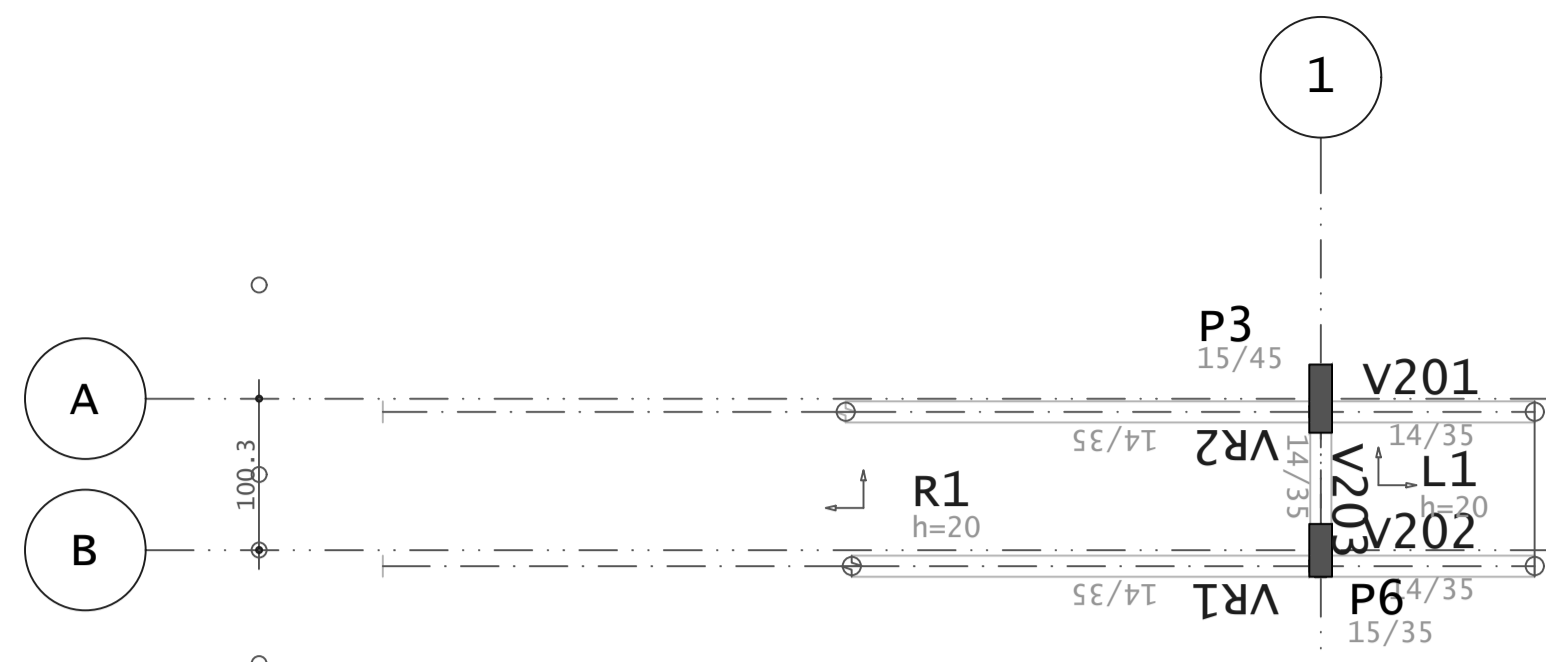


**PREFEITURA MUNICIPAL DE CANHOTINHO**  
**SECRETARIA DE EDUCAÇÃO**

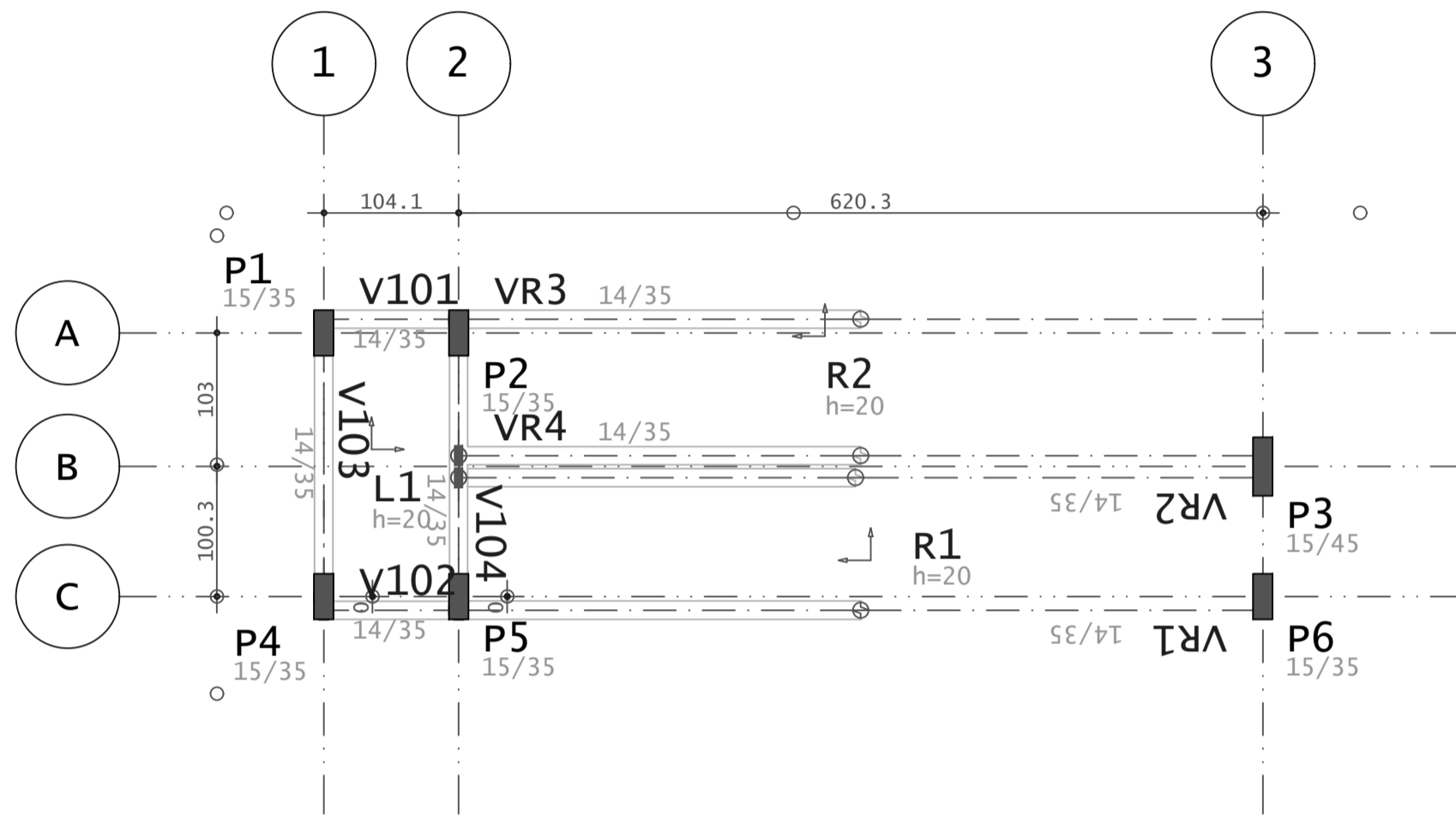
PROJETO: Construção de Serviços Complementares do  
Centro Educacional da Rede Municipal de Ensino



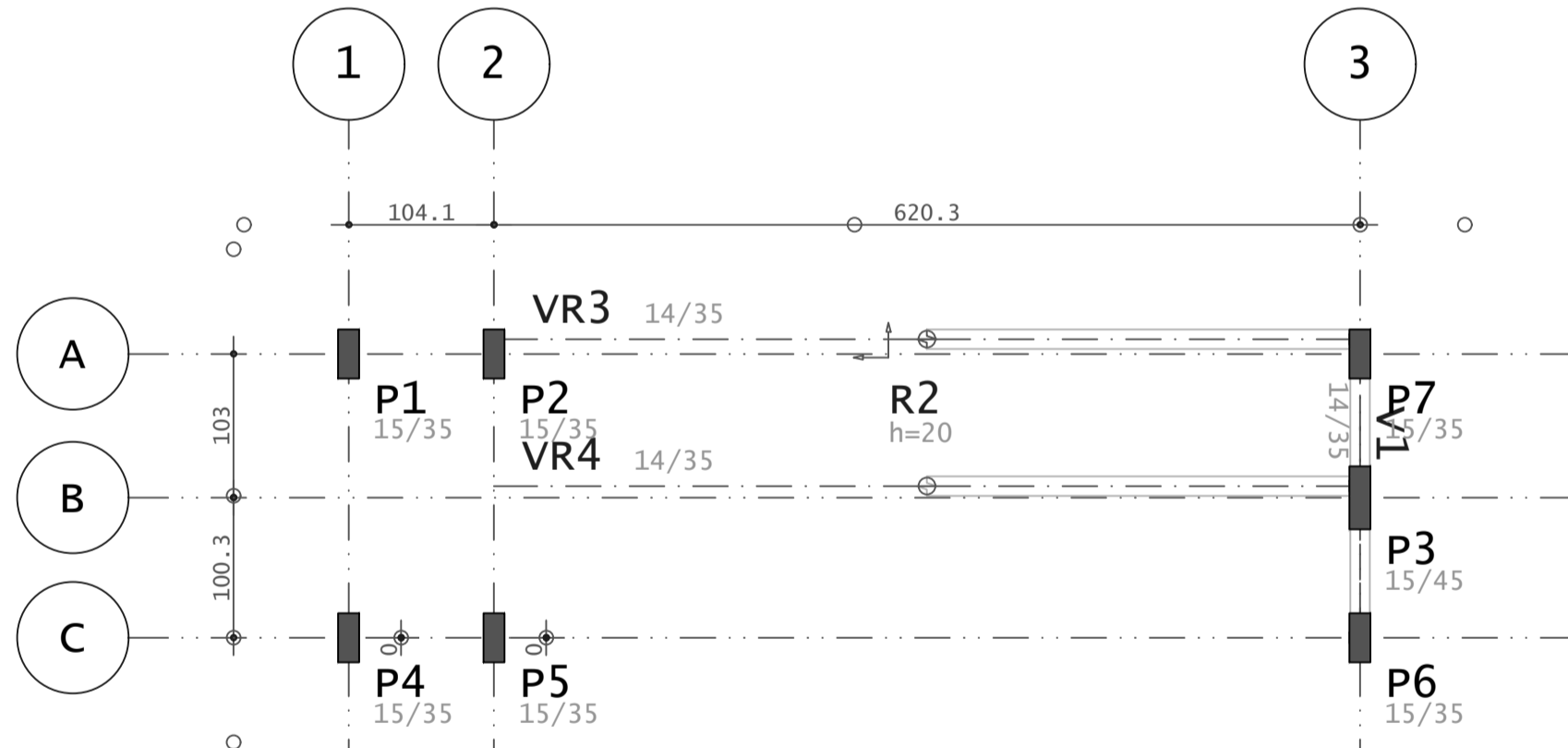
**- ESTRUTURAL RAMPA -**

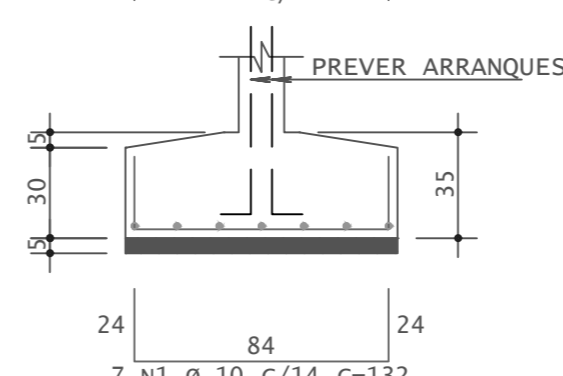
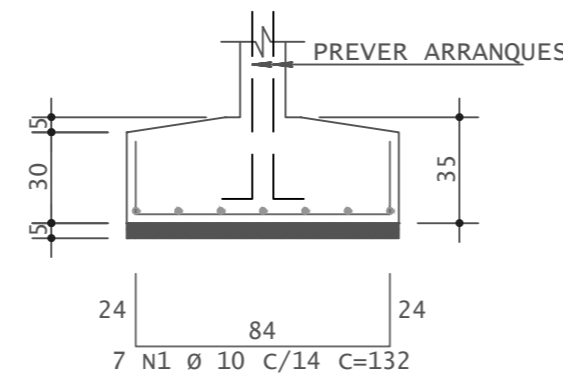
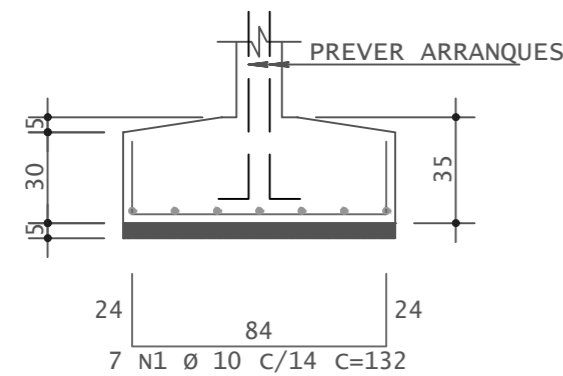
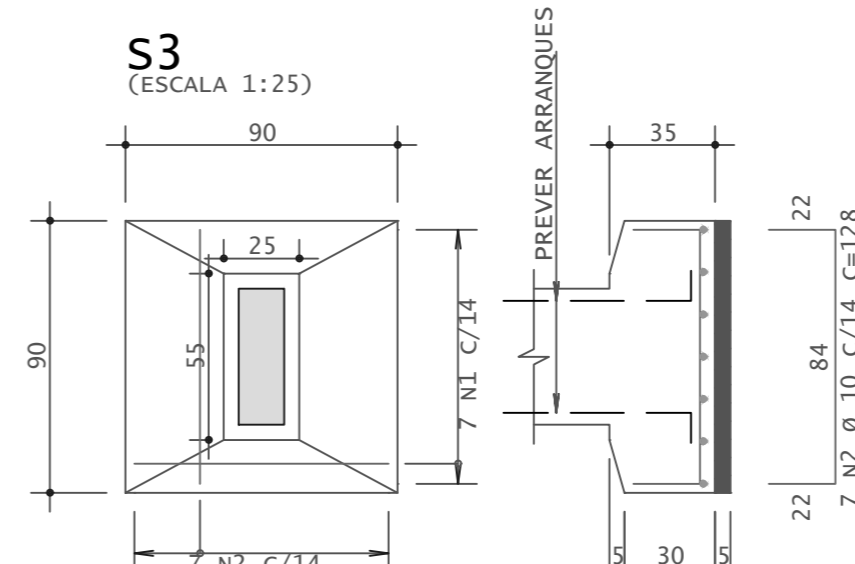
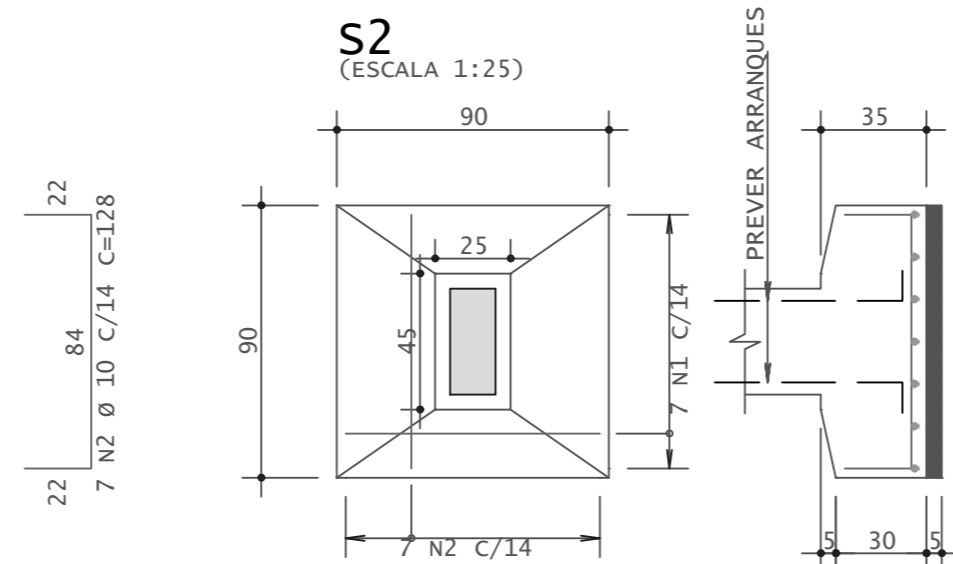
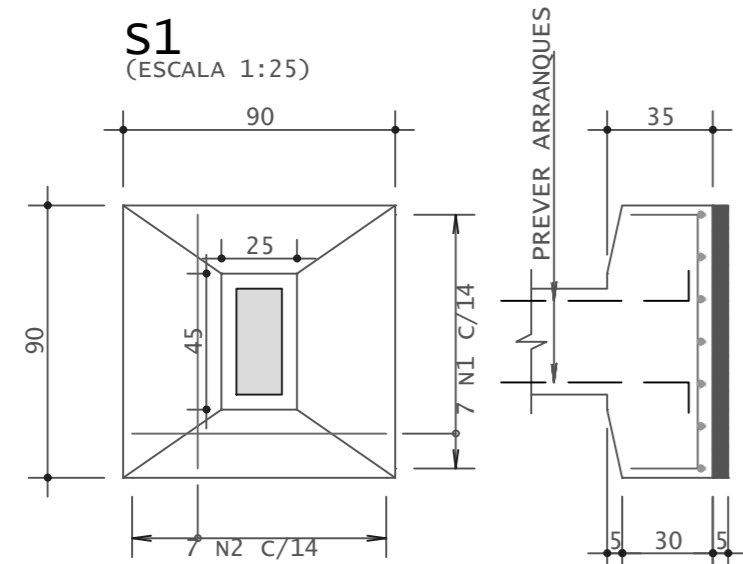


