



VOLUME DE CONCRETO - ESTACAS  $f_{ck}$  20MPa = 41,04 m³

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5	826,50	140,00
50a	8	1.140,00	495,33
Peso Total		60A =	140,00 kg
Peso Total		50A =	495,33 kg



**DETALHES DA SAPATA**  
ESCALA 1:25

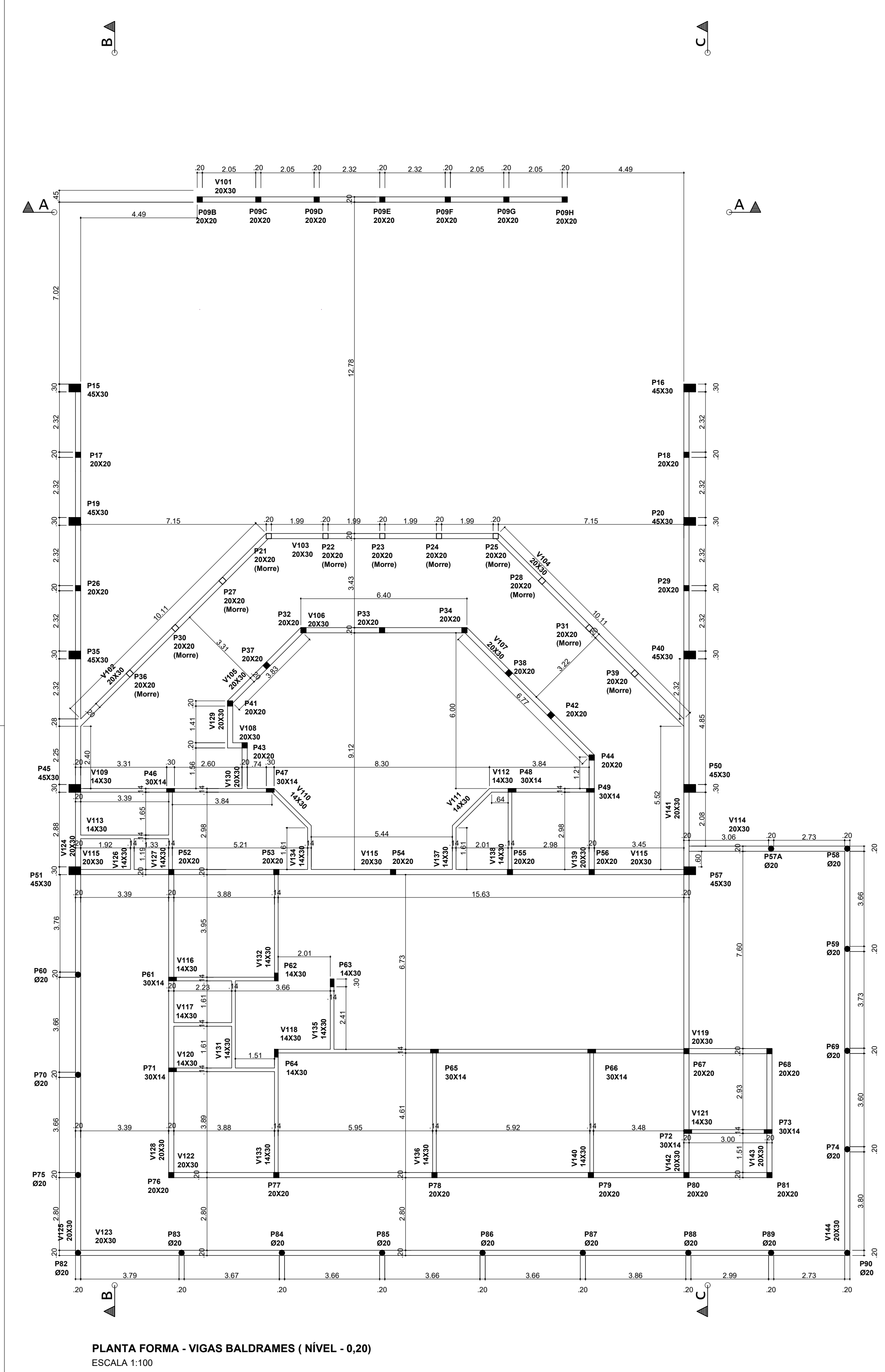
VOLUME DE CONCRETO MAGRO = 1,25 m<sup>3</sup>

COTA DE DFUNDO DAS SAPATAS	
DESCRIÇÃO	COTA (M)
S21=S22=S23=S24=S25=S27=S28=S30=S31=S32=S33=S34=S36=S37=S38=S39=S41=S42=S43=S44	- 0,75

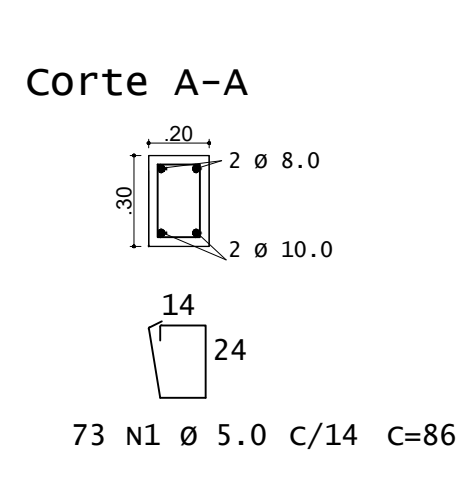
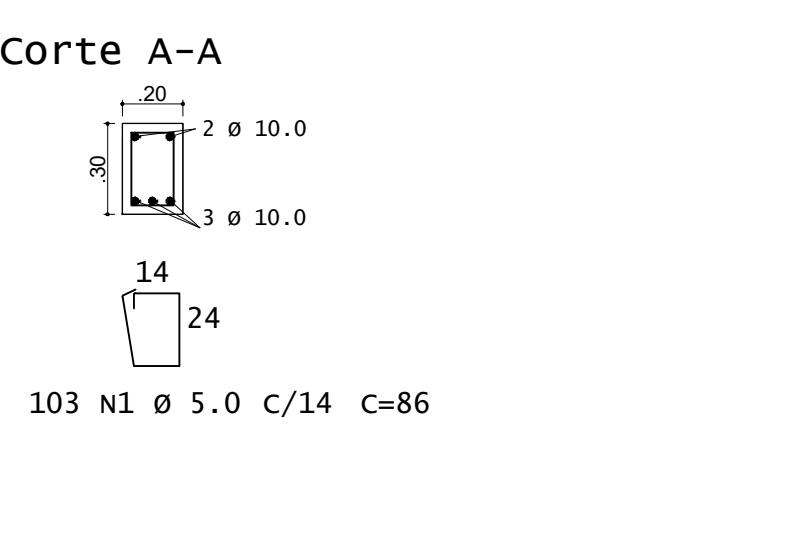
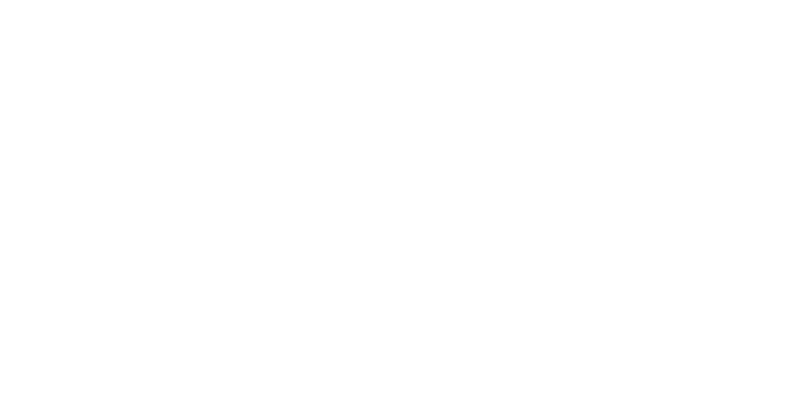
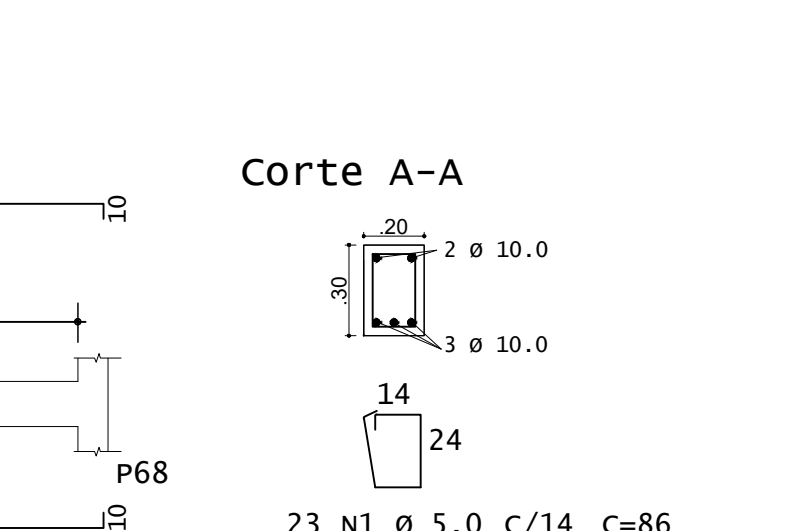
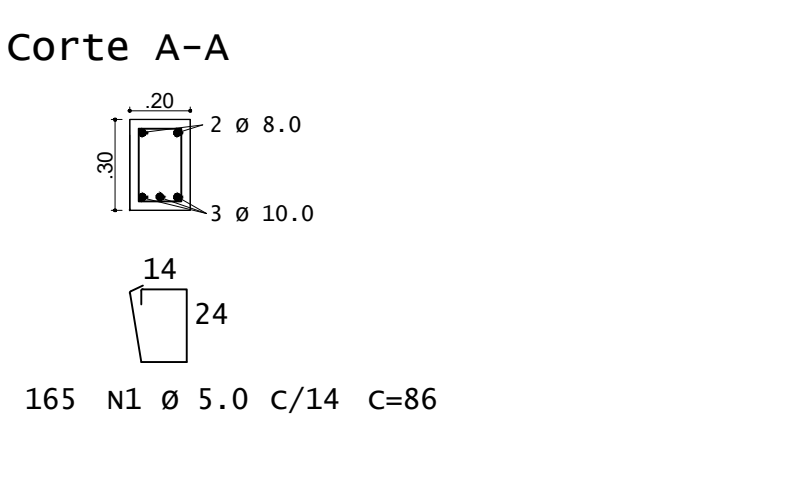
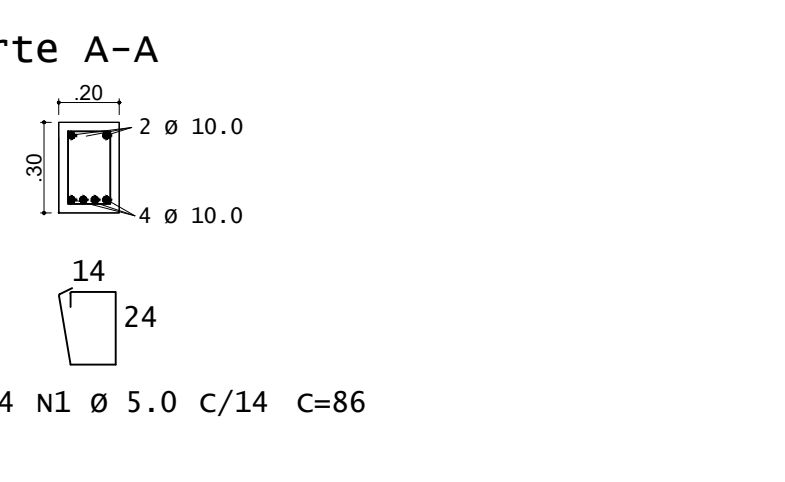
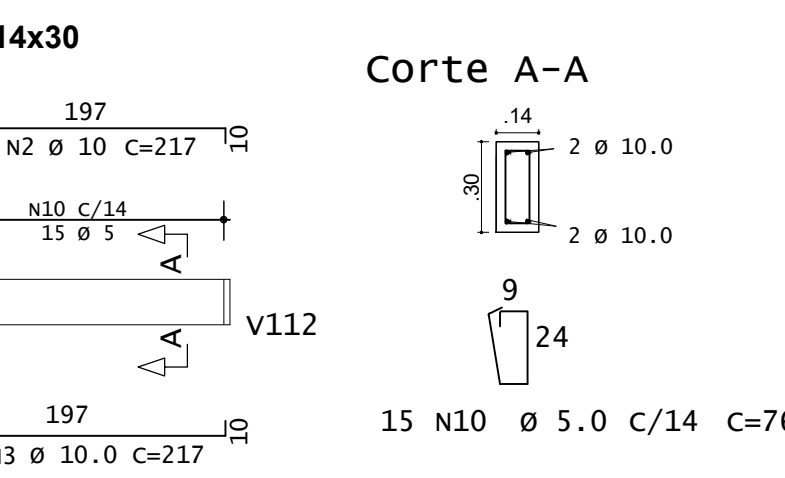
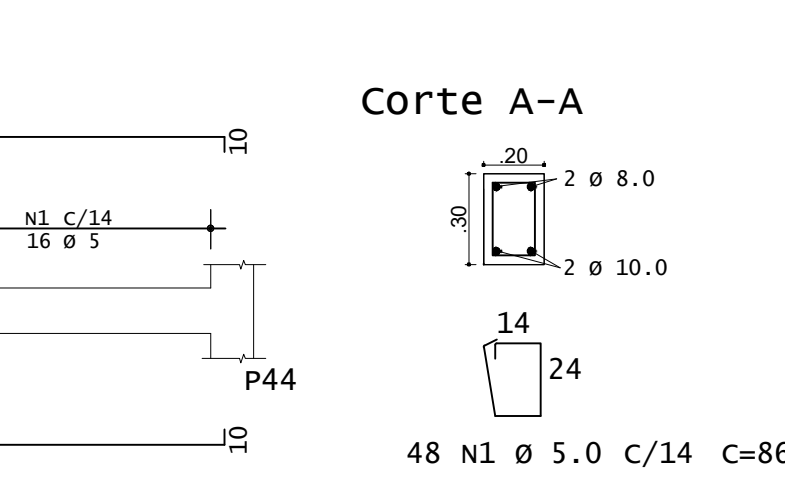
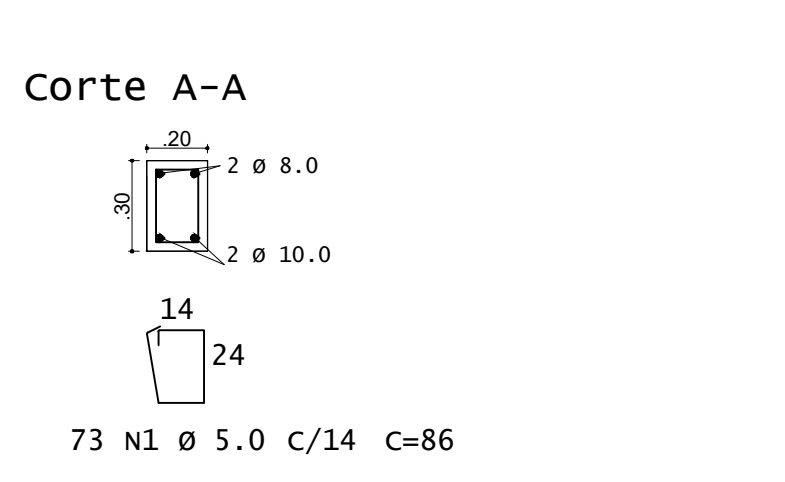
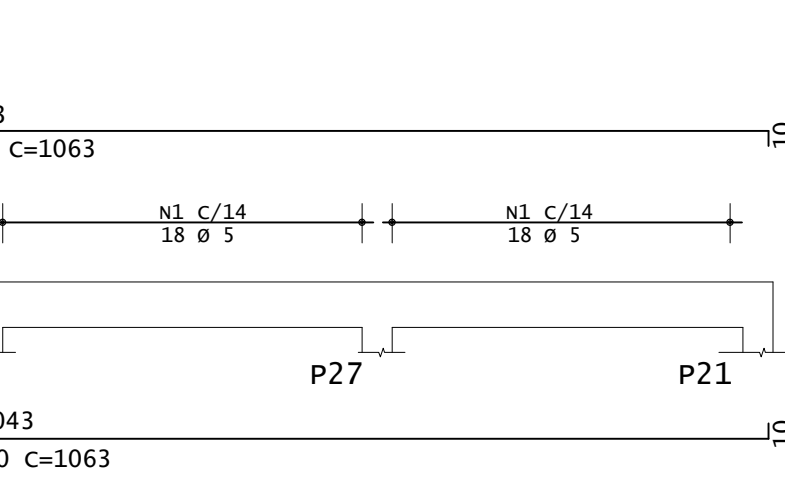
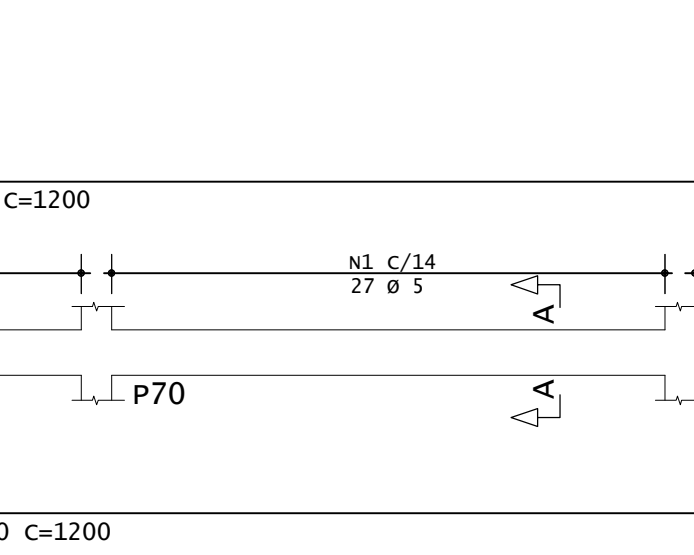
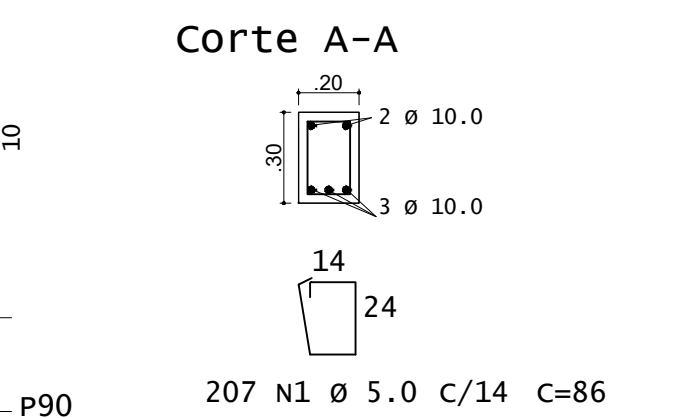
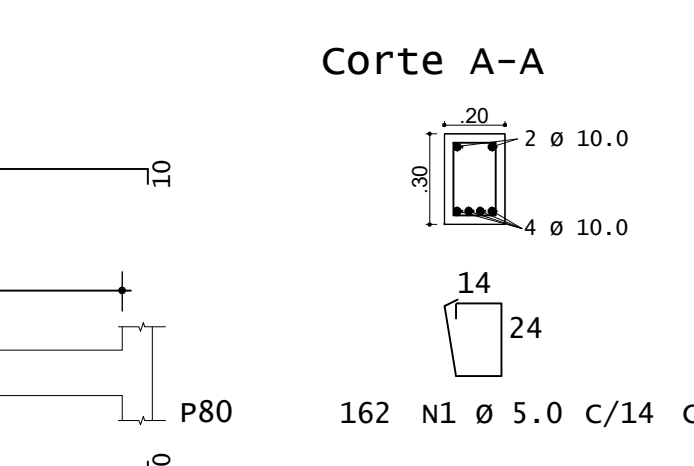
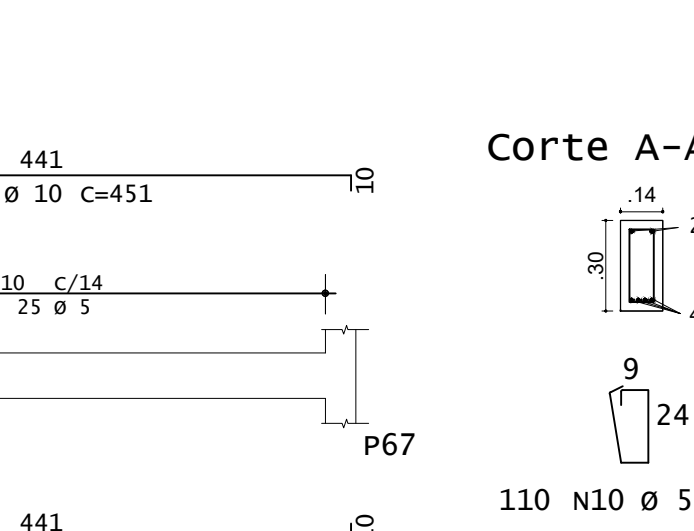
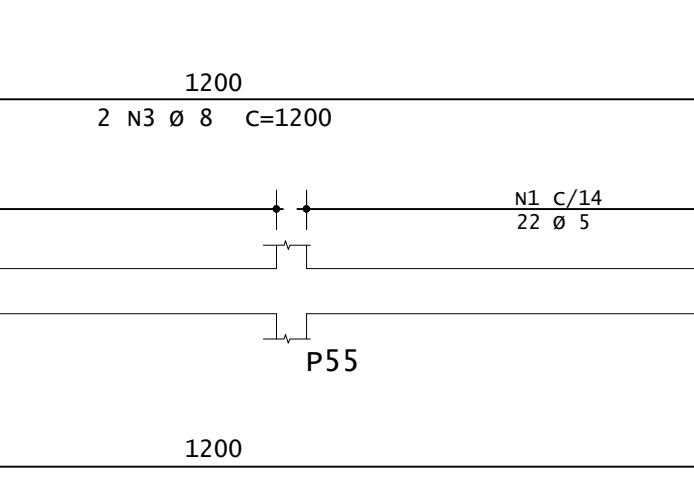
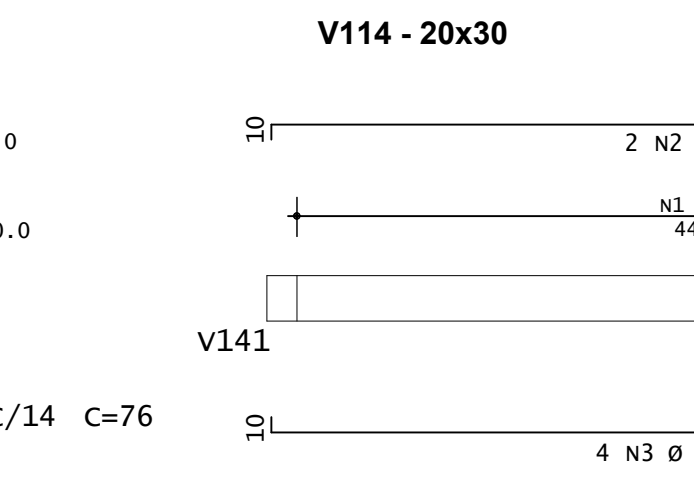
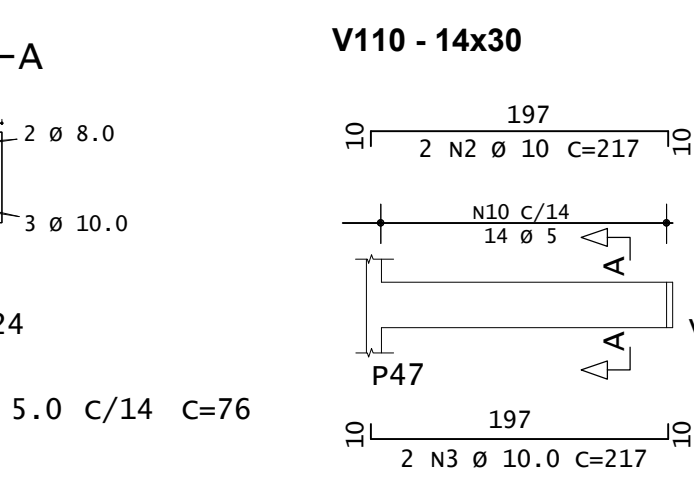
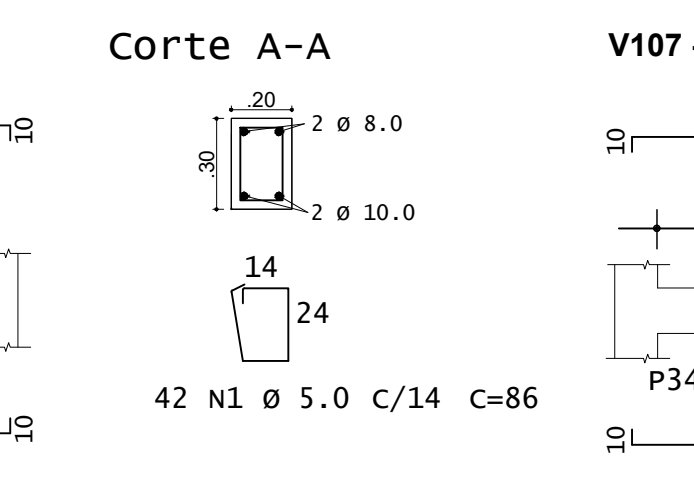
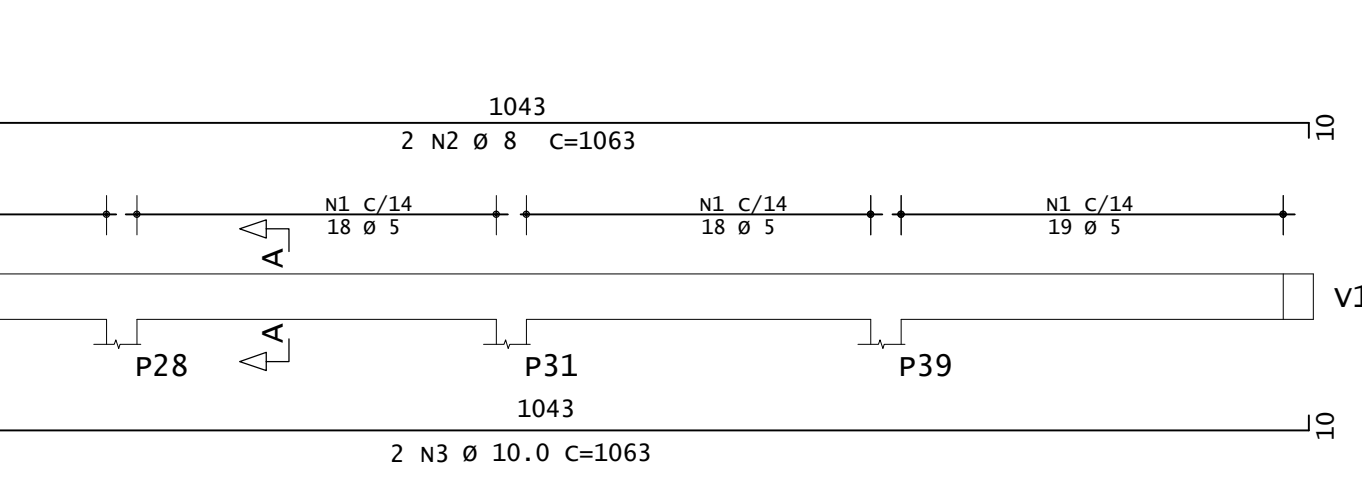
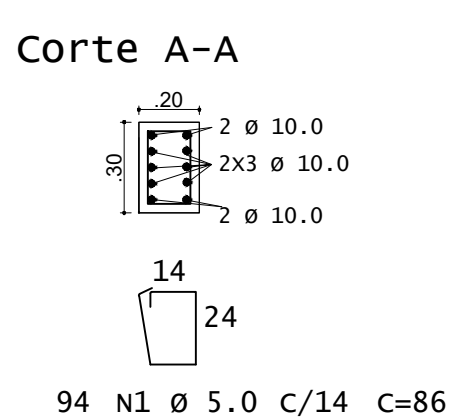
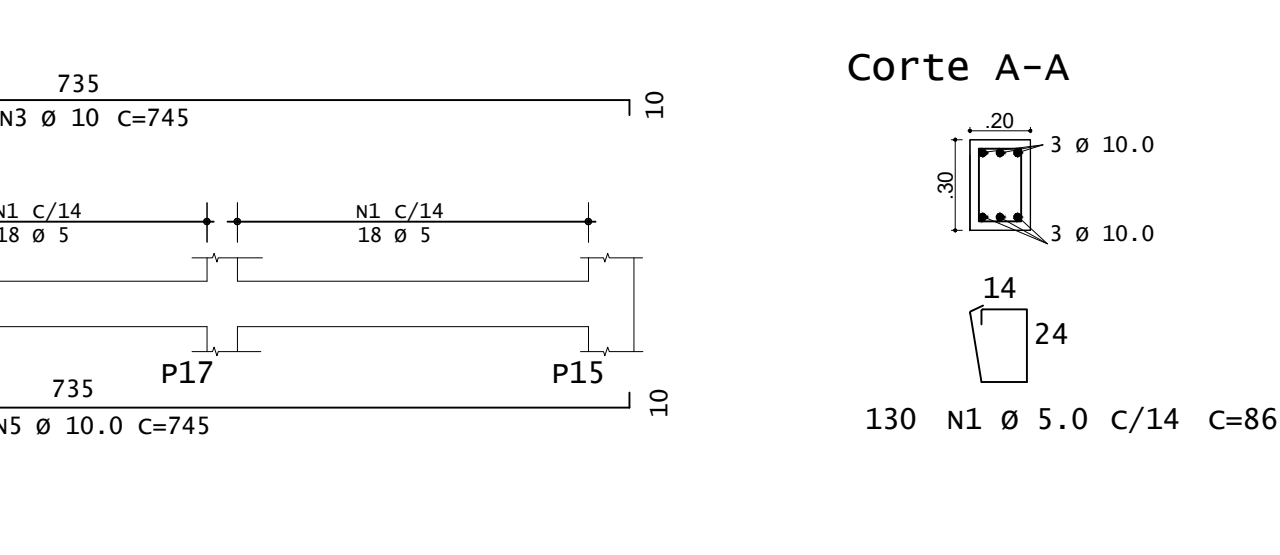
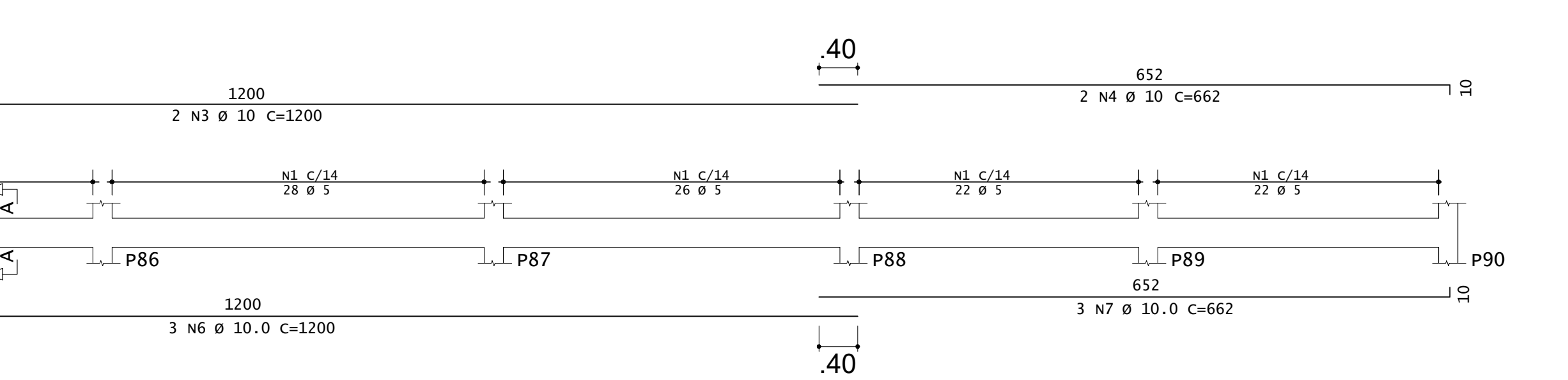
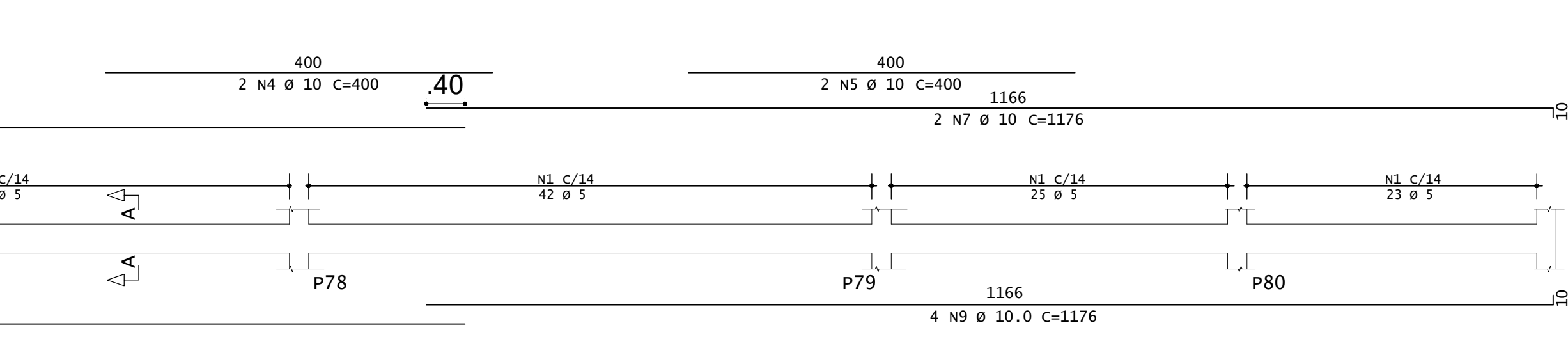
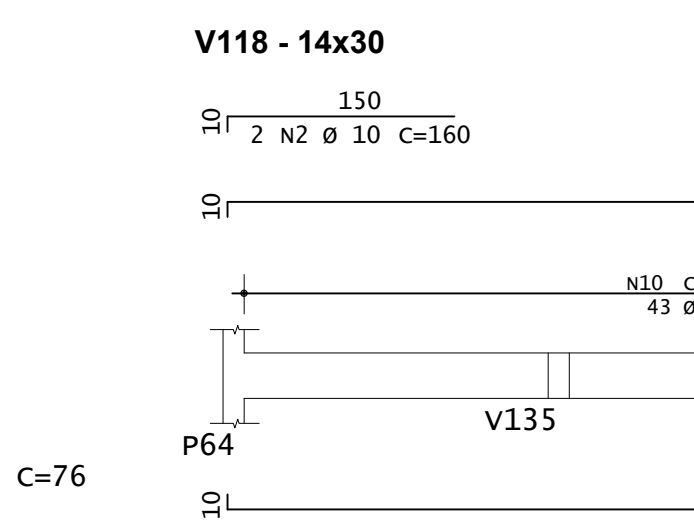
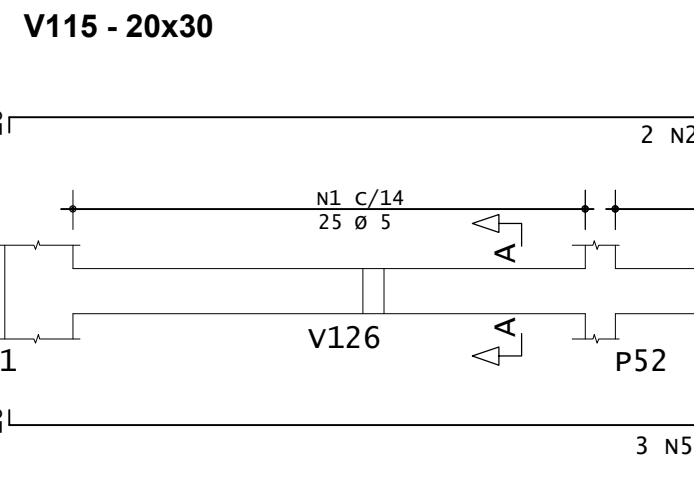
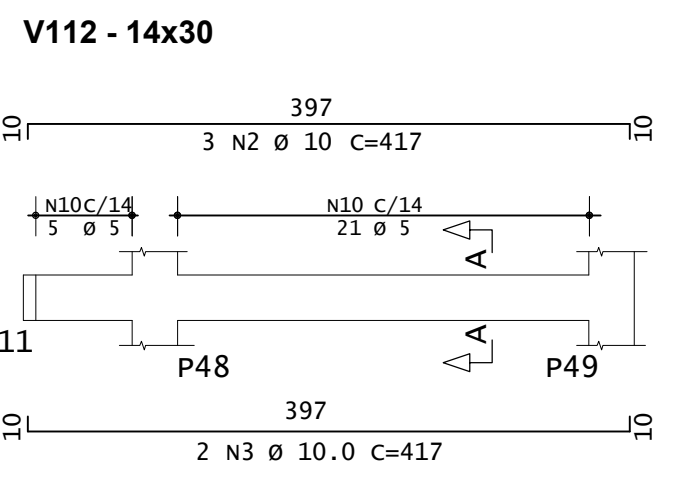
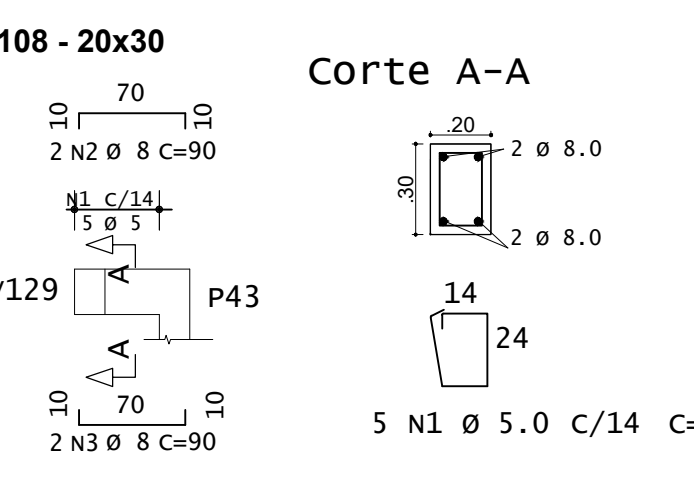
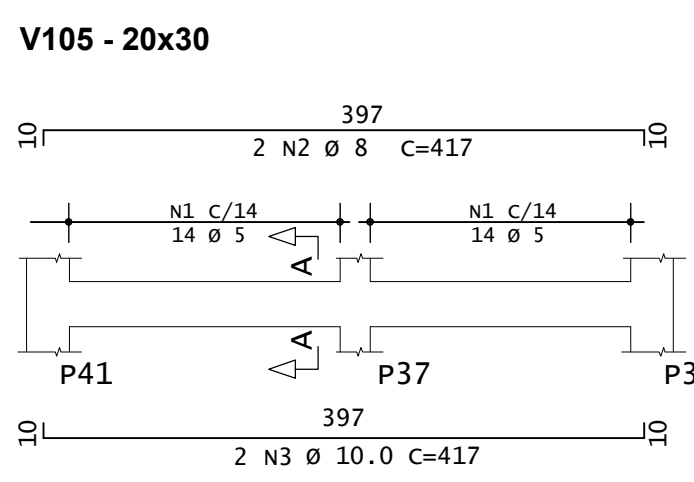
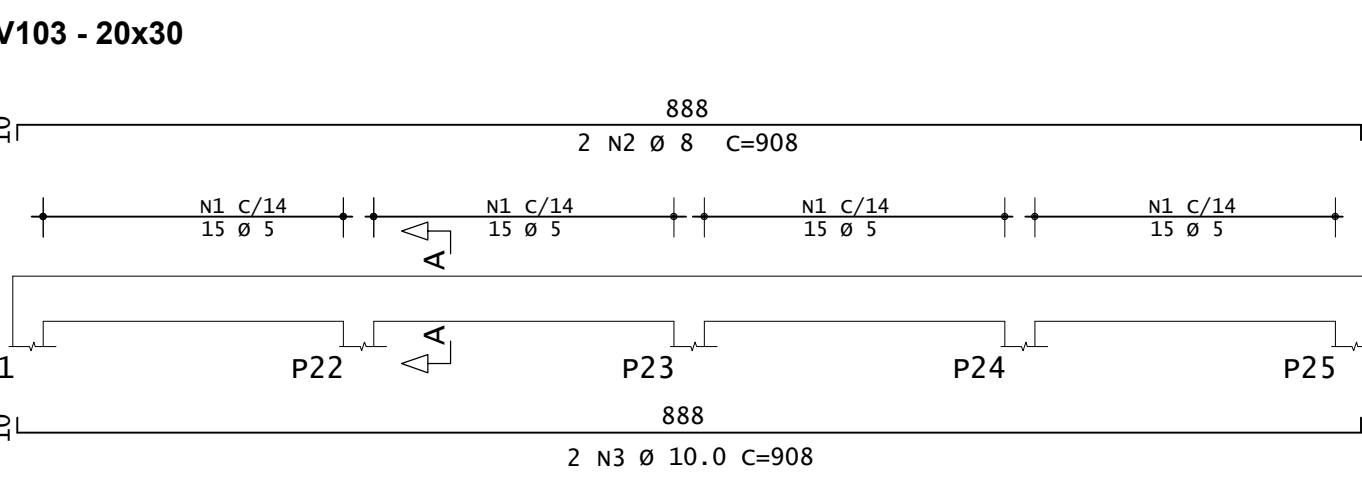
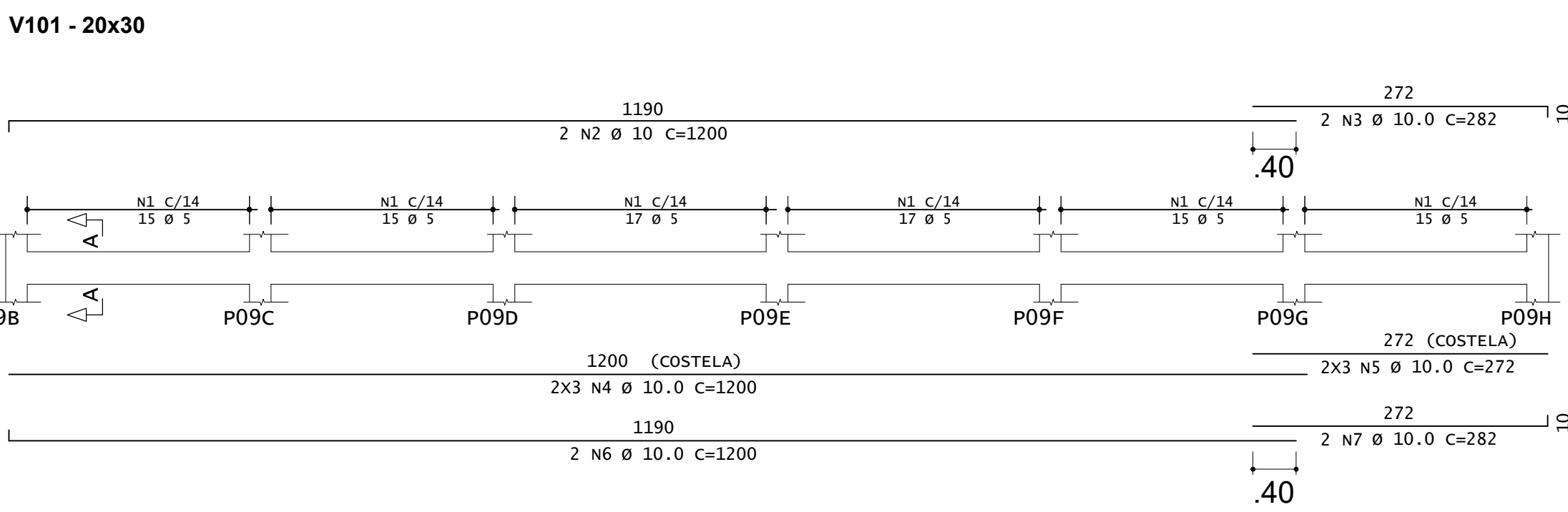
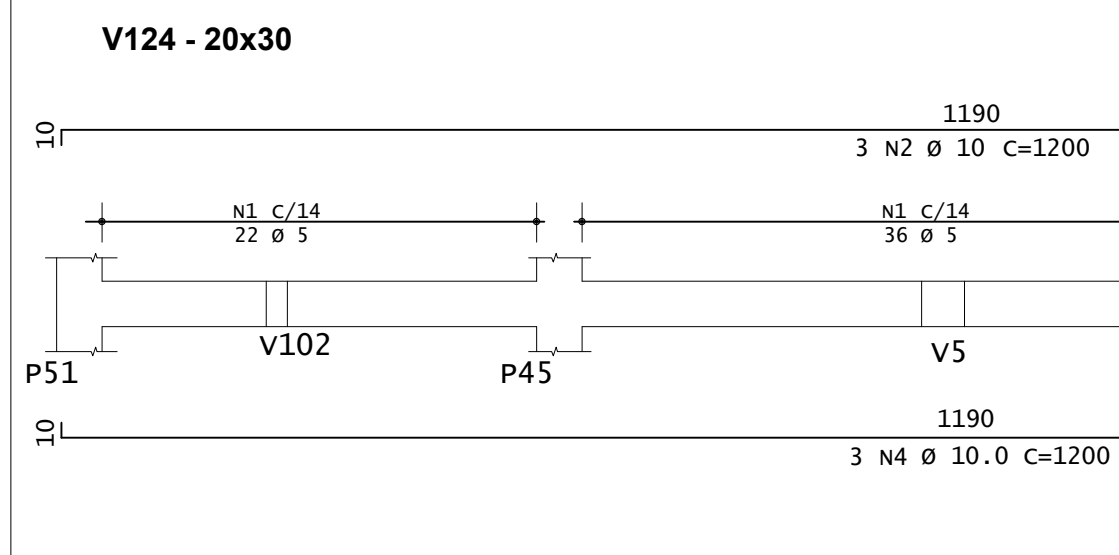
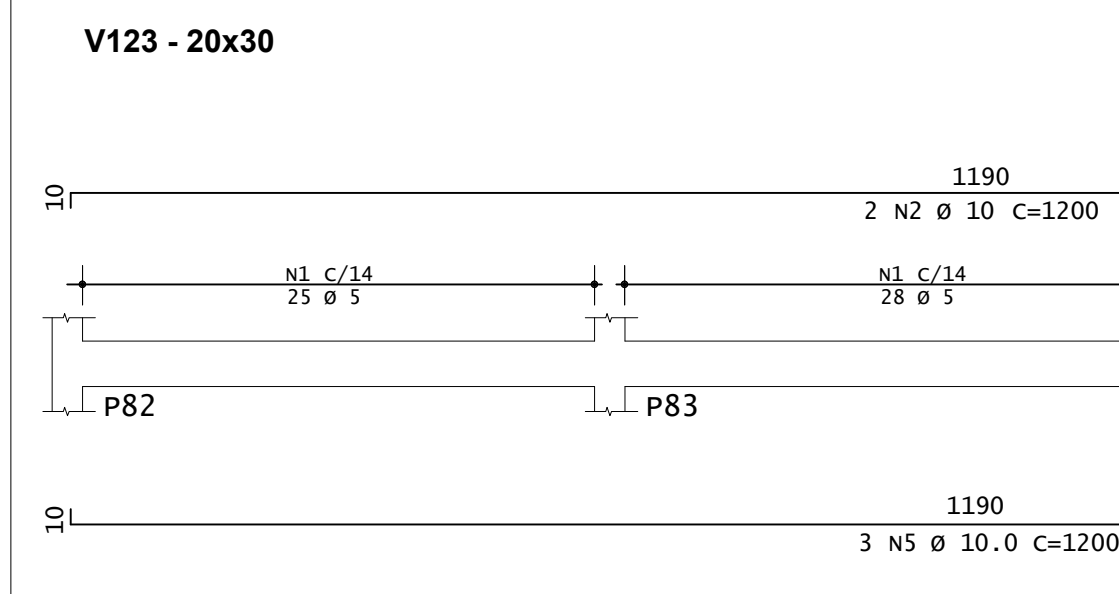
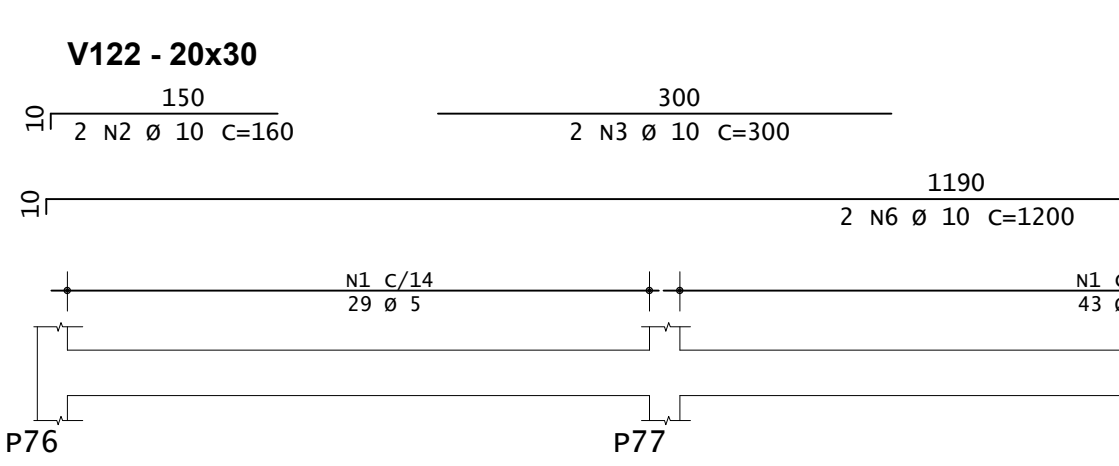
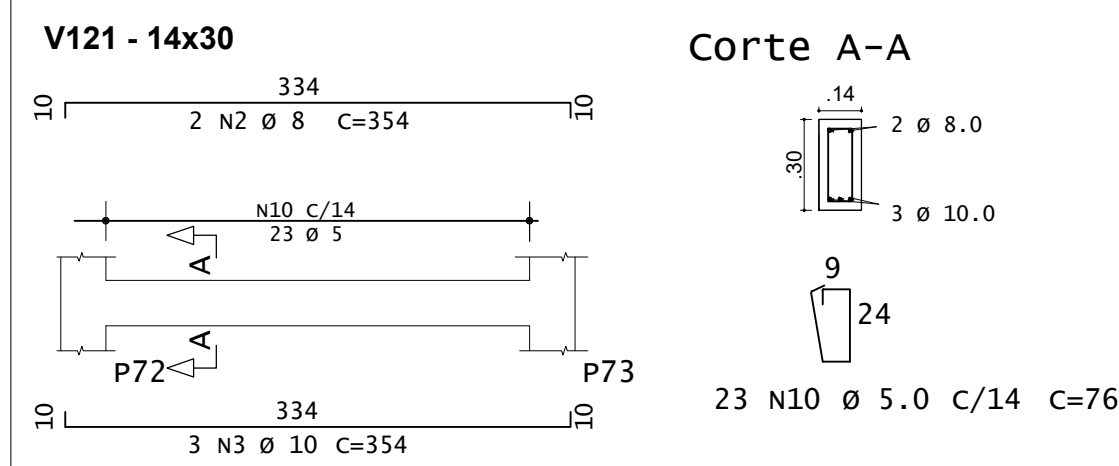
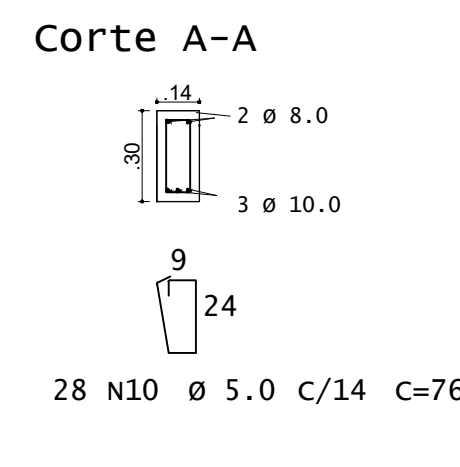
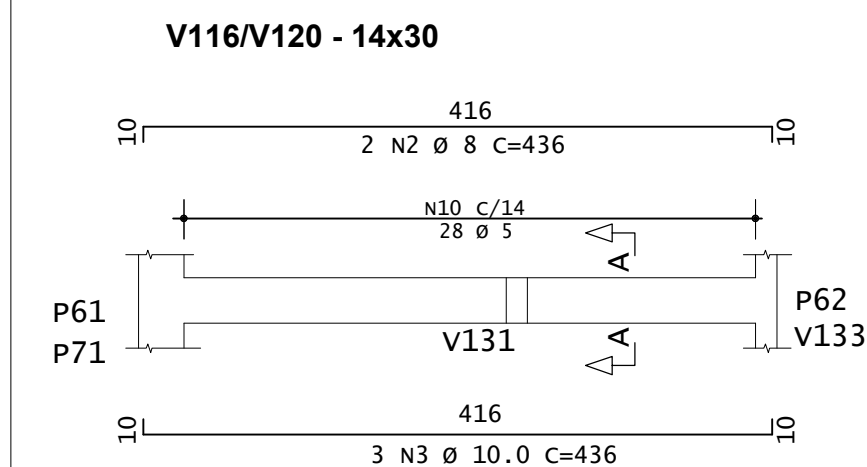
COTA DE DFUNDO DAS SAPATAS	
DESCRIÇÃO	COTA (M)
S21=S22=S23=S24=S25=S27=S28=S30=S31=S32=S33=S34=S36=S37=S38=S39=S41=S42=S43=S44	- 0,75

