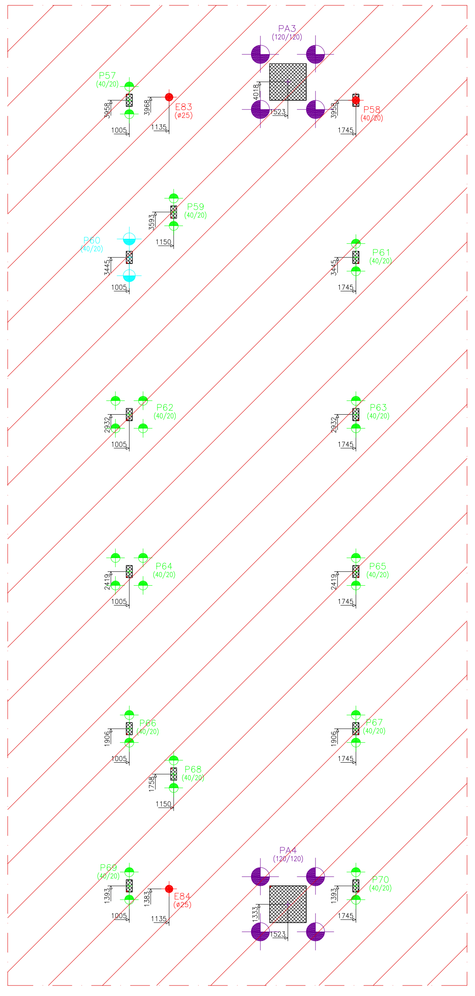
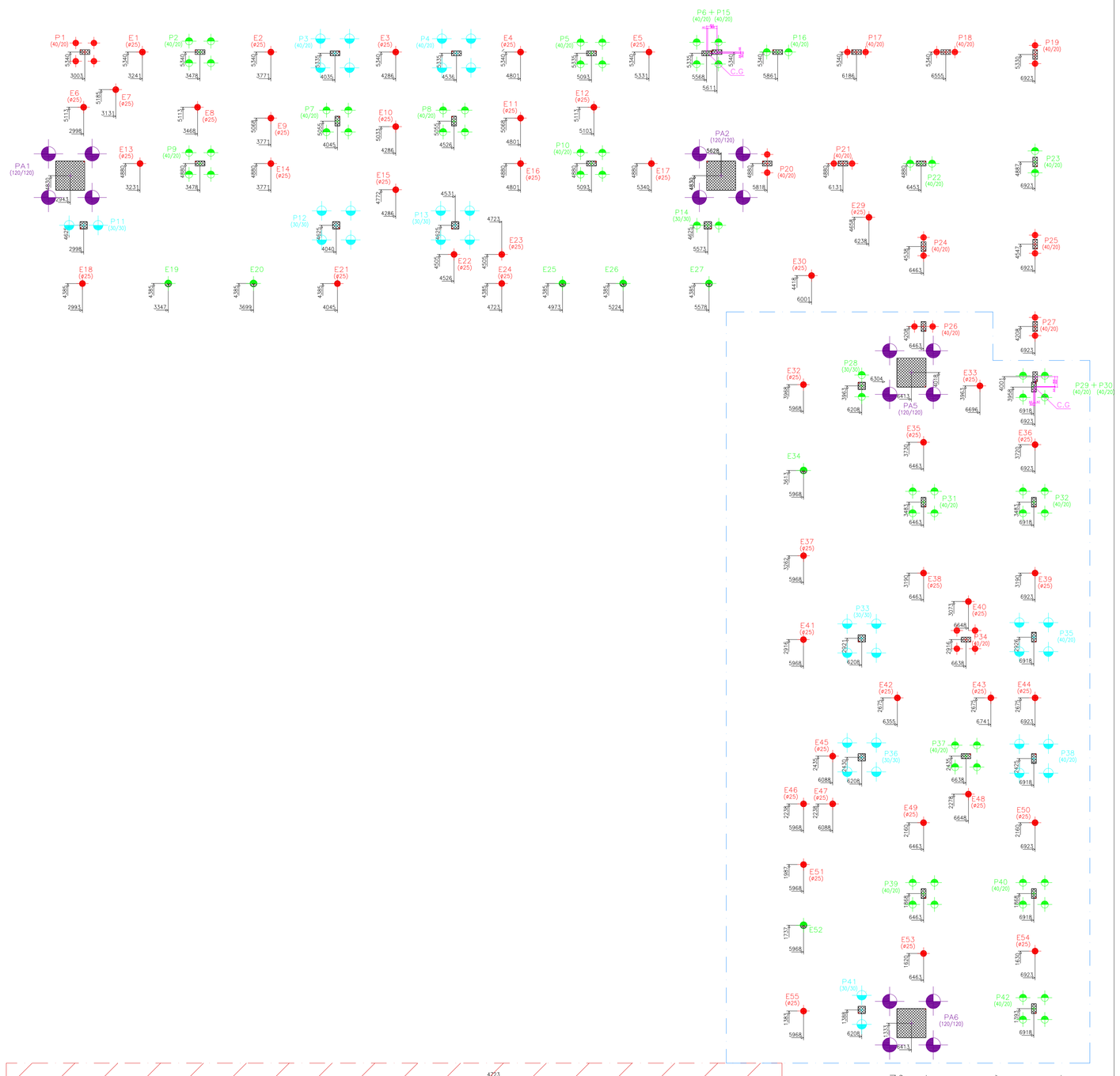
