MEMÓRIA DE CÁLCULO – ESTRUTURA DE CONCRETO ARMADO E FUNDAÇÕES

CEM QUADRA 04 AE 02 - ESTRUTURAL

(QUADRA DE ESPORTES)

Autor do Projeto: Eng. Civil Dalmo Blanco Cinnanti

CREA: 7962/D-DF

Critérios de projeto

Memorial de cálculo

R00	30/12/2022	Versão inicial	DALMO CINNANTI
REVISÃO	DATA	DESCRIÇÃO	RESPONSÁVEL
Nome do projeto		*MEMÓRIA DE CÁLCULO – ESTRUTURA DE CONCRETO ARMADO – CEM QD 04 ESTRUTURAL*	
Número do projeto		*314-SEEDF-CEM-ESTRUTURAL QD. 04 - MEM-QUADRA DE ESPORTES-EST-R01*	
Local		**Quadra 04 AE 02 - RA XXV - SCIA / ESTRUTURAL - Vila Estrutural - DF**	

SUMÁRIO

1. RESUMO DE RESULTADOS

a) Cargas verticais:

Peso próprio = 360.13 tf

Adicional = 250.45 tf

Acidental = 290.19 tf

Desaprumo X+ = 0.00 tf

Desaprumo X- = 0.00 tf

Desaprumo Y+ = 0.00 tf

Desaprumo Y- = 0.00 tf

Total = 900.77 tf

Área aproximada = 621.21 m²

Relação = 1450.03 kgf/m²

b) Deslocamento horizontal:

X+ = 0.00 cm (limite 0.43)

X- = 0.00 cm (limite 0.43)

Y+ = 0.00 cm (limite 0.43)

Y- = 0.00 cm (limite 0.43)

c) Verificação de estabilidade (Gama-Z):

Gama-Z tende ao infinito (estrutura instável)

d) Análise de 2ª ordem:

Processo P-Delta

Deslocamentos no topo da edificação:

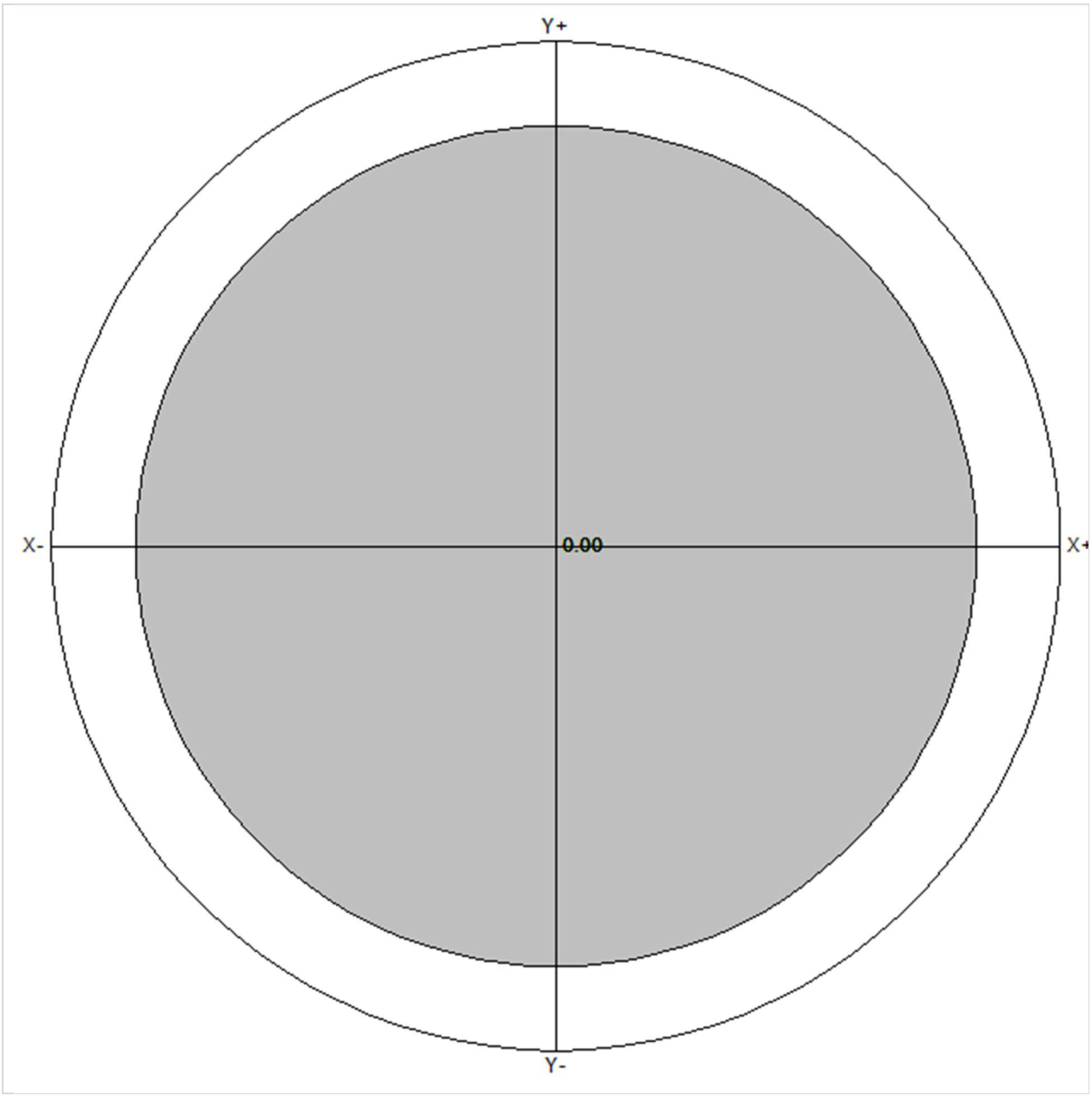
Desaprumo X+: 0.08 »» 0.08 (+6.74%)

Desaprumo X-: 0.08 »» 0.08 (+6.74%)

Desaprumo Y+: 0.02 »» 0.02 (+1.71%)

Desaprumo Y-: 0.02 »» 0.02 (+1.71%)

2. Deslocamentos Horizontais Devido à Ação do Vento



Verificações	X+	X-	Y+	Y-
Altura total da edificação (cm)	733.00			
Deslocamento limite (cm)	0.43			
Deslocamento característico (cm)	0.00	0.00	0.00	0.00
gf2	0.30	0.30	0.30	0.30
Deslocamento combinações frequentes (cm)	0.00	0.00	0.00	0.00

Pavimento	Altura (cm)	Deslocamento combinações frequentes (cm)				Diferença (cm)				Limite (cm)
		X+	X-	Y+	Y-	X+	X-	Y+	Y-	
COBERTURA NV 620	320.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
TÉRREO NV 300	305.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
QUADRA-NV 000	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
FUNDAÇÕES NV--60	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07

3. Relatório de Esforços nas Fundações por Elementos

Fundação B2						
Combinação	N (tf)	Mx (kgf.m)	My (kgf.m)	Vx (tf)	Vy (tf)	Mt (kgf/m)
Peso próprio (G1)	3.26	199.92	7.02	0.00	0.48	0.48
Adicional (G2)	9.02	-4384.14	2203.37	-0.55	1.15	868.17
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.24	124.03	2.48	0.00	0.17	-0.08
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.02	0.32	0.00	0.00	0.12
Vento X- (V2)	0.00	0.02	-0.32	0.00	0.00	-0.12
Vento Y+ (V3)	0.00	-1.43	-0.01	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.43	0.01	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-3.55	81.24	0.00	0.01	30.22
Desaprumo X- (D2)	0.00	3.55	-81.24	0.00	-0.01	-30.22
Desaprumo Y+ (D3)	0.05	-130.99	-1.05	0.00	0.00	-0.45
Desaprumo Y- (D4)	-0.05	130.99	1.05	0.00	0.00	0.45
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	12.45	-4100.96	2293.56	-0.55	1.76	898.90
G1+G2+0.7Q+0.6V2+D2	12.44	-4093.85	2130.69	-0.55	1.74	838.30
G1+G2+0.7Q+0.6V3+D3	12.50	-4229.25	2211.07	-0.55	1.75	868.14
G1+G2+0.7Q+0.6V4+D4	12.40	-3965.55	2213.18	-0.55	1.76	869.05
G1+G2+0.7Q+V1+0.6D1	12.45	-4099.55	2261.19	-0.55	1.76	886.86
G1+G2+0.7Q+V2+0.6D2	12.44	-4095.26	2163.05	-0.55	1.74	850.34
G1+G2+0.7Q+V3+0.6D3	12.48	-4177.43	2211.49	-0.55	1.75	868.32
G1+G2+0.7Q+V4+0.6D4	12.42	-4017.38	2212.76	-0.55	1.75	868.87
G1+G2+D1	12.29	-4187.77	2291.63	-0.56	1.64	898.88
G1+G2+D2	12.28	-4180.68	2129.14	-0.55	1.62	838.43
G1+G2+D3	12.33	-4315.21	2209.33	-0.55	1.63	868.20
G1+G2+D4	12.23	-4053.23	2211.44	-0.55	1.64	869.11
G1+G2+Q+0.6V1+0.6D1	12.52	-4062.33	2261.81	-0.55	1.81	886.78
G1+G2+Q+0.6V2+0.6D2	12.52	-4058.06	2163.93	-0.55	1.79	850.37
G1+G2+Q+0.6V3+0.6D3	12.55	-4139.65	2212.23	-0.55	1.80	868.30
G1+G2+Q+0.6V4+0.6D4	12.49	-3980.74	2213.50	-0.55	1.80	868.85
G1+G2+Q+D1	12.52	-4063.74	2294.11	-0.55	1.81	898.80
G1+G2+Q+D2	12.51	-4056.65	2131.63	-0.55	1.79	838.35
G1+G2+Q+D3	12.57	-4191.18	2211.82	-0.55	1.80	868.12
G1+G2+Q+D4	12.47	-3929.20	2213.92	-0.55	1.81	869.03

Fundação B3						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.43	272.52	1.18	0.00	0.60	1.24
Adicional (G2)	8.83	-4771.19	2230.66	-0.48	-0.19	857.13
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.29	150.84	0.60	0.00	0.20	0.25
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.02	0.33	0.00	0.00	0.12
Vento X- (V2)	0.00	0.02	-0.33	0.00	0.00	-0.12
Vento Y+ (V3)	0.00	-1.53	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.53	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-3.53	81.50	0.00	0.01	29.60
Desaprumo X- (D2)	0.00	3.53	-81.50	0.00	-0.01	-29.60
Desaprumo Y+ (D3)	0.04	-144.16	-0.27	0.00	0.00	-0.10
Desaprumo Y- (D4)	-0.04	144.16	0.27	0.00	0.00	0.10
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	12.47	-4396.62	2313.96	-0.49	0.56	888.21
G1+G2+0.7Q+0.6V2+D2	12.47	-4389.55	2150.56	-0.48	0.55	828.87
G1+G2+0.7Q+0.6V3+D3	12.51	-4538.16	2231.99	-0.49	0.56	858.45
G1+G2+0.7Q+0.6V4+D4	12.42	-4248.01	2232.53	-0.49	0.55	858.64
G1+G2+0.7Q+V1+0.6D1	12.47	-4395.21	2281.48	-0.49	0.56	876.42
G1+G2+0.7Q+V2+0.6D2	12.47	-4390.95	2183.03	-0.48	0.55	840.67
G1+G2+0.7Q+V3+0.6D3	12.49	-4481.11	2232.10	-0.49	0.55	858.49
G1+G2+0.7Q+V4+0.6D4	12.44	-4305.06	2232.42	-0.49	0.55	858.60
G1+G2+D1	12.27	-4502.20	2313.34	-0.49	0.42	887.96
G1+G2+D2	12.27	-4495.14	2150.34	-0.48	0.40	828.77
G1+G2+D3	12.31	-4642.83	2231.57	-0.49	0.41	858.27
G1+G2+D4	12.22	-4354.51	2232.11	-0.49	0.41	858.46
G1+G2+Q+0.6V1+0.6D1	12.55	-4349.96	2281.54	-0.49	0.62	876.45
G1+G2+Q+0.6V2+0.6D2	12.55	-4345.71	2183.34	-0.48	0.61	840.79
G1+G2+Q+0.6V3+0.6D3	12.58	-4435.25	2232.28	-0.49	0.62	858.56
G1+G2+Q+0.6V4+0.6D4	12.53	-4260.42	2232.60	-0.49	0.61	858.68
G1+G2+Q+D1	12.55	-4351.36	2313.94	-0.49	0.62	888.22
G1+G2+Q+D2	12.55	-4344.31	2150.94	-0.48	0.61	829.02
G1+G2+Q+D3	12.59	-4491.99	2232.17	-0.49	0.62	858.52
G1+G2+Q+D4	12.51	-4203.67	2232.71	-0.49	0.61	858.72

Fundação B4						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.43	265.36	-0.03	0.00	0.61	2.56
Adicional (G2)	8.85	-4775.55	2239.56	-0.47	-0.18	852.77
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.29	148.04	0.09	0.00	0.21	0.77
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.33	0.00	0.00	0.12
Vento X- (V2)	0.00	0.01	-0.33	0.00	0.00	-0.12
Vento Y+ (V3)	0.00	-1.53	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.53	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-3.11	81.59	0.00	0.01	29.63
Desaprumo X- (D2)	0.00	3.11	-81.59	0.00	-0.01	-29.63
Desaprumo Y+ (D3)	0.04	-145.17	-0.09	0.00	0.00	-0.28

Desaprumo Y- (D4)	-0.04	145.17	0.09	0.00	0.00	0.28
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	12.48	-4409.68	2321.38	-0.48	0.59	885.56
G1+G2+0.7Q+0.6V2+D2	12.48	-4403.45	2157.80	-0.47	0.58	826.16
G1+G2+0.7Q+0.6V3+D3	12.52	-4552.65	2239.50	-0.48	0.59	855.59
G1+G2+0.7Q+0.6V4+D4	12.44	-4260.48	2239.67	-0.48	0.58	856.14
G1+G2+0.7Q+V1+0.6D1	12.48	-4408.44	2288.87	-0.48	0.59	873.76
G1+G2+0.7Q+V2+0.6D2	12.48	-4404.68	2190.31	-0.48	0.58	837.97
G1+G2+0.7Q+V3+0.6D3	12.51	-4495.19	2239.54	-0.48	0.59	855.69
G1+G2+0.7Q+V4+0.6D4	12.46	-4317.93	2239.64	-0.48	0.58	856.03
G1+G2+D1	12.28	-4513.30	2321.12	-0.48	0.44	884.95
G1+G2+D2	12.28	-4507.08	2157.93	-0.47	0.43	825.70
G1+G2+D3	12.32	-4655.36	2239.44	-0.47	0.44	855.05
G1+G2+D4	12.24	-4365.02	2239.61	-0.48	0.43	855.60
G1+G2+Q+0.6V1+0.6D1	12.57	-4364.02	2288.77	-0.48	0.65	873.94
G1+G2+Q+0.6V2+0.6D2	12.57	-4360.28	2190.46	-0.48	0.64	838.24
G1+G2+Q+0.6V3+0.6D3	12.59	-4450.17	2239.57	-0.48	0.65	855.93
G1+G2+Q+0.6V4+0.6D4	12.54	-4274.13	2239.67	-0.48	0.64	856.26
G1+G2+Q+D1	12.57	-4365.26	2321.21	-0.48	0.65	885.72
G1+G2+Q+D2	12.57	-4359.04	2158.02	-0.48	0.64	826.47
G1+G2+Q+D3	12.61	-4507.32	2239.53	-0.48	0.65	855.82
G1+G2+Q+D4	12.53	-4216.98	2239.70	-0.48	0.64	856.37

Fundação B5						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.41	242.78	-3.43	-0.01	0.62	3.25
Adicional (G2)	8.73	-4586.58	2252.98	-0.46	0.96	854.31
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.28	136.74	-0.83	0.00	0.22	1.20
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.33	0.00	0.00	0.12
Vento X- (V2)	0.00	0.01	-0.33	0.00	0.00	-0.12
Vento Y+ (V3)	0.00	-1.46	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.46	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-3.68	81.58	0.00	0.01	29.78
Desaprumo X- (D2)	0.00	3.68	-81.58	0.00	-0.01	-29.78
Desaprumo Y+ (D3)	0.04	-138.17	0.22	0.00	-0.01	-0.44
Desaprumo Y- (D4)	-0.04	138.17	-0.22	0.00	0.01	0.44
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	12.34	-4251.77	2330.76	-0.47	1.74	888.26
G1+G2+0.7Q+0.6V2+D2	12.34	-4244.38	2167.20	-0.47	1.72	828.55
G1+G2+0.7Q+0.6V3+D3	12.38	-4387.12	2249.20	-0.47	1.72	857.95
G1+G2+0.7Q+0.6V4+D4	12.29	-4109.02	2248.75	-0.47	1.74	858.85
G1+G2+0.7Q+V1+0.6D1	12.34	-4250.30	2298.25	-0.47	1.74	876.39
G1+G2+0.7Q+V2+0.6D2	12.34	-4245.85	2199.70	-0.47	1.73	840.41
G1+G2+0.7Q+V3+0.6D3	12.36	-4332.44	2249.11	-0.47	1.73	858.13
G1+G2+0.7Q+V4+0.6D4	12.31	-4163.71	2248.84	-0.47	1.74	858.67
G1+G2+D1	12.14	-4347.48	2331.14	-0.47	1.59	887.34
G1+G2+D2	12.14	-4340.11	2167.97	-0.46	1.57	827.78
G1+G2+D3	12.18	-4481.97	2249.78	-0.47	1.57	857.11
G1+G2+D4	12.10	-4205.62	2249.34	-0.47	1.59	858.00

G1+G2+Q+0.6V1+0.6D1	12.42	-4209.27	2297.87	-0.47	1.80	876.70
G1+G2+Q+0.6V2+0.6D2	12.42	-4204.83	2199.58	-0.47	1.79	840.82
G1+G2+Q+0.6V3+0.6D3	12.45	-4290.83	2248.86	-0.47	1.79	858.49
G1+G2+Q+0.6V4+0.6D4	12.39	-4123.27	2248.59	-0.47	1.80	859.03
G1+G2+Q+D1	12.42	-4210.73	2330.31	-0.47	1.80	888.54
G1+G2+Q+D2	12.42	-4203.37	2167.14	-0.47	1.79	828.98
G1+G2+Q+D3	12.46	-4345.22	2248.95	-0.47	1.79	858.32
G1+G2+Q+D4	12.38	-4068.88	2248.51	-0.47	1.80	859.21

Fundação B6						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.44	147.18	-166.74	-0.60	-0.08	77.91
Adicional (G2)	8.22	-2235.20	893.54	0.15	-1.83	-90.82
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.19	41.86	-5.34	-0.04	-0.01	7.57
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.17	0.18	0.00	0.00	0.04
Vento X- (V2)	0.00	-0.17	-0.18	0.00	0.00	-0.04
Vento Y+ (V3)	0.00	-1.08	-0.06	0.00	0.00	-0.10
Vento Y- (V4)	0.00	1.08	0.06	0.00	0.00	0.10
Desaprumo X+ (D1)	-0.01	40.31	42.81	0.02	-0.04	9.11
Desaprumo X- (D2)	0.01	-40.31	-42.81	-0.02	0.04	-9.11
Desaprumo Y+ (D3)	0.05	-96.34	-6.16	-0.01	-0.05	-10.08
Desaprumo Y- (D4)	-0.05	96.34	6.16	0.01	0.05	10.08
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	11.79	-2018.31	765.98	-0.46	-1.96	1.52
G1+G2+0.7Q+0.6V2+D2	11.81	-2099.13	680.15	-0.51	-1.88	-16.74
G1+G2+0.7Q+0.6V3+D3	11.84	-2155.71	716.87	-0.49	-1.97	-17.75
G1+G2+0.7Q+0.6V4+D4	11.75	-1961.73	729.26	-0.48	-1.87	2.54
G1+G2+0.7Q+V1+0.6D1	11.79	-2034.37	748.93	-0.47	-1.95	-2.11
G1+G2+0.7Q+V2+0.6D2	11.80	-2083.07	697.20	-0.50	-1.90	-13.11
G1+G2+0.7Q+V3+0.6D3	11.82	-2117.61	719.31	-0.49	-1.95	-13.76
G1+G2+0.7Q+V4+0.6D4	11.77	-1999.83	726.82	-0.48	-1.89	-1.45
G1+G2+D1	11.65	-2047.71	769.61	-0.43	-1.96	-3.79
G1+G2+D2	11.67	-2128.33	684.00	-0.48	-1.88	-22.02
G1+G2+D3	11.71	-2184.36	720.64	-0.46	-1.97	-22.99
G1+G2+D4	11.62	-1991.68	732.96	-0.45	-1.86	-2.82
G1+G2+Q+0.6V1+0.6D1	11.85	-2021.88	747.25	-0.48	-1.95	0.15
G1+G2+Q+0.6V2+0.6D2	11.86	-2070.45	695.67	-0.51	-1.90	-10.82
G1+G2+Q+0.6V3+0.6D3	11.88	-2104.62	717.73	-0.50	-1.96	-11.45
G1+G2+Q+0.6V4+0.6D4	11.82	-1987.71	725.20	-0.49	-1.89	0.78
G1+G2+Q+D1	11.84	-2005.85	764.27	-0.47	-1.96	3.77
G1+G2+Q+D2	11.86	-2086.48	678.66	-0.52	-1.88	-14.45
G1+G2+Q+D3	11.90	-2142.50	715.31	-0.50	-1.98	-15.42
G1+G2+Q+D4	11.80	-1949.82	727.62	-0.49	-1.87	4.75

