Estacas			
Simbologia	Nome	d (cm)	Quantidade
	C30	30.00	55
	C40	40.00	4

Locação no eixo X	
Coordenadas (cm)	Nome
-5.00	P1, P9, P17, P21
10.00	P28, P47, P54
135.01	P22
295.00	P10, P18
297.42	P2
365.00	P29, P40
492.50	P48, P55
573.44	P19
589.93	P23
600.01	P3
600.69	P11
720.00	P30, P41
972.50	P4, P12
975.00	P20, P24, P31, P42, P49, P56
1204.00	P5
1244.97	P43, P50, P57
1245.00	P13, P25, P32, P36
1523.74	P6
1524.00	P14
1571.63	P33, P37
1580.23	P44, P51
1783.57	P26
1789.62	P58
1840.84	P7
1896.16	P34, P38
1905.16	P45, P52
2077.00	P15
2215.00	P59
2224.98	P8
2225.00	P16, P27, P35, P39, P46, P53

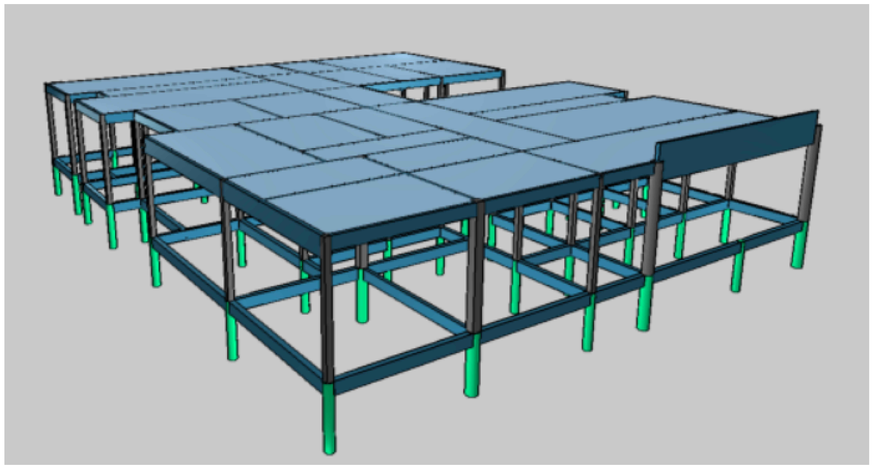
Locação no eixo Y	
Coordenadas (cm)	Nome
2745.12	P8
2745.09	P1, P3, P4, P5, P6, P7
2745.05	P2
2354.68	P9, P10, P11, P12, P13
2300.04	P14, P15
2295.04	P16
2184.69	P17, P18, P19, P20
1795.04	P21
1795.03	P22
1795.04	P24, P25, P26, P27
1788.92	P23
1295.04	P28, P29, P30, P31, P32, P33, P34, P35
939.90	P36, P37, P38, P39
770.00	P40, P41, P42, P43, P44, P45, P46
600.00	P47
595.00	P48
345.00	P49, P50, P51, P52, P53
15.00	P55
10.00	P54, P56
9.70	P58, P59
5.06	P57

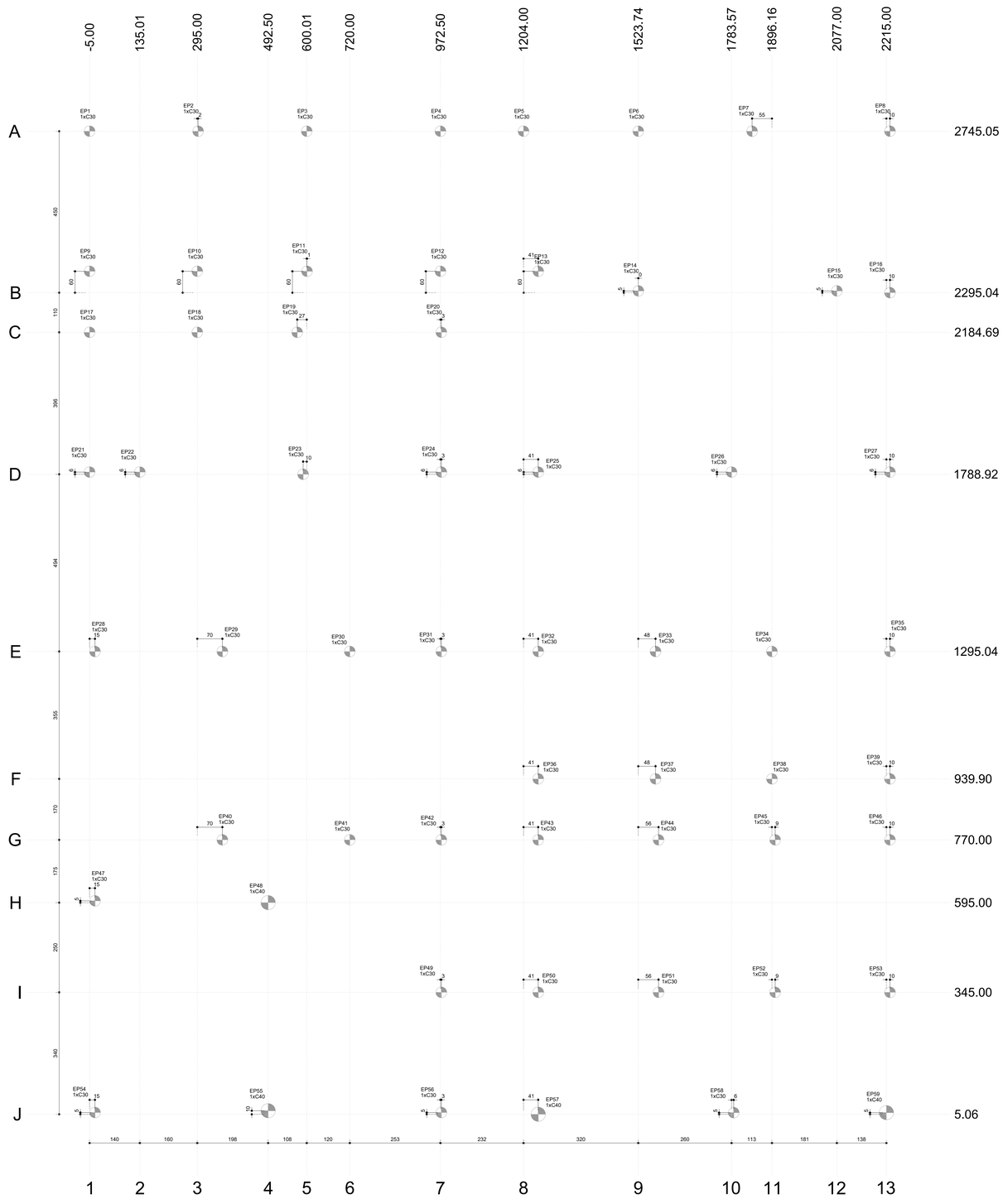
Pilar																	
Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (kgf)	Carga Mín. (kgf)	Mx Máximo (kgf m)		My Máximo (kgf m)		Fx Máximo (kgf)		Fy Máximo (kgf)		ne	Estaca	ca (cm)
						Positivo	Negativo	Positivo	Negativo	Positivo	Negativo	Positivo	Negativo			
P1	-	-5.00	2745.09	6000	5200	0	-500	0	-300	0	-300	600	0	1	C30	0
P2	-	297.42	2745.05	6800	6300	200	0	200	-300	200	-100	0	0	1	C30	0
P3	-	600.01	2745.09	7600	7100	0	-100	0	-400	0	-400	200	0	1	C30	0
P4	-	972.50	2745.09	7600	6900	200	-300	200	-100	300	0	200	0	1	C30	0
P5	-	1204.00	2745.09	5200	4600	100	-100	100	-400	0	-400	100	0	1	C30	0
P6	-	1523.74	2745.09	7000	6300	0	-400	200	-300	200	-100	300	0	1	C30	0
P7	-	1840.84	2745.09	9700	9200	0	-200	0	-400	0	-565	200	0	1	C30	0
P8	-	2224.98	2745.12	7200	6500	0	-500	600	0	800	0	700	0	1	C30	0
P9	-	-5.00	2354.68	6400	5600	600	0	0	-300	0	-300	0	-600	1	C30	0
P10	-	295.00	2354.68	7800	7100	100	-200	200	-300	200	-100	100	0	1	C30	0
P11	-	600.69	2354.68	8200	7700	200	0	100	-200	100	-200	0	-300	1	C30	0
P12	-	972.50	2354.68	9100	8400	200	-100	200	-300	200	-100	100	-100	1	C30	0
P13	-	1245.00	2354.68	10700	10000	0	-600	200	-200	200	0	900	0	1	C30	0
P14	-	1524.00	2300.04	17100	16400	300	-200	0	-400	0	-400	0	-200	1	C30	0
P15	-	2077.00	2300.04	14600	13300	300	0	300	0	400	0	0	-700	1	C30	0
P16	-	2225.00	2295.04	8300	6900	0	-300	100	-200	100	-300	400	0	1	C30	0
P17	-	-5.00	2184.69	6200	5500	0	-500	0	-400	0	-300	600	0	1	C30	0
P18	-	295.00	2184.69	7300	6600	100	-200	300	-100	300	0	100	0	1	C30	0
P19	-	573.44	2184.69	9100	8500	0	-900	100	-400	0	-400	900	0	1	C30	0
P20	-	975.00	2184.69	7300	6700	0	-600	400	0	400	0	800	0	1	C30	0
P21	-	-5.00	1795.04	4100	2600	600	0	0	-400	0	-200	0	-600	1	C30	0
P22	-	135.01	1795.03	13600	12200	0	-500	0	-500	0	-600	800	0	1	C30	0
P23	-	589.93	1788.92	14600	14000	100	-100	500	0	700	0	0	-400	1	C30	0
P24	-	975.00	1795.04	11400	10800	500	0	200	-200	200	0	0	-700	1	C30	0
P25	-	1245.00	1795.04	14600	14100	500	0	0	-200	0	-800	0	-500	1	C30	0
P26	-	1783.57	1795.04	12400	11800	900	0	300	0	300	0	0	-500	1	C30	0
P27	-	2225.00	1795.04	7100	6500	400	0	400	0	500	0	0	-500	1	C30	0
P28	-	10.00	1295.04	11300	10700	0	-900	0	-600	0	-800	1400	0	1	C30	0
P29	-	365.00	1295.04	13300	12700	200	-100	400	0	400	0	100	-200	1	C30	0
P30	-	720.00	1295.04	11800	11200	300	0	200	-100	200	-200	0	-400	1	C30	0
P31	-	975.00	1295.04	11300	10600	0	-500	300	0	300	0	800	0	1	C30	0
P32	-	1245.00	1295.04	10700	10200	300	-100	0	-200	0	-400	200	-100	1	C30	0
P33	-	1571.83	1295.04	7200	6700	0	-100	200	-200	200	0	200	0	1	C30	0
P34	-	1896.16	1295.04	7400	7000	0	-100	200	-100	100	-100	200	0	1	C30	0
P35	-	2225.00	1295.04	5800	5000	0	-400	300	0	300	0	600	0	1	C30	0
P36	-	1245.00	939.90	6400	5700	500	0	0	-200	0	-400	0	-500	1	C30	0
P37	-	1571.83	939.90	7600	7400	200	0	200	-200	200	-200	0	-100	1	C30	0
P38	-	1896.16	939.90	8200	7700	200	0	100	-300	100	-300	0	-100	1	C30	0
P39	-	2225.00	939.90	6200	5500	400	0	300	0	400	0	300	-600	1	C30	0
P40	-	365.00	770.00	12700	11800	200	-200	0	-400	0	-300	300	0	1	C30	0
P41	-	720.00	770.00	9400	8800	100	-300	300	0	300	0	200	0	1	C30	0
P42	-	975.00	770.00	12100	11200	500	0	300	0	300	0	0	-600	1	C30	0
P43	-	1244.97	770.00	7900	7200	0	-300	0	-300	0	-200	500	0	1	C30	0
P44	-	1580.23	770.00	8400	7900	100	-200	200	-200	200	-200	100	0	1	C30	0
P45	-	1905.16	770.00	8500	8000	100	-200	100	-100	100	-100	200	0	1	C30	0
P46	-	2225.00	770.00	6400	5700	0	-700	300	0	400	0	700	0	1	C30	0
P47	-	10.00	600.00	17700	17100	500	0	0	-700	0	-900	0	-500	1	C30	0
P48	-	492.50	595.00	17300	16300	800	-300	500	-300	300	0	0	-600	1	C40	0
P49	-	975.00	345.00	10500	9900	400	0	100	-100	0	-300	0	-500	1	C30	0
P50	-	1244.97	345.00	10500	10000	500	0	200	0	200	-200	0	-500	1	C30	0
P51	-	1580.23	345.00	10600	10000	300	0	300	0	300	0	0	-300	1	C30	0
P52	-	1905.16	345.00	10400	9900	200	0	300	0	200	0	0	-300	1	C30	0
P53	-	2225.00	345.00	9600	8800	400	-300	300	0	300	0	100	-400	1	C30	0
P54	-	10.00	10.00	8400	7700	800	0	0	-500	0	-500	0	-1100	1	C30	0
P55	-	492.50	15.00	16900	15700	600	-700	800	-100	500	-200	500	0	1	C40	0
P56	-	975.00	10.00	6700	6000	300	0	700	0	700	0	0	-200	1	C30	0
P57	-	1244.97	5.06	11600	10600	600	0	900	0	600	0	0	-300	1	C40	0
P58	-	1789.62	9.70	1300	800	100	0	600	0	600	0	100	0	1	C30	0
P59	-	2215.00	9.70	11200	9900	600	-300	300	-300	0	-600	0	-500	1	C40	0

Os esforços indicados nesta tabela são os valores máximos obtidos pela envoltória de todas as combinações definidas para as fundações. Para análises complementares, deve-se consultar o relatório de esforços na fundação, que apresenta os valores calculados para cada combinação.

