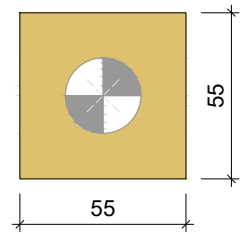


A

B1=B2=B3=B4=B5=B6
B7=B8=B9=B10=B11
B12=B13=B14=B15
B16=B17=B18=B19
B20=B21 (1xR25)



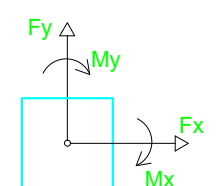
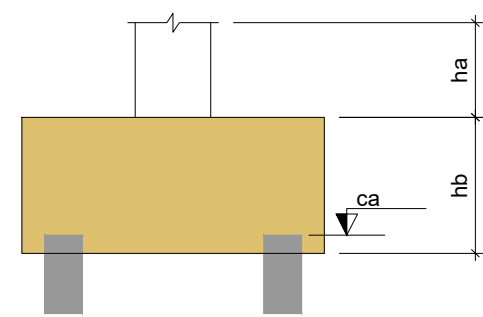
LEGENDA DOS BLOCOS

Escala 1/25

Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (tf)	Carga Mín. (tf)	Pilar				Fundação				Bloco							
						Mx Máximo (kgf.m)		My Máximo (kgf.m)		Fx Máximo (tf)		Fy Máximo (tf)		Lado B (cm)	Lado H (cm)	h0 / h1 (cm)	h1 / hb (cm)	ne	Estaca	ca (cm)	Base tub. (cm)
						Positivo	Negativo	Positivo	Negativo	Positivo	Negativo	Positivo	Negativo								
B1*	-	20.00	10.00	0.8	0.8	900	-1000	100	0	0.0	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B2*	-	220.00	10.00	1.2	1.2	900	-1000	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B3*	-	420.00	10.00	1.2	1.2	900	-1000	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B4*	-	620.00	10.00	1.2	1.2	900	-1000	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B5*	-	820.00	10.00	1.2	1.2	900	-1000	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B6*	-	1020.00	10.00	1.2	1.2	900	-1000	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B7*	-	1220.00	10.00	1.2	1.2	800	-900	100	0	0.1	0.0	0.5	-0.4	55	55	0	80	1	R25	35	
B8*	-	1420.00	10.00	1.3	1.2	1000	-1100	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	35	
B9*	-	1620.00	10.00	1.2	1.2	1700	-1800	100	0	0.1	0.0	0.9	-1.0	55	55	0	80	1	R25	35	
B10*	-	1780.00	10.00	1.5	1.5	600	-500	100	0	0.0	0.0	0.2	-0.3	55	55	0	80	1	R25	-65	
B11*	-	1980.00	10.00	1.7	1.7	1100	-1200	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	-65	
B12*	-	2180.00	10.00	1.7	1.7	1300	-1200	100	0	0.1	0.0	0.5	-0.6	55	55	0	80	1	R25	-65	
B13*	-	2380.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B14*	-	2580.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B15*	-	2780.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B16*	-	2980.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B17*	-	3180.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B18*	-	3380.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B19*	-	3580.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B20*	-	3780.00	10.00	1.7	1.7	1300	-1400	100	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	
B21*	-	3980.00	10.00	1.2	1.2	1300	-1400	0	0	0.1	0.0	0.6	-0.5	55	55	0	80	1	R25	-65	

Os esforços indicados nesta tabela são os valores máximos obtidos pela envoltória de todas as combinações definidas para as fundações. Para análises complementares, deve-se consultar o relatório de esforços na fundação, que apresenta os valores calculados para cada combinação. Os esforços indicados são referentes ao centro da fundação.

Simbologia	Estacas		
	Nome	d (cm)	Quantidade
	R25	25.00	21



Locação no eixo X	
Coordenadas (cm)	Nome
20.00	B1
220.00	B2
420.00	B3
620.00	B4
820.00	B5
1020.00	B6
1220.00	B7
1420.00	B8
1620.00	B9
1780.00	B10
1980.00	B11
2180.00	B12
2380.00	B13
2580.00	B14
2780.00	B15
2980.00	B16
3180.00	B17
3380.00	B18
3580.00	B19
3780.00	B20
3980.00	B21

Locação no eixo Y	
Coordenadas (cm)	Nome
10.00	B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20, B21

LOCAÇÃO DAS ESTACAS											
Bloco	Nome	Tipo	Coordenada X (cm)	Coordenada Y (cm)	Carga máx. tf	Carga mín. tf	Momento máx. kgf.m	Momento mín. kgf.m	Força horiz. máx. tf	Força horiz. mín. tf	CA (cm)
B1	E1-1	R25	20.00	10.00	1.51	1.51	878.27	0.78	0.47	0.03	35
B2	E2-1	R25	220.00	10.00	1.92	1.92	879.24	6.27	0.47	0.00	35
B3	E3-1	R25	420.00	10.00	1.91	1.91	879.61	0.41	0.47	0.00	35
B4	E4-1	R25	620.00	10.00	1.91	1.91	879.61	0.62	0.47	0.00	35
B5	E5-1	R25	820.00	10.00	1.91	1.91	877.74	0.82	0.47	0.00	35
B6	E6-1	R25	1020.00	10.00	1.91	1.91	863.97	0.13	0.47	0.00	35
B7	E7-1	R25	1220.00	10.00	1.92	1.92	788.01	4.09	0.44	0.00	35
B8	E8-1	R25	1420.00	10.00	1.93	1.93	968.71	4.75	0.49	0.00	35
B9	E9-1	R25	1620.00	10.00	1.88	1.87	1680.66	16.75	0.85	0.01	35
B10	E10-1	R25	1780.00	10.00	1.99	1.99	510.58	29.36	0.19	0.02	-65
B11	E11-1	R25	1980.00	10.00	2.23	2.23	1075.42	1.89	0.46	0.00	-65
B12	E12-1	R25	2180.00	10.00	2.23	2.23	1217.24	2.56	0.49	0.00	-65
B13	E13-1	R25	2380.00	10.00	2.23	2.23	1263.35	3.18	0.50	0.00	-65
B14	E14-1	R25	2580.00	10.00	2.23	2.23	1277.61	3.45	0.50	0.00	-65
B15	E15-1	R25	2780.00	10.00	2.23	2.23	1281.78	3.63	0.50	0.00	-65
B16	E16-1	R25	2980.00	10.00	2.23	2.23	1282.92	3.92	0.50	0.00	-65
B17	E17-1	R25	3180.00	10.00	2.23	2.23	1283.19	4.53	0.50	0.00	-65
B18	E18-1	R25	3380.00	10.00	2.23	2.23	1283.18	5.66	0.50	0.00	-65
B19	E19-1	R25	3580.00	10.00	2.23	2.23	1282.96	3.96	0.50	0.00	-65
B20	E20-1	R25	3780.00	10.00	2.23	2.23	1282.32	1.72	0.50	0.00	-65
B21	E21-1	R25	3980.00	10.00	1.70	1.70	1281.22	1.64	0.50	0.04	-65



PREFEITURA MUNICIPAL DE BITURUNA - PR
MURO LOTEAMENTO SONHO MEU

Projeto:
ESTRUTURAL

Cidade:
Bituruna

Estado:
Paraná

Desenho:
Eng Civil-Franciele Gonçalves

Escala:
INDICADA

Data:
Novembro/2024

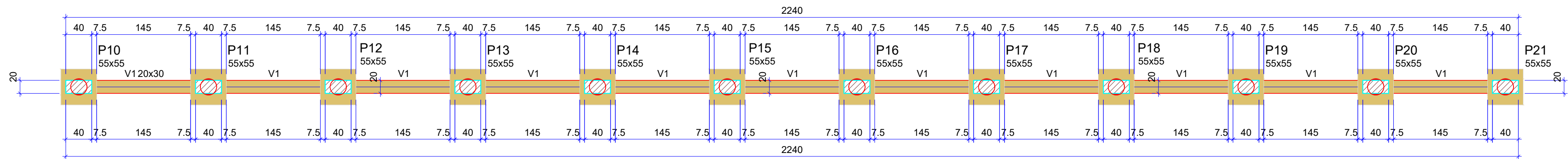
Referencia:
PLANTA DE LOCAÇÃO

Folha:
01
06

Responsável Técnico:

LUIZ RENATO FRIEDRICH
Engº Civil CREA 168233/D - PR

Assinado eletronicamente por LUÍZ RENATO FRIEDRICH em 11/11/2024 às 10:00:00



FORMA DO PAVIMENTO FUNDAÇÃO 01 (NÍVEL 0)

Escala 1:50

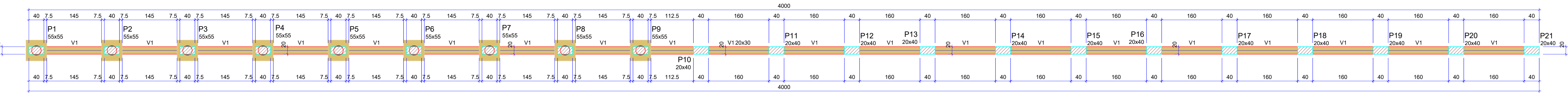
Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x30	0	0

Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm²)
Vigas	300	268384
Pilares	300	268384
Blocos	250	241500

Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
	Fundação

Legenda das vigas e paredes	
	Viga



FORMA DO PAVIMENTO FUNDAÇÃO 02 (NÍVEL 100)

Escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x30	0	100

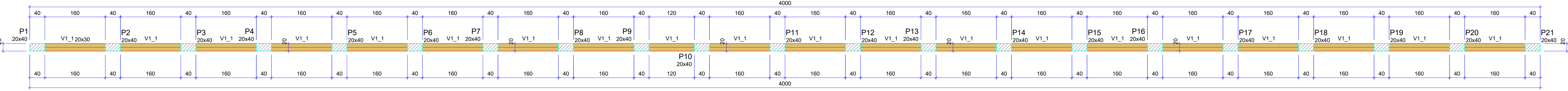
Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm²)
Vigas	300	268384
Pilares	300	268384
Blocos	250	241500

Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
	Pilar que passa
	Fundação

Legenda das vigas e paredes	
	Viga

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P10	20x40	0	100
P11	20x40	0	100
P12	20x40	0	100
P13	20x40	0	100
P14	20x40	0	100
P15	20x40	0	100
P16	20x40	0	100
P17	20x40	0	100
P18	20x40	0	100
P19	20x40	0	100
P20	20x40	0	100
P21	20x40	0	100



FORMA DO PAVIMENTO VIGA INTER (NÍVEL 200)

Escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1_1	20x30	0	200

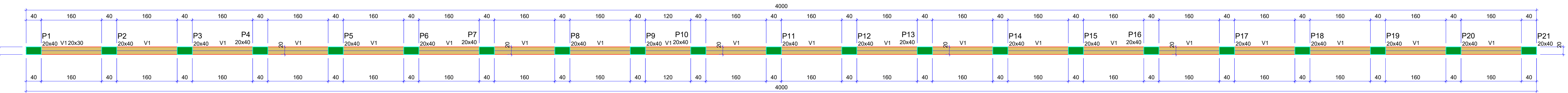
Características dos materiais		
fck (kgf/cm²)	Ecs (kgf/cm²)	
300	268384	

Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
	Pilar que passa

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x40	0	200
P2	20x40	0	200
P3	20x40	0	200
P4	20x40	0	200
P5	20x40	0	200
P6	20x40	0	200
P7	20x40	0	200
P8	20x40	0	200
P9	20x40	0	200
P10	20x40	0	200
P11	20x40	0	200
P12	20x40	0	200
P13	20x40	0	200
P14	20x40	0	200
P15	20x40	0	200
P16	20x40	0	200
P17	20x40	0	200
P18	20x40	0	200
P19	20x40	0	200
P20	20x40	0	200
P21	20x40	0	200

Legenda das vigas e paredes	
	Viga



FORMA DO PAVIMENTO CINTA (NÍVEL 300)

Escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x30	0	300

Características dos materiais		
fck (kgf/cm²)	Ecs (kgf/cm²)	
300	268384	

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x40	0	300
P2	20x40	0	300
P3	20x40	0	300
P4	20x40	0	300
P5	20x40	0	300
P6	20x40	0	300
P7	20x40	0	300
P8	20x40	0	300
P9	20x40	0	300
P10	20x40	0	300
P11	20x40	0	300
P12	20x40	0	300
P13	20x40	0	300
P14	20x40	0	300
P15	20x40	0	300
P16	20x40	0	300
P17	20x40	0	300
P18	20x40	0	300
P19	20x40	0	300
P20	20x40	0	300
P21	20x40	0	300

Legenda dos pilares	
	Pilar que morre

Legenda das vigas e paredes	
	Viga



PREFEITURA MUNICIPAL DE BITURUNA - PR
MURO LOTEAMENTO SONHO MEU

Projeto:
ESTRUTURAL

Cidade:
Bituruna

Estado:
Paraná

Desenho:
Eng Civil-Franciele Gonçalves

Escala:
INDICADA

Data:
Novembro/2024

Referência:
PLANTA DE FORMAS

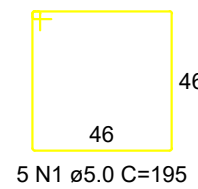
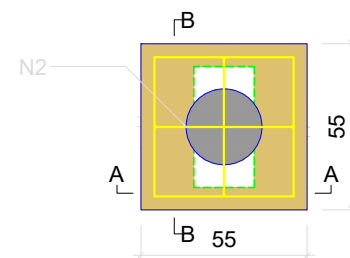
Folha:
02

06

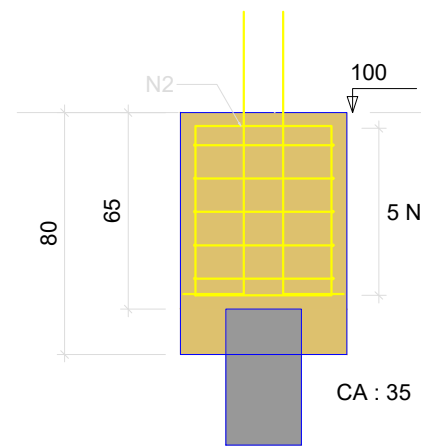
Responsável Técnico:

LUIZ RENATO FRIEDRICH
DE RAMOS/5943983/9902
LUIZ RENATO FRIEDRICH RAMOS
Engº Civil CREA 168233/D - PR

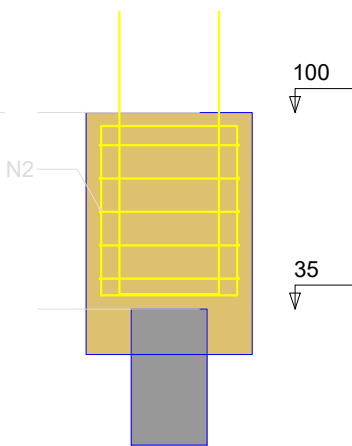
B1
1xR25
PLANTA
ESC 1:25



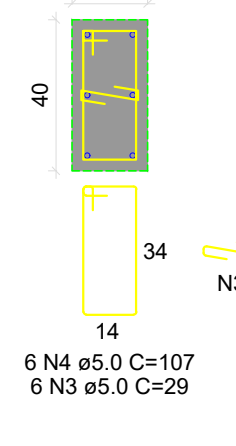
CORTE A-A
ESC 1:25



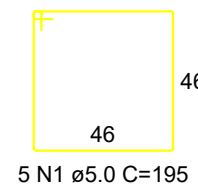
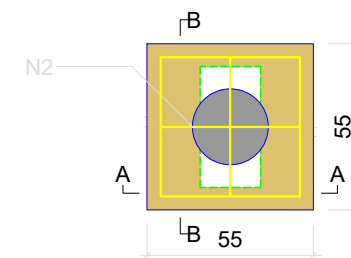
CORTE B-B
ESC 1:25



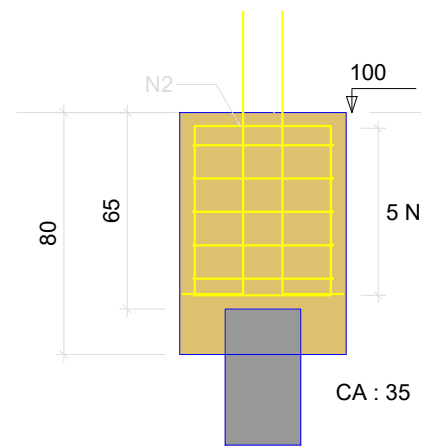
DETALHE DO PILAR
ESC 1:20



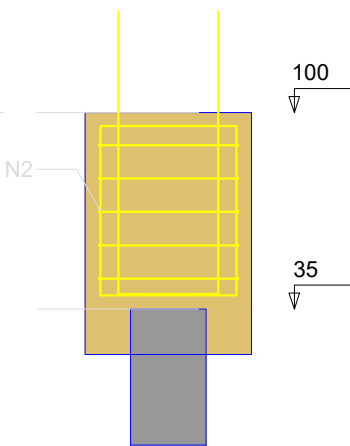
B2
1xR25
PLANTA
ESC 1:25



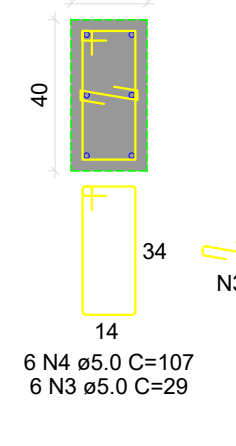
CORTE A-A
ESC 1:25



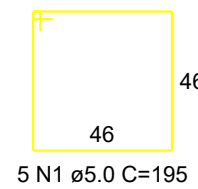
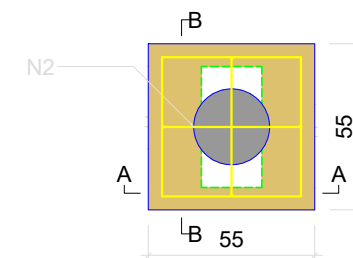
CORTE B-B
ESC 1:25



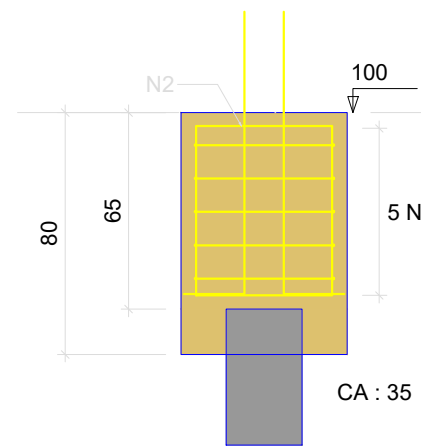
DETALHE DO PILAR
ESC 1:20



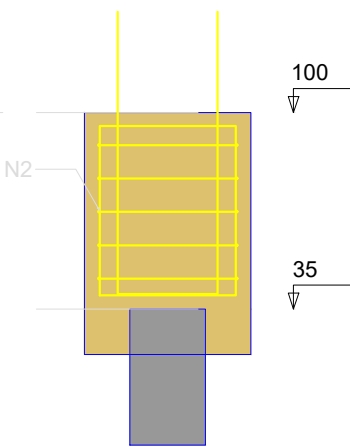
B3
1xR25
PLANTA
ESC 1:25



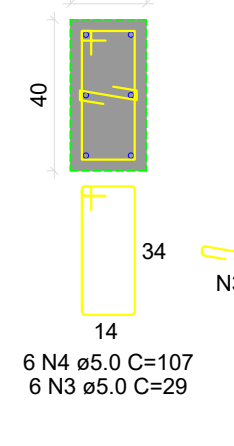
CORTE A-A
ESC 1:25



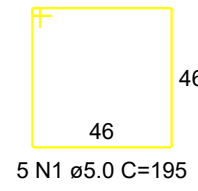
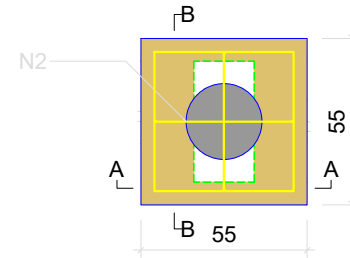
CORTE B-B
ESC 1:25



