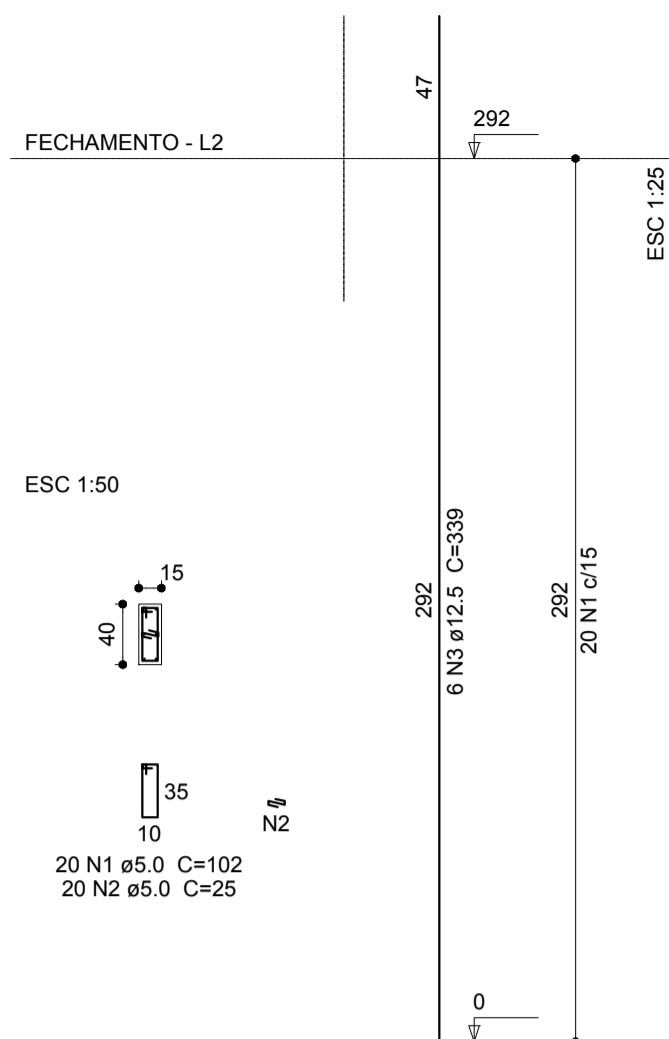
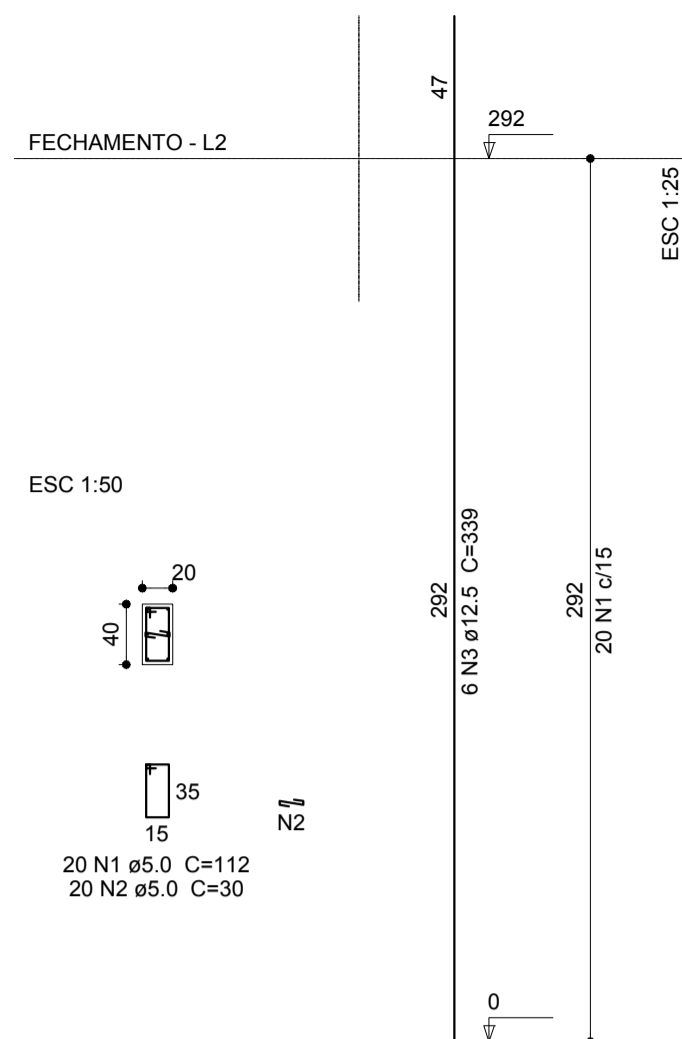


