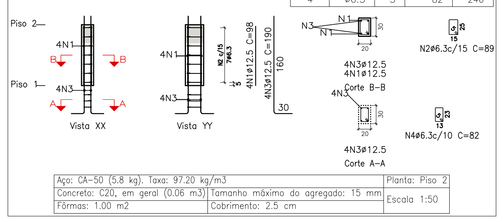
P1

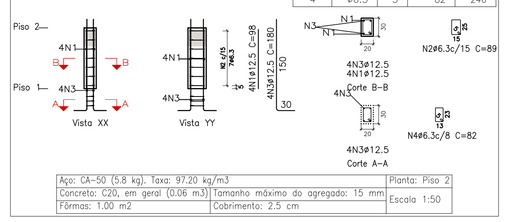
Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	98	392
2	ø6.3	7	89	623
3	ø12.5	4	190	760
4	ø6.3	3	82	246



Aço: CA-50 (5.8 kg). Taxa: 97.20 kg/m3		Planta: Piso 2
Concreto: C20, em geral (0.06 m3)	Tamanho máximo do agregado: 15 mm	Escala 1:50
Fôrmas: 1.00 m2	Cobrimento: 2.5 cm	

P6

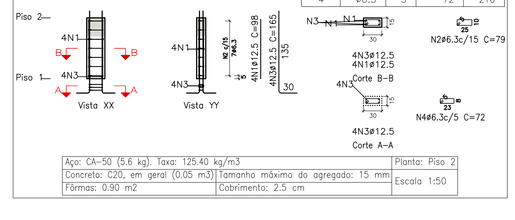
Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	98	392
2	ø6.3	7	89	623
3	ø12.5	4	180	720
4	ø6.3	3	82	246



Aço: CA-50 (5.8 kg). Taxa: 97.20 kg/m3		Planta: Piso 2
Concreto: C20, em geral (0.06 m3)	Tamanho máximo do agregado: 15 mm	Escala 1:50
Fôrmas: 1.00 m2	Cobrimento: 2.5 cm	

P2

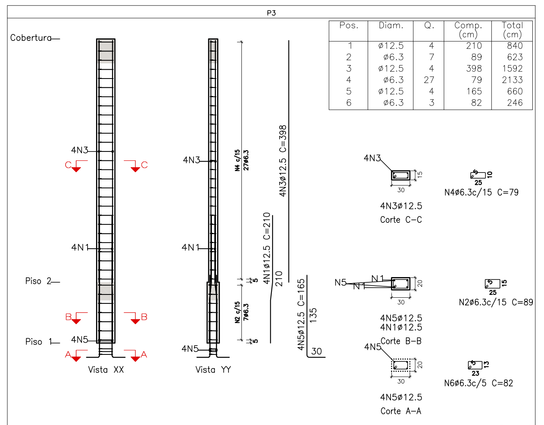
Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	98	392
2	ø6.3	7	79	553
3	ø12.5	4	165	660
4	ø6.3	3	72	216



Aço: CA-50 (5.8 kg). Taxa: 125.40 kg/m3		Planta: Piso 2
Concreto: C20, em geral (0.05 m3)	Tamanho máximo do agregado: 15 mm	Escala 1:50
Fôrmas: 0.90 m2	Cobrimento: 2.5 cm	

P3

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	210	840
2	ø6.3	7	89	623
3	ø12.5	4	398	1592
4	ø6.3	27	79	2133
5	ø12.5	4	165	660
6	ø6.3	3	82	246

