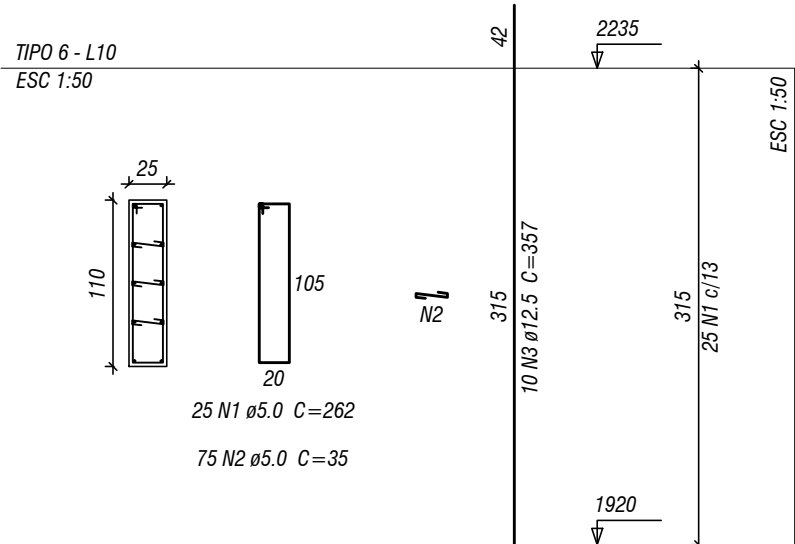
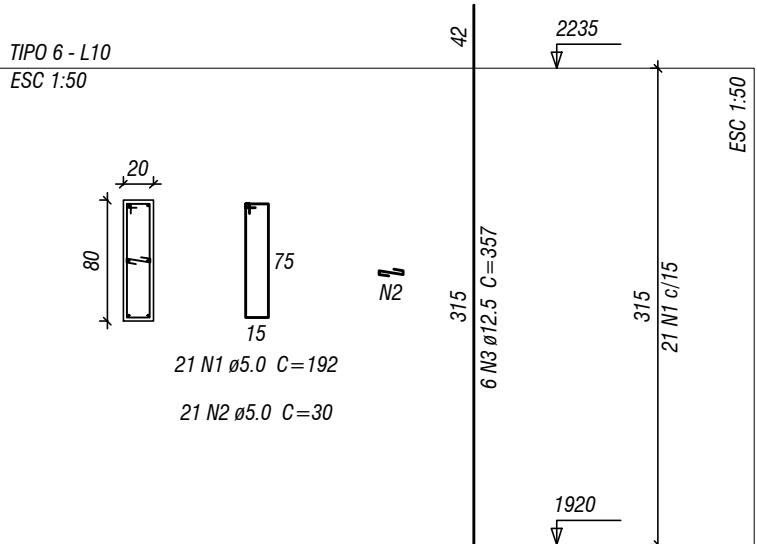


PRÉ-MOLDA PARA PLOTAGEM				
TIPO	PRÉ-MOLDA	PRÉ-MOLDA	PRÉ-MOLDA	PRÉ-MOLDA
1	Red	7	0,15	0,10
2	Armação	7	0,07	0,15
3	Armação	7	0,30	0,15
4	Armação	7	0,30	0,15
5	Armação	7	0,30	0,15
6	Armação	7	0,30	0,15
7	Armação	7	0,30	0,15