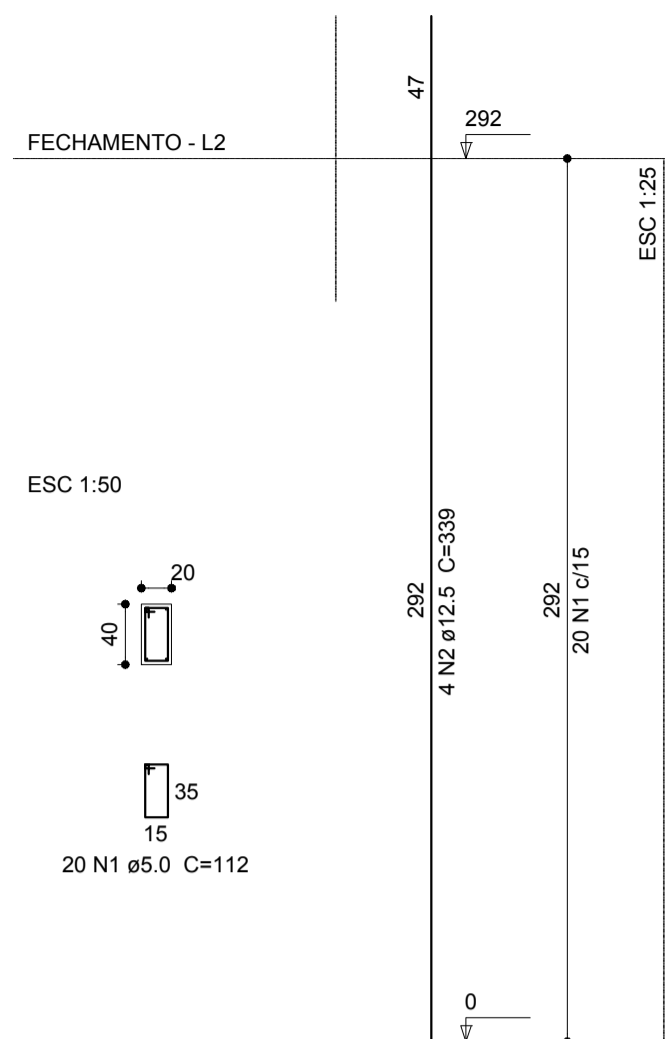
P1=P2=P3=P4=P5=P6



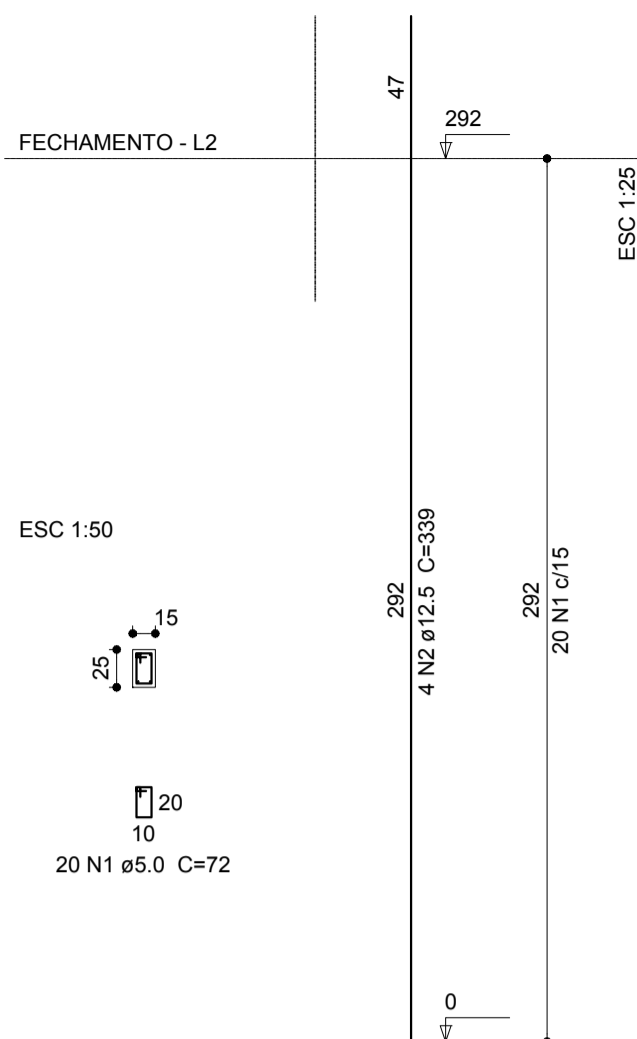
P13



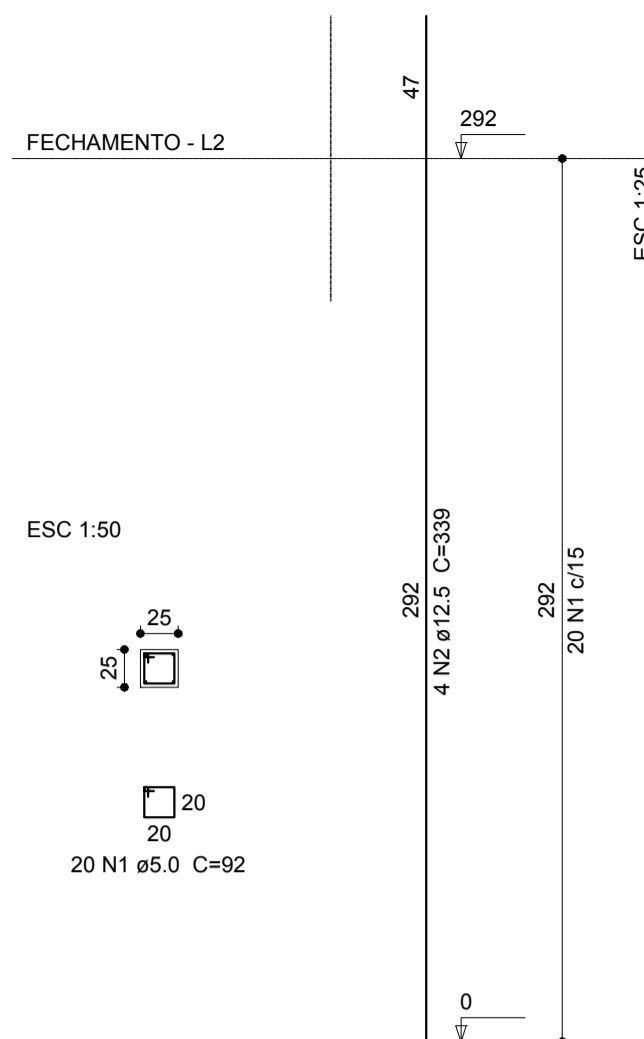
P14=P15=P16=P18



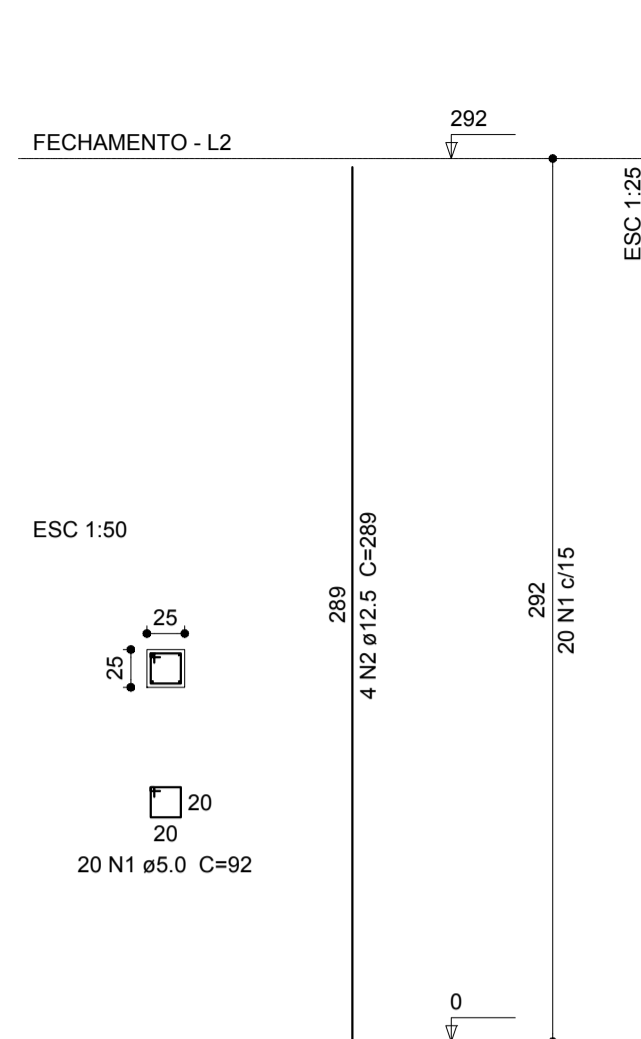
P17



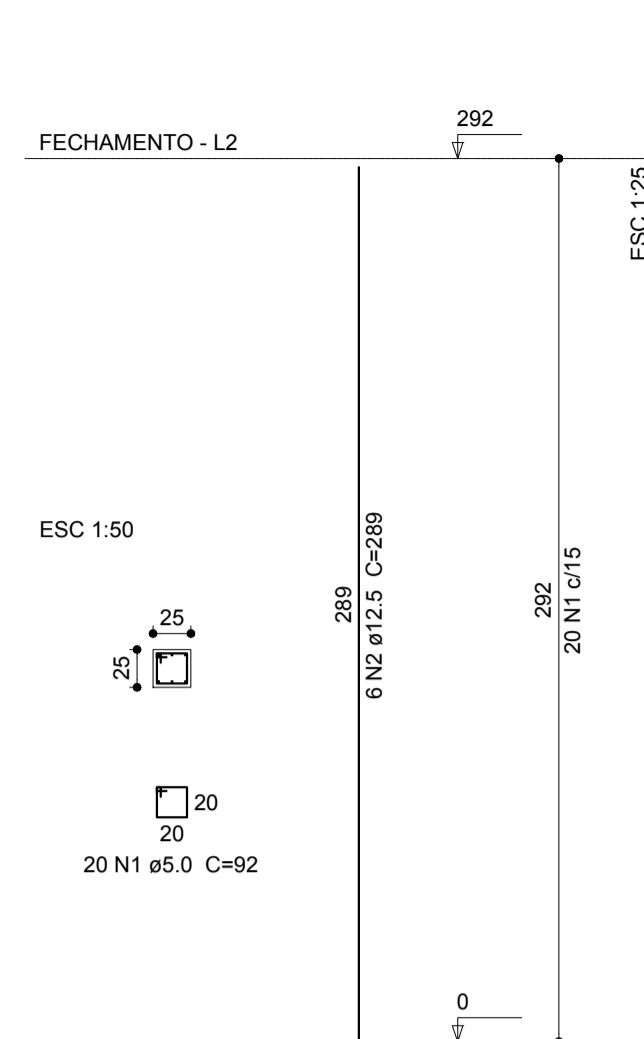
P20=P26=P32=P36



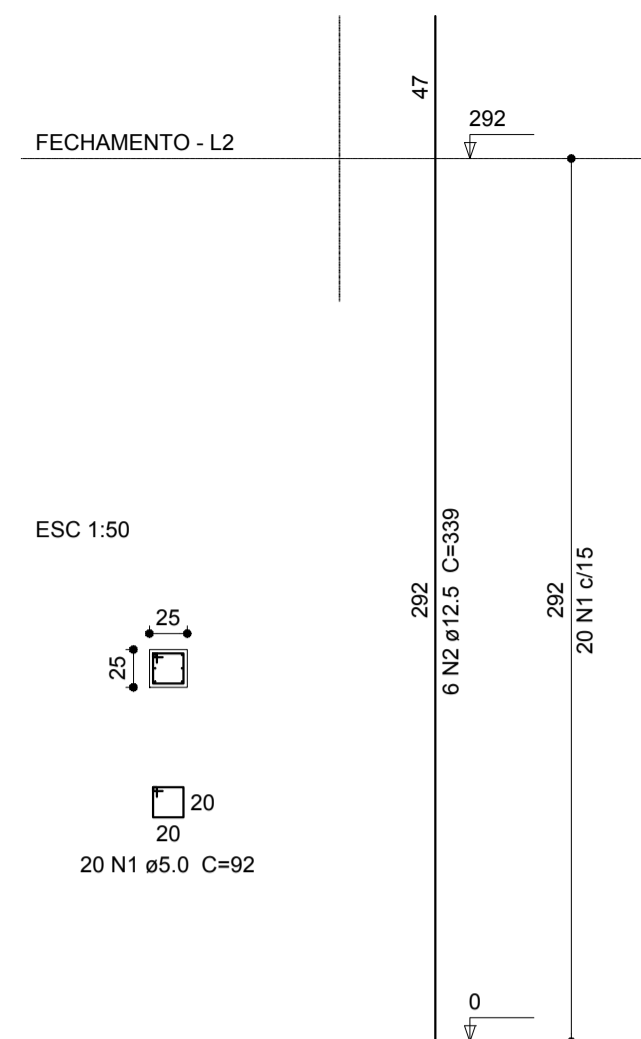
P22=P24



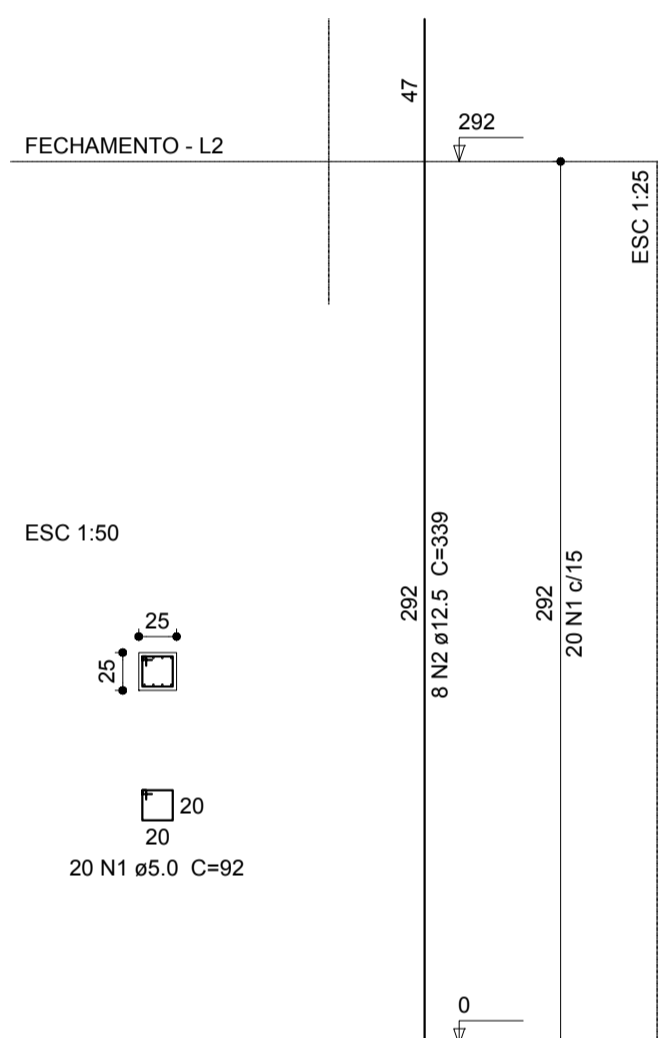
P23=P25



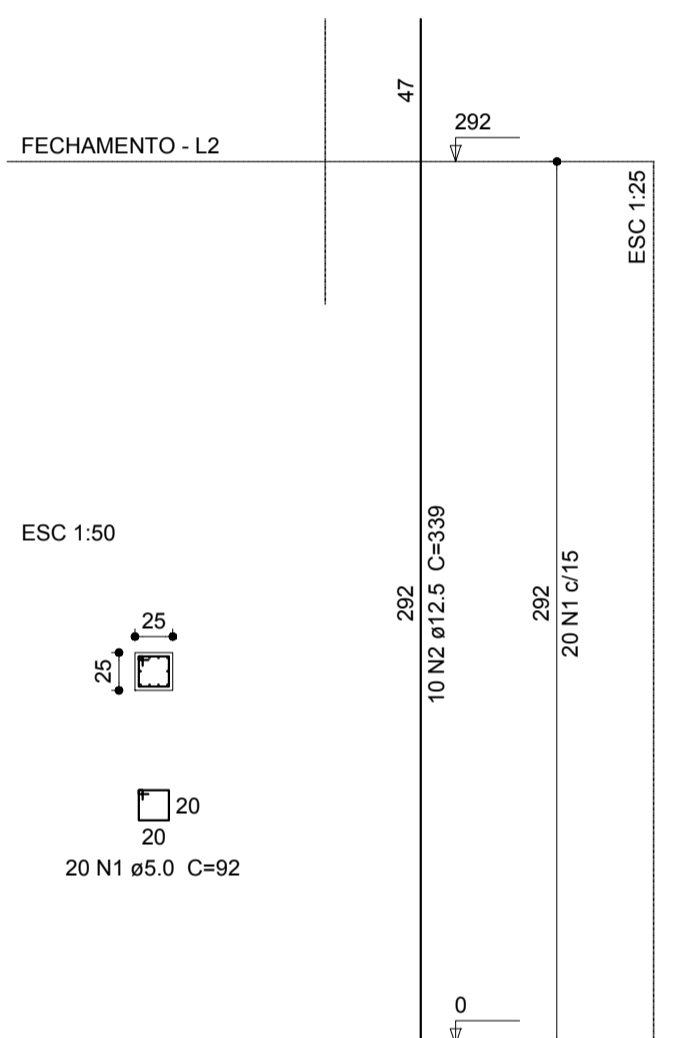
P30



P33



P35



Relação do aço - Pilares fechamento

| ELEMENTO | AÇO  | N | DIAM (mm) | QUANT (Barras) | UNIT (cm) | C.TOTAL (cm) |
|----------|------|---|-----------|----------------|-----------|--------------|
| 6xP1     | CA60 | 1 | 5.0       | 120            | 102       | 12240        |
|          | CA60 | 2 | 5.0       | 120            | 25        | 3000         |