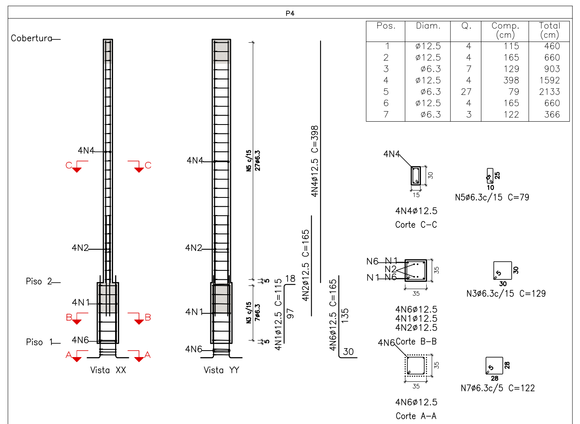


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	30x15	0.18	3.60	15.3	5.2	22.6	125.56
Piso 2	30x20	0.06	1.00	8.1	1.5	10.6	176.67
Total		0.24	4.60	23.4	6.7	33.2	138.33

P4

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	115	460
2	ø12.5	4	165	660
3	ø6.3	7	129	903
4	ø12.5	4	398	1592
5	ø6.3	27	79	2133
6	ø12.5	4	165	660
7	ø6.3	3	122	366

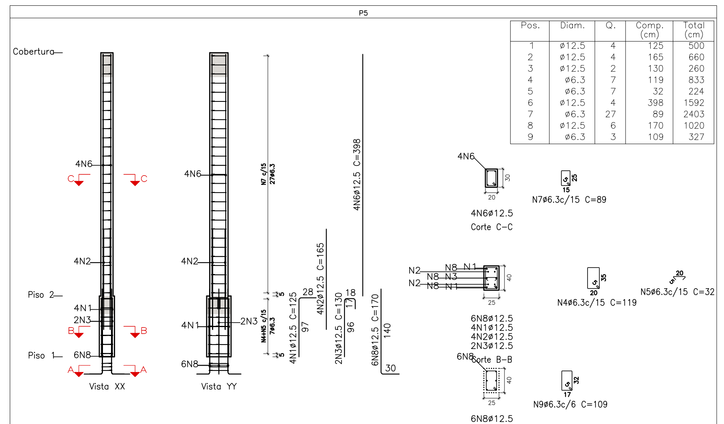


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	15x30	0.18	3.60	15.3	5.2	22.6	125.56
Piso 2	35x35	0.12	1.40	10.8	2.2	14.3	119.17
Total		0.30	5.00	26.1	7.4	36.9	123.00

P5

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	125	500
2	ø12.5	4	165	660
3	ø12.5	2	130	260
4	ø6.3	7	119	833
5	ø6.3	7	32	224
6	ø12.5	4	398	1592
7	ø6.3	27	89	2403
8	ø12.5	6	170	1020
9	ø6.3	3	109	327

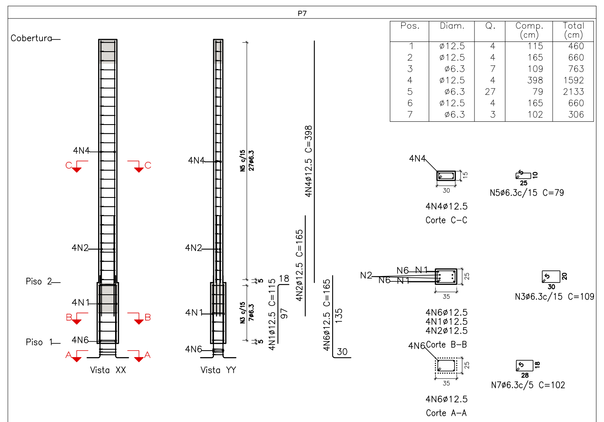


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	20x30	0.24	4.00	15.3	5.9	23.3	97.08
Piso 2	25x40	0.10	1.30	13.7	2.6	17.9	179.00
Total		0.34	5.30	29.0	8.5	41.2	121.18

P7

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	115	460
2	ø12.5	4	165	660
3	ø6.3	7	109	763
4	ø12.5	4	398	1592
5	ø6.3	27	79	2133
6	ø12.5	4	165	660
7	ø6.3	3	102	306

