

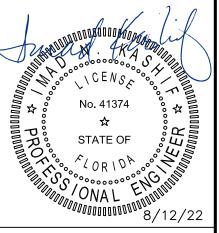
DETAIL A

INSTALLATION ADDRESS:

CULVER'S 394 N.W. COMMONS LOOP LAKE CITY, FL 32055

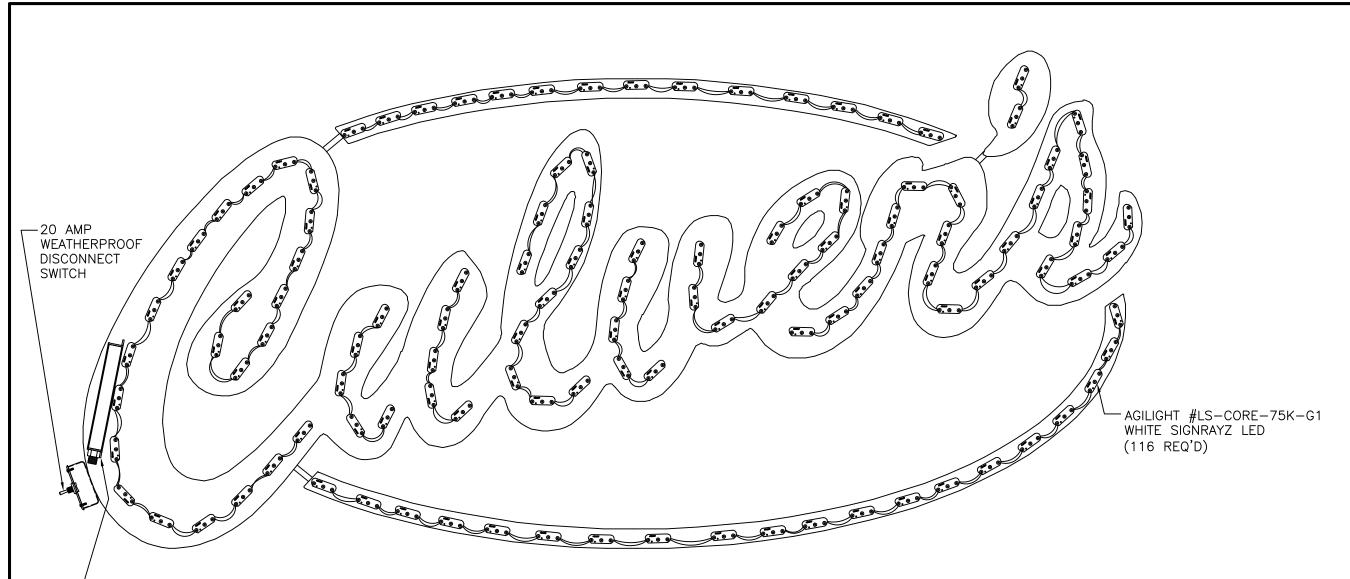


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Project N	lumber:	Drawing Number	er:		
22-	0282R3	B186700R2			
SHT.	OF	DATE:	BY:		
1	3	8/12/22	GHK		



-AGILIGHT 12V/60W LED POWER SUPPLY #PS12-60WSL-100-277V @0.63A IN A WEATHERPROOF POWER SUPPLY **ENCLOSURE**

ELECTRICAL ELEVATION

ELECTRICAL REQUIREMENTS:

LEDS: (116) AGILIGHT #LS-CORE-75K-G1 WHITE SIGNRAYZ CORE POWER SUPPLY: (1) AGILIGHT 12V/60W

#PS12-60W-100-277V © 0.63A

TOTAL LOAD: 0.63A @ 120VAC CIRCUITS: (1) 20 AMP REQUIRED

PHOTOCELL, OR ASTRONOMICAL TIMER LIGHT CONTROL MANAGEMENT SYSTEM IS REQUIRED

ELECTRICAL NOTES:

- 1. ALL ELECTRICAL COMPONENTS ARE UL LISTED AND **APPROVED**
- 2. SIGN GROUNDED ACCORDING TO NEC 600.73. SIGNS MANUFACTURED AND LISTED NEC 600.3 AND MARKED PER NEC 600.4
- 4. ALL BRANCH CIRCUITS PER NEC 600.5(B).1 OR (B).2
- 5. ALL SIGNS SHALL BE CONTROLLED BY PHOTOCELL OR TIME CLOCK
- ONE VISIBLE 20 AMP DISCONNECT PER SIGN PER CIRCUIT PER NEC 600.6(A).1
- 7. ALL CLASS 2 RATED LED MODULES AND LED POWER SUPPLIES WILL BE IN COMPLIANCE WITH NATIONALLY RECOGNIZED TEST LABORATORY

NSTALLATION ADDRESS:

CULVER'S 394 N.W. COMMONS LOOP LAKE CITY, FL 32055

CLIENT:



4825 EAST KEARNEY STREET SPRINGFIELD, MO 65803 417.862.2454 - FAX: 417.862.1887

W	DATE	DESCRIPTION
A	-/-/-	
◬	-/-/-	
ß	-/-/-	

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IMAD N. KASHIF, P.E.
FLORIDA STATE LICENSE NO.: 41374 SEAL & SIGNATURE:





Project Nun	nber:	Drawing Number:			
22-02	282R3	B186700R2			
SHT.	OF	DATE:	BY:		
2	3	8/12/22	GHK		

