF
84	52 PSF	70 PSF	70 PSF
77	60 PSF	70 PSF	70 PSF

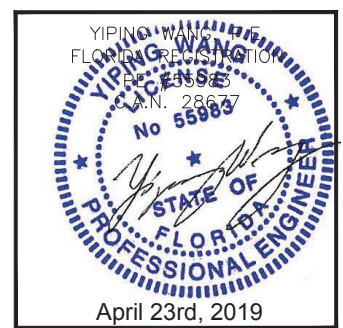
TUBE SIZE
SEE CHART T



ELEVATION OPTION 2



90 DEGREE SHUTTER OPTION



April 23rd, 2019

NO.	DATE	DESCRIPTION
2	02.26.15	UPDATE TO 2014/FBC
3	04.23.2019	UPDATE TO 2017/FBC

MCY ENGINEERING, INC.
GLAZING CONSULTANTS
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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM
NCCL CORPORATION
9960 NW 79 AVE.
HIALEAH GARDENS, FL. 33016
P. (305) 883 - 9940

FL#17552
DATE 4.23.2019
SCALE AS NOTED
DRAWN A.O.
PROJECT MCY 15-020
DRAWING NO. AD15-11
5 OF 16

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART							DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART						
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 1T (TOP)					MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 1B (BOTTOM)				
		CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK			CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)			ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)
PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1	PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1
25	60	14.0	14.0	14.0	10.8	14.0	25	60	14.0	14.0	14.0	8.7	14.0
	78	14.0	14.0	14.0	8.3	14.0		78	14.0	14.0	14.0	6.7	11.7
	96	14.0	14.0	14.0	6.7	11.7		96	14.0	12.1	14.0	5.5	9.5
	114	14.0	12.6	14.0	5.7	9.9		114	13.8	10.2	14.0	4.6	8.0
	132	14.0	10.9	14.0	4.9	8.5		132	11.9	8.8	14.0	4.0	6.9
	150	13.0	9.6	14.0	4.3	7.5		150	10.5	7.8	12.5	3.5	6.1
	168	11.6	8.5	13.7	3.8	6.7		168	9.4	6.9	11.1	3.1	5.4
180	10.8	8.0	12.8	3.6	6.2	180	8.8	6.5	10.4	-	5.1		
40	60	14.0	14.0	14.0	6.7	11.7	40	60	14.0	12.1	14.0	5.5	9.5
	78	14.0	11.5	14.0	5.2	9.0		78	12.6	9.3	14.0	4.2	7.3
	96	12.7	9.3	14.0	4.2	7.3		96	10.3	7.6	12.2	3.4	5.9
	114	10.7	7.9	12.6	3.5	6.2		114	8.6	6.4	10.3	-	5.0
	132	9.2	6.8	10.9	3.1	5.3		132	7.5	5.5	8.9	-	4.3
	150	8.1	6.0	9.6	-	4.7		150	6.6	4.8	7.8	-	3.8
	162	7.5	5.5	8.9	-	4.3		162	6.1	4.5	7.2	-	3.5
50	60	14.0	11.9	14.0	5.4	9.4	50	60	13.1	9.7	14.0	4.4	7.6
	78	12.5	9.2	14.0	4.1	7.2		78	10.1	7.5	12.0	3.4	5.8
	96	10.1	7.5	12.0	3.4	5.9		96	8.2	6.1	9.7	-	4.7
	114	8.5	6.3	10.1	-	4.9		114	6.9	5.1	8.2	-	4.0
	132	7.4	5.4	8.7	-	4.3		132	6.0	4.4	7.1	-	3.5
	153	6.4	4.7	7.5	-	3.7		153	5.2	3.8	6.1	-	-
	60	60	13.5	10.0	14.0	4.5		7.8	60	60	10.9	8.1	13.0
78		10.4	7.7	12.3	3.5	6.0	78	8.4		6.2	10.0	-	4.9
96		8.4	6.2	10.0	-	4.9	96	6.8		5.0	8.1	-	4.0
120		6.7	5.0	8.0	-	3.9	120	5.5		4.0	6.5	-	3.2
144		5.6	4.1	6.7	-	3.3	144	4.6		3.4	5.4	-	-
70	60	11.6	8.5	13.7	3.8	6.7	70	60	9.4	6.9	11.1	3.1	5.4
	78	8.9	6.6	10.6	-	5.1		78	7.2	5.3	8.6	-	4.2
	96	7.2	5.3	8.6	-	4.2		96	5.9	4.3	7.0	-	3.4
	114	6.1	4.5	7.2	-	3.5		114	4.9	3.6	5.9	-	-
	135	5.1	3.8	6.1	-	-		135	4.2	3.1	4.9	-	-
80	60	10.1	7.5	12.0	3.4	5.9	80	60	8.2	6.1	9.7	-	4.7
	78	7.8	5.7	9.2	-	4.5		78	6.3	4.7	7.5	-	3.7
	96	6.3	4.7	7.5	-	3.7		96	5.1	3.8	6.1	-	-
	120	5.1	3.7	6.0	-	-		120	4.1	3.0	4.9	-	-
90	60	9.0	6.6	10.7	3.0	5.2	90	60	7.3	5.4	8.7	-	4.2
	78	6.9	5.1	8.2	-	4.0		78	5.6	4.1	6.7	-	3.2
	96	5.6	4.1	6.7	-	3.3		96	4.6	3.4	5.4	-	-
	108	5.0	3.7	5.9	-	-		108	4.1	3.0	4.8	-	-
100	60	8.1	6.0	9.6	-	4.7	100	60	6.6	4.8	7.8	-	3.8
	72	6.7	5.0	8.0	-	3.9		72	5.5	4.0	6.5	-	3.2
	84	5.8	4.3	6.9	-	3.3		84	4.7	3.5	5.6	-	-
	96	5.1	3.7	6.0	-	-		96	4.1	3.0	4.9	-	-
120	48	8.4	6.2	10.0	-	4.9	120	48	6.8	5.0	8.1	-	4.0
	60	6.7	5.0	8.0	-	3.9		60	5.5	4.0	6.5	-	3.2
	72	5.6	4.1	6.7	-	3.3		72	4.6	3.4	5.4	-	-
	81	5.0	3.7	5.9	-	-		81	4.1	3.0	4.8	-	-
140	48	7.2	5.3	8.6	-	4.2	140	48	5.9	4.3	7.0	-	3.4
	60	5.8	4.3	6.9	-	3.3		60	4.7	3.5	5.6	-	-
	66	5.3	3.9	6.2	-	3.0		66	4.3	3.1	5.1	-	-
	72	4.8	3.6	5.7	-	-		72	3.9	-	4.6	-	-
160	48	6.3	4.7	7.5	-	3.7	160	48	5.1	3.8	6.1	-	-
	60	5.1	3.7	6.0	-	-		60	4.1	3.0	4.9	-	-
	66	4.6	3.4	5.5	-	-		66	3.7	-	4.4	-	-
180	48	5.6	4.1	6.7	-	3.3	180	48	4.6	3.4	5.4	-	-
	60	4.5	3.3	5.3	-	-		60	3.6	-	4.3	-	-
200	48	5.1	3.7	6.0	-	-	200	48	4.1	3.0	4.9	-	-
	57	4.3	3.1	5.1	-	-		57	3.5	-	4.1	-	-

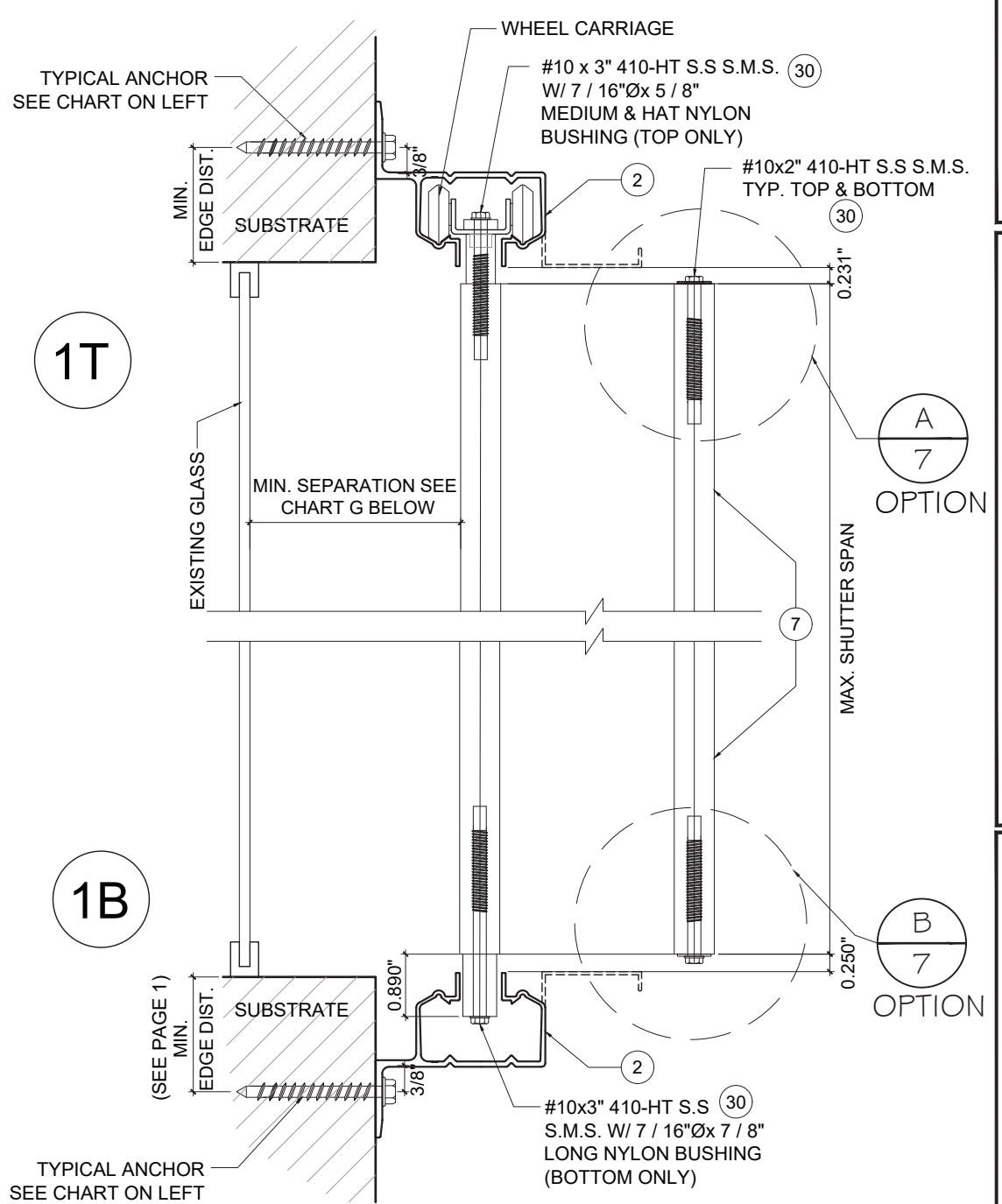
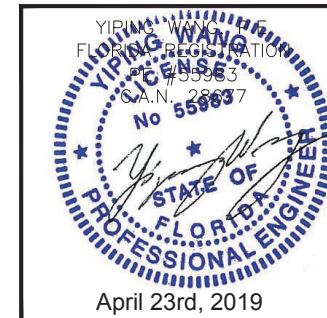


CHART G

MIN. GLASS SEPARATION CHART	
SHUTTER SPAN	SEPARATION
SPAN ≤ 60"	1½"
60" < SPAN ≤ 90"	2¼"
90" < SPAN ≤ 120"	3½"
120" < SPAN ≤ 144"	3¾"
144" < SPAN ≤ 168"	4"
168" < SPAN ≤ 180"	4½"



REVISIONS	
NO.	DESCRIPTION
2	02.26.15 UPDATE TO 2014FBC
3	04.23.2019 UPDATE TO 2017FBC

MCY

MCY ENGINEERING, INC.
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FL#17552

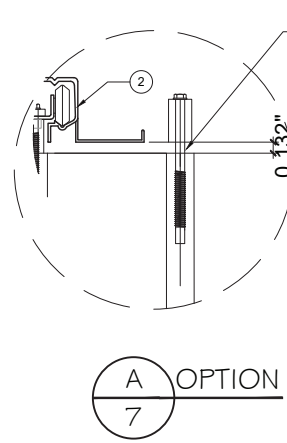
DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020

DRAWING NO.
AD15-11

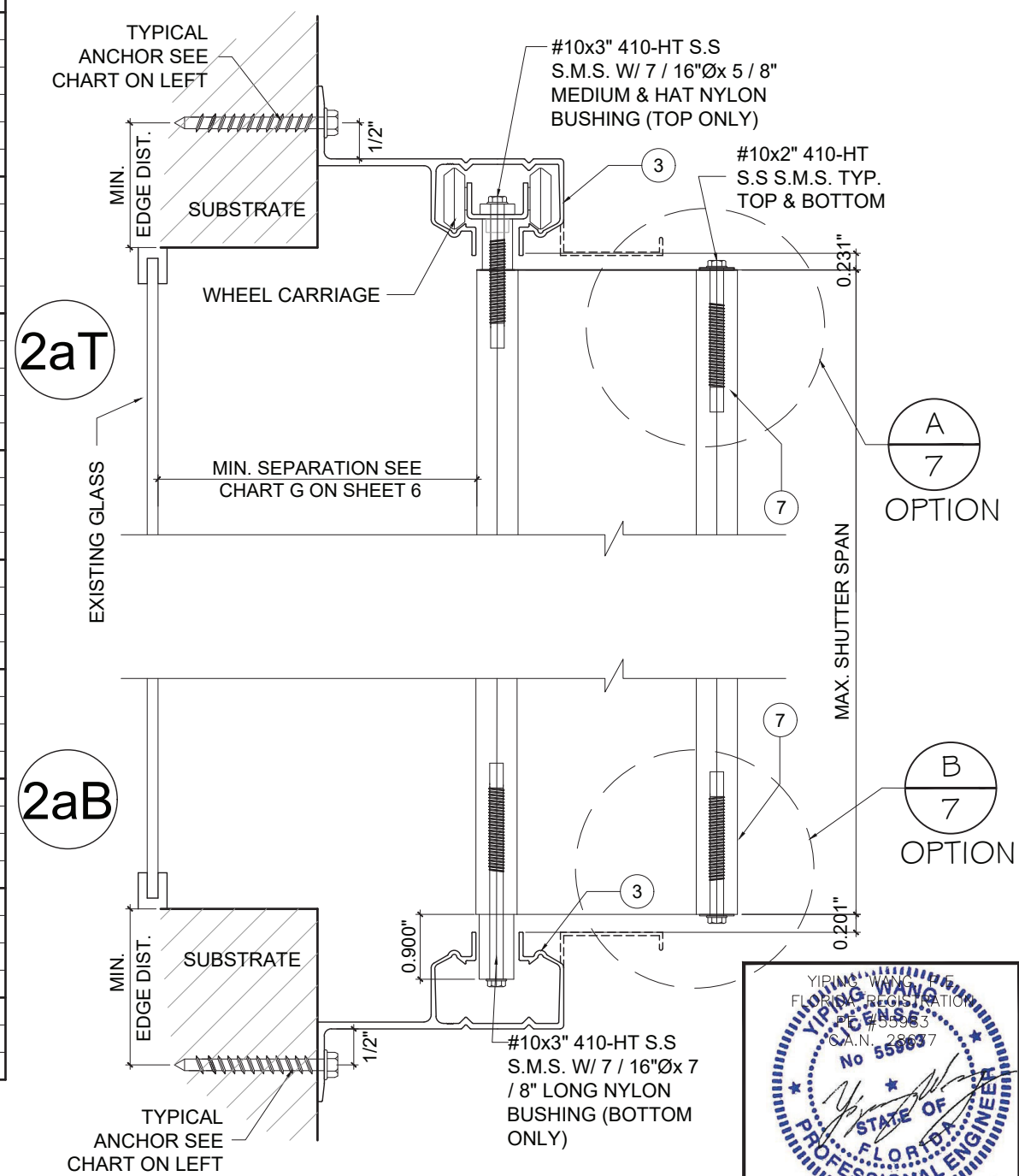
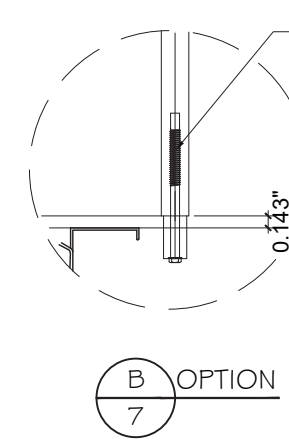
6 OF 16