Estaca	Ø (cm)	Profund. (M)	Armadura Longitudinal			Armadura Transversal							Quantidade Concreto (m³)
E1	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E2	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E3	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E4	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E5	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E6	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E7	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E8	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E9	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E10	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E11	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E12	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E13	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E14	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E15	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E16	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E17	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E18	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E19	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E20	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E21	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E22	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E23	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E24	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E25	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E26	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E27	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E28	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E29	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E30	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E31	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E32	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E33	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E34	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E35	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E36	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E37	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E38	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E39	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E40	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E41	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E42	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E43	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E44	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E45	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E46	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E47	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E48	40	2	7	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,2512
E49	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E50	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E51	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E52	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E53	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E54	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E55	40	2	7	Ø	10mm	17	Ø	6,3	C/	12	C=	107	0,2512
E56	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E57	40	2	7	Ø	10mm	17	Ø	6,3	C/	12	C=	107	0,2512
E58	30	2	4	Ø	10mm	17	Ø	6,3	C/	12	C=	75	0,1413
E59	40	2	7	Ø	10mm	17	Ø	6,3	C/	12	C=	107	0,2512

TOTAIS		
Concreto FCK= 25 Mpa	8,78	m³
Aço CA-50 Ø10mm	46	barras
Aço CA-60 Ø6,3mm	72	barras





PLANTA DE LOCAÇÃO

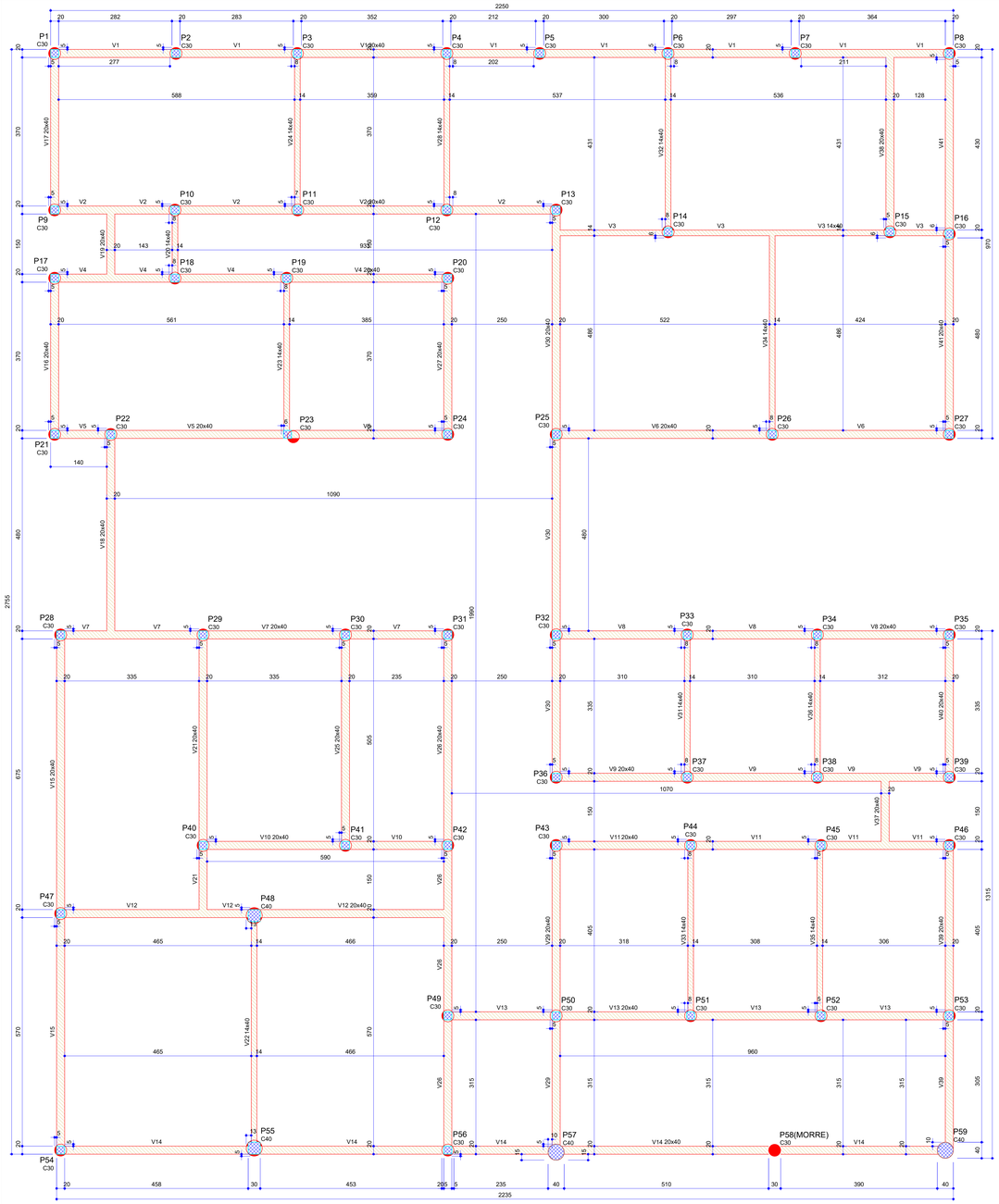
Escala 1:50

PREFEITURA MUNICIPAL DE ESPUMOSO

DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA: 1/10



Pilares

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x20	0	388
P2	20x20	0	388
P3	20x20	0	388
P4	20x20	0	388
P5	20x20	0	388
P6	20x20	0	388
P7	20x20	0	388
P8	20x20	0	388
P9	20x20	0	388
P10	20x20	0	388
P11	20x20	0	388
P12	20x20	0	388
P13	20x20	0	388
P14	20x20	0	388
P15	20x20	0	388
P16	20x20	0	388
P17	20x20	0	388
P18	20x20	0	388
P19	20x20	0	388
P20	20x20	0	388
P21	20x20	0	388
P22	20x20	0	388
P23	20x20	0	388
P24	20x20	0	388
P25	20x20	0	388
P26	20x20	0	388
P27	20x20	0	388
P28	20x20	0	388
P29	20x20	0	388
P30	20x20	0	388
P31	20x20	0	388
P32	20x20	0	388
P33	20x20	0	388
P34	20x20	0	388
P35	20x20	0	388
P36	20x20	0	388
P37	20x20	0	388
P38	20x20	0	388
P39	20x20	0	388
P40	20x20	0	388
P41	20x20	0	388
P42	20x20	0	388
P43	20x20	0	388
P44	20x20	0	388
P45	20x20	0	388
P46	20x20	0	388
P47	20x20	0	388
P48	30x30	0	388
P49	20x20	0	388
P50	20x20	0	388
P51	20x20	0	388
P52	20x20	0	388
P53	20x20	0	388
P54	20x20	0	388
P55	30x30	0	388
P56	20x20	0	388
P57	Circ 40	0	388
P59	Circ 40	0	388

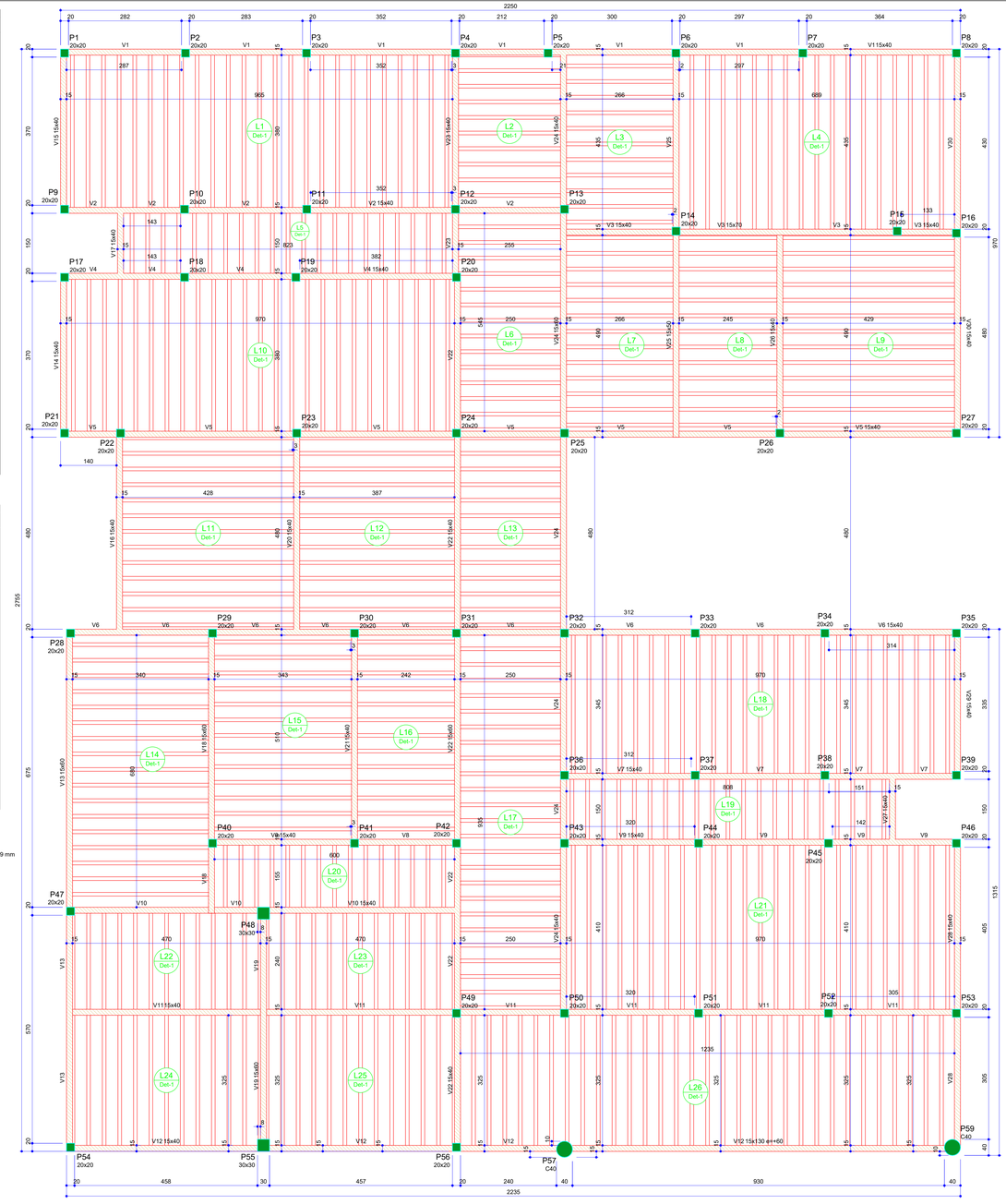
Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x40	0	388
V2	15x40	0	388
V3	15x40	0	388
	15x70	0	388
	15x40	0	388
V4	15x40	0	388
V5	15x40	0	388
V6	15x40	0	388
V7	15x40	0	388
V8	15x40	0	388
V9	15x40	0	388
V10	15x40	0	388
V11	15x40	0	388
V12	15x40	0	388
	15x130	60	448
V13	15x60	0	388
V14	15x40	0	388
V15	15x40	0	388
V16	15x40	0	388
V17	15x40	0	388
V18	15x60	0	388
V19	15x60	0	388
V20	15x40	0	388
V21	15x40	0	388
V22	15x40	0	388
	15x60	0	388
	15x40	0	388
V23	15x40	0	388
V24	15x40	0	388
	15x60	0	388
	15x40	0	388
V25	15x40	0	388
V26	15x40	0	388
V27	15x40	0	388
V28	15x40	0	388
V29	15x40	0	388
V30	15x40	0	388

