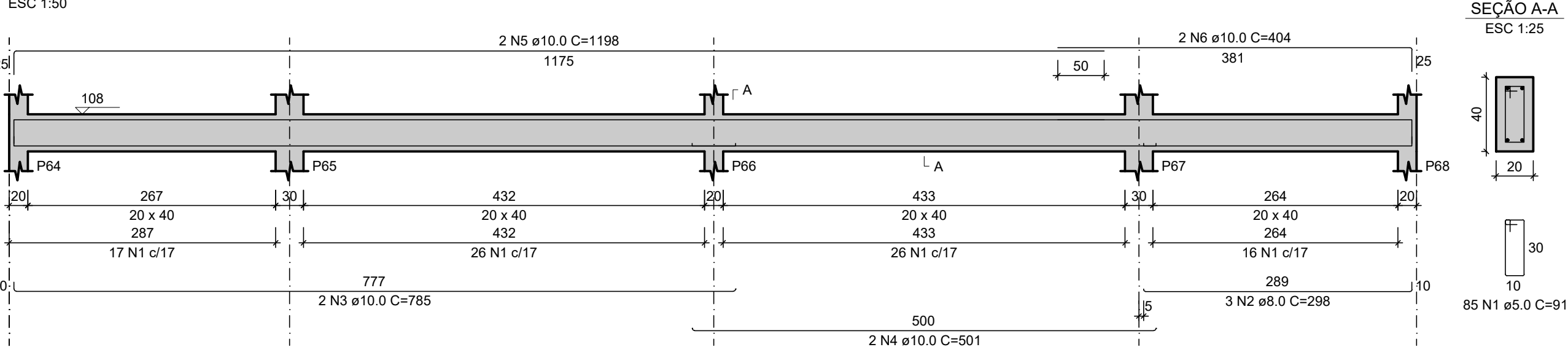
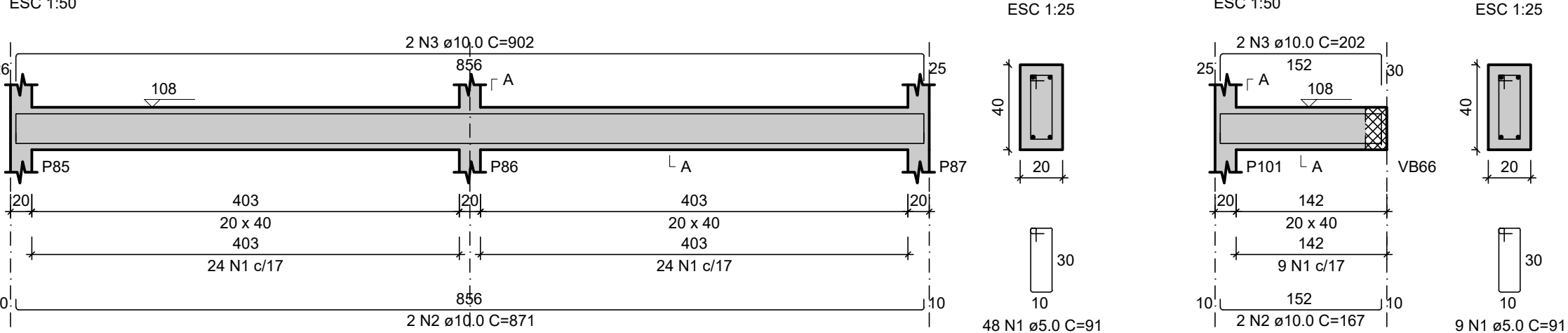


