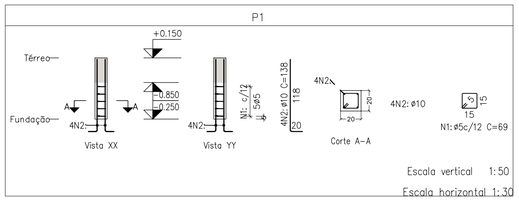
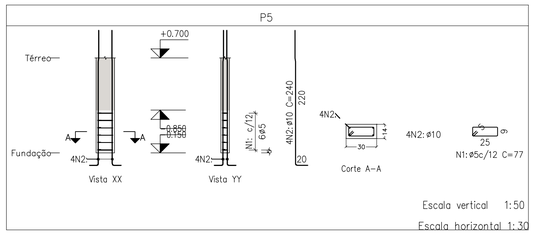
P1



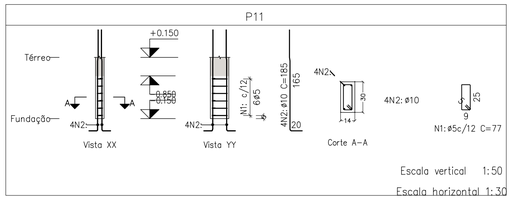
Escala vertical 1:50
Escala horizontal 1:30

P5



Escala vertical 1:50
Escala horizontal 1:30

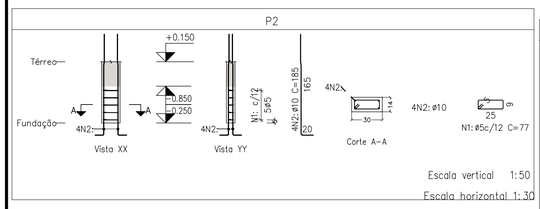
P11



Escala vertical 1:50
Escala horizontal 1:30

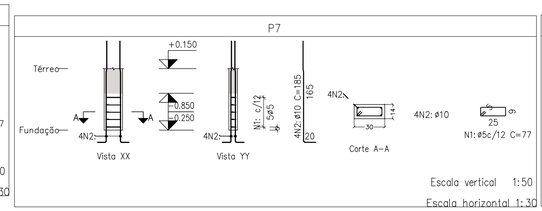
Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
P25=P26=P27=P28	1	ø5	4	77	308		0.5
	2	ø10	4	170	680	4.2	
					Total+10%	4.6	0.6
					(x4):	18.4	2.4
P29=P31	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
					(x2):	10.2	1.4
P30=P32	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
					(x2):	10.2	1.4

P2



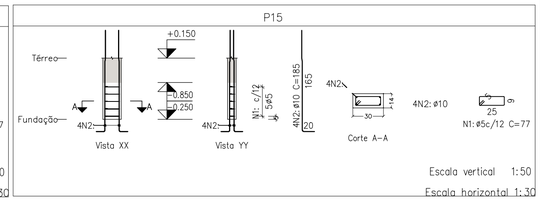
Escala vertical 1:50
Escala horizontal 1:30

P7



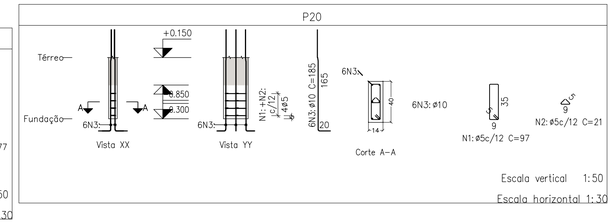
Escala vertical 1:50
Escala horizontal 1:30

P15



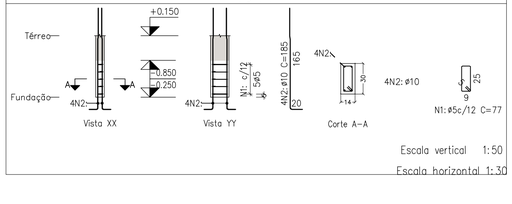
Escala vertical 1:50
Escala horizontal 1:30

P20



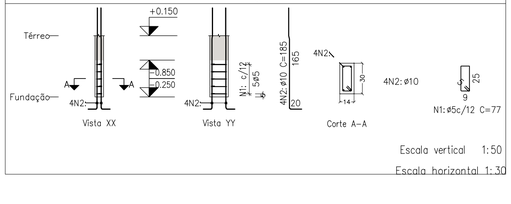
Escala vertical 1:50
Escala horizontal 1:30