|          | CA50 | 3 | 12.5      | 36             | 339       | 12204        |
| P13      | CA60 | 1 | 5.0       | 20             | 112       | 2240         |
|          | CA60 | 2 | 5.0       | 20             | 30        | 600          |
|          | CA50 | 3 | 12.5      | 6              | 339       | 2034         |
| 4xP14    | CA60 | 1 | 5.0       | 80             | 112       | 8960         |
|          | CA50 | 2 | 12.5      | 16             | 339       | 5424         |
|          | CA60 | 1 | 5.0       | 20             | 72        | 1440         |
| 4xP22    | CA50 | 2 | 12.5      | 4              | 339       | 1356         |
|          | CA60 | 1 | 5.0       | 80             | 92        | 7360         |
|          | CA50 | 2 | 12.5      | 16             | 339       | 5424         |
| 2xP22    | CA60 | 1 | 5.0       | 40             | 92        | 3680         |
|          | CA50 | 2 | 12.5      | 8              | 289       | 2312         |
|          | CA60 | 1 | 5.0       | 40             | 92        | 3680         |
| 2xP23    | CA50 | 2 | 12.5      | 12             | 289       | 3468         |
|          | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
|          | CA50 | 2 | 12.5      | 6              | 339       | 2034         |
| P30      | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
|          | CA50 | 2 | 12.5      | 6              | 339       | 2034         |
|          | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