 <h1 style="margin: 0;">INSTITUTO FEDERAL</h1> <p style="margin: 0;">Sul de Minas Gerais Campus Inconfidentes</p>			
PROJETO	OBRA: AUDITÓRIO (400 lugares)		
	LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES		
	TIPO: ESTRUTURA EM CONCRETO ARMADO		
PROPRIETÁRIO LUIZ FLAVIO REIS <small>Aprovado em forma digital por LUIZ FLAVIO REIS FERNANDES.057@... 62211669</small>		ENDEREÇO OBRA:  Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000	
IS/SULDEMINAS CAMPUS INCONFIDENTES DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES			
RESPONSÁVEL TÉCNICO: <b>PAULO ROBERTO DE OLIVEIRA:46134670</b> 634 <small>Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA:46134670634 Dados: 2022.10.25 11:05:43 +03'00'</small>		QUADRO RESUMO DE ÁREAS:  TERRENO PARTE B: ..... 99.41667 (ha) MATRÍCULA DO IMÓVEL: ..... 19.490 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINOMG	
END: CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 29.948D - MAT. SIAPE 2056557		ÁREA A CONSTRUIR: ..... 1.143,00 m²	
CARIMBOS:			
DATA: 17/10/2022	REVISÃO: 01	ESCALAS: INDICADAS	UNIDADE: METROS
			FOLHA: 01/16



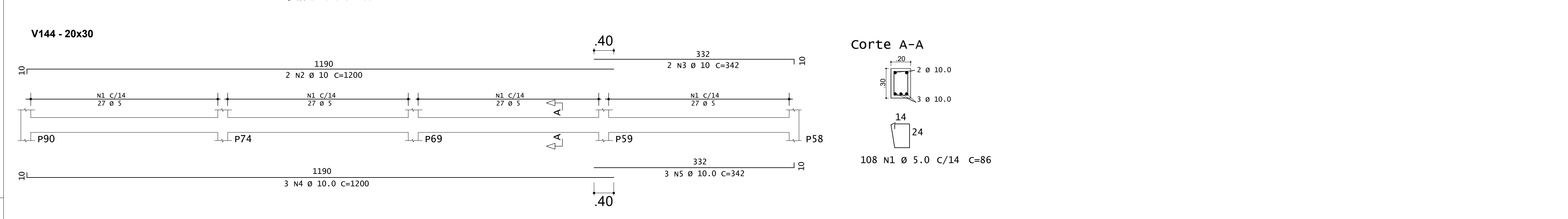
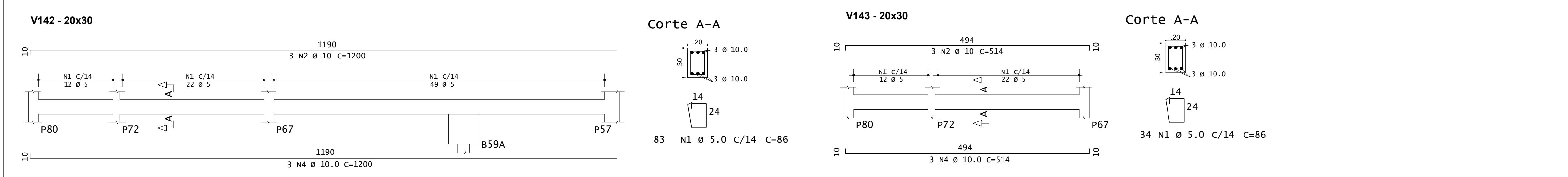
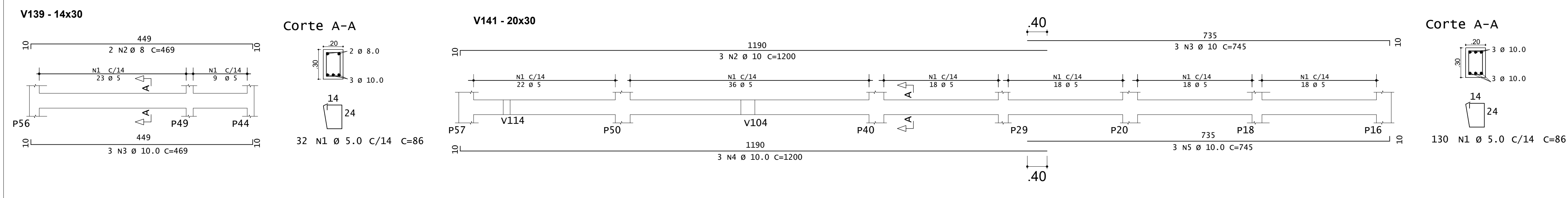
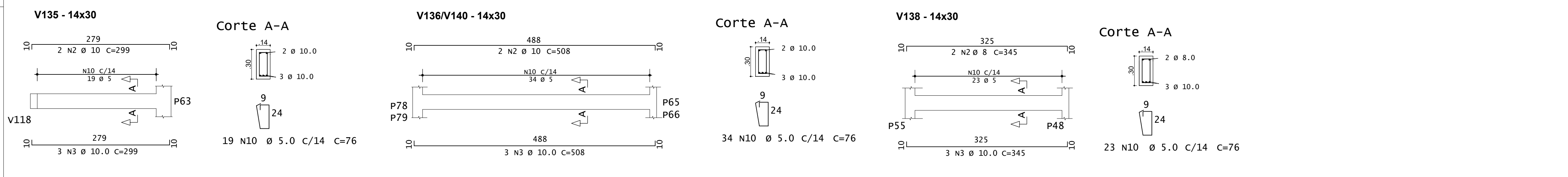
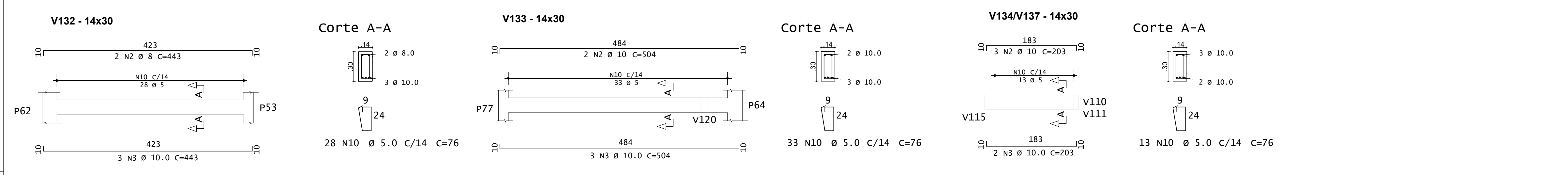
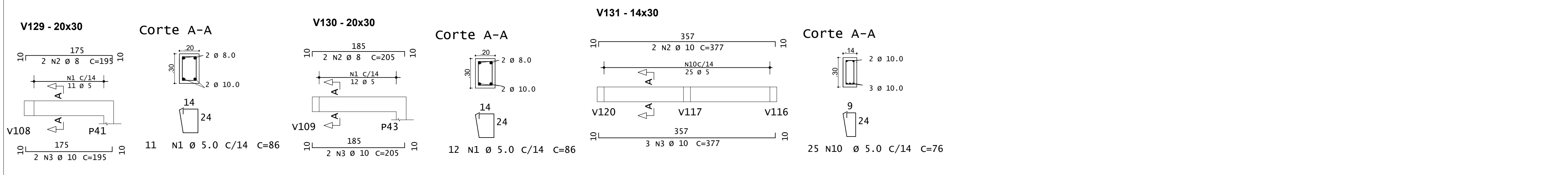
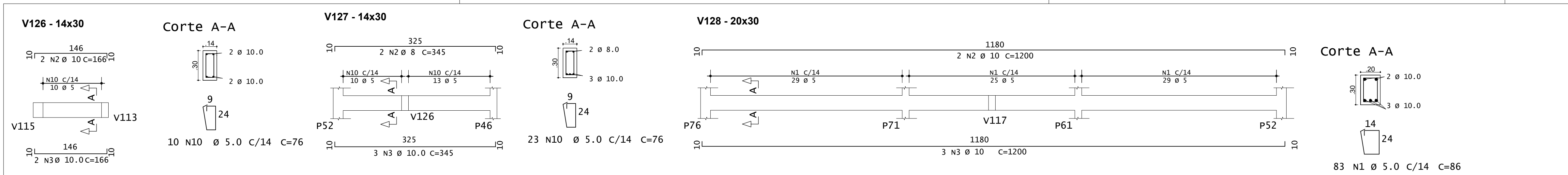


PLANTA FORMA - VIGAS BALDRAMES (NÍVEL - 0,20)  
ESCALA 1:100



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PROJETO	OBRA: AUDITÓRIO (400 lugares)			
	LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES			
	TIPO: ESTRUTURA EM CONCRETO ARMADO			
PROPRIETÁRIO: LUIZ FLAVIO REIS FERNANDES 05700 221669		Assinado de forma digital por LUIZ FLAVIO REIS FERNANDES 05700 221669 DN: cn=LUIZ FLAVIO REIS FERNANDES, o=INSTITUTO FEDERAL DE EDUCACAO, ou=IF/SULDEMINAS CAMPUS INCONFIDENTES, email=luizflavio@inconfidentes.edu.br, c=BR		ENDEREÇO OBRA: Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000
IF/SULDEMINAS CAMPUS INCONFIDENTES DIRETOR GERAL LUIZ FLÁVIO REIS FERNANDES				
RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA-46134670 634		Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA-46134670634 Dados: 2022.10.25 11:08:23 -03'00'		
ENEP: CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 29.949/D - MAT. SIAPE 2066557		QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: ..... 99.41667 (ha) MATRÍCULA DO IMÓVEL: ..... 19.460 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINOMG		
DESENHO: LEANDRO DE OLIVEIRA MATHEUS HENRIQUE FRANCO LOPES		ÁREA A CONSTRUIR: ..... 1.143,00 m²		
CARIMBOS:				
DATA:	REVISÃO:	ESCALAS:	UNIDADE:	FOLHA:
17/10/2022	01	INDICADAS	METROS	02/16



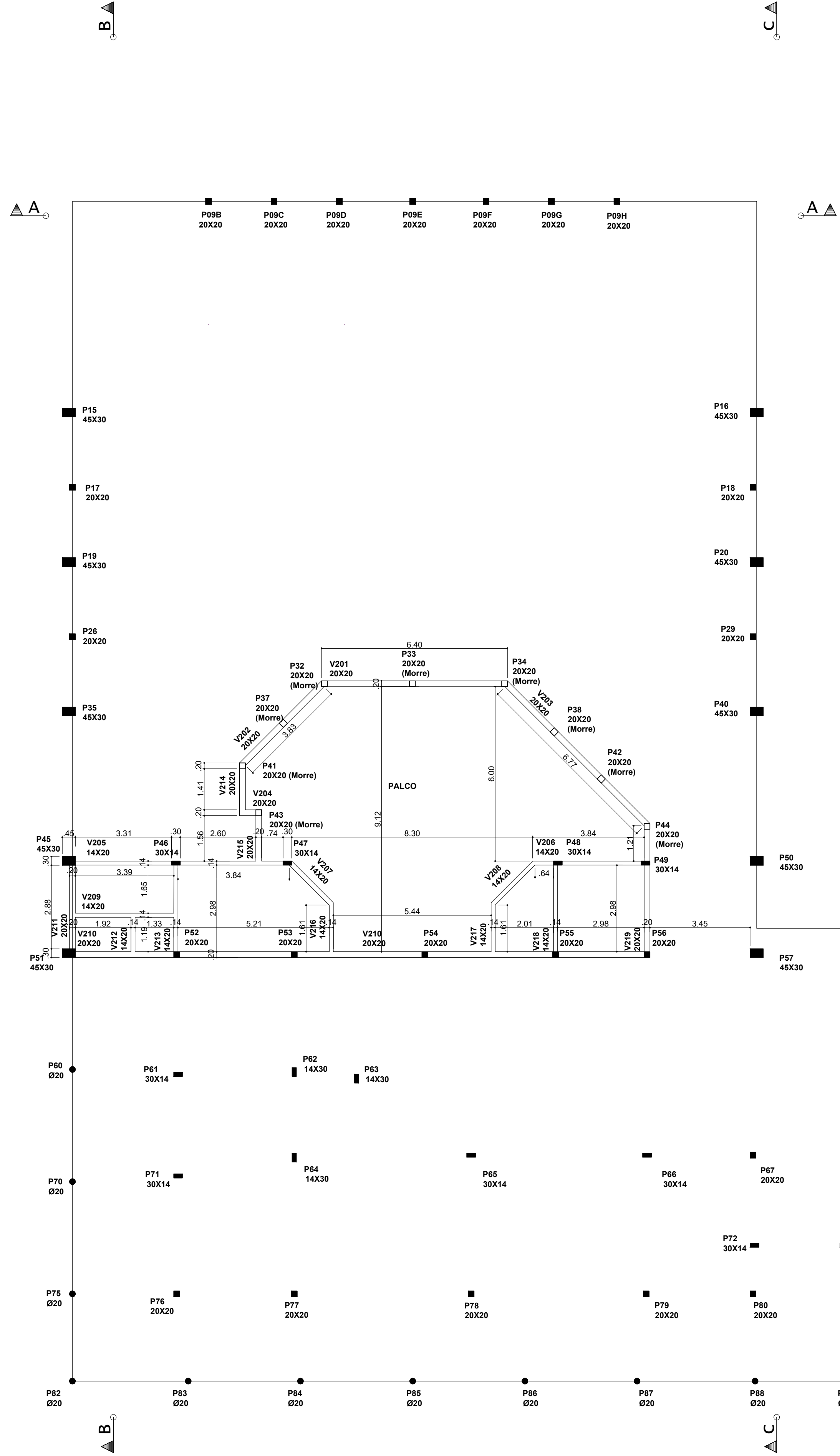


VOLUME DE CONCRETO - VIGAS fck 30Mpa = 18,93 M³	
ÁREA DE FORMAS - 205,88 M²	

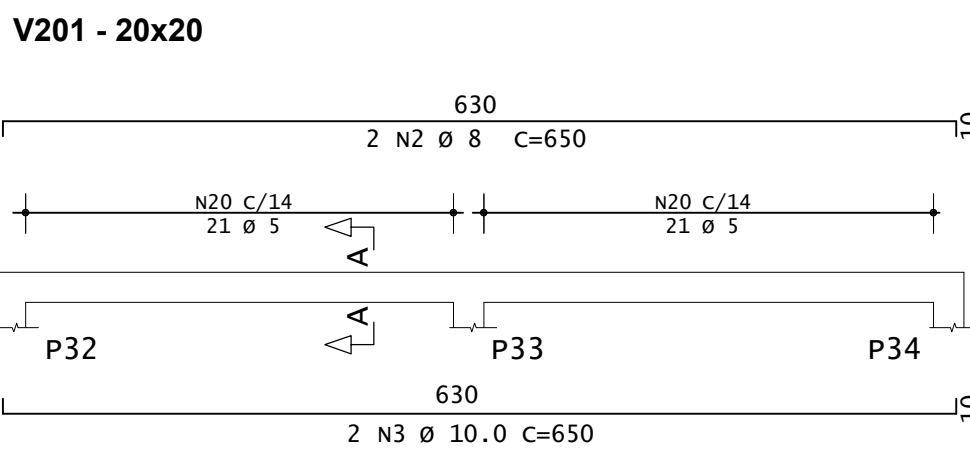
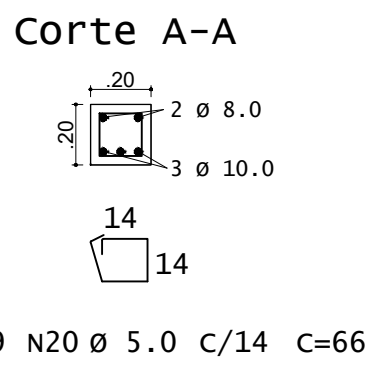
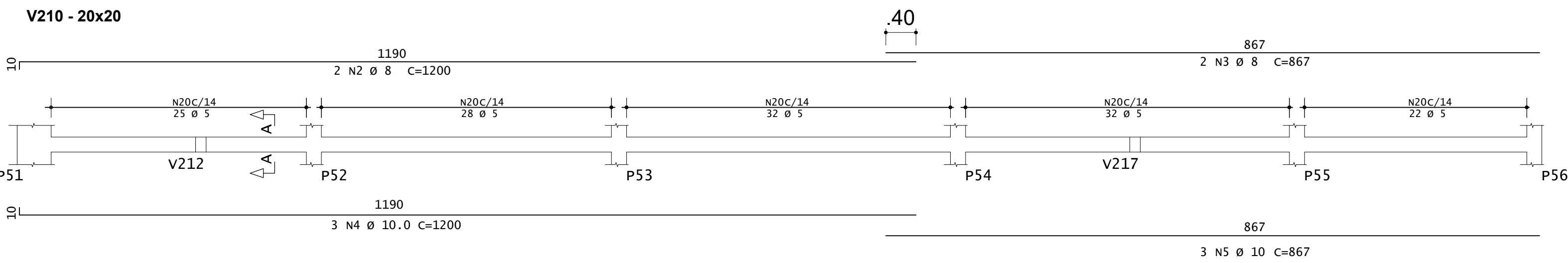
ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
<b>V101 (X1)</b>					
60A	1	5,0	94	86	8084
50A	2	10,0	2	1200	2400
	3	10,0	1	282	564
	4	10,0	3	1200	7200
	5	10,0	3	272	1632
	6	10,0	3	1200	2400
	7	10,0	3	282	564
<b>V102 (X1)</b>					
60A	1	5,0	73	86	6278
50A	2	8,0	2	1063	2126
	3	10,0	2	1063	2126
<b>V103 (X1)</b>					
60A	1	5,0	60	86	5160
50A	2	8,0	2	908	1816
	3	10,0	2	908	1816
<b>V104 (X1)</b>					
60A	1	5,0	73	86	6278
50A	2	8,0	2	1063	2126
	3	10,0	2	1063	2126
<b>V105 (X1)</b>					
60A	1	5,0	28	86	2408
50A	2	8,0	2	417	834
	3	10,0	2	417	834
<b>V106 (X1)</b>					
60A	1	5,0	42	86	3612
50A	2	8,0	2	650	1300
	3	10,0	2	650	1300
<b>V107 (X1)</b>					
60A	1	5,0	48	86	4128
50A	2	8,0	2	711	1422
	3	10,0	2	711	1422
<b>V108 (X1)</b>					
60A	1	5,0	5	86	430
50A	2	8,0	2	90	180
	3	8,0	2	90	180
<b>V109 (X1)</b>					
60A	10	5,0	51	76	3876
50A	2	8,0	2	804	1608
	3	10,0	2	804	2412
<b>V110 (X1)</b>					
60A	10	5,0	14	76	1064
50A	2	10,0	2	217	434
	3	10,0	2	217	434
<b>V111 (X1)</b>					
60A	10	5,0	15	76	1140
50A	2	10,0	2	217	434
	3	10,0	2	217	434
<b>V112 (X1)</b>					
60A	10	5,0	26	76	1976
50A	2	10,0	3	417	1251
	3	10,0	2	417	834
<b>V113 (X1)</b>					
60A	10	5,0	25	76	1900
50A	2	8,0	2	387	774
	3	10,0	3	387	1161
<b>V113 (X1)</b>					
60A	10	5,0	25	76	1900
50A	2	8,0	2	387	774
	3	10,0	3	387	1161
<b>V114 (X1)</b>					
60A	1	5,0	44	86	3784
50A	2	10,0	2	653	1306
	3	10,0	3	653	2612
<b>V115 (X1)</b>					
60A	1	5,0	165	86	14190
50A	2	8,0	2	1200	2400
	3	8,0	2	1200	2400
	4	8,0	2	107	214
	5	10,0	3	1200	3600
	6	10,0	3	1200	3600
	7	10,0	3	107	321
<b>V116=V120 (X2)</b>					
60A	10	5,0	56	76	4256
50A	2	8,0	4	436	1744
	3	10,0	6	436	2616
<b>V117 (X1)</b>					
60A	10	5,0	17	76	1292
50A	2	8,0	2	271	542
	3	8,0	2	271	542
<b>V118 (X1)</b>					
60A	10	5,0	110	76	8360
50A	2	10,0	2	160	320
	3	10,0	2	400	800
	4	10,0	2	451	902
	5	10,0	2	1200	2400
	6	10,0	4	1200	4800
	7	10,0	4	451	1804
<b>V119 (X1)</b>					
60A	1	5,0	23	86	1978
50A	2	10,0	2	354	708
	3	10,0	3	354	1062
<b>V121 (X1)</b>					
60A	10	5,0	23	76	1748
50A	2	8,0	2	354	708
	3	10,0	3	354	1062
<b>V122 (X1)</b>					
60A	1	5,0	162	86	13932
50A	2	10,0	2	160	320
	3	10,0	2	300	600
	4	10,0	2	400	800
	5	10,0	2	400	800
	6	10,0	2	1200	2400
	7	10,0	2	1176	2352
	8	10,0	4	1200	4800
	9	10,0	4	1176	4704

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V123 (X1)					
60A	1	5.0	207	86	17802
50A	2	10.0	2	1200	2400
	3	10.0	2	1200	2400
	4	10.0	2	662	1324
	5	10.0	3	1200	3600
	6	10.0	3	1200	3600
	7	10.0	3	662	1986
V124 (X1)					
60A	1	5.0	130	86	11180
50A	2	10.0	3	1200	3600
	3	10.0	3	745	2235
	4	10.0	3	1200	3600
	5	10.0	3	745	2235
V125 (X1)					
60A	1	5.0	103	86	8858
50A	2	10.0	2	1200	2400
	3	10.0	2	342	684
	4	10.0	3	1200	3600
	5	10.0	3	342	1026
V126 (X1)					
60A	10	5.0	10	76	760
50A	2	10.0	2	166	332
	3	10.0	2	166	332
V127 (X1)					
60A	10	5.0	23	76	1748
50A	2	8.0	2	345	690
	3	10.0	3	345	1035
V128 (X1)					
60A	1	5.0	83	86	7138
50A	2	10.0	2	1200	2400
	3	10.0	3	1200	3600
V129 (X1)					
60A	1	5.0	11	86	946
50A	2	8.0	2	195	390
	3	10.0	2	195	390
V130 (X1)					
60A	1	5.0	12	86	1032
50A	2	8.0	2	205	410
	3	10.0	2	205	410
V131 (X1)					
60A	10	5.0	25	76	1900
50A	2	10.0	2	377	754
	3	10.0	3	377	1131
V132 (X1)					
60A	10	5.0	28	76	2128
50A	2	8.0	2	443	886
	3	10.0	3	443	1329
V133 (X1)					
60A	10	5.0	33	76	2508
50A	2	10.0	2	504	1008
	3	10.0	3	504	1512
V134=V137 (X2)					
60A	10	5.0	26	76	1976
50A	2	10.0	6	203	1218
	3	10.0	4	203	812
V135 (X1)					
60A	10	5.0	19	76	1444
50A	2	10.0	2	299	598
	3	10.0	3	299	897
V136=V140 (X2)					
60A	10	5.0	68	76	5168
50A	2	10.0	4	508	2032
	3	10.0	6	508	3048
V138 (X1)					
60A	10	5.0	23	76	1748
50A	2	8.0	2	345	690
	3	10.0	3	345	1035
V139 (X1)					
60A	1	5.0	32	86	2752
50A	2	8.0	2	469	938
	3	10.0	3	469	1407
V141 (X1)					
60A	1	5.0	130	86	11180
50A	2	10.0	3	1200	3600
	3	10.0	3	745	2235
	4	10.0	3	1200	3600
	5	10.0	3	745	2235
V142 (X1)					
60A	1	5.0	83	86	7138
50A	2	10.0	3	1200	3600
	3	10.0	3	1200	3600
V143 (X1)					
60A	1	5.0	34	86	2924
50A	2	10.0	3	514	1542
	3	10.0	3	514	1542
V144 (X1)					
60A	1	5.0	108	86	9288
50A	2	10.0	2	1200	2400
	3	10.0	2	342	684
	4	10.0	3	1200	3600
	5	10.0	3	342	1026

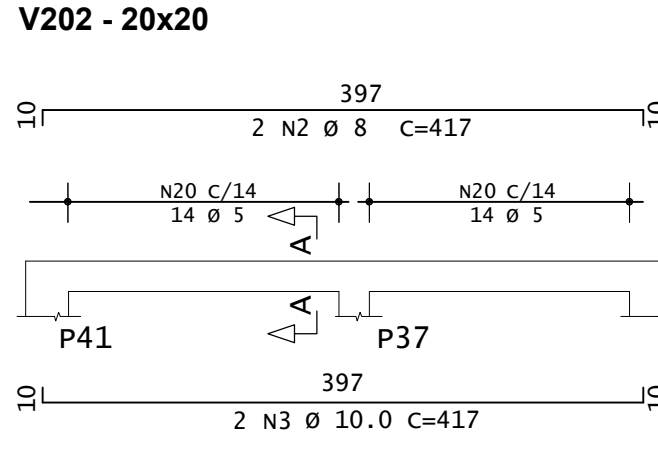
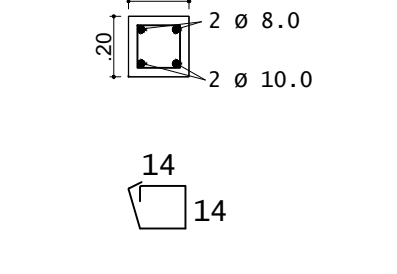




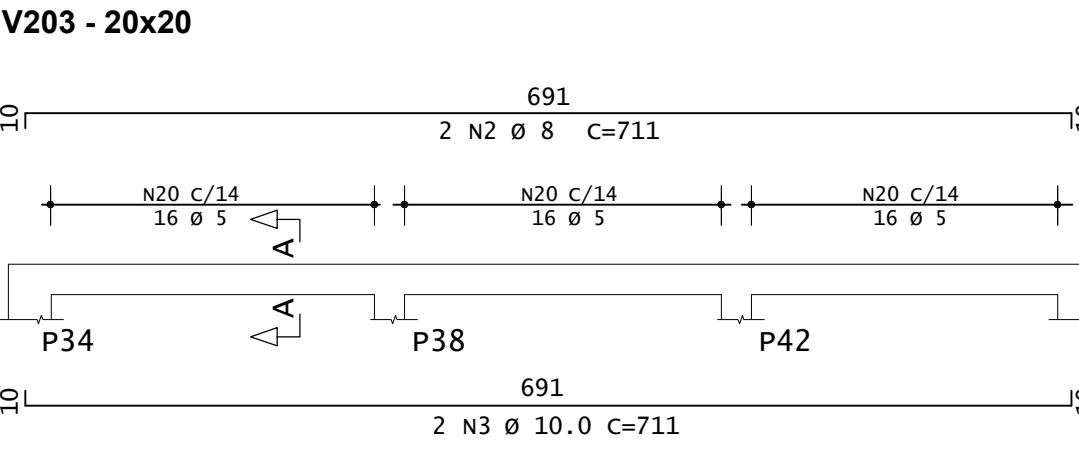
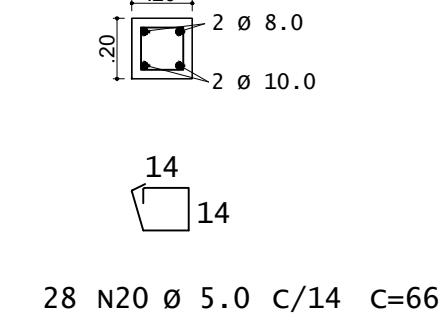
PLANTA FORMA - VIGAS BALDRAMES ( NÍVEL + 0,92 )  
ESCALA 1:100



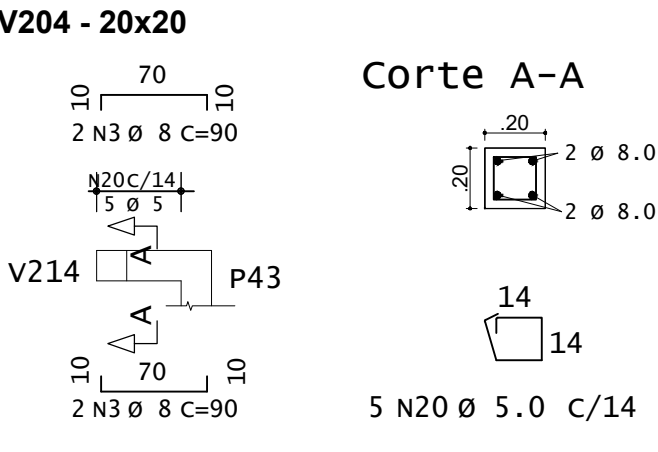
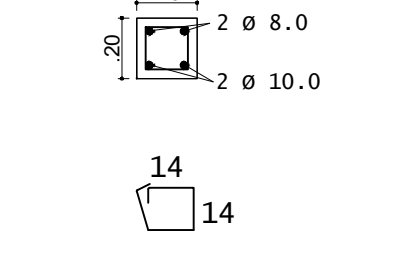
Corte A-A



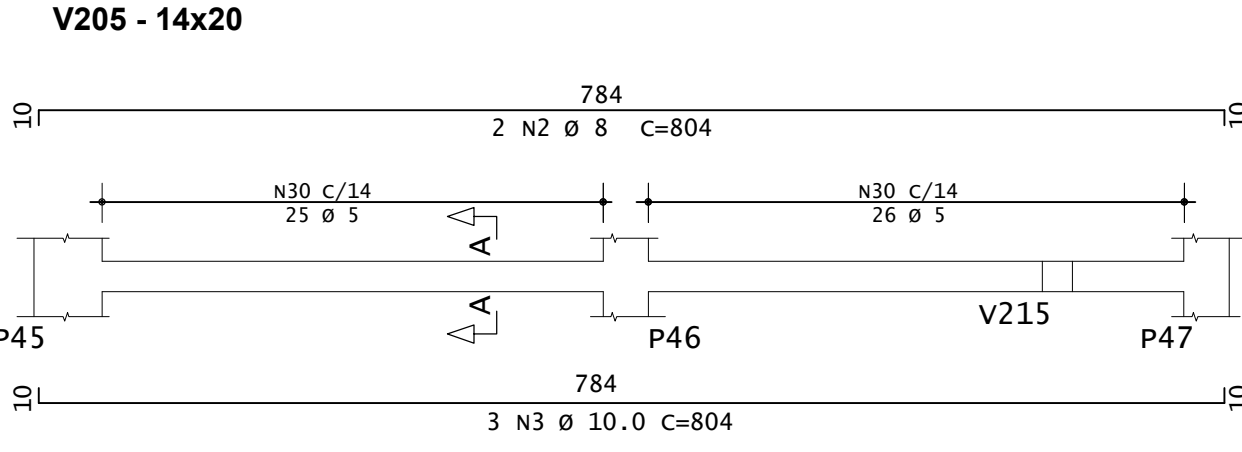
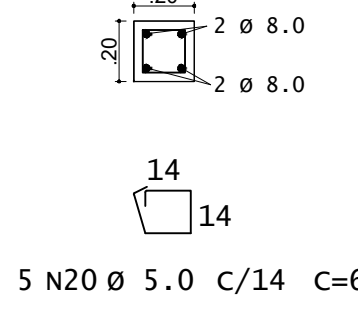
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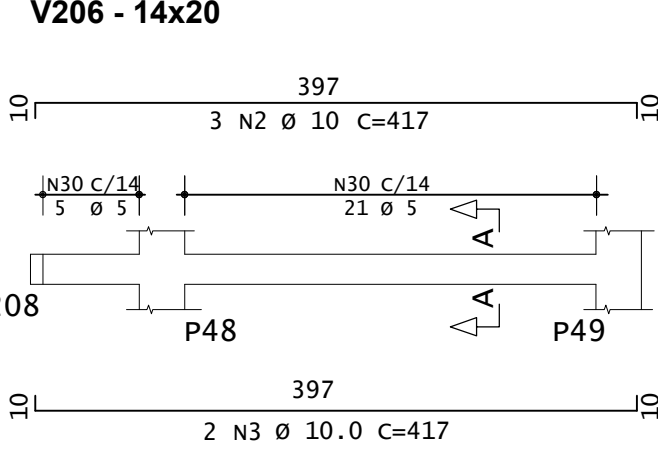
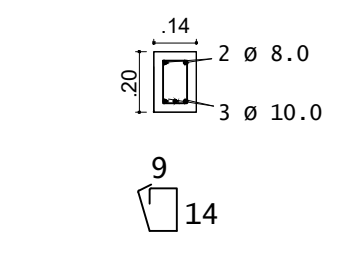
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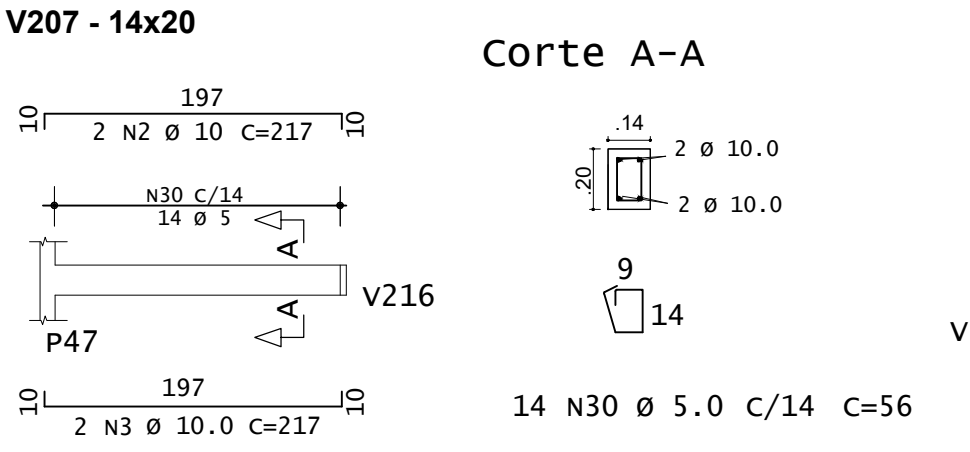
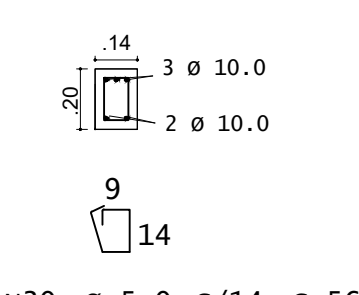
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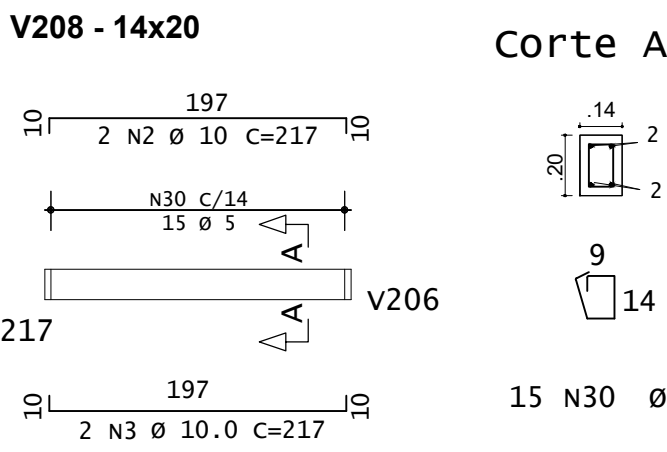
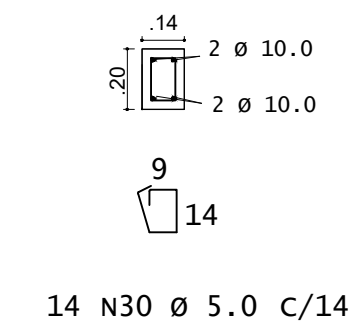
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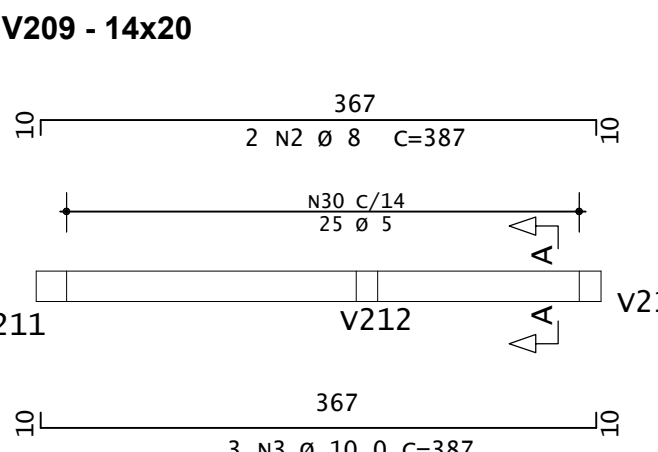
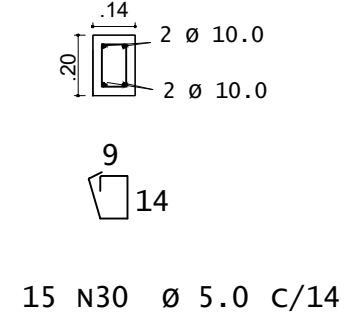
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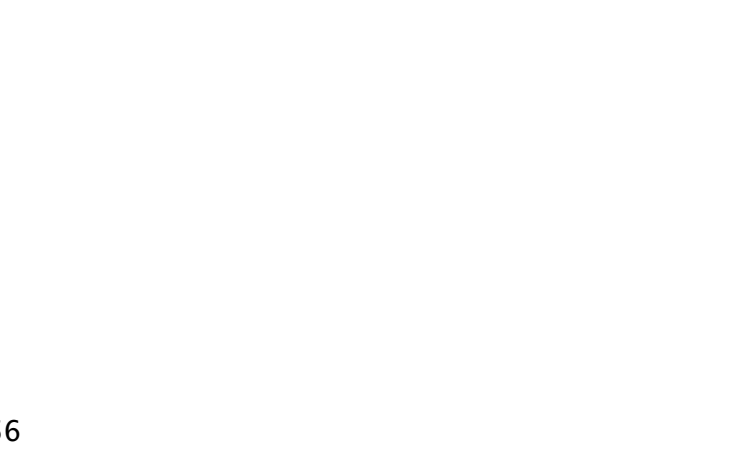
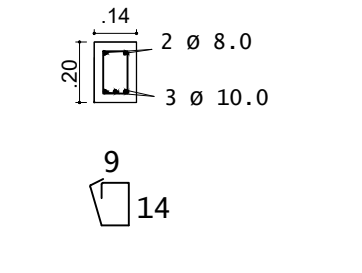
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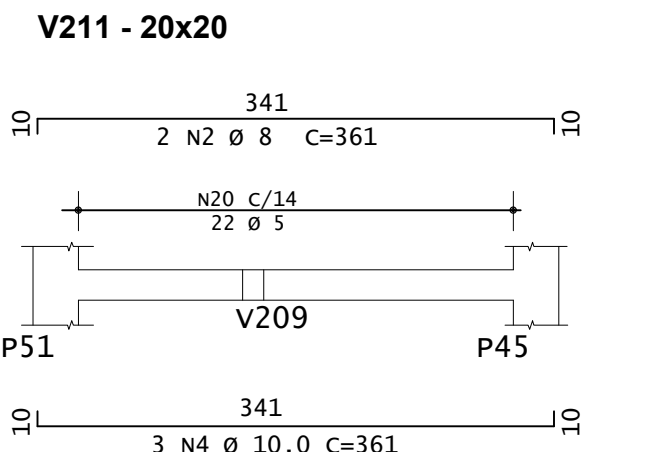
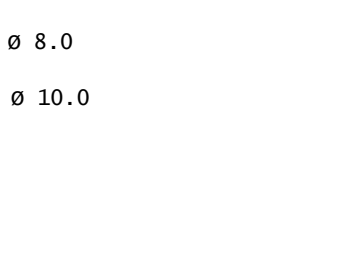
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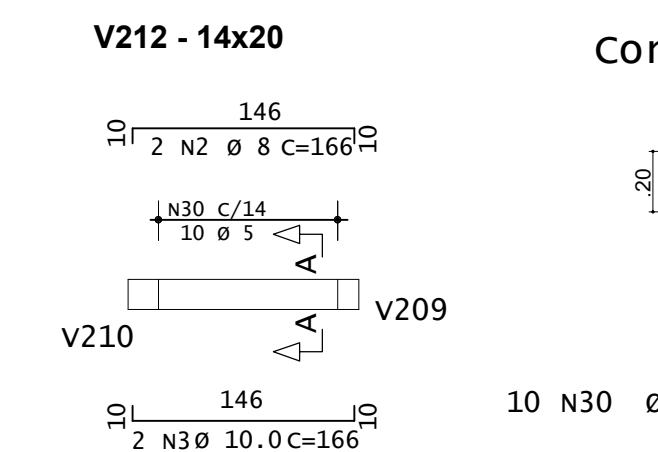
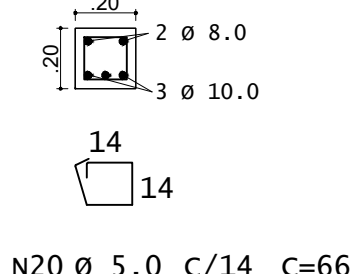
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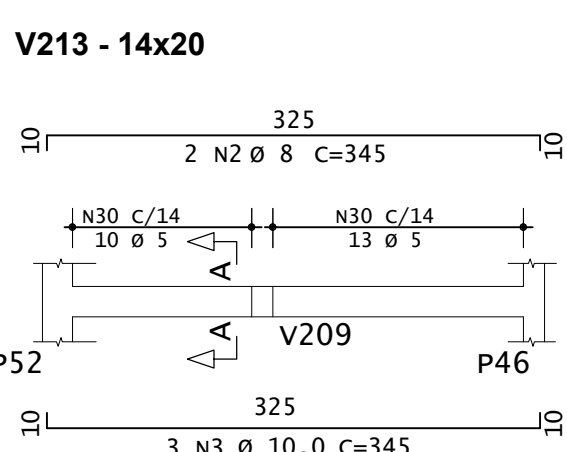
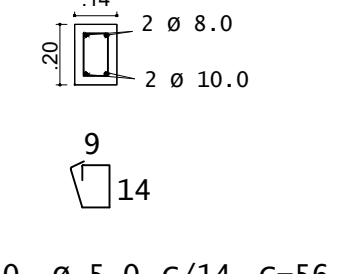
Corte A-A



