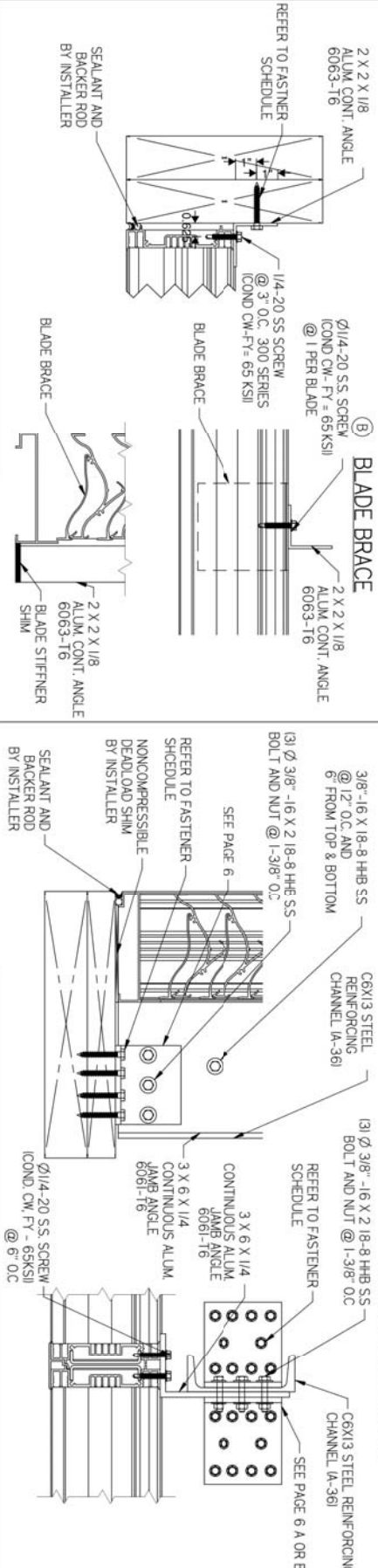
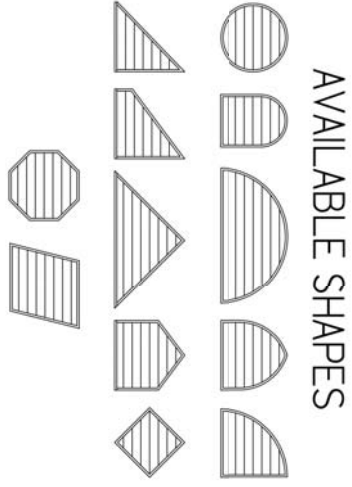
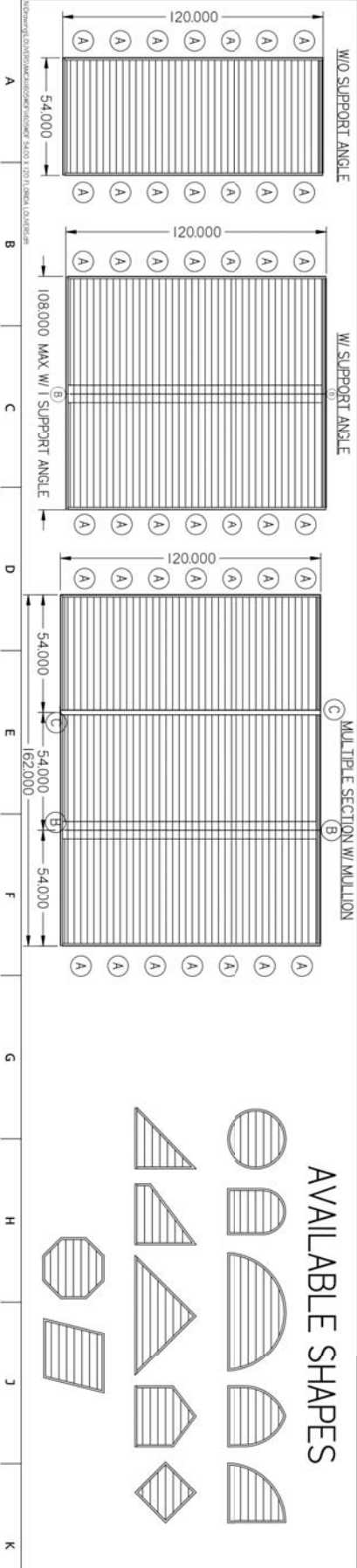
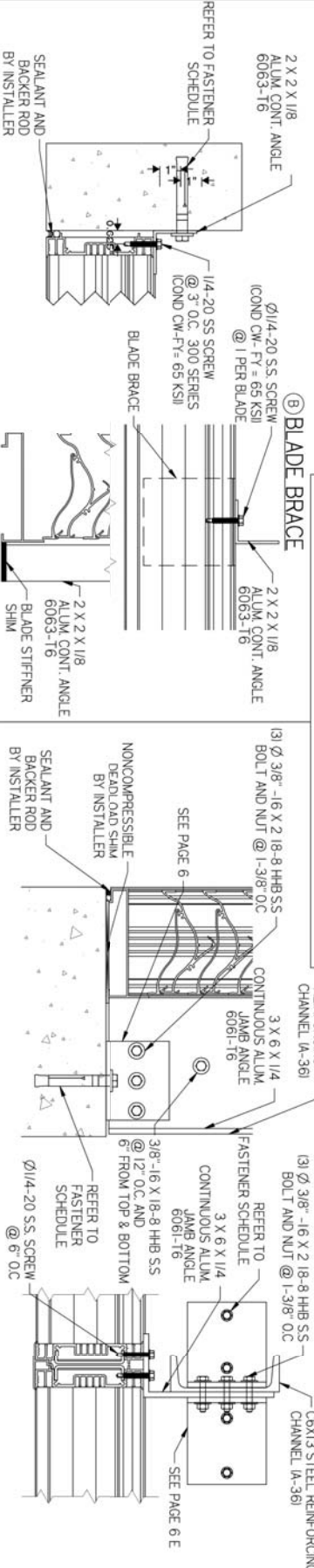


