Memorial de Cálculo

PROJETO ESTRUTURAL DE CÁLCULO DE ESTRUTURA

CASA DO AUTISTA

012-25-10-CASA DO AUTISTA-EST-PE-R00

SANTO AMARO DA IMPERATRIZ / SC

2026

CONTROLE DE REVISÕES

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00	09/10/2026	EMISSÃO INICIAL

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Pavimento TÉRREO

Relatório de Resultados das Sapatas

TÉRREO	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

Nome	Dimensões		Armaduras inferiores		Armaduras superiores	
	B (cm) H (cm)	H0 (cm) H1 (cm)	Dir. B	Dir. H	Dir. B	Dir. H
S1	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S2	75.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S3	60.00 85.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	6 ø 10.0 c/10 (4.71 cm²)		
S4	60.00 90.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S5	65.00 90.00	40.00 40.00	11 ø 8.0 c/8 (5.53 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S6	85.00 115.00	40.00 40.00	14 ø 8.0 c/8 (7.04 cm²)	10 ø 8.0 c/8 (5.03 cm²)		
S7	80.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S8	70.00 90.00	40.00 40.00	11 ø 8.0 c/8 (5.53 cm²)	8 ø 8.0 c/8 (4.02 cm²)		
S9	80.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S10	90.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S11	90.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S12	90.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S13	85.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	10 ø 8.0 c/8 (5.03 cm²)		
S14	60.00 85.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	6 ø 10.0 c/10 (4.71 cm²)		
S15	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S16	85.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	10 ø 8.0 c/8 (5.03 cm²)		
S17	80.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S18	80.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S19	85.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	10 ø 8.0 c/8 (5.03 cm²)		
S20	60.00 90.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S21	60.00 90.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S22	90.00 115.00	40.00 40.00	14 ø 8.0 c/8 (7.04 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S23	85.00	40.00	14 ø 8.0 c/8	10 ø 8.0 c/8		

	115.00	40.00	(7.04 cm²)	(5.03 cm²)		
S24	80.00 100.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S25	90.00 115.00	40.00 40.00	14 ø 8.0 c/8 (7.04 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S26	95.00 120.00	40.00 40.00	10 ø 10.0 c/12 (7.85 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S27	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S28	115.00 140.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	14 ø 8.0 c/8 (7.04 cm²)		
S29	115.00 145.00	40.00 40.00	12 ø 10.0 c/12 (9.42 cm²)	14 ø 8.0 c/8 (7.04 cm²)		
S30	100.00 130.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	12 ø 8.0 c/8 (6.03 cm²)		
S31	120.00 145.00	40.00 40.00	12 ø 10.0 c/12 (9.42 cm²)	10 ø 10.0 c/12 (7.85 cm²)		
S32	90.00 115.00	40.00 40.00	14 ø 8.0 c/8 (7.04 cm²)	11 ø 8.0 c/8 (5.53 cm²)		
S33	75.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S34	75.00 95.00	40.00 40.00	11 ø 8.0 c/8 (5.53 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S35	60.00 90.00	40.00 40.00	7 ø 10.0 c/12 (5.50 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S36	75.00 100.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S37	80.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S38	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S39	85.00 110.00	40.00 40.00	13 ø 8.0 c/8 (6.53 cm²)	10 ø 8.0 c/8 (5.03 cm²)		
S40	105.00 135.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	12 ø 8.0 c/8 (6.03 cm²)		
S41	105.00 130.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	12 ø 8.0 c/8 (6.03 cm²)		
S42	100.00 125.00	40.00 40.00	10 ø 10.0 c/12 (7.85 cm²)	12 ø 8.0 c/8 (6.03 cm²)		
S43	100.00 130.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	12 ø 8.0 c/8 (6.03 cm²)		
S44	110.00 140.00	40.00 40.00	11 ø 10.0 c/12 (8.64 cm²)	13 ø 8.0 c/8 (6.53 cm²)		
S45	75.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S46	80.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S47	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S48	75.00 100.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S49	65.00 90.00	40.00 40.00	11 ø 8.0 c/8 (5.53 cm²)	7 ø 8.0 c/8 (3.52 cm²)		
S50	55.00 80.00	40.00 40.00	7 ø 10.0 c/11 (5.50 cm²)	6 ø 10.0 c/9 (4.71 cm²)		
S51	75.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S52	75.00 105.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	9 ø 8.0 c/8 (4.52 cm²)		
S53	70.00 100.00	40.00 40.00	12 ø 8.0 c/8 (6.03 cm²)	8 ø 8.0 c/8 (4.02 cm²)		

Relatório de Cálculos das Sapatas

TÉRREO	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

Esforços e pressões

Nome	MB MH (tf.m)	FB FH (tf)	Carga Carga total (tf)	Pressão Sig1 (kgf/cm²)	Pressão Sig2 (kgf/cm²)	Pressão Sig3 (kgf/cm²)	Pressão Sig4 (kgf/cm²)
S1	0.03 0.07	0.15 0.16	5.43 6.63	1.56 (lim = 1.70)	1.69 (lim = 1.70)	1.44 (lim = 1.70)	1.32 (lim = 1.70)
S2	0.04 0.13	0.01 0.17	9.62 11.86	1.55 (lim = 1.70)	1.64 (lim = 1.70)	1.45 (lim = 1.70)	1.36 (lim = 1.70)
S3	0.03 0.08	0.01 0.19	6.03 7.43	1.51 (lim = 1.70)	1.62 (lim = 1.70)	1.40 (lim = 1.70)	1.29 (lim = 1.70)
S4	0.03 0.09	0.02 0.18	6.49 7.99	1.53 (lim = 1.70)	1.64 (lim = 1.70)	1.43 (lim = 1.70)	1.32 (lim = 1.70)
S5	0.03 0.10	0.10 0.03	7.33 8.97	1.59 (lim = 1.70)	1.70 (lim = 1.70)	1.48 (lim = 1.70)	1.37 (lim = 1.70)
S6	0.06 0.16	0.10 0.06	12.25 15.05	1.58 (lim = 1.70)	1.66 (lim = 1.70)	1.49 (lim = 1.70)	1.41 (lim = 1.70)
S7	0.05 0.14	0.04 0.08	10.21 12.61	1.55 (lim = 1.70)	1.64 (lim = 1.70)	1.45 (lim = 1.70)	1.37 (lim = 1.70)
S8	0.04 0.10	0.08 0.16	7.83 9.60	1.58 (lim = 1.70)	1.68 (lim = 1.70)	1.46 (lim = 1.70)	1.36 (lim = 1.70)
S9	0.05 0.14	0.14 0.06	10.80 13.31	1.56 (lim = 1.70)	1.65 (lim = 1.70)	1.47 (lim = 1.70)	1.38 (lim = 1.70)
S10	0.06 0.17	0.01 0.14	12.64 15.48	1.62 (lim = 1.70)	1.69 (lim = 1.70)	1.51 (lim = 1.70)	1.43 (lim = 1.70)
S11	0.06 0.17	0.00 0.11	12.58 15.42	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.50 (lim = 1.70)	1.42 (lim = 1.70)
S12	0.06 0.17	0.01 0.16	12.62 15.46	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.50 (lim = 1.70)	1.42 (lim = 1.70)
S13	0.06 0.16	0.22 0.05	11.83 14.50	1.60 (lim = 1.70)	1.68 (lim = 1.70)	1.50 (lim = 1.70)	1.42 (lim = 1.70)
S14	0.03 0.08	0.05 0.15	6.36 7.77	1.58 (lim = 1.70)	1.70 (lim = 1.70)	1.46 (lim = 1.70)	1.35 (lim = 1.70)
S15	0.02 0.07	0.12 0.13	5.10 6.30	1.49 (lim = 1.70)	1.60 (lim = 1.70)	1.37 (lim = 1.70)	1.26 (lim = 1.70)
S16	0.06 0.16	0.01 0.09	11.93 14.61	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.51 (lim = 1.70)	1.42 (lim = 1.70)
S17	0.05 0.14	0.01 0.18	10.32 12.71	1.56 (lim = 1.70)	1.64 (lim = 1.70)	1.46 (lim = 1.70)	1.37 (lim = 1.70)
S18	0.05 0.14	0.08 0.29	10.63 13.02	1.59 (lim = 1.70)	1.68 (lim = 1.70)	1.49 (lim = 1.70)	1.40 (lim = 1.70)
S19	0.05 0.15	0.04 0.01	11.32 13.87	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.50 (lim = 1.70)	1.42 (lim = 1.70)
S20	0.03 0.09	0.08 0.15	6.70 8.20	1.57 (lim = 1.70)	1.68 (lim = 1.70)	1.46 (lim = 1.70)	1.35 (lim = 1.70)
S21	0.03 0.09	0.05 0.05	6.42 7.91	1.51 (lim = 1.70)	1.62 (lim = 1.70)	1.41 (lim = 1.70)	1.30 (lim = 1.70)
S22	0.06 0.17	0.01 0.06	12.90 15.88	1.58 (lim = 1.70)	1.66 (lim = 1.70)	1.48 (lim = 1.70)	1.41 (lim = 1.70)
S23	0.06 0.17	0.02 0.06	12.43 15.23	1.60 (lim = 1.70)	1.68 (lim = 1.70)	1.51 (lim = 1.70)	1.42 (lim = 1.70)

S24	0.05 0.14	0.06 0.25	10.13 12.41	1.60 (lim = 1.70)	1.69 (lim = 1.70)	1.49 (lim = 1.70)	1.40 (lim = 1.70)
S25	0.06 0.17	0.10 0.04	12.91 15.88	1.58 (lim = 1.70)	1.66 (lim = 1.70)	1.49 (lim = 1.70)	1.41 (lim = 1.70)
S26	0.07 0.19	0.11 0.07	14.32 17.61	1.59 (lim = 1.70)	1.66 (lim = 1.70)	1.49 (lim = 1.70)	1.42 (lim = 1.70)
S27	0.02 0.06	0.15 0.09	4.48 5.68	1.33 (lim = 1.70)	1.44 (lim = 1.70)	1.23 (lim = 1.70)	1.13 (lim = 1.70)
S28	0.10 0.28	0.09 0.09	20.94 25.62	1.63 (lim = 1.70)	1.70 (lim = 1.70)	1.55 (lim = 1.70)	1.49 (lim = 1.70)
S29	0.10 0.29	0.02 0.12	21.59 26.45	1.62 (lim = 1.70)	1.69 (lim = 1.70)	1.54 (lim = 1.70)	1.48 (lim = 1.70)
S30	0.08 0.22	0.00 0.14	16.66 20.42	1.61 (lim = 1.70)	1.68 (lim = 1.70)	1.53 (lim = 1.70)	1.45 (lim = 1.70)
S31	0.10 0.29	0.01 0.10	22.03 27.10	1.59 (lim = 1.70)	1.65 (lim = 1.70)	1.51 (lim = 1.70)	1.45 (lim = 1.70)
S32	0.06 0.18	0.22 0.12	13.16 16.13	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.51 (lim = 1.70)	1.43 (lim = 1.70)
S33	0.05 0.13	0.08 0.08	9.84 12.08	1.58 (lim = 1.70)	1.68 (lim = 1.70)	1.48 (lim = 1.70)	1.39 (lim = 1.70)
S34	0.04 0.12	0.05 0.15	8.93 10.94	1.59 (lim = 1.70)	1.69 (lim = 1.70)	1.48 (lim = 1.70)	1.38 (lim = 1.70)
S35	0.03 0.09	0.03 0.01	6.74 8.24	1.57 (lim = 1.70)	1.69 (lim = 1.70)	1.47 (lim = 1.70)	1.35 (lim = 1.70)
S36	0.04 0.12	0.05 0.06	9.30 11.42	1.57 (lim = 1.70)	1.66 (lim = 1.70)	1.47 (lim = 1.70)	1.37 (lim = 1.70)
S37	0.05 0.14	0.11 0.10	10.63 13.03	1.60 (lim = 1.70)	1.69 (lim = 1.70)	1.50 (lim = 1.70)	1.41 (lim = 1.70)
S38	0.02 0.06	0.11 0.14	4.66 5.86	1.38 (lim = 1.70)	1.49 (lim = 1.70)	1.28 (lim = 1.70)	1.17 (lim = 1.70)
S39	0.05 0.16	0.00 0.08	11.72 14.39	1.58 (lim = 1.70)	1.66 (lim = 1.70)	1.48 (lim = 1.70)	1.40 (lim = 1.70)
S40	0.08 0.24	0.03 0.20	18.12 22.24	1.61 (lim = 1.70)	1.68 (lim = 1.70)	1.53 (lim = 1.70)	1.46 (lim = 1.70)
S41	0.08 0.23	0.00 0.09	17.17 21.13	1.59 (lim = 1.70)	1.66 (lim = 1.70)	1.50 (lim = 1.70)	1.43 (lim = 1.70)
S42	0.07 0.21	0.02 0.12	16.04 19.65	1.61 (lim = 1.70)	1.69 (lim = 1.70)	1.52 (lim = 1.70)	1.45 (lim = 1.70)
S43	0.08 0.22	0.01 0.54	16.18 19.95	1.57 (lim = 1.70)	1.64 (lim = 1.70)	1.49 (lim = 1.70)	1.42 (lim = 1.70)
S44	0.09 0.26	0.05 0.59	19.60 24.07	1.60 (lim = 1.70)	1.67 (lim = 1.70)	1.52 (lim = 1.70)	1.46 (lim = 1.70)
S45	0.05 0.13	0.12 0.12	9.82 12.05	1.58 (lim = 1.70)	1.67 (lim = 1.70)	1.48 (lim = 1.70)	1.39 (lim = 1.70)
S46	0.05 0.14	0.06 0.16	10.45 12.84	1.57 (lim = 1.70)	1.66 (lim = 1.70)	1.47 (lim = 1.70)	1.38 (lim = 1.70)
S47	0.02 0.07	0.15 0.15	5.06 6.26	1.48 (lim = 1.70)	1.60 (lim = 1.70)	1.37 (lim = 1.70)	1.25 (lim = 1.70)
S48	0.04 0.12	0.03 0.42	9.12 11.25	1.55 (lim = 1.70)	1.64 (lim = 1.70)	1.45 (lim = 1.70)	1.35 (lim = 1.70)
S49	0.03 0.10	0.02 0.34	7.14 8.77	1.55 (lim = 1.70)	1.65 (lim = 1.70)	1.44 (lim = 1.70)	1.33 (lim = 1.70)
S50	0.02 0.07	0.09 0.20	5.28 6.48	1.53 (lim = 1.70)	1.65 (lim = 1.70)	1.41 (lim = 1.70)	1.29 (lim = 1.70)
S51	0.05 0.13	0.01 0.11	9.69 11.93	1.56 (lim = 1.70)	1.65 (lim = 1.70)	1.47 (lim = 1.70)	1.37 (lim = 1.70)
S52	0.05 0.13	0.00 0.09	9.82 12.06	1.58 (lim = 1.70)	1.67 (lim = 1.70)	1.48 (lim = 1.70)	1.39 (lim = 1.70)
S53	0.04 0.11	0.02 0.17	8.52 10.49	1.54 (lim = 1.70)	1.64 (lim = 1.70)	1.44 (lim = 1.70)	1.35 (lim = 1.70)