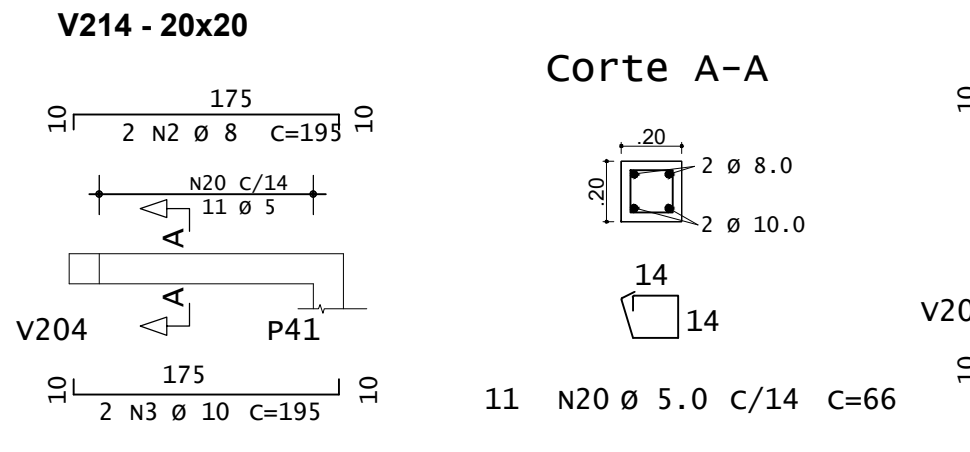
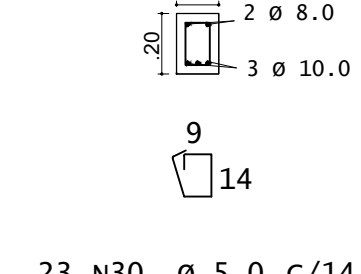
Corte A-A



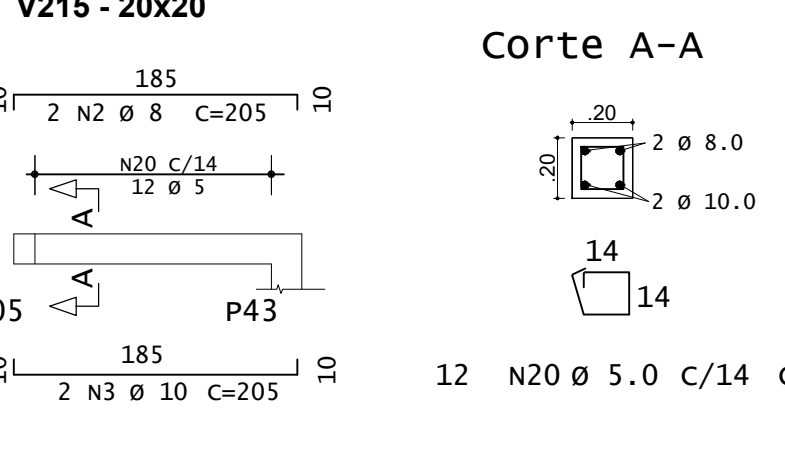
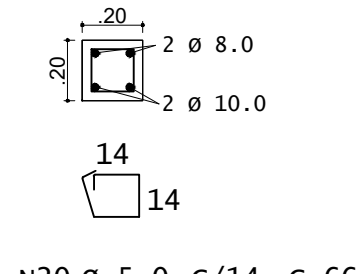
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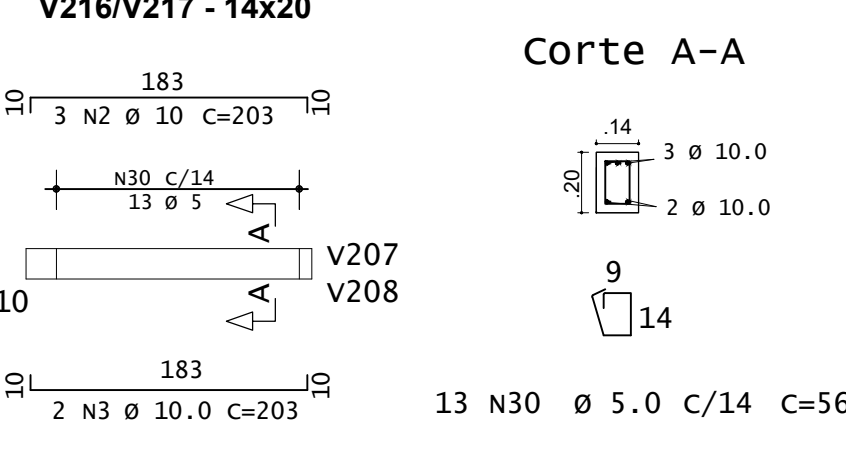
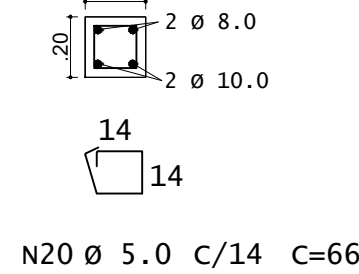
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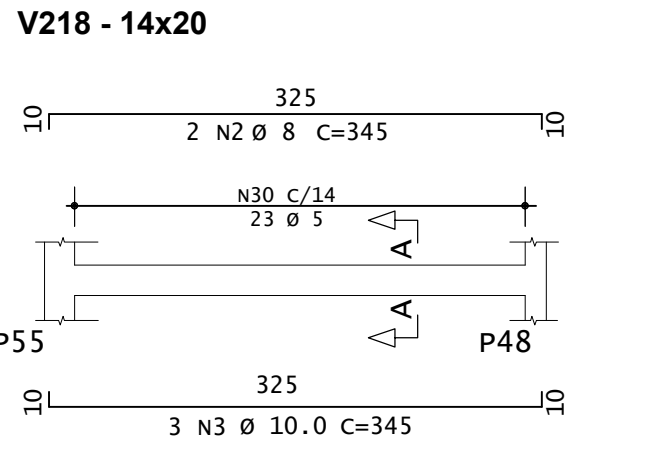
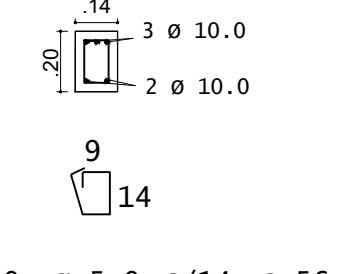
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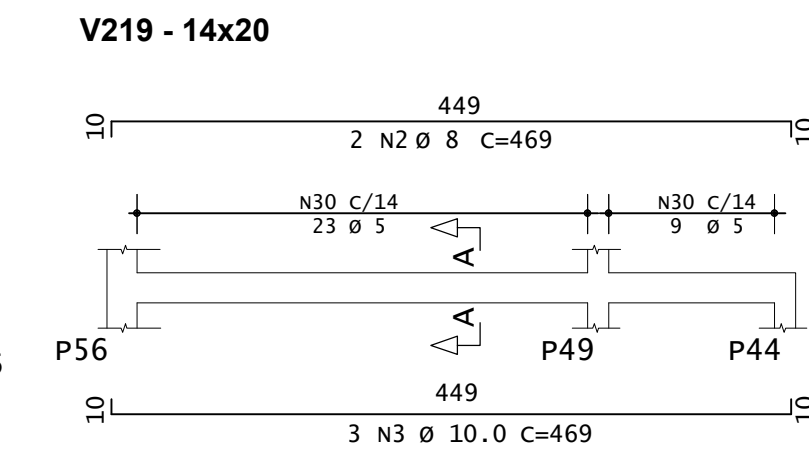
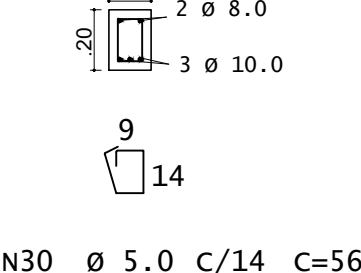
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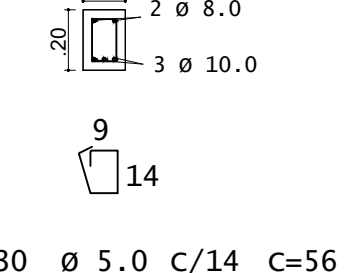
Corte A-A



Corte A-A



Corte A-A



VOLUME DE CONCRETO - VIGAS fck 30MPa = 2,74 M³	
ÁREA DE FORMAS - 33,90 M²	

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO (cm)	UNIT	TOTAL (cm)
V201 (X1)						
60A	20	5.0	42	66	2772	
50A	2	8.0	2	650	1300	
	3	10.0	2	650	1300	
V202 (X1)						
60A	20	5.0	28	66	1848	
50A	2	8.0	2	417	834	
	3	10.0	2	417	834	
V203 (X1)						
60A	20	5.0	48	66	3168	
50A	2	8.0	2	711	1422	
	3	10.0	2	711	1422	
V204 (X1)						
60A	20	5.0	5	66	330	
50A	2	8.0	2	90	180	
	3	8.0	2	90	180	
V205 (X1)						
60A	30	5.0	51	56	2856	
50A	2	8.0	2	804	1608	
	3	10.0	3	804	2412	
V206 (X1)						
60A	30	5.0	26	56	1456	
50A	2	10.0	3	417	1251	
	3	10.0	2	417	834	
V207 (X1)						
60A	30	5.0	14	56	784	
50A	2	10.0	2	217	434	
	3	10.0	2	217	434	
V208 (X1)						
60A	30	5.0	15	56	840	
50A	2	10.0	2	217	434	
	3	10.0	2	217	434	
V209 (X1)						
60A	30	5.0	25	56	1400	
50A	2	8.0	2	387	774	
	3	10.0	3	387	1161	
V210 (X1)						
60A	20	5.0	139	66	9174	
50A	2	8.0	2	1200	2400	
	3	8.0	2	867	1734	
	4	10.0	3	1200	3600	
	5	10.0	3	867	2601	
V211 (X1)						
60A	20	5.0	22	66	1452	
50A	2	8.0	2	361	722	
	3	10.0	3	361	1083	
V212 (X1)						
60A	30	5.0	10	56	560	
50A	2	8.0	2	166	332	
	3	10.0	2	166	332	
V213 (X1)						
60A	30	5.0	23	56	1288	
50A	2	8.0	2	345	690	
	3	10.0	3	345	1035	
V214 (X1)						
60A	20	5.0	11	66	726	
50A	2	8.0	2	195	390	
	3	10.0	2	195	390	
V215 (X1)						
60A	20	5.0	12	66	792	
50A	2	8.0	2	205	410	
	3	10.0	2	205	410	
V216=V217 (X2)						
60A	30	5.0	26	56	1456	
50A	2	10.0	6	203	1218	
	3	10.0	4	203	812	
V218 (X1)						
60A	30	5.0	23	56	1288	
50A	2	8.0	2	345	690	
	3	10.0	3	345	1035	
V219 (X1)						
60A	30	5.0	32	56	1792	
50A	2	8.0	2	469	938	
	3	10.0	3	469	1407	

RESUMO DE AÇO			
ACO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	339,82	57,57
50A	8.0	345,04	63,45
	10.0	248,73	168,81
Peso Total		60A =	57,57 kg
Peso Total		50A =	232,27 kg

INSTITUTO FEDERAL

Sul de Minas Gerais

Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)

LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO: LUIZ FLAVIO REIS, Assinado de forma digital por LUIZ FLAVIO REIS, 6221669, 02/09/2019 14:08:05, IFSULDEMINAS CAMPUS INCONFIDENTES, DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

ENDEREÇO OBRA: Fazenda Escola, Rua Sargento Mor Toledo Piza, Nº 01, Inconfidentes / MG- CEP: 37.576-000

RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA:461346706, Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA:46134670634, 02/09/2019 14:08:05, IFSULDEMINAS CAMPUS INCONFIDENTES, DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: 89.418m² (ha), MATRÍCULA DO IMÓVEL: 19.490, FICHA 1, LIVRO Nº02 - REGISTRO GERAL, SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

ENGP: CIVIL PAULO ROBERTO DE OLIVEIRA, CREA - MG 29.949/D - MAT. SIAPE 2056557

DESENHO: LEANDRO DE OLIVEIRA, MATHEUS HENRIQUE FRANCO LOPES

ÁREA A CONSTRUIR: 1.143,00 m²

CARIMBOS:

DATA: 17/10/2022

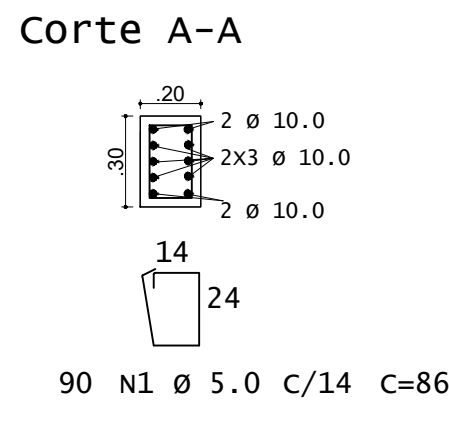
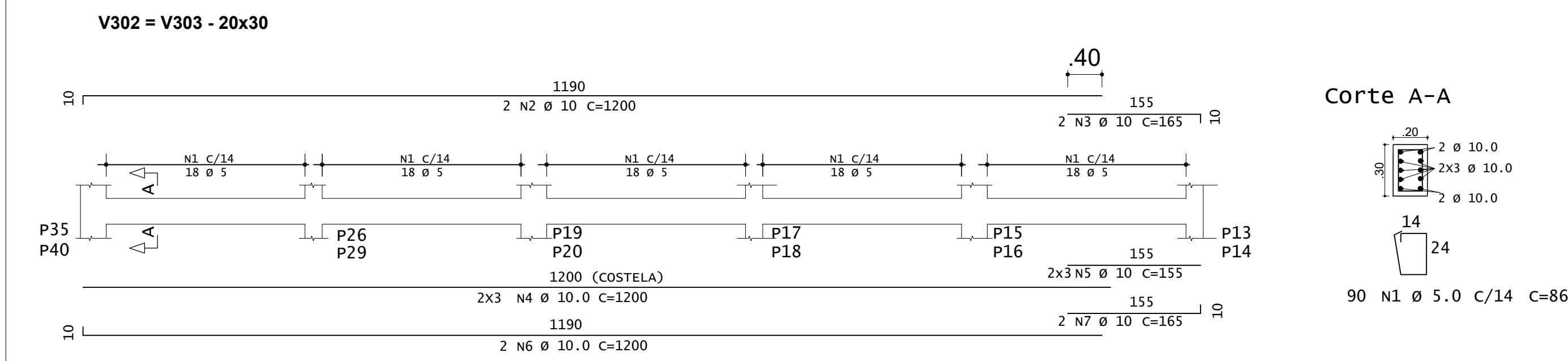
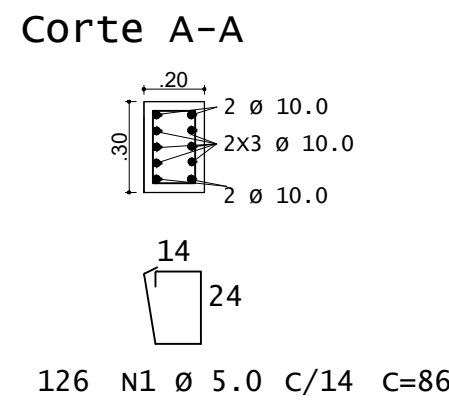
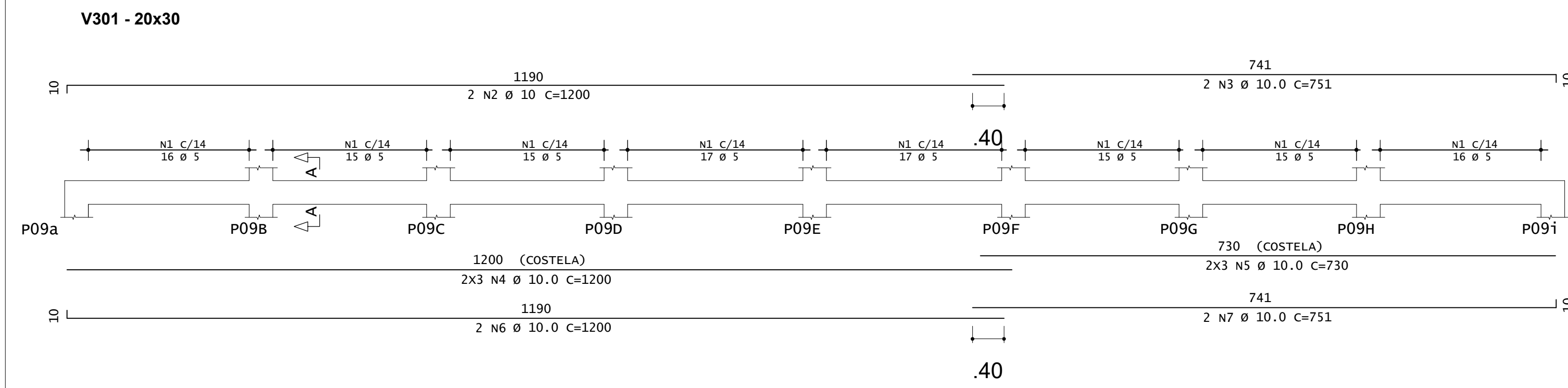
REVISÃO: 01

ESCALAS: INDICADAS

UNIDADE: METROS

FOLHA: 04/16



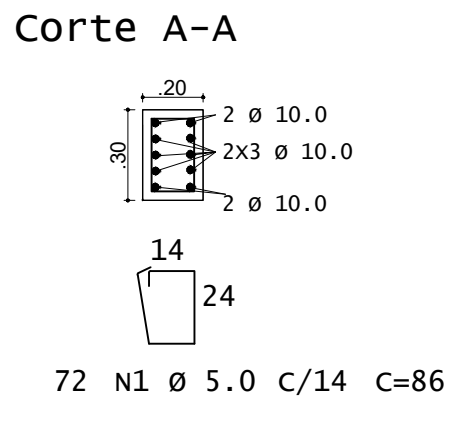
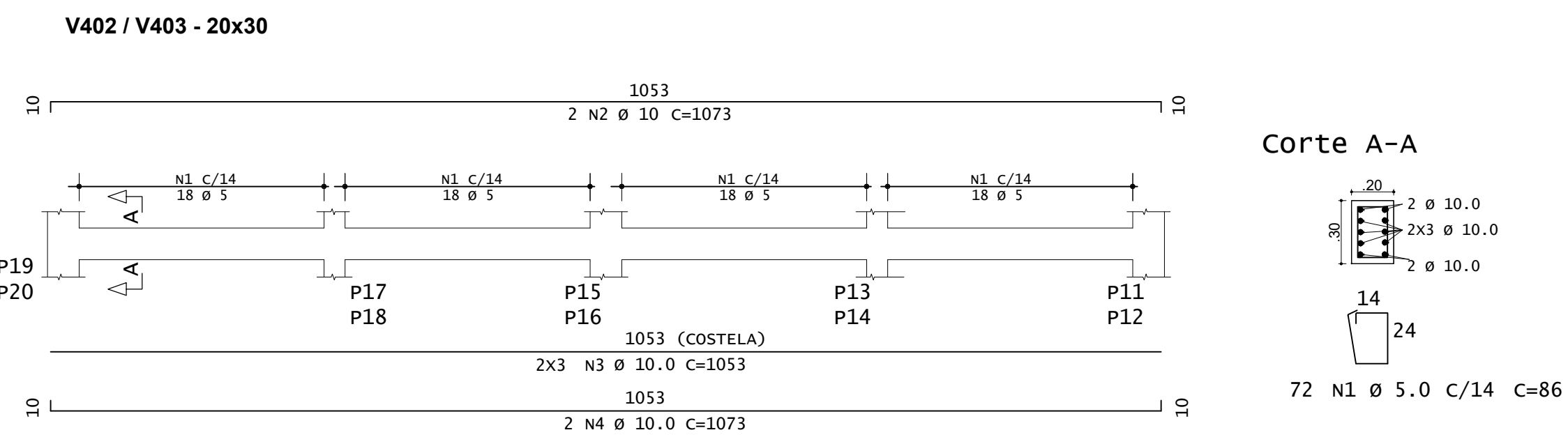
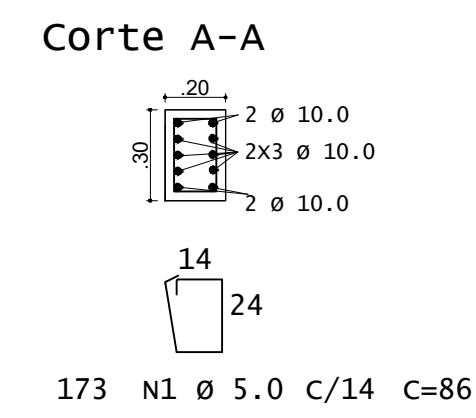
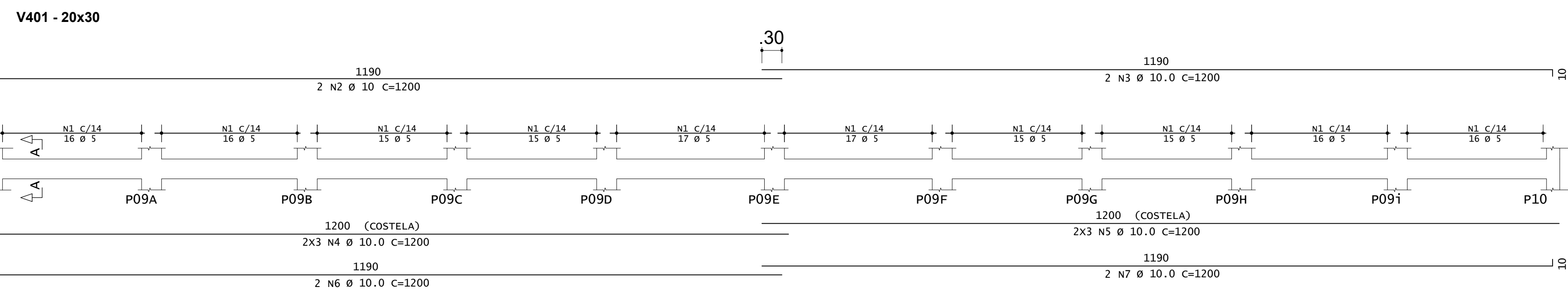
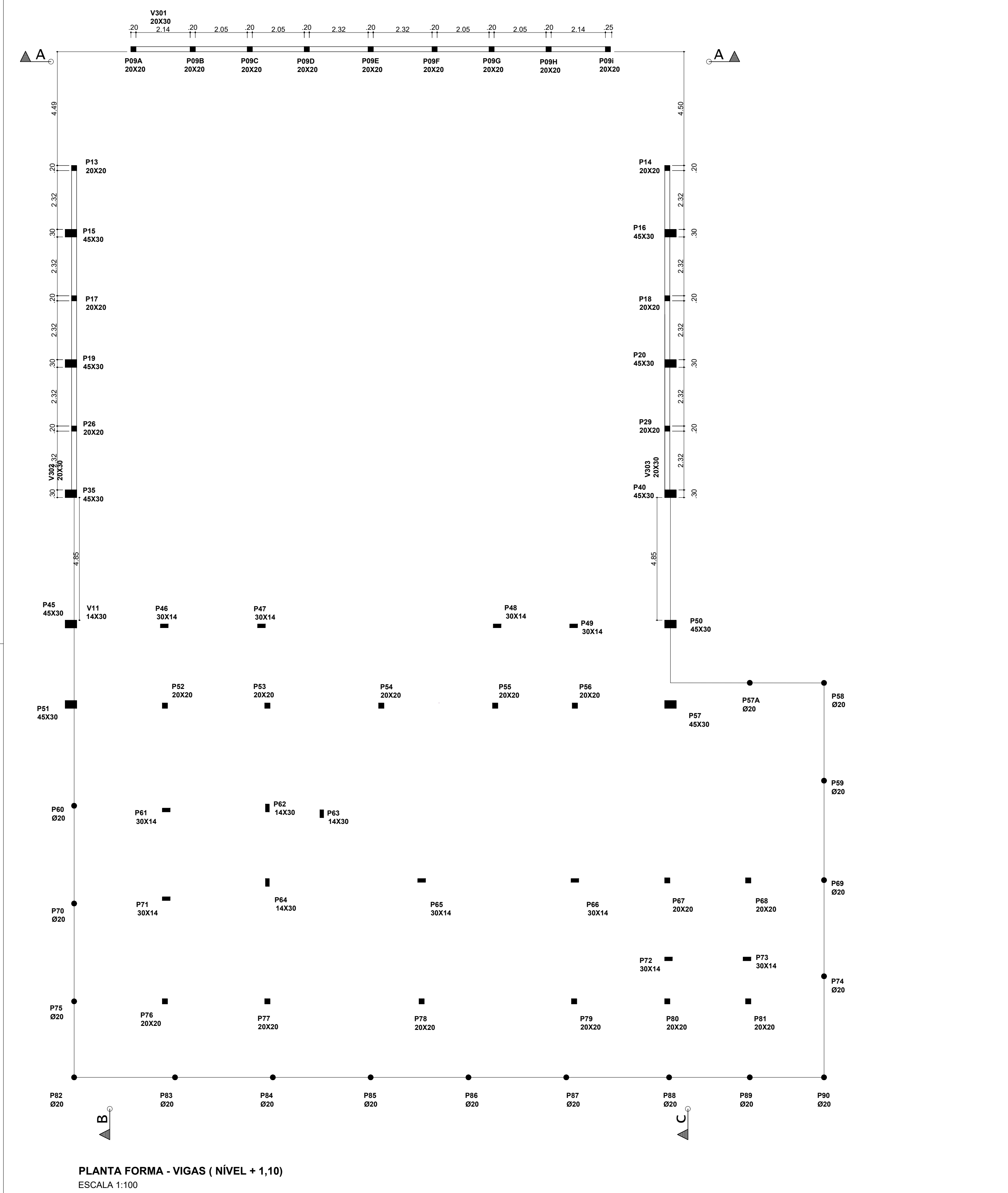


VOLUME DE CONCRETO - VIGAS fck 30MPa = 2,72 M³

ÁREA DE FORMAS - 27,16 M²

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V301 (X1)					
60A	1	5.0	126	86	10836
50A	2	10.0	2	1200	2400
	3	10.0	2	751	1502
	4	10.0	6	1200	7200
	5	10.0	6	730	4380
	6	10.0	2	1200	2400
	7	10.0	2	751	1502
V302 = V303 (X2)					
60A	1	5.0	144	86	12384
50A	2	10.0	4	1200	4800
	3	10.0	4	165	660
	4	10.0	12	1200	14400
	5	10.0	12	155	1860
	6	10.0	4	1200	4800
	7	10.0	4	165	660

RESUMO DE AÇO			
ACO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	263,16	44,58
50A	10.0	465,64	316,03
Peso Total		60A =	44,58 kg
Peso Total		50A =	316,03 kg

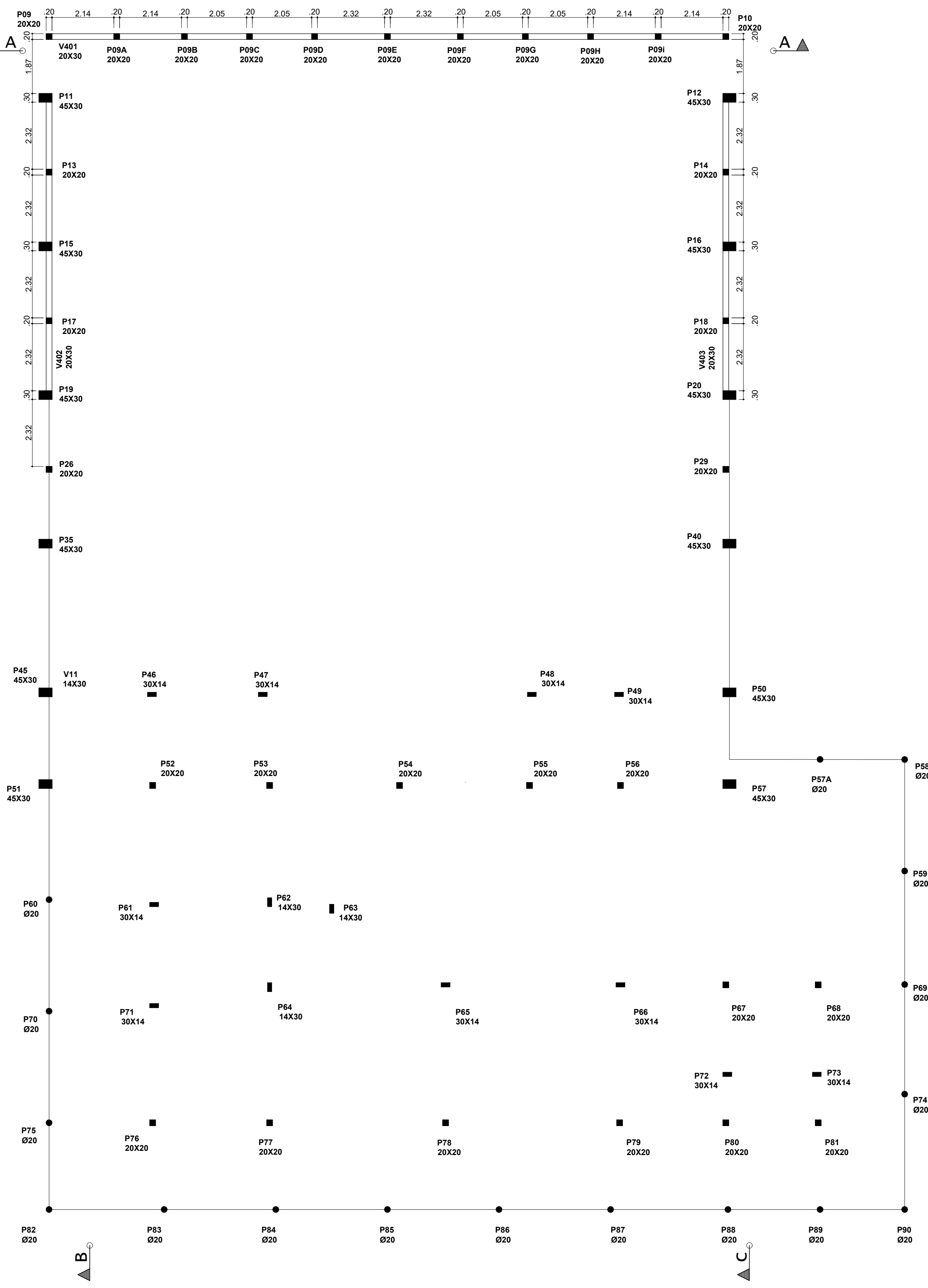


VOLUME DE CONCRETO - VIGAS fck 30MPa = 2,69 M³

ÁREA DE FORMAS - 26,88 M²

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V401 (X1)					
60A	1	5.0	173	86	14878
50A	2	10.0	2	1200	2400
	3	10.0	2	1200	2400
	4	10.0	6	1200	7200
	5	10.0	6	1200	7200
	6	10.0	2	1200	2400
	7	10.0	2	1200	2400
V402 = V403 (X2)					
60A	1	5.0	144	86	12384
50A	2	10.0	4	1073	4292
	3	10.0	12	1053	12636
	4	10.0	4	1073	4292

RESUMO DE AÇO			
ACO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	272,62	46,18
50A	10.0	452,20	306,91
Peso Total		60A =	46,18 kg
Peso Total		50A =	306,91 kg



**INSTITUTO FEDERAL**  
Sul de Minas Gerais  
Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)  
LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES  
TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO: LUIZ FLAVIO REIS  
FERNANDES057  
IFSULDEMINAS CAMPUS INCONFIDENTES  
DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

ENDEREÇO OBRA:  
Fazenda Escola  
Rua Sargento Mor Toledo Piza, Nº 01  
Inconfidentes / MG- CEP: 37.576-000

RESPONSÁVEL TÉCNICO:  
PAULO ROBERTO DE OLIVEIRA  
461346706  
34

Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA  
46134670634  
2022.10.25 11:16:01 -03'00'

QUADRO RESUMO DE ÁREAS:  
TERRENO PARTE B: 80.41857 (ha)  
MATRÍCULA DO IMÓVEL: 19.490 FICHA 1  
LIVRO Nº02 - REGISTRO GERAL  
SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

ÁREA A CONSTRUIR: 1.143,00 m²

DATA: 17/10/2022

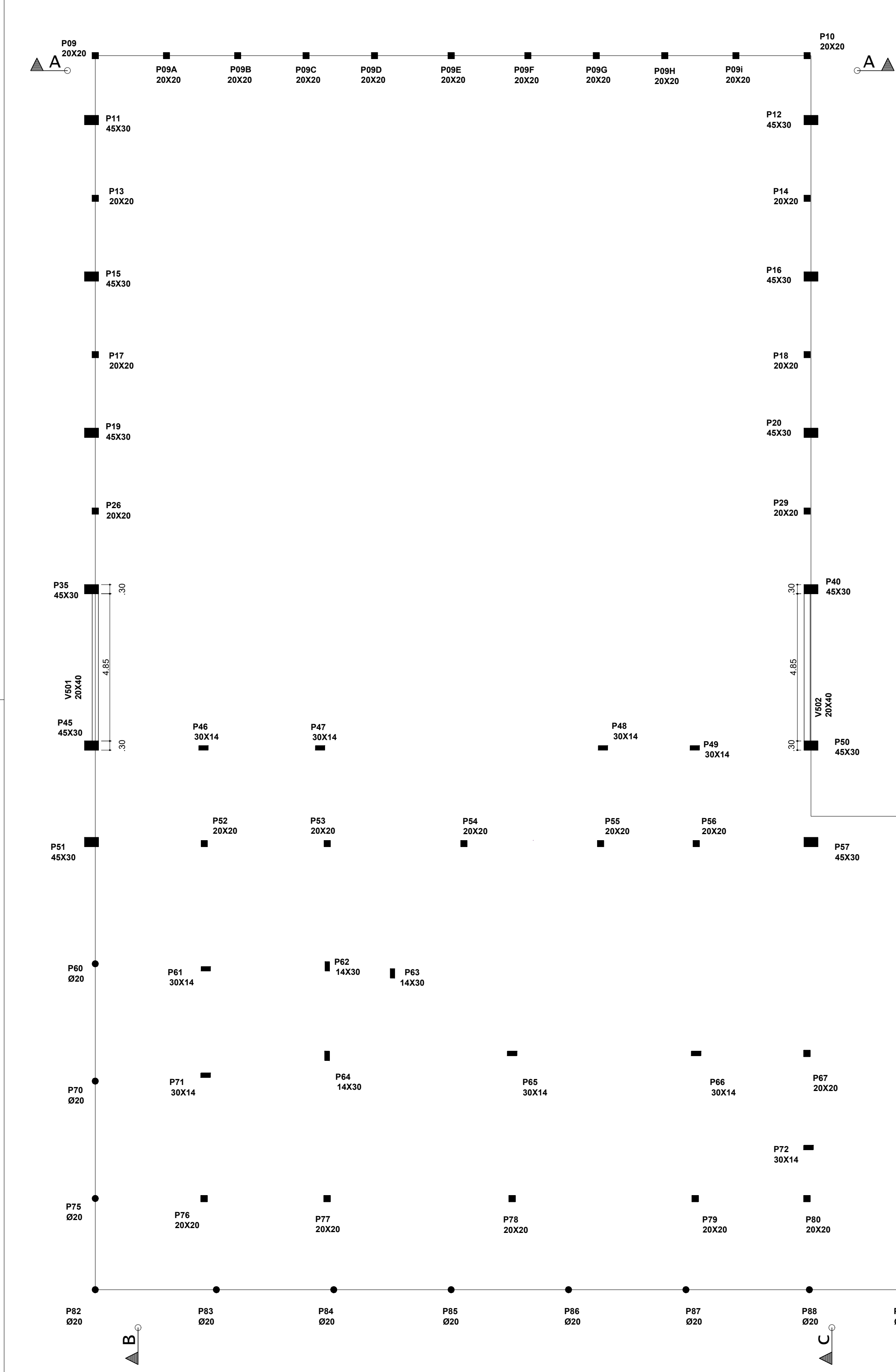
REVISÃO: 01

ESCALAS: INDICADAS

UNIDADE: METROS

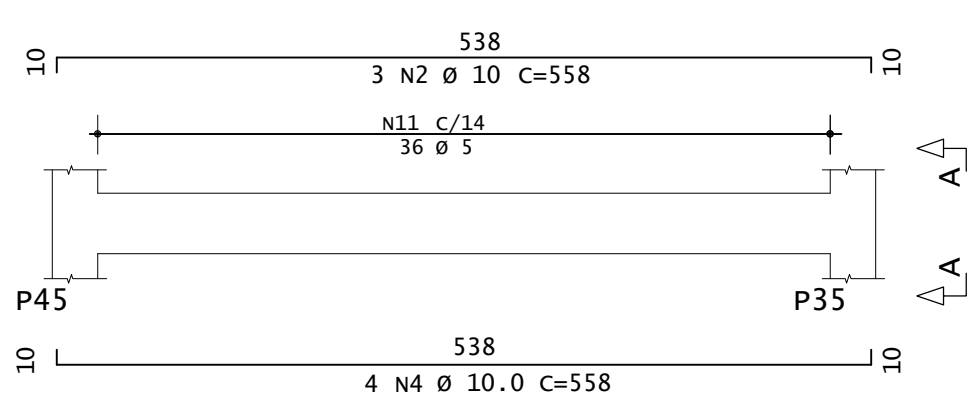
FOLHA: 05/16



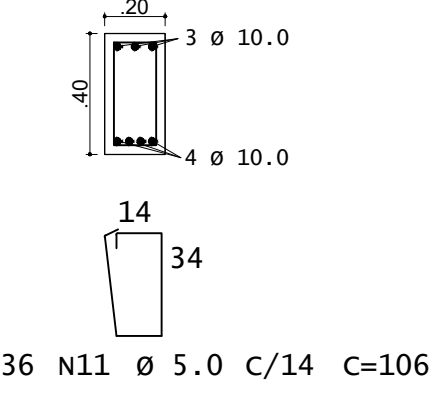


PLANTA FORMA - VIGAS ( NÍVEL + 2,80 )  
ESCALA 1:100

V501 / V502 - 20x40



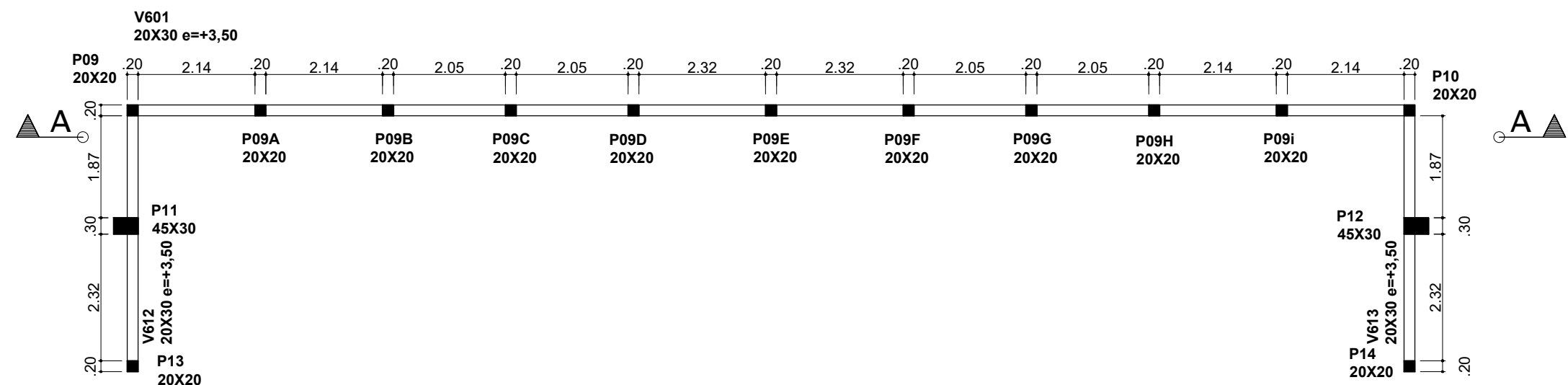
Corte A-A



VOLUME DE CONCRETO - VIGAS fck 30MPa = 0,90 M³  
ÁREA DE FORMAS - 8,71 M²

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V501=V502 (X2)					
60A	1	5.0	72	106	7632
50A	2	10.0	6	558	3348
	3	10.0	8	558	3348

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	76,32	12,93
50A	10.0	78,12	53,02
Peso Total 60A =			12,93 kg
Peso Total 50A =			53,02 kg