01 PLANTA BAIXA - TOPO DO PATAMAR (ENTRADA)  
ESCALA 1/50



02 PLANTA BAIXA - TOPO DA RAMPA (PRIMEIRA)  
ESCALA 1/50





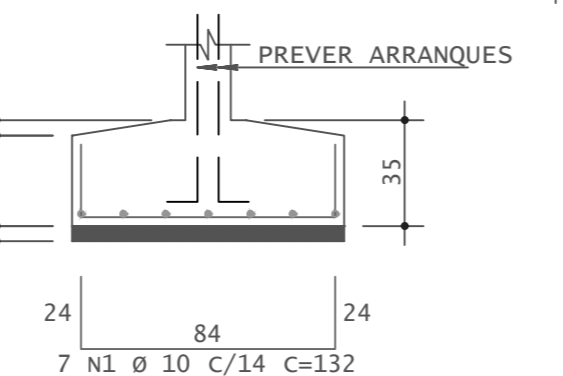
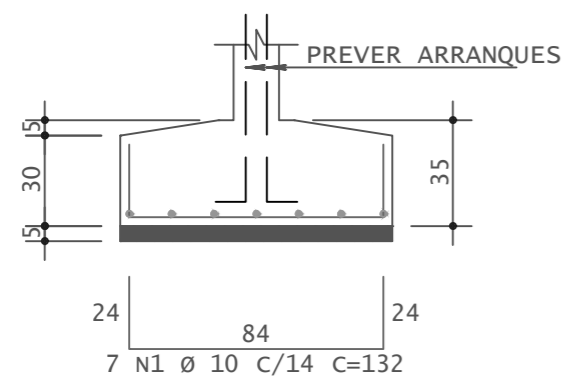
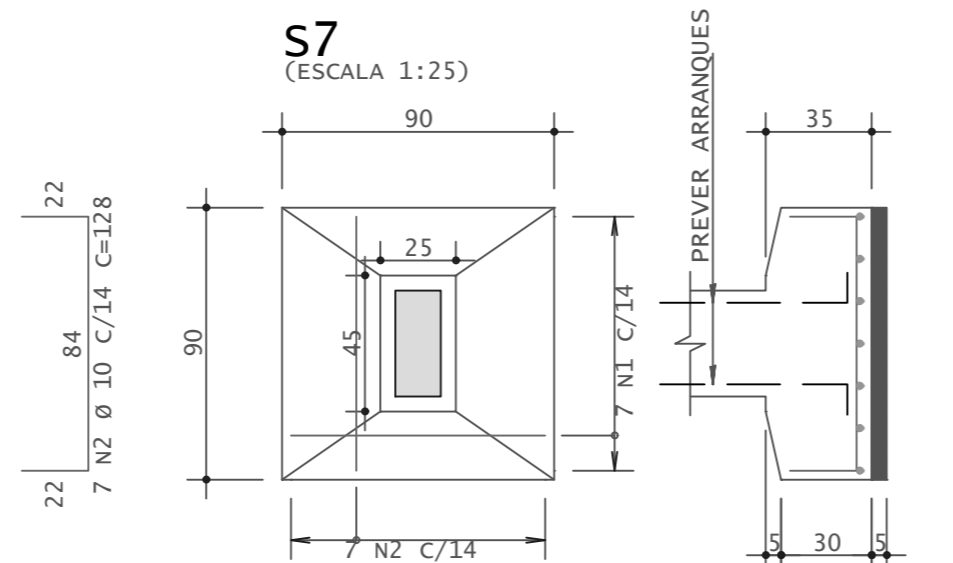
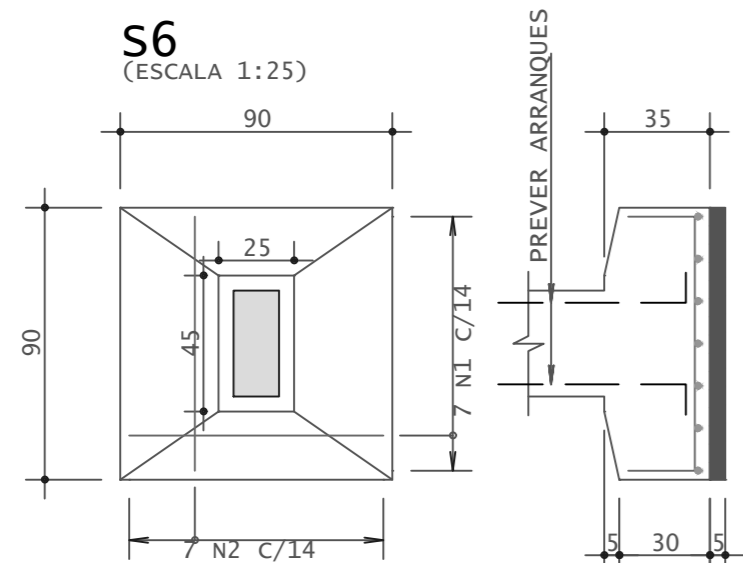
22  
84  
7 N2 Ø 10 C/14 C=128

22  
84  
7 N2 Ø 10 C/14 C=128

22  
84  
7 N2 Ø 10 C/14 C=128

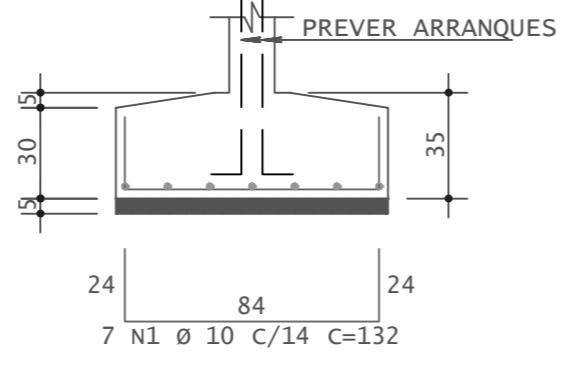
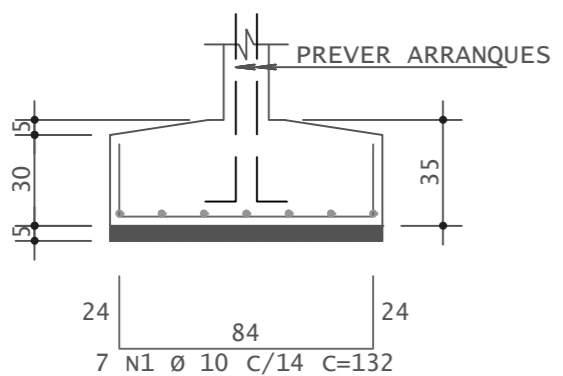
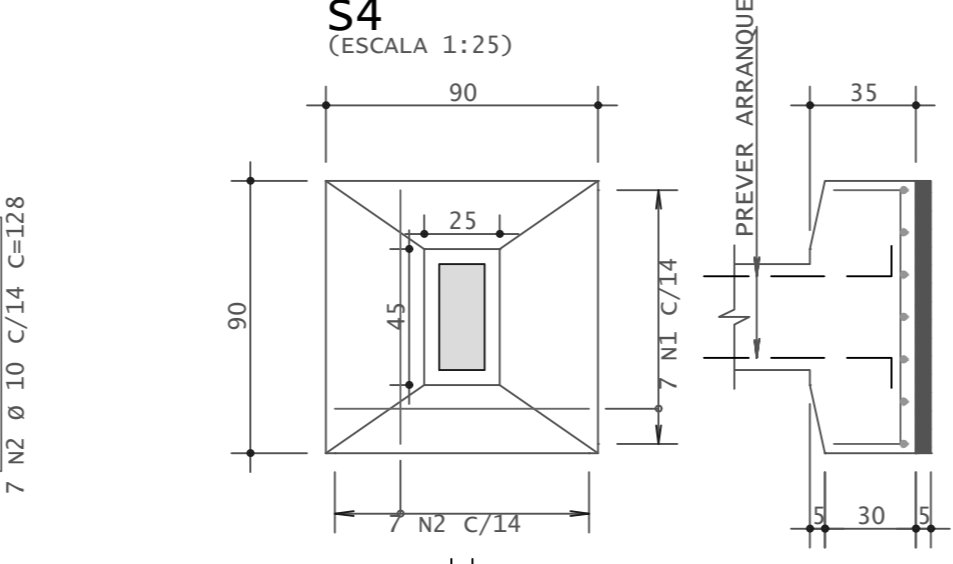
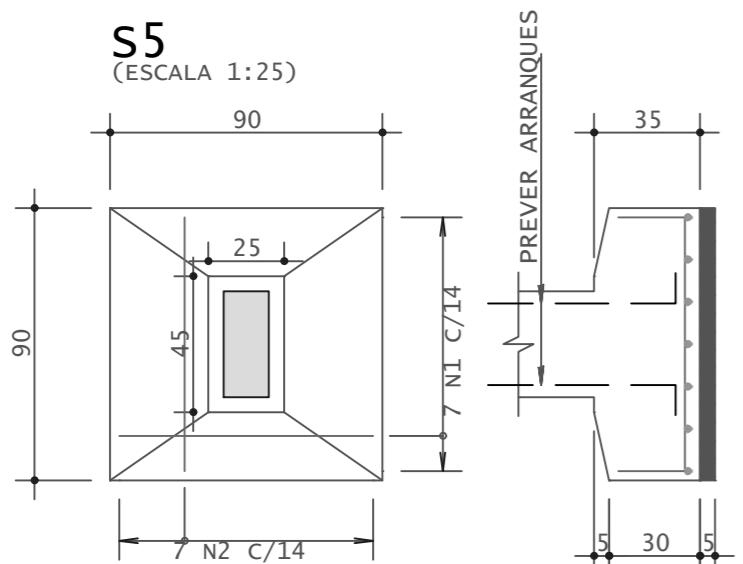
| AÇO | POS | BIT<br>mm | QUANT | COMPRIMENTO |             |     |
|-----|-----|-----------|-------|-------------|-------------|-----|
|     |     |           |       | UNIT<br>cm  | TOTAL<br>cm |     |
| S1  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S2  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S3  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S4  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S5  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S6  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |
| S7  | 50A | 1         | 10    | 7           | 132         | 924 |
|     | 50A | 2         | 10    | 7           | 128         | 896 |

| RESUMO DE AÇO |           |            |             |
|---------------|-----------|------------|-------------|
| AÇO           | BIT<br>mm | COMPR<br>m | PESO<br>kgf |
| 50A           | 10        | 127        | 79          |
| Peso Total    |           | 50A =      | 79 kgf      |



22  
84  
7 N2 Ø 10 C/14 C=128

22  
84  
7 N2 Ø 10 C/14 C=128



22  
84  
7 N2 Ø 10 C/14 C=128

22  
84  
7 N2 Ø 10 C/14 C=128



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## AMPLIAÇÃO CENTRO EDUCACIONAL - RAMPA DE ACESSO

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE CANHOTINHO  
MUNICÍPIO: CANHOTINHO - PE  
CNPJ: 10.132.777/0001-63  
RESPONSÁVEL TÉCNICO: GUSTAVO KLEMMER FERREIRA DE FRANÇA

PROPRIETÁRIO

Gustavo Klemmer F. França  
Engenheiro Civil  
CREA-PE 18197/23445

RESPONSÁVEL TÉCNICO

## DETALHAMENTO DAS FUNDAÇÕES

ÁREAS DO PROJETO:

PRANCHA:

02/06

DESENHO: REV1

DATA: 20/12/2023

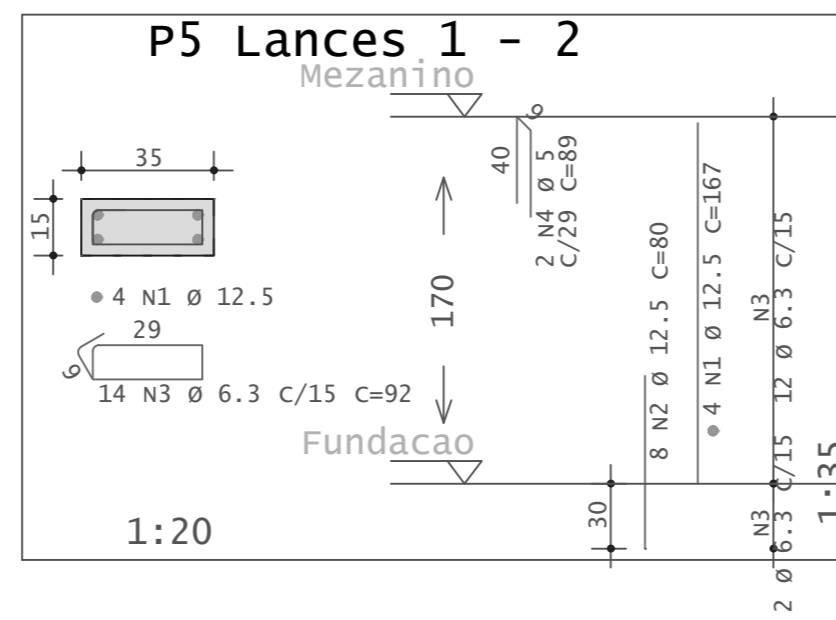
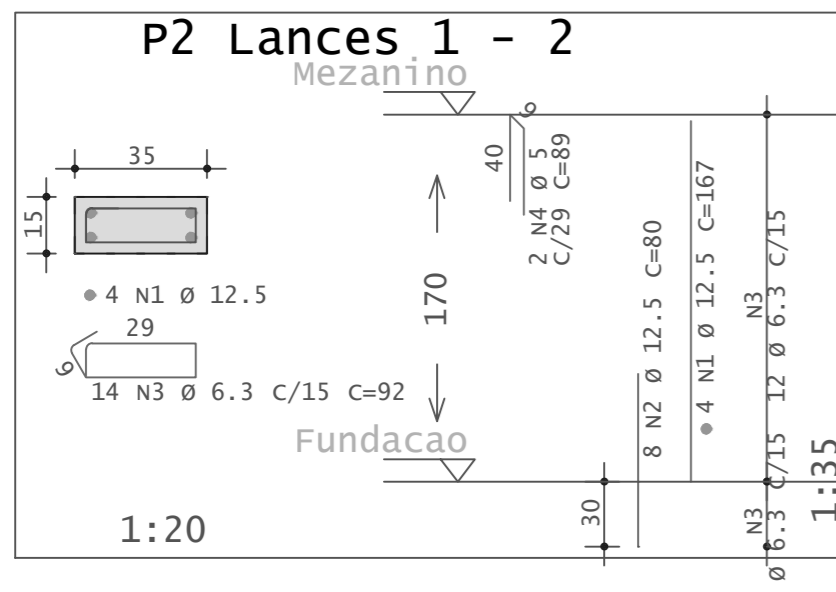
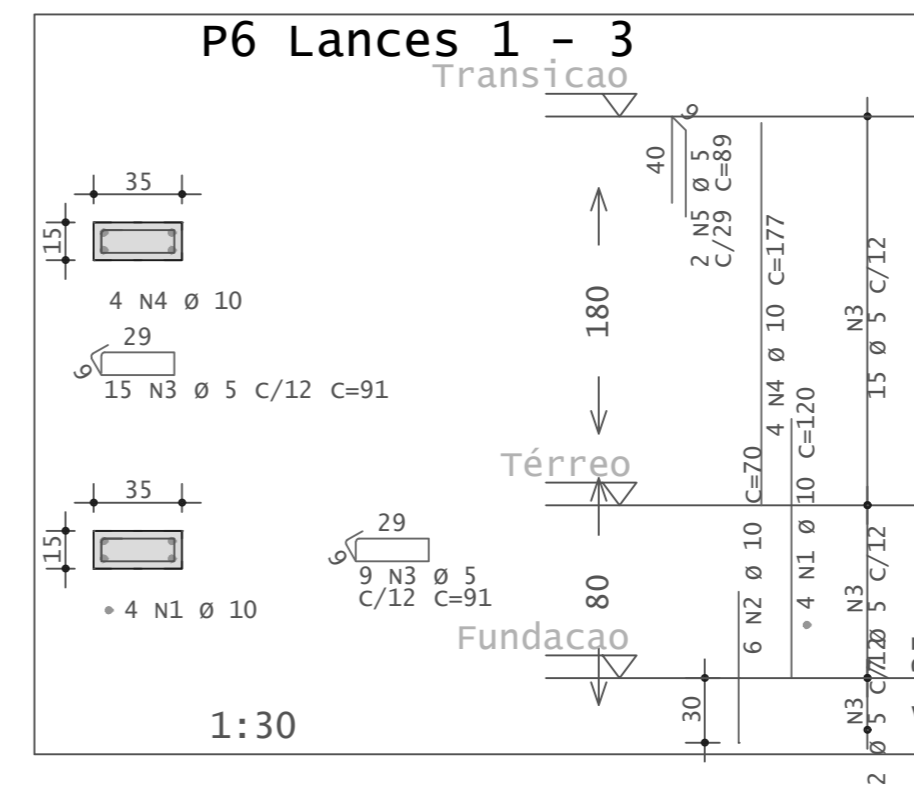
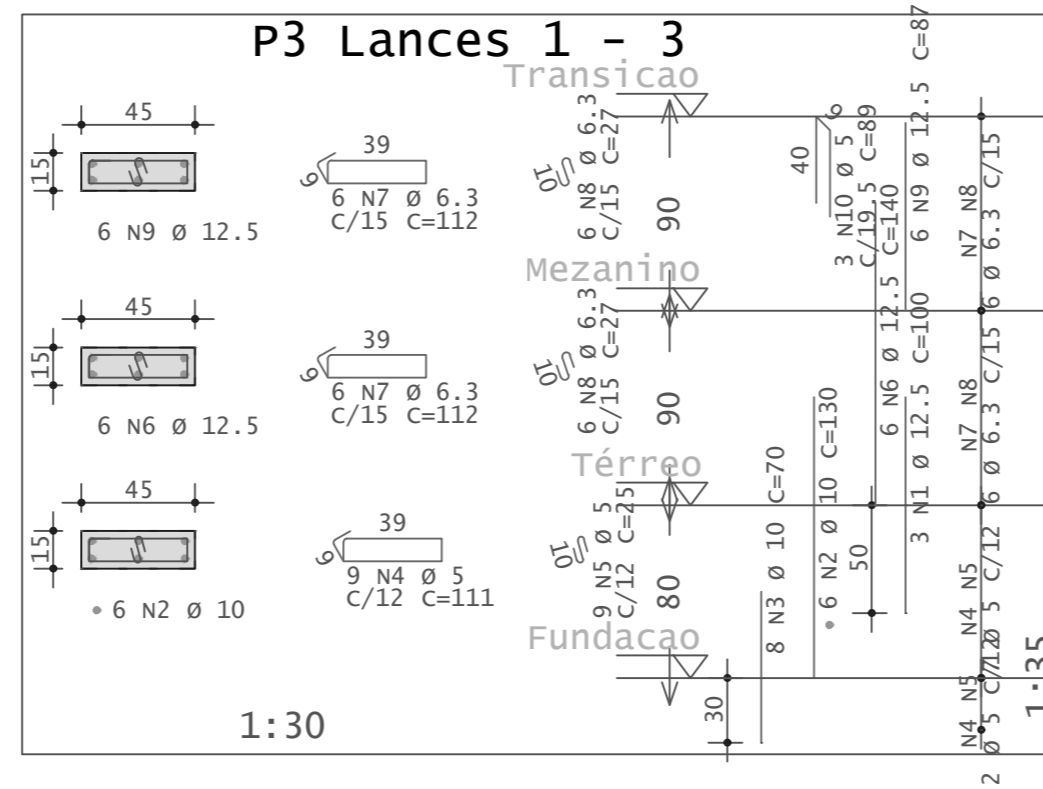
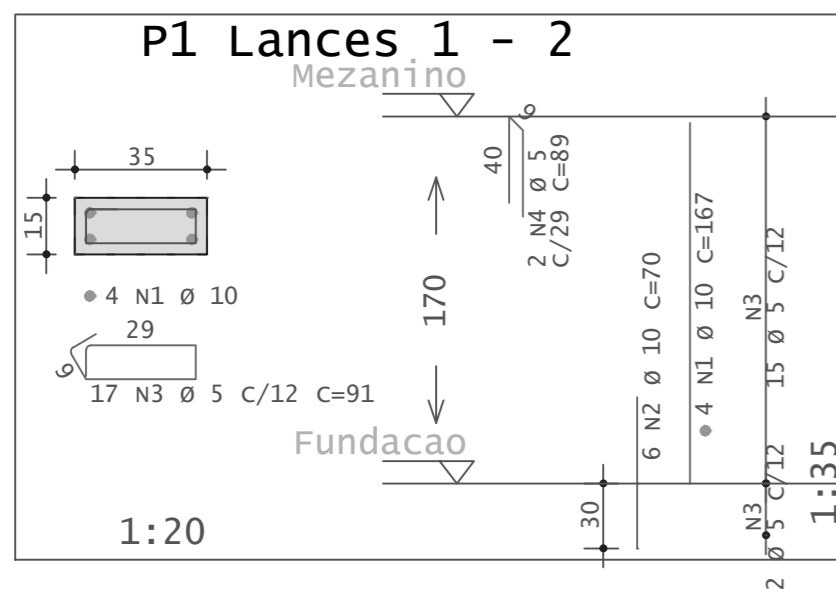
ESCALA: 1/50

FOLHA

A2

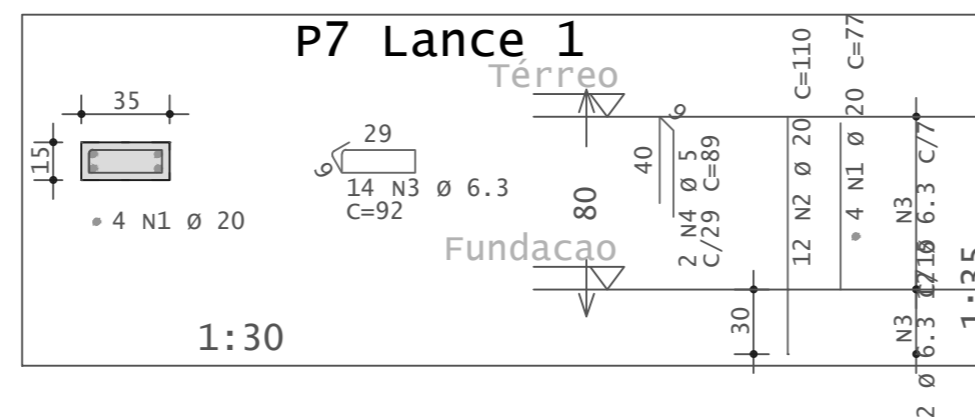
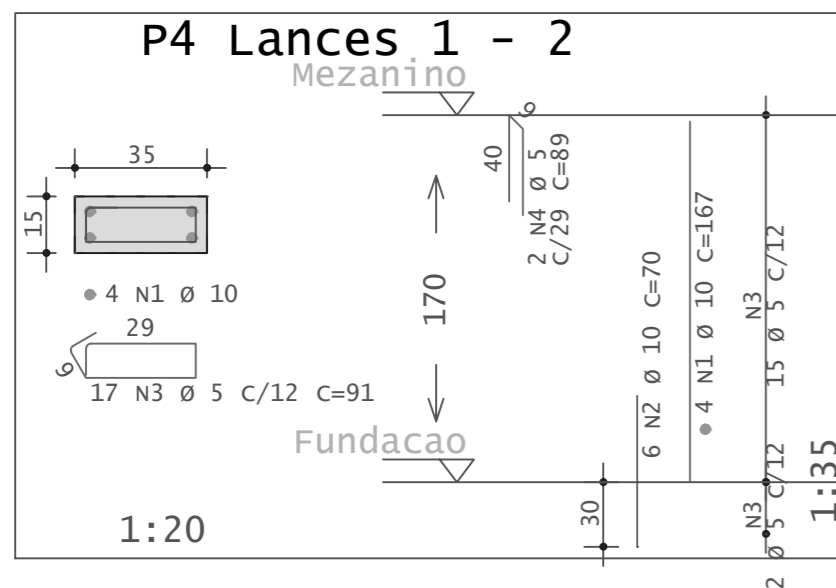






#### RESUMO DE AÇO

| AÇO               | BIT  | COMPR        | PESO           |
|-------------------|------|--------------|----------------|
|                   | mm   | m            | kgf            |
| 60A               | 5    | 78           | 12             |
| 50A               | 6.3  | 55           | 14             |
| 50A               | 10   | 51           | 32             |
| 50A               | 12.5 | 43           | 41             |
| 50A               | 20   | 16           | 40             |
| <b>Peso Total</b> |      | <b>60A =</b> | <b>12 kgf</b>  |
| <b>Peso Total</b> |      | <b>50A =</b> | <b>127 kgf</b> |



| AÇO                    | POS | BIT  | QUANT | COMPRIMENTO |       |
|------------------------|-----|------|-------|-------------|-------|
|                        |     |      |       | UNIT        | TOTAL |
|                        |     | mm   |       | cm          | cm    |
| <b>P1 Lances 1 - 2</b> |     |      |       |             |       |
| 50A                    | 1   | 10   | 4     | 167         | 668   |
| 50A                    | 2   | 10   | 6     | 70          | 420   |
| 60A                    | 3   | 5    | 17    | 91          | 1547  |
| 60A                    | 4   | 5    | 2     | 89          | 178   |
| <b>P2 Lances 1 - 2</b> |     |      |       |             |       |
| 50A                    | 1   | 12.5 | 4     | 167         | 668   |
| 50A                    | 2   | 12.5 | 8     | 80          | 640   |
| 50A                    | 3   | 6.3  | 14    | 92          | 1288  |
| 60A                    | 4   | 5    | 2     | 89          | 178   |
| <b>P3 Lances 1 - 3</b> |     |      |       |             |       |
| 50A                    | 1   | 12.5 | 3     | 100         | 300   |
| 50A                    | 2   | 10   | 6     | 130         | 780   |
| 50A                    | 3   | 10   | 8     | 70          | 560   |
| 60A                    | 4   | 5    | 9     | 111         | 999   |
| 60A                    | 5   | 5    | 9     | 25          | 225   |
| 50A                    | 6   | 12.5 | 6     | 140         | 840   |
| 50A                    | 7   | 6.3  | 12    | 112         | 1344  |
| 50A                    | 8   | 6.3  | 12    | 27          | 324   |
| 50A                    | 9   | 12.5 | 6     | 87          | 522   |
| 60A                    | 10  | 5    | 3     | 89          | 267   |
| <b>P4 Lances 1 - 2</b> |     |      |       |             |       |
| 50A                    | 1   | 10   | 4     | 167         | 668   |
| 50A                    | 2   | 10   | 6     | 70          | 420   |
| 60A                    | 3   | 5    | 17    | 91          | 1547  |
| 60A                    | 4   | 5    | 2     | 89          | 178   |
| <b>P5 Lances 1 - 2</b> |     |      |       |             |       |
| 50A                    | 1   | 12.5 | 4     | 167         | 668   |
| 50A                    | 2   | 12.5 | 8     | 80          | 640   |
| 50A                    | 3   | 6.3  | 14    | 92          | 1288  |
| 60A                    | 4   | 5    | 2     | 89          | 178   |
| <b>P6 Lances 1 - 3</b> |     |      |       |             |       |
| 50A                    | 1   | 10   | 4     | 120         | 480   |
| 50A                    | 2   | 10   | 6     | 70          | 420   |
| 60A                    | 3   | 5    | 24    | 91          | 2184  |
| 50A                    | 4   | 10   | 4     | 177         | 708   |
| 60A                    | 5   | 5    | 2     | 89          | 178   |
| <b>P7 Lance 1</b>      |     |      |       |             |       |
| 50A                    | 1   | 20   | 4     | 77          | 308   |
| 50A                    | 2   | 20   | 12    | 110         | 1320  |
| 50A                    | 3   | 6.3  | 14    | 92          | 1288  |
| 60A                    | 4   | 5    | 2     | 89          | 178   |



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## AMPLIAÇÃO CENTRO EDUCACIONAL - RAMPA DE ACESSO

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE CANHOTINHO MUNICÍPIO: CANHOTINHO - PE  
 CNPJ: 10.132.777/0001-63  
 RESPONSÁVEL TÉCNICO: GUSTAVO KLEMMER FERREIRA DE FRANÇA

