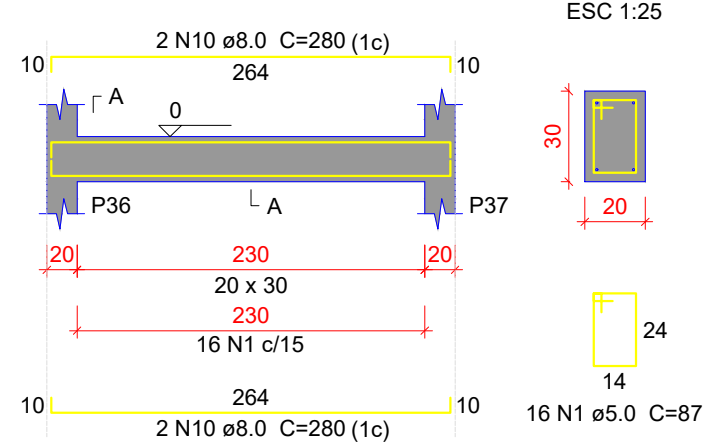


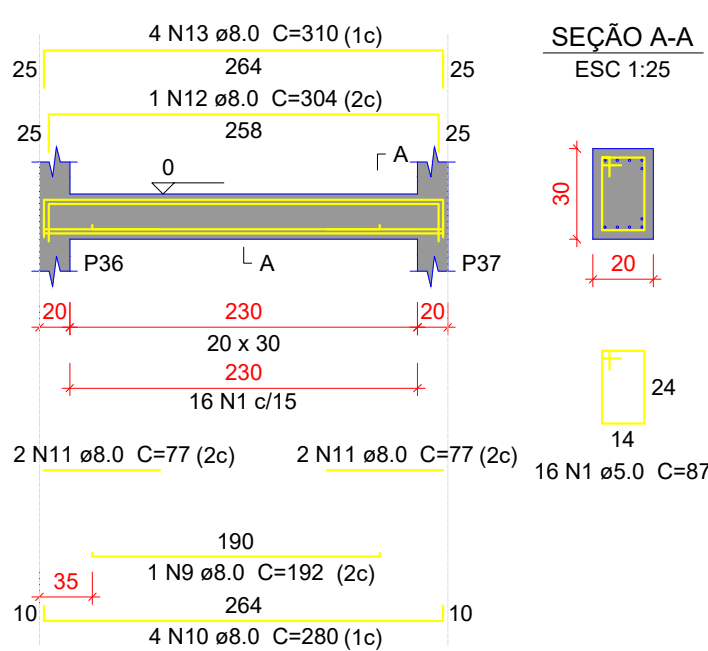
## VB118

ESC 1:50



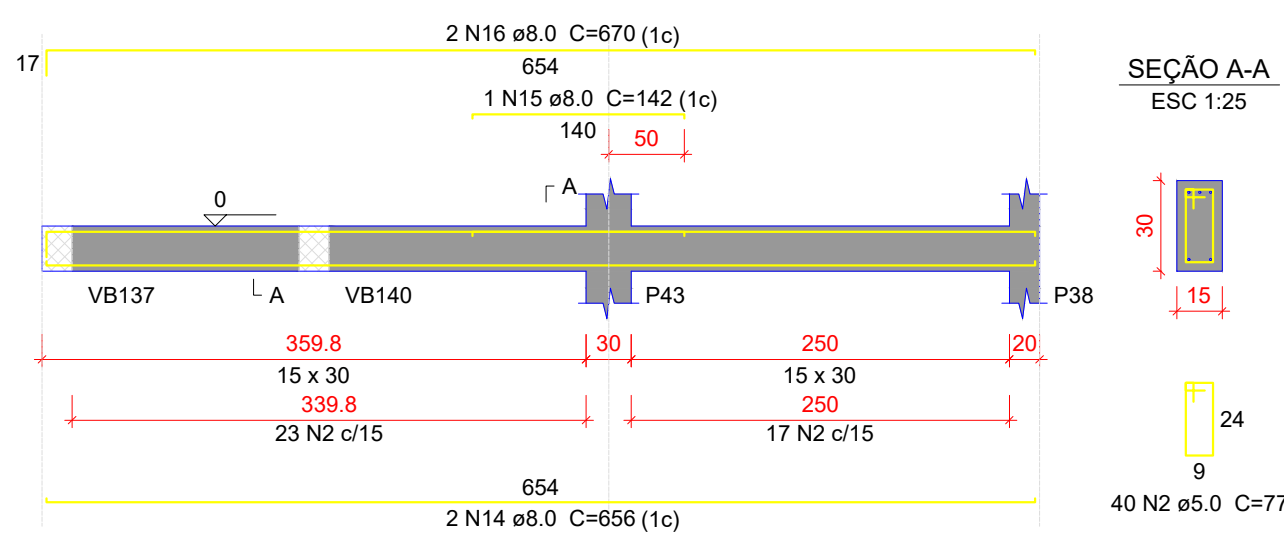
## VB119

ESC 1:50



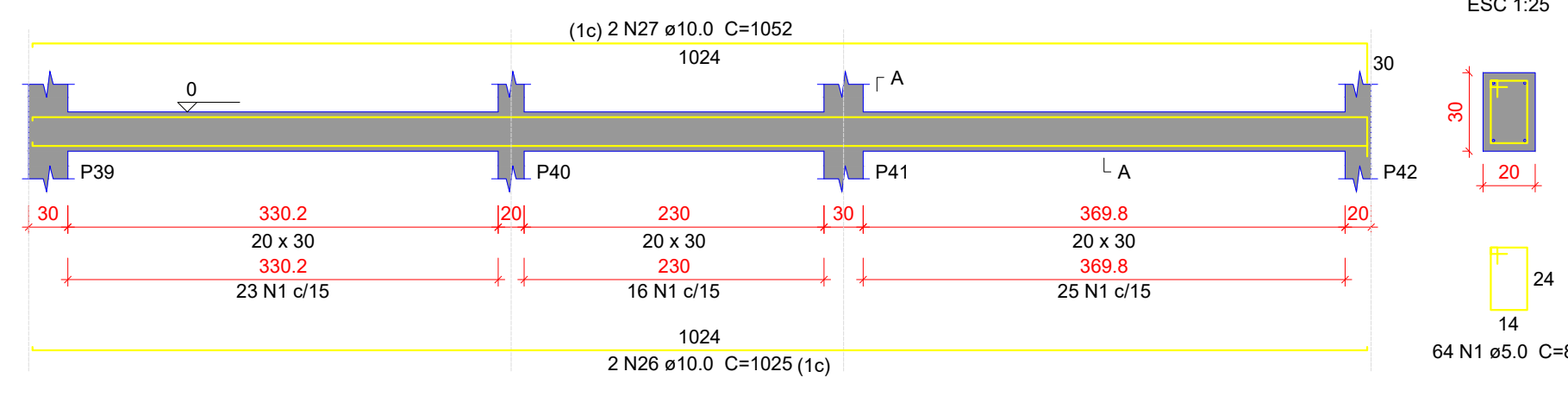
## VB120

ESC 1:50



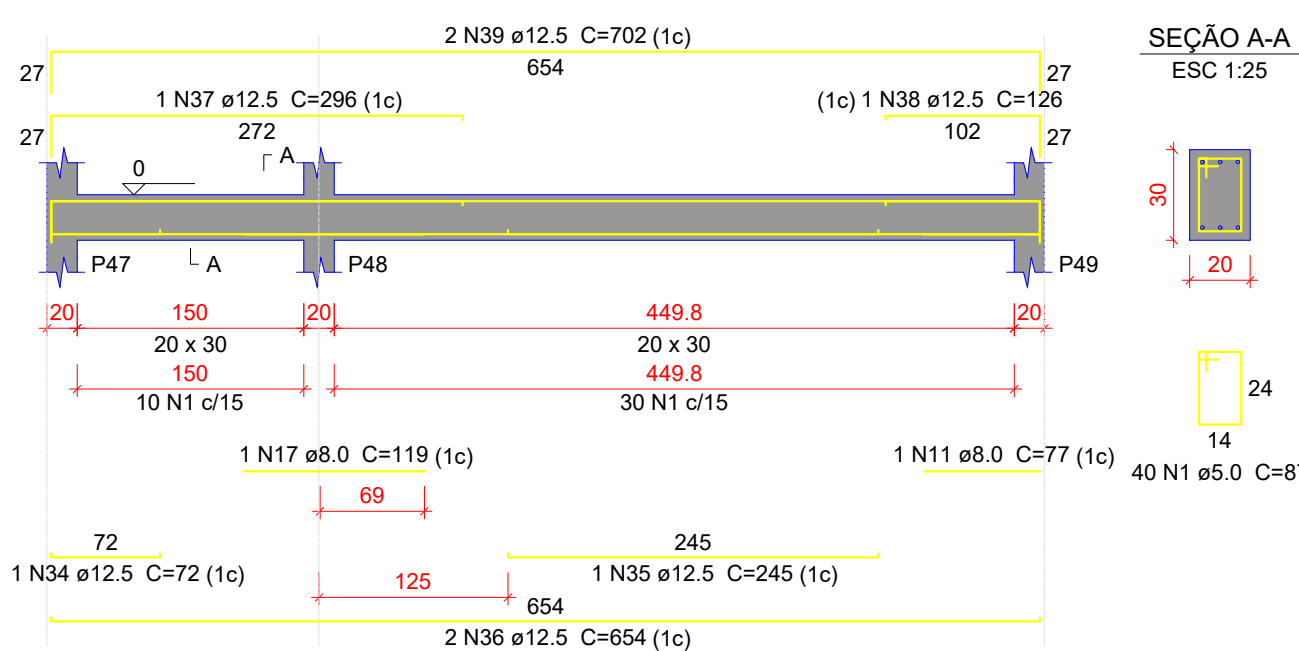
## VB121

ESC 1:50



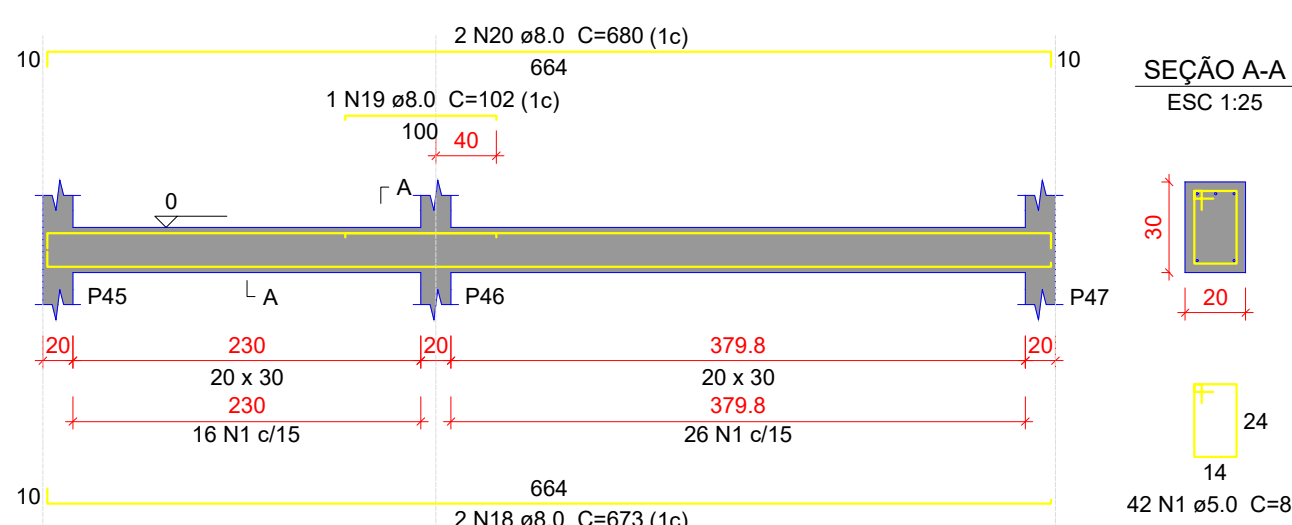
## VB122

ESC 1:50



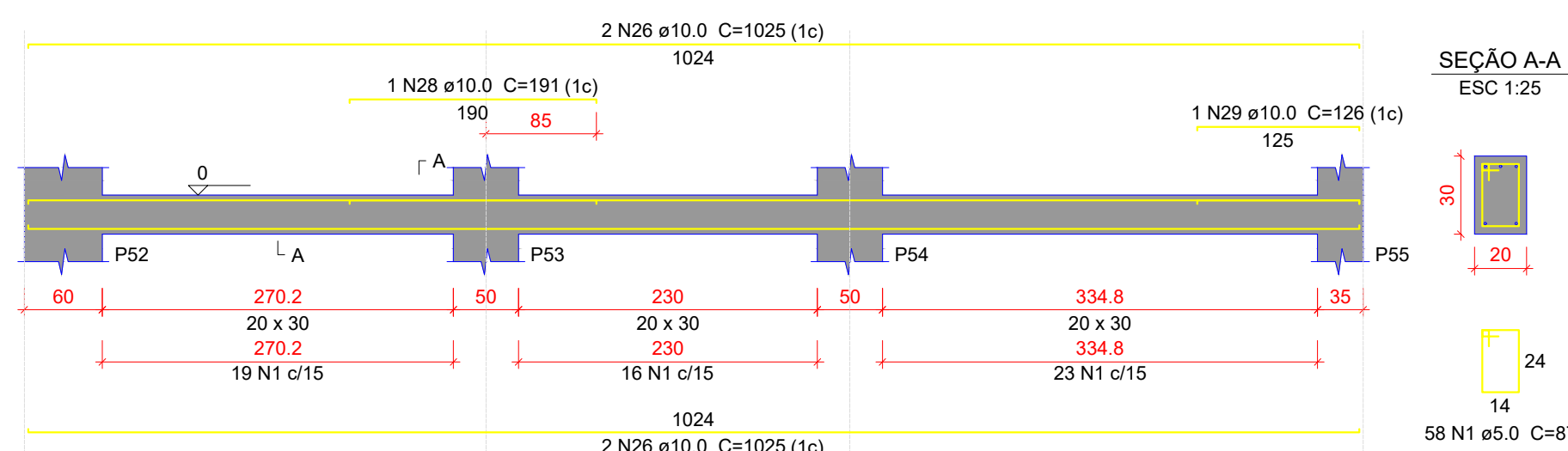
## VB123

ESC 1:50



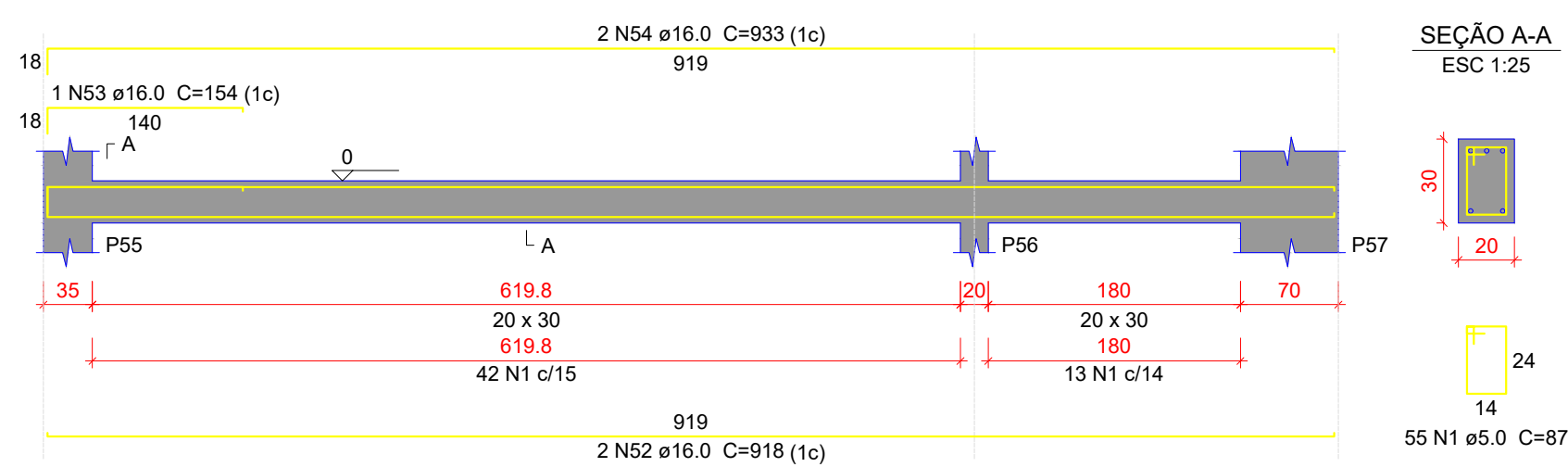
## VB124

ESC 1:50



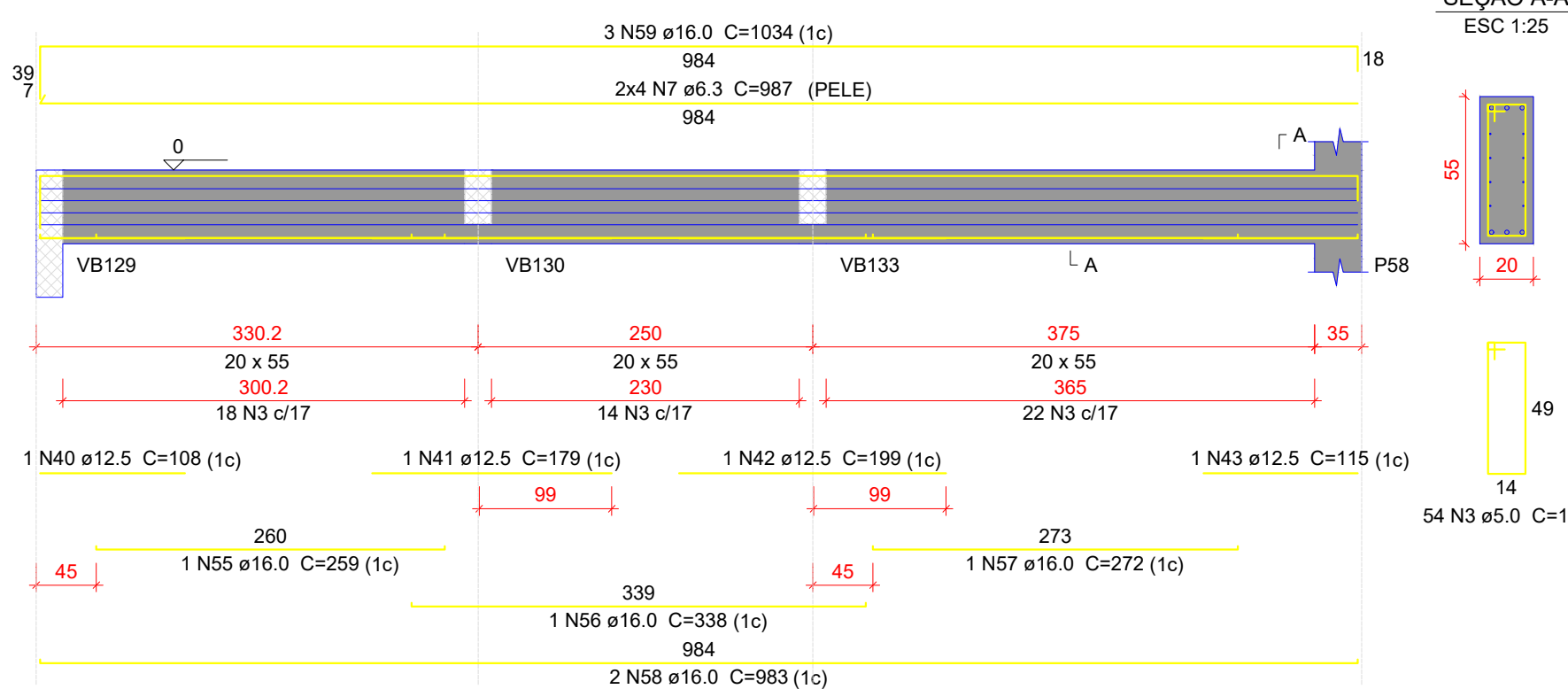
## VB125

ESC 1:50



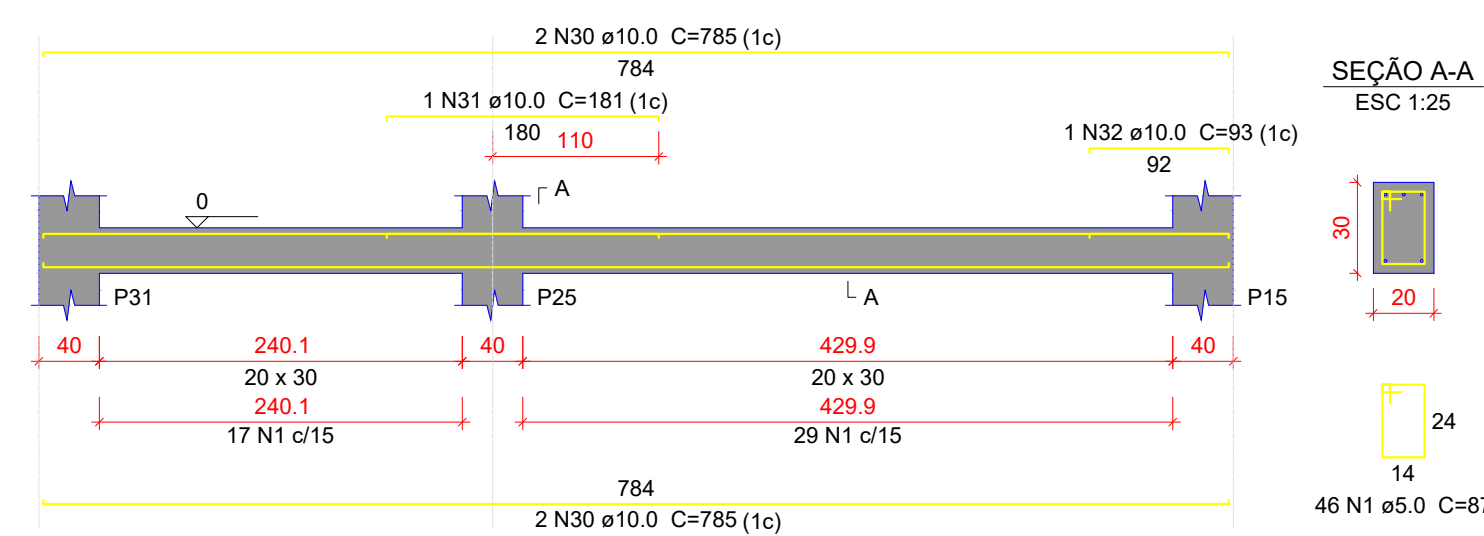
## VB126

ESC 1:50



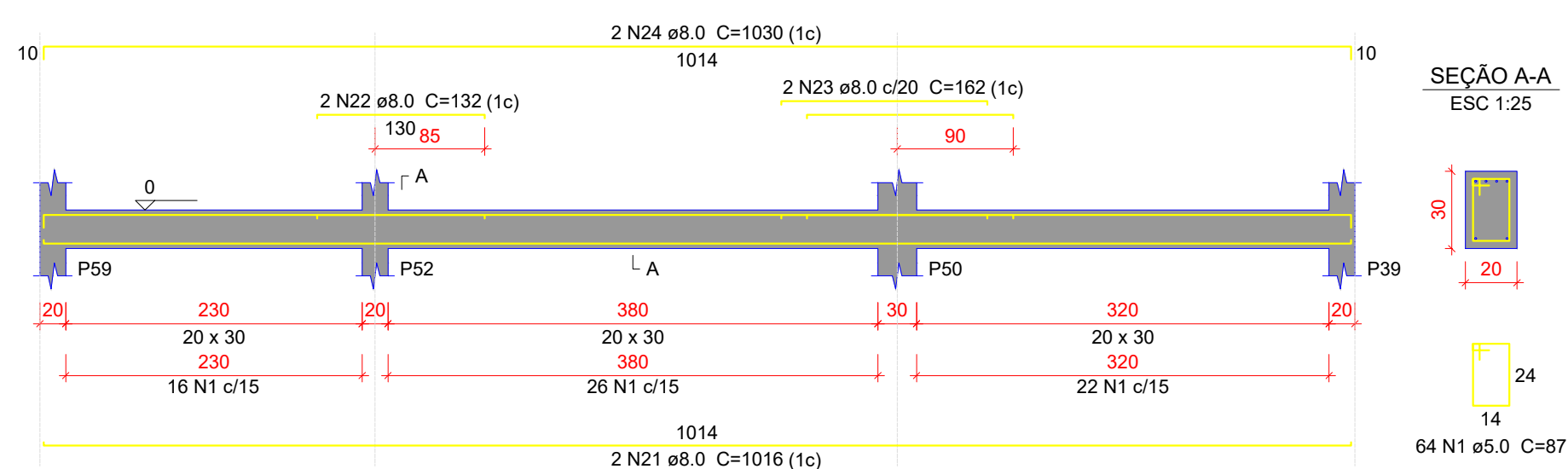
## VB127

ESC 1:50



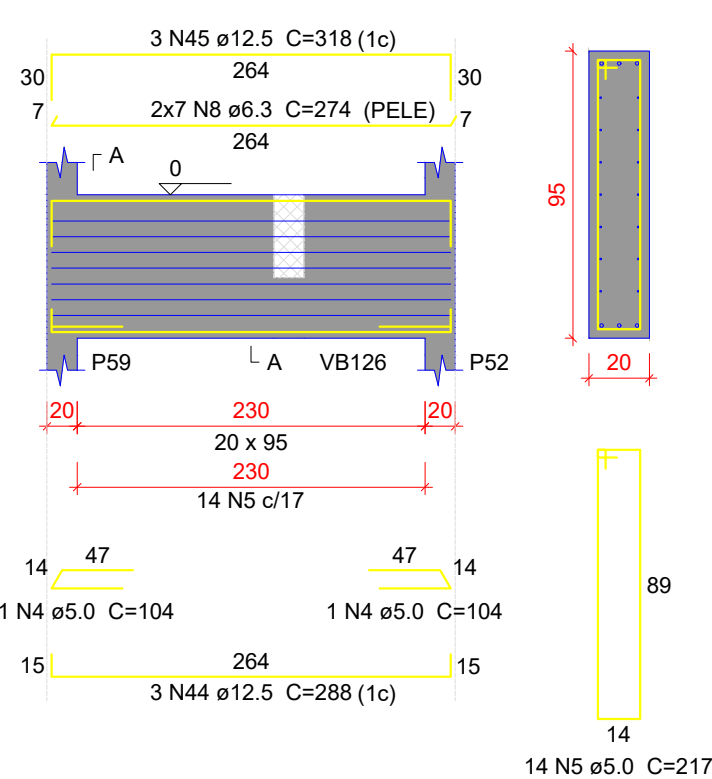
## VB128

ESC 1:50



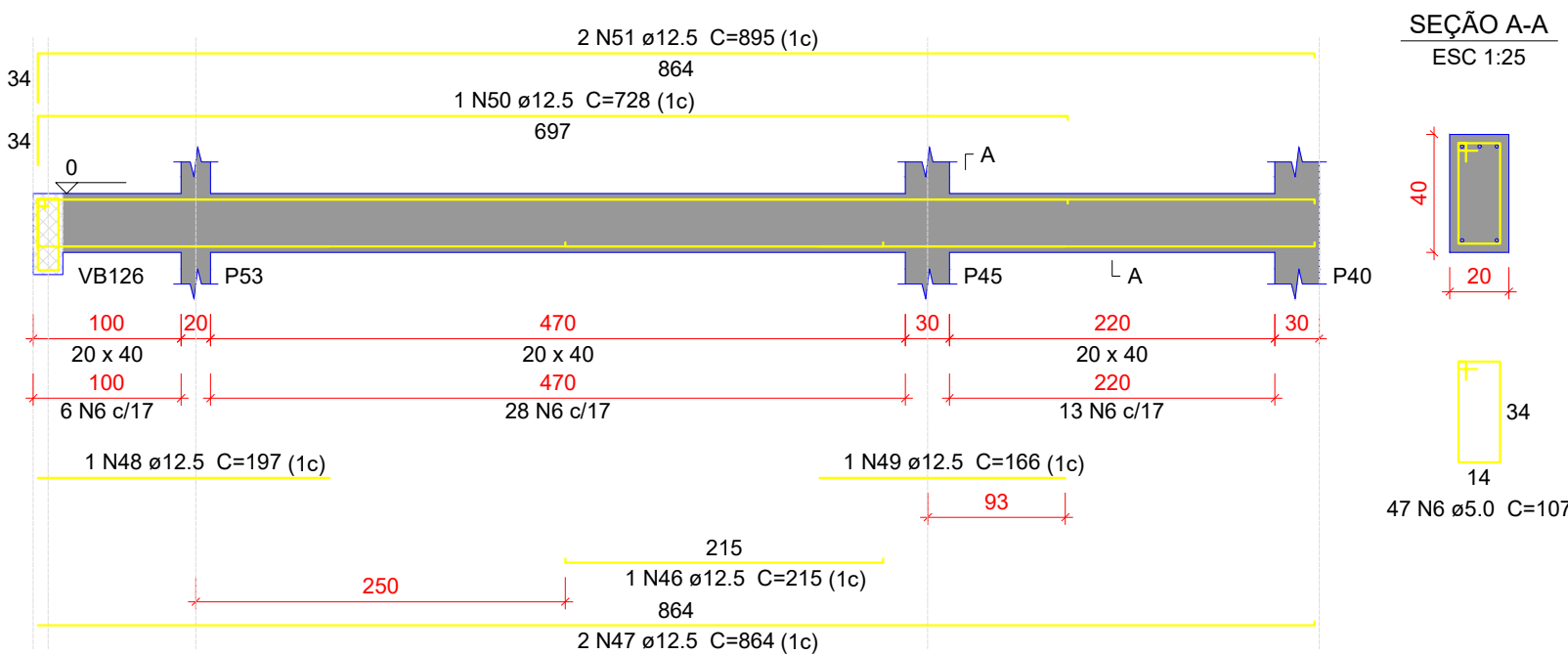
## VB129

ESC 1:50



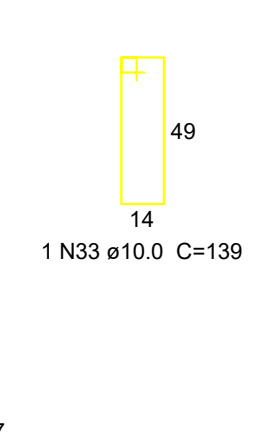
## VB130

ESC 1:50



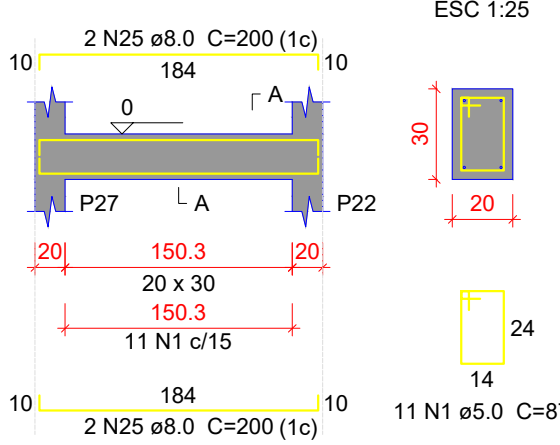
## SUSPENSÃO VB126

ESC 1:25



## VB131

ESC 1:50



## Relação do aço

| VB118 | VB119 | VB120     | VB121 | VB122       | VB123        | VB124 | VB125 | VB126     | VB127 | VB128       | VB129        | VB130 | VB131 |           |       |             |              |
|-------|-------|-----------|-------|-------------|--------------|-------|-------|-----------|-------|-------------|--------------|-------|-------|-----------|-------|-------------|--------------|
| AÇO   | N     | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) | AÇO   | N     | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) | AÇO   | N     | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
| CA60  | 1     | 5.0       | 412   | 87          | 35844        | CA50  | 1     | 5.0       | 412   | 87          | 35844        | CA40  | 1     | 5.0       | 412   | 87          | 35844        |
