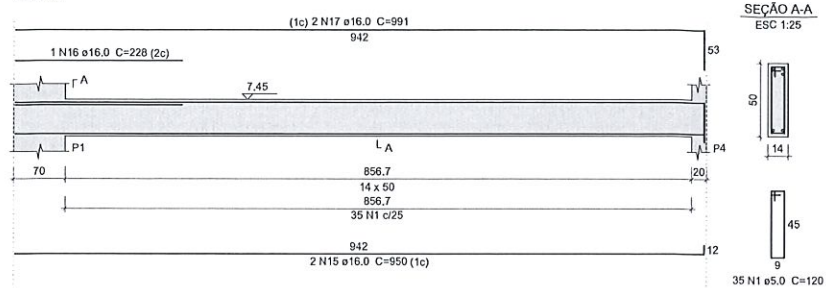
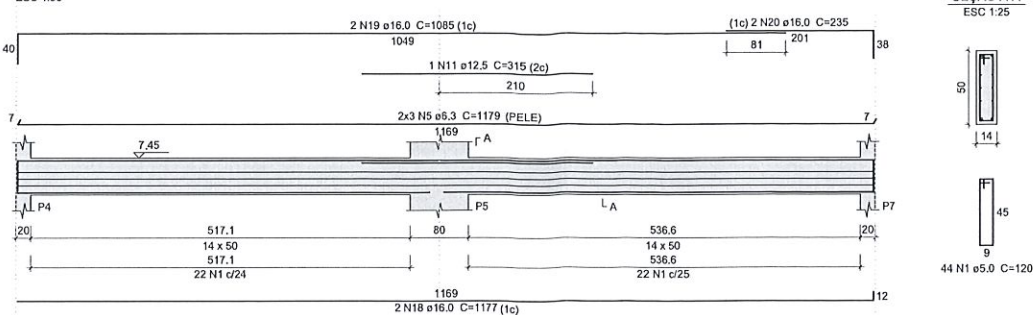


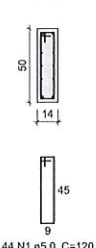
V1  
ESC 1:50



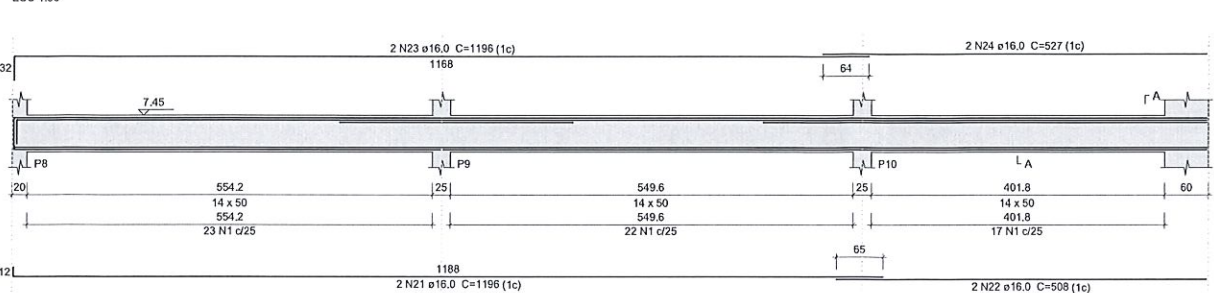
V2  
ESC 1:50



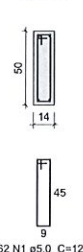
SEÇÃO A-A  
ESC 1:25



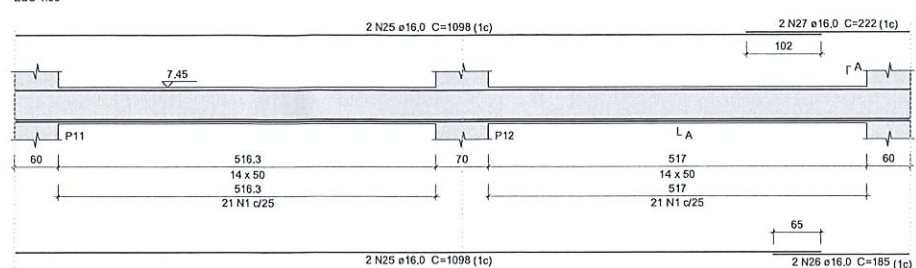
V3  
ESC 1:50



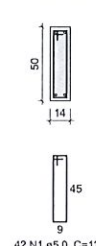
SEÇÃO A-A  
ESC 1:25



V4  
ESC 1:50



SEÇÃO A-A  
ESC 1:25



Relação do aço

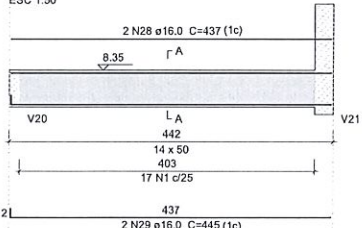
| AÇO  | N  | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|------|----|-----------|-------|-------------|--------------|
| CA60 | 1  | 5.0       | 367   | 120         | 44040        |
|      | 2  | 5.0       | 1     | 165         | 165          |
|      | 3  | 5.0       | 29    | 80          | 2320         |
|      | 4  | 5.0       | 1     | 105         | 105          |
| CA50 | 5  | 6.3       | 12    | 1179        | 14148        |
|      | 6  | 6.3       | 6     | 364         | 2184         |
|      | 7  | 10.0      | 2     | 343         | 686          |
|      | 8  | 10.0      | 2     | 155         | 310          |
|      | 9  | 10.0      | 2     | 1076        | 2152         |
|      | 10 | 10.0      | 2     | 212         | 424          |
|      | 11 | 12.5      | 1     | 315         | 315          |
|      | 12 | 12.5      | 1     | 178         | 178          |
|      | 13 | 12.5      | 2     | 359         | 718          |
|      | 14 | 12.5      | 2     | 709         | 1418         |
|      | 15 | 16.0      | 2     | 950         | 1900         |
|      | 16 | 16.0      | 1     | 228         | 228          |
|      | 17 | 16.0      | 2     | 991         | 1982         |
|      | 18 | 16.0      | 2     | 1177        | 2354         |
|      | 19 | 16.0      | 2     | 1085        | 2170         |
|      | 20 | 16.0      | 2     | 235         | 470          |
|      | 21 | 16.0      | 2     | 1196        | 2392         |
|      | 22 | 16.0      | 2     | 508         | 1016         |
|      | 23 | 16.0      | 2     | 1196        | 2392         |
|      | 24 | 16.0      | 2     | 527         | 1054         |
|      | 25 | 16.0      | 4     | 1098        | 4392         |
|      | 26 | 16.0      | 2     | 185         | 370          |
|      | 27 | 16.0      | 2     | 222         | 444          |
|      | 28 | 16.0      | 4     | 437         | 1748         |
|      | 29 | 16.0      | 4     | 445         | 1780         |
|      | 30 | 16.0      | 4     | 322         | 1288         |
|      | 31 | 16.0      | 2     | 344         | 688          |
|      | 32 | 16.0      | 3     | 385         | 1155         |
|      | 33 | 16.0      | 2     | 301         | 602          |
|      | 34 | 16.0      | 2     | 698         | 1396         |
|      | 35 | 16.0      | 2     | 683         | 1366         |
|      | 36 | 16.0      | 2     | 703         | 1406         |
|      | 37 | 16.0      | 2     | 613         | 1226         |
|      | 38 | 16.0      | 3     | 630         | 1890         |

Resumo do aço

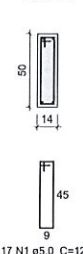
| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 6.3       | 163.4       | 44               |
|                 | 10.0      | 35.8        | 24.2             |
|                 | 12.5      | 28.3        | 27.9             |
|                 | 16.0      | 357.1       | 620              |
| CA60            | 5.0       | 466.3       | 79.1             |
| PESO TOTAL (kg) |           |             |                  |
| CA50            | 716       |             |                  |
| CA60            | 79.1      |             |                  |

Volume de concreto (C-30) = 6.24 m³  
Área de forma = 101.85 m²

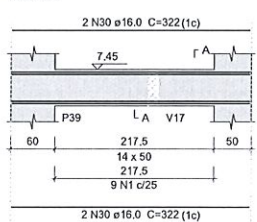
V5  
ESC 1:50



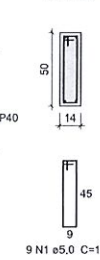
SEÇÃO A-A  
ESC 1:25



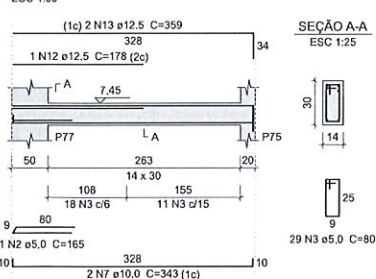
V6  
ESC 1:50



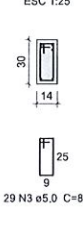
SEÇÃO A-A  
ESC 1:25



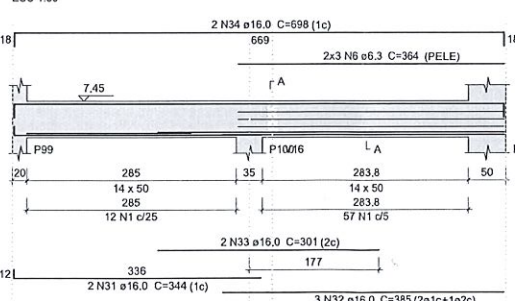
V7  
ESC 1:50



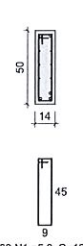
SEÇÃO A-A  
ESC 1:25



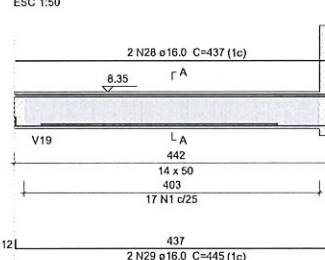
V8  
ESC 1:50



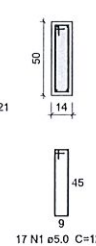
SEÇÃO A-A  
ESC 1:25



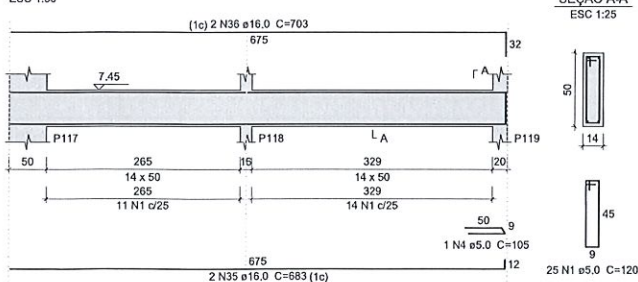
V9  
ESC 1:50



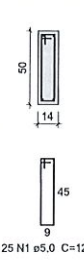
SEÇÃO A-A  
ESC 1:25



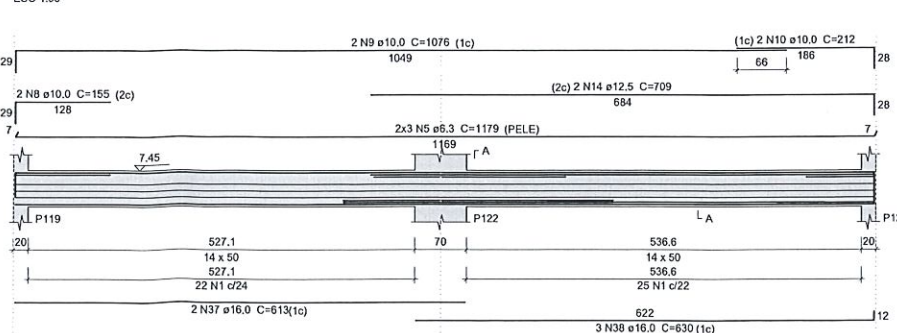
V10  
ESC 1:50



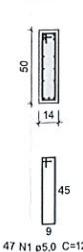
SEÇÃO A-A  
ESC 1:25



V11  
ESC 1:50

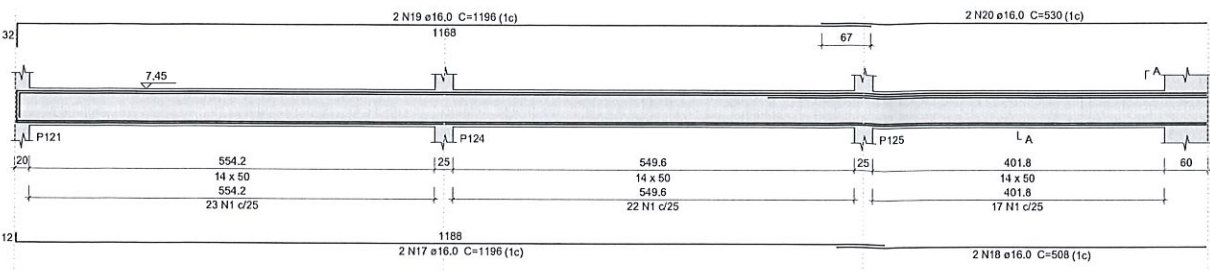


SEÇÃO A-A  
ESC 1:25

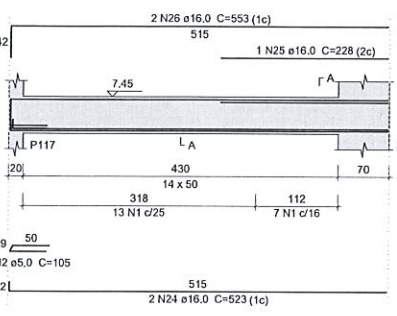


|                                                                                                                                                 |                                    |                                                                                                                                                  |            |                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                 |                                    | <b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br>Rua João Pessoa, 880 - sl B - Santa Terezinha<br>Pato Branco/PR<br>46.99102-2782<br>www.algetec.eng.br |            | PROJETO<br>ESTRUTURAL                                                                                             |
| Eng. Civil Daniel Parciante, CREA: 072040/0<br>Eng. Civil André Mateus Canan, CREA: 193615/0<br>Eng. Civil Loriane C. Parciante, CREA: 172354/0 |                                    | Município de Pato Branco - PR                                                                                                                    |            |                                                                                                                   |
| Resp. Técnico                                                                                                                                   | Rua Jacirelã<br>Pato Branco/PR     | Data                                                                                                                                             | 12/07/2021 | <div style="font-size: 2em; font-weight: bold;">59</div> <div style="font-size: 2em; font-weight: bold;">93</div> |
| Obra                                                                                                                                            | Teatro Municipal Naura Rigon       | Escala                                                                                                                                           | Indicada   |                                                                                                                   |
| Referência                                                                                                                                      | Pavimento: Área Técnica<br>Vigas 1 |                                                                                                                                                  |            |                                                                                                                   |