P3=P4



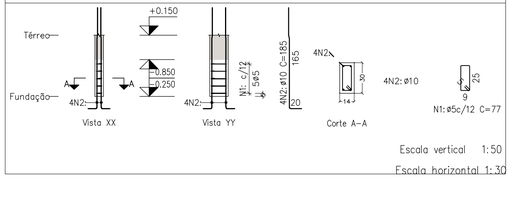
Escala vertical 1:50
Escala horizontal 1:30

P9



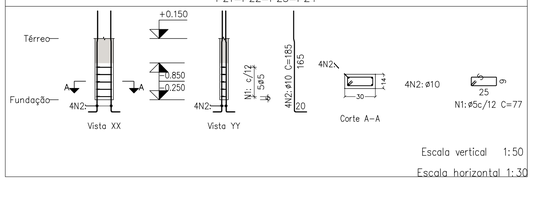
Escala vertical 1:50
Escala horizontal 1:30

P17



Escala vertical 1:50
Escala horizontal 1:30

P21=P22=P23=P24



Escala vertical 1:50
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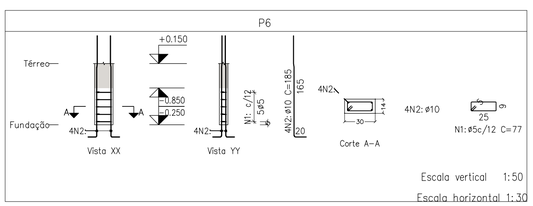
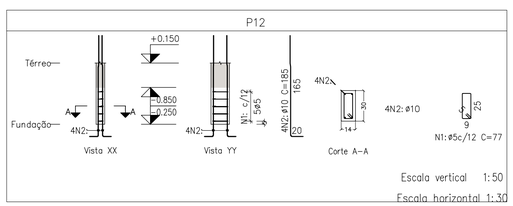
P6



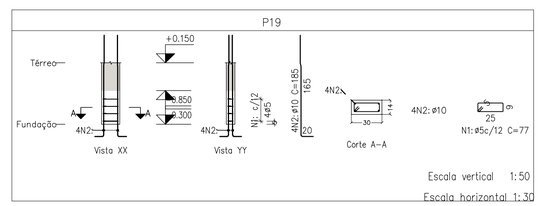
Escala vertical 1:50
Escala horizontal 1:30

P12



Escala vertical 1:50
Escala horizontal 1:30

P19

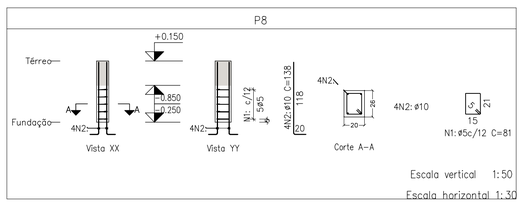


Escala vertical 1:50
Escala horizontal 1:30

Planta: Térreo
Concreto: C20, em geral
Aço dos estribos: CA-50 e CA-60

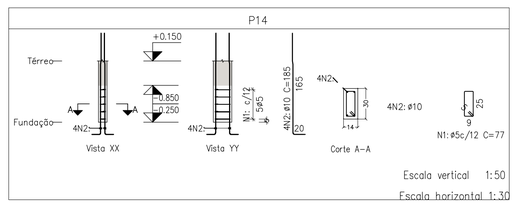
Resumo Aço Pilares	Comp. total (m)	Peso+10% (kg)	Total
CA-50 ø10	236.5	160	160
CA-60 ø5	121.6	21	21
Total			181

P8



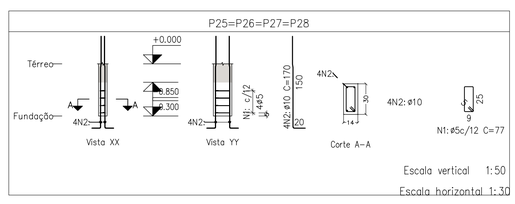
Escala vertical 1:50
Escala horizontal 1:30

P14



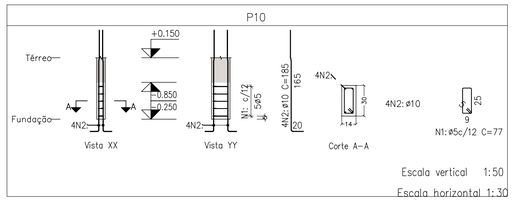
Escala vertical 1:50
Escala horizontal 1:30

