

## Structural Design Calculations

For

### MEGA STORAGE 520 NE TOWN CENTRE DRIVE LEE'S SUMMIT, MO



03/02/2022

**DAVIDSON AE** 

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## Design Loads

APEX ENGINEERS INC

Project: Mega Storage
Client: Davidson AE
Engineer: JB

Date: 3/2/2022

Description: Dead Load Development

#### **Roof Dead Load Calculations**

Typical Roof		
Standing Seam Metal	1.50 psf	
None	0.00 psf	
CFM Framing	2.30 psf	< Equivalent to 1200S162-54 @ 16" o.c.
None	0.00 psf	
None	0.00 psf	
No	0.00 psf	
No	0.00 psf	
No	0.00 psf	
	0.00 psf	
	3.80 psf	
0.50 : 12		
	4 psf	
	Standing Seam Metal None CFM Framing None None No No No	Standing Seam Metal       1.50 psf         None       0.00 psf         CFM Framing       2.30 psf         None       0.00 psf         No       0.00 psf         No       0.00 psf         No       0.00 psf         No       0.00 psf         0.00 psf       0.00 psf         0.50 psf       3.80 psf

#### **Wall Dead Load Calculations**

Description	Typ Exterior		
Exterior Finish	Metal Panel	2.00 psf	
Wall Sheathing	None	0.00 psf	
Wall Framing	CFM Framing	1.20 psf	< Equivalent to 600S162-54 @ 16" o.c.
Insulation	None	0.00 psf	
Interior Finish	None	0.00 psf	_
Miscellaneous		0.00 psf	
Total DL:		4 psf	

APEX ENGINEERS,INC Project: Mega Storage
Client: Davidson AE
Engineer: JB
Date: 3/2/2022

Description: Live Load Tables

Occupancy or Use	Uniform, L <sub>o</sub> (psf)	Live Load Reduction Permitted?	Multiple-Story Live Load Reduction Permitted?	Concentrated (lb)
Roofs	, , , ,			
Roof: Ordinary flat, pitched, and curved	20	Yes	_	

Reference Pella Building Systems calculation packages for specific loading conditions and reactions used in for the foundation design.

## Foundation Design



Mega Storage JB Project Title: Engineer:

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

Project File: Mega Storage\_Shawnee.ec6

Project ID: Project Descr:

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (1, 2, 3) - Exterior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

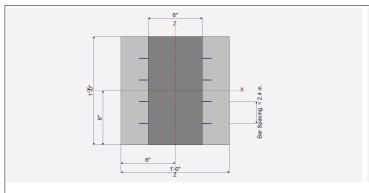
Load Combinations Used: IBC 2018

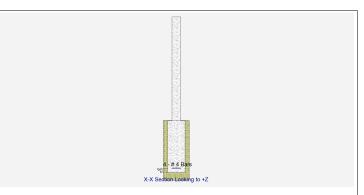
#### **General Information**

Material Properties f'c: Concrete 28 day strength fy: Rebar Yield Ec: Concrete Elastic Modulus Concrete Density  (p) Values Flexure	= = = =	3.50 ksi 60.0 ksi 3,122.0 ksi 145.0 pcf 0.90	Soil Design Values Allowable Soil Bearing Increase Bearing By Footing Weight Soil Passive Resistance (for Sliding) Soil/Concrete Friction Coeff.	= = = =	1.50 ksf No 250.0 pcf 0.30
Shear  Analysis Settings  Min Steel % Bending Reinf.  Min Allow % Temp Reinf.	= =	0.750 0.00180	Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below	= = =	ft ksf ft
Min. Overturning Safety Factor Min. Sliding Safety Factor AutoCalc Footing Weight as DL:	fin. Overturning Safety Factor = 1.0 : 1 fin. Sliding Safety Factor = 1.0 : 1		Increases based on footing Width Allow. Pressure Increase per foot of width when footing is wider than Adjusted Allowable Bearing Pressure	= =	ksf ft 0.0 ksf

**Dimensions** Reinforcing

Footing Width 1.0 ft Footing Thickness 36.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = Wall center offset at Bottom of footing = Reinforcing Bar Size  $3.0\,\text{in}$ from center of footing 0 in





		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0720	0.0810		0.0810			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	d =	in	above top of foo	oting				



LIC#: KW-06014638, Build:20.22.2.9

Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

Project File: Mega Storage\_Shawnee.ec6

**Wall Footing** 

APEX ENGINEERS INC

(c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (1, 2, 3) - Exterior Footing

DESIGN SUMMARY Factor of Safety Item				Applied		Capacity		Design OK Governing Load Combination			
PASS	n/a	Overturni	og 7 .	7		k-ft	0.0 k-ft			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
PASS	n/a	Sliding - 2	Ū	<u>~</u>			0.0 k-n		No Overturning No Sliding		
		J	\ <del>-</del> ^						U		
PASS	n/a	Uplift			0.0	K	0.0 k	Γ	No Uplift		
Uti	lization Ratio	Item			Applied		Capacity	Governing	Load Comb	oination	
PASS	0.0	Soil Bear	ng		0.0	ksf	0.0 ksf		0.0		
PASS	0.0	Z Flexure	(+X)		0.0 k-ft		0.0 k-ft	No	o Moment		
PASS	0.0	Z Flexure	(-X)		0.0 k-ft 0.0 k-ft		No	o Moment			
PASS	n/a	1-way Sh	ear (+X	()	0.0 psi		0.0 psi		n/a		
PASS	0.0	1-way Sh	ear (-X	)	0.0 psi		0.0 psi	n/a			
etailed Res	ults										
Soil Bearing											
<b>Rotation Axis</b>								earing Stress	Actual / A		
	nbination			Gro	oss Allowable	Xecc	-X	+X	Rat		
verturning Sta	bility								Units : k	:-ft	
Rotation Axis Load Con	& nbination			Overt	urning Momer	nt	Resisting Moment	Stability Ratio	o Sta	itus	
Footing Has N	Overturning										
liding Stability	•										
Force Applica	tion Axis			SI.	Sliding Force		Resisting Force	Sliding SafetyRa	atio Status		
Footing Has N				31	iding i orce		Resisting Force	Silding Saletyika	alio Sta	itus	
ooting Flexure	-										
Flexure Axis	& Load Combi	nation	Mu k-ft	Which T Side?	ension @ Bot. or Top ?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Statu	
									Units : k		
ne Way Shear									Ullits . K		



Project Title: Engineer: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064

Project ID: Project Descr: Foundation Design

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (1, 2, 3) - Interior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

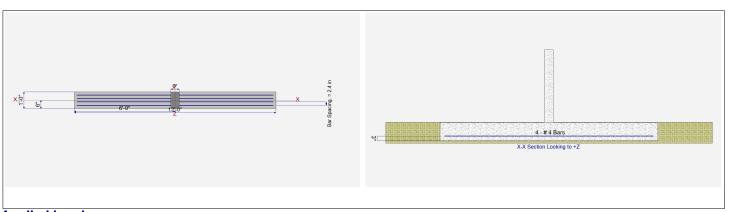
Load Combinations Used: IBC 2018

#### **General Information**

Material Properties			Soil Design Values		
f'c : Concrete 28 day strength = 3.50			Allowable Soil Bearing	=	1.50 ksf
fy : Rebar Yield	fy: Rebar Yield = 60.0 ksi		Increase Bearing By Footing Weight	=	No
Ec : Concrete Elastic Modulus	=	3,122.0 ksi	Soil Passive Resistance (for Sliding)	=	250.0 pcf
Concrete Density	=	145.0 pcf	Soil/Concrete Friction Coeff.	=	0.30
Values Flexure	=	0.90			
, Shear	=	0.750	Increases based on footing Depth		
Analysis Settings			Reference Depth below Surface	=	ft
Min Steel % Bending Reinf.	=		Allow. Pressure Increase per foot of depth	=	ksf
Min Allow % Temp Reinf.	=	0.00180	when base footing is below	=	ft
Min. Overturning Safety Factor	=	1.0:1	Increases based on footing Width		
Min. Sliding Safety Factor	· · · · · · · · · · · · · · · · · · ·		Allow. Pressure Increase per foot of width	=	ksf
AutoCalc Footing Weight as DL:		Yes	when footing is wider than	=	ft
			Adjusted Allowable Bearing Pressure	=	0.0 ksf

**Dimensions** Reinforcing

Footing Width 12.0 ft Footing Thickness 12.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = 4 Wall center offset at Bottom of footing = 3.0 in Reinforcing Bar Size 4 from center of footing 0 in



		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0770	0.130		0.130			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	=	in a	above top of foo	oting				



LIC#: KW-06014638, Build:20.22.2.9

Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6

(c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (1, 2, 3) - Interior Footing

Fac	tor of Safety	Item			Applied		Capacity	Governing	Load Comb	ination	
PASS	n/a	Overturnir	ng - Z-2	<u> </u>	0.0 k-ft			No Overturning			
PASS	n/a	Sliding - X	(-X		0.0	k	0.0 k	N	lo Sliding		
PASS	n/a	Uplift			0.0 k 0.0 k N		No Uplift	· ·			
Uti	lization Ratio	Item			Applied		Capacity	Governing	Load Comb	ination	
PASS	0.0	Soil Beari	ng		0.0	ksf	0.0 ksf		0.0		
PASS	0.0	Z Flexure	(+X)		0.0 k-ft 0.0 k-ft		No	o Moment			
PASS	0.0	Z Flexure	(-X)		0.0	k-ft	0.0 k-ft	0.0 k-ft		o Moment	
PASS	n/a	1-way She	ear (+X	()	0.0 psi		0.0 psi		n/a		
PASS	0.0	1-way She			0.0 psi		0.0 psi	n/a			
tailed Res	ults										
oil Bearing											
otation Axis Load Con	& nbination			Gı	ross Allowable	Xecc	Actual Soil B -X	Bearing Stress +X	Actual / A Rat		
erturning Sta	bility								Units : k	-ft	
otation Axis Load Con	& nbination			Over	rturning Momen	nt	Resisting Moment	Stability Ratio	o Sta	tus	
ooting Has N ling Stability	O Overturning										
orce Applica Load Cor	tion Axis nbination			Sliding SafetyRa	atio Sta	tus					
ooting Has N				\A/I. ! - I.	Tension @ Bot.	As Reg'd	Gvrn. As	Actual As	Phi*Mn		
ting Flexure	& Load Combi	nation	Mu k-ft	Side ?	or Top ?	in^2	in^2	in^2	k-ft	Status	
ting Flexure		nation					in^2	in^2	k-ft Units : k		

APEX ENGINEERS INC



Mega Storage JB Project Title: Engineer:

Project ID: Project Descr: 520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (4, 5) - Exterior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

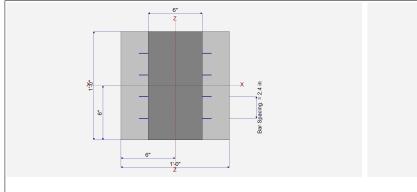
Load Combinations Used: IBC 2018

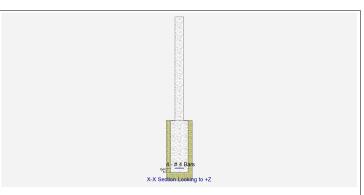
#### **General Information**

Material Properties f'c: Concrete 28 day strength fy: Rebar Yield Ec: Concrete Elastic Modulus Concrete Density	= = = =	3.50 ksi 60.0 ksi 3,122.0 ksi 145.0 pcf	Soil Design Values Allowable Soil Bearing Increase Bearing By Footing Weight Soil Passive Resistance (for Sliding) Soil/Concrete Friction Coeff.	= = = =	1.50 ksf No 250.0 pcf 0.30
φ Values Flexure Shear Analysis Settings Min Steel % Bending Reinf. Min Allow % Temp Reinf.	= = = =	0.90 0.750 0.00180	Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below	= = =	ft ksf ft
Min. Overturning Safety Factor Min. Sliding Safety Factor AutoCalc Footing Weight as DL:	=	1.0 : 1 1.0 : 1 Yes	Increases based on footing Width Allow. Pressure Increase per foot of width when footing is wider than Adjusted Allowable Bearing Pressure	= =	ksf ft 0.0 ksf

**Dimensions** Reinforcing

Footing Width 1.0 ft Footing Thickness 36.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = Wall center offset at Bottom of footing = Reinforcing Bar Size  $3.0\,\text{in}$ from center of footing 0 in





		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0690	0.0650		0.0650			k
OB : Overburden	=							ksf
V-x	= '							k
M-zz	=							k-ft
Vx applied	=	in :	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

(c) ENERCALC INC 1983-2022

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6 LIC#: KW-06014638, Build:20.22.2.9

APEX ENGINEERS INC

**DESCRIPTION:** Building (4, 5) - Exterior Footing

					•					
DESIGN	SUMMARY								esign OK	
	Factor of Safet	y Item			Applied		Capacity	Governing	Load Com	bination
PAS	S n/a	Overturning	j - Z-Z		0.0	k-ft	0.0 k-ft	No (	Overturning	
PAS	S n/a	Sliding - X-	Χ		0.0	k	0.0 k	No Sliding		
PAS	<b>s</b> n/a	Uplift			0.0	k	0.0 k	1	No Uplift	
	Utilization Ration	o Item			Applied		Capacity	Governing	Load Com	bination
PASS	0.0	Soil Bearing	g		0.0	ksf	0.0 ksf		0.0	
PAS	<b>S</b> 0.0	Z Flexure (-	+X)	0.0 k-ft			0.0 k-ft	No	Moment	
PAS	<b>S</b> 0.0	Z Flexure (-	-X)	0.0 k-ft			0.0 k-ft	No	Moment	
PAS	PASS n/a 1-way Shear (+X			0.0 psi			0.0 psi		n/a	
PAS	PASS 0.0 1-way Shear (-X)			0.0 psi			0.0 psi			
Detailed	Results									
Soil Bear	ing									
Rotation Load	Axis & Combination			Gre	oss Allowable	Xecc	Actual Soil B -X	Bearing Stress +X	Actual / A	
Overturnin	g Stability								Units: I	κ-ft
Rotation Load	Axis & Combination			Overt	urning Momen	t	Resisting Moment	Stability Ratio	o Sta	atus
Footing Footing Sta	Has NO Overturnir Ibility	g								
	plication Axis			S	liding Force		Resisting Force	Sliding SafetyRa	atio Sta	atus
Footing H	Has NO Sliding									
Footing Flo	exure									
Flexure	Axis & Load Com	bination		Which T Side?	ension @ Bot. or Top ?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Statu
One Way S	hear								Units : k	(
	Load Combination Vu @ -X									



Project Title: Engineer: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064

Project ID: Project Descr: Foundation Design

Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (4, 5) - Interior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

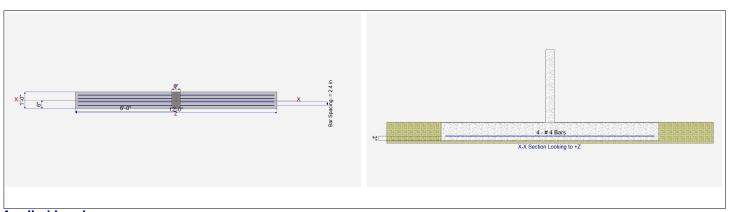
Load Combinations Used: IBC 2018

#### **General Information**

Material Properties			Soil Design Values		
f'c : Concrete 28 day strength	=	3.50 ksi	Allowable Soil Bearing	=	1.50 ksf
fy : Rebar Yield	=	60.0 ksi	Increase Bearing By Footing Weight	=	No
Ec : Concrete Elastic Modulus	=	3,122.0 ksi	Soil Passive Resistance (for Sliding)	=	250.0 pcf
Concrete Density	=	145.0 pcf	Soil/Concrete Friction Coeff.	=	0.30
	=	0.90			
Shear	=	0.750	Increases based on footing Depth		
Analysis Settings			Reference Depth below Surface	=	ft
Min Steel % Bending Reinf.	=		Allow. Pressure Increase per foot of depth	=	ksf
Min Allow % Temp Reinf.	=	0.00180	when base footing is below	=	ft
Min. Overturning Safety Factor	=	1.0:1	Increases based on footing Width		
Min. Sliding Safety Factor	=	1.0:1	Allow. Pressure Increase per foot of width	=	ksf
AutoCalc Footing Weight as DL:		Yes	when footing is wider than	=	ft
Ç Ç			Adjusted Allowable Bearing Pressure	=	0.0 ksf

