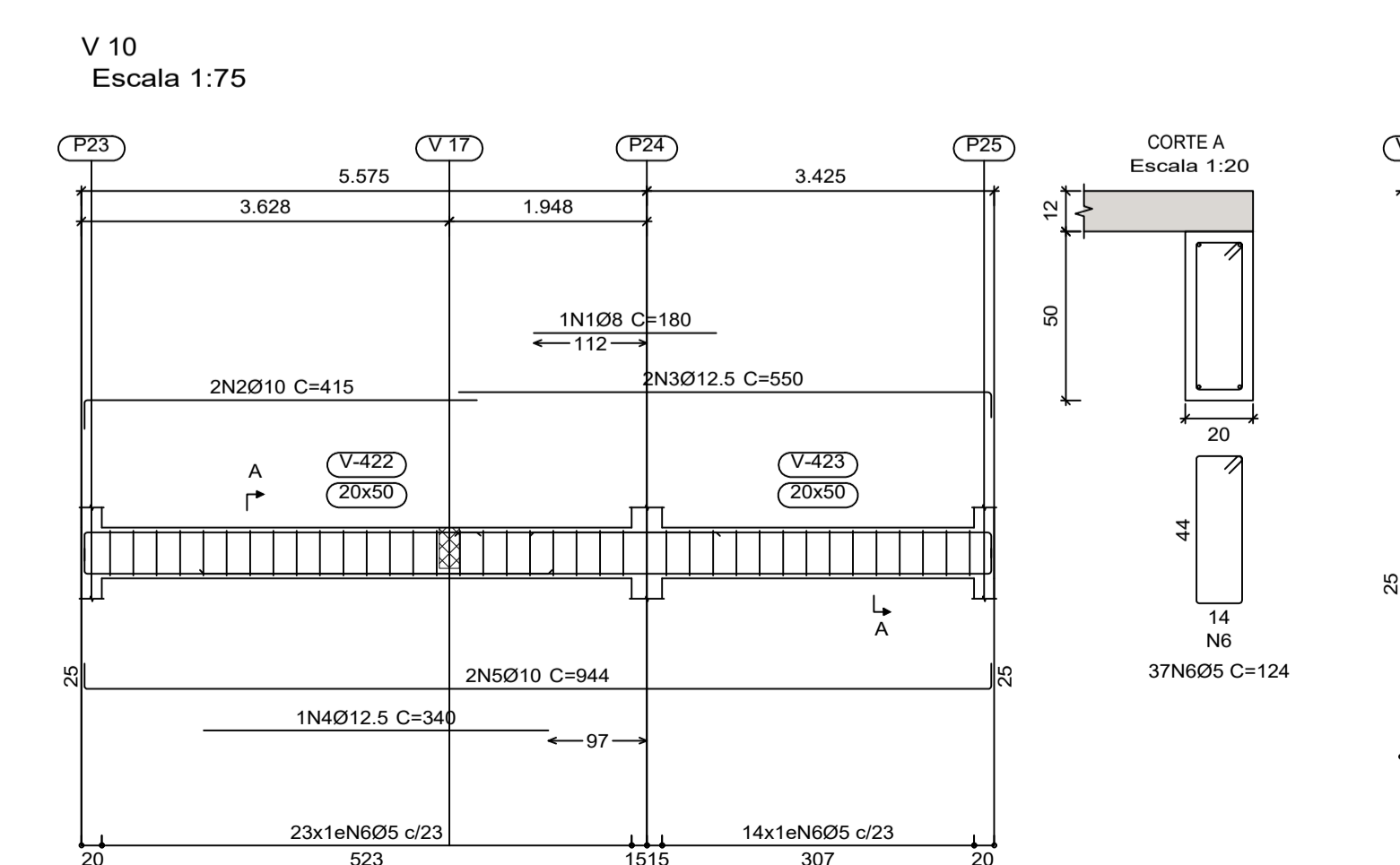
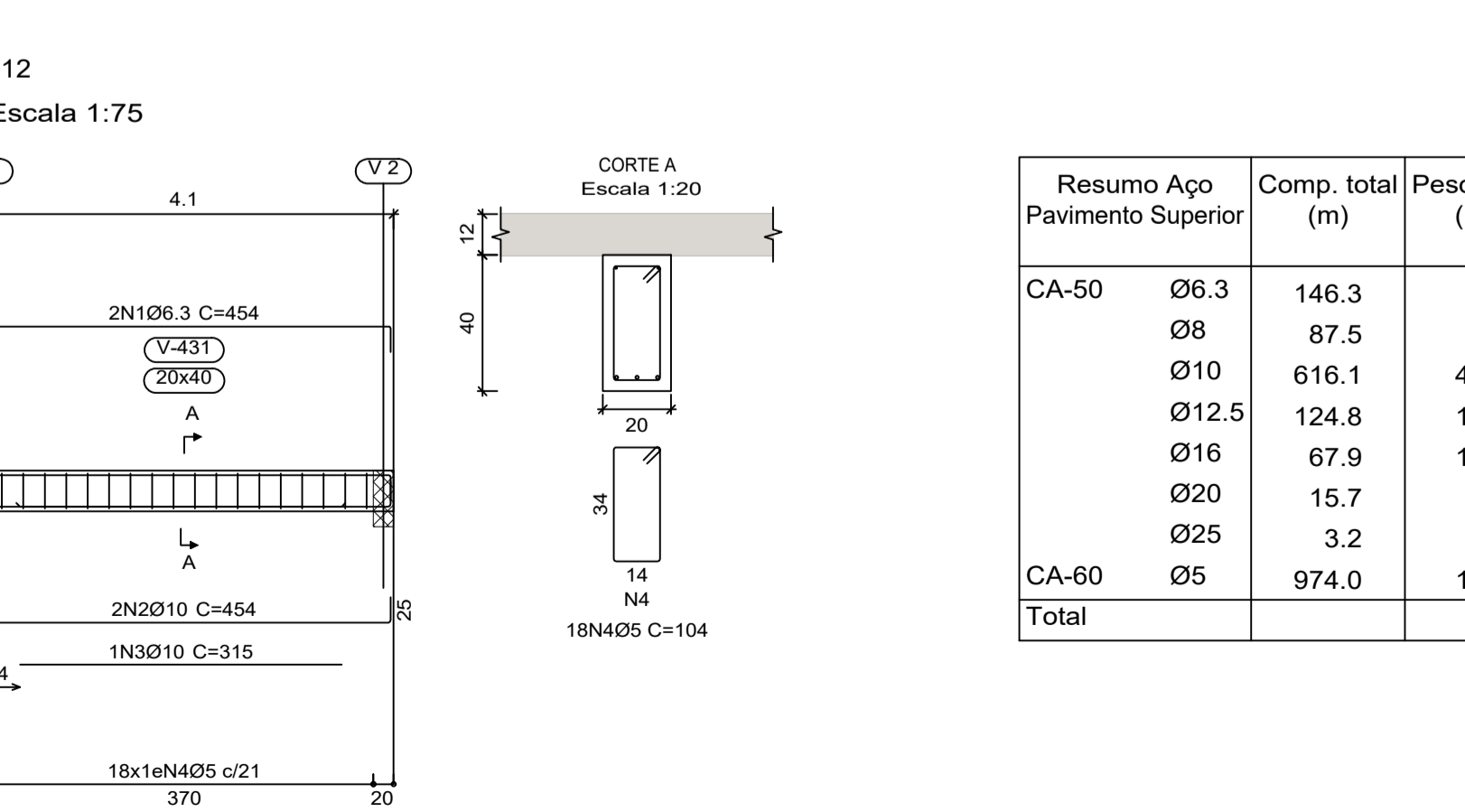
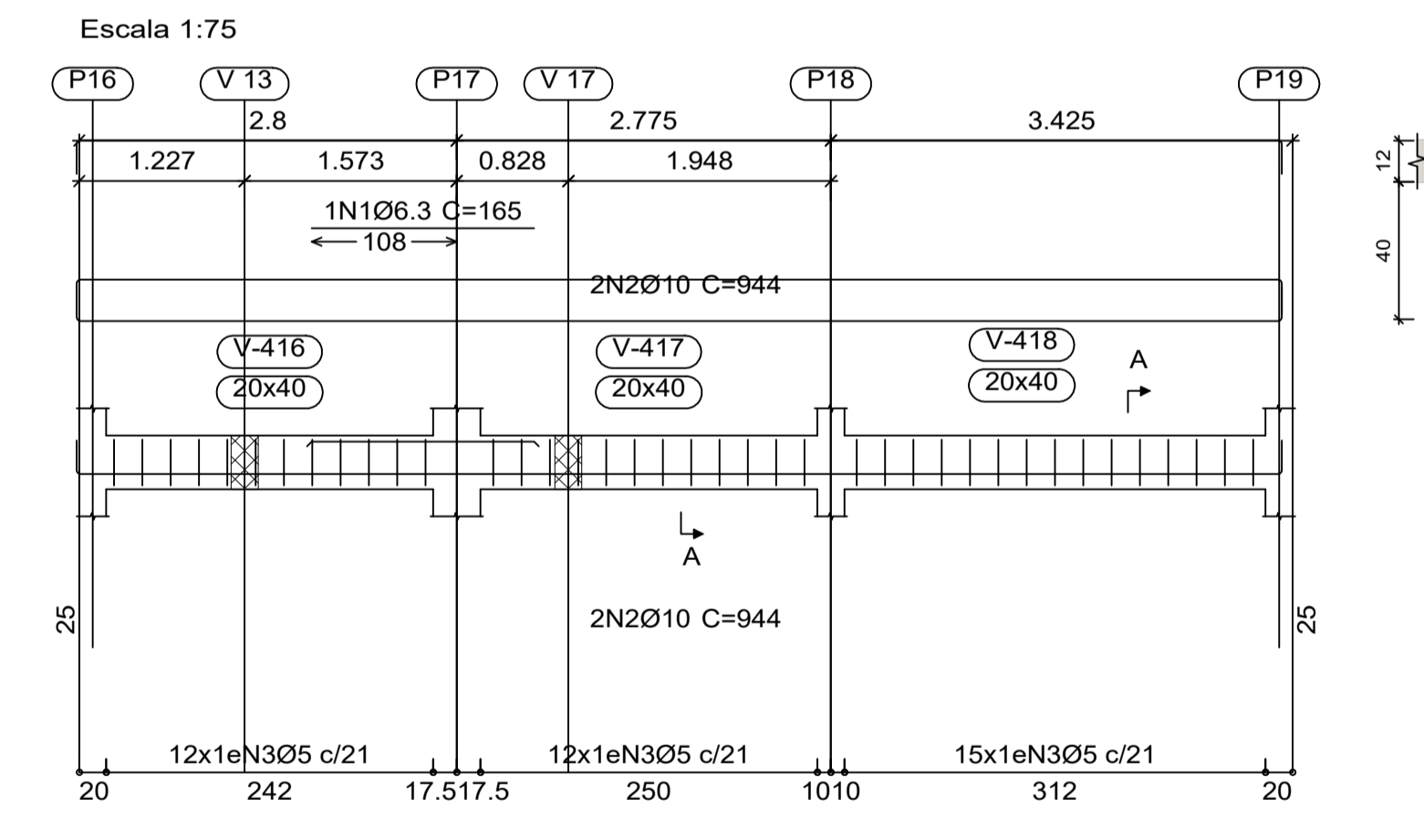
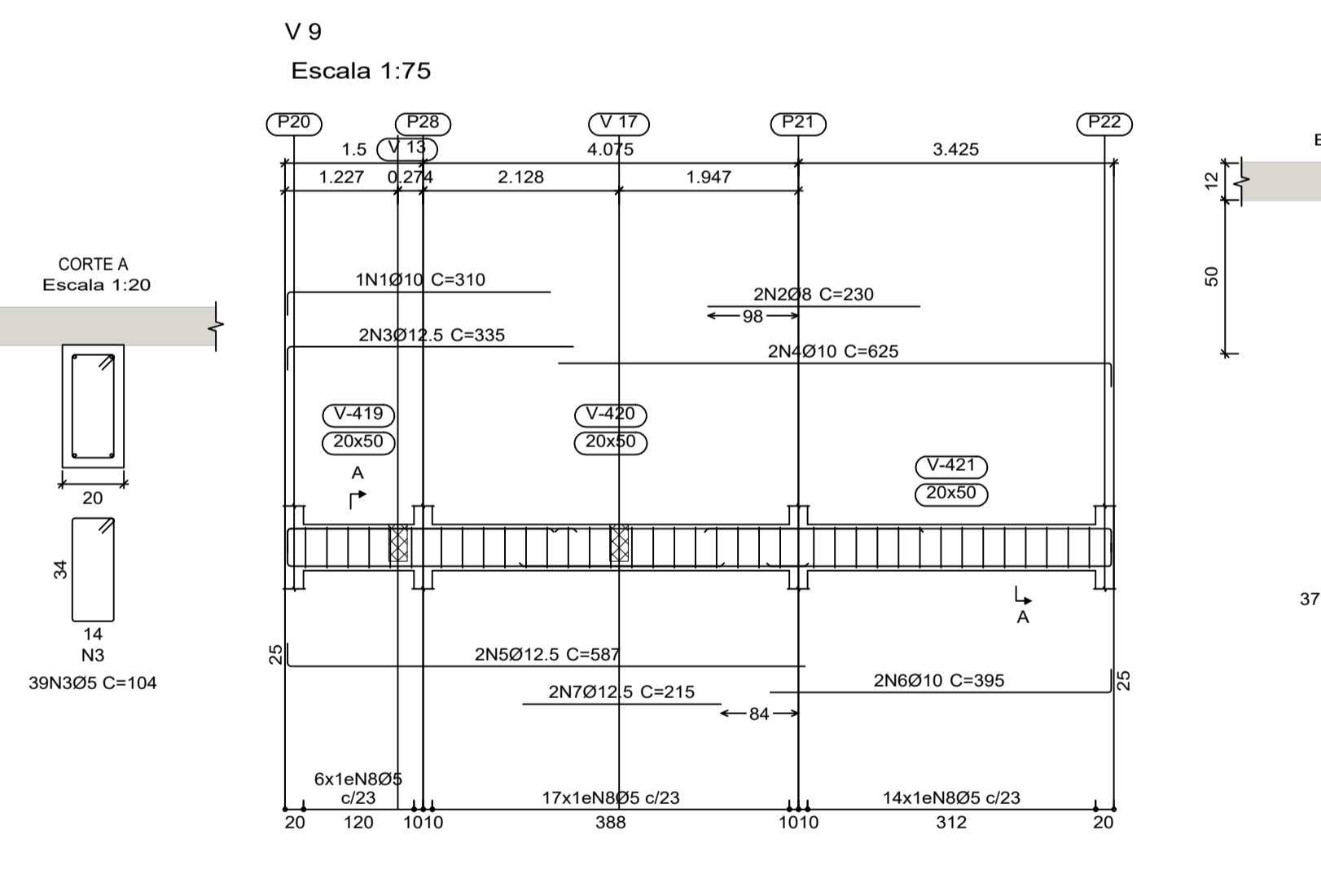
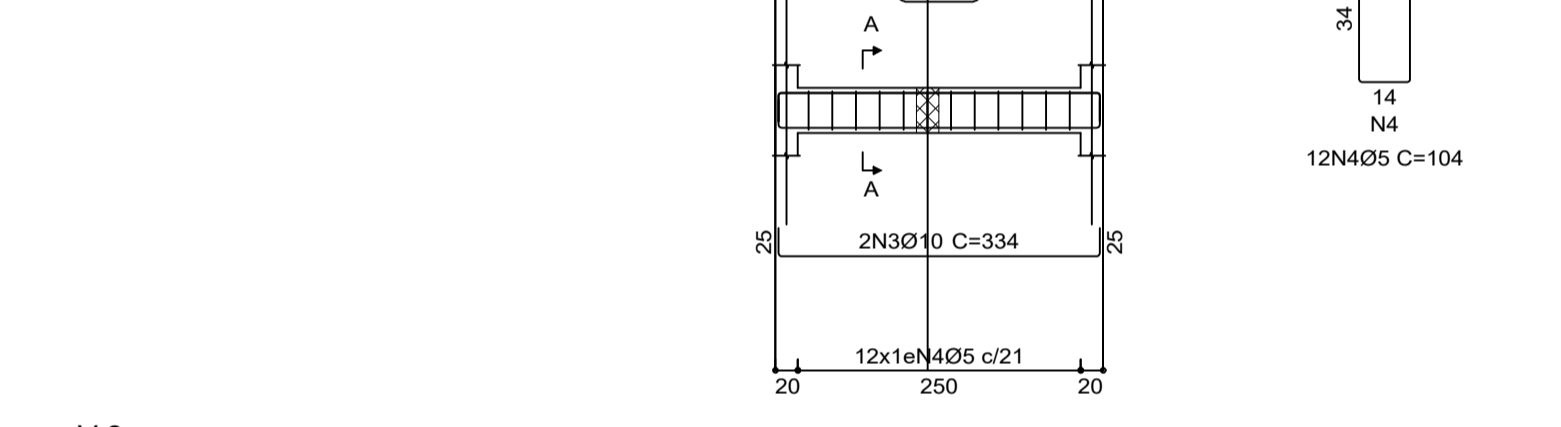
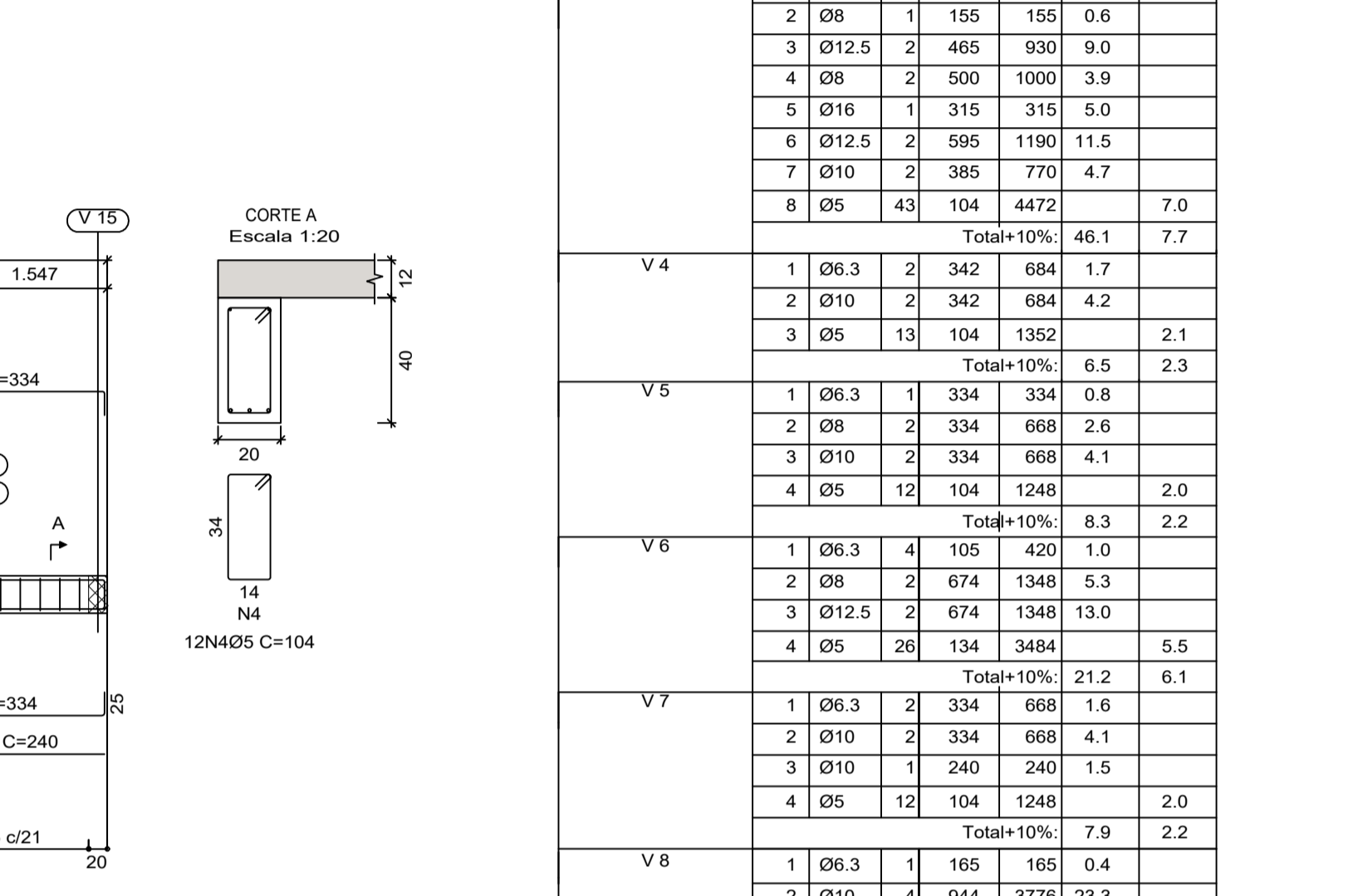
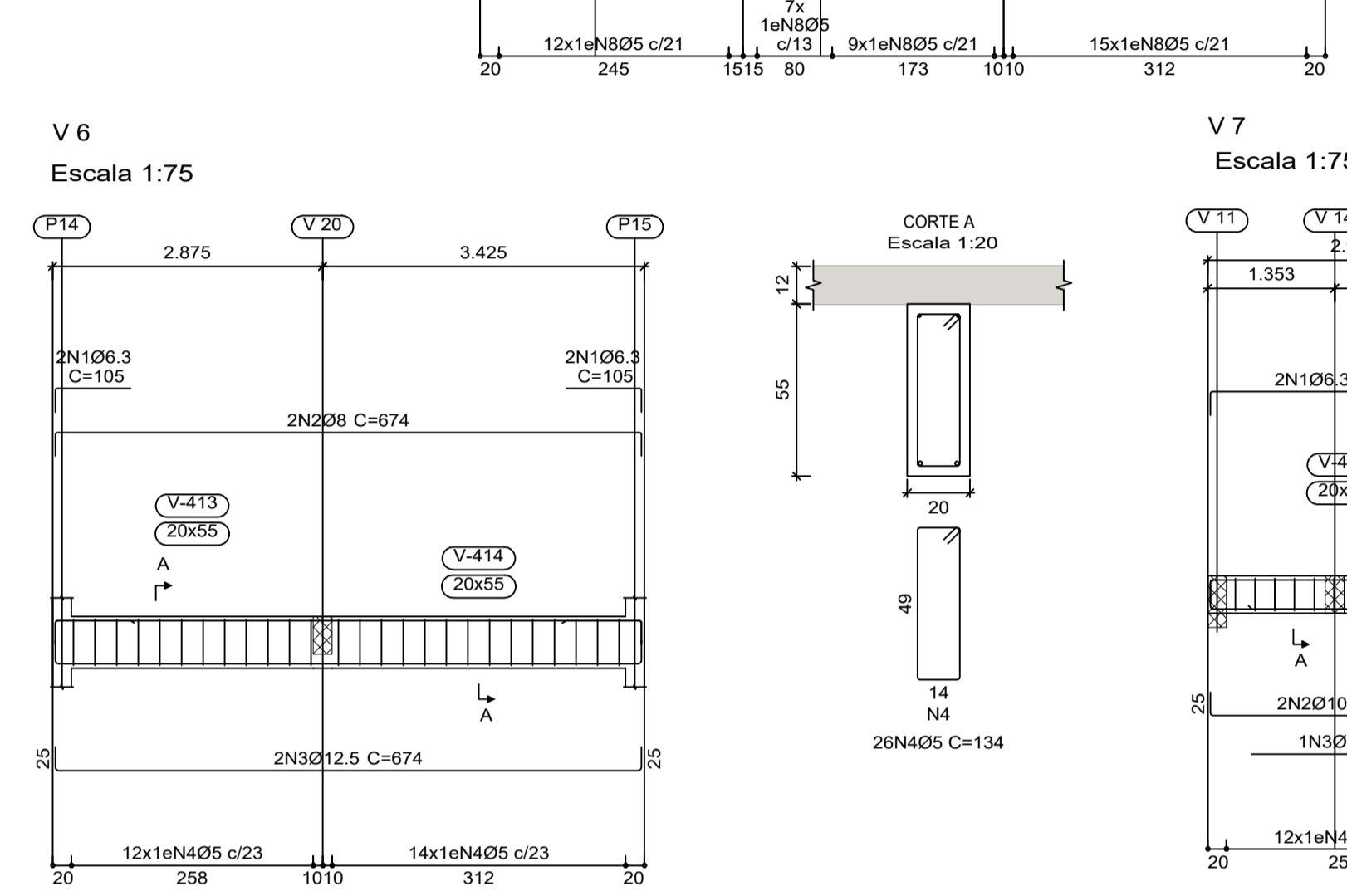
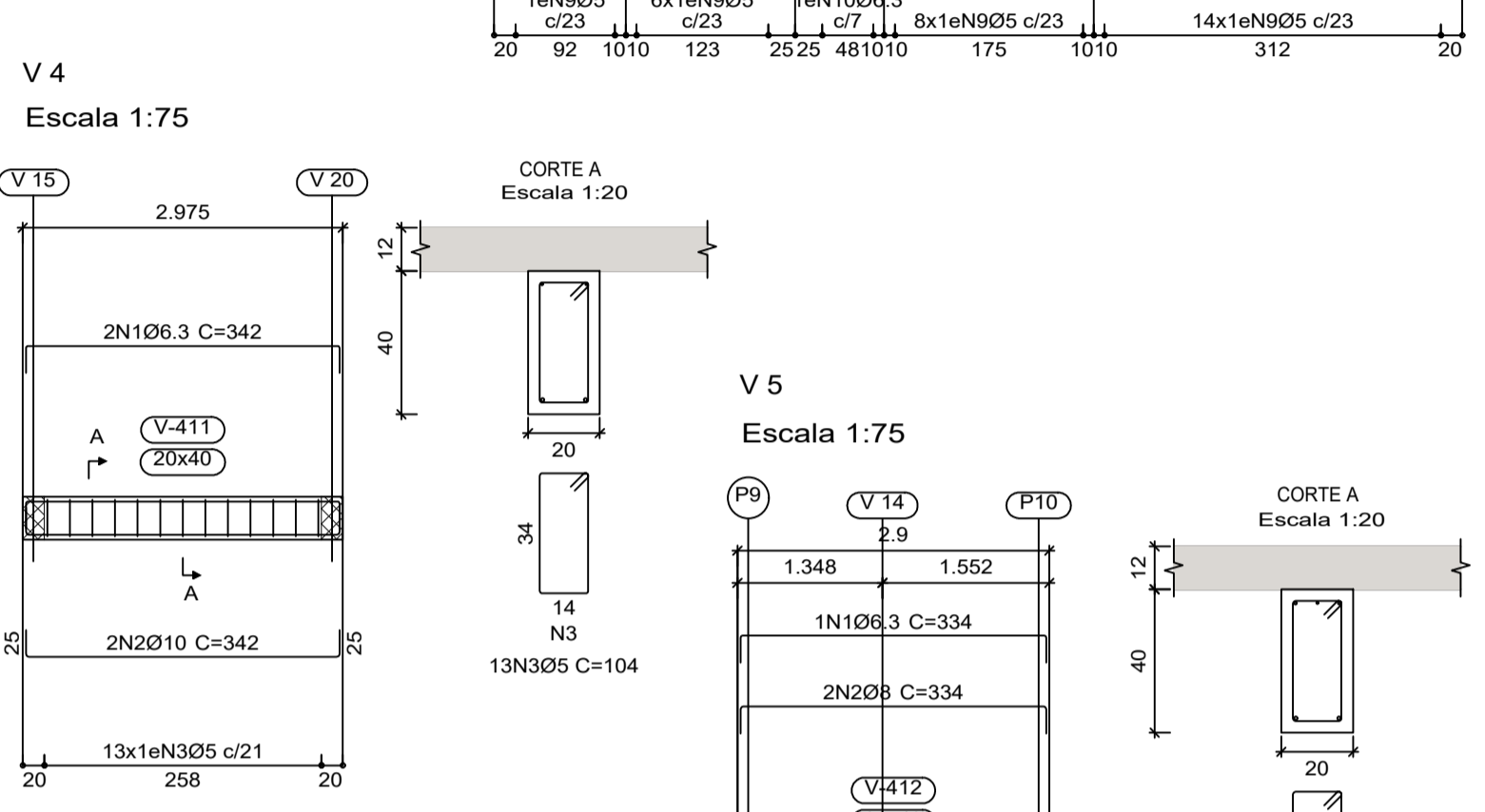
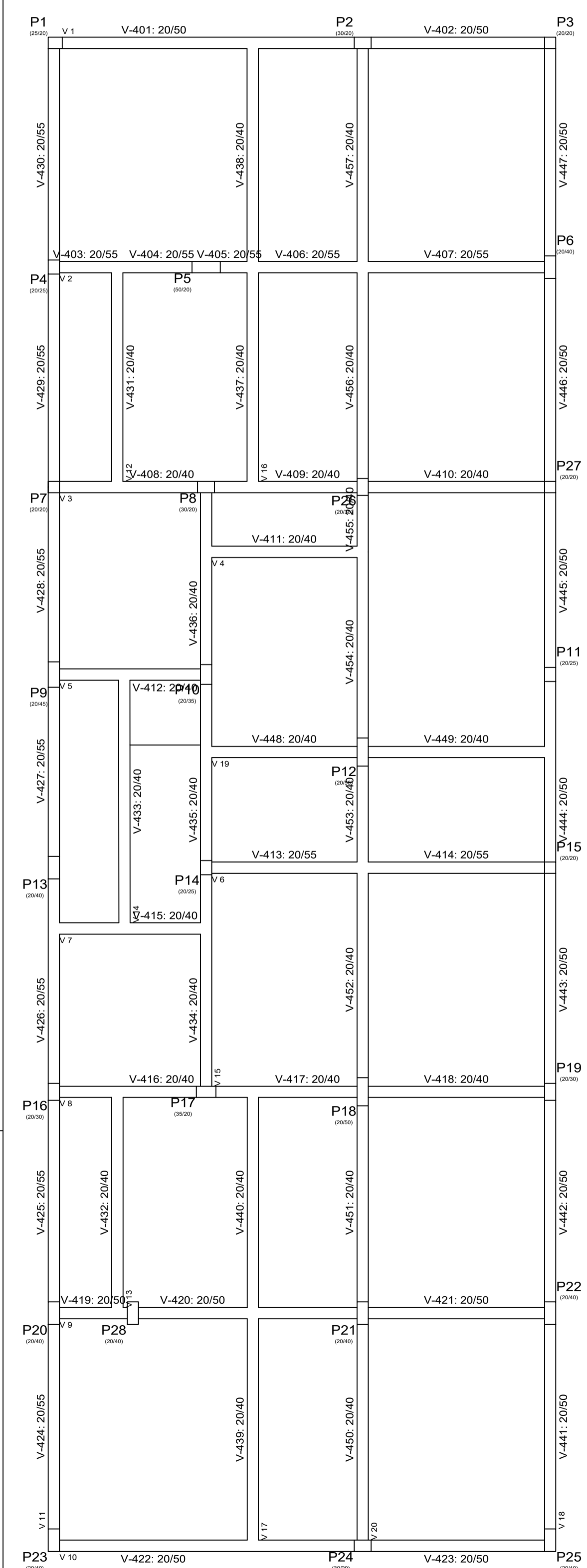


| Elemento    | Pos.  | Diam. | Q.  | Comp. (cm) | Total (cm) | CA-50 (kg) | CA-60 (kg) |
|-------------|-------|-------|-----|------------|------------|------------|------------|
| <b>V 1</b>  |       |       |     |            |            |            |            |
| 1           | Ø12.5 | 2     | 525 | 1050       | 10.1       |            |            |
| 2           | Ø8    | 2     | 435 | 870        | 3.4        |            |            |
| 3           | Ø8    | 1     | 944 | 944        | 3.7        |            |            |
| 4           | Ø10   | 1     | 445 | 445        | 2.7        |            |            |
| 5           | Ø10   | 2     | 944 | 1888       | 11.6       |            |            |
| 6           | Ø5    | 37    | 124 | 4588       |            | 7.2        |            |