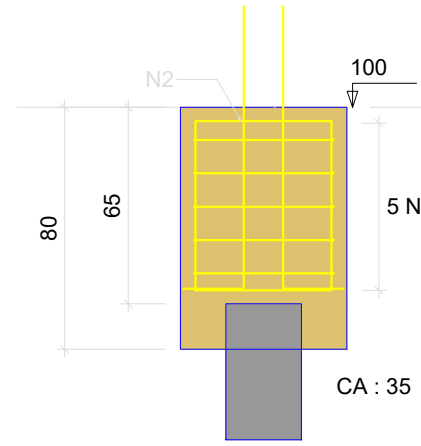
DETALHE DO PILAR
ESC 1:20



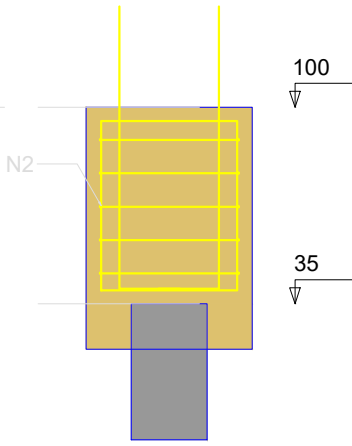
B4
1xR25
PLANTA
ESC 1:25



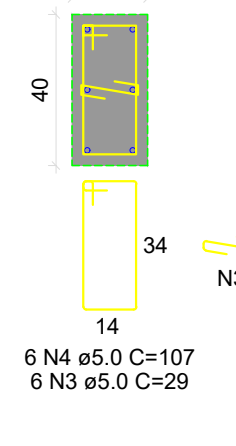
CORTE A-A
ESC 1:25



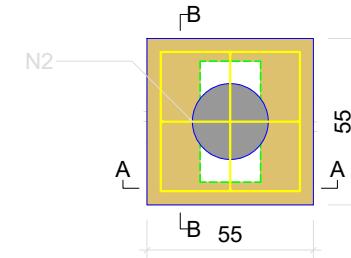
CORTE B-B
ESC 1:25



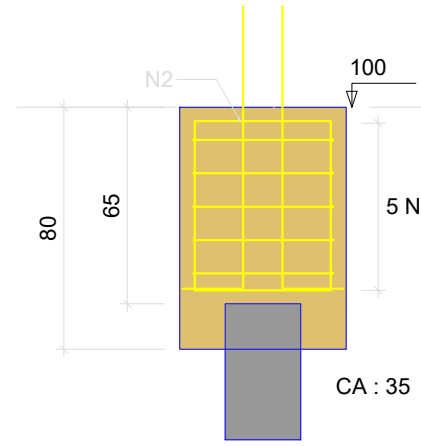
DETALHE DO PILAR
ESC 1:20



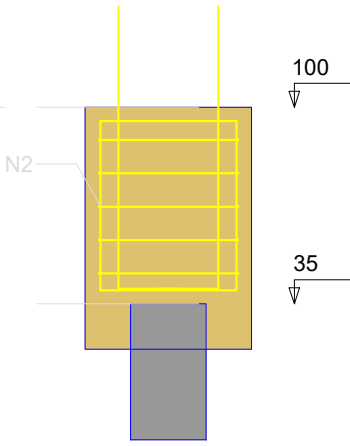
B5
1xR25
PLANTA
ESC 1:25



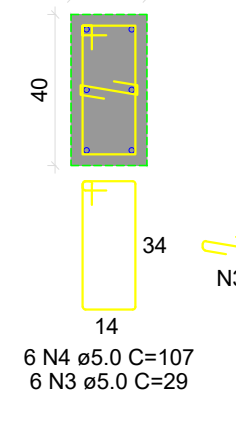
CORTE A-A
ESC 1:25



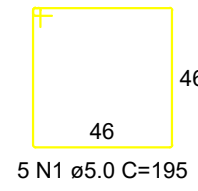
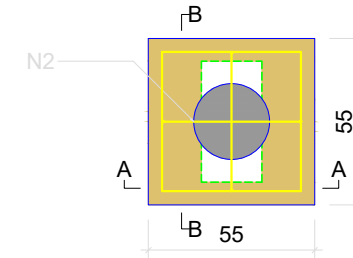
CORTE B-B
ESC 1:25



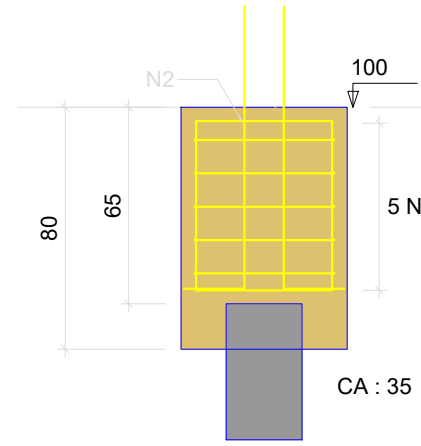
DETALHE DO PILAR
ESC 1:20



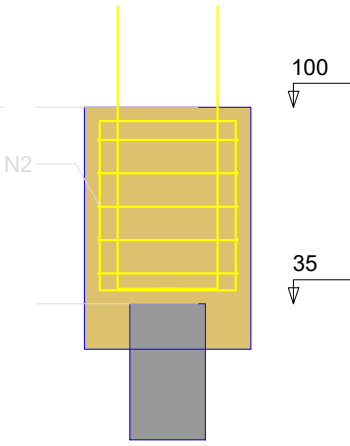
B6
1xR25
PLANTA
ESC 1:25



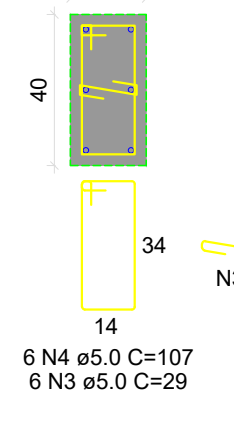
CORTE A-A
ESC 1:25



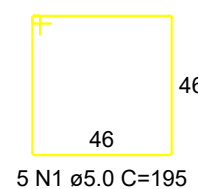
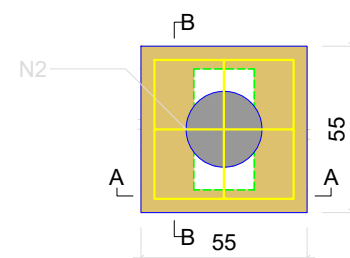
CORTE B-B
ESC 1:25



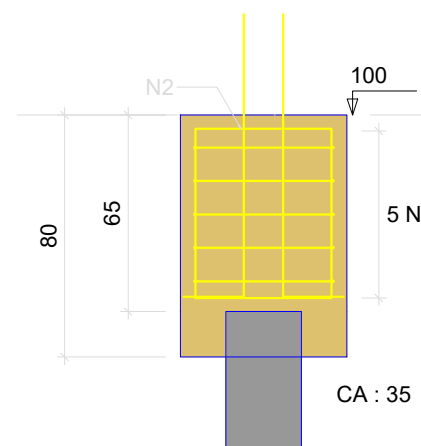
DETALHE DO PILAR
ESC 1:20



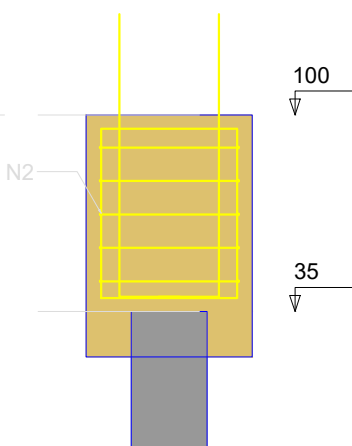
B7
1xR25
PLANTA
ESC 1:25



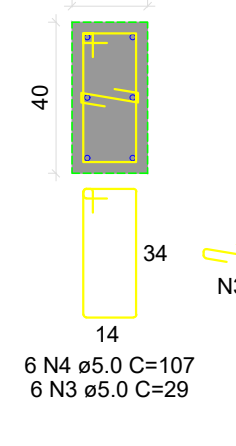
CORTE A-A
ESC 1:25



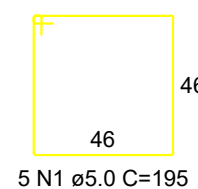
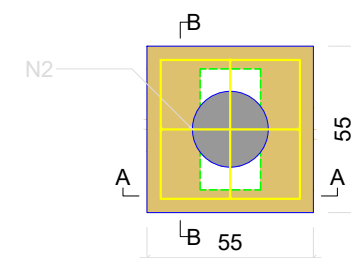
CORTE B-B
ESC 1:25



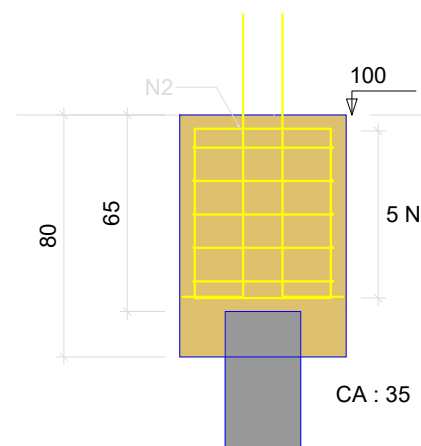
DETALHE DO PILAR
ESC 1:20



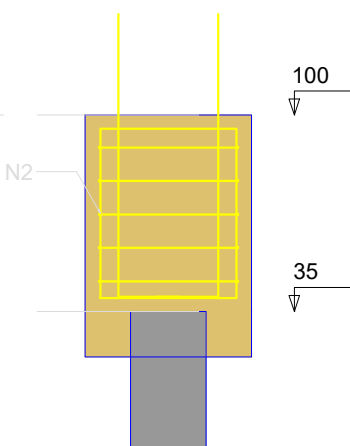
B8
1xR25
PLANTA
ESC 1:25



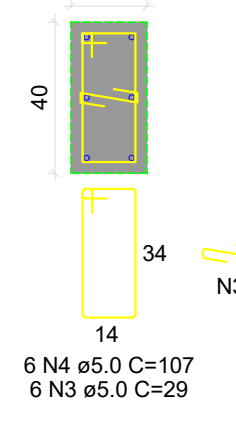
CORTE A-A
ESC 1:25



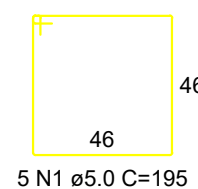
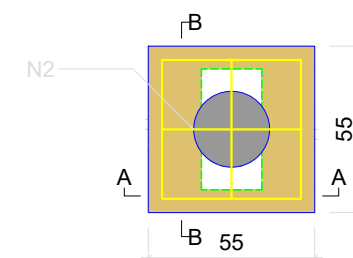
CORTE B-B
ESC 1:25



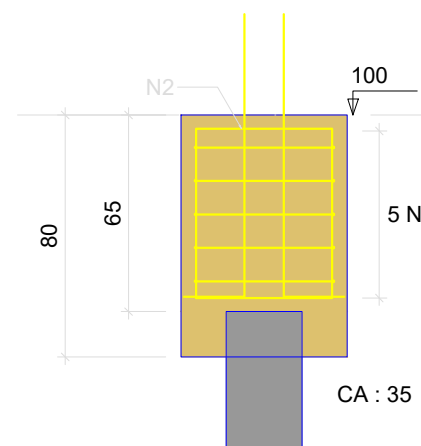
DETALHE DO PILAR
ESC 1:20



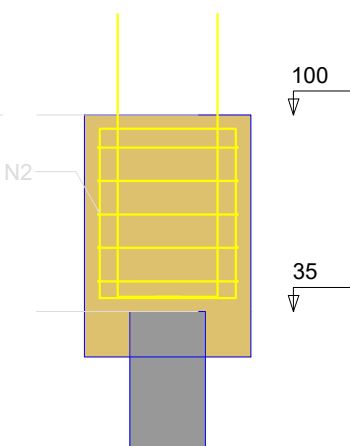
B9
1xR25
PLANTA
ESC 1:25



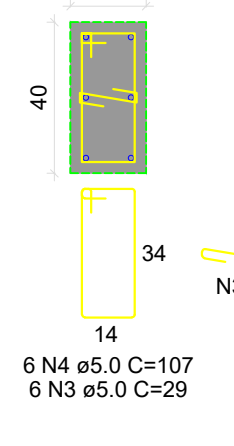
CORTE A-A
ESC 1:25



CORTE B-B
ESC 1:25



DETALHE DO PILAR
ESC 1:20



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	45	195	8775
CA60	2	5.0	18	213	3834
CA60	3	5.0	54	29	1566
CA60	4	5.0	54	107	5778
CA50	5	10.0	54	111	5994

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	59.9	40.7
CA60	5.0	199.5	33.8
PESO TOTAL (kg)			
CA50	40.7		
CA60	33.8		

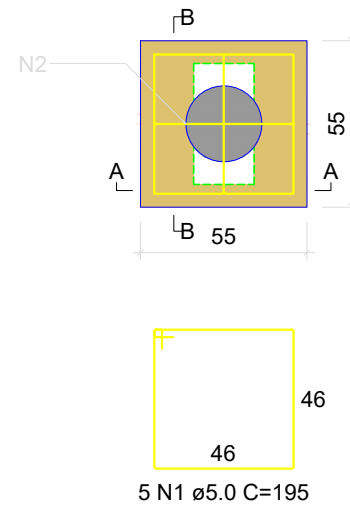
Volume de concreto (C-25) = 2.11 m³
Área de forma = 15.84 m²