Fundação B8						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.86	-5.32	188.10	0.03	0.26	17.76
Adicional (G2)	2.21	-134.92	580.81	-0.93	1.39	61.15
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.26	-3.57	-34.81	0.11	0.07	5.41
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.31	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.31	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.11	0.02	0.00	0.00	0.02
Vento Y- (V4)	0.00	0.11	-0.02	0.00	0.00	-0.02
Desaprumo X+ (D1)	-0.02	0.66	46.95	0.09	0.00	0.63
Desaprumo X- (D2)	0.02	-0.66	-46.95	-0.09	0.00	-0.63
Desaprumo Y+ (D3)	0.04	-8.17	-3.89	0.00	0.06	1.13
Desaprumo Y- (D4)	-0.04	8.17	3.89	0.00	-0.06	-1.13
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	5.24	-142.08	791.68	-0.73	1.70	83.32
G1+G2+0.7Q+0.6V2+D2	5.29	-143.40	697.42	-0.90	1.70	82.06
G1+G2+0.7Q+0.6V3+D3	5.30	-150.98	740.66	-0.82	1.76	83.83
G1+G2+0.7Q+0.6V4+D4	5.22	-134.51	748.43	-0.81	1.63	81.54
G1+G2+0.7Q+V1+0.6D1	5.25	-142.35	773.02	-0.76	1.70	83.07
G1+G2+0.7Q+V2+0.6D2	5.28	-143.14	716.07	-0.87	1.70	82.31
G1+G2+0.7Q+V3+0.6D3	5.29	-147.75	742.23	-0.82	1.74	83.39
G1+G2+0.7Q+V4+0.6D4	5.24	-137.73	746.87	-0.81	1.66	81.99
G1+G2+D1	5.05	-139.59	815.86	-0.81	1.65	79.54
G1+G2+D2	5.10	-140.91	721.97	-0.98	1.65	78.27
G1+G2+D3	5.12	-148.42	765.02	-0.90	1.71	80.04
G1+G2+D4	5.04	-132.07	772.81	-0.89	1.59	77.78
G1+G2+Q+0.6V1+0.6D1	5.33	-143.42	762.45	-0.73	1.72	84.69
G1+G2+Q+0.6V2+0.6D2	5.36	-144.21	705.75	-0.83	1.72	83.93
G1+G2+Q+0.6V3+0.6D3	5.37	-148.78	731.78	-0.78	1.76	85.00
G1+G2+Q+0.6V4+0.6D4	5.32	-138.85	736.43	-0.78	1.68	83.62
G1+G2+Q+D1	5.32	-143.15	781.05	-0.70	1.72	84.95
G1+G2+Q+D2	5.36	-144.47	687.16	-0.87	1.72	83.68
G1+G2+Q+D3	5.38	-151.99	730.21	-0.79	1.78	85.44
G1+G2+Q+D4	5.30	-135.64	738.00	-0.78	1.66	83.18

Fundação B11						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.37	-97.04	-22.83	0.03	-0.23	5.22
Adicional (G2)	0.42	-515.83	14.53	0.17	2.39	33.44
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.48	-52.71	-28.31	0.05	-0.14	10.41
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.03	0.05	0.00	0.00	-0.02
Vento X- (V2)	0.00	-0.03	-0.05	0.00	0.00	0.02
Vento Y+ (V3)	0.00	-0.64	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.64	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.01	2.34	4.11	0.01	0.02	0.07
Desaprumo X- (D2)	-0.01	-2.34	-4.11	-0.01	-0.02	-0.07
Desaprumo Y+ (D3)	-0.04	-39.80	0.65	0.00	0.13	-0.44

Desaprumo Y- (D4)	0.04	39.80	-0.65	0.00	-0.13	0.44
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	2.14	-647.41	-23.98	0.24	2.08	46.00
G1+G2+0.7Q+0.6V2+D2	2.13	-652.12	-32.26	0.22	2.05	45.89
G1+G2+0.7Q+0.6V3+D3	2.10	-689.96	-27.46	0.23	2.20	45.51
G1+G2+0.7Q+0.6V4+D4	2.17	-609.57	-28.77	0.23	1.94	46.38
G1+G2+0.7Q+V1+0.6D1	2.14	-648.33	-25.60	0.24	2.08	45.96
G1+G2+0.7Q+V2+0.6D2	2.13	-651.20	-30.63	0.23	2.06	45.93
G1+G2+0.7Q+V3+0.6D3	2.11	-674.29	-27.72	0.23	2.15	45.68
G1+G2+0.7Q+V4+0.6D4	2.16	-625.24	-28.51	0.23	1.99	46.21
G1+G2+D1	1.80	-610.53	-4.19	0.20	2.18	38.73
G1+G2+D2	1.79	-615.20	-12.41	0.19	2.15	38.59
G1+G2+D3	1.76	-652.67	-7.65	0.19	2.30	38.22
G1+G2+D4	1.83	-573.06	-8.95	0.19	2.04	39.10
G1+G2+Q+0.6V1+0.6D1	2.28	-664.16	-34.11	0.25	2.03	49.10
G1+G2+Q+0.6V2+0.6D2	2.27	-667.00	-39.10	0.24	2.02	49.04
G1+G2+Q+0.6V3+0.6D3	2.26	-689.85	-36.22	0.25	2.10	48.81
G1+G2+Q+0.6V4+0.6D4	2.30	-641.31	-37.00	0.25	1.95	49.33
G1+G2+Q+D1	2.29	-663.24	-32.50	0.25	2.04	49.14
G1+G2+Q+D2	2.27	-667.91	-40.72	0.24	2.01	49.00
G1+G2+Q+D3	2.24	-705.38	-35.96	0.25	2.15	48.63
G1+G2+Q+D4	2.31	-625.77	-37.26	0.25	1.90	49.50

Fundação B12						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	4.91	3.35	-21.08	-0.13	-0.13	-0.57
Adicional (G2)	3.01	-198.73	-72.17	-0.51	-0.19	-47.57
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.81	18.36	9.19	0.05	-0.01	5.17
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.01	0.03	0.00	0.00	0.00
Vento X- (V2)	0.00	-0.01	-0.03	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.35	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.35	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	-0.02	4.62	8.01	0.02	0.00	-0.09
Desaprumo X- (D2)	0.02	-4.62	-8.01	-0.02	0.00	0.09
Desaprumo Y+ (D3)	0.02	-23.20	-0.39	0.00	0.02	0.11
Desaprumo Y- (D4)	-0.02	23.20	0.39	0.00	-0.02	-0.11
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	8.47	-177.90	-78.79	-0.58	-0.34	-44.61
G1+G2+0.7Q+0.6V2+D2	8.50	-187.16	-94.84	-0.62	-0.33	-44.44
G1+G2+0.7Q+0.6V3+D3	8.50	-205.94	-87.20	-0.60	-0.31	-44.42
G1+G2+0.7Q+0.6V4+D4	8.46	-159.12	-86.43	-0.60	-0.36	-44.64
G1+G2+0.7Q+V1+0.6D1	8.47	-179.75	-81.99	-0.59	-0.34	-44.58
G1+G2+0.7Q+V2+0.6D2	8.49	-185.31	-91.65	-0.61	-0.33	-44.47
G1+G2+0.7Q+V3+0.6D3	8.49	-196.80	-87.05	-0.60	-0.32	-44.46
G1+G2+0.7Q+V4+0.6D4	8.47	-168.26	-86.58	-0.60	-0.35	-44.60
G1+G2+D1	7.90	-190.76	-85.24	-0.62	-0.33	-48.23
G1+G2+D2	7.93	-200.00	-101.26	-0.65	-0.32	-48.06
G1+G2+D3	7.94	-218.58	-93.63	-0.64	-0.30	-48.03
G1+G2+D4	7.90	-172.18	-92.86	-0.63	-0.35	-48.25

G1+G2+Q+0.6V1+0.6D1	8.71	-174.24	-79.24	-0.57	-0.34	-43.03
G1+G2+Q+0.6V2+0.6D2	8.73	-179.80	-88.88	-0.60	-0.34	-42.93
G1+G2+Q+0.6V3+0.6D3	8.74	-191.15	-84.29	-0.59	-0.32	-42.91
G1+G2+Q+0.6V4+0.6D4	8.71	-162.89	-83.83	-0.59	-0.35	-43.04
G1+G2+Q+D1	8.71	-172.40	-76.05	-0.57	-0.34	-43.06
G1+G2+Q+D2	8.74	-181.65	-92.07	-0.61	-0.34	-42.89
G1+G2+Q+D3	8.74	-200.22	-84.44	-0.59	-0.31	-42.87
G1+G2+Q+D4	8.70	-153.82	-83.67	-0.59	-0.36	-43.09

Fundação B13						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	5.09	19.67	35.05	0.15	0.01	0.97
Adicional (G2)	4.29	-366.01	139.50	0.63	0.28	-13.64
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.82	-0.60	-7.33	-0.05	0.01	0.01
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.02	0.03	0.00	0.00	0.00
Vento X- (V2)	0.00	-0.02	-0.03	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.41	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.41	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.01	4.74	7.94	0.02	-0.01	-0.16
Desaprumo X- (D2)	-0.01	-4.74	-7.94	-0.02	0.01	0.16
Desaprumo Y+ (D3)	0.01	-27.92	-0.35	0.00	0.04	0.00
Desaprumo Y- (D4)	-0.01	27.92	0.35	0.00	-0.04	0.00
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	9.97	-342.02	177.39	0.77	0.30	-12.82
G1+G2+0.7Q+0.6V2+D2	9.94	-351.51	161.47	0.73	0.31	-12.50
G1+G2+0.7Q+0.6V3+D3	9.97	-374.93	169.07	0.75	0.34	-12.66
G1+G2+0.7Q+0.6V4+D4	9.94	-318.59	169.78	0.75	0.27	-12.67
G1+G2+0.7Q+V1+0.6D1	9.96	-343.90	174.22	0.76	0.30	-12.76
G1+G2+0.7Q+V2+0.6D2	9.95	-349.62	164.63	0.74	0.31	-12.57
G1+G2+0.7Q+V3+0.6D3	9.96	-363.93	169.21	0.75	0.33	-12.66
G1+G2+0.7Q+V4+0.6D4	9.95	-329.60	169.64	0.75	0.28	-12.66
G1+G2+D1	9.39	-341.61	182.50	0.80	0.29	-12.82
G1+G2+D2	9.37	-351.08	166.61	0.76	0.30	-12.51
G1+G2+D3	9.40	-374.27	174.20	0.78	0.33	-12.66
G1+G2+D4	9.37	-318.42	174.91	0.78	0.26	-12.67
G1+G2+Q+0.6V1+0.6D1	10.21	-344.09	172.01	0.75	0.31	-12.75
G1+G2+Q+0.6V2+0.6D2	10.19	-349.79	162.45	0.72	0.31	-12.56
G1+G2+Q+0.6V3+0.6D3	10.21	-363.94	167.02	0.74	0.33	-12.66
G1+G2+Q+0.6V4+0.6D4	10.19	-329.94	167.44	0.74	0.29	-12.66
G1+G2+Q+D1	10.21	-342.21	175.17	0.76	0.30	-12.82
G1+G2+Q+D2	10.19	-351.68	159.28	0.72	0.32	-12.50
G1+G2+Q+D3	10.21	-374.86	166.88	0.74	0.35	-12.65
G1+G2+Q+D4	10.18	-319.02	167.58	0.74	0.27	-12.66

Fundação B14						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.20	5.62	20.67	-0.17	-0.05	-2.46
Adicional (G2)	1.16	-54.60	854.01	0.19	0.10	-9.11
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.19	5.60	-31.50	-0.03	-0.02	-1.69
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.21	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.21	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.09	-0.07	0.00	0.00	0.01
Vento Y- (V4)	0.00	0.09	0.07	0.00	0.00	-0.01
Desaprumo X+ (D1)	-0.01	1.38	37.76	0.03	0.00	-0.36
Desaprumo X- (D2)	0.01	-1.38	-37.76	-0.03	0.00	0.36
Desaprumo Y+ (D3)	-0.02	-5.94	-6.34	-0.01	0.02	0.42
Desaprumo Y- (D4)	0.02	5.94	6.34	0.01	-0.02	-0.42
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.49	-43.67	890.52	0.03	0.03	-13.11
G1+G2+0.7Q+0.6V2+D2	3.50	-46.44	814.74	-0.02	0.04	-12.39
G1+G2+0.7Q+0.6V3+D3	3.47	-51.05	846.25	0.00	0.05	-12.32
G1+G2+0.7Q+0.6V4+D4	3.51	-39.06	859.01	0.01	0.02	-13.18
G1+G2+0.7Q+V1+0.6D1	3.49	-44.22	875.49	0.02	0.03	-12.97
G1+G2+0.7Q+V2+0.6D2	3.50	-45.89	829.77	-0.01	0.04	-12.54
G1+G2+0.7Q+V3+0.6D3	3.48	-48.71	848.76	0.00	0.04	-12.49
G1+G2+0.7Q+V4+0.6D4	3.50	-41.40	856.50	0.01	0.02	-13.02
G1+G2+D1	3.36	-47.60	912.44	0.05	0.04	-11.92
G1+G2+D2	3.37	-50.36	836.91	0.00	0.05	-11.21
G1+G2+D3	3.34	-54.92	868.33	0.02	0.06	-11.14
G1+G2+D4	3.38	-43.04	881.02	0.03	0.03	-11.99
G1+G2+Q+0.6V1+0.6D1	3.54	-42.55	865.96	0.01	0.02	-13.47
G1+G2+Q+0.6V2+0.6D2	3.55	-44.21	820.40	-0.02	0.03	-13.04
G1+G2+Q+0.6V3+0.6D3	3.54	-47.00	839.33	-0.01	0.04	-13.00
G1+G2+Q+0.6V4+0.6D4	3.56	-39.76	847.03	0.00	0.02	-13.52
G1+G2+Q+D1	3.54	-41.99	880.94	0.02	0.02	-13.62
G1+G2+Q+D2	3.55	-44.76	805.42	-0.03	0.03	-12.90
G1+G2+Q+D3	3.53	-49.32	836.84	-0.01	0.05	-12.84
G1+G2+Q+D4	3.57	-37.43	849.53	0.00	0.01	-13.68

Fundação B23						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.20	-5.65	20.85	-0.17	0.05	2.47
Adicional (G2)	1.69	-69.44	819.44	0.23	0.25	13.33
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.19	-5.63	-31.20	-0.03	0.02	1.70
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.21	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.21	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.09	0.06	0.00	0.00	0.01
Vento Y- (V4)	0.00	0.09	-0.06	0.00	0.00	-0.01
Desaprumo X+ (D1)	-0.01	-1.18	35.07	0.03	0.00	0.32
Desaprumo X- (D2)	0.01	1.18	-35.07	-0.03	0.00	-0.32
Desaprumo Y+ (D3)	0.02	-5.75	5.56	0.01	0.02	0.33
Desaprumo Y- (D4)	-0.02	5.75	-5.56	-0.01	-0.02	-0.33
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	4.02	-80.22	853.64	0.07	0.32	17.31
G1+G2+0.7Q+0.6V2+D2	4.03	-77.85	783.25	0.02	0.31	16.66
G1+G2+0.7Q+0.6V3+D3	4.04	-84.84	824.05	0.05	0.34	17.33
G1+G2+0.7Q+0.6V4+D4	4.00	-73.23	812.84	0.04	0.30	16.65
G1+G2+0.7Q+V1+0.6D1	4.02	-79.75	839.69	0.06	0.32	17.18
G1+G2+0.7Q+V2+0.6D2	4.02	-78.32	797.20	0.03	0.32	16.79
G1+G2+0.7Q+V3+0.6D3	4.03	-82.57	821.85	0.05	0.33	17.19
G1+G2+0.7Q+V4+0.6D4	4.01	-75.50	815.04	0.04	0.31	16.78
G1+G2+D1	3.89	-76.27	875.35	0.09	0.31	16.11
G1+G2+D2	3.90	-73.91	805.22	0.04	0.30	15.47
G1+G2+D3	3.91	-80.84	845.85	0.07	0.32	16.13
G1+G2+D4	3.87	-69.34	834.72	0.06	0.29	15.46
G1+G2+Q+0.6V1+0.6D1	4.07	-81.44	830.25	0.05	0.33	17.69
G1+G2+Q+0.6V2+0.6D2	4.08	-80.01	787.92	0.02	0.32	17.30
G1+G2+Q+0.6V3+0.6D3	4.09	-84.23	812.46	0.04	0.33	17.70
G1+G2+Q+0.6V4+0.6D4	4.07	-77.22	805.71	0.03	0.31	17.29
G1+G2+Q+D1	4.07	-81.91	844.16	0.06	0.33	17.82
G1+G2+Q+D2	4.08	-79.54	774.02	0.01	0.32	17.18
G1+G2+Q+D3	4.10	-86.47	814.65	0.04	0.34	17.83
G1+G2+Q+D4	4.06	-74.98	803.52	0.03	0.31	17.16

Fundação B24						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	4.91	-2.96	-21.10	-0.13	0.13	0.66
Adicional (G2)	2.55	-236.45	-67.36	-0.51	0.37	37.77
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.81	-18.36	9.20	0.05	0.01	-5.13
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.03	0.00	0.00	0.00
Vento X- (V2)	0.00	0.01	-0.03	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.34	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.34	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	-0.01	-3.91	7.28	0.02	0.00	0.10
Desaprumo X- (D2)	0.01	3.91	-7.28	-0.02	0.00	-0.10
Desaprumo Y+ (D3)	-0.02	-22.20	0.35	0.00	0.02	0.11

Desaprumo Y- (D4)	0.02	22.20	-0.35	0.00	-0.02	-0.11
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	8.00	-256.17	-74.72	-0.58	0.51	34.94
G1+G2+0.7Q+0.6V2+D2	8.03	-248.34	-89.31	-0.62	0.50	34.74
G1+G2+0.7Q+0.6V3+D3	8.00	-274.67	-81.67	-0.60	0.53	34.95
G1+G2+0.7Q+0.6V4+D4	8.04	-229.85	-82.36	-0.60	0.48	34.73
G1+G2+0.7Q+V1+0.6D1	8.01	-254.61	-77.62	-0.59	0.51	34.90
G1+G2+0.7Q+V2+0.6D2	8.03	-249.90	-86.41	-0.61	0.51	34.78
G1+G2+0.7Q+V3+0.6D3	8.01	-265.92	-81.80	-0.60	0.52	34.91
G1+G2+0.7Q+V4+0.6D4	8.03	-238.59	-82.23	-0.60	0.49	34.77
G1+G2+D1	7.44	-243.32	-81.18	-0.61	0.50	38.53
G1+G2+D2	7.47	-235.50	-95.73	-0.65	0.50	38.33
G1+G2+D3	7.43	-261.61	-88.11	-0.63	0.52	38.54
G1+G2+D4	7.47	-217.21	-88.80	-0.63	0.48	38.32
G1+G2+Q+0.6V1+0.6D1	8.25	-260.11	-74.87	-0.57	0.51	33.36
G1+G2+Q+0.6V2+0.6D2	8.27	-255.41	-83.64	-0.59	0.51	33.24
G1+G2+Q+0.6V3+0.6D3	8.25	-271.29	-79.05	-0.58	0.52	33.36
G1+G2+Q+0.6V4+0.6D4	8.27	-244.24	-79.46	-0.58	0.50	33.23
G1+G2+Q+D1	8.24	-261.67	-71.98	-0.56	0.51	33.39
G1+G2+Q+D2	8.27	-253.86	-86.53	-0.60	0.51	33.20
G1+G2+Q+D3	8.24	-279.97	-78.91	-0.58	0.53	33.41
G1+G2+Q+D4	8.28	-235.56	-79.60	-0.58	0.49	33.19

Fundação B25						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	5.09	-19.83	35.00	0.15	-0.01	-0.96
Adicional (G2)	3.00	-133.53	148.16	0.64	-0.98	8.52
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.82	0.38	-7.32	-0.05	-0.01	0.00
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.02	0.03	0.00	0.00	0.00
Vento X- (V2)	0.00	0.02	-0.03	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.41	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.41	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.01	-4.03	7.17	0.02	0.01	0.15
Desaprumo X- (D2)	-0.01	4.03	-7.17	-0.02	-0.01	-0.15
Desaprumo Y+ (D3)	-0.01	-25.60	0.31	0.00	0.03	0.00
Desaprumo Y- (D4)	0.01	25.60	-0.31	0.00	-0.03	0.00
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	8.68	-157.13	185.21	0.78	-0.99	7.71
G1+G2+0.7Q+0.6V2+D2	8.65	-149.06	170.85	0.74	-1.00	7.41
G1+G2+0.7Q+0.6V3+D3	8.65	-178.94	178.35	0.76	-0.97	7.56
G1+G2+0.7Q+0.6V4+D4	8.68	-127.25	177.72	0.76	-1.03	7.56
G1+G2+0.7Q+V1+0.6D1	8.67	-155.53	182.36	0.77	-1.00	7.65
G1+G2+0.7Q+V2+0.6D2	8.66	-150.66	173.71	0.75	-1.00	7.47
G1+G2+0.7Q+V3+0.6D3	8.66	-168.87	178.22	0.76	-0.98	7.56
G1+G2+0.7Q+V4+0.6D4	8.67	-137.32	177.84	0.76	-1.02	7.56
G1+G2+D1	8.10	-157.39	190.33	0.81	-0.98	7.71
G1+G2+D2	8.08	-149.34	175.99	0.78	-1.00	7.41
G1+G2+D3	8.08	-178.97	183.47	0.79	-0.96	7.56
G1+G2+D4	8.11	-127.76	182.85	0.79	-1.02	7.57

G1+G2+Q+0.6V1+0.6D1	8.92	-155.41	180.15	0.76	-1.00	7.65
G1+G2+Q+0.6V2+0.6D2	8.90	-150.55	171.52	0.74	-1.01	7.47
G1+G2+Q+0.6V3+0.6D3	8.90	-168.59	176.02	0.75	-0.98	7.56
G1+G2+Q+0.6V4+0.6D4	8.92	-137.37	175.65	0.75	-1.02	7.56
G1+G2+Q+D1	8.92	-157.01	183.00	0.76	-1.00	7.71
G1+G2+Q+D2	8.90	-148.95	168.67	0.73	-1.01	7.41
G1+G2+Q+D3	8.90	-178.58	176.15	0.75	-0.97	7.56
G1+G2+Q+D4	8.92	-127.38	175.53	0.75	-1.04	7.57