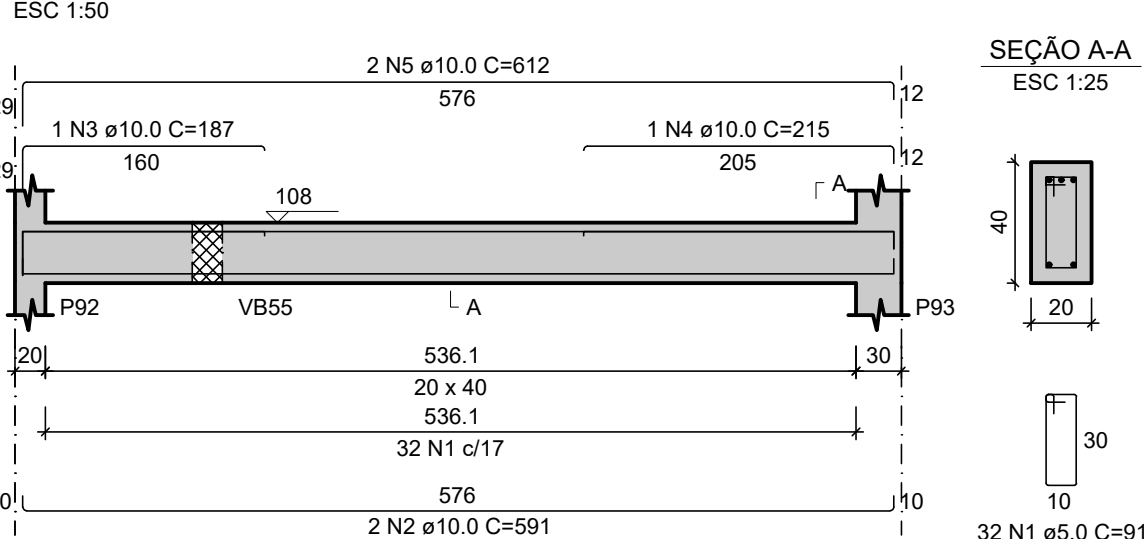
### VB21=VB27



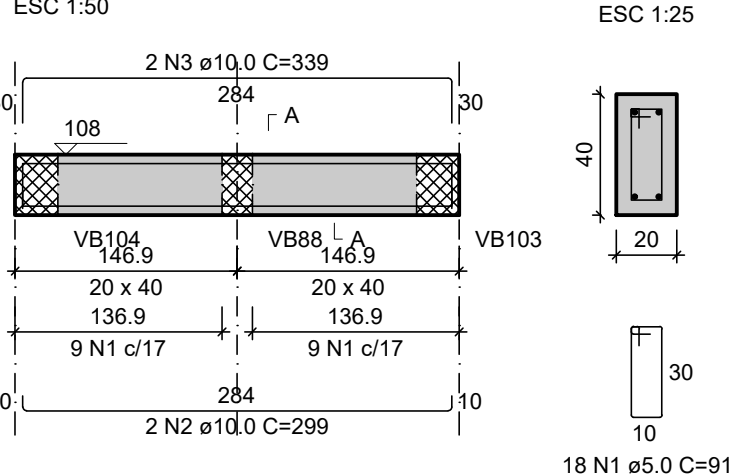
### VB26



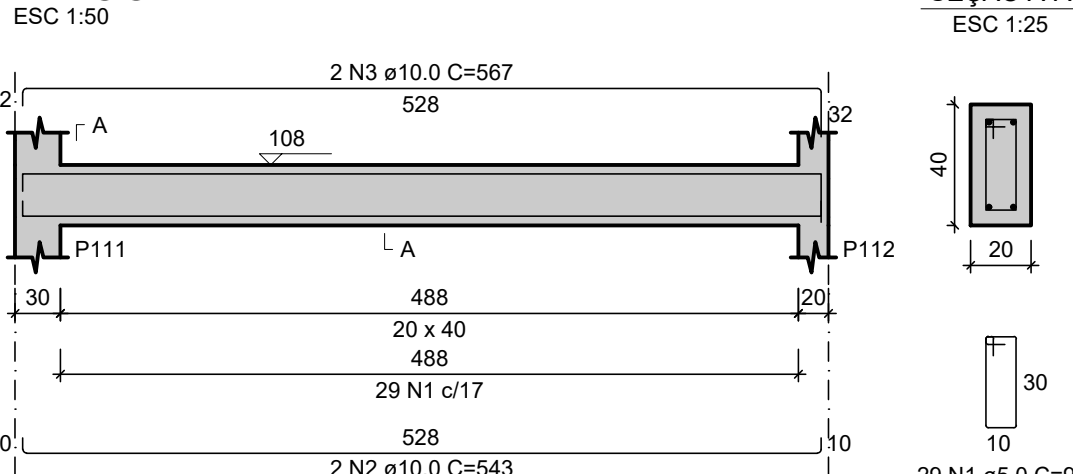
### VB28



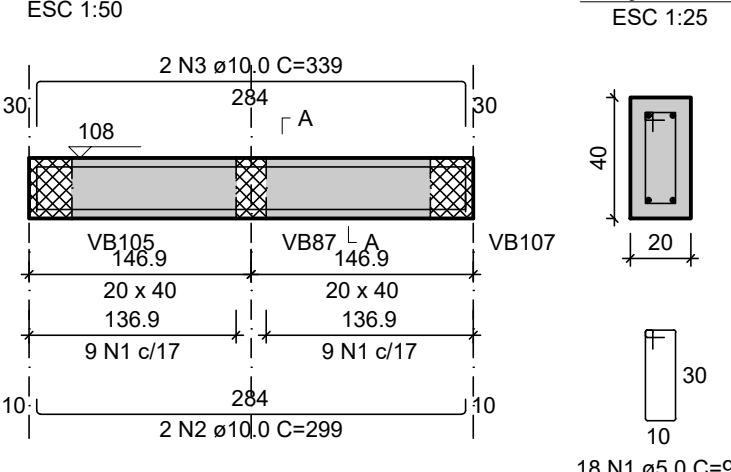
### VB34



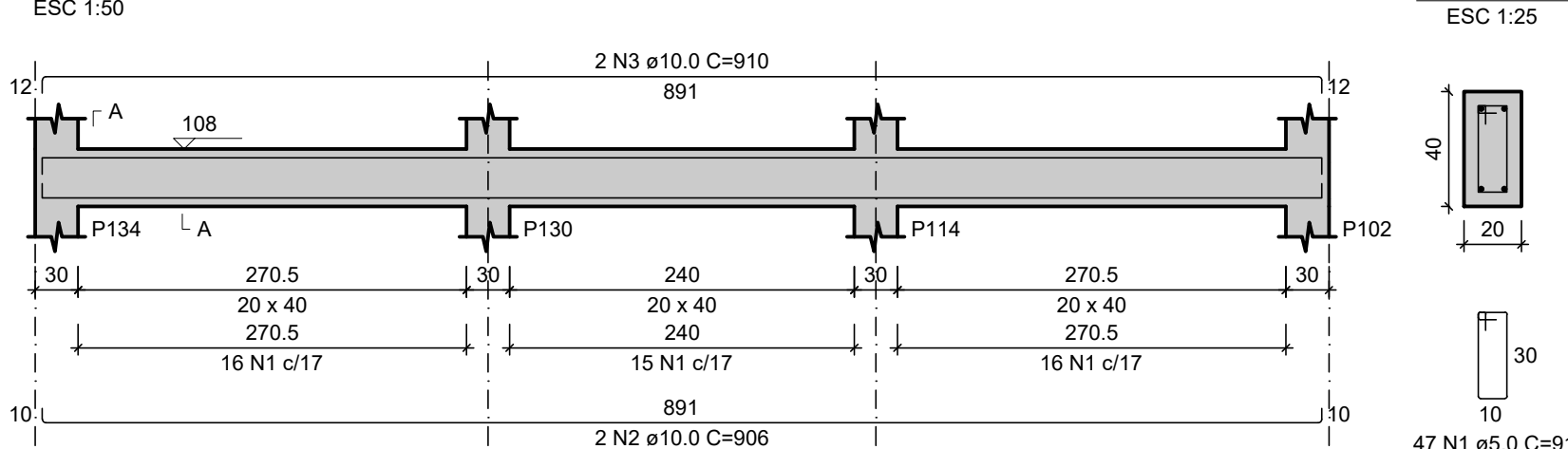
### VB38=VB41



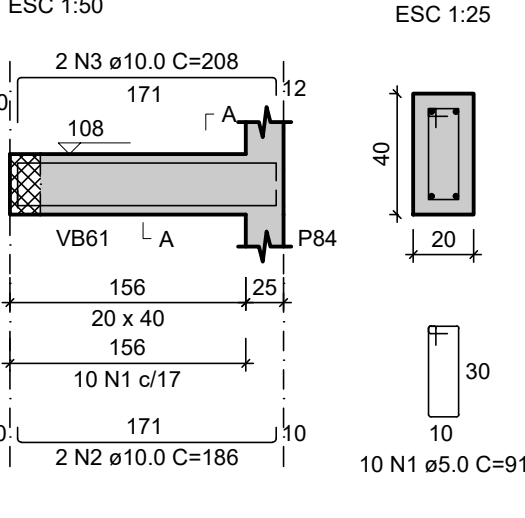
### VB44



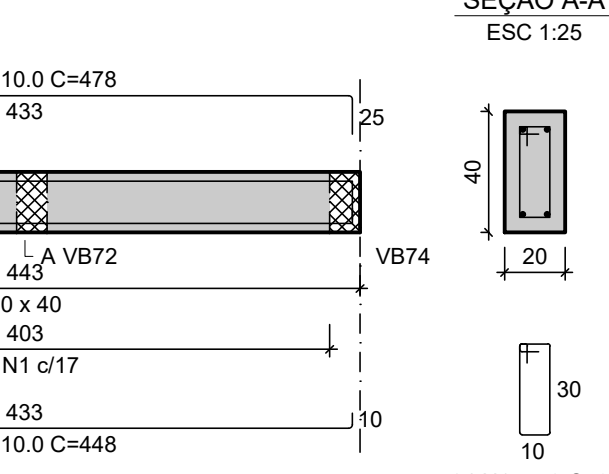
### VB51



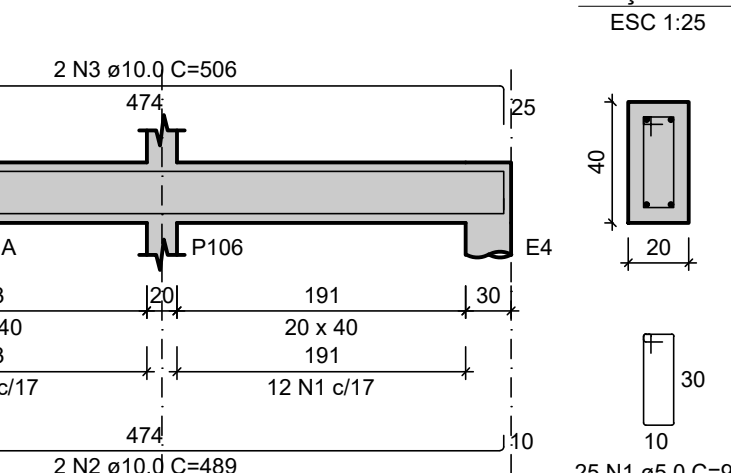
### VB24



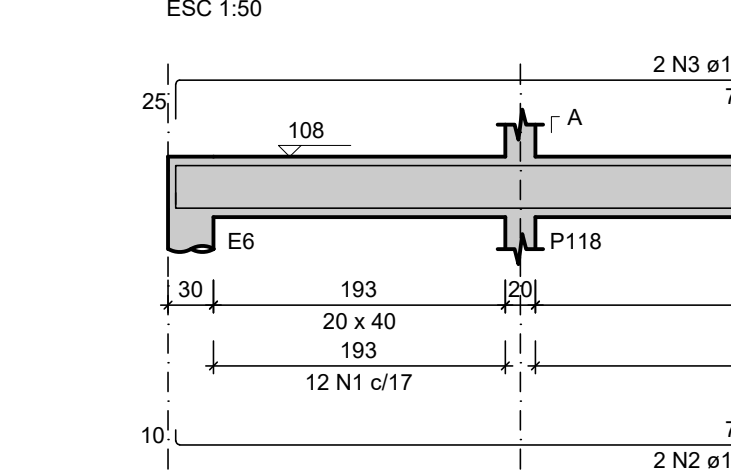
### VB31



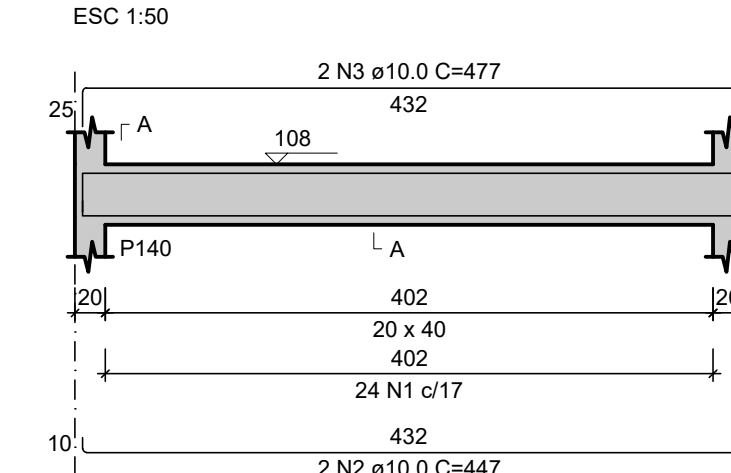
### VB36



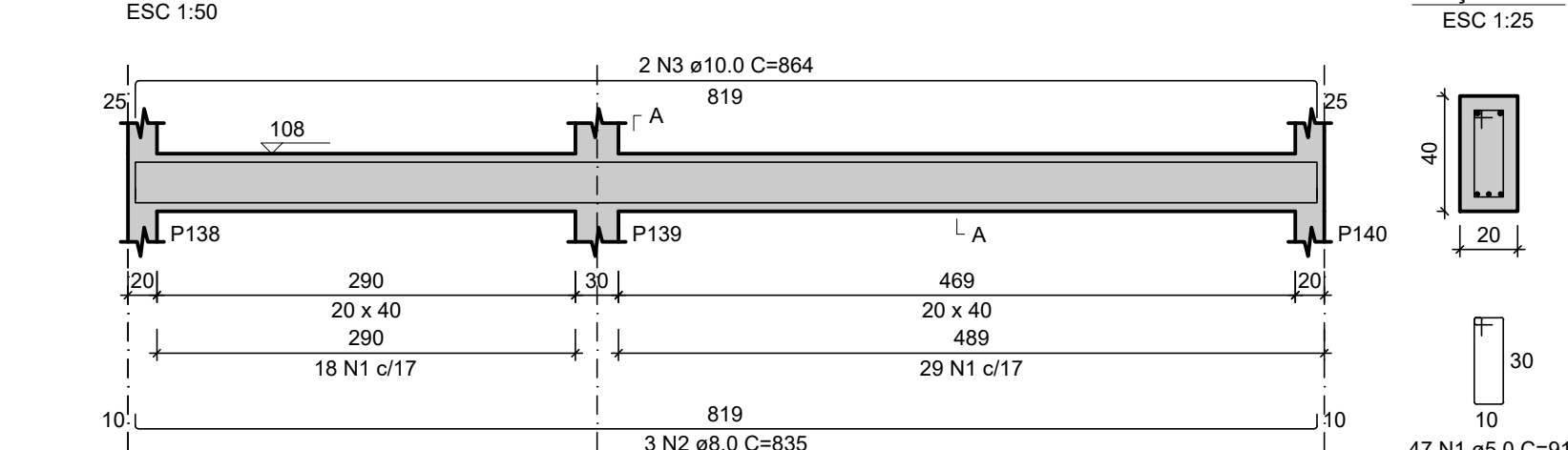
### VB40



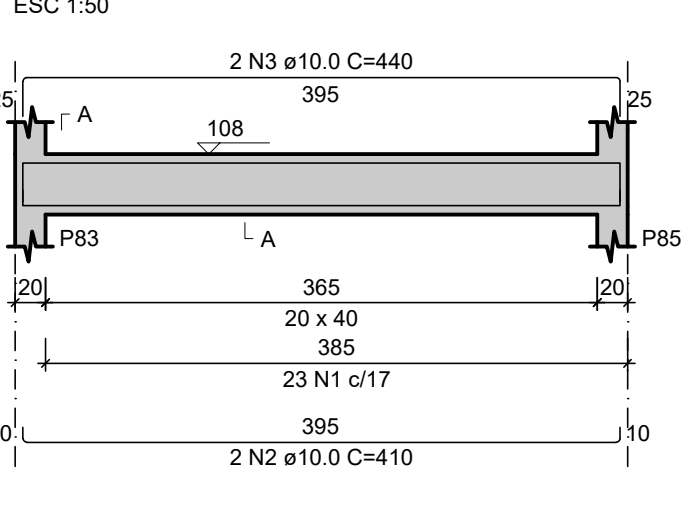
### VB49



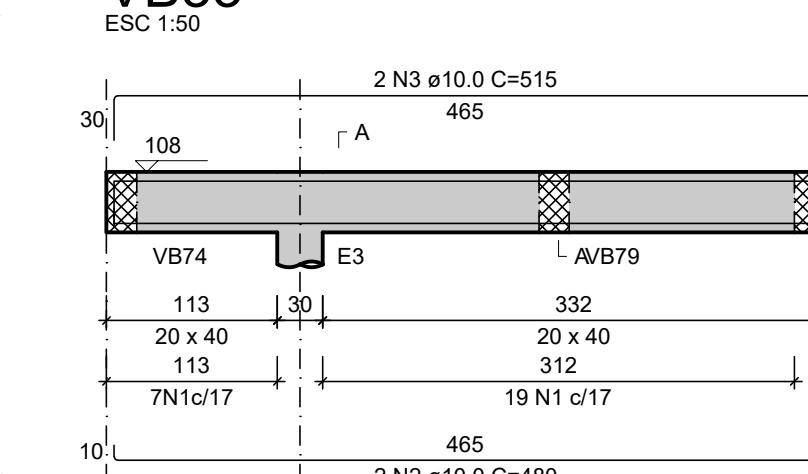
### VB48



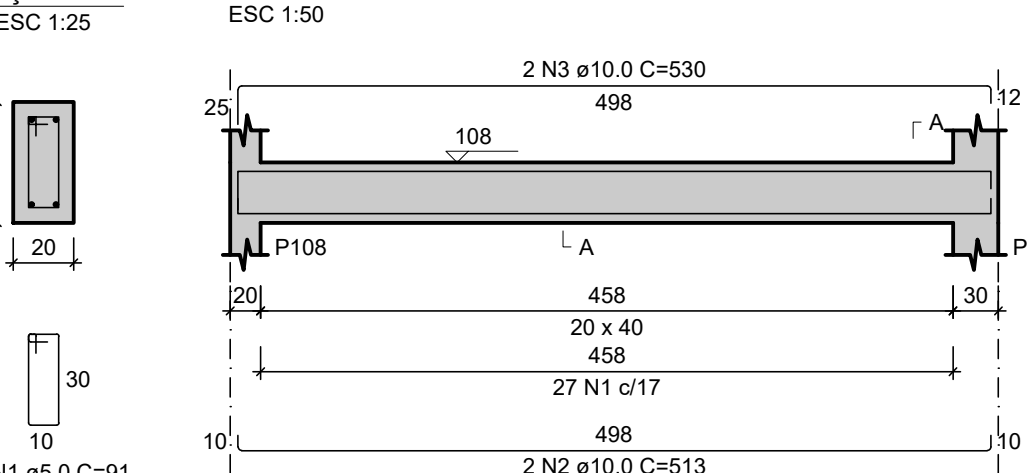
### VB25



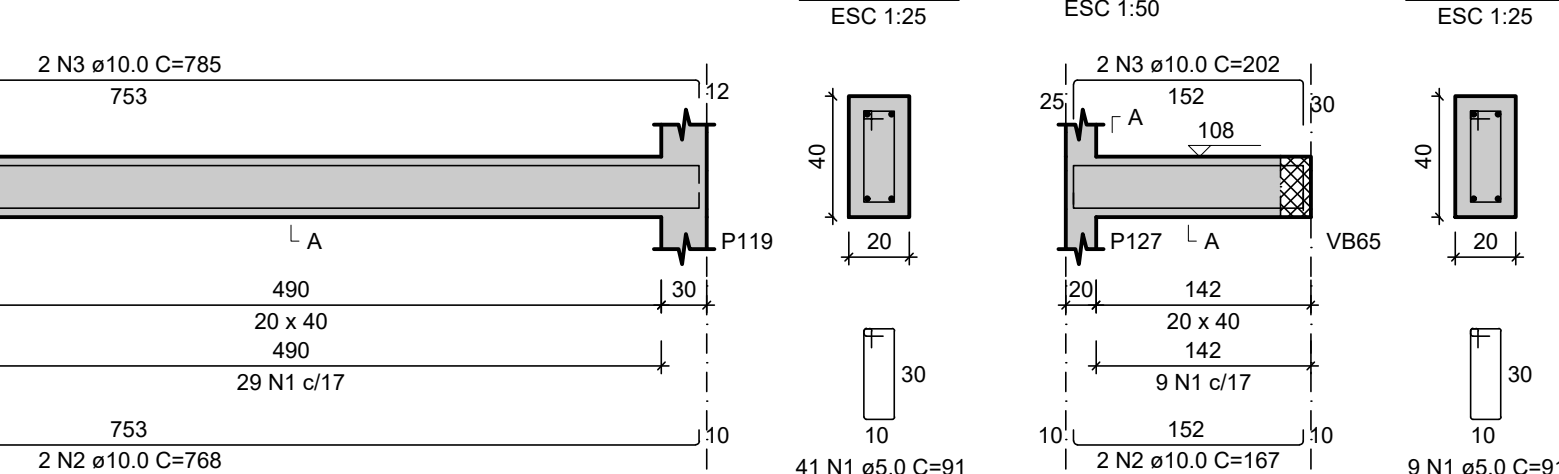
### VB33



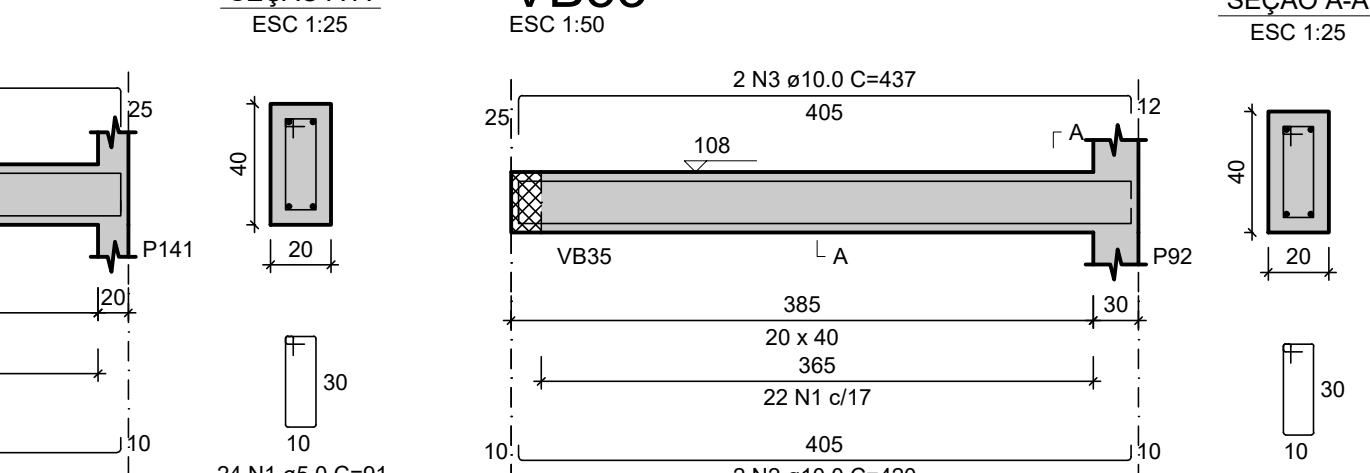
### VB37



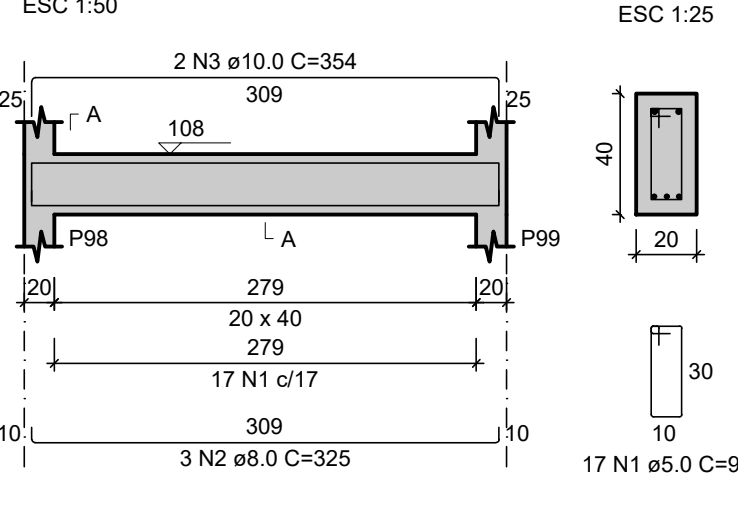
### VB43



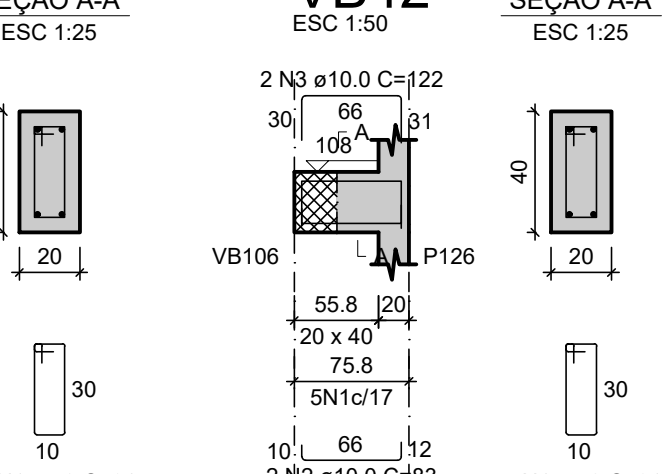
### VB53



### VB30

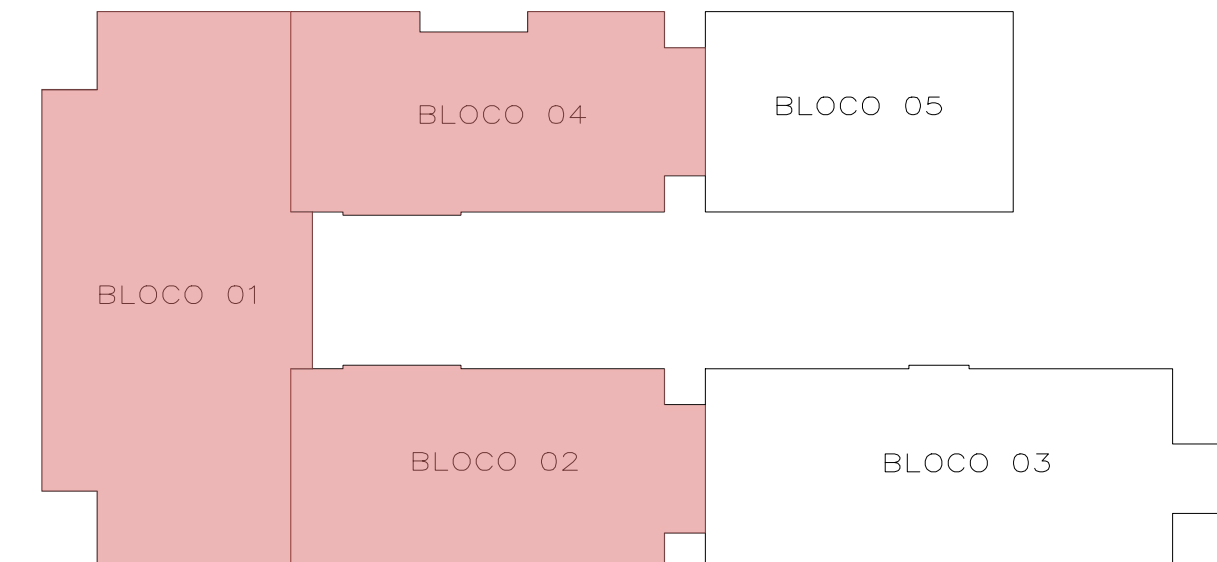


### VB42



| RELAÇÃO DO AÇO |      |   |           |       |             |              |  |
|----------------|------|---|-----------|-------|-------------|--------------|--|
| ELEMENTO       | AÇO  | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |  |
| 2xVB21         | CA60 | 1 | 5.0       | 170   | 91          | 15470        |  |