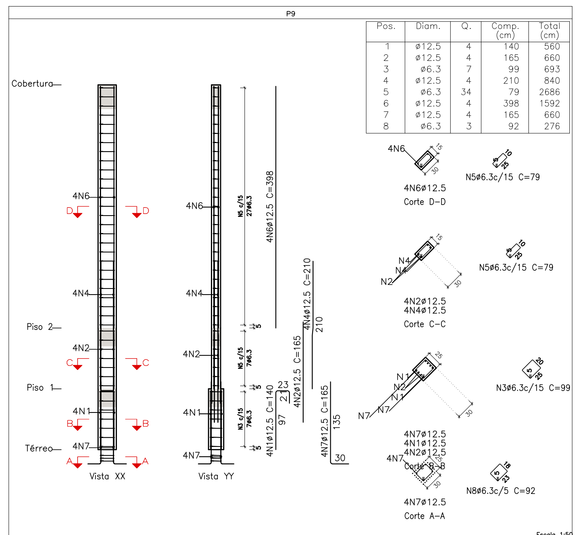


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	30x15	0.18	3.60	15.3	5.2	22.6	125.56
Piso 2	35x25	0.09	1.20	10.8	1.9	14.0	155.56
Total		0.27	4.80	26.1	7.1	36.6	135.56

P9

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	140	560
2	ø12.5	4	165	660
3	ø6.3	7	99	693
4	ø12.5	4	210	840
5	ø6.3	34	79	2686
6	ø12.5	4	398	1592
7	ø12.5	4	165	660
8	ø6.3	3	92	276

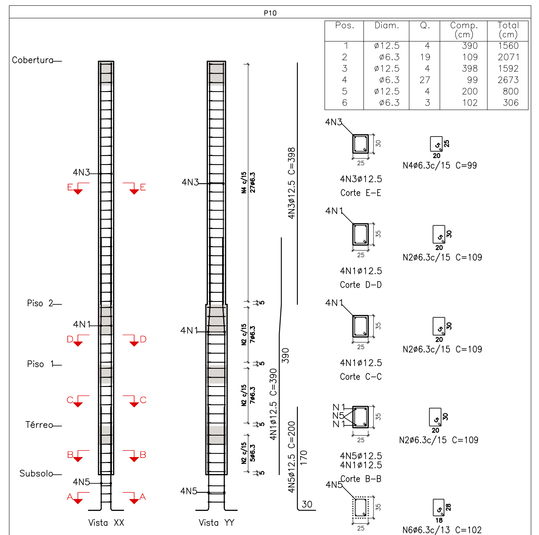


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	30x15	0.18	3.60	15.3	5.2	22.6	125.56
Piso 2	30x25	0.08	1.10	11.8	1.7	14.9	186.25
Total		0.31	5.60	35.2	8.3	48.0	154.84

P10

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	390	1565
2	ø6.3	19	109	2071
3	ø12.5	4	398	1592
4	ø6.3	27	99	2673
5	ø12.5	4	200	800
6	ø6.3	3	102	306

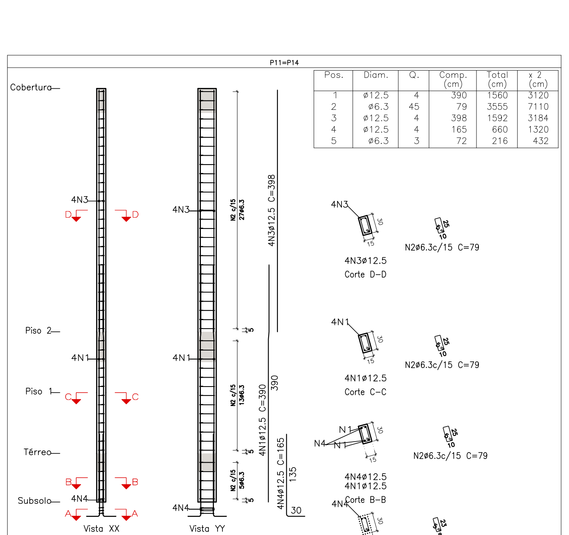


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	25x30	0.30	4.40	15.3	6.5	24.0	80.00
Piso 2	25x35	0.09	1.20	-	1.9	2.1	23.33
Piso 1		0.09	1.20	-	1.9	2.1	23.33
Térreo		0.07	0.96	15.0	1.3	17.9	255.71
Total		0.55	7.76	30.3	11.6	46.1	83.82