|       | 2     | 5.0       | 40    | 77          | 3080         |       | 2     | 5.0       | 40    | 77          | 3080         |       | 2     | 5.0       | 40    | 77          | 3080         |
|       | 3     | 5.0       | 54    | 137         | 7398         |       | 3     | 5.0       | 54    | 137         | 7398         |       | 3     | 5.0       | 54    | 137         | 7398         |
|       | 4     | 5.0       | 2     | 104         | 208          |       | 4     | 5.0       | 2     | 104         | 208          |       | 4     | 5.0       | 2     | 104         | 208          |
|       | 5     | 5.0       | 14    | 217         | 3038         |       | 5     | 5.0       | 14    | 217         | 3038         |       | 5     | 5.0       | 14    | 217         | 3038         |
| CA50  | 6     | 5.0       | 47    | 107         | 5029         | 6     | 5.0   | 47        | 107   | 5029        | 6            | 5.0   | 47    | 107       | 5029  |             |              |
|       | 7     | 6.3       | 8     | 987         | 7896         | 7     | 6.3   | 8         | 987   | 7896        | 7            | 6.3   | 8     | 987       | 7896  |             |              |
|       | 8     | 6.3       | 14    | 274         | 3836         | 8     | 6.3   | 14        | 274   | 3836        | 8            | 6.3   | 14    | 274       | 3836  |             |              |
|       | 9     | 8.0       | 1     | 192         | 192          | 9     | 8.0   | 1         | 192   | 192         | 9            | 8.0   | 1     | 192       | 192   |             |              |
|       | 10    | 8.0       | 8     | 280         | 2240         | 10    | 8.0   | 8         | 280   | 2240        | 10           | 8.0   | 8     | 280       | 2240  |             |              |