Fundação B26						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.42	19.83	-11.26	0.01	0.15	-1.65
Adicional (G2)	1.54	-686.16	5.64	0.08	2.99	-26.48
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.40	13.41	-11.31	0.05	0.04	-7.76
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.03	0.00	0.00	0.03
Vento X- (V2)	0.00	0.01	-0.03	0.00	0.00	-0.03
Vento Y+ (V3)	0.00	-0.35	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.35	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.01	-1.23	3.72	0.01	-0.01	1.02
Desaprumo X- (D2)	-0.01	1.23	-3.72	-0.01	0.01	-1.02
Desaprumo Y+ (D3)	0.05	-26.52	-0.42	0.00	0.10	-0.35
Desaprumo Y- (D4)	-0.05	26.52	0.42	0.00	-0.10	0.35
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.25	-658.18	-9.79	0.14	3.16	-32.53
G1+G2+0.7Q+0.6V2+D2	3.23	-655.70	-17.28	0.12	3.17	-34.59
G1+G2+0.7Q+0.6V3+D3	3.29	-683.67	-13.96	0.13	3.27	-33.91
G1+G2+0.7Q+0.6V4+D4	3.19	-630.21	-13.11	0.13	3.06	-33.21
G1+G2+0.7Q+V1+0.6D1	3.25	-657.70	-11.27	0.13	3.16	-32.92
G1+G2+0.7Q+V2+0.6D2	3.23	-656.19	-15.80	0.12	3.17	-34.20
G1+G2+0.7Q+V3+0.6D3	3.27	-673.21	-13.79	0.13	3.23	-33.77
G1+G2+0.7Q+V4+0.6D4	3.21	-640.68	-13.28	0.13	3.10	-33.35
G1+G2+D1	2.97	-667.56	-1.89	0.10	3.14	-27.11
G1+G2+D2	2.95	-665.09	-9.34	0.08	3.15	-29.15
G1+G2+D3	3.01	-692.85	-6.04	0.09	3.25	-28.48
G1+G2+D4	2.91	-639.80	-5.19	0.09	3.04	-27.78
G1+G2+Q+0.6V1+0.6D1	3.37	-653.67	-14.67	0.15	3.17	-35.26
G1+G2+Q+0.6V2+0.6D2	3.35	-652.17	-19.18	0.14	3.18	-36.51
G1+G2+Q+0.6V3+0.6D3	3.39	-669.04	-17.18	0.14	3.24	-36.10
G1+G2+Q+0.6V4+0.6D4	3.33	-636.80	-16.67	0.14	3.12	-35.68
G1+G2+Q+D1	3.37	-654.15	-13.20	0.15	3.17	-34.87
G1+G2+Q+D2	3.35	-651.69	-20.65	0.14	3.19	-36.90
G1+G2+Q+D3	3.41	-679.44	-17.35	0.14	3.28	-36.24
G1+G2+Q+D4	3.31	-626.40	-16.51	0.14	3.07	-35.54

Fundação B29						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.18	-158.81	5.77	0.00	-0.37	1.14
Adicional (G2)	5.35	-4258.06	2288.94	-0.55	0.45	-919.17
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.13	-38.75	1.36	0.00	-0.10	0.83
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.33	0.00	0.00	-0.13
Vento X- (V2)	0.00	0.01	-0.33	0.00	0.00	0.13
Vento Y+ (V3)	0.00	-1.36	0.01	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.36	-0.01	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-2.86	72.62	-0.02	0.00	-28.72
Desaprumo X- (D2)	0.00	2.86	-72.62	0.02	0.00	28.72
Desaprumo Y+ (D3)	-0.06	-118.71	0.94	0.00	-0.01	-0.45
Desaprumo Y- (D4)	0.06	118.71	-0.94	0.00	0.01	0.45
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	8.62	-4446.86	2368.48	-0.56	0.01	-946.25
G1+G2+0.7Q+0.6V2+D2	8.62	-4441.13	2222.85	-0.53	0.01	-888.65
G1+G2+0.7Q+0.6V3+D3	8.56	-4563.52	2296.61	-0.54	0.00	-917.90
G1+G2+0.7Q+0.6V4+D4	8.68	-4324.47	2294.72	-0.55	0.02	-917.00
G1+G2+0.7Q+V1+0.6D1	8.62	-4445.72	2339.57	-0.55	0.01	-934.81
G1+G2+0.7Q+V2+0.6D2	8.62	-4442.27	2251.76	-0.54	0.01	-900.09
G1+G2+0.7Q+V3+0.6D3	8.59	-4516.58	2296.24	-0.54	0.00	-917.73
G1+G2+0.7Q+V4+0.6D4	8.66	-4371.41	2295.09	-0.54	0.02	-917.18
G1+G2+D1	8.53	-4419.73	2367.33	-0.56	0.09	-946.75
G1+G2+D2	8.53	-4414.01	2222.09	-0.53	0.08	-889.31
G1+G2+D3	8.47	-4535.58	2295.65	-0.54	0.07	-918.48
G1+G2+D4	8.59	-4298.16	2293.77	-0.55	0.09	-917.58
G1+G2+Q+0.6V1+0.6D1	8.66	-4457.34	2339.84	-0.55	-0.02	-934.51
G1+G2+Q+0.6V2+0.6D2	8.66	-4453.90	2252.30	-0.53	-0.02	-899.89
G1+G2+Q+0.6V3+0.6D3	8.63	-4527.66	2296.64	-0.54	-0.03	-917.47
G1+G2+Q+0.6V4+0.6D4	8.70	-4383.58	2295.51	-0.54	-0.01	-916.93
G1+G2+Q+D1	8.66	-4458.48	2368.69	-0.56	-0.02	-945.92
G1+G2+Q+D2	8.66	-4452.76	2223.45	-0.53	-0.02	-888.48
G1+G2+Q+D3	8.60	-4574.33	2297.02	-0.54	-0.03	-917.65
G1+G2+Q+D4	8.72	-4336.91	2295.13	-0.54	-0.01	-916.75

Fundação B30						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.40	-243.23	0.43	0.00	-0.54	0.36
Adicional (G2)	5.64	-4708.11	2287.63	-0.52	0.52	-897.74
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.19	-59.29	0.38	0.00	-0.15	0.32
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.33	0.00	0.00	-0.13
Vento X- (V2)	0.00	0.00	-0.33	0.00	0.00	0.13
Vento Y+ (V3)	0.00	-1.47	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.47	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.03	74.56	-0.01	0.00	-28.55
Desaprumo X- (D2)	0.00	0.03	-74.56	0.01	0.00	28.55
Desaprumo Y+ (D3)	-0.05	-133.81	0.27	0.00	0.00	-0.04
Desaprumo Y- (D4)	0.05	133.81	-0.27	0.00	0.00	0.04
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	9.17	-4992.86	2363.09	-0.54	-0.13	-925.79
G1+G2+0.7Q+0.6V2+D2	9.17	-4992.81	2213.57	-0.51	-0.13	-868.53
G1+G2+0.7Q+0.6V3+D3	9.12	-5127.52	2288.59	-0.52	-0.13	-897.20
G1+G2+0.7Q+0.6V4+D4	9.22	-4858.15	2288.06	-0.52	-0.13	-897.12
G1+G2+0.7Q+V1+0.6D1	9.17	-4992.85	2333.40	-0.53	-0.13	-914.42
G1+G2+0.7Q+V2+0.6D2	9.17	-4992.82	2243.26	-0.52	-0.13	-879.90
G1+G2+0.7Q+V3+0.6D3	9.14	-5074.59	2288.49	-0.52	-0.13	-897.19
G1+G2+0.7Q+V4+0.6D4	9.20	-4911.09	2288.17	-0.52	-0.13	-897.13
G1+G2+D1	9.04	-4951.36	2362.62	-0.54	-0.03	-925.94
G1+G2+D2	9.04	-4951.31	2213.50	-0.51	-0.03	-868.84
G1+G2+D3	8.99	-5085.14	2288.33	-0.52	-0.03	-897.43
G1+G2+D4	9.09	-4817.53	2287.79	-0.52	-0.02	-897.35
G1+G2+Q+0.6V1+0.6D1	9.23	-5010.64	2333.38	-0.53	-0.18	-914.27
G1+G2+Q+0.6V2+0.6D2	9.23	-5010.61	2243.51	-0.52	-0.18	-879.86
G1+G2+Q+0.6V3+0.6D3	9.20	-5091.79	2288.60	-0.52	-0.18	-897.09
G1+G2+Q+0.6V4+0.6D4	9.26	-4929.46	2288.28	-0.52	-0.18	-897.04
G1+G2+Q+D1	9.23	-5010.65	2363.00	-0.54	-0.18	-925.62
G1+G2+Q+D2	9.23	-5010.60	2213.89	-0.51	-0.18	-868.51
G1+G2+Q+D3	9.18	-5144.43	2288.71	-0.52	-0.18	-897.10
G1+G2+Q+D4	9.28	-4876.82	2288.18	-0.52	-0.18	-897.02

Fundação B31						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.40	-240.09	-0.92	0.00	-0.55	-1.28
Adicional (G2)	5.65	-4743.01	2282.21	-0.53	0.58	-901.81
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.19	-58.88	-0.15	0.00	-0.15	-0.23
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.33	0.00	0.00	-0.13
Vento X- (V2)	0.00	0.00	-0.33	0.00	0.00	0.13
Vento Y+ (V3)	0.00	-1.47	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.47	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	0.37	74.59	-0.01	0.00	-28.53
Desaprumo X- (D2)	0.00	-0.37	-74.59	0.01	0.00	28.53
Desaprumo Y+ (D3)	-0.05	-135.46	0.12	0.00	0.00	-0.17

Desaprumo Y- (D4)	0.05	135.46	-0.12	0.00	0.00	0.17
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	9.18	-5023.94	2355.97	-0.55	-0.08	-931.85
G1+G2+0.7Q+0.6V2+D2	9.18	-5024.69	2206.38	-0.52	-0.08	-874.64
G1+G2+0.7Q+0.6V3+D3	9.13	-5160.65	2281.29	-0.54	-0.08	-903.42
G1+G2+0.7Q+0.6V4+D4	9.23	-4887.98	2281.06	-0.54	-0.08	-903.07
G1+G2+0.7Q+V1+0.6D1	9.18	-5024.09	2326.27	-0.54	-0.08	-920.49
G1+G2+0.7Q+V2+0.6D2	9.18	-5024.54	2236.09	-0.53	-0.08	-886.00
G1+G2+0.7Q+V3+0.6D3	9.15	-5107.05	2281.25	-0.54	-0.08	-903.35
G1+G2+0.7Q+V4+0.6D4	9.21	-4941.57	2281.11	-0.54	-0.08	-903.14
G1+G2+D1	9.05	-4982.73	2355.88	-0.55	0.03	-931.61
G1+G2+D2	9.05	-4983.47	2206.69	-0.52	0.03	-874.56
G1+G2+D3	9.00	-5118.56	2281.40	-0.54	0.03	-903.26
G1+G2+D4	9.10	-4847.64	2281.17	-0.54	0.03	-902.91
G1+G2+Q+0.6V1+0.6D1	9.23	-5041.75	2326.09	-0.54	-0.12	-920.50
G1+G2+Q+0.6V2+0.6D2	9.23	-5042.20	2236.18	-0.53	-0.12	-886.12
G1+G2+Q+0.6V3+0.6D3	9.20	-5124.13	2281.20	-0.54	-0.12	-903.42
G1+G2+Q+0.6V4+0.6D4	9.26	-4959.82	2281.06	-0.54	-0.12	-903.21
G1+G2+Q+D1	9.23	-5041.60	2355.72	-0.55	-0.12	-931.84
G1+G2+Q+D2	9.23	-5042.35	2206.54	-0.52	-0.12	-874.79
G1+G2+Q+D3	9.18	-5177.43	2281.25	-0.54	-0.12	-903.49
G1+G2+Q+D4	9.28	-4906.52	2281.01	-0.54	-0.12	-903.14

Fundação B32						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.38	-221.52	-5.17	-0.01	-0.55	-2.51
Adicional (G2)	5.64	-4513.34	2271.97	-0.55	0.26	-914.73
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.18	-57.13	-1.01	0.00	-0.15	-0.97
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.33	0.00	0.00	-0.13
Vento X- (V2)	0.00	0.00	-0.33	0.00	0.00	0.13
Vento Y+ (V3)	0.00	-1.40	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.40	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	0.04	74.49	-0.01	0.00	-28.73
Desaprumo X- (D2)	0.00	-0.04	-74.49	0.01	0.00	28.73
Desaprumo Y+ (D3)	-0.05	-128.92	-0.12	0.00	-0.01	-0.34
Desaprumo Y- (D4)	0.05	128.92	0.12	0.00	0.01	0.34
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	9.14	-4774.81	2340.78	-0.57	-0.39	-946.73
G1+G2+0.7Q+0.6V2+D2	9.14	-4774.89	2191.40	-0.55	-0.38	-889.11
G1+G2+0.7Q+0.6V3+D3	9.09	-4904.61	2265.97	-0.56	-0.39	-918.26
G1+G2+0.7Q+0.6V4+D4	9.19	-4645.09	2266.21	-0.56	-0.38	-917.58
G1+G2+0.7Q+V1+0.6D1	9.14	-4774.83	2311.12	-0.57	-0.39	-935.29
G1+G2+0.7Q+V2+0.6D2	9.14	-4774.88	2221.06	-0.55	-0.38	-900.56
G1+G2+0.7Q+V3+0.6D3	9.11	-4853.61	2266.02	-0.56	-0.39	-918.13
G1+G2+0.7Q+V4+0.6D4	9.17	-4696.10	2266.16	-0.56	-0.38	-917.71
G1+G2+D1	9.01	-4734.82	2341.29	-0.57	-0.28	-945.97
G1+G2+D2	9.01	-4734.90	2192.31	-0.55	-0.28	-888.51
G1+G2+D3	8.96	-4863.78	2266.68	-0.56	-0.29	-917.58
G1+G2+D4	9.06	-4605.95	2266.92	-0.56	-0.27	-916.90

G1+G2+Q+0.6V1+0.6D1	9.19	-4791.97	2310.68	-0.57	-0.43	-935.53
G1+G2+Q+0.6V2+0.6D2	9.19	-4792.02	2220.89	-0.55	-0.43	-900.90
G1+G2+Q+0.6V3+0.6D3	9.16	-4870.18	2265.71	-0.56	-0.44	-918.42
G1+G2+Q+0.6V4+0.6D4	9.22	-4713.80	2265.86	-0.56	-0.42	-918.01
G1+G2+Q+D1	9.19	-4791.95	2340.28	-0.57	-0.43	-946.94
G1+G2+Q+D2	9.19	-4792.03	2191.30	-0.55	-0.43	-889.48
G1+G2+Q+D3	9.14	-4920.91	2265.67	-0.56	-0.44	-918.55
G1+G2+Q+D4	9.24	-4663.08	2265.90	-0.56	-0.42	-917.87

Fundação B33						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.17	41.23	-143.10	-0.56	-0.01	-91.34
Adicional (G2)	4.39	-3523.18	1369.47	0.61	-0.88	-156.95
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.01	8.99	-0.28	0.00	-0.01	-0.65
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.02	0.22	0.00	0.00	-0.02
Vento X- (V2)	0.00	-0.02	-0.22	0.00	0.00	0.02
Vento Y+ (V3)	0.00	-1.18	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	1.18	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	-0.03	3.60	45.63	0.02	0.01	-4.79
Desaprumo X- (D2)	0.03	-3.60	-45.63	-0.02	-0.01	4.79
Desaprumo Y+ (D3)	-0.05	-102.77	-0.22	0.00	-0.06	0.24
Desaprumo Y- (D4)	0.05	102.77	0.22	0.00	0.06	-0.24
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	7.53	-3472.06	1271.94	0.07	-0.88	-253.55
G1+G2+0.7Q+0.6V2+D2	7.59	-3479.27	1180.41	0.03	-0.90	-243.94
G1+G2+0.7Q+0.6V3+D3	7.51	-3579.14	1225.95	0.05	-0.95	-248.51
G1+G2+0.7Q+0.6V4+D4	7.61	-3372.19	1226.39	0.05	-0.83	-248.98
G1+G2+0.7Q+V1+0.6D1	7.54	-3473.49	1253.77	0.06	-0.89	-251.65
G1+G2+0.7Q+V2+0.6D2	7.58	-3477.84	1198.57	0.03	-0.90	-245.85
G1+G2+0.7Q+V3+0.6D3	7.53	-3538.51	1226.04	0.05	-0.93	-248.60
G1+G2+0.7Q+V4+0.6D4	7.59	-3412.82	1226.31	0.05	-0.86	-248.89
G1+G2+D1	7.52	-3478.36	1272.01	0.07	-0.88	-253.08
G1+G2+D2	7.59	-3485.55	1180.74	0.03	-0.89	-243.50
G1+G2+D3	7.51	-3584.72	1226.15	0.05	-0.94	-248.05
G1+G2+D4	7.60	-3379.19	1226.59	0.05	-0.82	-248.53
G1+G2+Q+0.6V1+0.6D1	7.54	-3470.80	1253.60	0.06	-0.89	-251.83
G1+G2+Q+0.6V2+0.6D2	7.58	-3475.14	1198.58	0.03	-0.90	-246.05
G1+G2+Q+0.6V3+0.6D3	7.53	-3535.34	1225.96	0.05	-0.93	-248.80
G1+G2+Q+0.6V4+0.6D4	7.59	-3410.60	1226.22	0.05	-0.86	-249.09
G1+G2+Q+D1	7.53	-3469.37	1271.72	0.07	-0.89	-253.74
G1+G2+Q+D2	7.60	-3476.57	1180.45	0.03	-0.90	-244.15
G1+G2+Q+D3	7.52	-3575.74	1225.87	0.05	-0.95	-248.71
G1+G2+Q+D4	7.61	-3370.20	1226.31	0.05	-0.84	-249.18

Fundação B34						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.95	6.55	178.66	0.02	-0.16	-12.49
Adicional (G2)	0.89	-202.68	1119.12	-0.33	1.65	20.33
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.24	3.88	-31.81	0.11	-0.04	-3.56

Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.30	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.30	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.11	0.00	0.00	0.00	0.03
Vento Y- (V4)	0.00	0.11	0.00	0.00	0.00	-0.03
Desaprumo X+ (D1)	-0.02	-0.79	43.17	0.08	0.00	-0.26
Desaprumo X- (D2)	0.02	0.79	-43.17	-0.08	0.00	0.26
Desaprumo Y+ (D3)	-0.05	-8.23	3.45	0.00	0.07	1.39
Desaprumo Y- (D4)	0.05	8.23	-3.45	0.00	-0.07	-1.39
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.99	-194.20	1318.85	-0.15	1.46	5.10
G1+G2+0.7Q+0.6V2+D2	4.03	-192.63	1232.15	-0.31	1.46	5.61
G1+G2+0.7Q+0.6V3+D3	3.96	-201.71	1278.96	-0.23	1.53	6.76
G1+G2+0.7Q+0.6V4+D4	4.06	-185.12	1272.05	-0.23	1.38	3.95
G1+G2+0.7Q+V1+0.6D1	4.00	-193.89	1301.71	-0.18	1.46	5.20
G1+G2+0.7Q+V2+0.6D2	4.03	-192.94	1249.30	-0.28	1.46	5.51
G1+G2+0.7Q+V3+0.6D3	3.98	-198.46	1277.57	-0.23	1.50	6.22
G1+G2+0.7Q+V4+0.6D4	4.04	-188.37	1273.43	-0.23	1.41	4.49
G1+G2+D1	3.82	-196.91	1340.94	-0.23	1.49	7.59
G1+G2+D2	3.87	-195.34	1254.60	-0.39	1.49	8.10
G1+G2+D3	3.80	-204.36	1301.22	-0.31	1.57	9.23
G1+G2+D4	3.89	-187.89	1294.32	-0.31	1.42	6.46
G1+G2+Q+0.6V1+0.6D1	4.07	-192.72	1292.04	-0.15	1.45	4.14
G1+G2+Q+0.6V2+0.6D2	4.10	-191.78	1239.88	-0.25	1.44	4.44
G1+G2+Q+0.6V3+0.6D3	4.06	-197.25	1268.03	-0.20	1.49	5.14
G1+G2+Q+0.6V4+0.6D4	4.11	-187.25	1263.89	-0.20	1.40	3.44
G1+G2+Q+D1	4.06	-193.04	1309.13	-0.12	1.45	4.03
G1+G2+Q+D2	4.11	-191.46	1222.79	-0.28	1.44	4.55
G1+G2+Q+D3	4.04	-200.48	1269.41	-0.20	1.52	5.68
G1+G2+Q+D4	4.13	-184.02	1262.51	-0.20	1.37	2.90

Fundação B7-9						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	7.07	-44.85	1029.18	0.67	0.38	-120.85
Adicional (G2)	7.31	-1758.66	2296.10	1.27	2.32	23.45
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.40	118.22	-14.05	-0.06	-0.01	24.50
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.09	0.16	0.00	0.00	0.11
Vento X- (V2)	0.00	-0.09	-0.16	0.00	0.00	-0.11
Vento Y+ (V3)	0.00	-1.78	-0.04	0.00	0.00	-0.02
Vento Y- (V4)	0.00	1.78	0.04	0.00	0.00	0.02
Desaprumo X+ (D1)	0.06	22.47	23.25	-0.06	-0.01	25.95
Desaprumo X- (D2)	-0.06	-22.47	-23.25	0.06	0.01	-25.95
Desaprumo Y+ (D3)	0.02	-78.15	-2.82	0.00	-0.02	3.27
Desaprumo Y- (D4)	-0.02	78.15	2.82	0.00	0.02	-3.27
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	14.72	-1698.22	3338.80	1.85	2.69	-54.22
G1+G2+0.7Q+0.6V2+D2	14.60	-1743.28	3292.09	1.96	2.70	-106.26
G1+G2+0.7Q+0.6V3+D3	14.67	-1799.96	3312.60	1.90	2.68	-76.99
G1+G2+0.7Q+0.6V4+D4	14.64	-1641.54	3318.29	1.91	2.71	-83.50

G1+G2+0.7Q+V1+0.6D1	14.70	-1707.17	3329.56	1.87	2.69	-64.56
G1+G2+0.7Q+V2+0.6D2	14.62	-1734.33	3301.33	1.94	2.70	-95.93
G1+G2+0.7Q+V3+0.6D3	14.67	-1769.42	3313.71	1.90	2.69	-78.30
G1+G2+0.7Q+V4+0.6D4	14.65	-1672.08	3317.18	1.91	2.70	-82.19
G1+G2+D1	14.44	-1781.04	3348.54	1.89	2.70	-71.44
G1+G2+D2	14.32	-1825.97	3302.03	2.00	2.71	-123.35
G1+G2+D3	14.39	-1881.65	3322.46	1.94	2.69	-94.13
G1+G2+D4	14.36	-1725.36	3328.10	1.95	2.72	-100.66
G1+G2+Q+0.6V1+0.6D1	14.82	-1671.75	3325.28	1.85	2.69	-57.25
G1+G2+Q+0.6V2+0.6D2	14.74	-1698.82	3297.18	1.92	2.70	-88.53
G1+G2+Q+0.6V3+0.6D3	14.79	-1733.24	3309.51	1.89	2.68	-70.94
G1+G2+Q+0.6V4+0.6D4	14.77	-1637.33	3312.95	1.89	2.70	-74.84
G1+G2+Q+D1	14.84	-1662.82	3334.49	1.83	2.69	-46.94
G1+G2+Q+D2	14.72	-1707.75	3287.98	1.94	2.70	-98.84
G1+G2+Q+D3	14.79	-1763.43	3308.41	1.88	2.68	-69.63
G1+G2+Q+D4	14.76	-1607.14	3314.05	1.89	2.71	-76.16