Cal	culations for	or Drawing	B186700-E	3186702	SL-30						22-0282R
Florida Buildir	na Codo 74	h Edition (2020)	Cat II							7/14/2022 SR
120 MPH	Exp C			cimum abov	e arade						30
120 1011 11	LXPC	Zone 3	20-0 IIIax	diffulli abov	e grade						
Treated as Co	mponents	& Cladding		P =	-23.74	PSF					
Estimate weig					20.11						
	J. 1. C. C. P.C.			Wind		Top Row	Fastener Row	Cabinet	Max	Average	Avg
	Area	Area	Est Wt	Load	Fastener	Fastener	Spacing	Depth	Tension	Shear	Ten
Region	in^2	ft^2	lb	lb	Qty	Qty	in	in	lb	lb	lb
Top Curve	96.271	0.669	3.34	-15.87	4	2	2.625	5.500	5.72	0.8	3.97
Apostrophe	37.616	0.261	1.31	-6.20	2	1	4.000	5.500	4.00	0.7	3.10
Letters	1293.694	8.984	44.92	-213.27	17	9	17.125	5.500	13.35	2.6	12.55
Bottom Curve	144.788	1.005	5.03	-23.87	4	2	5.438	5.500	7.24	1.3	5.97
Maximun	n Fastener	Tension =	13.3	LB	1						
	_										
Maximu	um Fasten	er Shear =	2.6	LB							
	Wall Signa	age - Treate	ed as Comp	onents & C	Cladding						
V	/ind Speed	120	mph		From ASC	CE 7-16, Figu	ıre 26.5-1B				
	Exposure				Zg =	900					
	Zone				Alpha =	9.5					
	Height		Ft								
	Sign Area	<10	Ft^2								
	Determine	wind press	ure from A	SCF 7-16 (Chapter 30						
	Dotomino	Willia proce		002 7 10 0	maple: 00						
	Chapter 30	: Wind Lo	ads - Com	ponents &	Cladding						
	p = q* (GC					1 or 30.5-1)					
	~ 0.0005	6 * V- * V-	+ * V d * V a	* \/^2	(07. 06.10	4)					
	q - 0.0025	6 * Kz * Kz	l Nu Ke	V-Z	(eq. 26.10	-1)					
	Kz =	0.90			(Table 26.	10-1)					
	Kd =	0.85			(Table 26.	-					
	Kzt =	1			(Section 2						
	V =	120									
	Ke =	1									
	q =	28.26004									
	GCp =	-1.4	(From Fig	ure 30 4-1 f	or h<= 60 fl	and from Fi	gure 30.6-1 for h>	60 ft)			
	GCp =	+1.0	(. and nontri	3				
	p =	-39.56	psf								
	Load Com	bination:	D + 0.6W		(Section 2	2.4.1)					
	Docier M	nd Drass-	0 = 0.6141	22.74	nef	1					
		nd Pressur									
	Design Wi	nd Pressur	e = 0.6W =	16.96	psf						

- 1. Design is based on a 120 mph, 3 second gust wind design per Florida Building Code, 7th Edition (2020). Category II, Exposure C. Components and Cladding, Zone 5.
- No additional wind catching surfaces are added to the supporting structure. The customer's building engineer is to determine the adequacy of the supporting wall.
- 3. Sign design is by others.
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CLIENT:



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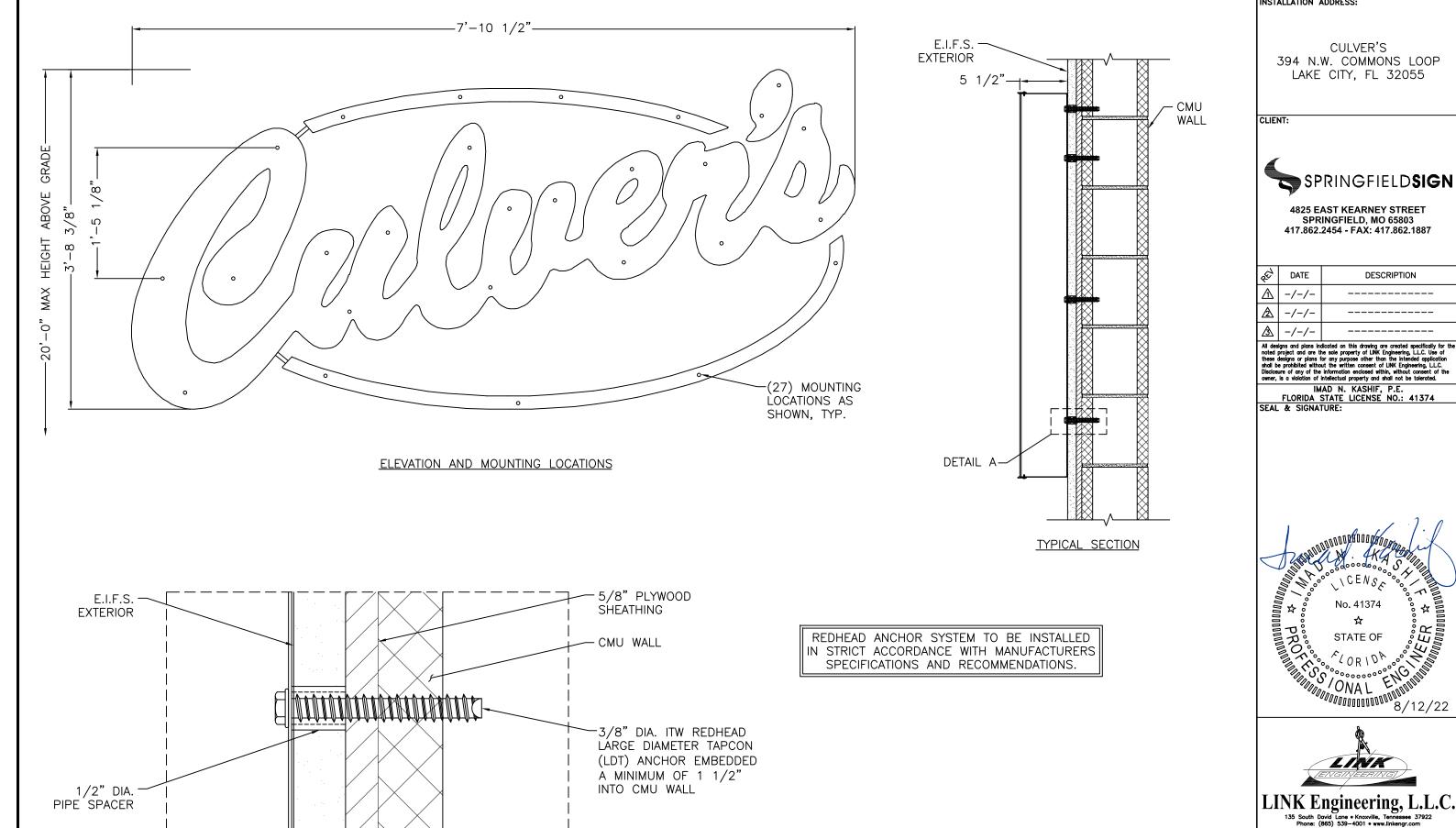
IMAD N. KASHIF, P.E.
FLORIDA STATE LICENSE NO.: 41374 SEAL & SIGNATURE:



LINK Engineering, L.L.C

Florida State Certificate of Authorization No.: 27148

Project Nu	ımber:	Drawing Number:			
22-0)282R3	B186700R2			
SHT.	OF	DATE:	BY:		
3	3	8/12/22	GHK		



DETAIL A

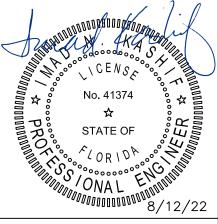
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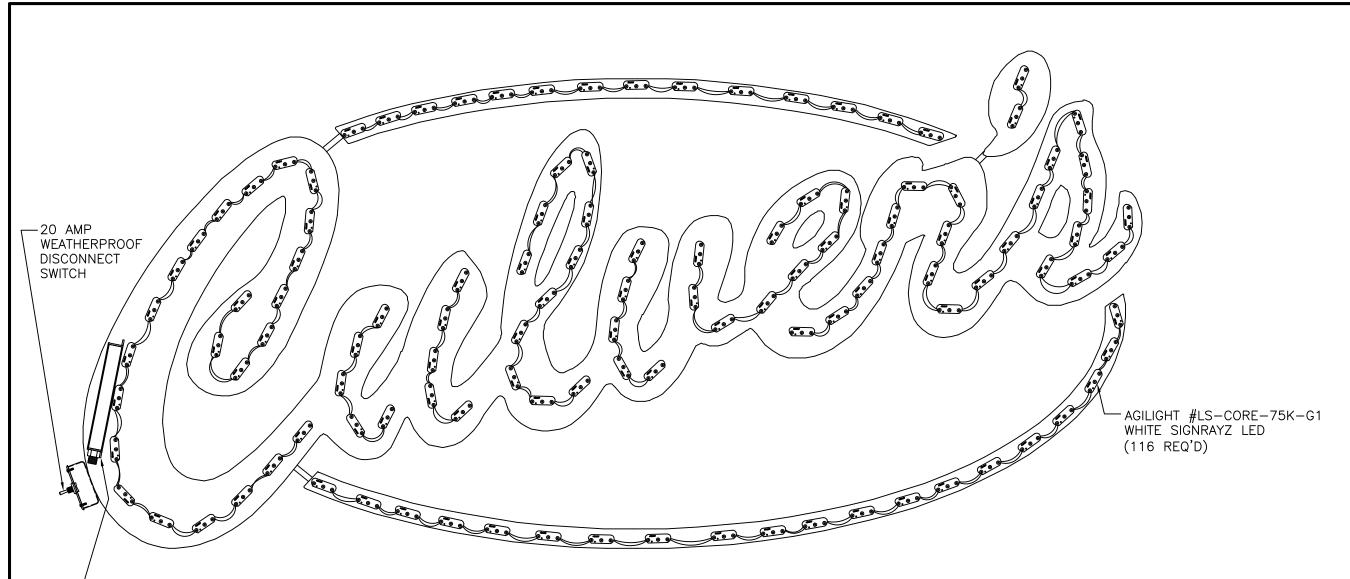
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Project Nur	mber:	Drawing Number:			
22-0	282R3	B186701R2			
SHT.	OF	DATE:	BY:		
1	3	8/12/22	GHK		



-AGILIGHT 12V/60W LED POWER SUPPLY #PS12-60WSL-100-277V @0.63A IN A WEATHERPROOF POWER SUPPLY **ENCLOSURE**

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ELECTRICAL REQUIREMENTS:

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#PS12-60W-100-277V

© 0.63A

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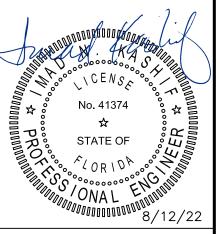


4825 EAST KEARNEY STREET SPRINGFIELD, MO 65803 417.862.2454 - FAX: 417.862.1887

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FLORIDA STATE LICENSE NO.: 41374 SEAL & SIGNATURE:





Project N	umber:	Drawing Numb	er:						
22-	0282R3	B18670	1R2						
SHT. OF		DATE:	BY:						
2	3	8/12/22	GHK						

Cal	culations for	or Drawing	B186700-E	3186702	SL-30						22-0282F 7/14/2022
Florida Buildir	na Code 7t	th Edition (2020)	Cat II							7/14/2022 SF
120 MPH	Exp C			imum abov	e grade						
	•										
reated as Co				P =	-23.74	PSF					
Estimate wei	ght at 5 psf										1980
	. •			Wind		Top Row	Fastener Row	Cabinet	Max	Average	Avg
Region	Area	Area	Est Wt	Load	Fastener	Fastener	Spacing	Depth	Tension	Shear	Ten
	in^2	ft^2	lb 2.24	lb	Qty	Qty	in	in	lb 5.70	lb	lb 2.07
Top Curve	96.271 37.616	0.669 0.261	3.34 1.31	-15.87 -6.20	2	2	2.625 4.000	5.500 5.500	5.72 4.00	0.8	3.97 3.10
Apostrophe Letters	1293.694	8.984	44.92	-0.20	17	9	17.125	5.500	13.35	2.6	12.55
Bottom Curve		1.005	5.03	-23.87	4	2	5.438	5.500	7.24	1.3	5.97
Jottom Guive	144.700	1.005	3.03	-20.01	_	2	0.400	3.300	7.24	1.5	3.37
Maximun	n Fastener	Tension =	13.3	LB							
Maxim	um Fastene	er Shear =	2.6	LB							
					1						
	Wall Signa	age - Treate	d as Comp	onents & C	Cladding						
W	ind Speed	120	mph		From ASC	E 7-16, Figu	ıre 26.5-1B				
	Exposure	С			Zg =	900					
	Zone	5			Alpha =	9.5					
	Height	20	Ft								
	Sign Area	<10	Ft^2								
	Determine	wind press	ure from A	SCE 7-16 (Chapter 30						
	Chapter 20): Wind Lo	ada Cam	nonente 9	Cladding						
	$p = q^* (GC)$		aus - Com	ponents &		or 30.5-1)					
	p - q (00	р - Осрі)			(eq. 50.5-	01 30.3-1)					
	q - 0.00256	6 * Kz * Kz	t * Kd * Ke	* V^2	(eq. 26.10	-1)					
	Kz =	0.90			(Table 26.	10.1)					
	K2 =	0.85			(Table 26.						
	Kzt =	1			(Section 2						
	V =	120			(CCCCION 2	J.0,					
	Ke =	1									
	q =	28.26004									
	GCp =	-1.4	(From Figu	ure 30.4-1 f	or h<= 60 ft	and from Fi	gure 30.6-1 for h>	60 ft)			
	GCp =	+1.0									
	p =	-39.56	psf								
	Load Com	bination:	D + 0.6W		(Section 2	.4.1)					
		nd Pressur									
	Design Wi	nd Pressur	e = 0.6W =	16.96	psf						