PROPRIETÁRIO

Gustavo Klemmer F. França  
 Engenheiro Civil  
 CREA-PE 1819723445

RESPONSÁVEL TÉCNICO

## DETALHAMENTO DOS PILARES

ÁREAS DO PROJETO:

PRANCHA:

03/06

DESENHO: REV1

DATA: 20/12/2023

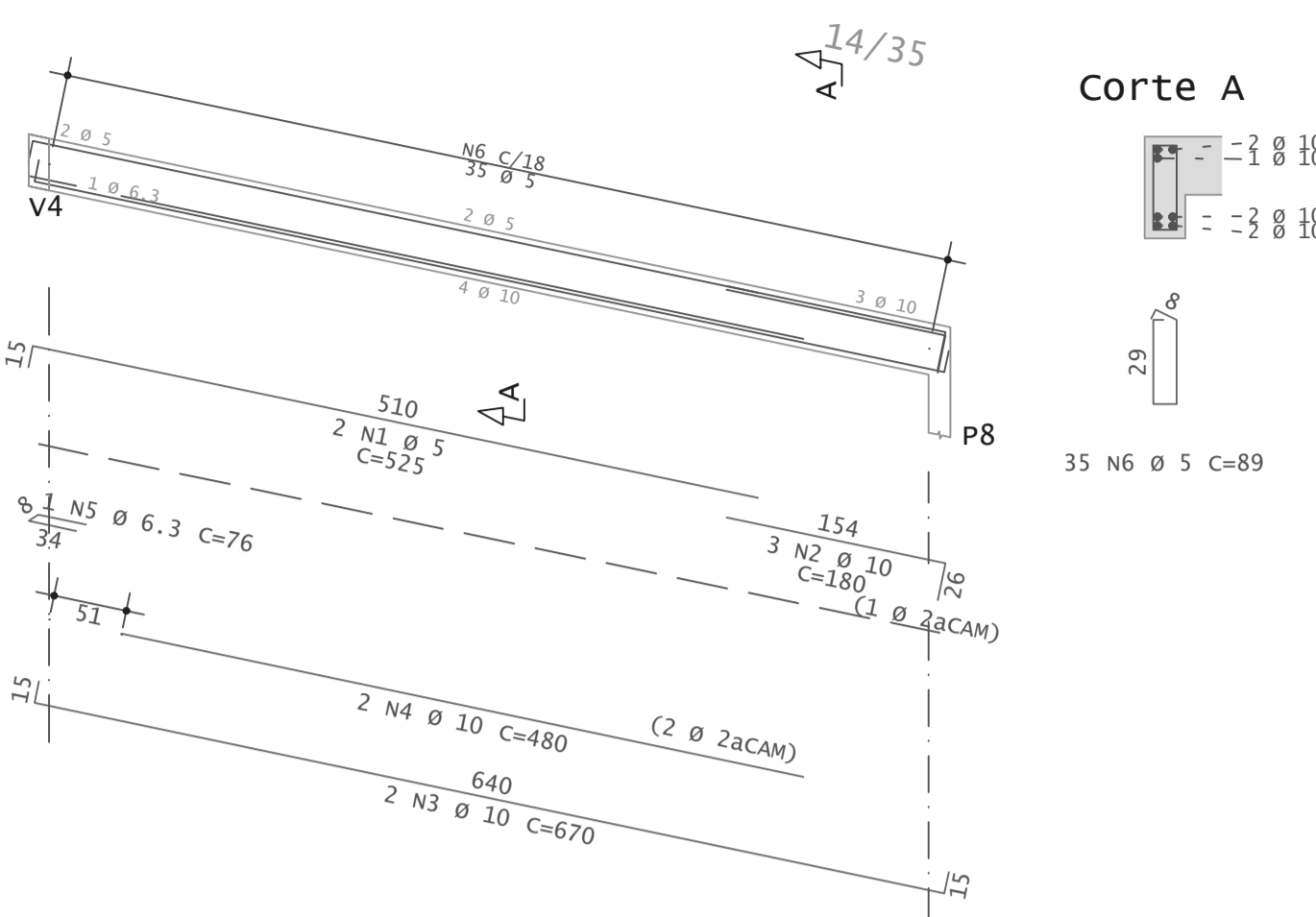
ESCALA: 1/50

FOLHA

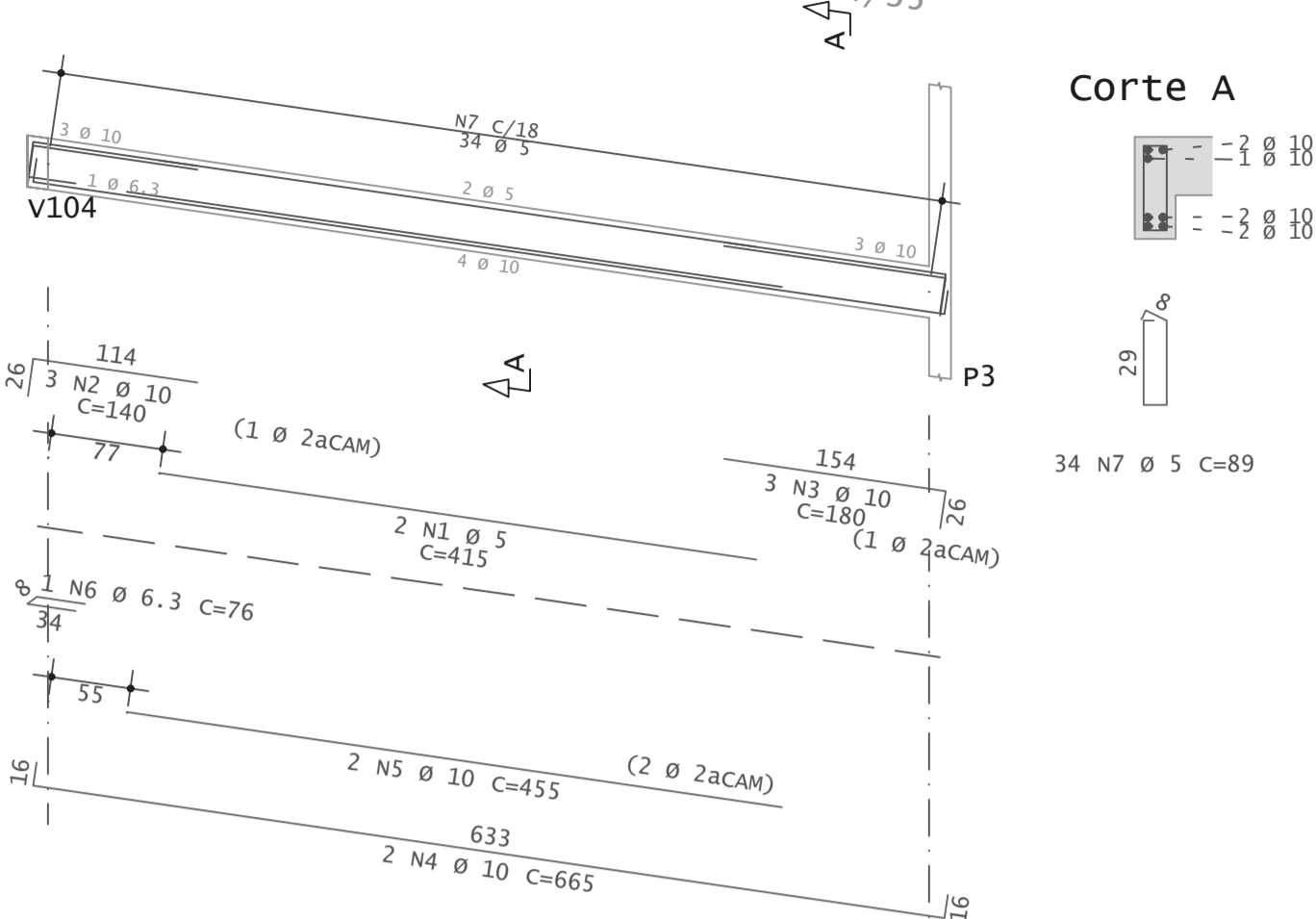
A2



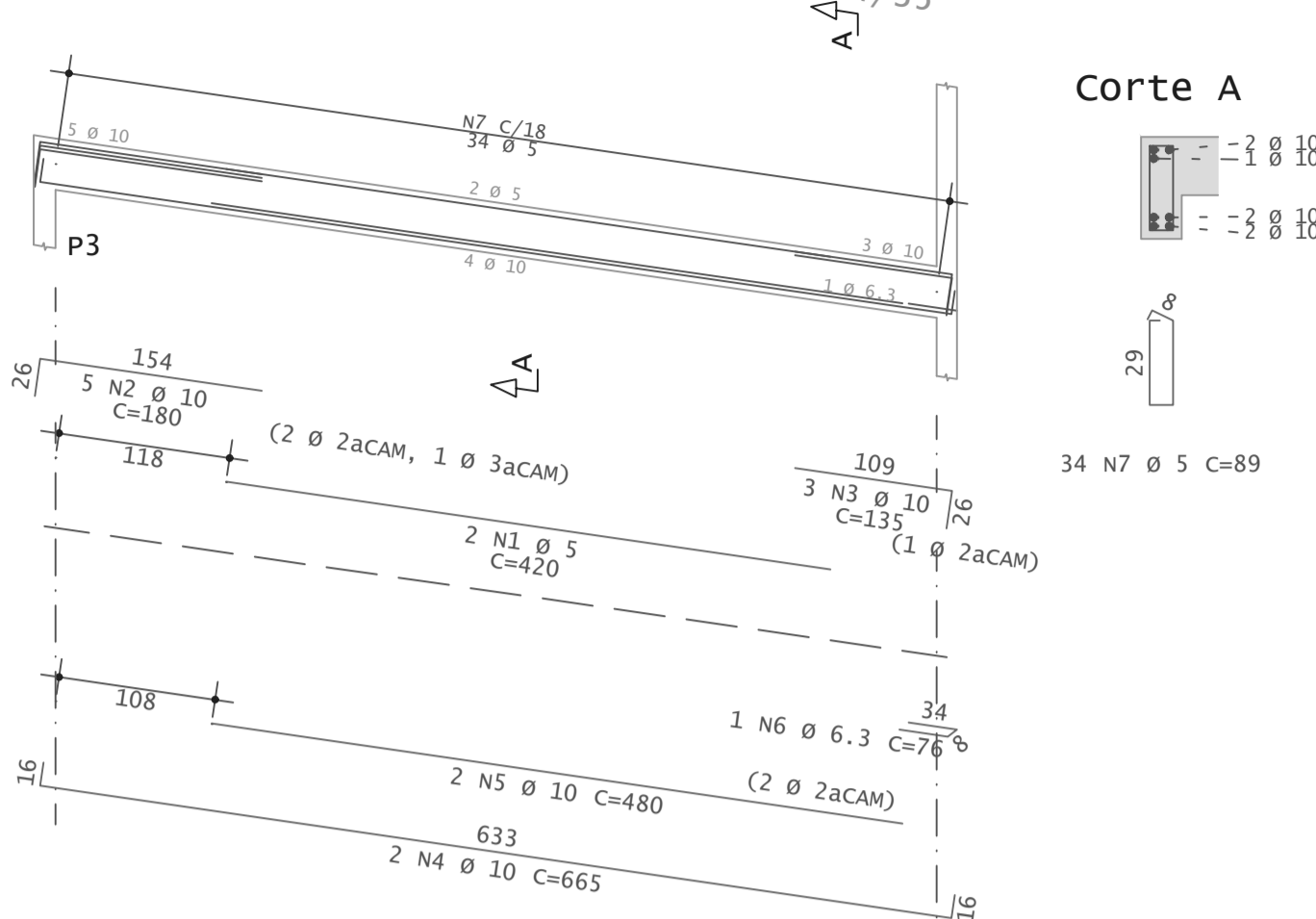
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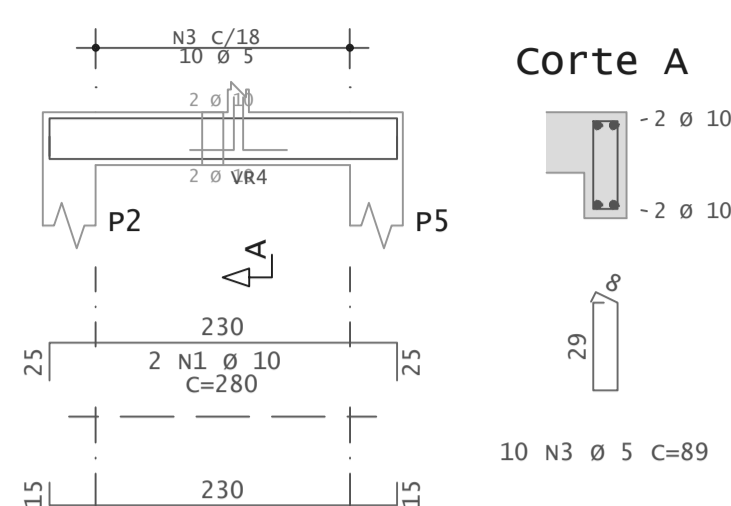
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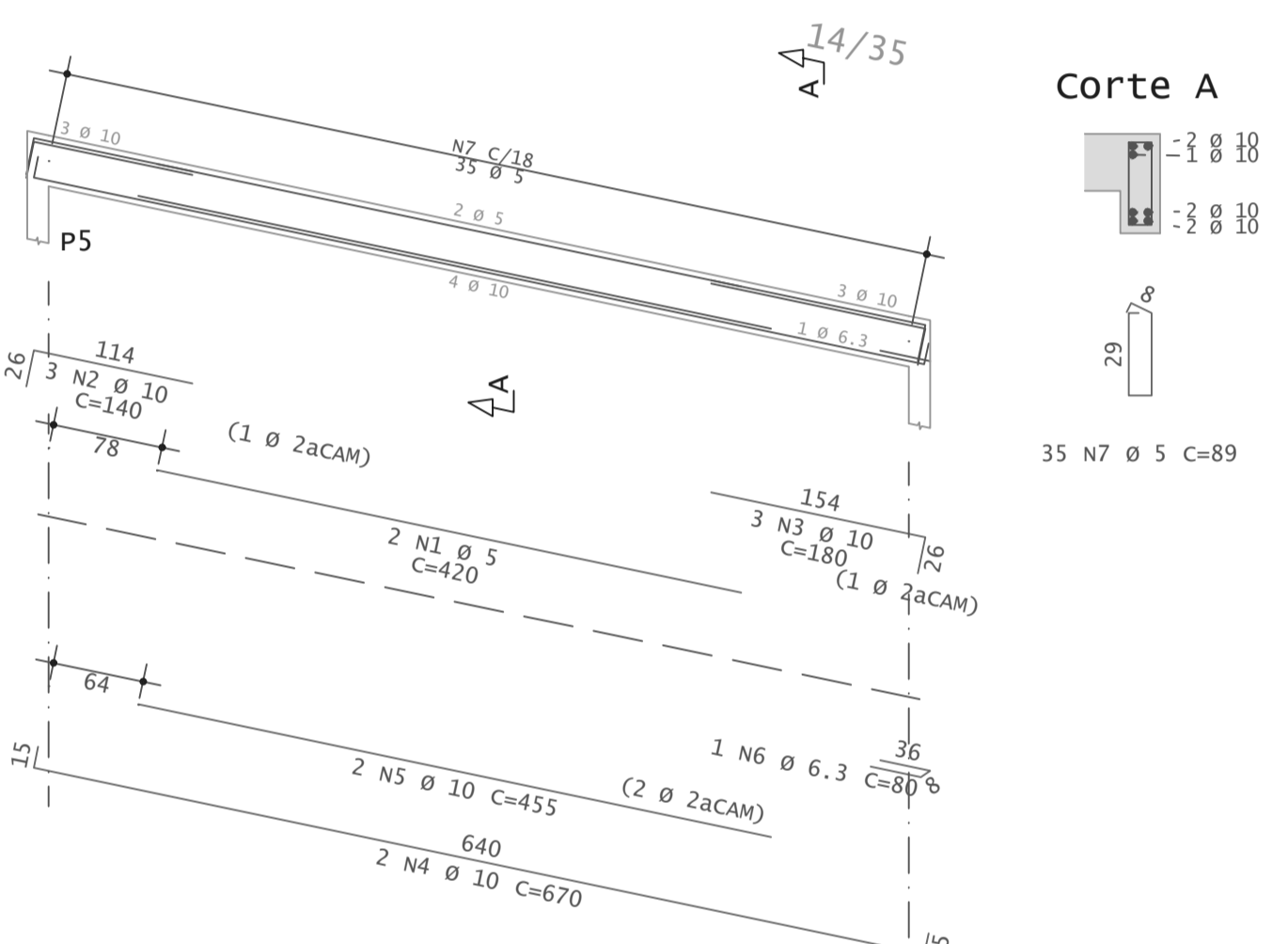
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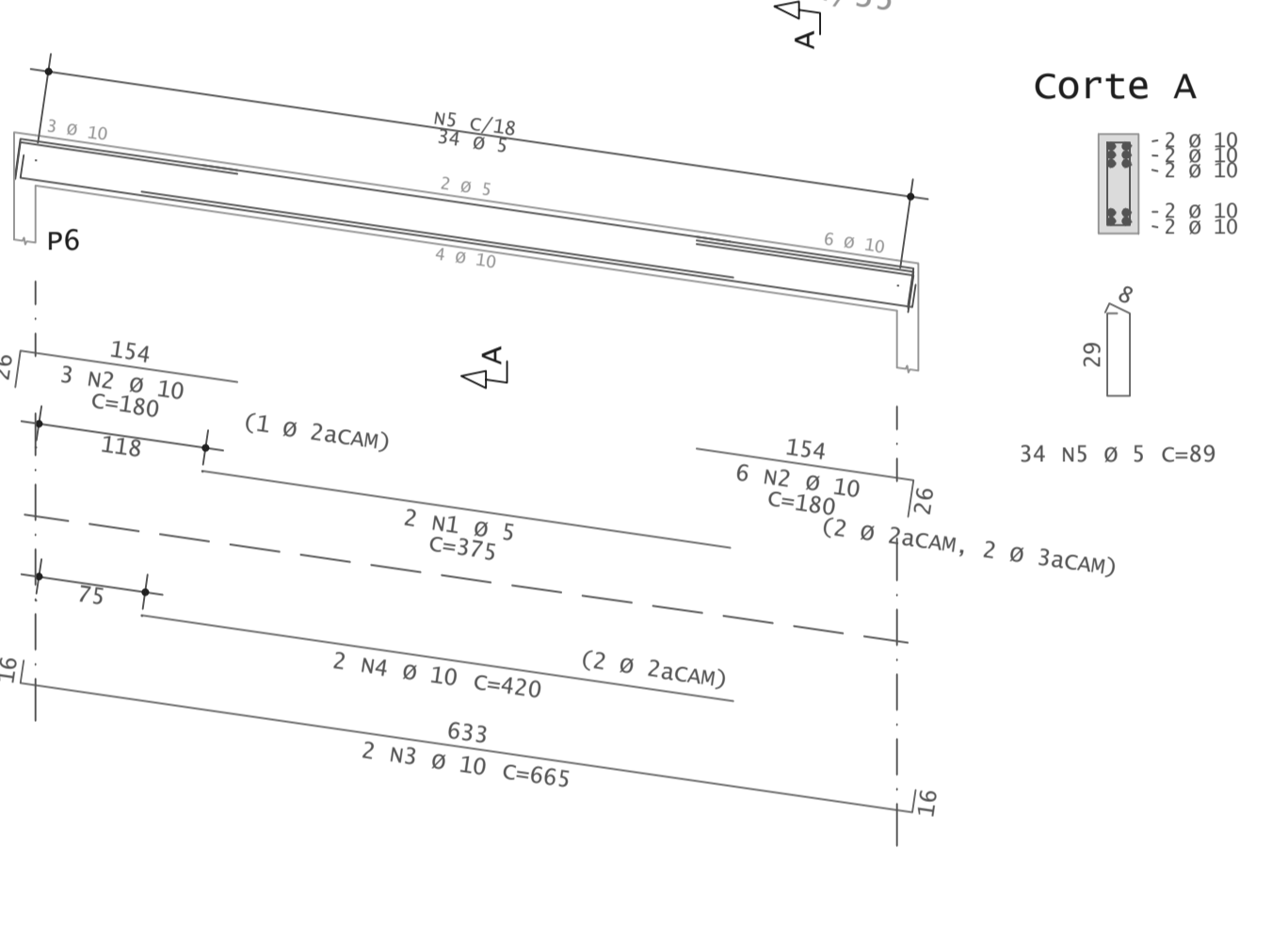