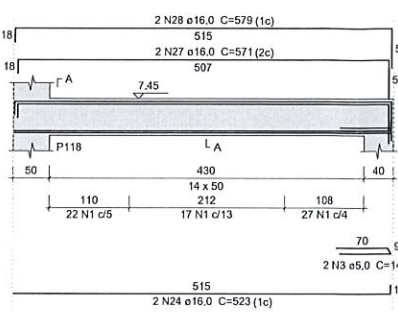
V12  
ESC 1:50



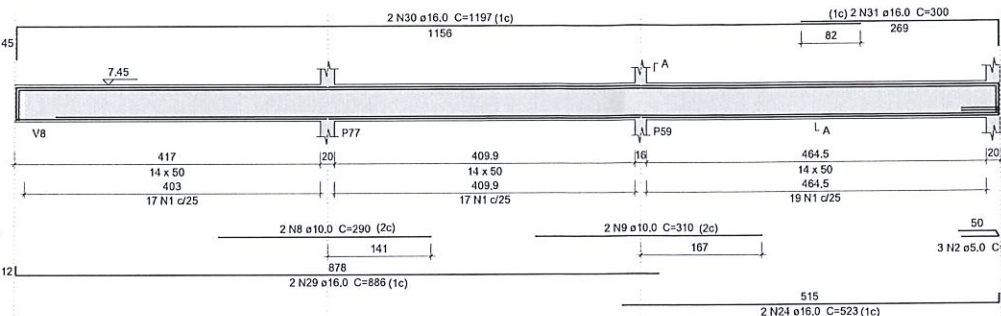
V14  
ESC 1:50



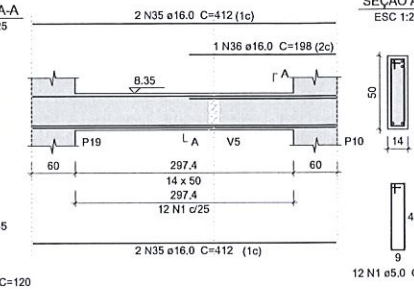
V15  
ESC 1:50



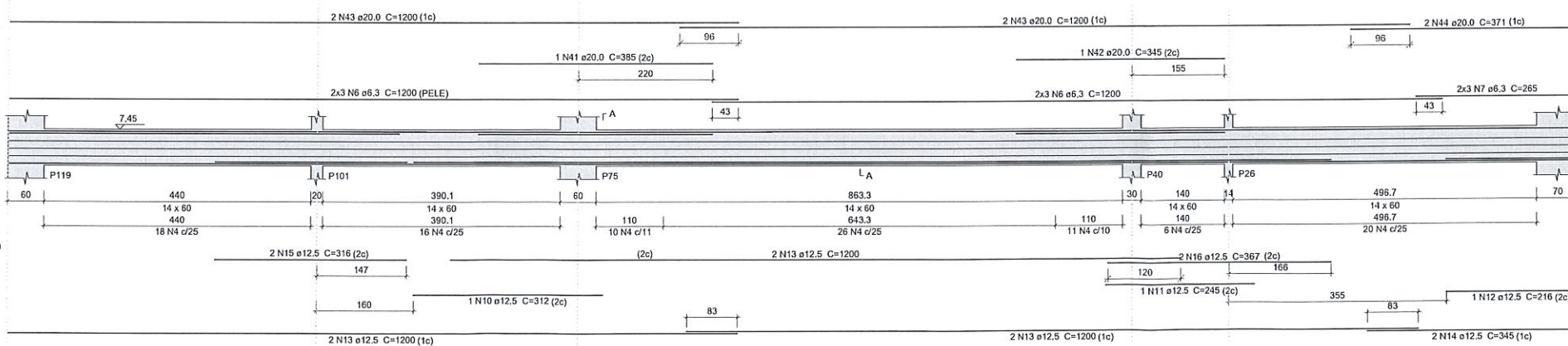
V16  
ESC 1:50



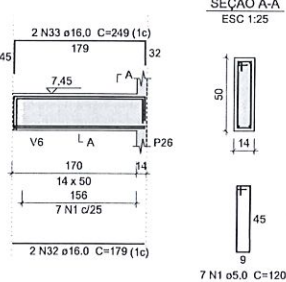
V20  
ESC 1:50



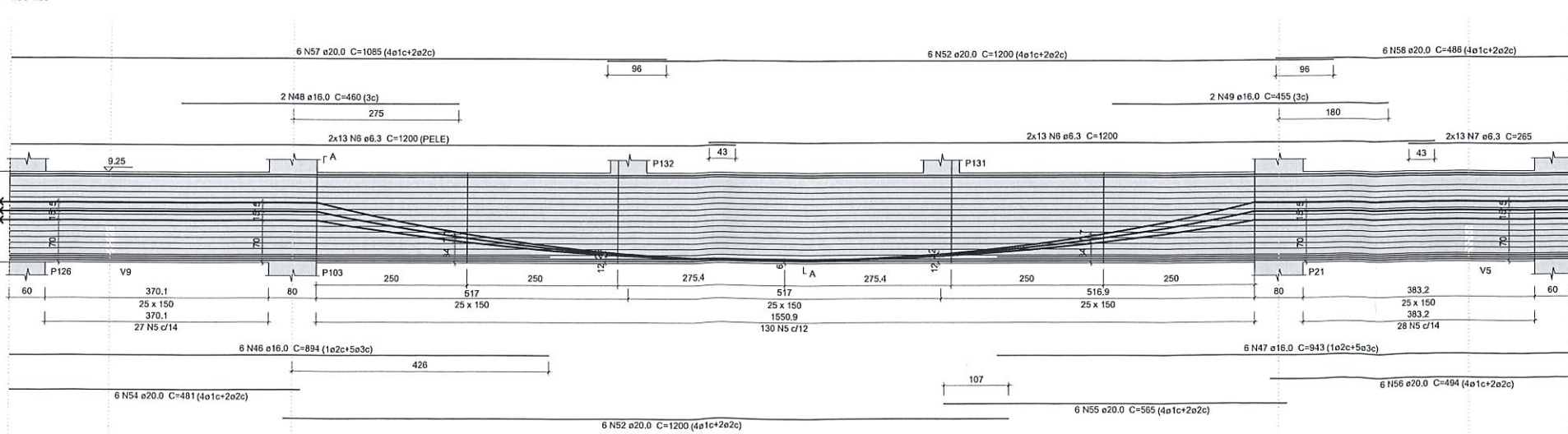
V18  
ESC 1:50



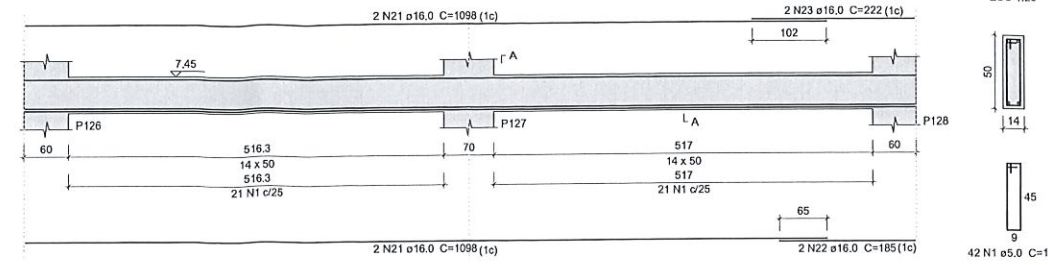
V17  
ESC 1:50



V21 - PROTENDIDA  
ESC 1:50



V13  
ESC 1:50



Relação do aço

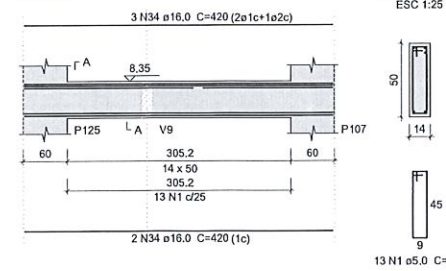
| AÇO | N  | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|-----|----|-----------|-------|-------------|--------------|
| V12 | 1  | 120       | 275   | 120         | 33000        |
| V15 | 2  | 5         | 105   | 525         | 525          |
| V18 | 3  | 2         | 145   | 290         | 290          |
| V21 | 4  | 107       | 140   | 14880       | 14880        |
|     | 5  | 185       | 342   | 63270       | 63270        |
|     | 6  | 64        | 1200  | 76800       | 76800        |
|     | 7  | 32        | 265   | 8480        | 8480         |
|     | 8  | 2         | 290   | 580         | 580          |
|     | 9  | 2         | 310   | 620         | 620          |
|     | 10 | 1         | 312   | 312         | 312          |
|     | 11 | 1         | 245   | 245         | 245          |
|     | 12 | 1         | 216   | 216         | 216          |
|     | 13 | 6         | 1200  | 7200        | 7200         |
|     | 14 | 2         | 345   | 690         | 690          |
|     | 15 | 2         | 316   | 632         | 632          |
|     | 16 | 2         | 367   | 734         | 734          |
|     | 17 | 2         | 1196  | 2392        | 2392         |
|     | 18 | 2         | 508   | 1016        | 1016         |
|     | 19 | 2         | 1196  | 2392        | 2392         |
|     | 20 | 2         | 530   | 1060        | 1060         |
|     | 21 | 4         | 1098  | 4392        | 4392         |
|     | 22 | 2         | 185   | 370         | 370          |
|     | 23 | 2         | 222   | 444         | 444          |
|     | 24 | 6         | 523   | 3138        | 3138         |
|     | 25 | 1         | 228   | 228         | 228          |
|     | 26 | 2         | 553   | 1106        | 1106         |
|     | 27 | 2         | 571   | 1142        | 1142         |
|     | 28 | 2         | 579   | 1158        | 1158         |
|     | 29 | 2         | 886   | 1772        | 1772         |
|     | 30 | 2         | 1197  | 2394        | 2394         |
|     | 31 | 2         | 300   | 600         | 600          |
|     | 32 | 2         | 179   | 358         | 358          |
|     | 33 | 2         | 249   | 498         | 498          |
|     | 34 | 5         | 420   | 2100        | 2100         |
|     | 35 | 4         | 412   | 1648        | 1648         |
|     | 36 | 1         | 198   | 198         | 198          |
|     | 37 | 6         | 894   | 5364        | 5364         |
|     | 38 | 6         | 943   | 5658        | 5658         |
|     | 39 | 2         | 460   | 920         | 920          |
|     | 40 | 2         | 455   | 910         | 910          |
|     | 41 | 1         | 385   | 385         | 385          |
|     | 42 | 1         | 345   | 345         | 345          |
|     | 43 | 16        | 1200  | 19200       | 19200        |
|     | 44 | 2         | 371   | 742         | 742          |
|     | 45 | 6         | 481   | 2886        | 2886         |
|     | 46 | 6         | 555   | 3330        | 3330         |
|     | 47 | 6         | 494   | 2964        | 2964         |
|     | 48 | 6         | 1085  | 6510        | 6510         |
|     | 49 | 6         | 486   | 2916        | 2916         |

Resumo do aço

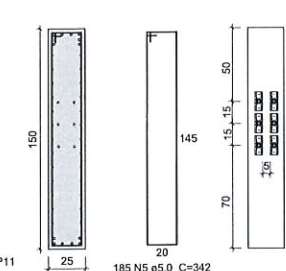
| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 6.3       | 852.8       | 229.6            |
|                 | 10.0      | 12          | 8.1              |
|                 | 12.5      | 106.3       | 106.3            |
|                 | 16.0      | 412.6       | 716.3            |
|                 | 20.0      | 393.4       | 1087.1           |
| CA60            | 5.0       | 1120.7      | 190              |
| PESO TOTAL (kg) |           |             | 2127.4           |
| CA50            |           |             | 190              |
| CA60            |           |             | 190              |

Volume de concreto (C-30) = 16.25 m³  
Área de forma = 190.12 m²

V19  
ESC 1:50



SEÇÃO A-A  
ESC 1:25



VISTA LATERAL DIREITA  
ESC 1:25

| CMO                                     | QUANT | CORREÇÃO | CORREÇÃO | DIAM (mm) | DIAM (mm) |
|-----------------------------------------|-------|----------|----------|-----------|-----------|
| CI                                      | 8     | 36.74    | 124.25   | 12.5      | 12.5      |
| PESO TOTAL 12.5mm CP 1000 - FERRAMENTAS |       |          |          |           |           |



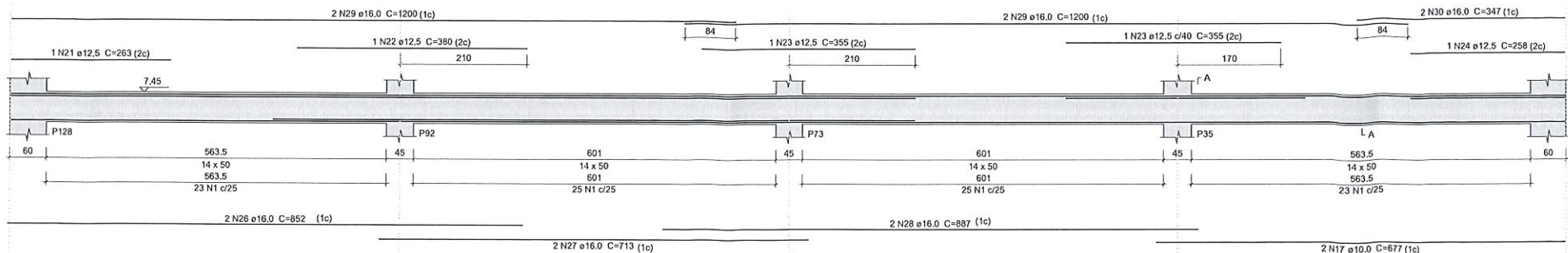
ALGETEC ENGENHARIA E CONSTRUÇÃO  
Rua João Pessoa, 880 - sl B - Santa Terezinha  
Pato Branco/PR  
46.99102-2782  
www.algetec.eng.br

