

City of Puyallup Development & Permitting Services ISSUED PERMIT			
Building	Planning		
Engineering	Public Works		
Fire	Traffic		

City of Puyallup
Building
REVIEWED
FOR
COMPLIANCE

BSnowden
04/25/2025
9:50:02 AM



The approved construction plans, documents, and all engineering must be posted on the job at all inspections in a visible and readily accessible location.

Full sized legible color plans are required to be provided by the permittee on site for inspection.

Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

DESIGN
17469

PROJECT
TACO TIME | EAST MAIN PUYALLUP

INSTALL LOCATION
1115 E MAIN, PUYALLUP 98372

APPROVED BY/DATE
X

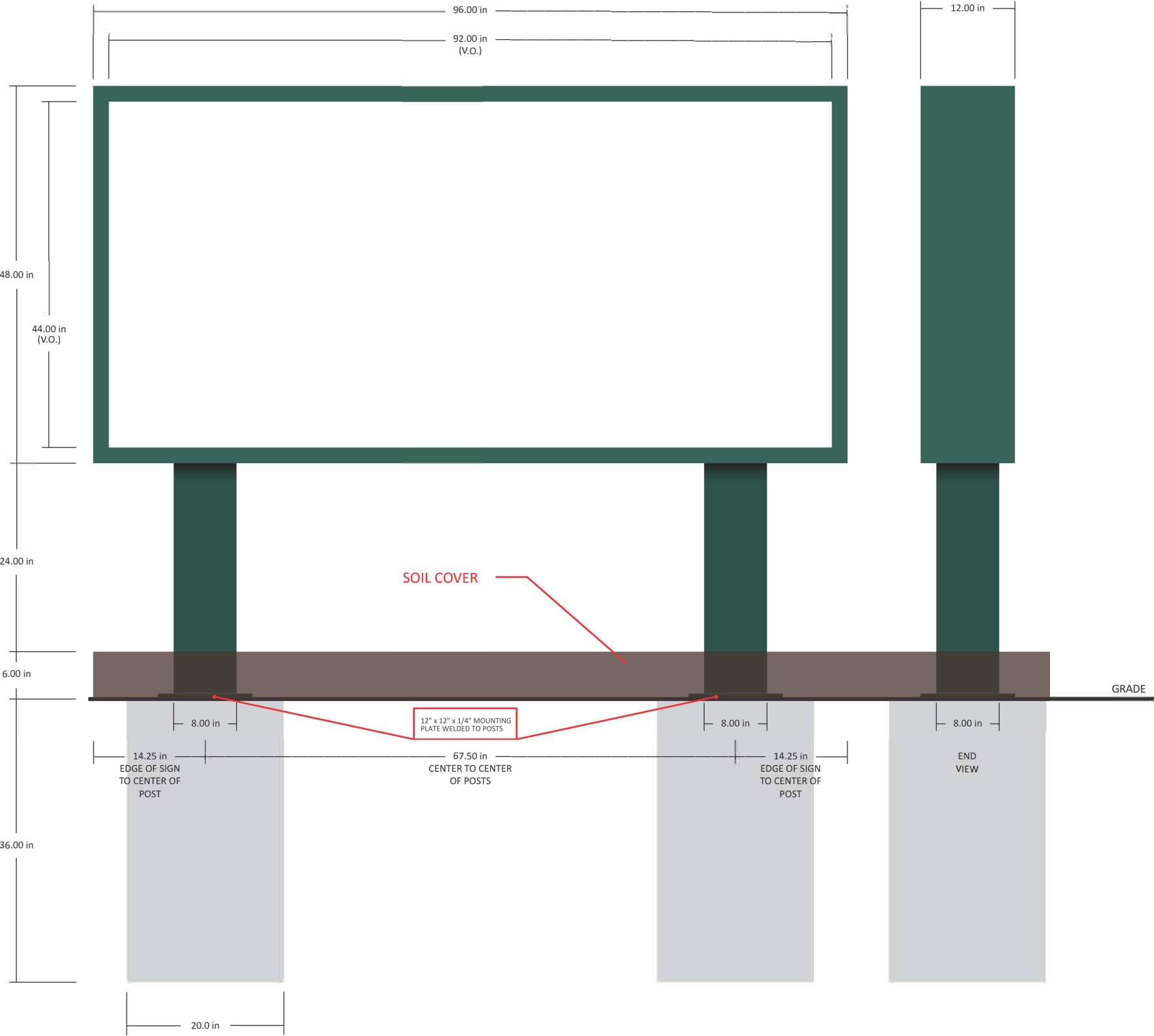


PLUMB SIGNS, INC
909 SOUTH 28TH ST
TACOMA, WA 98409
TEL# 253-473-3323
FAX# 253-472-3107

SALES
CARIN TAYLOR
DRAWN BY
CARTER / PETERSEN

SCALE
NA
START DATE
09.23.24

SHEET
1 OF 7
UPDATED
R2 02.04.25



3 MONUMENT MENU PYLON SIGN

32.0 SQ. FT. QTY: 2