Estabilidade

Nome	Tombamento B		Tombamento H		Deslizamento		Arrancamento	
	Mrd Msd (tf.m)	Mrd / Msd	Mrd Msd (tf.m)	Mrd / Msd	Frd Fsd (tf)	Frd / Fsd	Nt (tf)	Ns (tf)
S1	1.82 0.03	71.95 (lim = 1.50)	2.65 0.07	36.63 (lim = 1.50)	2.97 0.22	13.52 lim = (1.50)		
S2	4.45 0.04	99.03 (lim = 1.50)	6.23 0.13	48.52 (lim = 1.50)	5.32 0.17	30.96 lim = (1.50)		
S3	2.23 0.03	79.32 (lim = 1.50)	3.16 0.08	39.33 (lim = 1.50)	3.44 0.19	18.40 lim = (1.50)		
S4	2.40 0.03	79.13 (lim = 1.50)	3.59 0.09	41.54 (lim = 1.50)	3.65 0.18	20.70 lim = (1.50)		
S5	2.91 0.03	85.15 (lim = 1.50)	4.03 0.10	41.26 (lim = 1.50)	3.95 0.10	37.78 lim = (1.50)		
S6	6.40 0.06	111.91 (lim = 1.50)	8.65 0.16	52.99 (lim = 1.50)	6.60 0.11	57.94 lim = (1.50)		
S7	5.04 0.05	105.79 (lim = 1.50)	6.62 0.14	48.60 (lim = 1.50)	5.67 0.09	63.37 lim = (1.50)		
S8	3.36 0.04	91.91 (lim = 1.50)	4.32 0.10	41.36 (lim = 1.50)	4.25 0.18	23.95 lim = (1.50)		
S9	5.33 0.05	105.64 (lim = 1.50)	7.32 0.14	50.84 (lim = 1.50)	5.94 0.15	39.26 lim = (1.50)		
S10	6.97 0.06	118.08 (lim = 1.50)	8.52 0.17	50.51 (lim = 1.50)	6.68 0.14	46.83 lim = (1.50)		
S11	6.94 0.06	118.19 (lim = 1.50)	8.48 0.17	50.56 (lim = 1.50)	6.68 0.11	61.90 lim = (1.50)		
S12	6.96 0.06	118.13 (lim = 1.50)	8.49 0.17	50.54 (lim = 1.50)	6.68 0.16	42.26 lim = (1.50)		
S13	6.16 0.06	111.67 (lim = 1.50)	7.97 0.16	50.59 (lim = 1.50)	6.31 0.22	28.62 lim = (1.50)		
S14	2.33 0.03	78.53 (lim = 1.50)	3.30 0.08	38.94 (lim = 1.50)	3.44 0.16	22.16 lim = (1.50)		
S15	1.73 0.02	72.80 (lim = 1.50)	2.52 0.07	37.06 (lim = 1.50)	2.97 0.18	16.31 lim = (1.50)		
S16	6.21 0.06	111.49 (lim = 1.50)	8.03 0.16	50.51 (lim = 1.50)	6.31 0.09	69.11 lim = (1.50)		
S17	5.09 0.05	105.58 (lim = 1.50)	6.67 0.14	48.50 (lim = 1.50)	5.67 0.18	31.39 lim = (1.50)		
S18	5.21 0.05	105.01 (lim = 1.50)	6.84 0.14	48.24 (lim = 1.50)	5.67 0.30	18.60 lim = (1.50)		
S19	5.89 0.05	111.58 (lim = 1.50)	7.28 0.15	48.24 (lim = 1.50)	6.02 0.04	143.54 lim = (1.50)		
S20	2.46 0.03	78.65 (lim = 1.50)	3.69 0.09	41.29 (lim = 1.50)	3.65 0.17	21.98 lim = (1.50)		
S21	2.37 0.03	79.30 (lim = 1.50)	3.56 0.09	41.63 (lim = 1.50)	3.65 0.07	53.96 lim = (1.50)		
S22	7.14 0.06	118.65 (lim = 1.50)	9.12 0.17	53.07 (lim = 1.50)	6.99 0.06	123.98 lim = (1.50)		
S23	6.47 0.06	111.60 (lim = 1.50)	8.76 0.17	52.85 (lim = 1.50)	6.60 0.06	103.38 lim = (1.50)		
S24	4.96 0.05	104.94 (lim = 1.50)	6.20 0.14	45.91 (lim = 1.50)	5.40 0.26	21.05 lim = (1.50)		
S25	7.15 0.06	118.64 (lim = 1.50)	9.13 0.17	53.06 (lim = 1.50)	6.99 0.11	66.46 lim = (1.50)		
S26	8.36 0.07	125.14 (lim = 1.50)	10.56 0.19	55.33 (lim = 1.50)	7.70 0.13	59.63 lim = (1.50)		
S27	1.56 0.02	74.71 (lim = 1.50)	2.27 0.06	38.04 (lim = 1.50)	2.97 0.17	17.68 lim = (1.50)		
S28	14.73 0.10	150.80 (lim = 1.50)	17.93 0.28	64.26 (lim = 1.50)	10.87 0.13	85.15 lim = (1.50)		
S29	15.21 0.10	150.94 (lim = 1.50)	19.17 0.29	66.61 (lim = 1.50)	11.26 0.12	91.50 lim = (1.50)		
S30	10.21 0.08	131.35 (lim = 1.50)	13.27 0.22	59.76 (lim = 1.50)	8.78 0.14	61.29 lim = (1.50)		

S31	16.26 0.10	158.19 (lim = 1.50)	19.65 0.29	66.90 (lim = 1.50)	11.75 0.10	114.03 lim = (1.50)		
S32	7.26 0.06	118.22 (lim = 1.50)	9.28 0.18	52.87 (lim = 1.50)	6.99 0.24	28.64 lim = (1.50)		
S33	4.53 0.05	98.62 (lim = 1.50)	6.34 0.13	48.32 (lim = 1.50)	5.32 0.11	48.57 lim = (1.50)		
S34	4.10 0.04	98.48 (lim = 1.50)	5.19 0.12	43.66 (lim = 1.50)	4.81 0.16	30.45 lim = (1.50)		
S35	2.47 0.03	78.57 (lim = 1.50)	3.71 0.09	41.25 (lim = 1.50)	3.65 0.03	110.65 lim = (1.50)		
S36	4.28 0.04	98.72 (lim = 1.50)	5.71 0.12	46.07 (lim = 1.50)	5.06 0.08	64.84 lim = (1.50)		
S37	5.21 0.05	105.00 (lim = 1.50)	6.84 0.14	48.23 (lim = 1.50)	5.67 0.15	38.61 lim = (1.50)		
S38	1.61 0.02	74.11 (lim = 1.50)	2.34 0.06	37.73 (lim = 1.50)	2.97 0.18	16.39 lim = (1.50)		
S39	6.12 0.05	111.86 (lim = 1.50)	7.92 0.16	50.67 (lim = 1.50)	6.31 0.08	75.93 lim = (1.50)		
S40	11.67 0.08	138.03 (lim = 1.50)	15.01 0.24	62.12 (lim = 1.50)	9.57 0.20	47.74 lim = (1.50)		
S41	11.09 0.08	138.42 (lim = 1.50)	13.73 0.23	59.98 (lim = 1.50)	9.21 0.09	101.70 lim = (1.50)		
S42	9.83 0.07	131.29 (lim = 1.50)	12.28 0.21	57.44 (lim = 1.50)	8.44 0.12	69.41 lim = (1.50)		
S43	9.97 0.08	132.06 (lim = 1.50)	12.96 0.22	60.09 (lim = 1.50)	8.78 0.54	16.31 lim = (1.50)		
S44	13.24 0.09	144.79 (lim = 1.50)	16.84 0.26	64.51 (lim = 1.50)	10.39 0.60	17.42 lim = (1.50)		
S45	4.52 0.05	98.66 (lim = 1.50)	6.33 0.13	48.34 (lim = 1.50)	5.32 0.17	31.29 lim = (1.50)		
S46	5.14 0.05	105.34 (lim = 1.50)	6.74 0.14	48.39 (lim = 1.50)	5.67 0.17	32.76 lim = (1.50)		
S47	1.72 0.02	72.90 (lim = 1.50)	2.51 0.07	37.11 (lim = 1.50)	2.97 0.21	13.91 lim = (1.50)		
S48	4.22 0.04	99.07 (lim = 1.50)	5.62 0.12	46.23 (lim = 1.50)	5.06 0.42	12.07 lim = (1.50)		
S49	2.85 0.03	85.57 (lim = 1.50)	3.95 0.10	41.47 (lim = 1.50)	3.95 0.34	11.75 lim = (1.50)		
S50	1.78 0.02	72.33 (lim = 1.50)	2.59 0.07	36.82 (lim = 1.50)	2.97 0.22	13.64 lim = (1.50)		
S51	4.47 0.05	98.90 (lim = 1.50)	6.26 0.13	48.46 (lim = 1.50)	5.32 0.11	47.88 lim = (1.50)		
S52	4.52 0.05	98.64 (lim = 1.50)	6.33 0.13	48.34 (lim = 1.50)	5.32 0.09	56.63 lim = (1.50)		
S53	3.67 0.04	92.39 (lim = 1.50)	5.25 0.11	46.20 (lim = 1.50)	4.73 0.18	26.99 lim = (1.50)		

Verificação de tensão em área reduzida

Nome	Interface pilar-fundação		
	Força solicitante (tf)	Força resistente (tf)	Condição
S1	7.16	226.85	OK
S2	12.70	297.71	OK
S3	7.96	170.13	OK
S4	8.57	170.13	OK
S5	9.67	255.19	OK
S6	16.22	326.09	OK
S7	13.49	297.74	OK
S8	10.36	210.00	OK
S9	14.29	240.00	OK
S10	16.74	330.00	OK

S11	16.65	330.00	OK
S12	16.70	330.00	OK
S13	15.66	255.00	OK
S14	8.38	255.00	OK
S15	6.72	240.00	OK
S16	15.77	311.89	OK
S17	13.62	297.71	OK
S18	14.06	297.72	OK
S19	14.97	297.71	OK
S20	8.84	255.19	OK
S21	8.47	270.00	OK
S22	17.07	326.07	OK
S23	16.44	326.07	OK
S24	13.42	300.00	OK
S25	17.06	326.07	OK
S26	18.97	340.24	OK
S27	5.90	226.84	OK
S28	27.70	396.00	OK
S29	28.58	396.00	OK
S30	22.05	390.00	OK
S31	29.19	396.00	OK
S32	17.47	270.00	OK
S33	13.00	315.00	OK
S34	11.78	269.36	OK
S35	8.91	270.00	OK
S36	12.28	283.54	OK
S37	14.06	226.84	OK
S38	6.14	240.00	OK
S39	15.48	330.00	OK
S40	23.98	396.00	OK
S41	22.73	390.00	OK
S42	21.23	375.00	OK
S43	21.44	390.00	OK
S44	26.00	396.00	OK
S45	12.99	315.00	OK
S46	13.84	315.00	OK
S47	6.67	240.00	OK
S48	12.05	300.00	OK
S49	9.42	270.00	OK
S50	6.96	165.00	OK
S51	12.82	315.00	OK
S52	13.00	315.00	OK
S53	11.26	300.00	OK

Dimensionamento

Nome	Armaduras inferiores		Armaduras superiores	
	Dir. B	Dir. H	Dir. B	Dir. H
	Md (tf.m/m) As (cm²/m)	Md (tf.m/m) As (cm²/m)	Md (tf.m/m) A's (cm²/m)	Md (tf.m/m) A's (cm²/m)
S1	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S2	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S3	5.74 6.69	5.74 6.84	0.00 0.00	0.00 0.00
S4	5.74 6.69	5.74 6.51	0.00 0.00	0.00 0.00
S5	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S6	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00

S7	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S8	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S9	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S10	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S11	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S12	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S13	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S14	5.74 6.69	5.74 6.84	0.00 0.00	0.00 0.00
S15	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S16	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S17	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S18	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S19	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S20	5.74 6.69	5.74 6.51	0.00 0.00	0.00 0.00
S21	5.74 6.69	5.74 6.51	0.00 0.00	0.00 0.00
S22	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S23	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S24	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S25	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S26	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S27	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S28	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S29	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S30	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S31	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S32	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S33	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S34	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S35	5.74 6.69	5.74 6.51	0.00 0.00	0.00 0.00
S36	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S37	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S38	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S39	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00

S40	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S41	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S42	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S43	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S44	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S45	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S46	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S47	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S48	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S49	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S50	5.74 7.51	5.74 7.70	0.00 0.00	0.00 0.00
S51	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S52	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00
S53	5.74 6.51	5.74 6.51	0.00 0.00	0.00 0.00

Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

TÉRREO						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	14x40	5.43	0.00	6.36	0.05	0.05
P2	14x40	9.62	0.00	10.86	0.09	0.08
P3	14x40	6.03	0.00	6.77	0.06	0.05
P4	14x40	6.49	0.00	7.32	0.06	0.05
P5	14x40	7.33	0.00	8.30	0.07	0.06
P6	14x40	12.25	0.00	13.09	0.11	0.10
P7	14x40	10.21	0.00	11.19	0.09	0.08
P8	14x40	7.83	0.00	9.24	0.08	0.07
P9	14x40	10.80	0.00	12.60	0.11	0.09
P10	14x40	12.64	0.00	14.54	0.12	0.11
P11	14x40	12.58	0.00	14.42	0.12	0.11
P12	14x40	12.62	0.00	14.50	0.12	0.11
P13	14x40	11.83	0.00	13.76	0.11	0.10
P14	14x40	6.36	0.00	7.56	0.06	0.06
P15	14x40	5.10	0.00	5.99	0.05	0.04
P16	14x40	11.93	0.00	13.27	0.11	0.10
P17	14x40	10.32	0.00	11.44	0.10	0.08
P18	14x40	10.63	0.00	11.81	0.10	0.09
P19	14x40	11.32	0.00	12.49	0.10	0.09
P20	14x40	6.70	0.00	7.61	0.06	0.06
P21	14x40	6.42	0.00	7.40	0.06	0.05
P22	14x40	12.90	0.00	14.44	0.12	0.11
P23	14x40	12.43	0.00	13.17	0.11	0.10
P24	14x40	10.13	0.00	11.77	0.10	0.09
P25	14x40	12.91	0.00	14.32	0.12	0.11
P26	14x40	14.32	0.00	15.85	0.13	0.12
P27	14x40	4.48	0.00	5.28	0.04	0.04
P28	14x40	20.94	0.00	25.11	0.21	0.18
P29	14x40	21.59	0.00	25.14	0.21	0.18
P30	14x40	16.66	0.00	19.19	0.16	0.14
P31	14x40	22.03	0.00	26.08	0.22	0.19
P32	14x40	13.16	0.00	14.64	0.12	0.11
P33	14x40	9.84	0.00	11.33	0.09	0.08
P34	14x40	8.93	0.00	10.07	0.08	0.07
P35	14x40	6.74	0.00	7.75	0.06	0.06
P36	14x40	9.30	0.00	10.55	0.09	0.08
P37	14x40	10.63	0.00	12.14	0.10	0.09
P38	14x40	4.66	0.00	5.55	0.05	0.04
P39	14x40	11.72	0.00	14.07	0.12	0.10
P40	14x40	18.12	0.00	21.14	0.18	0.16
P41	14x40	17.17	0.00	19.75	0.16	0.15
P42	14x40	16.04	0.00	18.50	0.15	0.14
P43	14x40	16.18	0.00	19.08	0.16	0.14
P44	14x40	19.60	0.00	22.52	0.19	0.17
P45	14x40	9.82	0.00	11.29	0.09	0.08
P46	14x40	10.45	0.00	12.09	0.10	0.09
P47	14x40	5.06	0.00	5.91	0.05	0.04
P48	14x40	9.12	0.00	10.23	0.09	0.08
P49	14x40	7.14	0.00	7.98	0.07	0.06
P50	14x40	5.28	0.00	6.23	0.05	0.05
P51	14x40	9.69	0.00	10.93	0.09	0.08

