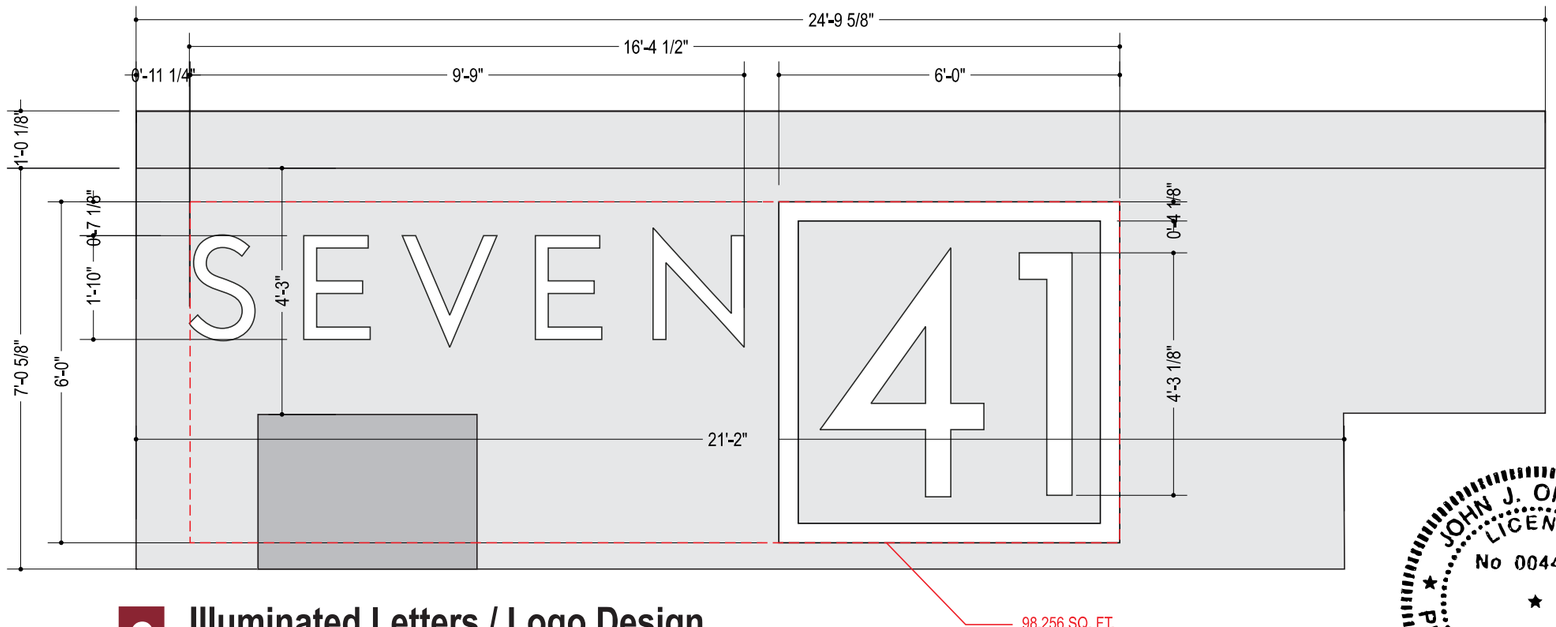
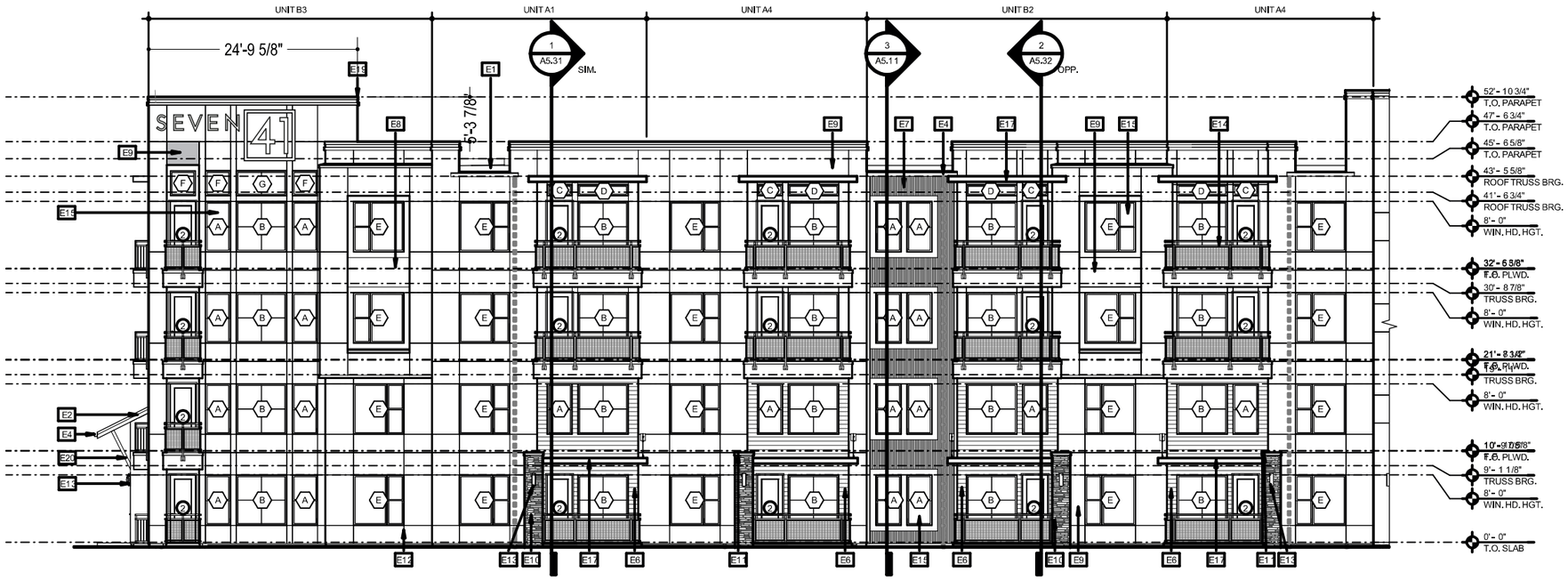