- FABRICATE AND INSTALL TWO (2) NEW MONUMENT MENU SIGN
- 2" SQUARE TUBE CONSTRUCTED FRAME w/ .090 ALUMINUM EXTERIOR
 - PAINT CABINET AND ALL EXPOSED EXTERIOR MATTHEWS HARTFORD GREEN
 - 3/16" LEXAN FACE
 - GRAPHICS FOR FACE PROVIDED BY TACO TIME MARKETING DEPT
 - 2" RETAINER SYSTEM
 - SIDE PANEL REMOVEABLE FOR FACE REPLACEMENT/UPDATE IN FUTURE
 - HANG BAR
 - ILLUMINATED w/ WHITE LEDs
- FABRICATE 12" x 12" x 1/4" SQUARE MOUNTING PLATE
- MOUNTING PLATE BOLT INTO 20" x 36" FOOTINGS SUPPLIED BY GC w/ 1/2" ANCHOR BOLTS
 - CONCRETE WILL BE DRILLED ONSITE TO MATCH PLATE HOLE PATTERN
 - DO NOT DOUBLE NUT. WILL NOT NEED LEVELING NUTS.

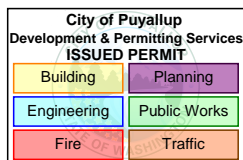
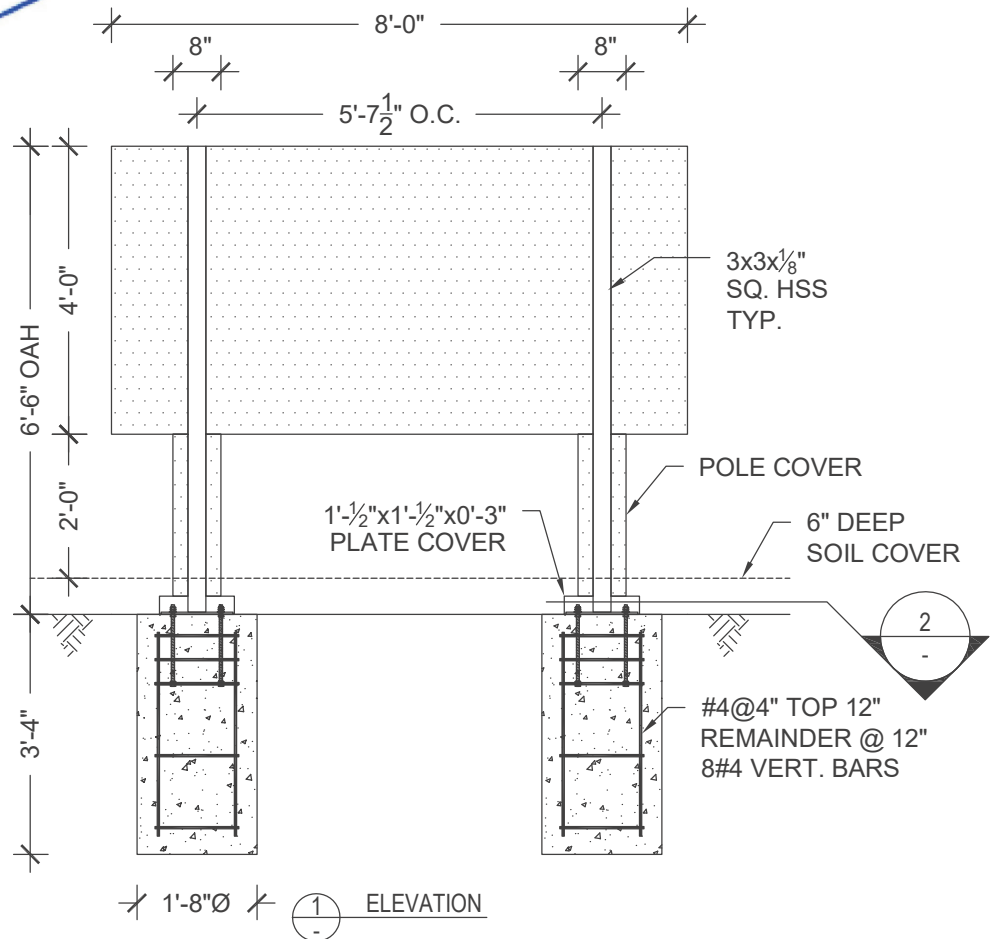
Prior to installation:
Review anchor product's ICC-ES Report and install the product per the report. If the report states special inspection(s) are required - the final special inspection report must be on site during City inspections.