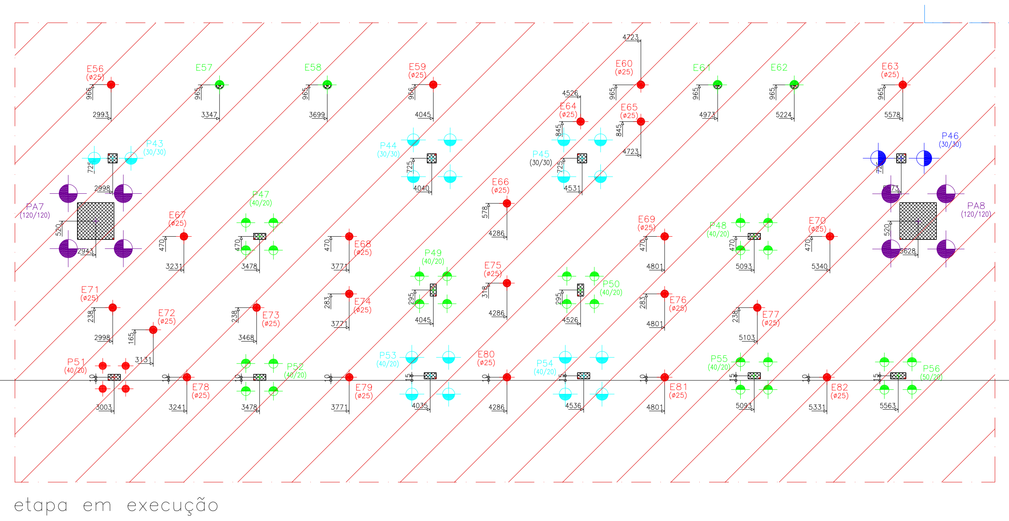