C Illuminated Letters / Logo Design

Scale: 3/8"=1'-0"

John J Orlando PE
Digitally signed by John J Orlando PE
Date: 2023.09.15 11:59:33 -04'00'

This item has been electronically signed and sealed by John J. Orlando, PE using a Digital Signature and date.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

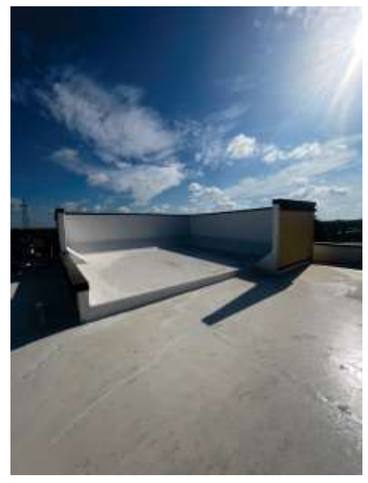


C SOUTH ELEVATION / CRANDON AVE.

SCALE: 1/16"=1'-0"

Proposed Updated Conditions

Night Conditions



Proposed Updated Conditions

Conforms to the requirements of the 7th Edition (2020) of the Florida Building Code sections 1609 and 3107, V(ult) = 140 mph, Exposure category = C, Risk category = II
John J. Orlando PE LLC - 165 Old Ridge Road - Macon, GA 31211 - 478 731 5394 - jjorlando@cox.net - Florida registration # 0044089 job 8923CSD

CREATIVE SIGN DESIGNS
12801 Commodity Place
Tampa, Florida 33626
Phone: 813-818-7100
Fax: 813-749-2311
www.creativesigndesigns.com

PROJECT:
SEVEN-41
WINTER PARK

SITE ADDRESS
741 Clay Street
Winter Park, FL.