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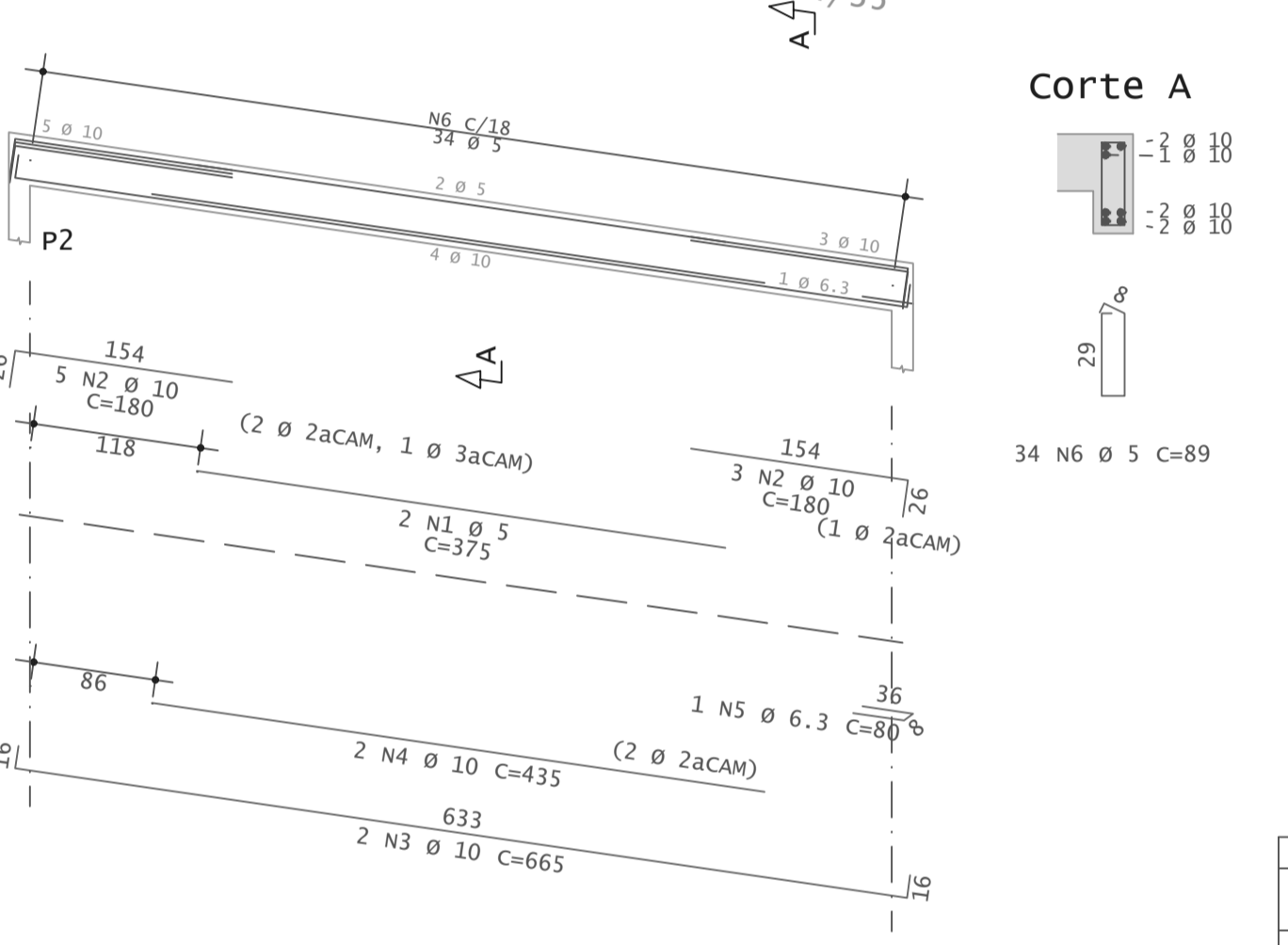
### VR1



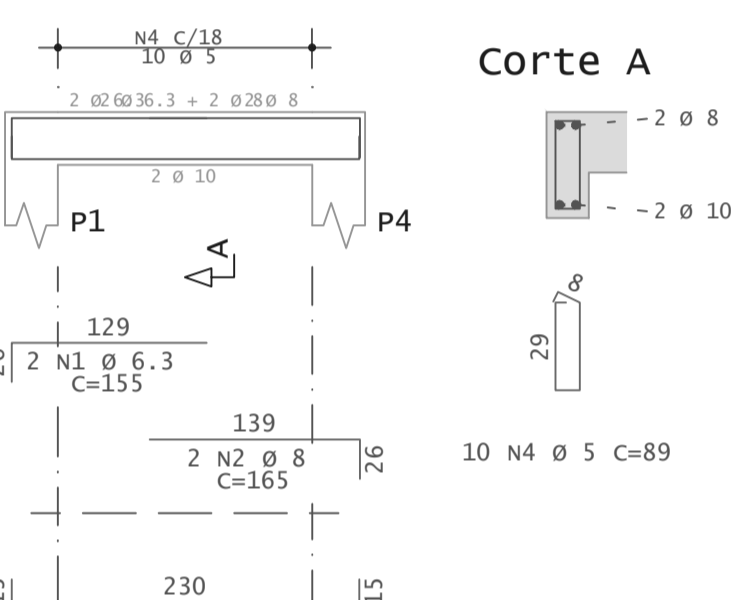
### VR1



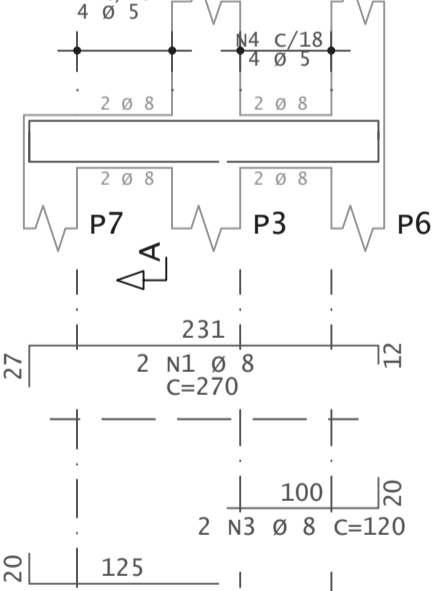
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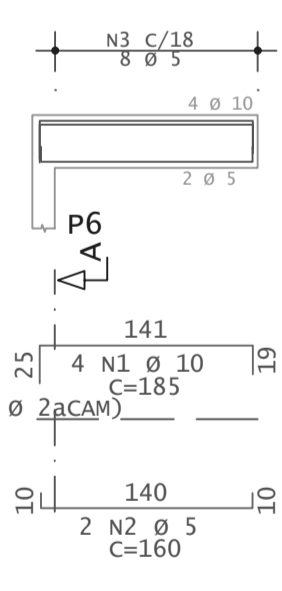
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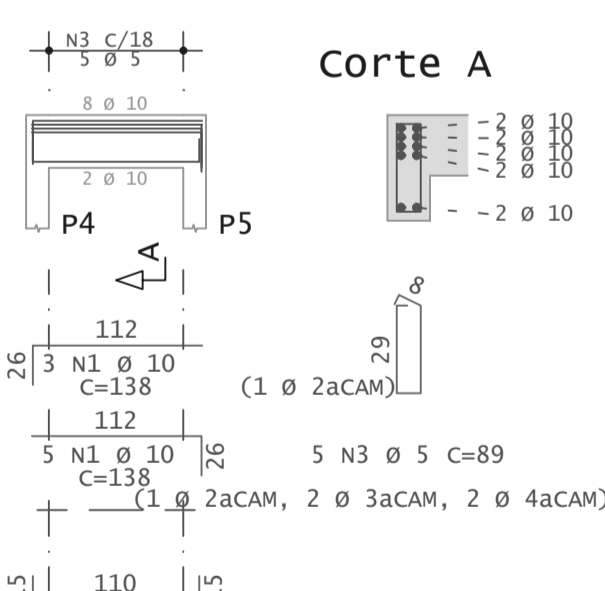
### V1



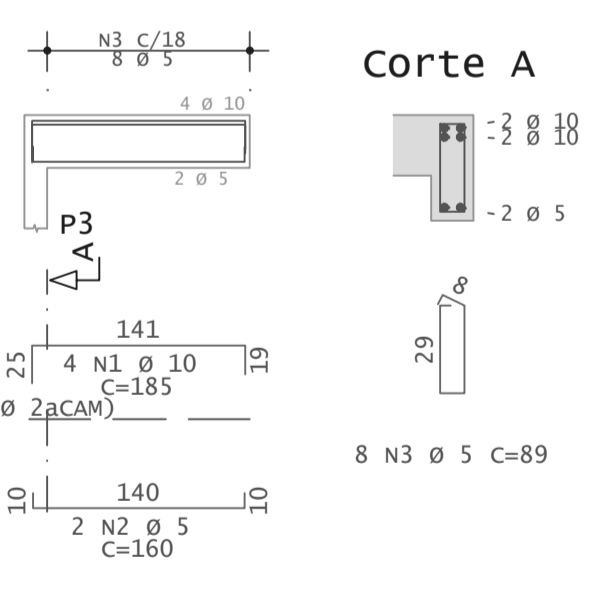
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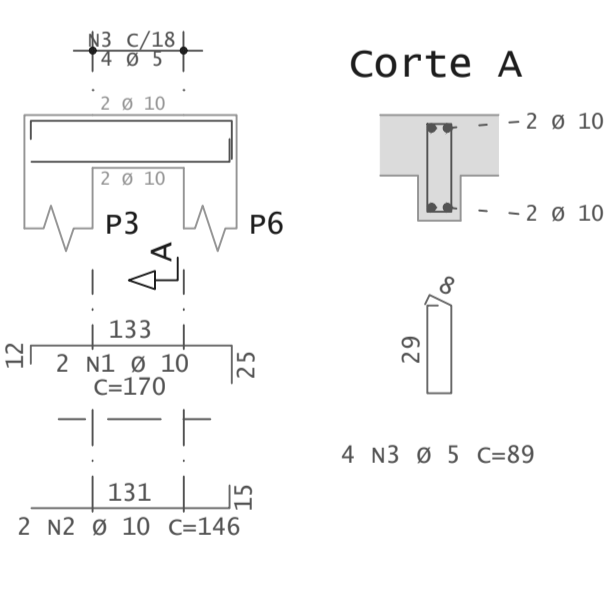
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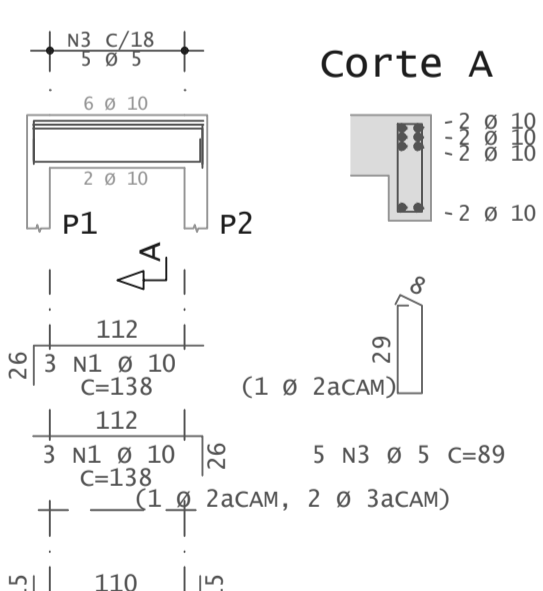
### V201