12396 WORLD TRADE DRIVE, SUITE 312,
SAN DIEGO, CA 92128
PROJECTMANAGER@SULLAWAYENG.COM
PHONE: 1-858-312-5150 FAX: 1-858-777-3534

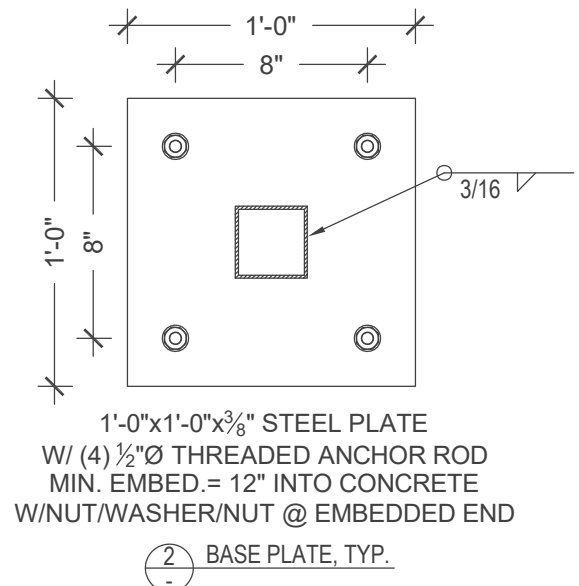
PROJECT: TACO TIME, SIGN TYPE: MONUMENT SIGN, 1115 E. MAIN, PUYALLUP, WA
PROJECT #: 50191D
CLIENT: PLUMB SIGNS

DATE: 03/18/2025
ENGINEER: JD
LAST REVISED:



GENERAL NOTES

- DESIGN CODE: IBC 2021 & WASHINGTON SBCC 2021
- DESIGN LOADS: ASCE 7-16
- WIND VELOCITY 100 MPH EXPOSURE C
- CONCRETE 2500 PSI MINIMUM
- SQ. HSS STEEL ASTM A500 GR. B, $F_y = 46$ KSI MIN.
- PLATE STEEL ASTM A36
- WELDING STRENGTH, $F_{exx} = 70$ KSI MIN.
- THREADED ANCHOR ROD STEEL ASTM F1554 GR. 36, $F_u = 58$ KSI MIN.
- STEEL REINFORCEMENT IN CONCRETE ASTM A615 GR. 60
- PROVIDE MIN. 3" CLEAR COVER ON ALL STEEL EMBEDDED IN CONCRETE WHEN CAST AGAINST SOIL
- LATERAL SOIL BEARING PER IBC CLASS 4 (150 PSF/FT)
- PROVIDE PROTECTION AGAINST DISSIMILAR METALS
- ALL DIMENSIONS TO BE VERIFIED PRIOR TO FABRICATION





PROJECT: TACO TIME
 PROJ. NO.: 50191D
 CLIENT: PLUMB SIGNS

DATE: 3/18/2025
 ENGINEER: JD

V5.5

units; pounds, feet unless noted otherwise

Applied Wind Loads; from ASCE 7-16 (LRFD):