CRM / Quote:
_____-206398

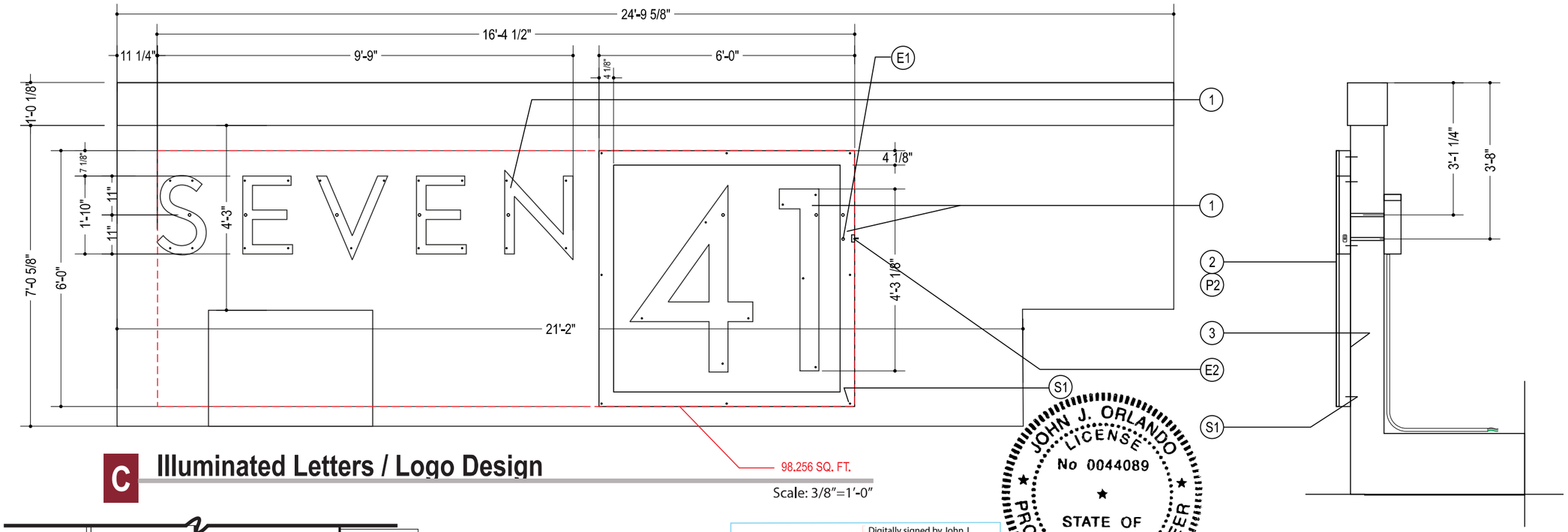
Account Manager: **MBM**
Project Manager / Project Leader: **SR**
Designer: **DRB** Date: **08-15-2022**

Revision:

No.	Date	Description
01	08/24/2021	customer up-dates DRB
02	08/29/2021	customer up-dates DRB
03	08/31/2021	customer up-dates DRB
04	10/10/2021	customer up-dates DRB
05	06/02/23	Removed options - AW
06	6/26/2023	PROD / customer up-dates DRF
07	07.24.2023	QC REVIEW - LOUGH

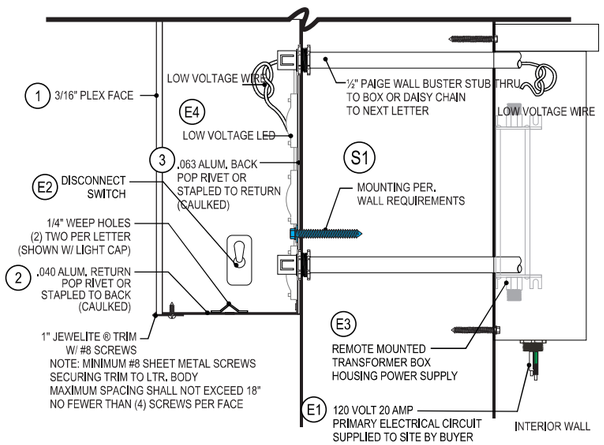
QC 07.24.2023
QC REVIEW M LOUGH DESIGN MANAGER

Sheet: **1** **1 of 5**



C Illuminated Letters / Logo Design

Scale: 3/8"=1'-0"



C SECTION DETAIL ILLUMINATED CHANNEL LETTERS REMOTE POWER SOURCE

SCALE: NTS

FASTENER SCHEDULE - FLUSH MOUNT CHANNEL LETTERS

2 Places (Minimum) Each Letter

*** All Fasteners Shall Be Spaced Evenly ***

Wall Material	Anchor Type
CONCRETE (3KSI) or HOLLOW MASONRY	1/4" TAPCONS OR EQUIVALENT WITH MIN 1.25" OF EMBEDMENT
	1/4" EXPANSION ANCHORS WITH MIN 2.5" OF EMBEDMENT
1/2" PLYWOOD (NO ACCESS BEHIND)	1/4" TOGGLE BOLTS
	1/4" WOOD SCREWS OR TAPCONS, FULL EMBEDMENT
METAL STUDS OR METAL PANELS	#14 METAL SCREWS TO MIN 18ga STEEL OR 0.090" ALUMINUM
HOLLOW WALL (BLOCKING BEHIND)	1/4" THRUBOLTS
	1/4" X 5" LAGS