**Dimensions** Reinforcing

Footing Width 12.0 ft Footing Thickness 12.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = 4 Wall center offset at Bottom of footing = 3.0 in Reinforcing Bar Size 4 from center of footing 0 in



		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0730	0.130		0.130			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	=	in a	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6 LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (4, 5) - Interior Footing

		_	. ,			•					
DESIGN	SUMMAR									esign OK	
	Factor of S	Safety	Item			Applie	d	Capacity	Governing	Load Comb	oination
PAS	ss n/a	С	) Verturning	g - Z-Z	<u> </u>	0.	0 k-ft	0.0 k-ft	No	Overturning	
PAS	ss n/a	S	liding - X-	Χ		0.	0 k	0.0 k	N	lo Sliding	
PAS	ss n/a	U	Jplift			0.	0 k	0.0 k	ı	No Uplift	
	Utilization	Ratio	Item			Applie	d	Capacity	Governing	Load Comb	ination
PAS	SS 0.0	S	oil Bearin	g		0.	0 ksf	0.0 ksf		0.0	
PAS	<b>SS</b> 0.0	Z	Flexure (	+X)		0.	0 k-ft	0.0 k-ft	Ne	o Moment	
PAS	<b>SS</b> 0.0	Z	Flexure (	-X)		0.	0 k-ft	0.0 k-ft	Ne	o Moment	
PAS	ss n/a	1	-way Shea	ar (+X	)	0.	0 psi	0.0 psi		n/a	
PAS	<b>SS</b> 0.0	1	-way Shea	ar (-X)	1	0.	0 psi	0.0 psi	n/a		
Detailed	d Results										
Soil Bea	aring										
	n Axis &								Bearing Stress	Actual / A	
	ad Combinatio	n			G	ross Allowable	e Xecc	-X	+X	Rat	
	ng Stability									Units : k	-ft
Rotatior Loa	n Axis & ad Combinatio	n			Ove	rturning Mome	ent	Resisting Moment	Stability Ratio	o Sta	tus
Footing	Has NO Overt	urning									
Sliding St	tability										
	application Ax				;	Sliding Force		Resisting Force	Sliding SafetyR	atio Sta	tus
Footing	Has NO Slidin	g									
Footing F	lexure										
Flexure	Axis & Load	Combinat	tion	Mu k-ft	Which Side ?	Tension @ Bo or Top ?	t. As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
One Way	Shear									Units : k	
One may											



Mega Storage JB Project Title: Engineer:

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design Project ID:

Project Descr:

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (8, 13, 14, 15) - Exterior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

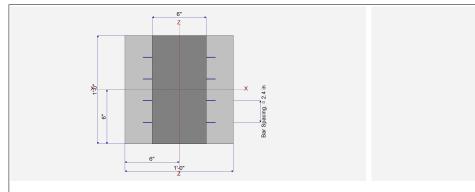
Load Combinations Used: IBC 2018

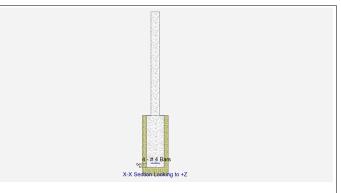
#### **General Information**

	Soil Passive Resistance (for Sliding)	_	No 250.0 pcf
= 145.0 pcf	Soil/Concrete Friction Coeff.	=	0.30
0.750	Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below	= = =	ft ksf ft
11211	Increases based on footing Width Allow. Pressure Increase per foot of width when footing is wider than	= =	ksf ft 0.0 ksf
	= 145.0 pcf = 0.90 = 0.750 = 0.00180 = 1.0:1 = 1.0:1	Soil Passive Resistance (for Sliding)  145.0 pcf Soil/Concrete Friction Coeff.  0.90 0.750 Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below  1.0:1 Increases based on footing Width Allow. Pressure Increase per foot of width	145.0 pcf

**Dimensions** Reinforcing

Footing Width 1.0 ft Footing Thickness 36.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = 4 Wall center offset at Bottom of footing = 3.0 in Reinforcing Bar Size 4 from center of footing 0 in





		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0750	0.0610		0.0610			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	=	in	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

(c) ENERCALC INC 1983-2022

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6 LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC

**DESCRIPTION:** Building (8, 13, 14, 15) - Exterior Footing

DESIGN	SUMMARY	,							De	esign OK		
DEGIGI	Factor of S		tem			Applied		Capacity	Governing		oination	
PAS	SS n/a	Ov	erturning - 2	Z-Z		0.0	k-ft	0.0 k-ft	No	Overturning		
PAS	ss n/a		ding - X-X			0.0	k	0.0 k	N	No Sliding		
PAS	ss n/a		olift			0.0	k	0.0 k	I	No Uplift		
	Utilization	Ratio I	tem			Applied		Capacity	Governing	Load Com	oination	
PAS	SS 0.0	So	il Bearing			0.0	ksf	0.0 ksf		0.0		
PAS	<b>SS</b> 0.0	Ζſ	Flexure (+X)		0.0 k-ft			0.0 k-ft	Ne	o Moment		
PAS	<b>SS</b> 0.0	Ζſ	Flexure (-X)		0.0 k-ft			0.0 k-ft	N	o Moment		
PAS	PASS n/a 1-way Shear (+X)			+X)	0.0 psi			0.0 psi		n/a		
PAS	PASS 0.0 1-way Shear (-X)			-X)	0.0 psi			0.0 psi	n/a			
Detailed	d Results											
Soil Bea	aring											
	n Axis & ad Combinatio	n			Gros	ss Allowable	Xecc	Actual Soil E -X	Bearing Stress +X	Actual / A		
Overturni	ng Stability									Units : k	c-ft	
	n Axis & ad Combinatio	n		(	Overtu	rning Momen	t	Resisting Moment	Stability Ratio	o Sta	ntus	
Footing Sliding St	Has NO Overti tability	urning										
	Application Axi				Slic	ding Force		Resisting Force	Sliding SafetyR	atio Sta	ntus	
Footing F	Has NO Slidin	g										
Flexure	Axis & Load (	Combinati	on Mu k-fi			nsion @ Bot. or Top ?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Statu	
One Way	Shear									Units : k		
Load C	ombination		Vu @ -X	V	u @ +	X	Vu:Max	Phi Vn	Vu / Phi*Vn	S	tatus	



Project Title: Engineer: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064

Project ID: Project Descr: Foundation Design

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (8, 13, 14, 15) - Interior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

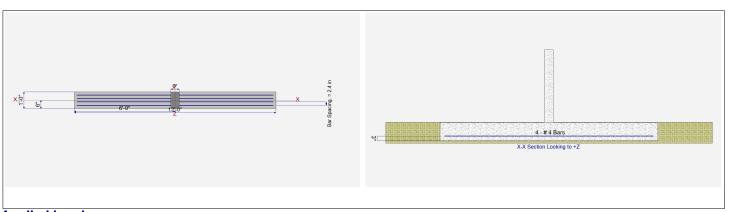
Load Combinations Used: IBC 2018

#### **General Information**

Material Properties f'c: Concrete 28 day strength fy: Rebar Yield Ec: Concrete Elastic Modulus Concrete Density  (p) Values Flexure	= = = =	3.50 ksi 60.0 ksi 3,122.0 ksi 145.0 pcf 0.90	Soil Design Values Allowable Soil Bearing Increase Bearing By Footing Weight Soil Passive Resistance (for Sliding) Soil/Concrete Friction Coeff.	= = = =	1.50 ksf No 250.0 pcf 0.30
Shear Analysis Settings Min Steel % Bending Reinf. Min Allow % Temp Reinf.	= =	0.750	Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below	= = =	ft ksf ft
Min. Overturning Safety Factor Min. Sliding Safety Factor AutoCalc Footing Weight as DL:	=	1.0:1 1.0:1 Yes	Increases based on footing Width Allow. Pressure Increase per foot of width when footing is wider than Adjusted Allowable Bearing Pressure	= =	ksf ft 0.0 ksf

#### **Dimensions** Reinforcing

Footing Width 12.0 ft Footing Thickness 12.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = Wall center offset at Bottom of footing = 3.0 in Reinforcing Bar Size from center of footing 0 in



		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0840	0.1210		0.1210			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	=	in	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6 LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (8, 13, 14, 15) - Interior Footing

Гол	MARY	It a ma			A montional		Camaaitu		esign OK	hinetien
Fac	ctor of Safety	Item			Applied		Capacity	Governing	Load Com	bination
PASS	n/a	Overturni	ng - Z-2	_	0.0	k-ft	0.0 k-ft	No 0	Overturning	
PASS	n/a	Sliding - 2	X-X		0.0	k	0.0 k	N		
PASS	n/a	Uplift			0.0	k	0.0 k		No Uplift	
Util	ization Ratio	Item			Applied		Capacity	Governing	Load Com	bination
PASS	0.0	Soil Bear	ing		0.0	ksf	0.0 ksf		0.0	
PASS	0.0	Z Flexure	(+X)		0.0	k-ft	0.0 k-ft	No	o Moment	
PASS	0.0	Z Flexure	(-X)		0.0	k-ft	0.0 k-ft	No	o Moment	
PASS n/a 1-way Shear (+X)			)	0.0	psi	0.0 psi		n/a		
PASS 0.0 1-way Shear (-X)		1	0.0	psi	0.0 psi	n/a				
tailed Res	ults									
oil Bearing										
Rotation Axis Load Con	& nbination			G	ross Allowable	Xecc	Actual Soil B -X	earing Stress +X	Actual / A	
erturning Sta	bility								Units : k	<-ft
otation Axis Load Con	& nbination			Ove	rturning Momen	nt	Resisting Moment	Stability Ratio	o Sta	atus
Footing Has N ding Stability	O Overturning									
Force Applica Load Con	tion Axis				Sliding Force		Resisting Force	Sliding SafetyRa	atio Sta	atus
ooting Has N	O Sliding									
oting Flexure	-									
Flexure Axis 8	& Load Combi	nation	Mu k-ft	Which Side ?	Tension @ Bot. or Top ?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
e Way Shear									Units : k	(
_oad Combination Vu @ -X										



Mega Storage JB Project Title: Engineer:

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

Project ID: Project Descr:

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (9, 10) - Exterior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

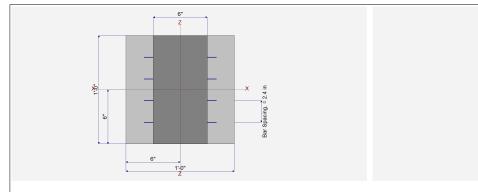
Load Combinations Used: IBC 2018

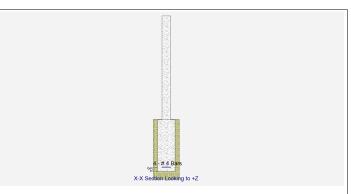
#### **General Information**

Material Properties f'c: Concrete 28 day strength fy: Rebar Yield Ec: Concrete Elastic Modulus Concrete Density  (p) Values Flexure	= = = =	3.50 ksi 60.0 ksi 3,122.0 ksi 145.0 pcf 0.90	Soil Design Values Allowable Soil Bearing Increase Bearing By Footing Weight Soil Passive Resistance (for Sliding) Soil/Concrete Friction Coeff.	= = = =	1.50 ksf No 250.0 pcf 0.30
Shear  Analysis Settings  Min Steel % Bending Reinf.  Min Allow % Temp Reinf.	= =	0.750 0.00180	Increases based on footing Depth Reference Depth below Surface Allow. Pressure Increase per foot of depth when base footing is below	= = =	ft ksf ft
Min. Overturning Safety Factor Min. Sliding Safety Factor AutoCalc Footing Weight as DL:	=	1.0:1 1.0:1 Yes	Increases based on footing Width Allow. Pressure Increase per foot of width when footing is wider than Adjusted Allowable Bearing Pressure	= =	ksf ft 0.0 ksf

**Dimensions** Reinforcing

Footing Width 1.0 ft Footing Thickness 36.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = Wall center offset at Bottom of footing = Reinforcing Bar Size  $3.0\,\text{in}$ from center of footing 0 in





		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0770	0.0620		0.0620			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applie	ed =	in	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

**Wall Footing** Project File: Mega Storage\_Shawnee.ec6

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC **DESCRIPTION:** Building (9, 10) - Exterior Footing

(c) ENERCALC INC 1983-2022

	3 ( )			9					
MMARY							De	esign OK	
ctor of Safety	Item			Applied		Capacity	Governing	Load Comb	oination
n/a	Overturni	ng - Z-2	2	0.0	k-ft	0.0 k-ft	0.0 k-ft No Overturni		
n/a	Sliding - 2	<-X		0.0	k	0.0 k	N	o Sliding	
n/a	Uplift			0.0	k	0.0 k	1	No Uplift	
lization Ratio	Item			Applied		Capacity	Governing	Load Comb	oination
0.0	Soil Bear	ing		0.0	ksf	0.0 ksf		0.0	
0.0	Z Flexure	(+X)		0.0	k-ft	0.0 k-ft	No	Moment	
0.0	Z Flexure	(-X)		0.0	k-ft	0.0 k-ft	No	Moment	
n/a	1-way Sh	ear (+X	)	0.0 psi		0.0 psi		n/a	
0.0	1-way Sh	ear (-X)		0.0 ps		0.0 psi		n/a	
ults									
& nbination			Gro	oss Allowable	Xecc	Actual Soil E -X	Bearing Stress +X	Actual / A Rat	
ability								Units : k	:-ft
& nbination			Overt	urning Momen	t	Resisting Moment	Stability Ratio	) Sta	tus
Overturning									
<u> </u>									
ntion Axis nbination			SI	iding Force		Resisting Force	Sliding SafetyRa	atio Sta	itus
IO Sliding									
•									
& Load Combi	nation	Mu k-ft	Which T Side?	ension @ Bot. or Top ?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
								Units : k	
ation	Vu @	) -X	Vu @ -	+X	Vu:Max	Phi Vn	Vu / Phi*Vn	S	tatus
	n/a n/a n/a n/a n/a lization Ratio 0.0 0.0 0.0 n/a 0.0 sults  & mbination bility & mbination IO Overturning fution Axis mbination IO Sliding & Load Combi	n/a Overturni n/a Sliding - ) n/a Uplift  lization Ratio Item  0.0 Soil Beari 0.0 Z Flexure 0.0 Z Flexure n/a 1-way Sh 0.0 1-way Sh ults  & nbination liO Overturning // stion Axis nbination IO Sliding  & Load Combination	n/a Overturning - Z-Z n/a Sliding - X-X n/a Uplift  lization Ratio Item  0.0 Soil Bearing 0.0 Z Flexure (+X) 0.0 Z Flexure (-X) n/a 1-way Shear (+X 0.0 1-way Shear (-X)  ults  & nbination liD Overturning // stion Axis nbination IO Sliding & Load Combination Mu k-ft	n/a Overturning - Z-Z n/a Sliding - X-X n/a Uplift  lization Ratio Item  0.0 Soil Bearing 0.0 Z Flexure (+X) 0.0 Z Flexure (-X) n/a 1-way Shear (+X) 0.0 1-way Shear (-X)  ults  & nbination Ground in the second	n/a Overturning - Z-Z 0.0 n/a Sliding - X-X 0.0 n/a Uplift 0.0  lization Ratio Item Applied  0.0 Soil Bearing 0.0 0.0 Z Flexure (+X) 0.0 n/a 1-way Shear (+X) 0.0 n/a 1-way Shear (-X) 0.0 ults  & nbination Gross Allowable  ability & nbination Overturning Momen  IO Overturning // cition Axis nbination Sliding Force  IO Sliding & Load Combination Mu Which Tension @ Bot. k-ft Side ? or Top ?	n/a Overturning - Z-Z 0.0 k-ft n/a Sliding - X-X 0.0 k n/a Uplift 0.00 k    Description   Descriptio	Capacity   Capacity	ctor of Safety Item Applied Capacity Governing  n/a Overturning - Z-Z 0.0 k-ft 0.0 k-ft No 0 n/a Sliding - X-X 0.0 k 0.0 k N n/a Uplift 0.0 k 0.0 k N n/a Uplift 0.0 k 0.0 k N  No 0.0 k 0.0 k N No 0.0 k N No 0.0 k N No 0.0 k-ft No 0.0 psi	ctor of Safety Item Applied Capacity Governing Load Combination  n/a Overturning - Z-Z 0.0 k-ft 0.0 k-ft No Overturning n/a Sliding - X-X 0.0 k 0.0 k No Sliding n/a Uplift 0.0 k 0.0 k No Uplift  Doublet One of the Market of th