|       | 11    | 8.0       | 5     | 77          | 385          | 11    | 8.0   | 5         | 77    | 385         | 11           | 8.0   | 5     | 77        | 385   |             |              |
|       | 12    | 8.0       | 1     | 304         | 304          | 12    | 8.0   | 1         | 304   | 304         | 12           | 8.0   | 1     | 304       | 304   |             |              |
|       | 13    | 8.0       | 4     | 310         | 1240         | 13    | 8.0   | 4         | 310   | 1240        | 13           | 8.0   | 4     | 310       | 1240  |             |              |
|       | 14    | 8.0       | 2     | 656         | 1312         | 14    | 8.0   | 2         | 656   | 1312        | 14           | 8.0   | 2     | 656       | 1312  |             |              |
|       | 15    | 8.0       | 1     | 142         | 142          | 15    | 8.0   | 1         | 142   | 142         | 15           | 8.0   | 1     | 142       | 142   |             |              |
|       | 16    | 8.0       | 2     | 670         | 1340         | 16    | 8.0   | 2         | 670   | 1340        | 16           | 8.0   | 2     | 670       | 1340  |             |              |
|       | 17    | 8.0       | 1     | 119         | 119          | 17    | 8.0   | 1         | 119   | 119         | 17           | 8.0   | 1     | 119       | 119   |             |              |
|       | 18    | 8.0       | 2     | 673         | 1346         | 18    | 8.0   | 2         | 673   | 1346        | 18           | 8.0   | 2     | 673       | 1346  |             |              |
|       | 19    | 8.0       | 1     | 102         | 102          | 19    | 8.0   | 1         | 102   | 102         | 19           | 8.0   | 1     | 102       | 102   |             |              |