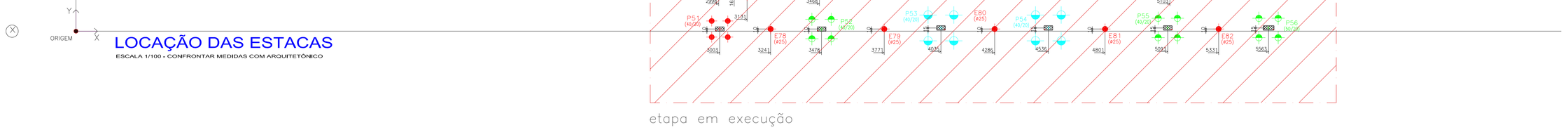
etapa em execução



3º etapa – à executar



etapa em execução



LOCAÇÃO DAS ESTACAS

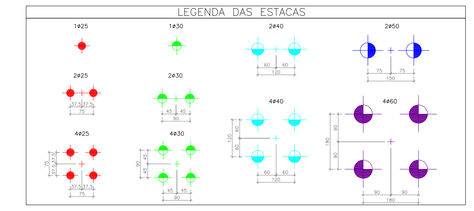
ESCALA 1:100 - CONFRONTAR MEDIDAS COM ARQUITETÔNICO

Pilar nº	Carga Permante	Carga Sobrecarga	Permanente + Sobrecarga	Ø estaca (cm)	Ø 25 (cm)	Ø 30 (cm)	Ø 40 (cm)	Ø 50 (cm)
E1	2.87	0.21	3.08	1 Ø 25	1x 6,00			
E2	5.03	0.39	5.42	1 Ø 25	1x 7,00			
E3	5.50	0.40	5.90	1 Ø 25	1x 7,00			
E4	5.11	0.32	5.43	1 Ø 25	1x 7,00			
E5	2.90	0.18	3.08	1 Ø 25	1x 4,00			
E6	2.92	0.18	3.10	1 Ø 25	1x 4,00			
E7	2.45	0.18	2.63	1 Ø 25	1x 4,00			
E8	2.92	0.19	3.11	1 Ø 25	1x 5,00			
E9	4.00	0.45	4.45	1 Ø 25	1x 6,00			
E10	5.82	0.61	6.43	1 Ø 25	1x 8,00			
E11	4.23	0.31	4.44	1 Ø 25	1x 6,00			
E12	2.92	0.20	3.12	1 Ø 25	1x 5,00			
E13	3.87	0.28	4.15	1 Ø 25	1x 6,00			
E14	5.21	0.38	5.49	1 Ø 25	1x 7,00			
E15	5.33	0.47	6.40	1 Ø 25	1x 8,00			
E16	4.90	0.50	5.40	1 Ø 25	1x 7,00			
E17	3.03	0.19	3.22	1 Ø 25	1x 5,00			
E18	9.89	0.35	10.24	1 Ø 25	1x 10,00			
E19	17.15	0.33	17.48	1 Ø 30		1x 13,00		
E20	16.95	0.33	17.28	1 Ø 30		1x 13,00		
E21	9.82	0.21	10.03	1 Ø 25	1x 11,00			
E22	5.12	0.56	5.68	1 Ø 25	1x 7,00			
E23	8.09	0.24	8.33	1 Ø 25	1x 10,00			
E24	8.59	0.44	9.03	1 Ø 25	1x 10,00			
E25	12.13	0.23	12.36	1 Ø 30		1x 9,00		
E26	14.90	0.25	15.15	1 Ø 30		1x 10,00		
E27	10.01	0.25	10.26	1 Ø 30		1x 7,00		
E28	3.25	0.24	3.49	1 Ø 25	1x 5,00			
E29	4.04	0.30	4.34	1 Ø 25	1x 6,00			
E30	7.51	0.57	8.08	1 Ø 25	1x 9,00			
E31	3.46	0.25	3.71	1 Ø 25	1x 5,00			
E32	8.24	0.24	8.48	1 Ø 25	1x 10,00			
E33	2.83	0.24	3.07	1 Ø 25	1x 4,00			
E34	13.41	0.31	13.54	1 Ø 30		1x 10,00		
E35	3.01	0.21	3.22	1 Ø 25	1x 5,00			
E36	2.89	0.20	3.09	1 Ø 25	1x 4,00			
E37	15.46	0.32	15.78	1 Ø 25	1x 10,00			
E38	4.41	0.45	4.86	1 Ø 25	1x 6,00			
E39	3.42	0.21	3.63	1 Ø 25	1x 5,00			
E40	3.24	0.21	3.45	1 Ø 25	1x 5,00			
E41	7.91	0.39	8.30	1 Ø 25	1x 10,00			
E42	6.95	0.55	7.50	1 Ø 25	1x 9,00			
E43	6.99	0.55	7.54	1 Ø 25	1x 9,00			
E44	3.06	0.23	3.29	1 Ø 25	1x 5,00			
E45	4.78	0.09	4.87	1 Ø 25	1x 6,00			
E46	7.13	0.04	7.17	1 Ø 25	1x 9,00			
E47	5.91	0.37	6.28	1 Ø 25	1x 8,00			
E48	6.65	0.77	7.42	1 Ø 25	1x 7,00			
E49	4.60	0.34	4.94	1 Ø 25	1x 6,00			
E50	4.03	0.34	4.37	1 Ø 25	1x 6,00			
