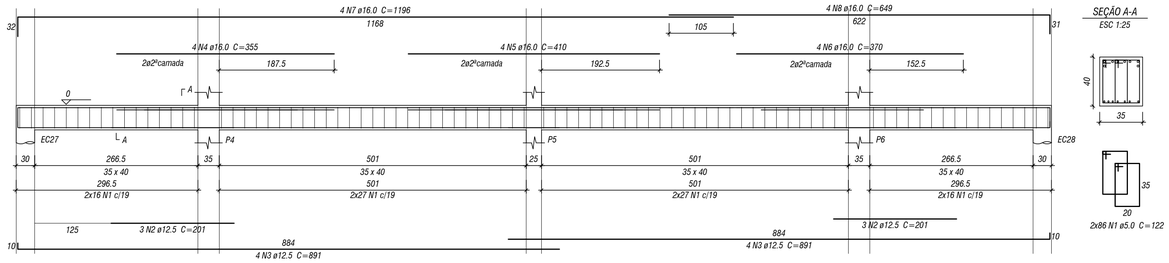
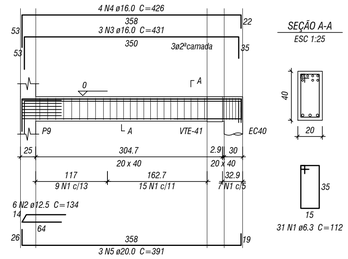
## VTE-1 (35 x 40)