Fundação B1-10						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	5.31	-1770.04	-29.56	-0.07	0.33	-4.82
Adicional (G2)	3.40	-6555.34	732.01	-0.30	4.64	285.70
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.42	398.07	-14.36	-0.02	0.16	14.76
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.05	0.15	0.00	0.00	0.05
Vento X- (V2)	0.00	0.05	-0.15	0.00	0.00	-0.05
Vento Y+ (V3)	0.00	-2.63	-0.02	0.00	0.00	0.00
Vento Y- (V4)	0.00	2.63	0.02	0.00	0.00	0.00
Desaprumo X+ (D1)	-0.06	-15.34	14.30	-0.04	0.01	1.42
Desaprumo X- (D2)	0.06	15.34	-14.30	0.04	-0.01	-1.42
Desaprumo Y+ (D3)	0.02	-148.98	-3.27	0.00	0.05	0.29
Desaprumo Y- (D4)	-0.02	148.98	3.27	0.00	-0.05	-0.29
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	8.95	-8062.09	706.79	-0.42	5.10	292.65
G1+G2+0.7Q+0.6V2+D2	9.06	-8031.35	678.00	-0.35	5.08	289.76
G1+G2+0.7Q+0.6V3+D3	9.02	-8197.28	689.11	-0.39	5.14	291.50
G1+G2+0.7Q+0.6V4+D4	8.99	-7896.16	695.67	-0.38	5.04	290.91
G1+G2+0.7Q+V1+0.6D1	8.97	-8055.98	701.13	-0.41	5.10	292.10
G1+G2+0.7Q+V2+0.6D2	9.04	-8037.47	683.66	-0.37	5.08	290.30
G1+G2+0.7Q+V3+0.6D3	9.02	-8138.74	690.41	-0.39	5.12	291.38
G1+G2+0.7Q+V4+0.6D4	9.00	-7954.70	694.37	-0.39	5.06	291.03
G1+G2+D1	8.65	-8340.71	716.75	-0.41	4.99	282.29
G1+G2+D2	8.77	-8310.03	688.14	-0.34	4.96	279.46
G1+G2+D3	8.73	-8474.35	699.18	-0.38	5.02	281.17
G1+G2+D4	8.69	-8176.40	705.71	-0.37	4.93	280.58
G1+G2+Q+0.6V1+0.6D1	9.10	-7936.53	696.76	-0.42	5.15	296.51
G1+G2+Q+0.6V2+0.6D2	9.17	-7918.06	679.41	-0.37	5.13	294.75
G1+G2+Q+0.6V3+0.6D3	9.14	-8018.27	686.11	-0.40	5.17	295.81
G1+G2+Q+0.6V4+0.6D4	9.12	-7836.33	690.06	-0.39	5.11	295.45
G1+G2+Q+D1	9.07	-7942.64	702.39	-0.43	5.15	297.05
G1+G2+Q+D2	9.19	-7911.96	673.78	-0.36	5.13	294.21
G1+G2+Q+D3	9.15	-8076.28	684.82	-0.40	5.19	295.93
G1+G2+Q+D4	9.11	-7778.32	691.35	-0.39	5.09	295.34

Fundação B15-16						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	8.14	945.77	-836.31	-0.17	-0.37	-104.94
Adicional (G2)	7.43	1763.10	2784.86	-4.12	-1.23	-39.42
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	1.08	422.58	-80.63	-0.22	-0.44	-94.07
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.64	1.02	0.00	0.00	0.00
Vento X- (V2)	0.00	-0.64	-1.02	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-1.27	-1.11	0.00	0.00	0.11
Vento Y- (V4)	0.00	1.27	1.11	0.00	0.00	-0.11
Desaprumo X+ (D1)	-0.01	90.34	137.47	-0.11	-0.03	14.51
Desaprumo X- (D2)	0.01	-90.34	-137.47	0.11	0.03	-14.51
Desaprumo Y+ (D3)	0.06	-77.18	-65.18	-0.03	-0.01	27.94
Desaprumo Y- (D4)	-0.06	77.18	65.18	0.03	0.01	-27.94
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	16.32	3095.40	2030.19	-4.56	-1.94	-195.71
G1+G2+0.7Q+0.6V2+D2	16.34	2913.95	1754.03	-4.33	-1.88	-224.72
G1+G2+0.7Q+0.6V3+D3	16.39	2926.73	1826.27	-4.48	-1.91	-182.20
G1+G2+0.7Q+0.6V4+D4	16.27	3082.62	1957.96	-4.41	-1.90	-238.22
G1+G2+0.7Q+V1+0.6D1	16.33	3059.51	1975.61	-4.51	-1.92	-201.51
G1+G2+0.7Q+V2+0.6D2	16.34	2949.84	1808.61	-4.38	-1.89	-218.91
G1+G2+0.7Q+V3+0.6D3	16.37	2957.09	1851.90	-4.47	-1.91	-193.33
G1+G2+0.7Q+V4+0.6D4	16.30	3052.26	1932.33	-4.43	-1.91	-227.09
G1+G2+D1	15.56	2799.20	2086.02	-4.40	-1.63	-129.86
G1+G2+D2	15.58	2618.53	1811.08	-4.18	-1.57	-158.87
G1+G2+D3	15.63	2631.69	1883.38	-4.32	-1.61	-116.42
G1+G2+D4	15.52	2786.05	2013.73	-4.26	-1.59	-172.31
G1+G2+Q+0.6V1+0.6D1	16.65	3186.04	1951.02	-4.58	-2.06	-229.73
G1+G2+Q+0.6V2+0.6D2	16.66	3076.87	1784.83	-4.45	-2.03	-247.13
G1+G2+Q+0.6V3+0.6D3	16.69	3084.38	1828.16	-4.53	-2.04	-221.60
G1+G2+Q+0.6V4+0.6D4	16.62	3178.52	1907.70	-4.49	-2.04	-255.27
G1+G2+Q+D1	16.65	3221.79	2005.40	-4.63	-2.07	-223.93
G1+G2+Q+D2	16.67	3041.11	1730.46	-4.40	-2.02	-252.94
G1+G2+Q+D3	16.71	3054.27	1802.75	-4.55	-2.05	-210.49
G1+G2+Q+D4	16.60	3208.63	1933.10	-4.48	-2.04	-266.38

Fundação B17-18						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	7.57	760.01	1060.26	0.06	-0.29	106.02
Adicional (G2)	6.68	-5005.60	11167.46	1.96	0.72	-370.13
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.11	-8.91	87.18	0.01	0.00	-1.68
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.60	1.85	0.00	0.00	-0.05
Vento X- (V2)	0.00	0.60	-1.85	0.00	0.00	0.05
Vento Y+ (V3)	0.00	-2.23	0.54	0.00	0.00	-0.17
Vento Y- (V4)	0.00	2.23	-0.54	0.00	0.00	0.17
Desaprumo X+ (D1)	0.02	-80.10	262.08	0.00	0.01	-9.16
Desaprumo X- (D2)	-0.02	80.10	-262.08	0.00	-0.01	9.16
Desaprumo Y+ (D3)	0.05	-108.42	23.00	0.01	0.01	10.48

Desaprumo Y- (D4)	-0.05	108.42	-23.00	-0.01	-0.01	-10.48
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	14.35	-4332.28	12551.94	2.03	0.43	-274.48
G1+G2+0.7Q+0.6V2+D2	14.31	-4171.36	12025.56	2.03	0.42	-256.09
G1+G2+0.7Q+0.6V3+D3	14.38	-4361.57	12312.07	2.04	0.44	-254.91
G1+G2+0.7Q+0.6V4+D4	14.28	-4142.07	12265.43	2.02	0.42	-275.66
G1+G2+0.7Q+V1+0.6D1	14.34	-4300.48	12447.85	2.03	0.43	-270.83
G1+G2+0.7Q+V2+0.6D2	14.32	-4203.16	12129.66	2.03	0.42	-259.73
G1+G2+0.7Q+V3+0.6D3	14.36	-4319.10	12303.09	2.03	0.43	-259.17
G1+G2+0.7Q+V4+0.6D4	14.30	-4184.55	12274.42	2.02	0.42	-271.40
G1+G2+D1	14.27	-4325.69	12489.80	2.02	0.44	-273.27
G1+G2+D2	14.23	-4165.48	11965.65	2.02	0.42	-254.95
G1+G2+D3	14.30	-4354.00	12250.72	2.03	0.44	-253.63
G1+G2+D4	14.20	-4137.17	12204.73	2.01	0.42	-274.59
G1+G2+Q+0.6V1+0.6D1	14.37	-4302.91	12473.26	2.03	0.43	-271.31
G1+G2+Q+0.6V2+0.6D2	14.35	-4206.07	12156.55	2.03	0.42	-260.26
G1+G2+Q+0.6V3+0.6D3	14.39	-4320.88	12329.03	2.04	0.43	-259.60
G1+G2+Q+0.6V4+0.6D4	14.33	-4188.11	12300.79	2.02	0.42	-271.97
G1+G2+Q+D1	14.38	-4334.60	12576.99	2.03	0.43	-274.95
G1+G2+Q+D2	14.35	-4174.39	12052.83	2.03	0.42	-256.62
G1+G2+Q+D3	14.41	-4362.91	12337.90	2.04	0.44	-255.30
G1+G2+Q+D4	14.31	-4146.08	12291.91	2.02	0.42	-276.26

Fundação B19-20						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	8.14	-1065.62	-821.67	-0.16	0.49	131.18
Adicional (G2)	3.64	-7929.30	6900.28	-0.80	3.76	769.11
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	1.08	-394.04	-81.23	-0.22	0.41	88.12
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.79	1.04	0.00	0.00	0.03
Vento X- (V2)	0.00	0.79	-1.04	0.00	0.00	-0.03
Vento Y+ (V3)	0.00	-1.18	1.00	0.00	0.00	0.08
Vento Y- (V4)	0.00	1.18	-1.00	0.00	0.00	-0.08
Desaprumo X+ (D1)	-0.01	-118.39	140.70	-0.08	0.05	-8.44
Desaprumo X- (D2)	0.01	118.39	-140.70	0.08	-0.05	8.44
Desaprumo Y+ (D3)	-0.06	-75.12	50.80	0.02	0.01	32.86
Desaprumo Y- (D4)	0.06	75.12	-50.80	-0.02	-0.01	-32.86
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	12.53	-9389.61	6163.06	-1.20	4.59	953.55
G1+G2+0.7Q+0.6V2+D2	12.54	-9151.88	5880.43	-1.03	4.48	970.39
G1+G2+0.7Q+0.6V3+D3	12.48	-9346.58	6073.14	-1.09	4.54	994.87
G1+G2+0.7Q+0.6V4+D4	12.59	-9194.92	5970.35	-1.14	4.52	929.07
G1+G2+0.7Q+V1+0.6D1	12.53	-9342.57	6107.20	-1.17	4.56	956.94
G1+G2+0.7Q+V2+0.6D2	12.54	-9198.92	5936.29	-1.07	4.50	967.00
G1+G2+0.7Q+V3+0.6D3	12.50	-9317.00	6053.22	-1.10	4.54	981.76
G1+G2+0.7Q+V4+0.6D4	12.57	-9224.50	5990.27	-1.13	4.53	942.18
G1+G2+D1	11.77	-9113.31	6219.30	-1.04	4.30	891.85
G1+G2+D2	11.78	-8876.53	5937.91	-0.88	4.19	908.72
G1+G2+D3	11.72	-9070.04	6129.40	-0.94	4.25	933.14
G1+G2+D4	11.84	-8919.80	6027.81	-0.98	4.24	867.43

G1+G2+Q+0.6V1+0.6D1	12.86	-9460.47	6082.42	-1.23	4.69	983.36
G1+G2+Q+0.6V2+0.6D2	12.86	-9317.45	5912.34	-1.13	4.62	993.45
G1+G2+Q+0.6V3+0.6D3	12.82	-9434.74	6028.46	-1.17	4.66	1008.17
G1+G2+Q+0.6V4+0.6D4	12.90	-9343.18	5966.30	-1.20	4.65	968.65
G1+G2+Q+D1	12.85	-9507.35	6138.07	-1.26	4.71	979.97
G1+G2+Q+D2	12.87	-9270.57	5856.68	-1.10	4.60	996.85
G1+G2+Q+D3	12.80	-9464.08	6048.18	-1.16	4.66	1021.26
G1+G2+Q+D4	12.92	-9313.83	5946.58	-1.20	4.65	955.55

Fundação B21-22						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	7.57	-760.73	1060.70	0.06	0.29	-106.05
Adicional (G2)	3.39	487.82	8543.66	1.16	1.38	-95.08
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.11	8.08	87.97	0.01	0.00	1.57
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.60	1.85	0.00	0.00	0.05
Vento X- (V2)	0.00	-0.60	-1.85	0.00	0.00	-0.05
Vento Y+ (V3)	0.00	-2.22	-0.55	0.00	0.00	-0.17
Vento Y- (V4)	0.00	2.22	0.55	0.00	0.00	0.17
Desaprumo X+ (D1)	0.01	73.16	241.69	0.00	0.00	8.90
Desaprumo X- (D2)	-0.01	-73.16	-241.69	0.00	0.00	-8.90
Desaprumo Y+ (D3)	-0.05	-97.89	-17.95	-0.01	0.01	6.76
Desaprumo Y- (D4)	0.05	97.89	17.95	0.01	-0.01	-6.76
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	11.05	-193.74	9908.74	1.23	1.67	-191.09
G1+G2+0.7Q+0.6V2+D2	11.03	-340.78	9423.14	1.22	1.68	-208.97
G1+G2+0.7Q+0.6V3+D3	10.99	-366.48	9647.65	1.21	1.69	-193.37
G1+G2+0.7Q+0.6V4+D4	11.09	-168.03	9684.23	1.23	1.66	-206.69
G1+G2+0.7Q+V1+0.6D1	11.04	-222.76	9812.81	1.23	1.67	-194.63
G1+G2+0.7Q+V2+0.6D2	11.03	-311.75	9519.07	1.22	1.68	-205.43
G1+G2+0.7Q+V3+0.6D3	11.01	-328.22	9654.62	1.22	1.69	-196.15
G1+G2+0.7Q+V4+0.6D4	11.07	-206.30	9677.26	1.23	1.67	-203.91
G1+G2+D1	10.97	-199.75	9846.05	1.22	1.67	-192.23
G1+G2+D2	10.95	-346.07	9362.67	1.21	1.68	-210.04
G1+G2+D3	10.91	-370.80	9586.41	1.21	1.69	-194.37
G1+G2+D4	11.01	-175.02	9622.32	1.22	1.66	-207.89
G1+G2+Q+0.6V1+0.6D1	11.08	-220.58	9838.46	1.23	1.68	-194.18
G1+G2+Q+0.6V2+0.6D2	11.06	-309.09	9546.21	1.22	1.68	-204.93
G1+G2+Q+0.6V3+0.6D3	11.04	-324.90	9681.23	1.22	1.69	-195.61
G1+G2+Q+0.6V4+0.6D4	11.10	-204.77	9703.43	1.23	1.67	-203.51
G1+G2+Q+D1	11.08	-191.68	9934.02	1.23	1.67	-190.65
G1+G2+Q+D2	11.06	-337.99	9450.64	1.22	1.68	-208.46
G1+G2+Q+D3	11.02	-362.72	9674.38	1.22	1.69	-192.80
G1+G2+Q+D4	11.12	-166.95	9710.29	1.23	1.67	-206.32

Fundação B27-28						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	5.49	1101.60	-0.02	-0.02	-0.24	-14.50
Adicional (G2)	3.33	-5694.29	2841.24	0.61	4.89	-461.57
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.38	-319.19	-23.63	-0.02	-0.20	-8.16

Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.05	0.41	0.00	0.00	-0.07
Vento X- (V2)	0.00	-0.05	-0.41	0.00	0.00	0.07
Vento Y+ (V3)	0.00	-3.56	0.09	0.00	0.00	0.05
Vento Y- (V4)	0.00	3.56	-0.09	0.00	0.00	-0.05
Desaprumo X+ (D1)	-0.03	10.54	68.32	-0.02	0.01	-12.62
Desaprumo X- (D2)	0.03	-10.54	-68.32	0.02	-0.01	12.62
Desaprumo Y+ (D3)	-0.02	-197.21	9.06	0.01	0.09	4.87
Desaprumo Y- (D4)	0.02	197.21	-9.06	-0.01	-0.09	-4.87
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	9.06	-4805.56	2893.23	0.56	4.51	-494.45
G1+G2+0.7Q+0.6V2+D2	9.12	-4826.70	2756.11	0.60	4.50	-469.13
G1+G2+0.7Q+0.6V3+D3	9.07	-5015.48	2833.79	0.59	4.60	-476.89
G1+G2+0.7Q+0.6V4+D4	9.11	-4616.78	2815.55	0.57	4.42	-486.69
G1+G2+0.7Q+V1+0.6D1	9.07	-4809.75	2866.07	0.57	4.51	-489.43
G1+G2+0.7Q+V2+0.6D2	9.11	-4822.50	2783.27	0.59	4.51	-474.15
G1+G2+0.7Q+V3+0.6D3	9.08	-4938.01	2830.20	0.59	4.57	-478.82
G1+G2+0.7Q+V4+0.6D4	9.10	-4694.24	2819.14	0.57	4.45	-484.76
G1+G2+D1	8.80	-4582.16	2909.53	0.57	4.65	-488.69
G1+G2+D2	8.85	-4603.24	2772.90	0.61	4.64	-463.46
G1+G2+D3	8.80	-4789.91	2850.27	0.60	4.74	-471.21
G1+G2+D4	8.85	-4395.48	2832.15	0.58	4.56	-480.95
G1+G2+Q+0.6V1+0.6D1	9.19	-4905.53	2858.82	0.56	4.45	-491.85
G1+G2+Q+0.6V2+0.6D2	9.22	-4918.24	2776.34	0.59	4.45	-476.63
G1+G2+Q+0.6V3+0.6D3	9.19	-5032.35	2823.07	0.58	4.51	-481.29
G1+G2+Q+0.6V4+0.6D4	9.22	-4791.42	2812.09	0.57	4.39	-487.19
G1+G2+Q+D1	9.18	-4901.34	2885.90	0.55	4.46	-496.86
G1+G2+Q+D2	9.23	-4922.42	2749.26	0.60	4.44	-471.62
G1+G2+Q+D3	9.18	-5109.10	2826.64	0.59	4.54	-479.37
G1+G2+Q+D4	9.23	-4714.67	2808.52	0.56	4.36	-489.11

Fundação B35-36						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	7.06	45.75	1022.31	0.67	-0.38	119.38
Adicional (G2)	7.38	-5025.28	2863.80	1.51	2.70	-347.58
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.39	-117.56	-47.60	-0.09	0.01	-28.55
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.09	0.26	0.00	0.00	-0.11
Vento X- (V2)	0.00	0.09	-0.26	0.00	0.00	0.11
Vento Y+ (V3)	0.00	-1.77	-0.01	0.00	0.00	-0.03
Vento Y- (V4)	0.00	1.77	0.01	0.00	0.00	0.03
Desaprumo X+ (D1)	0.06	-19.45	39.22	-0.04	0.00	-25.54
Desaprumo X- (D2)	-0.06	19.45	-39.22	0.04	0.00	25.54
Desaprumo Y+ (D3)	-0.02	-75.77	-1.70	0.00	-0.02	1.91
Desaprumo Y- (D4)	0.02	75.77	1.70	0.00	0.02	-1.91
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	14.78	-5081.33	3892.18	2.07	2.33	-273.79
G1+G2+0.7Q+0.6V2+D2	14.66	-5042.33	3813.42	2.15	2.32	-222.58
G1+G2+0.7Q+0.6V3+D3	14.70	-5138.67	3851.10	2.11	2.31	-246.29
G1+G2+0.7Q+0.6V4+D4	14.73	-4984.99	3854.50	2.11	2.34	-250.07

G1+G2+0.7Q+V1+0.6D1	14.76	-5073.59	3876.59	2.08	2.33	-263.62
G1+G2+0.7Q+V2+0.6D2	14.68	-5050.07	3829.01	2.13	2.33	-232.75
G1+G2+0.7Q+V3+0.6D3	14.71	-5109.07	3851.77	2.11	2.32	-247.07
G1+G2+0.7Q+V4+0.6D4	14.73	-5014.59	3853.82	2.11	2.34	-249.30
G1+G2+D1	14.51	-4998.98	3925.34	2.13	2.33	-253.73
G1+G2+D2	14.38	-4960.09	3846.89	2.21	2.32	-202.66
G1+G2+D3	14.43	-5055.31	3884.42	2.17	2.30	-226.29
G1+G2+D4	14.46	-4903.76	3887.81	2.17	2.34	-230.11
G1+G2+Q+0.6V1+0.6D1	14.87	-5108.82	3862.21	2.06	2.33	-272.14
G1+G2+Q+0.6V2+0.6D2	14.80	-5085.38	3814.83	2.11	2.33	-241.36
G1+G2+Q+0.6V3+0.6D3	14.82	-5143.63	3837.49	2.08	2.32	-255.62
G1+G2+Q+0.6V4+0.6D4	14.84	-5050.57	3839.54	2.08	2.34	-257.88
G1+G2+Q+D1	14.90	-5116.54	3877.74	2.04	2.33	-282.28
G1+G2+Q+D2	14.77	-5077.65	3799.29	2.12	2.33	-231.21
G1+G2+Q+D3	14.82	-5172.87	3836.82	2.08	2.31	-254.84
G1+G2+Q+D4	14.85	-5021.32	3840.21	2.08	2.35	-258.66