P52	14x40	9.82	0.00	11.06	0.09	0.08
P53	14x40	8.52	0.00	9.57	0.08	0.07

Vigas do pavimento TÉRREO

Viga	Vãos			Nós			Avisos
	Md (tf.m)	As	Als	Md (tf.m)	As	Als	
VT1	0.28 0.29 0.38 0.38 0.28 0.36	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.58 -0.66 -0.61 -0.69 -0.59 -0.76 -0.25	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT2	0.41 0.41 0.42 0.34 0.48	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.73 -1.17 -0.91 -0.85 -1.04 -0.31	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT3	0.15 0.44 0.43 0.30 0.26 0.62	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.14 -0.70 -0.96 -0.75 -0.51 -1.20 -0.76	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT4	0.48	2 ø 8.0		-0.43 -1.05	2 ø 8.0 2 ø 8.0		
VT5	0.45	2 ø 8.0		-0.89 -0.55	2 ø 8.0 2 ø 8.0		
VT6	0.00 0.42 0.00	2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.15 -1.10 -1.17 -0.22	2 ø 8.0 3 ø 8.0 3 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VT7	0.45	2 ø 8.0		-1.75 -1.66	3 ø 8.0 3 ø 8.0		
VT8	0.44	2 ø 8.0		-1.79 -1.79	3 ø 8.0 3 ø 8.0		
VT9	0.41	2 ø 8.0		-1.54 -1.83	2 ø 8.0 3 ø 8.0		
VT10	0.48	2 ø 8.0		-1.61 -1.75	2 ø 8.0 3 ø 8.0		
VT11	0.44	2 ø 8.0		-1.63 -1.83	2 ø 8.0 3 ø 8.0		
VT12	0.58	2 ø 8.0		-1.51 -1.37	2 ø 8.0 2 ø 8.0		
VT13	0.42	2 ø 8.0		-1.62 -1.85	2 ø 8.0 3 ø 8.0		
VT14	0.57	2 ø 8.0		-1.22 -1.04	2 ø 8.0 2 ø 8.0		
VT15	0.34	2 ø 8.0		-0.05 -0.07	2 ø 8.0 2 ø 8.0		
VT16	0.24 0.41	2 ø 8.0 2 ø 8.0		-0.34 -0.99 -1.21	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT17	0.40 0.00	2 ø 8.0 2 ø 8.0		-1.20 -1.19	2 ø 8.0 2 ø 8.0		
VT18	0.25 0.32 0.26	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.42 -0.80 -0.71 -0.36	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT19	0.60	2 ø 8.0		-0.01	2 ø 8.0		

				-0.08	2 ø 8.0		
VT20	0.66	2 ø 8.0		-0.37 -0.30	2 ø 8.0 2 ø 8.0		
VT21	0.43 0.08 0.42 0.60	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.62 -1.10 -0.96 -1.47 -0.56	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT22	0.44 0.51 0.57	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.20 -1.08 -1.21 -0.86	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT23	0.21 0.48 0.52	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.21 -1.00 -1.07 -0.68	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT24	0.29 0.58 0.45	2 ø 8.0 2 ø 8.0 2 ø 8.0		-1.68 -1.85	3 ø 8.0 3 ø 8.0		
VT25	0.63	2 ø 8.0		-0.06 -0.12	2 ø 8.0 2 ø 8.0		
VT26	0.52 0.45	2 ø 8.0 2 ø 8.0		-1.19 -1.30 -0.78	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT27	0.53 0.58	2 ø 8.0 2 ø 8.0		-0.01 -1.37 -0.31	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT28	0.57 0.39 0.44	2 ø 8.0 2 ø 8.0 2 ø 8.0		-1.29 -1.32 -1.00 -0.80	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT29	0.20	2 ø 8.0		-0.30 -0.44	2 ø 8.0 2 ø 8.0		
VT30	0.65	2 ø 8.0		-0.21 -0.34	2 ø 8.0 2 ø 8.0		
VT31	0.48 0.67	2 ø 8.0 2 ø 8.0		-1.83 -0.91	3 ø 8.0 2 ø 8.0		
VT32	0.71 0.60	2 ø 8.0 2 ø 8.0		-0.53 -1.39 -0.77	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT33	0.41	2 ø 8.0		-0.05 -0.02	2 ø 8.0 2 ø 8.0		
VT34	0.50 0.53 0.31 0.52	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.63 -1.36 -1.10 -0.97 -0.67	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT35	0.29	2 ø 8.0		-0.41 -0.19	2 ø 8.0 2 ø 8.0		
VT36	0.25 0.21 0.66	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.56 -0.46 -1.10 -0.66	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VT37	0.00 0.35 0.37 0.39	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.66 -0.65 -0.70 -0.17 -0.63	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		

Resultados da Viga VT1

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P8	40.00			2 ø 8.0 0.84					0.02
1	269.89	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P9	40.00			2 ø 8.0 0.84					0.02
2	301.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P10	14.00			2 ø 8.0 0.84					0.02
3	314.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P11	14.00			2 ø 8.0 0.84					0.02
4	314.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P12	14.00			2 ø 8.0 0.84					0.02
5	298.83	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P13	40.00			2 ø 8.0 0.84					0.03
6	298.84	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P14	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT2

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P28	14.00			2 ø 8.0 0.84					0.03
1	494.82	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P29	14.00			2 ø 8.0 0.84					0.07
2	314.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P30	14.00			2 ø 8.0 0.84					0.04
3	314.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P31	14.00			2 ø 8.0 0.84					0.04
4	298.83	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P32	40.00			2 ø 8.0 0.84					0.06
5	298.83	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P33	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT3

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	14.00			2 ø 8.0 0.84					0.00
1	166.06	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P40	14.00			2 ø 8.0 0.84					0.03
2	314.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P41	14.00			2 ø 8.0 0.84					0.05
3	315.23	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P42	14.00			2 ø 8.0 0.84					0.03
4	232.44	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P43	14.00			2 ø 8.0 0.84					0.01
5	233.01	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P44	14.00			2 ø 8.0 0.84					0.07
6	472.53	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P45	14.00			2 ø 8.0 0.84					0.03

Resultados da Viga VT4

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P50	14.00			2 ø 8.0 0.84					0.01
1	385.03	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P46	40.00			2 ø 8.0 0.84					0.06

Resultados da Viga VT5

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P24	40.00			2 ø 8.0 0.84					0.04
1	384.93	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P8	14.00			2 ø 8.0 0.84					0.02

Resultados da Viga VT6

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	20.05			2 ø 8.0 0.84					0.00
1	7.92	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P39	40.00			3 ø 8.0 1.23					0.03
2	451.00	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P28	40.00		2 ø 8.0 0.24	3 ø 8.0 1.23					0.03
3	2.21	14.00 x 40.00	2 ø 8.0 0.84	2 ø 8.0 0.24		ø 5.0 c/ 20		2x2 ø 6.3	0.00
	20.05		2 ø 8.0 0.24	2 ø 8.0 0.96					0.00

Resultados da Viga VT7

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P51	40.00			3 ø 8.0 1.13					0.07
1	534.51	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P40	40.00			3 ø 8.0 1.07					0.06

Resultados da Viga VT8

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P52	40.00			3 ø 8.0 1.16					0.08
1	534.49	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P41	40.00			3 ø 8.0 1.16					0.08

Resultados da Viga VT9

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P29	40.00			2 ø 8.0 0.99					0.12
1	534.40	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P10	40.00			3 ø 8.0 1.18					0.08

Resultados da Viga VT10

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P53	40.00			2 ø 8.0 1.04					0.13
1	521.59	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P42	40.00			3 ø 8.0 1.13					0.07

Resultados da Viga VT11

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P30	40.00			2 ø 8.0 1.05					0.14
1	534.41	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P11	40.00			3 ø 8.0 1.18					0.08

Resultados da Viga VT12

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P49	40.00			2 ø 8.0 0.97					0.12
1	449.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P43	40.00			2 ø 8.0 0.88					0.09

Resultados da Viga VT13

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P31	40.00			2 ø 8.0 1.04					0.13
1	534.41	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P12	40.00			3 ø 8.0 1.20					0.08

Resultados da Viga VT14

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P48	40.00			2 ø 8.0 0.84					0.08
1	378.15	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P44	40.00			2 ø 8.0 0.84					0.05

Resultados da Viga VT15

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT36	14.58			2 ø 8.0 0.84					0.00
1	360.12	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
VT3	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT16

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P47	40.00			2 ø 8.0 0.84					0.01
1	237.10	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P45	40.00			2 ø 8.0 0.84					0.05
2	503.01	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P33	40.00			2 ø 8.0 0.84					0.08

Resultados da Viga VT17

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P33	40.00			2 ø 8.0 0.84					0.07
1	534.40	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P14	40.00			2 ø 8.0 0.84					0.08
2	95.00	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
									0.00

Resultados da Viga VT18

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	40.00			2 ø 8.0 0.84					0.01
1	256.44	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P35	40.00			2 ø 8.0 0.84					0.03
2	360.00	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P21	40.00			2 ø 8.0 0.84					0.03
3	257.29	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P15	40.00			2 ø 8.0 0.84					0.01

Resultados da Viga VT19

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT24	14.00			2 ø 8.0 0.84					0.00
1	261.74	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
VT23	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT20

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P6	14.00			2 ø 8.0 0.84					0.01
1	261.74	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P5	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT21

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P15	14.58			2 ø 8.0 0.84					0.02
1	462.42	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P4	40.00			2 ø 8.0 0.84					0.06
2	168.99	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P3	40.00			2 ø 8.0 0.84					0.05
3	437.93	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P2	14.00			2 ø 8.0 0.95					0.11
4	535.59	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P1	14.00			2 ø 8.0 0.84					0.02

Resultados da Viga VT22

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P18	14.00			2 ø 8.0 0.84					0.00
1	253.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P17	14.00			2 ø 8.0 0.84					0.06
2	313.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P16	14.00			2 ø 8.0 0.84					0.07
3	313.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P7	14.00			2 ø 8.0 0.84					0.04

Resultados da Viga VT23

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P27	40.00			2 ø 8.0 0.84					0.00
1	192.50	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P20	40.00			2 ø 8.0 0.84					0.05
2	377.61	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P5	40.00			2 ø 8.0 0.84					0.06
3	267.22	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P1	40.00			2 ø 8.0 0.84					0.02

Resultados da Viga VT24

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT34	14.00								0.00
1	218.51	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P23	40.00			3 ø 8.0 1.08					0.07
2	377.61	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P6	40.00			3 ø 8.0 1.20					0.08
3	293.22	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
VT21	14.00								0.00

Resultados da Viga VT25

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT32	14.00			2 ø 8.0 0.84					0.00
1	253.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
VT31	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT26

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P36	40.00			2 ø 8.0 0.84					0.07
1	338.59	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P22	40.00			2 ø 8.0 0.84					0.09
2	248.89	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P16	40.00			2 ø 8.0 0.84					0.03

Resultados da Viga VT27

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT28	14.00			2 ø 8.0 0.84					0.00
1	260.74	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P23	14.00			2 ø 8.0 0.88					0.10
2	259.93	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P20	14.00			2 ø 8.0 0.84					0.01

Resultados da Viga VT28

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P34	40.00			2 ø 8.0 0.84					0.09
1	338.51	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P19	40.00			2 ø 8.0 0.84					0.09
2	248.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P7	40.00			2 ø 8.0 0.84					0.05
3	249.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P2	40.00			2 ø 8.0 0.84					0.03

Resultados da Viga VT29

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT6	20.05			2 ø 8.0 0.84					0.00
1	198.49	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P24	14.00			2 ø 8.0 0.84					0.01

Resultados da Viga VT30

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P26	14.00			2 ø 8.0 0.84					0.00
1	253.88	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P25	14.00			2 ø 8.0 0.84					0.01

Resultados da Viga VT31

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT34	14.00								0.00
1	364.54	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P25	40.00			3 ø 8.0 1.18					0.08
2	248.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P17	40.00			2 ø 8.0 0.84					0.04

Resultados da Viga VT32

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P37	14.00			2 ø 8.0 0.84					0.01
1	364.54	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.03
P26	40.00			2 ø 8.0 0.89					0.10
2	248.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P18	40.00			2 ø 8.0 0.84					0.03

Resultados da Viga VT33

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VT32	14.00			2 ø 8.0 0.84					0.00
1	253.88	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
VT31	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VT34

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	14.58			2 ø 8.0 0.84					0.02
1	498.92	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P37	40.00			2 ø 8.0 0.88					0.10
2	568.34	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P36	14.00			2 ø 8.0 0.84					0.06
3	313.47	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P34	14.00			2 ø 8.0 0.84					0.05
4	535.59	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P27	14.00			2 ø 8.0 0.84					0.02

Resultados da Viga VT35

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P46	14.00			2 ø 8.0 0.84					0.01
1	190.52	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
VT6	20.05			2 ø 8.0 0.84					0.00

Resultados da Viga VT36

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P53	14.58			2 ø 8.0 0.84					0.02
1	242.05	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P49	14.58			2 ø 8.0 0.84					0.01
2	242.62	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P48	14.58			2 ø 8.0 0.84					0.06
3	492.05	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P47	14.58			2 ø 8.0 0.84					0.02

Resultados da Viga VT37

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
									0.00
1	95.05	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P50	40.00			2 ø 8.0 0.84					0.02
2	282.88	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P51	14.00			2 ø 8.0 0.84					0.02
3	314.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P52	14.00			2 ø 8.0					0.03

				0.84					
4	316.52	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P53	14.58			2 ø 8.0 0.84					0.02

Pavimento COBERTURA

Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

COBERTURA						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	14x40	3.38	0.00	4.20	0.04	0.03
P2	14x40	5.72	0.00	6.93	0.06	0.05
P3	14x40	3.73	0.00	4.47	0.04	0.03
P4	14x40	4.11	0.00	4.93	0.04	0.04
P5	14x40	4.12	0.00	5.03	0.04	0.04
P6	14x40	6.69	0.00	7.71	0.06	0.06
P7	14x40	5.60	0.00	6.73	0.06	0.05
P8	14x40	6.19	0.00	7.50	0.06	0.06
P9	14x40	8.58	0.00	10.33	0.09	0.08
P10	14x40	9.32	0.00	11.13	0.09	0.08
P11	14x40	9.06	0.00	10.83	0.09	0.08
P12	14x40	9.29	0.00	11.08	0.09	0.08
P13	14x40	9.52	0.00	11.39	0.09	0.08
P14	14x40	4.40	0.00	5.41	0.05	0.04
P15	14x40	3.32	0.00	4.12	0.03	0.03
P16	14x40	7.25	0.00	8.72	0.07	0.06
P17	14x40	5.64	0.00	6.86	0.06	0.05
P18	14x40	6.76	0.00	8.10	0.07	0.06
P19	14x40	7.00	0.00	8.33	0.07	0.06
P20	14x40	3.89	0.00	4.75	0.04	0.03
P21	14x40	4.14	0.00	5.05	0.04	0.04
P22	14x40	8.76	0.00	10.48	0.09	0.08
P23	14x40	5.84	0.00	6.78	0.06	0.05
P24	14x40	8.19	0.00	9.74	0.08	0.07
P25	14x40	7.79	0.00	9.37	0.08	0.07
P26	14x40	9.53	0.00	11.18	0.09	0.08
P27	14x40	2.80	0.00	3.52	0.03	0.03
P28	14x40	17.91	0.00	22.00	0.18	0.16
P29	14x40	16.95	0.00	20.61	0.17	0.15
P30	14x40	12.14	0.00	14.77	0.12	0.11
P31	14x40	17.74	0.00	21.88	0.18	0.16
P32	14x40	9.50	0.00	11.08	0.09	0.08
P33	14x40	6.83	0.00	8.21	0.07	0.06
P34	14x40	5.09	0.00	6.19	0.05	0.05
P35	14x40	4.45	0.00	5.40	0.05	0.04
P36	14x40	5.82	0.00	7.01	0.06	0.06
P37	14x40	7.13	0.00	8.54	0.07	0.06
P38	14x40	3.11	0.00	3.87	0.03	0.03
P39	14x40	9.34	0.00	11.59	0.10	0.09
P40	14x40	13.89	0.00	17.01	0.14	0.09
P41	14x40	12.54	0.00	15.21	0.13	0.11
P42	14x40	11.68	0.00	14.24	0.12	0.10
P43	14x40	12.36	0.00	15.35	0.13	0.11
P44	14x40	15.13	0.00	18.21	0.15	0.13
P45	14x40	6.89	0.00	8.26	0.07	0.06
P46	14x40	8.33	0.00	9.92	0.08	0.07