Project Title: Engineer: Mega Storage JB

Project ID: 520 NE Town Centre Drive Lee's Summit, MO 64064

Project Descr: Foundation Design

#### Wall Footing

LIC#: KW-06014638, Build:20.22.2.9 APEX ENGINEERS INC Project File: Mega Storage\_Shawnee.ec6 (c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (9, 10) - Interior Footing

#### **Code References**

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16

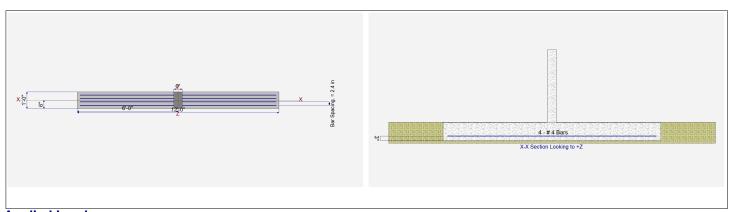
Load Combinations Used: IBC 2018

#### **General Information**

Material Properties			Soil Design Values		
f'c : Concrete 28 day strength		3.50 ksi	Allowable Soil Bearing	=	1.50 ksf
fy : Rebar Yield	=	60.0 ksi	Increase Bearing By Footing Weight	=	No
Ec : Concrete Elastic Modulus	=	3,122.0 ksi	Soil Passive Resistance (for Sliding)	=	250.0 pcf
Concrete Density	=	145.0 pcf	Soil/Concrete Friction Coeff.	=	0.30
Values Flexure	=	0.90			
Shear	=	0.750	Increases based on footing Depth		
Analysis Settings			Reference Depth below Surface	=	ft
Min Steel % Bending Reinf.	=		Allow. Pressure Increase per foot of depth	=	ksf
Min Allow % Temp Reinf.	=	0.00180	when base footing is below	=	ft
Min. Overturning Safety Factor		1.0:1	Increases based on footing Width		
9 ,		1.0:1	Allow. Pressure Increase per foot of width	=	ksf
AutoCalc Footing Weight as DL:			when footing is wider than	=	ft
Addodalo Fooling Wolght as DE		100	Adjusted Allowable Bearing Pressure	=	0.0 ksf

**Dimensions** Reinforcing

Footing Width 12.0 ft Footing Thickness 12.0 in Bars along X-X Axis Wall Thickness 6.0 in Rebar Centerline to Edge of Concrete... # of Bars in 12" Width = 4 Wall center offset at Bottom of footing = 3.0 in Reinforcing Bar Size 4 from center of footing 0 in



		D	Lr	L	S	W	E	Н
P : Column Load	=	0.0890	0.1240		0.1240			k
OB : Overburden	=							ksf
V-x	=							k
M-zz	=							k-ft
Vx applied	=	in	above top of foo	oting				



Project Title: Engineer: Project ID: Project Descr: Mega Storage JB

520 NE Town Centre Drive Lee's Summit, MO 64064 Foundation Design

Project File: Mega Storage\_Shawnee.ec6

**Wall Footing** 

LIC#: KW-06014638, Build:20.22.2.9

APEX ENGINEERS INC

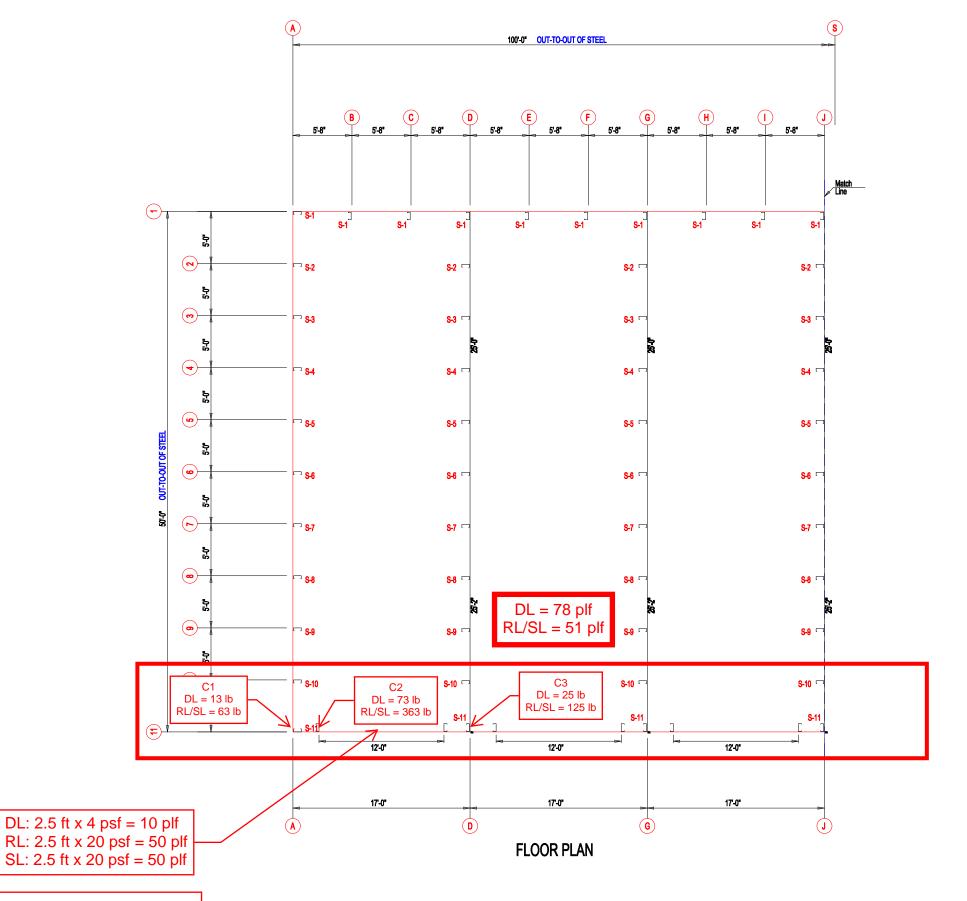
(c) ENERCALC INC 1983-2022

**DESCRIPTION:** Building (9, 10) - Interior Footing

	Factor of Safety	Item	Applied		Capacity	Governing	Load Comb	ination
PASS	n/a	Overturning - Z-Z	2 0.0	k-ft	0.0 k-ft	No (	Overturning	
PASS	n/a	Sliding - X-X	0.0	0.0 k		N	o Sliding	
PASS	n/a	Uplift	0.0	k	0.0 k	1	No Uplift	
	Utilization Ratio	Item	Applied		Capacity	Governing	Load Comb	ination
PASS	0.0	Soil Bearing	0.0	ksf	0.0 ksf		0.0	
PASS	0.0	Z Flexure (+X)	0.0	0.0 k-ft		No	o Moment	
PASS	0.0	Z Flexure (-X)	0.0	k-ft	0.0 k-ft	No	o Moment	
PASS	n/a	1-way Shear (+X	0.0	0.0 psi			n/a	
PASS	0.0	1-way Shear (-X)	0.0	0.0 psi		n/a		
Detailed F	Results							
Soil Beari	ng							
Rotation	Axis & Combination		Gross Allowable	Xecc	Actual Soil B -X	Searing Stress +X	Actual / A Rat	
Overturning			GIOSS Allowable	Vecc	-^	+^	Units : k	
Rotation A	· · · · · · · · · · · · · · · · · · ·						OTIILO . K	
	Combination		Overturning Momen	it	<b>Resisting Moment</b>	Stability Ratio	Sta	tus
Footing H Sliding Stat	as NO Overturning pility							
	olication Axis Combination		Sliding Force		Resisting Force	Sliding SafetyRa	atio Sta	tus
Footing H Footing Fle	as NO Sliding xure							
Flexure A	xis & Load Combi	nation Mu k-ft	Which Tension @ Bot. Side? or Top?	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Statu
One Way Sl	near						Units : k	
Lood Con	nbination	Vu @ -X	Vu @ +X	Vu:Max	Phi Vn	Vu / Phi*Vn	C	tatus

## Miscellaneous

## BUILDINGS 1, 2 & 3



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 14'-9 1/2"

 S-2
 6X2C16
 15'-0"

 S-3
 6X2C16
 15'-2 1/2"

 S-4
 6X2C16
 15'-5"

 S-5
 6X2C16
 15'-7 1/2"

 S-6
 6X2C16
 15'-10"

 S-7
 6X2C16
 16'-0 1/2"

 S-8
 6X2C16
 16'-3"

 S-9
 6X2C16
 16'-5 1/2"

 S-10
 6X2C16
 16'-8"

 S-11
 6X2C16
 17'-0"

# SOUTH FOOTING

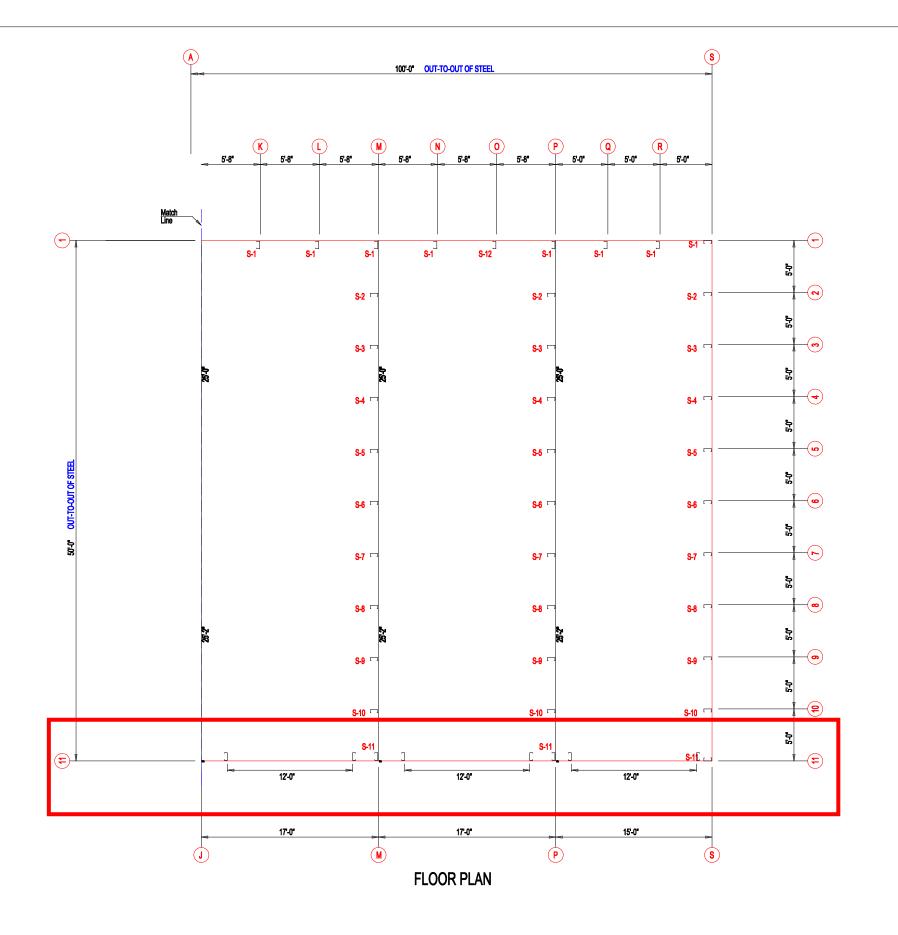
DLW:  $16.88 \text{ ft } \times 4 \text{ psf} = 68 \text{ plf}$ 

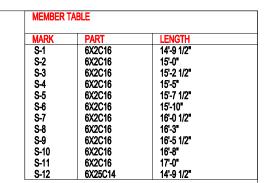
PELLA
BUILDING SYSTEMS

906 West 9th Street Pella, IA 50219
(800) 225-0481 www.pellabuildings.com

SCRIPTION:	FLOOR PLAN	
	FLOOR PLAN	

CUSTOMER:	DLR				PROJECT: MEGA	STORAGE LEES SUMM	IΤ
LOCATION:	LEES SU	MMIT MO					
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTATION NO.	SHEET NO.	
.IR	DES	1/17/22	N.T.S.	00	MEGASTORAGE	ELEBSUMQIFTBUIZADING	3#1#3

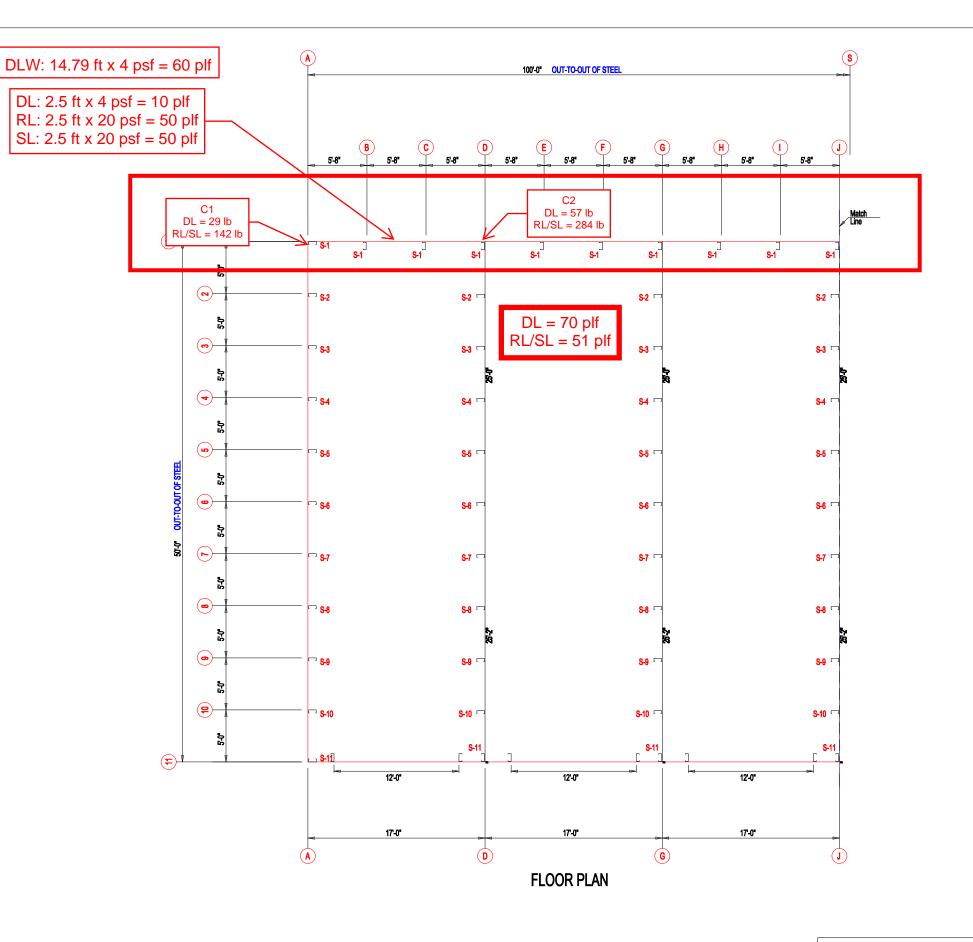


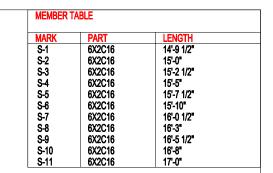


# SOUTH FOOTING



DEGOTAL TIO		RPLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	/IIT
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EESUM <b>OIF</b> TBUIZEDING	3#1#3