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART							DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART						
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 2aT (TOP)					MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 2aB (BOTTOM)				
		CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK			CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)			ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)
(PSF)	(INCH)	TYPE A / B / C / F	TYPE E	TYPE H / G	TYPE A1 / B1 / D1 / E1	TYPE C1 / F1	(PSF)	(INCH)	TYPE A / B / C / F	TYPE E	TYPE H / G	TYPE A1 / B1 / D1 / E1	TYPE C1 / F1
40	60"	12.0	12.0	12.0	9.1	12.0	40	60"	12.0	12.0	12.0	7.5	12.0
	78"	12.0	12.0	12.0	7.0	12.0		78"	12.0	12.0	12.0	5.8	10.1
	96"	12.0	12.0	12.0	5.7	9.9		96"	12.0	10.4	12.0	4.7	8.2
	114"	12.0	10.7	12.0	4.8	8.4		114"	11.9	8.8	12.0	4.0	6.9
	120"	12.0	10.1	12.0	4.6	7.9		120"	11.3	8.3	12.0	3.8	6.5
	132"	12.0	9.2	12.0	4.2	7.2		132"	10.3	7.6	12.0	3.4	5.9
	141"	11.7	8.6	12.0	3.9	6.8		141"	9.6	7.1	11.4	3.2	5.6
50	60"	12.0	12.0	12.0	7.3	12.0	50	60"	12.0	12.0	12.0	6.0	10.5
	78"	12.0	12.0	12.0	5.6	9.8		78"	12.0	10.3	12.0	4.6	8.0
	96"	12.0	10.1	12.0	4.6	7.9		96"	11.3	8.3	12.0	3.8	6.5
	114"	11.6	8.5	12.0	3.9	6.7		114"	9.5	7.0	11.3	3.2	5.5
	120"	11.0	8.1	12.0	3.7	6.4		120"	9.0	6.7	10.7	3.0	5.2
	132"	10.0	7.4	11.9	3.3	5.8		132"	8.2	6.1	9.8	-	4.8
60	60"	12.0	12.0	12.0	6.1	10.6	60	60"	12.0	11.1	12.0	5.0	8.7
	78"	12.0	10.4	12.0	4.7	8.1		78"	11.6	8.6	12.0	3.9	6.7
	96"	11.5	8.4	12.0	3.8	6.6		96"	9.4	7.0	11.2	3.1	5.4
	114"	9.6	7.1	11.4	3.2	5.6		114"	7.9	5.9	9.4	-	4.6
	126"	8.7	6.4	10.4	-	5.0		126"	7.2	5.3	8.5	-	4.2
70	60"	12.0	11.6	12.0	5.2	9.1	70	60"	12.0	9.5	12.0	4.3	7.5
	78"	12.0	8.9	12.0	4.0	7.0		78"	9.9	7.3	11.8	3.3	5.7
	96"	9.8	7.2	11.6	3.3	5.7		96"	8.1	6.0	9.6	-	4.7
	114"	8.3	6.1	9.8	-	4.8		114"	6.8	5.0	8.1	-	3.9
	118"	7.9	5.8	9.4	-	4.6		118"	6.5	4.8	7.7	-	3.8
80	60"	12.0	10.1	12.0	4.6	7.9	80	60"	11.3	8.3	12.0	3.8	6.5
	78"	10.6	7.8	12.0	3.5	6.1		78"	8.7	6.4	10.3	-	5.0
	96"	8.6	6.3	10.2	-	5.0		96"	7.1	5.2	8.4	-	4.1
	111"	7.4	5.5	8.8	-	4.3		111"	6.1	4.5	7.3	-	3.5
90	60"	12.0	9.0	12.0	4.1	7.1	90	60"	10.1	7.4	11.9	3.3	5.8
	78"	9.4	6.9	11.1	3.1	5.4		78"	7.7	5.7	9.2	-	4.5
	96"	7.6	5.6	9.1	-	4.4		96"	6.3	4.6	7.5	-	3.6
	105"	7.0	5.1	8.3	-	4.0		105"	5.7	4.2	6.8	-	3.3
100	60"	11.0	8.1	12.0	3.7	6.4	100	60"	9.0	6.7	10.7	3.0	5.2
	78"	8.5	6.2	10.0	-	4.9		78"	7.0	5.1	8.3	-	4.0
	96"	6.9	5.1	8.2	-	4.0		96"	5.7	4.2	6.7	-	3.3
	99"	6.7	4.9	7.9	-	3.9		99"	5.5	4.0	6.5	-	3.2
120	48"	11.5	8.4	12.0	3.8	6.6	120	48"	9.4	7.0	11.2	3.1	5.4
	60"	9.2	6.8	10.9	3.0	5.3		60"	7.5	5.6	8.9	-	4.4
	78"	7.0	5.2	8.4	-	4.1		78"	5.8	4.3	6.9	-	3.4
	91"	6.0	4.5	7.2	-	3.5		91"	5.0	3.7	5.9	-	-
140	48"	9.8	7.2	11.6	3.3	5.7	140	48"	8.1	6.0	9.6	-	4.7
	60"	7.9	5.8	9.3	-	4.5		60"	6.5	4.8	7.7	-	3.7
	78"	6.0	4.5	7.2	-	3.5		78"	5.0	3.7	5.9	-	-
	81"	5.8	4.3	6.9	-	3.4		81"	4.8	3.5	5.7	-	-
150	48"	8.6	6.3	10.2	-	5.0	150	48"	7.1	5.2	8.4	-	4.1
	60"	6.9	5.1	8.2	-	4.0		60"	5.7	4.2	6.7	-	3.3
	70"	5.8	4.3	6.9	-	3.4		70"	4.8	3.5	5.7	-	-

SCREW CAN APPLY TO ALL OPTION A



SCREW CAN APPLY TO ALLOPTION B



NO.	DATE	DESCRIPTION
2	02.26.15	UPDATE TO 2014FBC
3	04.23.2019	UPDATE TO 2017FBC

MCY ENGINEERING, INC.
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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM

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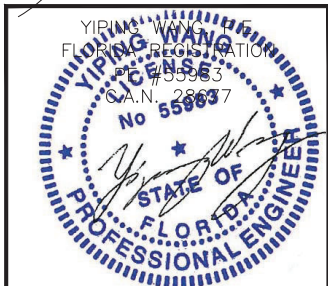
FL#17552

DATE 4.23.2019
SCALE AS NOTED
DRAWN A.O.
PROJECT MCY 15-020

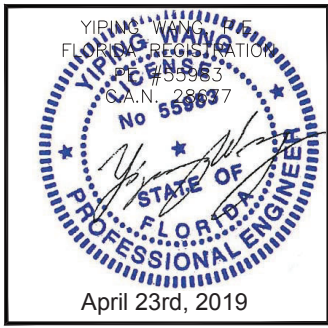
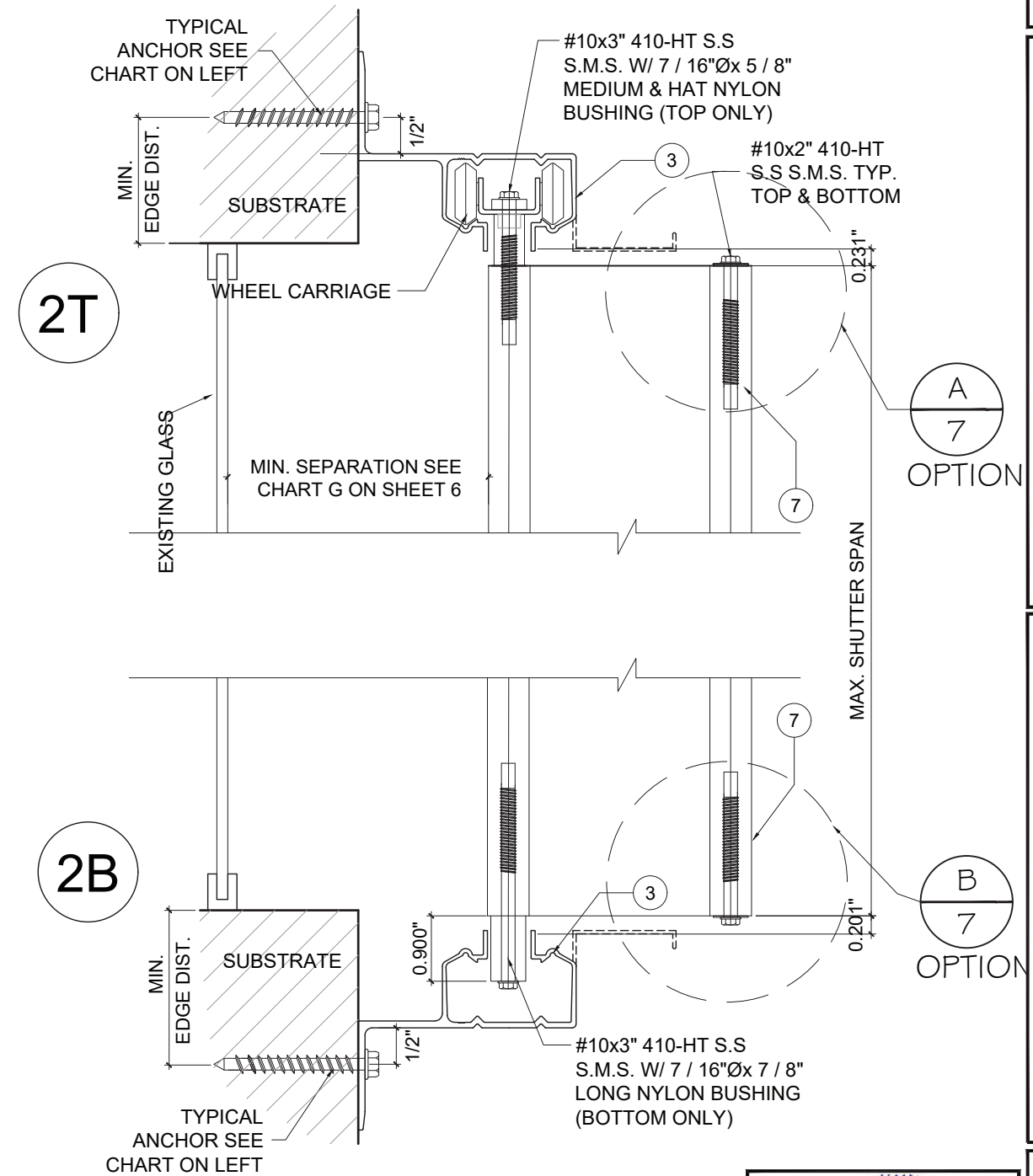
DRAWING NO. AD15-11