|                | CA50 | 2 | 8.0       | 6     | 298         | 1788         |  |
|                | CA50 | 3 | 10.0      | 4     | 785         | 3140         |  |
|                | CA50 | 4 | 10.0      | 4     | 501         | 2004         |  |
|                | CA50 | 5 | 10.0      | 4     | 1198        | 4792         |  |
| VB24           | CA50 | 6 | 10.0      | 4     | 404         | 1616         |  |
|                | CA60 | 1 | 5.0       | 10    | 91          | 910          |  |
|                | CA50 | 2 | 10.0      | 2     | 186         | 372          |  |
|                | CA50 | 3 | 10.0      | 2     | 208         | 416          |  |
|                | CA60 | 1 | 5.0       | 23    | 91          | 2093         |  |
| VB25           | CA50 | 2 | 10.0      | 2     | 410         | 820          |  |
|                | CA50 | 3 | 10.0      | 2     | 440         | 880          |  |
|                | CA60 | 1 | 5.0       | 48    | 91          | 4368         |  |
|                | CA50 | 2 | 10.0      | 2     | 871         | 1742         |  |
|                | CA50 | 3 | 10.0      | 2     | 902         | 1804         |  |
| VB26           | CA60 | 1 | 5.0       | 32    | 91          | 2912         |  |
|                | CA50 | 2 | 10.0      | 2     | 591         | 1182         |  |
|                | CA50 | 3 | 10.0      | 1     | 187         | 187          |  |