Características dos materiais

fck (MPa)	Ecs (MPa)
25	28980

Dimensão máxima do agregado = 19 mm



FORMA DO PAVIMENTO FUNDAÇÃO (NÍVEL 0)

Escala 1:50

Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x40	0	0
V2	20x40	0	0
V3	14x40	0	0
V4	20x40	0	0
V5	20x40	0	0
V6	20x40	0	0
V7	20x40	0	0
V8	20x40	0	0
V9	20x40	0	0
V10	20x40	0	0
V11	20x40	0	0
V12	20x40	0	0
V13	20x40	0	0
V14	20x40	0	0
V15	20x40	0	0
V16	20x40	0	0
V17	20x40	0	0
V18	20x40	0	0
V19	20x40	0	0
V20	14x40	0	0
V21	20x40	0	0
V22	14x40	0	0
V23	14x40	0	0
V24	14x40	0	0
V25	20x40	0	0
V26	20x40	0	0
V27	20x40	0	0
V28	14x40	0	0
V29	20x40	0	0
V30	20x40	0	0
V31	14x40	0	0
V32	14x40	0	0
V33	14x40	0	0
V34	14x40	0	0
V35	14x40	0	0
V36	14x40	0	0
V37	20x40	0	0
V38	20x40	0	0
V39	20x40	0	0
V40	20x40	0	0
V41	20x40	0	0

Características dos materiais

fck (MPa)	Ecs (MPa)
25	28980

Dimensão máxima do agregado = 19 mm

Legenda das vigas e paredes

Viga

Legenda dos pilares

Pilar que morre

Legenda das vigas e paredes

Viga

Blocos de enchimento

Detalhe	Tipo	Nome	Dimensões(cm) hb	bx	by	Quantidade
1	Lajota cerâmica	B8/30/20	8	30	20	0

Detalhe 1 (esc. 1:30)

Lajes

Nome	Tipo	Dados Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Sobrecarga (kgf/m²) Adicional	Acidental	Localizada
L1	Treliçada 1D	12	0	388	257	154	10	-
L2	Treliçada 1D	12	0	388	257	154	10	-
L3	Treliçada 1D	12	0	388	257	154	10	-
L4	Treliçada 1D	12	0	388	257	154	10	-
L5	Treliçada 1D	12	0	388	257	154	10	-
L6	Treliçada 1D	12	0	388	257	154	10	-
L7	Treliçada 1D	12	0	388	257	155	10	-
L8	Treliçada 1D	12	0	388	257	155	10	-
L9	Treliçada 1D	12	0	388	257	154	10	-
L10	Treliçada 1D	12	0	388	257	154	10	-
L11	Treliçada 1D	12	0	388	257	154	10	-
L12	Treliçada 1D	12	0	388	257	154	10	-
L13	Treliçada 1D	12	0	388	257	154	10	-
L14	Treliçada 1D	12	0	388	257	154	10	-
L15	Treliçada 1D	12	0	388	257	154	10	-
L16	Treliçada 1D	12	0	388	257	154	10	-
L17	Treliçada 1D	12	0	388	257	154	10	-
L18	Treliçada 1D	12	0	388	257	154	10	-
L19	Treliçada 1D	12	0	388	257	154	10	-
L20	Treliçada 1D	12	0	388	257	154	10	-
L21	Treliçada 1D	12	0	388	257	154	10	-
L22	Treliçada 1D	12	0	388	257	154	10	-
L23	Treliçada 1D	12	0	388	257	154	10	-
L24	Treliçada 1D	12	0	388	257	154	10	-
L25	Treliçada 1D	12	0	388	257	154	10	-
L26	Treliçada 1D	12	0	388	257	154	10	-

FORMA DO PAVIMENTO COBERTURA (NÍVEL 388)

Escala 1:50

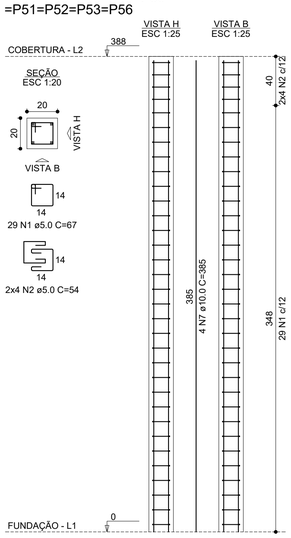
PREFEITURA MUNICIPAL DE ESPUMOSO

DEPARTAMENTO DE ENGENHARIA

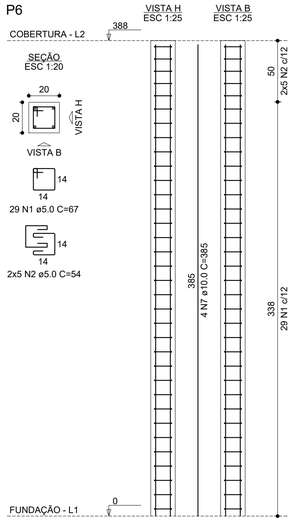
PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA: 2/10

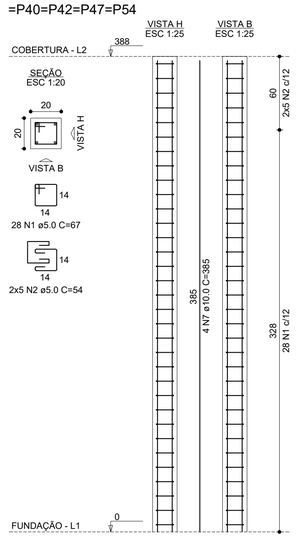
P1=P2=P3=P4=P5=P7=P8=
=P9=P10=P11=P12=P16=
=P17=P18=P19=P20=P21=
=P24=P32=P33=P34=P35=
=P36=P37=P38=P39=P43=
=P44=P45=P46=P49=P50=
=P51=P52=P53=P56



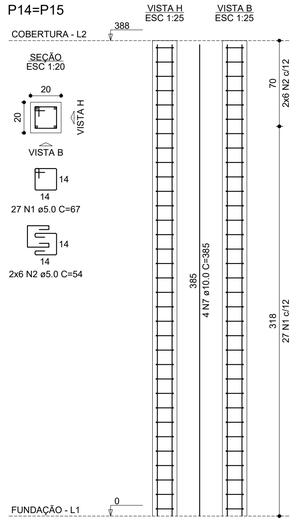
P6



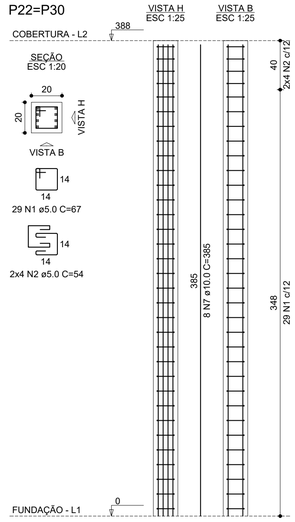
P13=P25=P28=P29=P31=
=P40=P42=P47=P54



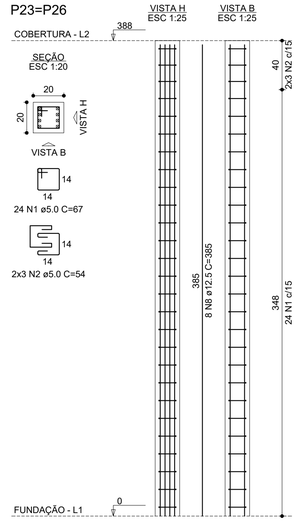
P14=P15



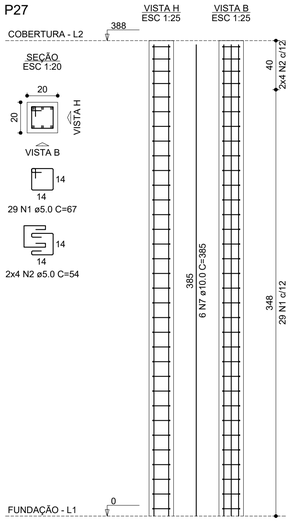
P22=P30



P23=P26



P27



P41

P48

P55

P57

P59

RELAÇÃO DO AÇO

36xP1	P6	9xP13
2xP14	2xP22	2xP23
P27	P41	P48
P55	P57	P59

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1538	67	103046
	2	5.0	454	54	24516
	3	5.0	33	39	1287
	4	5.0	56	107	5992
	5	5.0	20	84	1680
	6	5.0	88	124	10912
CA50	7	10.0	223	385	85855
	8	12.5	36	385	13860
	9	16.0	6	385	2310

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	10.0	858.6	79	582.3
	12.5	138.6	13	146.9
	16.0	23.1	3	40.1
CA60	5.0	1474.3	-	250

PESO TOTAL (kg)	
CA50	769.2
CA60	250

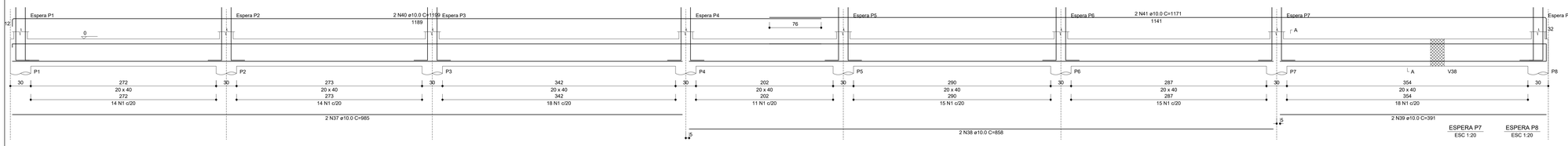
Volume de concreto (C-25) = 10.03 m³
Área de forma = 186.40 m²

PREFEITURA MUNICIPAL DE ESPUMOSO

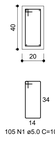
DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO
	PRANCHA: 3/10