|       | 20    | 8.0       | 2     | 680         | 1360         | 20    | 8.0   | 2         | 680   | 1360        | 20           | 8.0   | 2     | 680       | 1360  |             |              |
|       | 21    | 8.0       | 2     | 1016        | 2032         | 21    | 8.0   | 2         | 1016  | 2032        | 21           | 8.0   | 2     | 1016      | 2032  |             |              |
|       | 22    | 8.0       | 2     | 132         | 264          | 22    | 8.0   | 2         | 132   | 264         | 22           | 8.0   | 2     | 132       | 264   |             |              |
|       | 23    | 8.0       | 2     | 162         | 324          | 23    | 8.0   | 2         | 162   | 324         | 23           | 8.0   | 2     | 162       | 324   |             |              |
|       | 24    | 8.0       | 2     | 1030        | 2060         | 24    | 8.0   | 2         | 1030  | 2060        | 24           | 8.0   | 2     | 1030      | 2060  |             |              |
| 25    | 8.0   | 4         | 200   | 800         | 25           | 8.0   | 4     | 200       | 800   | 25          | 8.0          | 4     | 200   | 800       |       |             |              |
| 26    | 10.0  | 6         | 1025  | 6150        | 26           | 10.0  | 6     | 1025      | 6150  | 26          | 10.0         | 6     | 1025  | 6150      |       |             |              |
| 27    | 10.0  | 2         | 1052  | 2104        | 27           | 10.0  | 2     | 1052      | 2104  | 27          | 10.0         | 2     | 1052  | 2104      |       |             |              |
| 28    | 10.0  | 1         | 191   | 191         | 28           | 10.0  | 1     | 191       | 191   | 28          | 10.0         | 1     | 191   | 191       |       |             |              |