7 OF 16

April 23rd, 2019



DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART							DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART						
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 2T (TOP)					MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 2B (BOTTOM)				
		CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK			CONCRETE	CONCRETE	WOOD STRUCTURE	CONCRETE BLOCK	CONCRETE BLOCK
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)			ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)
PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1	PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1
25	60	12.0	12.0	12.0	12.0	12.0	25	60	12.0	12.0	12.0	12.0	12.0
	78	12.0	12.0	12.0	11.3	12.0		78	12.0	12.0	12.0	9.3	12.0
	96	12.0	12.0	12.0	9.1	12.0		96	12.0	12.0	12.0	7.5	12.0
	114	12.0	12.0	12.0	7.7	12.0		114	12.0	12.0	12.0	6.3	11.0
	132	12.0	12.0	12.0	6.7	11.6		132	12.0	12.0	12.0	5.5	9.5
	150	12.0	12.0	12.0	5.9	10.2		150	12.0	10.7	12.0	4.8	8.4
	168	12.0	11.6	12.0	5.2	9.1		168	12.0	9.5	12.0	4.3	7.5
180	12.0	10.8	12.0	4.9	8.5	180	12.0	8.9	12.0	4.0	7.0		
40	60	12.0	12.0	12.0	9.1	12.0	40	60	12.0	12.0	12.0	7.5	12.0
	78	12.0	12.0	12.0	7.0	12.0		78	12.0	12.0	12.0	5.8	10.1
	96	12.0	12.0	12.0	5.7	9.9		96	12.0	10.4	12.0	4.7	8.2
	114	12.0	10.7	12.0	4.8	8.4		114	11.9	8.8	12.0	4.0	6.9
	132	12.0	9.2	12.0	4.2	7.2		132	10.3	7.6	12.0	3.4	5.9
	150	11.0	8.1	12.0	3.7	6.4		150	9.0	6.7	10.7	3.0	5.2
	162	10.2	7.5	12.0	3.4	5.9		162	8.4	6.2	9.9	-	4.8
50	60	12.0	12.0	12.0	7.3	12.0	50	60	12.0	12.0	12.0	6.0	10.5
	78	12.0	12.0	12.0	5.6	9.8		78	12.0	10.3	12.0	4.6	8.0
	96	12.0	10.1	12.0	4.6	7.9		96	11.3	8.3	12.0	3.8	6.5
	114	11.6	8.5	12.0	3.9	6.7		114	9.5	7.0	11.3	3.2	5.5
	132	10.0	7.4	11.9	3.3	5.8		132	8.2	6.1	9.8	-	4.8
	153	8.6	6.4	10.2	-	5.0		153	7.1	5.2	8.4	-	4.1
60	60	12.0	12.0	12.0	6.1	10.6	60	60	12.0	11.1	12.0	5.0	8.7
	78	12.0	10.4	12.0	4.7	8.1		78	11.6	8.6	12.0	3.9	6.7
	96	11.5	8.4	12.0	3.8	6.6		96	9.4	7.0	11.2	3.1	5.4
	120	9.2	6.8	10.9	3.0	5.3		120	7.5	5.6	8.9	-	4.4
	144	7.6	5.6	9.1	-	4.4		144	6.3	4.6	7.5	-	3.6
70	60	12.0	11.6	12.0	5.2	9.1	70	60	12.0	9.5	12.0	4.3	7.5
	78	12.0	8.9	12.0	4.0	7.0		78	9.9	7.3	11.8	3.3	5.7
	96	9.8	7.2	11.6	3.3	5.7		96	8.1	6.0	9.6	-	4.7
	114	8.3	6.1	9.8	-	4.8		114	6.8	5.0	8.1	-	3.9
	135	7.0	5.1	8.3	-	4.0		135	5.7	4.2	6.8	-	3.3
80	60	12.0	10.1	12.0	4.6	7.9	80	60	11.3	8.3	12.0	3.8	6.5
	78	10.6	7.8	12.0	3.5	6.1		78	8.7	6.4	10.3	-	5.0
	96	8.6	6.3	10.2	-	5.0		96	7.1	5.2	8.4	-	4.1
	120	6.9	5.1	8.2	-	4.0		120	5.7	4.2	6.7	-	3.3
90	60	12.0	9.0	12.0	4.1	7.1	90	60	10.1	7.4	11.9	3.3	5.8
	78	9.4	6.9	11.1	3.1	5.4		78	7.7	5.7	9.2	-	4.5
	96	7.6	5.6	9.1	-	4.4		96	6.3	4.6	7.5	-	3.6
	108	6.8	5.0	8.1	-	3.9		108	5.6	4.1	6.6	-	3.2
100	60	11.0	8.1	12.0	3.7	6.4	100	60	9.0	6.7	10.7	3.0	5.2
	72	9.2	6.8	10.9	3.0	5.3		72	7.5	5.6	8.9	-	4.4
	84	7.9	5.8	9.3	-	4.5		84	6.5	4.8	7.7	-	3.7
	96	6.9	5.1	8.2	-	4.0		96	5.7	4.2	6.7	-	3.3
120	48	11.5	8.4	12.0	3.8	6.6	120	48	9.4	7.0	11.2	3.1	5.4
	60	9.2	6.8	10.9	3.0	5.3		60	7.5	5.6	8.9	-	4.4
	72	7.6	5.6	9.1	-	4.4		72	6.3	4.6	7.5	-	3.6
	81	6.8	5.0	8.1	-	3.9		81	5.6	4.1	6.6	-	3.2
140	48	9.8	7.2	11.6	3.3	5.7	140	48	8.1	6.0	9.6	-	4.7
	60	7.9	5.8	9.3	-	4.5		60	6.5	4.8	7.7	-	3.7
	72	6.5	4.8	7.8	-	3.8		72	5.9	4.3	7.0	-	3.4
160	48	8.6	6.3	10.2	-	5.0	160	48	7.1	5.2	8.4	-	4.1
	60	6.9	5.1	8.2	-	4.0		60	5.7	4.2	6.7	-	3.3
	66	6.2	4.6	7.4	-	3.6		66	5.1	3.8	6.1	-	-
180	48	7.6	5.6	9.1	-	4.4	180	48	6.3	4.6	7.5	-	3.6
	60	6.1	4.5	7.2	-	3.5		60	5.0	3.7	6.0	-	-
200	48	6.9	5.1	8.2	-	4.0	200	48	5.7	4.2	6.7	-	3.3
	57	5.8	4.3	6.9	-	3.3		57	4.8	3.5	5.7	-	-



REVISIONS			
NO.	DATE	DESCRIPTION	
2	02.26.15	UPDATE TO 2014FBC	
3	04.23.2019	UPDATE TO 2017FBC	

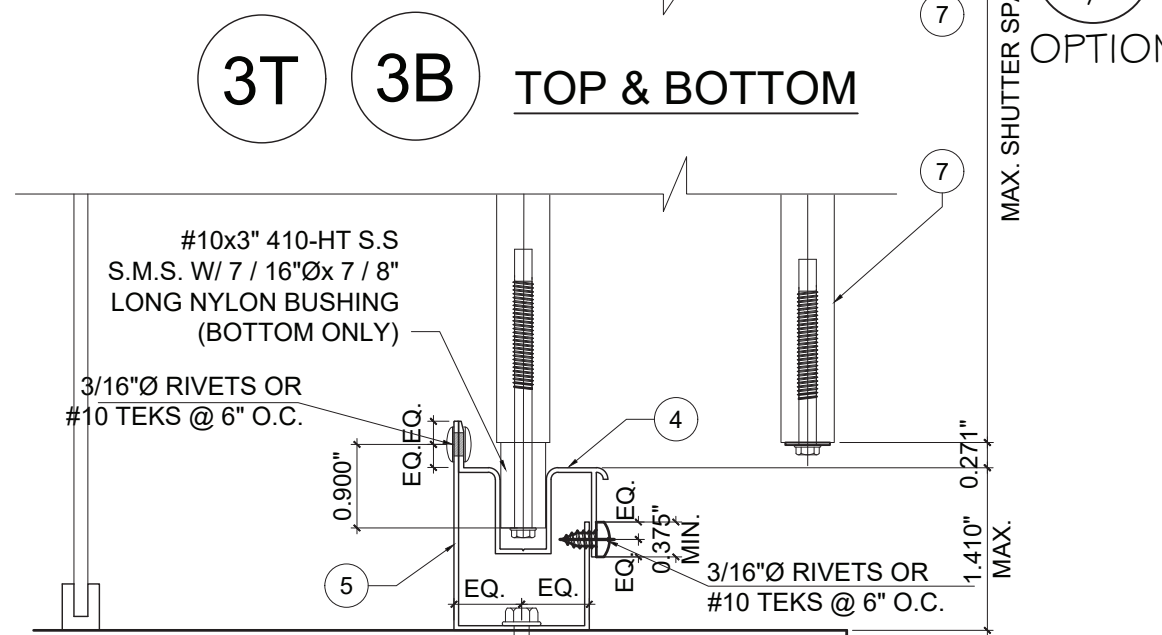
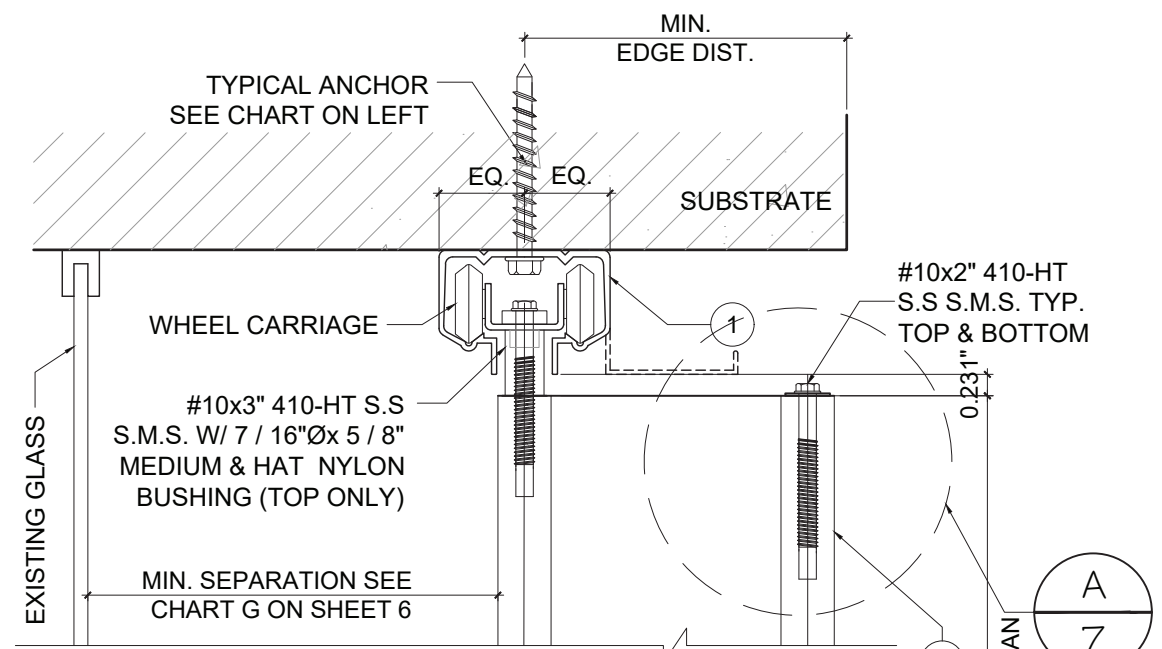
MCY
MCY ENGINEERING, INC.
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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM
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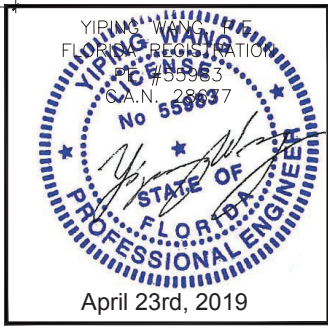
FL#17552

DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO.	
AD15-11	
8 OF 16	

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART								DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART										
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 3T & 3B (TOP & BOTTOM)						MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 13B (BOTTOM)								
		CONCRETE	CONCRETE	CONCRETE	WOOD	CONCRETE BLOCK	CONCRETE BLOCK			CONCRETE	CONCRETE	CONCRETE	CONCRETE BLOCK	CONCRETE BLOCK				
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)			ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)				
PSF	INCH	TYPE A/B	TYPE C/F	TYPE D/E	TYPE A2/D2/E2/G	TYPE A1/B1/D1	TYPE E1	PSF	INCH	TYPE A/B	TYPE C/F	TYPE D/E	TYPE A1/B1/D1	TYPE E1				
25	60	14.0	14.0	14.0	14.0	14.0	14.0	25	60	9.0	9.0	9.0	9.0	9.0				
	78	14.0	14.0	14.0	14.0	14.0	14.0		78	9.0	9.0	9.0	9.0	9.0				
	96	14.0	14.0	14.0	14.0	14.0	13.8		96	9.0	9.0	9.0	9.0	9.0				
	114	14.0	14.0	14.0	14.0	11.9	11.6		114	9.0	9.0	9.0	8.0	8.6				
	132	14.0	14.0	14.0	12.9	10.2	10.0		132	9.0	9.0	9.0	6.9	7.4				
	150	14.0	14.0	14.0	11.3	9.0	8.8		150	9.0	9.0	9.0	6.1	6.5				
	168	14.0	14.0	13.0	10.1	8.1	7.9		168	9.0	9.0	9.0	5.4	5.8				
180	14.0	14.0	12.1	9.4	7.5	7.3	180	9.0	9.0	9.0	5.1	5.5						
40	60	14.0	14.0	14.0	14.0	14.0	14.0	40	60	9.0	9.0	9.0	9.0	9.0				
	78	14.0	14.0	14.0	13.8	11.3	10.9		78	9.0	9.0	9.0	7.3	7.9				
	96	14.0	14.0	14.0	11.2	9.2	8.9		96	9.0	9.0	9.0	5.9	6.4				
	114	14.0	14.0	12.3	9.4	7.7	7.5		114	9.0	9.0	8.9	5.0	5.4				
	132	12.7	14.0	10.7	8.1	6.7	6.4		132	9.0	9.0	7.7	4.3	4.6				
	150	11.2	14.0	9.4	7.2	5.9	5.7		150	8.3	9.0	6.7	3.8	4.1				
	162	10.4	14.0	8.7	6.6	5.4	5.2		162	7.7	9.0	6.2	3.5	3.8				
50	60	14.0	14.0	14.0	14.0	11.9	11.4	50	60	9.0	9.0	9.0	7.6	8.2				
	78	14.0	14.0	14.0	11.1	9.2	8.8		78	9.0	9.0	9.0	5.9	6.3				
	96	14.0	14.0	11.8	9.0	7.4	7.2		96	9.0	9.0	8.4	4.8	5.1				
	114	11.9	14.0	10.0	7.6	6.3	6.0		114	8.8	9.0	7.1	4.0	4.3				
	132	10.3	14.0	8.6	6.5	5.4	5.2		132	7.6	9.0	6.1	3.5	3.7				
	153	8.9	12.2	7.4	5.6	4.7	4.5		153	6.5	8.3	5.3	-	3.2				
	60	60	14.0	14.0	14.0	12.0	10.0		9.6	60	60	9.0	9.0	9.0	6.3	6.8		
78		14.0	14.0	12.2	9.3	7.7	7.4	78	9.0		9.0	8.6	4.9	5.2				
96		11.9	14.0	9.9	7.5	6.3	6.0	96	8.7		9.0	7.0	4.0	4.3				
120		9.5	13.1	7.9	6.0	5.0	4.8	120	7.0		8.8	5.6	3.2	3.4				
144		7.9	10.9	6.6	5.0	4.2	4.0	144	5.8		7.3	4.7	-	-				
70		60	14.0	14.0	13.7	10.3	8.6	8.3	70		60	9.0	9.0	9.0	5.4	5.8		
		78	12.6	14.0	10.5	8.0	6.7	6.4			78	9.0	9.0	7.4	4.2	4.5		
	96	10.2	14.0	8.6	6.5	5.4	5.2	96		7.4	9.0	6.0	3.4	3.7				
	114	8.6	11.9	7.2	5.4	4.6	4.4	114		6.3	7.9	5.1	-	3.1				
	135	7.3	10.0	6.1	4.6	3.8	3.7	135		5.3	6.7	4.3	-	-				
	80	60	14.0	14.0	12.0	9.1	7.6	7.3		80	60	9.0	9.0	8.4	4.8	5.1		
		78	11.0	14.0	9.2	7.0	5.9	5.6			78	8.0	9.0	6.5	3.7	3.9		
96		9.0	12.4	7.5	5.7	4.8	4.5	96	6.5		8.3	5.3	-	3.2				
120		7.2	9.9	6.0	4.5	3.8	3.6	120	5.2		6.6	4.2	-	-				
90		60	12.8	14.0	10.7	8.1	6.8	6.5	90		60	9.0	9.0	7.5	4.2	4.5		
		78	9.8	13.6	8.2	6.2	5.2	5.0			78	7.1	9.0	5.8	3.3	3.5		
		96	8.0	11.1	6.7	5.0	4.2	4.0			96	5.8	7.3	4.7	-	-		
	108	7.1	9.8	6.0	4.5	3.8	3.6	108		5.1	6.5	4.2	-	-				
	100	60	11.5	14.0	9.7	7.3	6.1	5.8		100	60	8.3	9.0	6.7	3.8	4.1		
		72	9.6	13.3	8.1	6.1	5.1	4.9			72	7.0	8.8	5.6	3.2	3.4		
		84	8.2	11.4	6.9	5.2	4.4	4.2			84	6.0	7.6	4.8	-	-		
96		7.2	10.0	6.0	4.5	3.8	3.6	96	5.2		6.6	4.2	-	-				
120		48	12.0	14.0	10.1	7.6	6.4	6.1	120		48	8.7	9.0	7.0	4.0	4.3		
		60	9.6	13.4	8.1	6.1	5.1	4.9			60	7.0	8.8	5.6	3.2	3.4		
		72	8.0	11.1	6.7	5.1	4.3	4.1			72	5.8	7.3	4.7	-	-		
	81	7.1	9.9	6.0	4.5	3.8	3.6	81		5.1	6.5	4.2	-	-				
	140	48	10.3	14.0	8.7	6.5	5.5	5.2		140	48	7.4	9.0	6.0	3.4	3.7		
		60	8.3	11.5	6.9	5.2	4.4	4.2			60	6.0	7.6	4.8	-	-		
		66	7.5	10.5	6.3	4.7	4.0	3.8			66	5.4	6.9	4.4	-	-		
72		6.9	9.6	5.8	4.3	3.7	3.5	72	5.0		6.3	4.0	-	-				
160		48	9.1	12.6	7.6	5.7	4.8	4.6	160		48	6.5	8.3	5.3	-	3.2		
		60	7.3	10.1	6.1	4.6	3.9	3.7			60	5.2	6.6	4.2	-	-		
		66	6.6	9.2	5.5	4.1	3.5	3.3			66	4.7	6.0	3.8	-	-		
	180	48	8.1	11.2	6.8	5.1	4.3	4.1		180	48	5.8	7.3	4.7	-	-		
		60	6.5	9.0	5.4	4.1	3.5	3.3			60	4.6	5.9	3.7	-	-		
		200	48	7.3	10.1	6.1	4.6	3.9			3.7	200	48	5.2	6.6	4.2	-	-
			57	6.1	8.5	5.1	3.8	3.3			3.1		57	4.4	5.6	3.5	-	-