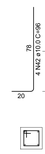
V1
ESC 1:25



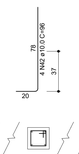
SEÇÃO A-A
ESC 1:20



ESPERA P1
ESC 1:20



ESPERA P2
ESC 1:20

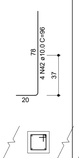


ESPERA P3
ESC 1:20

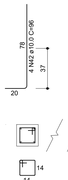
ESPERA P4
ESC 1:20

ESPERA P5
ESC 1:20

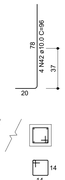
ESPERA P6
ESC 1:20



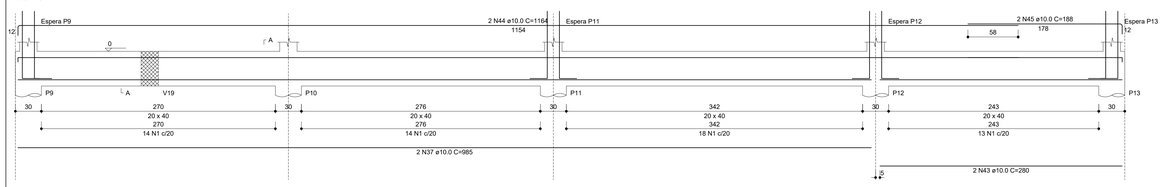
ESPERA P7
ESC 1:20



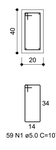
ESPERA P8
ESC 1:20



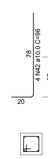
V2
ESC 1:25



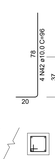
SEÇÃO A-A
ESC 1:20



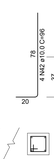
ESPERA P9
ESC 1:20



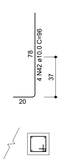
ESPERA P11
ESC 1:20



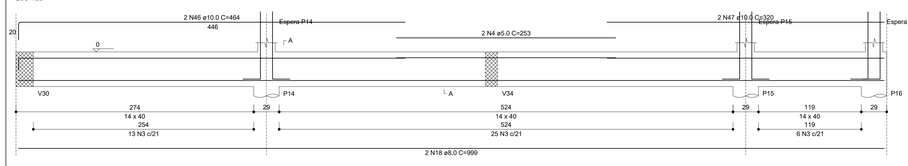
ESPERA P12
ESC 1:20



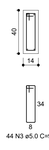
ESPERA P13
ESC 1:20



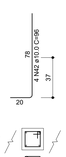
V3
ESC 1:25



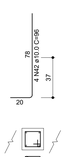
SEÇÃO A-A
ESC 1:20



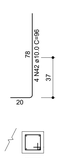
ESPERA P14
ESC 1:20



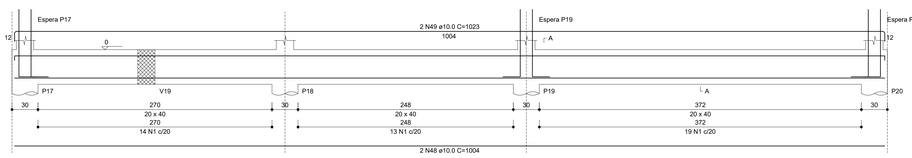
ESPERA P15
ESC 1:20



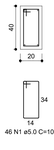
ESPERA P16
ESC 1:20



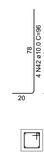
V4
ESC 1:25



SEÇÃO A-A
ESC 1:20

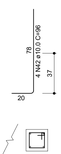


ESPERA P17
ESC 1:20

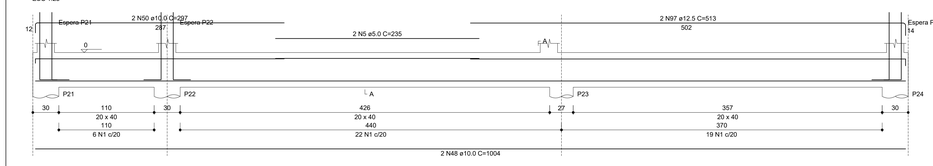


ESPERA P19
ESC 1:20

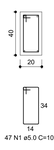
ESPERA P20
ESC 1:20



V5
ESC 1:25

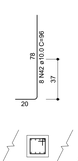


SEÇÃO A-A
ESC 1:20

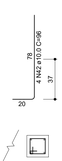


ESPERA P21
ESC 1:20

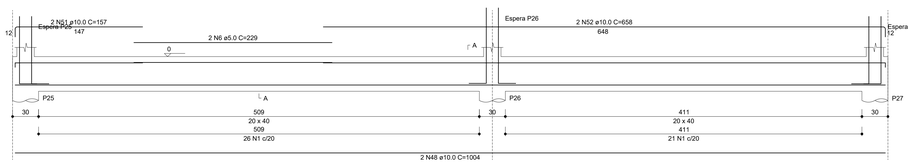
ESPERA P22
ESC 1:20



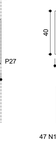
ESPERA P24
ESC 1:20



V6
ESC 1:25



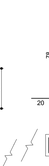
SEÇÃO A-A
ESC 1:20



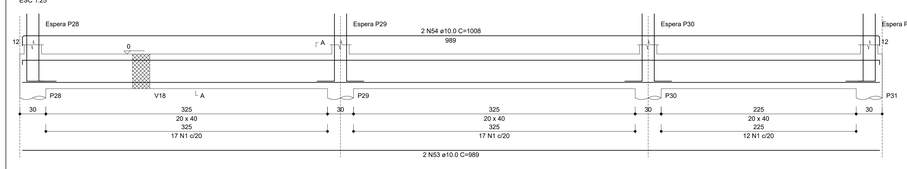
ESPERA P25
ESC 1:20

ESPERA P26
ESC 1:20

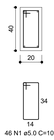
ESPERA P27
ESC 1:20



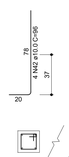
V7
ESC 1:25



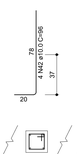
SEÇÃO A-A
ESC 1:20



ESPERA P28
ESC 1:20

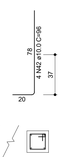


ESPERA P29
ESC 1:20

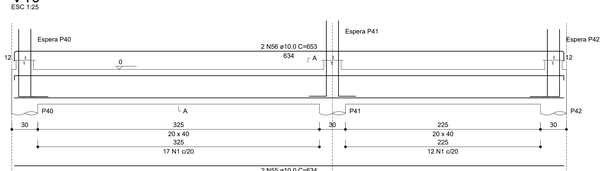


ESPERA P30
ESC 1:20

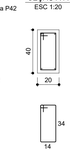
ESPERA P31
ESC 1:20



V10
ESC 1:25



SEÇÃO A-A
ESC 1:20

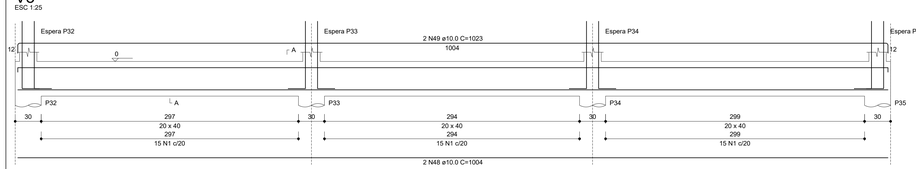


ESPERA P40
ESC 1:20

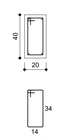
ESPERA P41
ESC 1:20

ESPERA P42
ESC 1:20

V8
ESC 1:25



SEÇÃO A-A
ESC 1:20



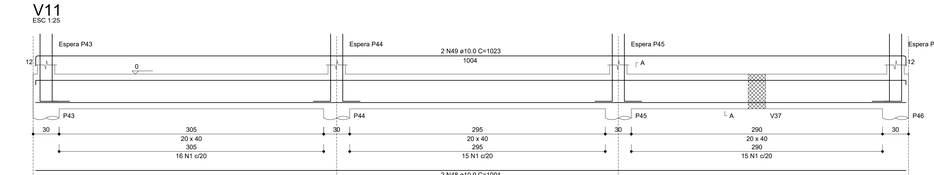
ESPERA P32
ESC 1:20

ESPERA P33
ESC 1:20

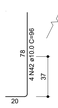
ESPERA P34
ESC 1:20

ESPERA P35
ESC 1:20

V11
ESC 1:25

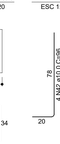


ESPERA P46
ESC 1:20



SEÇÃO A-A
ESC 1:20

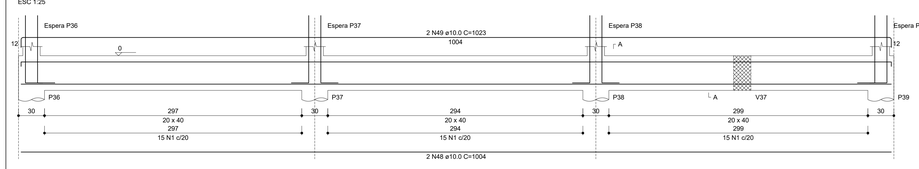
ESPERA P43
ESC 1:20



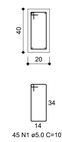
ESPERA P44
ESC 1:20

ESPERA P45
ESC 1:20

V9
ESC 1:25

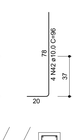


SEÇÃO A-A
ESC 1:20

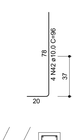


ESPERA P36
ESC 1:20

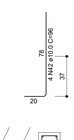
ESPERA P37
ESC 1:20



ESPERA P38
ESC 1:20



ESPERA P39
ESC 1:20

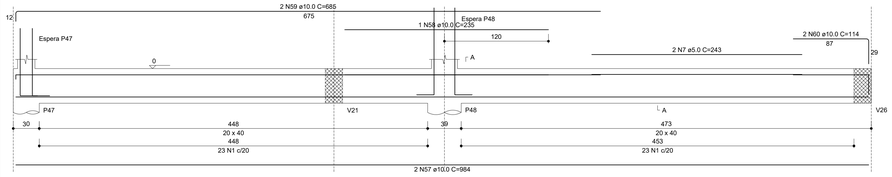


PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

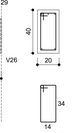
PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA: 4/10