| 29    | 10.0  | 1         | 126   | 126         | 29           | 10.0  | 1     | 126       | 126   | 29          | 10.0         | 1     | 126   | 126       |       |             |              |
| 30    | 10.0  | 4         | 785   | 3140        | 30           | 10.0  | 4     | 785       | 3140  | 30          | 10.0         | 4     | 785   | 3140      |       |             |              |
| 31    | 10.0  | 1         | 181   | 181         | 31           | 10.0  | 1     | 181       | 181   | 31          | 10.0         | 1     | 181   | 181       |       |             |              |
| 32    | 10.0  | 1         | 93    | 93          | 32           | 10.0  | 1     | 93        | 93    | 32          | 10.0         | 1     | 93    | 93        |       |             |              |
| 33    | 10.0  | 1         | 139   | 139         | 33           | 10.0  | 1     | 139       | 139   | 33          | 10.0         | 1     | 139   | 139       |       |             |              |
| 34    | 12.5  | 1         | 72    | 72          | 34           | 12.5  | 1     | 72        | 72    | 34          | 12.5         | 1     | 72    | 72        |       |             |              |
| 35    | 12.5  | 1         | 245   | 245         | 35           | 12.5  | 1     | 245       | 245   | 35          | 12.5         | 1     | 245   | 245       |       |             |              |
| 36    | 12.5  | 2         | 654   | 1308        | 36           | 12.5  | 2     | 654       | 1308  | 36          | 12.5         | 2     | 654   | 1308      |       |             |              |
| 37    | 12.5  | 1         | 296   | 296         | 37           | 12.5  | 1     | 296       | 296   | 37          | 12.5         | 1     | 296   | 296       |       |             |              |