P11=P14

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)	x 2 (cm)
1	ø12.5	4	390	1560	3120
2	ø6.3	45	79	3555	7110
3	ø12.5	4	398	1592	3184
4	ø12.5	4	165	660	1320
5	ø6.3	3	72	216	432

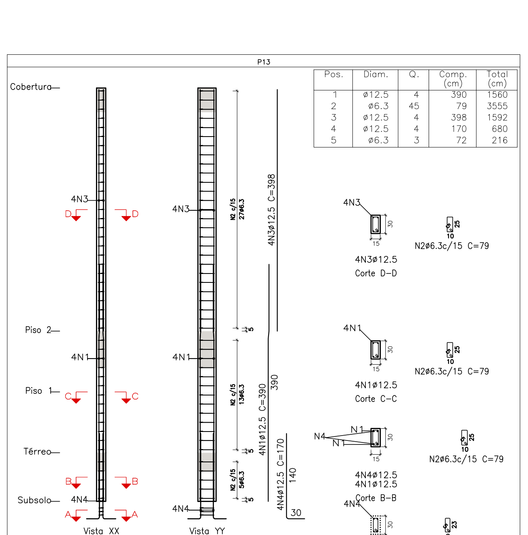


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	15x30	0.18	3.60	15.3	5.2	22.6	125.56
Piso 1		0.05	0.90		2.5	2.8	56.00
Térreo		0.04	0.72	15.0	1.0	17.6	440.00
Total (x2)		0.54	10.44	60.6	17.4	86.0	159.26

P13

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	390	1560
2	ø6.3	45	79	3555
3	ø12.5	4	398	1592
4	ø12.5	4	170	680
5	ø6.3	3	72	216

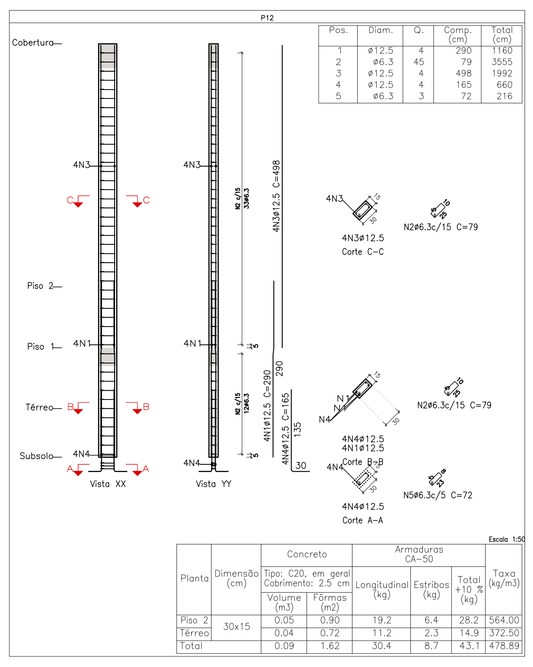


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	15x30	0.18	3.60	15.3	5.2	22.6	125.56
Piso 1		0.05	0.90	-	2.5	2.8	56.00
Térreo		0.04	0.72	15.0	1.0	17.6	440.00
Total		0.27	5.22	30.3	8.7	43.0	159.26

P12

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	290	1160
2	ø6.3	45	79	3555
3	ø12.5	4	498	1992
4	ø12.5	4	165	660
5	ø6.3	3	72	216