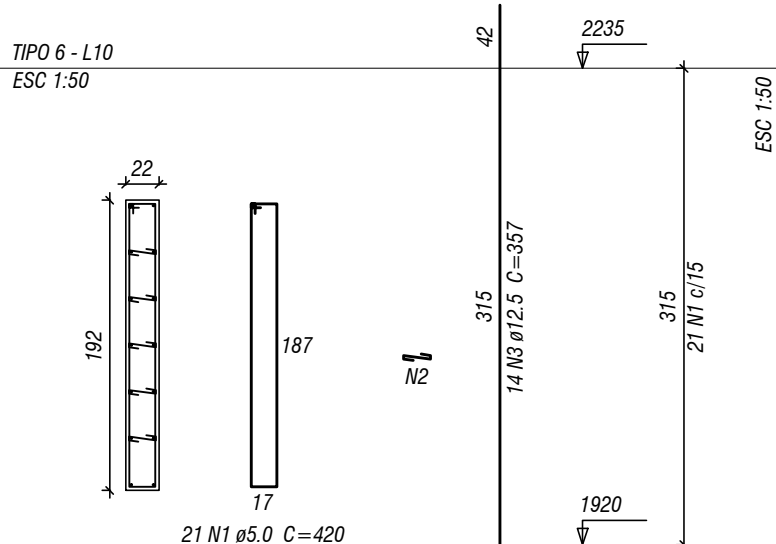
P11=P15=P20=P22



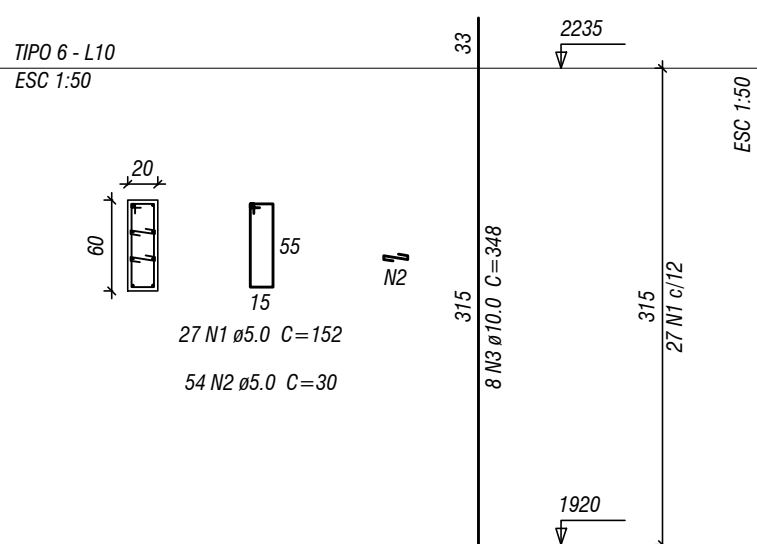
P12=P16=P40



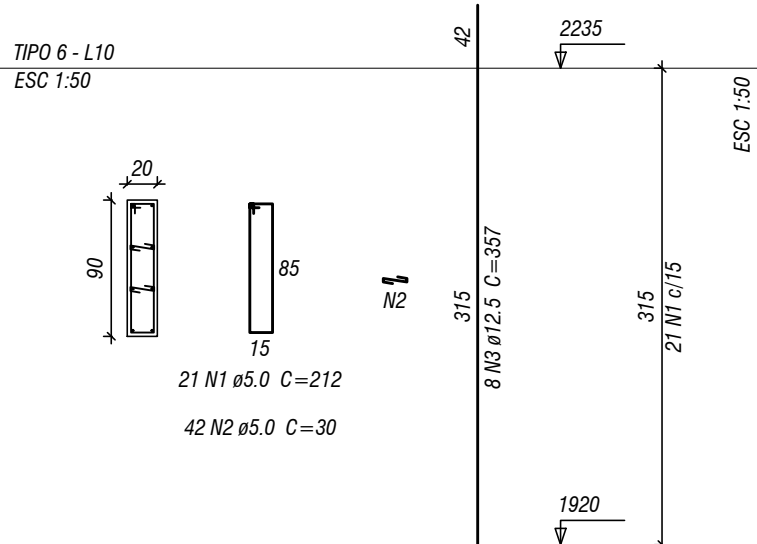
P13=P17



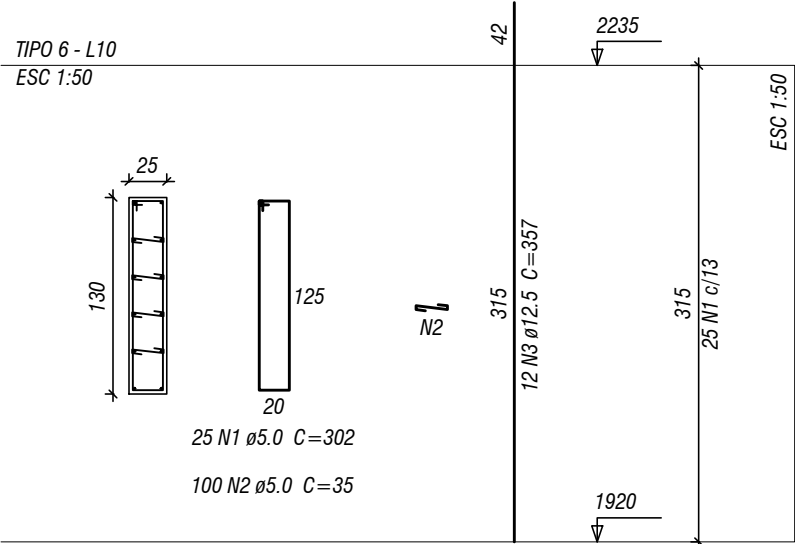
P19



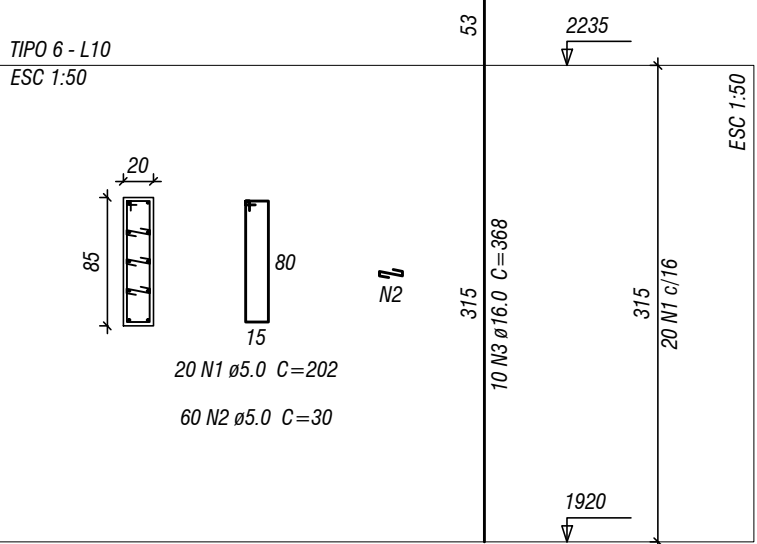
P21



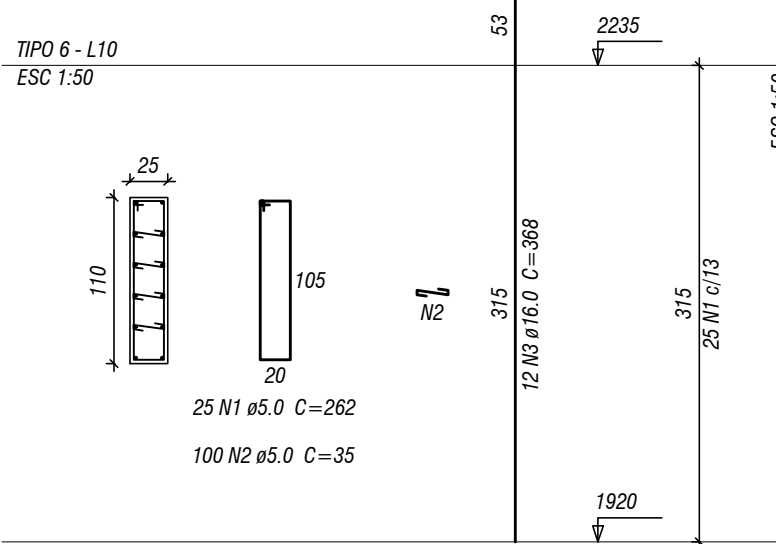
P26=P27



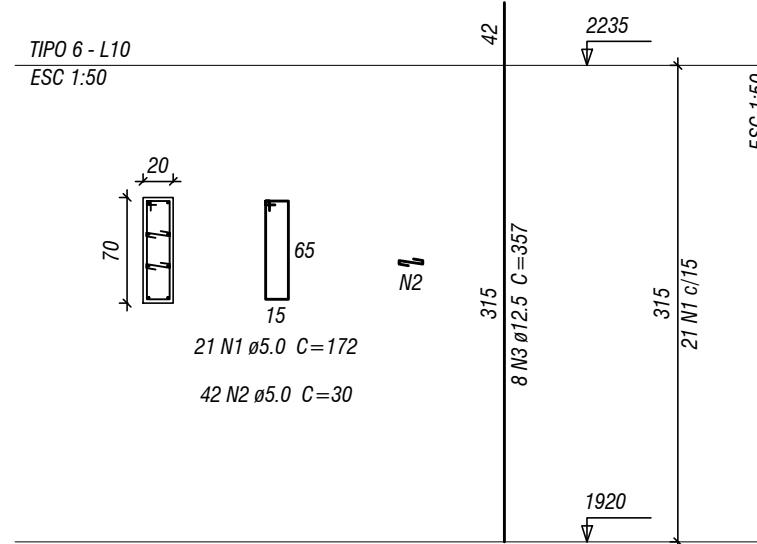
P37



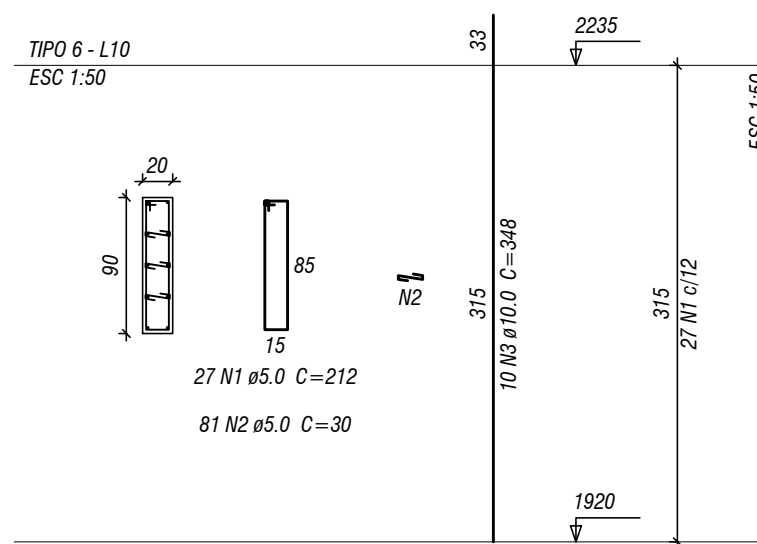
P4=P6



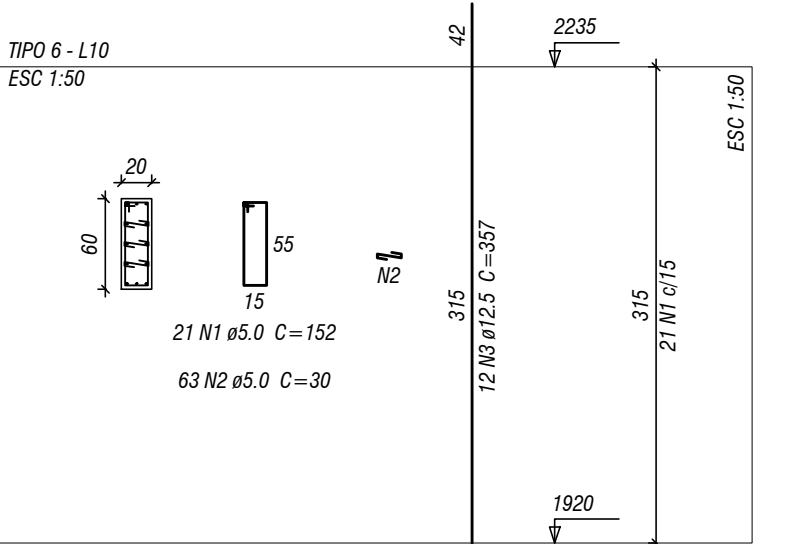
P41



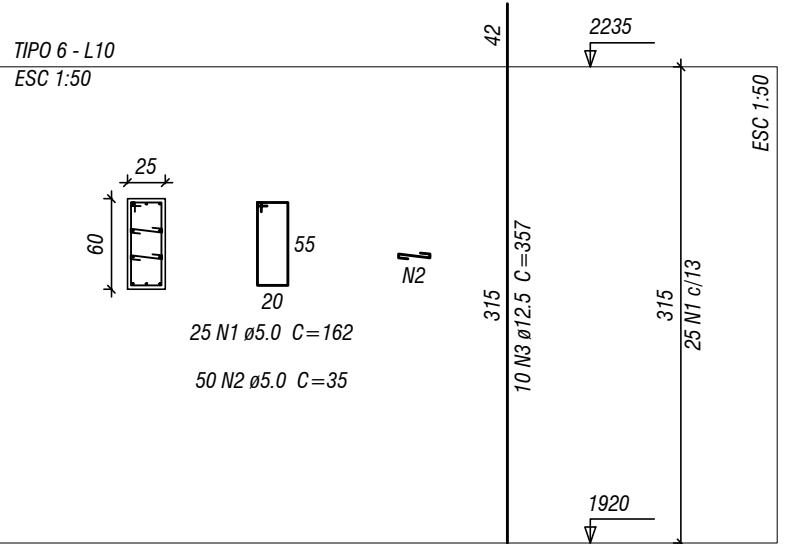
P44



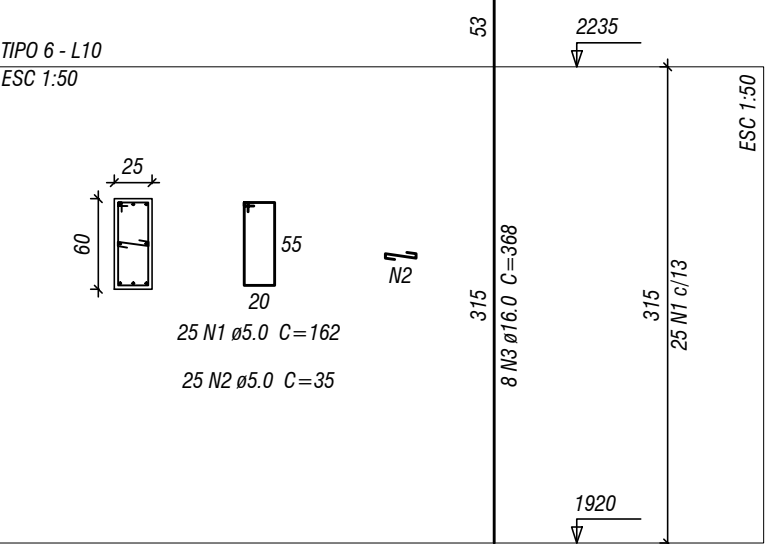
P45



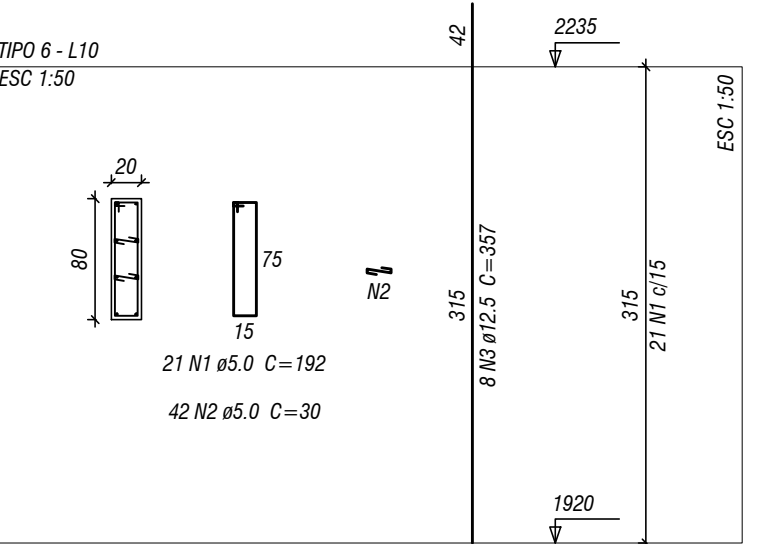
P46



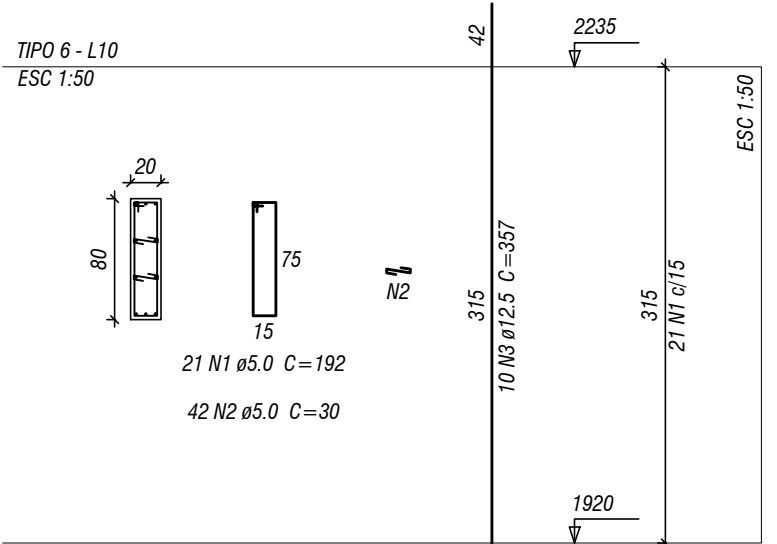