P47	14x40	3.30	0.00	4.07	0.03	0.03
P48	14x40	5.45	0.00	6.54	0.05	0.05
P49	14x40	3.98	0.00	4.81	0.04	0.04
P50	14x40	3.41	0.00	4.21	0.04	0.03
P51	14x40	6.26	0.00	7.45	0.06	0.05
P52	14x40	6.32	0.00	7.49	0.06	0.06
P53	14x40	5.11	0.00	6.12	0.05	0.04

Vigas do pavimento COBERTURA

Viga	Vãos			Nós			Avisos
	Md (tf.m)	As	Als	Md (tf.m)	As	Als	
VC1	0.48 0.61 0.61 0.61 0.59 0.73	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.93 -1.29 -1.55 -1.35 -1.49 -1.63 -0.49	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VC2	0.05 0.02 0.02 0.12	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.10 -0.10 -0.07 -0.17 -0.14	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VC3	5.29 0.07 0.64 2.39	9 ø 8.0 3 ø 8.0 4 ø 8.0 2 ø 10.0	2 ø 10.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	-2.37 -1.62 -4.70 -0.90 -2.72 -2.01	6 ø 8.0 3 ø 10.0 4 ø 12.5 4 ø 8.0 6 ø 8.0 3 ø 8.0	3 ø 8.0 2 ø 10.0 3 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	
VC4	0.52	2 ø 8.0	2 ø 8.0	-1.49 -0.02	3 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VC5	0.00	2 ø 8.0		-0.01	2 ø 8.0		
VC6	5.14	6 ø 8.0		-0.18 -0.19	2 ø 8.0 2 ø 8.0		
VC7	0.04 0.34 0.30 0.19	3 ø 8.0 2 ø 10.0 3 ø 8.0 3 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	-0.06 -0.25 -0.35 -0.95 -0.98 -0.24 -1.68	3 ø 8.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 3 ø 8.0 3 ø 8.0 2 ø 10.0	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	
VC8	3.36	3 ø 10.0		-4.29 -1.04	4 ø 10.0 2 ø 8.0		
VC9	1.44	2 ø 8.0		-1.12 -2.18	2 ø 8.0 3 ø 8.0		
VC10	1.66	3 ø 8.0		-2.30 -1.57	2 ø 10.0 2 ø 8.0		
VC11	0.00	2 ø 8.0		-0.13	2 ø 8.0		
VC12	2.83	2 ø 10.0		-4.54 -5.23	2 ø 12.5 6 ø 8.0		
VC13	4.29 0.05 5.69	3 ø 10.0 2 ø 10.0 6 ø 8.0		-3.31 -6.64 -1.51 -0.58 -6.37 -1.30	4 ø 8.0 3 ø 12.5 2 ø 10.0 2 ø 10.0 4 ø 10.0 2 ø 10.0		
VC14	4.19	3 ø 10.0		-4.04 -5.63	4 ø 8.0 4 ø 10.0		
VC15	3.98	4 ø 8.0		-5.51 -0.19 -4.31	6 ø 8.0 2 ø 8.0 3 ø 10.0		
VC16	3.40	4 ø 8.0		-3.36 -4.71	4 ø 8.0 2 ø 12.5		
VC17	3.82	4 ø 8.0		-5.02 -0.24 -4.23	6 ø 8.0 2 ø 8.0 3 ø 10.0		
VC18	1.60	2 ø 8.0		-1.81	3 ø 8.0		

	1.95	3 ø 8.0		-4.24 -3.01	4 ø 10.0 4 ø 8.0		
VC19	4.06	3 ø 10.0		-5.37 -0.08 -4.31	6 ø 8.0 2 ø 8.0 3 ø 10.0		
VC20	1.29 6.36	2 ø 8.0 3 ø 12.5		-0.94 -7.22 -0.77	2 ø 8.0 2 ø 16.0 2 ø 8.0		
VC21	7.20	2 ø 16.0		-2.11 -2.02	3 ø 8.0 2 ø 8.0		
VC22	2.42	2 ø 10.0		-0.17 -0.15	2 ø 8.0 2 ø 8.0		
VC23	0.16 3.59	2 ø 8.0 4 ø 8.0		-0.30 -3.33 -3.80	2 ø 8.0 4 ø 8.0 4 ø 8.0		
VC24	1.47	3 ø 8.0	2 ø 8.0	-3.07 -0.42 -2.72	3 ø 10.0 2 ø 8.0 4 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0	
VC25	0.09 0.88 0.07	2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.04 -1.89 -0.96 -0.34	2 ø 8.0 2 ø 10.0 2 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VC26	0.15	2 ø 8.0		-0.09 -0.04	2 ø 8.0 2 ø 8.0		
VC27	1.25 0.00 0.96 1.84	2 ø 8.0 2 ø 8.0 2 ø 8.0 3 ø 8.0		-1.16 -2.24 -1.74 -2.30 -1.11	2 ø 8.0 2 ø 10.0 3 ø 8.0 2 ø 10.0 2 ø 8.0		
VC28	0.08 0.81 0.33	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.02 -1.32 -1.50 -0.61	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VC29	0.72	2 ø 8.0		-0.18 -0.24	2 ø 8.0 2 ø 8.0		
VC30	1.60 0.26 0.93 1.22	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.42 -1.97 -1.29 -2.14 -0.53	2 ø 8.0 3 ø 8.0 2 ø 8.0 3 ø 8.0 2 ø 8.0		
VC31	0.10 1.33 0.93	2 ø 8.0 2 ø 8.0 2 ø 8.0		-2.32 -3.00	2 ø 10.0 4 ø 8.0		
VC32	1.62 0.53	2 ø 8.0 2 ø 8.0		-1.85 -2.49 -0.92	3 ø 8.0 2 ø 10.0 2 ø 8.0		
VC33	1.42 0.54 0.29	2 ø 8.0 2 ø 8.0 2 ø 8.0		-1.62 -2.39 -0.96 -0.69	2 ø 8.0 2 ø 10.0 2 ø 8.0 2 ø 8.0		
VC34	0.07	2 ø 8.0	2 ø 8.0	-0.46 -0.56	2 ø 8.0 2 ø 8.0		
VC35	2.12 0.46	3 ø 8.0 2 ø 8.0		-0.02 -3.95 -0.65	2 ø 8.0 6 ø 8.0 2 ø 8.0		
VC36	1.05 0.18 0.05	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.40 -1.44 -0.82	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VC37	3.08 0.68 0.70	4 ø 8.0 2 ø 8.0 2 ø 8.0		-0.28 -3.65 -0.28 -1.27 -0.24	2 ø 8.0 2 ø 12.5 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VC38	1.79 2.24 0.00 1.23	3 ø 8.0 2 ø 10.0 2 ø 8.0 2 ø 8.0		-1.63 -3.42 -2.06 -1.52	2 ø 8.0 3 ø 10.0 3 ø 8.0 2 ø 8.0		

				-1.16	2 ø 8.0		
VC39	0.34	2 ø 8.0	2 ø 8.0	-0.28 -0.30	2 ø 8.0 2 ø 8.0		
VC40	2.21	2 ø 10.0		-1.98 -1.28	3 ø 8.0 2 ø 8.0		
VC41	0.44	2 ø 8.0		-0.68	2 ø 8.0		
VC42	0.32	2 ø 8.0		-0.26	2 ø 8.0		
VC43	0.08 0.11 0.20	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.36 -0.37 -0.38	2 ø 8.0 2 ø 8.0 2 ø 8.0		

Resultados da Viga VC1

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P8	40.00			2 ø 8.0 0.84					0.05
1	269.89	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P9	40.00			2 ø 8.0 0.84					0.10
2	301.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P10	14.00			2 ø 8.0 1.00					0.13
3	314.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P11	14.00			2 ø 8.0 0.87					0.10
4	314.77	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P12	14.00			2 ø 8.0 0.95					0.12
5	298.83	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P13	40.00			2 ø 8.0 1.05					0.16
6	298.84	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.03
P14	14.00			2 ø 8.0 0.84					0.01

Resultados da Viga VC2

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC10	14.00			2 ø 8.0 0.29					0.01
1	637.66	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.00
VC15	14.00			2 ø 8.0 0.29					0.01
2	314.78	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.00
VC17	14.00			2 ø 8.0 0.29					0.00
3	314.77	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.00
VC19	14.00			2 ø 8.0 0.42					0.03
4	637.67	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.01
VC24	14.00			2 ø 8.0 0.34					0.02

Resultados da Viga VC3

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P28	14.00		3 ø 8.0 1.43	6 ø 8.0 2.66					0.03
1	494.82	14.00 x 50.00	9 ø 8.0 4.38	2 ø 10.0 1.43		ø 6.3 c/ 7		2x2 ø 8.0	0.05
P29	14.00		3 ø 8.0 1.55	4 ø 12.5 4.95					0.07
2	314.78	14.00 x 40.00	3 ø 8.0 1.33	2 ø 8.0 0.61		ø 5.0 c/ 7		2x2 ø 6.3	0.00
P30	14.00		2 ø 8.0 0.95	4 ø 8.0 1.69					0.01
3	314.77	14.00 x 40.00	4 ø 8.0 1.69	2 ø 8.0 0.95		ø 5.0 c/ 5		2x2 ø 6.3	0.01
P31	14.00		2 ø 8.0 0.95	6 ø 8.0 2.82					0.04
4	298.83	14.00 x 50.00	2 ø 10.0 1.50	2 ø 8.0 0.32		ø 5.0 c/ 10		2x3 ø 6.3	0.11
P32	40.00		2 ø 8.0 0.32	3 ø 8.0 1.33					0.06

Resultados da Viga VC4

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P32	40.00		2 ø 8.0 0.24	3 ø 8.0 1.20					0.06
1	298.83	14.00 x 40.00	2 ø 8.0 0.84	2 ø 8.0 0.24		ø 5.0 c/ 21		2x2 ø 6.3	0.02
P33	14.00		2 ø 8.0 0.24	2 ø 8.0 0.96					0.00

Resultados da Viga VC5

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
									0.00
1	88.49	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.00
VC18	14.00			2 ø 8.0 0.29					0.00

Resultados da Viga VC6

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC20	14.00			2 ø 8.0 1.05					0.00
1	472.53	14.00 x 50.00	6 ø 8.0 2.76			ø 5.0 c/ 25			0.07
VC23	14.00			2 ø 8.0 1.05					0.00

Resultados da Viga VC7

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	14.00		2 ø 8.0 0.36	3 ø 8.0 1.39					0.00
1	11.99	20.00 x 40.00	3 ø 8.0 1.20	2 ø 8.0 0.36		ø 5.0 c/ 13		2x3 ø 6.3	0.00
VC39	19.98		2 ø 8.0 0.55	2 ø 10.0 1.58					0.00
2	462.86	20.00 x 40.00	2 ø 10.0 1.58	2 ø 8.0 0.55		ø 5.0 c/ 7		2x3 ø 6.3	0.00
P41	14.00		2 ø 8.0 0.55	2 ø 10.0 1.58					0.02
3	315.23	20.00 x 40.00	3 ø 8.0 1.20	2 ø 8.0 0.36		ø 5.0 c/ 11		2x3 ø 6.3	0.00
P42	14.00		2 ø 8.0 0.36	3 ø 8.0 1.39					0.01
4	479.45	20.00 x 40.00	3 ø 8.0 1.38	2 ø 8.0 0.36		ø 5.0 c/ 8		2x3 ø 6.3	0.00
P44	14.00		2 ø 8.0 0.37	2 ø 10.0 1.44					0.06

Resultados da Viga VC8

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P44	14.00			4 ø 10.0 2.97					0.07
1	472.53	14.00 x 40.00	3 ø 10.0 2.23			ø 5.0 c/ 21			0.12
P45	14.00			2 ø 8.0 0.84					0.06

Resultados da Viga VC9

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P50	14.00			2 ø 8.0 0.84					0.07
1	385.03	14.00 x 40.00	2 ø 8.0 0.92			ø 5.0 c/ 21			0.12
P46	40.00			3 ø 8.0 1.41					0.12

Resultados da Viga VC10

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P24	40.00			2 ø 10.0 1.50					0.16
1	384.93	14.00 x 40.00	3 ø 8.0 1.07			ø 5.0 c/ 21			0.07
P8	14.00			2 ø 8.0 1.01					0.14

Resultados da Viga VC11

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P8	14.00			2 ø 8.0 0.33					0.02
1	95.00	14.00 x 13.00	2 ø 8.0 0.29			ø 5.0 c/ 5			0.00
									0.00

Resultados da Viga VC12

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	40.00			2 ø 12.5 2.36					0.20
1	451.00	14.00 x 50.00	2 ø 10.0 1.44			ø 5.0 c/ 25			0.15
P28	40.00			6 ø 8.0 2.81					0.07

Resultados da Viga VC13

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P51	40.00			4 ø 8.0 1.67					0.09
1	534.51	20.00 x 50.00	3 ø 10.0 2.19			ø 5.0 c/ 17			0.15
P40	40.00			3 ø 12.5 3.44					0.19
2	503.00	20.00 x 50.00	2 ø 10.0 1.50			ø 5.0 c/ 17			0.00
VC3	14.00			4 ø 10.0 3.29					0.16
3	586.40	20.00 x 50.00	6 ø 8.0 2.95			ø 5.0 c/ 17			0.07
P9	14.00			2 ø 10.0 1.50					0.03

Resultados da Viga VC14

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P52	40.00			4 ø 8.0 2.11					0.08
1	534.49	14.00 x 50.00	3 ø 10.0 2.16			ø 5.0 c/ 25			0.12
P41	40.00			4 ø 10.0 3.00					0.07

Resultados da Viga VC15

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P29	40.00			6 ø 8.0 2.97					0.08
1	534.40	14.00 x 50.00	4 ø 8.0 2.07			ø 5.0 c/ 25			0.08
P10	40.00			3 ø 10.0 2.22					0.12

Resultados da Viga VC16

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P53	40.00			4 ø 8.0 1.74					0.07
1	521.59	14.00 x 50.00	4 ø 8.0 1.76			ø 5.0 c/ 25			0.07
P42	40.00			2 ø 12.5 2.45					0.21

Resultados da Viga VC17

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P30	40.00			6 ø 8.0 2.69					0.07
1	534.41	14.00 x 50.00	4 ø 8.0 1.99			ø 5.0 c/ 25			0.08
P11	40.00			3 ø 10.0 2.18					0.12

Resultados da Viga VC18

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P49	40.00			3 ø 8.0 1.17					0.08
1	449.90	14.00 x 40.00	2 ø 8.0 1.03			ø 5.0 c/ 21			0.14
P43	40.00			4 ø 10.0 2.94					0.07
2	503.00	14.00 x 40.00	3 ø 8.0 1.26		ø 5.0 c/ 20 88.00	ø 5.0 c/ 21			0.10
VC3	14.00			4 ø 8.0 2.03					0.08

Resultados da Viga VC19

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P31	40.00			6 ø 8.0 2.89					0.07
1	534.41	14.00 x 50.00	3 ø 10.0 2.09			ø 5.0 c/ 25			0.11
P12	40.00			3 ø 10.0 2.22					0.12

Resultados da Viga VC20

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P48	40.00			2 ø 8.0 1.05					0.03
1	378.15	14.00 x 50.00	2 ø 8.0 1.05			ø 5.0 c/ 25			0.06
P44	40.00			2 ø 16.0 3.87					0.22
2	503.00	14.00 x 50.00	3 ø 12.5 3.46			ø 5.0 c/ 25			0.10
VC3	14.00			2 ø 8.0 1.05					0.02