John J Orlando PE

Digitally signed by John J Orlando PE
Date: 2023.09.15 11:59:46 -04'00'

This item has been electronically signed and sealed by John J. Orlando, PE using a Digital Signature and date.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FOR ESTIMATE USE ONLY FOR LED

FOR ESTIMATE USE ONLY FOR LED

Date	Module	Power Supply	Module Pitch	Total Dimensions	Double Sided
Friday, July 21, 2023	Phoenix PF-3120 (1.5 per ft)	HanleyLED 60w 12v	7.16"	22.08" x 85.13" x 5"	No
Total Watts	**Total Module Count**	**Total Power Supplies**	**Modules Per Letter**		
49.2	41	1	[S] - 8; [E] - 9; [V] - 6; [E] - 9; [N] - 9;		

Date	Module	Power Supply	Module Pitch	Total Dimensions	Double Sided
Friday, July 21, 2023	Phoenix PF-3120 (1.5 per ft)	HanleyLED 60w 12v	7.22"	51.19" x 41.57" x 5"	No
Total Watts	**Total Module Count**	**Total Power Supplies**	**Modules Per Letter**		
25.2	21	1	[4] - 14; [1] - 7;		

Date	Module	Power Supply	Module Pitch	Total Dimensions	Double Sided
Friday, July 21, 2023	Phoenix PF-3120 (1.5 per ft)	HanleyLED 60w 12v	7.47"	60.46" x 35.86" x 5"	No
Total Watts	**Total Module Count**	**Total Power Supplies**	**Modules Per Letter**		
38.4	32	1	[I] - 8; [I] - 8; [I] - 8; [I] - 8;		

PRODUCTION NOTES

1) FACE - 3/16" #7328 WHITE HELD W/ WHITE JEWELITE TRIM CAP
2) RETURNS - TO BE .040 WHITE ON WHITE ALUMINUM WITH CLINCHED BEND
3) BACKS - TO BE .063 WHITE ON WHITE ALUMINUM

PAINT NOTES:

ALL PAINTED SURFACES TO HAVE SATIN PAINT
P2) TO MATCH MP 202SP WHITE

P2
MP 202SP WHITE

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS.
2. EXISTING WALL CONSTRUCTION TYPE MUST BE DETERMINED AT THE ACTUAL PROPOSED LOCATION OF THE LETTERS BY THE CONTRACTOR.
3. CONTRACTOR SHALL VERIFY THAT FASTENERS CHOSEN ARE SUITABLE WITH WALL CONDITION TO WITHSTAND THE STATED PULLOUT FORCE.
4. THE BUILDING ENGINEER SHALL INCLUDE THE LOADS APPLIED BY THE SIGN STRUCTURE IN THE DESIGN OF THE WALL SYSTEM.
5. INSTALLATION SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES.

STRUCTURE NOTES:

S1) LETTERS TO WALL (PLYWOOD)
COORDINATE WITH ROOFER TO SEAL MEMBRANE

ELECTRICAL NOTES:

E1) 120 VOLT 20 AMP PRIMARY ELECTRIC CIRCUIT SUPPLIED TO SITE BY BUYER
E2) ELECTRICAL DISCONNECT SWITCH
E3) LED POWER SUPPLY
E4) WHITE LED
E5) ELECTRIC STUB THRU

L.E.D. NOTES:

120 VOLT / 20 AMP

LED TYPE: PHOENIX PHOENIX PF-3120	COLOR: WHITE 7000K	
LED MODULES: 94	SECONDARY	
LED POWER SOURCE TYPE: HANLEYLED 60W 12V	VOLTS	WATTS
	12	60
POWER SUPPLY QTY.: 3	AMP INPUT: .90 EA	

TOTAL AMP LOAD: 2.7 AMPS
REQUIRED 120V CIRCUITS: (1) 20 AMP

Conforms to the requirements of the 7th Edition (2020) of the Florida Building Code sections 1609 and 3107, V(ult) = 140 mph, Exposure category = C, Risk category = II
John J. Orlando PE LLC - 165 Old Ridge Road - Macon, GA 31211 - 478 731 5394 - jjorlando@cox.net - Florida registration # 0044089 job 8923CSD

CREATIVE SIGN DESIGNS
12801 Commodity Place
Tampa, Florida 33626
Phone: 813-818-7100
Fax: 813-749-2311
www.creativesigndesigns.com

PROJECT:
SEVEN-41
WINTER PARK

SITE ADDRESS
741 Clay Street
Winter Park, FL.