P47



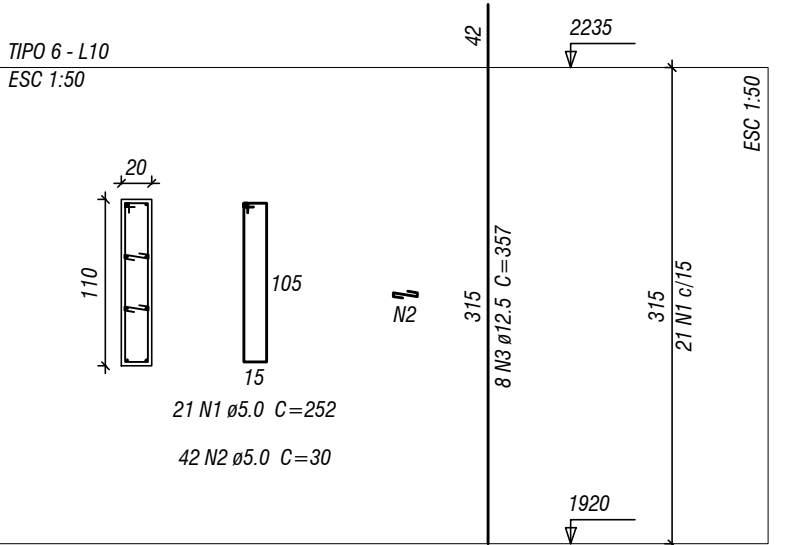
P48



P49



P8



Relação do aço						
ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
2xP4	CA60	1	5.0	50	262	13100
	CA60	2	5.0	200	35	7000
	CA50	3	16.0	24	368	8832
	CA60	1	5.0	21	252	5292
	CA60	2	5.0	42	30	1260
P8	CA50	3	12.5	8	357	2856
	CA60	1	5.0	100	262	26200
	CA60	2	5.0	300	35	10500
	CA50	3	12.5	40	357	14280
	CA60	1	5.0	63	192	12096
3xP12	CA60	2	5.0	63	30	1890
	CA50	3	12.5	18	357	6426
	CA60	1	5.0	42	420	17640
	CA60	2	5.0	210	32	6720
	CA50	3	12.5	28	357	9996
P19	CA60	1	5.0	27	152	4104
	CA60	2	5.0	54	30	1620
	CA50	3	10.0	8	348	2784