Fundação BA1						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.39	37.31	94.33	0.13	-0.25	2.01
Adicional (G2)	1.64	-17.33	517.94	0.95	-1.44	41.09
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.57	-2.33	45.51	0.10	0.03	-0.59
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.05	0.16	0.00	0.00	0.01
Vento X- (V2)	0.00	-0.05	-0.16	0.00	0.00	-0.01
Vento Y+ (V3)	0.00	-0.16	-0.09	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.16	0.09	0.00	0.00	0.00
Desaprumo X+ (D1)	0.04	10.90	36.15	0.07	-0.07	1.51
Desaprumo X- (D2)	-0.04	-10.90	-36.15	-0.07	0.07	-1.51
Desaprumo Y+ (D3)	0.00	-11.51	-14.81	-0.03	0.02	-0.07
Desaprumo Y- (D4)	0.00	11.51	14.81	0.03	-0.02	0.07
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.47	29.28	680.38	1.21	-1.74	44.19
G1+G2+0.7Q+0.6V2+D2	3.39	7.43	607.89	1.07	-1.59	41.17
G1+G2+0.7Q+0.6V3+D3	3.43	6.75	629.27	1.11	-1.65	42.62
G1+G2+0.7Q+0.6V4+D4	3.43	29.95	659.00	1.17	-1.68	42.75
G1+G2+0.7Q+V1+0.6D1	3.46	24.93	665.98	1.19	-1.71	43.59
G1+G2+0.7Q+V2+0.6D2	3.41	11.77	622.29	1.10	-1.62	41.77
G1+G2+0.7Q+V3+0.6D3	3.43	11.29	635.15	1.13	-1.65	42.64
G1+G2+0.7Q+V4+0.6D4	3.43	25.41	653.11	1.16	-1.68	42.72
G1+G2+D1	3.07	30.88	648.42	1.15	-1.76	44.61
G1+G2+D2	2.99	9.08	576.13	1.01	-1.62	41.59
G1+G2+D3	3.04	8.47	597.47	1.05	-1.67	43.03
G1+G2+D4	3.03	31.49	627.08	1.11	-1.70	43.16
G1+G2+Q+0.6V1+0.6D1	3.63	24.22	679.57	1.22	-1.70	43.41
G1+G2+Q+0.6V2+0.6D2	3.58	11.09	636.00	1.13	-1.61	41.59
G1+G2+Q+0.6V3+0.6D3	3.60	10.65	648.84	1.16	-1.65	42.46
G1+G2+Q+0.6V4+0.6D4	3.60	24.65	666.73	1.19	-1.67	42.54
G1+G2+Q+D1	3.64	28.55	693.93	1.24	-1.73	44.01
G1+G2+Q+D2	3.56	6.75	621.64	1.10	-1.59	40.99
G1+G2+Q+D3	3.61	6.14	642.98	1.14	-1.64	42.44
G1+G2+Q+D4	3.60	29.16	672.59	1.20	-1.67	42.57

Fundação BA2						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.67	-9.15	26.08	-0.21	0.04	1.95
Adicional (G2)	-0.26	-405.82	737.51	1.89	0.49	-24.38
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.65	-1.47	22.79	-0.06	0.03	0.35
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.16	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.16	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.16	-0.01	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.16	0.01	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.48	35.33	0.07	-0.01	-0.42
Desaprumo X- (D2)	0.00	0.48	-35.33	-0.07	0.01	0.42
Desaprumo Y+ (D3)	-0.03	-13.35	-7.50	0.00	0.02	-0.33
Desaprumo Y- (D4)	0.03	13.35	7.50	0.00	-0.02	0.33
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	1.87	-416.47	814.98	1.70	0.54	-22.60
G1+G2+0.7Q+0.6V2+D2	1.86	-415.52	744.12	1.56	0.55	-21.76
G1+G2+0.7Q+0.6V3+D3	1.84	-429.44	772.04	1.63	0.57	-22.52
G1+G2+0.7Q+0.6V4+D4	1.90	-402.56	787.06	1.63	0.52	-21.85
G1+G2+0.7Q+V1+0.6D1	1.87	-416.29	800.91	1.67	0.54	-22.44
G1+G2+0.7Q+V2+0.6D2	1.86	-415.71	758.20	1.59	0.55	-21.93
G1+G2+0.7Q+V3+0.6D3	1.85	-424.16	775.04	1.63	0.56	-22.39
G1+G2+0.7Q+V4+0.6D4	1.88	-407.83	784.07	1.63	0.53	-21.98
G1+G2+D1	1.41	-415.45	798.93	1.75	0.52	-22.85
G1+G2+D2	1.41	-414.49	728.26	1.60	0.53	-22.01
G1+G2+D3	1.38	-428.32	756.10	1.67	0.55	-22.76
G1+G2+D4	1.44	-401.63	771.10	1.67	0.51	-22.10
G1+G2+Q+0.6V1+0.6D1	2.06	-416.72	807.68	1.65	0.55	-22.33
G1+G2+Q+0.6V2+0.6D2	2.06	-416.15	765.10	1.57	0.56	-21.82
G1+G2+Q+0.6V3+0.6D3	2.04	-424.54	781.88	1.61	0.57	-22.28
G1+G2+Q+0.6V4+0.6D4	2.08	-408.34	790.90	1.61	0.54	-21.87
G1+G2+Q+D1	2.06	-416.91	821.72	1.68	0.55	-22.50
G1+G2+Q+D2	2.06	-415.96	751.06	1.54	0.56	-21.66
G1+G2+Q+D3	2.03	-429.78	778.89	1.61	0.58	-22.41
G1+G2+Q+D4	2.09	-403.09	793.89	1.61	0.53	-21.74

Fundação BA3						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.13	-12.61	53.39	0.08	0.09	0.28
Adicional (G2)	0.01	-522.36	759.89	1.40	0.92	-21.32
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.82	-2.72	35.93	0.07	0.04	0.03
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.16	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.16	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.18	-0.04	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.18	0.04	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.92	36.53	0.06	0.00	-0.61
Desaprumo X- (D2)	0.00	0.92	-36.53	-0.06	0.00	0.61
Desaprumo Y+ (D3)	-0.03	-16.38	-8.89	-0.02	0.03	-0.09

Desaprumo Y- (D4)	0.03	16.38	8.89	0.02	-0.03	0.09
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	2.72	-537.80	875.05	1.59	1.03	-21.62
G1+G2+0.7Q+0.6V2+D2	2.72	-535.95	801.80	1.46	1.03	-20.40
G1+G2+0.7Q+0.6V3+D3	2.69	-553.36	829.51	1.51	1.06	-21.10
G1+G2+0.7Q+0.6V4+D4	2.75	-520.39	847.34	1.54	1.01	-20.92
G1+G2+0.7Q+V1+0.6D1	2.72	-537.43	860.51	1.56	1.03	-21.38
G1+G2+0.7Q+V2+0.6D2	2.72	-536.32	816.35	1.49	1.03	-20.65
G1+G2+0.7Q+V3+0.6D3	2.71	-546.88	833.05	1.52	1.05	-21.07
G1+G2+0.7Q+V4+0.6D4	2.74	-526.87	843.81	1.53	1.02	-20.96
G1+G2+D1	2.14	-535.89	849.80	1.54	1.01	-21.64
G1+G2+D2	2.14	-534.05	776.75	1.41	1.00	-20.43
G1+G2+D3	2.12	-551.35	804.39	1.46	1.03	-21.12
G1+G2+D4	2.17	-518.58	822.17	1.49	0.98	-20.94
G1+G2+Q+0.6V1+0.6D1	2.97	-538.24	871.22	1.59	1.05	-21.37
G1+G2+Q+0.6V2+0.6D2	2.97	-537.13	827.19	1.51	1.04	-20.64
G1+G2+Q+0.6V3+0.6D3	2.95	-547.62	843.85	1.54	1.06	-21.06
G1+G2+Q+0.6V4+0.6D4	2.98	-527.75	854.57	1.56	1.03	-20.95
G1+G2+Q+D1	2.97	-538.61	885.73	1.61	1.05	-21.61
G1+G2+Q+D2	2.97	-536.77	812.68	1.48	1.04	-20.40
G1+G2+Q+D3	2.94	-554.07	840.32	1.53	1.07	-21.10
G1+G2+Q+D4	2.99	-521.31	858.10	1.56	1.02	-20.91

Fundação BA4						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.11	-12.40	15.35	0.03	0.09	0.04
Adicional (G2)	0.00	-558.59	888.18	1.47	0.98	-21.04
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.82	-2.56	19.32	0.04	0.04	-0.03
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.16	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.16	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.18	0.00	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.18	0.00	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.34	35.19	0.06	0.00	-0.72
Desaprumo X- (D2)	0.00	0.34	-35.19	-0.06	0.00	0.72
Desaprumo Y+ (D3)	-0.03	-18.01	-2.45	-0.01	0.03	0.00
Desaprumo Y- (D4)	0.03	18.01	2.45	0.01	-0.03	0.00
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	2.68	-573.12	952.34	1.59	1.11	-21.74
G1+G2+0.7Q+0.6V2+D2	2.68	-572.44	881.78	1.47	1.11	-20.31
G1+G2+0.7Q+0.6V3+D3	2.66	-590.90	914.61	1.53	1.14	-21.02
G1+G2+0.7Q+0.6V4+D4	2.71	-554.67	919.52	1.54	1.08	-21.03
G1+G2+0.7Q+V1+0.6D1	2.68	-572.99	938.33	1.57	1.11	-21.46
G1+G2+0.7Q+V2+0.6D2	2.68	-572.57	895.79	1.50	1.11	-20.59
G1+G2+0.7Q+V3+0.6D3	2.67	-583.77	915.59	1.53	1.12	-21.02
G1+G2+0.7Q+V4+0.6D4	2.70	-561.79	918.53	1.53	1.09	-21.03
G1+G2+D1	2.11	-571.33	938.72	1.56	1.08	-21.72
G1+G2+D2	2.11	-570.65	868.35	1.44	1.08	-20.29
G1+G2+D3	2.08	-589.00	901.08	1.50	1.11	-21.00
G1+G2+D4	2.14	-552.99	905.99	1.51	1.05	-21.01

G1+G2+Q+0.6V1+0.6D1	2.93	-573.75	944.06	1.58	1.12	-21.46
G1+G2+Q+0.6V2+0.6D2	2.93	-573.34	901.65	1.51	1.12	-20.60
G1+G2+Q+0.6V3+0.6D3	2.91	-584.46	921.38	1.54	1.14	-21.03
G1+G2+Q+0.6V4+0.6D4	2.94	-562.63	924.33	1.55	1.10	-21.03
G1+G2+Q+D1	2.93	-573.89	958.05	1.60	1.12	-21.75
G1+G2+Q+D2	2.93	-573.21	887.67	1.48	1.12	-20.32
G1+G2+Q+D3	2.90	-591.55	920.40	1.54	1.15	-21.03
G1+G2+Q+D4	2.95	-555.54	925.31	1.55	1.09	-21.03

Fundação BA5						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.12	-11.47	-20.31	-0.01	0.09	-0.13
Adicional (G2)	0.02	-534.11	987.08	1.58	0.94	-21.75
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.82	-2.45	3.08	0.01	0.04	-0.08
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.14	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.14	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.18	0.05	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.18	-0.05	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.16	32.07	0.05	0.00	-0.83
Desaprumo X- (D2)	0.00	0.16	-32.07	-0.05	0.00	0.83
Desaprumo Y+ (D3)	-0.03	-17.52	4.36	0.01	0.03	0.07
Desaprumo Y- (D4)	0.03	17.52	-4.36	-0.01	-0.03	-0.07
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	2.71	-547.45	1001.08	1.64	1.06	-22.78
G1+G2+0.7Q+0.6V2+D2	2.71	-547.13	936.78	1.53	1.06	-21.11
G1+G2+0.7Q+0.6V3+D3	2.68	-564.92	973.32	1.59	1.09	-21.87
G1+G2+0.7Q+0.6V4+D4	2.73	-529.66	964.53	1.58	1.03	-22.02
G1+G2+0.7Q+V1+0.6D1	2.71	-547.39	988.31	1.61	1.06	-22.44
G1+G2+0.7Q+V2+0.6D2	2.71	-547.19	949.55	1.55	1.06	-21.44
G1+G2+0.7Q+V3+0.6D3	2.69	-557.98	971.60	1.59	1.08	-21.90
G1+G2+0.7Q+V4+0.6D4	2.72	-536.60	966.26	1.58	1.05	-21.99
G1+G2+D1	2.13	-545.74	998.84	1.63	1.03	-22.72
G1+G2+D2	2.14	-545.42	934.70	1.52	1.03	-21.05
G1+G2+D3	2.11	-563.10	971.14	1.58	1.06	-21.81
G1+G2+D4	2.16	-528.06	962.41	1.57	1.00	-21.96
G1+G2+Q+0.6V1+0.6D1	2.95	-548.12	989.18	1.62	1.08	-22.47
G1+G2+Q+0.6V2+0.6D2	2.95	-547.93	950.53	1.55	1.08	-21.47
G1+G2+Q+0.6V3+0.6D3	2.94	-558.65	972.50	1.59	1.09	-21.92
G1+G2+Q+0.6V4+0.6D4	2.97	-537.41	967.20	1.58	1.06	-22.01
G1+G2+Q+D1	2.95	-548.19	1001.92	1.64	1.08	-22.80
G1+G2+Q+D2	2.95	-547.86	937.78	1.53	1.07	-21.13
G1+G2+Q+D3	2.93	-565.55	974.21	1.59	1.10	-21.89
G1+G2+Q+D4	2.98	-530.50	965.49	1.58	1.05	-22.04

Fundação BA6						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.90	-8.22	-10.19	0.23	0.05	-1.05
Adicional (G2)	0.20	-472.37	917.30	1.21	0.91	-5.50
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.74	-0.89	0.04	0.09	0.02	-0.52

Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.12	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.12	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.15	0.06	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.15	-0.06	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-1.00	27.31	0.05	0.00	-0.44
Desaprumo X- (D2)	0.00	1.00	-27.31	-0.05	0.00	0.44
Desaprumo Y+ (D3)	-0.02	-14.87	6.30	0.00	0.02	0.25
Desaprumo Y- (D4)	0.02	14.87	-6.30	0.00	-0.02	-0.25
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	2.62	-482.22	934.52	1.56	0.98	-7.35
G1+G2+0.7Q+0.6V2+D2	2.62	-480.22	879.76	1.46	0.97	-6.47
G1+G2+0.7Q+0.6V3+D3	2.60	-496.19	913.47	1.50	1.00	-6.66
G1+G2+0.7Q+0.6V4+D4	2.64	-466.25	900.80	1.51	0.95	-7.16
G1+G2+0.7Q+V1+0.6D1	2.62	-481.82	923.64	1.54	0.98	-7.18
G1+G2+0.7Q+V2+0.6D2	2.62	-480.61	890.63	1.48	0.97	-6.65
G1+G2+0.7Q+V3+0.6D3	2.61	-490.30	910.98	1.51	0.99	-6.76
G1+G2+0.7Q+V4+0.6D4	2.63	-472.14	903.30	1.51	0.96	-7.06
G1+G2+D1	2.10	-481.59	934.41	1.49	0.97	-6.98
G1+G2+D2	2.10	-479.59	879.80	1.40	0.96	-6.11
G1+G2+D3	2.08	-495.47	913.41	1.44	0.98	-6.30
G1+G2+D4	2.12	-465.72	900.80	1.45	0.94	-6.80
G1+G2+Q+0.6V1+0.6D1	2.84	-482.09	923.61	1.56	0.99	-7.33
G1+G2+Q+0.6V2+0.6D2	2.84	-480.88	890.69	1.51	0.98	-6.80
G1+G2+Q+0.6V3+0.6D3	2.83	-490.50	910.97	1.53	1.00	-6.92
G1+G2+Q+0.6V4+0.6D4	2.85	-472.47	903.34	1.54	0.97	-7.22
G1+G2+Q+D1	2.84	-482.49	934.46	1.58	0.99	-7.51
G1+G2+Q+D2	2.84	-480.49	879.84	1.49	0.98	-6.63
G1+G2+Q+D3	2.83	-496.36	913.45	1.53	1.01	-6.82
G1+G2+Q+D4	2.86	-466.61	900.85	1.54	0.96	-7.32

Fundação BA7						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.59	-14.09	-60.34	-0.04	0.04	0.35
Adicional (G2)	-1.43	-285.47	1562.71	3.18	-0.35	75.71
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.78	-7.18	-32.56	-0.07	0.04	-0.93
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.13	0.00	0.00	0.00
Vento X- (V2)	0.00	0.01	-0.13	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.11	0.24	0.00	0.00	0.02
Vento Y- (V4)	0.00	0.11	-0.24	0.00	0.00	-0.02
Desaprumo X+ (D1)	-0.02	-1.80	29.44	0.05	0.00	0.39
Desaprumo X- (D2)	0.02	1.80	-29.44	-0.05	0.00	-0.39
Desaprumo Y+ (D3)	-0.04	-9.83	25.19	0.06	0.00	1.90
Desaprumo Y- (D4)	0.04	9.83	-25.19	-0.06	0.00	-1.90
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	0.69	-306.39	1509.10	3.14	-0.28	75.80
G1+G2+0.7Q+0.6V2+D2	0.73	-302.79	1450.06	3.03	-0.28	75.02
G1+G2+0.7Q+0.6V3+D3	0.67	-314.49	1504.91	3.15	-0.29	77.32
G1+G2+0.7Q+0.6V4+D4	0.75	-294.69	1454.24	3.02	-0.28	73.49

G1+G2+0.7Q+V1+0.6D1	0.69	-305.67	1497.37	3.12	-0.28	75.65
G1+G2+0.7Q+V2+0.6D2	0.72	-303.50	1461.78	3.05	-0.28	75.17
G1+G2+0.7Q+V3+0.6D3	0.68	-310.60	1494.93	3.12	-0.28	76.57
G1+G2+0.7Q+V4+0.6D4	0.73	-298.58	1464.22	3.05	-0.28	74.25
G1+G2+D1	0.14	-301.36	1531.81	3.19	-0.31	76.45
G1+G2+D2	0.19	-297.77	1472.93	3.09	-0.31	75.67
G1+G2+D3	0.12	-309.40	1527.56	3.20	-0.31	77.96
G1+G2+D4	0.21	-289.73	1477.18	3.08	-0.31	74.16
G1+G2+Q+0.6V1+0.6D1	0.93	-307.82	1487.55	3.09	-0.27	75.37
G1+G2+Q+0.6V2+0.6D2	0.95	-305.66	1452.06	3.03	-0.27	74.89
G1+G2+Q+0.6V3+0.6D3	0.92	-312.71	1485.07	3.10	-0.27	76.28
G1+G2+Q+0.6V4+0.6D4	0.97	-300.78	1454.55	3.03	-0.27	73.98
G1+G2+Q+D1	0.92	-308.54	1499.25	3.11	-0.27	75.52
G1+G2+Q+D2	0.96	-304.94	1440.37	3.01	-0.27	74.74
G1+G2+Q+D3	0.90	-316.58	1495.00	3.12	-0.27	77.03
G1+G2+Q+D4	0.98	-296.91	1444.61	3.00	-0.27	73.23

Fundação BA8						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.70	9.31	150.96	0.43	-0.08	1.26
Adicional (G2)	1.63	-335.19	1069.52	3.13	0.54	21.56
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.56	5.61	58.32	0.18	-0.04	1.25
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.10	0.00	0.00	0.00
Vento X- (V2)	0.00	0.01	-0.10	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.14	0.12	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.14	-0.12	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-1.35	26.22	0.08	0.00	0.65
Desaprumo X- (D2)	0.00	1.35	-26.22	-0.08	0.00	-0.65
Desaprumo Y+ (D3)	0.00	-10.98	16.19	0.05	0.02	-0.14
Desaprumo Y- (D4)	0.00	10.98	-16.19	-0.05	-0.02	0.14
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.72	-323.30	1287.58	3.76	0.44	24.34
G1+G2+0.7Q+0.6V2+D2	3.71	-320.60	1235.01	3.61	0.43	23.03
G1+G2+0.7Q+0.6V3+D3	3.71	-333.01	1277.56	3.73	0.45	23.54
G1+G2+0.7Q+0.6V4+D4	3.72	-310.88	1245.04	3.64	0.42	23.83
G1+G2+0.7Q+V1+0.6D1	3.72	-322.76	1277.14	3.73	0.44	24.08
G1+G2+0.7Q+V2+0.6D2	3.71	-321.13	1245.46	3.64	0.43	23.29
G1+G2+0.7Q+V3+0.6D3	3.71	-328.67	1271.13	3.72	0.45	23.60
G1+G2+0.7Q+V4+0.6D4	3.72	-315.22	1251.47	3.66	0.42	23.77
G1+G2+D1	3.33	-327.22	1246.70	3.63	0.46	23.46
G1+G2+D2	3.32	-324.53	1194.25	3.48	0.46	22.16
G1+G2+D3	3.32	-336.86	1236.66	3.60	0.48	22.67
G1+G2+D4	3.33	-314.90	1204.28	3.51	0.44	22.96
G1+G2+Q+0.6V1+0.6D1	3.88	-321.07	1294.59	3.79	0.43	24.45
G1+G2+Q+0.6V2+0.6D2	3.88	-319.45	1263.00	3.70	0.42	23.67
G1+G2+Q+0.6V3+0.6D3	3.88	-326.93	1288.58	3.77	0.44	23.97
G1+G2+Q+0.6V4+0.6D4	3.88	-313.59	1269.01	3.71	0.41	24.15
G1+G2+Q+D1	3.89	-321.61	1305.02	3.82	0.43	24.71
G1+G2+Q+D2	3.88	-318.92	1252.57	3.67	0.42	23.41
G1+G2+Q+D3	3.88	-331.24	1294.99	3.79	0.44	23.91
G1+G2+Q+D4	3.89	-309.28	1262.61	3.69	0.41	24.20

Fundação BA9						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.63	3.66	-39.39	-0.65	-0.06	-0.41
Adicional (G2)	2.79	-436.68	768.64	1.44	0.96	6.63
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.84	5.67	-5.40	-0.23	-0.03	0.18
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	-0.01	0.11	0.00	0.00	0.00
Vento X- (V2)	0.00	0.01	-0.11	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.16	-0.01	0.00	0.00	-0.01
Vento Y- (V4)	0.00	0.16	0.01	0.00	0.00	0.01
Desaprumo X+ (D1)	0.01	-1.67	26.88	0.07	0.01	0.98
Desaprumo X- (D2)	-0.01	1.67	-26.88	-0.07	-0.01	-0.98
Desaprumo Y+ (D3)	0.04	-13.35	5.17	0.00	0.02	-0.43
Desaprumo Y- (D4)	-0.04	13.35	-5.17	0.00	-0.02	0.43
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	6.01	-430.72	752.42	0.69	0.88	7.34
G1+G2+0.7Q+0.6V2+D2	6.00	-427.37	698.53	0.55	0.87	5.37
G1+G2+0.7Q+0.6V3+D3	6.05	-442.50	730.64	0.62	0.90	5.92
G1+G2+0.7Q+0.6V4+D4	5.96	-415.60	720.32	0.63	0.85	6.78
G1+G2+0.7Q+V1+0.6D1	6.01	-430.06	741.72	0.66	0.88	6.94
G1+G2+0.7Q+V2+0.6D2	6.00	-428.04	709.24	0.58	0.87	5.76
G1+G2+0.7Q+V3+0.6D3	6.03	-437.22	728.57	0.62	0.89	6.09
G1+G2+0.7Q+V4+0.6D4	5.98	-420.88	722.39	0.62	0.86	6.61
G1+G2+D1	5.43	-434.69	756.14	0.85	0.90	7.20
G1+G2+D2	5.41	-431.35	702.37	0.71	0.89	5.24
G1+G2+D3	5.46	-446.37	734.42	0.78	0.92	5.79
G1+G2+D4	5.38	-419.66	724.09	0.79	0.88	6.65
G1+G2+Q+0.6V1+0.6D1	6.26	-428.35	740.05	0.60	0.87	7.00
G1+G2+Q+0.6V2+0.6D2	6.25	-426.34	707.67	0.51	0.86	5.81
G1+G2+Q+0.6V3+0.6D3	6.28	-435.45	726.95	0.55	0.88	6.15
G1+G2+Q+0.6V4+0.6D4	6.23	-419.24	720.76	0.56	0.85	6.67
G1+G2+Q+D1	6.26	-429.02	750.74	0.62	0.87	7.39
G1+G2+Q+D2	6.25	-425.68	696.98	0.48	0.86	5.42
G1+G2+Q+D3	6.30	-440.70	729.03	0.55	0.89	5.98
G1+G2+Q+D4	6.22	-413.99	718.69	0.56	0.84	6.83