|                | CA50 | 4 | 10.0      | 1     | 215         | 215          |  |
|                | CA50 | 5 | 10.0      | 2     | 612         | 1224         |  |
| VB28           | CA60 | 1 | 5.0       | 25    | 91          | 2275         |  |
|                | CA50 | 2 | 10.0      | 2     | 449         | 898          |  |
|                | CA50 | 3 | 10.0      | 1     | 182         | 182          |  |
|                | CA50 | 4 | 10.0      | 2     | 479         | 958          |  |
|                | CA60 | 1 | 5.0       | 17    | 91          | 1547         |  |
| VB29           | CA50 | 2 | 8.0       | 3     | 325         | 975          |  |
|                | CA50 | 3 | 10.0      | 2     | 354         | 708          |  |
|                | CA60 | 1 | 5.0       | 24    | 91          | 2184         |  |
|                | CA50 | 2 | 10.0      | 2     | 448         | 896          |  |
|                | CA50 | 3 | 10.0      | 2     | 478         | 956          |  |
| VB30           | CA60 | 1 | 5.0       | 91    | 91          | 819          |  |
|                | CA50 | 2 | 10.0      | 2     | 167         | 334          |  |
|                | CA50 | 3 | 10.0      | 2     | 202         | 404          |  |
|                | CA50 | 1 | 5.0       | 26    | 91          | 2366         |  |
|                | CA50 | 2 | 10.0      | 2     | 480         | 960          |  |