**WOOD OPENING** MINIMUM G = 0.42

**MULLION ANCHOR**



**CONCRETE MINIMUM 4 KSI / CMU MINIMUM 1.5 KSI**

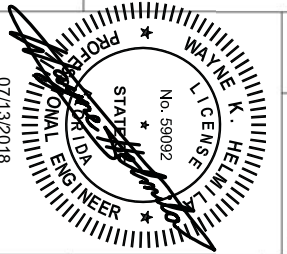


DWN BY: sleauvand CHK BY: MAstourian  
DATE: 3/2/2017 SCALE: NTS

SHEET: 1 OF 6  
**1605WDF**

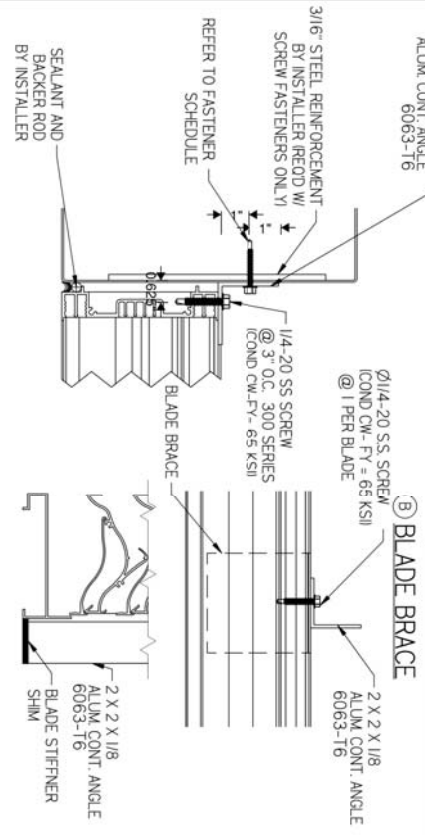
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TITLE:  
**WOOD & MASONRY MOUNTING AVAILABLE SHAPES**