Eng. Civil Daniel Barcelatto, CREA: 072040/D  
Eng. Civil André Mateus Canan, CREA: 193879/D  
Eng. Civil Loriane C. Parciannello, CREA: 172355/D

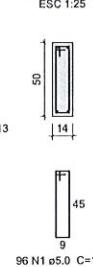
Município de Pato Branco - PR  
Rua Jacirelá, Pato Branco/PR  
Teatro Municipal Naura Rigon  
Pavimento: Área Técnica  
Vigas 2

60  
93

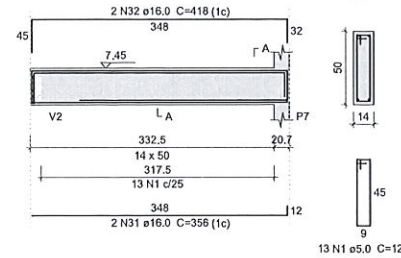
V22  
ESC 1:50



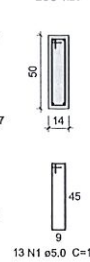
SEÇÃO A-A  
ESC 1:25



V23  
ESC 1:50



SEÇÃO A-A  
ESC 1:25



Relação do aço

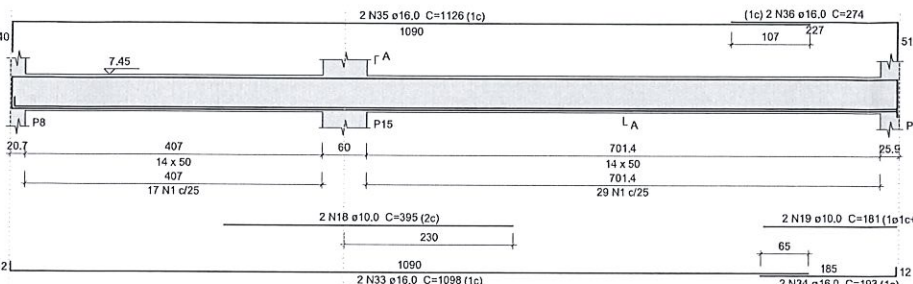
| AÇO | N  | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|-----|----|-----------|-------|-------------|--------------|
| V22 | 1  | 5.0       | 233   | 120         | 27960        |
| V25 | 2  | 5.0       | 207   | 80          | 16560        |
| V28 | 3  | 5.0       | 3     | 84          | 252          |
| V31 | 4  | 5.0       | 19    | 100         | 1900         |
| V34 | 5  | 8.0       | 8     | 97          | 776          |
| V37 | 6  | 8.0       | 4     | 597         | 2388         |
|     | 7  | 8.0       | 4     | 304         | 1216         |
|     | 8  | 8.0       | 4     | 101         | 404          |
|     | 9  | 8.0       | 4     | 440         | 1760         |
|     | 10 | 8.0       | 6     | 211         | 1266         |
|     | 11 | 8.0       | 4     | 207         | 828          |
|     | 12 | 8.0       | 2     | 1137        | 2274         |
|     | 13 | 8.0       | 2     | 154         | 308          |
|     | 14 | 8.0       | 2     | 1200        | 2400         |
|     | 15 | 8.0       | 2     | 134         | 268          |
|     | 16 | 8.0       | 4     | 572         | 2288         |
|     | 17 | 10.0      | 2     | 677         | 1354         |
|     | 18 | 10.0      | 2     | 395         | 790          |
|     | 19 | 10.0      | 2     | 181         | 362          |
|     | 20 | 10.0      | 2     | 396         | 792          |
|     | 21 | 12.5      | 1     | 263         | 263          |
|     | 22 | 12.5      | 1     | 380         | 380          |
|     | 23 | 12.5      | 2     | 355         | 710          |
|     | 24 | 12.5      | 1     | 258         | 258          |
|     | 25 | 12.5      | 1     | 190         | 190          |
|     | 26 | 16.0      | 2     | 852         | 1704         |
|     | 27 | 16.0      | 2     | 713         | 1426         |
|     | 28 | 16.0      | 2     | 887         | 1774         |
|     | 29 | 16.0      | 4     | 1200        | 4800         |
|     | 30 | 16.0      | 2     | 347         | 694          |
|     | 31 | 16.0      | 2     | 356         | 712          |
|     | 32 | 16.0      | 2     | 418         | 836          |
|     | 33 | 16.0      | 4     | 1098        | 4392         |
|     | 34 | 16.0      | 2     | 193         | 386          |
|     | 35 | 16.0      | 4     | 1126        | 4504         |
|     | 36 | 16.0      | 2     | 274         | 548          |
|     | 37 | 16.0      | 3     | 280         | 840          |
|     | 38 | 16.0      | 2     | 217         | 434          |
|     | 39 | 16.0      | 2     | 320         | 640          |
|     | 40 | 16.0      | 3     | 287         | 861          |
|     | 41 | 16.0      | 2     | 327         | 654          |
|     | 42 | 16.0      | 2     | 185         | 370          |
|     | 43 | 16.0      | 2     | 270         | 540          |
|     | 44 | 16.0      | 2     | 377         | 754          |
|     | 45 | 16.0      | 2     | 439         | 878          |
|     | 46 | 16.0      | 2     | 290         | 580          |
|     | 47 | 16.0      | 3     | 306         | 918          |
|     | 48 | 16.0      | 3     | 211         | 633          |
|     | 49 | 16.0      | 1     | 233         | 233          |
|     | 50 | 16.0      | 2     | 237         | 474          |

Resumo do aço

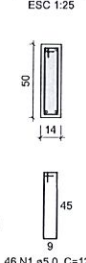
| AÇO             | DIAM (mm) | C.TOTAL (m) | PESO + 10 % (kg) |
|-----------------|-----------|-------------|------------------|
| CA50            | 8.0       | 161.8       | 70.2             |
|                 | 10.0      | 33          | 22.4             |
|                 | 12.5      | 18.1        | 19.1             |
|                 | 16.0      | 302.8       | 525.7            |
| CA60            | 5.0       | 466.8       | 79.1             |
| PESO TOTAL (kg) |           |             |                  |
| CA50            |           | 637.4       |                  |
| CA60            |           | 79.1        |                  |

Volume de concreto (C-30) = 6.15 m³  
Área de forma = 102.19 m²

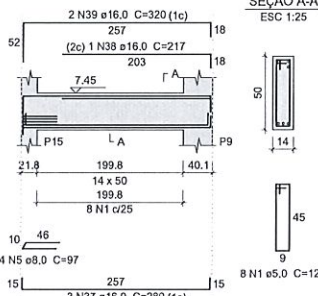
V24  
ESC 1:50



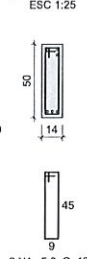
SEÇÃO A-A  
ESC 1:25



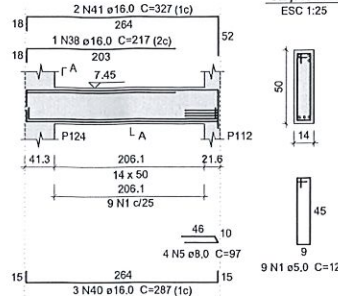
V25  
ESC 1:50



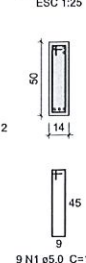
SEÇÃO A-A  
ESC 1:25



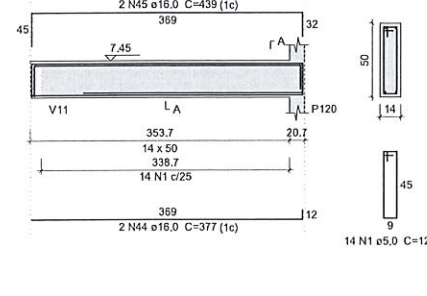
V26  
ESC 1:50



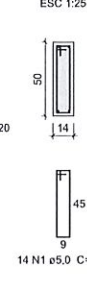
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ESC 1:25



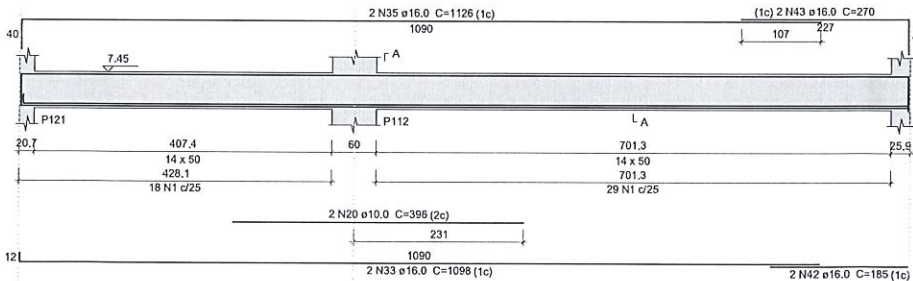
V28  
ESC 1:50



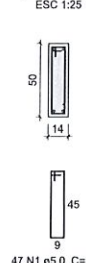
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ESC 1:25



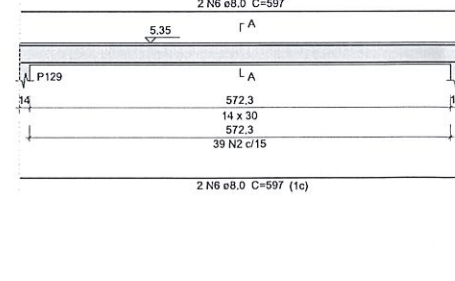
V27  
ESC 1:50



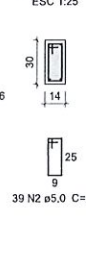
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ESC 1:25



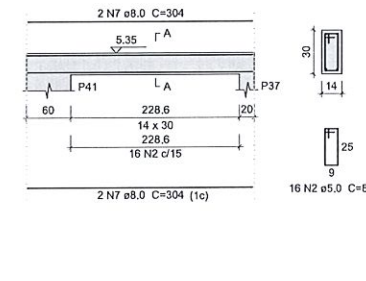
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ESC 1:50



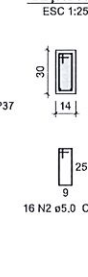
SEÇÃO A-A  
ESC 1:25



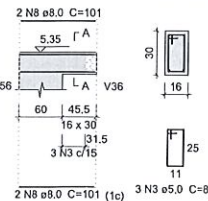
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ESC 1:50



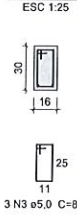
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ESC 1:25



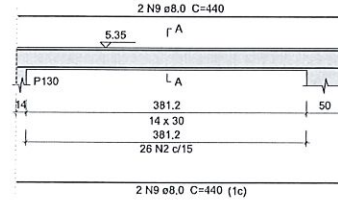
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ESC 1:50



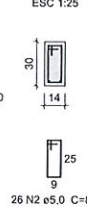
SEÇÃO A-A  
ESC 1:25



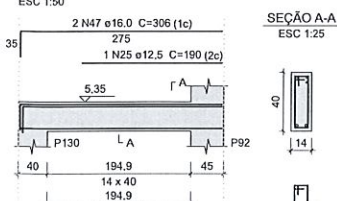
V32  
ESC 1:50



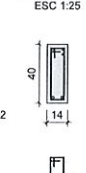
SEÇÃO A-A  
ESC 1:25



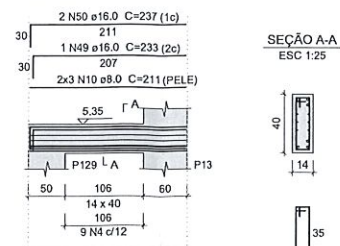
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ESC 1:50