$F = q_z * G * C_f * A_f$ with $q_z = 0.00256 K_z K_{zt} K_d V^2$ (29.3.2 & 29.4)
 $C_f = 1.533$ (Fig. 29.3-1) 2 pole C_f factor = 0.93 5.625 max. height = 6.50
 $K_{zt} = 1.0$ (26.8.2) (=1.0 unless unusual landscape)
 K_z = from table 28.3-1 Exposure = c
 $K_d = 0.85$ for signs (table 26.6-1)
 $V = 100$ mph
 $G = 0.85$ (26.9) weight = 0.355 kips
 $s/h = 0.615$ $M_{DL} = 0.000$ k-ft
 $B/s = 2.00$

Pole Loads	structure component	height at section c.g.	K_z	q_z	pressure $q_z * G * C_f$	A_f	shear	Wind Moment M_w	
	1	0.250	0.850	18.50	24.10	0.85	21	5	
	2	1.500	0.850	18.50	24.10	2.67	64	96	
	3	4.500	0.850	18.50	24.10	32.00	771	3471	
					sums:	35.52	856	3.57	(M_w) k-ft arm = 4.2
	two pole distribution factor *b*s (asce fig. 29.4-1):				x 0.68		579	2.42	
		$P_u = 0.43$ kip					$M = 2.42$ k-ft		$M = \sqrt{M_{DL}^2 + M_w^2}$
	$M_u = \sqrt{(1.2 M_{DL}^2 + 1.0 M_w^2)}$		2.42	k-ft					

Pole Design section; tube

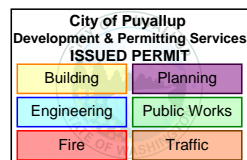
$M_u \leq \phi M_n$ with $M_n = f_y Z$	$f_y = 46$ ksi	$\phi = 0.9$					
H	M_u (k-ft)	Z req'd. (in)	Size(in)	t (in)	Z	USE	
at grade	2.42	0.70	2	0.25	1.0	3x3x1/8" Sq. HSS, $\phi M_n = 4.82$ k-ft	

Footing Design footprint: round

$\omega = 1.3$ IBC 1605.3.2 IBC Table 1806.2, sections 1806.3.4, 1807.3.2 $S = (1.3 \times 2 \times 150 \text{ psf/ft})$
 $P = 0.45$ kip $S_1 = S \times d / 3$ $A = 2.34 \times P / (S_1 \times b)$ $S = 400$
 $S_1 = 446$ $d = 0.5 \times A (1 + (1 + 4.36 \times h/A)^{.5})$ IBC 1807.3.2.1
 $A = 1.42$

footing: 1' - 8" dia.

3' - 4" deep





PROJECT: TACO TIME
 PROJ. NO.: 50191D
 CLIENT: PLUMB SIGNS

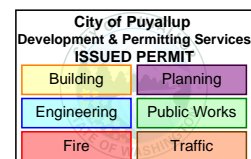
DATE: 3/18/2025
 ENGINEER: JD

V5.5

units; pounds, feet unless noted otherwise

Check 12x12x0.375" Steel Base Plate, A36 (LRFD):

arm =	2.575	in	b =	12.00	in	t =	0.375	in	n =	2
Mplate =						T per bolt * n * arm =	7.998 k-in (Tu=From Simpson)			
Z =						bt ² /4 =	0.422 in ³ (Tu= 1.553k)			
φMn =						φ*Fy*Z = 0.9*36ksi*Z =	13.669 k-in			
Ratio check =						Mplate/φMn =	0.585 <1		OK	





Anchor Designer™ for Concrete Software

Version 3.3.2501.2

Company:		Date:	3/19/2025
Engineer:		Page:	1
Project:			
Address:			
Phone:			
E-mail:			

1. Project information

Project description:
Location:
Design name: Design

Comment:

2. Input Data & Anchor Parameters

General

Design method: ACI 318-14
Units: Imperial units

Anchor Information:

Anchor type: Cast-in-place
Material: AB
Diameter (inch): 0.500
Effective Embedment depth, h_{ef} (inch): 12.000
Anchor category: -
Anchor ductility: Yes
 h_{min} (inch): 13.88
 C_{min} (inch): 3.00
 S_{min} (inch): 3.00

Base Material

Concrete: Normal-weight
Concrete thickness, h (inch): 40.00
State: Cracked
Compressive strength, f'_c (psi): 2500
 $\Psi_{c,v}$: 1.0
Reinforcement condition: B tension, B shear
Supplemental edge reinforcement: Not applicable
Reinforcement provided at corners: No
Ignore concrete breakout in tension: No
Ignore concrete breakout in shear: No
Ignore 6do requirement: No
Build-up grout pad: No