### V203



### V101



| RESUMO DE AÇO |     |       |         |
|---------------|-----|-------|---------|
| AÇO           | BIT | COMPR | PESO    |
|               | mm  | m     | kgf     |
| 60A           | 5   | 292   | 45      |
| 50A           | 6.3 | 7     | 2       |
| 50A           | 8   | 14    | 6       |
| 50A           | 10  | 265   | 163     |
| Peso Total    |     | 60A = | 45 kgf  |
| Peso Total    |     | 50A = | 171 kgf |

|      | AÇO | POS | BIT | QUANT | COMPRIMENTO |       |
|------|-----|-----|-----|-------|-------------|-------|
|      |     |     |     |       | UNIT        | TOTAL |
|      |     |     | mm  |       | cm          | cm    |
| V1   | 50A | 1   | 8   | 2     | 270         | 540   |
|      | 50A | 2   | 8   | 2     | 145         | 290   |
|      | 50A | 3   | 8   | 2     | 120         | 240   |
|      | 60A | 4   | 5   | 8     | 89          | 712   |
| V101 | 50A | 1   | 10  | 6     | 138         | 828   |
|      | 60A | 2   | 5   | 2     | 140         | 280   |
| V102 | 50A | 1   | 10  | 8     | 138         | 1104  |
|      | 60A | 3   | 5   | 2     | 140         | 280   |
| V103 | 50A | 1   | 6.3 | 2     | 155         | 310   |
|      | 50A | 2   | 10  | 2     | 165         | 330   |
|      | 50A | 3   | 5   | 2     | 260         | 520   |
|      | 60A | 4   | 5   | 10    | 89          | 890   |
| V104 | 50A | 1   | 10  | 2     | 280         | 560   |
|      | 60A | 2   | 5   | 10    | 260         | 520   |
| V201 | 50A | 1   | 10  | 4     | 185         | 740   |
|      | 60A | 2   | 5   | 2     | 160         | 320   |
|      | 60A | 3   | 5   | 8     | 89          | 712   |
| V202 | 50A | 1   | 10  | 4     | 185         | 740   |
|      | 60A | 2   | 5   | 2     | 160         | 320   |
| V203 | 50A | 1   | 10  | 2     | 170         | 340   |
|      | 60A | 2   | 5   | 4     | 146         | 292   |
| VR1  | 60A | 1   | 5   | 2     | 375         | 750   |
|      | 50A | 2   | 10  | 9     | 180         | 1620  |
|      | 50A | 3   | 10  | 2     | 665         | 1330  |
|      | 50A | 4   | 10  | 2     | 420         | 840   |
|      | 60A | 5   | 5   | 34    | 89          | 3026  |
| VR2  | 60A | 1   | 5   | 2     | 525         | 1050  |
|      | 50A | 2   | 10  | 3     | 180         | 540   |
|      | 50A | 3   | 10  | 2     | 670         | 1340  |
|      | 50A | 4   | 10  | 2     | 480         | 960   |
|      | 50A | 5   | 6.3 | 1     | 76          | 76    |
|      | 60A | 6   | 5   | 35    | 89          | 3115  |
|      | 60A | 7   | 5   | 35    | 89          | 3115  |
| VR3  | 60A | 1   | 5   | 2     | 420         | 840   |
|      | 50A | 2   | 10  | 5     | 180         | 900   |
|      | 50A | 3   | 10  | 3     | 135         | 405   |
|      | 50A | 4   | 10  | 2     | 665         | 1330  |
|      | 50A | 5   | 10  | 2     | 480         | 960   |
|      | 50A | 6   | 6.3 | 1     | 76          | 76    |
|      | 60A | 7   | 5   | 34    | 89          | 3026  |
| VR4  | 60A | 1   | 5   | 2     | 375         | 750   |
|      | 50A | 2   | 10  | 8     | 180         | 1440  |
|      | 50A | 3   | 10  | 2     | 665         | 1330  |
|      | 50A | 4   | 10  | 2     | 435         | 870   |
|      | 50A | 5   | 6.3 | 1     | 80          | 80    |
|      | 60A | 6   | 5   | 34    | 89          | 3026  |
|      | 60A | 7   | 5   | 34    | 89          | 3026  |



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---

**AMPLIAÇÃO CENTRO EDUCACIONAL - RAMPA DE ACESSO**

---

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE CANHOTINHO      MUNICÍPIO: CANHOTINHO - PE  
CNPJ: 10.132.777/0001-63  
RESPONSÁVEL TÉCNICO: GUSTAVO KLEMMER FERREIRA DE FRANÇA

---

PROPRIETÁRIO: Gustavo Klemmer F. França  
Engenheiro Civil  
RESPONSÁVEL TÉCNICO: CREA-PE 1819723445

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**DETALHAMENTO DAS VIGAS**

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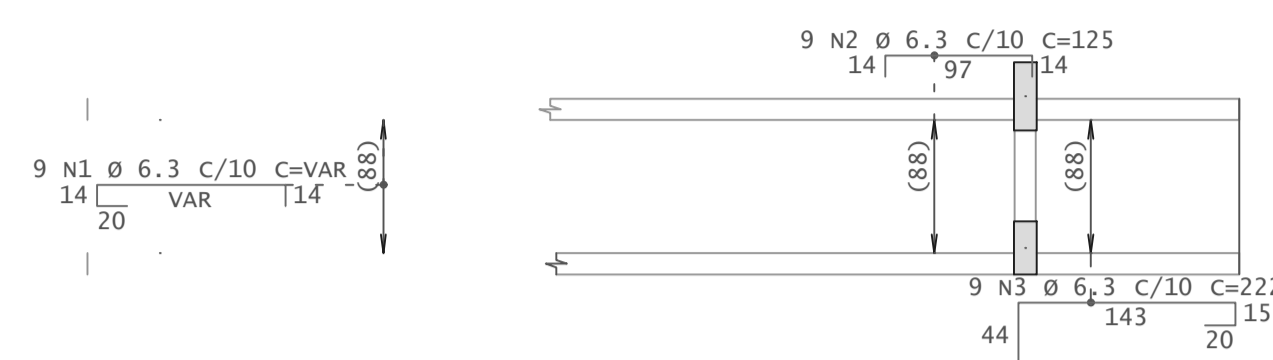
|   |                       |
|---|-----------------------|
| ÁREAS DO PROJETO:                                     | PRANCHA: <b>04/06</b> |
| DESENHO: REV1      DATA: 20/12/2023      ESCALA: 1/50 | FOLHA: <b>A1</b>      |

PORTAL DA TRANSPARÊNCIA  
 acessado em: 01/01/2025 às 10:02:00  
 URL: https://www.transparencia.municipalcanhotinho1-20240303122020.pdf

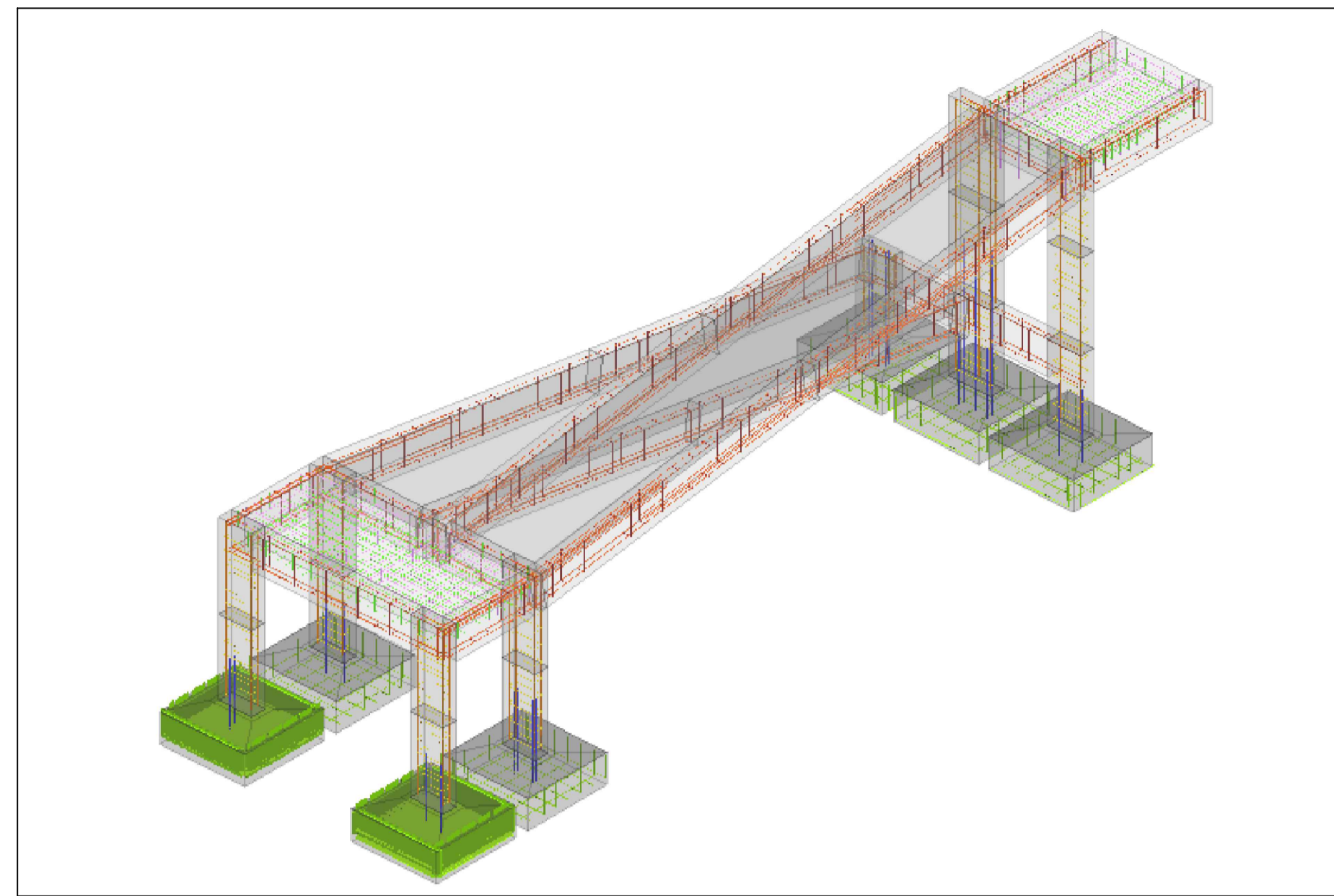
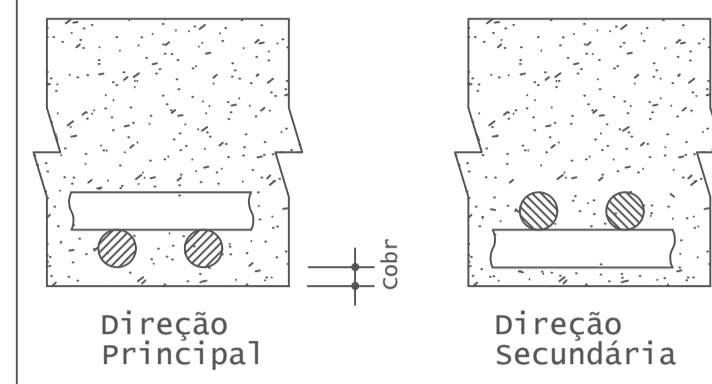


## Topo do Patamar - Armadura negativa principal

1X



Detalhe genérico do alojamento de armaduras positivas

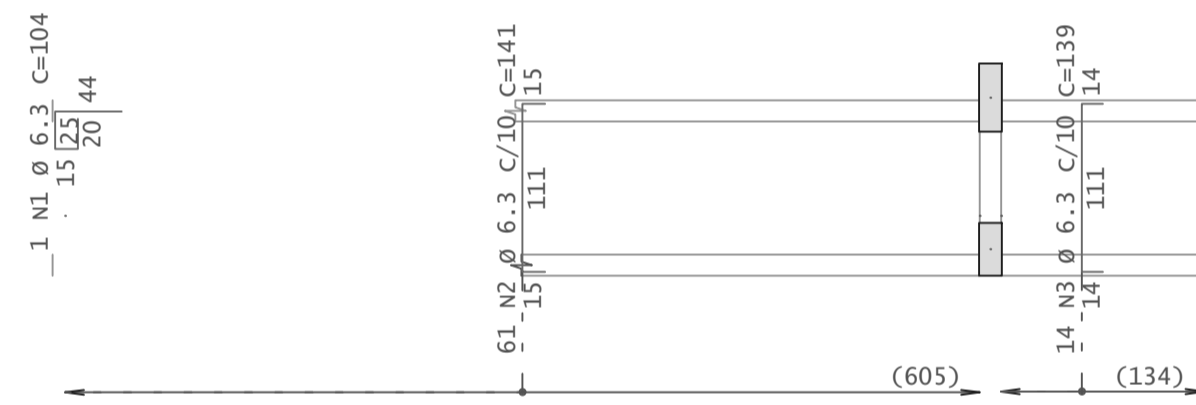


| AÇO  | POS | BIT | QUANT | COMPRIMENTO |       |
|--|-----|-----|-------|-------------|-------|
|  |     |     |       | UNIT        | TOTAL |
|  |     | mm  |       | cm          | cm    |
| Topo do Patamar - Armadura negativa principal  |     |     |       |             |       |
| 50A  | 1   | 6.3 | 9     | --VAR--     | 1557  |
| 50A  | 2   | 6.3 | 9     | 125         | 1125  |
| 50A  | 3   | 6.3 | 9     | 222         | 1998  |
| 50A  | 4   | 5   | 1     | 1140        | 1140  |
| Topo do Patamar - Armadura negativa secundária |     |     |       |             |       |
| 50A  | 1   | 6.3 | 1     | 104         | 104   |
| 50A  | 2   | 6.3 | 61    | 141         | 8601  |
| 50A  | 3   | 6.3 | 14    | 139         | 1946  |
| Topo do Patamar - Armadura positiva principal  |     |     |       |             |       |
| 50A  | 1   | 6.3 | 9     | 138         | 1422  |
| 50A  | 2   | 6.3 | 1     | 55          | 55    |
| 50A  | 3   | 6.3 | 59    | 141         | 8319  |
| Topo do Patamar - Armadura positiva secundária |     |     |       |             |       |
| 50A  | 1   | 6.3 | 9     | --VAR--     | 5877  |
| 50A  | 2   | 6.3 | 14    | 139         | 1946  |