P25=P26=P27=P28



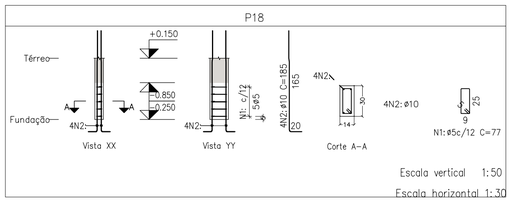
Escala vertical 1:50
Escala horizontal 1:30

P10



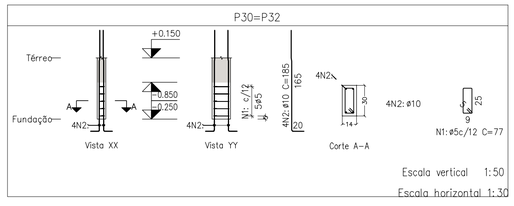
Escala vertical 1:50
Escala horizontal 1:30

P18



Escala vertical 1:50
Escala horizontal 1:30

P30=P32



Escala vertical 1:50
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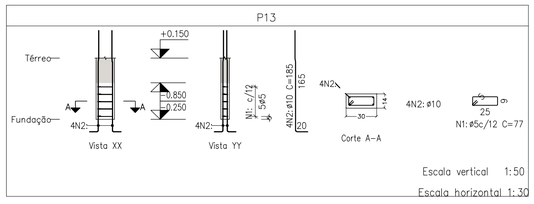
P13



Escala vertical 1:50
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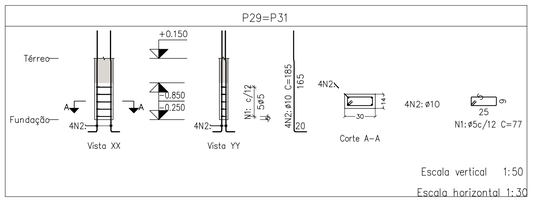
P29=P31



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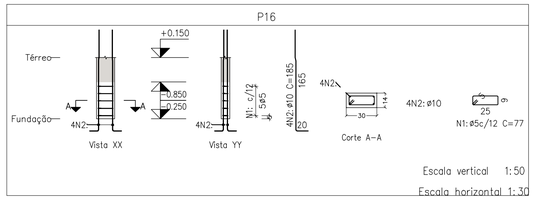
P16



Escala vertical 1:50
Escala horizontal 1:30

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
P1	1	ø5	5	69	345		0.5
	2	ø10	4	138	552	3.4	
					Total+10%	3.7	0.6
P2	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P3=P4	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
					(x2):	10.2	1.4
P5	1	ø5	6	77	462		0.7
	2	ø10	4	240	960	5.9	
					Total+10%	6.5	0.8
P6	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P7	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P8	1	ø5	5	81	405		0.6
	2	ø10	4	138	552	3.4	
					Total+10%	3.7	0.7
P9	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P10	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P11	1	ø5	6	77	462		0.7
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.8
P12	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P13	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P15	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P14	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P16	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P17	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P18	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
P19	1	ø5	4	77	308		0.5
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.6
P20	1	ø5	4	97	388		0.6
	2	ø5	4	21	84		0.1
	3	ø10	6	185	1110	6.8	
					Total+10%	7.5	0.8
P21=P22=P23=P24	1	ø5	5	77	385		0.6
	2	ø10	4	185	740	4.6	
					Total+10%	5.1	0.7
					(x4):	20.4	2.8
					ø5:	0.0	22.1
					ø10:	162.2	0.0
					Total:	162.2	22.1

Concreto 20MPa

REVISÕES				
NÚMERO	DATA	DESCRIÇÃO	DESENHO	VERIF.

PROJETO ESTRUTURAL

ProEng
ENGENHARIA E ARQUITETURA
CREA/SC 120.020-5

Rua dos Ferroviários, 279 - Tubarão / SC
proengengenharia@live.com
(48)3626-1466

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Eng.º Civil Jéssica Tartari da Silva
CREA/SC 147.347-0
Eng.º Eletricista Eduardo Marcelo da Silva
CREA/SC 107.293-8
Eng.º Mecânico Fábio Domingos Guimarães
CREA/SC 075.436-1

RESPONSÁVEL TÉCNICO: Eng.º Civil Celso Zanoni Filho

PROPRIETÁRIO LOCAL DA OBRA: PREFEITURA MUNICIPAL DE ANGELINA
CNPJ: 82.951.195/0001-10

Escola Municipal de Barra Clara
Barra Clara
Angelina/SC

APROVAÇÃO

CONTEÚDO: - Pilar chega em térreo

ESCALA: INDIC.

CAD	ÁREA	DATA	OBRA	PRANCHA
C.Z.F	441,21m²	Fev/2024	943	PI 01 / 04