| 38    | 12.5  | 1         | 126   | 126         | 38           | 12.5  | 1     | 126       | 126   | 38          | 12.5         | 1     | 126   | 126       |       |             |              |
| 39    | 12.5  | 2         | 702   | 1404        | 39           | 12.5  | 2     | 702       | 1404  | 39          | 12.5         | 2     | 702   | 1404      |       |             |              |
| 40    | 12.5  | 1         | 108   | 108         | 40           | 12.5  | 1     | 108       | 108   | 40          | 12.5         | 1     | 108   | 108       |       |             |              |
| 41    | 12.5  | 1         | 179   | 179         | 41           | 12.5  | 1     | 179       | 179   | 41          | 12.5         | 1     | 179   | 179       |       |             |              |
| 42    | 12.5  | 1         | 199   | 199         | 42           | 12.5  | 1     | 199       | 199   | 42          | 12.5         | 1     | 199   | 199       |       |             |              |
| 43    | 12.5  | 1         | 115   | 115         | 43           | 12.5  | 1     | 115       | 115   | 43          | 12.5         | 1     | 115   | 115       |       |             |              |
| 44    | 12.5  | 3         | 288   | 864         | 44           | 12.5  | 3     | 288       | 864   | 44          | 12.5         | 3     | 288   | 864       |       |             |              |
| 45    | 12.5  | 3         | 318   | 954         | 45           | 12.5  | 3     | 318       | 954   | 45          | 12.5         | 3     | 318   | 954       |       |             |              |
| 46    | 12.5  | 1         | 215   | 215         | 46           | 12.5  | 1     | 215       | 215   | 46          | 12.5         | 1     | 215   | 215       |       |             |              |