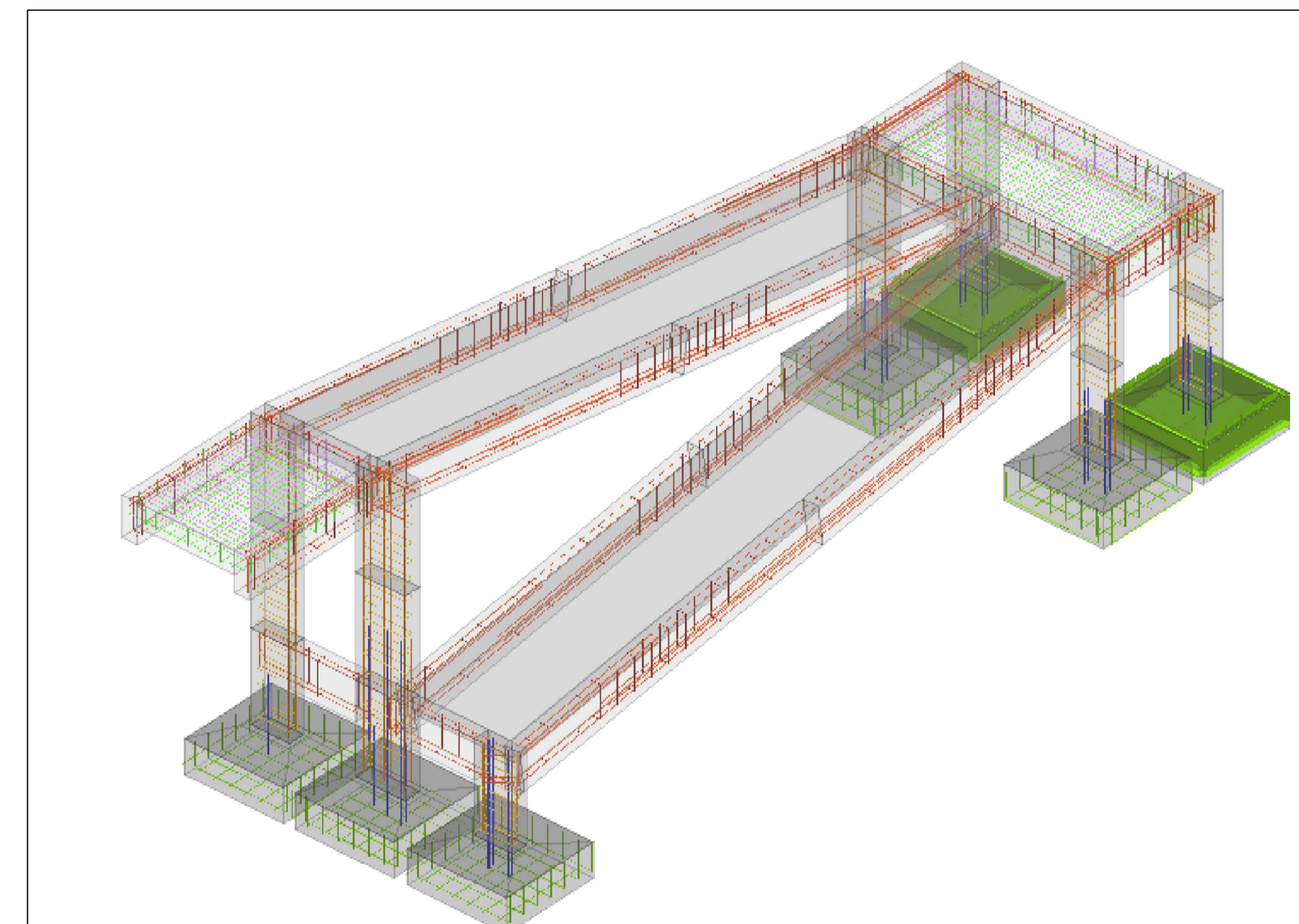
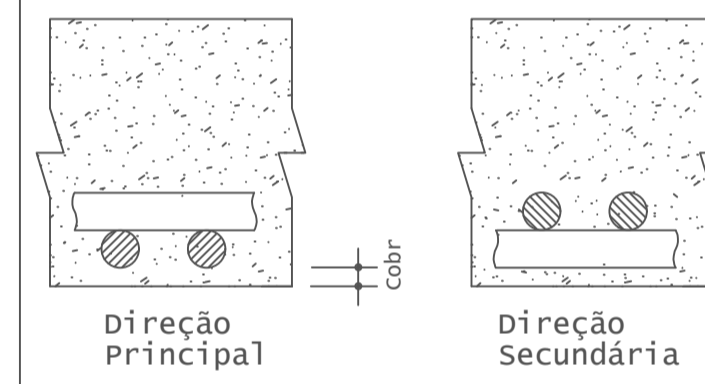
| RESUMO DE AÇO |     |       |        |
|---------------|-----|-------|--------|
| AÇO           | BIT | COMPR | PESO   |
|               |     | mm    | m      |
|               |     |       | kgf    |
| 60A           | 3   | 11    | 2      |
| 50A           | 6.3 | 330   | 81     |
| Peso Total    |     | 60A = | 2 kgf  |
| Peso Total    |     | 50A = | 81 kgf |

## Topo do Patamar - Armadura negativa secundaria

1X

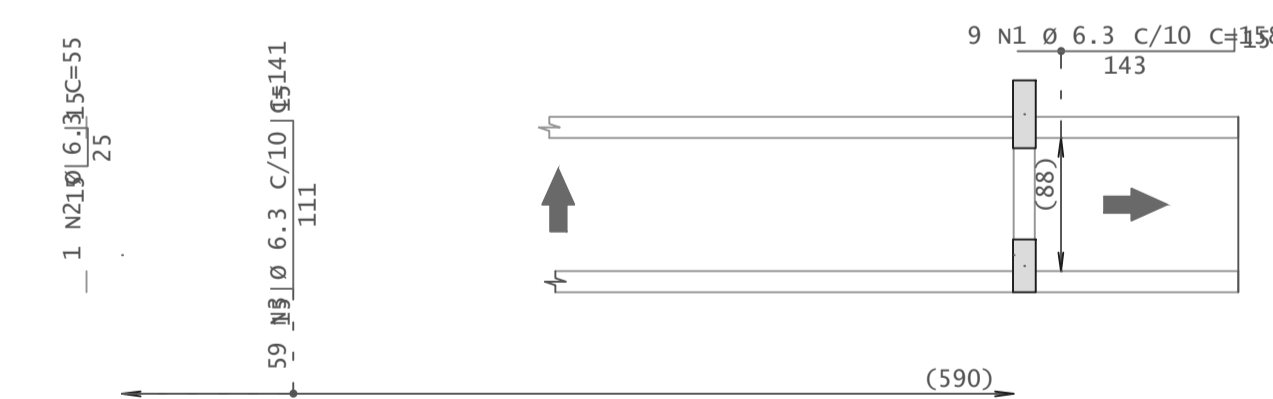


Detalhe genérico do alojamento de armaduras positivas

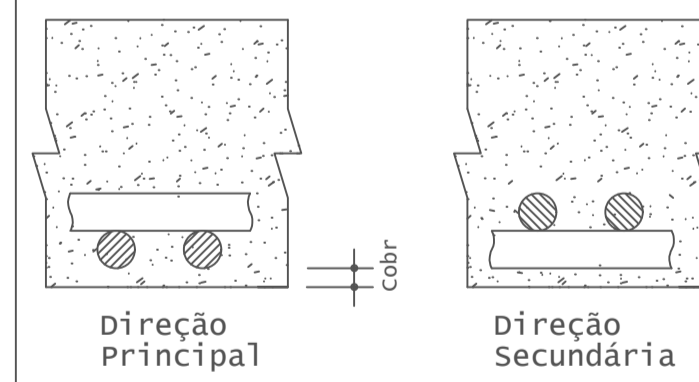


## Topo do Patamar - Armadura positiva principal

1X

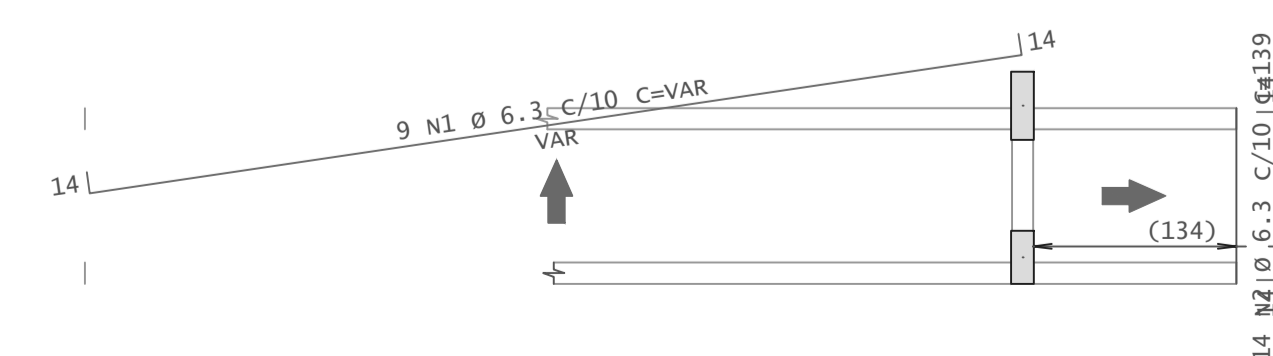


Detalhe genérico do alojamento de armaduras positivas

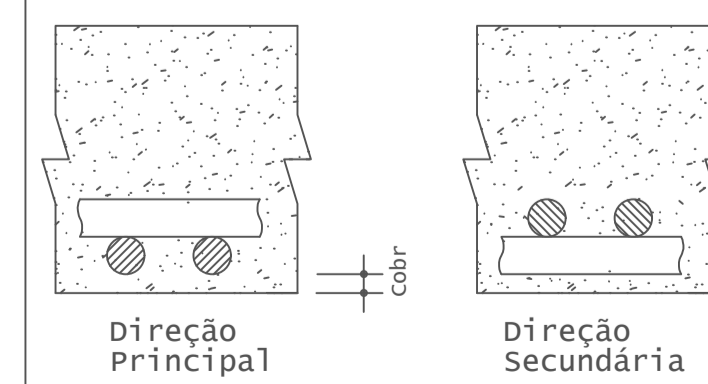


## Topo do Patamar - Armadura positiva secundaria

1X



Detalhe genérico do alojamento de armaduras positivas





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 • (87) 9.9918-9633  
 • @klemmer.engenharia  
 • klemmer.engenharia@gmail.com

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**AMPLIAÇÃO CENTRO EDUCACIONAL - RAMPA DE ACESSO**

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PROPRIETÁRIO: PREFEITURA MUNICIPAL DE CANHOTINHO      MUNICÍPIO: CANHOTINHO - PE  
 CNPJ: 10.132.777/0001-63  
 RESPONSÁVEL TÉCNICO: GUSTAVO KLEMMER FERREIRA DE FRANÇA

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PROPRIETÁRIO: Gustavo Klemmer F. França  
 Responsável Técnico: Gustavo Klemmer F. França  
 Responsável Técnico: CREA-PE 1819723445

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**DETALHAMENTO DAS LAJES - NÍVEL DE ACESSO**

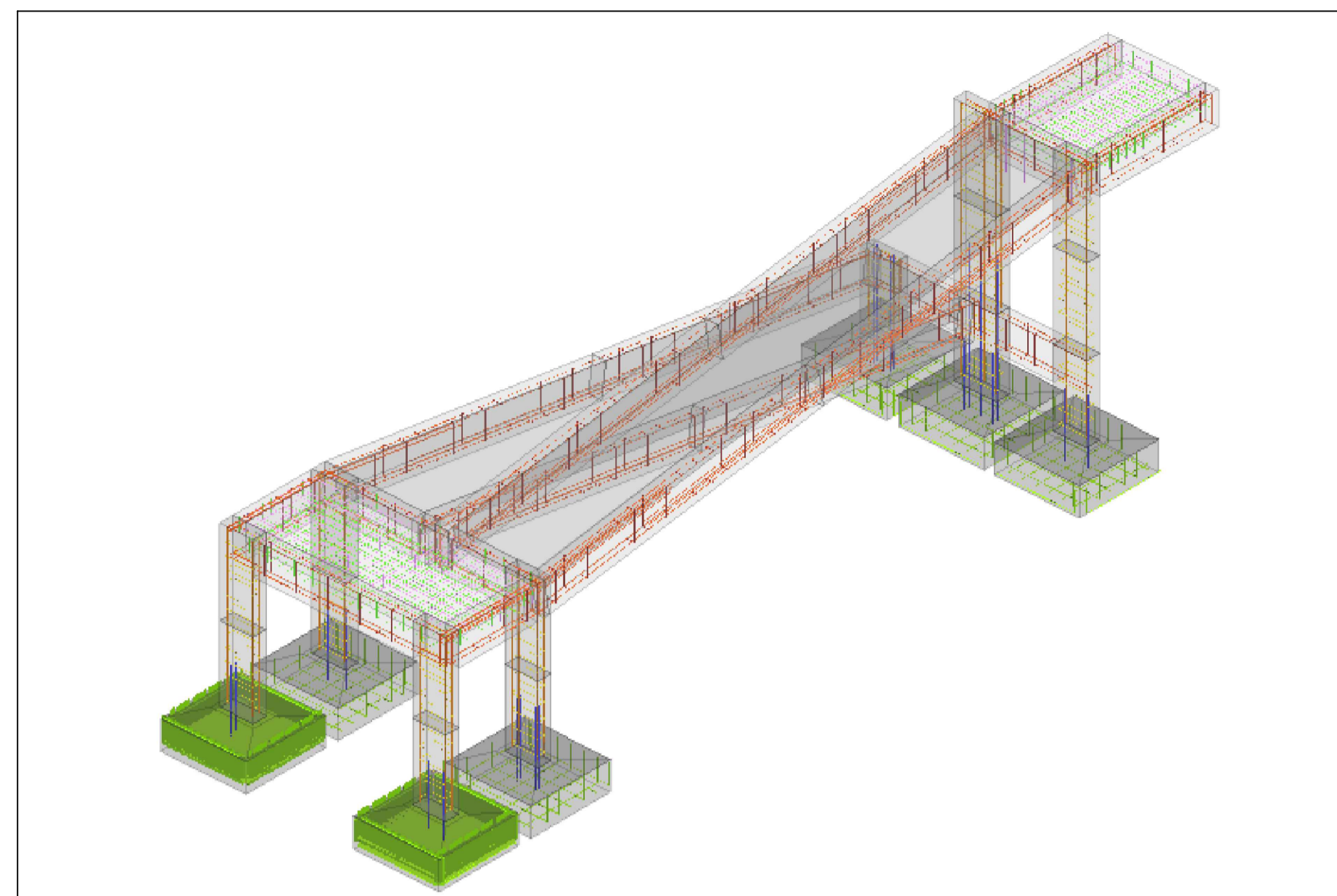
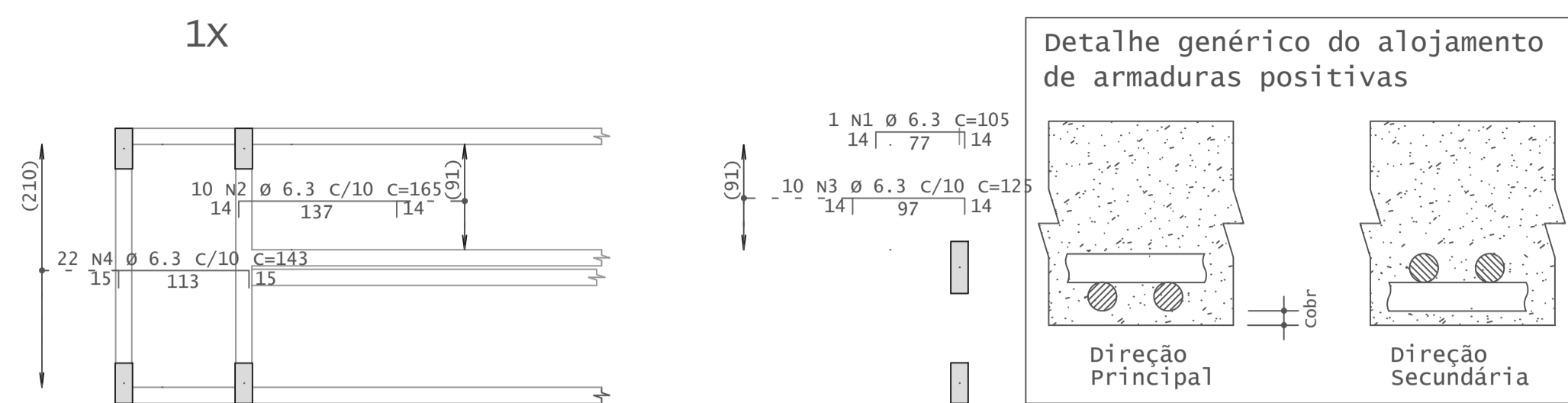
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|   |                    |
|---|--------------------|
| ÁREAS DO PROJETO:                                     | PRANCHA:           |
| DESENHO: REV1      DATA: 20/12/2023      ESCALA: 1/50 | <b>05/06</b>       |
|   | FOLHA<br><b>A1</b> |