	CA60	1	5.0	21	212	4452
	CA60	2	5.0	42	30	1260
P21	CA50	3	12.5	8	357	2856
	CA60	1	5.0	50	302	15100
	CA60	2	5.0	200	35	7000
	CA50	3	12.5	24	357	8568
	CA60	1	5.0	20	202	4040
2xP26	CA60	2	5.0	60	30	1800
	CA50	3	16.0	10	368	3680
	CA60	1	5.0	21	172	3612
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	8	357	2856
P37	CA60	1	5.0	27	212	5724
	CA60	2	5.0	81	30	2430
	CA50	3	10.0	10	348	3480
	CA60	1	5.0	21	152	3192
	CA60	2	5.0	63	30	1890
P41	CA50	3	12.5	12	357	4284
	CA60	1	5.0	25	162	4050
	CA60	2	5.0	50	35	1750
	CA50	3	12.5	10	357	3570
	CA60	1	5.0	25	162	4050
P44	CA60	2	5.0	25	35	875
	CA50	3	16.0	8	368	2944
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	8	357	2856
P45	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	10	357	3570
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
P46	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	8	357	2856
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
P47	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	8	357	2856
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
P48	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	8	357	2856
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
P49	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260
	CA50	3	12.5	10	357	3570
	CA60	1	5.0	21	192	4032