Resultados da Viga VC21

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P32	14.00			3 ø 8.0 1.06					0.07
1	586.41	14.00 x 50.00	2 ø 16.0 3.86			ø 5.0 c/ 25			0.21
P13	14.00			2 ø 8.0 1.05					0.14

Resultados da Viga VC22

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC40	14.58			2 ø 8.0 0.84					0.00
1	360.12	14.00 x 40.00	2 ø 10.0 1.58			ø 5.0 c/ 21			0.17
VC8	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VC23

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P47	40.00			2 ø 8.0 1.05					0.00
1	237.10	14.00 x 50.00	2 ø 8.0 1.05			ø 5.0 c/ 25			0.00
P45	40.00			4 ø 8.0 1.72					0.07
2	503.01	14.00 x 50.00	4 ø 8.0 1.86			ø 5.0 c/ 25			0.07
P33	40.00			4 ø 8.0 1.98					0.08

Resultados da Viga VC24

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P33	40.00		2 ø 8.0 0.24	3 ø 10.0 2.27					0.11
1	534.40	14.00 x 40.00	3 ø 8.0 0.95	2 ø 8.0 0.24		ø 5.0 c/ 21		2x2 ø 6.3	0.06
P14	40.00		2 ø 8.0 0.24	4 ø 8.0 2.06					0.07

Resultados da Viga VC25

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	40.00			2 ø 8.0 0.84					0.00
1	256.44	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P35	40.00		2 ø 8.0 0.24	2 ø 10.0 1.47					0.11
2	360.00	14.00 x 40.00	2 ø 8.0 0.84	2 ø 8.0 0.24		ø 5.0 c/ 19		2x2 ø 6.3	0.04
P21	40.00		2 ø 8.0 0.24	2 ø 8.0 0.96					0.05
3	257.29	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P15	40.00			2 ø 8.0 0.84					0.01

Resultados da Viga VC26

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P6	14.00			2 ø 8.0 0.84					0.00
1	261.74	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P5	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VC27

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P15	14.58			2 ø 8.0 0.84					0.08
1	462.42	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.09
P4	40.00			2 ø 10.0 1.46					0.15
2	168.99	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P3	40.00			3 ø 8.0 1.12					0.08
3	437.93	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.05
P2	14.00			2 ø 10.0 1.50					0.16
4	535.59	14.00 x 40.00	3 ø 8.0 1.19			ø 5.0 c/ 21			0.09
P1	14.00			2 ø 8.0 0.84					0.07

Resultados da Viga VC28

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	40.00			2 ø 8.0 0.84					0.00
1	192.50	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P20	40.00			2 ø 8.0 0.85					0.10
2	377.61	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.04
P5	40.00			2 ø 8.0 0.96					0.13
3	267.22	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P1	40.00			2 ø 8.0 0.84					0.02

Resultados da Viga VC29

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P23	14.00			2 ø 8.0 0.84					0.00
1	259.93	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.03
P20	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VC30

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P21	14.58			2 ø 8.0 0.84					0.01
1	310.19	14.00 x 40.00	2 ø 8.0 1.03			ø 5.0 c/ 21			0.14
P18	14.00			3 ø 8.0 1.27					0.10
2	253.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P17	14.00			2 ø 8.0 0.84					0.09
3	313.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.05
P16	14.00			3 ø 8.0 1.39					0.12
4	313.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.08
P7	14.00			2 ø 8.0 0.84					0.02

Resultados da Viga VC31

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC38	14.00								0.00
1	218.51	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P23	40.00			2 ø 10.0 1.52					0.16
2	377.61	14.00 x 40.00	2 ø 8.0 0.85			ø 5.0 c/ 21			0.10
P6	40.00			4 ø 8.0 2.02					0.08
3	293.22	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.05
VC27	14.00								0.00

Resultados da Viga VC32

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P36	40.00			3 ø 8.0 1.20					0.09
1	338.59	14.00 x 40.00	2 ø 8.0 1.04			ø 5.0 c/ 21			0.14
P22	40.00			2 ø 10.0 1.63					0.18
2	248.89	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P16	40.00			2 ø 8.0 0.84					0.05

Resultados da Viga VC33

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P34	40.00			2 ø 8.0 1.04					0.15
1	338.51	14.00 x 40.00	2 ø 8.0 0.91			ø 5.0 c/ 21			0.11
P19	40.00			2 ø 10.0 1.56					0.17
2	248.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.02
P7	40.00			2 ø 8.0 0.84					0.05
3	249.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P2	40.00			2 ø 8.0 0.84					0.03

Resultados da Viga VC34

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P24	14.62			2 ø 8.0 0.84					0.01
1	228.35	14.00 x 40.00	2 ø 8.0 0.84	2 ø 8.0 0.72		ø 5.0 c/ 21			0.04
	19.80			2 ø 8.0 0.84					0.02

Resultados da Viga VC35

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC38	14.00			2 ø 8.0 0.84					0.00
1	364.54	14.00 x 40.00	3 ø 8.0 1.38			ø 5.0 c/ 21			0.11
P25	40.00			6 ø 8.0 2.77					0.07
2	248.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P17	40.00			2 ø 8.0 0.84					0.02

Resultados da Viga VC36

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P37	14.00			2 ø 8.0 0.84					0.01
1	364.54	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.06
P26	40.00			2 ø 8.0 0.92					0.12
2	248.90	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P18	40.00			2 ø 8.0 0.84					0.04
3	275.75	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
	14.00								0.00

Resultados da Viga VC37

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VC25	14.58			2 ø 8.0 0.84					0.00
1	401.68	14.00 x 40.00	4 ø 8.0 2.08			ø 5.0 c/ 21			0.08
P26	14.00			2 ø 12.5 2.45					0.21
2	581.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.03
P22	14.00			2 ø 8.0 0.84					0.09
3	313.46	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.03
P19	14.00			2 ø 8.0 0.84					0.00

Resultados da Viga VC38

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	14.58			2 ø 8.0 1.05					0.15
1	498.92	14.00 x 40.00	3 ø 8.0 1.16			ø 5.0 c/ 21			0.08
P37	40.00			3 ø 10.0 2.27					0.12
2	568.34	14.00 x 40.00	2 ø 10.0 1.46			ø 5.0 c/ 21			0.15
P36	14.00			3 ø 8.0 1.34					0.11
3	313.47	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P34	14.00			2 ø 8.0 0.98					0.14
4	535.59	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.09
P27	14.00			2 ø 8.0 0.84					0.08

Resultados da Viga VC39

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P46	14.49			2 ø 8.0 0.84					0.00
1	221.87	14.00 x 40.00	2 ø 8.0 0.84	2 ø 8.0 0.72		ø 5.0 c/ 21			0.01
	28.54			2 ø 8.0 0.84					0.01

Resultados da Viga VC40

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P48	14.58			3 ø 8.0 1.28					0.10
1	492.05	14.00 x 40.00	2 ø 10.0 1.44			ø 5.0 c/ 21			0.15
P47	14.58			2 ø 8.0 0.84					0.09

Resultados da Viga VC41

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	14.58								0.00
1	242.62	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P48	14.58			2 ø 8.0 0.84					0.03

Resultados da Viga VC42

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	14.58								0.00
1	242.05	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.01
P49	14.58			2 ø 8.0 0.84					0.00

Resultados da Viga VC43

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P50	40.00			2 ø 8.0 0.84					0.01
1	282.88	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P51	14.00			2 ø 8.0 0.84					0.01
2	314.78	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P52	14.00			2 ø 8.0 0.84					0.01
3	316.52	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P53	14.58								0.00

Resultados da Laje

COBERTURA	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 2		cobr (externo) = 2.00 cm cobr (contato solo) = 2.50 cm	

Nome	Espessura (cm)	Carga (tf/m²)	Mdx (tf.m/m)	Mdy (tf.m/m)	Asx	Asy
L1	13	0.46	0.53		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L2	13	0.46	0.56		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L3	13	0.46	0.64		As = 0.44 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L4	13	0.46	0.63		As = 0.43 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L5	13	0.61	1.19	1.75	As = 3.50 cm²/m (ø8.0 c/14 - 3.59 cm²/m)	As = 6.45 cm²/m (ø12.5 c/19 - 6.46 cm²/m)
L6	13	0.61	0.04	0.16	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)
L7	13	0.46	0.67		As = 0.45 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L8	13	0.61	0.06	0.12	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L9	13	0.61	0.05	0.14	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L10	13	0.61	0.06	0.14	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L11	13	0.61	0.07	0.14	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L12	13	0.61	0.08	0.12	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L13	13	0.61	0.05	0.25	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L14	13	0.61	0.48	0.41	As = 1.31 cm²/m	As = 1.31 cm²/m

					(ø5.0 c/15 - 1.31 cm²/m)	(ø5.0 c/15 - 1.31 cm²/m)
L15	13	0.61	0.48	0.41	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)
L16	13	0.46	0.48		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L17	13	0.46	0.50		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L18	13	0.46	0.49		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L19	13	0.46	0.50		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L20	13	0.46	0.48		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L21	13	0.46	0.67		As = 0.45 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L22	13	0.61	0.41	0.30	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)
L23	13	0.46	0.78		As = 0.53 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L24	13	0.46	0.86		As = 0.58 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L25	13	0.46	0.50		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L26	13	0.46	0.86		As = 0.59 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L27	13	0.46	0.58		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L28	13	0.46	1.05		As = 0.86 cm²/N (TR 08645 - 0.39 cm²/N)	

					(1ø8.0 c/N - 0.50 cm²/N)	
L29	13	0.61	0.47	0.32	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)
L30	13	0.61	0.70	0.60	As = 2.00 cm²/m (ø6.3 c/15 - 2.08 cm²/m)	As = 1.82 cm²/m (ø6.3 c/17 - 1.83 cm²/m)
L31	13	0.81	0.58	0.72	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)	As = 1.37 cm²/m (ø5.0 c/14 - 1.40 cm²/m)
L32	13	0.46	0.46		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L33	13	0.61	0.69	0.18	As = 1.63 cm²/m (ø5.0 c/12 - 1.64 cm²/m)	As = 1.31 cm²/m (ø5.0 c/15 - 1.31 cm²/m)
L34	13	0.46	0.43		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L35	13	0.46	0.55		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L36	13	0.46	0.52		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L37	13	0.46	0.54		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L38	13	0.46	0.25		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L39	13	0.46	0.24		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L40	13	0.46	0.29		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	
L41	13	0.46	0.44		As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) (1ø5.0 c/N - 0.20 cm²/N)	

ARMADURA NEGATIVA							
Dados				**Resultados**			
Viga	**Trecho**	**Laje 1**	**Laje 2**	**Reação 1 (tf/m)**	**Reação 2 (tf/m)**	**Md (tf.m/m)**	**As (cm²)**
VC16	1	L37	L38	0.63	0.47	-0.66	As = 1.54 cm²/m

							(ø6.3 c/20 - 1.56 cm²/m)
VC7	4	L33		0.34		-0.91	As = 2.63 cm²/m (ø8.0 c/19 - 2.65 cm²/m)
VC14	1	L37	L36	0.69	0.68	-0.34	As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC7	3	L33		0.52		-1.50	As = 4.49 cm²/m (ø10.0 c/17 - 4.62 cm²/m)
VC13	1	L36	L35	0.68	0.65	-0.48	As = 1.08 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC1	1	L6	L8	0.56	0.37	-0.64	As = 1.96 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC1	2	L6	L9	0.52	0.61	-0.81	As = 2.46 cm²/m (ø8.0 c/20 - 2.51 cm²/m)
VC1	3	L6	L10	0.44	0.50	-0.46	As = 1.96 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC1	4	L6	L11	0.68	0.52	-0.67	As = 2.01 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC1	5	L6	L12	0.51	0.61	-0.69	As = 2.08 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC1	6	L6	L13	0.43	0.72	-0.84	As = 2.53 cm²/m (ø6.3 c/12 - 2.60 cm²/m)
VC15	1	L17	L18	0.69	0.67	-0.43	As = 0.97 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC13	5	L17	L16	0.64	0.58	-0.27	As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC3	3	L30		0.54		-1.84	As = 5.59 cm²/m (ø10.0 c/14 - 5.61 cm²/m)
VC17	1	L18	L19	0.64	0.64	-0.31	As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC3	4	L30		0.23		-1.00	As = 2.91 cm²/m (ø8.0 c/17 - 2.96 cm²/m)
VC19	1	L19	L20	0.67	0.68	-0.40	As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC3	5	L30		0.63		-1.36	As = 4.07 cm²/m (ø10.0 c/19 - 4.13 cm²/m)
VC21	1	L20	L21	0.65	0.74	-0.45	As = 1.01 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC10	2	L8	L5	0.84	1.06	-0.86	As = 2.62 cm²/m (ø8.0 c/19 - 2.65 cm²/m)
VC20	1	L40	L39	0.67	0.57	-1.53	As = 4.24 cm²/m Erro D36
VC18	1	L39	L38	0.41	0.52	-1.19	As = 2.96 cm²/m (ø6.3 c/10 - 3.12 cm²/m)
VC7	5	L33		0.23		-1.19	As = 3.46 cm²/m (ø6.3 c/9 - 3.46 cm²/m)

VC13	2	L29	L33	0.97	0.70	-0.61	As = 1.95 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC13	4	L29	L30	0.34	1.18	-0.06	As = 1.95 cm²/m (ø8.0 c/20 - 2.51 cm²/m)
VC12	1	L29	L5	0.91	1.04	-2.00	As = 6.06 cm²/m (ø8.0 c/8 - 6.28 cm²/m)
VC6	1	L34	L32	0.58	0.57	-0.21	As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
VC18	3	L31	L30	0.67	0.25	-0.32	As = 1.95 cm²/m (ø6.3 c/15 - 2.08 cm²/m)
VC18	2	L31	L33	1.20	0.71	-0.80	As = 2.30 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VC10	1	L16	L5	0.73	0.02	-1.17	As = 4.22 cm²/m Erro D36
VC9	2	L35	L5	0.70	0.05	-1.29	As = 4.67 cm²/m Erro D36
VC5	1	L33	L30	-0.14	0.11	0.00	

Cálculos das Lajes

COBERTURA	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 2		cobr (externo) = 2.00 cm cobr (contato solo) = 2.50 cm	

ARMADURAS POSITIVAS (LAJE)												
Laje	**Direção**	**Momento positivo**				**Momento negativo**				**Armadura inferior**	**Armadura superior**	**Cisalhamento**
		Seção	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**	**Seção**	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**			
L1	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.21 tf.m/N As = 0.36 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.15 tf.m/N F = 0.00 tf/N fiss = 0.03 mm		vsd = 0.31 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L2	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.23 tf.m/N As = 0.38 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.15 tf.m/N F = 0.00 tf/N fiss = 0.03 mm		vsd = 0.33 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L3	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.26 tf.m/N As = 0.44 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.44 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.18 tf.m/N F = 0.00 tf/N fiss = 0.04 mm		vsd = 0.36 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L4	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.25 tf.m/N As = 0.43 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.43 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.17 tf.m/N F = 0.00 tf/N		vsd = 0.37 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m

										fiss = 0.04 mm		
L5	X	bw = 100.0 cm h = 13.0 cm	Md = 1.55 tf.m/m As = 3.50 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 2.60 tf.m/m As = 6.21 cm²/m A's = 0.00 cm²/m			As = 3.50 cm²/m ø8.0 c/14 (3.59 cm²/m) M = 0.64 tf.m/m F = 0.00 tf fiss = 0.05 mm	A's = 5.81 cm²/m ø12.5 c/20 (6.14 cm²/m) M = 1.83 tf.m/m F = 0.00 tf fiss = 0.20 mm	vsd = 17.28 tf/m vrd1 = 7.66 tf/m Modelo I vrd2 = 51.42 tf/m vsw = 8.50 tf/m asw = 37.41 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 2.27 tf.m/m As = 5.90 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 6.12 tf.m/m As = 19.95 cm²/m A's = 6.45 cm²/m			As = 6.45 cm²/m ø12.5 c/19 (6.46 cm²/m) M = 1.60 tf.m/m F = 0.00 tf fiss = 0.20 mm	A's = 19.85 cm²/m ø16.0 c/10 (20.11 cm²/m) M = 3.30 tf.m/m F = 0.00 tf fiss = 0.00 mm	vsd = 5.98 tf/m vrd1 = 7.66 tf/m vrd2 = 46.20 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L6	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.03 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 1.09 tf.m/m As = 2.41 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.04 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 2.57 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 0.42 tf.m/m As = 0.81 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.15 tf.m/m F = 0.00 tf fiss = 0.02 mm	A's = 2.07 cm²/m ø6.3 c/15 (2.08 cm²/m) M = 0.30 tf.m/m F = 0.00 tf fiss = 0.14 mm	vsd = 0.57 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L7	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.27 tf.m/N As = 0.45 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.45 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.18 tf.m/N F = 0.00 tf/N fiss = 0.04 mm		vsd = 0.37 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L8	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 0.43 tf.m/m As = 0.82 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.04 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.50 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m			bw = 100.0 cm h = 13.0 cm	Md = 0.84 tf.m/m			As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m)		vsd = 2.09 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m