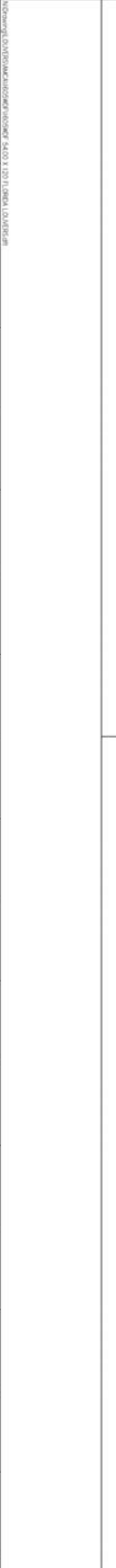
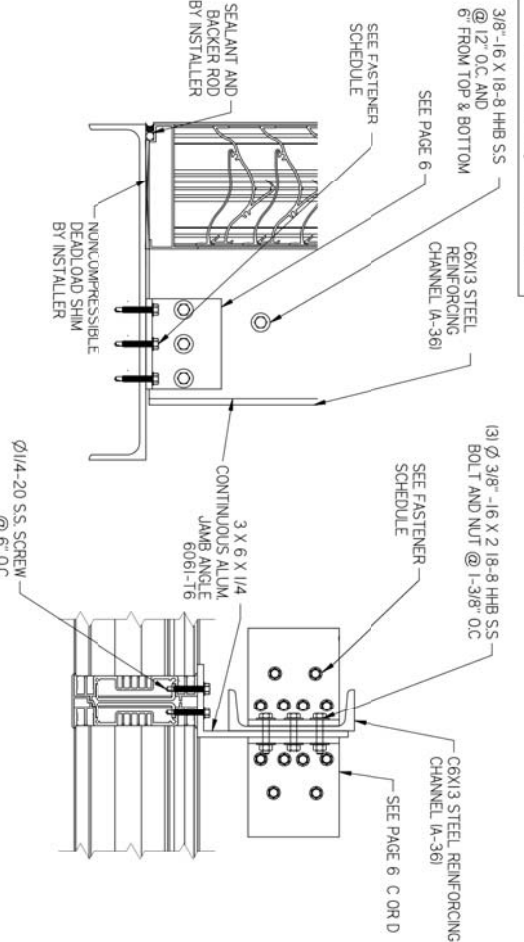
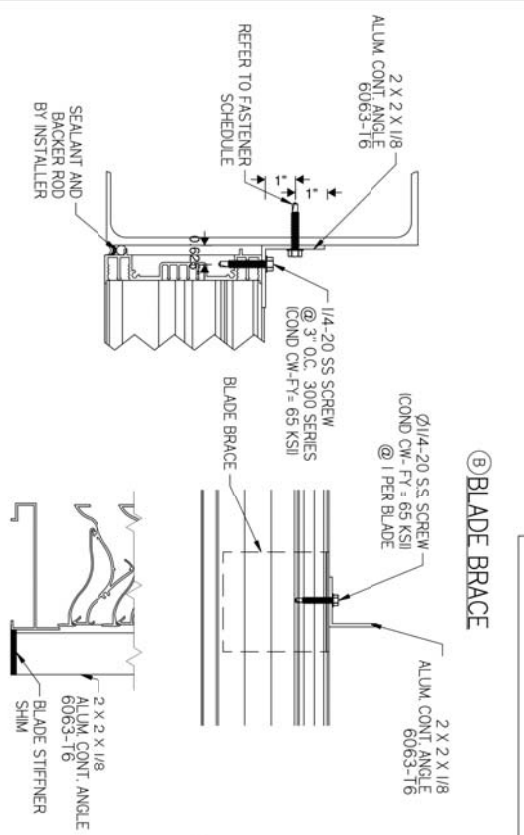


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Florida Firm No:  
F-010000501 Certificate of  
Authorization #9090Wayne K.  
Helms Registration No: 59092

**STEEL OPENING**  
1/6 GA MINIMUM THICKNESS  
MINIMUM Fy = 33 ksi



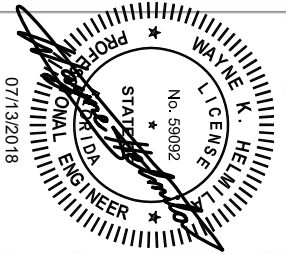
**STEEL OPENING**  
1/4" MINIMUM THICKNESS  
MINIMUM Fy = 36 ksi



DWN BY: sleavand	CHK BY: MAstourian
DATE: 3/2/2017	SCALE: NTS
SHEET: 2 OF 6	
1605WDF	