V12
ESC 1:25

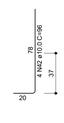


SEÇÃO A-A
ESC 1:20



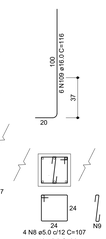
46 N1 ø5.0 C=107

ESPERA P47
ESC 1:20



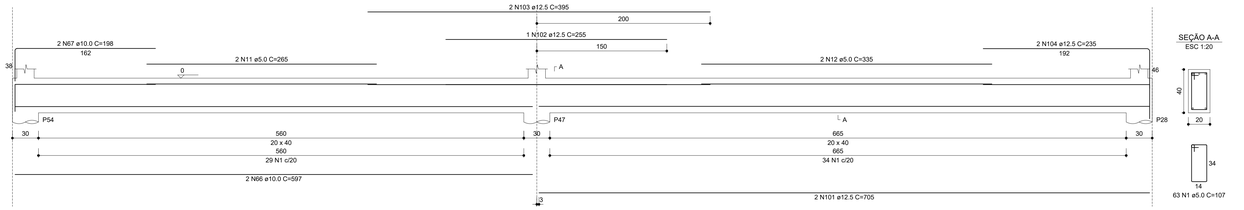
4 N2 ø5.0 c/12 C=67

ESPERA P48
ESC 1:20



4 N8 ø5.0 c/12 C=107
4 N9 ø5.0 C=39

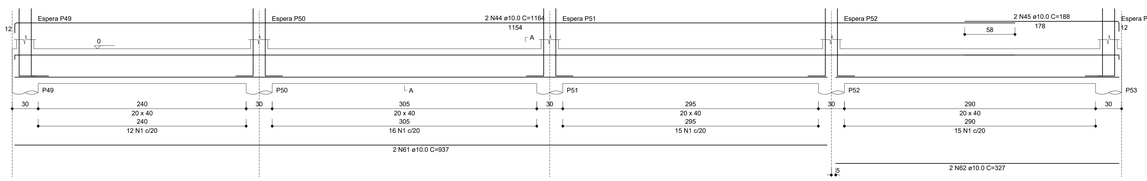
V15
ESC 1:25



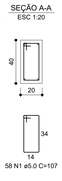
SEÇÃO A-A
ESC 1:20

63 N1 ø5.0 C=107

V13
ESC 1:25

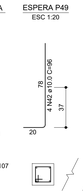


SEÇÃO A-A
ESC 1:20



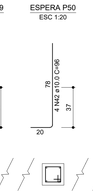
58 N1 ø5.0 C=107

ESPERA P49
ESC 1:20



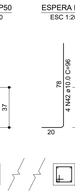
4 N2 ø5.0 c/12 C=67

ESPERA P50
ESC 1:20



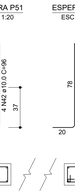
4 N2 ø5.0 c/12 C=67

ESPERA P51
ESC 1:20



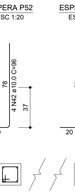
4 N2 ø5.0 c/12 C=67

ESPERA P52
ESC 1:20



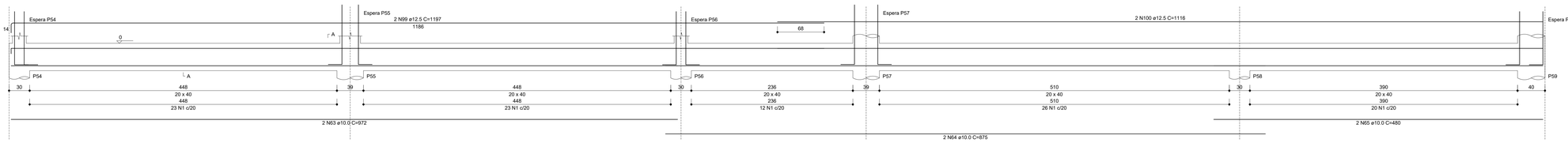
4 N2 ø5.0 c/12 C=67

ESPERA P53
ESC 1:20

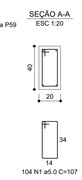


4 N2 ø5.0 c/12 C=67

V14
ESC 1:25

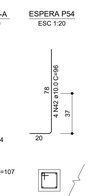


SEÇÃO A-A
ESC 1:20



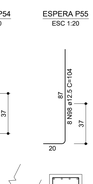
104 N1 ø5.0 C=107

ESPERA P54
ESC 1:20



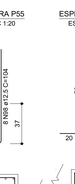
4 N2 ø5.0 c/12 C=67

ESPERA P55
ESC 1:20



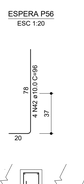
4 N8 ø5.0 c/12 C=107

ESPERA P56
ESC 1:20



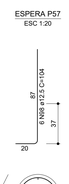
4 N2 ø5.0 c/12 C=67

ESPERA P57
ESC 1:20



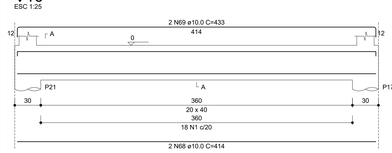
5 N10 ø5.0 c/9 C=124

ESPERA P59
ESC 1:20

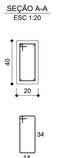


5 N10 ø5.0 c/9 C=124

V16
ESC 1:25

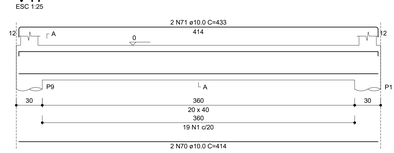


SEÇÃO A-A
ESC 1:20

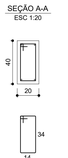


18 N1 ø5.0 C=107

V17
ESC 1:25

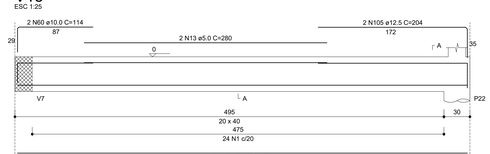


SEÇÃO A-A
ESC 1:20

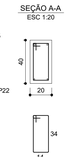


19 N1 ø5.0 C=107

V18
ESC 1:25

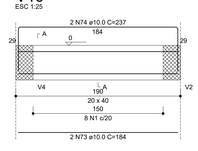


SEÇÃO A-A
ESC 1:20

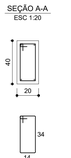


24 N1 ø5.0 C=107

V19
ESC 1:25

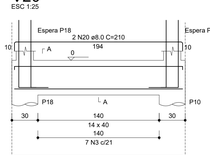


SEÇÃO A-A
ESC 1:20

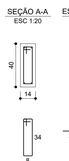


8 N1 ø5.0 C=107

V20
ESC 1:25

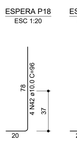


SEÇÃO A-A
ESC 1:20



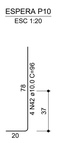
7 N3 ø5.0 C=95

ESPERA P18
ESC 1:20



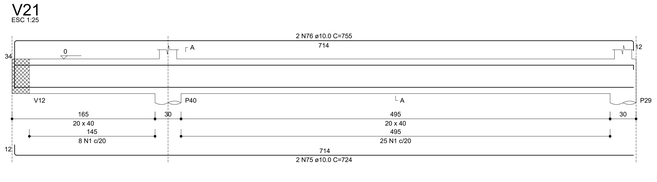
4 N2 ø5.0 c/12 C=67

ESPERA P10
ESC 1:20

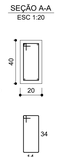


4 N2 ø5.0 c/12 C=67

V21
ESC 1:25

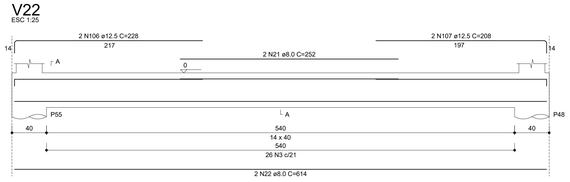


SEÇÃO A-A
ESC 1:20

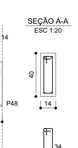


33 N1 ø5.0 C=107

V22
ESC 1:25

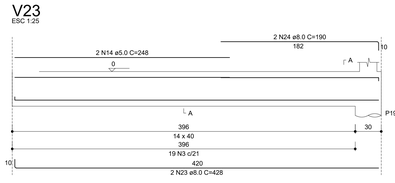


SEÇÃO A-A
ESC 1:20

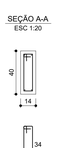


26 N3 ø5.0 C=95

V23
ESC 1:25

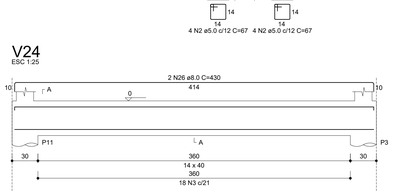


SEÇÃO A-A
ESC 1:20

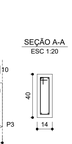


19 N3 ø5.0 C=95

V24
ESC 1:25

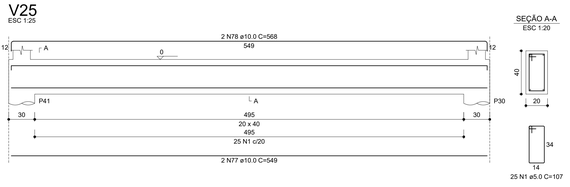


SEÇÃO A-A
ESC 1:20



18 N3 ø5.0 C=95

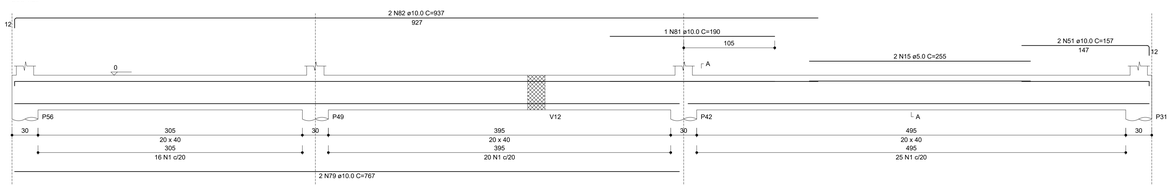
V25
ESC 1:25



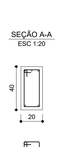
SEÇÃO A-A
ESC 1:20

25 N1 ø5.0 C=107

V26
ESC 1:25

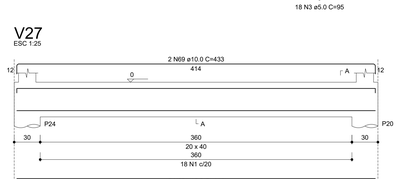


SEÇÃO A-A
ESC 1:20

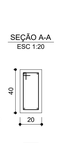


61 N1 ø5.0 C=107

V27
ESC 1:25

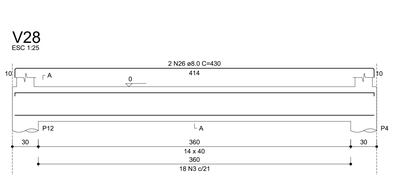


SEÇÃO A-A
ESC 1:20



18 N1 ø5.0 C=107

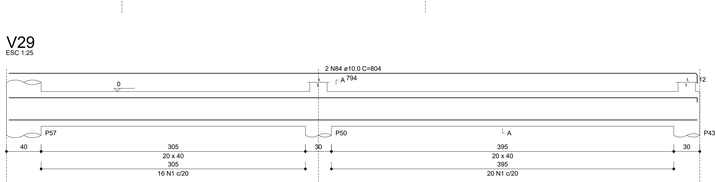
V28
ESC 1:25



SEÇÃO A-A
ESC 1:20

18 N3 ø5.0 C=95

V29
ESC 1:25



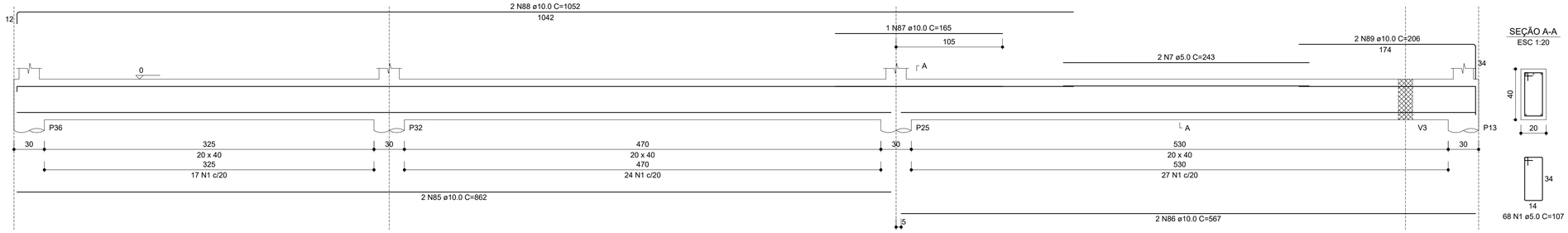
SEÇÃO A-A
ESC 1:20

36 N1 ø5.0 C=107

PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO
	PRANCHA: 5/10

V30
ESC 1:25



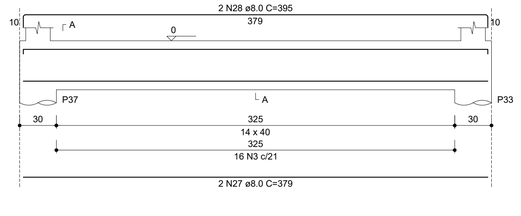
SEÇÃO A-A
ESC 1:20

RELAÇÃO DO AÇO

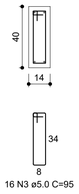
V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	V12
V13	V14	V15
V16	V17	V18
V19	V20	V21
V22	V23	V24
V25	V26	V27
V28	V29	V30
V31	V32	V33
V34	V35	V36
V37	V38	V39
V40	V41	

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1225	107	131075
	2	5.0	210	67	14070
	3	5.0	245	95	23275
	4	5.0	2	253	506
	5	5.0	2	235	470
	6	5.0	2	229	458
	7	5.0	4	243	972
	8	5.0	8	107	856
	9	5.0	4	39	156
	10	5.0	10	124	1240
	11	5.0	2	265	530
	12	5.0	2	335	670
	13	5.0	2	280	560
	14	5.0	2	248	496
	15	5.0	2	255	510
	16	5.0	2	235	470
	17	5.0	2	230	460
CA50	18	8.0	2	999	1998
	19	8.0	2	194	388
	20	8.0	2	210	420
	21	8.0	2	252	504
	22	8.0	2	614	1228
	23	8.0	2	428	856
	24	8.0	2	190	380
	25	8.0	4	414	1656
	26	8.0	4	430	1720
	27	8.0	4	379	1516
	28	8.0	4	395	1580
	29	8.0	2	469	938
	30	8.0	2	485	970
	31	8.0	2	449	898
	32	8.0	2	465	930
	33	8.0	2	519	1038
	34	8.0	2	550	1100
	35	8.0	2	448	896
	36	8.0	2	464	928
	37	10.0	4	985	3940
	38	10.0	2	858	1716
	39	10.0	2	391	782
	40	10.0	2	1199	2398
	41	10.0	2	1171	2342
	42	10.0	223	96	21408
	43	10.0	2	280	560
	44	10.0	4	1164	4656
	45	10.0	4	188	752
	46	10.0	2	464	928
	47	10.0	2	320	640
	48	10.0	12	1004	12048
	49	10.0	8	1023	8184
	50	10.0	2	297	594
	51	10.0	6	157	942
	52	10.0	2	658	1316
	53	10.0	2	989	1978
	54	10.0	2	1008	2016
	55	10.0	2	634	1268
	56	10.0	2	653	1306
	57	10.0	2	984	1968
	58	10.0	1	235	235
	59	10.0	2	685	1370
	60	10.0	6	114	684
	61	10.0	2	937	1874
	62	10.0	2	327	654
	63	10.0	2	972	1944
	64	10.0	2	875	1750
	65	10.0	2	480	960
	66	10.0	2	597	1194
	67	10.0	2	198	396
	68	10.0	4	414	1656
	69	10.0	4	433	1732
	70	10.0	2	414	828
	71	10.0	2	433	866
	72	10.0	2	519	1038
	73	10.0	4	184	736
	74	10.0	4	237	948
	75	10.0	2	724	1448
	76	10.0	2	755	1510
	77	10.0	2	549	1098
	78	10.0	2	568	1136
	79	10.0	2	767	1534
	80	10.0	2	532	1064
	81	10.0	1	190	190
	82	10.0	2	937	1874
	83	10.0	2	794	1588
	84	10.0	2	804	1608
	85	10.0	2	862	1724
	86	10.0	2	567	1134
	87	10.0	1	165	165
	88	10.0	2	1052	2104
	89	10.0	2	206	412
	90	10.0	2	464	928
	91	10.0	2	192	384
	92	10.0	2	787	1574
	93	10.0	2	797	1594
	94	10.0	2	379	758
	95	10.0	2	398	796
	96	10.0	2	974	1948
	97	12.5	2	513	1026
	98	12.5	28	104	2912
	99	12.5	2	1197	2394
	100	12.5	2	1116	2232
	101	12.5	2	705	1410
	102	12.5	1	255	255
	103	12.5	2	395	790
	104	12.5	2	235	470
	105	12.5	2	204	408
	106	12.5	2	228	456
	107	12.5	2	208	416
	108	12.5	2	628	1256
	109	16.0	6	116	696