			As = 1.37 cm²/m A's = 0.00 cm²/m				As = 2.04 cm²/m A's = 0.00 cm²/m			M = 0.08 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsw = 0.00 tf/m asw = 0.00 cm²/m
L9	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.04 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.22 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.10 tf.m/m F = 0.00 tf fiss = 0.01 mm		vsd = 0.65 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L10	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.04 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.12 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.10 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.01 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L11	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.05 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.21 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.10 tf.m/m F = 0.00 tf fiss = 0.01 mm		vsd = 1.20 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L12	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.05 tf.m/m		vsd = 1.67 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m

			A's = 0.00 cm²/m							F = 0.00 tf fiss = 0.00 mm		vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.09 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 0.79 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L13	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 0.55 tf.m/m As = 1.27 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.04 tf.m/m F = 0.00 tf fiss = 0.00 mm		vsd = 1.56 tf/m vrd1 = 6.95 tf/m Modelo I vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.18 tf.m/m F = 0.00 tf fiss = 0.02 mm		vsd = 1.38 tf/m vrd1 = 6.66 tf/m vrd2 = 46.76 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L14	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.03 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.34 tf.m/m F = 0.00 tf fiss = 0.09 mm		vsd = 1.33 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.29 tf.m/m F = 0.00 tf fiss = 0.07 mm		vsd = 1.12 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L15	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.03 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.34 tf.m/m F = 0.00 tf fiss = 0.09 mm		vsd = 1.46 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.29 tf.m/m F = 0.00 tf		vsd = 1.11 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m

			A's = 0.00 cm²/m							fiss = 0.07 mm		asw = 0.00 cm²/m
L16	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.19 tf.m/N As = 0.32 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.22 tf.m/N As = 0.41 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.13 tf.m/N F = 0.00 tf/N fiss = 0.02 mm	A's = 1.03 cm²/m ø5.0 c/19 (1.03 cm²/m) M = 0.15 tf.m/N F = 0.00 tf/N fiss = 0.03 mm	vsd = 0.42 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L17	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.20 tf.m/N As = 0.34 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.17 tf.m/N As = 0.32 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.14 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.41 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L18	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.19 tf.m/N As = 0.33 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.16 tf.m/N As = 0.29 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.13 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.40 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L19	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.20 tf.m/N As = 0.34 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.15 tf.m/N As = 0.28 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.14 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.40 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L20	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.19 tf.m/N As = 0.32 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.16 tf.m/N As = 0.30 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.13 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.40 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L21	X	bw = 10.0 cm	Md = 0.27 tf.m/N			bw = 10.0 cm	Md = 0.18 tf.m/N			As = 0.45 cm²/N		vsd = 0.44 tf/N

		h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	As = 0.45 cm²/N A's = 0.00 cm²/N			h = 13.0 cm	As = 0.33 cm²/N A's = 0.00 cm²/N			(TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.18 tf.m/N F = 0.00 tf/N fiss = 0.04 mm		vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L22	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.03 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.29 tf.m/m F = 0.00 tf fiss = 0.06 mm		vsd = 1.31 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.21 tf.m/m F = 0.00 tf fiss = 0.04 mm		vsd = 1.19 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L23	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.31 tf.m/N As = 0.53 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.53 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.21 tf.m/N F = 0.00 tf/N fiss = 0.06 mm		vsd = 0.40 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L24	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.34 tf.m/N As = 0.58 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.58 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.23 tf.m/N F = 0.00 tf/N fiss = 0.07 mm		vsd = 0.42 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L25	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.20 tf.m/N As = 0.34 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.14 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.31 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m

L26	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.35 tf.m/N As = 0.59 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.59 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.24 tf.m/N F = 0.00 tf/N fiss = 0.07 mm		vsd = 0.42 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L27	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.23 tf.m/N As = 0.39 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.16 tf.m/N F = 0.00 tf/N fiss = 0.03 mm		vsd = 0.34 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L28	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.42 tf.m/N As = 0.86 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.86 cm²/N (TR 08645 - 0.39 cm²/N) 1ø8.0 c/N (0.50 cm²/N) M = 0.29 tf.m/N F = 0.00 tf/N fiss = 0.06 mm		vsd = 0.45 tf/N vrd1 = 0.85 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L29	X	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.03 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 1.07 tf.m/m As = 2.36 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.33 tf.m/m F = 0.00 tf fiss = 0.09 mm		vsd = 2.33 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.23 tf.m/m F = 0.00 tf fiss = 0.04 mm		vsd = 1.14 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L30	X	bw = 100.0 cm h = 13.0 cm	Md = 0.91 tf.m/m As = 2.00 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 2.39 tf.m/m As = 5.59 cm²/m A's = 0.00 cm²/m			As = 2.00 cm²/m ø6.3 c/15 (2.08 cm²/m) M = 0.65 tf.m/m F = 0.00 tf fiss = 0.10 mm		vsd = 6.28 tf/m vrd1 = 7.38 tf/m Modelo I vrd2 = 51.86 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m

	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.78 tf.m/m As = 1.82 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 1.14 tf.m/m As = 2.82 cm²/m A's = 0.00 cm²/m			As = 1.82 cm²/m ø6.3 c/17 (1.83 cm²/m) M = 0.55 tf.m/m F = 0.00 tf fiss = 0.11 mm		vsd = 1.87 tf/m vrd1 = 6.95 tf/m vrd2 = 48.65 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L31	X	bw = 100.0 cm h = 13.0 cm	Md = 0.58 tf.m/m As = 1.05 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 0.80 tf.m/m As = 1.76 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.41 tf.m/m F = 0.00 tf fiss = 0.13 mm		vsd = 3.48 tf/m vrd1 = 7.25 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.72 tf.m/m As = 1.37 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.37 cm²/m ø5.0 c/14 (1.40 cm²/m) M = 0.51 tf.m/m F = 0.00 tf fiss = 0.19 mm		vsd = 2.45 tf/m vrd1 = 6.97 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L32	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.18 tf.m/N As = 0.31 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.09 tf.m/N As = 0.16 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.13 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.33 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L33	X	bw = 100.0 cm h = 13.0 cm	Md = 0.89 tf.m/m As = 1.63 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 1.94 tf.m/m As = 4.49 cm²/m A's = 0.00 cm²/m			As = 1.63 cm²/m ø5.0 c/12 (1.64 cm²/m) M = 0.64 tf.m/m F = 0.00 tf fiss = 0.20 mm		vsd = 4.69 tf/m vrd1 = 7.32 tf/m Modelo I vrd2 = 52.19 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 13.0 cm	Md = 0.57 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm	Md = 0.93 tf.m/m As = 2.28 cm²/m A's = 0.00 cm²/m			As = 1.31 cm²/m ø5.0 c/15 (1.31 cm²/m) M = 0.17 tf.m/m F = 0.00 tf fiss = 0.02 mm		vsd = 4.11 tf/m vrd1 = 6.95 tf/m vrd2 = 49.64 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L34	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm	Md = 0.17 tf.m/N As = 0.29 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.12 tf.m/N		vsd = 0.33 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N

		hf = 5.0 cm								F = 0.00 tf/N fiss = 0.02 mm		asw = 0.00 cm²/m
L35	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.22 tf.m/N As = 0.37 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.19 tf.m/N As = 0.36 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.15 tf.m/N F = 0.00 tf/N fiss = 0.03 mm	A's = 0.81 cm²/m ø5.0 c/20 (0.98 cm²/m) M = 0.13 tf.m/N F = 0.00 tf/N fiss = 0.03 mm	vsd = 0.45 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L36	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.21 tf.m/N As = 0.35 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.13 tf.m/N As = 0.25 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.14 tf.m/N F = 0.00 tf/N fiss = 0.03 mm		vsd = 0.40 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L37	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.22 tf.m/N As = 0.36 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.14 tf.m/N As = 0.25 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.15 tf.m/N F = 0.00 tf/N fiss = 0.03 mm	A's = 0.56 cm²/m ø5.0 c/20 (0.98 cm²/m) M = 0.09 tf.m/N F = 0.00 tf/N fiss = 0.01 mm	vsd = 0.41 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L38	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.11 tf.m/N As = 0.19 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.27 tf.m/N As = 0.51 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.07 tf.m/N F = 0.00 tf/N fiss = 0.01 mm		vsd = 0.54 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L39	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.11 tf.m/N As = 0.19 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.48 tf.m/N As = 1.18 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.07 tf.m/N F = 0.00 tf/N fiss = 0.01 mm	A's = 1.40 cm²/m ø5.0 c/14 (1.40 cm²/m) M = 0.34 tf.m/N F = 0.00 tf/N fiss = 0.02 mm	vsd = 0.72 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m

L40	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.12 tf.m/N As = 0.19 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm	Md = 0.61 tf.m/N As = 1.61 cm²/N A's = 0.00 cm²/N			As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.08 tf.m/N F = 0.00 tf/N fiss = 0.01 mm	A's = 4.05 cm²/m ø10.0 c/19 (4.13 cm²/m) M = 0.44 tf.m/N F = 0.00 tf/N fiss = 0.00 mm	vsd = 0.73 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m
L41	X	bw = 10.0 cm h = 13.0 cm bf = 40.0 cm hf = 5.0 cm	Md = 0.17 tf.m/N As = 0.29 cm²/N A's = 0.00 cm²/N			bw = 10.0 cm h = 13.0 cm				As = 0.42 cm²/N (TR 08645 - 0.39 cm²/N) 1ø5.0 c/N (0.20 cm²/N) M = 0.12 tf.m/N F = 0.00 tf/N fiss = 0.02 mm		vsd = 0.29 tf/N vrd1 = 0.78 tf/N Modelo I vrd2 = 5.60 tf/N vsw = 0.00 tf/N asw = 0.00 cm²/m

ARMADURAS NEGATIVAS (NA CONTINUIDADE)										
Viga **Trecho**	**Laje 1** **Laje 2**	**Momento negativo**				**Momento positivo**				**Armaduras finais**
		Seção	**Flexão**	**Flexo compressão**	**Flexo tração**	**Seção**	**Flexão**	**Flexo compressão**	**Flexo tração**	
VC16 1	L37 L38	bw = 25.0 cm h = 13.0 cm	Md = 0.66 tf.m/m As = 1.54 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 1.54 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.11 mm
VC7 4	L33	bw = 100.0 cm h = 13.0 cm	Md = 1.18 tf.m/m As = 2.63 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.63 cm²/m (ø8.0 c/19 - 2.65 cm²/m) fiss = 0.14 mm
VC14 1	L37 L36	bw = 25.0 cm h = 13.0 cm	Md = 0.34 tf.m/m As = 0.76 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.03 mm
VC7 3	L33	bw = 100.0 cm h = 13.0 cm	Md = 1.94 tf.m/m As = 4.49 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 4.49 cm²/m (ø10.0 c/17 - 4.62 cm²/m) fiss = 0.17 mm
VC13 1	L36 L35	bw = 25.0 cm h = 13.0 cm	Md = 0.48 tf.m/m As = 1.08 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 1.08 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.06 mm
VC1 1	L6 L8	bw = 100.0 cm h = 13.0 cm	Md = 0.85 tf.m/m As = 1.96 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.96 cm²/m (ø6.3 c/15 - 2.08 cm²/m) fiss = 0.10 mm

			A's = 0.00 cm²/m							
VC1 2	L6 L9	bw = 100.0 cm h = 13.0 cm	Md = 1.05 tf.m/m As = 2.46 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.46 cm²/m (ø8.0 c/20 - 2.51 cm²/m) fiss = 0.14 mm
VC1 3	L6 L10	bw = 100.0 cm h = 13.0 cm	Md = 0.85 tf.m/m As = 1.96 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.96 cm²/m (ø6.3 c/15 - 2.08 cm²/m) fiss = 0.05 mm
VC1 4	L6 L11	bw = 100.0 cm h = 13.0 cm	Md = 0.87 tf.m/m As = 2.01 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.01 cm²/m (ø6.3 c/15 - 2.08 cm²/m) fiss = 0.11 mm
VC1 5	L6 L12	bw = 100.0 cm h = 13.0 cm	Md = 0.90 tf.m/m As = 2.08 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.08 cm²/m (ø6.3 c/15 - 2.08 cm²/m) fiss = 0.11 mm
VC1 6	L6 L13	bw = 100.0 cm h = 13.0 cm	Md = 1.09 tf.m/m As = 2.53 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.53 cm²/m (ø6.3 c/12 - 2.60 cm²/m) fiss = 0.11 mm
VC15 1	L17 L18	bw = 25.0 cm h = 13.0 cm	Md = 0.43 tf.m/m As = 0.97 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 0.97 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.05 mm
VC13 5	L17 L16	bw = 25.0 cm h = 13.0 cm	Md = 0.27 tf.m/m As = 0.61 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.02 mm
VC3 3	L30	bw = 100.0 cm h = 13.0 cm	Md = 2.39 tf.m/m As = 5.59 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 5.59 cm²/m (ø10.0 c/14 - 5.61 cm²/m) fiss = 0.18 mm
VC17 1	L18 L19	bw = 25.0 cm h = 13.0 cm	Md = 0.31 tf.m/m As = 0.69 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.02 mm
VC3 4	L30	bw = 100.0 cm h = 13.0 cm	Md = 1.30 tf.m/m As = 2.91 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.91 cm²/m (ø8.0 c/17 - 2.96 cm²/m) fiss = 0.14 mm
VC19 1	L19 L20	bw = 25.0 cm h = 13.0 cm	Md = 0.40 tf.m/m			bw = 25.0 cm h = 13.0 cm				As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m)