Base Plate

Length x Width x Thickness (inch): 12.00 x 12.00 x 0.38
Yield stress: 36000 psi

Profile type/size: 3X3X1/8

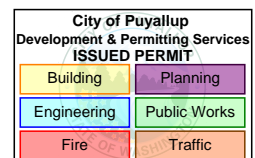
Recommended Anchor

Anchor Name: PAB Pre-Assembled Anchor Bolt - PAB4 (1/2"Ø)



Prior to installation:

Review anchor product's ICC-ES Report and install the product per the report. If the report states special inspection(s) are required - the final special inspection report must be on site during City inspections.





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Concrete Software**
Version 3.3.2501.2

Company:		Date:	3/19/2025
Engineer:		Page:	2
Project:			
Address:			
Phone:			
E-mail:			

Load and Geometry

Load factor source: ACI 318 Section 5.3

Load combination: not set

Seismic design: No

Anchors subjected to sustained tension: Not applicable

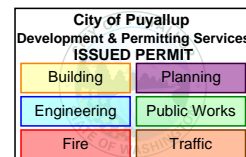
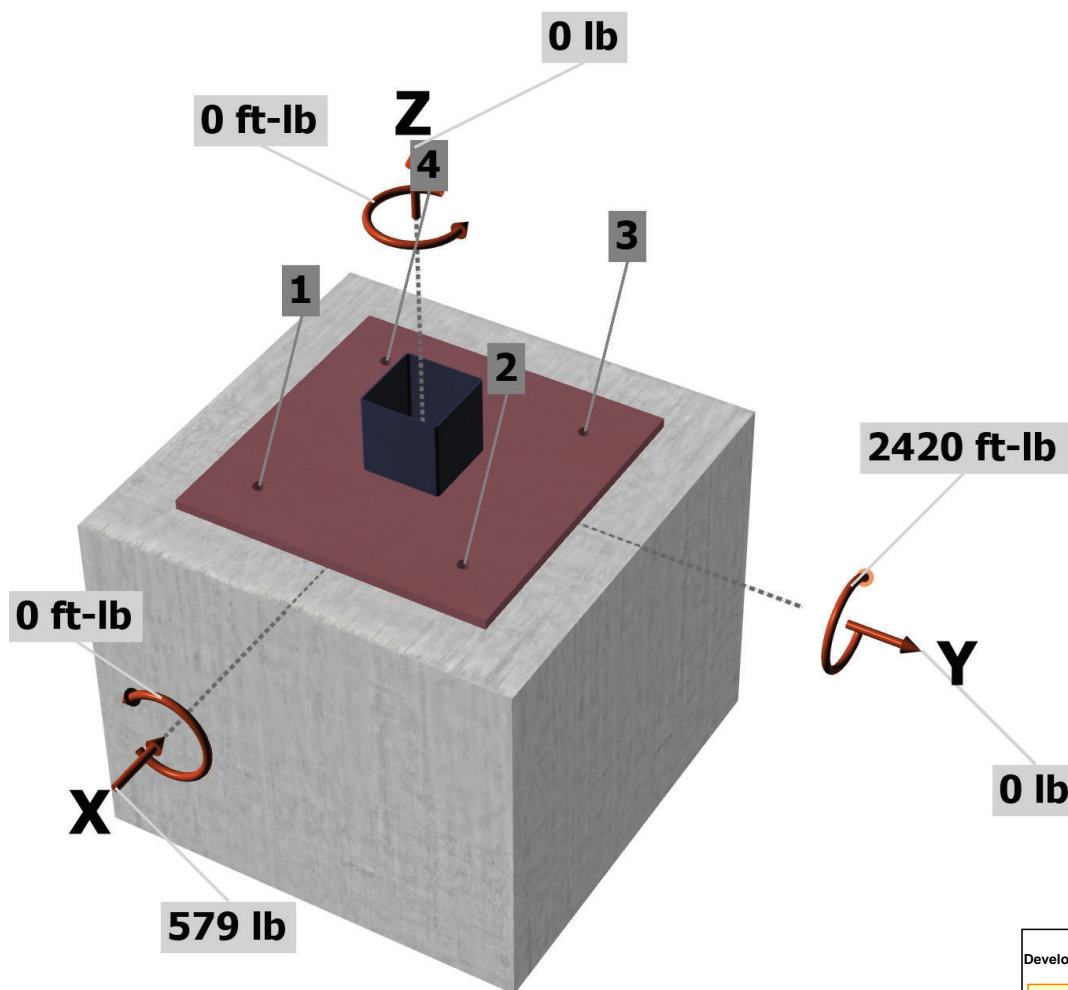
Apply entire shear load at front row: No