13B



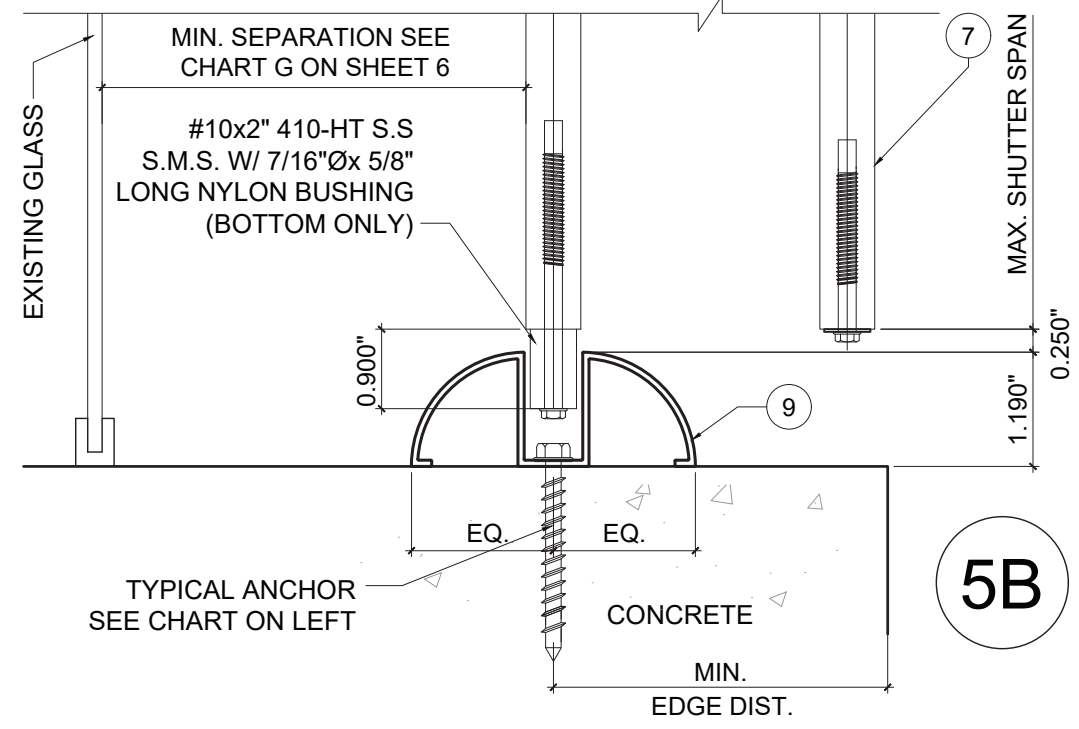
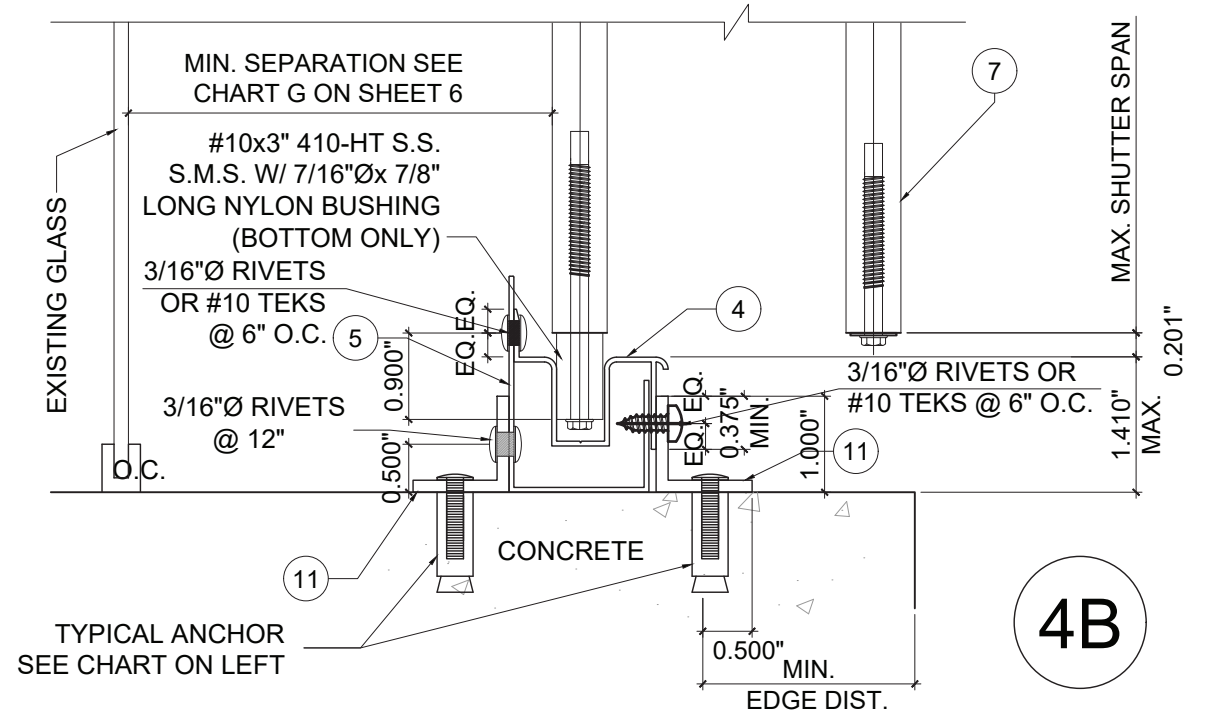
REVISIONS			
NO.	DATE	DESCRIPTION	
2	02.26.15	UPDATE TO 2014FBC	
3	04.23.2019	UPDATE TO 2017FBC	

MCY
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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM
 NCCL CORPORATION
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 HIALEAH GARDENS, FL 33016
 P: (305) 883 - 9940

DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO.	AD15-11
9 OF 16	

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART							DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART						
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 4B (BOTTOM)					MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 5B (BOTTOM)				
		CONCRETE	CONCRETE	CONCRETE	CONCRETE BLOCK	CONCRETE BLOCK			CONCRETE	CONCRETE	CONCRETE	CONCRETE BLOCK	CONCRETE BLOCK
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)			ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)
PSF	INCH	TYPE A/B	TYPE C/F	TYPE D/E	TYPE A1/B1/D1	TYPE E1	PSF	INCH	TYPE A/B	TYPE C/F	TYPE D/E	TYPE A1/B1/D1	TYPE E1
25	60	17.0	17.0	17.0	17.0	17.0	25	60	15.0	15.0	15.0	15.0	15.0
	78	17.0	17.0	17.0	17.0	17.0		78	15.0	15.0	15.0	15.0	15.0
	96	17.0	17.0	17.0	17.0	17.0		96	15.0	15.0	15.0	15.0	15.0
	114	17.0	17.0	17.0	16.7	14.6		114	15.0	15.0	15.0	15.0	15.0
	132	17.0	17.0	17.0	14.5	12.6		132	15.0	15.0	15.0	15.0	13.6
	150	17.0	17.0	17.0	12.7	11.1		150	15.0	15.0	15.0	14.4	12.0
	168	17.0	17.0	16.5	11.4	9.9		168	15.0	15.0	15.0	12.8	10.7
180	17.0	17.0	15.4	10.6	9.3	180	15.0	15.0	15.0	12.0	10.0		
40	60	17.0	17.0	17.0	17.0	17.0	40	60	15.0	15.0	15.0	15.0	15.0
	78	17.0	17.0	17.0	15.3	13.4		78	15.0	15.0	15.0	15.0	14.4
	96	17.0	17.0	17.0	12.4	10.9		96	15.0	15.0	15.0	14.0	11.7
	114	17.0	17.0	15.2	10.5	9.1		114	15.0	15.0	15.0	11.8	9.9
	132	15.3	17.0	13.1	9.0	7.9		132	15.0	15.0	14.2	10.2	8.5
	150	13.5	17.0	11.6	7.9	7.0		150	14.4	15.0	12.5	9.0	7.5
162	12.5	17.0	10.7	7.4	6.4	162	13.3	15.0	11.6	8.3	6.9		
50	60	17.0	17.0	17.0	15.9	13.9	50	60	15.0	15.0	15.0	15.0	15.0
	78	17.0	17.0	17.0	12.2	10.7		78	15.0	15.0	15.0	13.8	11.5
	96	16.8	17.0	14.4	9.9	8.7		96	15.0	15.0	15.0	11.2	9.4
	114	14.2	17.0	12.2	8.4	7.3		114	15.0	15.0	13.1	9.4	7.9
	132	12.2	17.0	10.5	7.2	6.3		132	13.1	15.0	11.3	8.2	6.8
153	10.6	15.5	9.1	6.2	5.5	153	11.3	15.0	9.8	7.0	5.9		
60	60	17.0	17.0	17.0	17.0	17.0	60	60	15.0	15.0	15.0	14.9	12.5
	78	17.0	17.0	17.0	15.2	14.6		78	15.0	15.0	15.0	11.5	9.6
	96	17.0	17.0	17.0	12.4	11.9		96	15.0	15.0	13.0	9.3	7.8
	120	17.0	17.0	15.8	9.9	9.5		120	12.0	15.0	10.4	7.5	6.3
144	15.7	17.0	13.1	8.3	7.9	144	10.0	15.0	8.7	6.2	5.2		
70	60	17.0	17.0	17.0	17.0	16.3	70	60	15.0	15.0	15.0	12.8	10.7
	78	17.0	17.0	17.0	13.1	12.6		78	15.0	15.0	13.7	9.9	8.2
	96	17.0	17.0	16.9	10.6	10.2		96	12.8	15.0	11.1	8.0	6.7
	114	17.0	17.0	14.2	8.9	8.6		114	10.8	15.0	9.4	6.7	5.6
135	14.4	17.0	12.0	7.5	7.3	135	9.1	13.8	7.9	5.7	4.8		
80	60	17.0	17.0	17.0	14.9	14.3	80	60	15.0	15.0	15.0	11.2	9.4
	78	17.0	17.0	17.0	11.4	11.0		78	13.8	15.0	12.0	8.6	7.2
	96	17.0	17.0	14.8	9.3	8.9		96	11.2	15.0	9.8	7.0	5.9
	120	14.1	17.0	11.8	7.4	7.1		120	9.0	13.6	7.8	5.6	4.7
90	60	17.0	17.0	17.0	13.2	12.7	90	60	15.0	15.0	13.9	10.0	8.3
	78	17.0	17.0	16.2	10.2	9.8		78	12.3	15.0	10.7	7.7	6.4
	96	15.7	17.0	13.1	8.3	7.9		96	10.0	15.0	8.7	6.2	5.2
	108	14.0	17.0	11.7	7.3	7.1		108	8.9	13.4	7.7	5.5	4.6
100	60	17.0	17.0	17.0	11.9	11.4	100	60	14.4	15.0	12.5	9.0	7.5
	72	17.0	17.0	15.8	9.9	9.5		72	12.0	15.0	10.4	7.5	6.3
	84	16.1	17.0	13.5	8.5	8.2		84	10.3	15.0	8.9	6.4	5.4
	96	14.1	17.0	11.8	7.4	7.1		96	9.0	13.6	7.8	5.6	4.7
120	48	17.0	17.0	17.0	12.4	11.9	120	48	15.0	15.0	13.0	9.3	7.8
	60	17.0	17.0	15.8	9.9	9.5		60	12.0	15.0	10.4	7.5	6.3
	72	15.7	17.0	13.1	8.3	7.9		72	10.0	15.0	8.7	6.2	5.2
	81	14.0	17.0	11.7	7.3	7.1		81	8.9	13.4	7.7	5.5	4.6
140	48	17.0	17.0	16.9	10.6	10.2	140	48	12.8	15.0	11.1	8.0	6.7
	60	16.1	17.0	13.5	8.5	8.2		60	10.3	15.0	8.9	6.4	5.4
	66	14.7	17.0	12.3	7.7	7.4		66	9.3	14.1	8.1	5.8	4.9
	72	13.5	17.0	11.3	7.1	6.8		72	8.6	13.0	7.4	5.3	4.5
160	48	17.0	17.0	14.8	9.3	8.9	160	48	11.2	15.0	9.8	7.0	5.9
	60	14.1	17.0	11.8	7.4	7.1		60	9.0	13.6	7.8	5.6	4.7
	66	12.8	17.0	10.7	6.8	6.5		66	8.2	12.4	7.1	5.1	4.3
180	48	15.7	17.0	13.1	8.3	7.9	180	48	10.0	15.0	8.7	6.2	5.2
	60	12.6	17.0	10.5	6.6	6.3		60	8.0	12.1	6.9	5.0	4.2
200	48	14.1	17.0	11.8	7.4	7.1	200	48	9.0	13.6	7.8	5.6	4.7
	57	11.9	16.4	10.0	6.3	6.0		57	7.6	11.5	6.6	4.7	3.9