PREFEITURA MUNICIPAL DE BITURUNA - PR
MURO LOTEAMENTO SONHO MEU

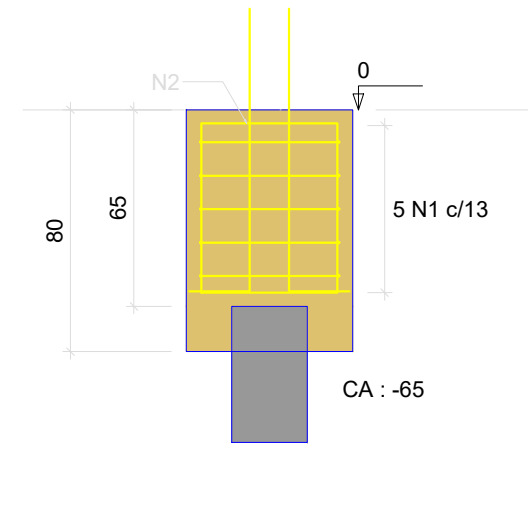
Cidade: **Bituruna**
Estado: **Paraná**
Desenho: **Eng Civil- Franciele Gonçalves**
Escala: **INDICADA**
Data: **Novembro/2024**

Referencia: **PLANTA DE BLOCOS DE COROAMENTO**
Folha: **03**
Responsável Técnico: **LUIZ RENATO FRIEDRICH DE RAMOS.06439830902**
Assinado de forma digital por LUIZ RENATO FRIEDRICH DE RAMOS.06439830902
Data: 2025.01.28 11:38:48 -03'00'
LUIZ RENATO FRIEDRICH RAMOS
Engº Civil CREA 168233/D - PR