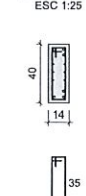
SEÇÃO A-A  
ESC 1:25



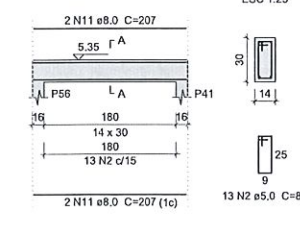
V34  
ESC 1:50



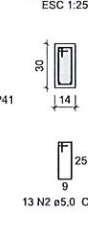
SEÇÃO A-A  
ESC 1:25



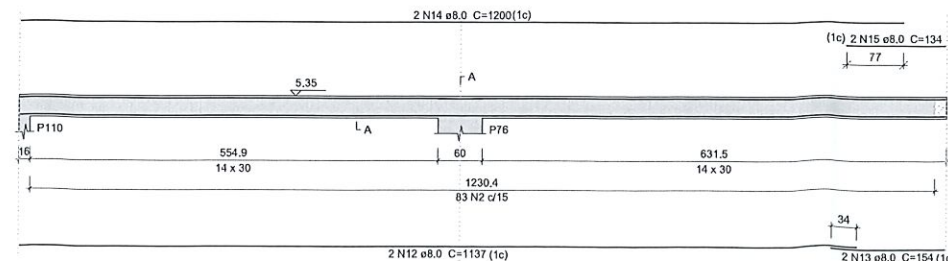
V35  
ESC 1:50



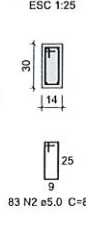
SEÇÃO A-A  
ESC 1:25



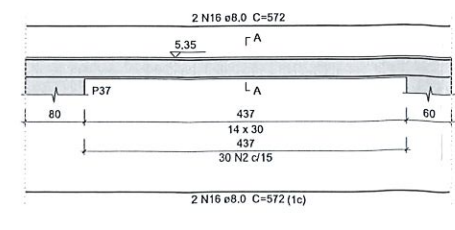
V36  
ESC 1:50



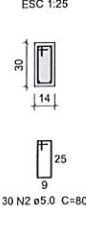
SEÇÃO A-A  
ESC 1:25



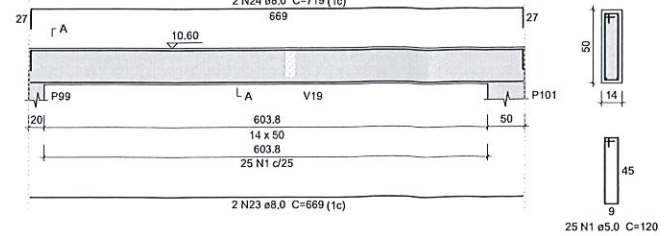
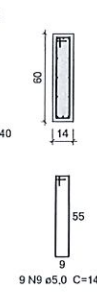
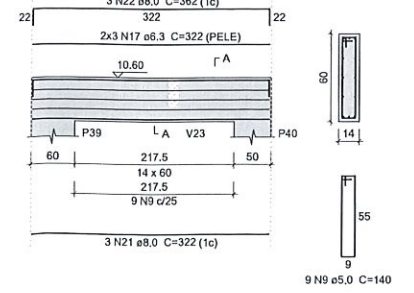
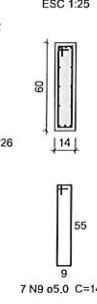
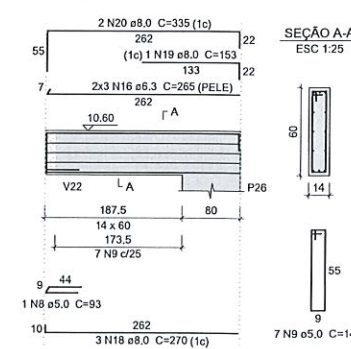
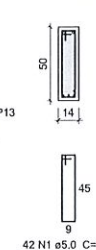
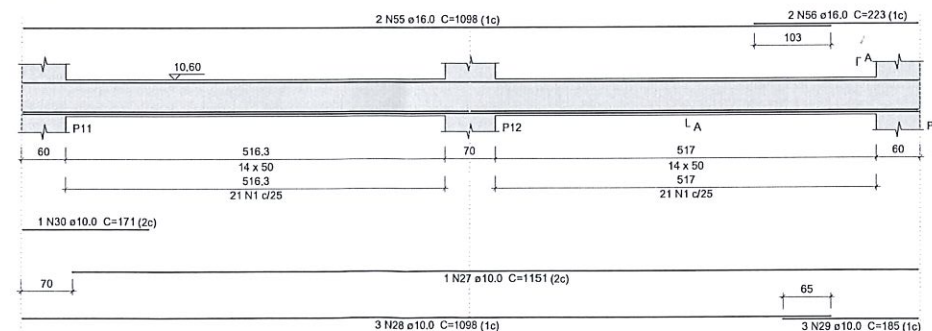
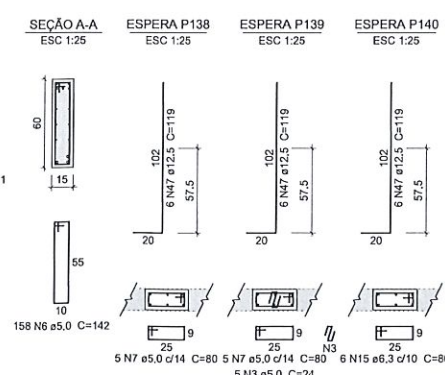
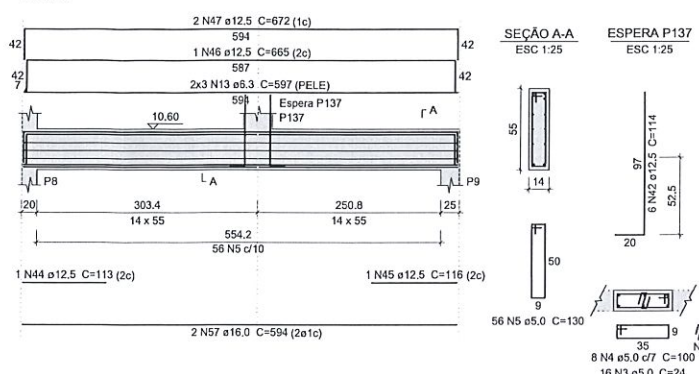
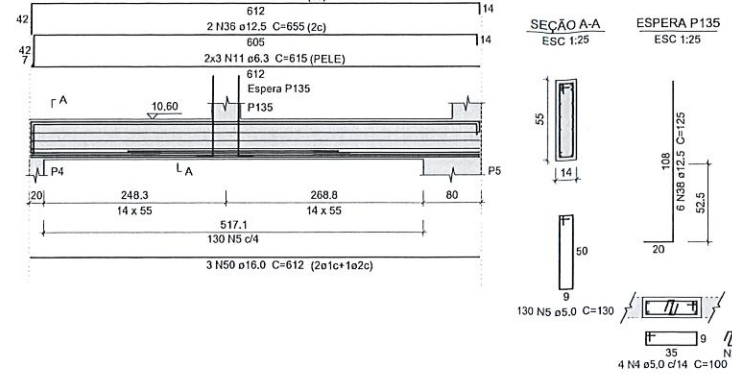
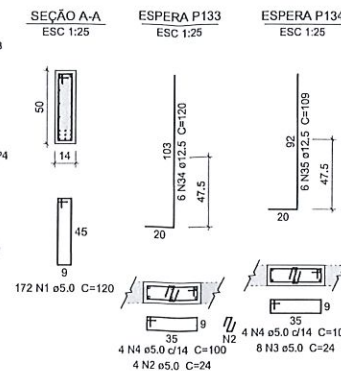
V37  
ESC 1:50



SEÇÃO A-A  
ESC 1:25



|                                                                                                                                                                         |                                                  |                                                                                                                                                  |                    |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|
|                                                                                                                                                                         |                                                  | <b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br>Rua João Pessoa, 880 - sl B - Santa Terezinha<br>Pato Branco/PR<br>46.98102-2782<br>www.algetec.eng.br |                    | PROJETO<br>ESTRUTURAL |
|                                                                                                                                                                         |                                                  | Município de Pato Branco - PR                                                                                                                    |                    |                       |
| Resp. Técnico<br>Eng. Civil Daniel Parciannello, CREA: 072040/D<br>Eng. Civil André Mateus Capari, CREA: 193875/D<br>Eng. Civil Loriane C. Parciannello, CREA: 172355/D | Rua Jacirelã<br>Pato Branco/PR                   | Data<br>12/07/2021                                                                                                                               | Escala<br>Indicada | <b>61</b><br>93       |
| Obra<br>Teatro Municipal Naura Rigon                                                                                                                                    | Referência<br>Pavimento: Área Técnica<br>Vigas 3 |                                                                                                                                                  |                    |                       |

Relação do aço

|     |    |    |
|-----|----|----|
| V1  | V2 | V3 |
| V4  | V5 | V6 |
| V7  | V8 | V9 |
| V10 |    |    |

| AÇO  | N    | DIAM<br>(mm) | QUANT | C.UNIT<br>(cm) | C.TOTAL<br>(cm) |
|------|------|--------------|-------|----------------|-----------------|
| CA60 | 1    | 5,0          | 256   | 120            | 30720           |
|      | 2    | 5,0          | 8     | 24             | 192             |
|      | 3    | 5,0          | 34    | 24             | 816             |
|      | 4    | 5,0          | 25    | 100            | 2500            |
|      | 5    | 5,0          | 215   | 130            | 27950           |
|      | 6    | 5,0          | 158   | 142            | 22436           |
|      | 7    | 5,0          | 10    | 80             | 800             |
|      | 8    | 5,0          | 1     | 93             | 93              |
|      | 9    | 5,0          | 16    | 140            | 2240            |
|      | 10   | 6,3          | 6     | 846            | 5088            |
| CA50 | 11   | 6,3          | 6     | 805            | 3600            |
|      | 12   | 6,3          | 6     | 636            | 3828            |
|      | 13   | 6,3          | 6     | 597            | 3582            |
|      | 14   | 6,3          | 6     | 1058           | 6336            |
|      | 15   | 6,3          | 6     | 80             | 480             |
|      | 16   | 6,3          | 6     | 265            | 1590            |
|      | 17   | 6,3          | 6     | 322            | 1932            |
|      | 18   | 8,0          | 3     | 270            | 810             |
|      | 19   | 8,0          | 1     | 153            | 153             |
|      | 20   | 8,0          | 2     | 335            | 670             |
|      | 21   | 8,0          | 3     | 322            | 966             |
|      | 22   | 8,0          | 3     | 862            | 1086            |
|      | 23   | 8,0          | 2     | 669            | 1338            |
|      | 24   | 8,0          | 2     | 719            | 1438            |
|      | 25   | 10,0         | 2     | 731            | 1462            |
|      | 26   | 10,0         | 1     | 1084           | 1084            |
|      | 27   | 10,0         | 1     | 115            | 115             |
|      | 28   | 10,0         | 3     | 1098           | 3294            |
| 29   | 10,0 | 3            | 185   | 555            |                 |
| 30   | 10,0 | 1            | 171   | 171            |                 |
| 31   | 10,0 | 4            | 426   | 1704           |                 |
| 32   | 10,0 | 2            | 317   | 634            |                 |
| 33   | 10,0 | 2            | 445   | 890            |                 |
| 34   | 12,5 | 6            | 120   | 720            |                 |
| 35   | 12,5 | 6            | 109   | 654            |                 |
| 36   | 12,5 | 2            | 655   | 1310           |                 |
| 37   | 12,5 | 2            | 662   | 1324           |                 |
| 38   | 12,5 | 6            | 750   | 4500           |                 |
| 39   | 12,5 | 2            | 227   | 454            |                 |
| 40   | 12,5 | 1            | 397   | 397            |                 |
| 41   | 12,5 | 2            | 643   | 1286           |                 |
| 42   | 12,5 | 12           | 114   | 1368           |                 |
| 44   | 12,5 | 1            | 113   | 113            |                 |
| 45   | 12,5 | 1            | 116   | 116            |                 |
| 46   | 12,5 | 1            | 665   | 665            |                 |
| 47   | 12,5 | 2            | 672   | 1344           |                 |
| 47   | 12,5 | 18           | 119   | 2142           |                 |
| 48   | 16,0 | 3            | 948   | 2844           |                 |
| 49   | 16,0 | 2            | 1082  | 2164           |                 |
| 50   | 16,0 | 3            | 612   | 1836           |                 |
| 51   | 16,0 | 2            | 632   | 1264           |                 |
| 57   | 16,0 | 2            | 594   | 1188           |                 |
| 53   | 16,0 | 3            | 1056  | 3168           |                 |
| 54   | 16,0 | 2            | 1085  | 2170           |                 |
| 55   | 16,0 | 2            | 1038  | 2076           |                 |
| 56   | 16,0 | 2            | 223   | 446            |                 |

Resumo do aç

| AÇO                | DIAM<br>(mm) | C.TOTAL<br>(m) | PESO + 10 %<br>(kg) |
|--------------------|--------------|----------------|---------------------|
| CA50               | 6.3          | 271.3          | 7                   |
|                    | 8.0          | 64.7           | 2                   |
|                    | 10.0         | 109.5          | 74                  |
|                    | 12.5         | 126.5          | 13                  |
|                    | 16.0         | 171            | 296                 |
| CA60               | 5.0          | 877.5          | 148                 |
| PESO TOTAL<br>(kg) |              |                |                     |
| CA50               | 606          |                |                     |
| CA60               | 148.8        |                |                     |

Volume de concreto (C-30) = 5,17  
Área de forma = 82,61 m<sup>2</sup>

| Nº | Comentário                           | Data       | Autor          |
|----|--------------------------------------|------------|----------------|
| 0  | Emissão inicial                      |            |                |
| 1  | Alteração da armadura positiva da V4 | 09/09/2021 | André M. Canam |
|    |                                      |            |                |
|    |                                      |            |                |
|    |                                      |            |                |



**ALGETEC ENGENHARIA E CONSTRUÇÃO**  
Rua João Pessoa, 880 - sl B - Santa Terezinha  
Pato Branco/PR  
46.99102-2782  
www.algetec.eng.br

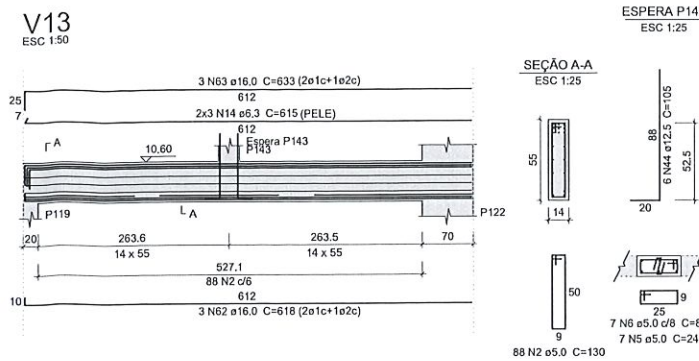
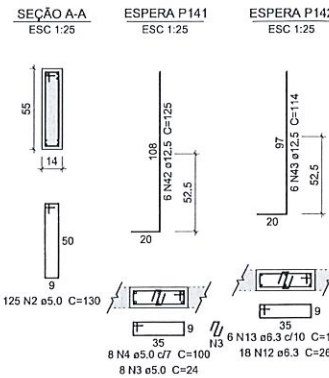
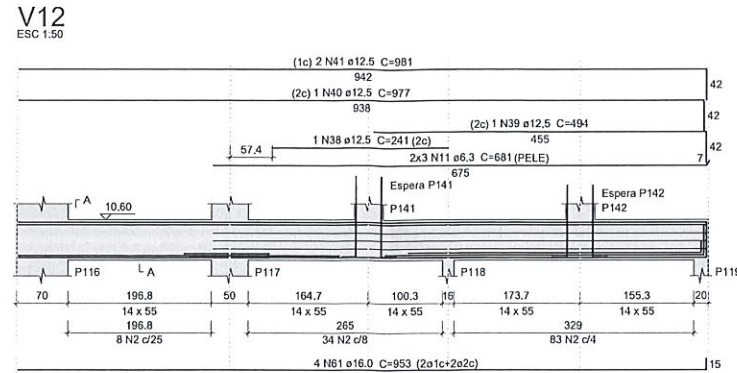
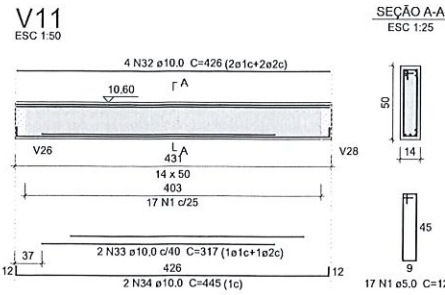
|               |                                                 |              |                               |
|---------------|-------------------------------------------------|--------------|-------------------------------|
| Resp. Técnico | Eng. Civil Daniel Pardalino, CREA: 072040/D     | Proprietário | Município de Palo Branco - PR |
|               | Eng. Civil Andre Mateus Canas, CREA: 193875/D   |              |                               |
|               | Eng. Civil Loriane C. Pardalino, CREA: 172355/D |              |                               |

|      |                                |          |            |
|------|--------------------------------|----------|------------|
| End  | Rua Jacirêla<br>Pato Branco/PR | Data     | 12/07/2021 |
| Obra | Teatro Municipal Naura Rigon   | Indicada |            |

|            |                                   |          |
|------------|-----------------------------------|----------|
| Referencia | Pavimento: Cobertura 1<br>Vigas 1 | 02<br>93 |
|------------|-----------------------------------|----------|