Fundação BA10						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.49	8.61	50.76	-0.01	-0.11	0.30
Adicional (G2)	2.40	-515.14	995.30	2.16	0.99	36.15
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	1.13	9.40	30.44	0.03	-0.06	0.31
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.13	0.00	0.00	0.01
Vento X- (V2)	0.00	0.00	-0.13	0.00	0.00	-0.01
Vento Y+ (V3)	0.00	-0.18	0.03	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.18	-0.03	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.56	31.68	0.07	0.00	1.45
Desaprumo X- (D2)	0.00	0.56	-31.68	-0.07	0.00	-1.45
Desaprumo Y+ (D3)	0.04	-16.85	6.98	0.01	0.03	-0.11

Desaprumo Y- (D4)	-0.04	16.85	-6.98	-0.01	-0.03	0.11
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	6.68	-500.51	1099.13	2.24	0.85	38.13
G1+G2+0.7Q+0.6V2+D2	6.68	-499.39	1035.61	2.09	0.85	35.22
G1+G2+0.7Q+0.6V3+D3	6.72	-516.91	1074.37	2.18	0.88	36.56
G1+G2+0.7Q+0.6V4+D4	6.64	-482.99	1060.37	2.15	0.82	36.79
G1+G2+0.7Q+V1+0.6D1	6.68	-500.28	1086.51	2.21	0.85	37.55
G1+G2+0.7Q+V2+0.6D2	6.68	-499.61	1048.23	2.12	0.85	35.80
G1+G2+0.7Q+V3+0.6D3	6.70	-510.24	1071.58	2.17	0.86	36.61
G1+G2+0.7Q+V4+0.6D4	6.65	-489.65	1063.15	2.16	0.83	36.74
G1+G2+D1	5.89	-507.08	1077.74	2.22	0.89	37.90
G1+G2+D2	5.89	-505.97	1014.38	2.08	0.89	35.01
G1+G2+D3	5.93	-523.38	1053.04	2.16	0.91	36.35
G1+G2+D4	5.85	-489.67	1039.07	2.13	0.86	36.57
G1+G2+Q+0.6V1+0.6D1	7.02	-497.46	1095.59	2.22	0.83	37.64
G1+G2+Q+0.6V2+0.6D2	7.02	-496.79	1057.41	2.13	0.83	35.90
G1+G2+Q+0.6V3+0.6D3	7.04	-507.35	1080.71	2.18	0.85	36.70
G1+G2+Q+0.6V4+0.6D4	6.99	-486.91	1072.30	2.17	0.81	36.84
G1+G2+Q+D1	7.02	-497.69	1108.18	2.24	0.83	38.22
G1+G2+Q+D2	7.02	-496.57	1044.82	2.10	0.83	35.32
G1+G2+Q+D3	7.06	-513.98	1083.48	2.19	0.86	36.66
G1+G2+Q+D4	6.98	-480.28	1069.52	2.16	0.80	36.88

Fundação BA11						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.52	11.38	8.76	0.02	-0.13	1.29
Adicional (G2)	2.42	-567.34	823.51	1.83	1.08	39.66
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	1.15	10.93	16.55	0.04	-0.07	0.68
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.13	0.00	0.00	0.01
Vento X- (V2)	0.00	0.00	-0.13	0.00	0.00	-0.01
Vento Y+ (V3)	0.00	-0.19	-0.01	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.19	0.01	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.43	33.18	0.07	0.00	1.59
Desaprumo X- (D2)	0.00	0.43	-33.18	-0.07	0.00	-1.59
Desaprumo Y+ (D3)	0.04	-18.50	1.25	0.00	0.03	-0.04
Desaprumo Y- (D4)	-0.04	18.50	-1.25	0.00	-0.03	0.04
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	6.74	-548.74	877.12	1.95	0.90	43.02
G1+G2+0.7Q+0.6V2+D2	6.74	-547.88	810.61	1.81	0.90	39.83
G1+G2+0.7Q+0.6V3+D3	6.78	-566.93	845.11	1.88	0.93	41.38
G1+G2+0.7Q+0.6V4+D4	6.70	-529.70	842.62	1.88	0.87	41.47
G1+G2+0.7Q+V1+0.6D1	6.74	-548.57	863.90	1.92	0.90	42.38
G1+G2+0.7Q+V2+0.6D2	6.74	-548.05	823.83	1.83	0.90	40.46
G1+G2+0.7Q+V3+0.6D3	6.77	-559.60	844.60	1.88	0.92	41.39
G1+G2+0.7Q+V4+0.6D4	6.72	-537.02	843.12	1.88	0.88	41.45
G1+G2+D1	5.94	-556.39	865.45	1.92	0.95	42.54
G1+G2+D2	5.94	-555.53	799.10	1.78	0.94	39.36
G1+G2+D3	5.98	-574.46	833.53	1.85	0.98	40.90
G1+G2+D4	5.90	-537.46	831.03	1.85	0.92	40.99

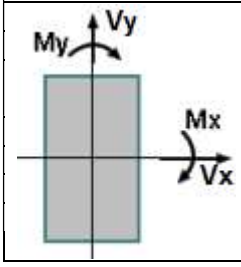
G1+G2+Q+0.6V1+0.6D1	7.09	-545.29	868.81	1.93	0.88	42.59
G1+G2+Q+0.6V2+0.6D2	7.09	-544.77	828.84	1.85	0.88	40.67
G1+G2+Q+0.6V3+0.6D3	7.11	-556.25	849.57	1.89	0.90	41.60
G1+G2+Q+0.6V4+0.6D4	7.06	-533.82	848.09	1.89	0.86	41.66
G1+G2+Q+D1	7.09	-545.46	882.00	1.96	0.88	43.22
G1+G2+Q+D2	7.09	-544.60	815.65	1.82	0.88	40.04
G1+G2+Q+D3	7.13	-563.54	850.08	1.89	0.91	41.58
G1+G2+Q+D4	7.04	-526.53	847.58	1.89	0.85	41.67

Fundação BA12						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	3.51	11.30	-58.25	-0.09	-0.13	1.66
Adicional (G2)	2.41	-555.66	532.10	1.23	1.05	43.83
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	1.15	10.28	-8.71	0.00	-0.06	0.78
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.12	0.00	0.00	0.01
Vento X- (V2)	0.00	0.00	-0.12	0.00	0.00	-0.01
Vento Y+ (V3)	0.00	-0.18	-0.06	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.18	0.06	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	-0.49	31.86	0.07	0.00	1.69
Desaprumo X- (D2)	0.00	0.49	-31.86	-0.07	0.00	-1.69
Desaprumo Y+ (D3)	0.04	-18.03	-5.30	-0.01	0.03	0.03
Desaprumo Y- (D4)	-0.04	18.03	5.30	0.01	-0.03	-0.03
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	6.73	-537.66	499.69	1.21	0.88	47.74
G1+G2+0.7Q+0.6V2+D2	6.73	-536.68	435.82	1.07	0.88	44.35
G1+G2+0.7Q+0.6V3+D3	6.77	-555.32	462.42	1.13	0.91	46.08
G1+G2+0.7Q+0.6V4+D4	6.69	-519.03	473.09	1.15	0.85	46.01
G1+G2+0.7Q+V1+0.6D1	6.73	-537.47	486.99	1.18	0.88	47.07
G1+G2+0.7Q+V2+0.6D2	6.73	-536.87	448.51	1.10	0.88	45.02
G1+G2+0.7Q+V3+0.6D3	6.75	-548.18	464.51	1.13	0.90	46.06
G1+G2+0.7Q+V4+0.6D4	6.70	-526.17	471.00	1.15	0.86	46.03
G1+G2+D1	5.93	-544.85	505.71	1.21	0.93	47.19
G1+G2+D2	5.93	-543.87	441.99	1.07	0.92	43.80
G1+G2+D3	5.97	-562.40	468.55	1.13	0.95	45.53
G1+G2+D4	5.88	-526.33	479.15	1.15	0.90	45.46
G1+G2+Q+0.6V1+0.6D1	7.07	-534.38	484.33	1.18	0.86	47.30
G1+G2+Q+0.6V2+0.6D2	7.07	-533.79	445.95	1.10	0.86	45.26
G1+G2+Q+0.6V3+0.6D3	7.10	-545.02	461.92	1.13	0.88	46.30
G1+G2+Q+0.6V4+0.6D4	7.05	-523.16	468.36	1.15	0.84	46.26
G1+G2+Q+D1	7.07	-534.58	497.00	1.21	0.86	47.97
G1+G2+Q+D2	7.07	-533.60	433.28	1.07	0.86	44.59
G1+G2+Q+D3	7.11	-552.12	459.84	1.13	0.89	46.31
G1+G2+Q+D4	7.03	-516.05	470.44	1.15	0.83	46.25

Fundação BA13						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	2.99	8.87	51.01	0.60	-0.06	0.81
Adicional (G2)	1.72	-324.51	370.49	1.38	0.45	34.55
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.95	6.47	27.15	0.25	-0.03	0.13

Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.09	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.09	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.11	-0.04	0.00	0.00	0.00
Vento Y- (V4)	0.00	0.11	0.04	0.00	0.00	0.00
Desaprumo X+ (D1)	0.00	0.30	22.79	0.05	0.00	0.65
Desaprumo X- (D2)	0.00	-0.30	-22.79	-0.05	0.00	-0.65
Desaprumo Y+ (D3)	0.03	-11.05	-4.19	0.00	0.01	0.25
Desaprumo Y- (D4)	-0.03	11.05	4.19	0.00	-0.01	-0.25
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	5.37	-310.81	463.36	2.20	0.36	36.10
G1+G2+0.7Q+0.6V2+D2	5.38	-311.42	417.67	2.10	0.37	34.80
G1+G2+0.7Q+0.6V3+D3	5.40	-322.23	436.30	2.16	0.38	35.70
G1+G2+0.7Q+0.6V4+D4	5.35	-300.00	444.73	2.15	0.35	35.20
G1+G2+0.7Q+V1+0.6D1	5.37	-310.93	454.27	2.18	0.36	35.84
G1+G2+0.7Q+V2+0.6D2	5.38	-311.30	426.75	2.12	0.37	35.06
G1+G2+0.7Q+V3+0.6D3	5.39	-317.86	437.96	2.15	0.38	35.60
G1+G2+0.7Q+V4+0.6D4	5.36	-304.37	443.07	2.15	0.36	35.30
G1+G2+D1	4.71	-315.34	444.30	2.03	0.39	36.01
G1+G2+D2	4.72	-315.94	398.71	1.93	0.39	34.72
G1+G2+D3	4.74	-326.69	417.31	1.98	0.40	35.61
G1+G2+D4	4.69	-304.60	425.70	1.97	0.37	35.12
G1+G2+Q+0.6V1+0.6D1	5.66	-308.99	462.39	2.26	0.36	35.88
G1+G2+Q+0.6V2+0.6D2	5.66	-309.36	434.93	2.20	0.36	35.10
G1+G2+Q+0.6V3+0.6D3	5.68	-315.87	446.12	2.23	0.37	35.64
G1+G2+Q+0.6V4+0.6D4	5.64	-302.48	451.20	2.22	0.35	35.34
G1+G2+Q+D1	5.66	-308.87	471.45	2.28	0.35	36.14
G1+G2+Q+D2	5.66	-309.47	425.87	2.18	0.36	34.84
G1+G2+Q+D3	5.69	-320.22	444.47	2.23	0.37	35.74
G1+G2+Q+D4	5.63	-298.13	452.85	2.22	0.34	35.24

Fundação BA14						
Combinação	**N (tf)**	**Mx (kgf.m)**	**My (kgf.m)**	**Vx (tf)**	**Vy (tf)**	**Mt (kgf/m)**
Peso próprio (G1)	1.89	13.72	-112.37	-0.14	-0.06	0.58
Adicional (G2)	1.54	-398.81	-144.52	-0.45	0.93	-26.69
Solo (S)	0.00	0.00	0.00	0.00	0.00	0.00
Acidental (Q)	0.63	8.29	-39.41	-0.06	-0.03	0.19
Água (A)	0.00	0.00	0.00	0.00	0.00	0.00
Vento X+ (V1)	0.00	0.00	0.09	0.00	0.00	0.00
Vento X- (V2)	0.00	0.00	-0.09	0.00	0.00	0.00
Vento Y+ (V3)	0.00	-0.14	-0.17	0.00	0.00	-0.01
Vento Y- (V4)	0.00	0.14	0.17	0.00	0.00	0.01
Desaprumo X+ (D1)	0.00	0.23	22.52	0.05	0.00	0.56
Desaprumo X- (D2)	0.00	-0.23	-22.52	-0.05	0.00	-0.56
Desaprumo Y+ (D3)	0.03	-13.34	-18.55	-0.05	0.03	-0.85
Desaprumo Y- (D4)	-0.03	13.34	18.55	0.05	-0.03	0.85
Subpressão (AS)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 1 (T1)	0.00	0.00	0.00	0.00	0.00	0.00
Temperatura 2 (T2)	0.00	0.00	0.00	0.00	0.00	0.00
Retração (R)	0.00	0.00	0.00	0.00	0.00	0.00
G1+G2+0.7Q+0.6V1+D1	3.86	-379.06	-261.91	-0.58	0.84	-25.43
G1+G2+0.7Q+0.6V2+D2	3.87	-379.52	-307.05	-0.69	0.85	-26.54
G1+G2+0.7Q+0.6V3+D3	3.90	-392.71	-303.14	-0.68	0.88	-26.84
G1+G2+0.7Q+0.6V4+D4	3.83	-365.87	-265.83	-0.58	0.82	-25.13
G1+G2+0.7Q+V1+0.6D1	3.87	-379.15	-270.88	-0.60	0.84	-25.65
G1+G2+0.7Q+V2+0.6D2	3.87	-379.42	-298.08	-0.67	0.85	-26.32
G1+G2+0.7Q+V3+0.6D3	3.89	-387.43	-295.79	-0.66	0.86	-26.51
G1+G2+0.7Q+V4+0.6D4	3.85	-371.15	-273.18	-0.60	0.83	-25.47
G1+G2+D1	3.42	-384.86	-234.38	-0.54	0.87	-25.56
G1+G2+D2	3.43	-385.32	-279.41	-0.65	0.87	-26.67
G1+G2+D3	3.46	-398.43	-275.45	-0.64	0.90	-26.97
G1+G2+D4	3.39	-371.75	-238.35	-0.54	0.84	-25.27
G1+G2+Q+0.6V1+0.6D1	4.05	-376.66	-282.74	-0.62	0.83	-25.59
G1+G2+Q+0.6V2+0.6D2	4.06	-376.94	-309.87	-0.68	0.84	-26.26
G1+G2+Q+0.6V3+0.6D3	4.08	-384.89	-307.54	-0.68	0.85	-26.44
G1+G2+Q+0.6V4+0.6D4	4.04	-368.72	-285.07	-0.62	0.82	-25.41
G1+G2+Q+D1	4.05	-376.57	-273.79	-0.59	0.83	-25.37
G1+G2+Q+D2	4.06	-377.03	-318.82	-0.70	0.84	-26.49
G1+G2+Q+D3	4.09	-390.14	-314.86	-0.70	0.86	-26.78
G1+G2+Q+D4	4.02	-363.46	-277.76	-0.60	0.80	-25.08

Legenda	
	- Caso: indica o caso de carregamento no qual serão apresentados os esforços atuantes;
	- Elemento: nome da fundação;
	- N: esforço axial na fundação (inclui o peso próprio do bloco caso sua seção tenha sido definida no lançamento);
	- Mx: momento fletor na fundação, atuante em torno do eixo X global;
	- My: momento fletor na fundação, atuante em torno do eixo Y global;
	- Vx: esforço cortante na fundação, atuante no plano paralelo à direção X global;
	- Vy: esforço cortante na fundação, atuante no plano paralelo à direção Y global;
	- Mt: momento de torção atuante.

4. Pavimento FUNDAÇÕES NV—60

a) Resultado dos Blocos

FUNDAÇÕES NV--60	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

Blocos	ne Estaca	LB LH (cm)	hb (cm)	Principal (cm²)		Estribo (cm²)		Superior (cm²)		As dist. (cm²)
				X	Y	Hor.	Vert.	X	Y	
B2	2 C40-18m	190.00 70.00	55.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B3	2 C40-18m	190.00 70.00	55.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B4	2 C40-18m	190.00 70.00	55.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B5	2 C40-18m	190.00 70.00	55.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B6	2 C40-18m	190.00 70.00	65.00	4.91 (4 ø 12.5)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B8	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B11	1 C40-PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B12	1 C40-17m	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B13	1 C40-17m	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B14	1 C40-PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B23	1 C40-PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B24	1 C40-17m	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B25	2 C40-14M	190.00 70.00	65.00	3.14 (4 ø 10.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B26	2 C40-PROF:11M	190.00 70.00	65.00	2.01 (4 ø 8.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B29	2 C40-18m	190.00 70.00	55.00	4.91 (4 ø 12.5)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)

B30	2 C40-18m	190.00 70.00	55.00	4.91 (4 ø 12.5)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B31	2 C40-18m	190.00 70.00	55.00	4.91 (4 ø 12.5)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B32	2 C40-18m	190.00 70.00	55.00	4.91 (4 ø 12.5)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B33	2 C40-18m	190.00 70.00	65.00	3.14 (4 ø 10.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B34	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
B7-9	2 C40-18m	190.00 70.00	70.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	3.14 (4 ø 10.0)	-	1.01 (ø 8.0 c/10)
B1-10	3 C40-18m	275.83 238.87	110.00	8.04 (4 ø 16.0)	-	1.87 (6 ø 6.3)	-	6.03 (12 ø 8.0)	7.04 (14 ø 8.0)	1.77 (ø 8.0 c/20)
B15-16	2 C40-18m	190.00 70.00	70.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	2.01 (4 ø 8.0)	-	1.01 (ø 8.0 c/10)
B17-18	3 C40-18m	310.00 70.00	120.00	8.04 (4 ø 16.0)	-	2.18 (7 ø 6.3)	13.07 2x(13 ø 8.0)	10.05 (5 ø 16.0)	-	1.01 (ø 8.0 c/10)
B19-20	2 C40-18m	190.00 70.00		Erro D54	-	-	-	-	-	-
B21-22	3 C40-18m	310.00 70.00	120.00	4.91 (4 ø 12.5)	-	2.18 (7 ø 6.3)	13.07 2x(13 ø 8.0)	8.04 (4 ø 16.0)	-	1.01 (ø 8.0 c/10)
B27-28	2 C40-18m	190.00 70.00	70.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	4.91 (4 ø 12.5)	-	1.01 (ø 8.0 c/10)
B35-36	2 C40-18m	190.00 70.00	70.00	8.04 (4 ø 16.0)	-	1.56 (5 ø 6.3)	8.04 2x(8 ø 8.0)	3.14 (4 ø 10.0)	-	1.01 (ø 8.0 c/10)
BA1	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA2	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA3	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA4	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA5	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA6	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA7	1 C40- PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA8	2	190.00	65.00	3.14	-	1.56	8.04	2.01	-	1.01

	C40-PROF:11M	70.00		(4 ø 10.0)		(5 ø 6.3)	2x(8 ø 8.0)	(4 ø 8.0)		(ø 8.0 c/10)
BA9	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA10	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA11	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA12	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA13	1 C40-14M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-
BA14	1 C40-PROF:11M	70.00 70.00		-	-	1.56 (5 ø 6.3)	1.25 2x(2 ø 6.3)	-	-	-

b) Cálculo dos Pilares

FUNDAÇÕES NV--60	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	20.00 X 60.00	RR 20.07 RR 3.92	10.05 6.85	1539 1812	6163 7258	(*) 4.00	4.02 (2 ø 16.0) 12.06 (6 ø 16.0)
P2	20.00 X 60.00	EL 40.14 EL 13.38	17.27 12.04	3964 5883	4060 6024	1.02	1.57 (2 ø 10.0) 7.07 (9 ø 10.0)
P3	20.00 X 60.00	RR 20.07 RR 6.69	17.29 12.03	3682 6027	3671 6007	1.00	1.57 (2 ø 10.0) 6.28 (8 ø 10.0)
P4	20.00 X 60.00	RR 20.07 RR 6.69	17.31 12.05	3685 6022	3675 6005	1.00	1.57 (2 ø 10.0) 6.28 (8 ø 10.0)
P5	20.00 X 60.00	RR 20.07 RR 6.69	17.11 11.91	3691 4860	3801 5004	1.03	1.57 (2 ø 10.0) 6.28 (8 ø 10.0)
P6	20.00 X 60.00	RR 20.07 RR 6.69	16.31 11.42	1481 4412	2558 7624	1.73	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P7	20.00 X 60.00	RR 20.07 RR 6.69	12.33 8.76	1755 1634	2492 2321	1.42	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P8	15.00 X 40.00	RR 5.07 RR 1.90	8.70 5.99	378 1648	952 4152	2.52	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P9	15.00 X 40.00	RR 15.69 RR 5.88	9.29 6.27	519 889	1284 2198	2.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P10	15.00 X 40.00	RR 15.69 RR 5.88	3.15 1.37	42 2560	65 3984	1.56	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P11	15.00 X 40.00	EL 42.44 RR 7.96	3.72 2.06	58 1177	199 4058	3.45	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P12	15.00 X 40.00	RR 14.30 RR 5.36	14.10 9.36	545 664	1515 1848	2.78	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P13	15.00 X 40.00	RR 14.30 RR 5.36	16.55 11.12	569 276	1785 868	3.14	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P14	15.00 X 40.00	RR 14.30 RR 5.36	5.73 3.89	81 1547	226 4330	2.80	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P15	20.00 X 60.00	EL 24.22 RR 4.04	0.00 -6.70	1154 5158	1182 5283	1.02	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P16	20.00 X 50.00	EL 24.22 EL 9.69	28.56 18.71	670 3672	1668 9137	2.49	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P17	20.00 X 50.00	EL 24.22 EL 9.69	0.00 -18.60	286 2868	295 2962	1.03	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P18	20.00 X 60.00	EL 24.22 RR 1.61	37.75 25.77	870 1975	3616 8206	4.16	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P19	20.00 X 60.00	EL 24.22 RR 4.04	0.00 -15.19	72 3690	89 4578	1.24	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P20	20.00 X 50.00	EL 24.22 EL 9.69	31.73 21.05	741 1682	2881 6538	3.89	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P21	20.00 X 50.00	EL 24.22 EL 9.69	0.00 -14.30	214 2745	304 3908	1.42	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P22	20.00 X 60.00	EL 24.22 RR 4.04	28.84 19.50	591 1730	3044 8919	5.16	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P23	15.00 X 40.00	RR 14.30 RR 5.36	6.62 4.53	147 1468	442 4414	3.01	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P24	15.00 X 40.00	RR 14.30 RR 5.36	13.32 8.80	546 113	1735 358	3.18	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P25	15.00 X 40.00	RR 14.30 RR 5.36	14.38 9.58	558 1286	1321 3046	2.37	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P26	15.00 X 40.00	EL 42.44 RR 7.96	5.56 3.41	95 1166	345 4228	3.62	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P27	20.00 X 60.00	RR 11.76 RR 3.92	6.91 4.09	790 1136	2355 3386	2.98	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