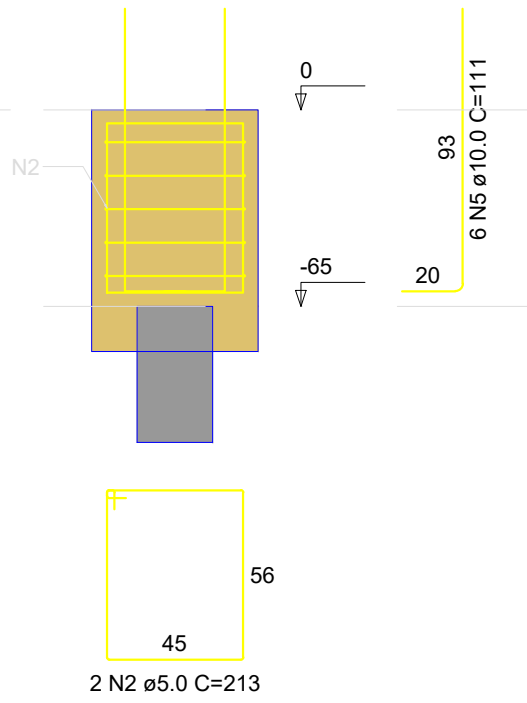
B10
1xR25
PLANTA
ESC 1:25



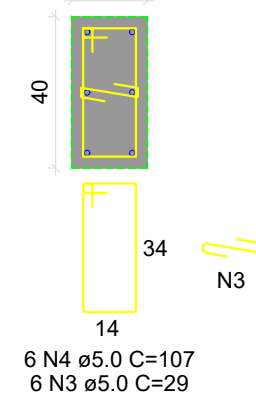
CORTE A-A
ESC 1:25



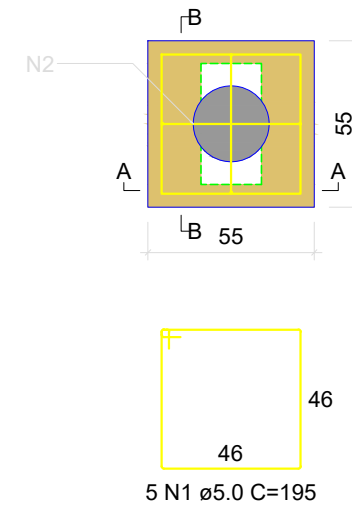
CORTE B-B
ESC 1:25



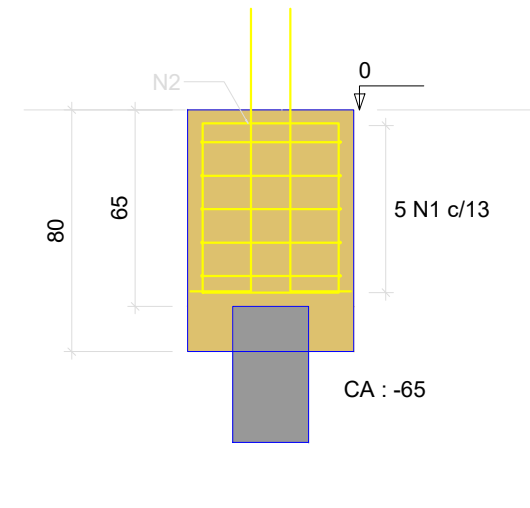
DETALHE DO PILAR
ESC 1:20



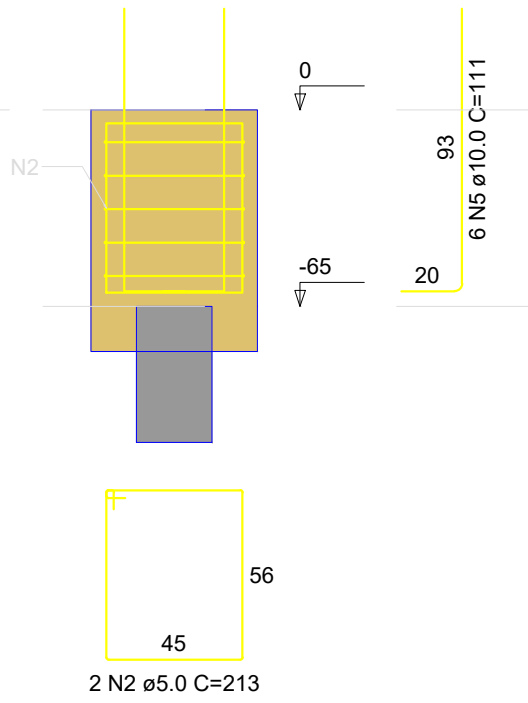
B11
1xR25
PLANTA
ESC 1:25



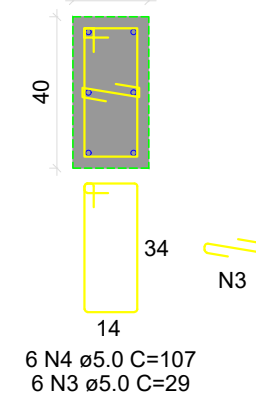
CORTE A-A
ESC 1:25



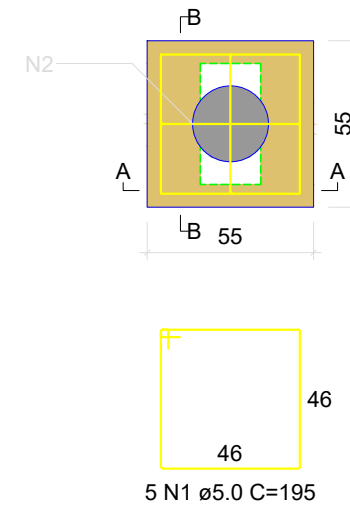
CORTE B-B
ESC 1:25



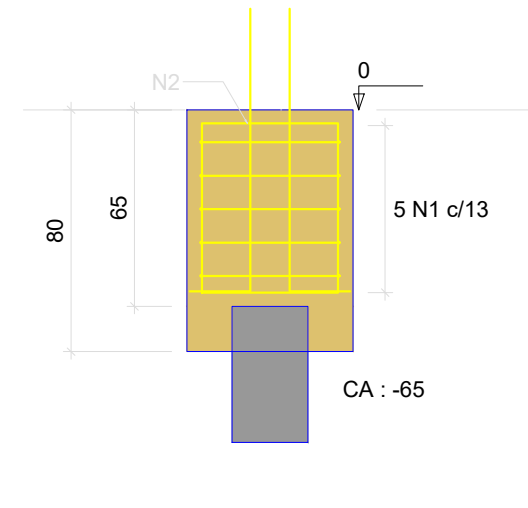
DETALHE DO PILAR
ESC 1:20



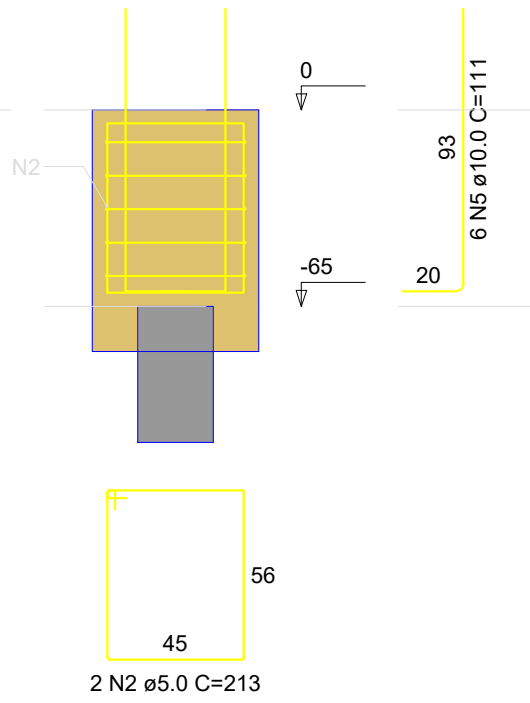
B12
1xR25
PLANTA
ESC 1:25



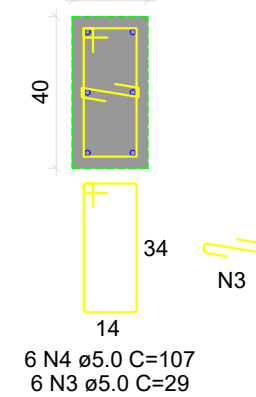
CORTE A-A
ESC 1:25



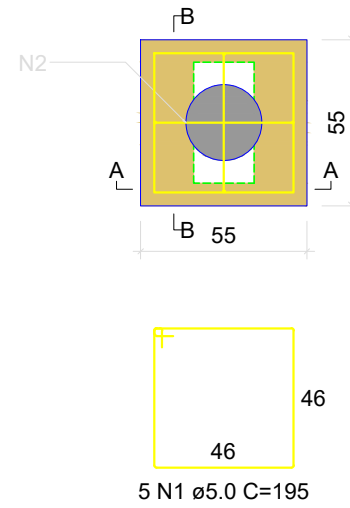
CORTE B-B
ESC 1:25



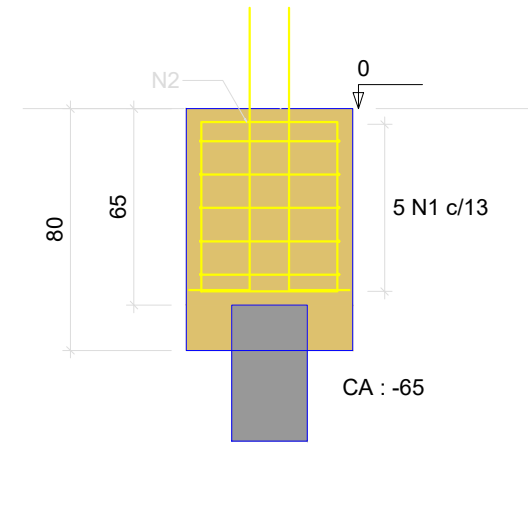
DETALHE DO PILAR
ESC 1:20



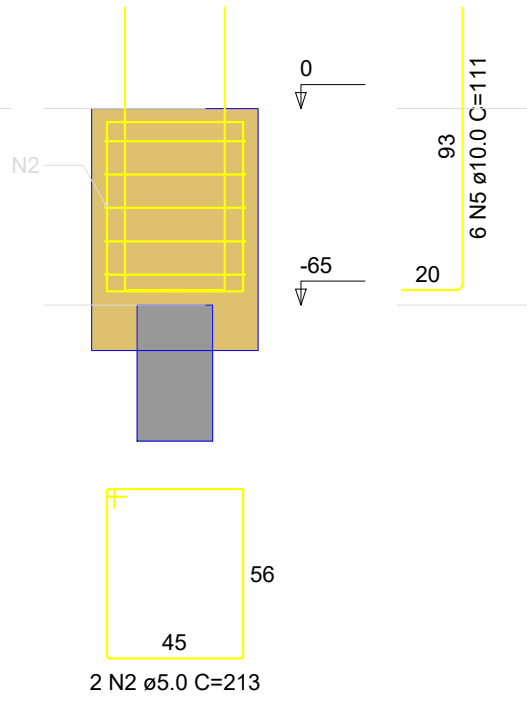
B13
1xR25
PLANTA
ESC 1:25



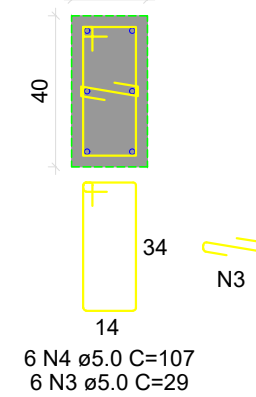
CORTE A-A
ESC 1:25



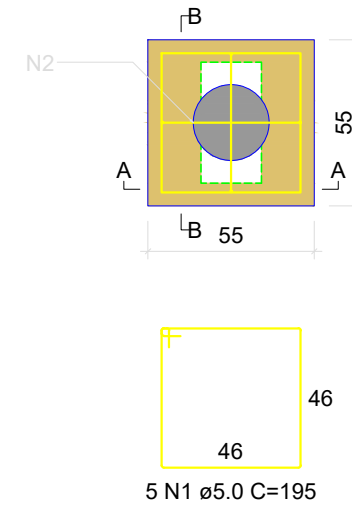
CORTE B-B
ESC 1:25



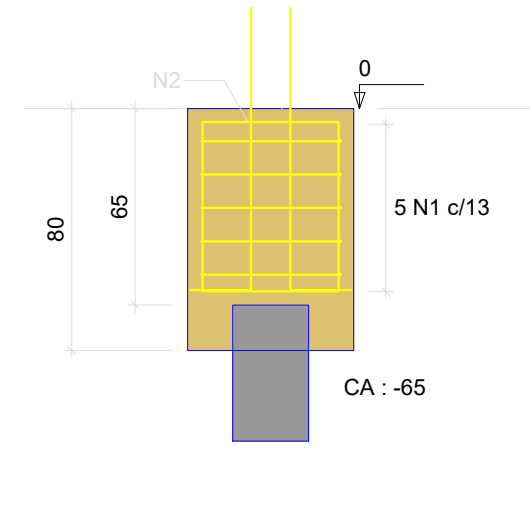
DETALHE DO PILAR
ESC 1:20



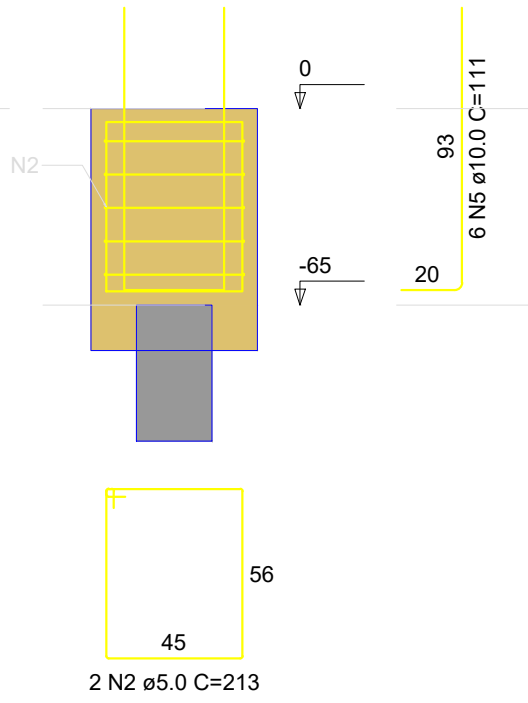
B14
1xR25
PLANTA
ESC 1:25



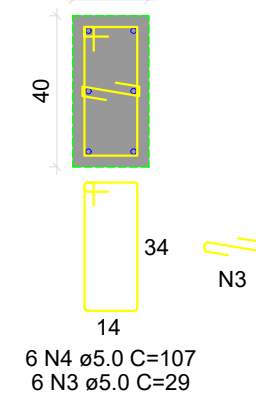
CORTE A-A
ESC 1:25



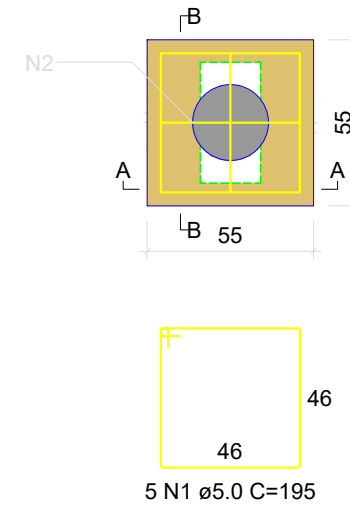
CORTE B-B
ESC 1:25



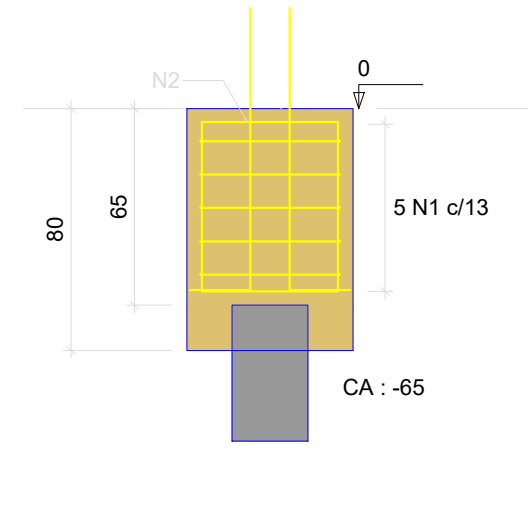
DETALHE DO PILAR
ESC 1:20



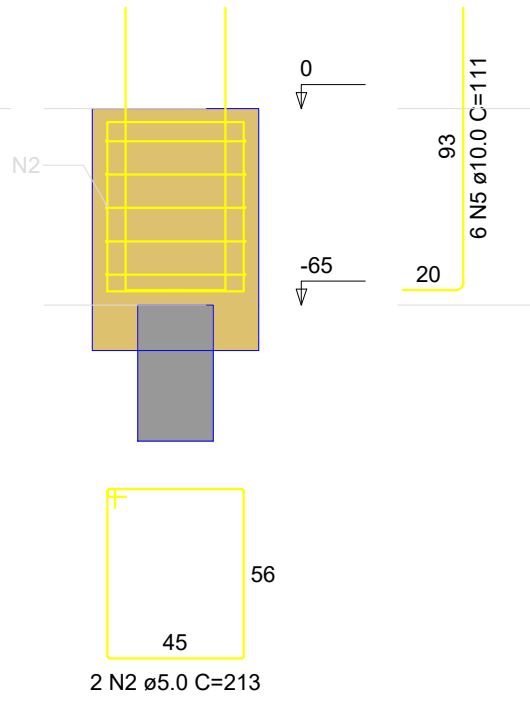
B15
1xR25
PLANTA
ESC 1:25



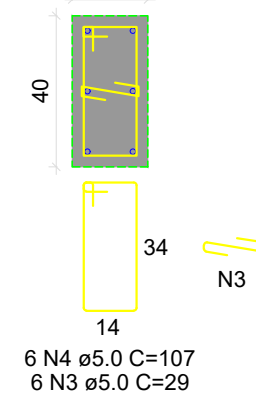