Anchors only resisting wind and/or seismic loads: No

Strength level loads:

N_{ua} [lb]: 0
 V_{uax} [lb]: -579
 V_{uay} [lb]: 0
 M_{ux} [ft-lb]: 0
 M_{uy} [ft-lb]: -2420
 M_{uz} [ft-lb]: 0

<Figure 1>



Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines must be checked for plausibility.

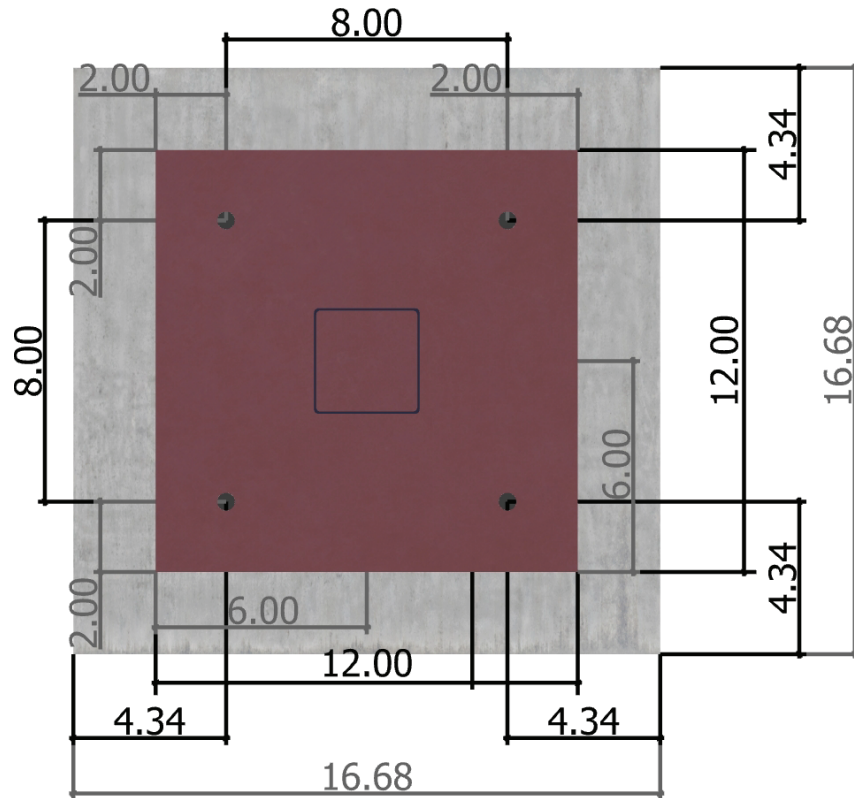
Simpson Strong-Tie Company Inc. 5956 W. Las Positas Boulevard Pleasanton, CA 94588 Phone: 925.560.9000 Fax: 925.847.3871 www.strongtie.com



Anchor Designer™ for
Concrete Software
Version 3.3.2501.2

Company:		Date:	3/19/2025
Engineer:		Page:	3
Project:			
Address:			
Phone:			
E-mail:			

<Figure 2>



3. Resulting Anchor Forces

Anchor	Tension load, N_{ua} (lb)	Shear load x, V_{uax} (lb)	Shear load y, V_{uay} (lb)	Shear load combined, $\sqrt{(V_{uax})^2 + (V_{uay})^2}$ (lb)
1	1552.8	-144.8	0.0	144.8
2	1552.8	-144.8	0.0	144.8
3	5.8	-144.8	0.0	144.8
4	5.8	-144.8	0.0	144.8
Sum	3117.0	-579.0	0.0	579.0

