Company	**JOB TITLE**		
Address			
City	**JOB NO.**	**SHEET NO.**	
Phone	**CALCULATED BY**	**DATE**	
Other	**CHECKED BY**	**DATE**	

TU08 Ver 2010.07.23

TILT-UP CONCRETE WALL (ACI 318-08)

www.struware.com

DESCRIPTION: ACI 551.2R-10 example B.1

PANEL PROPERTIES

Panel Height: Lc =	29.5 ft	Conc Weight =	150.0 pcf
Total Panel Thickness =	6.25 in	f'c =	4.0 ksi
Reveal Thickness =	0.00 in	fy =	60.0 ksi
Structural Thickness: h =	6.25 in	Lt wt conc factor	
Strip Width: b =	180.0 in	(NW=1, LW=.75)	1.00
Cover to Ext Vert Bar =	0.75 in		
Vert Bar Location :	Centered	Min Defl ratio =	150
Bar Depth: d =	3.125 in		
Vertical Bar Size =	# 6		
Vertical Bar Spacing =	11.3 in		
As =	0.469 in2/ft		
Parapet Height =	1.50 ft		

Opening Properties		Horizontal Reinforcing:	
Opening Width =	0.00 ft	As =	0.0020 Ag
EL Top of Opening =	0.00 ft	Centered	Each Face
EL Bottom Opening =	0.00 ft	#4@ 15.7	#4@ 18.0
Opening Material Wt =	10.0 psf	#5@ 18.0	#5@ 18.0
Opng Conc thickness =	6.25 in		

LOADING

12" STRIP WIDTH

Lateral Loading			plf	Ms ('lb)
Wind Pressure =	17.0 psf		17.0	1849.3
Seismic Factor =	0.000		0.0	0.0
	Use this seismic moment instead :			0.0
Vertical Loading				
S_{DS} =	0.000			
Uniform Vertical Loading		eccentricity	plf	Ms ('lb)
Strip wt midht =	1270 plf	0.000 in	1270	0.0
Dead Load =	0 plf	3.000 in	0	0.0
Floor Live Load =	0 plf	3.000 in	0	0.0
Roof Live Load =	0 plf	3.000 in	0	0.0
Roof Snow Load =	0 plf	3.000 in	0	0.0
Concentrated Vertical Loading		eccentricity		
Opening wt midht =	0.0 k	0.000 in	0	0.0
Dead Load =	7.2 k	3.000 in	480	60.0
Floor Live Load =	0.0 k	3.000 in	0	0.0
Roof Live Load =	7.5 k	3.000 in	500	62.5
Roof Snow Load =	0.0 k	3.000 in	0	0.0

Garage, assembly or LL>100psf: ○ Roofs that don't shed snow: ◉

All Others: ◉ All Others: ○

STRENGTH

	1.4D	1.2D +1.6L +0.5Lr	1.2D +0.5L +1.6Lr	1.2D +0.8W +1.6Lr	1.2D +1.6W +0.5L +0.5Lr	(1.2+.2Sds)D +1.0E +0.5L +0.7S	0.9D +1.6W	(0.9-.2Sds)D +1.0E	
Mua ('lb) =	84.0	103.3	172.0	1651.4	3062.1	72.0	3012.9	54.0	
Pu (lb) =	2449.3	2349.4	2899.4	2899.4	2349.4	2099.4	1574.6	1574.6	
Pu /Ag (psi) =	32.7	31.3	38.7	38.7	31.3	28.0	21.0	21.0	COMPRESSION OKAY
0.06f'c (psi) =	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	
Ase (in2) =	0.51	0.51	0.52	0.52	0.51	0.50	0.50	0.50	
Ec (ksi) =	3605	3605	3605	3605	3605	3605	3605	3605	
n =	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	
a (in) =	0.749	0.747	0.760	0.760	0.747	0.741	0.728	0.728	
c (in) =	0.882	0.879	0.895	0.895	0.879	0.872	0.856	0.856	
Icr (in4) =	23.4	23.3	23.6	23.6	23.3	23.2	23.0	23.0	
ε_t =	0.0076	0.0077	0.0075	0.0075	0.0077	0.0078	0.0079	0.0079	
ϕ =	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	
Ig (in4) =	244.1	244.1	244.1	244.1	244.1	244.1	244.1	244.1	
yt (in) =	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	
fr (psi) =	474.3	474.3	474.3	474.3	474.3	474.3	474.3	474.3	
Mcr ('lb) =	3088.2	3088.2	3088.2	3088.2	3088.2	3088.2	3088.2	3088.2	
Mu ('lb) =	170.0	201.0	423.9	4070.1	5959.7	127.8	4499.8	80.7	
Capacity: ϕMn ('lb) =	6306.8	6289.0	6386.8	6386.8	6289.0	6244.3	6150.2	6150.2	

STRENGTH OKAY

DEFLECTION

Service Load Combinations: ○
ACI 318 Commentary Load Combinations: ◉

	D	D +0.5L or 0.5Lr	D +0.5Lr or 0.5S	D +0.7W	D+0.70W +0.50L or 0.50Lr	(1+.105Sds)D +0.7E +0.5(L+S)	0.6D +1.0W	(0.6-.14Sds)D +0.7E	
Msa ('lb) =	60.0	91.3	91.3	1354.5	1385.7	60.0	1885.3	36.0	
Ps (lb) =	1749.5	1999.5	1999.5	1749.5	1999.5	1749.5	1049.7	1049.7	
Δcr (in) =	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	
Δn (in) =	13.028	13.015	13.090	13.090	13.015	12.980	12.907	12.907	
Ma ('lb) =	61.6	94.0	94.0	1390.6	1387.4	61.6	1915.1	36.6	
Δs (in) =	0.011	0.017	0.017	0.247	0.010	0.011	0.341	0.007	
Defl Ratio =	L / 9999	L / 9999	L / 9999	L / 1430	L / 9999	L / 9999	L / 1039	L / 9999	

DEFLECTION OKAY

Company
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Other

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JOB NO. SHEET NO.
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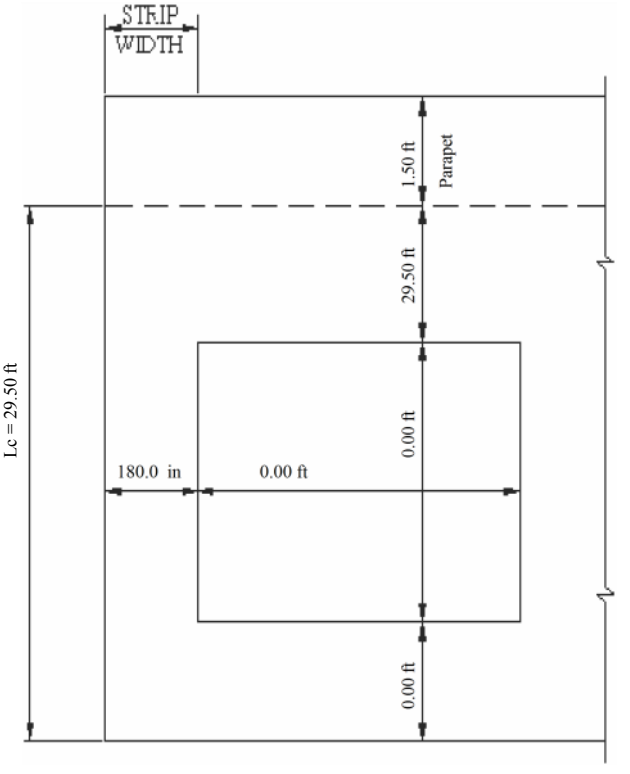

PANEL ELEVATION