CORTE A-A
ESC 1:25



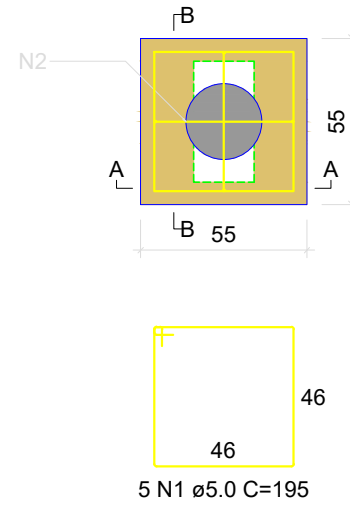
CORTE B-B
ESC 1:25



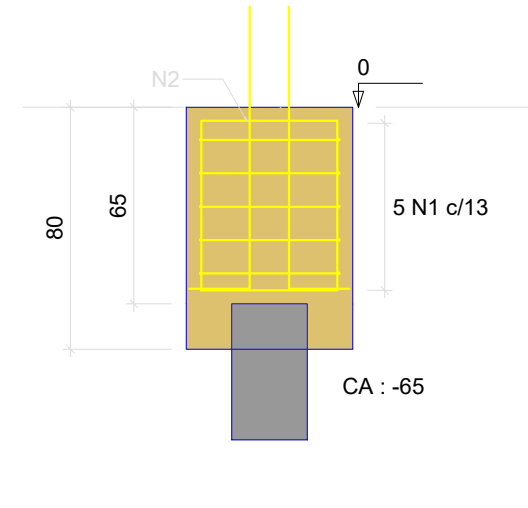
DETALHE DO PILAR
ESC 1:20



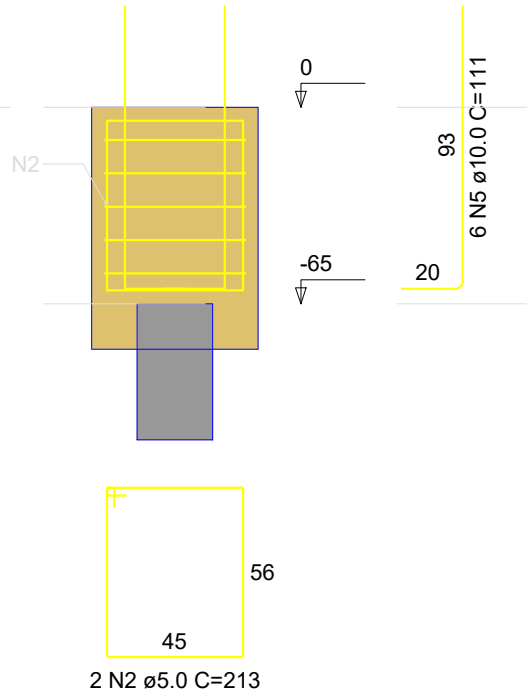
B16
1xR25
PLANTA
ESC 1:25



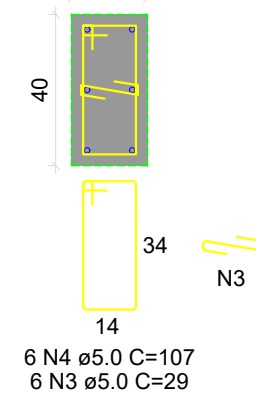
CORTE A-A
ESC 1:25



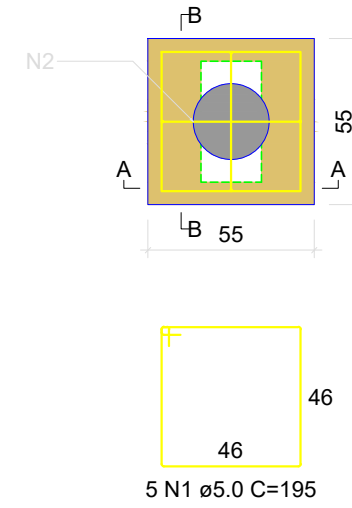
CORTE B-B
ESC 1:25



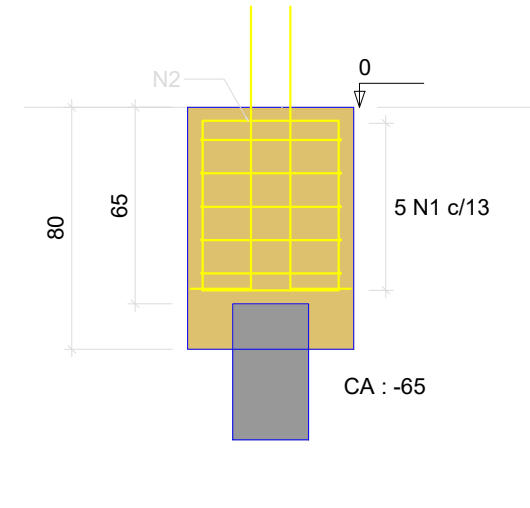
DETALHE DO PILAR
ESC 1:20



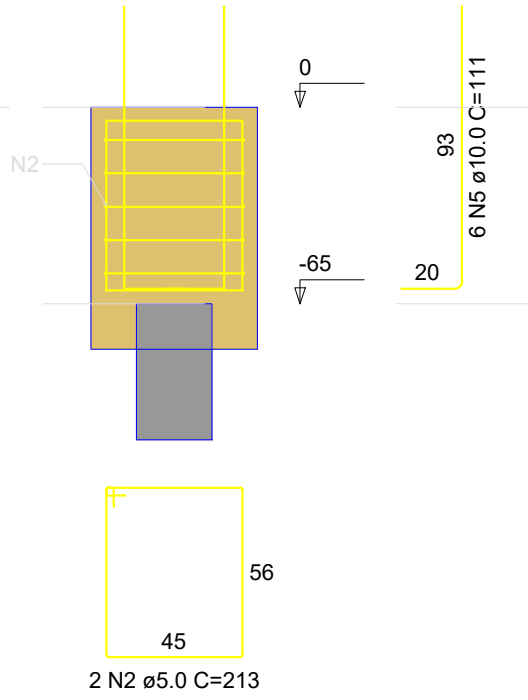
B17
1xR25
PLANTA
ESC 1:25



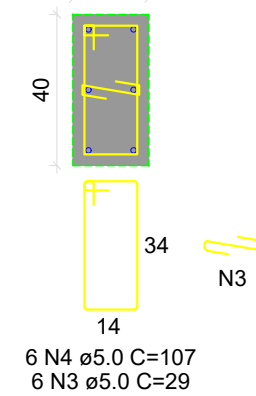
CORTE A-A
ESC 1:25



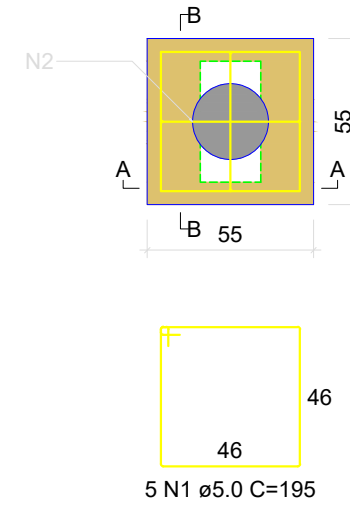
CORTE B-B
ESC 1:25



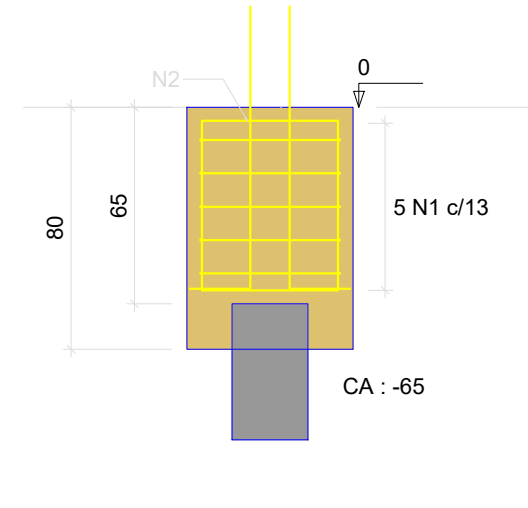
DETALHE DO PILAR
ESC 1:20



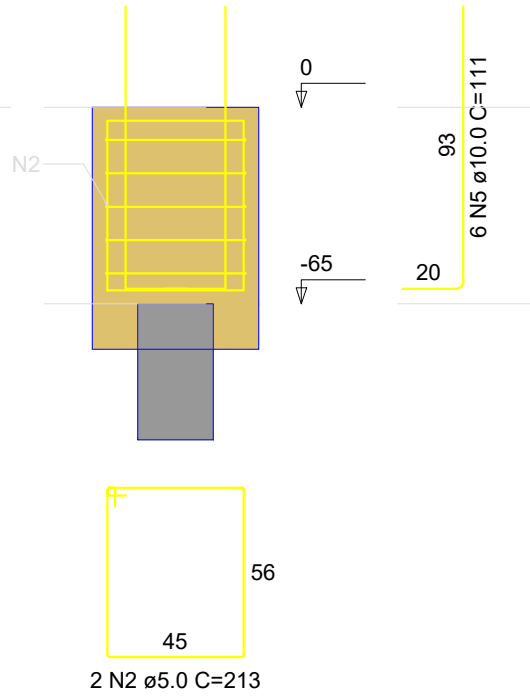
B18
1xR25
PLANTA
ESC 1:25



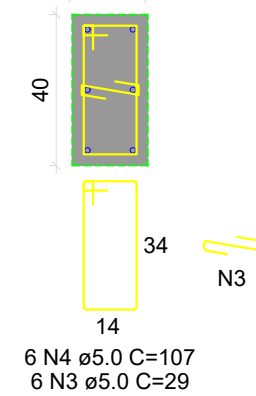
CORTE A-A
ESC 1:25



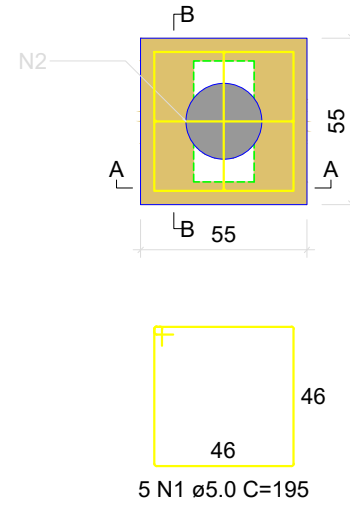
CORTE B-B
ESC 1:25



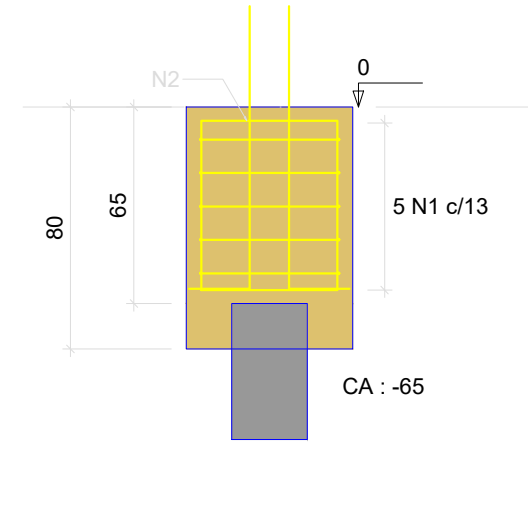
DETALHE DO PILAR
ESC 1:20



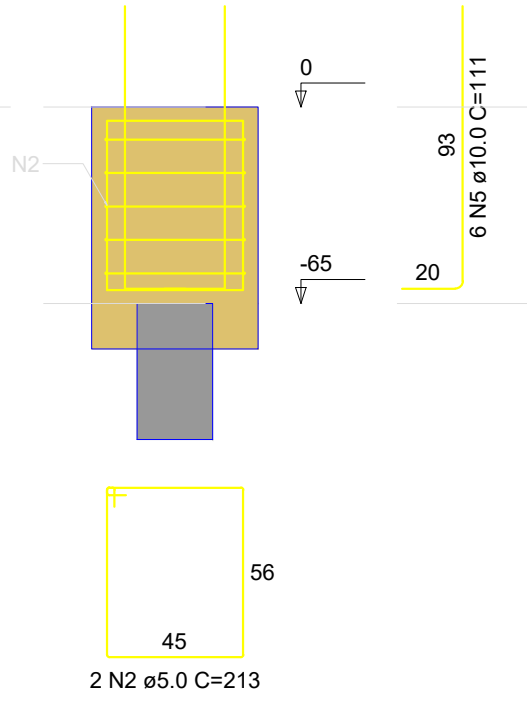
B19
1xR25
PLANTA
ESC 1:25



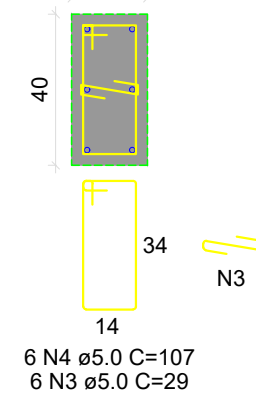
CORTE A-A
ESC 1:25



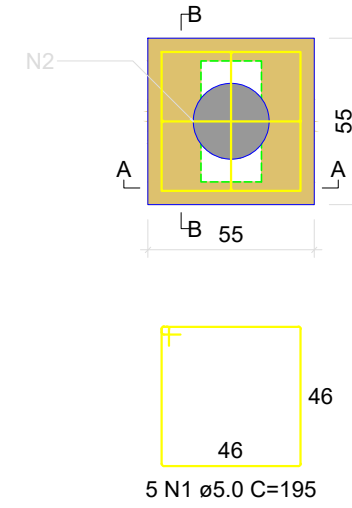
CORTE B-B
ESC 1:25



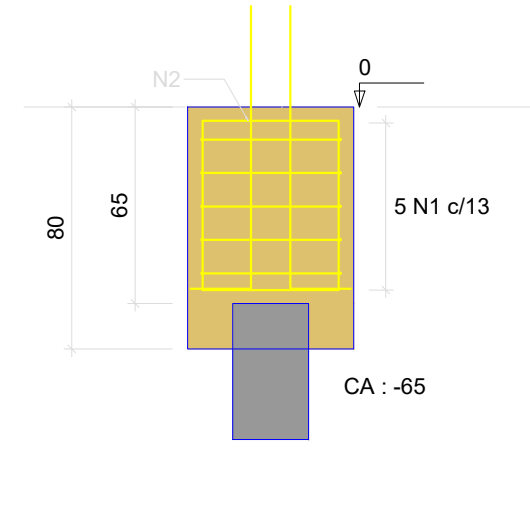
DETALHE DO PILAR
ESC 1:20



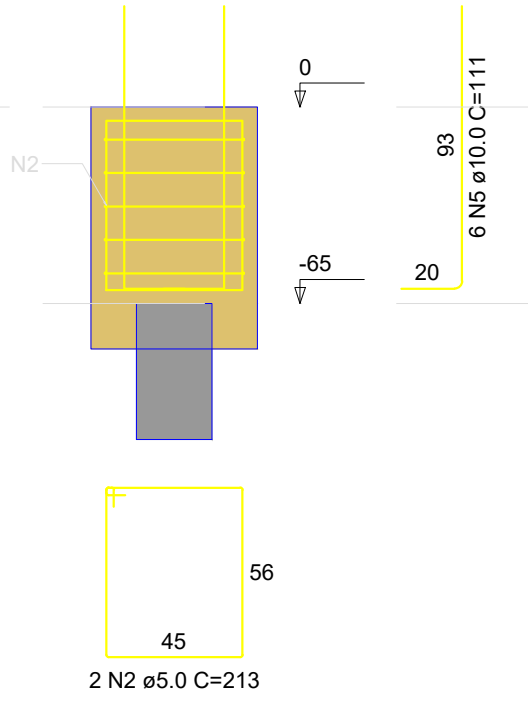
B20
1xR25
PLANTA
ESC 1:25



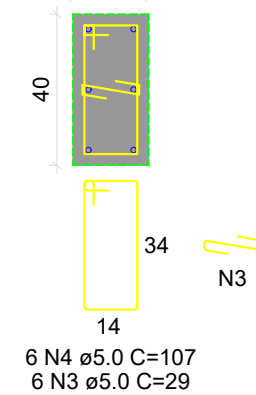
CORTE A-A
ESC 1:25



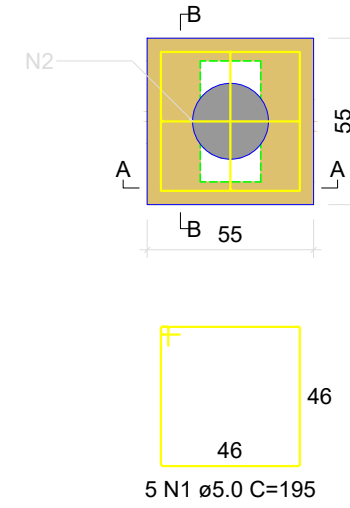
CORTE B-B