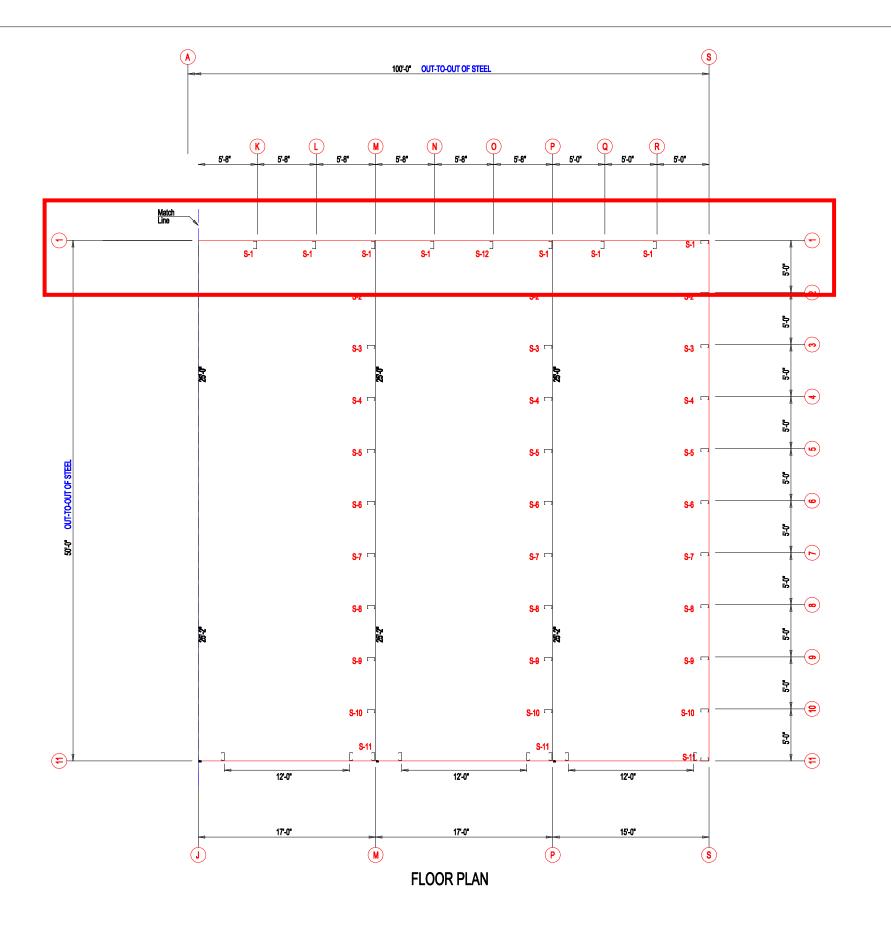


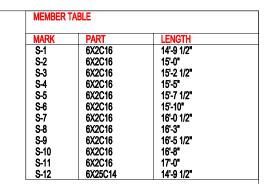


# NORTH FOOTING



DESCRIPTIO	" FLOOI	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUM	MIT
LOCATION:	LEES SU	IMMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGE	EBSUMØFTBUBADIN	G#1#3



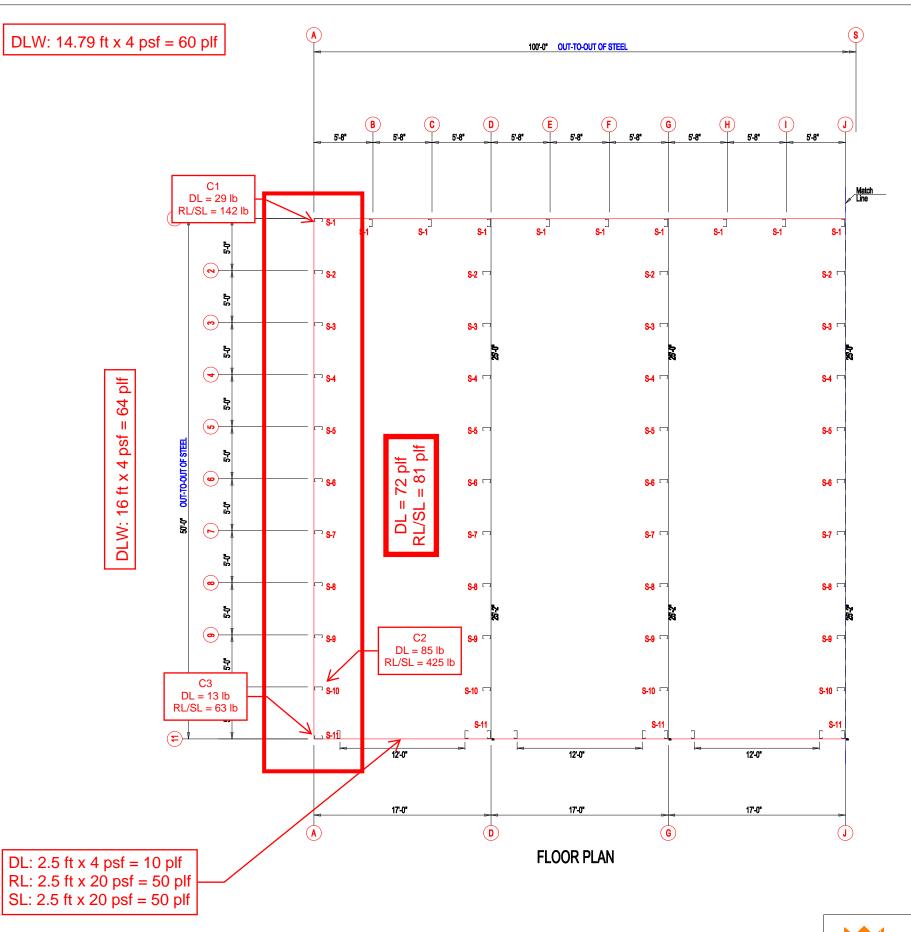


# NORTH FOOTING



DESCRIPTION:	
	FLOOR PLAN

CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMMIT	Ī
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTATIO	ON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAST	ORAGEL	.E <b>es</b> um <b>oif</b> tbu <b>i24</b> 0ing#1	1#3



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 14'-9 1/2"

 S-2
 6X2C16
 15'-0"

 S-3
 6X2C16
 15'-2 1/2"

 S-4
 6X2C16
 15'-5"

 S-5
 6X2C16
 15'-7 1/2"

 S-6
 6X2C16
 15'-10"

 S-7
 6X2C16
 16'-0 1/2"

 S-8
 6X2C16
 16'-3"

 S-9
 6X2C16
 16'-5 1/2"

 S-10
 6X2C16
 16'-8"

 S-11
 6X2C16
 17'-0"

# WEST FOOTING

BUILDING SYSTEMS

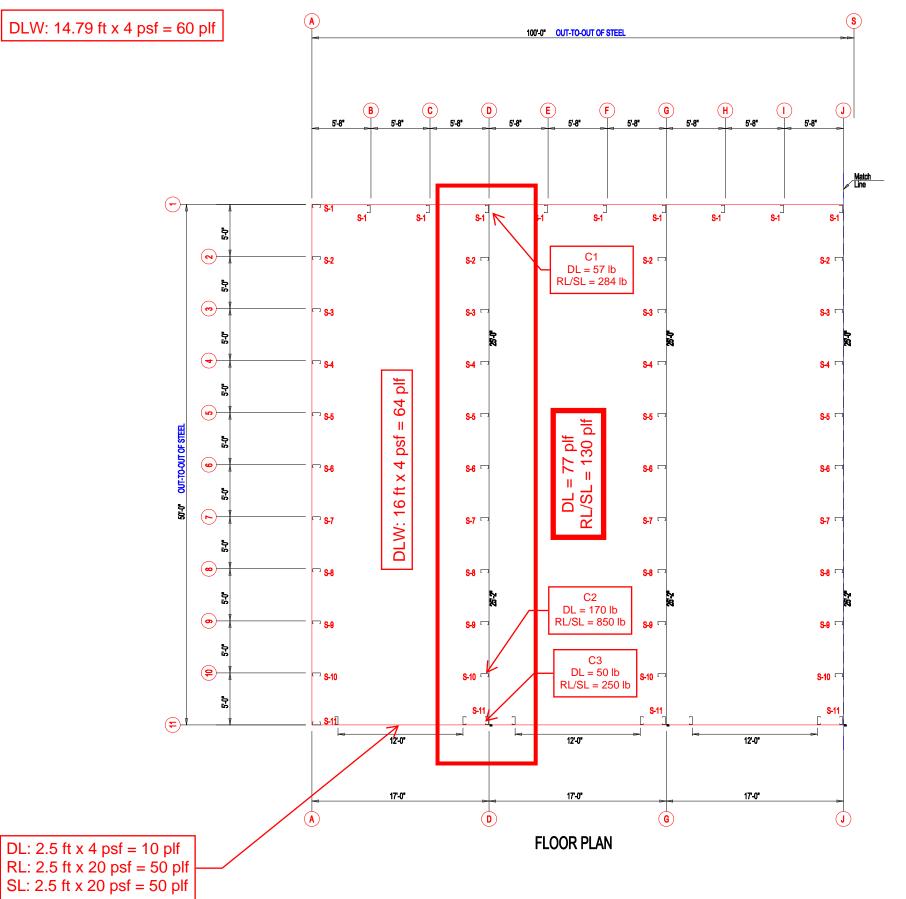
CUE
LOC

Street Pella IA 50219

DRI

FLOOR PLAN	I
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	00.							
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	IIT
OCATION:	LEES SU	MMIT MO						
RN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EBSUMQIFTBUBLIDING	#1#3



LENGTH 14'-9 1/2" S-1 S-2 S-3 S-4 S-5 S-6 S-7 S-8 S-9 S-10 S-11 6X2C16 14-9 1/2" 15-0" 15-2 1/2" 15-5" 15-7 1/2" 15-10" 16-0 1/2" 16-3" 16-5 1/2" 16-8" 17-0" 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16

# INTERIOR

RL: 2.5 ft x 20 psf = 50 plfSL: 2.5 ft x 20 psf = 50 plf



DESCRIPTION		RPLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	IT
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTATION	ON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAST	<b>FORAGEL</b>	EESUM <b>01F</b> TBU124DING	#1#3

#### Buildings 1, 2 & 3

SOUTH FOOTING LOAD (EXT)							
LENGTH (FT)		100					
COLUMN	C1	C1 C2 C3					
# OF COLUMNS	2	12	5				
DL (LB)	13	73	25				
RL (LB)	63	363	125				
SL (LB)	63	363	125				
DL SUM (LB)	26	125					
RL SUM (LB)	126	4356	625				
SL SUM (LB)	126 4356		625				
DL WALL (PLF)	PLF) 68						
DL (PLF)	78						
RL (PLF)	51						
SL (PLF)		51					

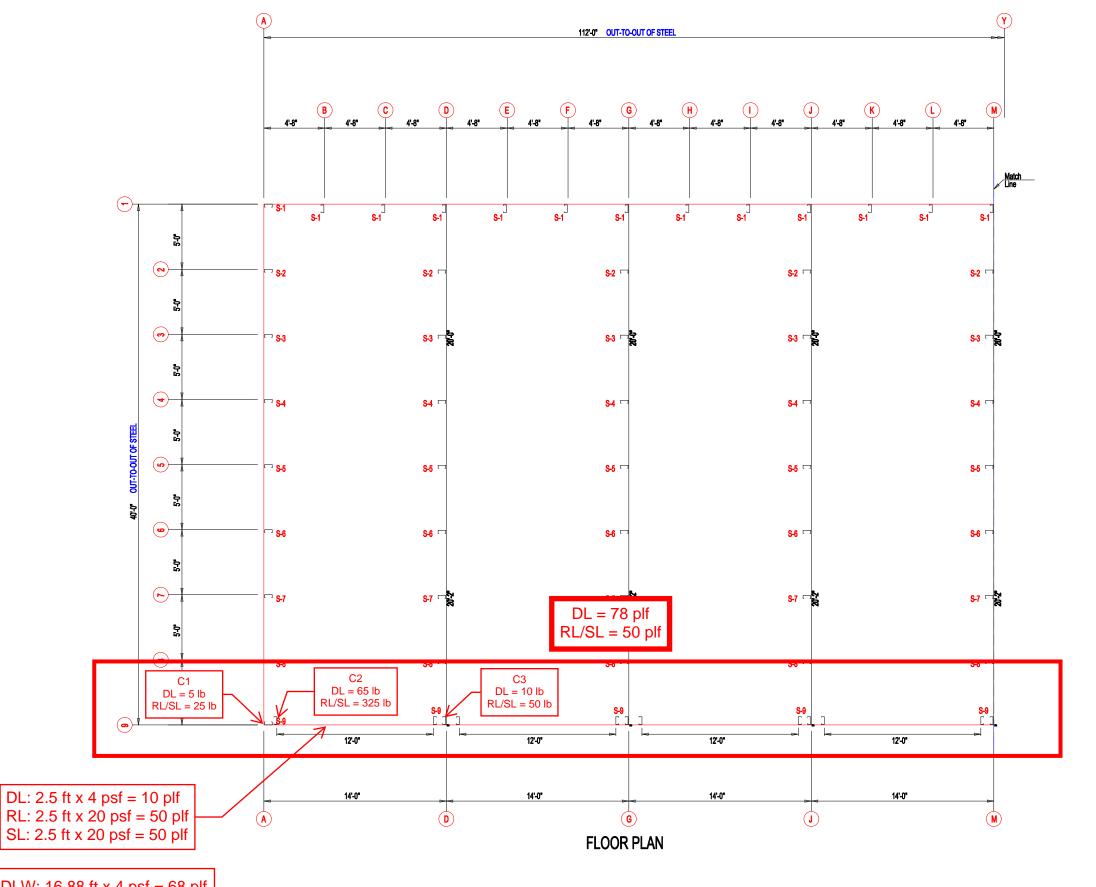
NORTH FOOTING LOAD (EXT)						
LENGTH (FT)		100				
COLUMN	C1	C1 C2				
# OF COLUMNS	2	17				
DL (LB)	29	57				
RL (LB)	142	284				
SL (LB)	142	284				
DL SUM (LB)	58	969				
RL SUM (LB)	284	4828				
SL SUM (LB)	284 4828					
DL WALL (PLF)		60				
DL (PLF)	70					
RL (PLF)	51					
SL (PLF)		51				

#### Buildings 1, 2 & 3

WEST FOOTING LOAD (EXT)							
LENGTH (FT)		50					
COLUMN	C1	C1 C2 C3					
# OF COLUMNS	1	9	1				
DL (LB)	29	85	13				
RL (LB)	142	425	63				
SL (LB)	142	425	63				
DL SUM (LB)	29	765	13				
RL SUM (LB)	142	3825	63				
SL SUM (LB)	142 3825		63				
DL WALL (PLF)		64					
DL (PLF)	72						
RL (PLF)	81						
SL (PLF)	81						

INTERIOR FOOTING LOAD (INT)							
LENGTH (FT)		50					
COLUMN	C1	C2	C3				
# OF COLUMNS	1	7	1				
DL (LB)	57	170	50				
RL (LB)	284	850	250				
SL (LB)	284	850	250				
DL SUM (LB)	57	1190	50				
RL SUM (LB)	284	5950	250				
SL SUM (LB)	284	5950	250				
DL WALL (PLF)		64					
DL (PLF)	DL (PLF) 77						
RL (PLF)	130						
SL (PLF)	130						