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TITLE: STEEL OPENING



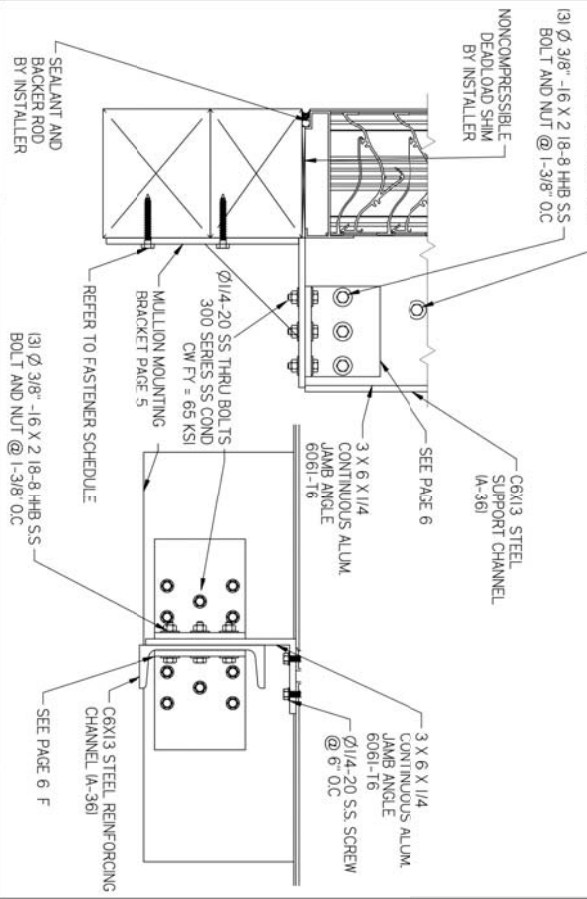
COA: 9090  
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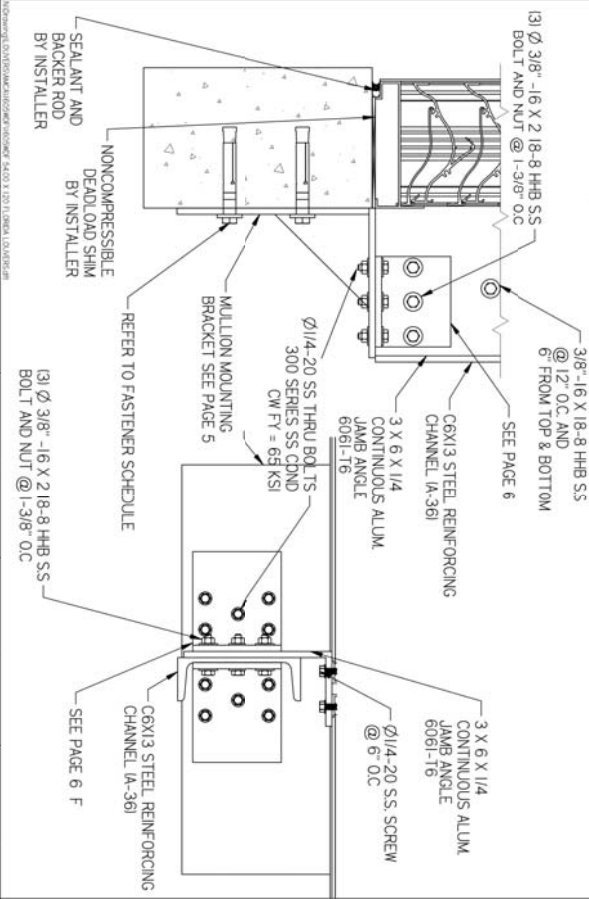
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Fax: (920) 617-1100  
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Certificate of Authorization: #9090  
Wayne K. Helm  
Registration No. 59092