| P33      | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
|          | CA50 | 2 | 12.5      | 8              | 339       | 2712         |
|          | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
| P35      | CA60 | 1 | 5.0       | 20             | 92        | 1840         |
|          | CA50 | 2 | 12.5      | 10             | 339       | 3390         |

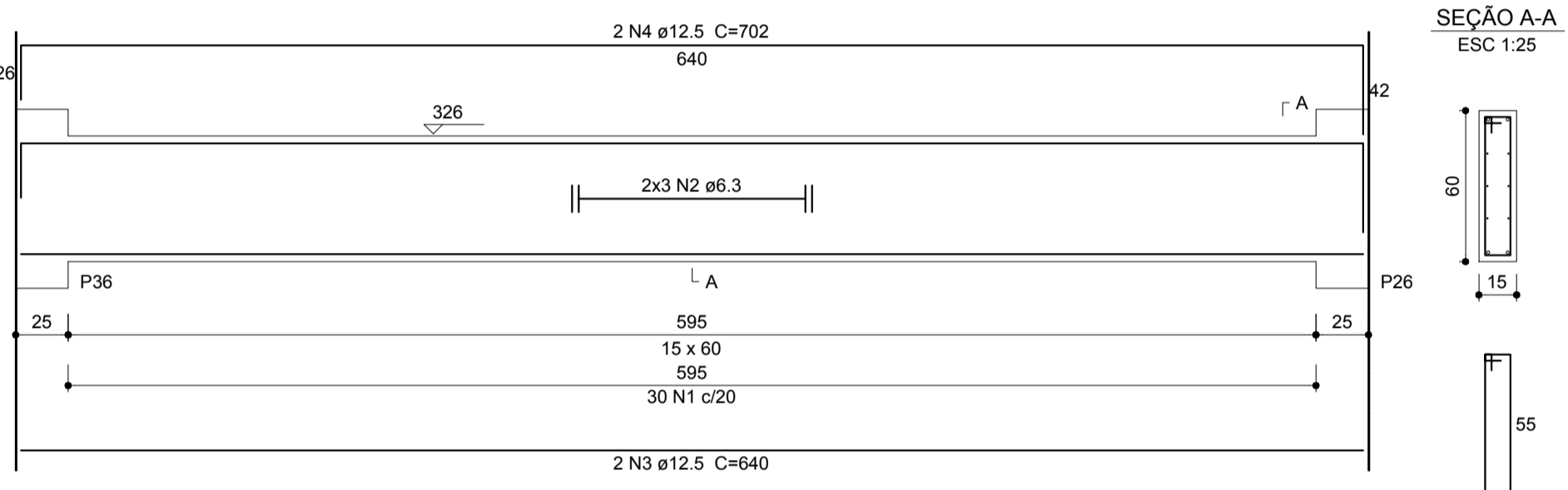
Resumo do aço - Pilares

| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 12.5      | 403.6       | 427.7            |
| CA60            | 5.0       | 487.2       | 82.6             |
| PESO TOTAL (kg) |           |             |                  |
| CA50            |           | 427.7       |                  |
| CA60            |           | 82.6        |                  |