Maximum concrete compression strain (‰): 0.06

Maximum concrete compression stress (psi): 264

Resultant tension force (lb): 3117

Resultant compression force (lb): 3117

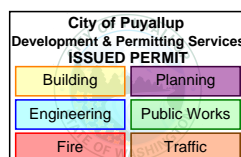
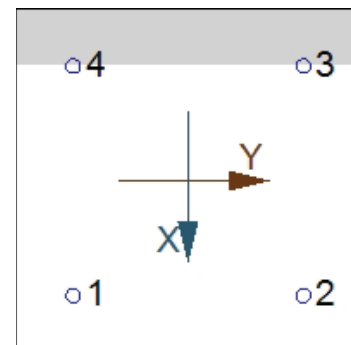
Eccentricity of resultant tension forces in x-axis, e'_{nx} (inch): 0.00

Eccentricity of resultant tension forces in y-axis, e'_{ny} (inch): 3.97

Eccentricity of resultant shear forces in x-axis, e'_{vx} (inch): 0.00

Eccentricity of resultant shear forces in y-axis, e'_{vy} (inch): 0.00

<Figure 3>





Company:		Date:	3/19/2025
Engineer:		Page:	4
Project:			
Address:			
Phone:			
E-mail:			

4. Steel Strength of Anchor in Tension (Sec. 17.4.1)

N_{sa} (lb)	ϕ	ϕN_{sa} (lb)
8235	0.75	6176

5. Concrete Breakout Strength of Anchor in Tension (Sec. 17.4.2)

$$N_b = 16\lambda_a \sqrt{f'_c} h_{ef}^{5/3} \text{ (Eq. 17.4.2.2b)}$$

λ_a	f'_c (psi)	h_{ef} (in)	N_b (lb)
1.00	2500	2.893	4700

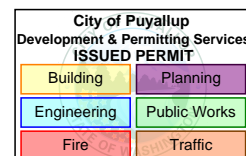
$$\phi N_{cbg} = \phi (A_{Nc} / A_{Nco}) \Psi_{ec,N} \Psi_{ed,N} \Psi_{c,N} \Psi_{cp,N} N_b \text{ (Sec. 17.3.1 & Eq. 17.4.2.1b)}$$

A_{Nc} (in ²)	A_{Nco} (in ²)	$c_{a,min}$ (in)	$\Psi_{ec,N}$	$\Psi_{ed,N}$	$\Psi_{c,N}$	$\Psi_{cp,N}$	N_b (lb)	ϕ	ϕN_{cbg} (lb)
278.22	75.34	4.34	0.522	1.000	1.00	1.000	4700	0.70	6345

6. Pullout Strength of Anchor in Tension (Sec. 17.4.3)

$$\phi N_{pn} = \phi \Psi_{c,P} N_p = \phi \Psi_{c,P} 8 A_{brg} f'_c \text{ (Sec. 17.3.1, Eq. 17.4.3.1 & 17.4.3.4)}$$

$\Psi_{c,P}$	A_{brg} (in ²)	f'_c (psi)	ϕ	ϕN_{pn} (lb)
1.0	1.57	2500	0.70	21994





Company:		Date:	3/19/2025
Engineer:		Page:	5
Project:			
Address:			
Phone:			
E-mail:			

7. Side-Face Blowout Strength of Anchor in Tension (Sec. 17.4.4)

$$\phi N_{sb} = \phi \{ (1 + c_{a2}/c_{a1})/4 \} (1 + s/6c_{a1}) N_{sb} = \phi \{ (1 + c_{a2}/c_{a1})/4 \} (1 + s/6c_{a1}) (160c_{a1}\sqrt{A_{brg}})\lambda\sqrt{f'_c} \text{ (Sec. 17.3.1, Eq. 17.4.4.1 \& 17.4.4.2)}$$

s (in)	c _{a1} (in)	c _{a2} (in)	A _{brg} (in ²)	λ _a	f' _c (psi)	φ	φN _{sb} (lb)
8.00	4.34	4.34	1.57	1.00	2500	0.70	19911