| 47    | 12.5  | 2         | 864   | 1728        | 47           | 12.5  | 2     | 864       | 1728  | 47          | 12.5         | 2     | 864   | 1728      |       |             |              |
| 48    | 12.5  | 1         | 197   | 197         | 48           | 12.5  | 1     | 197       | 197   | 48          | 12.5         | 1     | 197   | 197       |       |             |              |
| 49    | 12.5  | 1         | 166   | 166         | 49           | 12.5  | 1     | 166       | 166   | 49          | 12.5         | 1     | 166   | 166       |       |             |              |
| 50    | 12.5  | 1         | 728   | 728         | 50           | 12.5  | 1     | 728       | 728   | 50          | 12.5         | 1     | 728   | 728       |       |             |              |
| 51    | 12.5  | 2         | 895   | 1790        | 51           | 12.5  | 2     | 895       | 1790  | 51          | 12.5         | 2     | 895   | 1790      |       |             |              |
| 52    | 16.0  | 2         | 918   | 1836        | 52           | 16.0  | 2     | 918       | 1836  | 52          | 16.0         | 2     | 918   | 1836      |       |             |              |
| 53    | 16.0  | 1         | 154   | 154         | 53           | 16.0  | 1     | 154       | 154   | 53          | 16.0         | 1     | 154   | 154       |       |             |              |
| 54    | 16.0  | 2         | 933   | 1866        | 54           | 16.0  | 2     | 933       | 1866  | 54          | 16.0         | 2     | 933   | 1866      |       |             |              |
| 55    | 16.0  | 1         | 259   | 259         | 55           | 16.0  | 1     | 259       | 259   | 55          | 16.0         | 1     | 259   | 259       |       |             |              |