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CULVER'S 394 N.W. COMMONS LOOP LAKE CITY, FL 32055

CLIENT:



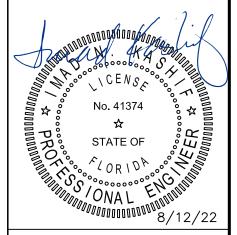
4825 EAST KEARNEY STREET SPRINGFIELD, MO 65803 417.862.2454 - FAX: 417.862.1887

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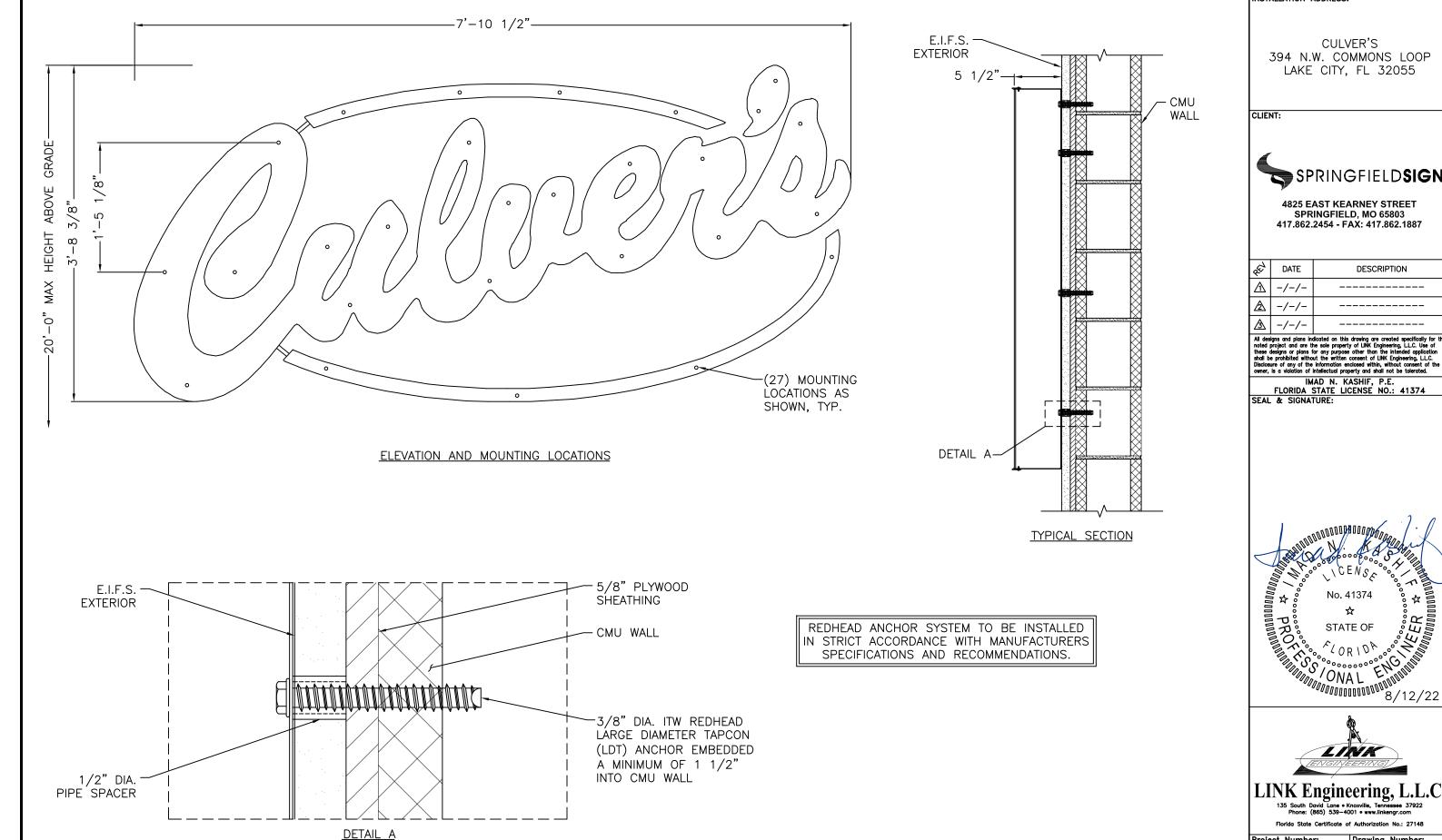




LINK Engineering, L.L.C

135 South David Lane • Knoxville, Tennessee 37922 Phone: (865) 539-4001 • www.linkengr.com Florida State Certificate of Authorization No.: 27148

Project Nun	nber:	Drawing Numbe	r:		
22-02	282R3	B186701R2			
SHT.	OF	DATE:	BY:		
	_	8/12/22			