CRM / Quote:
_____-206398

Account Manager:
MBM

Project Manager / Project Leader
SR

Designer: **DRB** Date: **08-15-2022**

Revision:

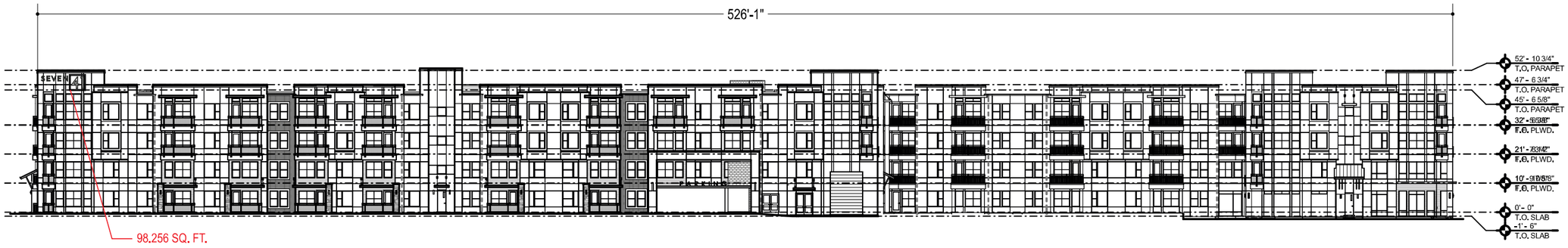
No.	Date	Description
01	08/24/2021	customer up-dates DRB
02	08/29/2021	customer up-dates DRB
03	08/31/2021	customer up-dates DRB
04	10/10/2021	customer up-dates DRB
05	06/02/23	Removed options - AW
06	6/26/2023	PROD / customer up-dates DRF
07	07.24.2023	QC REVIEW - LOUGH

LISTED MET us E212525
Complies to NEC 2017 — 2017 Edition

ALL ELECTRICAL COMPONENTS WILL BE UL 48 ELEC. SIGNS AND APPROVED AS PER 2014 & 2017 NEC 600,3 AND MARKED AS PER NEC 600,4. THE INSTALLATION OF THE WIRING WILL BE DONE AS PER FBC 4505,4 AND DESIGNATED TO UL 48. ALL SIGNS ARE TO BE GROUNDED AND BONDED PER NEC 600,7 AND 250,122.
AN ELECTRICAL DISCONNECT WILL BE PROVIDED PER NEC 600,6
ALL WIRING INSIDE LETTERING WILL BE LOW VOLTAGE UNDER UL SIGN ACCESSORIES MANUAL (SAM) E242084. LISTED AND APPROVED AS PER 2017 NEC 600,3 AND MARKED PER NEC 600,4.
PRIMARY ELECTRICAL SOURCE TO BE SUPPLIED BY CUSTOMER WITHIN SIX (6) FEET OF SIGN. ALL PRIMARY WIRING WILL BE #12 THWN, DRAIN HOLES PER NEC 600-8(G)
(1) DEDICATED 20 AMP CIRCUIT PER SIGN PER NEC 600,5

QC 07.24.2023
QC REVIEW M LOUGH DESIGN MANAGER

Sheet:
2 **2 of 5**



C SOUTH ELEVATION / CRANDON AVE.

SCALE: 3/128"=1'-0"

CREATIVE SIGN DESIGNS
12801 Commodity Place
Tampa, Florida 33626
Phone: 813-818-7100
Fax: 813-749-2311
www.creativesigndesigns.com

PROJECT:

SEVEN-41
WINTER PARK

SITE ADDRESS

741 Clay Street
Winter Park, FL.

CRM / Quote:

_____-206398

Account Manager:
MBM

Project Manager / Project Leader
SR

Designer:	Date:
DRB	**08-15-2022**

Revision:

No.	Date	Description
01	08/24/2021	customer up-dates DRB
02	08/29/2021	customer up-dates DRB
03	08/31/2021	customer up-dates DRB
04	10/10/2021	customer up-dates DRB
05	06/02/23	Removed options - AW
06	6/26/2023	PROD / customer up-dates DRF
07	07.24.2023	QC REVIEW - LOUGH