| VB31           | CA50 | 3 | 10.0      | 2     | 515         | 1030         |  |
|                | CA60 | 1 | 5.0       | 18    | 91          | 1638         |  |
|                | CA50 | 2 | 10.0      | 2     | 299         | 598          |  |
|                | CA50 | 3 | 10.0      | 2     | 339         | 678          |  |
|                | CA60 | 1 | 5.0       | 57    | 91          | 5167         |  |
| VB32           | CA50 | 2 | 10.0      | 2     | 1026        | 2052         |  |
|                | CA50 | 3 | 10.0      | 1     | 346         | 346          |  |
|                | CA50 | 4 | 10.0      | 2     | 1061        | 2122         |  |
|                | CA60 | 1 | 5.0       | 25    | 91          | 2275         |  |
|                | CA50 | 2 | 10.0      | 2     | 499         | 998          |  |
| VB33           | CA50 | 3 | 10.0      | 2     | 506         | 1012         |  |
|                | CA60 | 1 | 5.0       | 27    | 91          | 2457         |  |
|                | CA50 | 2 | 10.0      | 2     | 513         | 1026         |  |
|                | CA50 | 3 | 10.0      | 2     | 530         | 1060         |  |
|                | CA60 | 1 | 5.0       | 58    | 91          | 5278         |  |
| 2xVB38         | CA50 | 2 | 10.0      | 4     | 543         | 2172         |  |
