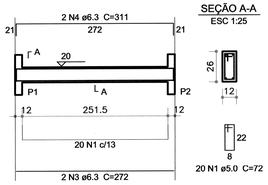
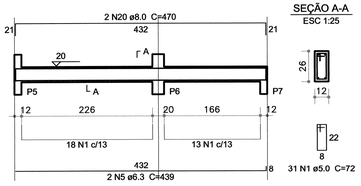
# VIGAS DO PAVIMENTO TÉRREO

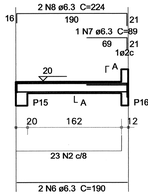
## V1=V2
ESC 1:50



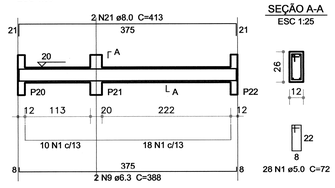

## V3=V4
ESC 1:50



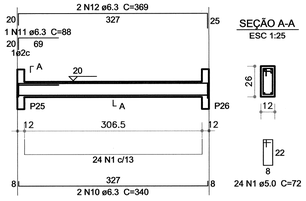

## V6=V5
ESC 1:50



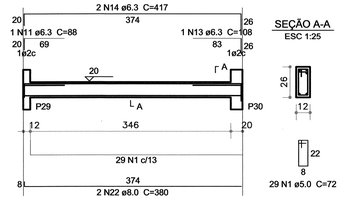

## V8=V7
ESC 1:50



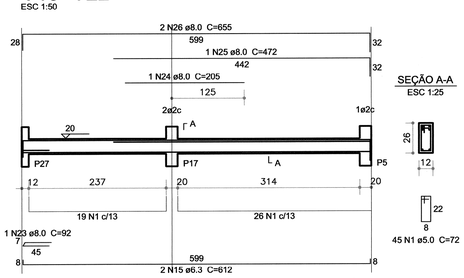

## V10=V9
ESC 1:50



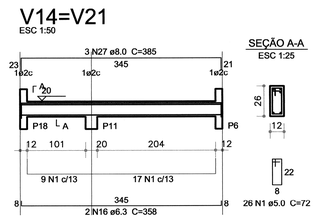

## V12=V11
ESC 1:50



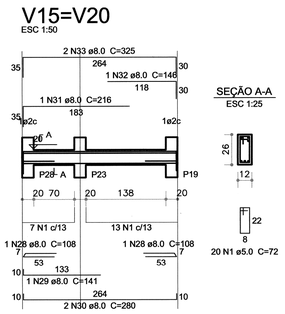

## V13=V22
ESC 1:50



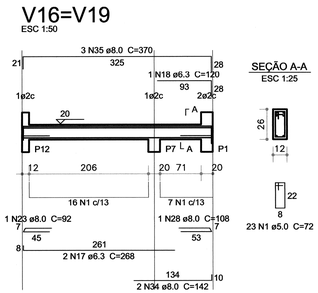

## V14=V21
ESC 1:50



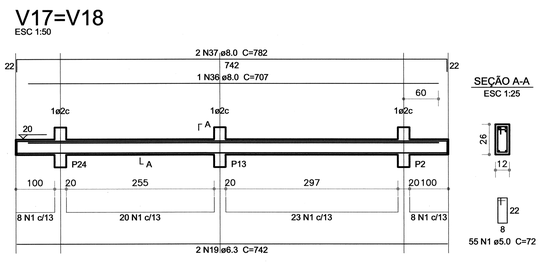

## V15=V20
ESC 1:50




## V16=V19
ESC 1:50




## V17=V18
ESC 1:50




### Relação do aço

| AÇO | N | DIAM (mm) | QUANT (Barras) | UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|
| CA60 | 1 | 5.0 | 602 | 72 | 43344 |
| | 2 | 5.0 | 46 | 60 | 2760 |
| CA50 | 3 | 6.3 | 4 | 272 | 1088 |
| | 4 | 6.3 | 4 | 311 | 1244 |
| | 5 | 6.3 | 4 | 439 | 1756 |
| | 6 | 6.3 | 4 | 190 | 760 |
| | 7 | 6.3 | 2 | 89 | 178 |
| | 8 | 6.3 | 4 | 224 | 896 |
| | 9 | 6.3 | 4 | 388 | 1552 |
| | 10 | 6.3 | 4 | 340 | 1360 |
| | 11 | 6.3 | 4 | 88 | 352 |
| | 12 | 6.3 | 4 | 369 | 1476 |
| | 13 | 6.3 | 2 | 108 | 216 |
| | 14 | 6.3 | 4 | 417 | 1668 |
| | 15 | 6.3 | 4 | 612 | 2448 |
| | 16 | 6.3 | 4 | 358 | 1432 |
| | 17 | 6.3 | 4 | 268 | 1072 |
| | 18 | 6.3 | 2 | 120 | 240 |