E51	9.42	0.23	9.65	1 Ø 25	1x 11,00			
E52	11.60	0.37	11.97	1 Ø 30		1x 8,00		
E53	3.00	0.22	3.22	1 Ø 25	1x 5,00			
E54	2.87	0.21	3.08	1 Ø 25	1x 4,00			
E55	8.14	0.35	8.49	1 Ø 25	1x 10,00			
E56	9.98	0.49	10.47	1 Ø 25	1x 11,00			
E57	17.15	0.33	17.48	1 Ø 30		1x 13,00		
E58	16.95	0.33	17.28	1 Ø 30		1x 13,00		
E59	9.90	0.13	10.03	1 Ø 25	1x 11,00			
E60	9.36	0.31	9.67	1 Ø 25	1x 11,00			
E61	12.13	0.23	12.36	1 Ø 30		1x 9,00		
E62	14.76	0.25	15.02	1 Ø 30		1x 10,00		
E63	10.25	0.03	10.28	1 Ø 25	1x 11,00			
E64	5.59	0.32	5.87	1 Ø 25	1x 8,00			
E65	7.27	0.56	7.83	1 Ø 25	1x 9,00			
E66	6.03	0.30	6.30	1 Ø 25	1x 8,00			
E67	3.85	0.30	4.15	1 Ø 25	1x 6,00			
E68	5.15	0.33	5.48	1 Ø 25	1x 7,00			
E69	5.04	0.44	5.48	1 Ø 25	1x 7,00			
E70	2.97	0.26	3.23	1 Ø 25	1x 5,00			
E71	2.90	0.20	3.10	1 Ø 25	1x 4,00			
E72	2.44	0.19	2.63	1 Ø 25	1x 4,00			
E73	2.93	0.22	3.15	1 Ø 25	1x 5,00			
E74	4.11	0.33	4.44	1 Ø 25	1x 6,00			
E75	5.86	0.56	6.42	1 Ø 25	1x 8,00			
E76	4.32	0.13	4.45	1 Ø 25	1x 6,00			
E77	2.93	0.19	3.12	1 Ø 25	1x 5,00			
E78	2.87	0.21	3.08	1 Ø 25	1x 4,00			
E79	4.96	0.46	5.42	1 Ø 25	1x 7,00			
E80	5.40	0.49	5.89	1 Ø 25	1x 7,00			
E81	4.95	0.47	5.42	1 Ø 25	1x 7,00			
E82	2.78	0.23	3.01	1 Ø 25	1x 4,00			
E83	0.80	0.13	0.99	1 Ø 25	1x 10,00			
E84	0.76	0.16	0.92	1 Ø 25	1x 4,00			
P2								
P1	**26.98**	**12.19**	**39.17**	**4 Ø 25**	**4x 11,00**			
P2	**69.83**	**4.19**	**74.02**	**4 Ø 30**		**4x 13,00**		
P3	79.13	7.60	86.73	4 Ø 40			4x 12,00	
P4	79.01	10.41	86.42	4 Ø 40			4x 12,00	
P5	62.64	11.22	73.86	4 Ø 30		4x 14,00		
P6 + P15	**47.89**	**9.49**	**57.38**	**4 Ø 30**		**4x 11,00**		
	5.25	**0.75**	**6.01**					
P7	42.21	3.01	45.22	4 Ø 30		4x 9,00		
P8	44.48	3.48	47.96	4 Ø 30		4x 8,00		
P9	45.65	6.21	51.93	4 Ø 30		4x 9,00		
P10	41.75	10.00	51.84	4 Ø 30		4x 9,00		
P11	39.03	2.99	42.02	2 Ø 40			2x 11,00	
P12	85.65	5.92	91.57	4 Ø 40			4x 13,00	
P13	86.61	4.04	90.65	4 Ø 40			4x 13,00	
P14	25.97	9.90	35.87	2 Ø 30		2x 13,00		
P16	16.96	7.60	24.56	2 Ø 30		2x 10,00		
P17	**13.06**	**5.41**	**18.47**	**2 Ø 25**	**2x 10,00**			
P18	**16.27**	**5.71**	**21.98**	**2 Ø 25**	**2x 11,00**			
P19	**13.53**	**2.88**	**16.42**	**2 Ø 25**	**2x 10,00**			
P20	**13.77**	**2.08**	**15.85**	**2 Ø 25**	**2x 9,00**			