PORTAL DA TRANSPARÊNCIA  
 assinado por: id:1868755



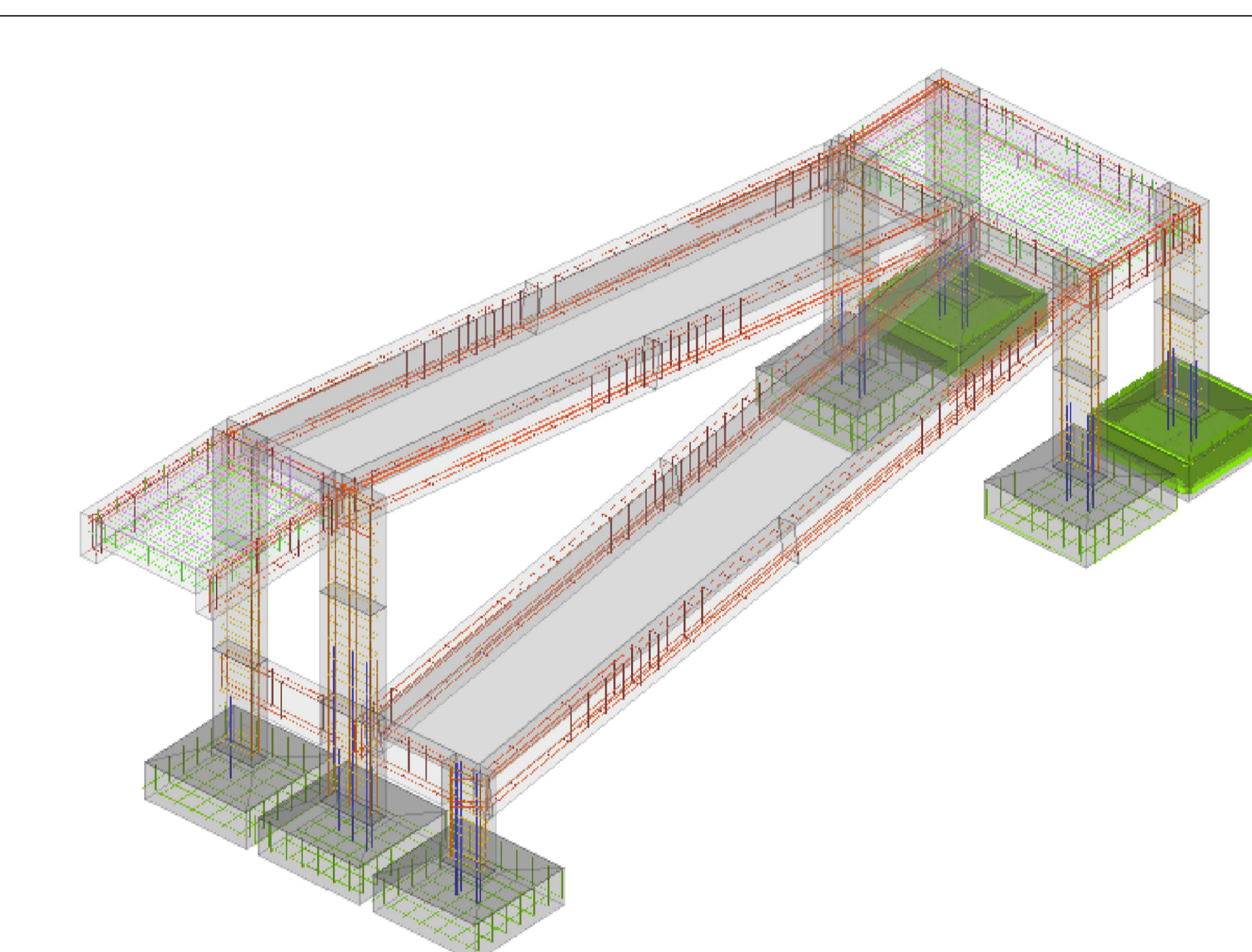
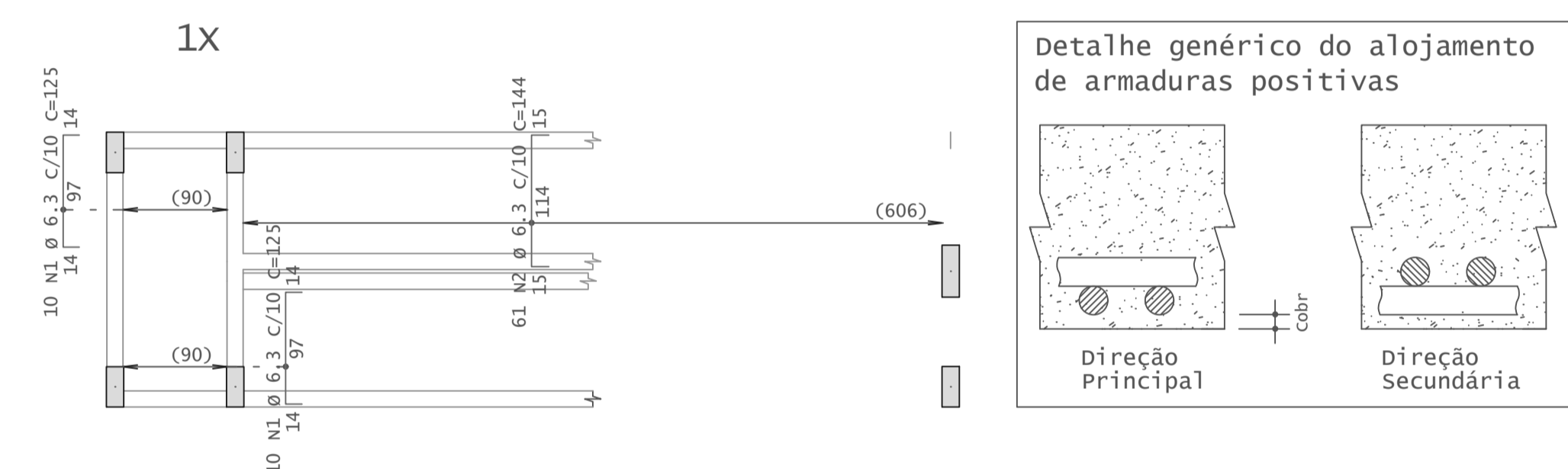
## Topo da Rampa - Armadura negativa principal



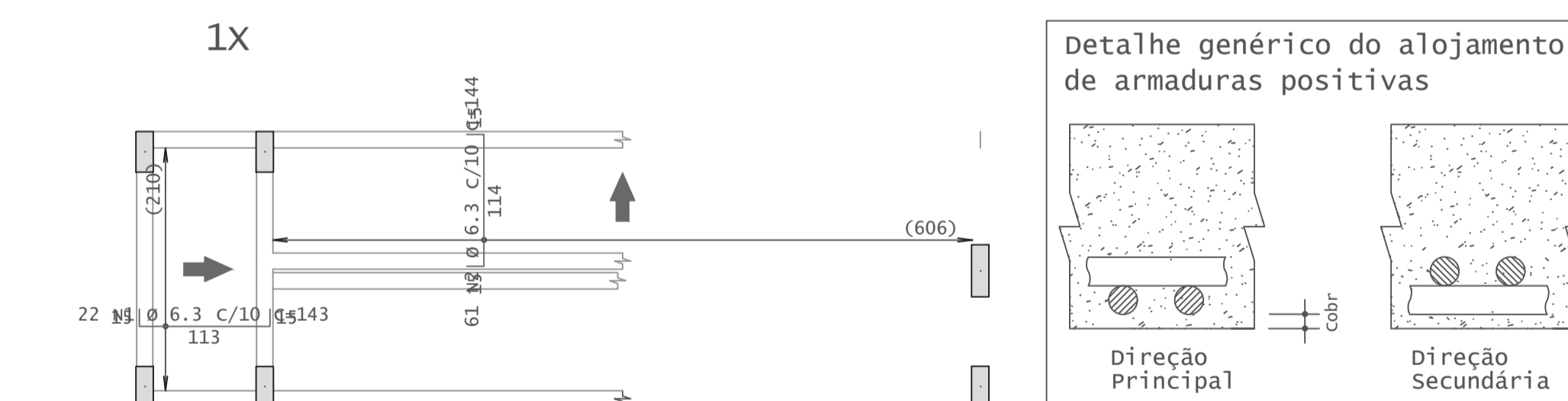
| AÇO  | POS | BIT | QUANT | COMPRIMENTO |       |
|--|-----|-----|-------|-------------|-------|
|  |     |     |       | UNIT        | TOTAL |
| cm   |     |     |       |             |       |
| Topo da Rampa - Armadura negativa principal  |     |     |       |             |       |
| 50A  | 1   | 6.3 | 1     | 105         | 105   |
| 50A  | 2   | 6.3 | 10    | 165         | 1650  |
| 50A  | 3   | 6.3 | 10    | 125         | 1250  |
| 50A  | 4   | 6.3 | 22    | 143         | 3146  |
| 60A  | 5   | 5   | 1     | 1140        | 1140  |
| Topo da Rampa - Armadura negativa secundaria |     |     |       |             |       |
| 50A  | 1   | 6.3 | 20    | 125         | 2500  |
| 50A  | 2   | 6.3 | 61    | 144         | 8784  |
| Topo da Rampa - Armadura positiva principal  |     |     |       |             |       |
| 50A  | 1   | 6.3 | 22    | 143         | 3146  |
| 50A  | 2   | 6.3 | 61    | 144         | 8784  |
| Topo da Rampa - Armadura positiva secundaria |     |     |       |             |       |
| 50A  | 1   | 6.3 | 4     | 85          | 340   |
| 50A  | 2   | 6.3 | 10    | 664         | 6640  |
| 50A  | 3   | 6.3 | 10    | 261         | 2610  |

| RESUMO DE AÇO |     |       |        |
|---------------|-----|-------|--------|
| AÇO           | BIT | COMPR | PESO   |
|               |     | mm    | m      |
|               |     | mm    | kgf    |
| 60A           | 5   | 11    | 2      |
| 50A           | 6.3 | 390   | 95     |
| Peso Total    |     | 60A = | 2 kgf  |
| Peso Total    |     | 50A = | 95 kgf |

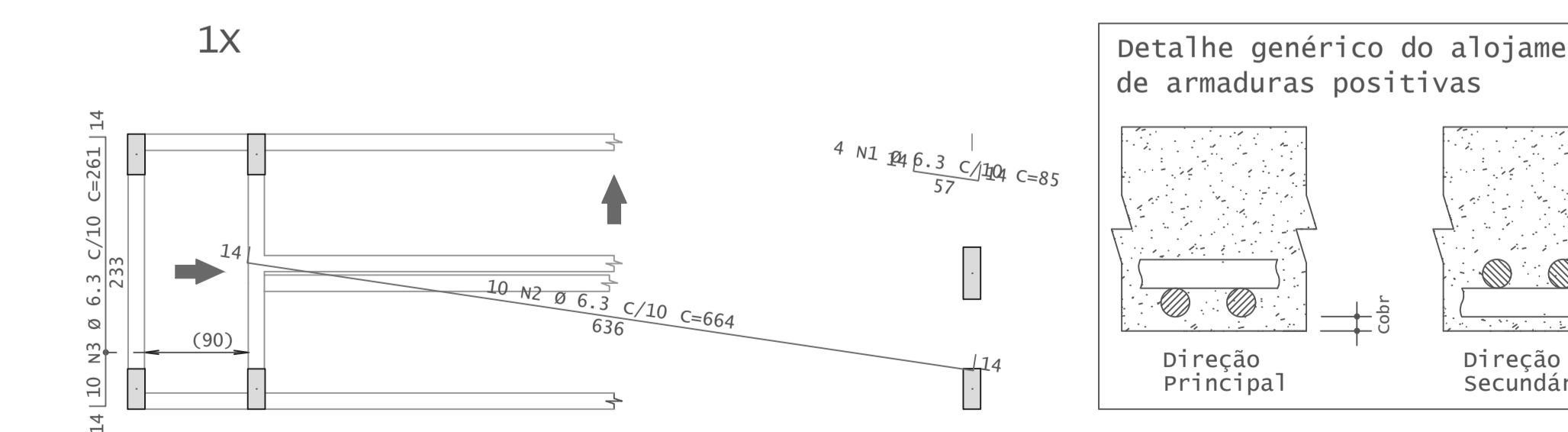
## Topo da Rampa - Armadura negativa secundaria



## Topo da Rampa - Armadura positiva principal



## Topo da Rampa - Armadura positiva secundaria





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**AMPLIAÇÃO CENTRO EDUCACIONAL - RAMPA DE ACESSO**

---

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE CANHOTINHO      MUNICÍPIO: CANHOTINHO - PE  
 CNPJ: 10.132.777/0001-63  
 RESPONSÁVEL TÉCNICO: GUSTAVO KLEMMER FERREIRA DE FRANÇA

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PROPRIETÁRIO: Gustavo Klemmer F. França  
 Engenheiro Civil  
 RESPONSÁVEL TÉCNICO: CREA-PE 1819723445

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**DETALHAMENTO DAS LAJES - RAMPA E PATAMAR**

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|   |              |
|---|--------------|
| ÁREAS DO PROJETO:                                     | PRANCHA:     |
|   | <b>06/06</b> |
| DESENHO: REV1      DATA: 20/12/2023      ESCALA: 1/50 | FOLHA:       |
|   | <b>A1</b>    |

PORTAL DA TRANSPARÊNCIA  
 assinado por: idelzer 85      10/01/2024 09:11:20Z (03/12/2023)