## BUILDINGS 4 & 5



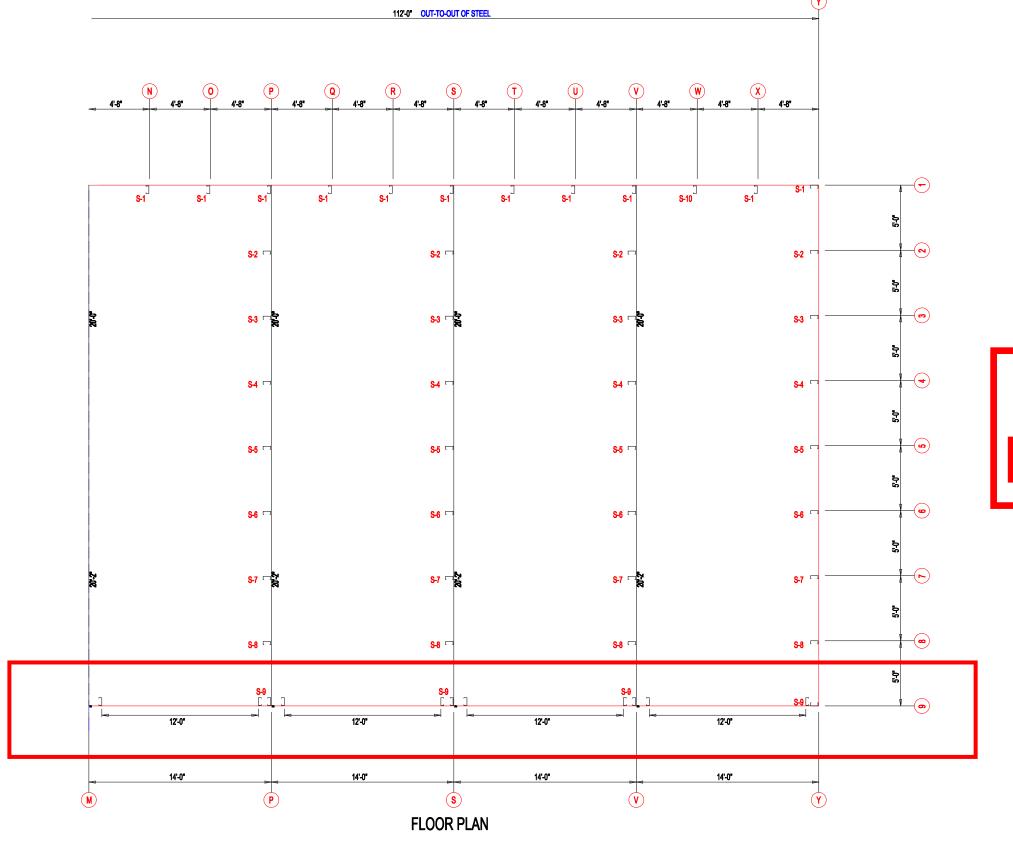
S-1 S-2 S-3 S-4 S-5 S-6 S-7 S-8 S-9 LENGTH 14'-9 1/2" 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 15-0" 15-2 1/2" 15-5" 15-7 1/2" 15-10" 16-0 1/2" 16-3" 16-7"

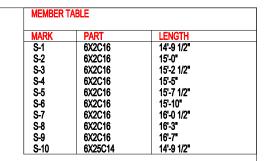
DLW: 16.88 ft x 4 psf = 68 plf

**PELLA** 906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com

SCRIPTION:	LOOR PLAN
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CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMI	Г 4,5
LOCATION:	LEES SUMMIT MO							
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTATION NO.		SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EBSUMMITBURADING	#4#5

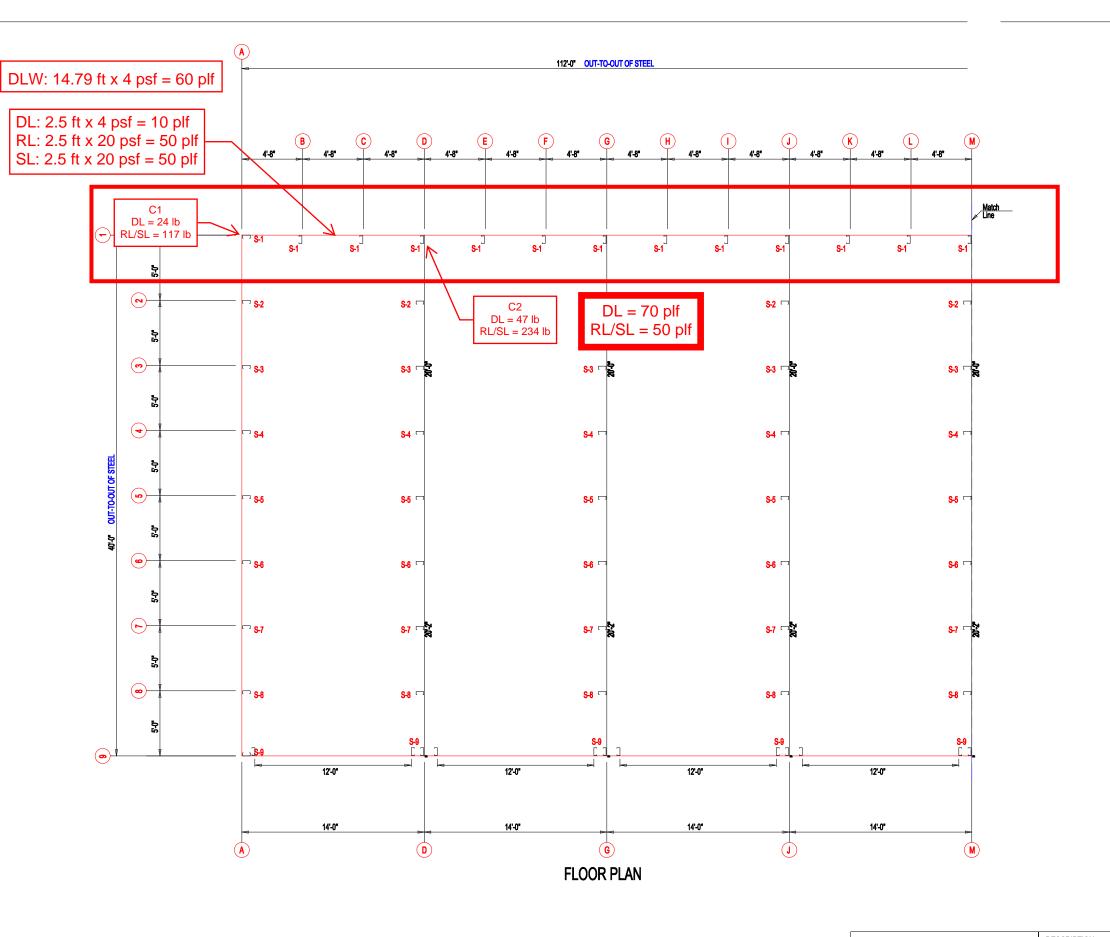


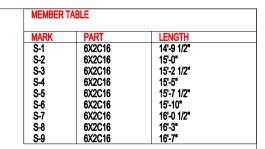


# SOUTH FOOTING

PELLA BUILDING SYSTEMS
906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com

DESCRIPTIO		R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMI	۲4,5
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>ES</b> UM <b>ØIF</b> TBU <b>IZ</b> IÐING	#4#5



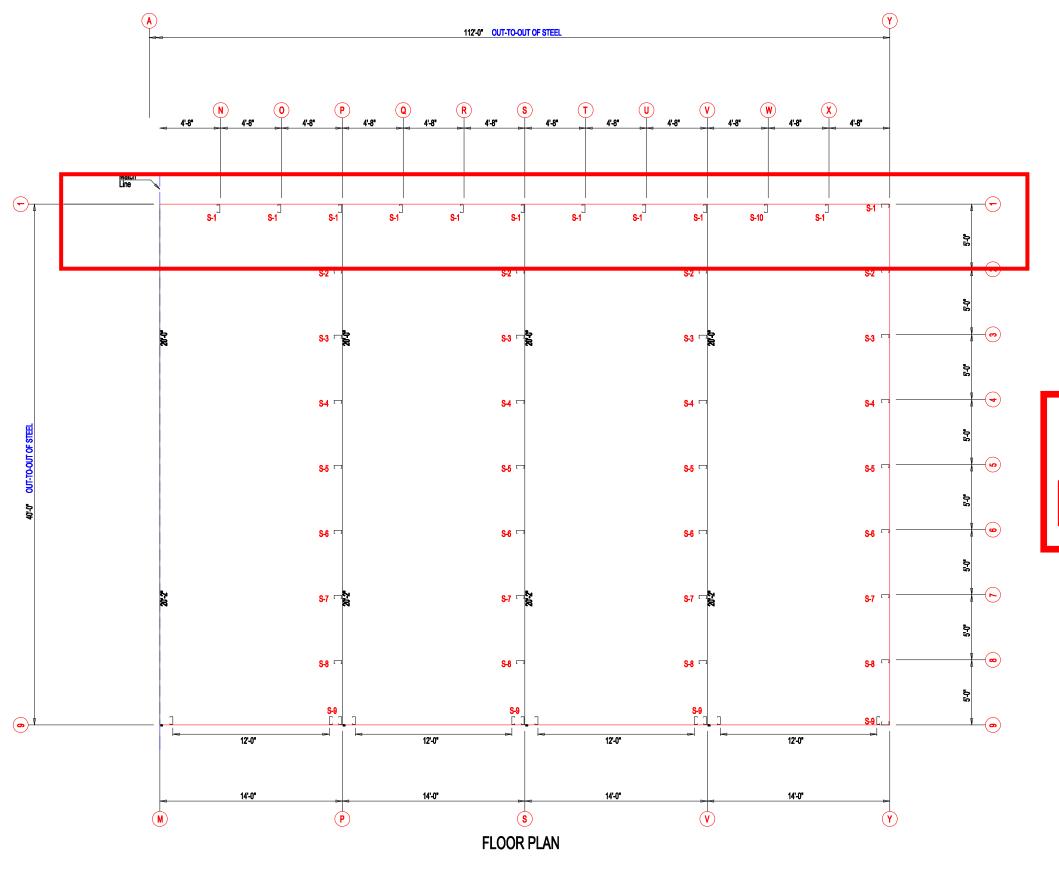


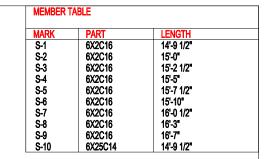
## NORTH FOOTING

PELLA BUILDING SYSTEMS
906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com

DESCRIPTION.	FLOOR PLAN	

CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMI	Г 4,5
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EESUM <b>OIF</b> TBUIZEDING	#4#5





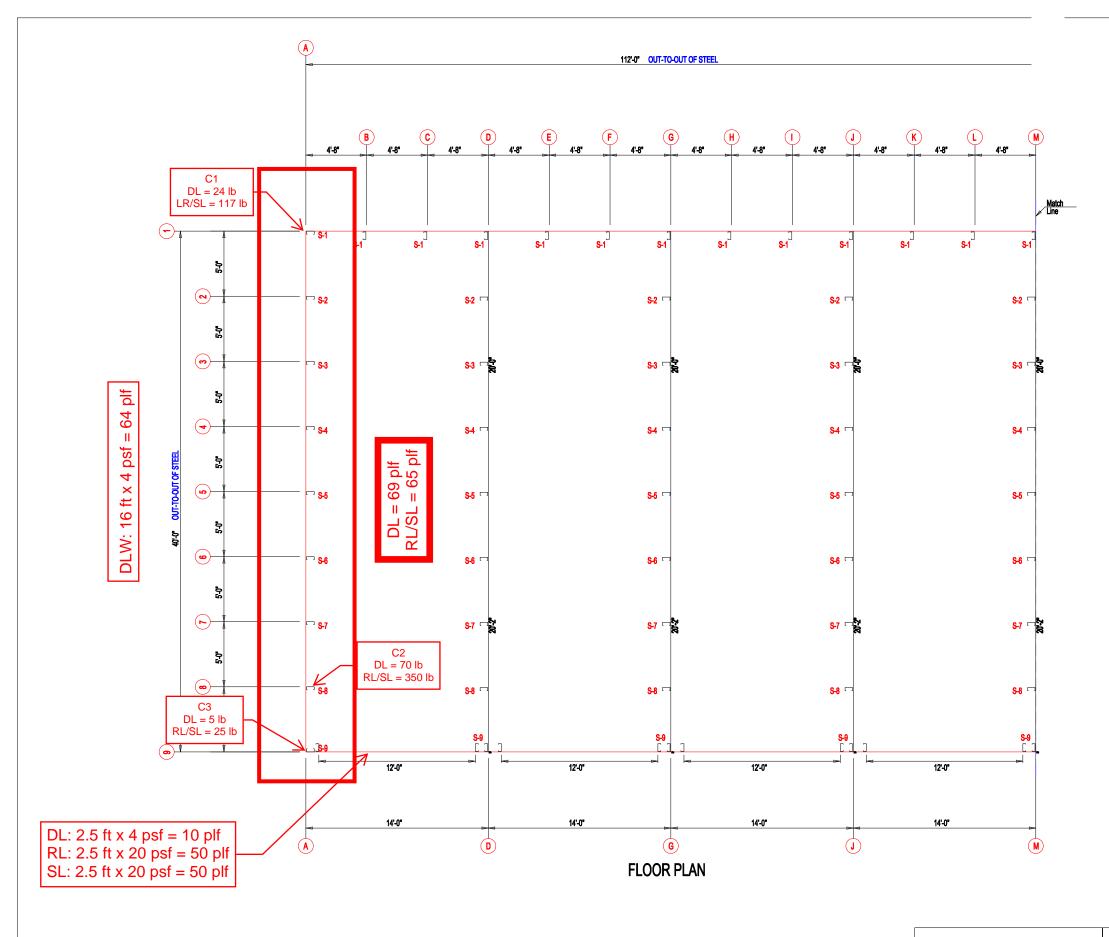
### NORTH FOOTING

PELLA
BUILDING SYSTEMS

906 West 9th Street Pella, IA 50219
(800) 225-0481 www.pellabuildings.com

DESCRIPTION:	FLOOR PLAN
	LOOKILAN

CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMI	Г 4,5
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EBSUMMITBURADING	#4#5



 MARK
 PART
 LENGTH

 S-1
 6X2C16
 14'-9 1/2"

 S-2
 6X2C16
 15'-0"

 S-3
 6X2C16
 15'-2 1/2"

 S-4
 6X2C16
 15'-5"

 S-5
 6X2C16
 15'-7 1/2"

 S-6
 6X2C16
 15'-10"

 S-7
 6X2C16
 16'-0 1/2"

 S-8
 6X2C16
 16'-3"

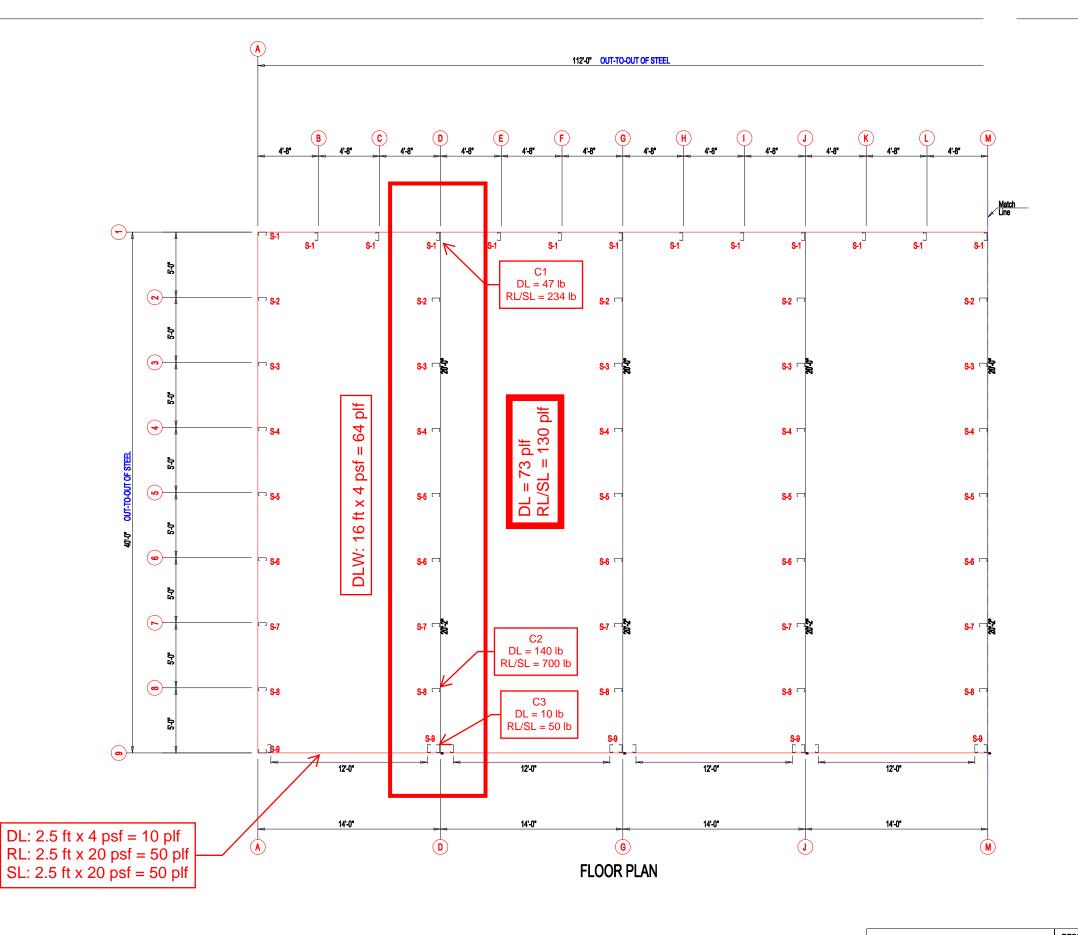
 S-9
 6X2C16
 16'-7"