P15 45X30

P17 20X20

P19 45X30

P28 20X20

P32 45X30

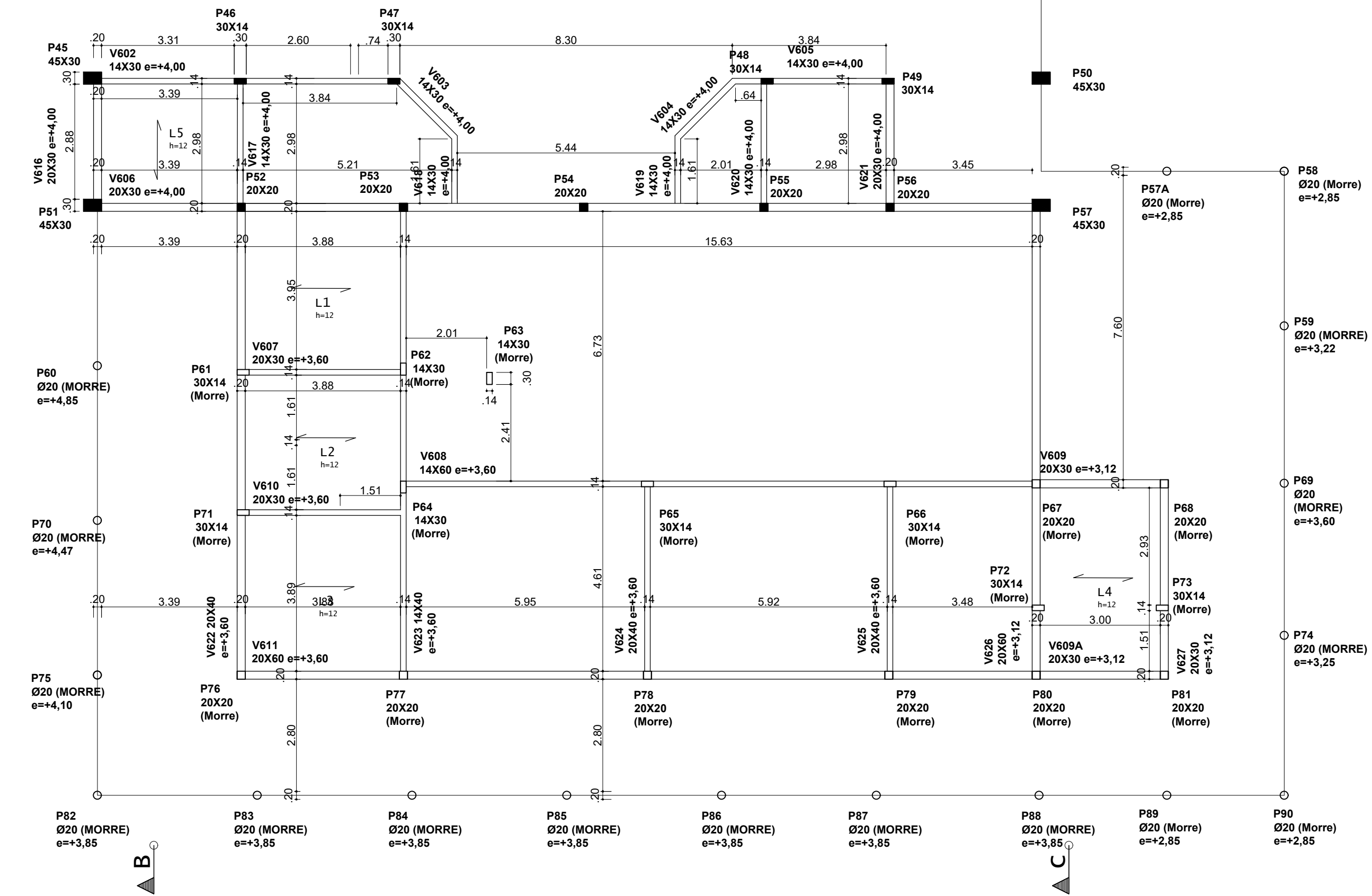
P16 45X30

P18 20X20

P20 45X30

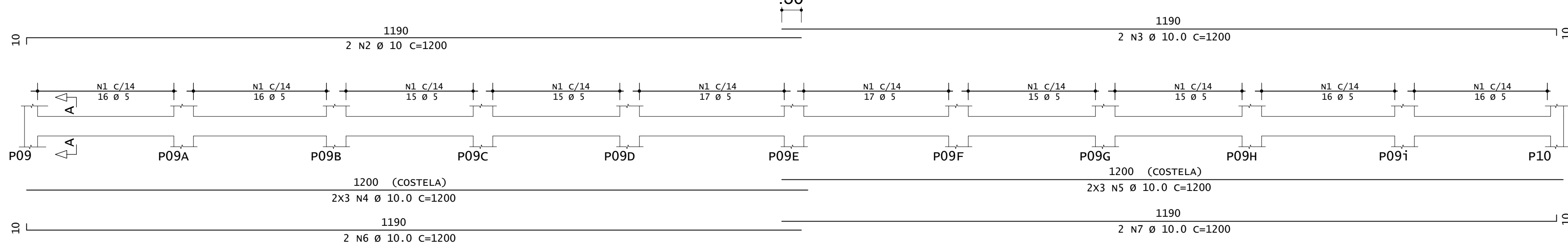
P29 20X20

P40 45X30

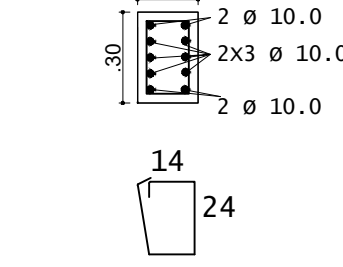


PLANTA FORMA - VIGAS ( NÍVEIS VARIADOS )  
ESCALA 1:100

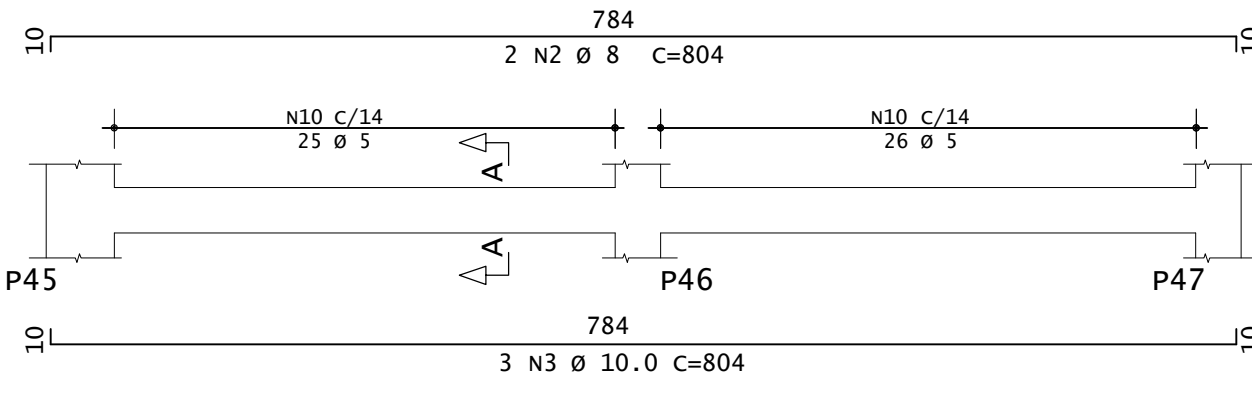
V601 - 20x30



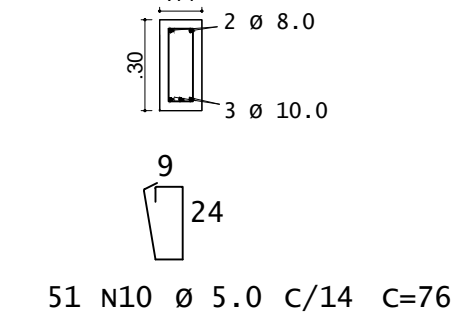
Corte A-A



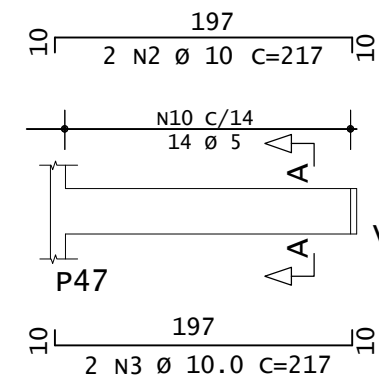
V602 - 14x30



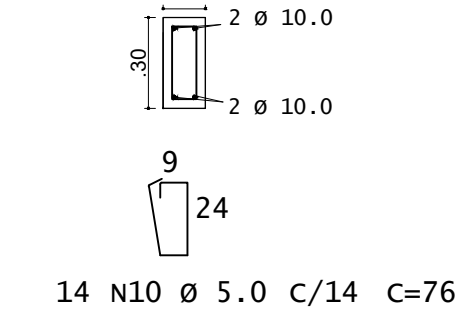
Corte A-A



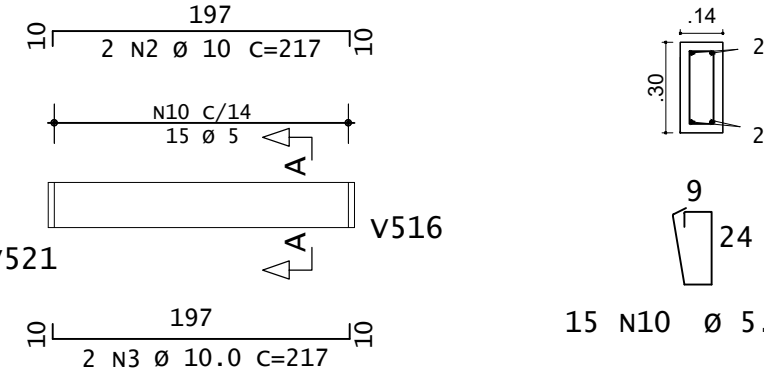
V603 - 14x30



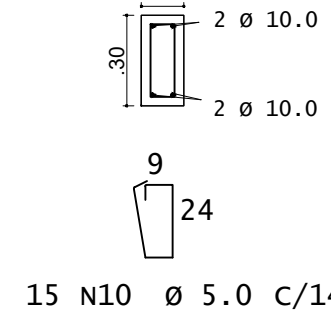
Corte A-A



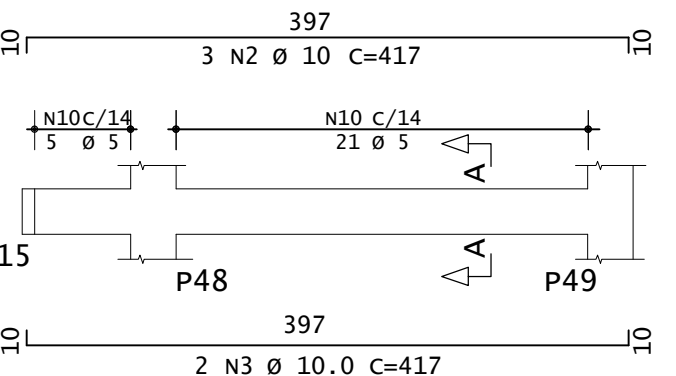
V604 - 14x30



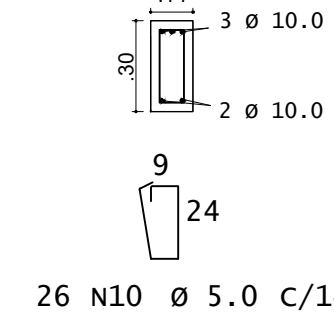
Corte A-A



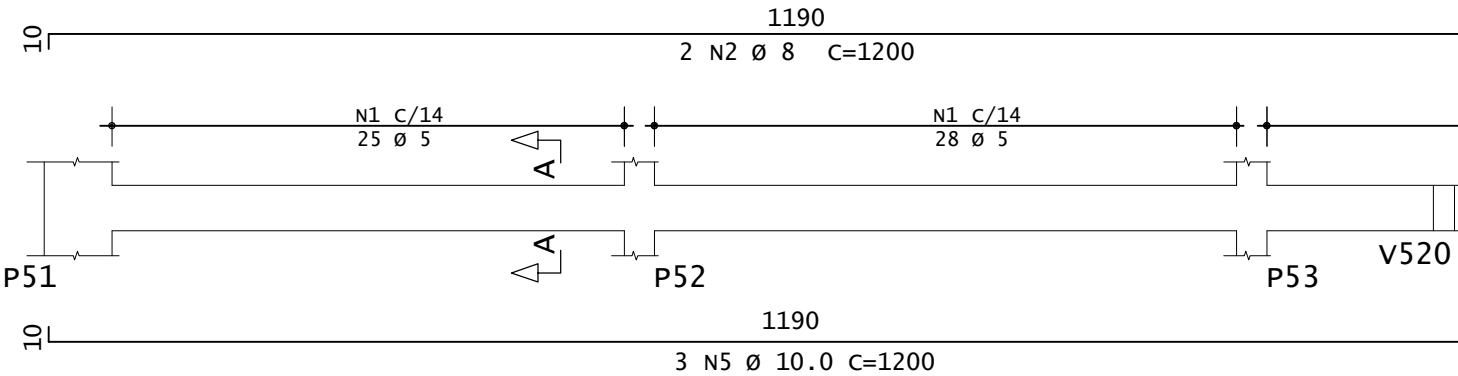
V605 - 14x30



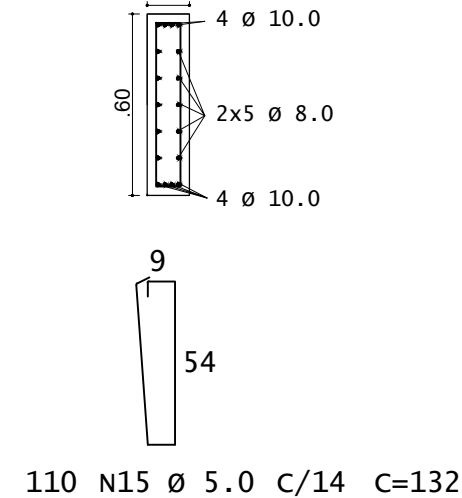
Corte A-A



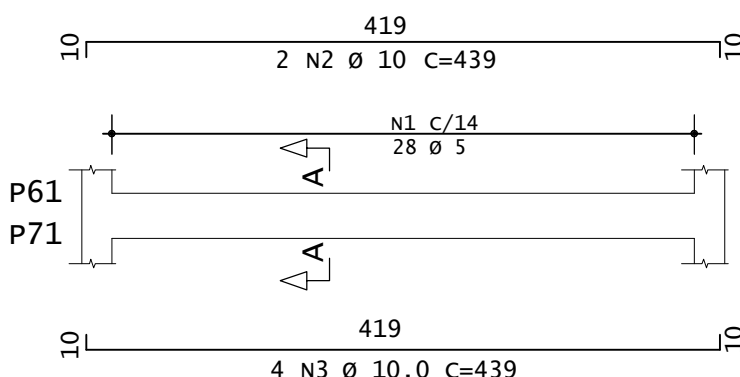
V606 - 20x30



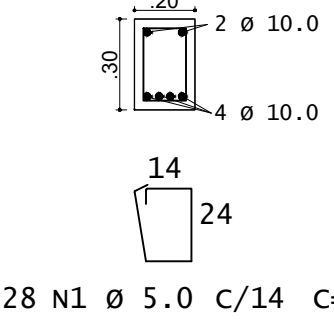
Corte A-A



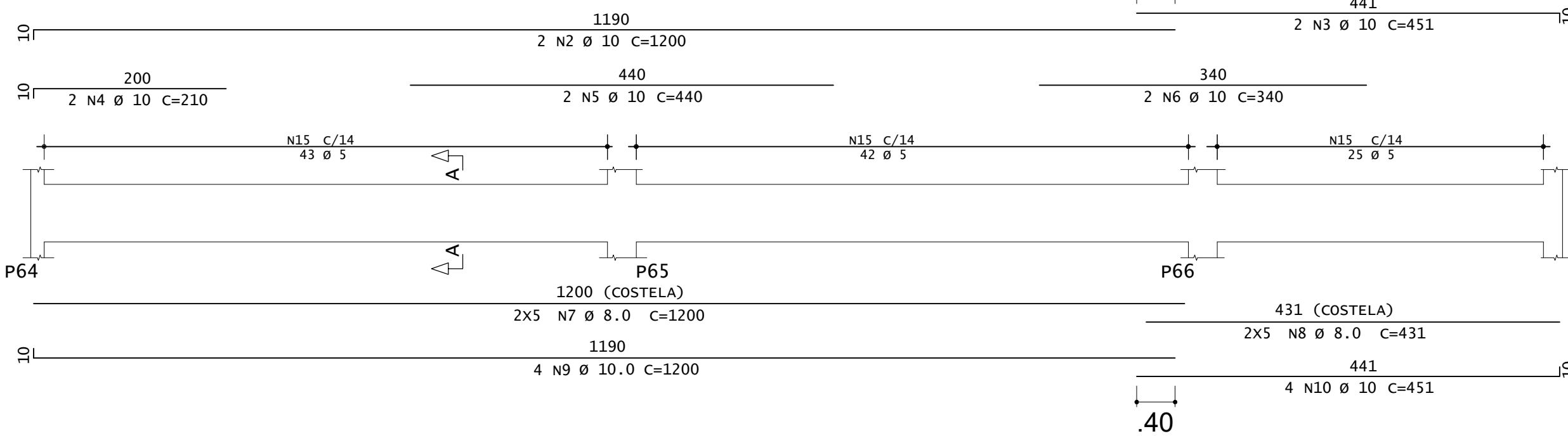
V607/ V610 - 20x30



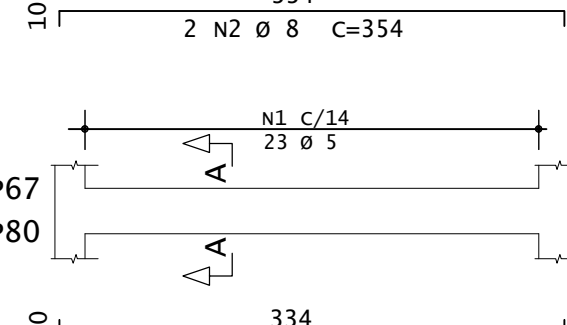
Corte A-A



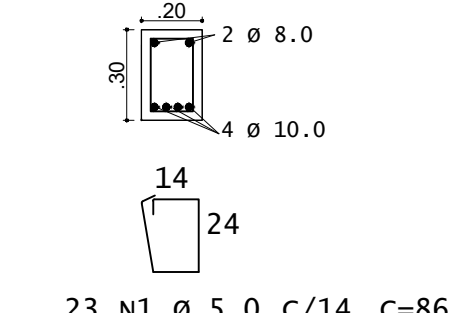
V608 - 14x60



V609=V609A - 20x30



Corte A-A



INSTITUTO FEDERAL

Sul de Minas Gerais

Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)

LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO

LUÍZ FLÁVIO REIS  
FERNANDES 0570  
IF SULD/EMINAS CAMPUS INCONFIDENTES  
DIRETOR GERAL LUÍZ FLÁVIO REIS FERNANDES

RESPONSÁVEL TÉCNICO:

PAULO ROBERTO DE OLIVEIRA-461346706  
FERNANDES 0570  
34

ENDEREÇO OBRA:

Fazenda Escola  
Rua Sargento Mor Toledo Piza, Nº 01  
Inconfidentes / MG- CEP: 37.576-000

TERRENO PARTE B: 80.41867 (m²)

MATRICULA DO IMÓVEL: 15.460 FICHA 1

LIVRO Nº02 - REGISTRO GERAL

SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

ÁREA A CONSTRUIR: 1.143,00 m²

CARIMBOS:

DATA: 17/10/2022

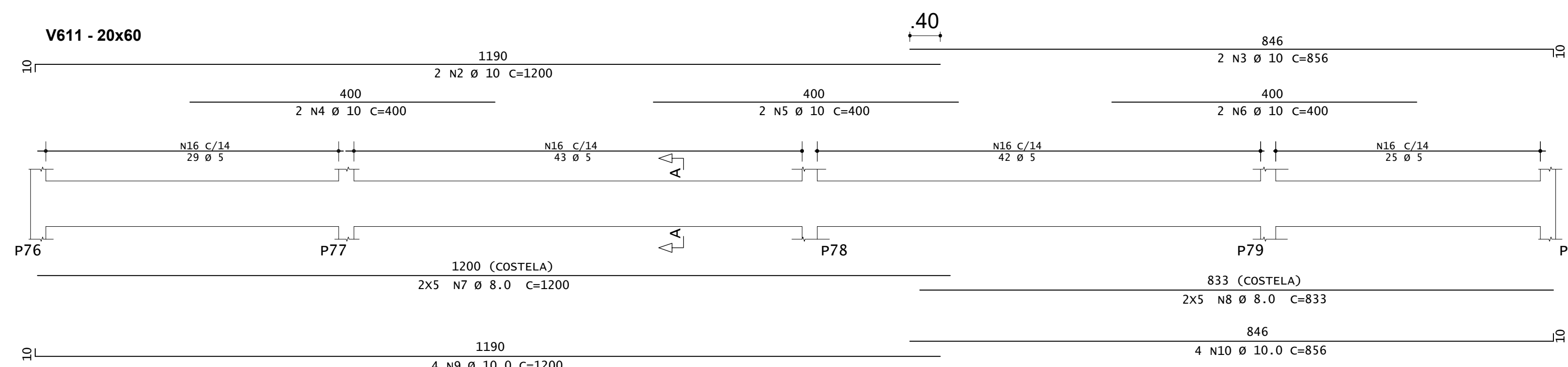
REVISÃO: 01

ESCALAS: INDICADAS

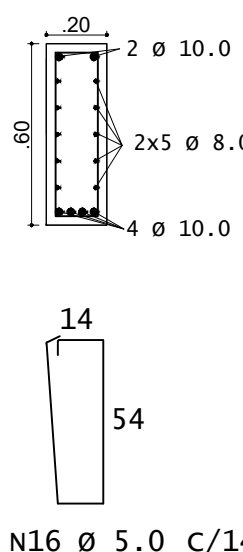
UNIDADE: METROS

FOLHA: 06/16

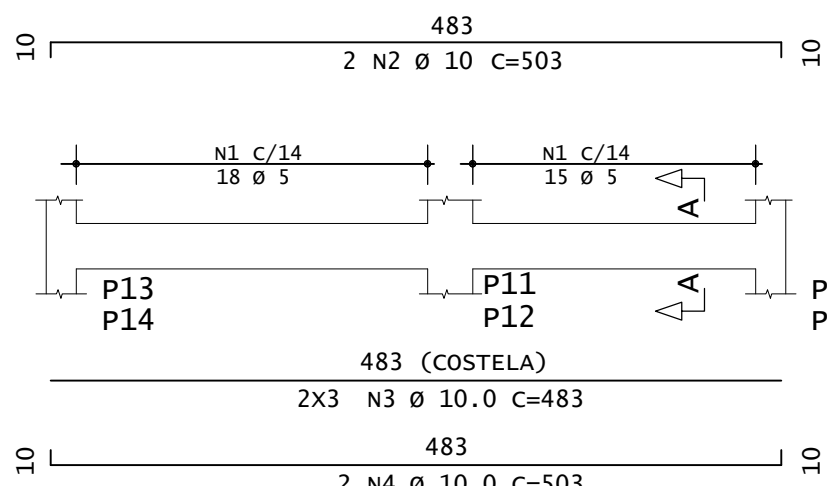




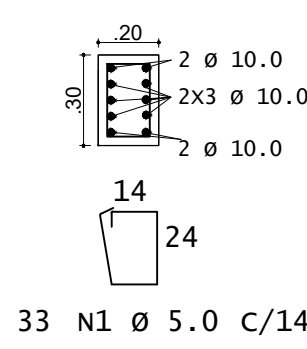
Corte A-A



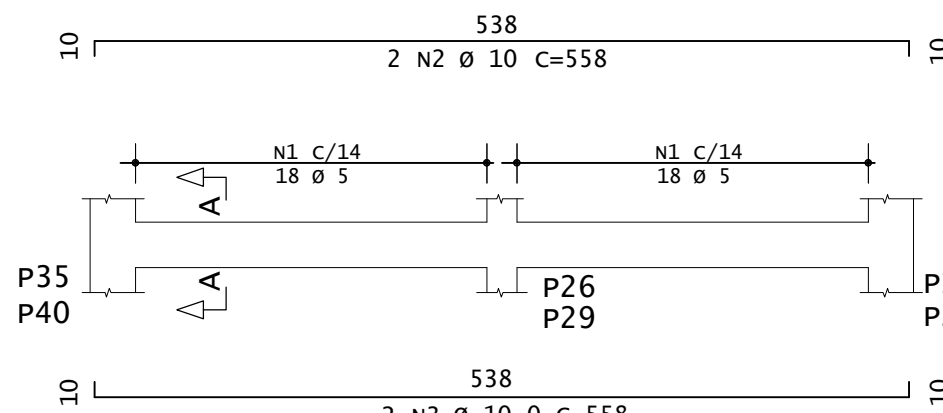
V612 / V613 - 20x30



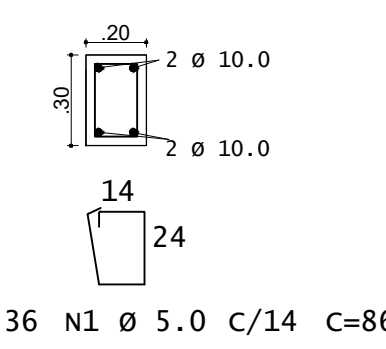
Corte A-A



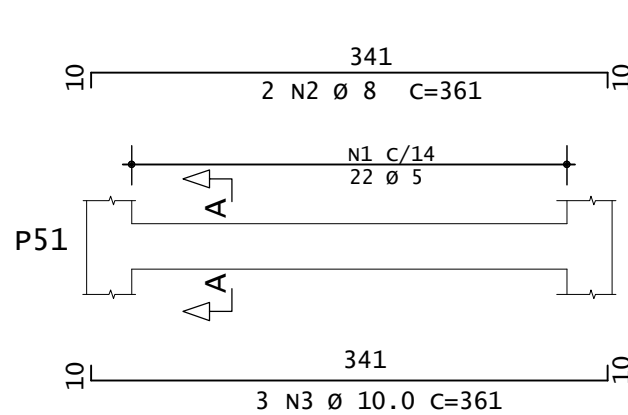
V614 / V615 - 20x30



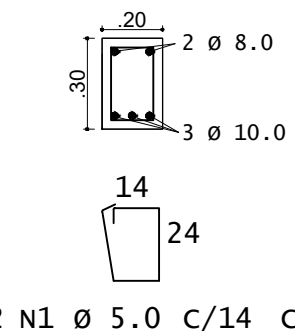
Corte A-A



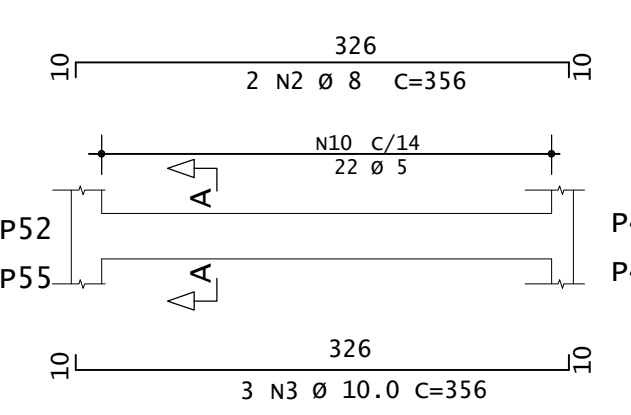
V616 - 20x30



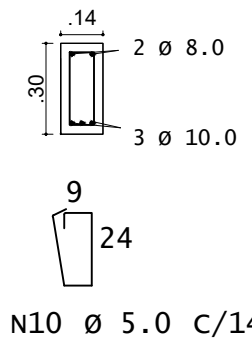
Corte A-A



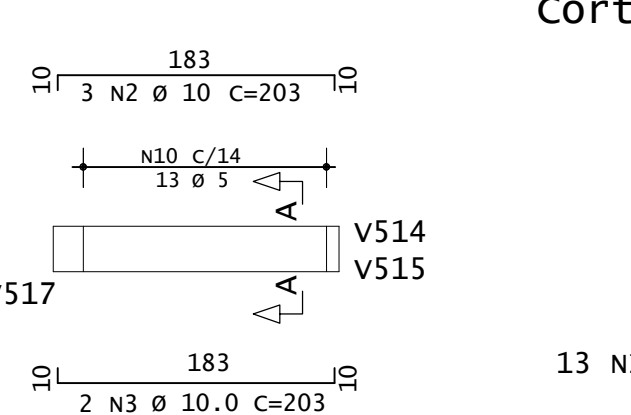
V617 / V620 - 14x30



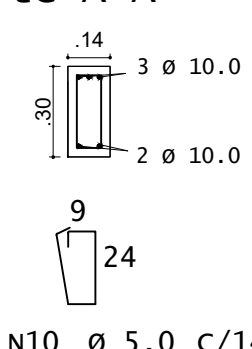
Corte A-A



V618 / V619 - 14x30



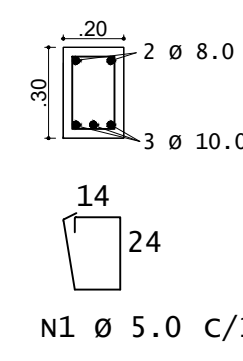
Corte A-A



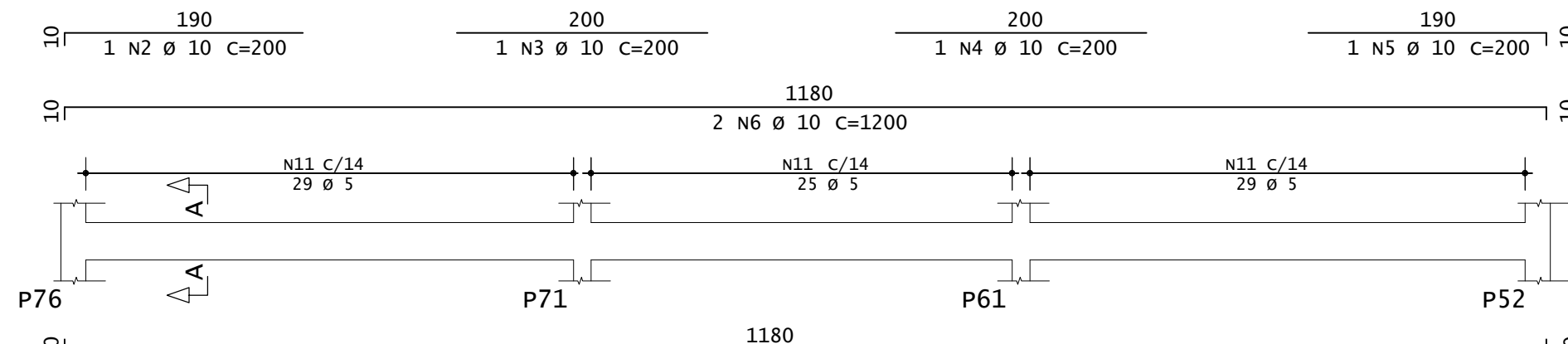
V621 - 20x30



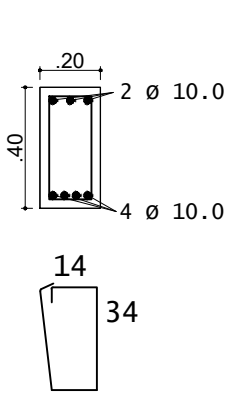
Corte A-A



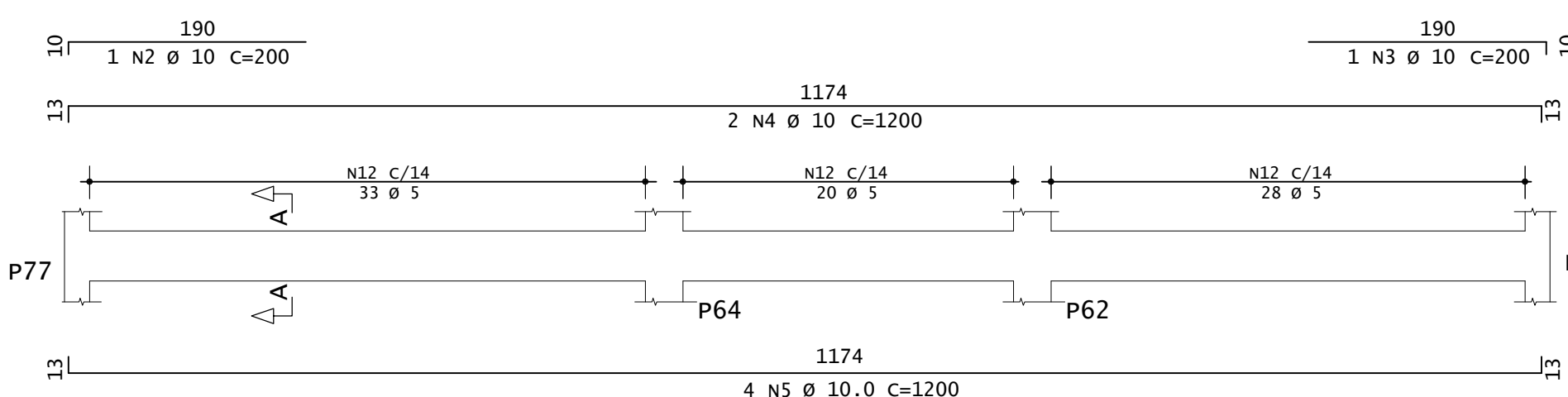
V622 - 20x40



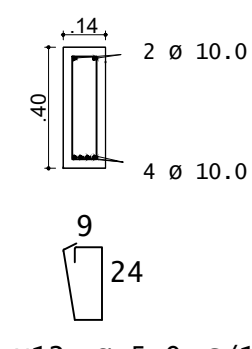
Corte A-A



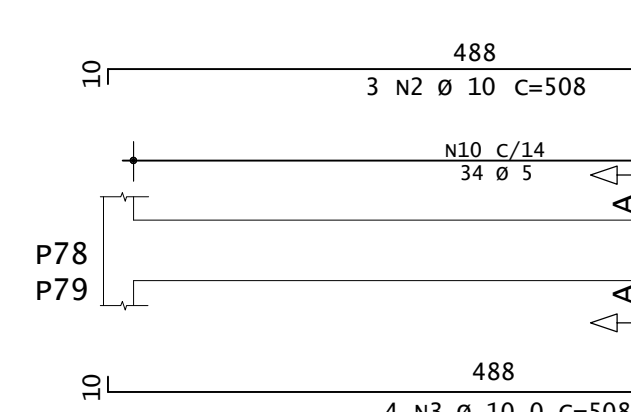
V623 - 14x40



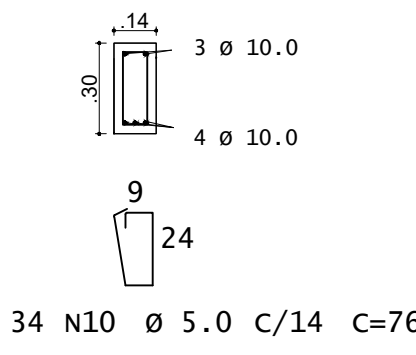
Corte A-A



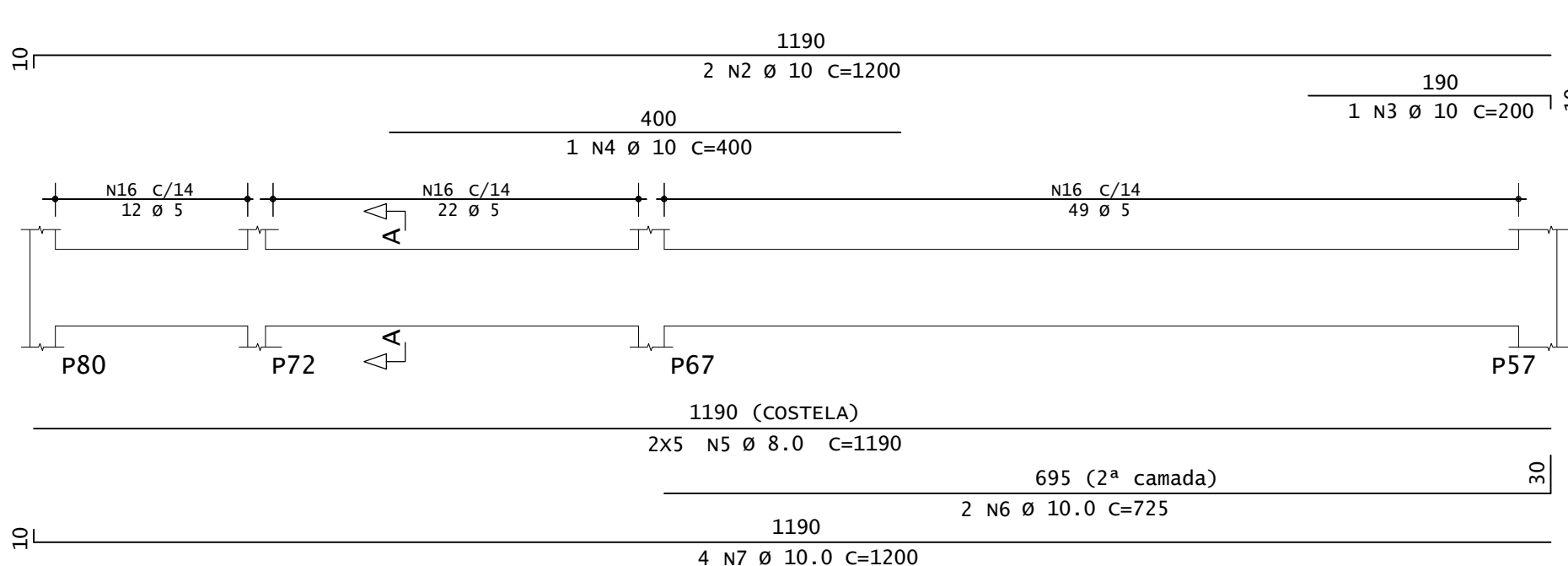
V624/V625 - 14x40



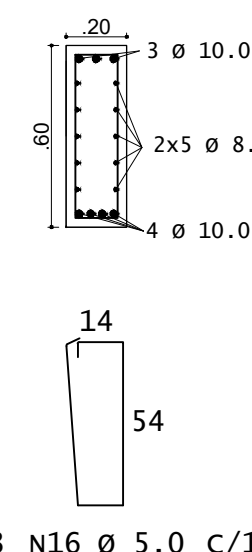
Corte A-A



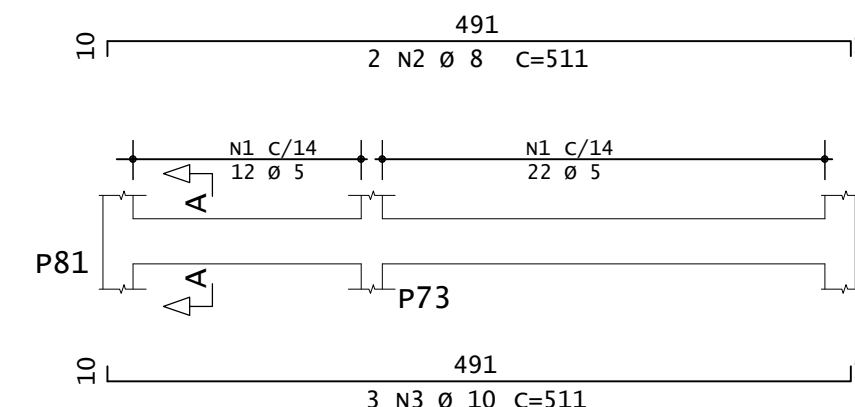
V626 - 20x60



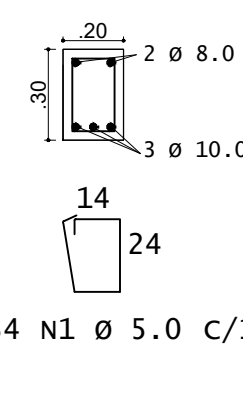
Corte A-A



V627 - 20x30



Corte A-A

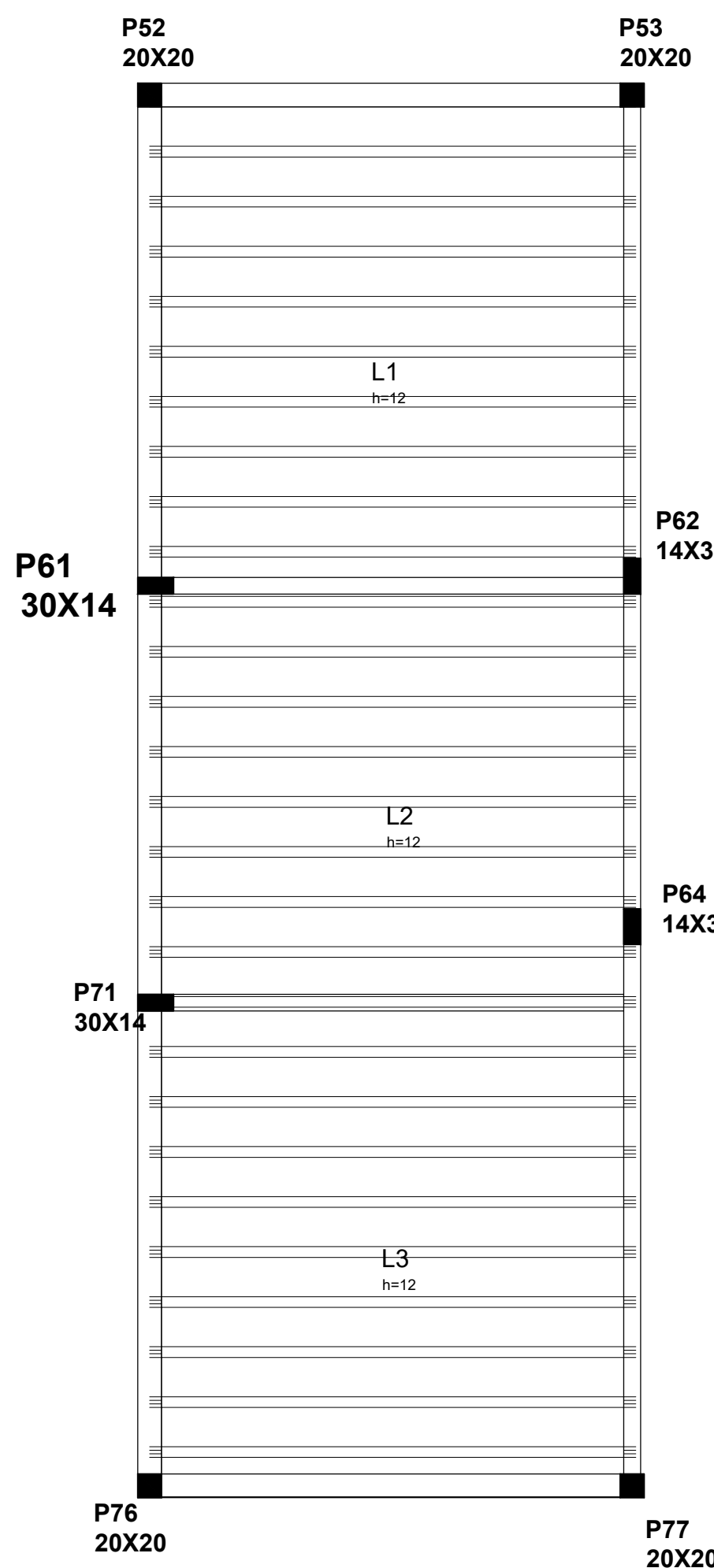


VOLUME DE CONCRETO - VIGAS fck 30Mpa = 14,20 M³	
ÁREA DE FORMAS - 157,58 M²	

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V601 (X1)					
60A	1	5.0	173	86	14878
50A	2	10.0	2	1200	2400
3	10.0	2	1200	2400	
4	10.0	6	1200	7200	
6	10.0	2	1200	2400	
7	10.0	2	1200	2400	
V602 (X1)					
60A	10	5.0	51	76	3876
50A	2	8.0	2	804	1608
3	10.0	3	804	2412	
V603 (X1)					
60A	10	5.0	14	76	1064
50A	2	10.0	2	217	434
3	10.0	3	217	434	
V604 (X1)					
60A	10	5.0	15	76	1140
50A	2	10.0	2	217	434
3	10.0	2	217	434	
V605 (X1)					
60A	10	5.0	26	76	1976
50A	2	10.0	3	417	1251
3	10.0	2	417	834	
V606 (X1)					
60A	1	5.0	165	86	14190
50A	2	8.0	2	1200	2400
3	8.0	2	1200	2400	
4	8.0	2	107	214	
5	10.0	3	1200	3600	
6	10.0	3	1200	3600	
7	10.0	3	107	321	
V607=v610 (X2)					
60A	1	5.0	56	86	4816
50A	2	10.0	4	439	1756
3	10.0	8	439	3512	
V608 (X1)					
60A	15	5.0	110	132	14520
50A	2	10.0	2	1200	2400
3	10.0	2	451	902	
4	10.0	2	210	420	
5	10.0	2	440	880	
6	10.0	2	340	680	
7	8.0	10	1200	12000	
8	8.0	10	431	4310	
9	10.0	4	1200	4800	
10	10.0	4	451	1804	
V609=v609A (X2)					
60A	1	5.0	46	86	3956
50A	2	8.0	4	354	1416
3	10.0	8	354	2832	
V611 (X1)					
60A	16	5.0	132	142	18744
50A	2	10.0	2	1200	2400
3	10.0	2	856	1712	
4	10.0	2	400	800	
5	10.0	2	400	800	
6	10.0	2	400	800	
7	8.0	10	1200	12000	
8	8.0	10	833	8330	
9	10.0	4	1200	4800	
10	10.0	4	856	3424	

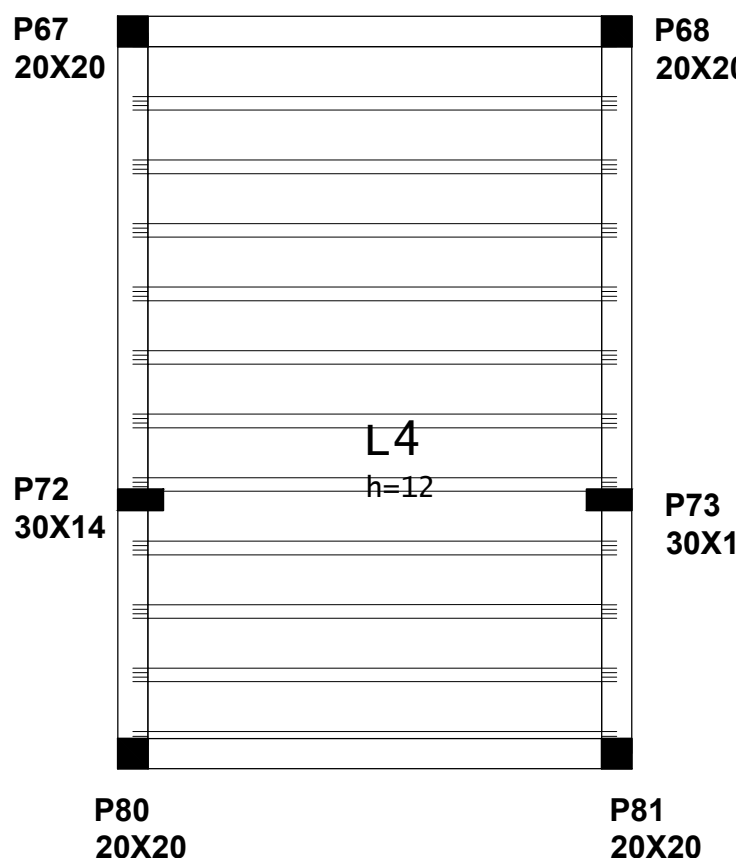
ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V612=v613 (X2)					
60A	1	5.0	66	86	5676
50A	2	10.0	4	503	2012
3	10.0	12	483	5796	
4	10.0	4	503	2012	
V614=v615 (X2)					
60A	1	5.0	72	86	6192
50A	2	10.0	4	558	2232
3	10.0	4	558	2232	
V616 (X1)					
60A	1	5.0	22	86	1892
50A	2	8.0	2	361	722
3	10.0	3	361	1083	
V617=v620 (X2)					
60A	10	5.0	44	76	3344
50A	2	8.0	4	356	1424
3	10.0	6	356	2136	
V618=v619 (X2)					
60A	10	5.0	26	76	1976
50A	2	10.0	6	203	1218
3	10.0	4	203	812	
V621 (X1)					
60A	1	5.0	23	86	1978
50A	2	8.0	2	469	938
3	10.0	3	469	1407	
V622 (X1)					
60A	11	5.0	83	106	8798
50A	2	10.0	1	200	200
3	10.0	1	200	200	
4	10.0	1	200	200	
5	10.0	1	200	200	
6	10.0	2	1200	2400	
7	10.0	4	1200	4800	
V623 (X1)					
60A	12	5.0	81	106	8586
50A	2	10.0	1	200	200
3	10.0	1	200	200	
4	10.0	2	1200	2400	
5	10.0	4	1200	4800	
V624=v625 (X2)					
60A	10	5.0	68	76	5168
50A	2	10.0	6	508	3048
3	10.0	8	508	4064	
V626 (X1)					
60A	16	5.0	83	142	11786
50A	2	10.0	2	1200	2400
3	10.0	1	200	200	
4	10.0	1	400	400	
5	8.0	10	1190	11900	
6	10.0	2	725	1450	
7	10.0	4	1200	4800	
V627 (X1)					
60A	1	5.0	34	86	2924
50A	2	8.0	2	511	1022
3	10.0	3	511	1533	

RESUMO DE AÇO			
ACO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	1374,80	232,89
50A	8.0	606,84	263,67
10.0	10.0	1269,11	861,34
Peso Total		60A =	232,89 kg
Peso Total		50A =	1125,02 kg



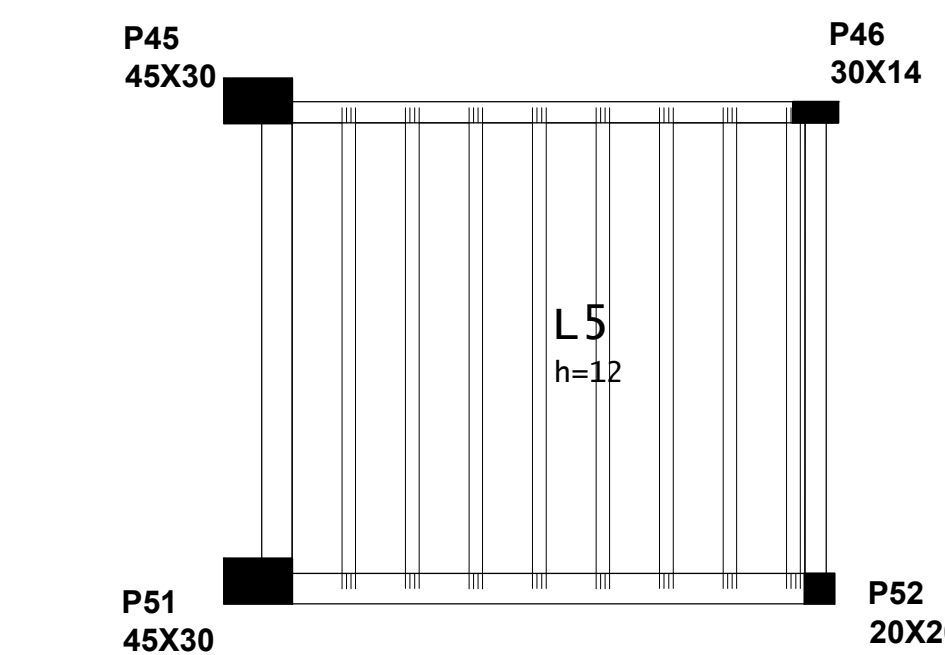
PLANTA FORMA - LAJES (NÍVEL + 3,60)

ESCALA 1:50



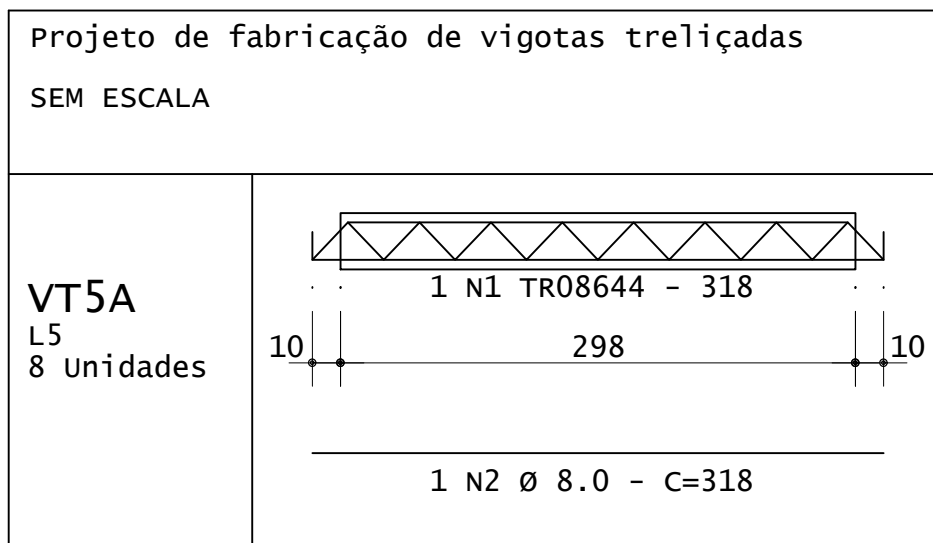
PLANTA FORMA - LAJES (NÍVEL + 3,12)

ESCALA 1:50



PLANTA FORMA - LAJES (NÍVEL + 4,00)

ESCALA 1:50



Projeto de fabricação de vigotas treliçadas SEM ESCALA

VT5A

L5

8 unidades

1 N1 TR08644 - 318

298

1 N2 Ø 8.0 - C=318

ACO	POS	Desc.	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
Lajes					
	1	TR08644	8	318	2544

RESUMO DE AÇO		
ACO	COMPR (m)	PESO (kg)
TR08644	25,44	18,70
Peso Total		TR08644 = 18,70 kg

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
ADICIONAIS					
50A	2	8.0	8	318	2544

RESUMO DE AÇO		
ACO	BIT (mm)	COMPR (m)
50A	8.0	25,44
Peso Total		50A = 11,05 kg

ACO	POS	Desc.	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
Lajes					
	1	TR08644	10	408	4080
	2	TR08644	9	408	3672
	3	TR08644	9	408	3672
	4	TR08644	9	320	2880

RESUMO DE AÇO		
ACO	COMPR (m)	PESO (kg)
TR08644	143,04	105,13
Peso Total		TR08644 = 105,13 kg

ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
ADICIONAIS					
50A	5	10.0	10	408	4080
	6	10.0	9	408	3672
	7	10.0	9	408	3672
	8	8.0	9	320	2880

RESUMO DE AÇO		
ACO	BIT (mm)	COMPR (m)
50A	8.0	28,80
10.0	10.0	114,24
Peso Total		50A = 90,04 kg

INSTITUTO FEDERAL

Sul de Minas Gerais

Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)

LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO: LUIZ FLAVIO REIS  
FERNANDES 05706  
IF SULDEMINAS CAMPUS INCONFIDENTES  
DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

ENDEREÇO OBRA: Fazenda Escola  
Rua Sargento Mor Toledo Piza, Nº 01  
Inconfidentes / MG- CEP: 37.576-000

RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA 461346706  
Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA 46134670634  
Data: 2022.10.25 11:21:18 -0300

ENGENHO: LEANDRO DE OLIVEIRA  
MATHEUS HENRIQUE FRANCO LOPES

QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: 80,4187 (ha)  
MATERIAIS DO IMÓVEL: 19,460 FICHA 1  
LIVRO Nº02 - REGISTRO GERAL  
SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