**ALTERNATE WOOD OPENING**



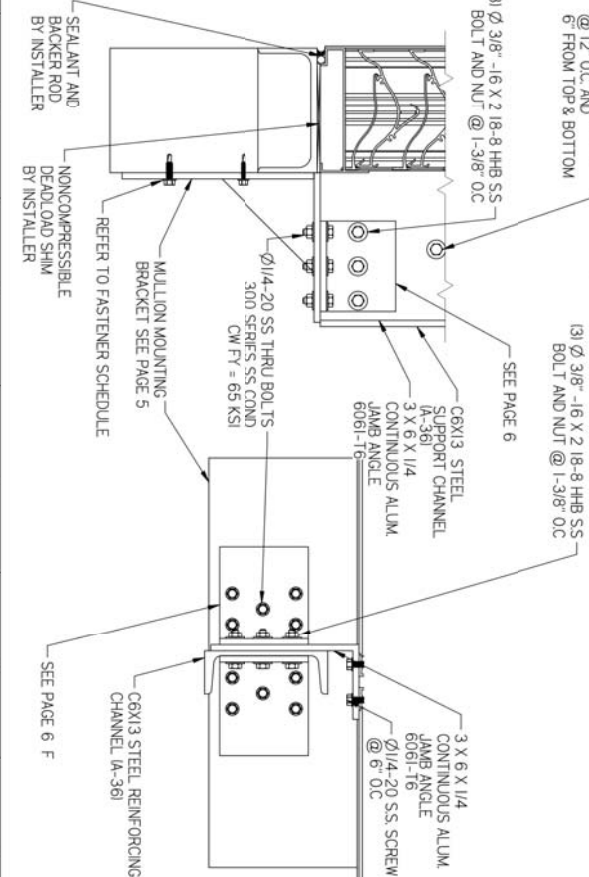
**ALTERNATE CONCRETE / CMU OPENING**



**ALTERNATE STEEL A-36 OPENING**



**ALTERNATE CONCRETE / CMU OPENING**



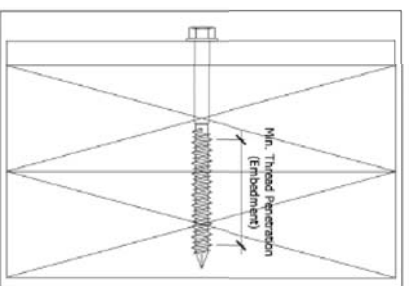
<p><b>RICE ENGINEERING</b></p> <p>105 School Creek Trail Lumberton, NJ 08027 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com</p> <p>Florida Firm No. F-401000005081 Certificate of Authorization #9090 Wayne K. Heimila Registration No. 59092</p>	<p>COA: 9090</p> <p>07/13/2018</p>		<p>PRIVATE &amp; CONFIDENTIAL</p> <p>DO NOT REPRODUCE WITHOUT THE PERMISSION OF</p> <p><b>Nailor Industries Inc.</b></p> <p>4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086</p> <p>www.nailor.com</p>	<p>DWN BY: sleauvand</p> <p>DATE: 3/2/2017</p>	<p>CHK BY: MAstourian</p> <p>SCALE: NTS</p>	<p>SHEET: 3 OF 6</p> <p><b>1605WDF</b></p>	<p>REV</p>
			<p>TITLE: ALTERNATE OPENNING MOUNTING</p>	<p>REV</p>			

WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MN	FASTENER TYPE	DIAMETER	# Rqd	CENTERS	EDGE	EMBEDMENT
CONTINUOUS JAMB PERMETER ANGLE FASTENER WIDTH <= 108 INCHES											
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	1	2-1/2"	2"	2-1/2"
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	3/8"	1	3"	2"	3"
	X				16 GA	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	1	3"	2"	FULL PENE.
		X			A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	1	9"	2"	FULL PENE.
			X		A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	5/16"	1	13"	2"	FULL PENE.
			X-CRACKED		4ksi	HLL TI KWK HUS-EZ	1/4"	1	6"	4"	2-1/2"
			X-CRACKED		4ksi	HLL TI KWK HUS-EZ	3/8"	1	10"	4"	2-1/2"