P28	20.00 X 60.00	RR 11.25 RR 3.92	5.96 3.79	3770 1836	3796 1848	1.01	2.45 (2 ø 12.5) 7.36 (6 ø 12.5)
P29	20.00 X 60.00	RR 126.46 RR 3.34	11.89 8.28	5709 6223	5679 6190	0.99	1.57 (2 ø 10.0) 11.00 (14 ø 10.0)
P30	20.00 X 60.00	RR 126.46 RR 3.34	12.65 8.80	5819 7059	5946 7212	1.02	1.57 (2 ø 10.0) 11.78 (15 ø 10.0)
P31	20.00 X 60.00	RR 126.46 RR 3.34	12.66 8.80	5816 7076	6697 8148	(*) 1.15	4.02 (2 ø 16.0) 14.07 (7 ø 16.0)
P32	20.00 X 60.00	RR 126.46 RR 3.34	12.60 8.77	5796 6877	5953 7064	1.03	1.57 (2 ø 10.0) 11.78 (15 ø 10.0)
P33	20.00 X 60.00	RR 18.34 RR 3.34	10.34 7.32	1805 5300	2290 6723	1.27	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P34	15.00 X 40.00	RR 5.07 RR 1.90	6.59 4.49	338 2231	632 4167	1.87	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P35	15.00 X 40.00	RR 15.69 RR 5.88	9.91 6.72	1481 292	1617 319	1.09	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P36	20.00 X 60.00	RR 20.07 RR 42.73	11.89 8.46	2323 3290	2729 3863	1.17	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA1	20.00 X 60.00	RR 10.03 RR 3.34	4.96 2.80	1385 25	2563 45	1.85	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA2	20.00 X 60.00	RR 10.03 RR 3.34	2.76 1.20	604 1056	2041 3569	3.38	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA3	20.00 X 60.00	RR 10.03 RR 3.34	3.98 1.93	779 1121	2156 3103	2.77	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA4	20.00 X 60.00	RR 10.03 RR 3.34	3.92 1.90	831 1260	2139 3242	2.57	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA5	20.00 X 60.00	RR 10.03 RR 3.34	3.96 1.93	795 1362	2106 3606	2.65	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA6	20.00 X 60.00	RR 10.03 RR 3.34	3.81 1.90	701 1280	2086 3809	2.98	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

PA7	20.00 X 60.00	RR 10.03 RR 3.34	1.31 -0.21	690 455	2114 1393	3.06	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA8	20.00 X 60.00	RR 10.03 RR 3.34	5.27 3.15	486 1716	1911 6757	3.94	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA9	20.00 X 60.00	RR 10.03 RR 3.34	8.56 5.19	647 1032	2410 3846	3.73	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA10	20.00 X 60.00	RR 10.03 RR 3.34	9.53 5.66	757 1469	2369 4599	3.13	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA11	20.00 X 60.00	RR 10.03 RR 3.34	9.63 5.71	829 1166	2491 3506	3.01	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA12	20.00 X 60.00	RR 10.03 RR 3.34	9.61 5.69	812 662	2636 2149	3.25	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA13	20.00 X 60.00	RR 11.76 RR 3.92	7.66 4.47	480 579	2431 2934	5.07	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA14	20.00 X 60.00	RR 11.76 RR 3.92	5.54 3.17	575 374	2445 1592	4.25	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

(*) Quantidade de barras alterada pelo usuário (para mais)

c) Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

FUNDAÇÕES NV--60						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	20x60	7.47	0.00	10.37	0.03	0.03
P2	20x60	12.57	0.00	17.19	0.05	0.05
P3	20x60	12.59	0.00	17.17	0.05	0.05
P4	20x60	12.61	0.00	17.19	0.05	0.05
P5	20x60	12.46	0.00	17.00	0.05	0.05
P6	20x60	11.90	0.00	16.33	0.05	0.05
P7	20x60	9.09	0.00	12.64	0.04	0.03
P8	15x40	5.38	0.00	7.11	0.04	0.04
P9	15x40	5.76	0.00	7.49	0.04	0.04
P10	15x40	1.96	0.00	1.82	0.01	0.01
P11	15x40	2.31	0.00	2.52	0.01	0.01
P12	15x40	8.74	0.00	11.08	0.06	0.06
P13	15x40	10.21	0.00	13.14	0.08	0.07
P14	15x40	3.57	0.00	4.71	0.03	0.03
P15	20x60	0.00	-4.49	0.00	0.00	0.00
P16	20x50	20.67	0.00	27.22	0.10	0.09
P17	20x50	0.00	-13.09	0.00	0.00	0.00
P18	20x60	27.30	0.00	37.30	0.11	0.10
P19	20x60	0.00	-10.55	0.00	0.00	0.00
P20	20x50	22.94	0.00	30.44	0.11	0.10
P21	20x50	0.00	-10.03	0.00	0.00	0.00
P22	20x60	20.94	0.00	28.44	0.08	0.08
P23	15x40	4.10	0.00	5.45	0.03	0.03
P24	15x40	8.28	0.00	10.43	0.06	0.06
P25	15x40	8.92	0.00	11.33	0.07	0.06
P26	15x40	3.41	0.00	4.14	0.02	0.02
P27	20x60	5.06	0.00	6.15	0.02	0.02
P28	20x60	4.52	0.00	6.20	0.02	0.02
P29	20x60	8.72	0.00	11.94	0.03	0.03
P30	20x60	9.28	0.00	12.66	0.04	0.03
P31	20x60	9.28	0.00	12.67	0.04	0.03
P32	20x60	9.24	0.00	12.62	0.04	0.03
P33	20x60	7.61	0.00	10.58	0.03	0.03
P34	15x40	4.13	0.00	5.38	0.03	0.03
P35	15x40	6.13	0.00	8.01	0.05	0.04
P36	20x60	8.77	0.00	12.21	0.04	0.03
PA1	20x60	3.64	0.00	4.24	0.01	0.01
PA2	20x60	2.09	0.00	1.98	0.01	0.01
PA3	20x60	2.99	0.00	3.00	0.01	0.01
PA4	20x60	2.95	0.00	2.95	0.01	0.01
PA5	20x60	2.98	0.00	2.99	0.01	0.01
PA6	20x60	2.86	0.00	2.94	0.01	0.01
PA7	20x60	0.98	-0.05	0.23	0.00	0.00
PA8	20x60	3.89	0.00	4.66	0.01	0.01
PA9	20x60	6.30	0.00	7.59	0.02	0.02
PA10	20x60	7.06	0.00	8.24	0.02	0.02
PA11	20x60	7.13	0.00	8.31	0.02	0.02
PA12	20x60	7.11	0.00	8.30	0.02	0.02
PA13	20x60	5.69	0.00	6.60	0.02	0.02
PA14	20x60	4.09	0.00	4.79	0.01	0.01

d) Vigas do pavimento FUNDAÇÕES NV--60

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
VB1	943.57	2 ø 10.0		-2044.26 -1654.95	2 ø 10.0 2 ø 10.0		Aviso 26
VB2	124.95 115.50 108.18 232.50 211.39 212.90 213.26 211.80 214.16 194.50 192.52 234.69	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-368.96 -349.09 -335.20 -699.57 -436.21 -690.25 -435.70 -698.64 -390.49 -655.01 -592.02 -39.34	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		
VB3	761.96	2 ø 10.0		-564.68 -923.05	2 ø 10.0 2 ø 10.0		Aviso 26
VB4	906.62	2 ø 10.0		-903.00 -56.79	2 ø 10.0 2 ø 10.0		Aviso 26
VB5	340.67	2 ø 10.0	2 ø 10.0	-0.04	2 ø 10.0	2 ø 10.0	Aviso 02
VB6	506.72	2 ø 10.0	2 ø 10.0	-696.21	2 ø 10.0	2 ø 10.0	Avisos 26, 02
VB7	461.79	2 ø 10.0		-128.63	2 ø 10.0		Aviso 02
VB8	331.21	2 ø 10.0	2 ø 10.0	-545.53	2 ø 10.0	2 ø 10.0	Avisos 26, 02
VB9	905.46	2 ø 10.0		-894.50 -62.76	2 ø 10.0 2 ø 10.0		Aviso 26
VB10	761.01	2 ø 10.0		-536.43 -953.15	2 ø 10.0 2 ø 10.0		Aviso 26
VB11	1003.99 434.37 1663.10 1743.06 1748.08 1720.39 336.57 359.96	2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5	 2 ø 10.0	-1698.58 -2247.22 -3265.29 -3503.58 -3341.48 -2823.87 -1028.26 -47.46	2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 12.5 2 ø 16.0 2 ø 16.0	 2 ø 10.0 2 ø 10.0	Avisos 26, 02, 48
VB12	953.63	2 ø 10.0		-1797.55 -1879.82	2 ø 10.0 2 ø 10.0		Aviso 26
VB13	932.13 635.34	2 ø 10.0 2 ø 10.0	2 ø 10.0	-2194.74 -2552.75	2 ø 12.5 2 ø 10.0	2 ø 10.0	Aviso 26
VB14	0.00	Erro D1			Erro D1		
VB15	335.79	2 ø 10.0		-0.04 -1066.25	2 ø 10.0 2 ø 10.0		
VB16	854.36	2 ø 10.0		-81.62	2 ø 10.0		Avisos 26, 02
VB17	0.00	Erro D1			Erro D1		
VB18	717.25	2 ø 10.0		-46.34	2 ø 10.0		Avisos 26, 02
VB19	114.75	2 ø 10.0	2 ø 10.0	-1864.31	2 ø 10.0	2 ø 10.0	Aviso 26
VB20	718.66	2 ø 10.0		-50.03	2 ø 10.0		Avisos 26, 02
VB21	114.96	2 ø 10.0	2 ø 10.0	-1866.25	2 ø 10.0	2 ø 10.0	Aviso 26
VB22	693.06	2 ø 10.0		-41.53	2 ø 10.0		Avisos 26, 02
VB23	112.91	2 ø 10.0	2 ø 10.0	-1754.68	2 ø 10.0	2 ø 10.0	Aviso 26
VB24	1515.32	2 ø 10.0		-511.81	2 ø 10.0		Aviso 26
VB25	420.77	2 ø 12.5	2 ø 10.0	-0.04 -1329.95	2 ø 12.5 2 ø 12.5	2 ø 10.0	Avisos 26, 02, 48
VB26	359.45	2 ø 10.0		-286.03	2 ø 10.0		

				-337.83	2 ø 10.0		
VB27	823.37 298.74	2 ø 10.0 2 ø 10.0		-56.19 -1831.44 -449.41	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB28	270.75 923.75	2 ø 10.0 2 ø 10.0		-49.04 -1584.37 -44.99	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB29	283.27	2 ø 10.0		-500.25	2 ø 10.0		Aviso 26
VB30	160.49 783.29	2 ø 10.0 2 ø 10.0	2 ø 10.0	-2215.65 -832.59 -2072.75	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB31	894.71 681.64	2 ø 10.0 2 ø 10.0		-1271.54 -1733.53 -748.31	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26

5. Dados do Radier

FUNDAÇÕES NV--60	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

Seção (cm)				Cargas (kgf/m²)				Temperatura Caso T1 Caso T2 (ºC)	Retração Deform. X Deform. Y (‰)
Radier	**H**	**Elevação**	**Nível**	**Peso Próprio**	**Acidental Revestimento**	**Paredes Outras**	**Total**		
R1	15	0.00	0.00	375.00	500.00 183.00	0.00 0.00	1058.00		

a) Cálculos do Radier

FUNDAÇÕES NV--60	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

ARMADURAS POSITIVAS (RADIER)												
		Momento positivo				Momento negativo						
Radier	**Direção**	**Seção**	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**	**Seção**	**Flexão**	**Verificação axial (compressão)**	**Verificação axial (tração)**	**Armadura inferior**	**Armadura superior**	**Cisalhamento**
R1	X	bw = 100.0 cm h = 15.0 cm	Md = 917 kgf.m/m As = 2.13 cm²/m A's = 0.00 cm²/m		Fd = 11.79 tf Situação: PE As = 2.38 cm²/m A's = 0.70 cm²/m	bw = 100.0 cm h = 15.0 cm	Md = 608 kgf.m/m As = 1.42 cm²/m A's = 0.00 cm²/m		Fd = 11.79 tf Situação: GE As = 3.44 cm²/m A's = 0.00 cm²/m	As = 2.38 cm²/m ø8.0 c/20 (2.51 cm²/m) M = 138.99 kgf.m/m F = 7.02 tf fiss = 0.05 mm		vsd = 1.18 tf/m vrd1 = 8.63 tf/m Modelo I vrd2 = 62.21 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 15.0 cm	Md = 917 kgf.m/m As = 2.32 cm²/m A's = 0.00 cm²/m		Fd = 2.72 tf Situação: GE As = 1.36 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 15.0 cm	Md = 325 kgf.m/m As = 0.80 cm²/m A's = 0.00 cm²/m		Fd = 2.72 tf Situação: GE As = 1.30 cm²/m A's = 0.00 cm²/m	As = 2.32 cm²/m ø8.0 c/20 (2.51 cm²/m) M = 205.25 kgf.m/m F = 1.62 tf fiss = 0.02 mm		vsd = 5.50 tf/m vrd1 = 8.04 tf/m vrd2 = 57.02 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m

MALHA BASE SUPERIOR		
Laje	**As,cal**	**As,ef**
R1	2.32 cm²/m	ø8.0 c/10 cm (5.03 cm²/m)

6. Pavimento QUADRA-NV 00

a) Cálculo dos Pilares

QUADRA-NV 000	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 2		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	20.00 X 60.00	RR 20.07 RR 20.36	8.77 6.28	1811 5272	2215 6445	1.22	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P2	20.00 X 60.00	EL 112.45 EL 37.48	15.19 10.80	6138 7588	6147 7601	1.00	1.57 (2 ø 10.0) 11.78 (15 ø 10.0)
P3	20.00 X 60.00	RR 126.46 RR 42.15	14.96 10.66	6553 7438	6551 7436	1.00	1.57 (2 ø 10.0) 12.57 (16 ø 10.0)
P4	20.00 X 60.00	RR 108.13 RR 36.04	14.97 10.68	5813 7435	5799 7417	1.00	1.57 (2 ø 10.0) 11.00 (14 ø 10.0)
P5	20.00 X 60.00	RR 126.46 RR 36.04	14.89 10.62	6552 7543	6527 7515	1.00	1.57 (2 ø 10.0) 12.57 (16 ø 10.0)
P6	20.00 X 60.00	RR 108.13 RR 36.04	16.09 11.28	3385 7055	3416 7118	1.01	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P7	20.00 X 60.00	RR 108.13 RR 36.04	12.07 8.62	1867 3260	2288 3995	1.23	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P15	20.00 X 60.00	EL 124.56 RR 20.76	0.00 -9.38	660 3721	780 4394	1.18	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P17	20.00 X 50.00	EL 124.56 EL 49.82	0.00 -15.24	265 2328	308 2698	1.16	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P18	20.00 X 60.00	EL 124.56 RR 20.76	31.01 21.12	4723 1146	4796 1164	1.02	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P19	20.00 X 60.00	EL 114.18 RR 18.45	0.00 -16.13	341 3286	445 4290	1.31	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P20	20.00 X 50.00	EL 124.56 EL 49.82	27.35 18.68	4183 1653	4296 1697	1.03	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P21	20.00 X 50.00	EL 124.56 EL 49.82	0.00 -11.37	269 2368	514 4518	1.91	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P22	20.00 X 60.00	EL 124.56 RR 20.76	22.78 15.31	3490 2110	3672 2220	1.05	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P27	20.00 X 60.00	RR 8.30 EL 5.54	0.42 0.16	129 38	2212 649	17.20	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P29	20.00 X 60.00	RR 126.46 RR 2.77	12.27 8.73	6254 8064	6562 8462	1.05	2.45 (2 ø 12.5) 13.50 (11 ø 12.5)
P30	20.00 X 60.00	RR 126.46 RR 2.77	12.77 9.12	6302 8731	6508 9016	1.03	2.45 (2 ø 12.5) 13.50 (11 ø 12.5)
P31	20.00 X 60.00	RR 126.46 RR 2.77	12.79 9.13	6306 8733	6507 9012	1.03	2.45 (2 ø 12.5) 13.50 (11 ø 12.5)
P32	20.00 X 60.00	RR 126.46 RR 2.77	12.71 9.07	6297 8615	6512 8909	1.03	2.45 (2 ø 12.5) 13.50 (11 ø 12.5)
P33	20.00 X 60.00	RR 18.34 RR 38.81	12.01 8.56	1627 9253	1657 9424	1.02	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P35	15.00 X 40.00	RR 81.43 RR 30.53	4.84 3.07	572 1700	1005 2988	1.76	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
PA1	20.00 X 60.00	RR 8.30 RR 2.77	2.79 1.78	1787 322	1995 359	1.12	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA2	20.00 X 60.00	EL 16.61 RR 2.77	0.42 0.13	32 885	265 7390	8.35	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA3	20.00 X 60.00	EL 16.61 RR 2.77	0.96 0.54	19 372	392 7503	20.17	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA4	20.00 X 60.00	EL 16.61 RR 2.77	0.93 0.52	19 347	407 7493	21.60	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA5	20.00 X 60.00	EL 16.61 RR 2.77	0.95 0.53	11 331	251 7534	22.74	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

PA6	20.00 X 60.00	EL 16.61 RR 2.77	1.08 0.64	85 545	1123 7225	13.26	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA7	20.00 X 60.00	RR 8.30 RR 2.77	0.00 -2.51	2440 1113	2451 1118	1.00	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
PA8	20.00 X 60.00	EL 16.61 RR 2.77	0.84 0.48	34 684	370 7487	10.94	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA9	20.00 X 60.00	EL 16.61 RR 2.77	2.45 1.59	51 1017	397 7875	7.75	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA10	20.00 X 60.00	EL 16.61 RR 2.77	3.11 2.08	65 343	1406 7469	21.80	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA11	20.00 X 60.00	EL 16.61 RR 2.77	3.07 2.06	64 344	1384 7479	21.72	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA12	20.00 X 60.00	EL 16.61 RR 2.77	3.07 2.06	64 245	1802 6931	28.27	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA13	20.00 X 60.00	EL 16.61 RR 2.77	2.40 1.59	50 1167	340 7879	6.75	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PA14	20.00 X 60.00	EL 16.61 RR 2.77	0.65 0.33	14 462	220 7474	16.18	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

b) Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

QUADRA-NV 000						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	20x60	6.56	0.00	9.11	0.03	0.03
P2	20x60	11.04	0.00	15.41	0.04	0.04
P3	20x60	10.88	0.00	15.20	0.04	0.04
P4	20x60	10.89	0.00	15.22	0.04	0.04
P5	20x60	10.83	0.00	15.13	0.04	0.04
P6	20x60	11.73	0.00	16.09	0.05	0.04
P7	20x60	8.88	0.00	12.35	0.04	0.03
P15	20x60	0.00	-6.46	0.00	0.00	0.00
P17	20x50	0.00	-10.72	0.00	0.00	0.00
P18	20x60	22.43	0.00	30.57	0.09	0.08
P19	20x60	0.00	-11.28	0.00	0.00	0.00
P20	20x50	19.74	0.00	27.05	0.09	0.09
P21	20x50	0.00	-7.95	0.00	0.00	0.00
P22	20x60	16.55	0.00	22.38	0.07	0.06
P27	20x60	0.32	0.00	0.44	0.00	0.00
P29	20x60	8.95	0.00	12.49	0.04	0.03
P30	20x60	9.32	0.00	13.02	0.04	0.03
P31	20x60	9.33	0.00	13.03	0.04	0.03
P32	20x60	9.27	0.00	12.95	0.04	0.03
P33	20x60	8.79	0.00	12.25	0.04	0.03
P35	15x40	3.04	0.00	3.71	0.02	0.02
PA1	20x60	2.03	0.00	2.78	0.01	0.01
PA2	20x60	0.35	0.00	0.43	0.00	0.00
PA3	20x60	0.75	0.00	1.00	0.00	0.00
PA4	20x60	0.73	0.00	0.97	0.00	0.00
PA5	20x60	0.74	0.00	0.99	0.00	0.00
PA6	20x60	0.83	0.00	1.12	0.00	0.00
PA7	20x60	0.00	-1.78	0.00	0.00	0.00
PA8	20x60	0.64	0.00	0.88	0.00	0.00
PA9	20x60	1.80	0.00	2.48	0.01	0.01
PA10	20x60	2.28	0.00	3.16	0.01	0.01
PA11	20x60	2.26	0.00	3.12	0.01	0.01
PA12	20x60	2.26	0.00	3.12	0.01	0.01
PA13	20x60	1.77	0.00	2.45	0.01	0.01
PA14	20x60	0.49	0.00	0.68	0.00	0.00

c) Vigas do pavimento QUADRA-NV 000

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
V1	0.00	Erro D1			Erro D1		
V2	0.11 3220.48	2 ø 12.5 2 ø 10.0	2 ø 10.0	-135.01 -824.86 -4990.87	2 ø 12.5 2 ø 16.0 2 ø 12.5	2 ø 10.0 2 ø 10.0	Avisos 02, 19
V3	652.07 220.54 378.37 245.73 395.20 238.37 379.84 211.02 179.36	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	-103.86 -144.77 -1021.72 -81.61 -1029.71 -51.26 -1032.90 -55.41 -993.18 -63.58 -414.27	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Aviso 26
V4	659.18	2 ø 10.0	2 ø 10.0	-456.62	2 ø 10.0	2 ø 10.0	Avisos 26, 02
V5	986.17	2 ø 10.0		-538.73	2 ø 10.0		Avisos 26, 02
V6	934.55	2 ø 10.0	2 ø 10.0	-1300.07	2 ø 10.0	2 ø 10.0	Avisos 26, 02
V7	258.65	2 ø 10.0	2 ø 10.0	-82.73	2 ø 10.0	2 ø 10.0	Avisos 26, 02
V8	71.22 140.67 1139.60 985.26 983.67 998.10 127.20	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	-0.04 -279.60 -1400.46 -1630.86 -1652.03 -1618.99 -1492.92 -118.39	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Aviso 26
V9	0.00	Erro D1			Erro D1		
V10	563.41	2 ø 10.0		-0.04 -1174.30	2 ø 10.0 2 ø 10.0		Aviso 26
V11	62.93	2 ø 10.0		-1830.31	2 ø 10.0		Aviso 26
V12	679.63	2 ø 10.0	2 ø 10.0				Avisos 26, 02
V13	0.00	Erro D1			Erro D1		
V14	95.73	2 ø 10.0	2 ø 10.0	-26.15	2 ø 10.0	2 ø 10.0	Aviso 26
V15	2.02	2 ø 10.0	2 ø 10.0	-2151.79	2 ø 10.0	2 ø 10.0	Aviso 26
V16	92.34	2 ø 10.0	2 ø 10.0	-29.34	2 ø 10.0	2 ø 10.0	Aviso 26
V17	2.06	2 ø 10.0	2 ø 10.0	-2157.37	2 ø 10.0	2 ø 10.0	Aviso 26
V18	138.41	2 ø 10.0	2 ø 10.0	-0.04	2 ø 10.0	2 ø 10.0	Aviso 26
V19	1.81	2 ø 10.0	2 ø 10.0	-2109.37	2 ø 10.0	2 ø 10.0	Aviso 26
V20	2380.22	2 ø 12.5	2 ø 12.5	-635.88	2 ø 12.5	2 ø 12.5	Aviso 26
V21	567.19	2 ø 10.0		-747.02	2 ø 10.0		Aviso 26