REVISIONS			
NO.	DATE	DESCRIPTION	UPDATE TO
2	02.26.15		2014/FBC
3	04.23.2019		2017/FBC

MCY ENGINEERING, INC.
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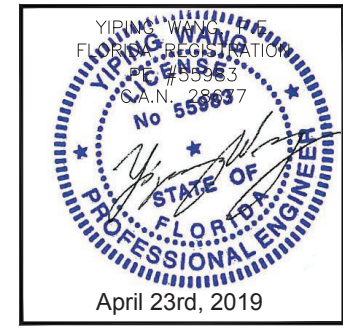
GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM

NCCL CORPORATION

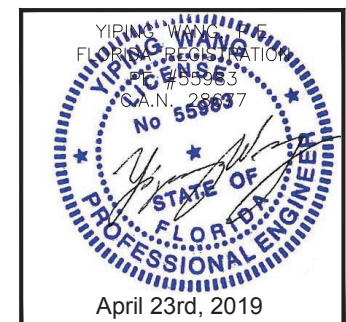
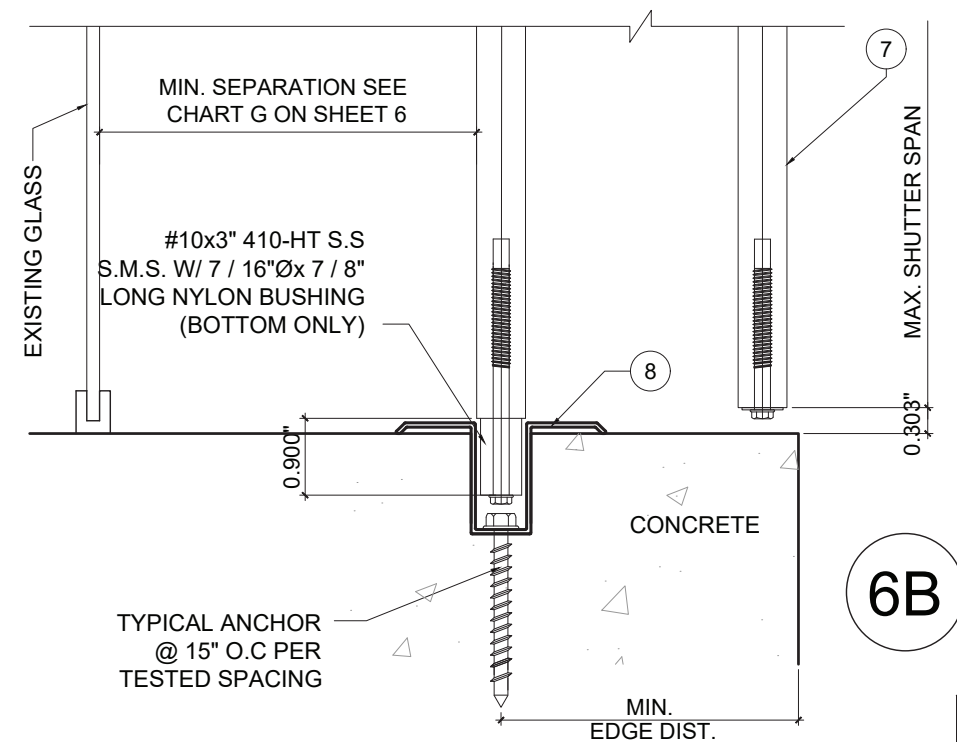
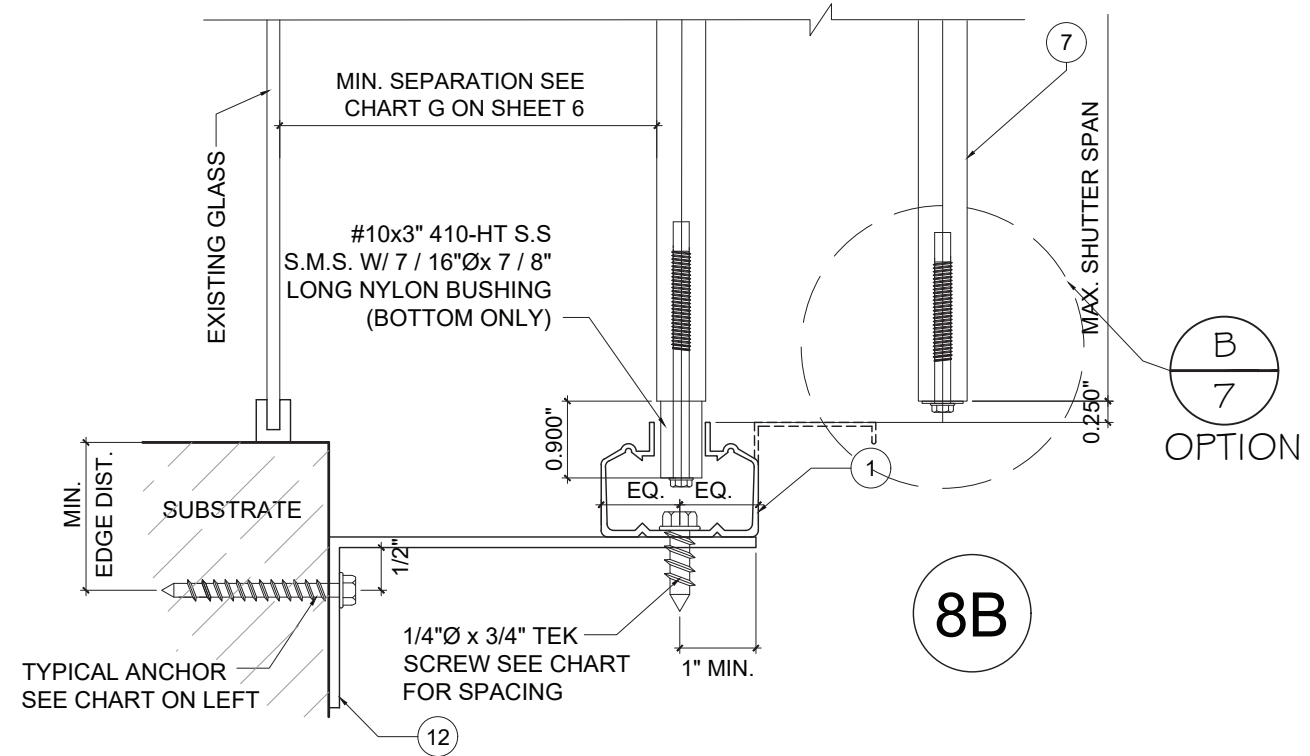
9960 NW 79 AVE.
HALEAH GARDENS, FL 33016
P: (305) 883 - 9940

FL#17552

DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO.	AD15-11
10 OF 16	



DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART							
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 8B (BOTTOM)					
		CONCRETE	CONCRETE	WOOD	CONCRETE BLOCK	CONCRETE BLOCK	ALUM. 6063-T6
		ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)	ANCHOR SPACING (in.)
PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1	1/4" TEKS
25	60	9.0	9.0	9.0	9.0	9.0	9.0
	78	9.0	9.0	9.0	9.0	9.0	9.0
	96	9.0	9.0	9.0	9.0	9.0	9.0
	114	9.0	9.0	9.0	8.3	9.0	9.0
	120	9.0	9.0	9.0	7.9	9.0	9.0
	150	9.0	9.0	9.0	6.3	9.0	9.0
	168	9.0	9.0	9.0	5.6	9.0	9.0
40	60	9.0	9.0	9.0	9.0	9.0	9.0
	78	9.0	9.0	9.0	7.6	9.0	9.0
	96	9.0	9.0	9.0	6.1	9.0	9.0
	114	9.0	9.0	9.0	5.2	9.0	9.0
	120	9.0	9.0	9.0	4.9	8.5	9.0
	150	9.0	8.7	9.0	3.9	6.8	9.0
	162	9.0	8.1	9.0	3.6	6.3	9.0
50	60	9.0	9.0	9.0	7.9	9.0	9.0
	78	9.0	9.0	9.0	6.0	9.0	9.0
	96	9.0	9.0	9.0	4.9	8.5	9.0
	114	9.0	9.0	9.0	4.1	7.2	9.0
	132	9.0	7.9	9.0	3.6	6.2	8.8
60	60	9.0	9.0	9.0	6.5	9.0	9.0
	78	9.0	9.0	9.0	5.0	8.8	9.0
	96	9.0	9.0	9.0	4.1	7.1	9.0
	120	9.0	7.3	9.0	3.3	5.7	8.1
	144	8.2	6.1	9.0	-	4.7	6.8
70	60	9.0	9.0	9.0	5.6	9.0	9.0
	78	9.0	9.0	9.0	4.3	7.5	9.0
	96	9.0	7.8	9.0	3.5	6.1	8.7
	114	8.9	6.6	9.0	-	5.1	7.3
	135	7.5	5.5	8.9	-	4.3	6.2
80	60	9.0	9.0	9.0	4.9	8.5	9.0
	78	9.0	8.4	9.0	3.8	6.6	9.0
	96	9.0	6.8	9.0	3.1	5.3	7.6
	120	7.4	5.4	8.8	-	4.3	6.1
90	60	9.0	9.0	9.0	4.4	7.6	9.0
	78	9.0	7.4	9.0	3.4	5.8	8.3
	96	8.2	6.1	9.0	-	4.7	6.8
	108	7.3	5.4	8.6	-	4.2	6.0
100	60	9.0	8.7	9.0	3.9	6.8	9.0
	72	9.0	7.3	9.0	3.3	5.7	8.1
	84	8.4	6.2	9.0	-	4.9	6.9
	96	7.4	5.4	8.8	-	4.3	6.1
120	48	9.0	9.0	9.0	4.1	7.1	9.0
	60	9.0	7.3	9.0	3.3	5.7	8.1
	72	8.2	6.1	9.0	-	4.7	6.8
	81	7.3	5.4	8.6	-	4.2	6.0
140	48	9.0	7.8	9.0	3.5	6.1	8.7
	60	8.4	6.2	9.0	-	4.9	6.9
	66	7.7	5.7	9.0	-	4.4	6.3
	72	7.0	5.2	8.3	-	4.1	5.8
160	48	9.0	6.8	9.0	3.1	5.3	7.6
	60	7.4	5.4	8.8	-	4.3	6.1
	66	6.7	5.0	8.0	-	3.9	5.5
180	48	8.2	6.1	9.0	-	4.7	6.8
	60	6.6	4.8	7.8	-	3.8	5.4
200	48	7.4	5.4	8.8	-	4.3	6.1
	57	6.2	4.6	7.4	-	3.6	5.1