Volume de concreto (C-25) = 4.34 m³  
Área de forma = 71.25 m²

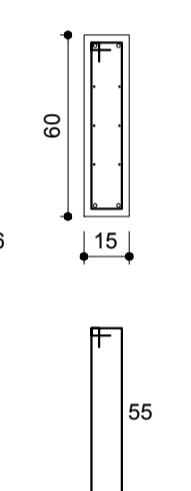
V9

ESC 1:30



SEÇÃO A-A

ESC 1:25



Relação do aço - Vigas fechamento

| ELEMENTO | AÇO  | N  | DIAM (mm) | QUANT (Barras) | UNIT (cm) | C.TOTAL (cm) |
|----------|------|----|-----------|----------------|-----------|--------------|
| V3       | CA60 | 1  | 5.0       | 112            | 142       | 15904        |
|          | CA50 | 2  | 6.3       | 6              | CORR      | 3750         |
|          | CA50 | 3  | 6.3       | 6              | CORR      | 2310         |
|          | CA50 | 4  | 6.3       | 6              | CORR      | 2840         |
|          | CA50 | 5  | 6.3       | 6              | CORR      | 1740         |
|          | CA50 | 6  | 6.3       | 6              | CORR      | 2280         |
|          | CA50 | 7  | 12.5      | 2              | 1070      | 2140         |
|          | CA50 | 8  | 12.5      | 2              | 830       | 1660         |
|          | CA50 | 9  | 12.5      | 2              | 415       | 830          |
|          | CA50 | 10 | 12.5      | 1              | 177       | 177          |
| V4       | CA50 | 11 | 12.5      | 2              | 1197      | 2394         |
|          | CA50 | 12 | 12.5      | 2              | 1117      | 2234         |
|          | CA50 | 13 | 12.5      | 2              | 230       | 460          |
|          | CA60 | 1  | 5.0       | 113            | 142       | 16046        |
|          | CA50 | 2  | 6.3       | 6              | CORR      | 6210         |
|          | CA50 | 3  | 6.3       | 6              | CORR      | 4830         |
|          | CA50 | 4  | 6.3       | 6              | CORR      | 2280         |
|          | CA50 | 5  | 12.5      | 2              | 1082      | 2164         |
|          | CA50 | 6  | 12.5      | 1              | 400       | 400          |
|          | CA50 | 7  | 12.5      | 2              | 830       | 1660         |
| V5       | CA50 | 8  | 12.5      | 2              | 415       | 830          |
|          | CA50 | 9  | 12.5      | 1              | 255       | 255          |
|          | CA50 | 10 | 12.5      | 1              | 1010      | 1010         |
|          | CA50 | 11 | 12.5      | 2              | 1197      | 2394         |
|          | CA50 | 12 | 12.5      | 2              | 1125      | 2250         |
|          | CA50 | 13 | 12.5      | 2              | 238       | 476          |
|          | CA60 | 1  | 5.0       | 30             | 142       | 4260         |
|          | CA50 | 2  | 6.3       | 6              | CORR      | 3570         |
|          | CA50 | 3  | 12.5      | 2              | 652       | 1304         |
|          | CA50 | 4  | 12.5      | 1              | 194       | 194          |
| V6       | CA50 | 5  | 12.5      | 2              | 701       | 1402         |
|          | CA60 | 1  | 5.0       | 14             | 123       | 1722         |
|          | CA60 | 2  | 5.0       | 30             | 142       | 4260         |
|          | CA50 | 3  | 6.3       | 6              | CORR      | 3570         |
|          | CA50 | 4  | 12.5      | 2              | 664       | 1328         |
|          | CA50 | 5  | 12.5      | 1              | 244       | 244          |
|          | CA50 | 6  | 12.5      | 2              | 708       | 1416         |
|          | CA60 | 1  | 5.0       | 12             | 123       | 1476         |
|          | CA60 | 2  | 5.0       | 35             | 142       | 4970         |
|          | CA50 | 3  | 6.3       | 6              | CORR      | 3570         |
| V7       | CA50 | 4  | 12.5      | 2              | 664       | 1328         |
|          | CA50 | 5  | 12.5      | 1              | 221       | 221          |
|          | CA50 | 6  | 12.5      | 1              | 241       | 241          |
|          | CA50 | 7  | 12.5      | 2              | 709       | 1418         |
|          | CA60 | 1  | 5.0       | 39             | 142       | 5538         |
|          | CA50 | 2  | 6.3       | 6              | CORR      | 3570         |
|          | CA50 | 3  | 12.5      | 3              | 664       | 1992         |
|          | CA50 | 4  | 12.5      | 2              | 720       | 1440         |
|          | CA60 | 1  | 5.0       | 30             | 142       | 4260         |
|          | CA50 | 2  | 6.3       | 6              | CORR      | 3570         |
| V8       | CA50 | 3  | 12.5      | 2              | 640       | 1280         |
|          | CA50 | 4  | 12.5      | 2              | 702       | 1404         |