| Total+10%:  |       |       |     |            |            | 34.7       | 7.9        |
| <b>V 2</b>  |       |       |     |            |            |            |            |
| 1           | Ø16   | 1     | 270 | 270        | 4.3        |            |            |
| 2           | Ø20   | 2     | 485 | 970        | 23.9       |            |            |
| 3           | Ø12.5 | 1     | 190 | 190        | 1.8        |            |            |
| 4           | Ø12.5 | 2     | 485 | 970        | 9.3        |            |            |
| 5           | Ø8    | 2     | 392 | 784        | 3.1        |            |            |
| 6           | Ø16   | 2     | 585 | 1170       | 18.5       |            |            |
| 7           | Ø8    | 1     | 151 | 151        | 0.6        |            |            |
| 8           | Ø20   | 1     | 310 | 310        | 7.6        |            |            |
| 9           | Ø5    | 33    | 134 | 4422       |            | 6.9        |            |
| 10          | Ø6.3  | 7     | 136 | 952        | 2.3        |            |            |
| Total+10%:  |       |       |     |            |            | 78.5       | 7.6        |
| <b>V 3</b>  |       |       |     |            |            |            |            |
| 1           | Ø20   | 1     | 290 | 290        | 7.2        |            |            |
| 2           | Ø8    | 1     | 155 | 155        | 0.6        |            |            |
| 3           | Ø12.5 | 2     | 465 | 930        | 9.0        |            |            |
| 4           | Ø8    | 2     | 500 | 1000       | 3.9        |            |            |
| 5           | Ø16   | 1     | 315 | 315        | 5.0        |            |            |
| 6           | Ø12.5 | 2     | 595 | 1190       | 11.5       |            |            |
| 7           | Ø10   | 2     | 385 | 770        | 4.7        |            |            |
| 8           | Ø5    | 43    | 104 | 4472       |            | 7.0        |            |
| Total+10%:  |       |       |     |            |            | 46.1       | 7.7        |
| <b>V 4</b>  |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 2     | 342 | 684        | 1.7        |            |            |
| 2           | Ø10   | 2     | 342 | 684        | 4.2        |            |            |
| 3           | Ø5    | 13    | 104 | 1352       |            | 2.1        |            |
| Total+10%:  |       |       |     |            |            | 6.5        | 2.3        |