			X		1.5ksi	HLL TI KWK - CON II +	1/4"	1	3"	1-1/2"	1-3/4"
			X		1.5ksi	HLL TI KWK-BOLT 3	3/8"	1	8"	4"	2-1/2"
MULLION ANGLE MOUNT FASTENERS, HEIGHT <= 120 INCHES											
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	10	VARIES	2"	2-5/8"
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	1/2"	6	VARIES	2"	2-5/8"
	X				A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	6	VARIES	2"	FULL PENE.
		X			A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	5/16"	4	7/8"	2"	FULL PENE.
			X-UNCRACKED		4ksi	HLL TI KWK BOLT 3 - CS "	1/2"	2	4"	7"	3-9/16"
			X-CRACKED		4ksi	HLL TI KWK BOLT 3 - CS "	5/8"	2	4"	10"	4-7/16"
MULLION ANGLE MOUNT BACK OF WALL FASTENERS, HEIGHT <= 120 INCHES											
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	17	VARIES	1"	3-11/32"
X					SG 0.42	LAG SCREW (300 SERIES SS - COND. CW - FY = 65 ksi)	3/8"	12	VARIES	1-1/2"	3-9/32"
		X			A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	1/4"	15	VARIES	1"	FULL PENE.
			X		A-36	ELCO DRIL-FLEX FRILLING SCREWS (300 SERIES SS - COND. CW - FY = 65 ksi)	5/16"	14	VARIES	1"	FULL PENE.
			X-UNCRACKED		4ksi	HLL TI KWK BOLT 3 - CS "	1/2"	10	VARIES	3"	4-1/4"
			X-CRACKED		4ksi	HLL TI KWK BOLT 3 - CS "	1/2"	12	VARIES	3"	3-5/8"

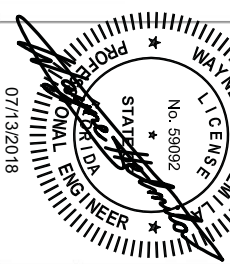
\* NOTE THREAD PENETRATION EMBEDMENT LENGTH SIGNIFIES THE REQUIRED LENGTH OF THE THREAD PORTION OF THE FASTENER INTO THE WOOD SUBSTRATE PROVIDING FULL CONTACT WITH THE WOOD. LAG SCREW TIP CANNOT BE CONSIDERED PART OF THE THREADED PORTION OF THE SCREW. LAG SCREWS ARE NOT TO BE INSTALLED AT WOOD JOINTS / SPLICES WHERE THE LAG SCREW COULD FALL BETWEEN MEMBERS.