ÁREA A CONSTRUIR: 1.143,00 m²

DATA: 17/10/2022

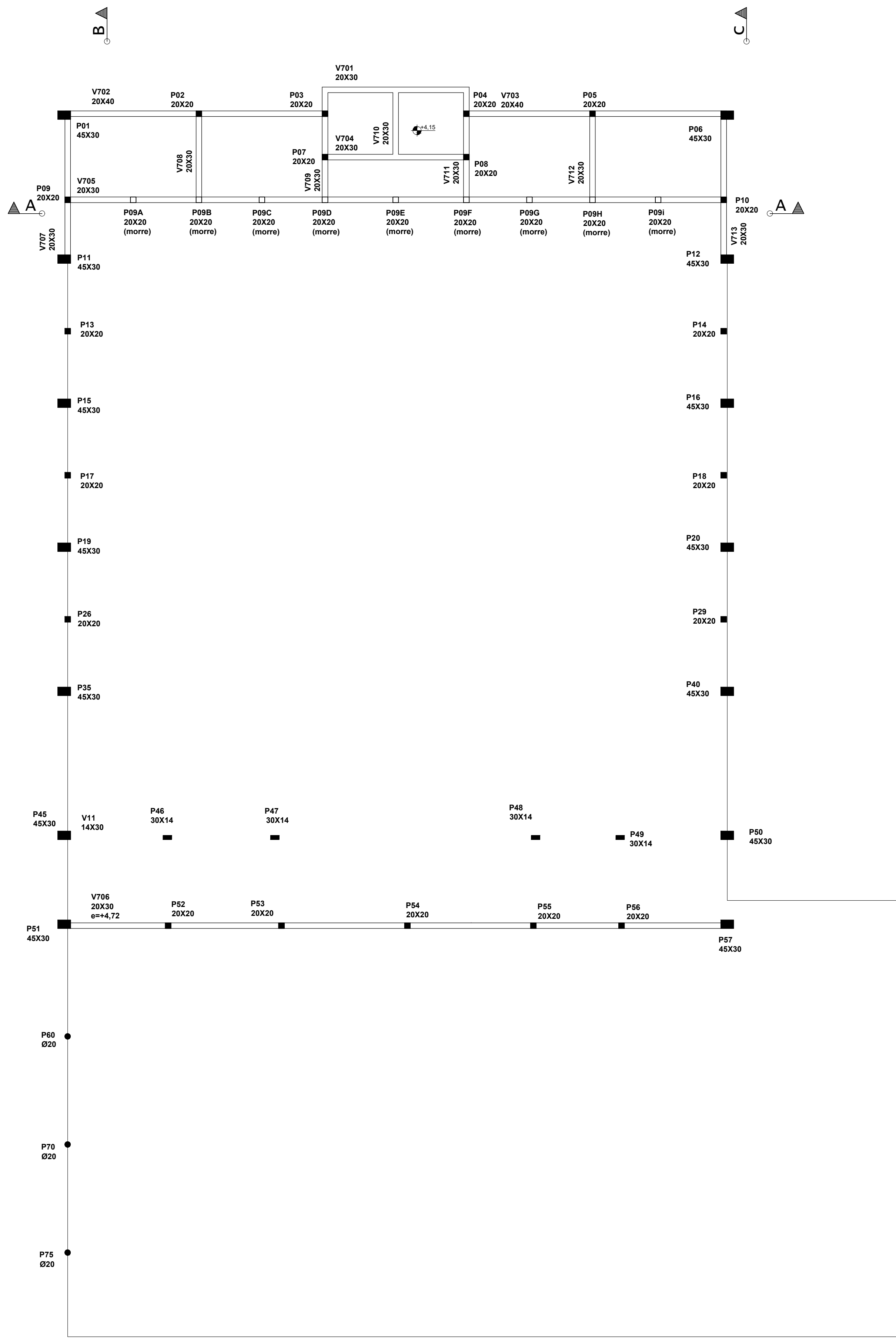
REVISÃO: 01

ESCALAS: INDICADAS

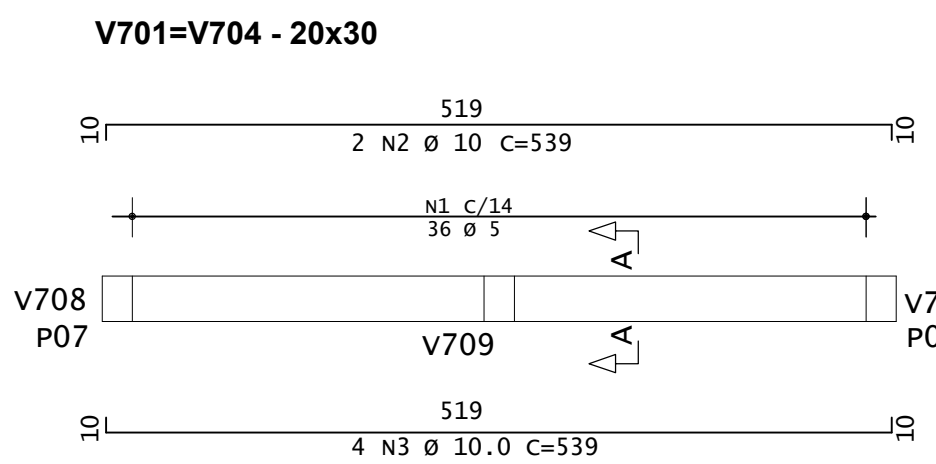
UNIDADE: METROS

FOLHA: 07/16

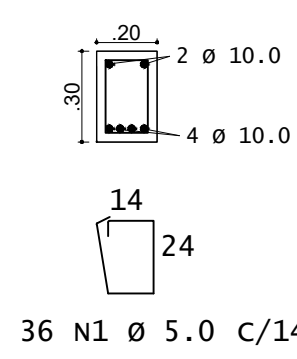




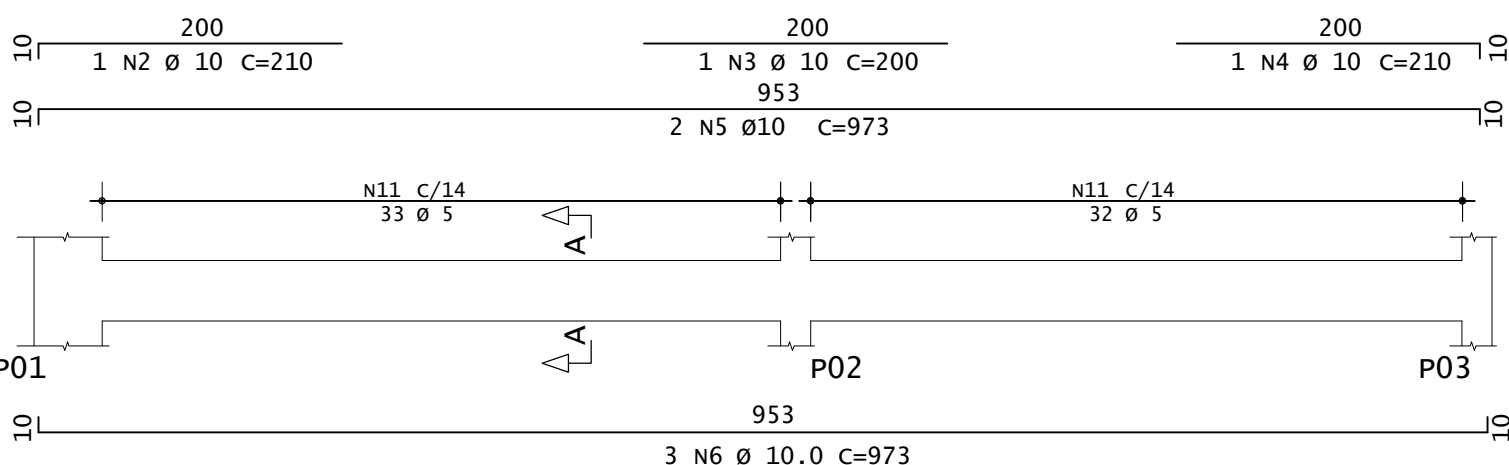
PLANTA FORMA - VIGAS ( NÍVEL + 4,15 e 4,72)  
ESCALA 1:100



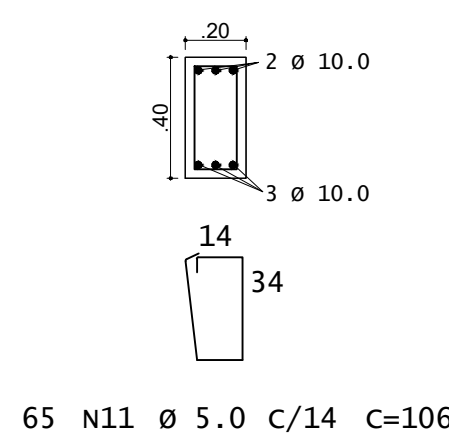
Corte A-A



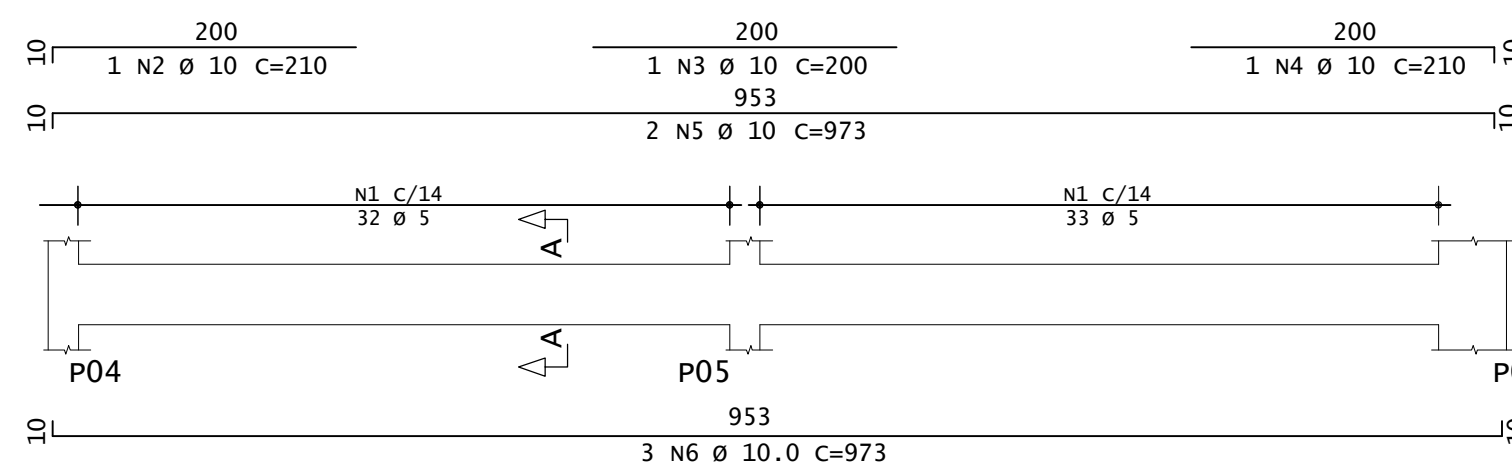
V702 - 20x40



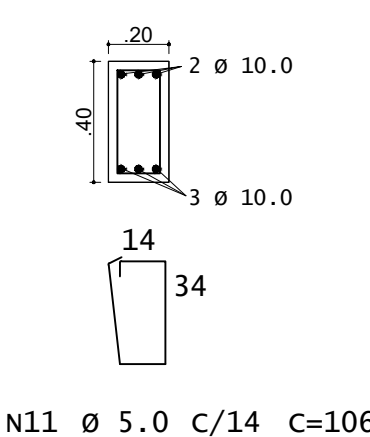
Corte A-A



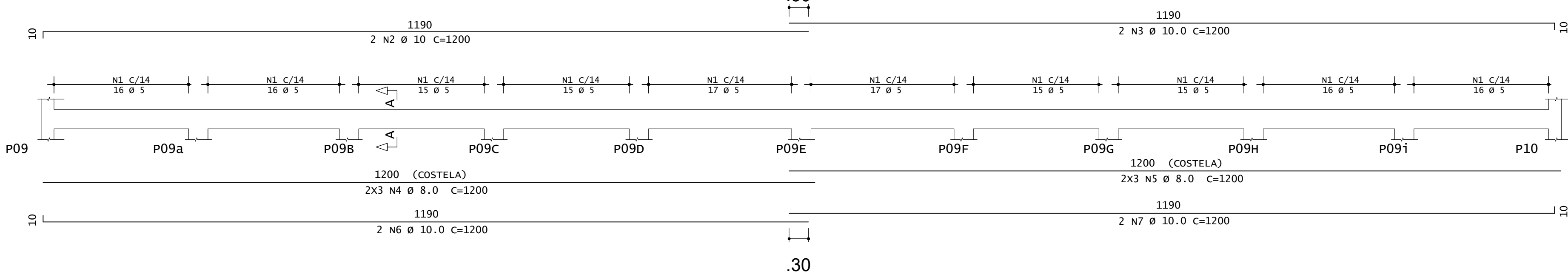
V703 - 20x40



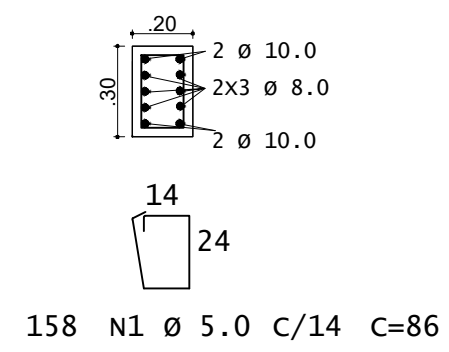
Corte A-A



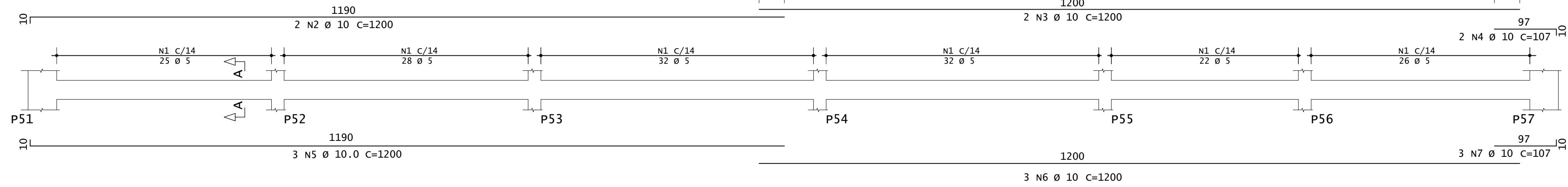
V705 - 20x30



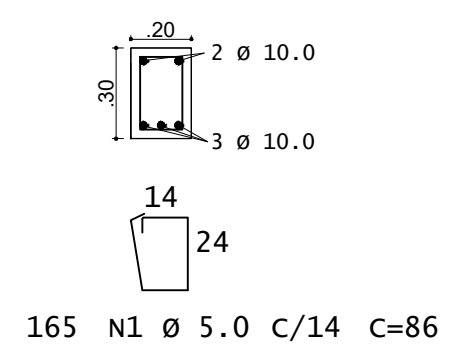
Corte A-A



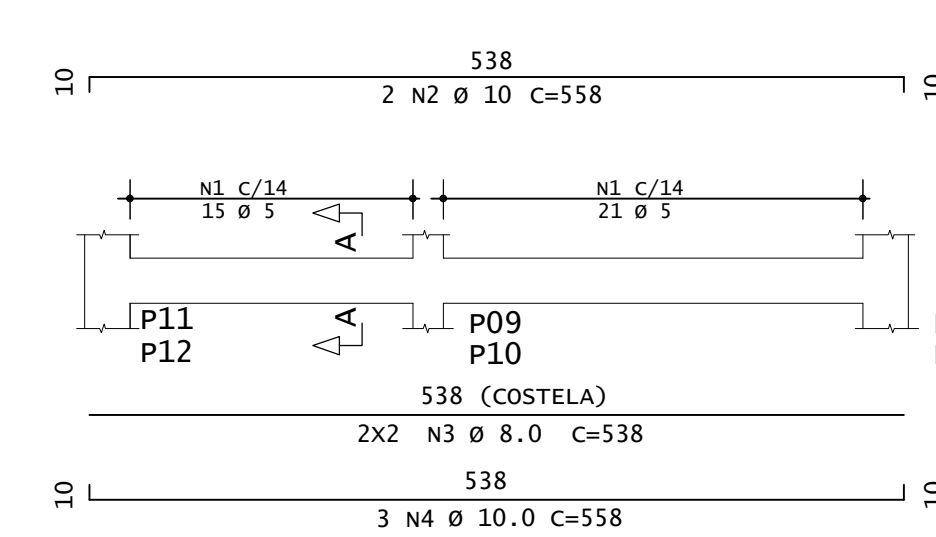
V706 - 20x30



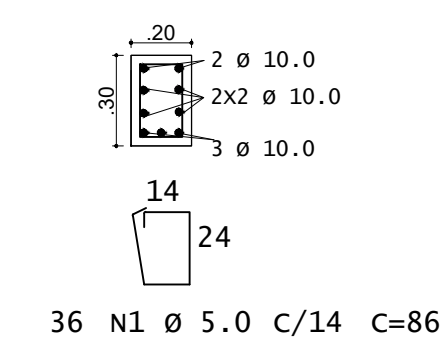
Corte A-A



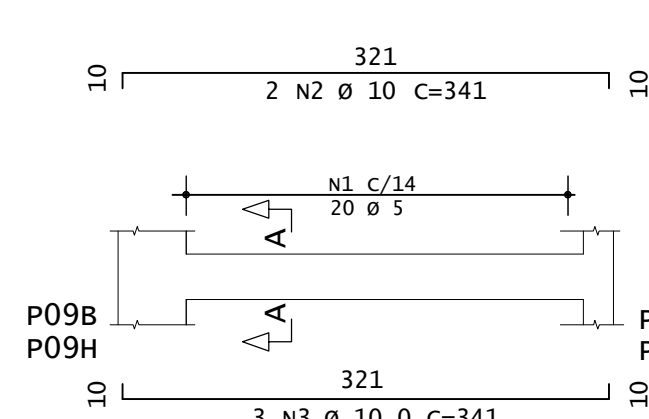
V707 / V713 - 20x30



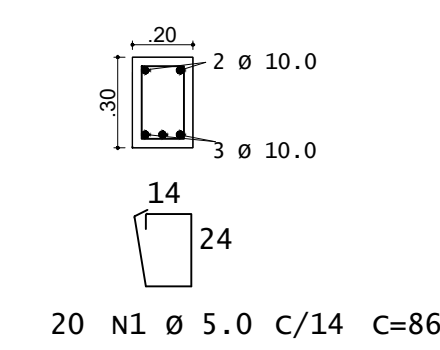
Corte A-A



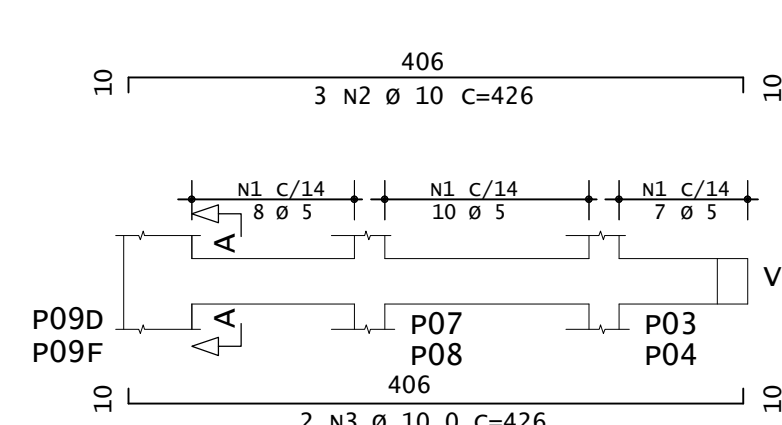
V708 / V712 - 20x30



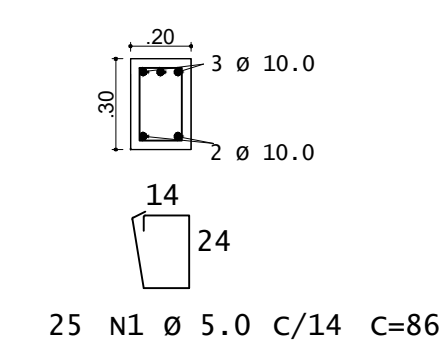
Corte A-A



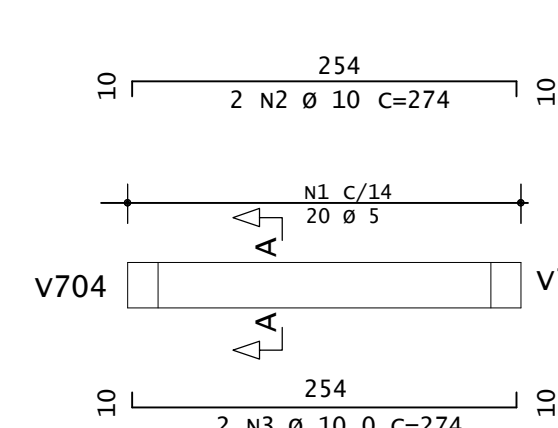
V709 / V711 - 20x30



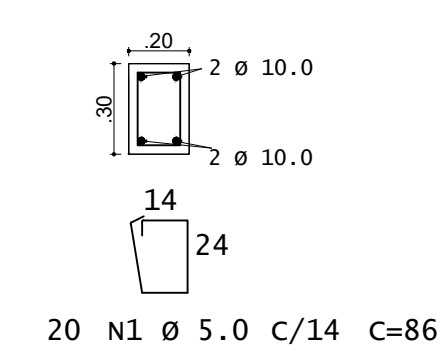
Corte A-A



V710 - 20x30



Corte A-A



VOLUME DE CONCRETO - VIGAS fck 30MPa = 6,73 M³	
ÁREA DE FORMAS - 67,34 M²	

ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
V701=V704 (X2)					
60A	1	5.0	72	86	6192
50A	2	10.0	4	539	2156
	3	10.0	8	539	4312
V702 (X1)					
60A	11	5.0	65	106	6890
50A	2	10.0	1	210	210
	3	10.0	1	200	200
	4	10.0	1	210	210
	5	10.0	2	973	1946
	6	10.0	3	973	2919
V703 (X1)					
60A	11	5.0	65	106	6890
50A	2	10.0	1	210	210
	3	10.0	1	200	200
	4	10.0	1	210	210
	5	10.0	2	973	1946
	6	10.0	3	973	2919
V705 (X1)					
60A	1	5.0	158	86	13588
50A	2	10.0	2	1200	2400
	3	10.0	2	1200	2400
	4	8.0	6	1200	7200
	5	8.0	6	1200	7200
	6	10.0	2	1200	2400
	7	10.0	2	1200	2400
V706 (X1)					
60A	1	5.0	165	86	14190
50A	2	10.0	2	1200	2400
	3	10.0	2	1200	2400
	4	10.0	2	107	214
	5	10.0	3	1200	3600
	6	10.0	3	1200	3600
	7	10.0	3	107	321
V707=V713 (X2)					
60A	1	5.0	72	86	6192
50A	2	10.0	4	558	2232
	3	8.0	8	538	4304
	4	10.0	6	558	3348
V708=V712 (X2)					
60A	1	5.0	40	86	3440
50A	2	10.0	4	341	1364
	3	10.0	6	341	2046
V709=V711 (X2)					
60A	1	5.0	50	86	4300
50A	2	10.0	6	426	2556
	3	10.0	4	426	1704
V710 (X1)					
60A	1	5.0	20	86	1720
50A	2	10.0	2	274	548
	3	10.0	2	274	548

RESUMO DE AÇO		
ÇO	BIT (mm)	PESO C/10% (kg)
60A	5.0	634,02
50A	8.0	187,04
	10.0	539,19
Peso Total	60A =	107,40 kg
Peso Total	50A =	447,22 kg

**INSTITUTO FEDERAL**  
Sul de Minas Gerais  
Campus Inconfidentes

**PROJETO**

OBRA:  
AUDITÓRIO (400 lugares)

LOCAL:  
FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO:  
ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO  
LUIZ FLAVIO RES  
FERNANDES 057  
0621669  
IF SULDE MINAS CAMPUS INCONFIDENTES  
DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

ENDEREÇO OBRA:  
Fazenda Escola  
Rua Sargento Mor Toledo Piza, Nº 01  
Inconfidentes / MG- CEP: 37.576-000

RESPONSÁVEL TÉCNICO:  
PAULO ROBERTO DE OLIVEIRA 46134670  
634  
Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA 46134670634  
Data: 2022.10.25 11:23:20 -03'07'

QUADRO RESUMO DE ÁREAS:  
TERRENO PARTE B: ..... 89,41857 (ha)  
MATRÍCULA DO IMÓVEL ..... 15.486 FICHA 1  
LIVRO Nº02 - REGISTRO GERAL  
SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

ENGPº CIVIL PAULO ROBERTO DE OLIVEIRA  
CREA - MG 28.949/D - MAT. SIAPE 20566557

DESENHO: LEANDRO DE OLIVEIRA  
MATHEUS HENRIQUE FRANCO LOPES

ÁREA A CONSTRUIR: ..... 1.143,00 m²

DATA:  
17/10/2022

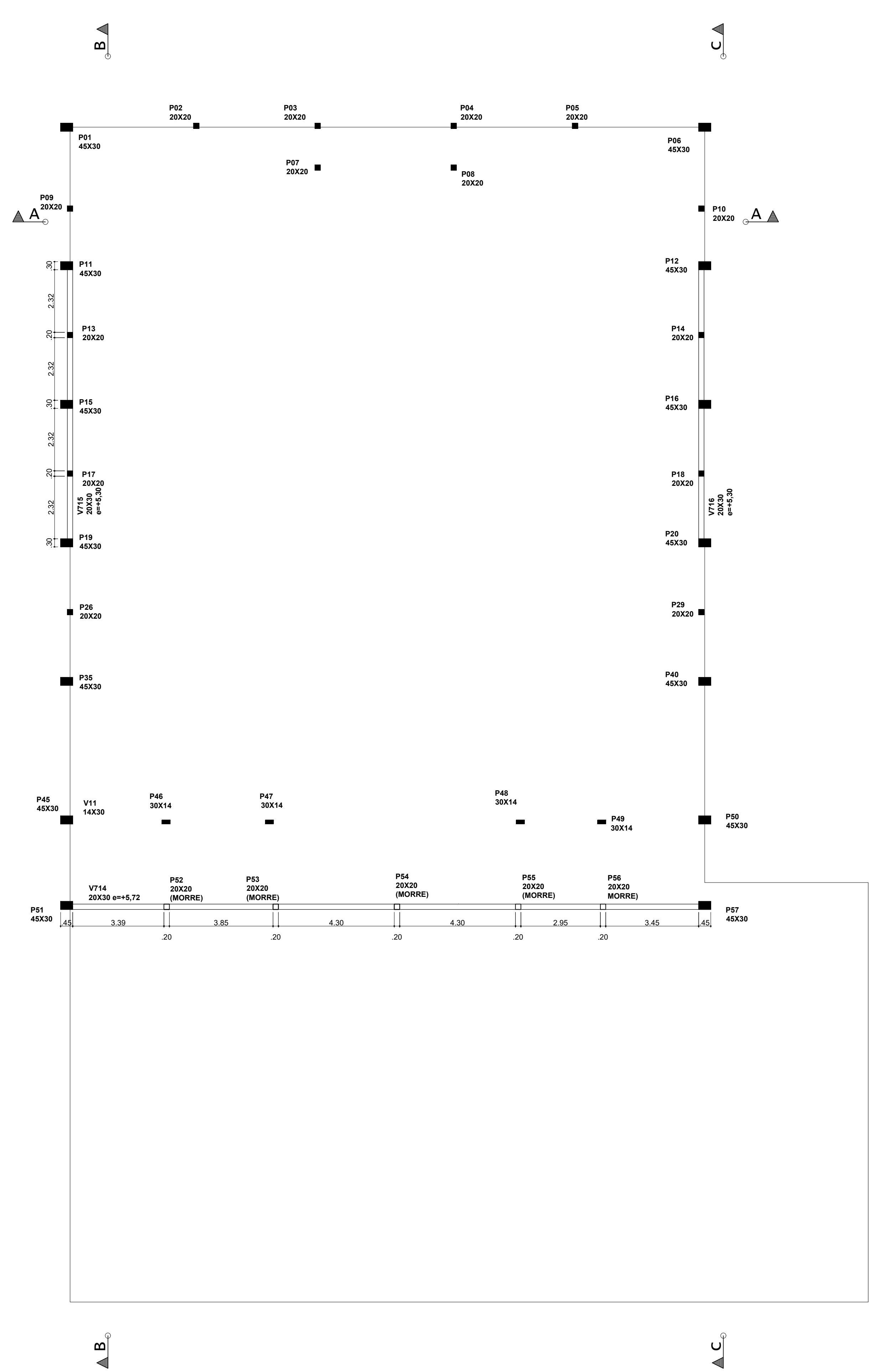
REVISÃO:  
01

ESCALAS:  
INDICADAS

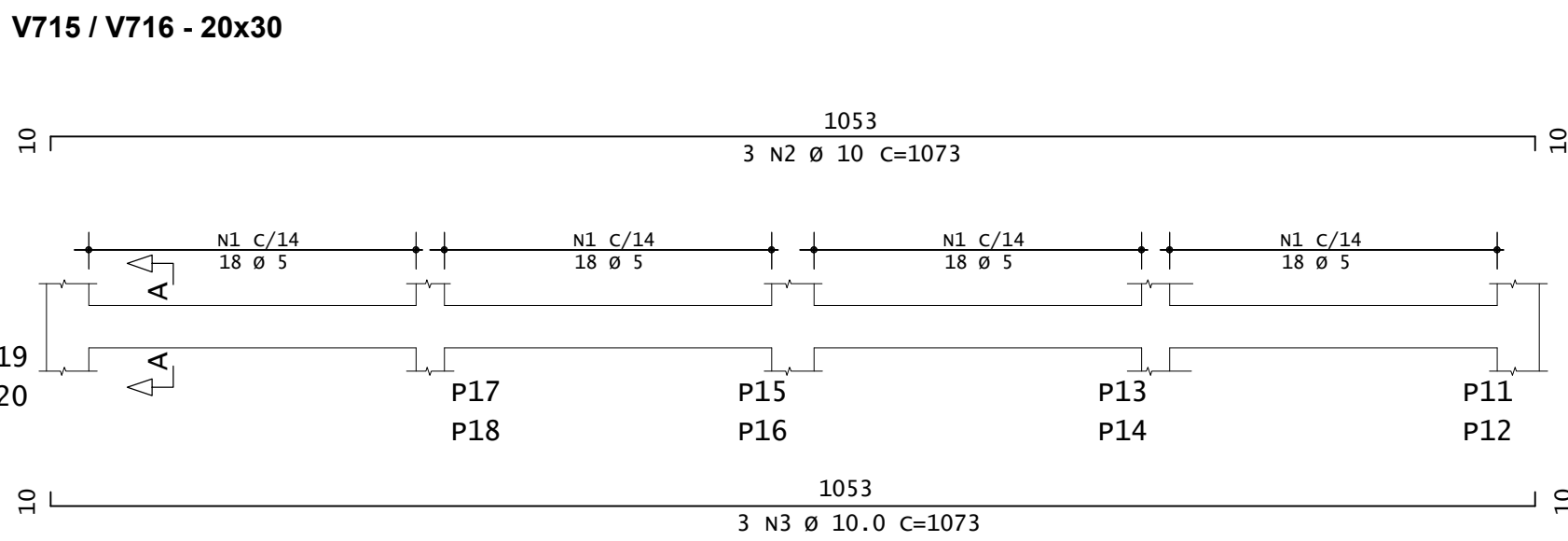
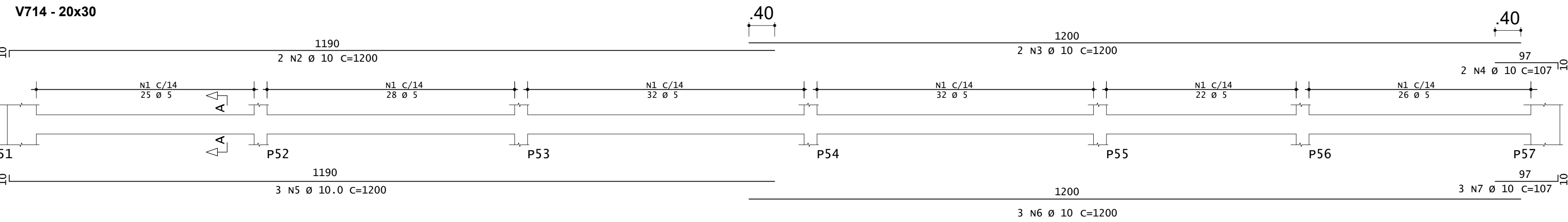
UNIDADE:  
METROS

FOLHA:  
08/16

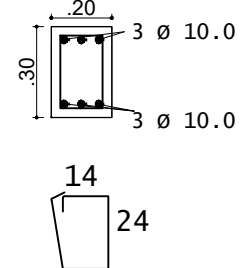




PLANTA FORMA - VIGAS ( NÍVEL + 5,30 e 5,72)  
ESCALA 1:100

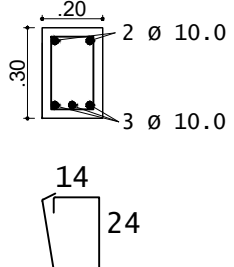


Corte A-A



72 N1 Ø 5.0 C/14 C=86

Corte A-A

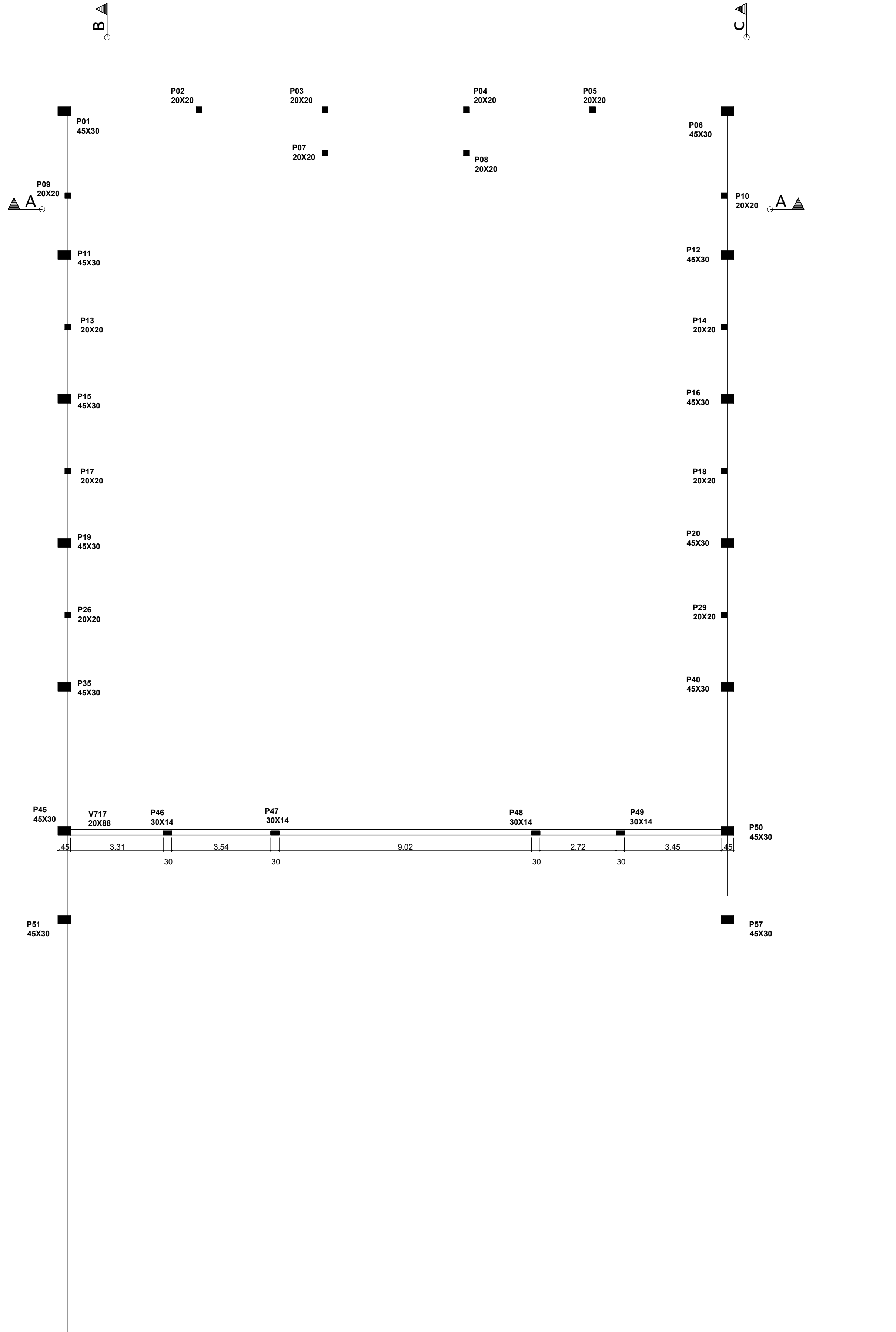


165 N1 Ø 5.0 C/14 C=86

VOLUME DE CONCRETO - VIGAS fck 30MPa = 2,72 M³	
ÁREA DE FORMAS - 27,20 M²	

ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO (cm)	UNIT	TOTAL (cm)
V714 (X1)						
60A 50A	1	5.0	165	86	14190	
	2	10.0	2	1200	2400	
	3	10.0	2	1200	2400	
	4	10.0	2	107	214	
	5	10.0	3	1200	3600	
	6	10.0	3	1200	3600	
	7	10.0	3	107	321	
V715=V716 (X2)						
60A 50A	1	5.0	144	86	12384	
	2	10.0	6	1073	6438	
	3	10.0	6	1073	6438	

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A	5.0	265,74	45,02
50A	10.0	254,11	172,46
Peso Total		60A =	45,02 kg
Peso Total		50A =	172,46 kg

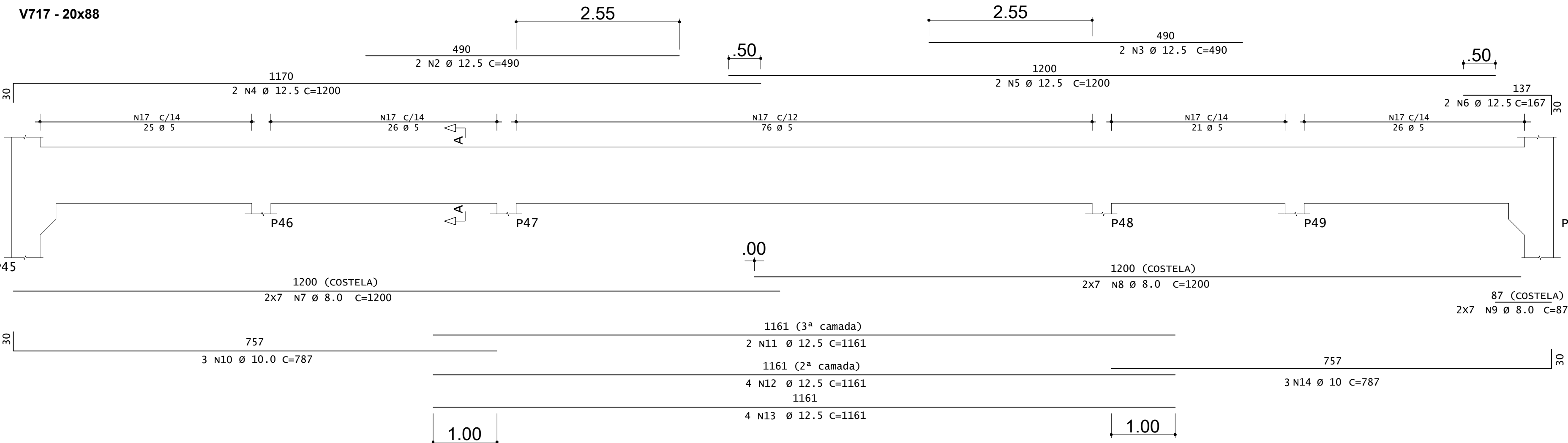


PLANTA FORMA - VIGAS ( NÍVEL + 6,76)  
ESCALA 1:100

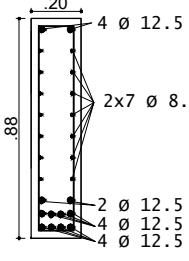
VOLUME DE CONCRETO - VIGAS fck 30MPa = 4,25 M³	
ÁREA DE FORMAS - 42,46 M²	

ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO (cm)	UNIT	TOTAL (cm)
V714 (X1)						
60A 50A	1	5.0	174	192	33408	
	2	12.5	2	490	980	
	3	12.5	2	490	980	
	4	12.5	2	1200	2400	
	5	12.5	3	1200	3600	
	6	12.5	3	167	501	
	7	8.0	14	1200	16800	
	8	8.0	14	1200	16800	
	9	8.0	14	87	1218	
	10	12.5	3	787	2361	
	11	12.5	2	1161	2322	
	12	12.5	4	1161	4644	
	13	12.5	4	1161	4644	
	14	12.5	3	787	2361	

RESUMO DE AÇO			
AÇO	BIT (mm)	COMPR (m)	PESO C/10% (kg)
60A 50A	5.0	357,69	60,59
	8.0	348,18	151,28
	12.5	247,93	262,63
Peso Total	60A =		60,59 kg
Peso Total	50A =		413,92 kg