| <b>V 5</b>  |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 1     | 334 | 334        | 0.8        |            |            |
| 2           | Ø8    | 2     | 334 | 668        | 2.6        |            |            |
| 3           | Ø10   | 2     | 334 | 668        | 4.1        |            |            |
| 4           | Ø5    | 12    | 104 | 1248       |            | 2.0        |            |
| Total+10%:  |       |       |     |            |            | 8.3        | 2.2        |
| <b>V 6</b>  |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 4     | 105 | 420        | 1.0        |            |            |
| 2           | Ø8    | 2     | 674 | 1348       | 5.3        |            |            |
| 3           | Ø12.5 | 2     | 674 | 1348       | 13.0       |            |            |
| 4           | Ø5    | 26    | 134 | 3484       |            | 5.5        |            |
| Total+10%:  |       |       |     |            |            | 21.2       | 6.1        |
| <b>V 7</b>  |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 2     | 334 | 668        | 1.6        |            |            |
| 2           | Ø10   | 2     | 334 | 668        | 4.1        |            |            |
| 3           | Ø10   | 1     | 240 | 240        | 1.5        |            |            |
| 4           | Ø5    | 12    | 104 | 1248       |            | 2.0        |            |
| Total+10%:  |       |       |     |            |            | 7.9        | 2.2        |
| <b>V 8</b>  |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 1     | 165 | 165        | 0.4        |            |            |
| 2           | Ø10   | 4     | 944 | 3776       | 23.3       |            |            |
| 3           | Ø5    | 39    | 104 | 4056       |            | 6.4        |            |
| Total+10%:  |       |       |     |            |            | 26.1       | 7.0        |
| <b>V 9</b>  |       |       |     |            |            |            |            |
| 1           | Ø10   | 1     | 310 | 310        | 1.9        |            |            |
| 2           | Ø8    | 2     | 230 | 460        | 1.8        |            |            |
| 3           | Ø12.5 | 2     | 335 | 670        | 6.5        |            |            |
| 4           | Ø10   | 2     | 625 | 1250       | 7.7        |            |            |
| 5           | Ø12.5 | 2     | 587 | 1174       | 11.3       |            |            |