|                | CA50 | 3 | 10.0      | 4     | 567         | 2268         |  |
|                | CA60 | 2 | 5.0       | 36    | 91          | 3276         |  |
|                | CA50 | 2 | 8.0       | 3     | 691         | 2073         |  |
|                | CA50 | 3 | 10.0      | 2     | 707         | 1414         |  |
| VB39           | CA60 | 1 | 5.0       | 41    | 91          | 3731         |  |
|                | CA50 | 2 | 10.0      | 2     | 768         | 1536         |  |
|                | CA50 | 3 | 10.0      | 2     | 785         | 1570         |  |
|                | CA60 | 1 | 5.0       | 5     | 91          | 455          |  |
|                | CA50 | 2 | 10.0      | 2     | 83          | 166          |  |
| VB40           | CA50 | 3 | 10.0      | 2     | 122         | 244          |  |
|                | CA60 | 1 | 5.0       | 9     | 91          | 819          |  |
|                | CA50 | 2 | 10.0      | 2     | 167         | 334          |  |
|                | CA50 | 3 | 10.0      | 2     | 202         | 404          |  |
|                | CA60 | 1 | 5.0       | 18    | 91          | 1638         |  |
| VB41           | CA50 | 2 | 10.0      | 2     | 299         | 598          |  |
|                | CA50 | 3 | 10.0      | 2     | 339         | 678          |  |
|                | CA60 | 1 | 5.0       | 24    | 91          | 2184         |  |