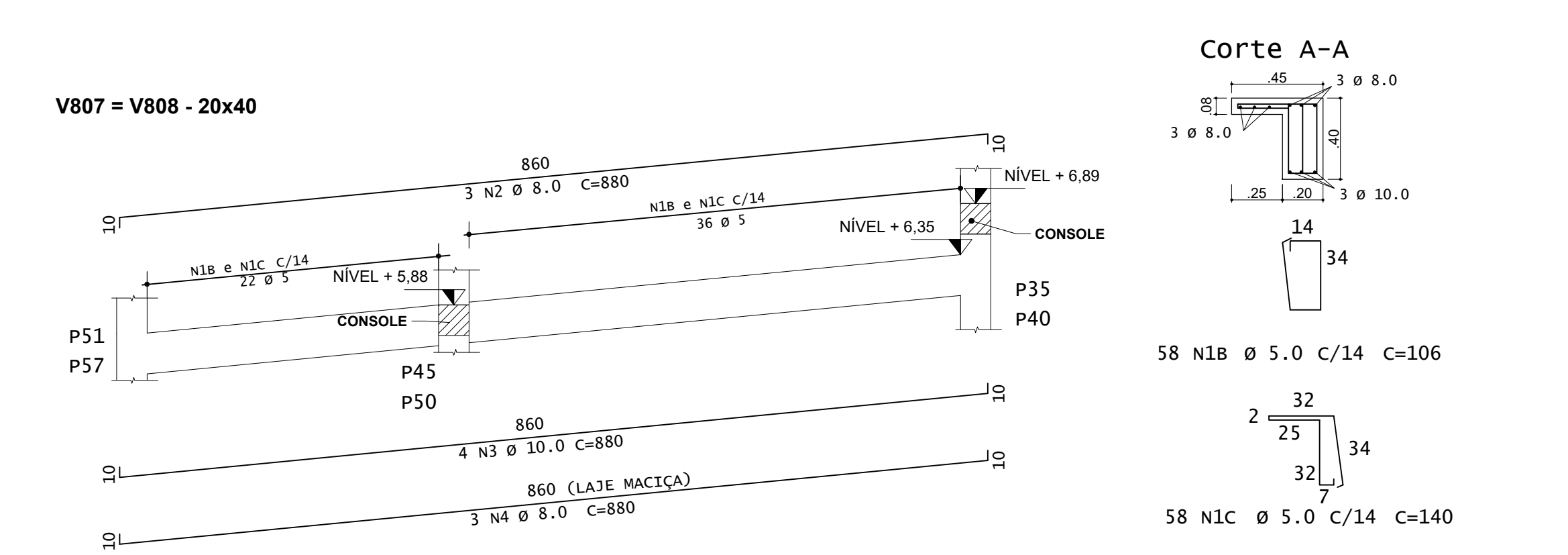
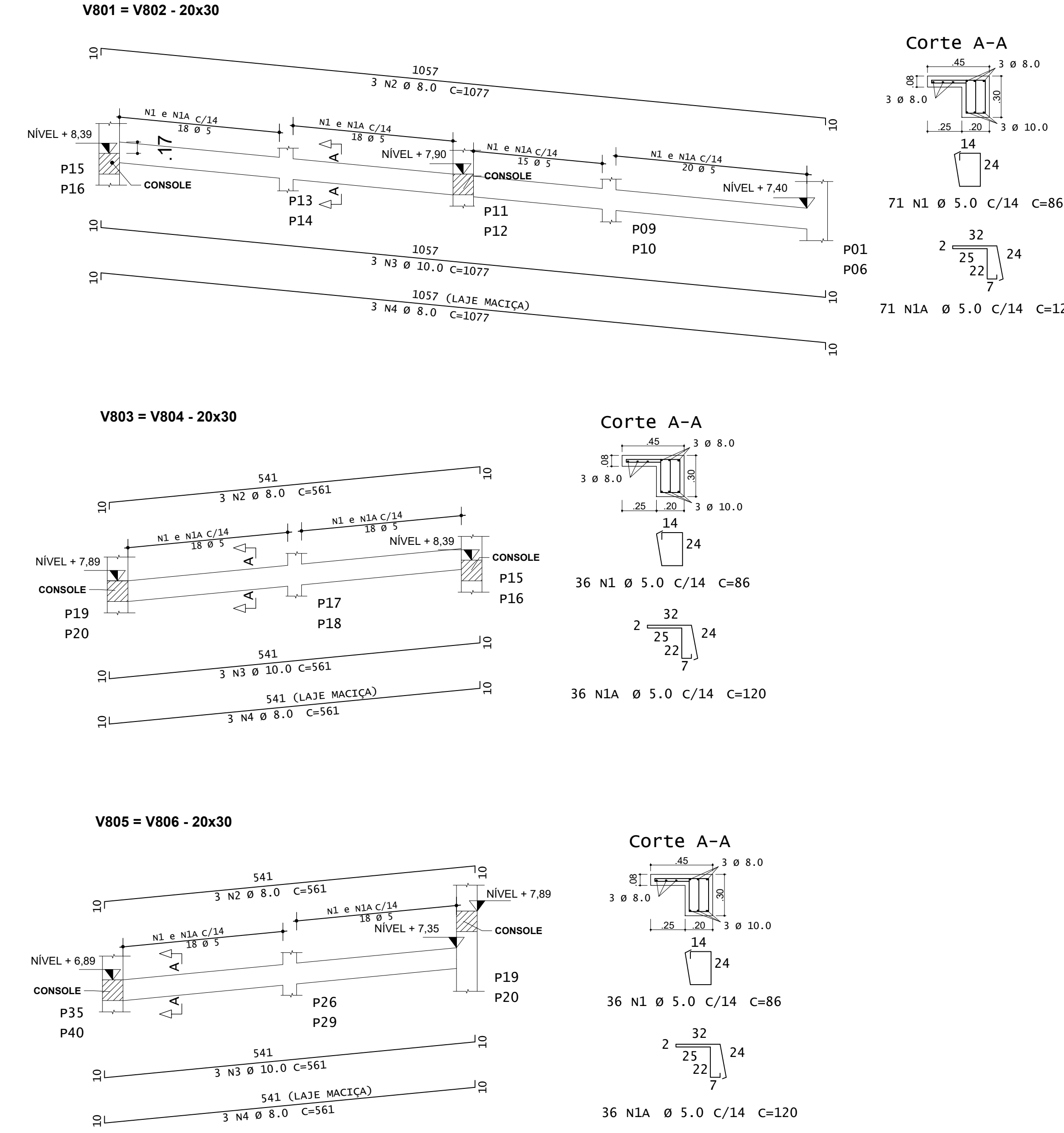
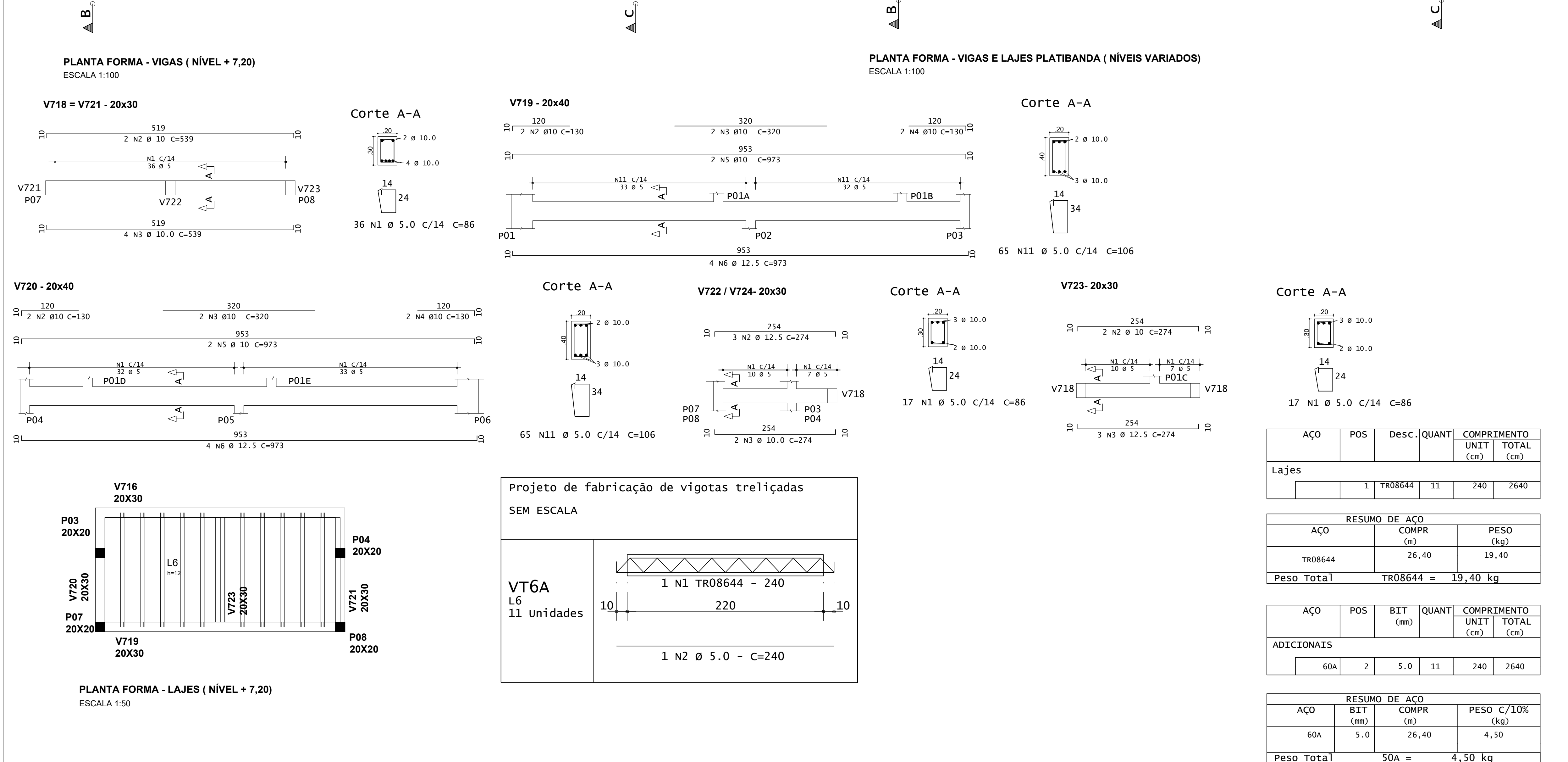
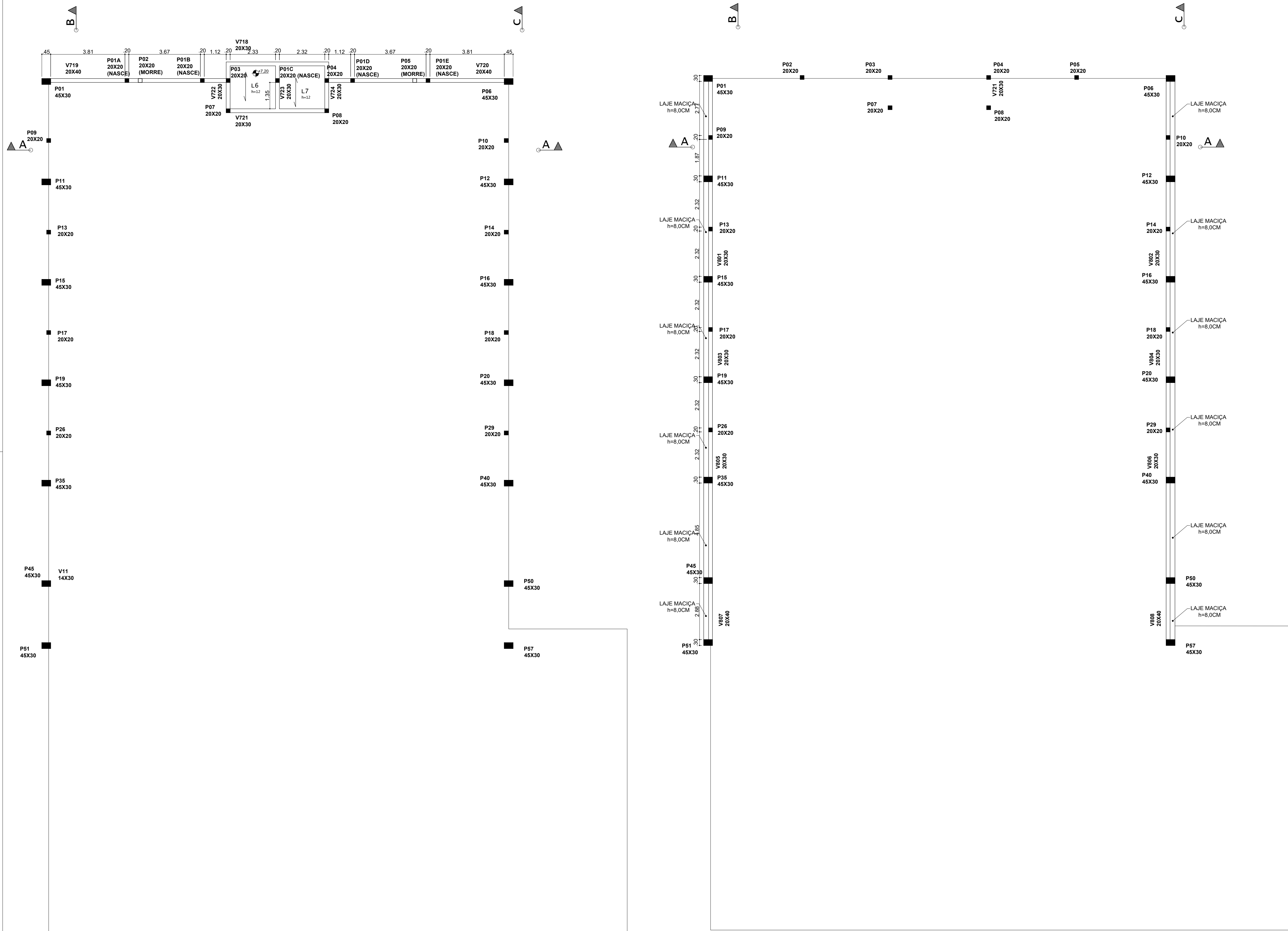


Corte A-A



174 N17 Ø 5.0 C/14 C=192





VOLUME DE CONCRETO - VIGAS Fck 30MPa = 3,63 M³					
ÁREA DE FORMAS - 29,01 M²					
ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V801=V802 (X2)					
60A	1	5.0	142	86	12212
50A	2	8.0	142	120	17040
	3	10.0	6	1077	6462
	4	8.0	6	1077	6462
V803=V804 (X2)					
60A	1	5.0	72	86	6192
50A	2	8.0	72	120	8640
	3	10.0	6	561	3366
	4	8.0	6	561	3366
V805=V806 (X2)					
60A	1	5.0	72	86	6192
50A	2	8.0	72	120	8640
	3	10.0	6	561	3366
	4	8.0	6	561	3366
V807=V808 (X2)					
60A	1	5.0	116	86	9976
50A	2	8.0	116	120	13920
	3	10.0	8	880	5280
	4	8.0	8	880	5280
RESUMO DE AÇO				PESO C/10%	
ÇO	BIT (mm)	COMPR (m)	PESO (kg)		
60A	5.0	950,24	160,97		
50A	8.0	369,48	160,54		
	10.0	202,34	137,33		
Peso Total				60A =	160,97 kg
Peso Total				50A =	297,87 kg

VOLUME DE CONCRETO - VIGAS fck 30MPa = 2,54 M³	
ÁREA DE FORMAS - 25,43 M²	

ÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V718=V721 (X2)					
60A	1	5.0	72	86	6192
50A	2	10.0	4	539	2156
	3	10.0	8	539	4312
V719 (X1)					
60A	1	5.0	65	106	6890
50A	2	10.0	2	130	260
	3	10.0	2	320	640
	4	10.0	2	130	260
	5	10.0	2	973	1946
	6	12.5	4	973	3892
V720 (X1)					
60A	1	5.0	65	106	6890
50A	2	10.0	2	130	260
	3	10.0	2	320	640
	4	10.0	2	130	260
	5	10.0	2	973	1946
	6	12.5	4	973	3892
V722=724 (X2)					
60A	1	5.0	34	86	2924
50A	2	12.5	6	274	1644
	3	10.0	4	274	1096
V723 (X1)					
60A	1	5.0	17	86	1462
50A	2	10.0	2	274	548
	3	12.5	3	274	822

RESUMO DE AÇO				PESO C/10%	
ÇO	BIT (mm)	COMPR (m)	PESO (kg)		
60A	5.0	243,58	41,26		
	10.0	143,24	97,22		
	12.5	86,06	91,16		
Peso Total				60A =	41,26 kg
Peso Total				50A =	188,38 kg

INSTITUTO FEDERAL

Sul de Minas Gerais

Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)

LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO: LUIZ FLAVIO REIS  
FERNANDES 505706  
IF SUL DE MINAS CAMPUS INCONFIDENTES  
DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES

ENDEREÇO OBRA: Fazenda Escola  
Rua Sargento Mor Toledo Piza, Nº 01  
Inconfidentes / MG- CEP: 37.576-000

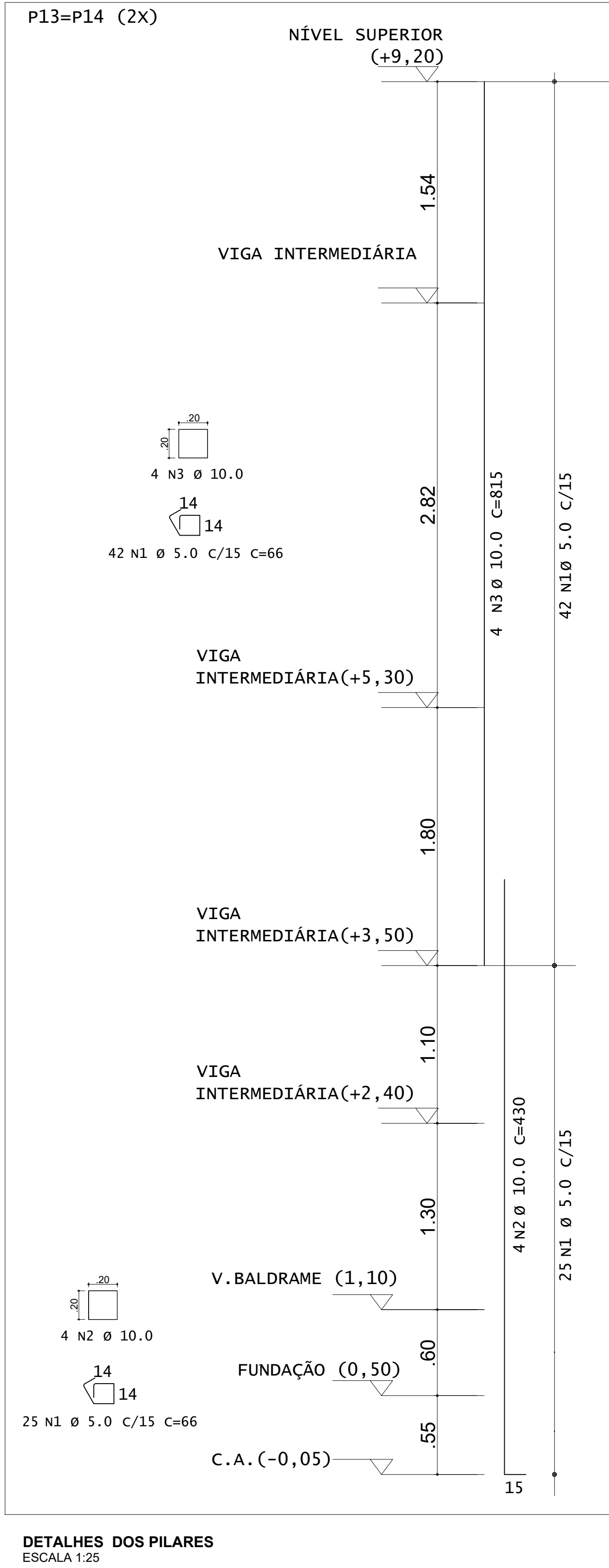
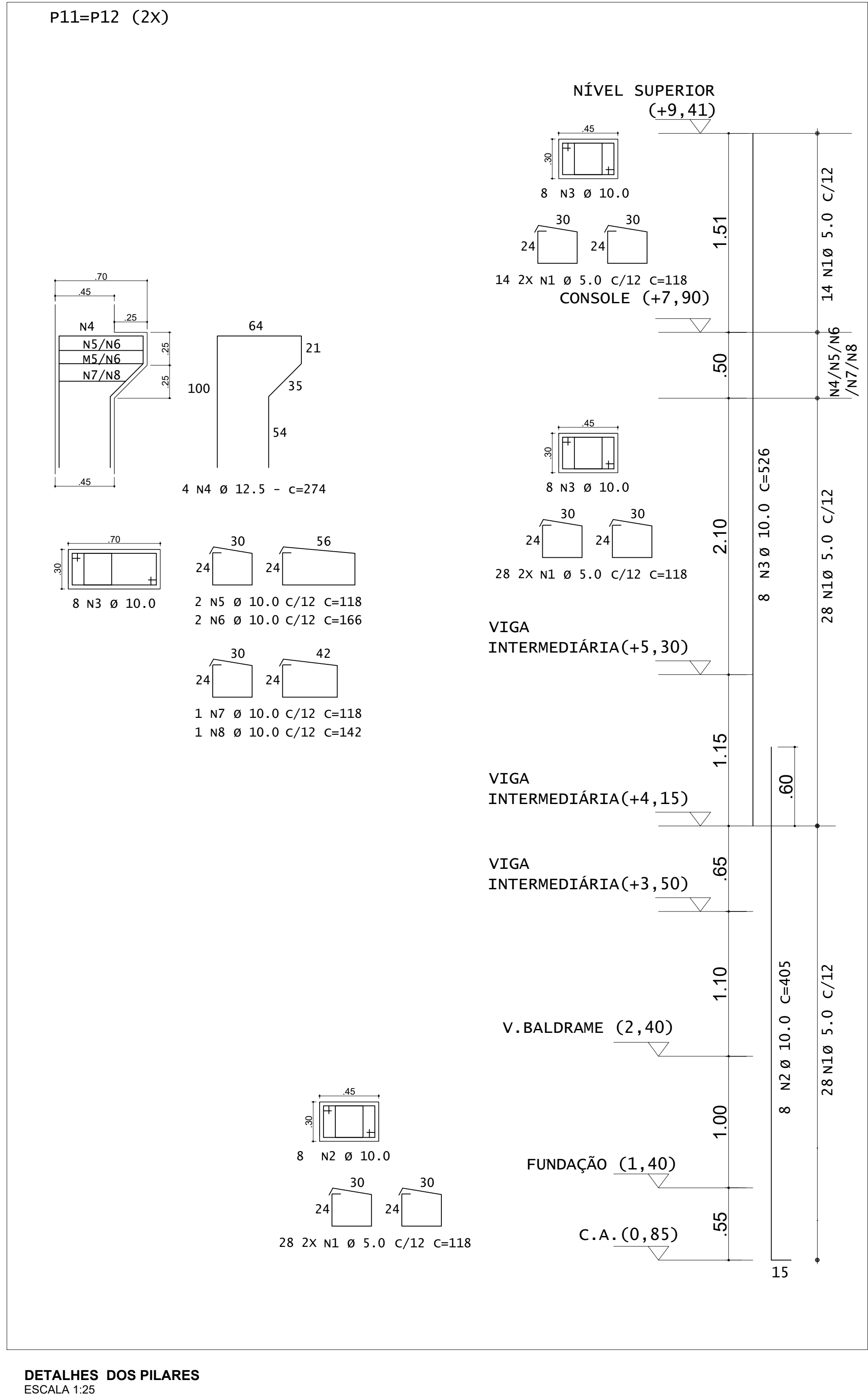
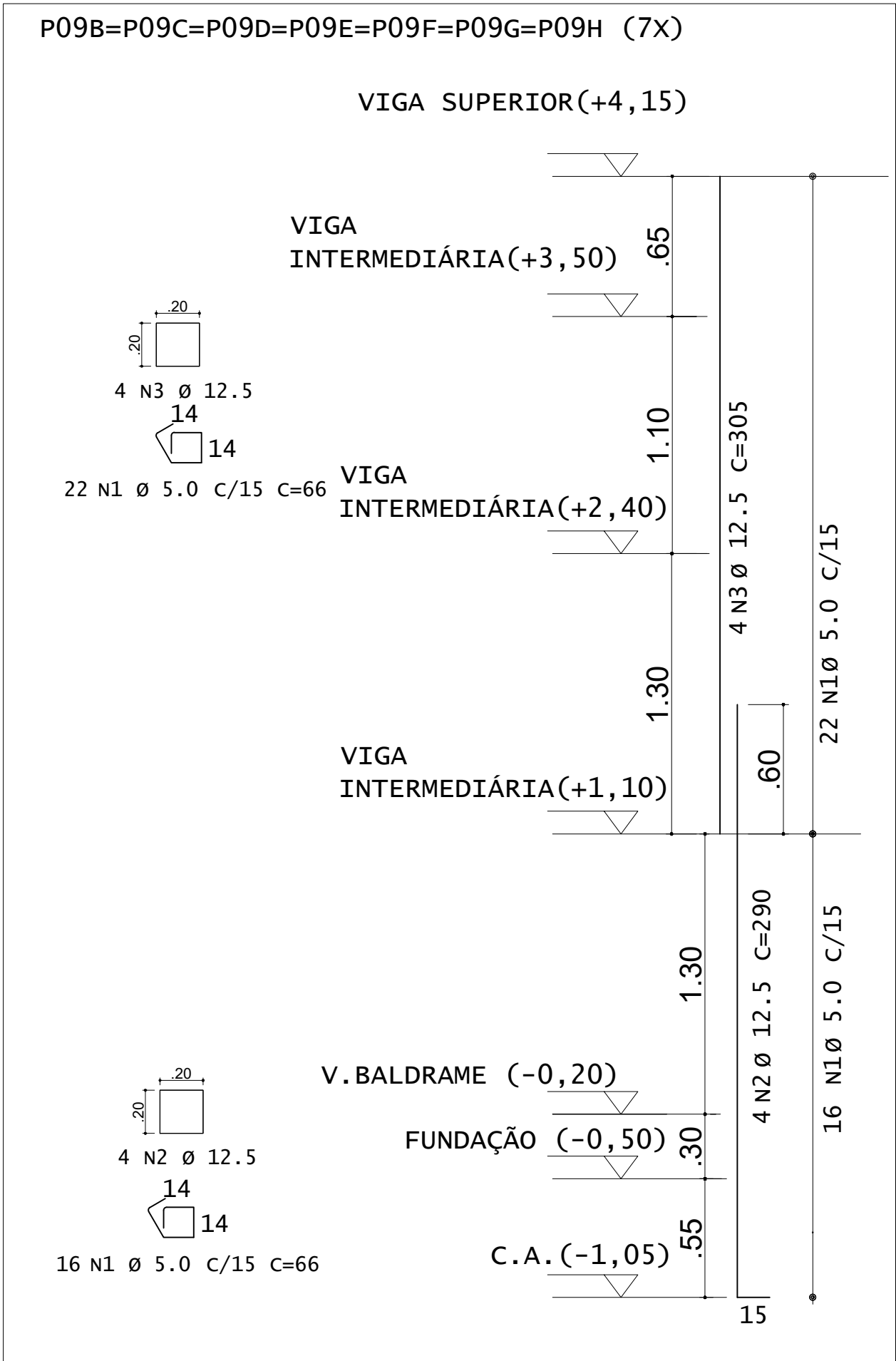
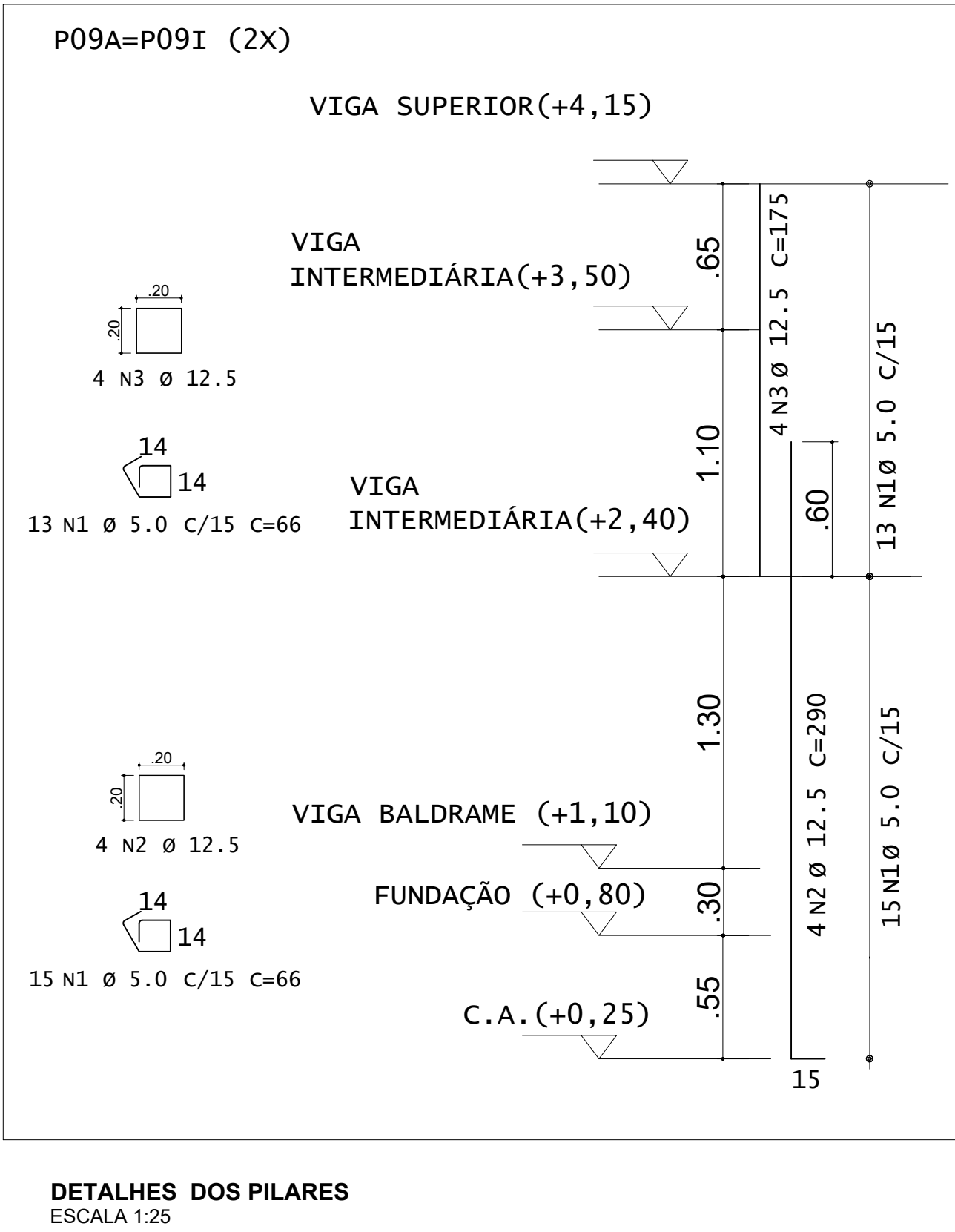
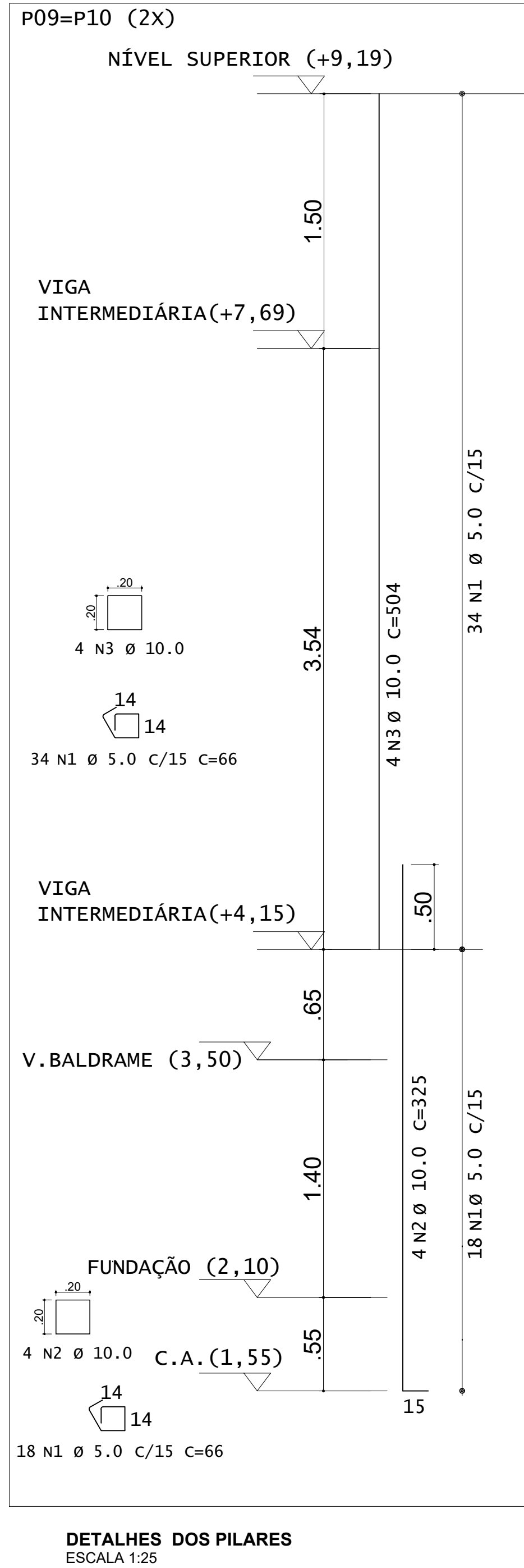
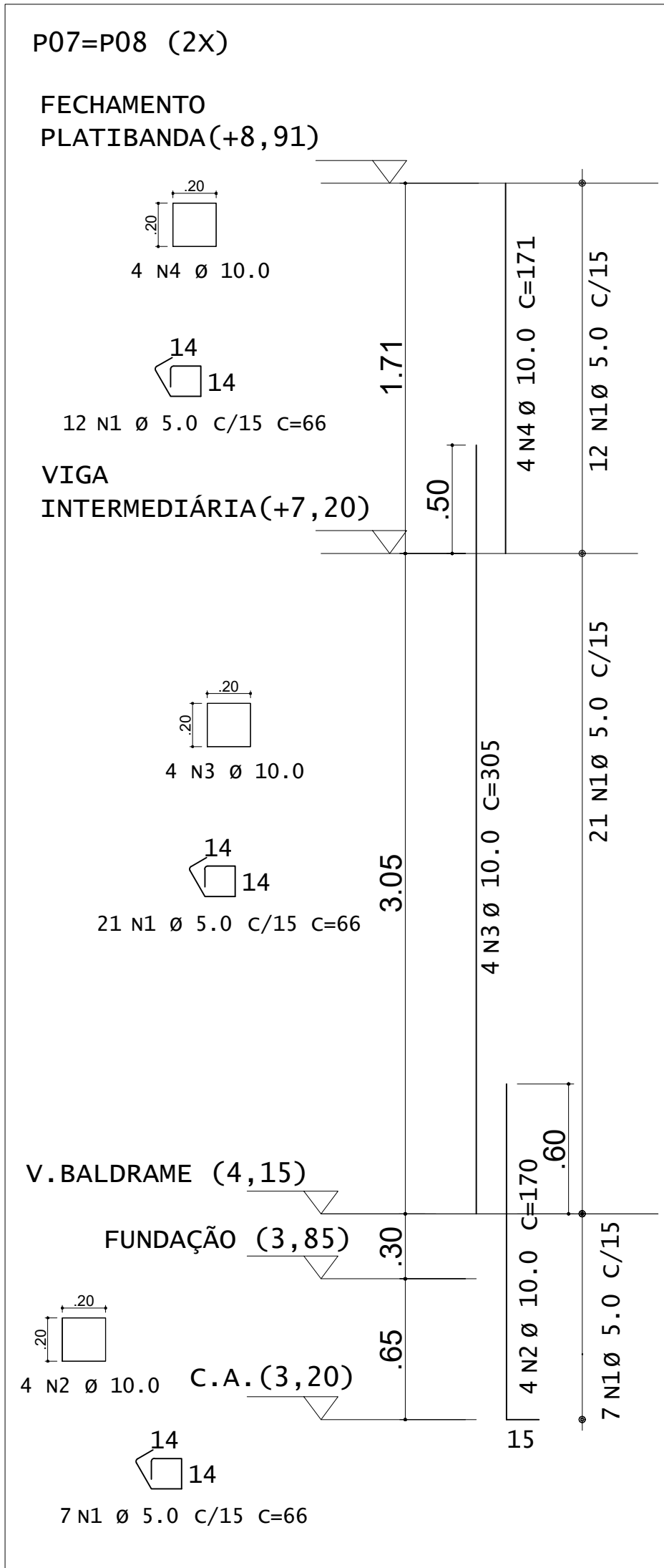
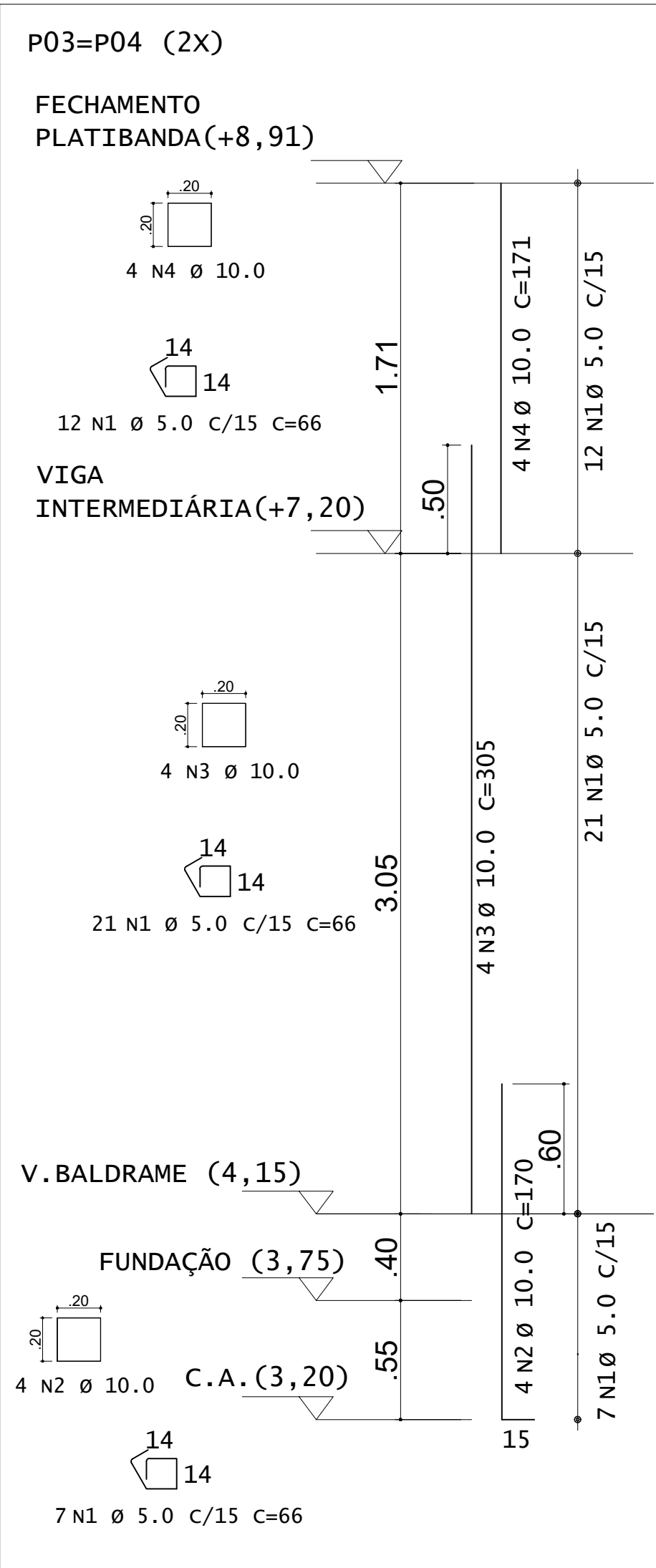
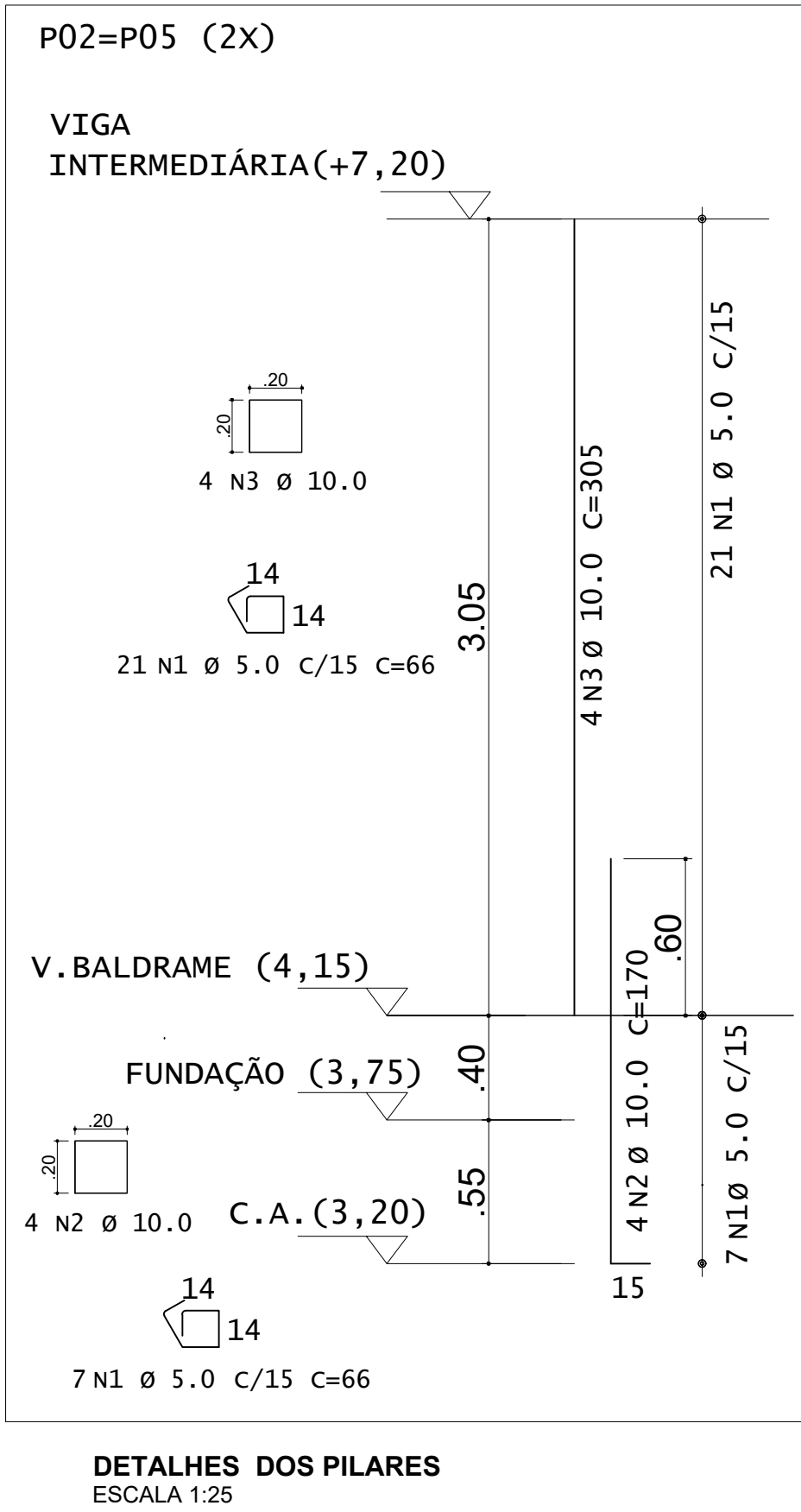
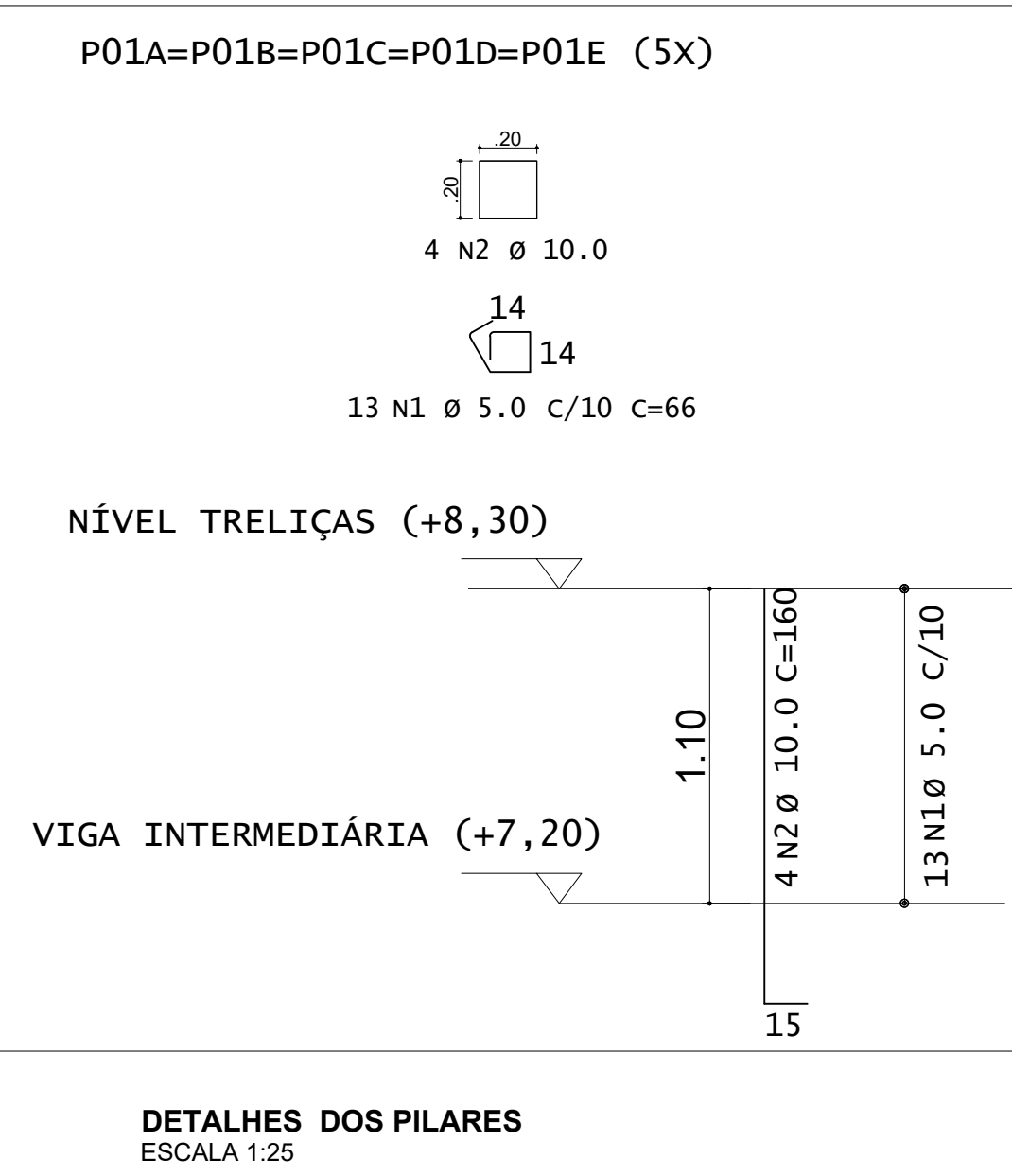
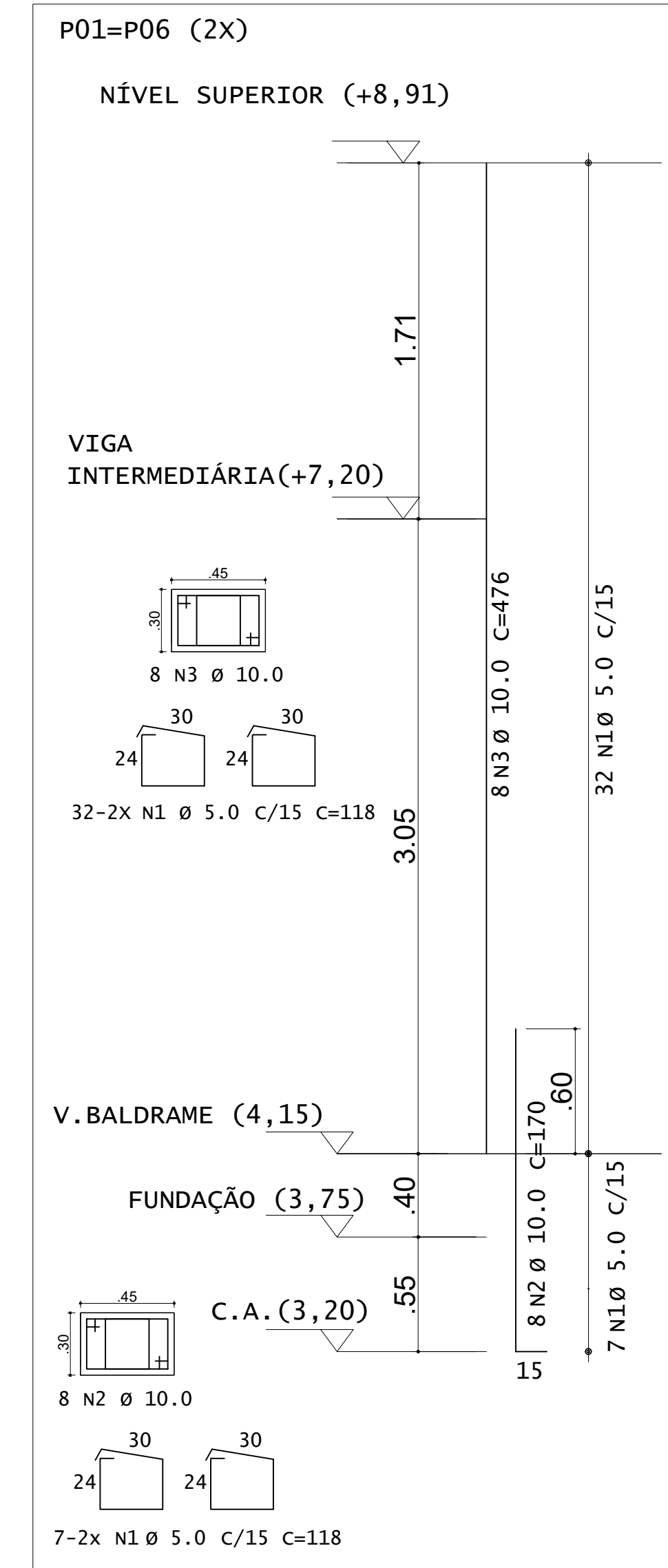
RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA-461346706  
Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA-46134670634  
Data: 2022.10.25 11:28:11 -03'00'

QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: 89.41867 (m²)  
MATRÍCULA DO IMÓVEL: 19.490 FICHA 1  
LIVRO Nº02 - REGISTRO GERAL  
SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG

CARIMBOS:

DATA: 17/10/2022  
REVISÃO: 01  
ESCALAS: INDICADAS  
UNIDADE: METROS  
FOLHA: 10/16





CONVENÇÕES

- Pilar que morre
- Pilar que nasce / passa
- Pilar com mudança de seção

PARÂMETROS

CONCRETO: INDICADO

AÇO(S) : CA-50 e CA-60

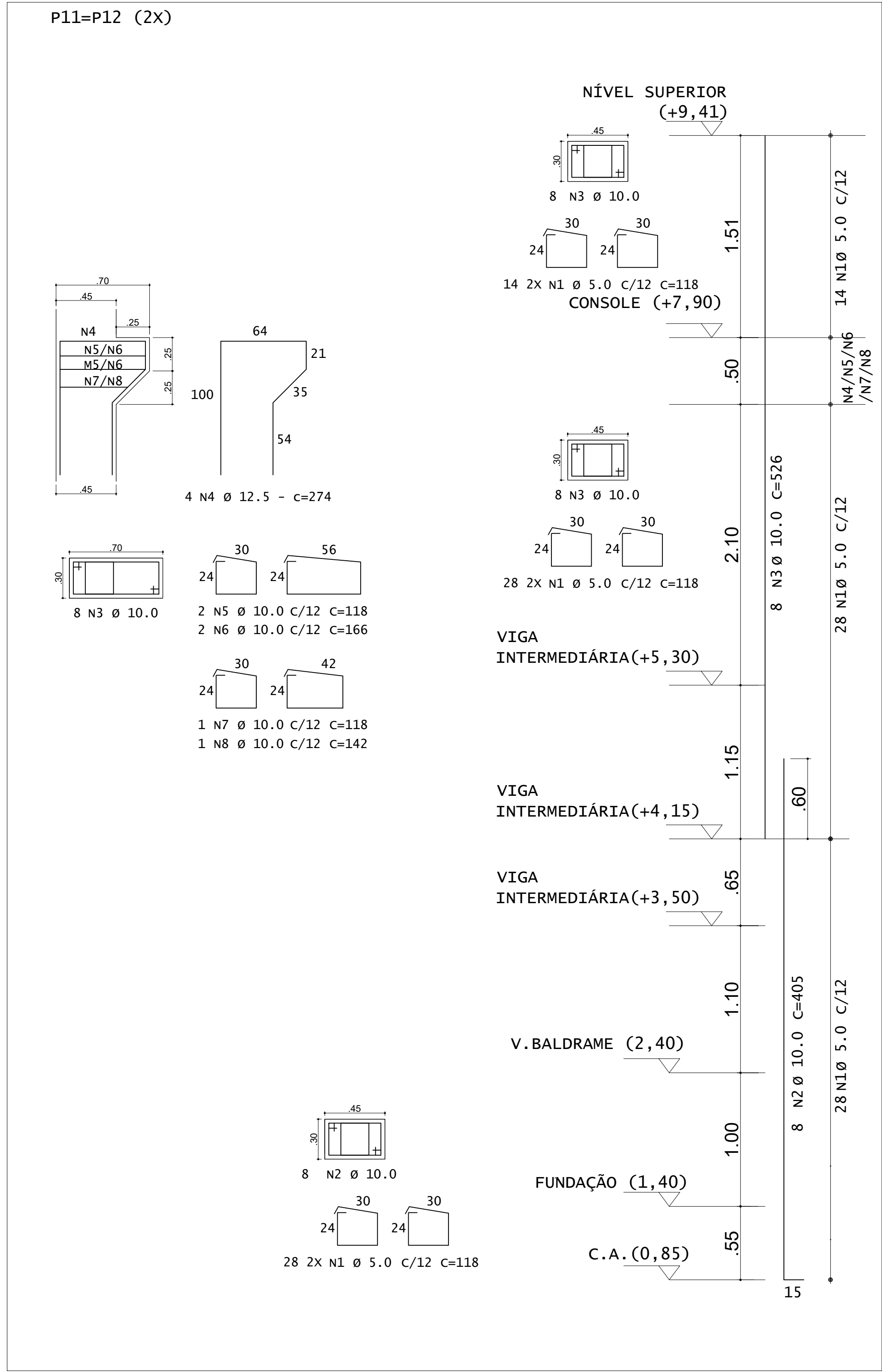
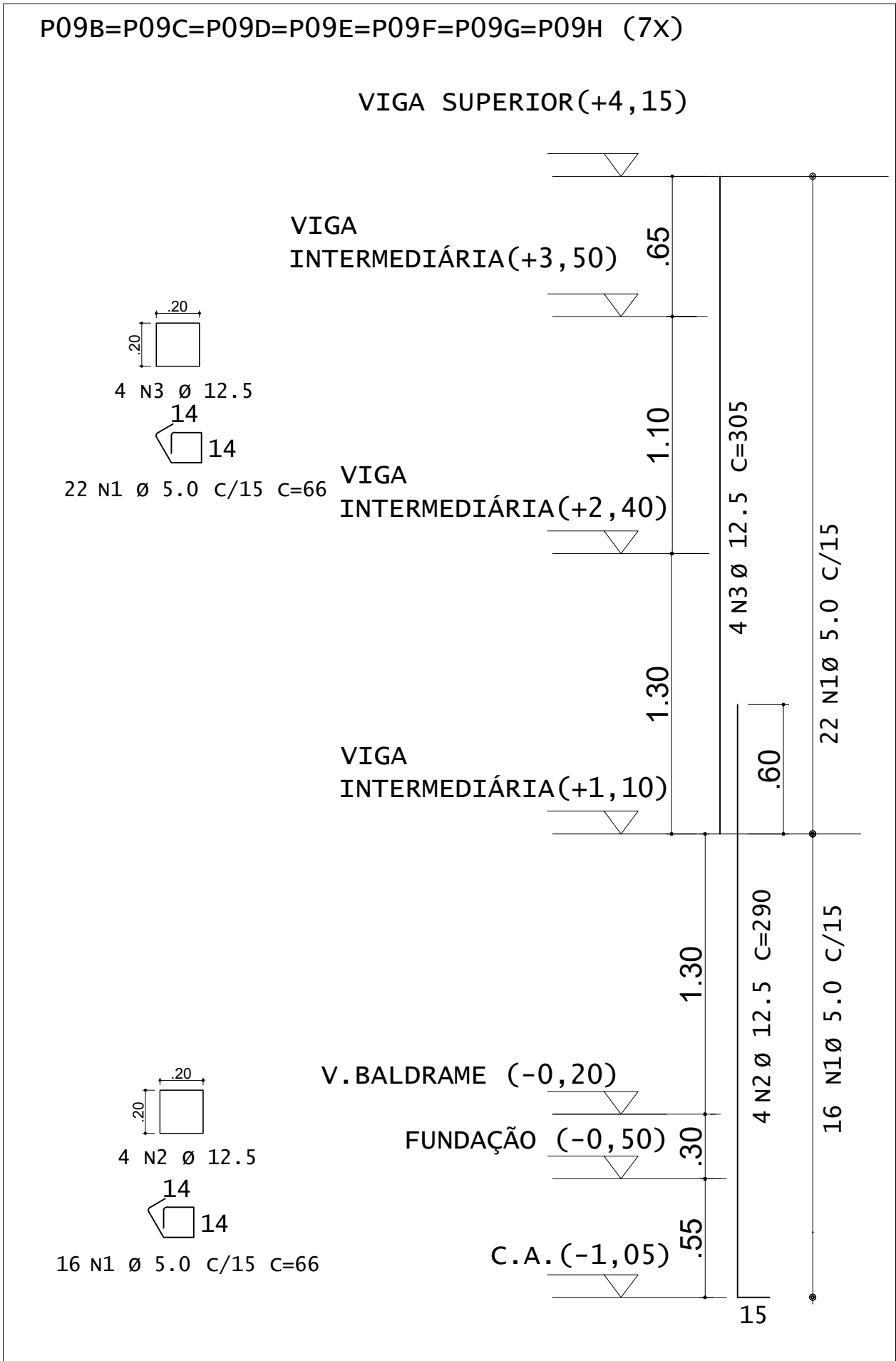
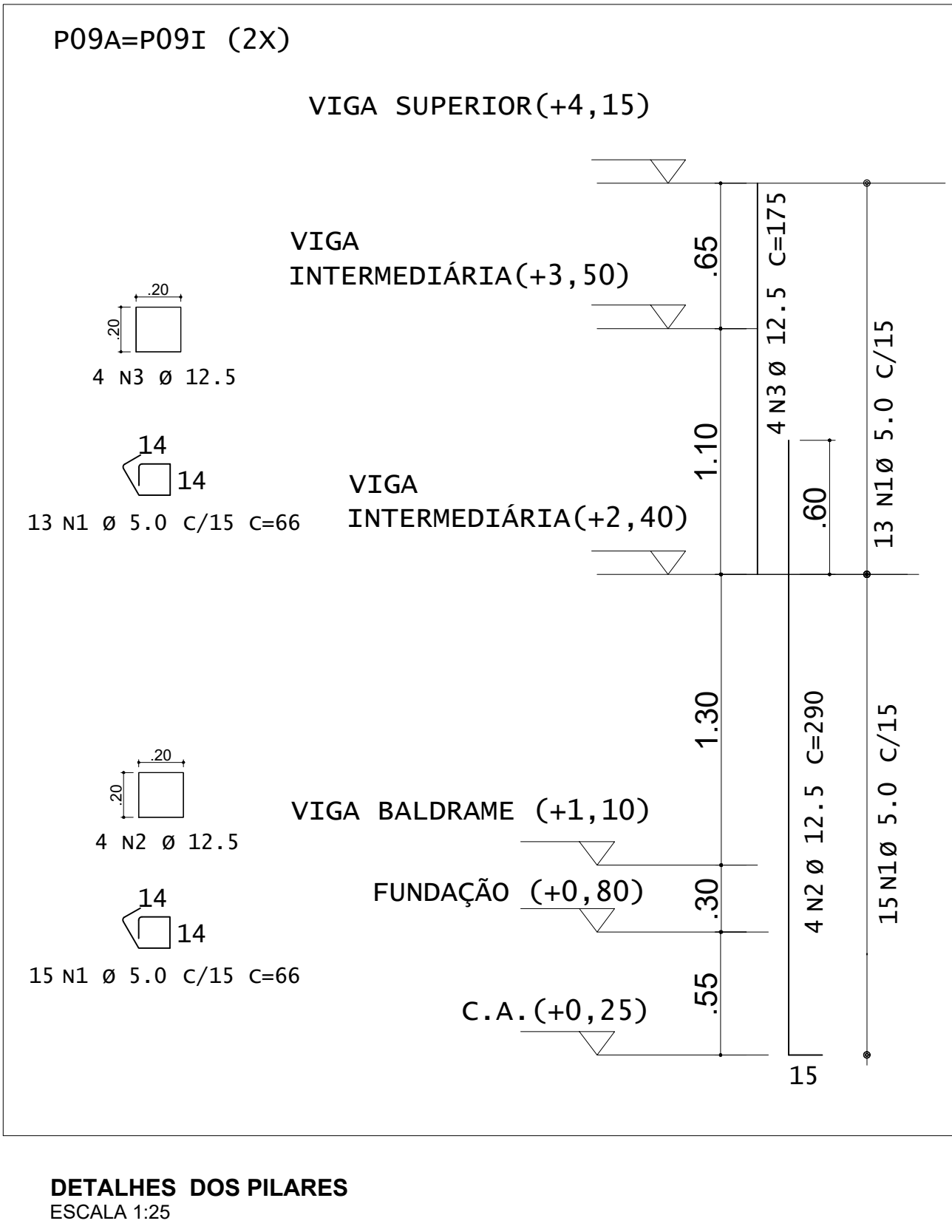
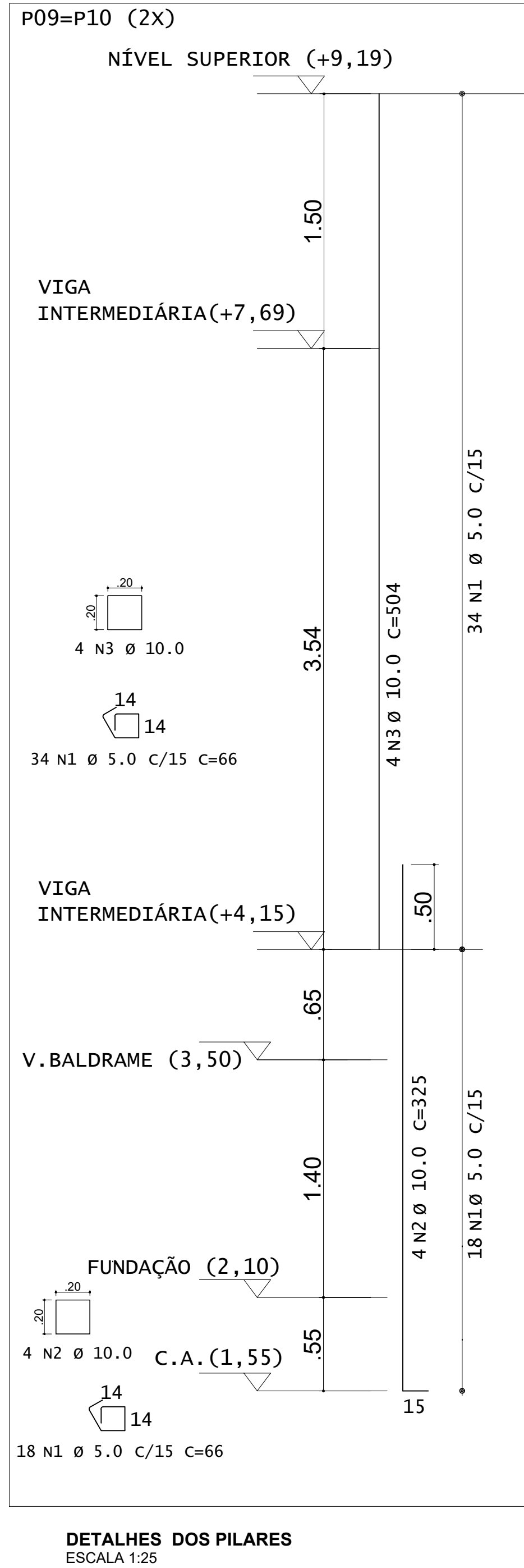
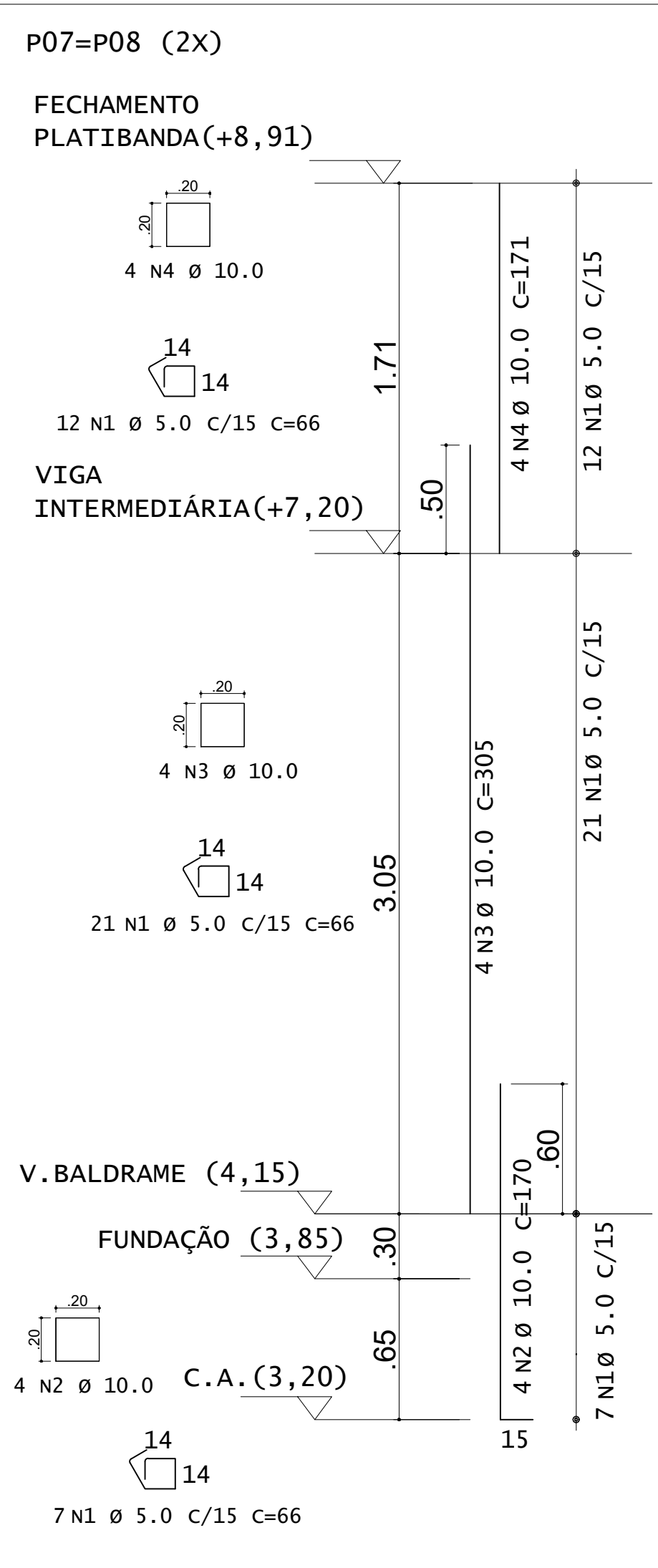
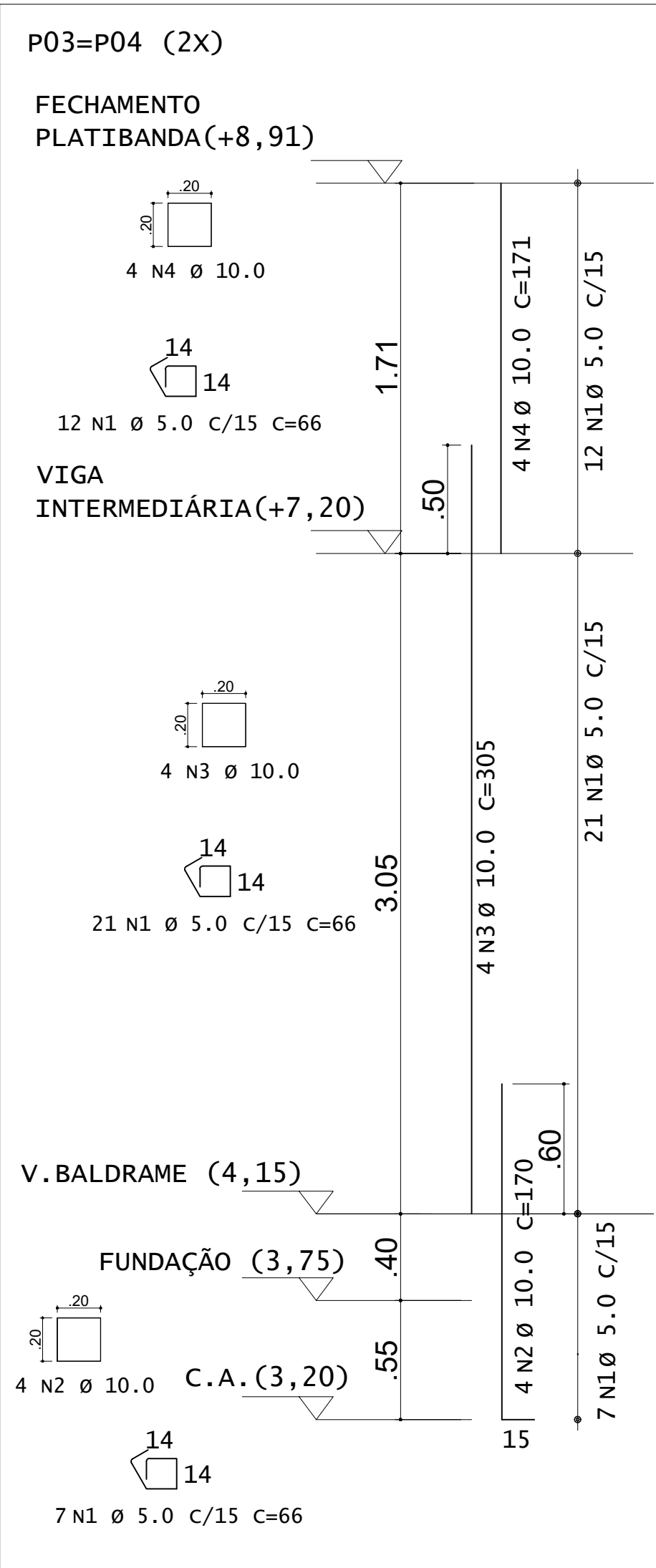
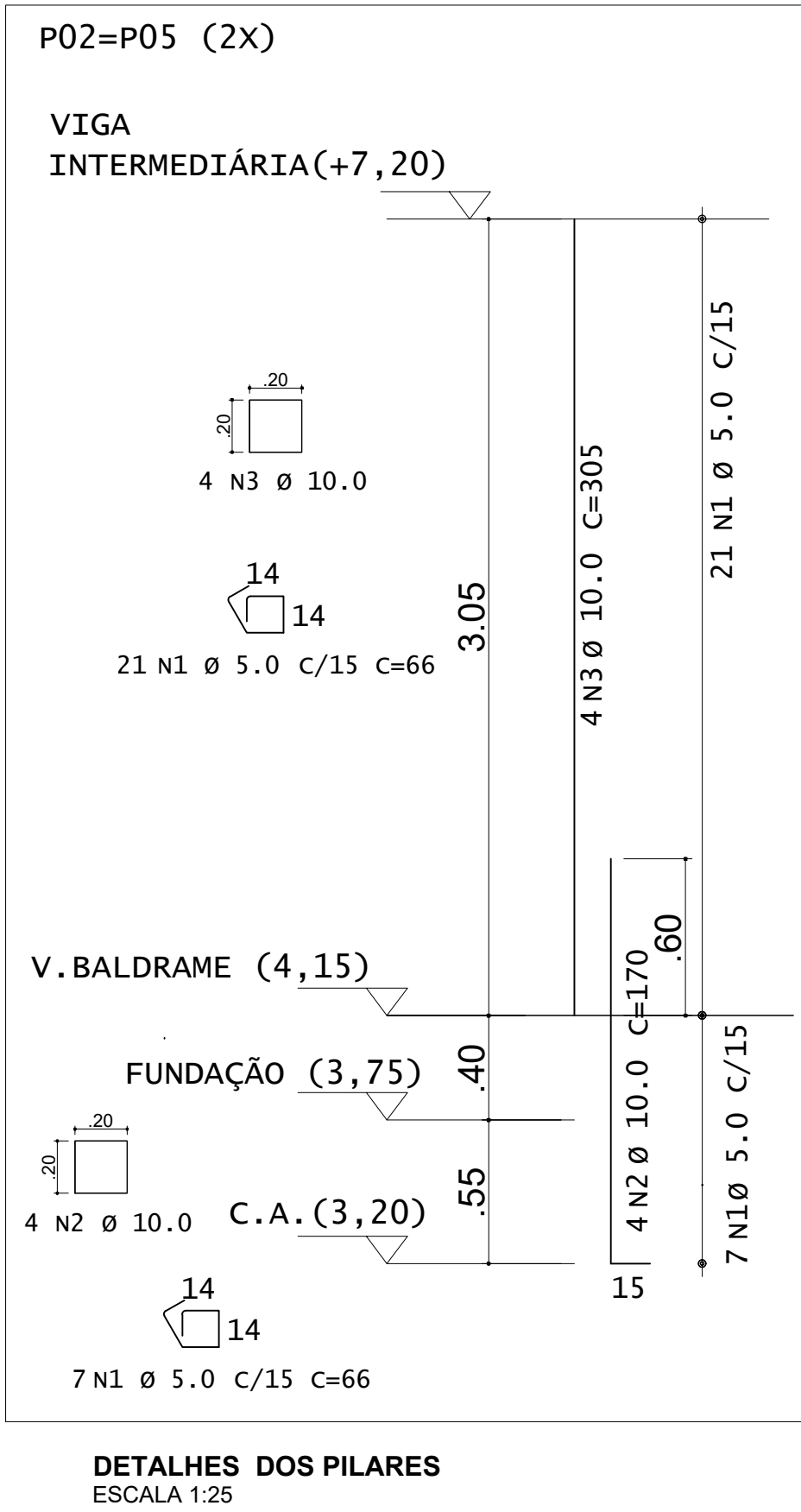
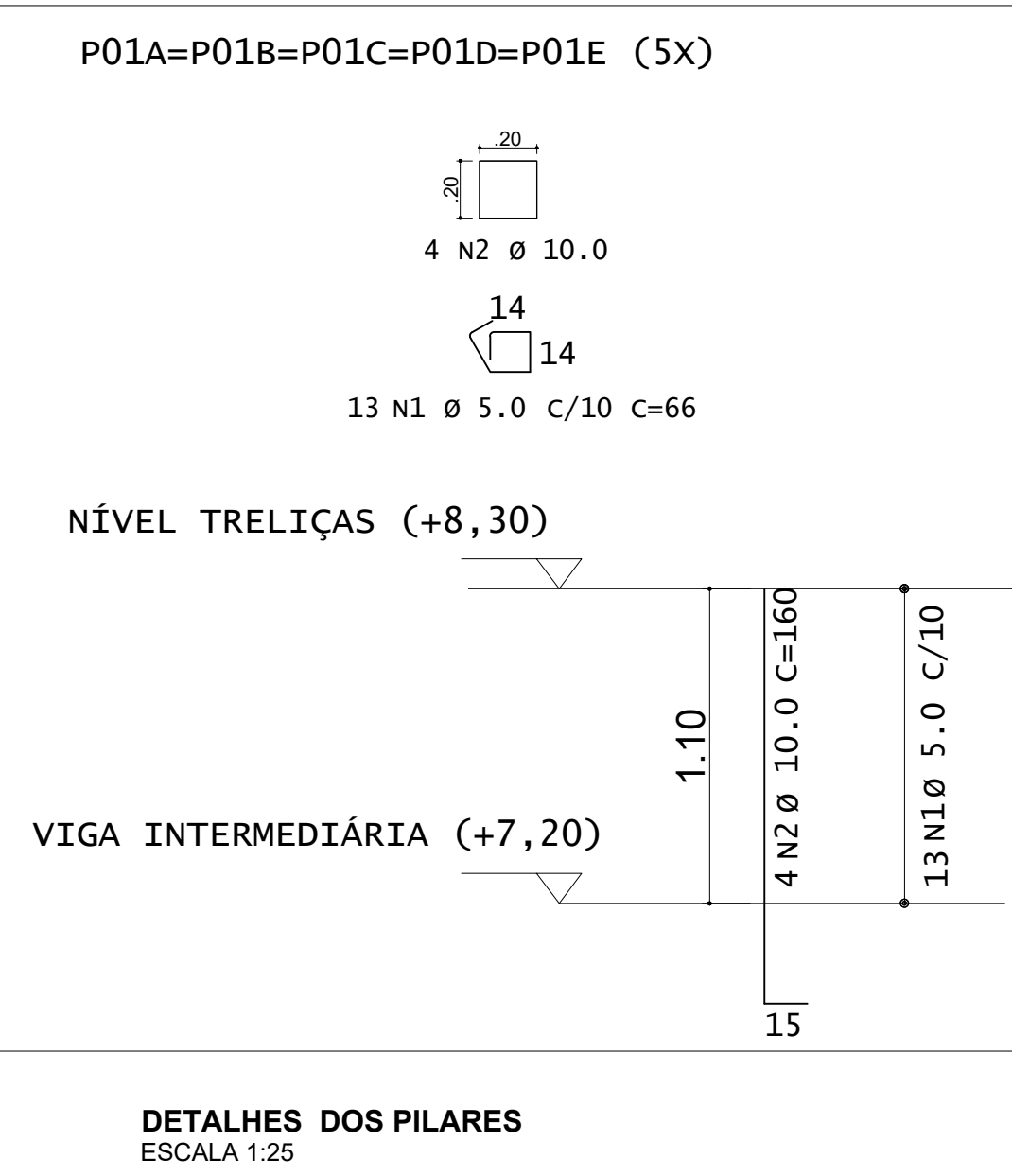
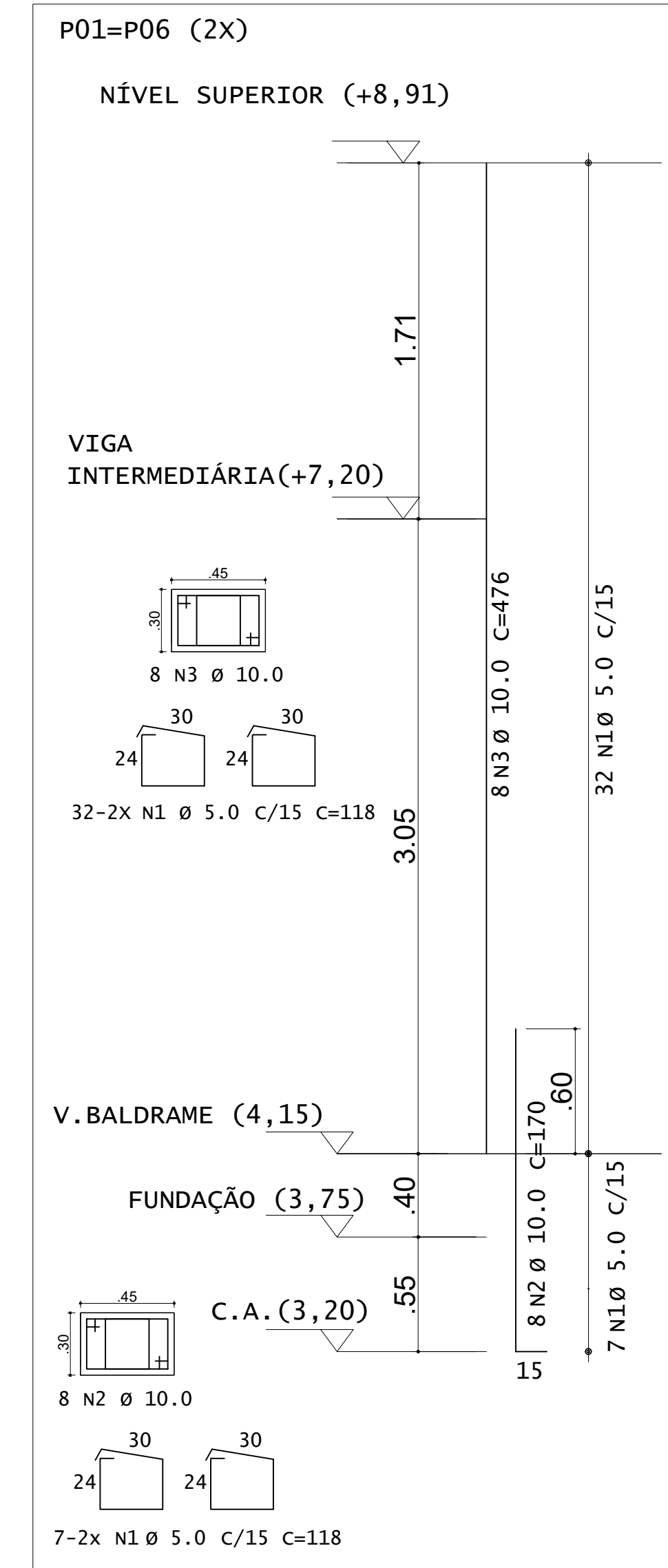
COBRIMENTO DAS ARMADURAS: VIGA / CINTA = 2.50 cm  
PILAR = 2.50/3.00 cm  
LAJE = 2.50 cm

OBSERVAÇÕES INICIAIS

- 1 - A taxa do solo foi fornecida em ensaio de sondagem;
- 2 - A execução da estrutura deve obedecer as recomendações da NBR - 6118;
- 3 - As cotas e níveis devem ser conferidos pelas plantas estruturais e afins;
- 4 - Confirmar, com o fabricante de concreto, a disponibilidade, dois dias antes da concretagem;
- 5 - Para concreto confeccionado na obra, utilizar a betoneira;
- 6 - Antes da execução da estrutura, as formas e a locação devem ser validadas pelo engenheiro construtor;
- 7 - As dúvidas projetuais para melhor execução, serão esclarecidas pelo engenheiro projetista;
- 8 - Acompanhar cuidadosamente a cura do concreto, principalmente nos primeiros sete dias, umedecendo adequadamente as peças concretadas.

<b>INSTITUTO FEDERAL</b> Sul de Minas Gerais Campus Inconfidentes				
<b>PROJETO</b>	OBRA:	AUDITÓRIO (400 lugares)		
	LOCAL:	FAZENDA ESCOLA - CAMPUS INCONFIDENTES		
	TIPO:	ESTRUTURA EM CONCRETO ARMADO		
PROPRIETÁRIO	LUIZ FLAVIO REIS <small>Assinado de forma digital por LUIZ FLAVIO REIS FERNANDES:057 06237669</small>		ENDEREÇO OBRA: Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000	
RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA:46134670 <small>Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA:46134670634 Data: 2022.10.25 11:30:21 -03'00'</small>				
QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: ..... 80.41857 (m²) MATRÍCULA DO IMÓVEL ..... 15.480 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG				
ENGPº CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 28.949D - MAT. SIAPE 2056557 DESENHO: LEANDRO DE OLIVEIRA MATHEUS HENRIQUE FRANCO LOPES				
ÁREA A CONSTRUIR: ..... 1.143,00 m²				
CARIMBOS:				
DATA:	REVISÃO:	ESCALAS:	UNIDADE:	FOLHA:
17/10/2022	01	INDICADAS	METROS	11/16





- CONVENÇÕES
- Pilar que morre
  - Pilar que nasce / passa
  - Pilar com mudança de seção

PARÂMETROS

CONCRETO: INDICADO

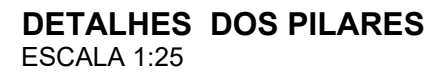
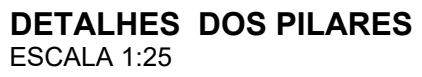
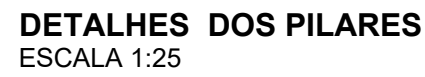
AÇO(S) : CA-50 e CA-60


COBRIMENTO DAS ARMADURAS: VIGA / CINTA = 2.50 cm  
PILAR = 2.50/3.00 cm  
LAJE = 2.50 cm

- OBSERVAÇÕES INICIAIS
- 1 - A taxa do solo foi fornecida em ensaio de sondagem;
  - 2 - A execução da estrutura deve obedecer as recomendações da NBR - 6118;
  - 3 - As cotas e níveis devem ser conferidos pelas plantas estruturais e afins;
  - 4 - Confirmar, com o fabricante de concreto, a disponibilidade, dois dias antes da concretagem;
  - 5 - Para concreto confeccionado na obra, utilizar a betoneira;
  - 6 - Antes da execução da estrutura, as formas e a locação devem ser validadas pelo engenheiro construtor;
  - 7 - As dúvidas projetuais para melhor execução, serão esclarecidas pelo engenheiro projetista;
  - 8 - Acompanhar cuidadosamente a cura do concreto, principalmente nos primeiros sete dias, umedecendo adequadamente as peças concretadas.

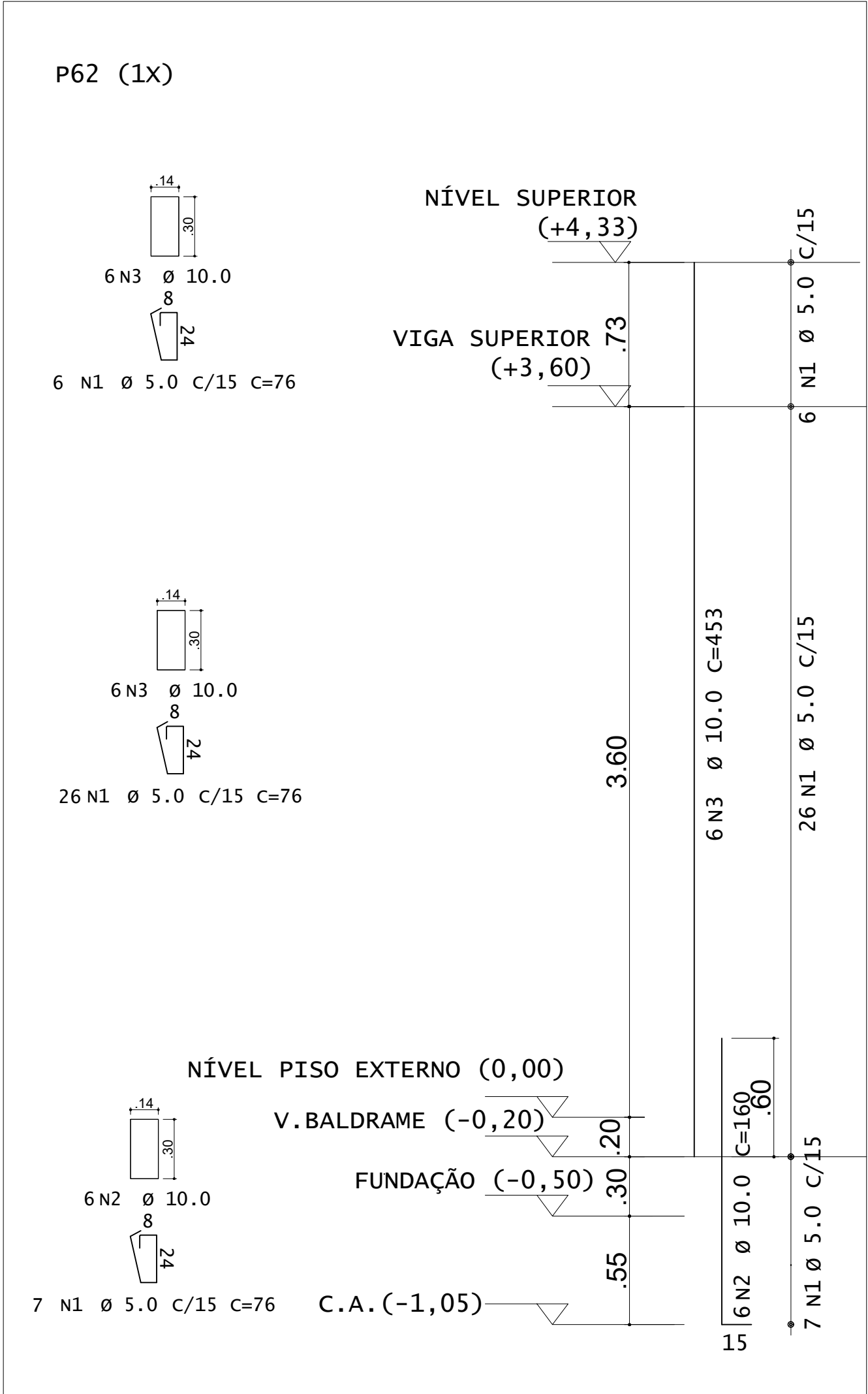
<b>INSTITUTO FEDERAL</b> Sul de Minas Gerais Campus Inconfidentes				
<b>PROJETO</b>	OBRA:	AUDITÓRIO (400 lugares)		
	LOCAL:	FAZENDA ESCOLA - CAMPUS INCONFIDENTES		
	TIPO:	ESTRUTURA EM CONCRETO ARMADO		
PROPRIETÁRIO	LUIZ FLAVIO REIS FERNANDES057 06221669 IFSU/DEMINAS CAMPUS INCONFIDENTES DIRETOR GERAL LUÍZ FLÁVIO REIS FERNANDES	Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA:461346706 Data: 2022.10.25 11:32:21 -03'00'	ENDEREÇO OBRA: Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000	
RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA:461346706 34		QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: ..... 89.41857 (m²) MATRÍCULA DO IMÓVEL ..... 19.490 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG		
ENGPº CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 28.949D - MAT. SIAPE 2056557 DESENHO: LEANDRO DE OLIVEIRA MATHEUS HENRIQUE FRANCO LOPES		ÁREA A CONSTRUIR: ..... 1.143,00 m²		
CARIMBOS:				
DATA:	REVISÃO:	ESCALAS:	UNIDADE:	FOLHA:
17/10/2022	01	INDICADAS	METROS	11/16



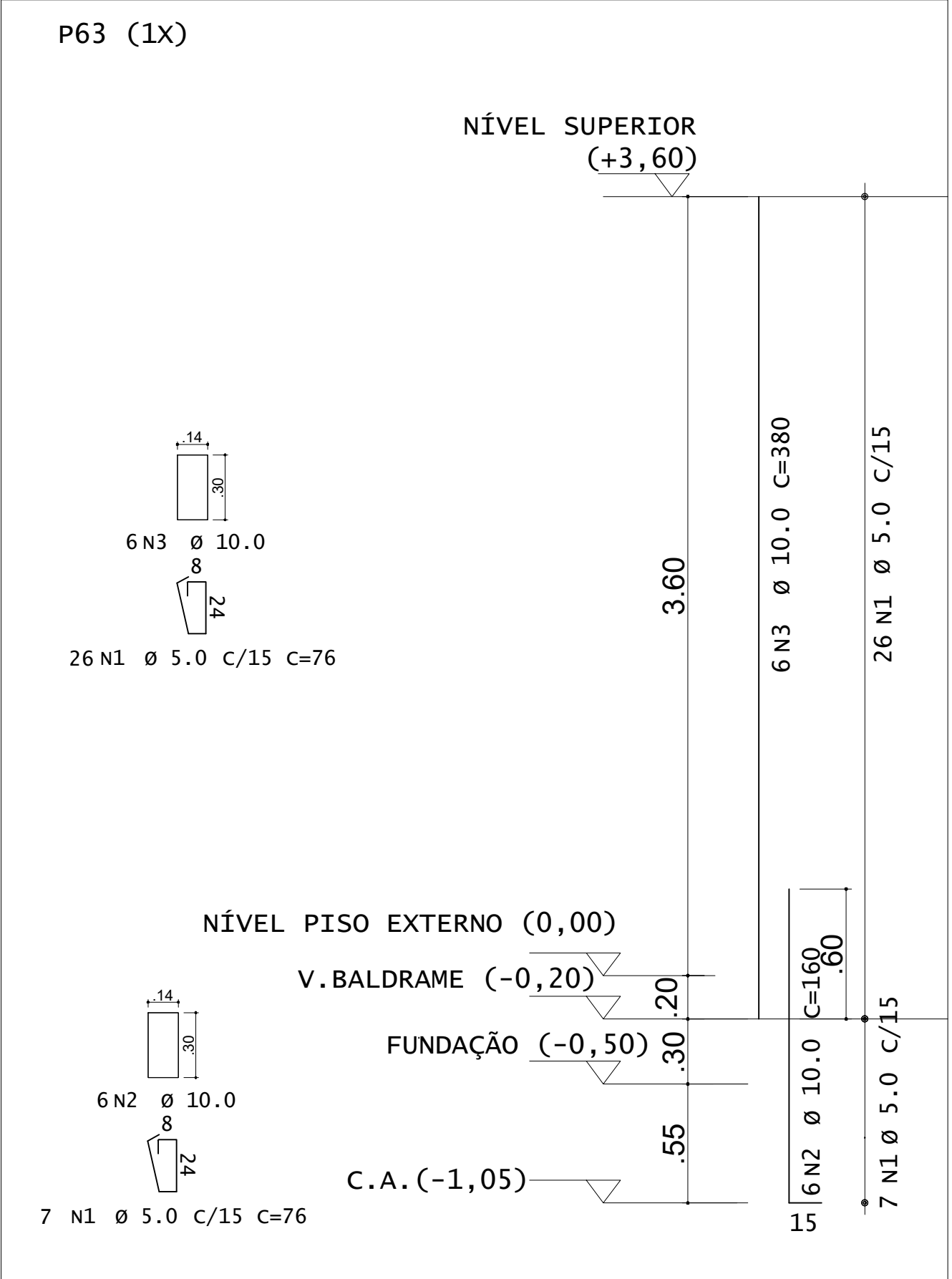


		<h1>INSTITUTO FEDERAL</h1> <h2>Sul de Minas Gerais</h2> <h3>Campus Inconfidentes</h3>		
PROJETO	OBRA:	AUDITÓRIO (400 lugares)		
	LOCAL:	FAZENDA ESCOLA - CAMPUS INCONFIDENTES		
	TIPO:	ESTRUTURA EM CONCRETO ARMADO		
PROPRIETÁRIO		ENDEREÇO OBRA:		
LUIZ FLAVIO REIS <small>Arquiteto de Honorário Digital</small> FERNANDES057 <small>(FERNANDES057@ufmg.br)</small> 9522-1669 <small>celular 2022-70 17148</small> 4910		Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000		
ÍSULDEMINAS CAMPUS INCONFIDENTES DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES				
RESPONSÁVEL TÉCNICO:		QUADRO RESUMO DE ÁREAS:		
PAULO ROBERTO DE OLIVEIRA-46134670-634		Assinado de forma digital por PAULO ROBERTO DE OLIVEIRA-46134670634 Dados: 2022.10.25 11:55:11 -03'00'		
ENQ.: CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 29 949/D - MAT. SIAPE 2056557		TERRENO PARTE B: ..... 99.41667 (ha) MATRÍCULA DO IMÓVEL: ..... 19.490 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINOMG		
DESENHO LEANDRO DE OLIVEIRA MATHEUS HENRIQUE FRANCO LOPES		ÁREA A CONSTRUIR: ..... 1.143,00 m²		
CARIMBOS:				
DATA:	REVISÃO:	ESCALAS:	UNIDADE:	FOLHA:
17/10/2022	01	INDICADAS	METROS	13/16