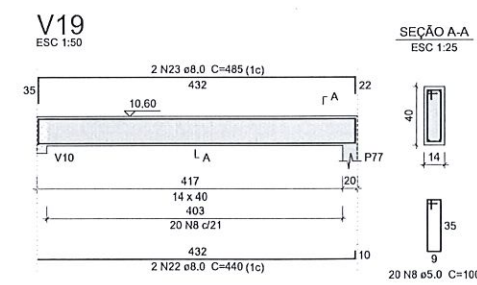
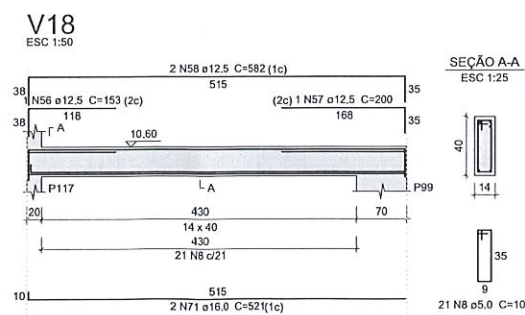
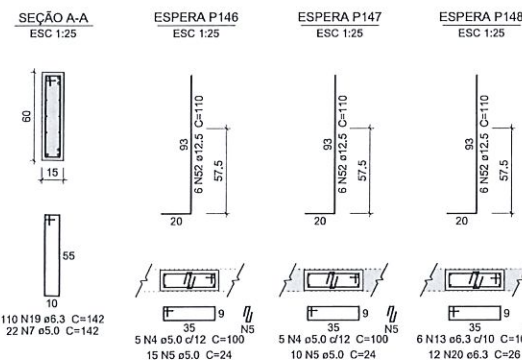
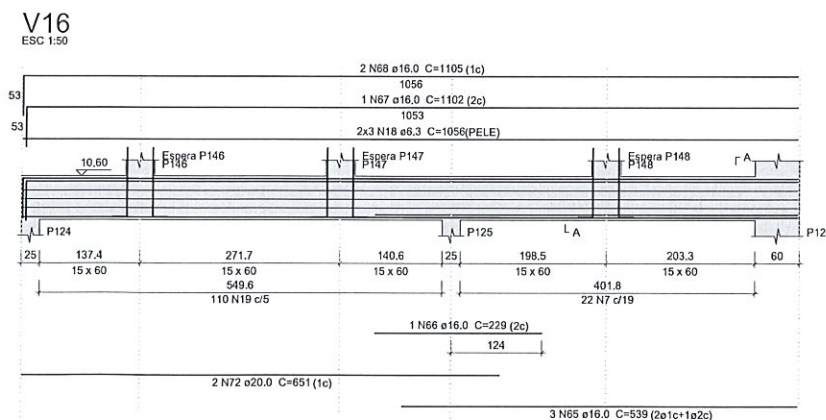
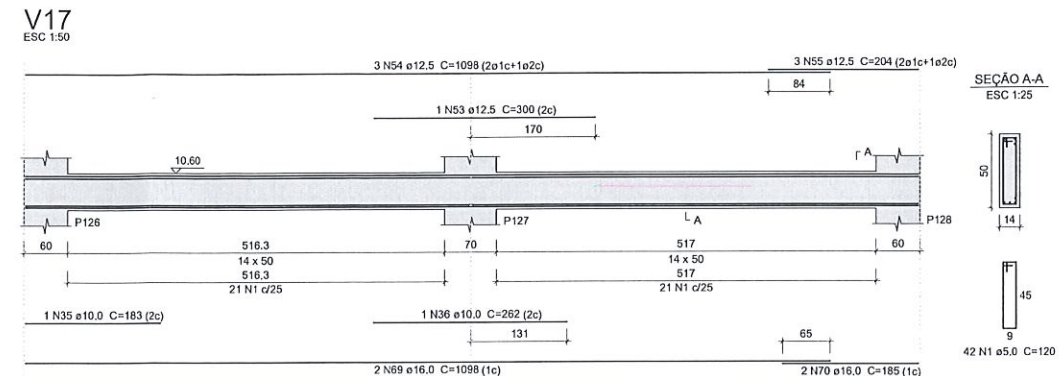
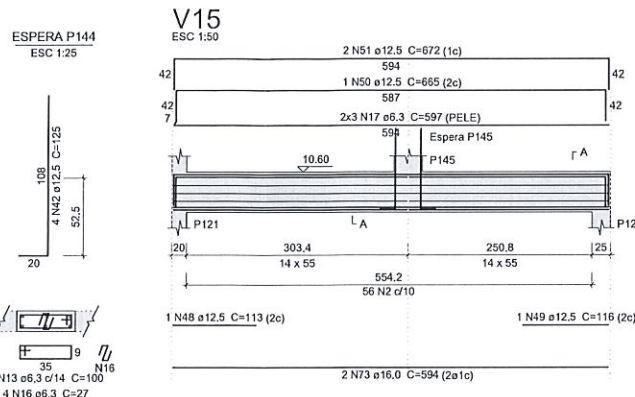
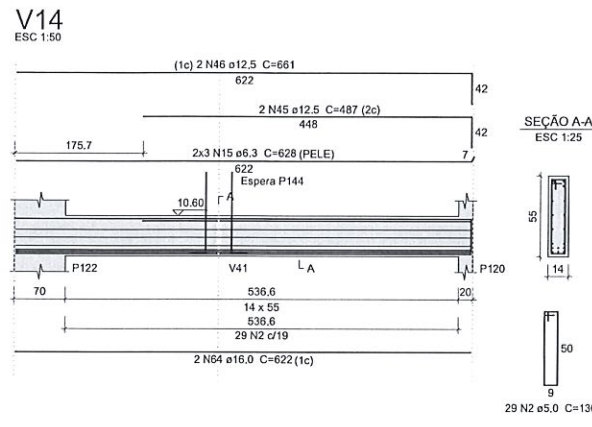
PROJETO  
STRUTURAL

62  
93



**Relação do aço**

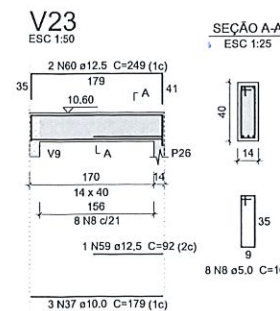
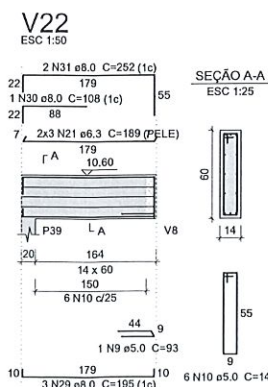
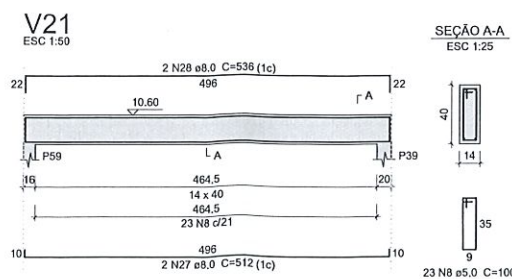
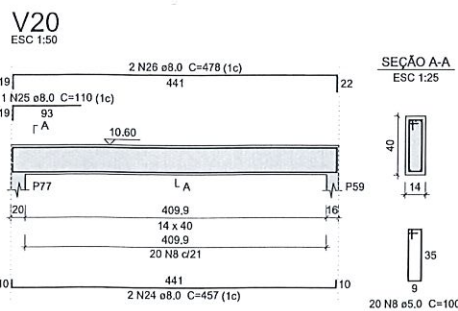
| CA   | N  | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|------|----|-----------|-------|-------------|--------------|
| CA60 | 1  | 5.0       | 59    | 120         | 7080         |
|      | 2  | 5.0       | 298   | 130         | 38740        |
|      | 3  | 5.0       | 12    | 24          | 288          |
|      | 4  | 5.0       | 22    | 100         | 2200         |
|      | 5  | 5.0       | 32    | 24          | 768          |
|      | 6  | 5.0       | 7     | 80          | 560          |
|      | 7  | 5.0       | 22    | 142         | 3124         |
|      | 8  | 5.0       | 92    | 100         | 9200         |
|      | 9  | 5.0       | 1     | 93          | 93           |
| CA50 | 10 | 5.0       | 6     | 140         | 840          |
|      | 11 | 6.3       | 6     | 681         | 4086         |
|      | 12 | 6.3       | 18    | 26          | 468          |
|      | 13 | 6.3       | 16    | 100         | 1600         |
|      | 14 | 6.3       | 6     | 615         | 3690         |
|      | 15 | 6.3       | 6     | 628         | 3768         |
|      | 16 | 6.3       | 4     | 27          | 108          |
|      | 17 | 6.3       | 6     | 597         | 3582         |
|      | 18 | 6.3       | 6     | 1056        | 6336         |
|      | 19 | 6.3       | 110   | 142         | 15620        |
|      | 20 | 6.3       | 12    | 26          | 312          |
|      | 21 | 6.3       | 6     | 169         | 1014         |
|      | 22 | 8.0       | 2     | 440         | 880          |
|      | 23 | 8.0       | 2     | 485         | 970          |
|      | 24 | 8.0       | 2     | 457         | 914          |
|      | 25 | 8.0       | 1     | 110         | 110          |
|      | 26 | 8.0       | 1     | 478         | 478          |
|      | 27 | 8.0       | 2     | 512         | 1024         |
|      | 28 | 8.0       | 2     | 536         | 1072         |
|      | 29 | 8.0       | 3     | 195         | 585          |
|      | 30 | 8.0       | 1     | 108         | 108          |
|      | 31 | 8.0       | 2     | 252         | 504          |
|      | 32 | 10.0      | 4     | 426         | 1704         |
|      | 33 | 10.0      | 2     | 317         | 634          |
|      | 34 | 10.0      | 2     | 445         | 890          |
|      | 35 | 10.0      | 1     | 183         | 183          |
|      | 36 | 10.0      | 1     | 262         | 262          |
|      | 37 | 10.0      | 3     | 179         | 537          |
|      | 38 | 12.5      | 1     | 241         | 241          |
|      | 39 | 12.5      | 1     | 494         | 494          |
|      | 40 | 12.5      | 1     | 977         | 977          |
|      | 41 | 12.5      | 2     | 981         | 1962         |
|      | 42 | 12.5      | 16    | 125         | 2000         |
|      | 43 | 12.5      | 6     | 114         | 684          |
|      | 44 | 12.5      | 2     | 105         | 630          |
|      | 45 | 12.5      | 2     | 487         | 974          |
|      | 46 | 12.5      | 2     | 661         | 1322         |
|      | 48 | 12.5      | 1     | 113         | 113          |
|      | 49 | 12.5      | 1     | 116         | 116          |
|      | 50 | 12.5      | 1     | 655         | 655          |
|      | 51 | 12.5      | 2     | 672         | 1344         |
|      | 52 | 12.5      | 18    | 110         | 1980         |
|      | 53 | 12.5      | 1     | 300         | 300          |
|      | 54 | 12.5      | 3     | 1098        | 3294         |
|      | 55 | 12.5      | 3     | 204         | 612          |
|      | 56 | 12.5      | 1     | 153         | 153          |
|      | 57 | 12.5      | 1     | 200         | 200          |
|      | 58 | 12.5      | 2     | 582         | 1164         |
|      | 59 | 12.5      | 1     | 92          | 92           |
|      | 60 | 12.5      | 2     | 249         | 498          |
|      | 61 | 16.0      | 4     | 953         | 3812         |
|      | 62 | 16.0      | 3     | 618         | 1854         |
|      | 63 | 16.0      | 3     | 633         | 1899         |
|      | 64 | 16.0      | 2     | 622         | 1244         |
|      | 73 | 16.0      | 2     | 594         | 1188         |
|      | 65 | 16.0      | 3     | 539         | 1617         |
|      | 66 | 16.0      | 1     | 229         | 229          |
|      | 67 | 16.0      | 1     | 1102        | 1102         |
|      | 68 | 16.0      | 2     | 1105        | 2210         |
|      | 69 | 16.0      | 2     | 1098        | 2196         |
|      | 70 | 16.0      | 2     | 185         | 370          |
|      | 71 | 16.0      | 2     | 521         | 1042         |
|      | 72 | 20.0      | 2     | 651         | 1302         |



**Resumo do aço**

| AÇO                    | DIAM (mm) | C.TOTAL (m) | PESO + 10% (kg) |
|------------------------|-----------|-------------|-----------------|
| CA50                   | 6.3       | 407.1       | 109.6           |
|                        | 8.0       | 71.3        | 30.9            |
|                        | 10.0      | 42.1        | 28.6            |
|                        | 12.5      | 198.2       | 210             |
|                        | 16.0      | 187.7       | 325.8           |
|                        | 20.0      | 13.1        | 35.3            |
| CA60                   | 5.0       | 629         | 106.6           |
| <b>PESO TOTAL (kg)</b> |           |             |                 |
| CA50                   | 740.1     |             |                 |
| CA60                   | 106.6     |             |                 |