LISTED MET US E212525

Complies to NEC 2017 — 2017 Edition

ALL ELECTRICAL COMPONENTS WILL BE UL 48 ELEC. SIGNS AND APPROVED AS PER 2014 & 2017 NEC 600.3 AND MARKED AS PER NEC 600.4. THE INSTALLATION OF THE WIRING WILL BE DONE AS PER FBC 605.4 AND DESIGNATED TO UL 48. ALL SIGNS ARE TO BE GROUNDED AND BONDED PER NEC 600.7 AND 250.122.
AN ELECTRICAL DISCONNECT WILL BE PROVIDED PER NEC 600.6
ALL WIRING INSIDE LETTERING WILL BE LOW VOLTAGE UNDER UL SIGN ACCESSORIES MANUAL (SAM) E242084, LISTED AND APPROVED AS PER 2017 NEC 600.3 AND MARKED PER NEC 600.4.
PRIMARY ELECTRICAL SOURCE TO BE SUPPLIED BY CUSTOMER WITHIN SIX (6) FEET OF SIGN, ALL PRIMARY WIRING WILL BE #12 THWN, DRAIN HOLES PER NEC 600-8(G)
(1) DEDICATED 20 AMP CIRCUIT PER SIGN PER NEC 600.5

QC 07.24.2023
QC REVIEW
M LOUGH
DESIGN MANAGER

JOHN J. ORLANDO LICENSE No 0044089 STATE OF FLORIDA PROFESSIONAL ENGINEER

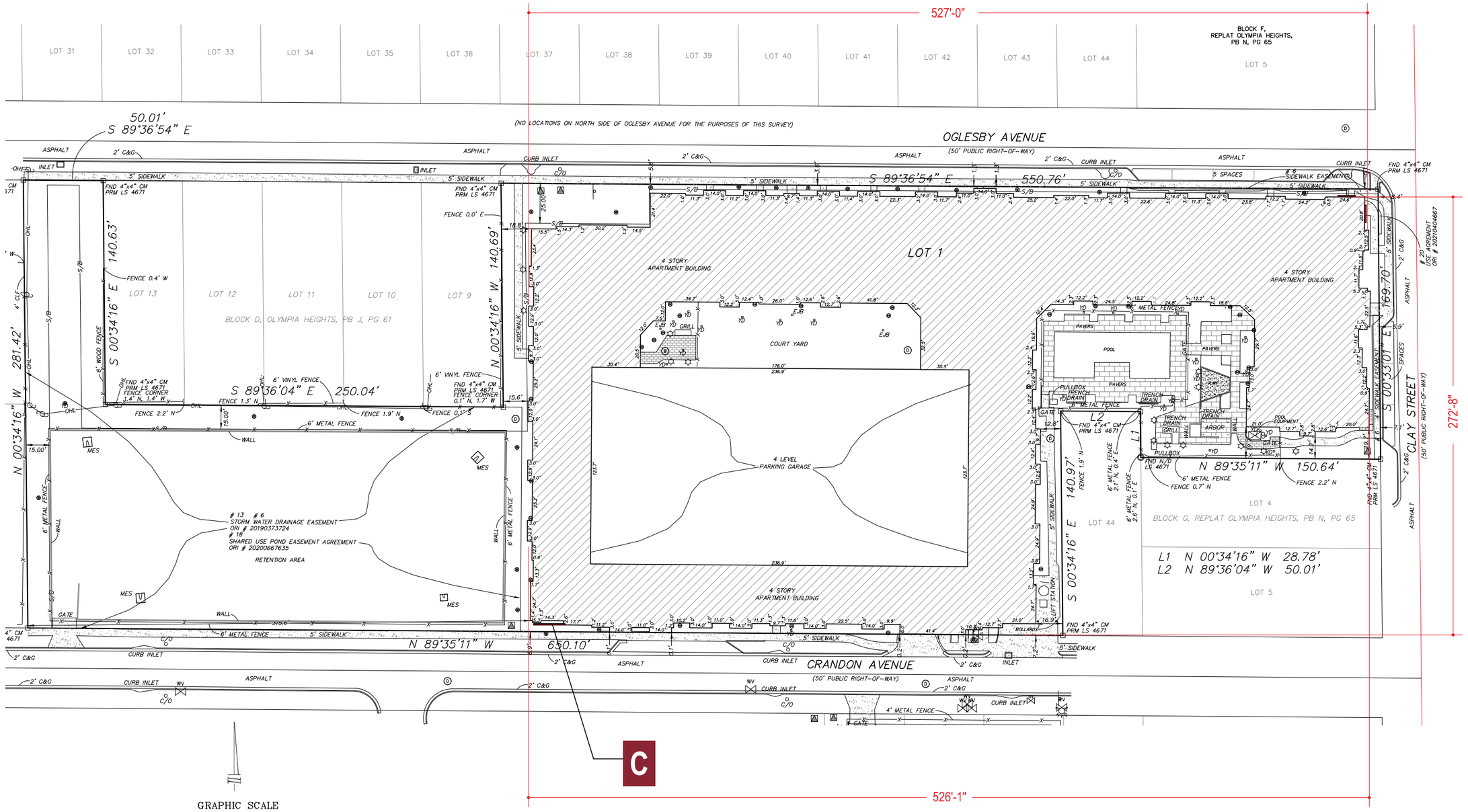
John J Orlando PE
Digitally signed by John J Orlando PE
Date: 2023.09.15 12:00:00 -04'00'