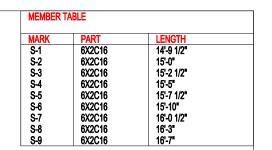
# WEST FOOTING



906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com DESCRIPTION: FLOOR PLAN

CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMI	Г 4,5
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>ES</b> UM <b>01F</b> TBU <b>124</b> DING	#4#5





# INTERIOR FOOTING



ESCRIPTION:	FLOOR PLAN
-------------	------------

CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEE SUMMIT	4,5
LOCATION:	LEES SU	MMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	EBSUMMITBURADING	#4#5

#### Buildings 4 & 5

SOUTH FOOTING LOAD (EXT)							
LENGTH (FT)		112					
COLUMN	C1	C2	C3				
# OF COLUMNS	2	16	7				
DL (LB)	5	65	10				
RL (LB)	25	325	50				
SL (LB)	25 325 50						
DL SUM (LB)	10	1040	70				
RL SUM (LB)	50	5200	350				
SL SUM (LB)	50	5200	350				
DL WALL (PLF)	68						
DL (PLF)	78						
RL (PLF)	50						
SL (PLF)		50					

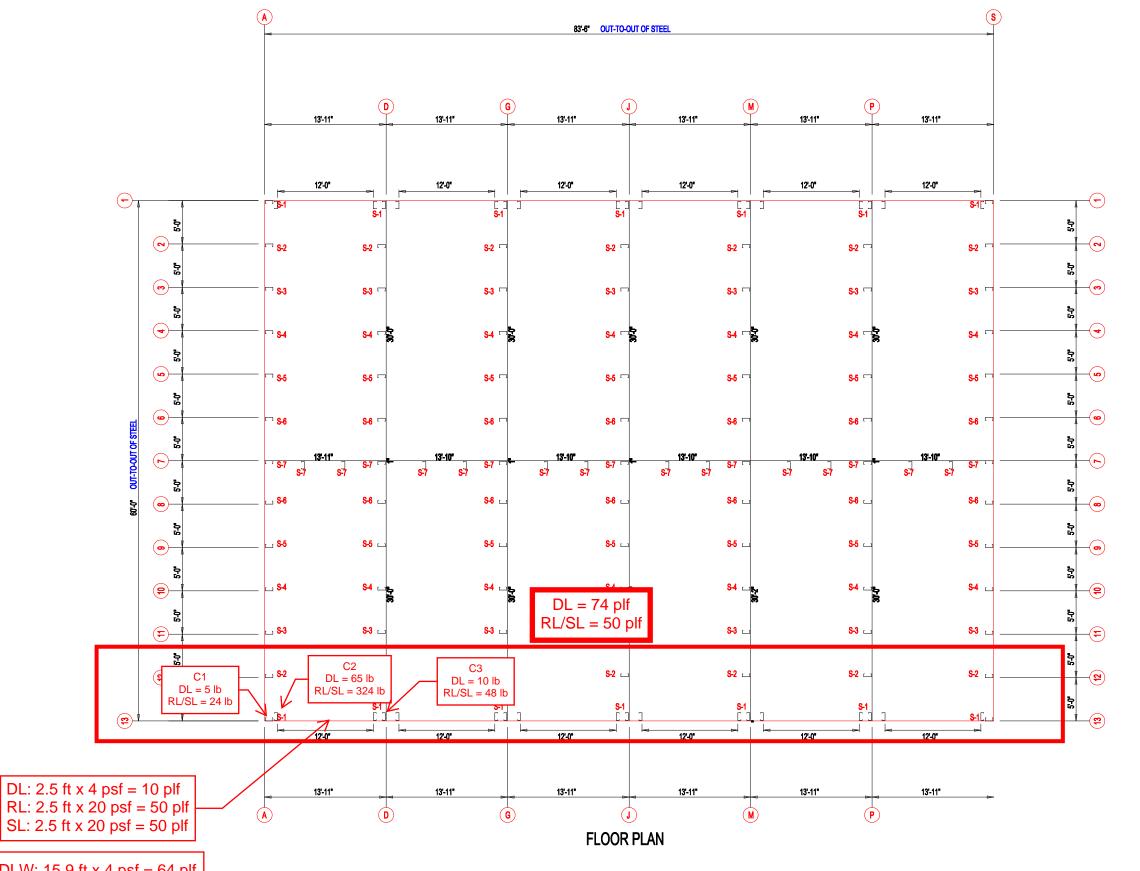
NORTH FOOTING LOAD (EXT)							
LENGTH (FT)	112						
COLUMN	C1	C2					
# OF COLUMNS	2	23					
DL (LB)	24	47					
RL (LB)	117	234					
SL (LB)	117	234					
DL SUM (LB)	48	1081					
RL SUM (LB)	234	5382					
SL SUM (LB)	234	5382					
DL WALL (PLF)	60						
DL (PLF)	70						
RL (PLF)	50						
SL (PLF)		50					

#### Buildings 4 & 5

WEST FOOTING LOAD (EXT)							
LENGTH (FT)		40					
COLUMN	C1	C2	C3				
# OF COLUMNS	1	7	1				
DL (LB)	24	70	5				
RL (LB)	117	350	25				
SL (LB)	117 350 25						
DL SUM (LB)	24	490	5				
RL SUM (LB)	117	2450	25				
SL SUM (LB)	117	2450	25				
DL WALL (PLF)	64						
DL (PLF)	69						
RL (PLF)	65						
SL (PLF)		65					

INTERIOR FOOTING LOAD (INT)							
LENGTH (FT)	40						
COLUMN	C1	C2	C3				
# OF COLUMNS	1	7	1				
DL (LB)	47	140	10				
RL (LB)	234	700	50				
SL (LB)	234	700	50				
DL SUM (LB)	47	980	10				
RL SUM (LB)	234	4900	50				
SL SUM (LB)	234	4900	50				
DL WALL (PLF)		64					
DL (PLF)	73						
RL (PLF)	130						
SL (PLF)		130	·				

### BUILDINGS 8, 13, 14 & 15

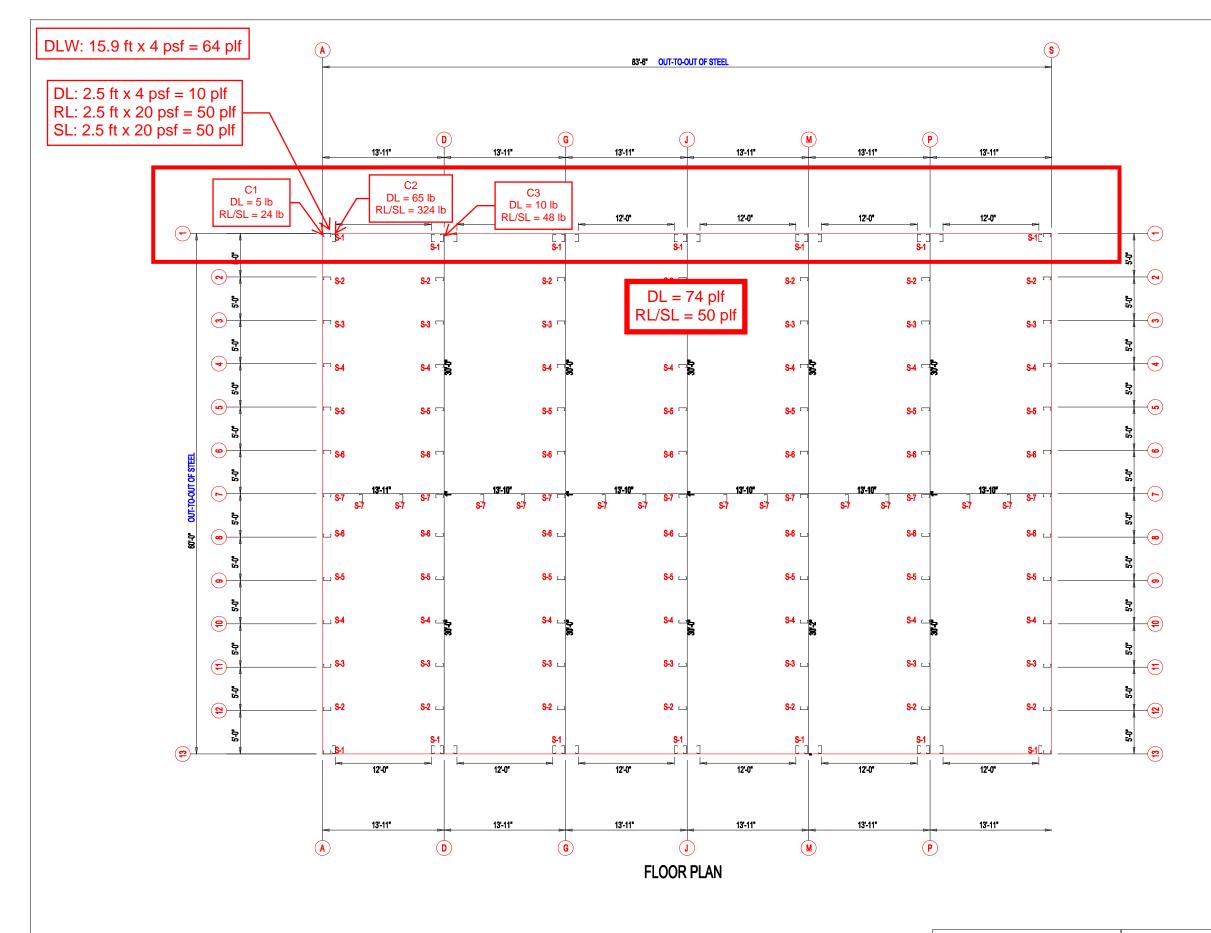


LENGTH
16'-0"
16'-1"
16'-3 1/2"
16'-6"
16'-8 1/2"
16'-11"
17'-1 1/2" PART 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 6X2C16 S-1 S-2 S-3 S-4 S-5 S-6 S-7

DLW: 15.9 ft x 4 psf = 64 plf



DESCRIPTION:	FLOOI	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMI	VIIT
LOCATION:	LEE'S SU	JMMIT						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>BS</b> UM <b>QIF</b> T#8#214#14	1#15



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16-0"

 S-2
 6X2C16
 16'-1"

 S-3
 6X2C16
 16'-3 1/2"

 S-4
 6X2C16
 16'-6"

 S-5
 6X2C16
 16'-8 1/2"

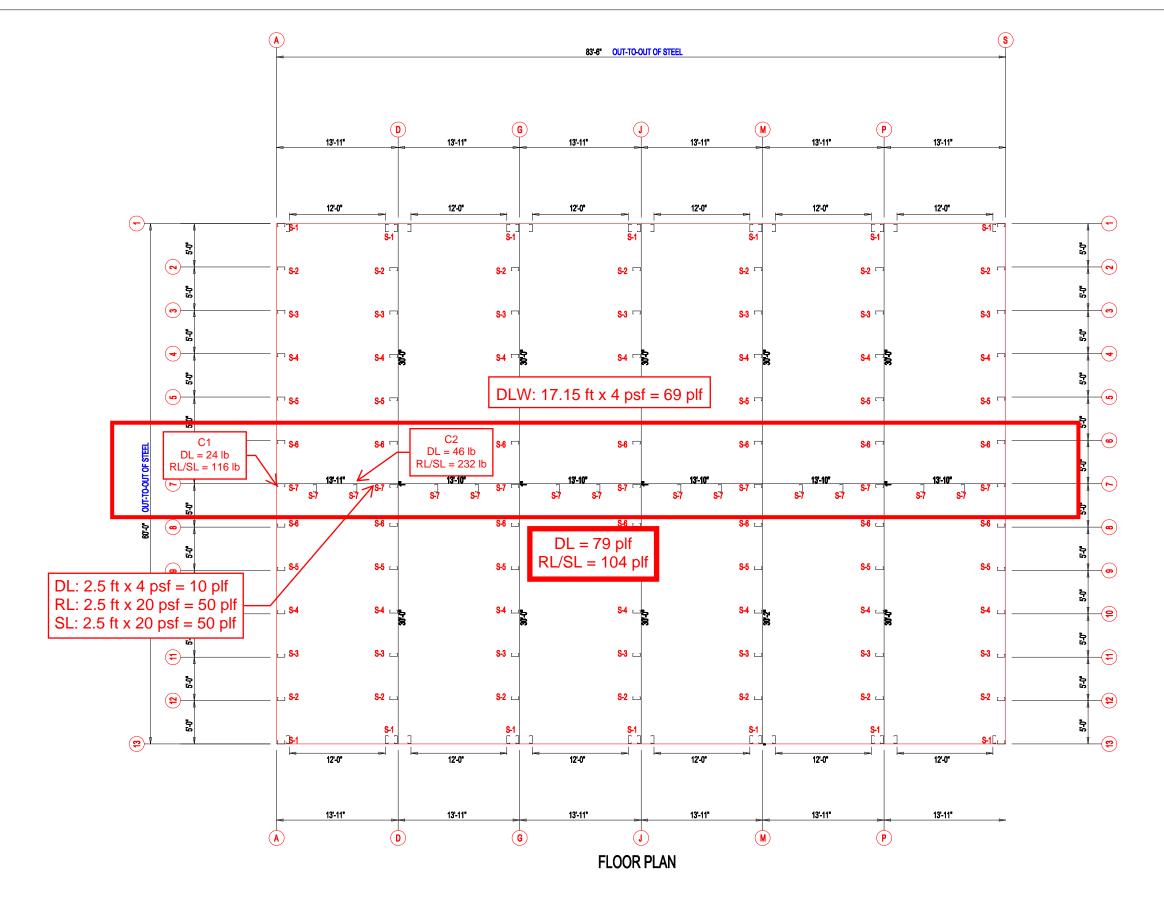
 S-6
 6X2C16
 16'-11"

 S-7
 6X2C16
 17'-1 1/2"

### NORTH FOOTING

PFIΙΔ	
	(
BUILDING SYSTEMS	L
906 West 9th Street Pella, IA 50219	D

DESCRIPTION	FLOOF	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	ΙIΤ
LOCATION:	LEE'S SU	JMMIT						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>BS</b> UM <b>QIF</b> T#8 <b>#2&amp;</b> #14	#15



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-0"

 S-2
 6X2C16
 16'-1"

 S-3
 6X2C16
 16'-3 1/2"

 S-4
 6X2C16
 16'-8"

 S-5
 6X2C16
 16'-8 1/2"