ESC 1:25



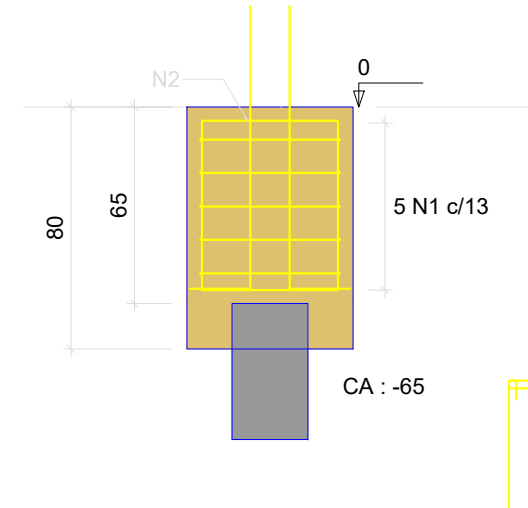
DETALHE DO PILAR
ESC 1:20



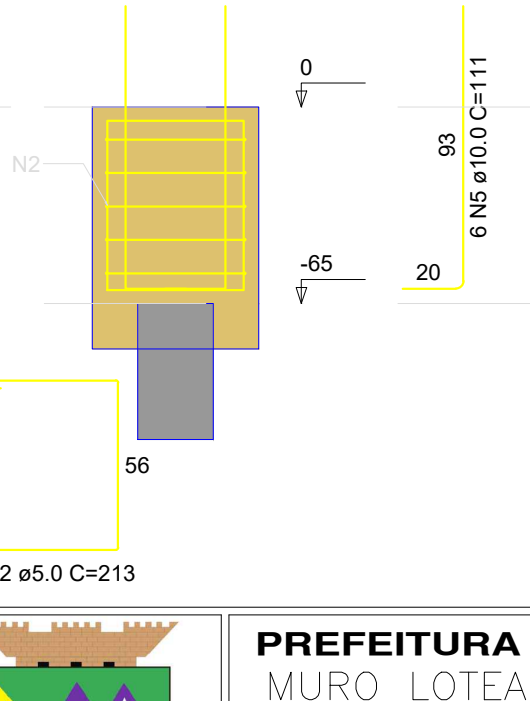
B21
1xR25
PLANTA
ESC 1:25



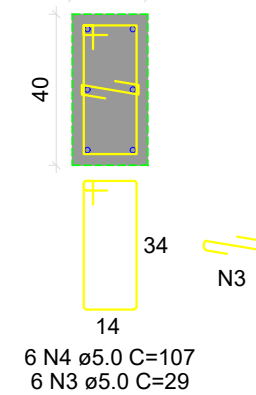
CORTE A-A
ESC 1:25



CORTE B-B
ESC 1:25



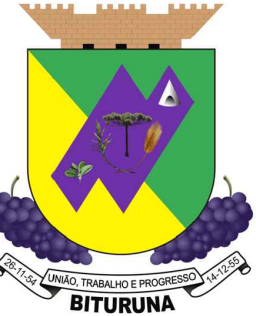
DETALHE DO PILAR
ESC 1:20



RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	60	195	11700
	2	5.0	24	213	5112
	3	5.0	72	29	2088
	4	5.0	72	107	7704
CA50	5	10.0	72	111	7992

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO ± 10% (kg)
CA50	10.0	79.9	54.2
CA60	5.0	266	45.1
PESO TOTAL (kg)			
CA50			54.2
CA60			45.1

Volume de concreto (C-25) = 2.82 m³
Área de forma = 21.12 m²



PREFEITURA MUNICIPAL DE BITURUNA - PR
MURO LOTEAMENTO SONHO MEU

Projeto:
ESTRUTURAL

Cidade:
Bituruna

Estado:
Paraná

Desenho:
Eng Civil- Franciele Gonçalves

Escala:
INDICADA

Data:
Novembro/2024

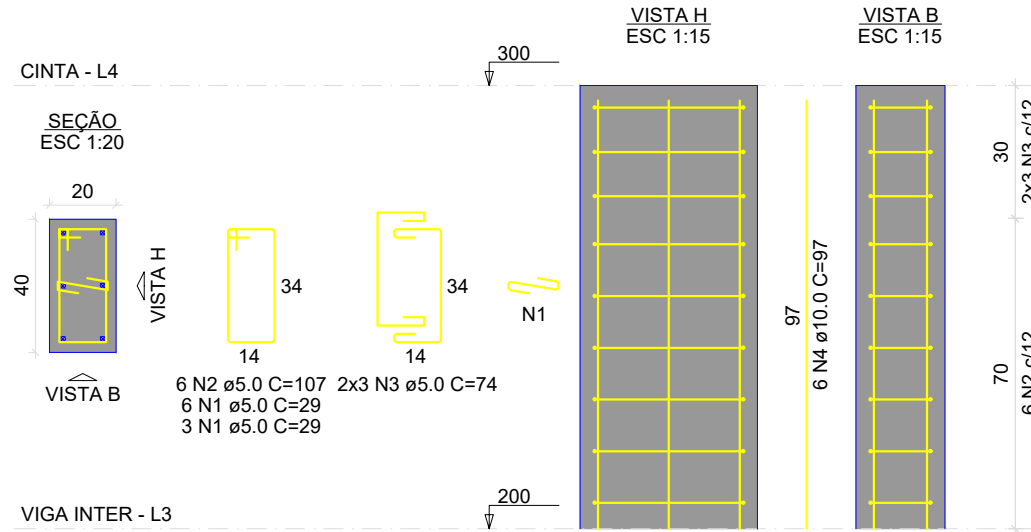
Referencia:
PLANTA DE BLOCOS DE COROAMENTO

Folha:
04
06

Responsável Técnico:
LUIZ RENATO FRIEDRICH DE RAMOS
Engº Civil CREA 168233/D - PR

Assinado de forma digital por LUIZ RENATO FRIEDRICH DE RAMOS:06439830902
Data: 2025.01.28 11:39:20 -03'00'

P1=P2=P3=P4=P5=P6=P7=P8=P9=P10=P11=P12=
=P13=P14=P15=P16=P17=P18=P19=P20=P21

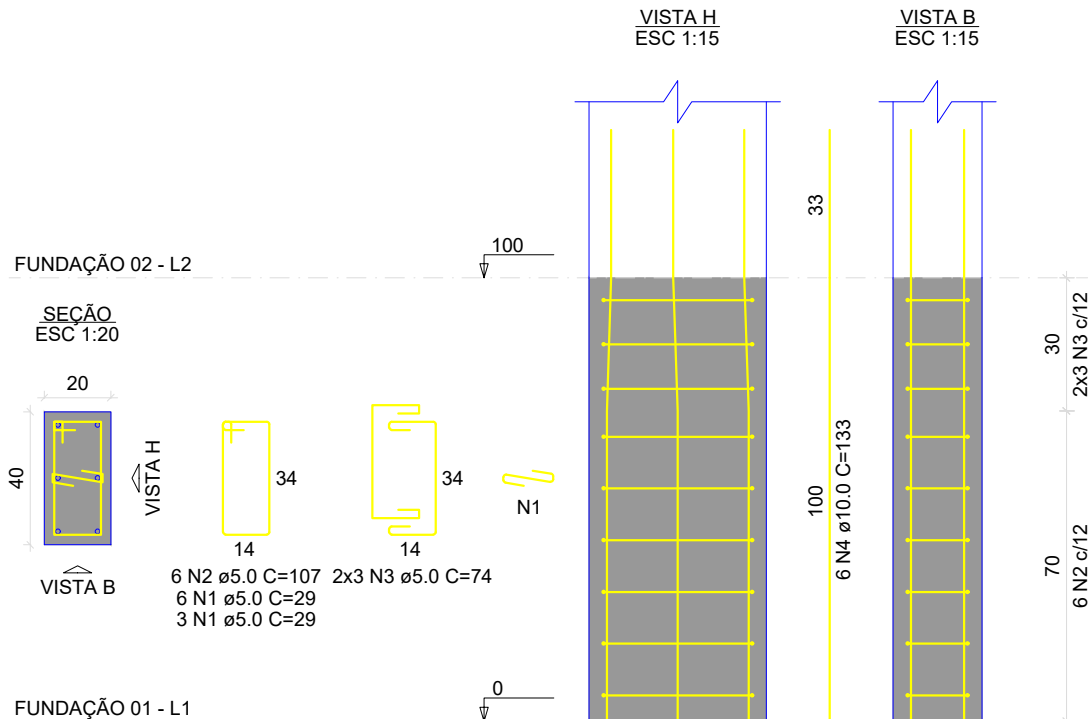


RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	189	29	5481
CA50	2	5.0	126	107	13482
CA50	3	5.0	126	74	9324
CA50	4	10.0	126	97	12222