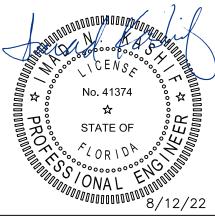


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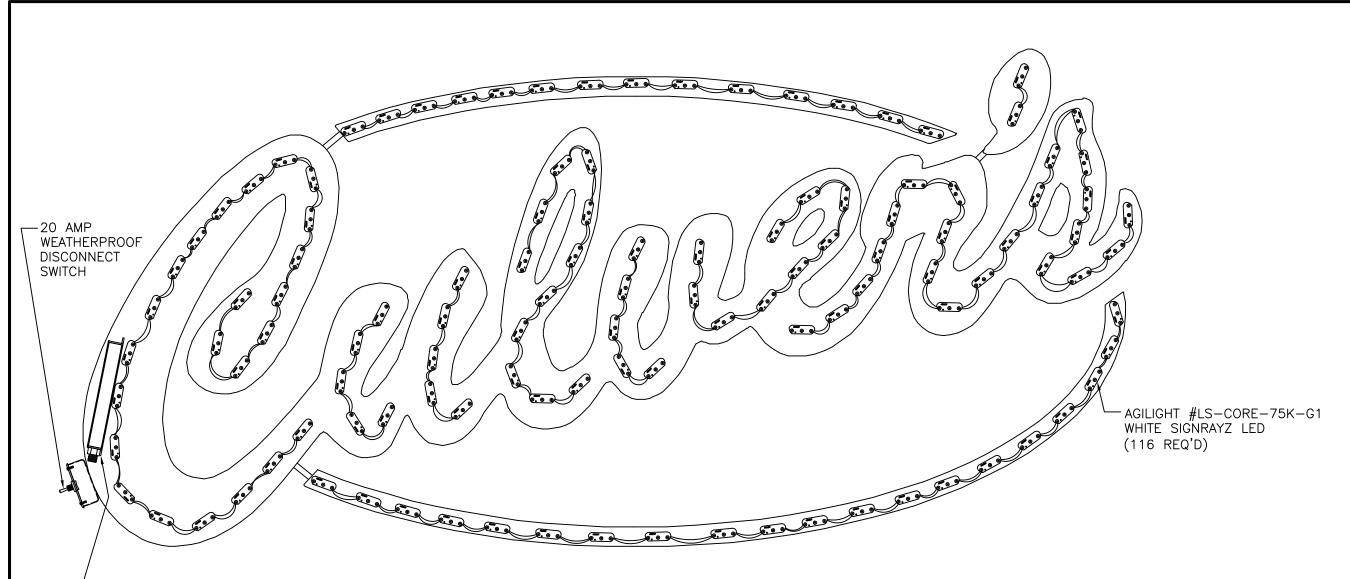


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Project N	umber:	Drawing Number:							
22-	0282R3	B186702R2							
SHT.	OF	DATE:	BY:						
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ELECTRICAL ELEVATION

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FLORIDA STATE LICENSE NO.: 41374 SEAL & SIGNATURE:





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22-	0282R3	B186702R2				
SHT.	OF	DATE:	BY:			
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	culations to	or Drawing	B186700-E	3186702	SL-30						22-0282F 7/14/2022
lorida Buildi	na Code. 7t	h Edition (2020)	Cat II							77 147 2022 SF
20 MPH	Exp C		20'-0" max		e grade						
reated as Co	omponents	& Cladding		P =	-23.74	PSF					
stimate wei	ght at 5 psf										
				Wind		Top Row	Fastener Row	Cabinet	Max	Average	Avg
Region	Area	Area	Est Wt	Load	Fastener	Fastener	Spacing	Depth	Tension	Shear	Ten
551	in^2	ft^2	lb	lb	Qty	Qty	in	in	lb	lb	lb
Top Curve	96.271	0.669	3.34	-15.87	4	2	2.625	5.500	5.72	0.8	3.97
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Maximur	n Fastener	Tension =	13.3	LB]						
Maxim	um Fastene	er Shear =	2.6	LB							
WIGAIIII	an rastent	orical -	2.0								
	Wall Signa	ne - Treate	ed as Comp	onents & C	Cladding						
	vvaii Oigiio	ige - freate	u as comp	onents a c	Jiaddinig						
V	/ind Speed	120	mph		From ASC	E 7-16, Figu	re 26 5-1B				
	Exposure	C	inpii		Zg =	900	10 20.0 1B				
	Zone	5			Alpha =	9.5					
	Height	20	Ft		/ lipitu	0.0					
	Sign Area	<10	Ft^2								
	Determine	wind press	ure from A	SCE 7-16 (Chapter 30						
			L		<u></u>						
	Chapter 30		ads - Com	ponents &							
	p = q* (GC	p - Gcpi)			(eq. 30.3-	1 or 30.5-1)					
	q - 0.00256	6 * Kz * Kz	t * Kd * Ke	* V^2	(eq. 26.10	-1)					
	Kz =	0.90			(Table 26.	• • • • • • • • • • • • • • • • • • • •					
	Kd =	0.85			(Table 26.						
	Kzt =	1			(Section 2	(6.8)					
	V =	120									
	Ke =	1 29 26004									
	q =	28.26004	1		1						
	GCp =	-1.4	(From Figu	ure 30.4-1 f	or h<= 60 ft	and from Fi	gure 30.6-1 for h>	60 ft)			
	GCp =	+1.0									
	n =	-39.56	nsf	1							
	Load Comi	oination:	D + 0.6W		(Section 2	.4.1)					
	Design W/i	nd Pressur	e = 0.6W =	-23 74	nsf						
	LACTOR HILL VVI	iu i cooul	C - 0.0VV -	-LU.14	Pol						

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IMAD N. KASHIF, P.E.
FLORIDA STATE LICENSE NO.: 41374 SEAL & SIGNATURE:

No. 41374

PROTICE NO. CENS.