			As = 0.90 cm²/m A's = 0.00 cm²/m			bf = 100.0 cm hf = 5.0 cm				fiss = 0.04 mm
VC3 5	L30	bw = 100.0 cm h = 13.0 cm	Md = 1.77 tf.m/m As = 4.07 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 4.07 cm²/m (ø10.0 c/19 - 4.13 cm²/m) fiss = 0.17 mm
VC21 1	L20 L21	bw = 25.0 cm h = 13.0 cm	Md = 0.45 tf.m/m As = 1.01 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 1.01 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.05 mm
VC10 2	L8 L5	bw = 100.0 cm h = 13.0 cm	Md = 1.11 tf.m/m As = 2.62 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.62 cm²/m (ø8.0 c/19 - 2.65 cm²/m) fiss = 0.14 mm
VC20 1	L40 L39	bw = 25.0 cm h = 13.0 cm	Md = 1.53 tf.m/m As = 4.24 cm²/m A's = 0.40 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 4.24 cm²/m Erro D36 fiss = 0.05 mm A's = 1.05 cm²/m Erro D36
VC18 1	L39 L38	bw = 25.0 cm h = 13.0 cm	Md = 1.19 tf.m/m As = 2.96 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 2.96 cm²/m (ø6.3 c/10 - 3.12 cm²/m) fiss = 0.09 mm
VC7 5	L33	bw = 100.0 cm h = 13.0 cm	Md = 1.55 tf.m/m As = 3.46 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 3.46 cm²/m (ø6.3 c/9 - 3.46 cm²/m) fiss = 0.11 mm
VC13 2	L29 L33	bw = 100.0 cm h = 13.0 cm	Md = 0.85 tf.m/m As = 1.87 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.95 cm²/m (ø6.3 c/15 - 2.08 cm²/m) fiss = 0.08 mm
VC13 4	L29 L30	bw = 100.0 cm h = 13.0 cm	Md = 0.85 tf.m/m As = 1.88 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 1.95 cm²/m (ø8.0 c/20 - 2.51 cm²/m) fiss = 0.00 mm
VC12 1	L29 L5	bw = 100.0 cm h = 13.0 cm	Md = 2.60 tf.m/m As = 6.06 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 6.06 cm²/m (ø8.0 c/8 - 6.28 cm²/m) fiss = 0.13 mm
VC6 1	L34 L32	bw = 25.0 cm h = 13.0 cm	Md = 0.21 tf.m/m As = 0.47 cm²/m A's = 0.00 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 5.0 cm				As = 0.90 cm²/m (ø6.3 c/20 - 1.56 cm²/m) fiss = 0.01 mm
VC18	L31	bw = 100.0 cm	Md = 0.85 tf.m/m			bw = 100.0 cm				As = 1.95 cm²/m

3	L30	h = 13.0 cm	As = 1.87 cm²/m A's = 0.00 cm²/m			h = 13.0 cm				(ø6.3 c/15 - 2.08 cm²/m) fiss = 0.02 mm
VC18 2	L31 L33	bw = 100.0 cm h = 13.0 cm	Md = 1.04 tf.m/m As = 2.30 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 13.0 cm				As = 2.30 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.10 mm
VC10 1	L16 L5	bw = 25.0 cm h = 13.0 cm	Md = 1.52 tf.m/m As = 4.22 cm²/m A's = 0.37 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 0.0 cm				As = 4.22 cm²/m Erro D36 fiss = 0.05 mm A's = 0.90 cm²/m Erro D36
VC9 2	L35 L5	bw = 25.0 cm h = 13.0 cm	Md = 1.67 tf.m/m As = 4.67 cm²/m A's = 0.82 cm²/m			bw = 25.0 cm h = 13.0 cm bf = 100.0 cm hf = 0.0 cm				As = 4.67 cm²/m Erro D36 fiss = 0.06 mm A's = 0.90 cm²/m Erro D36
VC5 1	L33 L30	bw = 100.0 cm h = 13.0 cm				bw = 100.0 cm h = 13.0 cm				fiss = 0.00 mm

Pavimento RESERVATÓRIO

Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

RESERVATÓRIO						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	14x40	0.63	0.00	0.86	0.01	0.01
P2	14x40	0.70	0.00	0.98	0.01	0.01
P3	14x40	0.54	0.00	0.74	0.01	0.01
P4	14x40	0.53	0.00	0.73	0.01	0.01
P5	14x40	0.53	0.00	0.74	0.01	0.01
P7	14x30	0.56	0.00	0.78	0.01	0.01
P8	14x40	0.59	0.00	0.81	0.01	0.01
P9	14x40	0.47	0.00	0.66	0.01	0.00
P10	14x40	0.53	0.00	0.74	0.01	0.01
P11	14x40	0.50	0.00	0.70	0.01	0.01
P12	14x40	0.54	0.00	0.75	0.01	0.01
P13	14x40	0.46	0.00	0.64	0.01	0.00
P14	14x40	0.67	0.00	0.92	0.01	0.01
P15	14x40	0.60	0.00	0.82	0.01	0.01
P16	14x30	0.59	0.00	0.83	0.01	0.01
P17	14x30	0.60	0.00	0.83	0.01	0.01
P18	14x40	0.57	0.00	0.80	0.01	0.01
P19	14x40	0.72	0.00	1.00	0.01	0.01
P20	14x40	0.50	0.00	0.70	0.01	0.01
P21	14x40	0.51	0.00	0.72	0.01	0.01
P22	14x30	0.60	0.00	0.84	0.01	0.01
P24	14x40	0.40	0.00	0.56	0.00	0.00
P25	14x30	0.62	0.00	0.86	0.01	0.01
P26	14x40	0.61	0.00	0.85	0.01	0.01
P27	14x40	0.57	0.00	0.79	0.01	0.01
P28	14x40	7.41	0.00	9.29	0.08	0.06
P29	14x40	6.47	0.00	8.22	0.07	0.05
P30	14x40	4.21	0.00	5.47	0.05	0.04
P31	14x40	6.09	0.00	7.99	0.07	0.06
P33	14x40	0.74	0.00	1.04	0.01	0.01
P34	14x40	0.63	0.00	0.87	0.01	0.01
P35	14x40	0.53	0.00	0.74	0.01	0.01
P36	14x40	0.67	0.00	0.93	0.01	0.01
P37	14x40	0.74	0.00	1.04	0.01	0.01
P38	14x40	0.61	0.00	0.83	0.01	0.01
P39	14x40	2.86	0.00	3.74	0.03	0.03
P40	14x40	4.97	0.00	6.36	0.05	0.04
P41	14x40	3.96	0.00	5.15	0.04	0.04
P42	14x40	4.06	0.00	5.26	0.04	0.04
P43	14x40	3.76	0.00	4.93	0.04	0.04
P44	14x40	1.25	0.00	1.73	0.01	0.01
P45	14x40	0.57	0.00	0.79	0.01	0.01
P46	14x40	0.46	0.00	0.65	0.01	0.00
P47	14x40	0.64	0.00	0.86	0.01	0.01
P50	14x40	0.59	0.00	0.80	0.01	0.01
P51	14x40	0.52	0.00	0.72	0.01	0.01

P52	14x40	0.50	0.00	0.70	0.01	0.01
P54	14x40	0.00	-1.89	0.00	0.00	0.00
P55	14x40	0.00	-1.21	0.00	0.00	0.00
P56	14x40	0.61	0.00	0.85	0.01	0.01
P57	14x40	0.47	0.00	0.65	0.01	0.00
P58	14x40	0.36	0.00	0.50	0.00	0.00

Vigas do pavimento RESERVATÓRIO

Viga	Vãos			Nós			Avisos
	Md (tf.m)	As	Als	Md (tf.m)	As	Als	
VR1	0.12 0.07 0.48 0.01	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.34 -0.28 -0.27 -0.64	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR2	0.01 0.06 0.05 0.05 0.03	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.05 -0.07 -0.15 -0.15 -0.06 -0.05	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR3	0.13	2 ø 8.0		-0.20 -0.31	2 ø 8.0 2 ø 8.0		
VR4	0.15	2 ø 8.0		-0.36 -0.19	2 ø 8.0 2 ø 8.0		
VR5	0.33	2 ø 8.0		-0.25 -0.03	2 ø 8.0 2 ø 8.0		
VR6	0.12	2 ø 8.0		-0.19 0.00	2 ø 8.0 2 ø 8.0		
VR7	0.07 0.06 0.07	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.03 -0.17 -0.16 -0.09	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR8	0.09	2 ø 8.0	2 ø 8.0	-0.10 -0.01	2 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VR9	0.12 0.05 0.09	2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.21 -0.18 -0.04	2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	
VR10	0.05 0.06 0.05 0.05 0.07 0.04	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.12 -0.09 -0.17 -0.12 -0.19 -0.09 -0.20	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR11	5.97 0.18 1.11 0.01	6 ø 8.0 3 ø 8.0 3 ø 8.0 3 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0	-2.99 -1.64 -5.80 -1.34 -2.27	4 ø 8.0 3 ø 8.0 4 ø 10.0 3 ø 8.0 3 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	
VR12	0.00	3 ø 8.0					
VR13	0.00	2 ø 8.0		-0.19	2 ø 8.0		
VR14	0.00	3 ø 8.0					
VR15	0.10 0.36 0.34 0.35 0.42	3 ø 8.0 3 ø 8.0 2 ø 10.0 2 ø 10.0 3 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	-0.06 -0.06 -0.40 -0.91 -1.06 -0.45	3 ø 8.0 3 ø 8.0 3 ø 8.0 3 ø 8.0 2 ø 10.0 2 ø 10.0	2 ø 8.0 2 ø 8.0 2 ø 8.0 3 ø 8.0	
VR16	0.08	2 ø 8.0		-0.26 -0.18	2 ø 8.0 2 ø 8.0		
VR17	0.09	2 ø 8.0		-0.13 -0.31	2 ø 8.0 2 ø 8.0		
VR18	1.18	3 ø 8.0		-1.94 -2.74	3 ø 8.0 3 ø 8.0		
VR19	2.66	3 ø 8.0		-1.51 -1.39	3 ø 8.0 3 ø 8.0		

VR20	0.00	3 ø 8.0					
VR21	1.62	2 ø 10.0	2 ø 8.0	-1.34 -0.37 -2.50	2 ø 10.0 2 ø 10.0 4 ø 8.0	2 ø 8.0 2 ø 8.0 2 ø 8.0	
VR22	0.80	3 ø 8.0		-0.10 -0.02	3 ø 8.0 3 ø 8.0		
VR23	0.07 0.15 0.17	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.14 -0.36 -0.36 -0.35	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR24	0.06 0.07 0.05	2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.06 -0.17 -0.18 -0.12	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VR25	0.13 0.05 0.11 0.17	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.27 -0.28 -0.25 -0.34 -0.33	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VR26	0.04 0.08 0.05	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.05 -0.19 -0.18 -0.11	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR27	0.00	2 ø 8.0		-0.05 -0.38	2 ø 8.0 2 ø 8.0		
VR28	0.14 0.19 0.08 0.16	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0	-0.38 -0.36 -0.41 -0.38 -0.31	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0	2 ø 8.0 2 ø 8.0	
VR29	0.06	2 ø 8.0		-0.01 -0.17	2 ø 8.0 2 ø 8.0		
VR30	0.09 0.07 0.14	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.22 -0.26 -0.33	2 ø 8.0 2 ø 8.0 2 ø 8.0		
VR31	0.06 0.07 0.07	2 ø 8.0 2 ø 8.0 2 ø 8.0		-0.15 -0.22 -0.21 0.00 -0.04	2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0 2 ø 8.0		

Resultados da Viga VR1

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P28	14.00			2 ø 8.0 0.63					0.01
1	481.82	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P29	40.00			2 ø 8.0 0.63					0.01
2	288.78	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P30	40.00			2 ø 8.0 0.63					0.01
3	288.77	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.03
P31	40.00			2 ø 8.0 0.63					0.05
4	138.13	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
	14.00								0.00

Resultados da Viga VR2

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	14.00			2 ø 8.0 0.63					0.00
1	153.06	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P40	40.00			2 ø 8.0 0.63					0.00
2	288.77	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P41	40.00			2 ø 8.0 0.63					0.00
3	289.23	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P42	40.00			2 ø 8.0 0.63					0.00
4	206.44	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P43	40.00			2 ø 8.0 0.63					0.00
5	194.01	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P44	40.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR3

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	40.00			2 ø 8.0 0.63					0.01
1	451.00	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P28	40.00			2 ø 8.0 0.63					0.01

Resultados da Viga VR4

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P43	14.00			2 ø 8.0 0.63					0.02
1	477.00	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P55	40.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR5

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P44	14.00			2 ø 8.0 0.63					0.01
1	503.00	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.01
VR1	14.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR6

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P19	40.00			2 ø 8.0 0.84					0.00
1	258.91	14.00 x 40.00	2 ø 8.0 0.84			ø 5.0 c/ 21			0.00
P7	30.00			2 ø 8.0 0.84					0.00

Resultados da Viga VR7

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P18	14.00			2 ø 8.0 0.63					0.00
1	253.90	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P17	14.00			2 ø 8.0 0.63					0.00
2	313.90	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P16	14.00			2 ø 8.0 0.63					0.00
3	313.91	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P7	14.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR8

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P26	40.00		2 ø 8.0 0.08	2 ø 8.0 0.63					0.00
1	248.90	14.00 x 30.00	2 ø 8.0 0.63	2 ø 8.0 0.08		ø 5.0 c/ 15			0.00
P18	40.00		2 ø 8.0 0.08	2 ø 8.0 0.63					0.00

Resultados da Viga VR9

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P26	14.00								0.00
1	253.88	14.00 x 30.00	2 ø 8.0 0.63	2 ø 8.0 0.06		ø 5.0 c/ 15			0.00
P25	14.00		2 ø 8.0 0.06	2 ø 8.0 0.63					0.01
2	313.89	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P22	14.00			2 ø 8.0 0.63					0.00
3	313.46	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P19	14.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR10

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P8	40.00			2 ø 8.0 0.63					0.00
1	269.89	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P9	40.00			2 ø 8.0 0.63					0.00
2	288.77	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P10	40.00			2 ø 8.0 0.63					0.00
3	288.78	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P11	40.00			2 ø 8.0					0.00

				0.63					
4	288.77	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P12	40.00			2 ø 8.0 0.63					0.00
5	285.83	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P13	40.00			2 ø 8.0 0.63					0.00
6	298.84	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P14	14.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR11

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P28	14.00		2 ø 8.0 0.36	4 ø 8.0 1.74					0.06
1	481.82	14.00 x 55.00	6 ø 8.0 2.88	2 ø 8.0 0.36		ø 5.0 c/ 16		2x2 ø 8.0	0.08
P29	40.00		2 ø 8.0 0.36	4 ø 10.0 3.11					0.06
2	288.78	14.00 x 55.00	3 ø 8.0 1.24	2 ø 8.0 0.36		ø 5.0 c/ 10		2x2 ø 8.0	0.00
P30	40.00		2 ø 8.0 0.36	3 ø 8.0 1.32					0.02
3	288.77	14.00 x 55.00	3 ø 8.0 1.16	2 ø 8.0 0.36		ø 5.0 c/ 16		2x2 ø 8.0	0.02
P31	40.00		2 ø 8.0 0.36	3 ø 8.0 1.39					0.07
4	138.13	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.00
	14.00								0.00

Resultados da Viga VR12

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VR19	14.00								0.00
1	799.01	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.00
VR20	14.00								0.00

Resultados da Viga VR13

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	14.00								0.00
1	74.50	14.00 x 15.00	2 ø 8.0 0.32			ø 5.0 c/ 6			0.00
VR21	14.00			2 ø 8.0 0.38					0.02

Resultados da Viga VR14

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VR19	14.00								0.00
1	799.01	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.00
VR20	14.00								0.00

Resultados da Viga VR15

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	14.00			3 ø 8.0 1.16					0.00
1	153.06	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.00
P40	40.00		2 ø 8.0 0.36	3 ø 8.0 1.32					0.00
2	288.77	14.00 x 55.00	3 ø 8.0 1.16	2 ø 8.0 0.36		ø 5.0 c/ 17		2x2 ø 8.0	0.00
P41	40.00		2 ø 8.0 0.46	3 ø 8.0 1.43					0.01
3	289.23	14.00 x 55.00	2 ø 10.0 1.46	2 ø 8.0 0.49		ø 5.0 c/ 8		2x2 ø 8.0	0.00
P42	40.00		2 ø 8.0 0.54	2 ø 10.0 1.51					0.02
4	206.44	14.00 x 55.00	2 ø 10.0 1.51	2 ø 8.0 0.54		ø 5.0 c/ 8		2x2 ø 8.0	0.00
P43	40.00		3 ø 8.0 1.35	2 ø 10.0 1.51					0.02
5	194.01	14.00 x 55.00	3 ø 8.0 1.16	2 ø 8.0 0.81		ø 5.0 c/ 25			0.02
	40.00								0.00