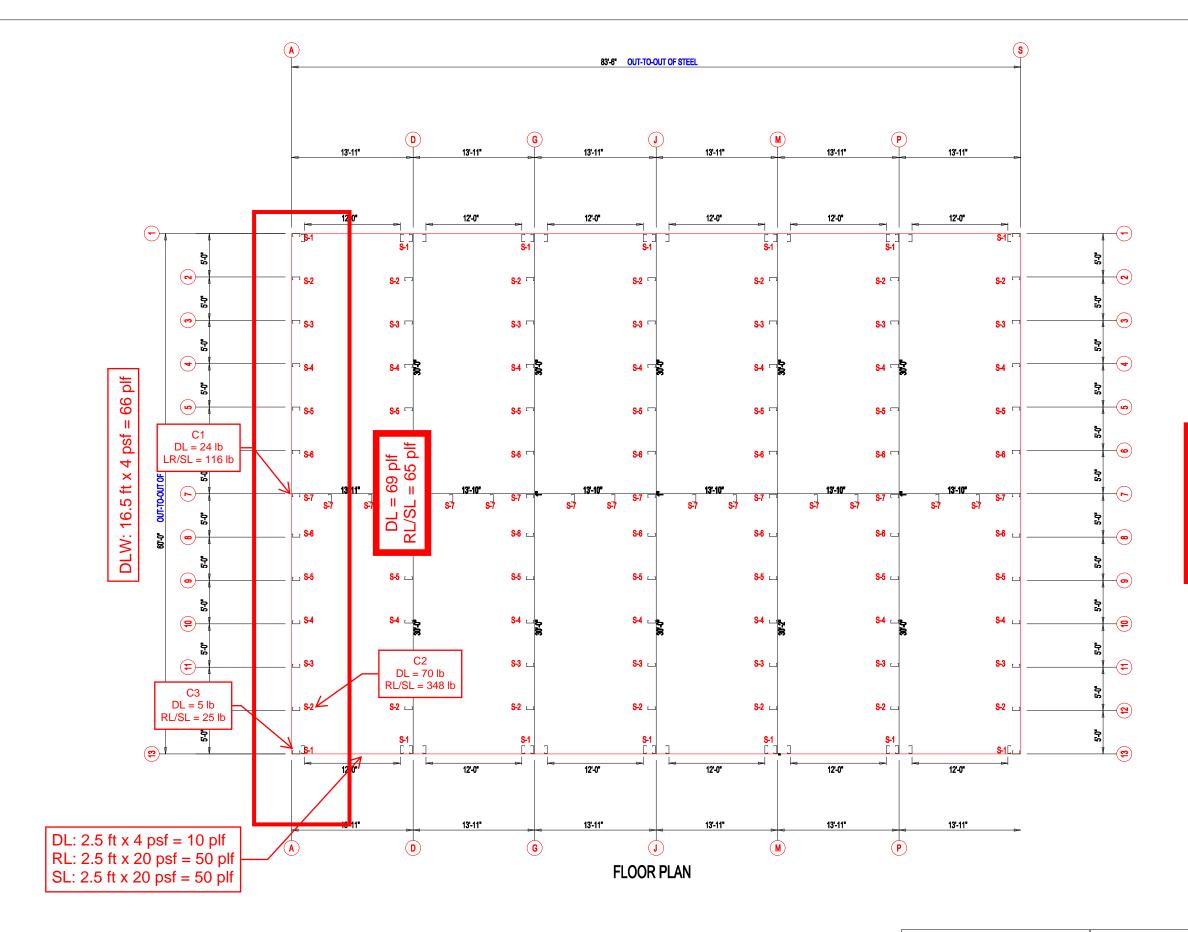
 S-6
 6X2C16
 16'-11"

 S-7
 6X2C16
 17'-1 1/2"

# CENTER INTERIOR FOOTING

PELLA	
BUILDING SYSTEMS	Ī
906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com	Γ

DESCRIPTION:	FLOO	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SU	иміт
LOCATION:	LEE'S SI	UMMIT						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	TON NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>BS</b> UM <b>MF</b> T#8#21 <b>4</b> #	14#15



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-0"

 S-2
 6X2C16
 16'-1"

 S-3
 6X2C16
 16'-3 1/2"

 S-4
 6X2C16
 16'-6"

 S-5
 6X2C16
 16'-8 1/2"

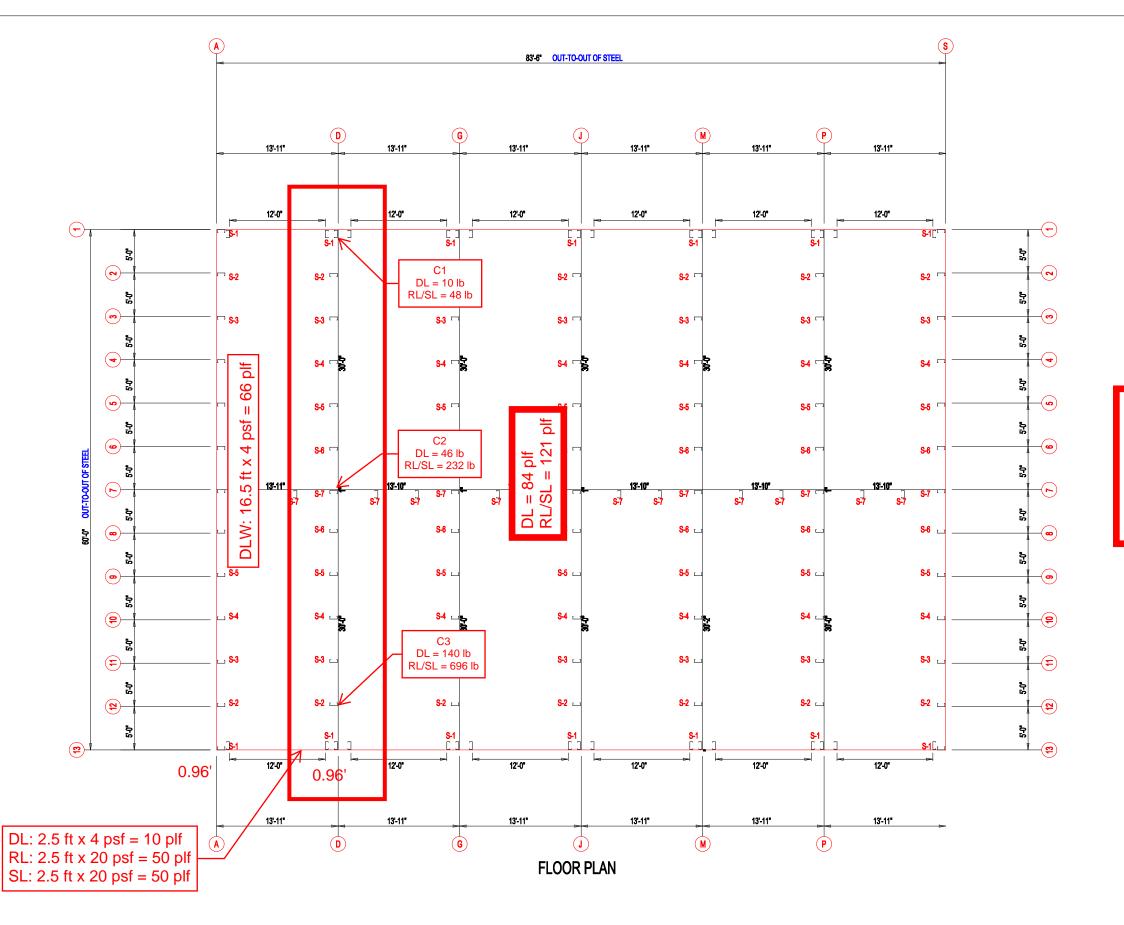
 S-6
 6X2C16
 16'-11"

 S-7
 16'-11''
 17'-1 1/2"

# WEST FOOTING



DESCRIPTION	N: FLOOF	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUM	ΜΙΤ
LOCATION:	LEE'S SU	JMMIT						
ORN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>BS</b> UM <b>MF</b> T#8#214#14	4#15



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-0"

 S-2
 6X2C16
 16'-1"

 S-3
 6X2C16
 16'-3 1/2"

 S-4
 6X2C16
 16'-8"

 S-5
 6X2C16
 16'-8 1/2"

 S-6
 6X2C16
 16'-11"

 S-7
 6X2C16
 17'-1 1/2"

# INTERIOR FOOTING

PELLA	
BUILDING SYSTEMS	Ī
906 West 9th Street Pella, IA 50219 (800) 225-0481 www.pellabuildings.com	Γ

DESCRIPTION	FLOOI	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUN	MIT
LOCATION:	LEE'S SU	JMMIT						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>63</b> UM <b>0/F</b> T#8#24#*	4#15

#### Buildings 8, 13, 14 & 15

SOUTH FOOTING LOAD (EXT)								
LENGTH (FT)		83.5						
COLUMN	C1	C1 C2 C3						
# OF COLUMNS	2	12	5					
DL (LB)	5	65	10					
RL (LB)	24	24 324 48						
SL (LB)	24	324	48					
DL SUM (LB)	10	780	50					
RL SUM (LB)	48	3888	240					
SL SUM (LB)	48	3888	240					
DL WALL (PLF)	64							
DL (PLF)	74							
RL (PLF)		50						
SL (PLF)		50						

NORTH FOOTING LOAD (EXT)							
LENGTH (FT)	83.5						
COLUMN	C1	C1 C2					
# OF COLUMNS	2	12	5				
DL (LB)	5	65	10				
RL (LB)	24	324	48				
SL (LB)	24	324	48				
DL SUM (LB)	10	780	50				
RL SUM (LB)	48	3888	240				
SL SUM (LB)	48	3888	240				
DL WALL (PLF)		64					
DL (PLF) 74							
RL (PLF)	50						
SL (PLF)		50					

#### Buildings 8, 13, 14 & 15

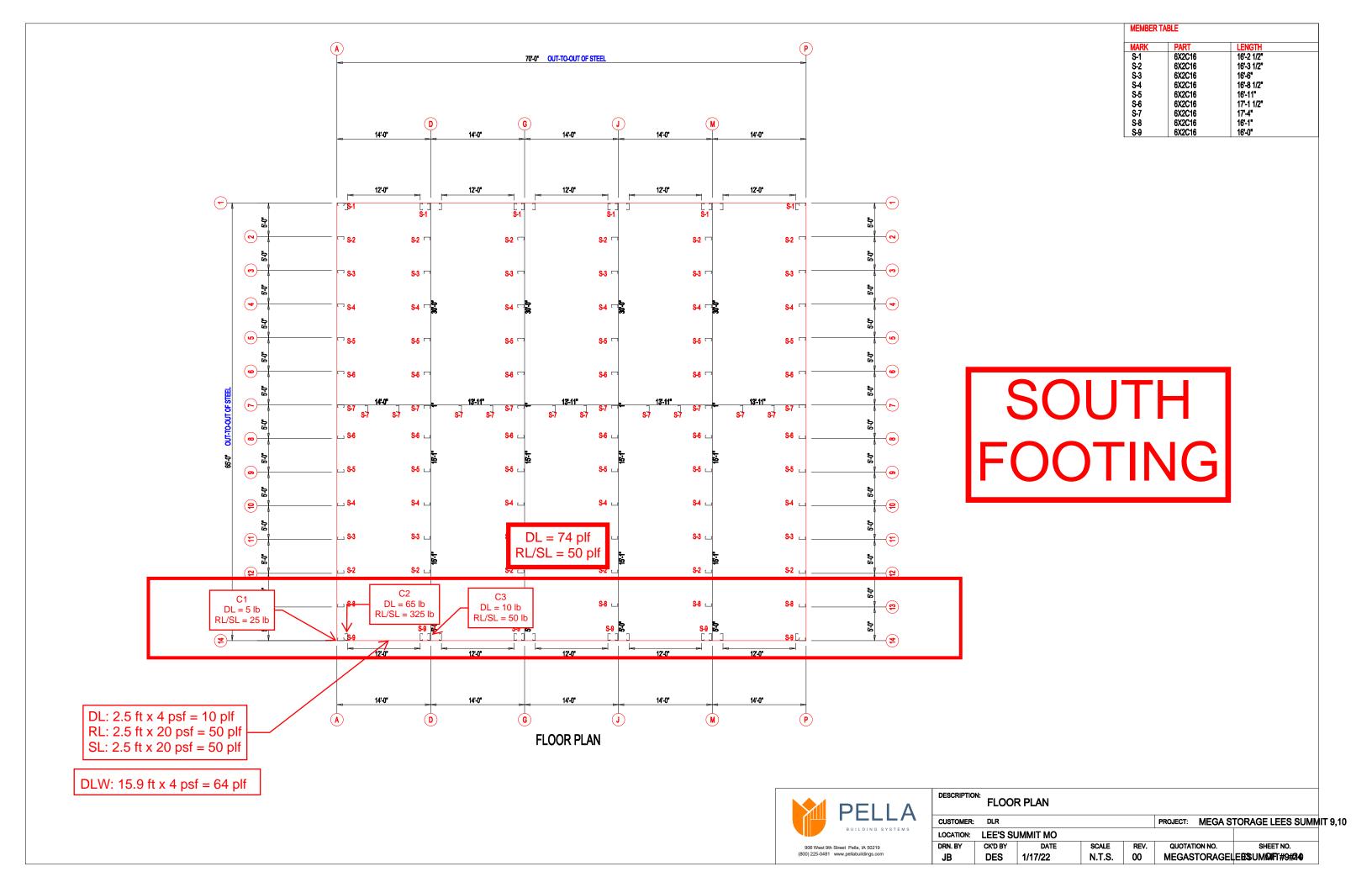
WEST FOOTING LOAD (EXT)								
LENGTH (FT)	60							
COLUMN	C1	C1 C2 C3						
# OF COLUMNS	1	10	2					
DL (LB)	24	70	5					
RL (LB)	116	348	25					
SL (LB)	116	348	25					
DL SUM (LB)	24	700	10					
RL SUM (LB)	116	3480	50					
SL SUM (LB)	116	3480	50					
DL WALL (PLF)	66							
DL (PLF)	75							
RL (PLF)		61						
SL (PLF)		61						

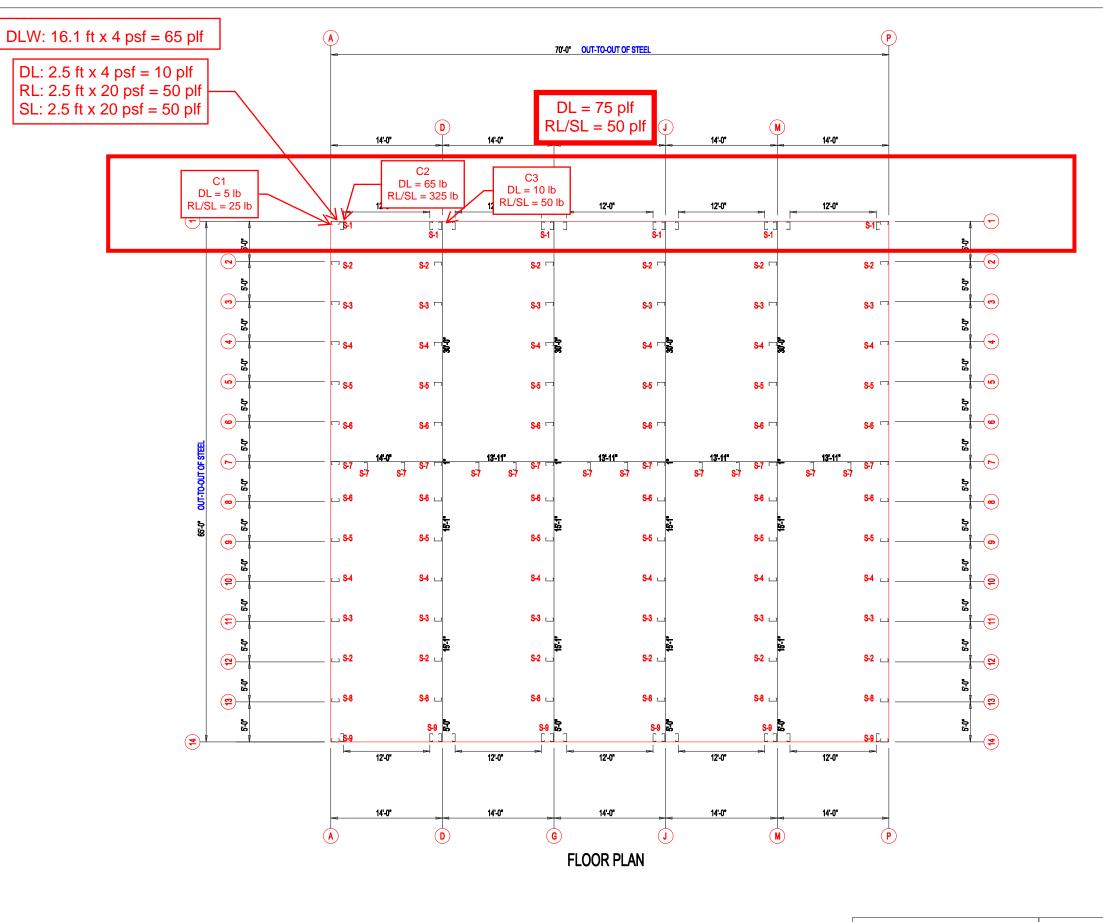
INTERIOR FOOTING LOAD (INT)							
LENGTH (FT)	60						
COLUMN	C1	C1 C2 C3					
# OF COLUMNS	2	1	10				
DL (LB)	10	46	140				
RL (LB)	48	232	696				
SL (LB)	48	232	696				
DL SUM (LB)	20	46	1400				
RL SUM (LB)	96	232	6960				
SL SUM (LB)	96	232	6960				
DL WALL (PLF)	66						
DL (PLF)	84						
RL (PLF)	121						
SL (PLF)		121					