|                | CA50 | 2 | 10.0      | 2     | 449         | 898          |  |
|                | CA50 | 3 | 10.0      | 2     | 453         | 906          |  |
| VB42           | CA60 | 1 | 5.0       | 17    | 91          | 1547         |  |
|                | CA50 | 2 | 8.0       | 3     | 325         | 975          |  |
|                | CA50 | 3 | 10.0      | 2     | 354         | 708          |  |
|                | CA60 | 1 | 5.0       | 47    | 91          | 4277         |  |
|                | CA50 | 2 | 8.0       | 3     | 835         | 2505         |  |
| VB43           | CA50 | 3 | 10.0      | 2     | 864         | 1728         |  |
|                | CA60 | 1 | 5.0       | 24    | 91          | 2184         |  |
|                | CA50 | 2 | 10.0      | 2     | 447         | 894          |  |
|                | CA50 | 3 | 10.0      | 2     | 477         | 954          |  |
|                | CA60 | 1 | 5.0       | 47    | 91          | 4277         |  |
| VB44           | CA50 | 2 | 10.0      | 2     | 906         | 1812         |  |
|                | CA50 | 3 | 10.0      | 2     | 910         | 1820         |  |
|                | CA60 | 1 | 5.0       | 22    | 91          | 2002         |  |
|                | CA50 | 2 | 10.0      | 2     | 420         | 840          |  |
|                | CA50 | 3 | 10.0      | 2     | 437         | 874          |  |