8. Steel Strength of Anchor in Shear (Sec. 17.5.1)

V _{sa} (lb)	φ _{grout}	φ	φ _{grout} φV _{sa} (lb)
4940	1.0	0.65	3211

9. Concrete Breakout Strength of Anchor in Shear (Sec. 17.5.2)

Shear perpendicular to edge in x-direction:

$$V_{bx} = \min[7(l_e/d_a)^{0.2}\sqrt{d_a}\lambda_a\sqrt{f'_c}c_{a1}^{1.5}; 9\lambda_a\sqrt{f'_c}c_{a1}^{1.5}] \text{ (Eq. 17.5.2.2a \& Eq. 17.5.2.2b)}$$

l _e (in)	d _a (in)	λ _a	f' _c (psi)	c _{a1} (in)	V _{bx} (lb)
4.00	0.500	1.00	2500	12.34	16261

$$\phi V_{cbgx} = \phi (A_{vc}/A_{vco})\psi_{ec,v}\psi_{ed,v}\psi_{c,v}\psi_{h,v}V_{bx} \text{ (Sec. 17.3.1 \& Eq. 17.5.2.1b)}$$

A _{vc} (in ²)	A _{vco} (in ²)	ψ _{ec,v}	ψ _{ed,v}	ψ _{c,v}	ψ _{h,v}	V _{bx} (lb)	φ	φV _{cbgx} (lb)
308.75	685.24	1.000	0.770	1.000	1.000	16261	0.70	3951

Shear parallel to edge in y-direction:

$$V_{bx} = \min[7(l_e/d_a)^{0.2}\sqrt{d_a}\lambda_a\sqrt{f'_c}c_{a1}^{1.5}; 9\lambda_a\sqrt{f'_c}c_{a1}^{1.5}] \text{ (Eq. 17.5.2.2a \& Eq. 17.5.2.2b)}$$

l _e (in)	d _a (in)	λ _a	f' _c (psi)	c _{a1} (in)	V _{bx} (lb)
4.00	0.500	1.00	2500	4.34	3392

$$\phi V_{cbgy} = \phi (2)(A_{vc}/A_{vco})\psi_{ec,v}\psi_{ed,v}\psi_{c,v}\psi_{h,v}V_{bx} \text{ (Sec. 17.3.1, 17.5.2.1(c) \& Eq. 17.5.2.1b)}$$

A _{vc} (in ²)	A _{vco} (in ²)	ψ _{ec,v}	ψ _{ed,v}	ψ _{c,v}	ψ _{h,v}	V _{bx} (lb)	φ	φV _{cbgy} (lb)
108.59	84.76	1.000	1.000	1.000	1.000	3392	0.70	6083

10. Concrete Pryout Strength of Anchor in Shear (Sec. 17.5.3)

$$\phi V_{cp} = \phi k_{cp}N_{cb} = \phi k_{cp}(A_{nc}/A_{nco})\psi_{ec,n}\psi_{ed,n}\psi_{c,n}\psi_{cp,n}N_b \text{ (Sec. 17.3.1 \& Eq. 17.5.3.1b)}$$

k _{cp}	A _{nc} (in ²)	A _{nco} (in ²)	ψ _{ec,n}	ψ _{ed,n}	ψ _{c,n}	ψ _{cp,n}	N _b (lb)	φ	φV _{cp} (lb)
2.0	278.22	75.34	1.000	1.000	1.000	1.000	4700	0.70	24298

11. Results

Interaction of Tensile and Shear Forces (Sec. R17.6)

Tension	Factored Load, N _{ua} (lb)	Design Strength, φN _n (lb)	Ratio	Status
Steel	1553	6176	0.25	Pass
Concrete breakout	3117	6345	0.49	Pass (Governs)
Pullout	1553	21994	0.07	Pass
Side-face blowout	3106	19911	0.16	Pass

Shear	Factored Load, V _{ua} (lb)	Design Strength, φV _n (lb)	Ratio	Status
Steel	145	3211	0.05	Pass
T Concrete breakout x-	579	3951	0.15	Pass (Governs)
 Concrete breakout y+	290	6083	0.05	Pass (Governs)
Pryout	579	24298	0.02	Pass

Interaction check	(N _{ua} /φN _n) ^{5/3}	(V _{ua} /φV _n) ^{5/3}	Utilization Ratio	Permissible	Status
Sec. R17.6	0.31	0.04	34.7%	1.0	Pass

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Anchor Designer™ for
Concrete Software
Version 3.3.2501.2

Company:		Date:	3/19/2025
Engineer:		Page:	6
Project:			
Address:			
Phone:			
E-mail:			

PAB4 (1/2"Ø) with hef = 12.000 inch meets the selected design criteria.

12. Warnings

- Designer must exercise own judgement to determine if this design is suitable.