\*NOTE ENGINEER OF RECORD (EOR) IS RESPONSIBLE FOR DETERMINING IF CONCRETE IS TO BE CONSIDERED CRACKED OR UNCRACKED.

- GENERAL NOTES:**
1. IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
  2. INSTALLER TO PROVIDE SEPARATION OF THE DISSIMILAR MATERIALS AS REQUIRED.
  3. WOOD SUBSTRATE TO BE MINIMUM G = 0.42.
  4. CONCRETE SUBSTRATE = 4 KSI. / GROUT FILLED CMU = 2 KSI
  5. STEEL STUD OPENINGS (1/6 GA MINIMUM THICKNESS) TO BE MIN. Fy=33 ksi.
  6. STRUCTURAL STEEL OPENINGS (1/4" MINIMUM THICKNESS) TO BE MINIMUM Fy = 36 ksi.



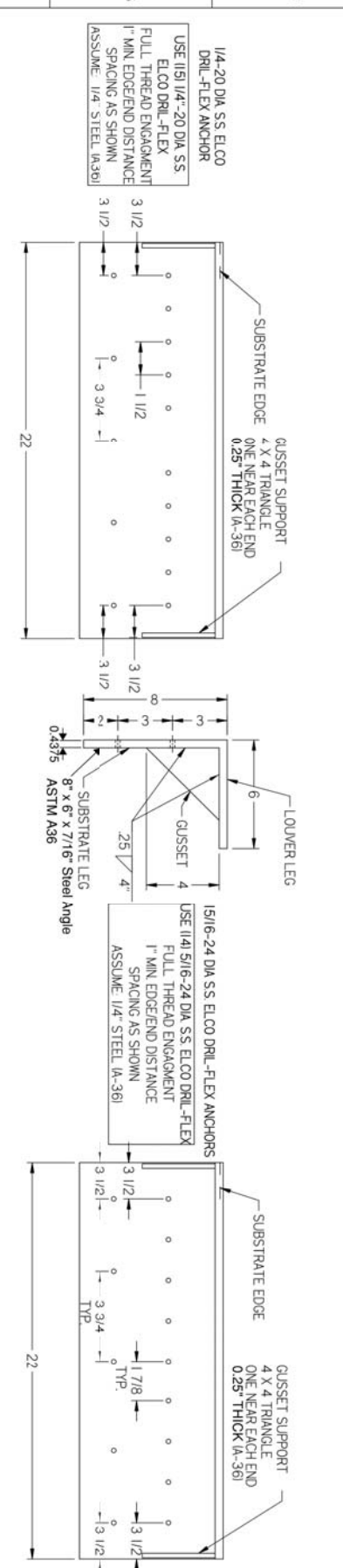
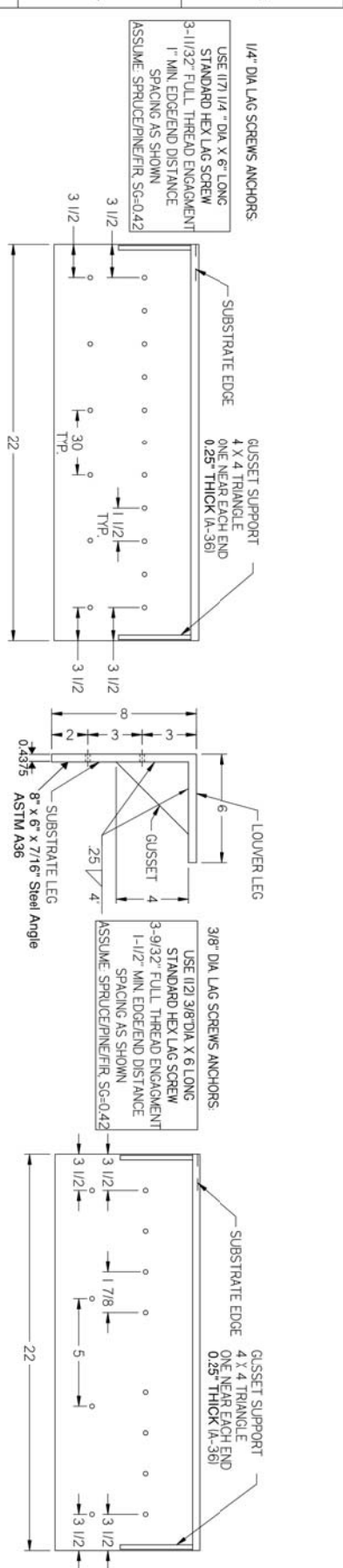
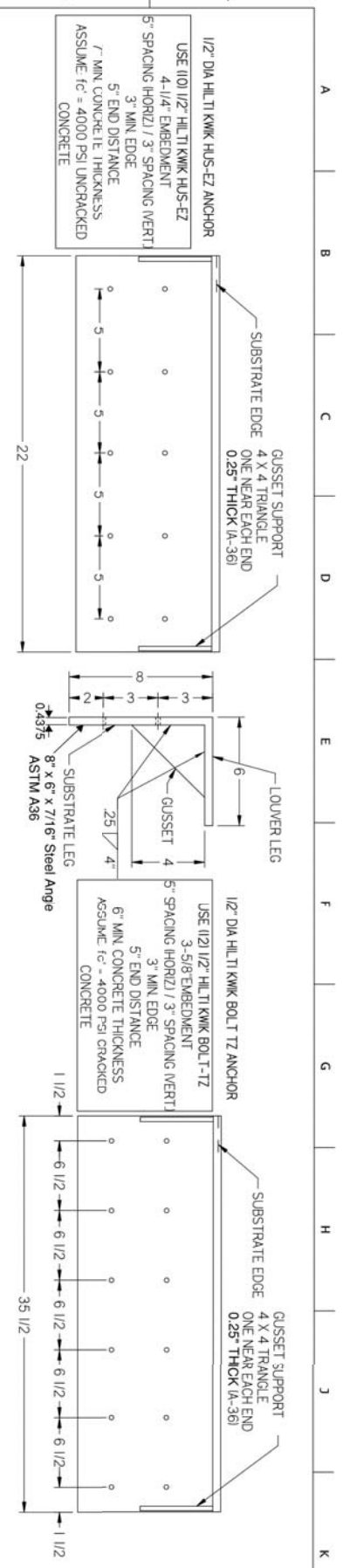
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	<p>DATE: 3/2/2017</p>	<p>SCALE: NTS</p>
<p>TITLE: <b>FASTENER SCHEDULE AND GENERAL NOTES</b></p>	<p><b>1605WDF</b></p>	