This item has been electronically signed and sealed by John J. Orlando, PE using a Digital Signature and date.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Conforms to the requirements of the 7th Edition (2020) of the Florida Building Code sections 1609 and 3107, V(ult) = 140 mph, Exposure category = C, Risk category = II
John J. Orlando PE LLC - 165 Old Ridge Road - Macon, GA 31211 - 478 731 5394 - jjorlando@cox.net - Florida registration # 0044089 job 8923CSD

Sheet:

3 **3 of 5**



GRAPHIC SCALE

50 40 30 20 10 0 50

SCALE: 1/64"=1'-0"

SITE PLAN

JOHN J. ORLANDO LICENSE No 0044089 STATE OF FLORIDA PROFESSIONAL ENGINEER

John J Orlando PE

Digitally signed by John J Orlando PE
Date: 2023.09.15 12:00:15 -04'00'

This item has been electronically signed and sealed by John J. Orlando, PE using a Digital Signature and date.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Conforms to the requirements of the 7th Edition (2020) of the Florida Building Code sections 1609 and 3107, V(ult) = 140 mph, Exposure category = C, Risk category = II
John J. Orlando PE LLC - 165 Old Ridge Road - Macon, GA 31211 - 478 731 5394 - jjorlando@cox.net - Florida registration # 0044089 job 8923CSD

CREATIVE SIGN DESIGNS
12801 Commodity Place
Tampa, Florida 33626
Phone: 813-818-7100
Fax: 813-749-2311
www.creativesigndesigns.com

PROJECT:

SEVEN-41
WINTER PARK

SITE ADDRESS

741 Clay Street
Winter Park, FL.

CRM / Quote:
_____-206398

Account Manager: **MBM**

Project Manager / Project Leader: **SR**

Designer: **DRB** | Date: **08-15-2022**

Revision:

No.	Date	Description
01	08/24/2021	customer up-dates DRB
02	08/29/2021	customer up-dates DRB
03	08/31/2021	customer up-dates DRB
04	10/10/2021	customer up-dates DRB
05	06/02/23	Removed options - AW
06	6/26/2023	PROD / customer up-dates DRF
07	07.24.2023	QC REVIEW - LOUGH

LISTED MET us E212525

Complies to NEC 2017 — 2017 Edition

ALL ELECTRICAL COMPONENTS WILL BE UL 48 ELEC. SIGNS AND APPROVED AS PER 2014 & 2017 NEC 600,3 AND MARKED AS PER NEC 600,4. THE INSTALLATION OF THE WIRING WILL BE DONE AS PER FBC 4595.4 AND DESIGNATED TO UL 48. ALL SIGNS ARE TO BE GROUNDED AND BONDED PER NEC 600,7 AND 250,122.
AN ELECTRICAL DISCONNECT WILL BE PROVIDED PER NEC 600,6
ALL WIRING INSIDE LETTERING WILL BE LOW VOLTAGE UNDER UL SIGN ACCESSORIES MANUAL (SAM) E242084, LISTED AND APPROVED AS PER 2017 NEC 600,3 AND MARKED PER NEC 600,4.
PRIMARY ELECTRICAL SOURCE TO BE SUPPLIED BY CUSTOMER WITHIN SIX (6) FEET OF SIGN, ALL PRIMARY WIRING WILL BE #12 THWN, DRAIN HOLES PER NEC 600-8(G)
(1) DEDICATED 20 AMP CIRCUIT PER SIGN PER NEC 600,5