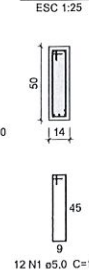
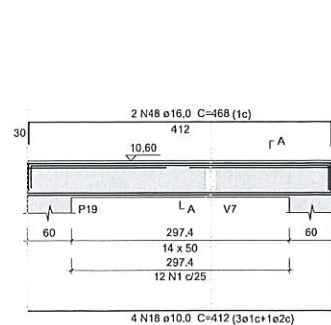
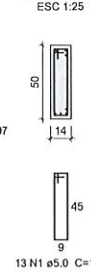
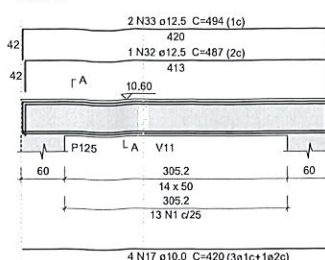
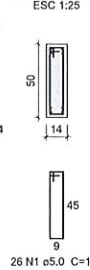
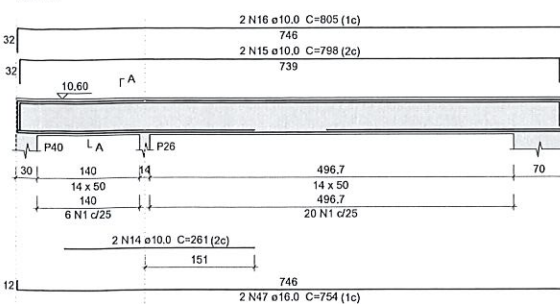
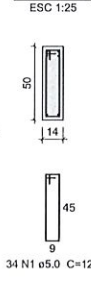
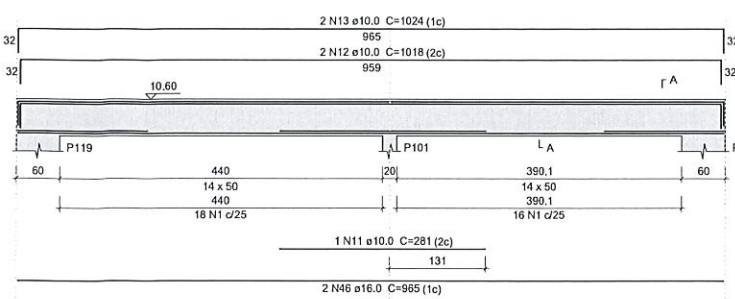
Volume de concreto (C-30) = 5.58 m³  
Área de forma = 89.87 m²



|    |                                       |            |                |
|----|---------------------------------------|------------|----------------|
| Nº | Comentário                            | Data       | Autor          |
| 0  | Emissão inicial                       |            |                |
| 1  | Alteração da armadura positiva da V15 | 09/09/2021 | André M. Canan |

|                                                                                                                                                     |                                   |                                                                                                                                                  |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|                                                                                                                                                     |                                   | <b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br>Rua João Pessoa, 880 - sl B - Santa Terezinha<br>Pato Branco/PR<br>46.99102-2762<br>www.algetec.eng.br | PROJETO ESTRUTURAL |
| Eng. Civil Daniel Parcianneto, CREA: 072040/D<br>Eng. Civil André Mateus Canan, CREA: 193875/D<br>Eng. Civil Loriane C. Parcianneto, CREA: 172355/D | Município de Pato Branco - PR     |                                                                                                                                                  |                    |
| Resp. Técnico                                                                                                                                       | Rua Jacirela<br>Pato Branco/PR    | Data<br>12/07/2021                                                                                                                               | <b>63</b><br>93    |
| Obra                                                                                                                                                | Teatro Municipal Naura Rigon      | Indicada                                                                                                                                         |                    |
| Referência                                                                                                                                          | Pavimento: Cobertura 1<br>Vigas 2 |                                                                                                                                                  |                    |



Relação do aço

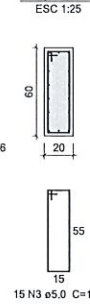
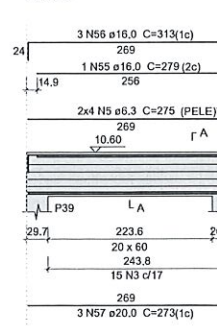
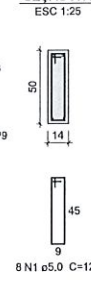
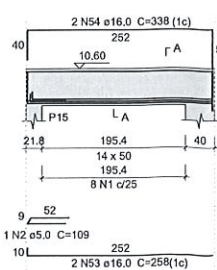
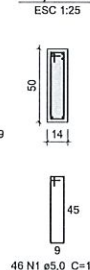
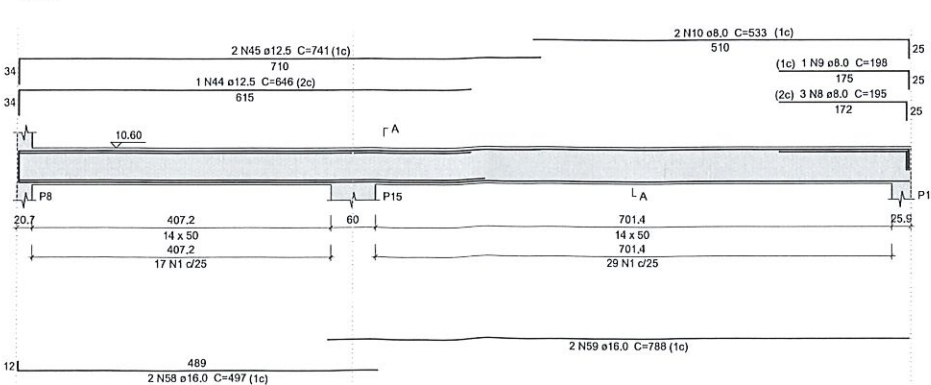
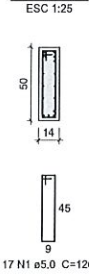
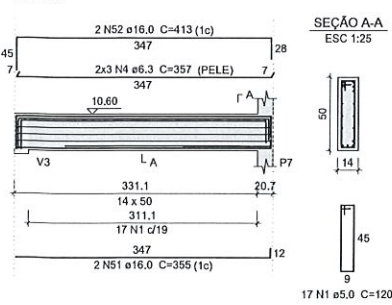
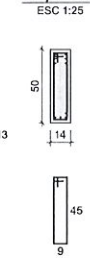
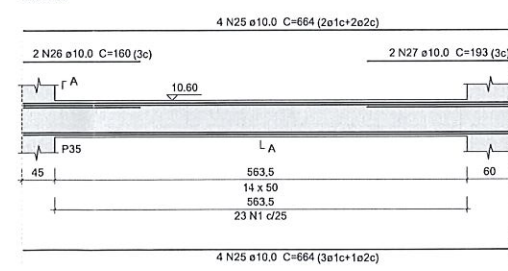
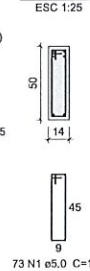
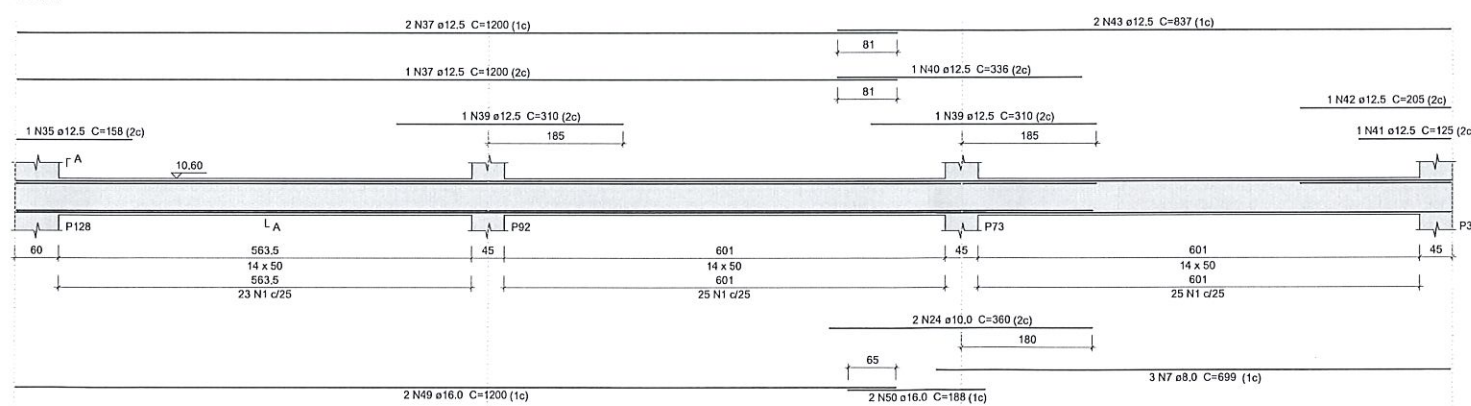
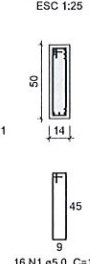
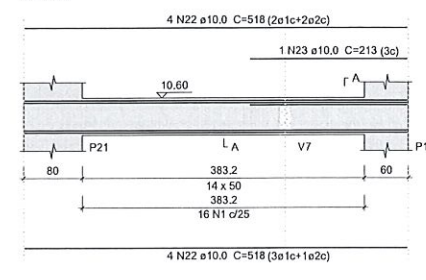
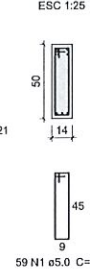
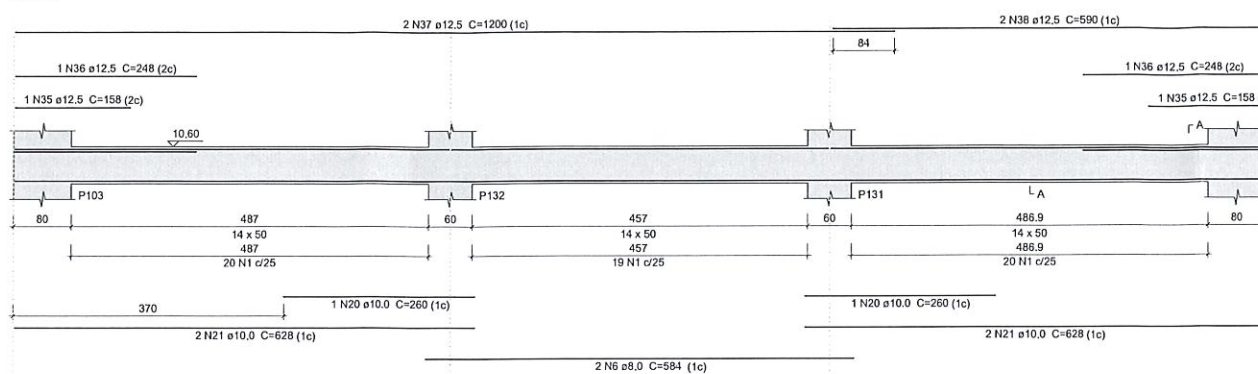
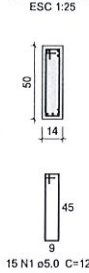
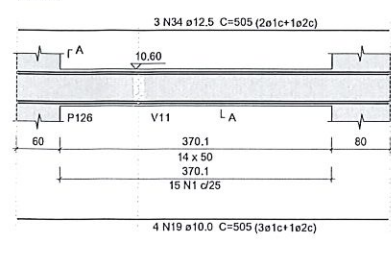
|     |     |     |
|-----|-----|-----|
| V24 | V25 | V26 |
| V27 | V28 | V29 |
| V30 | V31 | V32 |
| V33 | V34 | V35 |
| V36 |     |     |

| AÇO  | N    | DIAM<br>(mm) | QUANT | C.LIMIT<br>(cm) | C.TOTAL<br>(cm) |
|------|------|--------------|-------|-----------------|-----------------|
| CA60 | 1    | 5,0          | 342   | 120             | 41040           |
|      | 2    | 5,0          | 1     | 109             | 109             |
| CA50 | 3    | 5,0          | 15    | 152             | 2280            |
|      | 4    | 6,3          | 6     | 357             | 2142            |
|      | 5    | 6,3          | 8     | 275             | 2200            |
|      | 6    | 8,0          | 2     | 554             | 1165            |
|      | 7    | 8,0          | 3     | 659             | 2097            |
|      | 8    | 8,0          | 3     | 195             | 585             |
|      | 9    | 8,0          | 1     | 198             | 198             |
|      | 10   | 8,0          | 2     | 533             | 1066            |
|      | 11   | 10,0         | 1     | 281             | 281             |
|      | 12   | 10,0         | 2     | 1018            | 2036            |
|      | 13   | 10,0         | 2     | 1024            | 2048            |
|      | 14   | 10,0         | 2     | 261             | 522             |
|      | 15   | 10,0         | 2     | 798             | 1596            |
|      | 16   | 10,0         | 2     | 805             | 1610            |
|      | 17   | 10,0         | 4     | 420             | 1680            |
|      | 18   | 10,0         | 4     | 412             | 1648            |
|      | 19   | 10,0         | 4     | 505             | 2020            |
|      | 20   | 10,0         | 2     | 260             | 520             |
| 21   | 10,0 | 4            | 628   | 2512            |                 |
| 22   | 10,0 | 8            | 518   | 4144            |                 |
| 23   | 10,0 | 1            | 213   | 213             |                 |
| 24   | 10,0 | 2            | 360   | 720             |                 |
| 25   | 10,0 | 8            | 564   | 5312            |                 |
| 26   | 10,0 | 2            | 160   | 320             |                 |
| 27   | 10,0 | 2            | 193   | 386             |                 |
| 32   | 12,5 | 1            | 487   | 487             |                 |
| 33   | 12,5 | 2            | 494   | 988             |                 |
| 34   | 12,5 | 3            | 505   | 1515            |                 |
| 35   | 12,5 | 3            | 158   | 474             |                 |
| 36   | 12,5 | 2            | 248   | 496             |                 |
| 37   | 12,5 | 5            | 1200  | 6000            |                 |
| 38   | 12,5 | 2            | 590   | 1180            |                 |
| 39   | 12,5 | 2            | 310   | 620             |                 |
| 40   | 12,5 | 1            | 336   | 336             |                 |
| 41   | 12,5 | 1            | 125   | 125             |                 |
| 42   | 12,5 | 1            | 205   | 205             |                 |
| 43   | 12,5 | 2            | 837   | 1674            |                 |
| 44   | 12,5 | 1            | 646   | 646             |                 |
| 45   | 12,5 | 2            | 741   | 1482            |                 |
| 46   | 16,0 | 2            | 965   | 1930            |                 |
| 47   | 16,0 | 2            | 754   | 1508            |                 |
| 48   | 16,0 | 2            | 468   | 936             |                 |
| 49   | 16,0 | 2            | 1200  | 2400            |                 |
| 50   | 16,0 | 2            | 188   | 376             |                 |
| 51   | 16,0 | 2            | 355   | 710             |                 |
| 52   | 16,0 | 2            | 413   | 826             |                 |
| 58   | 16,0 | 2            | 497   | 994             |                 |
| 59   | 16,0 | 2            | 788   | 1576            |                 |
| 53   | 16,0 | 2            | 258   | 516             |                 |
| 54   | 16,0 | 2            | 338   | 676             |                 |
| 55   | 16,0 | 1            | 279   | 279             |                 |
| 56   | 16,0 | 3            | 313   | 939             |                 |
| 57   | 20,0 | 3            | 273   | 819             |                 |