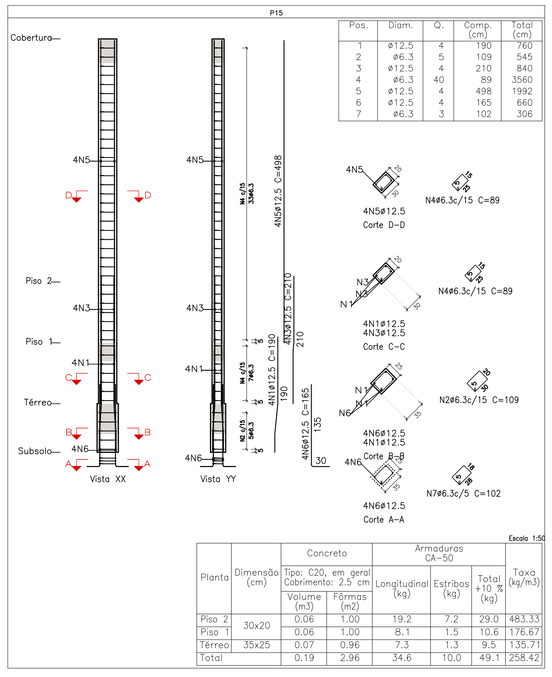


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Piso 2	30x15	0.05	0.90	19.2	6.4	28.2	564.00
Térreo		0.04	0.72	11.2	2.3	14.9	372.50
Total		0.09	1.62	30.4	8.7	43.1	478.89

P15

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	190	760
2	ø6.3	5	109	545
3	ø12.5	4	210	840
4	ø6.3	40	89	3560
5	ø12.5	4	398	1992
6	ø12.5	4	165	660
7	ø6.3	3	102	306

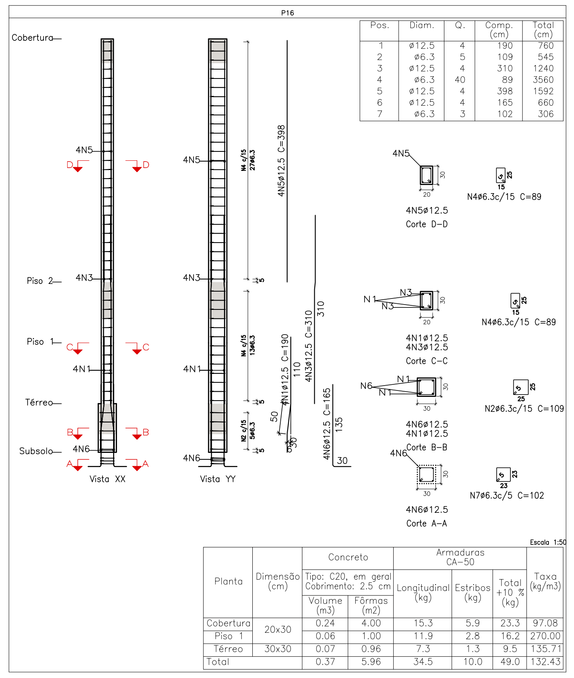


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Piso 2	30x20	0.06	1.00	19.2	7.2	29.0	483.33
Piso 1		0.06	1.00	8.1	1.5	10.6	176.67
Térreo	35x25	0.07	0.96	7.3	1.3	9.5	135.71
Total		0.19	2.96	34.6	10.0	49.1	258.42

P16

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	190	760
2	ø6.3	5	109	545
3	ø12.5	4	310	1240
4	ø6.3	40	89	3560
5	ø12.5	4	398	1592
6	ø12.5	4	165	660
7	ø6.3	3	102	306