NO.	DATE	DESCRIPTION
2	02.26.15	UPDATE TO 2014FBC
3	04.23.2019	UPDATE TO 2017FBC

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM

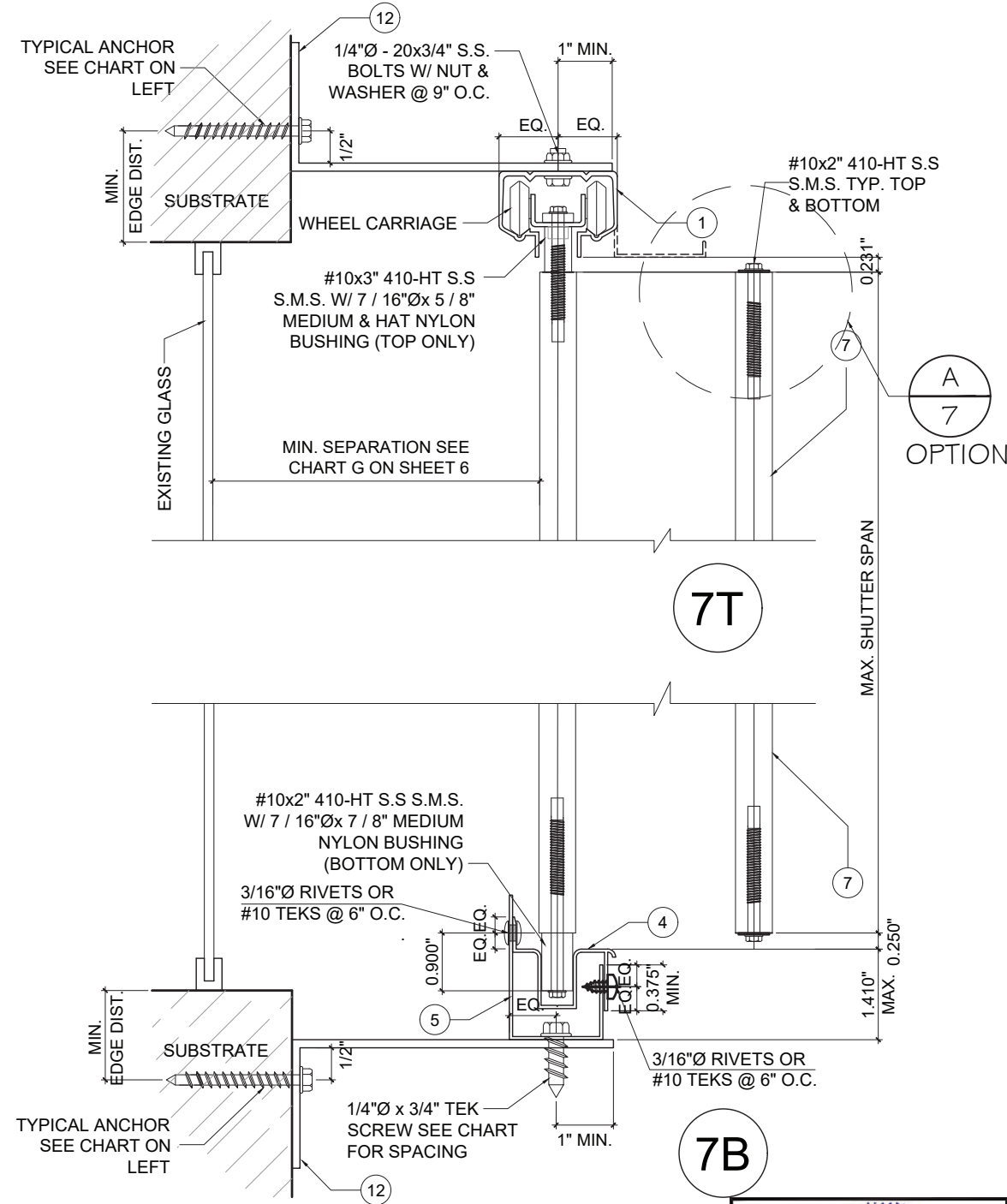
NCCL CORPORATION

9960 NW 79 AVE.
HALEAH GARDENS, FL. 33016

P: (305) 883 - 9940

FL#17552
DATE: 4.23.2019
SCALE: AS NOTED
DRAWN: A.O.
PROJECT: MCY 15-020
DRAWING NO. AD15-11
11 OF 16

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART								DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART											
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 7T (TOP)						MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 7B (BOTTOM)									
		CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	WOOD ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRET E BLOCK ANCHOR SPACING (in.)	ALUM. 6063-T6 ANCHOR SPACING (in.)			CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	WOOD ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	ALUM. 6063-T6 ANCHOR SPACING (in.)				
PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2 /G	TYPE A1/B1/D1 /E1	TYPE C1/F1	1/4" TEKS	PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2 /G	TYPE A1/B1/D1 /E1	TYPE C1/F1	1/4" TEKS				
25	60	9.0	9.0	9.0	9.0	9.0	9.0	25	60	9.0	9.0	9.0	9.0	9.0	9.0				
	78	9.0	9.0	9.0	9.0	9.0	9.0		78	9.0	9.0	9.0	9.0	9.0	9.0				
	96	9.0	9.0	9.0	9.0	9.0	9.0		96	9.0	9.0	9.0	9.0	9.0	9.0				
	114	9.0	9.0	9.0	9.0	9.0	9.0		114	9.0	9.0	9.0	7.9	9.0	9.0				
	120	9.0	9.0	9.0	9.0	8.9	9.0		120	9.0	9.0	9.0	7.5	9.0	9.0				
	150	9.0	9.0	9.0	9.0	7.1	9.0		150	9.0	9.0	9.0	6.0	9.0	9.0				
	168	9.0	9.0	9.0	9.0	6.4	9.0		168	9.0	9.0	9.0	5.3	9.0	9.0				
40	60	9.0	9.0	9.0	9.0	9.0	9.0	40	60	9.0	9.0	9.0	9.0	9.0	9.0				
	78	9.0	9.0	9.0	8.6	9.0	9.0		78	9.0	9.0	9.0	7.2	9.0	9.0				
	96	9.0	9.0	9.0	7.0	9.0	9.0		96	9.0	9.0	9.0	5.8	9.0	9.0				
	114	9.0	9.0	9.0	5.9	9.0	9.0		114	9.0	9.0	9.0	4.9	8.5	9.0				
	120	9.0	9.0	9.0	5.6	9.0	9.0		120	9.0	9.0	9.0	4.7	8.1	9.0				
	150	9.0	9.0	9.0	4.5	7.7	9.0		150	9.0	8.3	9.0	3.7	6.5	7.8				
	162	9.0	9.0	9.0	4.1	7.2	9.0		162	9.0	7.7	9.0	3.5	6.0	7.2				
50	60	9.0	9.0	9.0	8.9	9.0	9.0	50	60	9.0	9.0	9.0	7.5	9.0	9.0				
	78	9.0	9.0	9.0	6.9	9.0	9.0		78	9.0	9.0	9.0	5.8	9.0	9.0				
	96	9.0	9.0	9.0	5.6	9.0	9.0		96	9.0	9.0	9.0	4.7	8.1	9.0				
	114	9.0	9.0	9.0	4.7	8.2	9.0		114	9.0	8.7	9.0	3.9	6.8	8.2				
	132	9.0	9.0	9.0	4.1	7.0	9.0		132	9.0	7.5	9.0	3.4	5.9	7.1				
	153	9.0	7.8	9.0	3.5	6.1	9.0		153	8.8	6.5	9.0	-	5.1	6.1				
	60	60	9.0	9.0	9.0	7.4	9.0		9.0	60	60	9.0	9.0	9.0	6.2	9.0	9.0		
78		9.0	9.0	9.0	5.7	9.0	9.0	78	9.0		9.0	9.0	4.8	8.3	9.0				
96		9.0	9.0	9.0	4.6	8.1	9.0	96	9.0		8.6	9.0	3.9	6.8	8.2				
120		9.0	8.2	9.0	3.7	6.5	9.0	120	9.0		6.9	9.0	3.1	5.4	6.5				
144		9.0	6.9	9.0	3.1	5.4	9.0	144	7.8		5.8	9.0	-	4.5	5.4				
70		60	9.0	9.0	9.0	6.4	9.0	9.0	70		60	9.0	9.0	9.0	5.3	9.0	9.0		
		78	9.0	9.0	9.0	4.9	8.5	9.0			78	9.0	9.0	9.0	4.1	7.1	8.6		
	96	9.0	8.8	9.0	4.0	6.9	9.0	96		9.0	7.4	9.0	3.3	5.8	7.0				
	114	9.0	7.4	9.0	3.4	5.8	9.0	114		8.5	6.2	9.0	-	4.9	5.9				
	135	8.5	6.3	9.0	-	4.9	9.0	135		7.1	5.3	8.5	-	4.1	5.0				
	80	60	9.0	9.0	9.0	5.6	9.0	9.0		80	60	9.0	9.0	9.0	4.7	8.1	9.0		
		78	9.0	9.0	9.0	4.3	7.5	9.0			78	9.0	8.0	9.0	3.6	6.2	7.5		
96		9.0	7.7	9.0	3.5	6.1	9.0	96	8.8		6.5	9.0	-	5.1	6.1				
120		8.4	6.2	9.0	-	4.8	9.0	120	7.0		5.2	8.3	-	4.1	4.9				
90		60	9.0	9.0	9.0	5.0	8.6	9.0	90		60	9.0	9.0	9.0	4.2	7.2	8.7		
		78	9.0	8.5	9.0	3.8	6.6	9.0			78	9.0	7.1	9.0	3.2	5.6	6.7		
		96	9.0	6.9	9.0	3.1	5.4	9.0			96	7.8	5.8	9.0	-	4.5	5.4		
	108	8.3	6.1	9.0	-	4.8	9.0	108		6.9	5.1	8.2	-	4.0	4.8				
	100	60	9.0	9.0	9.0	4.5	7.7	9.0		100	60	9.0	8.3	9.0	3.7	6.5	7.8		
		72	9.0	8.2	9.0	3.7	6.5	9.0			72	9.0	6.9	9.0	3.1	5.4	6.5		
		84	9.0	7.1	9.0	3.2	5.5	9.0			84	8.0	5.9	9.0	-	4.6	5.6		
96		8.4	6.2	9.0	-	4.8	9.0	96	7.0		5.2	8.3	-	4.1	4.9				
120		48	9.0	9.0	9.0	4.6	8.1	9.0	120		48	9.0	8.6	9.0	3.9	6.8	8.2		
		60	9.0	8.2	9.0	3.7	6.5	9.0			60	9.0	6.9	9.0	3.1	5.4	6.5		
		72	9.0	6.9	9.0	3.1	5.4	9.0			72	7.8	5.8	9.0	-	4.5	5.4		
	81	8.3	6.1	9.0	-	4.8	9.0	81		6.9	5.1	8.2	-	4.0	4.8				
	140	48	9.0	8.8	9.0	4.0	6.9	9.0		140	48	9.0	7.4	9.0	3.3	5.8	7.0		
		60	9.0	7.1	9.0	3.2	5.5	9.0			60	8.0	5.9	9.0	-	4.6	5.6		
		66	8.7	6.4	9.0	-	5.0	9.0			66	7.3	5.4	8.7	-	4.2	5.1		
72		8.0	5.9	9.0	-	4.6	9.0	72	6.7		4.9	7.9	-	3.9	4.7				
160		48	9.0	7.7	9.0	3.5	6.1	9.0	160		48	8.8	6.5	9.0	-	5.1	6.1		
		60	8.4	6.2	9.0	-	4.8	9.0			60	7.0	5.2	8.3	-	4.1	4.9		
		66	7.6	5.6	9.0	-	4.4	9.0			66	6.4	4.7	7.6	-	3.7	4.4		
	180	48	9.0	6.9	9.0	3.1	5.4	9.0		180	48	7.8	5.8	9.0	-	4.5	5.4		
		60	7.4	5.5	8.8	-	4.3	9.0			60	6.2	4.6	7.4	-	3.6	4.3		
		200	48	8.4	6.2	9.0	-	4.8			9.0	200	48	7.0	5.2	8.3	-	4.1	4.9
			57	7.1	5.2	8.4	-	4.1			9.0		57	5.9	4.4	7.0	-	3.4	4.1



REVISIONS			
NO.	DATE	DESCRIPTION	BY
2	02.26.15	UPDATE TO 2014FBC	
3	04.23.2019	UPDATE TO 2017FBC	

MCY

MCY ENGINEERING, INC.
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NCCL CORPORATION

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FL#17552

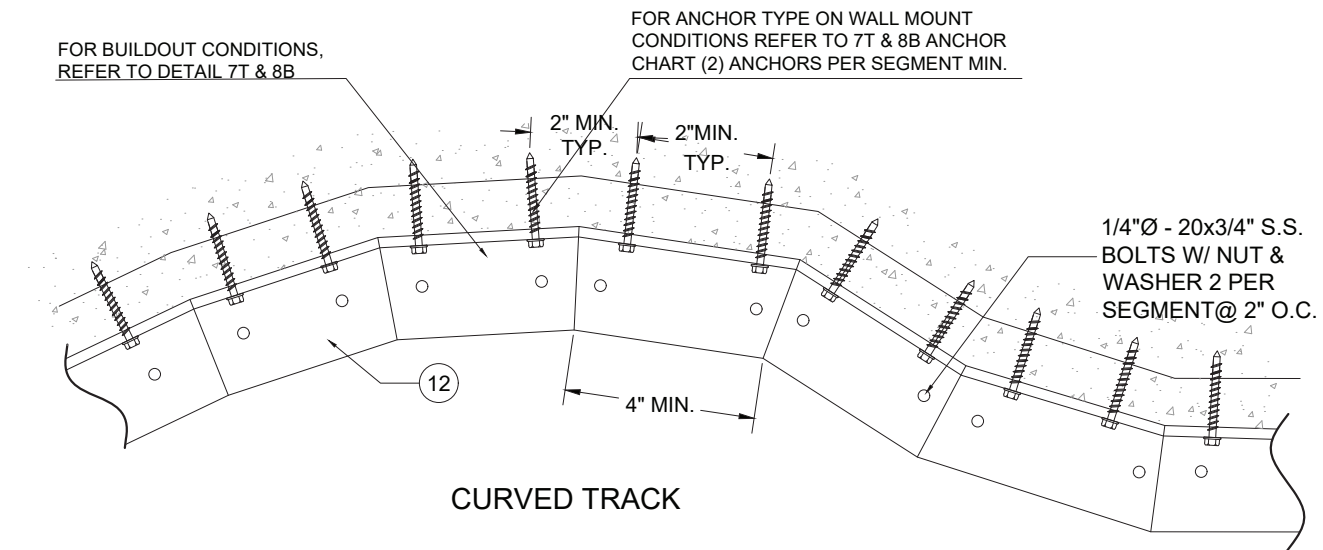
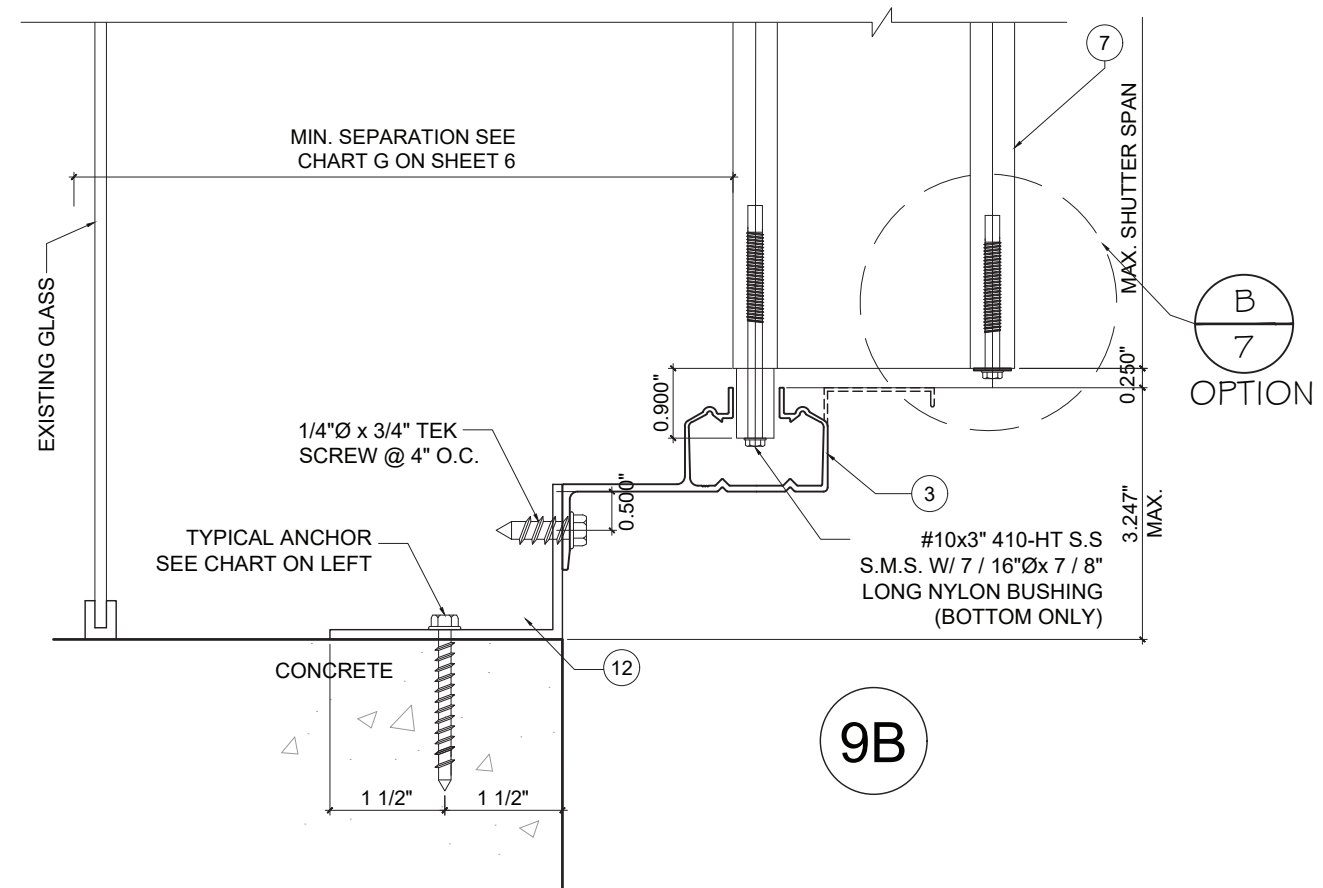
DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020