### Resumo do aço

| AÇO                | DIAM<br>(mm) | C.TOTAL<br>(m) | PESO + 10 % |
|--------------------|--------------|----------------|-------------|
| CA50               | 6.3          | 43.5           | 11.7        |
|                    | 8.0          | 51.2           | 22.2        |
|                    | 10.0         | 276.7          | 187         |
|                    | 12.5         | 162.3          | 172         |
|                    | 16.0         | 136.7          | 237.3       |
|                    | 20.0         | 8.2            | 22.2        |
| CA60               | 5.0          | 434.3          | 73.6        |
| PESO TOTAL<br>(kg) |              |                |             |
| CA50               | 652.3        |                |             |
| CA60               | 73.6         |                |             |

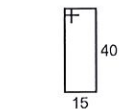
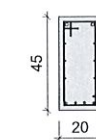
Volume de concreto (C-30) = 7.16 m<sup>3</sup>  
Área de forma = 115.1 m<sup>2</sup>



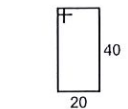
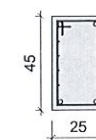
| Nº | Comentário                            | Data       | Autor          |
|----|---------------------------------------|------------|----------------|
| 0  | Emissão inicial                       |            |                |
| 1  | Alteração da armadura positiva da V34 | 09/09/2021 | André M. Canan |
|    |                                       |            |                |
|    |                                       |            |                |
|    |                                       |            |                |

|                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                           |  |                                                                                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <br><b>ALGETEC</b><br>ENGENHARIA E CONSTRUÇÃO                                                                                                                          |  | <b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br>Rua João Pessoa, 880 - sl B - Santa Terezinha<br>Pato Branco/PR<br>46. 98102 2782<br><a href="http://www.algetec.eng.br">www.algetec.eng.br</a> |  | PROJETO<br>ESTRUTURAL                                                                                                                                           |  |
| Resp. Técnico<br><br>Eng. Civil Danilo Perchinello, CREA: 072040/D<br>Eng. Civil André Mateus Gariani, CREA: 193875/D<br>Eng. Civil Loriane C. Pariani, CREA: 172355/D |  | Proprietário<br><br>Município de Pato Branco - PR                                                    |  |                                                                                                                                                                 |  |
| End.<br>Rua Jaciêta<br>Pato Branco/PR                                                                                                                                                                                                                       |  | Data<br>12/07/2021                                                                                                                                                                        |  |                                                                                                                                                                 |  |
| Obra<br>Teatro Municipal Naura Rigon                                                                                                                                                                                                                        |  | Escala<br>Indicada                                                                                                                                                                        |  | <div style="font-size: 48px; text-align: center;">64</div> <div style="text-align: center; border-top: 1px solid black; width: 100px; margin: 0 auto;">93</div> |  |
| Referência<br>Pavimento: Cobertura 1<br>Vigas 3                                                                                                                                                                                                             |  |                                                                                                                                                                                           |  |                                                                                                                                                                 |  |

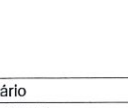
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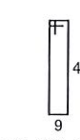
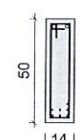
SECÃO A-A



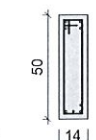
ESC 1:50



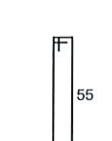
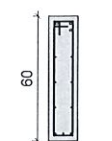
ESC 1:50



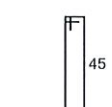
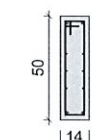
ESC 1:50



ESC 1:50



ESC 1:50



V37  
V40

| AÇO  | N  | DIAM<br>(mm) | QUANT | C.UNIT<br>(cm) | C.TOTAL<br>(cm) |
|------|----|--------------|-------|----------------|-----------------|
| CA60 | 1  | 5,0          | 74    | 120            | 8880            |
|      | 2  | 5,0          | 35    | 140            | 4900            |
| CA50 | 3  | 6,3          | 6     | 379            | 2274            |
|      | 4  | 6,3          | 6     | 948            | 5688            |
|      | 5  | 6,3          | 14    | 1200           | 16800           |
|      | 6  | 6,3          | 14    | 730            | 10220           |
|      | 7  | 6,3          | 472   | 122            | 57584           |
|      | 8  | 6,3          | 190   | 132            | 25080           |
|      | 10 | 8,0          | 3     | 948            | 2844            |
|      | 11 | 10,0         | 3     | 474            | 1422            |
|      | 12 | 10,0         | 1     | 656            | 656             |
|      | 13 | 10,0         | 1     | 631            | 631             |
|      | 14 | 10,0         | 2     | 1120           | 2240            |
|      | 15 | 10,0         | 2     | 209            | 418             |
|      | 16 | 12,5         | 1     | 164            | 164             |
|      | 17 | 12,5         | 2     | 959            | 1918            |
|      | 18 | 16,0         | 2     | 272            | 544             |
|      | 19 | 16,0         | 2     | 351            | 702             |
|      | 20 | 16,0         | 2     | 497            | 994             |
|      | 33 | 16,0         | 2     | 794            | 1588            |
|      | 21 | 16,0         | 2     | 377            | 754             |
|      | 22 | 16,0         | 2     | 435            | 870             |
|      | 23 | 16,0         | 2     | 1200           | 2400            |
|      | 24 | 16,0         | 2     | 748            | 1496            |
|      | 25 | 16,0         | 2     | 1196           | 2392            |
|      | 26 | 16,0         | 2     | 890            | 1780            |
|      | 27 | 16,0         | 2     | 1002           | 2004            |
|      | 28 | 16,0         | 2     | 543            | 1086            |
|      | 29 | 16,0         | 2     | 1196           | 2392            |
|      | 30 | 16,0         | 2     | 804            | 1608            |
|      | 31 | 20,0         | 2     | 603            | 1206            |
|      | 32 | 20,0         | 2     | 249            | 498             |

| AÇO                | DIAM<br>(mm) | C.TOTAL<br>(m) | PESO + 10 %<br>(kg) |
|--------------------|--------------|----------------|---------------------|
| CA50               | 6.3          | 1176.5         | 316                 |
|                    | 8.0          | 28.5           | 12                  |
|                    | 10.0         | 53.7           | 36                  |
|                    | 12.5         | 20.9           | 22                  |
|                    | 16.0         | 206.1          | 357                 |
|                    | 20.0         | 17.1           | 46                  |
| CA60               | 5.0          | 137.8          | 23                  |
| PESO TOTAL<br>(kg) |              |                |                     |
| CA50               | 791.5        |                |                     |
| CA60               | 23.4         |                |                     |

Volume de concreto (C-30) = 5.92 m<sup>3</sup>  
Área de forma = 76.41 m<sup>2</sup>

| Nº | Comentário                            | Data       | Autor          |
|----|---------------------------------------|------------|----------------|
| 0  | Emissão inicial                       |            |                |
| 1  | Alteração da armadura positiva da V40 | 09/09/2021 | André M. Canan |
|    |                                       |            |                |
|    |                                       |            |                |



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PROJETO

Eng. Civil Daniel Parciannelo, CREA: 072040/D  
Eng. Civil André Mateus Canan, CREA: 193875/D  
Eng. Civil Loriane C. Parciannelo, CREA: 172355/D

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Município de Pato Branco - PR

|      |                                |
|------|--------------------------------|
| End. | Rua Jaciretã<br>Pato Branco/PR |
|------|--------------------------------|

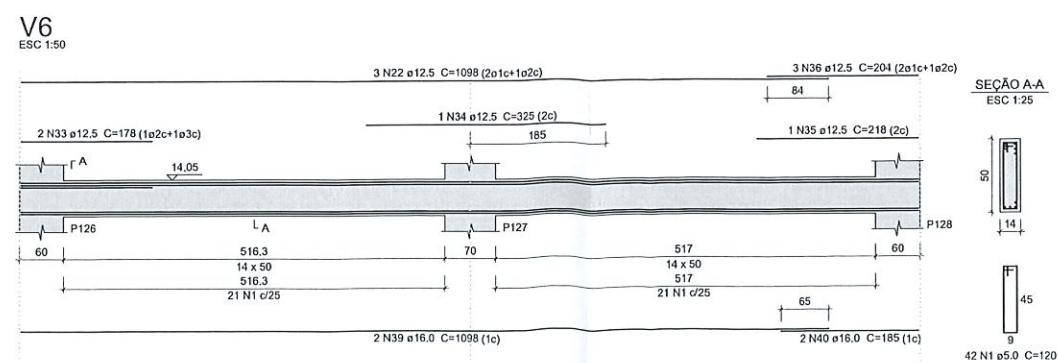
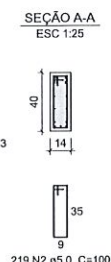
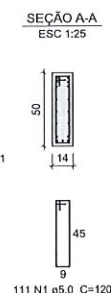
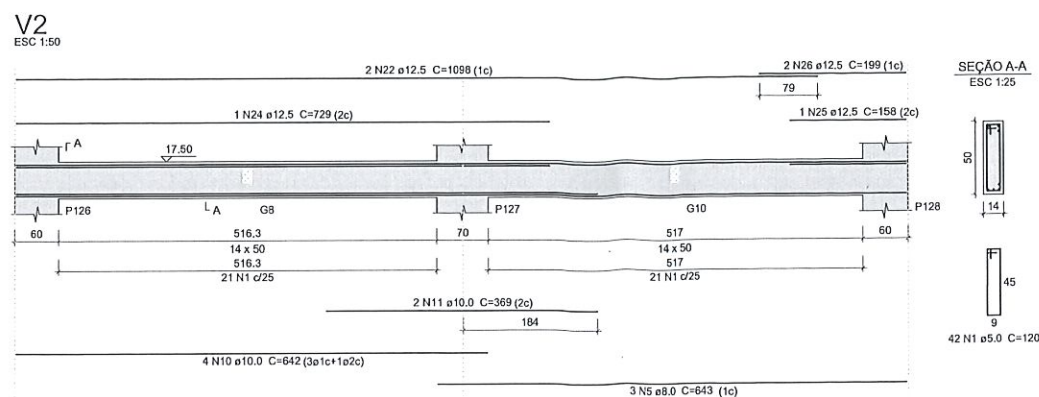
|      |            |
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| Data | 12/07/2021 |
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Teatro Municipal Naura Rigor

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| Indicada |  |
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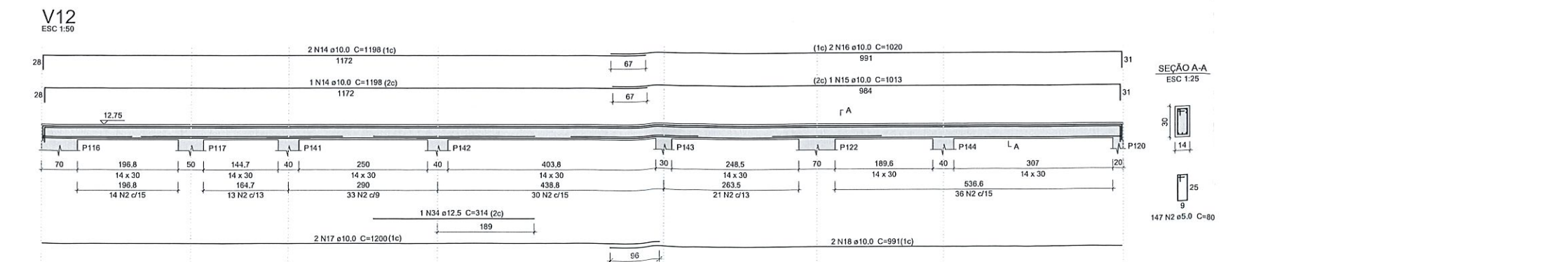
Pavimento: Cobertura 1  
Vigas 4

65  
93



| AÇO                | DIAM<br>(mm) | C.TOTAL<br>(m) | PESO + 10 %<br>(kg) |
|--------------------|--------------|----------------|---------------------|
| CA50               | 6.3          | 266.5          | 71.7                |
|                    | 8.0          | 22.7           | 9.8                 |
|                    | 10.0         | 350.6          | 237.7               |
|                    | 12.5         | 239.3          | 253.5               |
|                    | 16.0         | 103.8          | 178.3               |
| CA60               | 5.0          | 553.8          | 93.9                |
| PESO TOTAL<br>(kg) |              |                |                     |
| CA50               | 751.1        |                |                     |
| CA60               | 93.9         |                |                     |

Volume de concreto (C-30) = 6.68 m<sup>3</sup>  
Área de forma = 109.53 m<sup>2</sup>



Volume de concreto (C-30) = 6.33 m<sup>3</sup>  
Área de forma = 105.89 m<sup>2</sup>

|                                                                                       |                                                                                                                                                                                            |              |                                 |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------|
|  | <b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br>Rua João Pessoa, 880 - sl B - Santa Terezinha<br>Pato Branco/PR<br>46. 99.102.2782<br><a href="http://www.algetec.eng.br">www.algetec.eng.br</a> |              | 67<br>93                        |
|                                                                                       | Eng. Civil Daniel Parcianno, CREA: 072040/O<br>Eng. Civil André Mateus Canan, CREA: 193875/D<br>Eng. Civil Loriane C. Parcianno, CREA: 172355/D                                            | Proprietário |                                 |
| Resp. Técnico                                                                         |                                                                                                       | End.         | Rua Jacirelê<br>Pato Branco/PR  |
| Data                                                                                  | 12/07/2021                                                                                                                                                                                 | Oba          | Teatro Municipal Naura Rigon    |
| Essencial                                                                             | Indcada                                                                                                                                                                                    | Referência   | Pavimento: Urdimento<br>Vigas 2 |