COA: 9090  
07/13/2018

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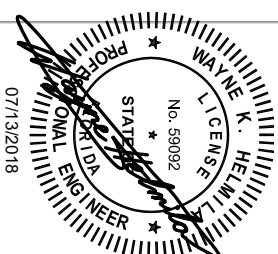
Florida Firm No. F-401000005081  
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Wayne K. Helm  
Registration No. 59092



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DATE: 3/2/2017	SCALE: NTS
SHEET: 5 OF 6	
1605WDF	
REV	1

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TITLE:  
**SILL - HEAD ANCHOR**  
**BACK OF WALL**



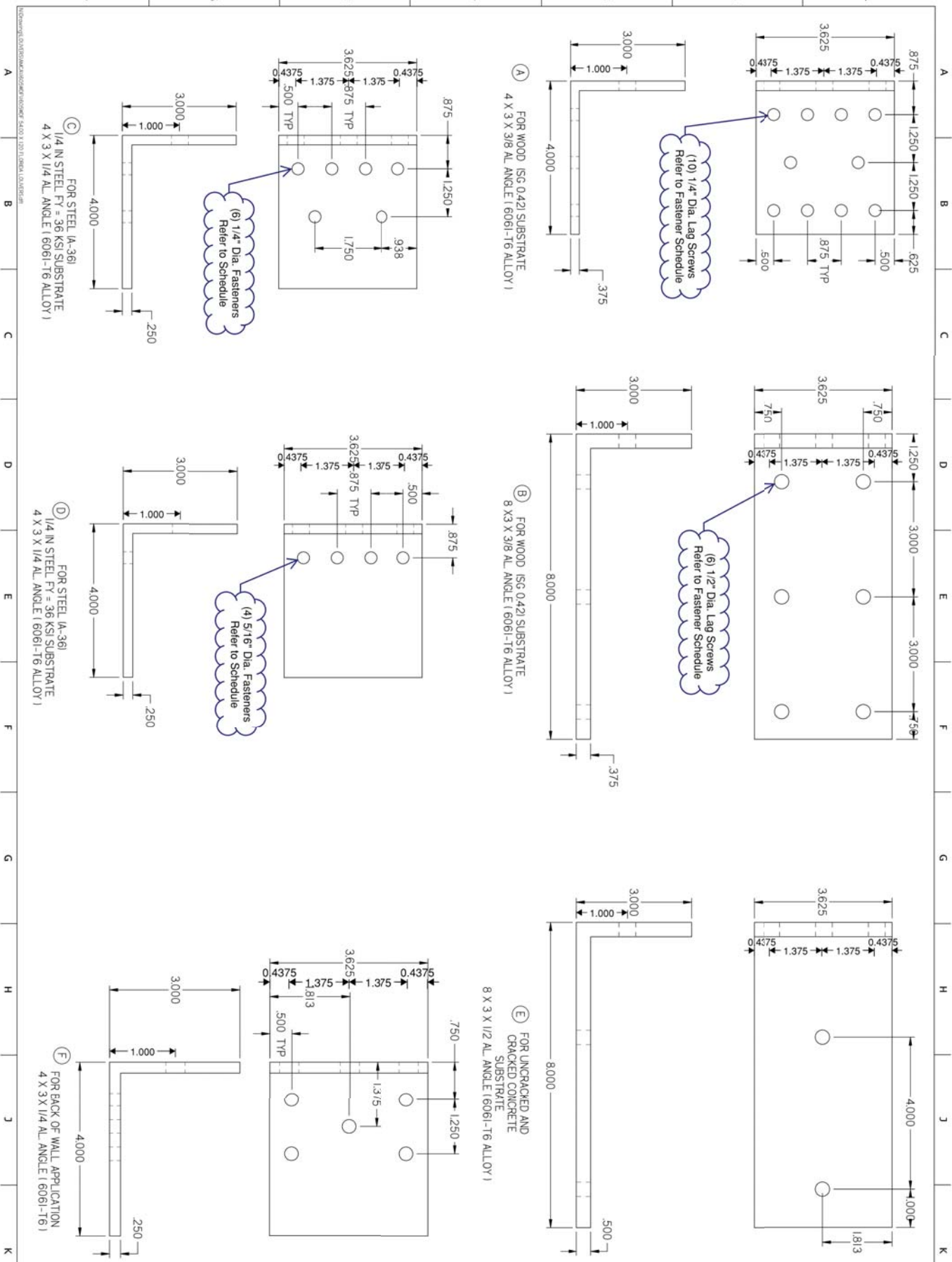
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Wayne K. Helms  
Registration No. 59092

A B C D E F G H J K L

7 6 5 4 3 2 1



(10) 1/4" Dia. Lag Screws  
Refer to Fastener Schedule

(6) 1/2" Dia. Lag Screws  
Refer to Fastener Schedule

(6) 1/4" Dia. Fasteners  
Refer to Schedule

(4) 5/16" Dia. Fasteners  
Refer to Schedule

(C) FOR STEEL (A-36)  
1/4" N STEEL F<sub>y</sub> = 36 KSI SUBSTRATE  
4 X 3 X 1/4 AL ANGLE (6061-T6 ALLOY)

(D) FOR STEEL (A-36)  
1/4" N STEEL F<sub>y</sub> = 36 KSI SUBSTRATE  
4 X 3 X 1/4 AL ANGLE (6061-T6 ALLOY)

(F) FOR BACK OF WALL APPLICATION  
4 X 3 X 1/4 AL ANGLE (6061-T6)

(A) FOR WOOD (SG 042) SUBSTRATE  
4 X 3 X 3/8 AL ANGLE (6061-T6 ALLOY)

(B) FOR WOOD (SG 042) SUBSTRATE  
8 X 3 X 3/8 AL ANGLE (6061-T6 ALLOY)

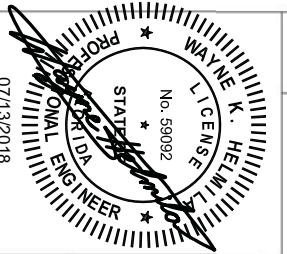
(E) FOR UNCRACKED AND  
CRACKED CONCRETE  
SUBSTRATE  
8 X 3 X 1/2 AL ANGLE (6061-T6 ALLOY)

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TITLE:  
**SILL - HEAD ANCHOR  
CLIPS**

DWN BY: sleauvand CHK BY: MAstourian  
DATE: 3/2/2017 SCALE: NTS

SHEET: 6 OF 6  
**1605WDF**



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