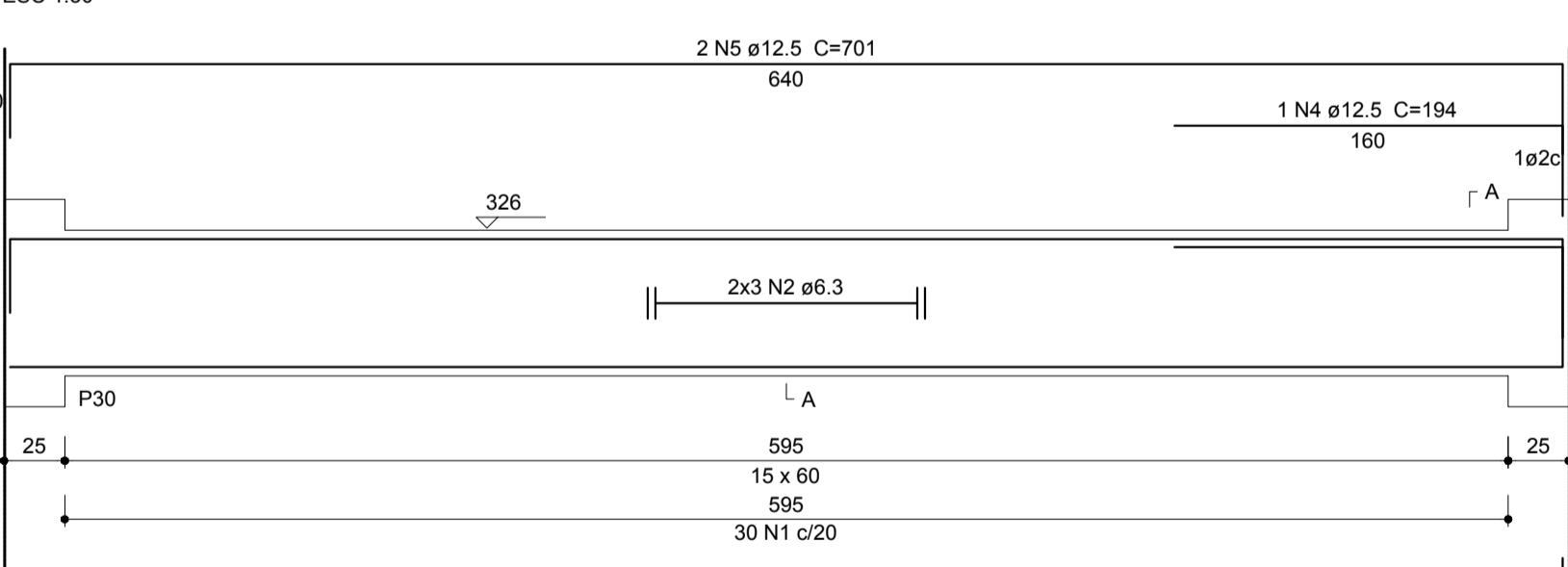
Resumo do aço - Vigas fechamento

| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 6.3       | 441.9       | 118.9            |
| CA50            | 12.5      | 365.5       | 387.3            |
| CA60            | 5.0       | 584.4       | 99.1             |
| PESO TOTAL (kg) |           |             |                  |
| CA50            |           | 506.2       |                  |
| CA60            |           | 99.1        |                  |