DRAWING NO.
AD15-11

12 OF 16

YIP WANG WANG
FLORIDA REGISTERED PROFESSIONAL ENGINEER
No. 55983
April 23rd, 2019

DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART									
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 9B (BOTTOM)							
		CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)
PSF	INCH	TYPE A	TYPE C	TYPE D	TYPE E/F	TYPE A1	TYPE E1/F1	TYPE C1	TYPE D1
25	60	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	78	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	96	6.5	6.5	6.5	6.5	6.1	6.1	6.5	6.5
	114	6.5	6.5	6.5	6.5	5.1	5.1	6.5	6.5
	132	6.5	6.5	6.5	6.5	4.4	4.4	6.3	6.1
	150	6.5	6.5	6.5	6.5	3.9	3.9	5.6	5.3
	168	6.5	6.5	6.5	6.5	5.8	3.5	3.5	5.0
180	6.5	6.5	6.5	6.5	5.4	3.2	3.3	4.6	4.4
40	60	6.5	6.5	6.5	6.5	6.1	6.1	6.5	6.5
	78	6.5	6.5	6.5	6.5	4.7	4.7	6.5	6.4
	96	6.5	6.5	6.5	6.3	3.8	3.8	5.4	5.2
	114	6.5	6.5	6.5	5.3	3.2	3.2	4.6	4.4
	132	6.0	6.4	6.5	4.6	-	-	4.0	3.8
	150	5.3	5.6	6.5	4.0	-	-	3.5	3.3
	162	4.9	5.2	6.0	3.7	-	-	3.2	3.1
50	60	6.5	6.5	6.5	6.5	4.9	4.9	6.5	6.5
	78	6.5	6.5	6.5	6.2	3.7	3.8	5.4	5.1
	96	6.5	6.5	6.5	5.1	3.0	3.0	4.4	4.2
	114	5.6	5.9	6.5	4.3	-	-	3.7	3.5
	132	4.8	5.1	5.9	3.7	-	-	3.2	3.0
	153	4.2	4.4	5.1	3.2	-	-	-	-
60	60	6.5	6.5	6.5	6.5	4.1	4.1	5.8	5.5
	78	6.5	6.5	6.5	5.2	3.1	3.1	4.5	4.3
	96	5.5	5.8	6.5	4.2	-	-	3.6	3.5
	120	4.4	4.7	5.4	3.4	-	-	-	-
	144	3.7	3.9	4.5	-	-	-	-	-
70	60	6.5	6.5	6.5	5.8	3.5	3.5	5.0	4.8
	78	5.8	6.2	6.5	4.4	-	-	3.8	3.7
	96	4.8	5.0	5.8	3.6	-	-	3.1	-
	114	4.0	4.2	4.9	3.0	-	-	-	-
135	3.4	3.6	4.1	-	-	-	-	-	
80	60	6.5	6.5	6.5	5.1	3.0	3.0	4.4	4.2
	78	5.1	5.4	6.3	3.9	-	-	3.3	3.2
	96	4.2	4.4	5.1	3.2	-	-	-	-
	120	3.3	3.5	4.1	-	-	-	-	-
90	60	5.9	6.2	6.5	4.5	-	-	3.9	3.7
	78	4.5	4.8	5.6	3.5	-	-	-	-
	96	3.7	3.9	4.5	-	-	-	-	-
	108	3.3	3.5	4.0	-	-	-	-	-
100	60	5.3	5.6	6.5	4.0	-	-	3.5	3.3
	72	4.4	4.7	5.4	3.4	-	-	-	-
	84	3.8	4.0	4.6	-	-	-	-	-
	96	3.3	3.5	4.1	-	-	-	-	-
120	48	5.5	5.8	6.5	4.2	-	-	3.6	3.5
	60	4.4	4.7	5.4	3.4	-	-	-	-
	72	3.7	3.9	4.5	-	-	-	-	-
	81	3.3	3.5	4.0	-	-	-	-	-
140	48	4.8	5.0	5.8	3.6	-	-	3.1	-
	60	3.8	4.0	4.6	-	-	-	-	-
	66	3.5	3.6	4.2	-	-	-	-	-
	72	3.2	3.3	3.9	-	-	-	-	-
160	48	4.2	4.4	5.1	3.2	-	-	-	-
	60	3.3	3.5	4.1	-	-	-	-	-
	66	3.0	3.2	3.7	-	-	-	-	-
180	48	3.7	3.9	4.5	-	-	-	-	-
	60	-	3.1	3.6	-	-	-	-	-
200	48	3.3	3.5	4.1	-	-	-	-	-
	57	-	-	3.4	-	-	-	-	-



YIPING WANG
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 REGISTRATION NO. 55983
 No. 55983
 April 23rd, 2019

REVISIONS	
NO.	DESCRIPTION
2	02.26.15 UPDATE TO 2014FBC
3	04.23.2019 UPDATE TO 2017FBC

MCY ENGINEERING, INC.
 GLAZING CONSULTANTS

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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM
 NCCL CORPORATION
 9960 NW 79 AVE.
 HIALEAH GARDENS, FL. 33016
 P: (305) 883 - 9940

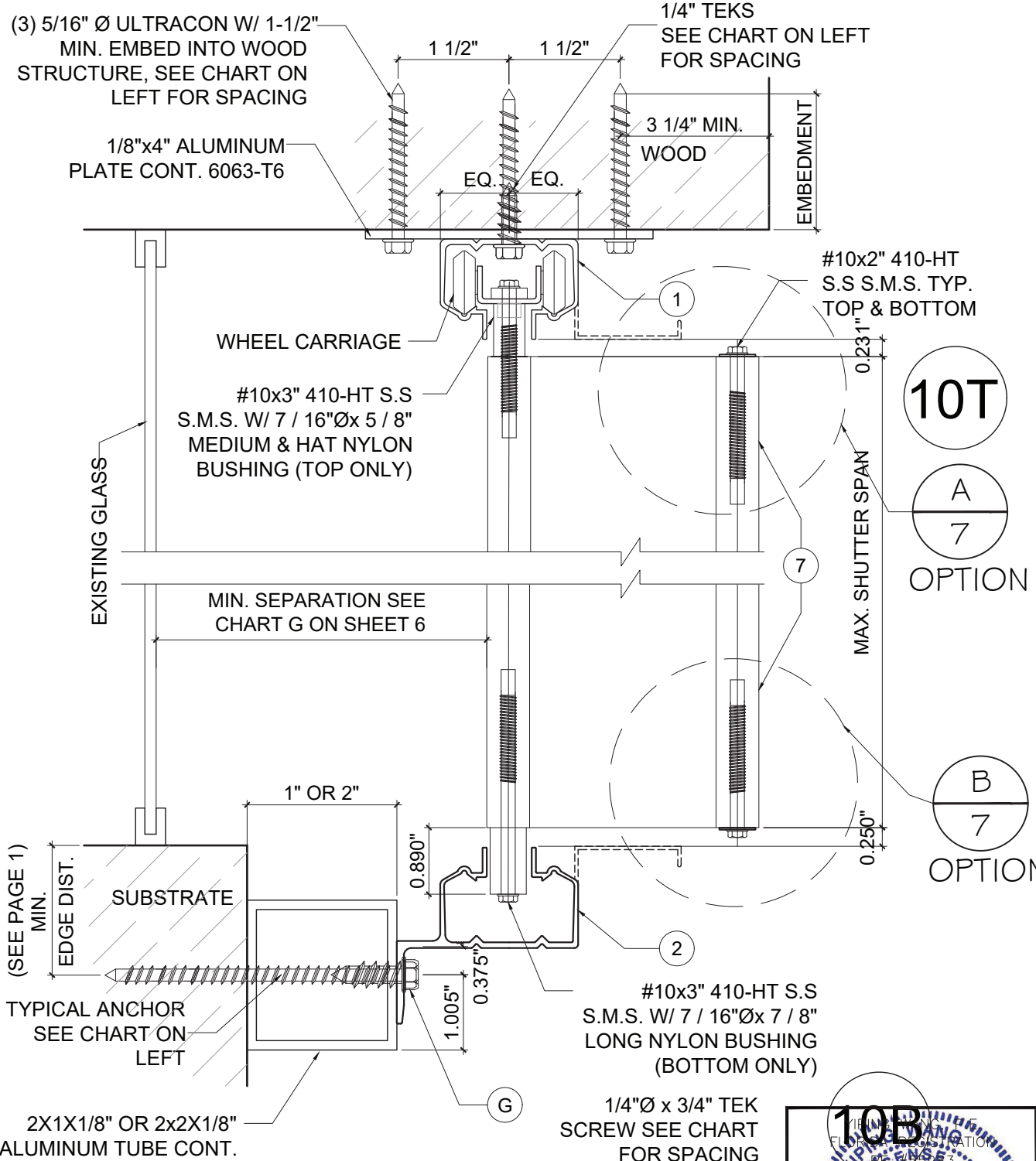
FL#17552

DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020

DRAWING NO.
 AD15-11

13 OF 16

DESIGN LOAD VS SPAN AND ANCHOR SPACING				DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART								
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 10T (TOP)		MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 10B (BOTTOM)						
		WOOD ANCHOR SPACING (in.)	ALUM. 6063-T6 ANCHOR SPACING (in.)			CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	WOOD STRUCTURE ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	ALUM. 6063-T6 ANCHOR SPACING (in.)	
PSF	INCH	5/16" ULTRACON	1/4" TEKS	PSF	INCH	TYPE A/B/C/F	TYPE E	TYPE A2/D2/E2/G	TYPE A1/B1/D1/E1	TYPE C1/F1	1/4" TEKS	
25	60	17.0	12.0	25	60	9.0	9.0	9.0	9.0	9.0	9.0	
	78	17.0	12.0		78	9.0	9.0	9.0	9.0	9.0	9.0	9.0
	96	17.0	12.0		96	9.0	9.0	9.0	9.0	9.0	9.0	9.0
	114	17.0	12.0		114	9.0	9.0	9.0	7.6	9.0	9.0	9.0
	120	17.0	12.0		120	9.0	9.0	9.0	7.2	9.0	9.0	9.0
	150	17.0	12.0		150	9.0	9.0	9.0	5.8	9.0	9.0	7.8
	168	17.0	12.0		168	9.0	9.0	9.0	5.2	8.9	9.0	6.9
40	60	17.0	12.0	40	60	9.0	9.0	9.0	9.0	9.0	9.0	
	78	17.0	12.0		78	9.0	9.0	9.0	6.9	9.0	9.0	9.0
	96	17.0	12.0		96	9.0	9.0	9.0	5.6	9.0	9.0	7.6
	114	17.0	12.0		114	9.0	9.0	9.0	4.7	8.2	9.0	6.4
	120	17.0	12.0		120	9.0	9.0	9.0	4.5	7.8	9.0	6.1
	150	17.0	12.0		150	9.0	8.0	9.0	3.6	6.3	9.0	4.8
	162	17.0	12.0		162	9.0	7.4	9.0	3.3	5.8	9.0	4.5
50	60	17.0	12.0	50	60	9.0	9.0	9.0	7.2	9.0	9.0	
	78	17.0	12.0		78	9.0	9.0	9.0	5.5	9.0	9.0	7.5
	96	17.0	12.0		96	9.0	9.0	9.0	4.5	7.8	9.0	6.1
	114	17.0	12.0		114	9.0	8.4	9.0	3.8	6.6	9.0	5.1
	132	17.0	12.0		132	9.0	7.3	9.0	3.3	5.7	9.0	4.4
	153	17.0	10.5		153	8.5	6.3	9.0	-	4.9	9.0	3.8
60	60	17.0	12.0	60	60	9.0	9.0	9.0	6.0	9.0	8.1	
	78	17.0	12.0		78	9.0	9.0	9.0	4.6	8.0	9.0	6.2
	96	17.0	12.0		96	9.0	8.3	9.0	3.8	6.5	9.0	5.0
	120	17.0	11.1		120	9.0	6.7	9.0	3.0	5.2	9.0	4.0
	144	17.0	9.4		144	7.5	5.6	8.9	-	4.3	9.0	3.4
70	60	17.0	12.0	70	60	9.0	9.0	9.0	5.2	8.9	6.9	
	78	17.0	12.0		78	9.0	8.8	9.0	4.0	6.9	9.0	5.3
	96	17.0	11.9		96	9.0	7.1	9.0	3.2	5.6	9.0	4.3
	114	17.0	10.1		114	8.1	6.0	9.0	-	4.7	9.0	3.6
	135	16.1	8.6		135	6.9	5.1	8.2	-	4.0	9.0	3.1
80	60	17.0	12.0	80	60	9.0	9.0	9.0	4.5	7.8	6.1	
	78	17.0	12.0		78	9.0	7.7	9.0	3.5	6.0	9.0	4.7
	96	17.0	10.5		96	8.5	6.2	9.0	-	4.9	9.0	3.8
	120	15.8	8.5		120	6.8	5.0	8.0	-	3.9	9.0	3.0
90	60	17.0	12.0	90	60	9.0	8.9	9.0	4.0	7.0	5.4	
	78	17.0	11.4		78	9.0	6.8	9.0	3.1	5.4	9.0	4.1
	96	17.0	9.4		96	7.5	5.6	8.9	-	4.3	9.0	3.4
	108	15.7	8.4		108	6.7	4.9	7.9	-	3.9	9.0	3.0
100	60	17.0	12.0	100	60	9.0	8.0	9.0	3.6	6.3	4.8	
	72	17.0	11.1		72	9.0	6.7	9.0	3.0	5.2	9.0	4.0
	84	17.0	9.6		84	7.7	5.7	9.0	-	4.5	9.0	3.5
	96	15.8	8.5		96	6.8	5.0	8.0	-	3.9	9.0	3.0
120	48	17.0	12.0	120	48	9.0	8.3	9.0	3.8	6.5	5.0	
	60	17.0	11.1		60	9.0	6.7	9.0	3.0	5.2	9.0	4.0
	72	17.0	9.4		72	7.5	5.6	8.9	-	4.3	9.0	3.4
	81	15.7	8.4		81	6.7	4.9	7.9	-	3.9	9.0	3.0
140	48	17.0	11.9	140	48	9.0	7.1	9.0	3.2	5.6	4.3	
	60	17.0	9.6		60	7.7	5.7	9.0	-	4.5	9.0	3.5
	66	16.4	8.8		66	7.0	5.2	8.3	-	4.1	9.0	3.1
	72	15.1	8.1		72	6.5	4.8	7.7	-	3.7	9.0	-
160	48	17.0	10.5	160	48	8.5	6.2	9.0	-	4.9	3.8	
	60	15.8	8.5		60	6.8	5.0	8.0	-	3.9	3.0	-
	66	14.4	7.8		66	6.2	4.5	7.3	-	3.6	-	-
180	48	17.0	9.4	180	48	7.5	5.6	8.9	-	4.3	3.4	
	60	14.1	7.6		60	6.0	4.4	7.1	-	3.5	-	-
200	48	15.8	8.5	200	48	6.8	5.0	8.0	-	3.9	3.0	
	57	13.4	7.2		57	5.7	4.2	6.8	-	3.3	-	-