V13                      V14

| AÇO  | N  | DIAM<br>(mm) | QUANT | C.UNIT<br>(cm) | C.TOTAL<br>(cm) |
|------|----|--------------|-------|----------------|-----------------|
| CA60 | 1  | 5,0          | 128   | 80             | 10240           |
|      | 2  | 5,0          | 119   | 100            | 11900           |
| CA50 | 3  | 8,0          | 4     | 278            | 1112            |
|      | 4  | 8,0          | 2     | 647            | 1294            |
|      | 5  | 8,0          | 2     | 729            | 1458            |
|      | 6  | 8,0          | 2     | 1190           | 2380            |
|      | 7  | 8,0          | 2     | 170            | 340             |
|      | 8  | 8,0          | 1     | 135            | 135             |
|      | 9  | 8,0          | 2     | 220            | 440             |
|      | 10 | 8,0          | 2     | 1198           | 2396            |
|      | 11 | 8,0          | 2     | 502            | 1004            |
|      | 12 | 10,0         | 1     | 172            | 172             |
|      | 13 | 10,0         | 2     | 992            | 1984            |
|      | 14 | 12,5         | 1     | 346            | 346             |
|      | 15 | 12,5         | 2     | 1197           | 2394            |
|      | 16 | 12,5         | 2     | 555            | 1110            |
|      | 17 | 16,0         | 2     | 1200           | 2400            |
|      | 18 | 16,0         | 2     | 551            | 1102            |

| AÇO  | DIAM<br>(mm) | C.TOTAL<br>(m) | PESO + 10 %<br>(kg) |
|------|--------------|----------------|---------------------|
| CA50 | 8,0          | 105,6          | 45,3                |
|      | 10,0         | 21,6           | 14,3                |
|      | 12,5         | 38,5           | 40,1                |
|      | 16,0         | 35,1           | 60,1                |
| CA60 | 5,0          | 221,4          | 37,3                |

|            |  |
|------------|--|
| PESO TOTAL |  |
| (kg)       |  |

Volume de concreto (C-30) = 2.13 m<sup>3</sup>  
Área de forma = 36.39 m<sup>2</sup>

Technical drawing of a bridge deck cross-section (Figure 1.10). The drawing shows a symmetrical cross-section with a total width of 1160 units. The top layer is 2 N15 ø12.5 C=1197 (1c). Below this is a 40-unit thick layer. The main deck is 2 N16 ø12.5 C=555 (1c). The bottom layer is 2 N17 ø16.0 C=1200(1c). The drawing includes various reinforcement details, including 1 N14 ø12.5 C=346 (2c), 2x2 N3 ø8.0 C=278 (PELE), and 16 N1 ø13. The drawing also shows the location of reinforcement bars P121, P145, P146, P147, P148, and P12. The drawing is labeled 'Figure 1.10' and 'Figure 1.10'.

6

14

30

9

25

128 N1  $\phi 5.0$  C=80

**SEÇÃO A-A**  
ESC 1:25

**Top View:**

- Reinforcement: 2 N10  $\varnothing$ 8.0 C=1198 (1c), 2 N11  $\varnothing$ 8.0 C=502 (1c), 2 N9  $\varnothing$ 8.0 c/10 C=220 (1 $\varnothing$ 1c+1 $\varnothing$ 2c), 2 N13  $\varnothing$ 10.0 C=992 (1c), (2c) 1 N12  $\varnothing$ 10.0 C=172
- Dimensions: 1178, 54, 165, 963, 143, 115

**Bottom View:**

- Reinforcement: 1 N8  $\varnothing$ 8.0 C=135 (1c), 2 N4  $\varnothing$ 8.0 C=647 (1c), 2 N5  $\varnothing$ 8.0 C=729 (1c), 2 N6  $\varnothing$ 8.0 C=1190 (1c), 2 N7  $\varnothing$ 8.0 C=170 (1c), 119 N2  $\varnothing$ 5.0 C=100
- Dimensions: 12.75, 25, 583.2, 30, 648, 25, 1242.9, 30, 50

**Cross-section (A-A):**

- Dimensions: 40, 14, 35, 9

SEÇÃO A-A  
ESC 1:25



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PROJETO

Eng. Civil Daniel Parciánello, CREA: 072040/D  
Eng. Civil André Mateus Canan, CREA: 193875/D  
Eng. Civil Loriane C. Parciánello, CREA: 172355/D

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Município de Pato Branco - PR

|      |                                |
|------|--------------------------------|
| End: | Rua Jaciretã<br>Pato Branco/PR |
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|  | Data | 12/07/2021 |
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| experiência | Pavimento: Urdimento |
|             | Vigas 3              |

68  
93

Relação do aço

| AÇO  | N  | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|------|----|-----------|-------|-------------|--------------|
| CA60 | 1  | 5.0       | 323   | 100         | 32300        |
| CA50 | 2  | 6.3       | 4     | 505         | 2020         |
|      | 3  | 6.3       | 4     | 518         | 2072         |
|      | 4  | 6.3       | 8     | 664         | 5312         |
|      | 5  | 8.0       | 6     | 651         | 3906         |
|      | 6  | 8.0       | 1     | 136         | 136          |
|      | 7  | 8.0       | 6     | 282         | 1572         |
|      | 8  | 8.0       | 2     | 1001        | 2002         |
|      | 9  | 8.0       | 4     | 714         | 2856         |
|      | 10 | 8.0       | 2     | 135         | 270          |
|      | 11 | 8.0       | 8     | 408         | 3264         |
|      | 12 | 8.0       | 4     | 871         | 3484         |
|      | 13 | 8.0       | 1     | 826         | 826          |
|      | 14 | 8.0       | 3     | 856         | 2568         |
|      | 15 | 8.0       | 2     | 1198        | 2396         |
|      | 16 | 8.0       | 2     | 1200        | 2400         |
|      | 17 | 8.0       | 2     | 333         | 666          |
|      | 18 | 10.0      | 2     | 1200        | 2400         |
|      | 19 | 10.0      | 2     | 571         | 1142         |
|      | 20 | 12.5      | 2     | 651         | 1302         |
|      | 21 | 12.5      | 2     | 380         | 760          |
|      | 22 | 12.5      | 4     | 1136        | 4544         |
|      | 23 | 12.5      | 4     | 228         | 912          |
|      | 24 | 12.5      | 2     | 650         | 1300         |
|      | 25 | 12.5      | 2     | 509         | 1018         |
|      | 26 | 12.5      | 4     | 685         | 2740         |
|      | 27 | 16.0      | 2     | 514         | 1028         |
|      | 28 | 16.0      | 2     | 813         | 1626         |
|      | 29 | 16.0      | 2     | 826         | 1652         |

Resumo do aço

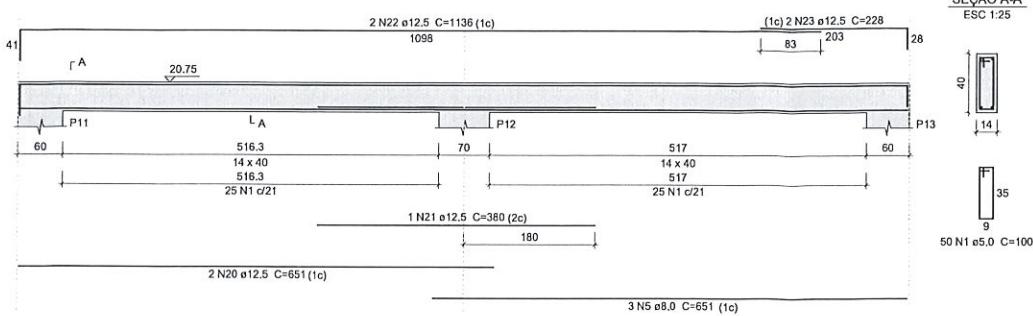
| AÇO  | DIAM (mm) | C.TOTAL (m) | PESO * 10 % (kg) |
|------|-----------|-------------|------------------|
| CA50 | 6.3       | 94.1        | 25.3             |
|      | 8.0       | 263.5       | 114.4            |
|      | 10.0      | 35.5        | 24               |
|      | 12.5      | 125.8       | 133.3            |
|      | 16.0      | 43.1        | 74.8             |
| CA60 | 5.0       | 323         | 54.8             |

PESO TOTAL (kg)

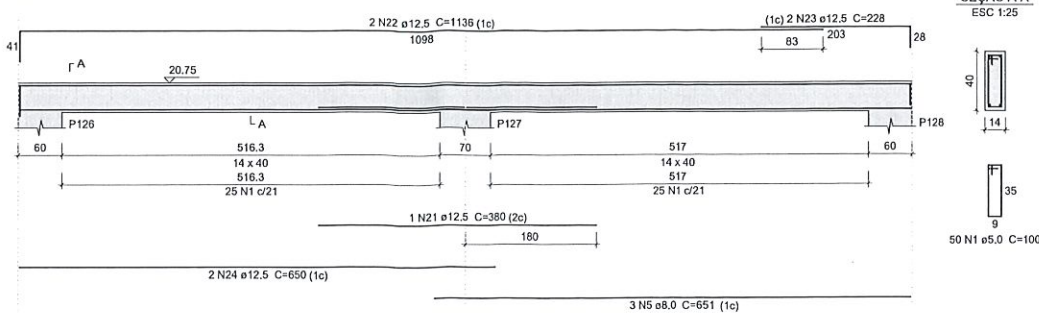
|      |       |
|------|-------|
| CA50 | 371.7 |
| CA60 | 54.8  |

Volume de concreto (C-30) = 4.26 m³  
Área de forma = 71.58 m²

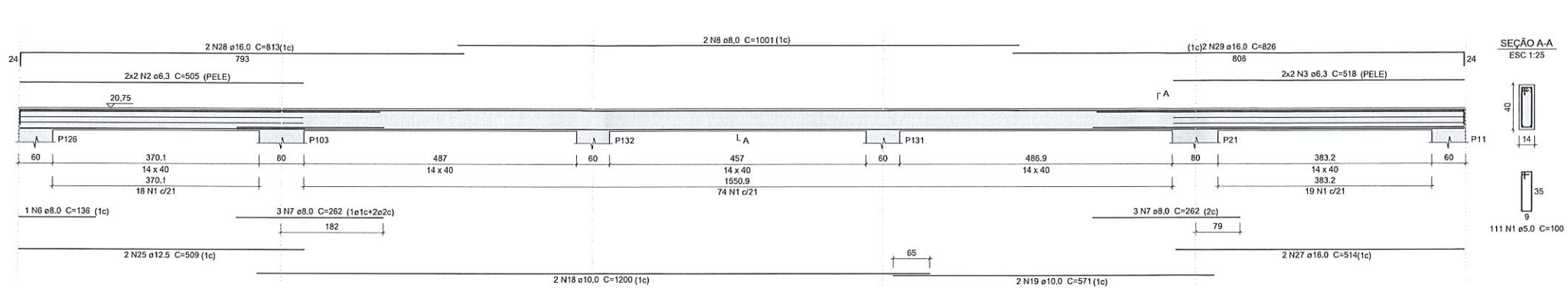
V1  
ESC 1:50



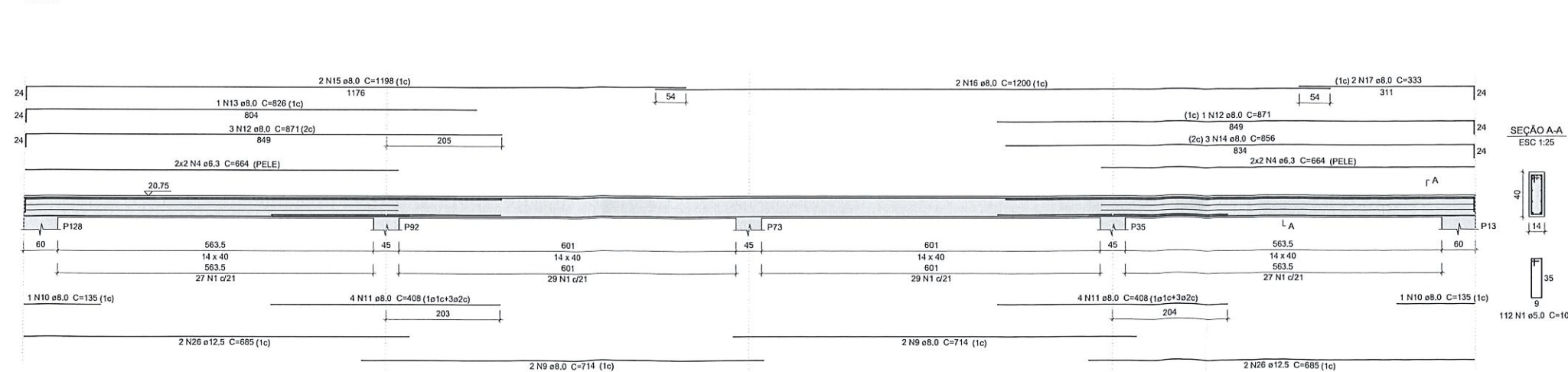
V2  
ESC 1:50



V3  
ESC 1:50



V4  
ESC 1:50



|                                                                                                                                                                                      |                                                          |                                                                                                                                                              |                               |                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|
| <p><b>ALGETEC</b><br/>ENGENHARIA E CONSTRUÇÃO</p>                                                                                                                                    |                                                          | <p><b>ALGETEC ENGENHARIA E CONSTRUÇÃO</b><br/>Rua João Pessoa, 880 - sl B - Santa Terezinha<br/>Pato Branco/PR<br/>46. 99102 2782<br/>www.algetec.eng.br</p> |                               | <p>PROJETO<br/>ESTRUTURAL</p> |
|                                                                                                                                                                                      |                                                          | <p>Município de Pato Branco - PR</p>                                                                                                                         |                               |                               |
| <p>Resp. Técnico</p> <p>Eng. Civil Daniel Parcianno, CREA: 107664/O-0</p> <p>Eng. Civil André Matos Canan, CREA: 193584/O</p> <p>Eng. Civil Loriano C. Parcianno, CREA: 172835/D</p> | <p>Proprietário</p> <p>Município de Pato Branco - PR</p> | <p>End.</p> <p>Rua Jaciretã<br/>Pato Branco/PR</p>                                                                                                           | <p>Data</p> <p>12/07/2021</p> | <p>69</p> <p>93</p>           |
| <p>Obra</p> <p>Teatro Municipal Naura Rigon</p>                                                                                                                                      | <p>Local</p> <p>Indicada</p>                             | <p>Referência</p> <p>Pavimento: Platibanda 2<br/>Vigas 1</p>                                                                                                 |                               |                               |