Volume de concreto (C-25) = 7.08 m³  
Área de forma = 106.18 m²

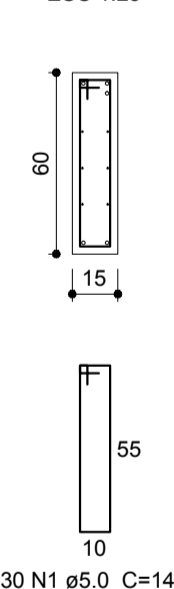
V5

ESC 1:30



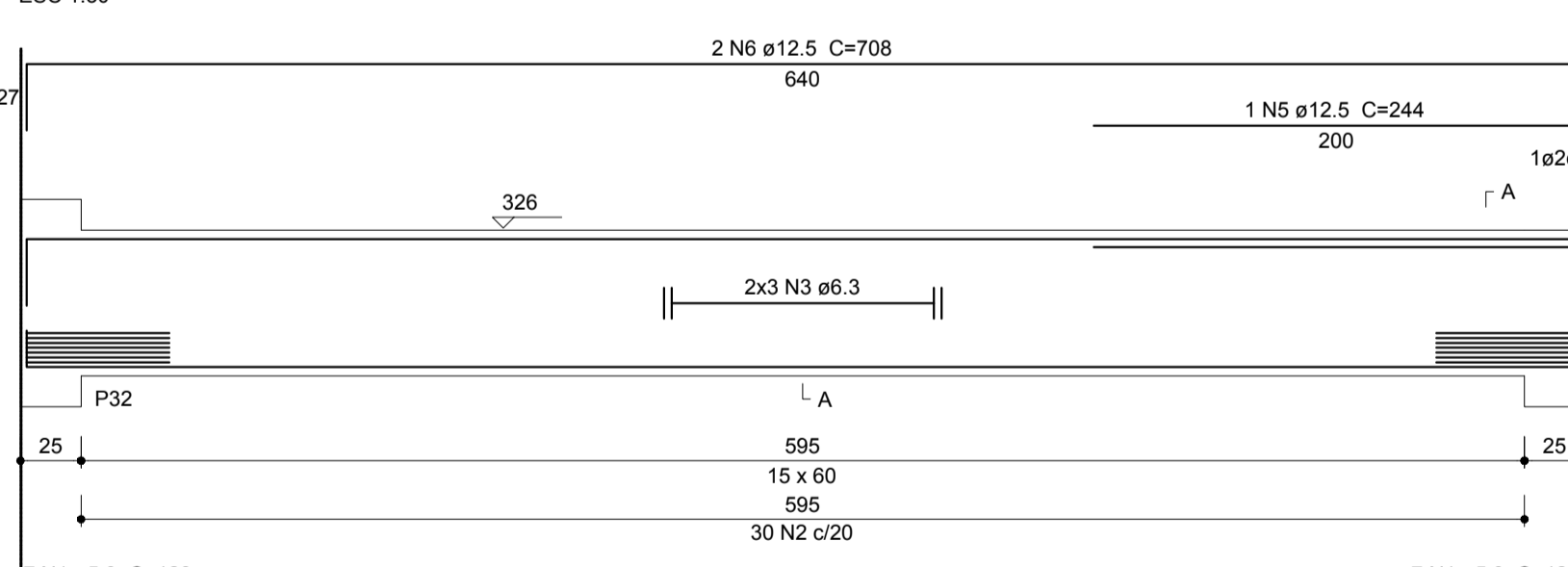
SEÇÃO A-A

ESC 1:25



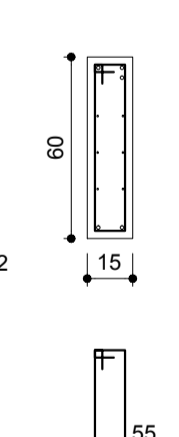
V6

ESC 1:30



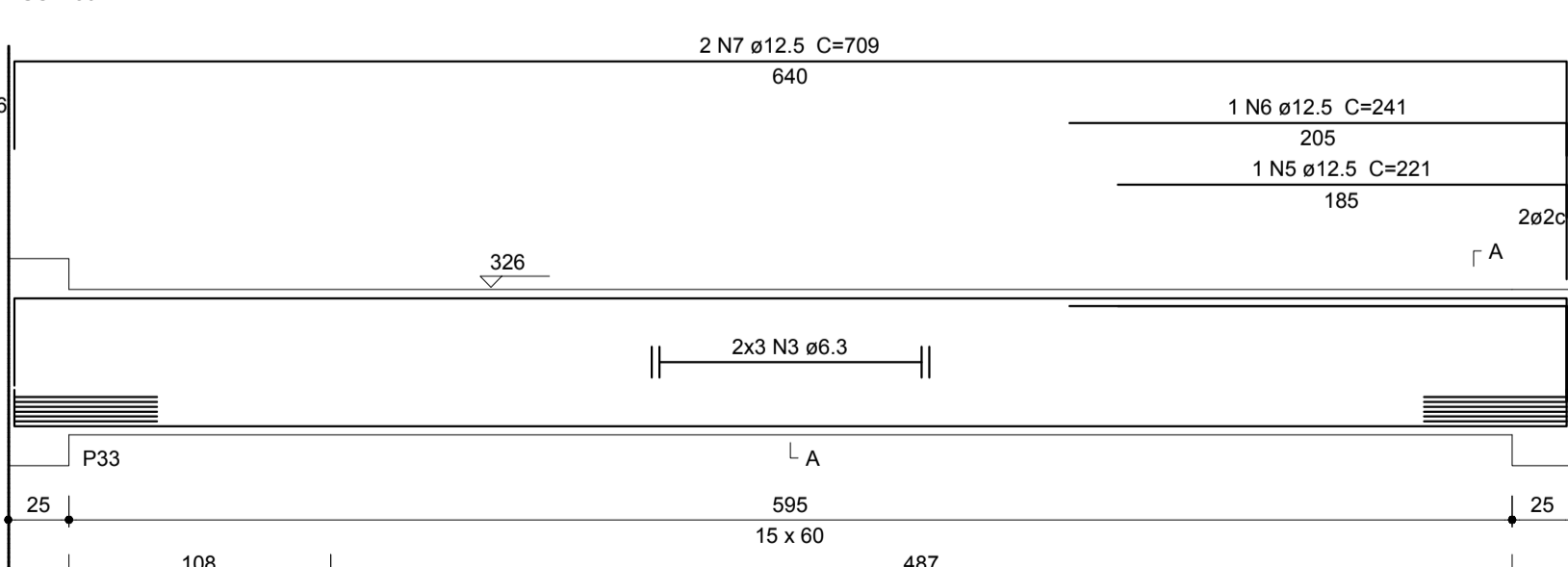
SEÇÃO A-A

ESC 1:25



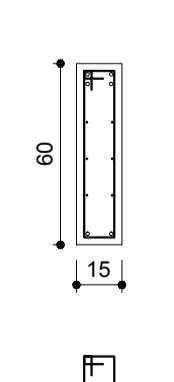
V7

ESC 1:30



SEÇÃO A-A

ESC 1:25



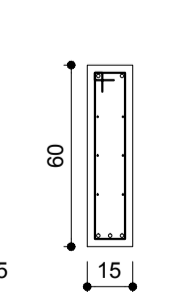
V8

ESC 1:30



SEÇÃO A-A

ESC 1:25



|  |  |  |  |
|--|--|--|--|
| CONTRATADA:<br><b>INSTITUTO FEDERAL DE EDUCAÇÃO CIÊNCIA E TECNOLOGIA CATARINENSE - REITORIA</b><br>TELEFONE:<br>(47) 3331 7800<br>ENDEREÇO:<br>RUA DAS MISSÕES, 100<br>BLUMENAU - SC |  | CONTRATANTE:<br><b>INSTITUTO FEDERAL DE EDUCAÇÃO CIÊNCIA E TECNOLOGIA CATARINENSE</b><br>UNIDADE:<br>CAMPUS VIDEIRA<br>ENDEREÇO:<br>ROD. SC135, KM125 CAMPO EXP.<br>VIDEIRA - SC |  |
| AUTORIA DO PROJETO:<br><b>ENG. MARIO C. ALEXANDRE JUNIOR</b><br>CREA-SC: 119087-1  |  | CONTRATANTE:<br><br>   |  |
| NOME DO PROJETO:<br><b>PROJETO ESTRUTURAL - REFEITÓRIO IFC VIDEIRA</b>   |  |  |  |
| CONTEUDO: DETALHAMENTO PILARES E VIGAS FECHAMENTO;   |  |  |  |
| OBJETIVO DO PROJETO:<br><b>CONSTRUÇÃO</b>  |  | TIPO DE PROJETO:<br><b>ESTRUTURAL</b>  |  |
| AUTORIA DO DESENHO:<br><b>ENG. MARIO C. ALEXANDRE JR</b>   |  | REVISÃO Nº:<br><b>01</b>   |  |
| CIDADE - UF:<br><b>BLUMENAU - SC</b>   |  | ESCALA:<br><b>INDICADA</b>   |  |
| DATA:<br><b>08/2014</b>  |  | REFERÊNCIA:<br><b>EST. 13/24</b>   |  |