ESC 1:50



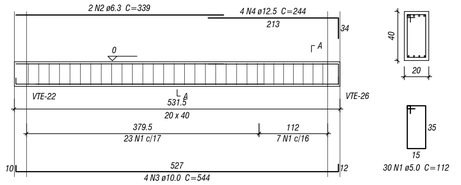

## VTE-2 (20 x 40)

ESC 1:50



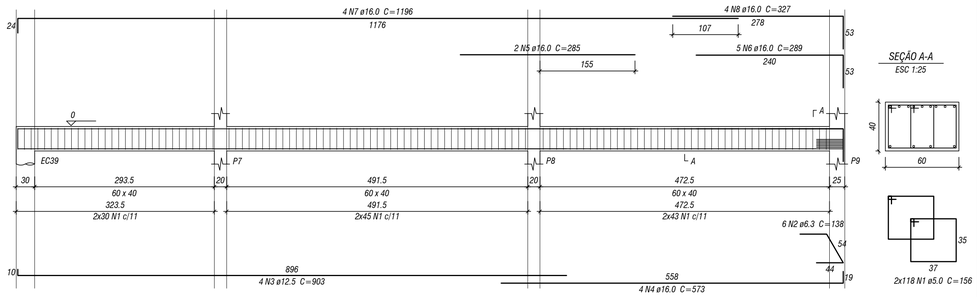

## VTE-4 (20 x 40)

ESC 1:50



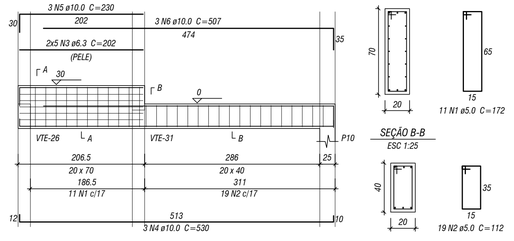

## VTE-3 (60 x 40)

ESC 1:50



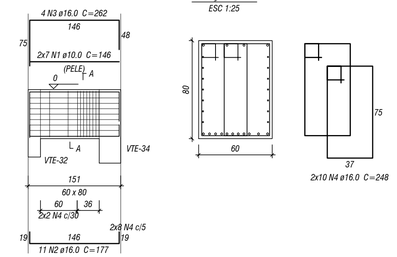

## VTE-5 (var)

ESC 1:50



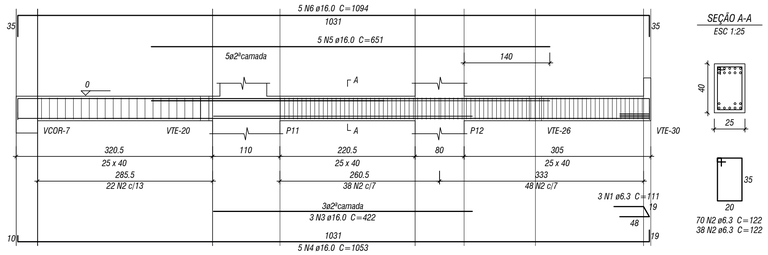

## VTE-6 (60 x 80)

ESC 1:50



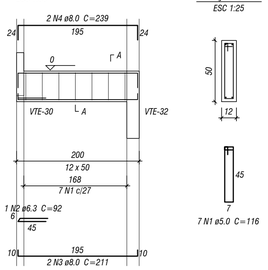

## VTE-7 (25 x 40)

ESC 1:50



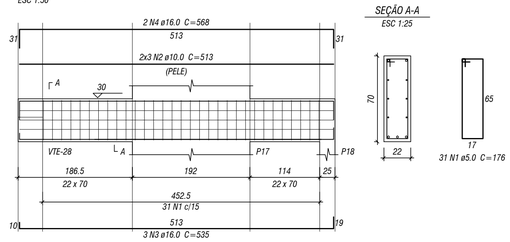

## VTE-8 (12 x 50)

ESC 1:50



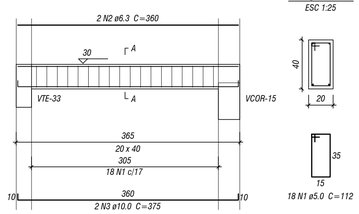

## VTE-10 (22 x 70)

ESC 1:50



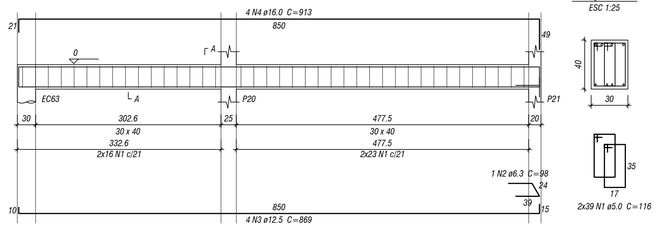

## VTE-11 (20 x 40)

ESC 1:50



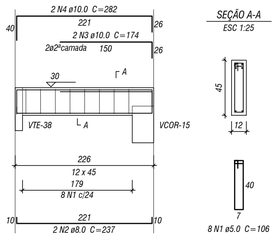

## VTE-13 (30 x 40)

ESC 1:50



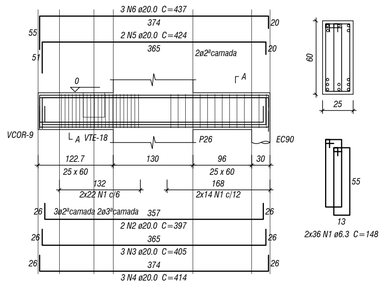

## VTE-14 (12 x 45)

ESC 1:50




## VTE-16 (25 x 60)

ESC 1:50




### Relação do aço

| ELEMENTO | AÇO | N | DIAM | Q | UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| VTE-1 | CA60 | 1 | 5.0 | 172 | 122 | 20984 |
| | CA50 | 2 | 12.5 | 6 | 201 | 1206 |
| | CA50 | 3 | 12.5 | 8 | 891 | 7128 |
| | CA50 | 4 | 16.0 | 4 | 355 | 1420 |
| | CA50 | 5 | 16.0 | 4 | 410 | 1640 |
| | CA50 | 6 | 16.0 | 4 | 370 | 1480 |
| | CA50 | 7 | 16.0 | 4 | 1196 | 4784 |
| | CA50 | 8 | 16.0 | 4 | 649 | 2596 |
| VTE-2 | CA50 | 1 | 6.3 | 31 | 112 | 3472 |
| | CA50 | 2 | 12.5 | 6 | 134 | 804 |
| | CA50 | 3 | 16.0 | 3 | 431 | 1293 |
| | CA50 | 4 | 16.0 | 4 | 426 | 1704 |
| | CA50 | 5 | 20.0 | 3 | 391 | 1173 |
| VTE-3 | CA60 | 1 | 5.0 | 236 | 156 | 36816 |
| | CA50 | 2 | 6.3 | 6 | 138 | 828 |
| | CA50 | 3 | 12.5 | 4 | 903 | 3612 |
| | CA50 | 4 | 16.0 | 4 | 573 | 2292 |
| | CA50 | 5 | 16.0 | 2 | 285 | 570 |
| | CA50 | 6 | 16.0 | 5 | 289 | 1445 |
| | CA50 | 7 | 16.0 | 4 | 1196 | 4784 |
| | CA50 | 8 | 16.0 | 4 | 327 | 1308 |
| VTE-4 | CA60 | 1 | 5.0 | 30 | 112 | 3360 |
| | CA50 | 2 | 6.3 | 2 | 339 | 678 |
| | CA50 | 3 | 10.0 | 4 | 544 | 2176 |
| | CA50 | 4 | 12.5 | 4 | 244 | 976 |
| VTE-5 | CA60 | 1 | 5.0 | 11 | 172 | 1892 |
| | CA60 | 2 | 5.0 | 19 | 112 | 2128 |
| | CA50 | 3 | 6.3 | 10 | 202 | 2020 |
| | CA50 | 4 | 10.0 | 3 | 530 | 1590 |
| | CA50 | 5 | 10.0 | 3 | 230 | 690 |
| | CA50 | 6 | 10.0 | 3 | 507 | 1521 |
| VTE-6 | CA50 | 1 | 10.0 | 14 | 146 | 2044 |
| | CA50 | 2 | 16.0 | 11 | 177 | 1947 |
| | CA50 | 3 | 16.0 | 4 | 262 | 1048 |
| | CA50 | 4 | 16.0 | 20 | 248 | 4960 |
| VTE-7 | CA50 | 1 | 6.3 | 3 | 111 | 333 |
| | CA50 | 2 | 6.3 | 108 | 122 | 13176 |
| | CA50 | 3 | 16.0 | 3 | 422 | 1266 |