P21	**12.79**	**4.16**	**17.10**	**2 Ø 25**	**2x 10,00**			
P22	24.32	8.10	32.42	2 Ø 30		2x 12,00		
P23	21.09	5.27	26.36	2 Ø 30		2x 10,00		
P24	**15.46**	**5.56**	**21.02**	**2 Ø 25**	**2x 11,00**			
P25	**14.28**	**5.05**	**19.33**	**2 Ø 25**	**2x 11,00**			
P26	**13.88**	**2.44**	**16.32**	**2 Ø 25**	**2x 10,00**			
P27	**13.57**	**2.81**	**16.38**	**2 Ø 25**	**2x 10,00**			
P28	24.57	11.43	36.00	2 Ø 30		2x 13,00		
P29 + P30	**3.53**	**0.07**	**3.70**					
	53.18	**11.35**	**64.41**	**4 Ø 30**		**4x 11,00**		
P31	40.09	10.20	50.29	4 Ø 30		4x 10,00		
P32	61.53	11.27	72.62	4 Ø 30		4x 12,00		
P33	87.69	3.71	91.40	4 Ø 40			4x 13,00	
P34	**43.09**	**3.74**	**46.83**	**4 Ø 25**	**4x 12,00**			
P35	75.32	10.94	86.27	4 Ø 40			4x 12,00	
P36	83.94	2.23	86.17	4 Ø 40			4x 12,00	
P37	42.06	2.62	44.62	4 Ø 30		4x 9,00		
P38	75.70	7.23	82.93	4 Ø 40			4x 12,00	
P39	44.62	5.87	50.49	4 Ø 30		4x 10,00		
P40	69.40	3.32	72.72	4 Ø 30		4x 13,00		
P41	40.28	5.27	45.55	2 Ø 40			2x 12,00	
P42	29.25	15.43	44.68	4 Ø 30		4x 9,00		
P43	42.77	5.26	48.03	2 Ø 40			2x 11,00	
P44	75.79	2.12	77.91	4 Ø 40			4x 11,00	
P45	75.58	0.53	77.11	4 Ø 40			4x 11,00	
P46	**53.38**	**16.34**	**69.72**	**2 Ø 50**				**2x 9,00**
P47	44.68	7.17	51.85	4 Ø 30		4x 10,00		
P48	42.47	9.23	51.75	4 Ø 30		4x 10,00		
P49	41.47	3.43	44.90	4 Ø 30		4x 9,00		
P50	43.85	3.98	47.83	4 Ø 30		4x 9,00		
P51	**25.71**	**13.09**	**38.80**	**4 Ø 25**	**4x 10,00**			
P52	68.93	5.24	74.17	4 Ø 40		4x 13,00		
P53	74.83	11.11	85.94	4 Ø 40			4x 12,00	
P54	72.06	14.34	86.39	4 Ø 40			4x 12,00	
P55	60.72	11.46	72.18	4 Ø 30		4x 13,00		
P56	35.07	10.05	45.12	4 Ø 30		4x 8,00		
P57	26.92	3.11	30.07	2 Ø 30		2x 11,00		
P58	**3.69**	**3.33**	**7.02**	**1 Ø 25**	**1x 8,00**			
P59	18.62	11.98	30.60	2 Ø 30		2x 11,00		
P60	28.25	6.64	34.90	2 Ø 40			2x 11,00	
P61	20.76	11.76	32.52	2 Ø 30		2x 13,00		
P62	31.12	11.00	42.12	4 Ø 30		4x 9,00		
P63	15.23	9.69	24.92	2 Ø 30		2x 10,00		
P64	30.81	11.32	42.13	4 Ø 30		4x 9,00		
P65	14.61	10.18	24.81	2 Ø 30		2x 10,00		
P66	30.14	6.33	36.47	2 Ø 30		2x 13,00		
P67	23.82	9.34	33.16	2 Ø 30		2x 12,00		
P68	24.38	7.56	31.94	2 Ø 30		2x 12,00		
P69	13.24	10.50	23.74	2 Ø 30		2x 9,00		
P70	13.20	6.04	19.24	2 Ø 30		2x 8,00		