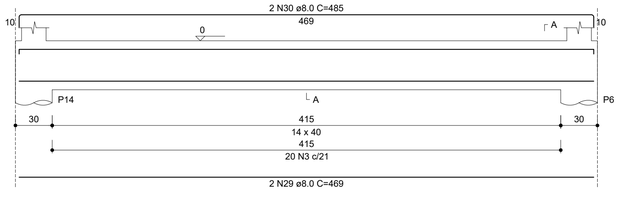
V31
ESC 1:25



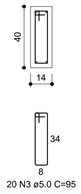
SEÇÃO A-A
ESC 1:20



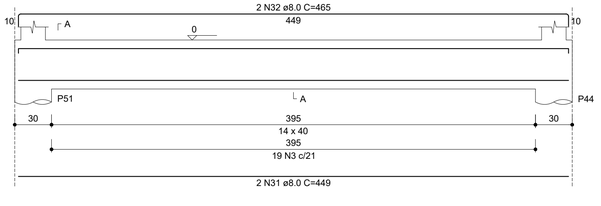
V32
ESC 1:25



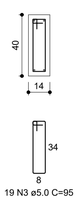
SEÇÃO A-A
ESC 1:20



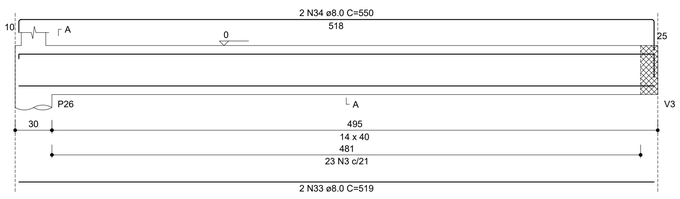
V33
ESC 1:25



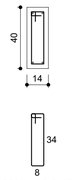
SEÇÃO A-A
ESC 1:20



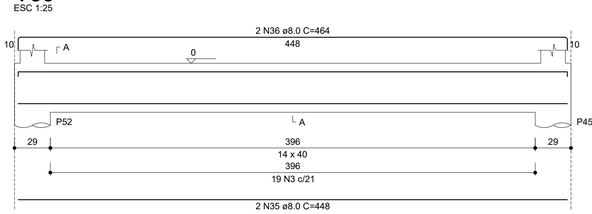
V34
ESC 1:25



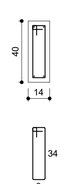
SEÇÃO A-A
ESC 1:20



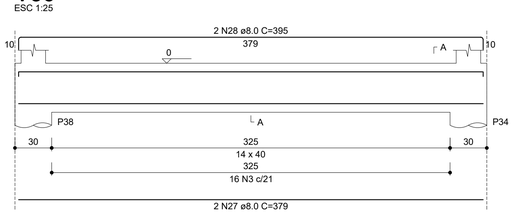
V35
ESC 1:25



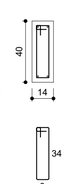
SEÇÃO A-A
ESC 1:20



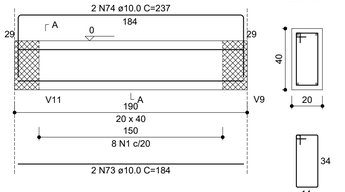
V36
ESC 1:25



SEÇÃO A-A
ESC 1:20

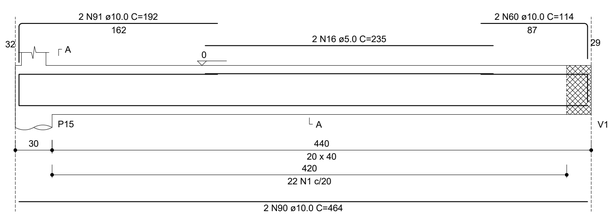


V37
ESC 1:25

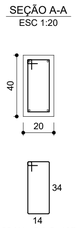


SEÇÃO A-A
ESC 1:20

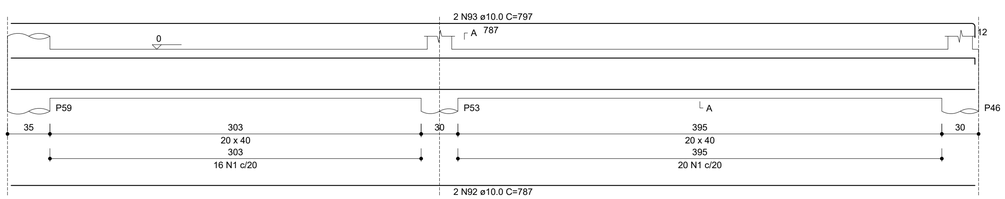
V38
ESC 1:25



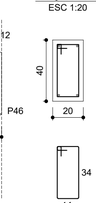
SEÇÃO A-A
ESC 1:20



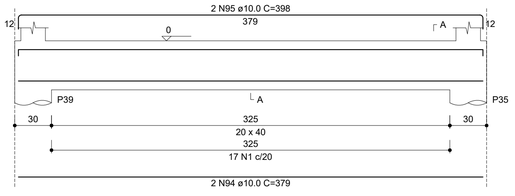
V39
ESC 1:25



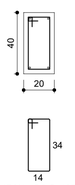
SEÇÃO A-A
ESC 1:20



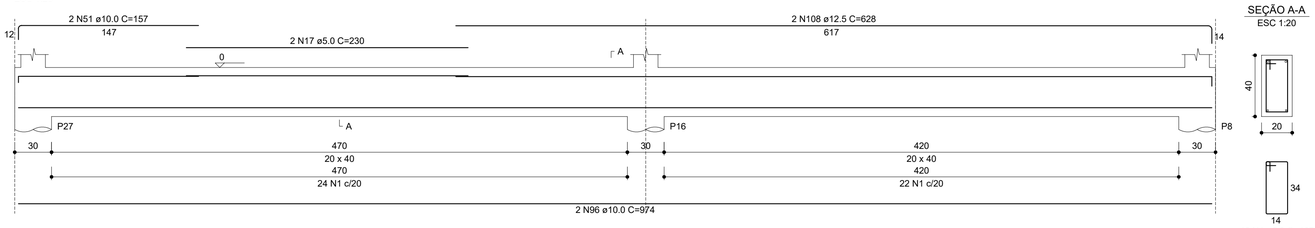
V40
ESC 1:25



SEÇÃO A-A
ESC 1:20



V41
ESC 1:25



SEÇÃO A-A
ESC 1:20

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	8.0	199.4	19	86.6
	10.0	1171.8	108	794.7
	12.5	140.3	13	148.6
	16.0	7	1	12.1
CA60	5.0	1767.7	-	299.7

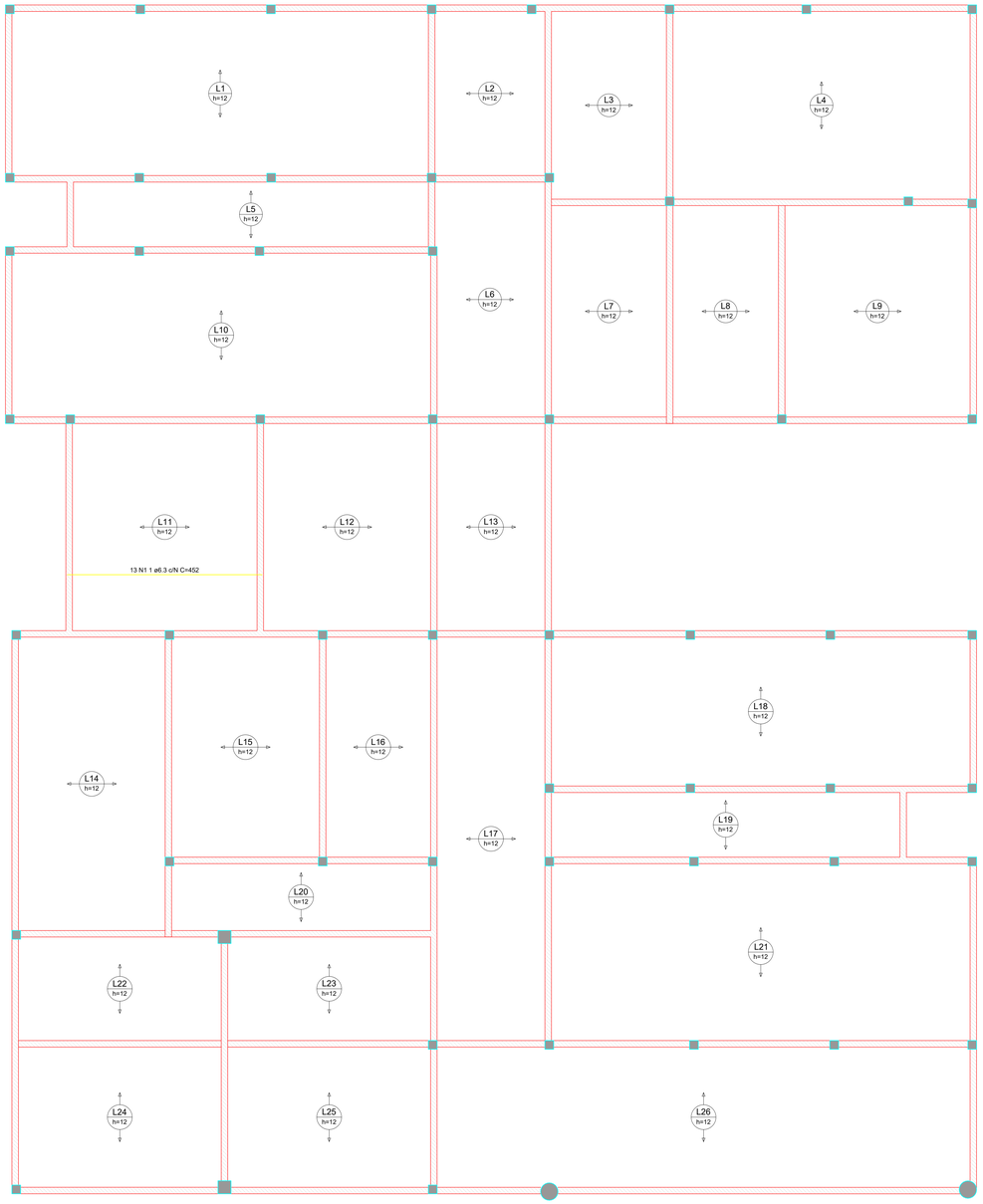
PESO TOTAL (kg)	
CA50	1042
CA60	299.7

Volume de concreto (C-25) = 23.08 m³
Área de forma = 300.84 m²

PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

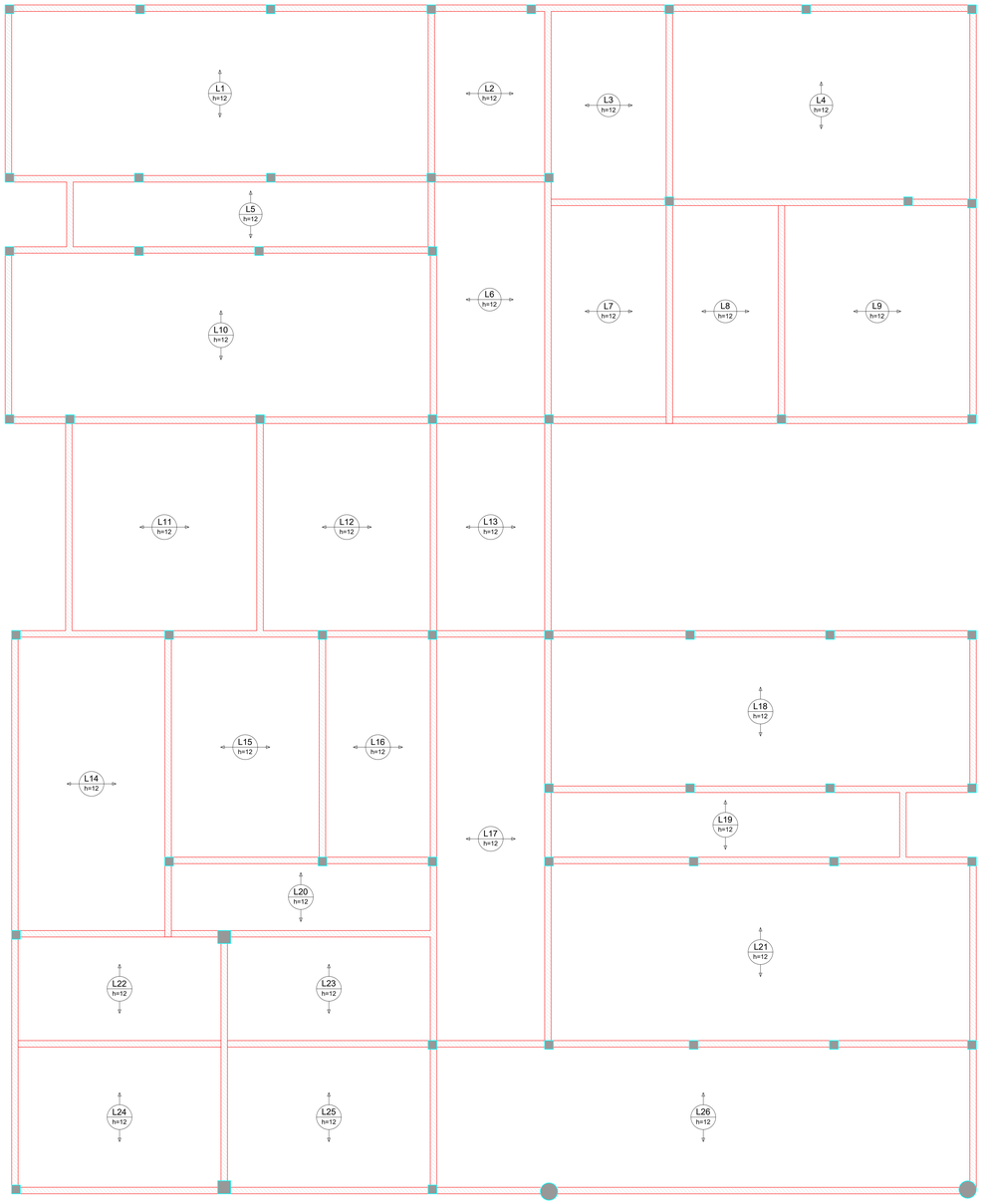
PROPRIETÁRIO Prefeitura Municipal de Espumoso	DATA Março/2026
ENDEREÇO Loteamento São Valentim, Espumoso	ESCALA Indicada
NOME DA OBRA Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA
6/10



ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO COBERTURA (EIXO X)

Escala 1:50



ARMAÇÃO POSITIVA DAS LAJES DO PAVIMENTO COBERTURA (EIXO Y)

Escala 1:50

RELAÇÃO DO AÇO

Positivos X

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	13	452	5876

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	58.8	6	15.8

PESO TOTAL (kg)
CA50 15.8

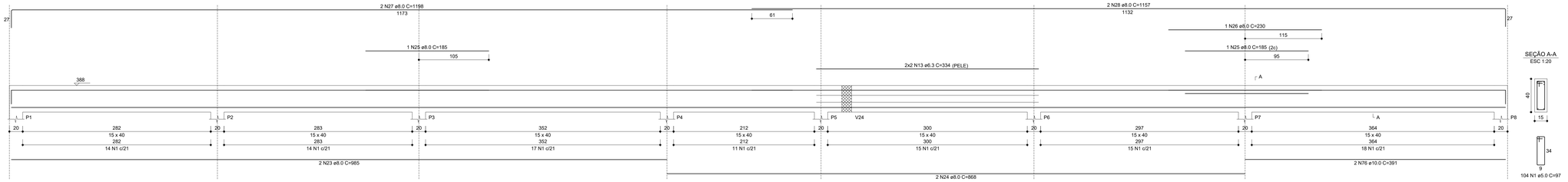
Volume de concreto (C-25) = 26.32 m³
Área de forma = 0.00 m²

PREFEITURA MUNICIPAL DE ESPUMOSO

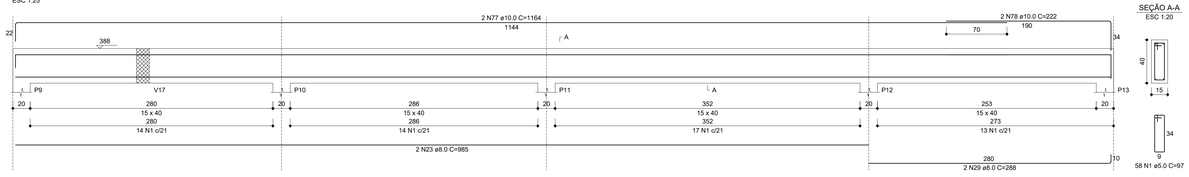
DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO
	PRANCHA: 7/10

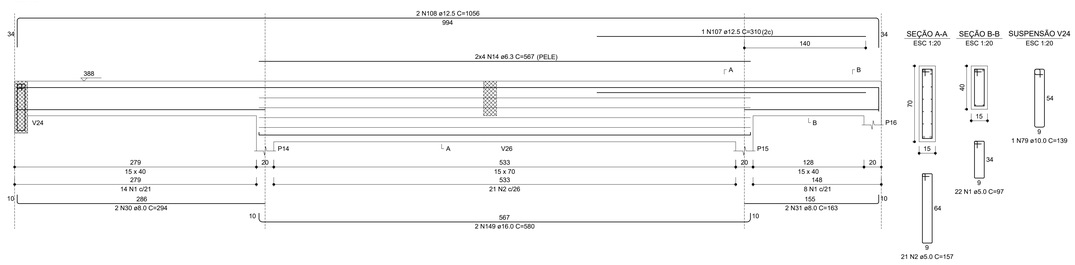
V1
ESC 1:25



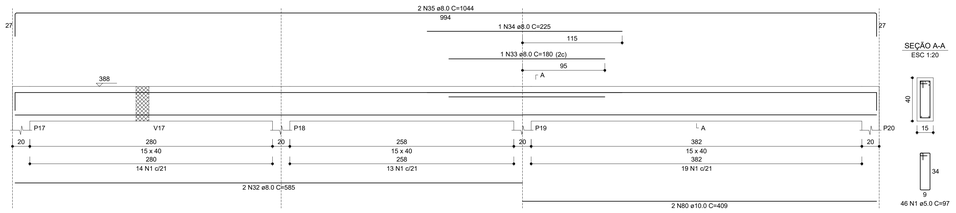
V2
ESC 1:25



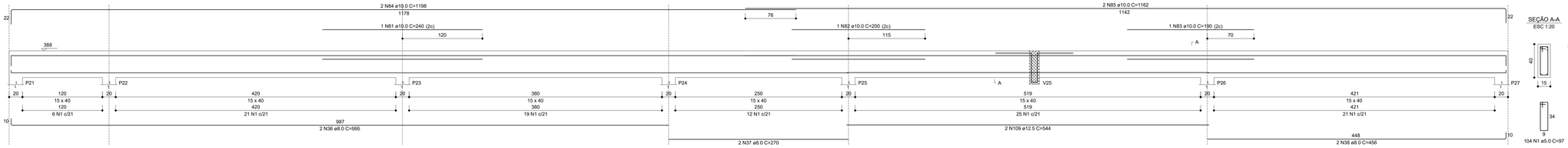
V3
ESC 1:25



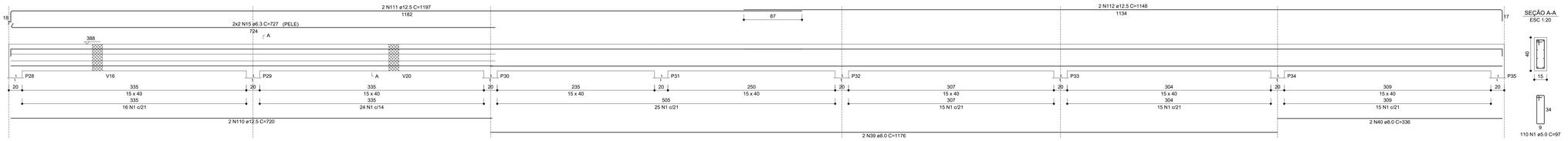
V4
ESC 1:25



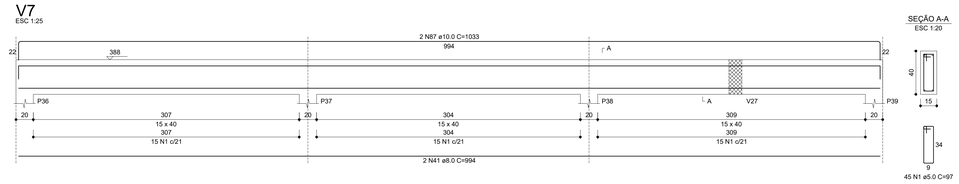
V5
ESC 1:25



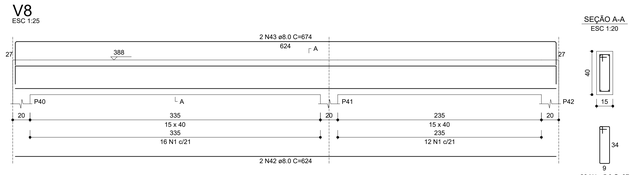
V6
ESC 1:25



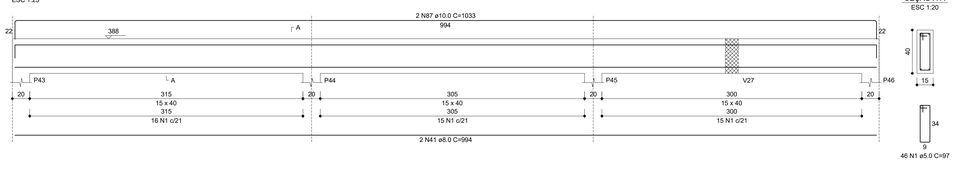
V7
ESC 1:25



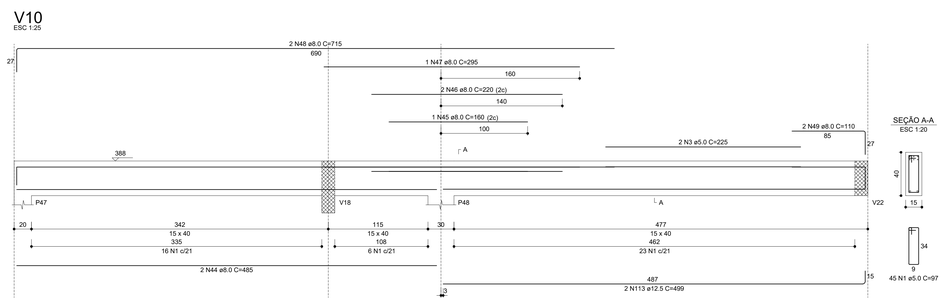
V8
ESC 1:25



V9
ESC 1:25



V10
ESC 1:25

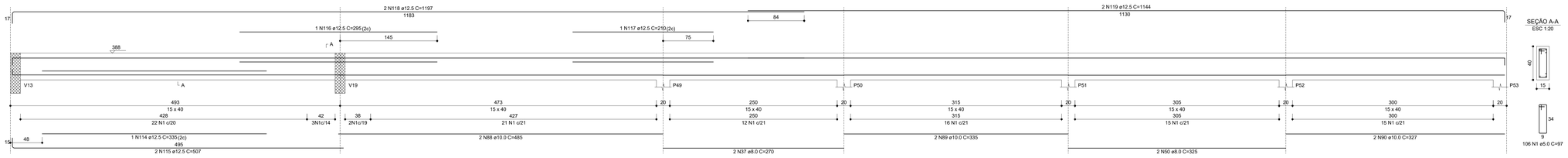


PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

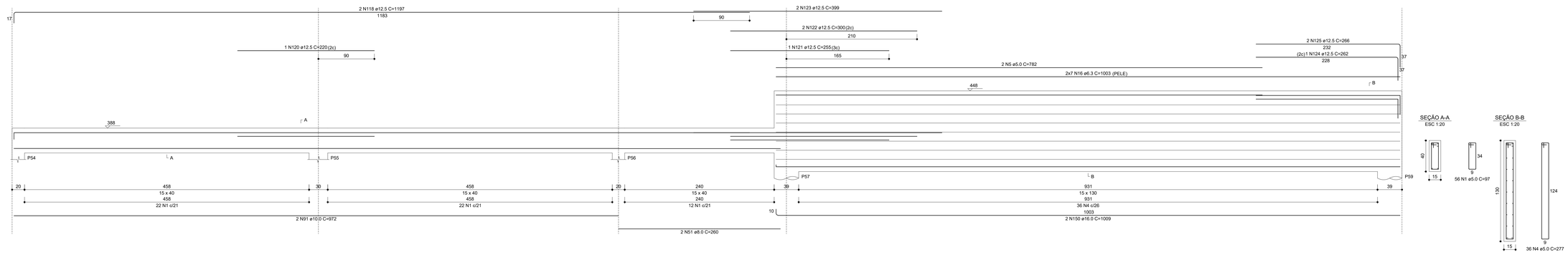
PROPRIETÁRIO Prefeitura Municipal de Espumoso	DATA Março/2026
ENDEREÇO Loteamento São Valentim, Espumoso	ESCALA Indicada
NOME DA OBRA Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA
8/10