| 6           | Ø10   | 2     | 395 | 790        | 4.9        |            |            |
| 7           | Ø12.5 | 2     | 215 | 430        | 4.1        |            |            |
| 8           | Ø5    | 37    | 124 | 4588       |            | 7.2        |            |
| Total+10%:  |       |       |     |            |            | 42.0       | 7.9        |
| <b>V 10</b> |       |       |     |            |            |            |            |
| 1           | Ø8    | 1     | 180 | 180        | 0.7        |            |            |
| 2           | Ø10   | 2     | 415 | 830        | 5.1        |            |            |
| 3           | Ø12.5 | 2     | 550 | 1100       | 10.6       |            |            |
| 4           | Ø12.5 | 1     | 940 | 940        | 3.3        |            |            |
| 5           | Ø10   | 2     | 944 | 1888       | 11.6       |            |            |
| 6           | Ø5    | 37    | 124 | 4588       |            | 7.2        |            |
| Total+10%:  |       |       |     |            |            | 34.4       | 7.9        |
| <b>V 12</b> |       |       |     |            |            |            |            |
| 1           | Ø6.3  | 2     | 454 | 908        | 2.2        |            |            |
| 2           | Ø10   | 2     | 454 | 908        | 5.6        |            |            |
| 3           | Ø10   | 1     | 315 | 315        | 1.9        |            |            |
| 4           | Ø5    | 18    | 104 | 1872       |            | 2.9        |            |
| Total+10%:  |       |       |     |            |            | 10.7       | 3.2        |
| Ø5:         |       |       |     |            |            | 0.0        | 62         |
| Ø6.3:       |       |       |     |            |            | 10.8       | 0.0        |
| Ø8:         |       |       |     |            |            | 28.2       | 0.0        |
| Ø10:        |       |       |     |            |            | 107.4      | 0.0        |
| Ø12.5:      |       |       |     |            |            | 99.9       | 0.0        |
| Ø16:        |       |       |     |            |            | 30.6       | 0.0        |
| Ø20:        |       |       |     |            |            | 42.5       | 0.0        |
| Total:      |       |       |     |            |            | 319.4      | 62         |



| Resumo Aço Pavimento Superior | Comp. total (m) | Peso+10% (kg) | Total      |
|-------------------------------|-----------------|---------------|------------|
| CA-50 Ø6.3                    | 146.3           | 39            |            |
| Ø8                            | 87.5            | 38            |            |
| Ø10                           | 616.1           | 418           |            |
| Ø12.5                         | 124.8           | 132           |            |
| Ø16                           | 67.9            | 118           |            |
| Ø20                           | 15.7            | 43            |            |
| Ø25                           | 3.2             | 14            | 802        |
| CA-60 Ø5                      | 974.0           | 168           | 168        |
| <b>Total</b>                  |                 |               | <b>970</b> |

Pavimento Superior  
Concreto: C25, em geral  
Aço das barras: CA-50 e CA-60  
Aço dos estribos: CA-50 e CA-60  
Escala vigas 1:75  
Escala seções 1:20  
Escala Planta de Forma 1:75

**Projeto:** TCC **Data:** Outubro de 2016

**Nome:** LEANDRO WILLIAN DE FRETAS

**Des.no.:** Planta: DETALHAMENTO - VIGAS DO PAVIMENTO SUPERIOR

**ESCALAS: 1:20 - 1:75** **PRANCHA 10**