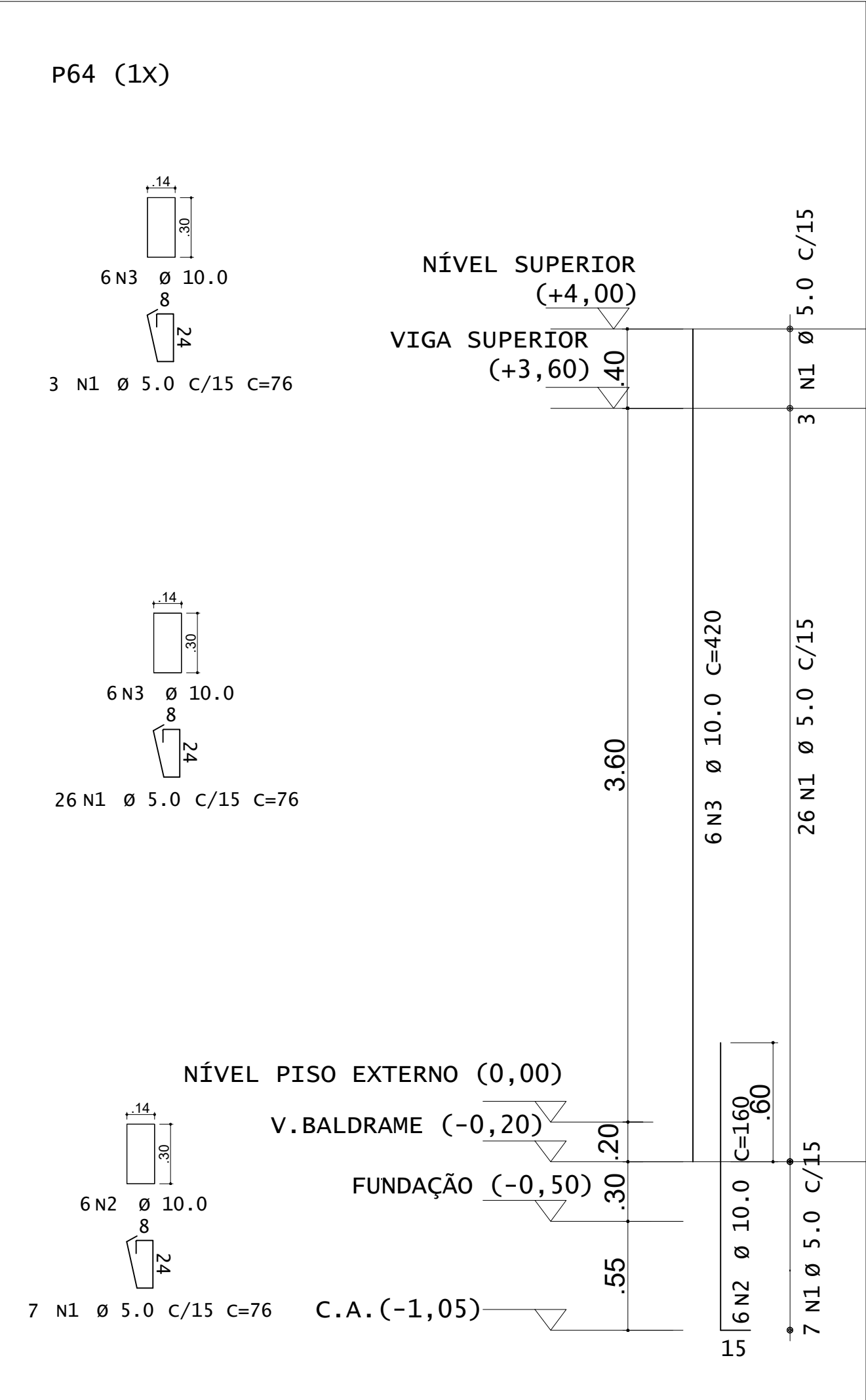




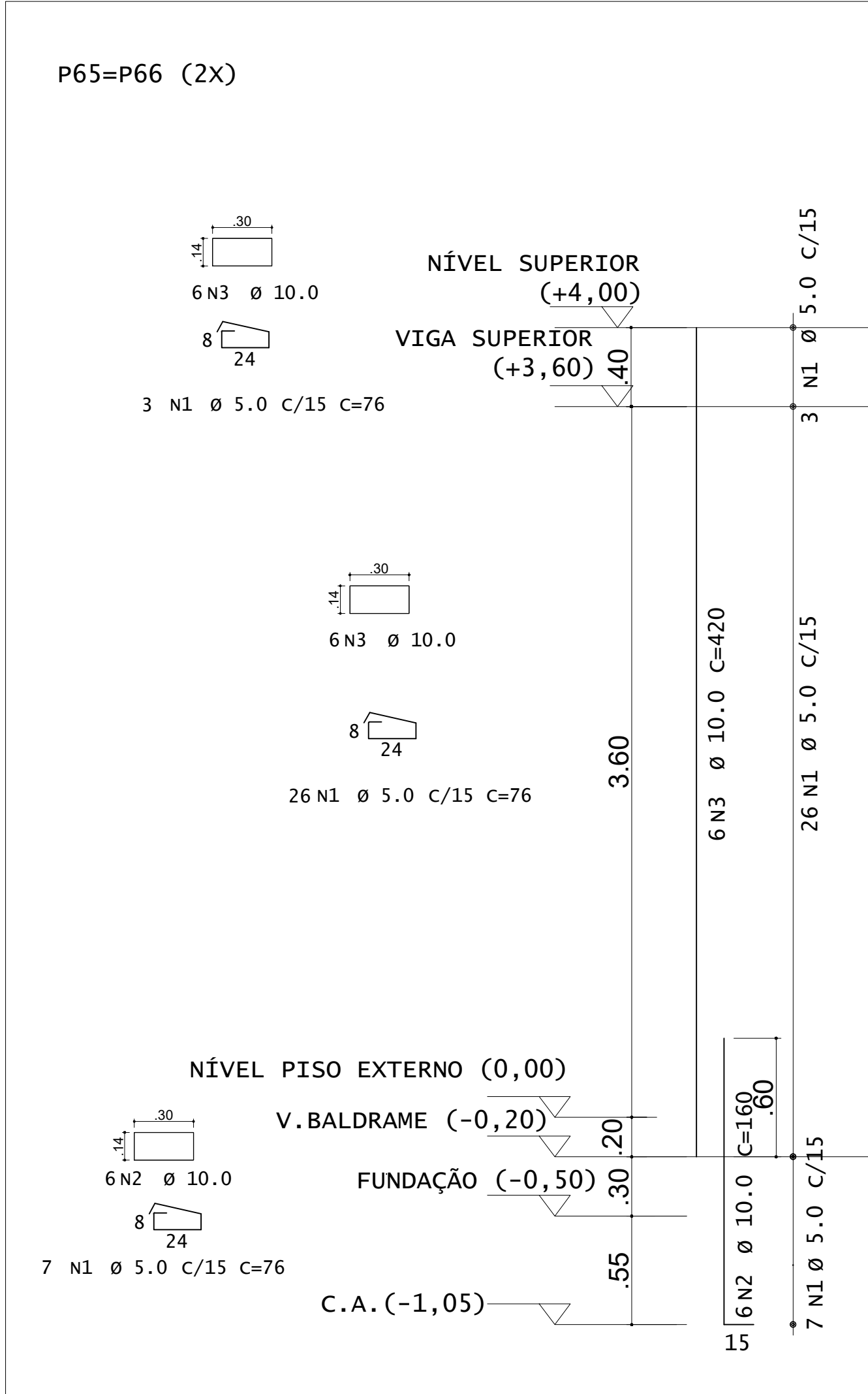
DETALHES DOS PILARES  
ESCALA 1:25



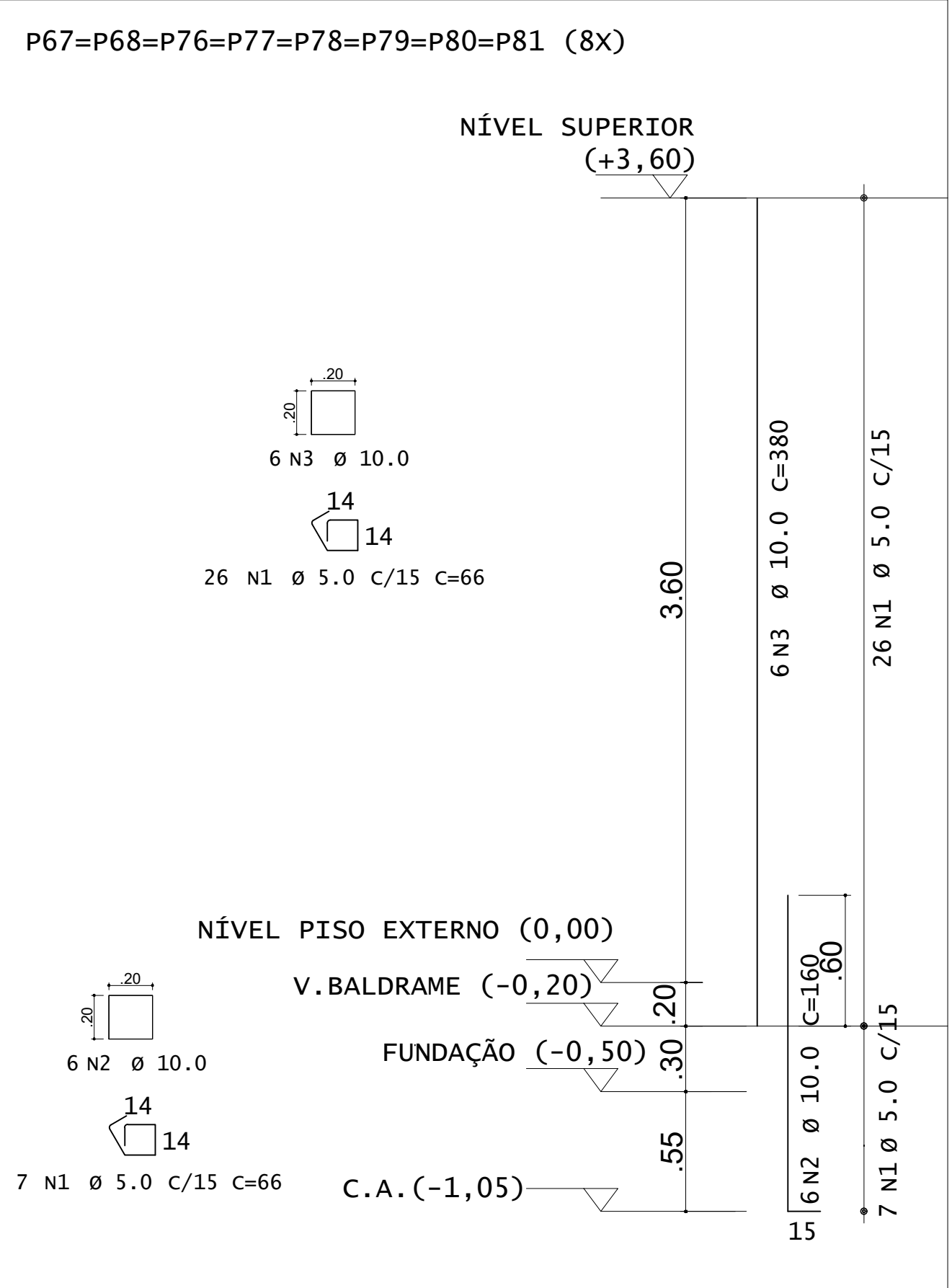
DETALHES DOS PILARES  
ESCALA 1:25



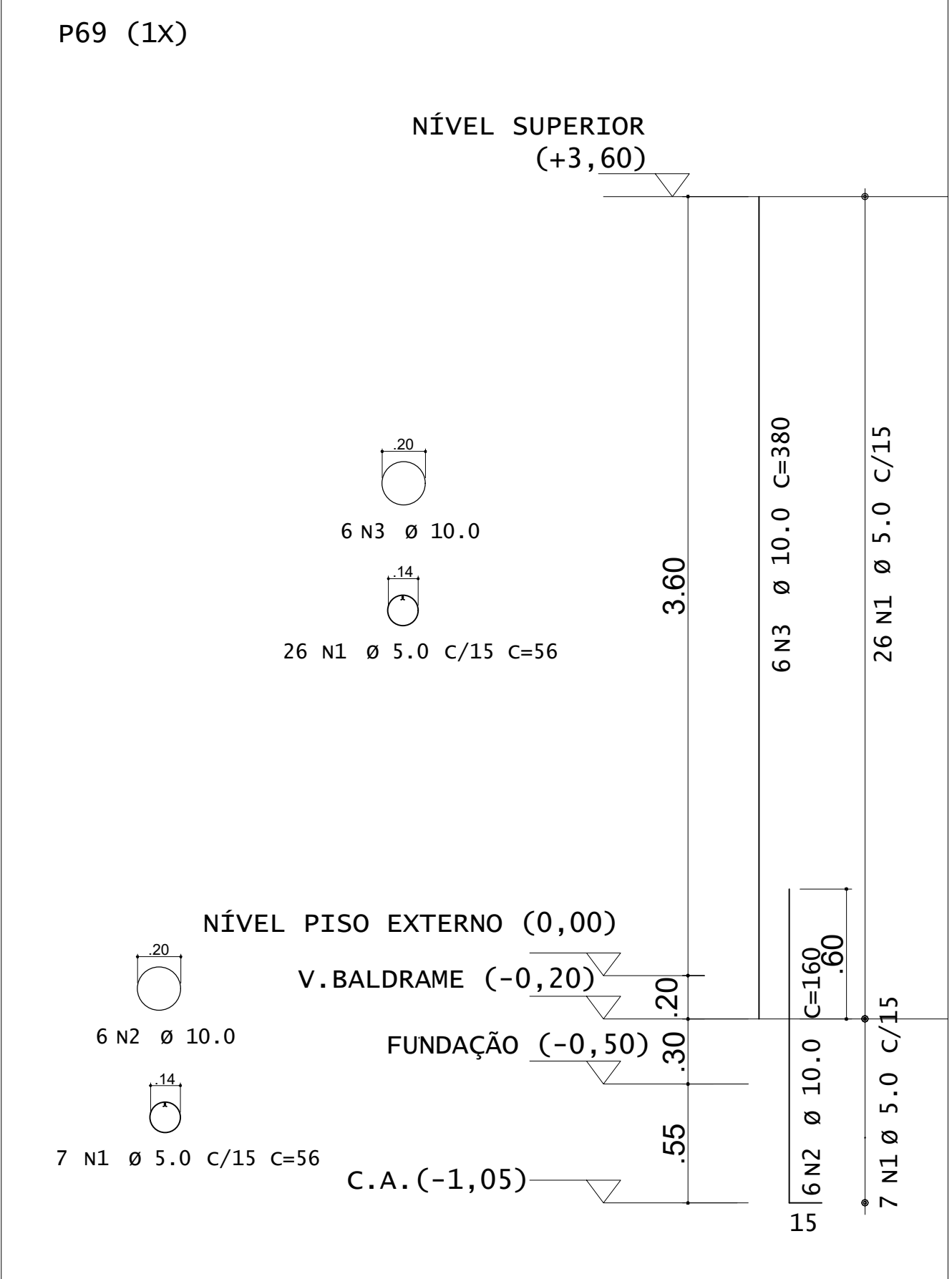
DETALHES DOS PILARES  
ESCALA 1:25



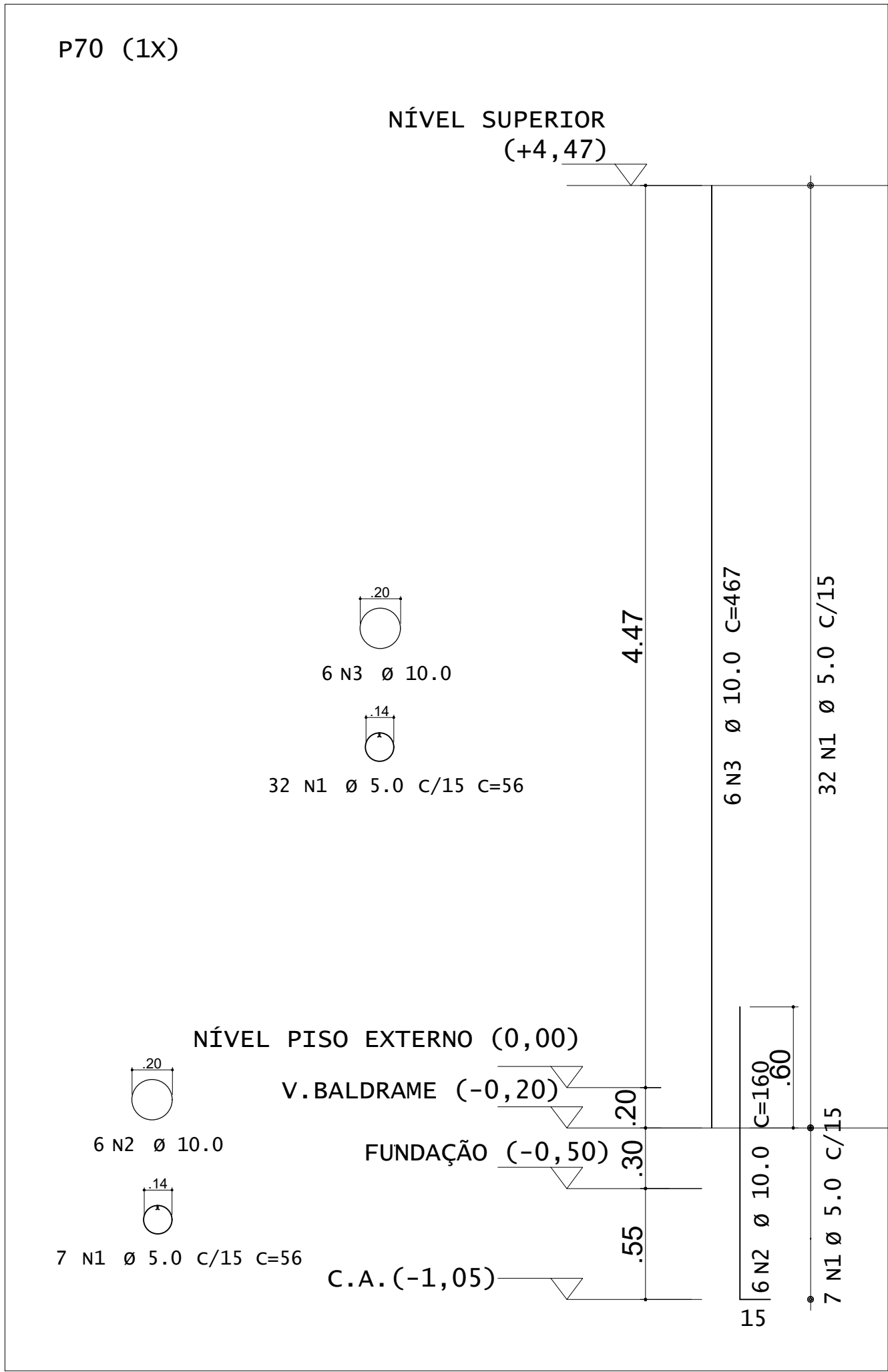
DETALHES DOS PILARES  
ESCALA 1:25



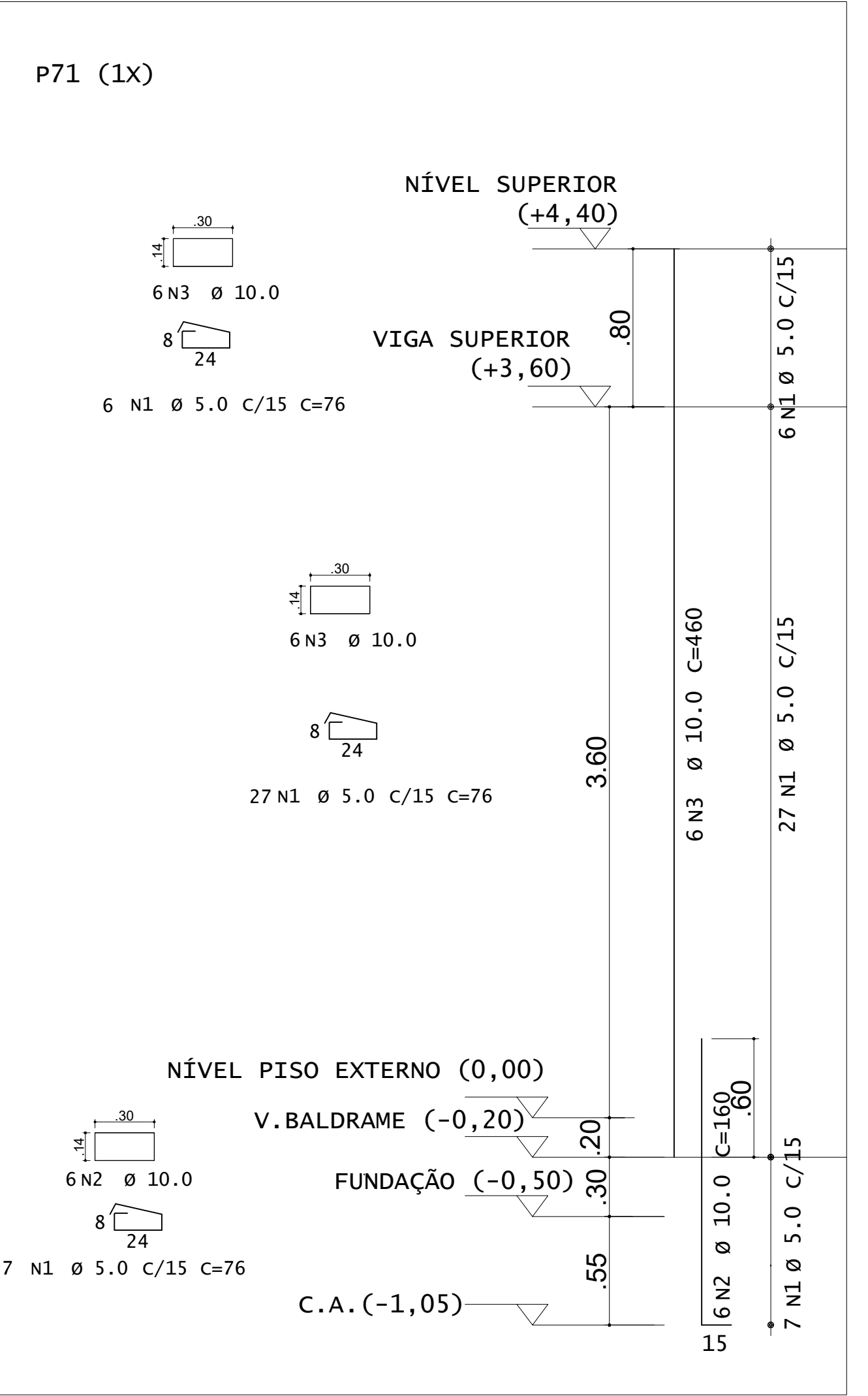
DETALHES DOS PILARES  
ESCALA 1:25



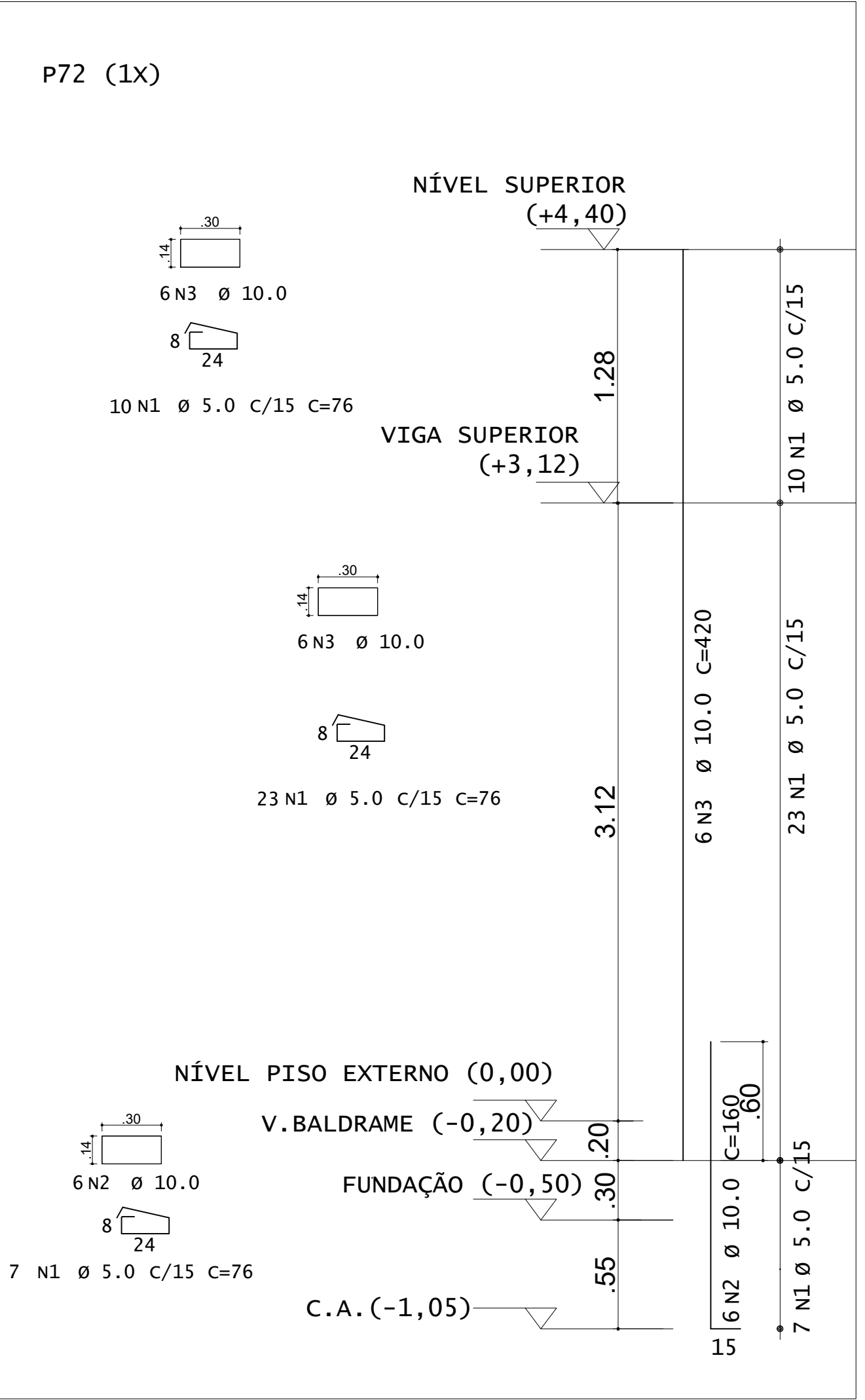
DETALHES DOS PILARES  
ESCALA 1:25



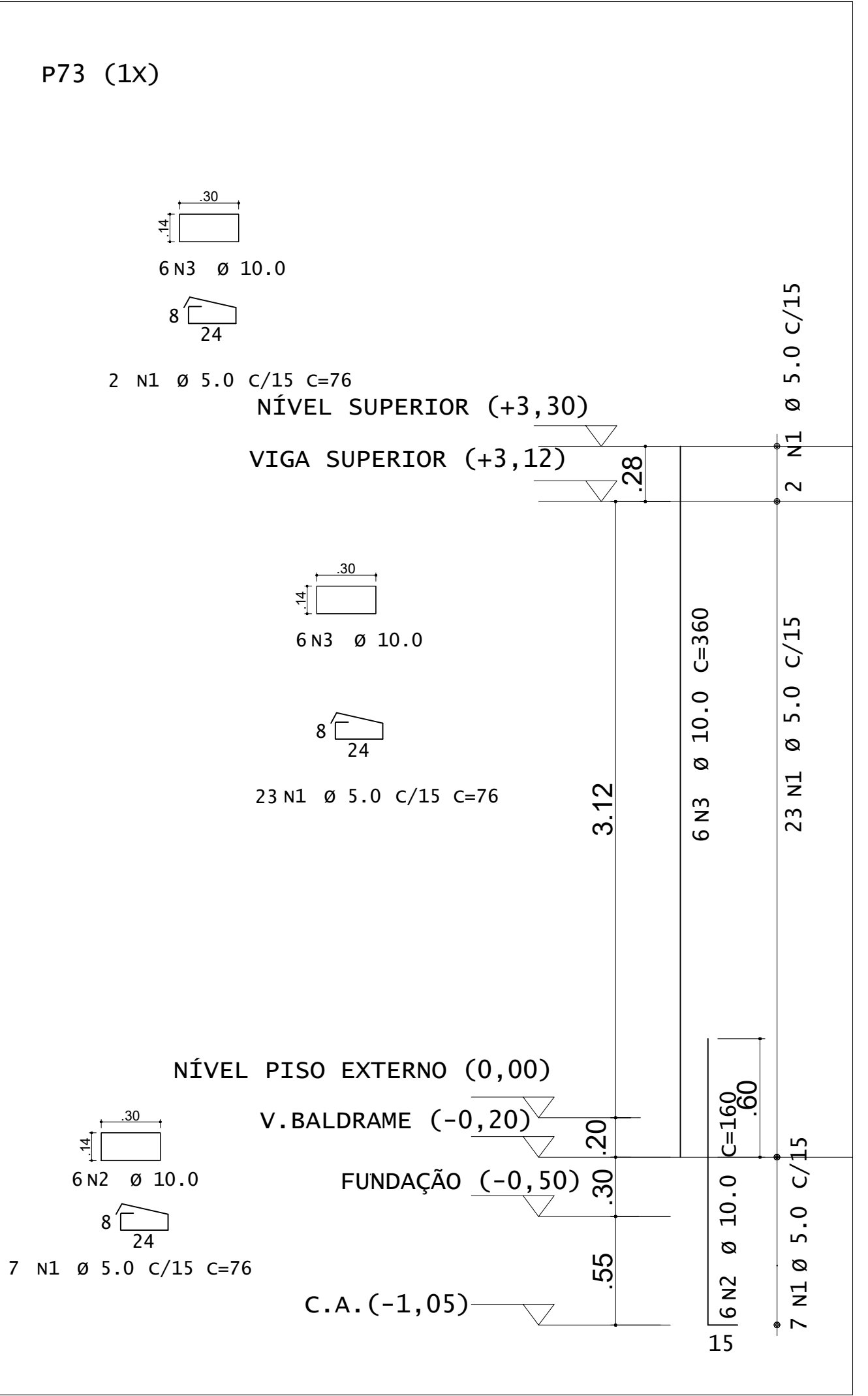
DETALHES DOS PILARES  
ESCALA 1:25



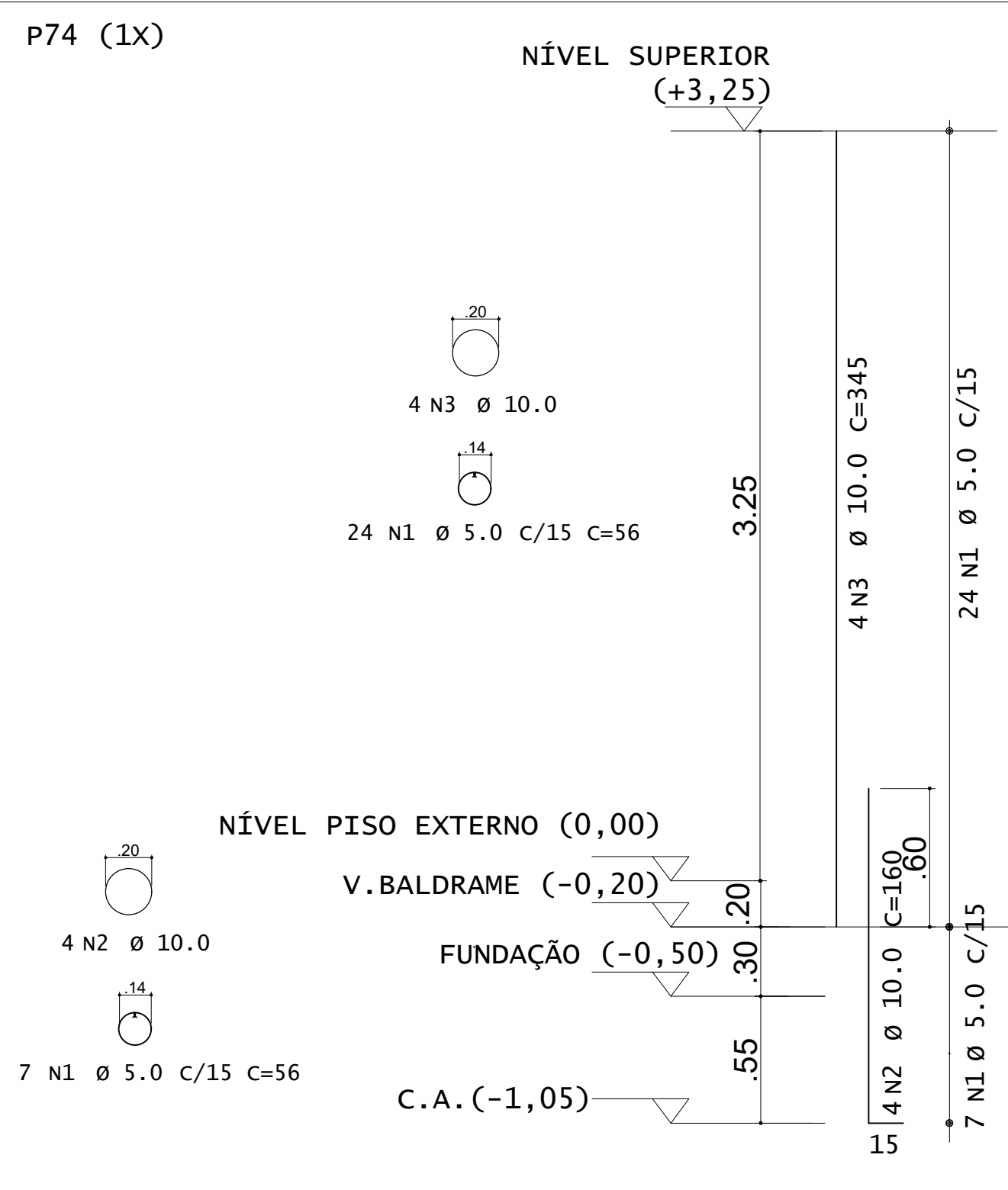
DETALHES DOS PILARES  
ESCALA 1:25



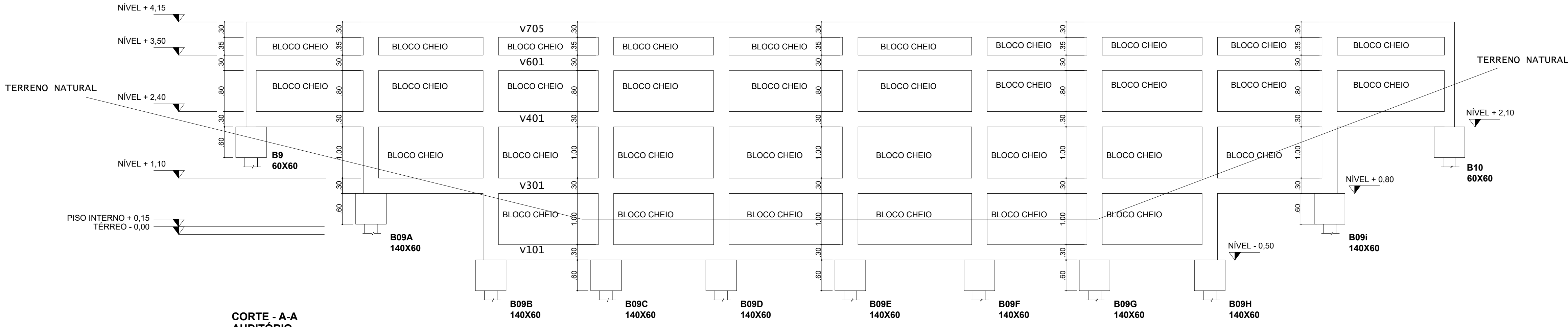
DETALHES DOS PILARES  
ESCALA 1:25



DETALHES DOS PILARES  
ESCALA 1:25

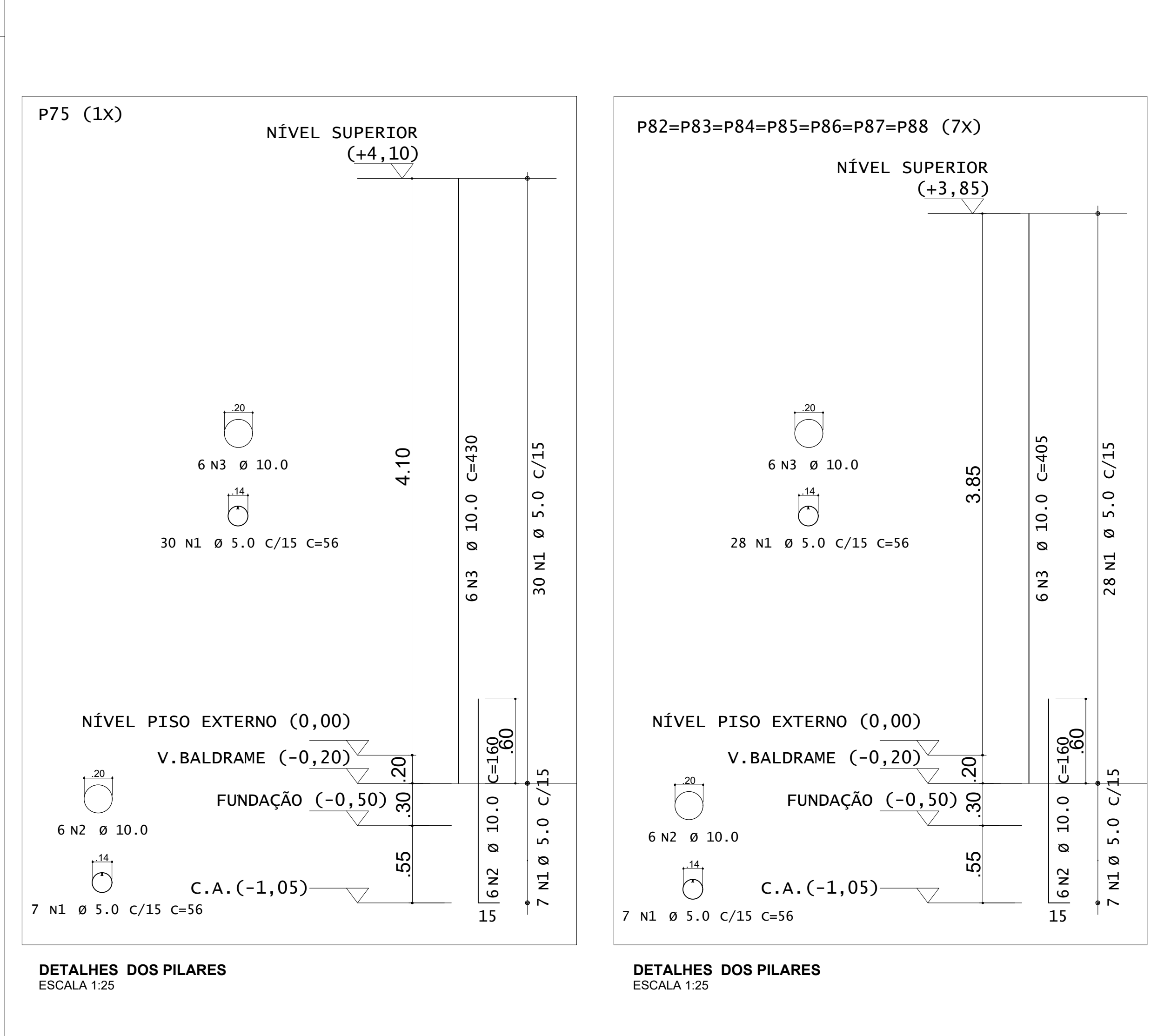
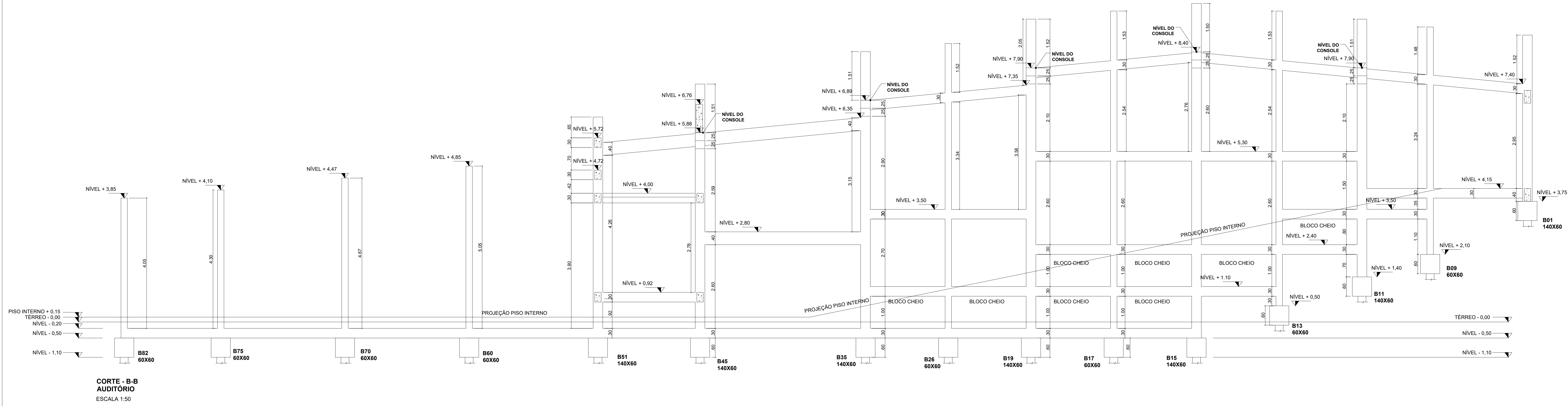
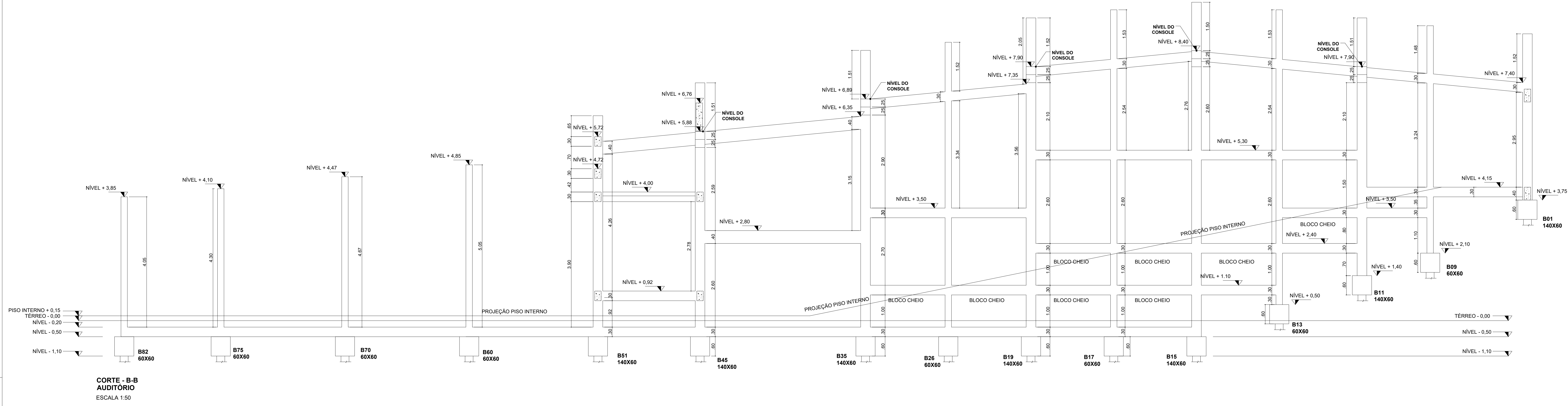


DETALHES DOS PILARES  
ESCALA 1:25



<b>PROJETO</b>	<b>INSTITUTO FEDERAL</b> Sul de Minas Gerais Campus Inconfidentes			
	OBRAS: AUDITÓRIO (400 lugares)			
	LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES			
	TIPO: ESTRUTURA EM CONCRETO ARMADO			
PROPRIETÁRIO: LUIZ FLAVIO REIS FERNANDES 6570 IF SULDEMINAS CAMPUS INCONFIDENTES DIRETOR GERAL LUIZ FLAVIO REIS FERNANDES		ENDEREÇO OBRA: Fazenda Escola Rua Sargento Mor Toledo Piza, Nº 01 Inconfidentes / MG- CEP: 37.576-000		
RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA:46134670 634		QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: ..... 89.41857 (m²) MATRÍCULA DO IMÓVEL: ..... 15.490 FICHA 1 LIVRO Nº02 - REGISTRO GERAL SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO/MG		
ENGPº CIVIL PAULO ROBERTO DE OLIVEIRA CREA - MG 29.949/D - MAT. SIAPE 2056557 DESENHO: LEANDRO DE OLIVEIRA MATHEUS HENRIQUE FRANCO LOPES		ÁREA A CONSTRUIR: ..... 1.143,00 m²		
CARIMBOS:				
DATA: 17/10/2022	REVISÃO: 01	ESCALAS: INDICADAS	UNIDADE: METROS	FOLHA: 14/16





VOLUME DE CONCRETO - PILARES fck 30MPa = 31,35 M³					
ÁREA DE FORMAS - 465,23 M²					
ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P01=P06 (X2)					
60A	1	5.0	156	118	18408
50A	2	10.0	16	170	2720
50A	2	10.0	16	170	2720
P01A=P01B=P01C=P01D=P01E (X5)					
60A	1	5.0	65	66	4290
50A	2	10.0	20	160	3200
P02=P05 (X2)					
60A	1	5.0	56	66	3696
50A	2	10.0	8	170	1360
50A	2	10.0	8	305	2440
P03=P04 (X2)					
60A	1	5.0	80	66	5280
50A	2	10.0	8	305	2440
50A	2	10.0	8	171	1368
P07=P08 (X2)					
60A	1	5.0	80	66	5280
50A	2	10.0	8	305	2440
50A	2	10.0	8	171	1368
P09=P10 (X2)					
60A	1	5.0	104	66	6864
50A	2	10.0	8	325	2600
50A	2	10.0	8	504	4032
P09A=P09I (X2)					
60A	1	5.0	36	66	2376
50A	2	12.5	8	290	2320
50A	2	12.5	8	175	1400
P09B=P09C=P09D=P09E=P09F=P09G=P09H (X7)					
60A	1	5.0	266	66	17556
50A	2	12.5	28	290	8120
50A	2	12.5	28	305	8540
P11=P12 (X2)					
60A	1	5.0	280	118	33040
50A	2	10.0	16	405	6480
50A	2	10.0	16	526	8416
50A	2	12.5	8	274	2192
50A	2	10.0	4	118	472
50A	2	10.0	4	166	664
50A	2	10.0	2	118	236
50A	2	10.0	2	142	284

ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P13=P14 (X2)					
60A	1	5.0	134	66	8844
50A	2	10.0	8	430	3440
50A	2	10.0	8	815	6520
P15=P16 (X2)					
60A	1	5.0	360	118	42480
50A	2	10.0	16	420	6720
50A	2	10.0	16	749	11984
50A	2	10.0	16	151	2416
50A	2	12.5	8	274	2192
50A	2	10.0	4	118	472
50A	2	10.0	4	166	664
50A	2	10.0	2	118	236
50A	2	10.0	2	142	284
P17=P18 (X2)					
60A	1	5.0	160	66	10560
50A	2	10.0	8	420	3360
50A	2	10.0	8	727	5816
P19=P20 (X2)					
60A	1	5.0	348	118	41064
50A	2	10.0	16	420	6720
50A	2	10.0	16	701	11216
50A	2	12.5	8	274	2192
50A	2	10.0	4	118	472
50A	2	10.0	4	166	664
50A	2	10.0	2	118	236
50A	2	10.0	2	142	284
P21=P22=P23=P24=P25=P27=P28=P30=P31=P36=P39 (X11)					
60A	1	5.0	77	66	5082
50A	2	10.0	44	105	4620
P26=P29 (X2)					
60A	1	5.0	152	66	10032
50A	2	10.0	8	290	2320
50A	2	10.0	8	300	2400
50A	2	10.0	4	516	4128
P32=P33=P34=P37=P38=P41=P42=P43=P44 (X9)					
60A	1	5.0	108	66	7128
50A	2	10.0	36	182	6552
P35=P40 (X2)					
60A	1	5.0	340	118	40120
50A	2	10.0	16	290	4640
50A	2	10.0	16	300	4800
50A	2	10.0	16	490	7840
50A	2	12.5	8	274	2192
50A	2	10.0	4	118	472
50A	2	10.0	4	166	664
50A	2	10.0	2	118	236
50A	2	10.0	2	142	284

ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P45=P50 (X2)					
60A	1	5.0	264	118	31152
50A	2	10.0	16	212	3392
50A	2	10.0	16	556	8896
50A	2	10.0	16	151	2416
50A	2	12.5	8	274	2192
50A	2	10.0	4	118	472
50A	2	10.0	4	166	664
50A	2	10.0	2	118	236
50A	2	10.0	2	142	284
P46=P47=P48=P49 (X4)					
60A	1	5.0	260	74	19240
50A	2	10.0	24	212	5088
50A	2	10.0	24	388	9312
50A	2	10.0	24	339	8136
P51=P57 (X2)					
60A	1	5.0	264	118	31152
50A	2	10.0	16	212	3392
50A	2	10.0	16	368	5888
50A	2	10.0	16	237	3792
P52=P53=P54=P55=P56 (X5)					
60A	1	5.0	265	66	17490
50A	2	10.0	20	212	4240
50A	2	10.0	20	368	7360
50A	2	10.0	20	237	4740
P57A=P58=P59=P90 (X4)					
60A	1	5.0	112	56	6272
50A	2	10.0	16	160	2560
50A	2	10.0	16	305	4880
P59 (X1)					
60A	1	5.0	31	56	1736
50A	2	10.0	4	160	640
50A	2	10.0	4	342	1368
P60 (X1)					
60A	1	5.0	41	56	2296
50A	2	10.0	8	160	1280
50A	2	10.0	8	505	4040
P61 (X1)					
60A	1	5.0	39	76	2964
50A	2	10.0	6	160	960
50A	2	10.0	6	453	2718
P62 (X1)					
60A	1	5.0	39	76	2964
50A	2	10.0	6	160	960
50A	2	10.0	6	453	2718

ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P63 (X1)					
60A	1	5.0	33	76	2508
50A	2	10.0	6	160	960
50A	2	10.0	6	380	2280
P64 (X1)					
60A	1	5.0	36	76	2736
50A	2	10.0	6	160	960
50A	2	10.0	6	420	2520
P65=P66 (X2)					
60A	1	5.0	72	76	5472
50A	2	10.0	12	160	1920
50A	2	10.0	12	420	5040
P67=P68=P69=P70=P71=P72=P73=P74 (X8)					
60A	1	5.0	264	66	17424
50A	2	10.0	48	160	7680
50A	2	10.0	48	380	18240
P69 (X1)					
60A	1	5.0	33	56	1848
50A	2	10.0	6	160	960
50A	2	10.0	6	380	2280
P70 (X1)					
60A	1	5.0	39	56	2184
50A	2	10.0	6	160	960
50A	2	10.0	6	467	2802
P71 (X1)					
60A	1	5.0	40	76	3040
50A	2	10.0	6	160	960
50A	2	10.0	6	460	2760
P72 (X1)					
60A	1	5.0	40	76	3040
50A	2	10.0	6	160	960
50A	2	10.0	6	420	2520
P73 (X1)					
60A	1	5.0	32	76	2432
50A	2	10.0	6	160	960
50A	2	10.0	6	360	2160
P74 (X1)					
60A	1	5.0	31	56	1736
50A	2	10.0	4	160	640
50A	2	10.0	4	345	1380

ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P75 (X1)					
60A	1	5.0	37	56	2072
50A	2	10.0	6	160	960
50A	2	10.0	6	430	2380
P82=P83=P84=P85=P86=P87=P88 (X7)					
60A	1	5.0	245	56	13720
50A	2	10.0	42	160	6720
50A	2	10.0	42	405	17010
RESUMO DE AÇO					
ÁÇO	BIT (mm)	COMPR (m)	PESO C/10% (kg)		
60A	5.0	4818,83	816,31		
50A	10.0	3255,44	2209,47		
50A	12.5	313,40	331,98		
Peso Total			60A = 816,31 kg		
			50A = 2.541,45 kg		

# INSTITUTO FEDERAL

Sul de Minas Gerais

Campus Inconfidentes

PROJETO

OBRA: AUDITÓRIO (400 lugares)

LOCAL: FAZENDA ESCOLA - CAMPUS INCONFIDENTES

TIPO: ESTRUTURA EM CONCRETO ARMADO

PROPRIETÁRIO: LUIZ FLAVIO REIS FERNANDES

RESPONSÁVEL TÉCNICO: PAULO ROBERTO DE OLIVEIRA

DESENHO: LEANDRO DE OLIVEIRA

ENDEREÇO OBRA: Fazenda Escola, Rua Sargento Mor Toledo Piza, Nº 01, Inconfidentes / MG - CEP: 37.576-000

QUADRO RESUMO DE ÁREAS: TERRENO PARTE B: 80,41857 (ha), MATRÍCULA DO IMÓVEL: 15.460, FICHA: 1, LIVRO Nº02 - REGISTRO GERAL, SERVIÇO REGISTRAL IMOBILIÁRIO DE OURO FINO

DATA: 17/10/2022

REVISÃO: 01

ESCALAS: INDICADAS

UNIDADE: METROS

FOLHA: 15/16





Recobrir as telas em um espaço de 10 cm.