7. Pavimento TÉRREO NV 300

a) Cálculo dos Pilares

TÉRREO NV 300	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	20.00 X 60.00	RR 61.07 RR 20.36	9.37 6.01	4934 4167	5060 4274	1.03	1.57 (2 ø 10.0) 8.64 (11 ø 10.0)
P2	20.00 X 60.00	EL 105.53 EL 35.18	11.21 7.24	5829 9154	5860 9201	1.01	2.45 (2 ø 12.5) 11.04 (9 ø 12.5)
P3	20.00 X 60.00	RR 126.46 RR 42.15	11.10 7.16	4845 6483	4872 6518	1.01	4.02 (2 ø 16.0) 8.04 (4 ø 16.0)
P4	20.00 X 60.00	RR 108.13 RR 36.04	11.11 7.17	4408 9248	4455 9348	1.01	4.02 (2 ø 16.0) 8.04 (4 ø 16.0)
P5	20.00 X 60.00	RR 126.46 RR 36.04	11.08 7.15	4840 6520	4865 6554	1.01	4.02 (2 ø 16.0) 8.04 (4 ø 16.0)
P6	20.00 X 60.00	RR 108.13 RR 36.04	10.97 7.06	5876 9280	5844 9229	0.99	2.45 (2 ø 12.5) 11.04 (9 ø 12.5)
P7	20.00 X 60.00	RR 108.13 RR 36.04	8.92 5.63	5385 3433	5531 3526	1.03	1.57 (2 ø 10.0) 9.42 (12 ø 10.0)
P8	15.00 X 40.00	RR 81.43 RR 30.53	3.67 1.82	47 1695	113 4083	2.41	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P9	15.00 X 40.00	RR 81.43 RR 30.53	4.86 2.53	559 1725	994 3066	1.78	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P11	15.00 X 40.00	EL 136.09 RR 25.52	1.11 0.16	188 86	1193 548	6.34	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P12	15.00 X 40.00	RR 81.43 RR 30.53	8.18 4.52	628 772	1353 1664	2.16	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P13	15.00 X 40.00	RR 81.43 RR 30.53	10.01 5.22	1057 1063	1464 1472	1.39	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P14	15.00 X 40.00	RR 81.43 RR 30.53	2.69 1.18	140 395	960 2704	6.84	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P15	20.00 X 60.00	EL 124.56 RR 20.76	0.00 -7.76	911 2682	1001 2948	1.10	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P16	20.00 X 50.00	EL 124.56 EL 49.82	25.47 12.94	4534 3156	4686 3262	1.03	1.57 (2 ø 10.0) 5.50 (7 ø 10.0)
P17	20.00 X 50.00	EL 124.56 EL 49.82	0.00 -12.26	496 3189	546 3508	1.10	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P18	20.00 X 60.00	EL 124.56 RR 20.76	25.23 16.53	4295 1228	4404 1259	1.03	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P19	20.00 X 60.00	EL 114.18 RR 18.45	0.00 -10.94	809 3879	935 4480	1.16	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P20	20.00 X 50.00	EL 124.56 EL 49.82	19.80 12.89	3403 3208	3559 3355	1.05	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P21	20.00 X 50.00	EL 124.56 EL 49.82	0.00 -10.97	518 2322	1036 4649	2.00	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P22	20.00 X 60.00	EL 124.56 RR 20.76	20.77 13.39	3351 1632	3601 1754	1.07	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P23	15.00 X 40.00	RR 81.43 RR 30.53	3.12 1.49	409 304	1238 920	3.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P24	15.00 X 40.00	RR 81.43 RR 30.53	7.81 4.26	581 2211	997 3792	1.72	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P25	15.00 X 40.00	RR 81.43 RR 30.53	8.89 4.42	1077 1549	1341 1929	1.25	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P26	15.00 X 40.00	EL 136.09 RR 25.52	1.65 0.55	258 714	936 2584	3.62	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P28	20.00 X 60.00	RR 61.07 RR 20.36	8.64 4.85	4217 3337	4225 3343	1.00	1.57 (2 ø 10.0) 7.07 (9 ø 10.0)

P29	20.00 X 60.00	RR 126.46 RR 36.04	11.13 7.18	4951 5830	4922 5795	0.99	1.57 (2 ø 10.0) 7.85 (10 ø 10.0)
P30	20.00 X 60.00	RR 126.46 RR 36.04	11.05 7.13	4927 5847	4912 5829	1.00	1.57 (2 ø 10.0) 7.85 (10 ø 10.0)
P31	20.00 X 60.00	RR 126.46 RR 36.04	11.06 7.13	4929 5844	4914 5825	1.00	1.57 (2 ø 10.0) 7.85 (10 ø 10.0)
P32	20.00 X 60.00	RR 126.46 RR 36.04	11.04 7.12	4928 5809	4917 5796	1.00	1.57 (2 ø 10.0) 7.85 (10 ø 10.0)
P33	20.00 X 60.00	RR 108.13 RR 38.81	10.93 7.03	5853 8028	6035 8278	1.03	1.57 (2 ø 10.0) 11.00 (14 ø 10.0)
P34	15.00 X 40.00	RR 81.43 RR 30.53	2.73 1.15	169 983	634 3676	3.74	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P35	15.00 X 40.00	RR 81.43 RR 30.53	4.73 2.53	120 2518	201 4234	1.68	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

b) Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

TÉRREO NV 300						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	20x60	6.96	0.00	9.72	0.03	0.03
P2	20x60	8.16	0.00	11.42	0.03	0.03
P3	20x60	8.07	0.00	11.30	0.03	0.03
P4	20x60	8.08	0.00	11.32	0.03	0.03
P5	20x60	8.06	0.00	11.29	0.03	0.03
P6	20x60	7.99	0.00	11.18	0.03	0.03
P7	20x60	6.57	0.00	9.19	0.03	0.02
P8	15x40	2.32	0.00	2.90	0.02	0.02
P9	15x40	3.05	0.00	3.72	0.02	0.02
P11	15x40	0.71	0.00	0.97	0.01	0.01
P12	15x40	5.13	0.00	6.03	0.04	0.03
P13	15x40	6.23	0.00	7.56	0.04	0.04
P14	15x40	1.71	0.00	2.14	0.01	0.01
P15	20x60	0.00	-5.35	0.00	0.00	0.00
P16	20x50	18.40	0.00	25.13	0.09	0.08
P17	20x50	0.00	-8.65	0.00	0.00	0.00
P18	20x60	18.29	0.00	24.99	0.07	0.07
P19	20x60	0.00	-7.62	0.00	0.00	0.00
P20	20x50	14.30	0.00	19.63	0.07	0.06
P21	20x50	0.00	-7.73	0.00	0.00	0.00
P22	20x60	15.10	0.00	20.55	0.06	0.06
P23	15x40	1.96	0.00	2.49	0.01	0.01
P24	15x40	4.91	0.00	5.73	0.03	0.03
P25	15x40	5.56	0.00	6.62	0.04	0.04
P26	15x40	1.03	0.00	1.42	0.01	0.01
P28	20x60	6.45	0.00	9.01	0.03	0.02
P29	20x60	8.10	0.00	11.33	0.03	0.03
P30	20x60	8.04	0.00	11.26	0.03	0.03
P31	20x60	8.05	0.00	11.27	0.03	0.03
P32	20x60	8.03	0.00	11.25	0.03	0.03
P33	20x60	7.95	0.00	11.13	0.03	0.03
P34	15x40	1.76	0.00	2.12	0.01	0.01
P35	15x40	2.97	0.00	3.61	0.02	0.02

c) Vigas do pavimento TÉRREO NV 300

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
V101	1373.37	2 ø 10.0		-1299.34 -1502.01	2 ø 10.0 2 ø 10.0		Avisos 26, 48
V102	2930.54	2 ø 10.0		-456.27 -810.37	2 ø 10.0 2 ø 10.0		
V103	1191.31	2 ø 10.0		-235.09 -68.09	2 ø 10.0 2 ø 10.0		Aviso 48
V104	964.43	2 ø 10.0		-1818.83	2 ø 10.0		Avisos 26, 02, 48
V105	2507.40	2 ø 10.0		-918.62	2 ø 10.0		Avisos 26, 02, 48
V106	1337.02	2 ø 10.0		-2937.80	2 ø 10.0		Avisos 26, 02, 48
V107	1151.08	2 ø 10.0		-374.05	2 ø 10.0		Avisos 26, 02, 48
V108	1218.57	2 ø 10.0		-147.19 -128.51	2 ø 10.0 2 ø 10.0		Aviso 48
V109	2929.65	2 ø 10.0		-430.42 -838.84	2 ø 10.0 2 ø 10.0		
V110	1411.94	2 ø 10.0		-687.92 -2010.38	2 ø 10.0 2 ø 10.0		Avisos 26, 48
V111	1162.30	2 ø 10.0	2 ø 10.0	-147.79 -3098.77	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 48
V112	0.00	Erro D1			Erro D1		
V113	1655.89	2 ø 10.0		-1732.42	2 ø 10.0		Avisos 26, 48
V114	180.85	2 ø 10.0		-630.79	2 ø 10.0		Avisos 26, 48
V115	103.00	2 ø 10.0		-36.44 -5.99	2 ø 10.0 2 ø 10.0		Avisos 26, 48
V116	987.19 219.78	2 ø 10.0 2 ø 10.0		-22.38 -1848.61 -287.69	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 48
V117	113.11 1136.02	2 ø 10.0 2 ø 10.0		-6.83 -1414.25 -44.17	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 48
V118	1545.31	2 ø 10.0		-1740.28	2 ø 10.0		Avisos 26, 48
V119	1079.26 276.39	2 ø 10.0 2 ø 10.0	2 ø 10.0	-0.04 -1592.93 -346.73 -2719.23	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5	2 ø 10.0 2 ø 10.0	Aviso 48
V120	1218.59 965.49	2 ø 10.0 2 ø 10.0		-0.04 -2069.88 -396.18	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 48

d) Dados das Lajes

TÉRREO NV 300	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 2.50 cm	

Seção (cm)						Cargas (kgf/m²)				Temperatura Caso T1 Caso T2 (ºC)	Retração Deform. X Deform. Y (‰)
Laje	**Tipo**	**H**	**ee ec**	**enx eny**	**eex eey**	**Peso Próprio**	**Acidental Revestimento**	**Paredes Outras**	**Total**		
L101	Maciça	10				250.00	100.00 80.00	0.00 0.00	430.00		
L102	Maciça	10				250.00	100.00 80.00	0.00 0.00	430.00		
L103	Maciça	10				250.00	100.00 80.00	0.00 0.00	430.00		
L104	Maciça	10				250.00	100.00 80.00	0.00 0.00	430.00		

e) Cálculos das Lajes

TÉRREO NV 300	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 2.50 cm	

ARMADURAS POSITIVAS (LAJE)							
Laje	**Direção**	**Momento positivo**		**Momento negativo**		**Armadura inferior**	**Cisalhamento**
		Seção	**Flexão**	**Seção**	**Flexão**		
L101	X	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.33 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm		As = 1.33 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 261.94 kgf.m/m F = 0.00 tf fiss = 0.06 mm	vsd = 0.79 tf/m vrd1 = 6.20 tf/m Modelo I vrd2 = 43.32 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.46 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm	Md = 588 kgf.m/m As = 2.16 cm²/m A's = 0.00 cm²/m	As = 1.46 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 256.79 kgf.m/m F = 0.00 tf fiss = 0.06 mm	vsd = 1.00 tf/m vrd1 = 5.71 tf/m vrd2 = 39.24 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L102	X	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.33 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm	Md = 517 kgf.m/m As = 1.71 cm²/m	As = 1.33 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 160.25 kgf.m/m F = 0.00 tf fiss = 0.02 mm	vsd = 0.88 tf/m vrd1 = 6.20 tf/m Modelo I vrd2 = 43.32 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m

					A's = 0.00 cm²/m		
	Y	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.46 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm		As = 1.46 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 110.79 kgf.m/m F = 0.00 tf fiss = 0.01 mm	vsd = 0.53 tf/m vrd1 = 5.71 tf/m vrd2 = 39.24 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L103	X	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.33 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm	Md = 517 kgf.m/m As = 1.71 cm²/m A's = 0.00 cm²/m	As = 1.33 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 160.25 kgf.m/m F = 0.00 tf fiss = 0.02 mm	vsd = 0.88 tf/m vrd1 = 6.20 tf/m Modelo I vrd2 = 43.32 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.46 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm		As = 1.46 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 110.79 kgf.m/m F = 0.00 tf fiss = 0.01 mm	vsd = 0.53 tf/m vrd1 = 5.71 tf/m vrd2 = 39.24 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
L104	X	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.33 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm		As = 1.33 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 261.94 kgf.m/m F = 0.00 tf fiss = 0.06 mm	vsd = 0.79 tf/m vrd1 = 6.20 tf/m Modelo I vrd2 = 43.32 tf/m vsw = 0.00 tf/m asw = 0.00 cm²/m
	Y	bw = 100.0 cm h = 10.0 cm	Md = 407 kgf.m/m As = 1.46 cm²/m A's = 0.00 cm²/m	bw = 100.0 cm h = 10.0 cm	Md = 588 kgf.m/m As = 2.16 cm²/m A's = 0.00 cm²/m	As = 1.46 cm²/m ø6.3 c/20 (1.56 cm²/m) M = 256.79 kgf.m/m F = 0.00 tf fiss = 0.06 mm	vsd = 1.00 tf/m vrd1 = 5.71 tf/m vrd2 = 39.24 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 Compr e-ssão**	**Flexo tração**	**Seção**	**Flexão**	**Flexo Compre-ssão**	**Flexo tração**	
V102 1	L101 L102	bw = 100.0 cm h = 10.0 cm	Md = 608 kgf.m/m As = 2.02 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 10.0 cm				As = 2.02 cm²/m (ø8.0 c/20 - 2.51 cm²/m) fiss = 0.07 mm
V109 1	L103 L104	bw = 100.0 cm h = 10.0 cm	Md = 608 kgf.m/m As = 2.02 cm²/m A's = 0.00 cm²/m			bw = 100.0 cm h = 10.0 cm				As = 2.02 cm²/m (ø8.0 c/20 - 2.51 cm²/m) fiss = 0.07 mm

8. Pavimento COBERTURA NV 620

a) Cálculo dos Pilares

COBERTURA NV 620	fck = 400.00 kgf/cm²	E = 318758 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 4		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	20.00 X 60.00	RR 55.36 RR 18.45	6.39 3.71	2066 4807	2203 5127	1.07	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P2	20.00 X 60.00	EL 34.60 EL 11.53	10.02 6.28	3238 4896	3347 5060	1.03	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P3	20.00 X 60.00	RR 126.46 RR 42.15	9.91 6.20	3025 4905	3303 5356	1.09	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P4	20.00 X 60.00	RR 108.13 RR 36.04	9.92 6.21	3036 4905	3306 5341	1.09	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P5	20.00 X 60.00	RR 126.46 RR 36.04	9.89 6.19	3070 4903	3310 5287	1.08	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P6	20.00 X 60.00	RR 108.13 RR 36.04	9.79 6.10	3536 4890	3726 5154	1.05	1.57 (2 ø 10.0) 5.50 (7 ø 10.0)
P7	20.00 X 60.00	RR 108.13 RR 36.04	7.73 4.67	2310 3879	2404 4036	1.04	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P15	20.00 X 60.00	EL 114.18 RR 19.03	0.00 -1.75	614 460	1532 1148	2.49	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P16	20.00 X 50.00	EL 114.18 EL 45.67	9.08 5.54	2134 1937	2284 2073	1.07	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P17	20.00 X 50.00	EL 110.72 EL 44.29	0.00 -5.38	1004 2636	1149 3015	1.14	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P18	20.00 X 60.00	EL 114.18 RR 18.45	13.24 8.41	2352 880	3137 1174	1.33	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

P19	20.00 X 60.00	EL 114.18 RR 18.45	0.09 -1.61	501 5057	704 7104	1.40	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P20	20.00 X 50.00	EL 110.72 EL 44.29	7.78 4.62	1692 2637	1973 3075	1.17	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P21	20.00 X 50.00	EL 110.72 EL 44.29	0.00 -6.54	1098 2374	1098 2372	1.00	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P22	20.00 X 60.00	EL 114.18 RR 18.45	12.98 8.23	2304 1403	2460 1498	1.07	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P28	20.00 X 60.00	RR 55.36 RR 18.45	5.72 3.23	1933 840	2132 927	1.10	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P29	20.00 X 60.00	RR 126.46 RR 36.04	9.94 6.22	3231 3921	3450 4187	1.07	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P30	20.00 X 60.00	RR 126.46 RR 36.04	9.86 6.17	3128 3930	3430 4310	1.10	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P31	20.00 X 60.00	RR 126.46 RR 36.04	9.87 6.17	3133 3930	3432 4305	1.10	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P32	20.00 X 60.00	RR 126.46 RR 36.04	9.85 6.16	3162 3927	3435 4266	1.09	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P33	20.00 X 60.00	RR 108.13 RR 38.81	9.74 6.07	3600 3914	3851 4187	1.07	1.57 (2 ø 10.0) 5.50 (7 ø 10.0)
P36	20.00 X 60.00	RR 108.13 RR 42.73	11.63 4.21	7147 2632	7102 2616	0.99	1.57 (2 ø 10.0) 11.78 (15 ø 10.0)

b) Quadro de Cargas e Taxa de Compressão Permanente nos Pilares

COBERTURA NV 620						
Pilares	**Seção (cm)**	**Nmáx (tf)**	**Nmin (tf)**	**Nperm (tf)**	**Taxa de compressão (bruta)**	**Taxa de compressão (homogeneizada)**
P1	20x60	4.70	0.00	6.57	0.02	0.02
P2	20x60	7.24	0.00	10.14	0.03	0.03
P3	20x60	7.16	0.00	10.02	0.03	0.03
P4	20x60	7.17	0.00	10.03	0.03	0.03
P5	20x60	7.15	0.00	10.00	0.03	0.03
P6	20x60	7.07	0.00	9.90	0.03	0.03
P7	20x60	5.66	0.00	7.91	0.02	0.02
P15	20x60	0.00	-1.18	0.00	0.00	0.00
P16	20x50	6.56	0.00	9.06	0.03	0.03
P17	20x50	0.00	-3.83	0.00	0.00	0.00
P18	20x60	9.61	0.00	13.32	0.04	0.04
P19	20x60	0.05	-1.09	0.00	0.00	0.00
P20	20x50	5.64	0.00	7.77	0.03	0.03
P21	20x50	0.00	-4.66	0.00	0.00	0.00
P22	20x60	9.42	0.00	13.07	0.04	0.04
P28	20x60	4.22	0.00	5.89	0.02	0.02
P29	20x60	7.18	0.00	10.05	0.03	0.03
P30	20x60	7.13	0.00	9.98	0.03	0.03
P31	20x60	7.14	0.00	9.99	0.03	0.03
P32	20x60	7.12	0.00	9.96	0.03	0.03
P33	20x60	7.04	0.00	9.85	0.03	0.03
P36	20x60	8.57	0.00	11.93	0.03	0.03

c) Vigas do pavimento COBERTURA NV 620

Viga	**Vãos**			**Nós**			**Avisos**
	Md (kgf.m)	**As**	**Als**	**Md (kgf.m)**	**As**	**Als**	
V201	1274.67	2 ø 10.0		-1086.25	2 ø 10.0		Avisos 26, 02
V202	1061.98	2 ø 10.0	2 ø 10.0	-1312.91	2 ø 10.0	2 ø 10.0	Avisos 26, 02
V203	1322.51	2 ø 10.0		-1234.94	2 ø 10.0		Avisos 26, 02
V204	809.11	2 ø 10.0	2 ø 10.0	-1243.90	2 ø 10.0	2 ø 10.0	Avisos 26, 02
V205	0.00	Erro D1			Erro D1		
V206	0.00	Erro D1			Erro D1		
V207	971.40	2 ø 10.0		-1055.78	2 ø 10.0		Aviso 26
V208	1043.76	2 ø 10.0		-1229.89	2 ø 10.0		Aviso 26
V209	0.00	Erro D1			Erro D1		
V210	0.00	Erro D1			Erro D1		