No. 41374

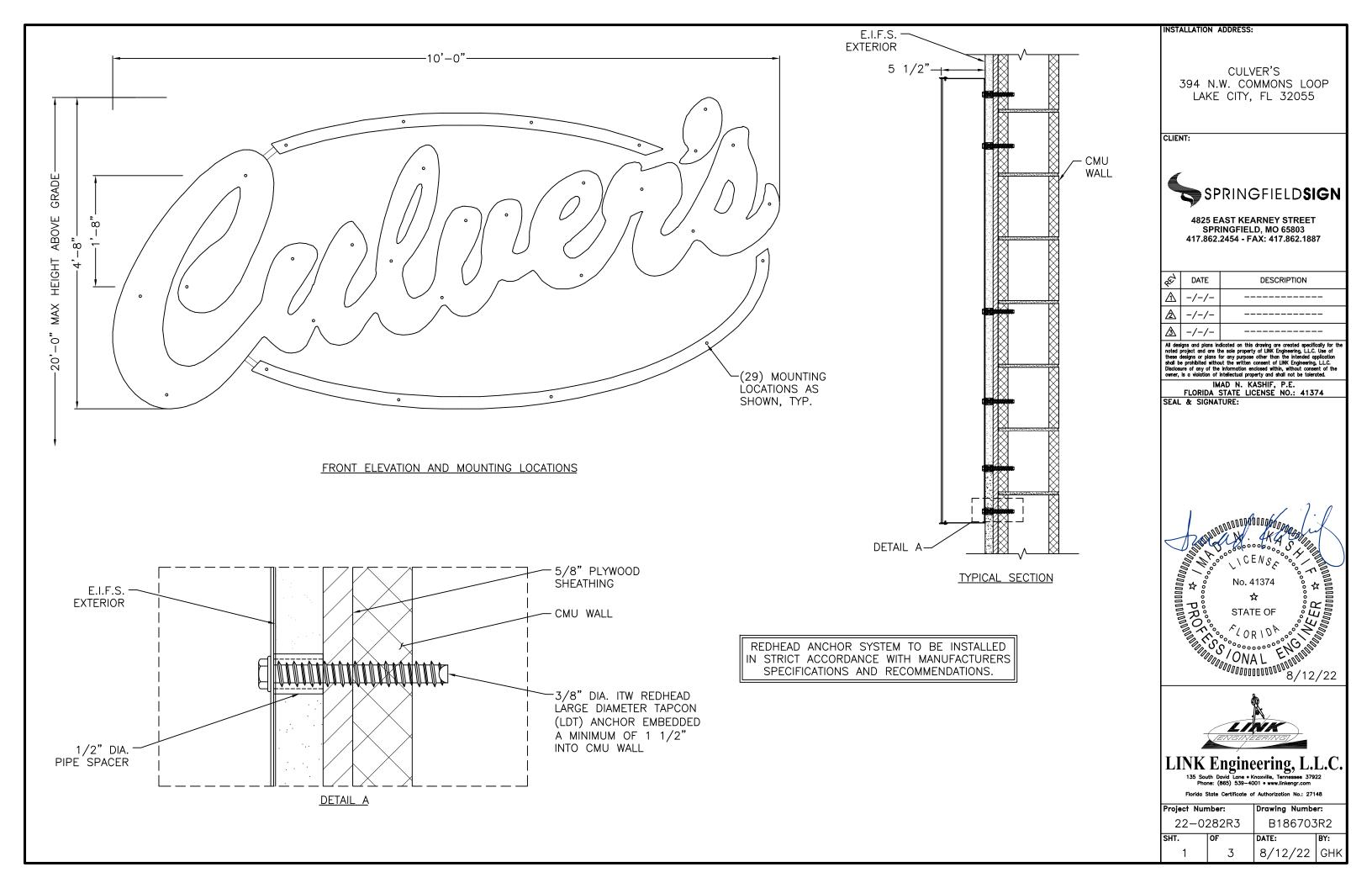
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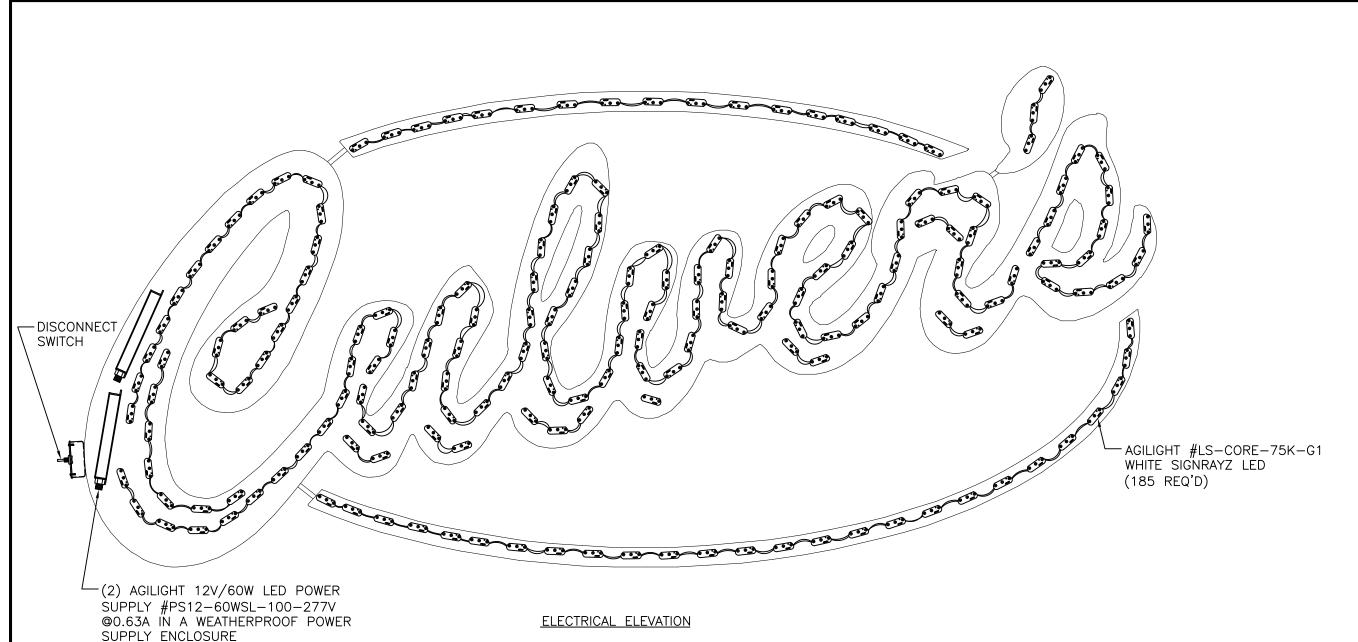


LINK Engineering, L.L.C

135 South David Lane • Knoxville, Tennessee 37922 Phone: (865) 539-4001 • www.linkengr.com Florida State Certificate of Authorization No.: 27148