REVISIONS			
NO.	DATE	DESCRIPTION	
2	02.26.15	UPDATE TO 2014FBC	
3	04.23.2019	UPDATE TO 2017FBC	

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

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GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM

NCCL CORPORATION
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HALEAH GARDENS, FL. 33016
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FL#17552

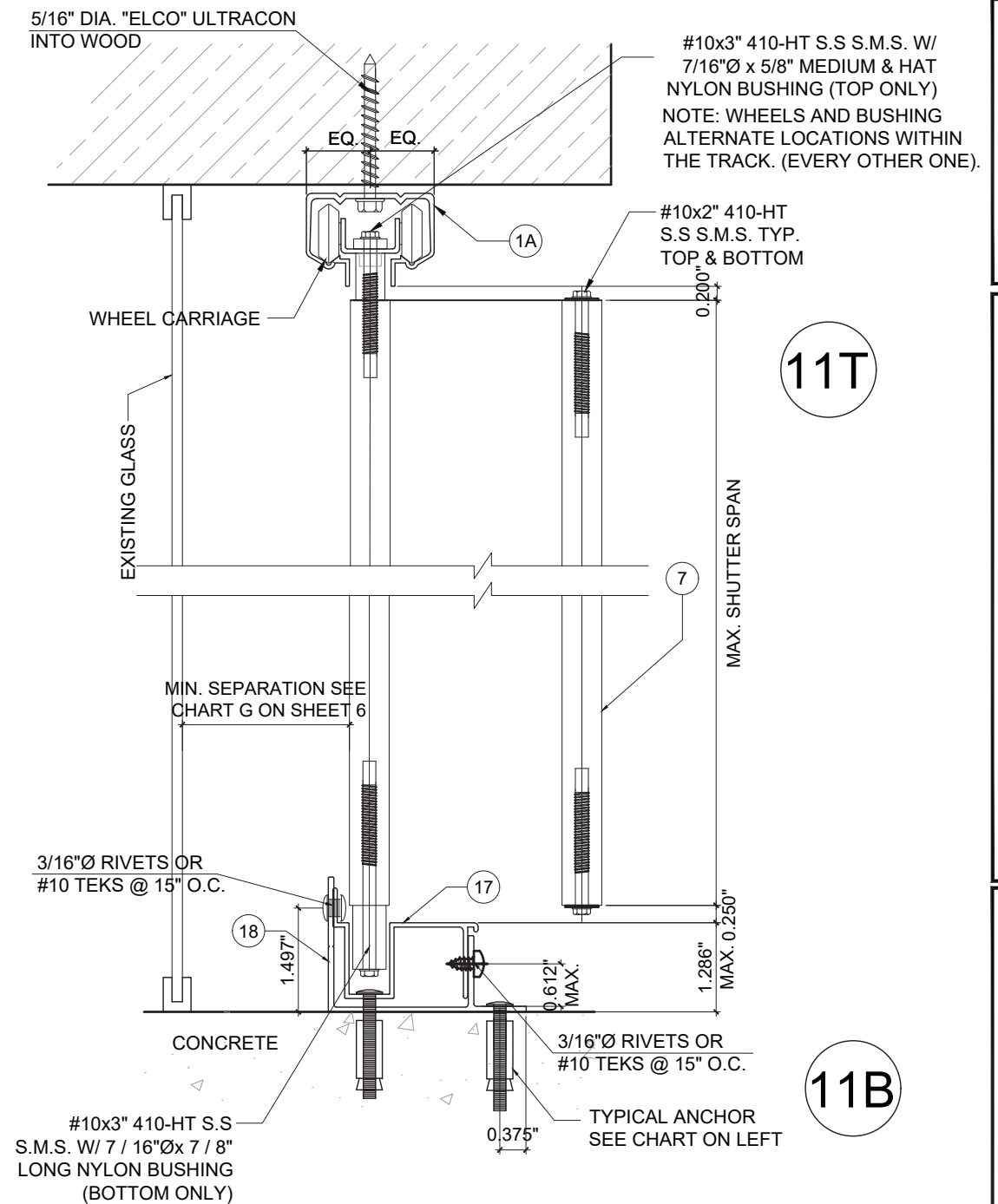
DATE	4.23.2019
SCALE	AS NOTED
DRAWN	A.O.
PROJECT	MCY 15-020
DRAWING NO.	AD15-11
14 OF 16	

10B

Professional Engineer
No. 55983
STATE OF FLORIDA
APR 23 2019

April 23rd, 2019

DESIGN LOAD VS SPAN AND ANCHOR SPACING			DESIGN LOAD VS SPAN AND ANCHOR SPACING CHART						
MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 11T (TOP)	MAX. DESIGN LOAD	SHUTTER SPAN	DETAIL 11B (BOTTOM)				
		WOOD ANCHOR SPACING (in.)			CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	CONCRETE ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)	CONCRETE BLOCK ANCHOR SPACING (in.)
PSF	INCH	5/16" ULTRACON	PSF	INCH	TYPE A/B	TYPE C/F	TYPE D/E	TYPE A1/B1/D1	TYPE E1
25	60	24.0	25	60	12.0	12.0	12.0	12.0	12.0
	78	24.0		78	12.0	12.0	12.0	12.0	12.0
	96	24.0		96	12.0	12.0	12.0	12.0	12.0
	114	23.9		114	12.0	12.0	12.0	12.0	12.0
	132	20.6		132	12.0	12.0	12.0	12.0	12.0
	150	18.2		150	12.0	12.0	12.0	12.0	11.8
	168	16.2		168	12.0	12.0	12.0	12.0	10.5
180	15.1	180	12.0	12.0	12.0	12.0	11.6	9.8	
40	60	24.0	40	60	12.0	12.0	12.0	12.0	12.0
	78	22.2		78	12.0	12.0	12.0	12.0	12.0
	96	18.0		96	12.0	12.0	12.0	12.0	11.5
	114	15.2		114	12.0	12.0	12.0	11.4	9.7
	132	13.1		132	12.0	12.0	12.0	9.9	8.3
	150	11.5		150	12.0	12.0	12.0	8.7	7.3
	162	10.7		162	12.0	12.0	11.3	8.0	6.8
50	60	23.2	50	60	12.0	12.0	12.0	12.0	12.0
	78	17.9		78	12.0	12.0	12.0	12.0	11.3
	96	14.5		96	12.0	12.0	12.0	10.8	9.2
	114	12.2		114	12.0	12.0	12.0	9.1	7.7
	132	10.6		132	12.0	12.0	11.1	7.9	6.7
	153	9.1		153	11.1	12.0	9.6	6.8	5.8
60	60	19.4	60	60	12.0	12.0	12.0	12.0	12.0
	78	14.9		78	12.0	12.0	12.0	12.0	12.0
	96	12.1		96	12.0	12.0	12.0	12.0	12.0
	120	9.7		120	12.0	12.0	12.0	11.3	10.4
	144	8.1		144	12.0	12.0	12.0	9.4	8.7
70	60	16.7	70	60	12.0	12.0	12.0	12.0	12.0
	78	12.8		78	12.0	12.0	12.0	12.0	12.0
	96	10.4		96	12.0	12.0	12.0	12.0	11.2
	114	8.8		114	12.0	12.0	12.0	10.2	9.4
	135	7.4		135	12.0	12.0	12.0	8.6	8.0
80	60	14.6	80	60	12.0	12.0	12.0	12.0	12.0
	78	11.3		78	12.0	12.0	12.0	12.0	12.0
	96	9.1		96	12.0	12.0	12.0	10.6	9.8
	120	7.3		120	12.0	12.0	12.0	8.5	7.8
90	60	13.0	90	60	12.0	12.0	12.0	12.0	12.0
	78	10.0		78	12.0	12.0	12.0	11.6	10.7
	96	8.1		96	12.0	12.0	12.0	9.4	8.7
	108	7.2		108	12.0	12.0	12.0	8.4	7.7
100	60	11.7	100	60	12.0	12.0	12.0	12.0	12.0
	72	9.8		72	12.0	12.0	12.0	11.3	10.4
	84	8.4		84	12.0	12.0	12.0	9.7	8.9
	96	7.3		96	12.0	12.0	12.0	8.5	7.8
120	48	12.3	120	48	12.0	12.0	12.0	12.0	12.0
	60	9.8		60	12.0	12.0	12.0	11.3	10.4
	72	8.2		72	12.0	12.0	12.0	9.4	8.7
	81	7.3		81	12.0	12.0	12.0	8.4	7.7
140	48	10.5	140	48	12.0	12.0	12.0	12.0	11.2
	60	8.4		60	12.0	12.0	12.0	9.7	8.9
	66	7.7		66	12.0	12.0	12.0	8.8	8.1
	72	7.0		72	12.0	12.0	12.0	8.1	7.5
160	48	9.2	160	48	12.0	12.0	12.0	10.6	9.8
	60	7.4		60	12.0	12.0	12.0	8.5	7.8
	66	6.7		66	12.0	12.0	11.8	7.7	7.1
180	48	8.2	180	48	12.0	12.0	12.0	9.4	8.7
	60	6.6		60	12.0	12.0	11.5	7.5	7.0
200	48	7.4	200	48	12.0	12.0	12.0	8.5	7.8
	57	6.2		57	12.0	12.0	10.9	7.1	6.6



REVISIONS			
NO.	DATE	DESCRIPTION	
2	02.26.15	UPDATE TO 2014FBC	
3	04.23.2019	UPDATE TO 2017FBC	

MCY ENGINEERING, INC.
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FL#17552

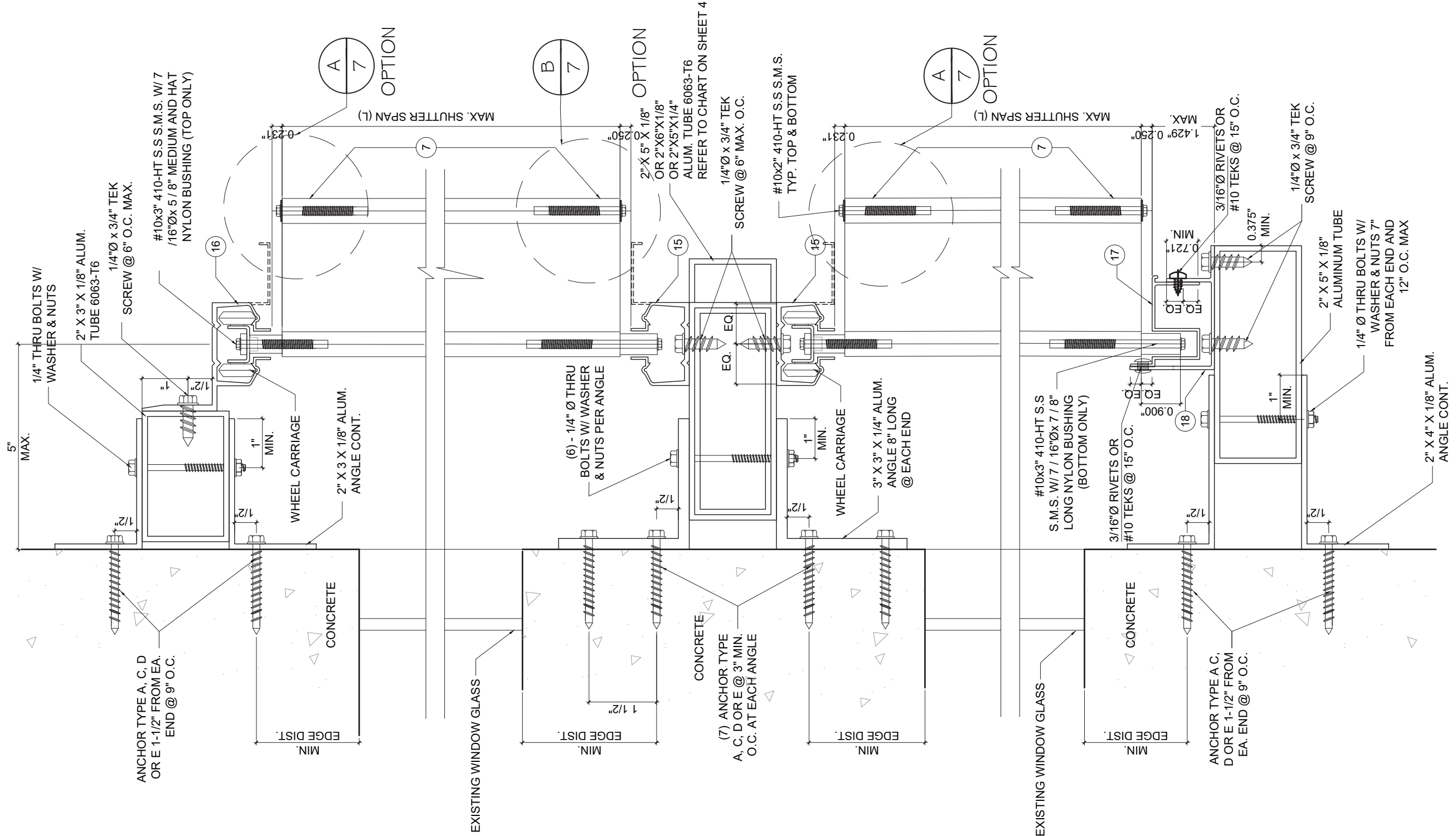
DATE: 4.23.2019
SCALE: AS NOTED
DRAWN: A.O.
PROJECT: MCY 15-020

DRAWING NO.
AD15-11

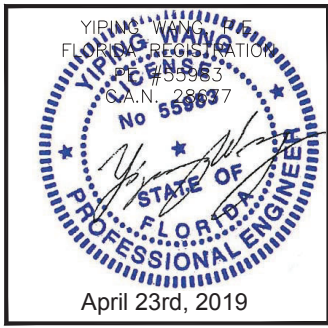
April 23rd, 2019

15 OF 16





12 B.O WALL MOUNTING INSTALLATION
HEAVY DUTY TRACK



GSS - 1 GENESIS ACCORDION SHUTTER SYSTEM
NCCL CORPORATION
9960 NW 79 AVE.
HALEAH GARDENS, FL. 33016
P: (305) 883 - 9940

FL#17552
DATE 4.23.2019
SCALE AS NOTED
DRAWN A.O.
PROJECT MCY 15-020
DRAWING NO. AD15-11
16 OF 16

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

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MIAMI, FL. 33183 P: 786.360.2786

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NO.	DATE	DESCRIPTION
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