| | 19 | 6.3 | 4 | 742 | 2968 |
| | 20 | 8.0 | 4 | 470 | 1880 |
| | 21 | 8.0 | 4 | 413 | 1652 |
| | 22 | 8.0 | 4 | 380 | 1520 |
| | 23 | 8.0 | 4 | 92 | 368 |
| | 24 | 8.0 | 2 | 205 | 410 |
| | 25 | 8.0 | 2 | 472 | 944 |
| | 26 | 8.0 | 4 | 655 | 2620 |
| | 27 | 8.0 | 6 | 385 | 2310 |
| | 28 | 8.0 | 6 | 108 | 648 |
| | 29 | 8.0 | 2 | 141 | 282 |
| | 30 | 8.0 | 4 | 280 | 1120 |
| | 31 | 8.0 | 2 | 216 | 432 |
| | 32 | 8.0 | 2 | 146 | 292 |
| | 33 | 8.0 | 4 | 325 | 1300 |
| | 34 | 8.0 | 4 | 142 | 568 |
| | 35 | 8.0 | 6 | 370 | 2220 |
| | 36 | 8.0 | 2 | 707 | 1414 |
| | 37 | 8.0 | 4 | 782 | 3128 |

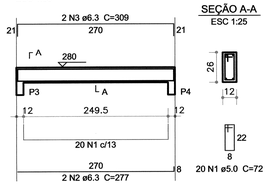
### Resumo do aço

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|---|---|---|---|
| CA50 | 6.3 | 207.1 | 55.7 |
| | 8.0 | 231.1 | 100.3 |
| CA60 | 5.0 | 461.1 | 78.2 |
| PESO TOTAL (kg) | | | |
| CA50 | 156 | | |
| CA60 | 78.2 | | |

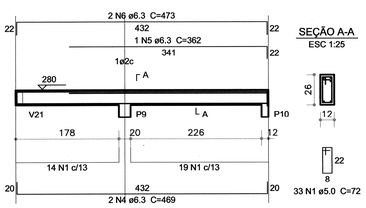
Volume de concreto (C-20) = 2.65 m³
Área de forma = 54.42 m²

# VIGAS DO PAVIMENTO SUPERIOR

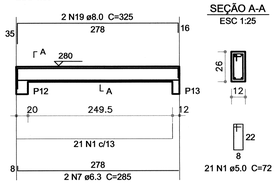
## V2=V1
ESC 1:50



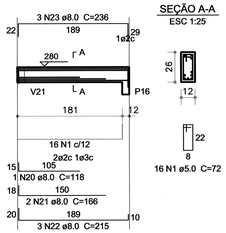

## V4=V3
ESC 1:50



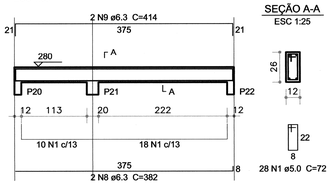

## V6=V5
ESC 1:50




## V8=V7
ESC 1:50




## V10=V9
ESC 1:50




### Relação do aço

| | | | |
|---|---|---|---|
| 2xV2 | 2xV4 | 2xV6 | |
| 2xV8 | 2xV10 | 2xV11 | |
| 2xV14 | 2xV15 | 2xV16 | |
| 2xV20 | 2xV21 | | |