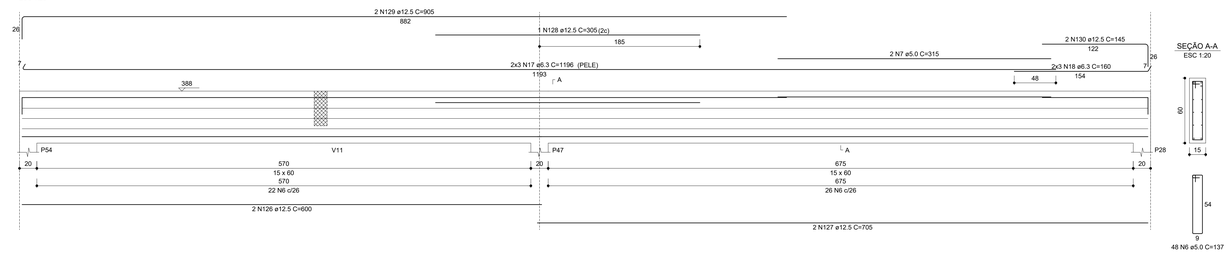
V11
ESC 1:25



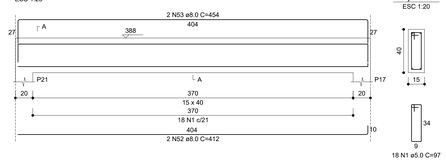
V12
ESC 1:25



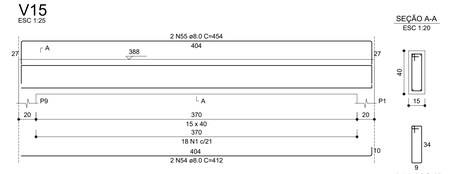
V13
ESC 1:25



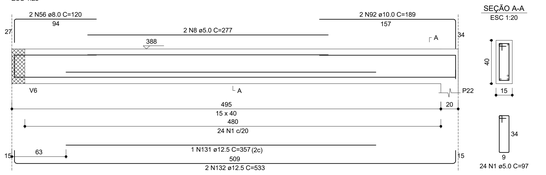
V14
ESC 1:25



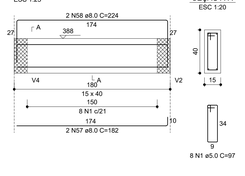
V15
ESC 1:25



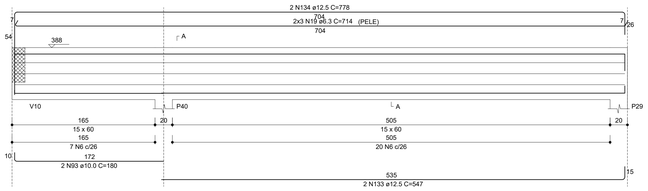
V16
ESC 1:25



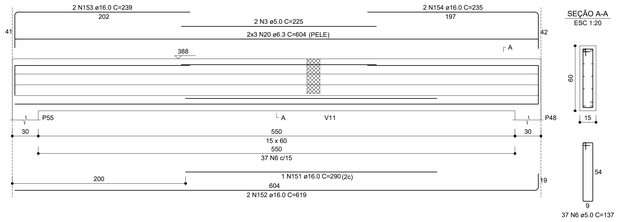
V17
ESC 1:25



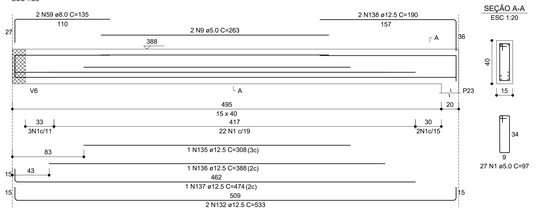
V18
ESC 1:25



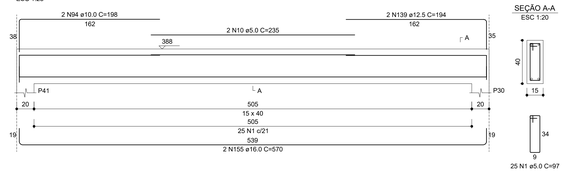
V19
ESC 1:25



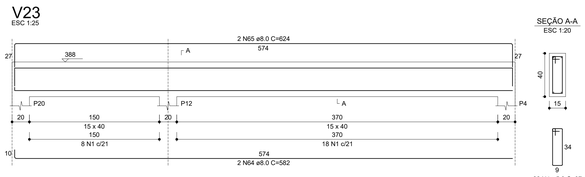
V20
ESC 1:25



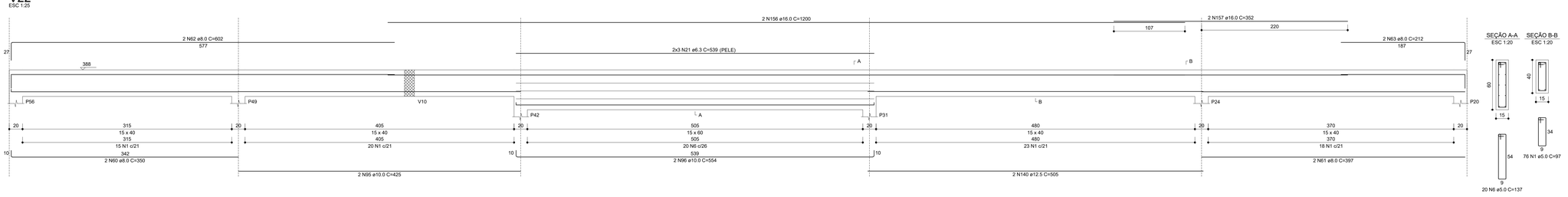
V21
ESC 1:25



V23
SEÇÃO A-A
ESC 1:20



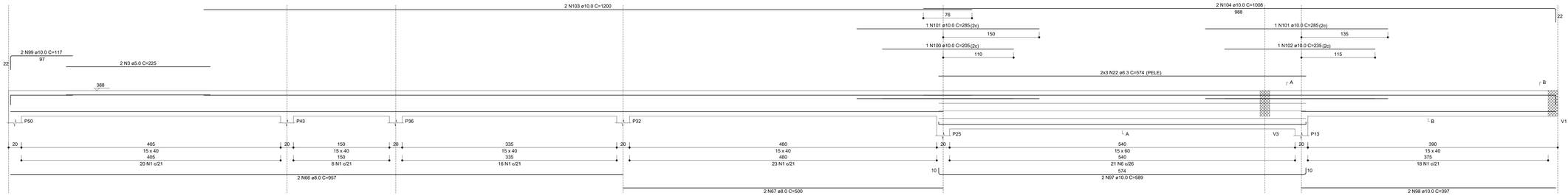
V22
ESC 1:25



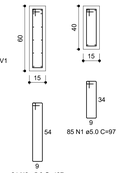
PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO
	PRANCHA: 9/10

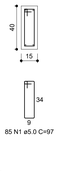
V24
ESC 1:25



SEÇÃO A-A
ESC 1:20



SEÇÃO B-B
ESC 1:20



RELAÇÃO DO AÇO

V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	V12
V13	V14	V15
V16	V17	V18
V19	V20	V21
V22	V23	V24
V25	V26	V27
V28	V29	V30

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1205	97	116885
	2	5.0	21	157	3297
	3	5.0	6	225	1350
	4	5.0	36	277	9972
	5	5.0	2	782	1564
	6	5.0	153	137	20961
	7	5.0	2	315	630
	8	5.0	2	277	554
	9	5.0	4	263	1052
	10	5.0	4	235	940
	11	5.0	36	117	4212
	12	5.0	2	342	684
CA50	13	6.3	4	334	1336
	14	6.3	8	567	4536
	15	6.3	4	727	2908
	16	6.3	14	1003	14042
	17	6.3	6	1196	7176
	18	6.3	6	160	960
	19	6.3	6	714	4284
	20	6.3	6	604	3624
	21	6.3	6	539	3234
	22	6.3	6	574	3444
	23	8.0	4	985	3940
	24	8.0	2	868	1736
	25	8.0	2	185	370
	26	8.0	1	230	230
	27	8.0	2	1198	2396
	28	8.0	2	1157	2314
	29	8.0	2	288	576
	30	8.0	2	294	588
	31	8.0	2	163	326
	32	8.0	2	585	1170
	33	8.0	1	180	180
	34	8.0	1	225	225
	35	8.0	2	1044	2088
	36	8.0	2	995	1990
	37	8.0	4	270	1080
	38	8.0	2	456	912
	39	8.0	2	1176	2352
	40	8.0	2	336	672
	41	8.0	4	994	3976
	42	8.0	2	623	1246
	43	8.0	2	674	1348
	44	8.0	1	160	160
	45	8.0	1	160	160
	46	8.0	2	220	440
	47	8.0	1	295	295
	48	8.0	2	715	1430
	49	8.0	2	110	220
	50	8.0	2	325	650
	51	8.0	2	260	520
	52	8.0	2	412	824
	53	8.0	2	454	908
	54	8.0	2	412	824
	55	8.0	2	454	908
	56	8.0	2	120	240
	57	8.0	2	182	364
	58	8.0	4	224	896
	59	8.0	2	135	270
	60	8.0	2	350	700
	61	8.0	2	397	794
	62	8.0	2	602	1204
	63	8.0	2	212	424
	64	8.0	2	582	1164
	65	8.0	2	624	1248
	66	8.0	2	957	1914
	67	8.0	2	500	1000
	68	8.0	2	130	260
	69	8.0	2	190	380
	70	8.0	2	780	1560
	71	8.0	2	478	956
	72	8.0	2	137	274
	73	8.0	2	377	754
	74	8.0	2	419	838
	75	8.0	2	465	930
	76	10.0	2	391	782
	77	10.0	2	1164	2328
	78	10.0	2	222	444
	79	10.0	1	139	139
	80	10.0	2	409	818
	81	10.0	1	240	240
	82	10.0	1	200	200
	83	10.0	1	190	190
	84	10.0	2	1193	2386
	85	10.0	2	1162	2324
	86	10.0	1	598	598
	87	10.0	4	1033	4132
	88	10.0	2	283	570
	89	10.0	2	335	670
	90	10.0	2	327	654
	91	10.0	2	972	1944
	92	10.0	2	189	378
	93	10.0	2	180	360
	94	10.0	2	198	396
	95	10.0	2	425	850
	96	10.0	2	554	1108
	97	10.0	2	589	1178
	98	10.0	2	397	794
	99	10.0	2	117	234
	100	10.0	1	205	205
	101	10.0	2	285	570
	102	10.0	1	235	235
	103	10.0	2	1200	2400
	104	10.0	2	1008	2016
	105	10.0	1	522	522
	106	10.0	2	983	1966
	107	12.5	1	310	310
	108	12.5	2	1056	2112
	109	12.5	2	544	1088
	110	12.5	2	720	1440
	111	12.5	2	1197	2394
	112	12.5	2	1148	2296
	113	12.5	2	499	998
	114	12.5	1	335	335
	115	12.5	2	507	1014
	116	12.5	1	295	295
	117	12.5	1	210	210
	118	12.5	4	1197	4788
	119	12.5	2	1144	2288
	120	12.5	1	220	220
	121	12.5	1	255	255
	122	12.5	2	300	600
	123	12.5	2	399	798
	124	12.5	1	262	262
	125	12.5	2	266	532
	126	12.5	2	600	1200
	127	12.5	2	705	1410
	128	12.5	1	305	305
	129	12.5	2	905	1810
	130	12.5	2	145	290
	131	12.5	1	357	357
	132	12.5	4	533	2132
	133	12.5	2	547	1094
	134	12.5	2	778	1556
	135	12.5	1	308	308
	136	12.5	1	388	388
	137	12.5	1	474	474
	138	12.5	2	190	380
	139	12.5	2	194	388
	140	12.5	2	505	1010
	141	12.5	1	245	245
	142	12.5	2	651	1302
	143	12.5	1	343	343
	144	12.5	1	438	438
	145	12.5	2	538	1076
	146	12.5	2	201	402
	147	12.5	2	510	1020
	148	12.5	2	995	1990
	149	16.0	2	580	1160
	150	16.0	2	1009	2018
	151	16.0	1	290	290
	152	16.0	2	619	1238
	153	16.0	2	239	478
	154	16.0	2	235	470
	155	16.0	2	570	1140
	156	16.0	2	1200	2400
	157	16.0	2	352	704

V25
ESC 1:25

SEÇÃO A-A
ESC 1:20

V26
ESC 1:25

SEÇÃO A-A
ESC 1:20

V27
ESC 1:25

SEÇÃO A-A
ESC 1:20

V28
ESC 1:25

SEÇÃO A-A
ESC 1:20

V29
ESC 1:25

SEÇÃO A-A
ESC 1:20

V30
ESC 1:25

SEÇÃO A-A
ESC 1:20

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	455.4	42	122.6
	8.0	540.4	50	234.5
	10.0	316.4	30	214.6
	12.5	421.5	39	446.7
	16.0	99	10	171.8
CA60	5.0	1621	-	274.8

PESO TOTAL (kg)	
CA50	1190.2
CA60	274.8

Volume de concreto (C-25) = 20.84 m³
Área de forma = 265.20 m²

PREFEITURA MUNICIPAL DE ESPUMOSO
DEPARTAMENTO DE ENGENHARIA

PROPRIETÁRIO: Prefeitura Municipal de Espumoso	DATA: Março/2026
ENDEREÇO: Loteamento São Valentim, Espumoso	ESCALA: Indicada
NOME DA OBRA: Construção CAPS Novo PAC	
PROPRIETÁRIO	RESPONSÁVEL TÉCNICO

PRANCHA: 10/10