Pilar nº	Carga Permante	Carga Sobrecarga	Permanente + Sobrecarga	Ø estaca (cm)	Ø 60 (cm)
P51	**73.33**	**1.71**	**81.04**	**4 Ø 60**	**4x 15,00**
P52	**86.91**	**14.52**	**101.83**	**4 Ø 60**	**4x 15,00**
P53	**76.55**	**7.52**	**86.07**	**4 Ø 60**	**4x 15,00**
P54	**61.09**	**7.93**	**69.02**	**4 Ø 60**	**4x 15,00**
P55	**90.82**	**16.46**	**107.28**	**4 Ø 60**	**4x 15,00**
P56	**74.49**	**0.80**	**75.29**	**4 Ø 60**	**4x 15,00**
P57	**75.39**	**0.91**	**75.90**	**4 Ø 60**	**4x 15,00**
P58	**83.75**	**7.80**	**91.64**	**4 Ø 60**	**4x 15,00**

RESUMO:

104 Ø25cm - 826,00m
133 Ø30cm - 1.401,00m
56 Ø40cm - 670,00m
2 Ø50cm - 18,00m
32 Ø60cm -480,00m

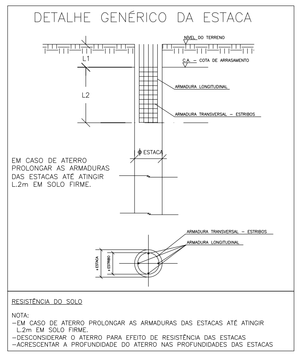


QUADRO DE ARMADURA – ESTACAS ESCAVADAS

ARMADURA LONGITUDINAL						ARMADURA TRANSVERSAL – ESTRIBOS						
Ø estaca (cm)	Ø armadura (mm)	Qte de Barras	Qte de Emenda	L. 1m	L. 2m	L.1+L.2m	Ø estaca (cm)	Ø Corrido (mm)	Qte de Estribo	Qte de Emenda	Diâmetro (m)	Comp. Estribo (m)
25	8.00	4	104x	0.20	1.50	1.70	25	5.00	7	104x	0,17	0,74
30	10.00	4	133x	0.25	1.80	2.05	30	5.00	9	133x	0,22	0,90
40	12.50	4	56x	0.35	2.40	2.75	40	5.00	12	56x	0,32	1,20
50	12.50	6	2x	0.45	3.00	3.45	50	6.30	16	2x	0,42	1,52
60	12.50	9	32x	0.55	11.45	12.00	60	6.30	57	32x	0,52	1,83

QUADRO RESUMO – ESTACAS ESCAVADAS

ARMADURA		ESTRIBO	
Ø armadura (mm)	TOTAL (kg)	Ø Corrido (mm)	TOTAL (kg)
8,00	289,95	5,00	387,59
10,00	665,26	6,30	846,64
12,50	4.113,40		
Total de armadura: 6.302,84 kg			



NOTA:
-EM CASO DE ATERRO PROLONGAR AS ARMADURAS DAS ESTACAS ATÉ ATINGIR 1,2m EM SOLO FIRME.
-DESCONSIDERAR O ATERRO PARA EFEITO DE RESISTÊNCIA DAS ESTACAS
-ACRESCENTAR A PROFUNDIDADE DO ATERRO NAS PROFUNDIDADES DAS ESTACAS

OBSERVAÇÕES:

1. Resistência característica do concreto das estacas: fck=20MPa
2. C.G – CENTRO DE GRAVIDADE

DATA	ALTERAÇÃO DO PROJETO
00/00/0000	
00/00/0000	
00/00/0000	

ABS
Estacas Sondagens e Fundações Ltda.

PROJETO DE FUNDAÇÃO

RUA UBIRAJARA, 447 - JARDIM LUCIANÓPLIS
CEP 87080-430
MARINGÁ - PR - e-mail: absestacas@hotmail.com

RESPONSÁVEL TÉCNICO
MICHELLE BUGHI ENG. CIVIL CREA-PR 79.528/D

ASSUNTO: **LOCAÇÃO DE ESTACAS**		PRANCHA	01/01
OBRA	ARENA – CENTRO DE EVENTOS	REVISÃO:	R00
LOCAL DA OBRA	LOTE 126-B - GLEBA ANDRÁ SÃO JORGE DO IVAI – PR	DESENHO:	KARLA CERON
PROPRIETÁRIO	PREFEITURA MUNICIPAL DE SÃO JORGE DO IVAI	ESCALA:	1:100
EXECUÇÃO	ENG° PAULO LEÃO	DATA:	19/03/2015