#### Buildings 8, 13, 14 & 15

CENTER INTERIOR FOOTING LOAD (INT)								
LENGTH (FT)	83.5							
COLUMN	C1 C2							
# OF COLUMNS	2	17						
DL (LB)	24	46						
RL (LB)	116	232						
SL (LB)	116	232						
DL SUM (LB)	48	782	0					
RL SUM (LB)	232	3944	0					
SL SUM (LB)	232	3944	0					
DL WALL (PLF)	69							
DL (PLF)	79							
RL (PLF)		70						
SL (PLF)		70						

### **BUILDINGS 9 & 10**





 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-2 1/2"

 S-2
 6X2C16
 16'-3 1/2"

 S-3
 6X2C16
 16'-8"

 S-4
 6X2C16
 16'-8 1/2"

 S-5
 6X2C16
 16'-11"

 S-6
 6X2C16
 17'-1 1/2"

 S-7
 6X2C16
 17'-4"

 S-8
 6X2C16
 16'-1"

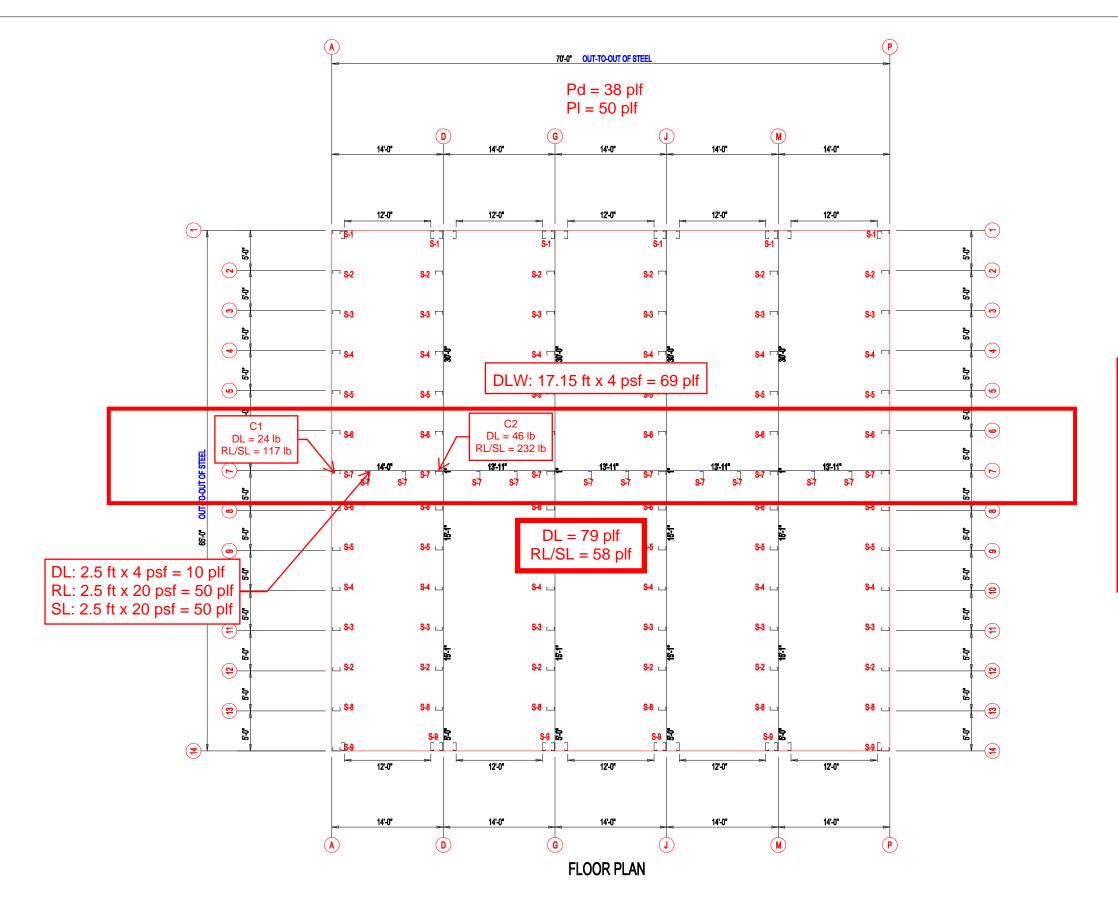
 S-9
 6X2C16
 16'-0"

### NORTH FOOTING

DELLA	DES
	cus
BUILDING SYSTEMS	LOC
906 West 9th Street Pella, IA 50219	DRN
(800) 225-0481 www.pellabuildings.com	I IB

ESCRIPTION:	FLOOR PLAN	
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CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	IIT 9,10
LOCATION:	LEE'S SU	JMMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	'ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>ES</b> UM <b>01F</b> T#9#2 <b>4</b>	



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-2 1/2"

 S-2
 6X2C16
 16'-3 1/2"

 S-3
 6X2C16
 16'-6"

 S-4
 6X2C16
 16'-8 1/2"

 S-5
 6X2C16
 16'-11"

 S-6
 6X2C16
 17'-1 1/2"

 S-7
 6X2C16
 17'-4"

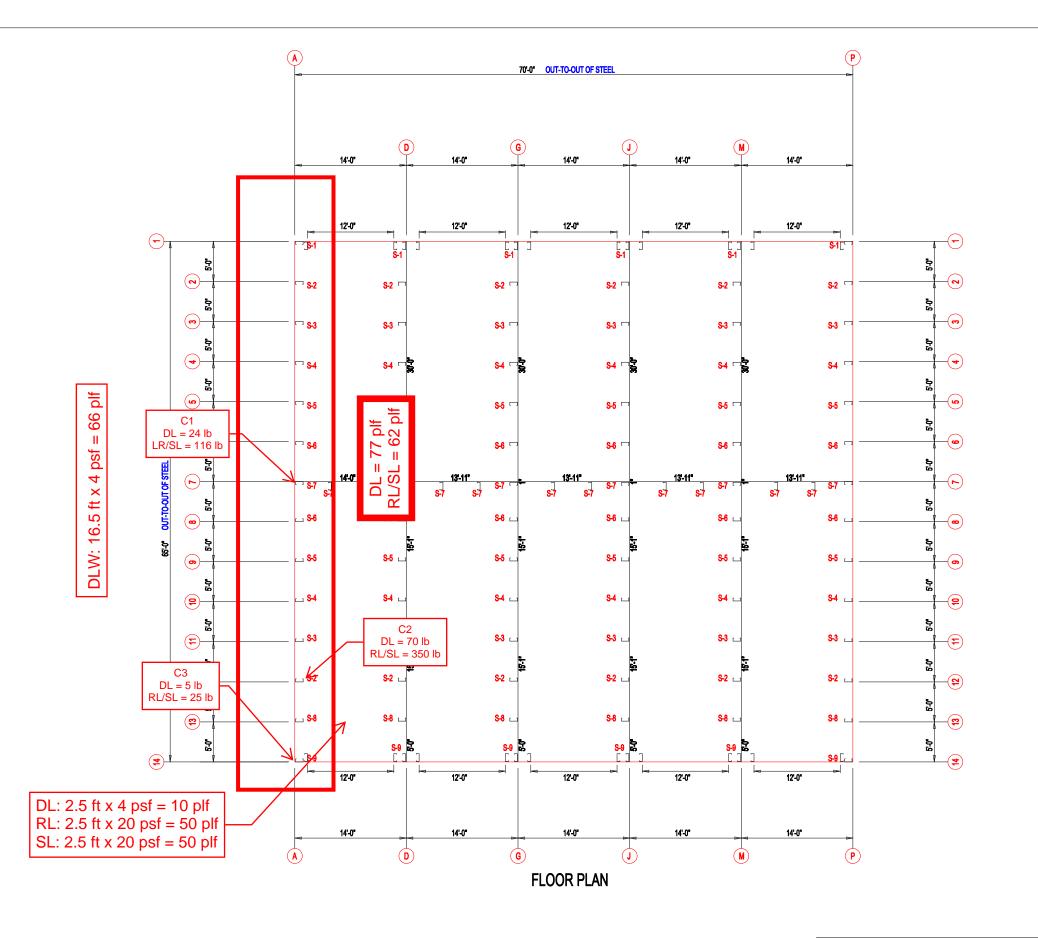
 S-8
 6X2C16
 16'-1"

 S-9
 6X2C16
 16'-0"

# CENTER INTERIOR FOOTING



DESCRIPTIO	N: FLOOF	R PLAN						
CUSTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	IIT 9,10
LOCATION:	LEE'S SU	JMMIT MO						
DRN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	'ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	.E <b>es</b> um <b>01f</b> t#9# <b>24</b>	



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16-2 1/2"

 S-2
 6X2C16
 16-3 1/2"

 S-3
 6X2C16
 16-8"

 S-4
 6X2C16
 16-8 1/2"

 S-5
 6X2C16
 16-11"

 S-6
 6X2C16
 17-1 1/2"

 S-7
 6X2C16
 17-4"

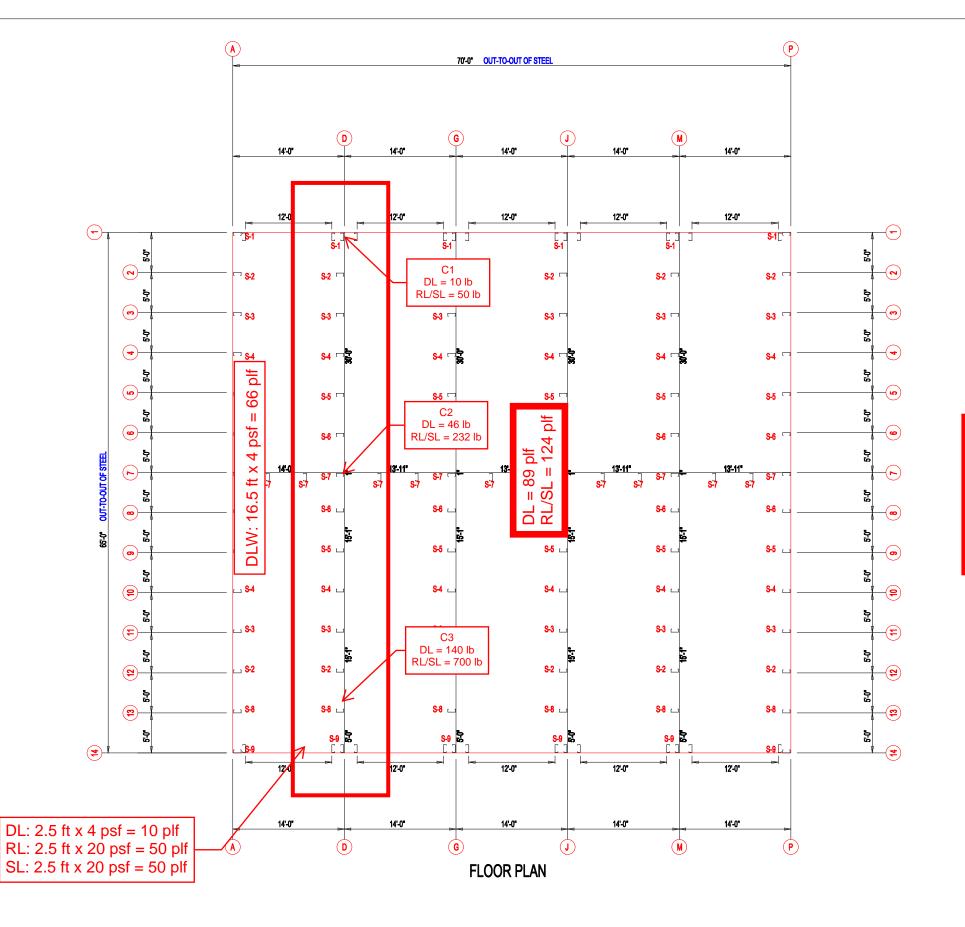
 S-8
 6X2C16
 16-1"

 S-9
 6X2C16
 16-0"

## WEST FOOTING



ESCRIPTIO	N: FLOOF	R PLAN						
USTOMER:	DLR				PROJECT:	MEGA S	TORAGE LEES SUMM	IIT 9,10
OCATION:	LEE'S SU	JMMIT MO						
RN. BY	CK'D BY	DATE	SCALE	REV.	QUOTAT	ION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGAS	TORAGEL	E <b>BS</b> UM <b>MF</b> T#9# <b>24</b>	



 MEMBER TABLE

 MARK
 PART
 LENGTH

 S-1
 6X2C16
 16'-2 1/2"

 S-2
 6X2C16
 16'-3 1/2"

 S-3
 6X2C16
 16'-8"

 S-4
 6X2C16
 16'-8 1/2"

 S-5
 6X2C16
 16'-11"

 S-6
 6X2C16
 17'-1 1/2"

 S-7
 6X2C16
 17'-4"

 S-8
 6X2C16
 16'-1"

 S-9
 6X2C16
 16'-0"

## INTERIOR FOOTING



FLOOR PLAN
------------

USTOMER:	DLR				PROJECT: MEGA	STORAGE LEES SUMMI	T 9,10
OCATION:	LEE'S SU	JMMIT MO					
RN. BY	CK'D BY	DATE	SCALE	REV.	QUOTATION NO.	SHEET NO.	
JB	DES	1/17/22	N.T.S.	00	MEGASTORAGE	LE <b>BS</b> UM <b>01F</b> T#9#24	

#### Buildings 9 & 10

SOUTH FOOTING LOAD (EXT)								
LENGTH (FT)		70						
COLUMN	C1 C2 C3							
# OF COLUMNS	2	10	4					
DL (LB)	5	65	10					
RL (LB)	25	25 325						
SL (LB)	25	325	50					
DL SUM (LB)	10	650	40					
RL SUM (LB)	50	3250	200					
SL SUM (LB)	50	3250	200					
DL WALL (PLF)	64							
DL (PLF)	74							
RL (PLF)	50							
SL (PLF)		50						

NORTH FOOTING LOAD (EXT)							
LENGTH (FT)		70					
COLUMN	C1	C2					
# OF COLUMNS	2	10	4				
DL (LB)	5	65	10				
RL (LB)	25	325	50				
SL (LB)	25	325	50				
DL SUM (LB)	10	650	40				
RL SUM (LB)	50	3250	200				
SL SUM (LB)	50	3250	200				
DL WALL (PLF)		65					
DL (PLF)	75						
RL (PLF)	50						
SL (PLF)		50					

#### Buildings 9 & 10

WEST FOOTING LOAD (EXT)							
LENGTH (FT)		65					
COLUMN	C1 C2 C3						
# OF COLUMNS	1	11	2				
DL (LB)	24	70	5				
RL (LB)	116	350	25				
SL (LB)	116	25					
DL SUM (LB)	24	770	10				
RL SUM (LB)	116	3850	50				
SL SUM (LB)	116	3850	50				
DL WALL (PLF)		66					
DL (PLF)	77						
RL (PLF)	62						
SL (PLF)		62					

INTERIOR FOOTING LOAD (INT)								
LENGTH (FT)		65						
COLUMN	C1	C1 C2						
# OF COLUMNS	2	1	11					
DL (LB)	10	46	140					
RL (LB)	50	232	700					
SL (LB)	50	232	700					
DL SUM (LB)	20	46	1540					
RL SUM (LB)	100	232	7700					
SL SUM (LB)	100	232	7700					
DL WALL (PLF)		66						
DL (PLF)	89							
RL (PLF)	124							
SL (PLF)		124						

#### Buildings 9 & 10

CENTER INTERIOR FOOTING LOAD (INT)			
LENGTH (FT)	70		
COLUMN	C1	C2	
# OF COLUMNS	2	14	
DL (LB)	24	46	
RL (LB)	117	232	
SL (LB)	117	232	
DL SUM (LB)	48	644	0
RL SUM (LB)	234	3248	0
SL SUM (LB)	234	3248	0
DL WALL (PLF)	69		
DL (PLF)	79		
RL (PLF)	54		
SL (PLF)	54		