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	122.2	82.9
CA60	5.0	282.9	48
PESO TOTAL (kg)			
CA50	82.9		
CA60	48		

Volume de concreto (C-30) = 1.68 m³
Área de forma = 25.20 m²

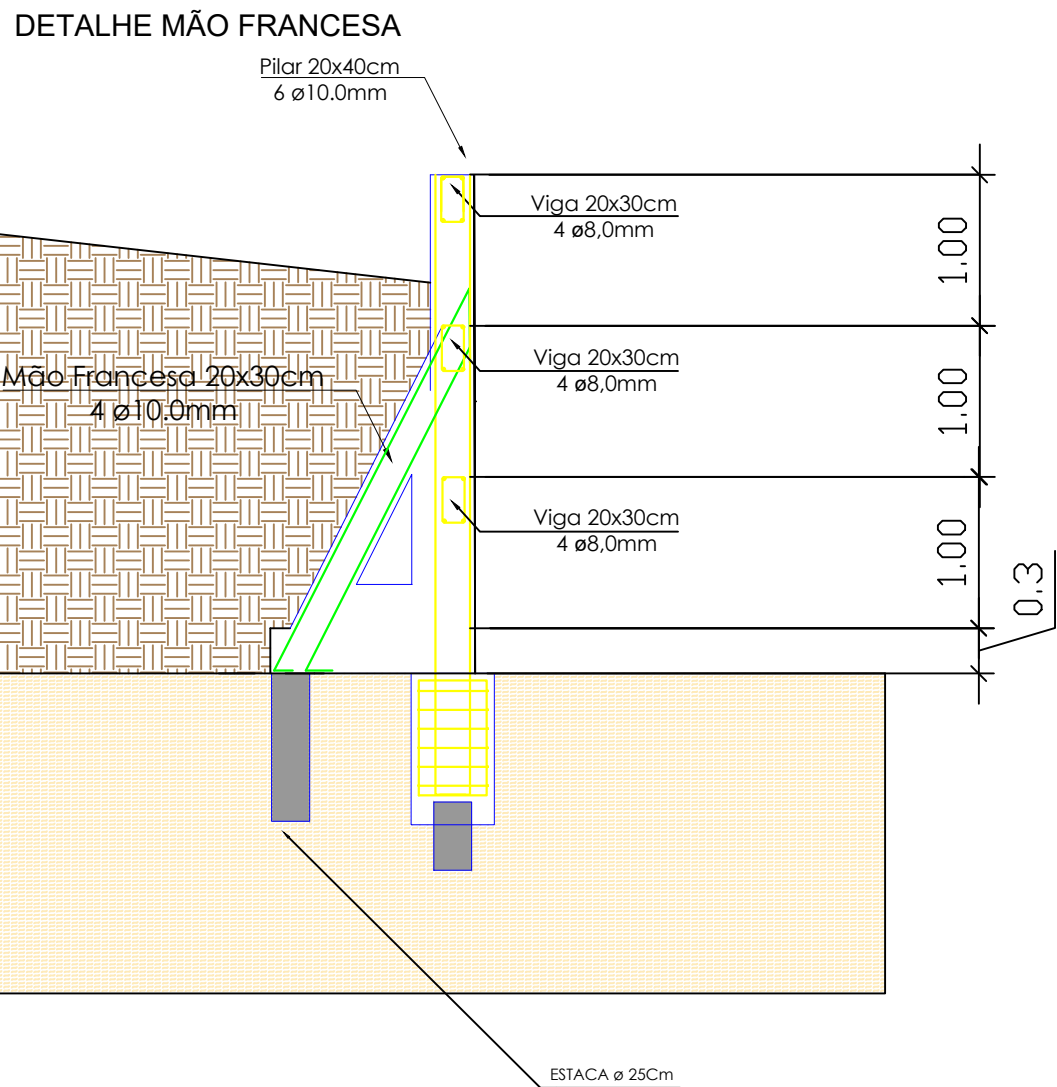
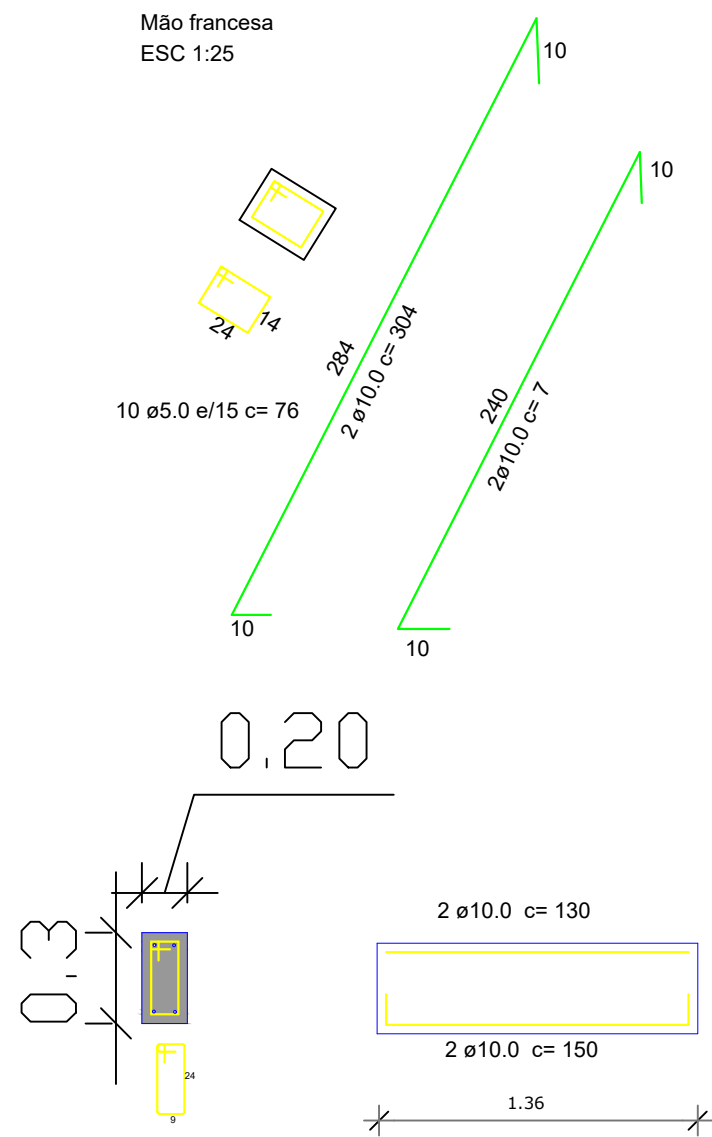
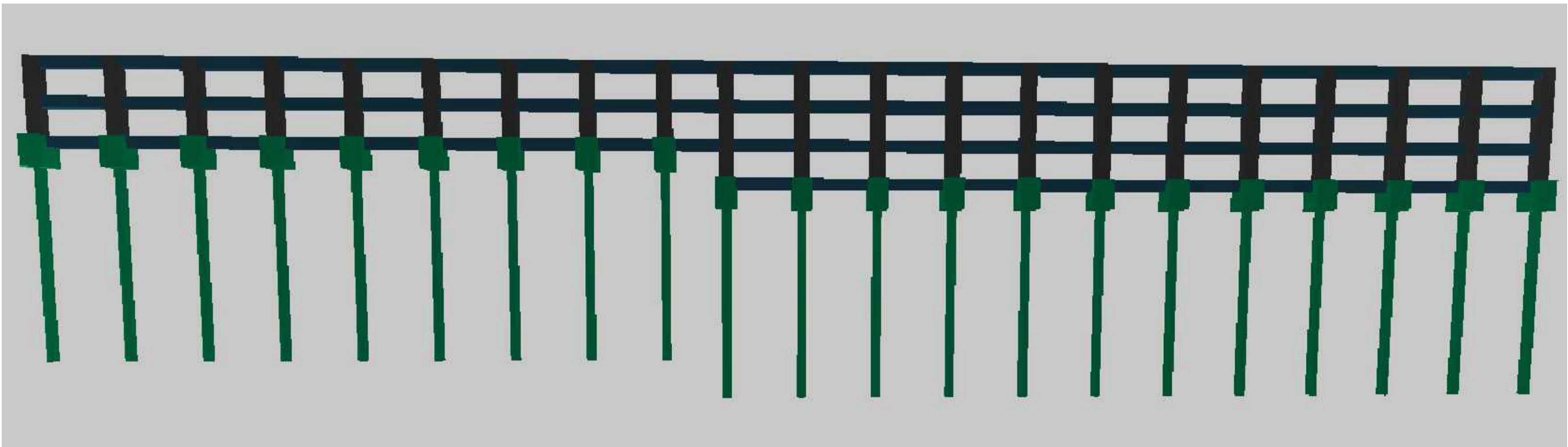
P10=P11=P12=P13=P14=P15=P16=P17=P18=P19=
=P20=P21



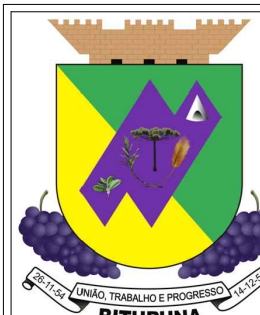
RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	108	29	3132
CA60	2	5.0	72	107	7704
CA50	3	5.0	72	74	5328
CA50	4	10.0	72	133	9576

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	95.8	64.9
CA60	5.0	161.6	27.4
PESO TOTAL (kg)			
CA50	64.9		
CA60	27.4		

Volume de concreto (C-30) = 0.96 m³
Área de forma = 14.40 m²



NOTA:
EXECUTAR TRAVAMENTO COM MÃO FRANCESA
A CADA 2 PILARES, (EX P1 e P3, P5 e P7.....)



PREFEITURA MUNICIPAL DE BITURUNA - PR
MURO LOTEAMENTO SONHO MEU

Projeto:
ESTRUTURAL

Cidade: **Bituruna**
Estado: **Paraná**
Desenho: **Eng Civil Franciele Gonçalves**
Escala: **INDICADA**
Data: **Novembro/2024**

Referencia:
PLANTA DE PILARES E DETALHAMENTO

Folha: **06**
06

Responsável Técnico:
LUIZ RENATO FRIEDRICH DE RAMOS
Engº Civil CREA 168233/D - PR