| 56    | 16.0  | 1         | 338   | 338         | 56           | 16.0  | 1     | 338       | 338   | 56          | 16.0         | 1     | 338   | 338       |       |             |              |
| 57    | 16.0  | 1         | 272   | 272         | 57           | 16.0  | 1     | 272       | 272   | 57          | 16.0         | 1     | 272   | 272       |       |             |              |
| 58    | 16.0  | 2         | 983   | 1966        | 58           | 16.0  | 2     | 983       | 1966  | 58          | 16.0         | 2     | 983   | 1966      |       |             |              |
| 59    | 16.0  | 3         | 1034  | 3102        | 59           | 16.0  | 3     | 1034      | 3102  | 59          | 16.0         | 3     | 1034  | 3102      |       |             |              |

## Resumo do aço

| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 6.3       | 117.4       | 31.6             |
|                 | 8.0       | 155.7       | 67.5             |
|                 | 10.0      | 121.3       | 82.2             |
|                 | 12.5      | 107         | 113.3            |
|                 | 16.0      | 98          | 170              |
| CA60            | 5.0       | 546         | 92.6             |
| PESO TOTAL (kg) |           |             |                  |
| CA50            |           | 464.7       |                  |
| CA60            |           | 92.6        |                  |

Volume de concreto (C-30) = 5.97 m³

Área de forma = 77.32 m²

## Características do Projeto

- 1 - COBRIMENTO DAS ARMADURAS - PILARES E VIGAS: 3.0 cm
- 2 - COBRIMENTO DAS ARMADURAS - LAJES E ESCADAS: 3.0 cm
- 3 - COBRIMENTO DAS ARMADURAS - FUNDAÇÃO: 4.5 cm
- 4 - PREVER LASTRO DE CONCRETO MAGRO (5 cm) SOB AS ESTRUTURAS EM CONCRETO.

5 - OS VENTOS INCIDENTES NAS FACES X (90°) E Y (0°),