	CA60	2	5.0	42	30	1260

Resumo do aço			
AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	10.0	62.7	38.6
	12.5	621.2	596.4
	16.0	154.6	243.9
CA60	5.0	1805	278.2
PESO TOTAL			
CA50	881		
CA60	278.2		

Vol. de concreto total (C=30) = 16.93 m³  
Área de forma total = 184.15 m²

CONTROLE DAS REVISÕES:		
REVISÃO	DATA	DESCRIÇÃO



# ENGENHARIA

Engenharia de Estruturas e Engenharia de Segurança do Trabalho

Excelência em Projetos Estruturais de Concreto Armado, Protendido, Pré-Moldado, Estruturas Metálicas e Alvenaria Estrutural

Avenida Pinguim, Nº 304 | Sala 01 | Gleba Ribeirão Pinguim | Maringá - Paraná | CEP: 87065-675

Fone/Fax: (44) 3026-8993 - e-mail: yk@ykengeharia.com.br - Visite nosso site! http://www.ykengeharia.com.br

## PROJETO: ESTRUTURAL EM CONCRETO ARMADO

CLIENTE:

**RODRIGO KOJO**

OBRA:

Para Construção de Uma Edificação Residencial Coletiva - Edifício Jardins de France

LOCAL:

Rua Francisco Glicério, nº 1.033 - Zona 07 - Maringá - Paraná

REFERÊNCIA(S):

Detalhes dos Pilares do Tipo 5

RESPONSÁVEL TÉCNICO:

Eng. Esp. Yutaka Mario Kobayashi Júnior  
CREA PR-89.748/D

REVISÃO:

**R-00**

DATA CRIAÇÃO:

09/04/2013

DATA DA REVISÃO:

N/C

PROJETO Nº:

**P-181**

PRANCHA:

**42**

**68**

ESCALAS:

INDICADAS