QC 07.24.2023
QC REVIEW M LOUGH DESIGN MANAGER

Sheet: **4** | **4 of 5**

Job name	SEVEN-41 (south)
Job#	8923CSD
Sign company:	Creative Sign Designs
Installation location:	741 Clay St, Winter Park, FL 32789

Section 3107 and 1609 of Florida Building Code 2020 and Chapter 30 ASCE 7-16 applies.
Application of wind pressures using the alternative all heights method for components and cladding

Type of structure: flush mounted LED channel letters and logo

Occupancy Category: II

Wind velocity (3 sec gust), FBC 2020, section 1609.3: 140 mph

Wind pressure (qz) 50.2 psf

Net Pressure Coeficient (Cnet) from Figure 30.7-2
Components and cladding not in areas of discontinuity - walls and parapets -1.09
Wind Pressure -54.7 psf

Wind load applied between wall and structure, pulling structure away from wall
Load carried by tension in fasteners connecting structure to wall

- maximum height of structure to be attached	6.00	ft
- maximum width of structure to be attached	0.34	ft
- effective projected area factor	1.00	
- projected area of each component to be attached	2.1	ft^2
- wind load	-113	lbs
- allowable tension load per fastener to	150	lbs
- even number of fasteners minimum of 2 =	-2	
- number of fasteners practically required due to structure shape	3	
- weight of structure is approximately	3	lbs
- allowable shear load per fastener to	100	lbs
- average shear load per fastener =	1.0	lbs

Mounting surface construction is: to be determined
Use methods: 1 through 7

Method 1 - 1/4" A36 Threaded rod or GR2 through bolts into a blocking member.
- safe working tension load = 160 pounds
- safe working shear load = 200 pounds
http://www.derose.net/steve/resources/engtables/bolts.html

Method 2 - Lag bolts into framing members.
-use 1/4" galvanized lag bolts with at least 3" of embedment into framing members.
- allowable pull out load = 225 pounds
http://www.siegefiles.outlands.org/Construction%20Plans/Tables,%20References%20and%20Best%20Practices/Fasteners/Lag%20Screw%20Withdrawal%2

Method 3 - 1/4-20 SS Toggler zip toggle anchors (BBS)
- allowable pull out load = 125 lbs
- allowable shear out load = 100 lbs
https://toggler.com/pdfs/SNAPTOGGLE%C2%AE-Heavy-Duty-Toggle-Bolts.pdf
NOTE: . Design assumes that fasteners are installed according to manufacturer's instructions, using correct size drill.

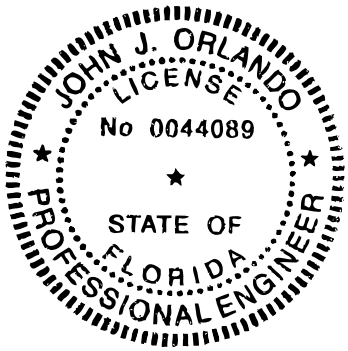
Method 4 - Hilti 1/4" Kwik Bolt with 2 1/2" embedment
allowable loads in grout filled cmu
- allowable tension load = 150 lbs
- allowable shear load = 380 lbs
NOTE: . Design assumes that fasteners are installed according to manufacturer's instructions, using correct size drill.
https://www.hilti.com/medias/sys_master/documents/h06/9176315265054/Technical-information-ASSET-DOC-LOC-3009635.pdf

Method 5 - 1/4" Tapcon
- depth of embedment in hollow concrete bock = 1 1/4"
- allowable tension strength = 250 lbs
- allowable shear strength = 620 lbs
https://www.itwredhead.com/portals/0/fmproductcatalog/documents/products/37/tapcontechnicaldata.pdf

Method 6 - #14 self tapping sheet metal screws to min 18ga steel or 0.090" aluminum
http://www.itwbuildex.com/pdf/teks_select_datasheet.pdf
- allowable tension (pull out) load = 400 pounds

Method 7 - 1/4" wood screws in 1/2" plywood
https://www.zillarac.com/Portals/0/Documents/PDF/Screw%20Pull-out.pdf
- allowable tension load = 150 pounds

References:
ASCE 7-16
The 7th Edition (2020) of the Florida Building Code



John J. Orlando PE LLC 0044089
165 Old Ridge Road
Macon, GA 31211
(478) 731-5394
jjorlando@cox.net

John J Orlando PE
Digitally signed by John J Orlando PE
Date: 2023.09.15 12:00:29 -04'00'