| | CA50 | 4 | 16.0 | 5 | 1053 | 5265 |
| | CA50 | 5 | 16.0 | 5 | 651 | 3255 |
| | CA50 | 6 | 16.0 | 5 | 1094 | 5470 |
| VTE-8 | CA60 | 1 | 5.0 | 7 | 116 | 812 |
| | CA50 | 2 | 6.3 | 1 | 92 | 92 |
| | CA50 | 3 | 8.0 | 2 | 211 | 422 |
| | CA50 | 4 | 8.0 | 2 | 239 | 478 |
| VTE-10 | CA60 | 1 | 5.0 | 31 | 176 | 5456 |
| | CA50 | 2 | 10.0 | 6 | 513 | 3078 |
| | CA50 | 3 | 16.0 | 3 | 535 | 1605 |
| | CA50 | 4 | 16.0 | 2 | 568 | 1136 |
| VTE-11 | CA60 | 1 | 5.0 | 18 | 112 | 2016 |
| | CA50 | 2 | 6.3 | 2 | 360 | 720 |
| | CA50 | 3 | 10.0 | 2 | 375 | 750 |
| VTE-13 | CA60 | 1 | 5.0 | 78 | 116 | 9048 |
| | CA50 | 2 | 6.3 | 1 | 98 | 98 |
| | CA50 | 3 | 12.5 | 4 | 869 | 3476 |
| | CA50 | 4 | 16.0 | 4 | 913 | 3652 |
| VTE-14 | CA60 | 1 | 5.0 | 8 | 106 | 848 |
| | CA50 | 2 | 8.0 | 2 | 237 | 474 |
| | CA50 | 3 | 10.0 | 2 | 174 | 348 |
| | CA50 | 4 | 10.0 | 2 | 282 | 564 |
| VTE-16 | CA50 | 1 | 6.3 | 72 | 148 | 10656 |
| | CA50 | 2 | 20.0 | 2 | 397 | 794 |
| | CA50 | 3 | 20.0 | 3 | 405 | 1215 |
| | CA50 | 4 | 20.0 | 3 | 414 | 1242 |
| | CA50 | 5 | 20.0 | 2 | 424 | 848 |
| | CA50 | 6 | 20.0 | 3 | 437 | 1311 |

### Resumo do aço

| AÇO | DIAM | C.TOTAL (m) | PESO (kg) |
|---|---|---|---|
| CA50 | 6.3 | 320.8 | 78.5 |
| | 8.0 | 13.8 | 5.4 |
| | 10.0 | 127.7 | 78.7 |
| | 12.5 | 172.1 | 165.7 |
| | 16.0 | 549.2 | 866.8 |
| | 20.0 | 65.9 | 162.3 |
| CA60 | 5.0 | 833.6 | 128.5 |
| PESO TOTAL | | | |
| CA50 | 1357.5 | | |
| CA60 | 128.5 | | |

Vol. de concreto total (C-30) = 11.54 m³
Área de forma total = 99.34 m²

PENAS PARA PLOTAGEM

| COR | PENA_N° | PESO | PENA_N° | PESO |
|---|---|---|---|---|
| 1 (red) | 0,5 | 0,05 | 0,5 | 0,05 |
| 2 (yellow) | 7 | 0,07 | 7 | 0,10 |
| 3 (green) | 7 | 0,10 | 7 | 0,15 |
| 4 (cyan) | 7 | 0,20 | 7 | 0,60 |
| 5 (blue) | 7 | 0,30 | 7 | 0,60 |
| 6 (magenta) | 7 | 0,40 | 7 | 0,22 |
| 7 (white) | 7 | 0,22 | | |

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

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Fone/Fax: (44) 3026-8993 - e-mail: yk@ykengenharia.com.br - Visite nosso site! http://www.ykengenharia.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, n° 1.033 - Zona 07 - Maringá - Paraná

REFERÊNCIA(s):

Detalhes das Vigas do Térreo (folha 01 de 03)

<>

<>

REVISÃO: **R-00**

PRANCHA: **19 / 68**

RESPONSÁVEL TÉCNICO:

Eng°. Esp. Yutaka Mario Kobayashi Júnior

CREA PR-89.748/D

DATA CRIAÇÃO: 09/04/2013

DATA DA REVISÃO: N/C

ART N°: 20122498064

PROJETO N°: P-181

ESCALAS: INDICADAS