| RESUMO DO AÇO                        |           |             |                 |
|--------------------------------------|-----------|-------------|-----------------|
| AÇO                                  | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
| CA50                                 | 8.0       | 83.2        | 38.1            |
| CA60                                 | 10.0      | 604.1       | 409.7           |
| CA60                                 | 5.0       | 781.7       | 132.5           |
| PESO TOTAL (kg)                      |           |             |                 |
| CA50                                 | 445.8     |             |                 |
| CA60                                 | 132.5     |             |                 |
| Volume de concreto (C-30) = 11.31 m³ |           |             |                 |
| Área de forma = 141.47 m²            |           |             |                 |



JOSÉ VILMAR P. DE FRAGA ARQUITETO E URBANISTA BRUNO REBECHI DALLE MULLE ENGENHEIRO CIVIL ANA CAROLINA M. SANTOS ARQUITETA E URBANISTA HENRIQUE RODRIGUES DIAS AUX. ENGENHARIA CIVIL

|                                                                                                                                                      |                                                                                  |                                              |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------|------------|
| ESTADO DO RIO GRANDE DO SUL<br>PREFEITURA MUNICIPAL DE IMBÉ<br>AVENIDA PARAGUASSU, 2070 - CENTRO - IMBÉ - RS<br>FONE: 51.3627.8515 - CEP: 95.625-000 |                                                                                  | E. M. E. F. RUI BARBOSA<br>NOVAS INSTALAÇÕES |            |
| EDIFICADO                                                                                                                                            | BAIRRO MARILUZ - IMBÉ - RS<br>AVENIDA MARILUZ, 1160<br>TERRENO URBANO - SETOR 35 | DESENHO                                      | BRUNO      |
| SECRETARIA MUNICIPAL DE EDUCAÇÃO                                                                                                                     | ANA CAROLINA MOREIRA SANTOS<br>ARQUITETA E URBANISTA<br>CAU 4715046              | ESCALA                                       | INDICADAS  |
| SECRETARIA MUNICIPAL DE EDUCAÇÃO                                                                                                                     | BRUNO REBECHI DALLE MULLE<br>ENGENHEIRO CIVIL<br>CREA-RS-202822                  | DATA                                         | ABRIL 2025 |
| SECRETARIA MUNICIPAL DE EDUCAÇÃO                                                                                                                     | RUTH JOSIELI MONTEIRO RUSCHEL<br>SECRETARIA MUNICIPAL DE EDUCAÇÃO                | ÁREA                                         | 2.491,91m² |
| SECRETARIA MUNICIPAL DE EDUCAÇÃO                                                                                                                     | ESTRUTURAL<br>ARMADURAS VIGAS DE BALDRAMES - 02                                  | PÁGINA                                       | 11 / 56    |