Resultados da Viga VR16

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P50	14.00			2 ø 8.0 0.63					0.01
1	385.03	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P46	40.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR17

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P24	40.00			2 ø 8.0 0.63					0.00
1	384.93	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P8	14.00			2 ø 8.0 0.63					0.01

Resultados da Viga VR18

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P39	40.00			3 ø 8.0 1.16					0.05
1	451.00	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.02
P28	40.00			3 ø 8.0 1.25					0.10

Resultados da Viga VR19

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P40	14.00			3 ø 8.0 1.16					0.03
1	477.00	14.00 x 55.00	3 ø 8.0 1.21			ø 5.0 c/ 25			0.09
P54	40.00			3 ø 8.0 1.16					0.03

Resultados da Viga VR20

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
VR14	14.00								0.00
1	329.02	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.00
VR13	14.00								0.00

Resultados da Viga VR21

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P43	14.00		2 ø 8.0 0.56	2 ø 10.0 1.53					0.03
1	477.00	14.00 x 55.00	2 ø 10.0 1.53	2 ø 8.0 0.56		ø 5.0 c/ 8		2x2 ø 8.0	0.04
P55	40.00		2 ø 8.0 0.53	4 ø 8.0 1.68					0.05

Resultados da Viga VR22

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P44	14.00			3 ø 8.0 1.16					0.00
1	503.01	14.00 x 55.00	3 ø 8.0 1.16			ø 5.0 c/ 25			0.01
VR11	14.00			3 ø 8.0 1.16					0.00

Resultados da Viga VR23

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P47	40.00			2 ø 8.0 0.63					0.00
1	237.10	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P45	40.00			2 ø 8.0 0.63					0.02
2	503.01	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P33	40.00			2 ø 8.0 0.63					0.02
3	534.40	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P14	40.00			2 ø 8.0 0.63					0.02

Resultados da Viga VR24

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	40.00		2 ø 8.0 0.07	2 ø 8.0 0.63					0.00
1	256.44	14.00 x 30.00	2 ø 8.0 0.63	2 ø 8.0 0.07		ø 5.0 c/ 15			0.00
P35	40.00		2 ø 8.0 0.07	2 ø 8.0 0.63					0.01
2	360.00	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P21	40.00			2 ø 8.0 0.63					0.00
3	257.29	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P15	40.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR25

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P15	14.58			2 ø 8.0 0.63					0.01
1	462.42	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P4	40.00		2 ø 8.0 0.10	2 ø 8.0 0.63					0.01
2	168.99	14.00 x 30.00	2 ø 8.0 0.63	2 ø 8.0 0.10		ø 5.0 c/ 15			0.00
P3	40.00		2 ø 8.0 0.10	2 ø 8.0 0.63					0.01
3	424.93	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P2	40.00			2 ø 8.0 0.63					0.02
4	522.59	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P1	14.00			2 ø 8.0 0.63					0.01

Resultados da Viga VR26

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P27	40.00			2 ø 8.0 0.63					0.00
1	192.50	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P20	40.00			2 ø 8.0 0.63					0.01
2	377.61	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P5	40.00			2 ø 8.0 0.63					0.00
3	267.22	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P1	40.00			2 ø 8.0 0.63					0.00

Resultados da Viga VR27

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	14.62			2 ø 8.0 0.63					0.00
1	228.35	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
VR11	19.80			2 ø 8.0 0.63					0.02

Resultados da Viga VR28

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P38	14.54			2 ø 8.0 0.63					0.02
1	497.84	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P37	40.00			2 ø 8.0 0.63					0.02
2	555.34	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P36	40.00		2 ø 8.0 0.12	2 ø 8.0 0.63					0.03
3	287.47	14.00 x 30.00	2 ø 8.0 0.63	2 ø 8.0 0.12		ø 5.0 c/ 15			0.00
P34	40.00		2 ø 8.0 0.12	2 ø 8.0 0.63					0.02
4	522.59	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P27	14.00			2 ø 8.0 0.63					0.01

Resultados da Viga VR29

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P46	14.62			2 ø 8.0 0.63					0.00
1	228.35	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
VR15	19.80			2 ø 8.0 0.63					0.00

Resultados da Viga VR30

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
	40.00								0.00
1	216.62	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P57	40.00			2 ø 8.0 0.63					0.01
2	217.20	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P56	40.00			2 ø 8.0 0.63					0.01
3	481.37	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P47	14.58			2 ø 8.0 0.63					0.01

Resultados da Viga VR31

fck = 300.00 kgf/cm²	Ecs = 268384 kgf/cm²
Cobrimento = 2.50 cm	Peso específico = 2500.00 kgf/m³

Dados			Resultados						
Pilar Trecho	**Apoio 1 e 1o (cm)**	**Seção (cm)**	**As Inf (cm²)**	**As Sup (cm²)**	**As esq trecho (cm²)**	**Asw min (cm²)**	**As dir trecho (cm²)**	**Asw Pele (cm²)**	**Fissura (mm)**
P50	40.00			2 ø 8.0 0.63					0.00
1	269.88	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P51	40.00			2 ø 8.0 0.63					0.01
2	288.78	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P52	40.00			2 ø 8.0 0.63					0.01
3	288.77	14.00 x 30.00	2 ø 8.0 0.63			ø 5.0 c/ 15			0.00
P58	40.00			2 ø 8.0 0.63					0.00

Resultados da Laje

RESERVATÓRIO	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 2.00 cm	

Nome	Espessura (cm)	Carga (tf/m²)	Mdx (tf.m/m)	Mdy (tf.m/m)	Asx	Asy
L1	15	0.76	0.38	0.40	As = 1.51 cm²/m (ø6.3 c/20 - 1.56 cm²/m)	As = 1.51 cm²/m (ø6.3 c/20 - 1.56 cm²/m)
L2	15	0.76	0.18	0.43	As = 1.51 cm²/m (ø6.3 c/20 - 1.56 cm²/m)	As = 1.69 cm²/m (ø6.3 c/18 - 1.73 cm²/m)
L3	15	0.76	0.64	0.37	As = 1.51 cm²/m (ø6.3 c/20 - 1.56 cm²/m)	As = 1.64 cm²/m (ø6.3 c/19 - 1.64 cm²/m)

ARMADURA NEGATIVA							
Dados				Resultados			
Viga	Trecho	Laje 1	Laje 2	Reação 1 (tf/m)	Reação 2 (tf/m)	Md (tf.m/m)	As (cm²)
VR19	1	L1	L3	1.18	1.29	-0.76	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR19	3	L1	L2	1.45	1.88	-1.34	As = 3.11 cm²/m (ø10.0 c/20 - 3.93 cm²/m)
VR11	5	L2		0.47		-0.54	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR11	4	L2		0.67		-0.51	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR11	3	L2		0.32		-0.51	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR13	1	L2	L3	-0.41	0.60	0.00	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR21	2	L2		1.49		-0.77	As = 2.25 cm²/m (ø8.0 c/20 - 2.51 cm²/m)
VR21	1	L3		0.54		-0.15	As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)
VR15	3	L3		0.30		-1.37	As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m)
VR15	4	L3		0.54		-0.97	As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m)
VR15	5	L3		0.85		-1.22	As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m)

Cálculos das Lajes

RESERVATÓRIO	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 2.00 cm	

ARMADURAS POSITIVAS (LAJE)												
Laje	**Direção**	**Momento positivo**				**Momento negativo**				**Armadura inferior**	**Armadura superior**	**Cisalhamento**
		Seção	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**	**Seção**	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**			
L1	X	bw = 100.0 cm h = 15.0 cm	Md = 0.76 tf.m/m As = 1.39 cm²/m A's = 0.00 cm²/m	Fd = 3.61 tf Situação: GE As = 0.20 cm²/m A's = 0.00 cm²/m	Fd = 0.42 tf Situação: GE As = 0.74 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 1.51 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.27 tf.m/m F = 0.25 tf fiss = 0.02 mm		vsd = 1.78 tf/m vrd1 = 8.45 tf/m Modelo I vrd2 = 62.04 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 15.0 cm	Md = 0.76 tf.m/m As = 1.47 cm²/m A's = 0.00 cm²/m	Fd = 2.03 tf Situação: GE As = 0.49 cm²/m A's = 0.00 cm²/m	Fd = 0.93 tf Situação: GE As = 0.91 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 1.51 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.29 tf.m/m F = 0.56 tf fiss = 0.04 mm		vsd = 0.82 tf/m vrd1 = 8.08 tf/m vrd2 = 58.83 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L2	X	bw = 100.0 cm h = 15.0 cm	Md = 0.76 tf.m/m As = 1.39 cm²/m A's = 0.00 cm²/m		Fd = 0.04 tf Situação: GE As = 0.40 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 1.51 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.16 tf.m/m F = 0.02 tf fiss = 0.01 mm		vsd = 2.74 tf/m vrd1 = 8.45 tf/m Modelo I vrd2 = 62.04 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 15.0 cm	Md = 0.76 tf.m/m As = 1.47 cm²/m A's = 0.00 cm²/m		Fd = 4.91 tf Situação: GE As = 1.69 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm	Md = 1.60 tf.m/m As = 3.04 cm²/m A's = 0.00 cm²/m	Fd = 7.11 tf Situação: GE As = 2.10 cm²/m A's = 0.00 cm²/m	Fd = 4.91 tf Situação: GE As = 3.69 cm²/m A's = 0.00 cm²/m	As = 1.69 cm²/m ø6.3 c/18 (1.73 cm²/m) M = 0.38 tf.m/m F = 2.98 tf fiss = 0.08 mm		vsd = 6.86 tf/m vrd1 = 8.12 tf/m vrd2 = 58.83 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L3	X	bw = 100.0 cm h = 15.0 cm	Md = 0.77 tf.m/m As = 1.41 cm²/m A's = 0.00 cm²/m	Fd = 4.57 tf Situação: GE As = 0.81 cm²/m A's = 0.00 cm²/m	Fd = 0.56 tf Situação: GE As = 1.49 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm	Md = 1.64 tf.m/m As = 3.09 cm²/m A's = 0.00 cm²/m	Fd = 4.57 tf Situação: GE As = 2.49 cm²/m A's = 0.00 cm²/m	Fd = 0.56 tf Situação: GE As = 3.16 cm²/m A's = 0.00 cm²/m	As = 1.51 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 0.56 tf.m/m F = 0.35 tf fiss = 0.10 mm		vsd = 3.94 tf/m vrd1 = 8.45 tf/m Modelo I vrd2 = 62.04 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm	Md = 0.76 tf.m/m	Fd = 3.48 tf Situação: GE As = 0.35 cm²/m	Fd = 5.58 tf Situação: GE	bw = 100.0 cm	Md = 0.92 tf.m/m	Fd = 3.48 tf Situação: GE As = 1.32 cm²/m	Fd = 5.58 tf Situação: GE	As = 1.64 cm²/m ø6.3 c/19		vsd = 2.95 tf/m vrd1 = 8.10 tf/m

		h = 15.0 cm	As = 1.47 cm²/m A's = 0.00 cm²/m	A's = 0.00 cm²/m	As = 1.64 cm²/m A's = 0.00 cm²/m	h = 15.0 cm	As = 1.82 cm²/m A's = 0.00 cm²/m	A's = 0.00 cm²/m	As = 2.62 cm²/m A's = 0.00 cm²/m	(1.64 cm²/m) M = 0.32 tf.m/m F = 3.39 tf fiss = 0.08 mm		vrd2 = 58.83 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m

ARMADURAS NEGATIVAS (NA CONTINUIDADE)										
Viga Trecho	Laje 1 Laje 2	Momento negativo				Momento positivo				Armaduras finais
		Seção	Flexão	Flexo compressão	Flexo tração	Seção	Flexão	Flexo compressão	Flexo tração	
VR19 1	L1 L3	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m A's = 0.00 cm²/m	Fd = 3.48 tf Situação: GE As = 1.23 cm²/m A's = 0.00 cm²/m	Fd = 0.45 tf Situação: GE As = 1.75 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.06 mm
VR19 3	L1 L2	bw = 100.0 cm h = 15.0 cm	Md = 1.60 tf.m/m As = 3.04 cm²/m A's = 0.00 cm²/m	Fd = 7.11 tf Situação: GE As = 2.10 cm²/m A's = 0.00 cm²/m	Fd = 0.56 tf Situação: GE As = 3.11 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 3.11 cm²/m (ø10.0 c/20 - 3.93 cm²/m) fiss = 0.11 mm
VR11 5	L2	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m A's = 0.00 cm²/m	Fd = 0.70 tf Situação: GE As = 1.08 cm²/m A's = 0.00 cm²/m	Fd = 0.03 tf Situação: GE As = 1.18 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.03 mm
VR11 4	L2	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m A's = 0.00 cm²/m	Fd = 0.70 tf Situação: GE As = 1.08 cm²/m A's = 0.00 cm²/m	Fd = 0.03 tf Situação: GE As = 1.18 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.03 mm
VR11 3	L2	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m A's = 0.00 cm²/m	Fd = 0.70 tf Situação: GE As = 1.08 cm²/m A's = 0.00 cm²/m	Fd = 0.03 tf Situação: GE As = 1.18 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.03 mm
VR13 1	L2 L3	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m) fiss = 0.00 mm
VR21 2	L2	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.10 cm²/m A's = 0.00 cm²/m	Fd = 0.21 tf Situação: GE As = 1.68 cm²/m A's = 0.00 cm²/m	Fd = 0.45 tf Situação: GE As = 1.77 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø8.0 c/20 - 2.51 cm²/m) fiss = 0.07 mm
VR21 1	L3	bw = 100.0 cm h = 15.0 cm	Md = 1.13 tf.m/m As = 2.09 cm²/m	Fd = 0.32 tf Situação: GE As = 0.29 cm²/m	Fd = 0.04 tf Situação: GE As = 0.34 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm				As = 2.25 cm²/m (ø6.3 c/13 - 2.40 cm²/m)

			A's = 0.00 cm²/m	A's = 0.00 cm²/m						fiss = 0.00 mm
VR15 3	L3	bw = 100.0 cm h = 15.0 cm	Md = 1.64 tf.m/m As = 3.07 cm²/m A's = 0.00 cm²/m	Fd = 2.23 tf Situação: GE As = 2.78 cm²/m A's = 0.00 cm²/m		bw = 100.0 cm h = 15.0 cm				As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m) fiss = 0.11 mm
VR15 4	L3	bw = 100.0 cm h = 15.0 cm	Md = 1.64 tf.m/m As = 3.07 cm²/m A's = 0.00 cm²/m	Fd = 2.23 tf Situação: GE As = 2.78 cm²/m A's = 0.00 cm²/m		bw = 100.0 cm h = 15.0 cm				As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m) fiss = 0.11 mm
VR15 5	L3	bw = 100.0 cm h = 15.0 cm	Md = 1.64 tf.m/m As = 3.07 cm²/m A's = 0.00 cm²/m	Fd = 2.23 tf Situação: GE As = 2.78 cm²/m A's = 0.00 cm²/m		bw = 100.0 cm h = 15.0 cm				As = 3.07 cm²/m (ø6.3 c/10 - 3.12 cm²/m) fiss = 0.11 mm

MARCO AURELIO SACENTI:04158791910

Assinado de forma digital por MARCO AURELIO SACENTI:04158791910
Dados: 2026.11.10 14:23:56 -03'00'

MARCO AURÉLIO SACENTI

CREA/SC 082270-7

GUSTAVO JOSE DE ABREU:04958573941

Assinado de forma digital por GUSTAVO JOSE DE ABREU:04958573941
Dados: 2026.11.17 16:29:29 -03'00'

PREFEITURA MUNICIPAL DE SANTO AMARO DA IMPERATRIZ

CNPJ: 82.892.324/0001-46