Project Nu	mber:	Drawing Number	er:		
22-0	282R3	B186702R2			
SHT.	OF	DATE:	BY:		
3	3	8/12/22	GHK		





ELECTRICAL REQUIREMENTS:

LEDS: (185) AGILIGHT #LS-CORE-75K-G1 WHITE SIGNRAYZ CORE POWER SUPPLY: (2) AGILIGHT 12V/60W

#PS12-60W-100-277V © 0.63A

TOTAL LOAD: 1.26A @ 120VAC CIRCUITS: (1) 20 AMP REQUIRED PHOTOCELL, OR ASTRONOMICAL TIMER LIGHT CONTROL MANAGEMENT SYSTEM IS REQUIRED

NSTALLATION ADDRESS:

CULVER'S 394 N.W. COMMONS LOOP LAKE CITY, FL 32055

CLIENT:



4825 EAST KEARNEY STREET SPRINGFIELD, MO 65803 417.862.2454 - FAX: 417.862.1887

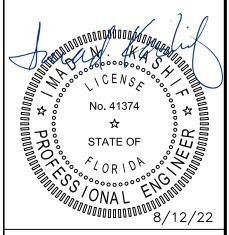
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<u>A</u>	-/-/-	

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IMAD N. KASHIF, P.E.

FLORIDA STATE LICENSE NO.: 41374

SEAL & SIGNATURE:





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22-02	282R3	B186703R2		
SHT.	OF	DATE:	BY:	
2	3	8/12/22	GHK	

Cal	culations fo	or Drawing	B186703		SL-45						22-0282F 7/14/2022
Florida Buildir	na Code 7t	h Edition (2	2020)	Cat II							77 147 2022 SF
20 MPH	Exp C			imum abov	e grade						01
	= 1, 0				Januar						
reated as Co	mponents	& Cladding		P =	-23.74	PSF					
stimate weig											
		t		Wind		Top Row	Fastener Row	Cabinet	Max	Average	Avg
Dagian	Area	Area	Est Wt	Load	Fastener	Fastener	Spacing	Depth	Tension	Shear	Ten
Region	in^2	ft^2	lb	lb	Qty	Qty	in	in	lb	lb	lb
Top Curve	155.237	1.078	5.39	-25.59	4	2	3.563	5.500	8.48	1.3	6.40
Apostrophe	60.656	0.421	2.11	-10.00	2	1	7.500	5.500	5.77	1.1	5.00
Letters	2086.078	14.487	72.43	-343.89	18	9	20.000	5.500	20.21	4.0	19.11
Bottom Curve	233.469	1.621	8.11	-38.49	5	3	8.438	5.500	8.58	1.6	7.70
					1						
Maximun	n Fastener	Tension =	20.2	LB							
Maxim	um Fastene	er Shear =	4.0	LB							
	Wall Signa	ige - Treate	d as Comp	onents & C	Cladding						
							00.5.45				
V	/ind Speed	120	mph			E 7-16, Figu	ire 26.5-1B				
	Exposure				Zg =	900					
	Zone	5	F4		Alpha =	9.5					
	Height		Ft								
	Sign Area	<10	Ft^2								
	Determine	wind nrece	ure from A	SCE 7-16 (Chanter 30						
	Determine	wirid press	uie iioiii A	JOE 7-10 (Jilapiei 30						
	Chapter 30	. Wind Lo	ads - Com	ponents &	Cladding						
	p = q* (GC		0011	porionio a		or 30.5-1)					
	P 4 (00	р оор,,			(04. 00.0	. 0. 00.0 1)					
	q - 0.00256	6 * Kz * Kz	t * Kd * Ke	* V^2	(eq. 26.10	-1)					
	V	0.90			/Toble 26	10.1)					
	Kz = Kd =	0.90			(Table 26. (Table 26.						
	Kzt =	1			(Section 2						
	V =	120			(OCCION 2	0.01					
	Ke =	1									
	q =	28.26004									
	GCp =	-1.4	(From Fig	ure 30.4-1 f	or h<= 60 ft	and from Fi	gure 30.6-1 for h>	60 ft)			
	GCp =	+1.0		Access to the second 200 12	100000000000000000000000000000000000000		Section of the Section of Prince ASSESSES				
	p =	-39.56	psf								
					(Cooties o	4.1)					
	Load Coml	oination:	D + 0.6W		(Section 2	.4.1)					
	Design Wi	nd Pressur	e = 0.6W =	-23.74	psf						
		762704290	NAME	16.96							

- 1. Design is based on a 120 mph, 3 second gust wind design per Florida Building Code, 7th Edition (2020). Category II, Exposure C. Components and Cladding, Zone 5.
- No additional wind catching surfaces are added to the supporting structure. The customer's building engineer is to determine the adequacy of the supporting wall.
- 3. Sign design is by others.
- All fasteners shall be zinc coated to prevent corrosion. All penetrations shall be sealed to prevent water intrusion.
- Wall construction is depicted as reported by client. Should field conditions differ from what is shown on this drawing, cease all work and contact SPRINGFIELD SIGN & NEON immediately for direction. The scope of this engineer does not include onsite observations.
- LINK Engineering will not be responsible for the safety on this job site before, during or after installation of this structure. It is the responsibility of the owners, contractors and installers to ensure that the installation and erection of this structure is performed using methods that are in full compliance with OSHA regulations.
- Any deviation from this design or from any part of this drawing, including the General Notes, without prior written consent from LINK Engineering voids this drawing in its entirety.
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CLIENT:



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<u>A</u>	-/-/-	

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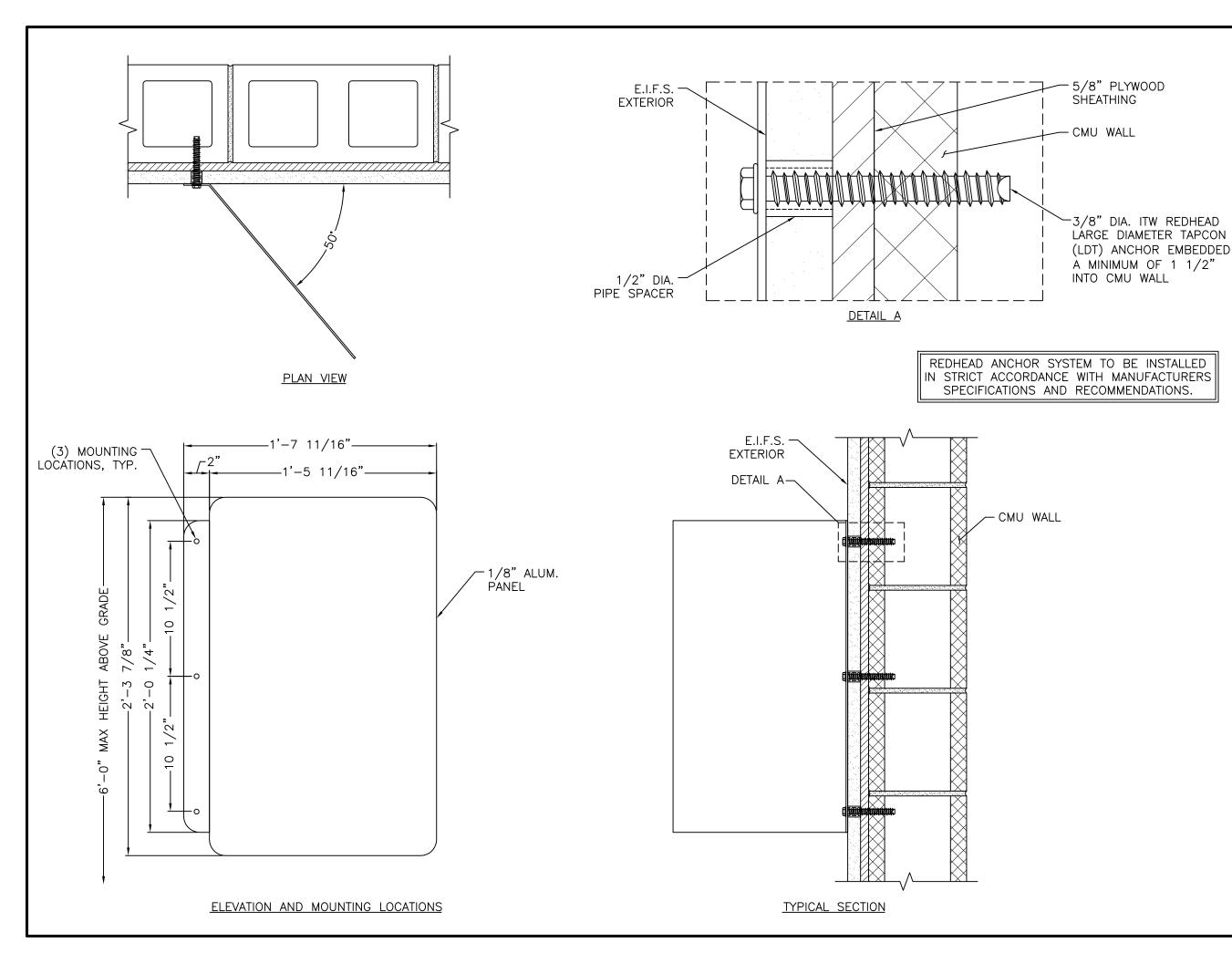
No. 41374



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22-02	282R3	B186704R		
SHT.	OF	DATE:	BY:	
1	2	8/12/22	GHK	

Ca	culations fo	or Drawing	B186704		BB-1 Blad	le Sign					22-0282R
											7/14/2022
Florida Buildi				Cat II							SR
120 MPH	Exp C	Zone 5	6'-0" maxii	mum above	grade						
Treated as Co	omponents	& Cladding		P =	-18.42	PSF					
Estimate wei					-10.42	101					
Latimate wer	grit at 1.5 p	31		Wind		Top Row	Fastener Row	Moment	Max	Average	Avg
CE20 1 02	Area	Area	Est Wt	Load	Fastener	Fastener	Spacing	Arm	Tension	Shear	Ten
Region	in^2	ft^2	Ib	lb	Qty	Qty	in	in	lb	lb	lb
Blade Sign	526.775	3.658	5.49	-67.40	3	1	21.000	6.375	114.5251	1.8	22.47
							Aras (100ean Serves as).				
Maximur	n Fastener	Tension =	114.5	LB							
Maxim	um Fastene	r Shear =	1.8	LB							
IVIANIIII	um astene	onear –	1.0	LD]						
	Wall Signa	ige - Treate	ed as Comp	onents & C	ladding						
V	Vind Speed	120	mph		From ASC	E 7-16, Figu	re 26 5 1B				
, v	Exposure	C	Прп		Zg =	900	116 20.5-1D				
	Zone	5			Alpha =	9.5					
	Height	6	Ft		Арпа –	0.0					
	Sign Area	<10	Ft^2								
	Oigii / iioa	- 10									
	Determine	wind press	ure from A	SCE 7-16 C	hapter 30						
	Chapter 30	: Wind Lo	ads - Com	ponents &	Cladding						
	p = q* (GC	p - Gcpi)			(eq. 30.3-	1 or 30.5-1)					
	q - 0.00256	6 * Kz * Kz	t * Kd * Ke	* V^2	(eq. 26.10	-1)					
	Kz =	0.70			(Table 26.	10-1)					
	Kd =	0.70			(Table 26.	COURT 1					
	Kzt =	1			(Section 2						
	V =	120			(Occion 2	.0.0)					
	Ke =	1									
	q =	21.93274									
	GCp =	-1.4	(From Figu	ure 30.4-1 fo	or h<= 60 fl	and from Fi	gure 30.6-1 for h>	60 ft)			
	GCp =	+1.0									
	p =	-30.71	psf								
	Load Comb	oination:	D + 0.6W		(Section 2	111					
	Load Colli	on auton.	D . 0.0VV		(Section 2	7. 1)					
	Design Wi	nd Pressur	e = 0.6W =	-18.42	psf						
	Design Wi	nd Pressur	e = 0.6W =	13.16	psf						

- Design is based on a 120 mph, 3 second gust wind design per Florida Building Code, 7th Edition (2020). Category II, Exposure C. Components and Cladding, Zone 5.
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- Electrical design is by others.
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