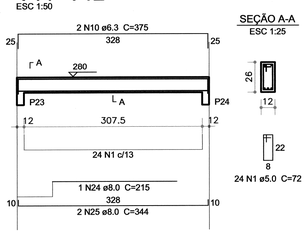
| AÇO | N | DIAM (mm) | QUANT (Barras) | UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|
| CA60 | 1 | 5.0 | 642 | 72 | 46224 |
| CA50 | 2 | 6.3 | 4 | 277 | 1108 |
| | 3 | 6.3 | 4 | 309 | 1236 |
| | 4 | 6.3 | 4 | 469 | 1876 |
| | 5 | 6.3 | 2 | 362 | 724 |
| | 6 | 6.3 | 4 | 473 | 1892 |
| | 7 | 6.3 | 4 | 285 | 1140 |
| | 8 | 6.3 | 4 | 382 | 1528 |
| | 9 | 6.3 | 4 | 414 | 1656 |
| | 10 | 6.3 | 4 | 375 | 1500 |
| | 11 | 6.3 | 4 | 374 | 1496 |
| | 12 | 6.3 | 4 | 413 | 1652 |
| | 13 | 6.3 | 4 | 392 | 1568 |
| | 14 | 6.3 | 4 | 606 | 2424 |
| | 15 | 6.3 | 2 | 427 | 854 |
| | 16 | 6.3 | 4 | 638 | 2552 |
| | 17 | 6.3 | 2 | 125 | 250 |
| | 18 | 6.3 | 4 | 333 | 1332 |
| | 19 | 8.0 | 4 | 325 | 1300 |
| | 20 | 8.0 | 2 | 118 | 236 |
| | 21 | 8.0 | 4 | 166 | 664 |
| | 22 | 8.0 | 6 | 215 | 1290 |
| | 23 | 8.0 | 6 | 236 | 1416 |
| | 24 | 8.0 | 2 | 215 | 430 |
| | 25 | 8.0 | 4 | 344 | 1376 |
| | 26 | 8.0 | 4 | 357 | 1428 |
| | 27 | 8.0 | 4 | 742 | 2968 |
| | 28 | 8.0 | 4 | 782 | 3128 |
| | 29 | 8.0 | 2 | 140 | 280 |
| | 30 | 8.0 | 2 | 165 | 330 |
| | 31 | 8.0 | 4 | 373 | 1492 |

### Resumo do aço

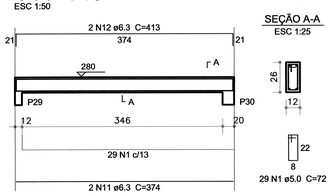
| AÇO | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|---|---|---|---|
| CA50 | 6.3 | 247.9 | 66.7 |
| | 8.0 | 163.4 | 70.9 |
| CA60 | 5.0 | 462.3 | 78.4 |
| PESO TOTAL (kg) | | | |
| CA50 | 137.6 | | |
| CA60 | 78.4 | | |

Volume de concreto (C-20) = 2.68 m³
Área de forma = 55.05 m²

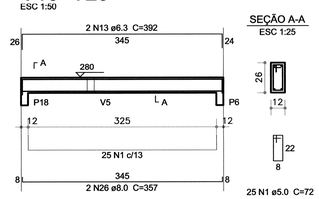
## V11=V12
ESC 1:50



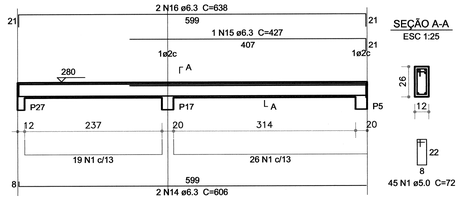

## V14=V13
ESC 1:50



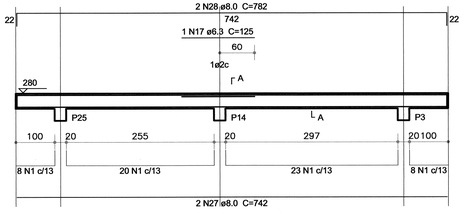

## V16=V23
ESC 1:50



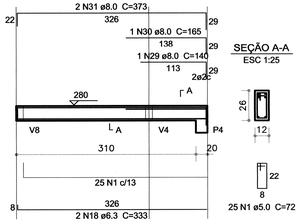

## V15=V24
ESC 1:50




## V20=v19
ESC 1:50




## V21=v18
ESC 1:50




| REVISÕES | | | |
|---|---|---|---|
| REV | DATA | DESCRIÇÃO | |
| R00 | 04/04/2017 | EMISSÃO INICIAL | |
| R01 | 05/09/17 | Adequação dos pilares conforme projeto arquitetônico | DVIE-R_RUY |

USO EXCLUSIVO DA COHAPAR

RESPONSÁVEL TÉCNICO - COHAPAR:
Raquel Mantovani R. Scrips
Engª Civil - COHAPAR
CREA 10.928/PR

ANUÊNCIA DO ENGENHEIRO DO ESCRITÓRIO REGIONAL - COHAPAR:

COHAPAR
Companhia de Habitação do Paraná

MBP 42 GEM - A
42,15m²
APOIO À PRODUÇÃO

MORAR BEM PARANÁ

PROJETO ESTRUTURAL
VIGAS DO PAV. INFERIOR E PAV. SUPERIOR

| PRANCHA | REVISÃO |
|---|---|
| EST 02 02 | R 01 |

| autor projeto | autor desenho |
|---|---|
| R.MANTOVANI | R_RUY |
| escala | data de criação |
| INDICADAS | 04/04/2017 |

nome do arquivo
EST_FGTS_MBP_42GEM-A_R01.dwg

HISTÓRICO
SALVO EM: 07/09/2018
IMPRESSO EM: 22/09/2018
SALVO POR: rosarruy

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