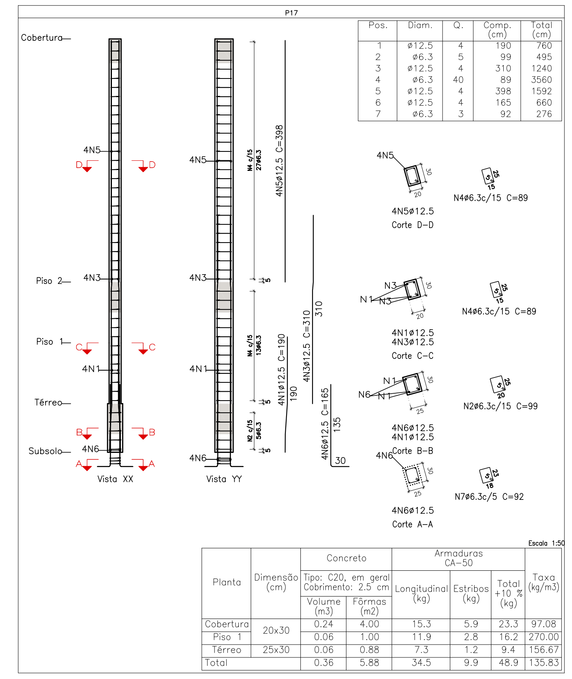


Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	20x30	0.24	4.00	15.3	5.9	23.3	97.08
Piso 1		0.06	1.00	11.9	2.8	16.2	270.00
Térreo	30x30	0.07	0.96	7.3	1.3	9.5	135.71
Total		0.37	5.96	34.5	10.0	49.0	132.43

P17

Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
1	ø12.5	4	190	760
2	ø6.3	5	109	545
3	ø12.5	4	310	1240
4	ø6.3	40	89	3560
5	ø12.5	4	398	1592
6	ø12.5	4	165	660
7	ø6.3	3	92	276



Escala 1:50

Planta	Dimensão (cm)	Concreto		Armaduras CA-50			Taxa (kg/m3)
		Tipo: C20, em geral Cobrimento: 2.5 cm		Longitudinal (kg)	Estribos (kg)	Total +10 % (kg)	
		Volume (m3)	Fôrmas (m2)				
Cobertura	20x30	0.24	4.00	15.3	5.9	23.3	97.08
Piso 1		0.06	1.00	11.9	2.8	16.2	270.00
Térreo	25x30	0.06	0.88	7.3	1.2	9.4	156.67
Total		0.36	5.88	34.5	9.9	48.9	135.83

LEGENDA DE PILARES:

- PILAR CONTINUA
- PILAR MORRE
- PILAR NASCE

NOTAS:
CONCRETO FCK 20 MPA - AÇO CA-50

ENDEREÇO:

PARQUE ZOO BOTÂNICO
RUA PETRÓPOLIS / BJARDIM PETRÓPOLIS

PROPRIETÁRIO: **PREFEITURA DO MUNICIPIO DE VARGINHA** — CNPJ: **18.240.119/0001-05**

CORREGEDORIA:

CATEGORIA DE USO:

SITUAÇÃO - SEM ESCALA

DECLARO QUE A APROVAÇÃO DO PROJETO, NÃO IMPLICA NO RECONHECIMENTO POR PARTE DA PREFEITURA DO DIREITO DE PROPRIEDADE DO TERRENO.

PROPRIETÁRIO

AUTOR DO PROJETO: ADRIENE LIMA TOTI / CAU 83.343-0

RESPONSÁVEL TÉCNICO — CREA

ÁREAS

RECINTO GAVIÕES
ÁREA: 145,50 m²

DESENHOS: 01/2015

APROVAÇÕES

IDENTIFICAÇÃO DA OBRA: **PROJETO ESTRUTURAL**

CONTEÚDO DA PRANCHA: **ESTRUTURAL - RECINTO GAVIÕES**

ESCALAS: INDICADAS

2/3

PRANCHA: **A4-E**

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PROIBIDA CÓPIAS SEM O CONSENTIMENTO DO AUTOR