

FUNDAÇÃO 2			
Borícentros de pilares			
Pilar	X (cm)	Pilar	Y (cm)
P58	-409.8	P42	23.7
P59	-409.8	P53	37.5
PF-12	-409.8	P49	37.5
P56	-409.8	P48	37.5
P57	-409.8	P47	37.5
PF-1	-62.5	P46	37.5
P1	-62.5	P45	37.5
P5	-62.5	P44	37.5
P12	-62.5	P43	37.5
P42	23.8	P36	382.5
P27	207.3	P37	387.5
P13	207.3	P41	387.5
P35	207.3	P39	387.5
P2	282.5	P40	387.5
PF-2	282.5	P38	387.5
P6	282.5	P33	470.0
P14	465.0	P52	470.0
P7	467.5	P34	470.0
P3	467.5	P30	552.5
PF-3	467.5	P28	552.5
P36	507.5	P31	552.5
P43	507.5	P29	552.5
P37	807.5	P32	552.5
P28	807.5	P27	588.7
P16	811.2	P24	792.5
P15	812.5	P25	792.5
P4	812.5	P26	792.5
PF-4	812.5	P23	797.5
P8	812.5	P21	885.0
P45	1102.5	P22	885.0
P38	1102.5	P51	885.0
P17	1102.5	P58	907.5
P29	1102.5	P16	962.5
PF-5	1172.5	P19	962.5
PF-8	1172.5	P20	962.5
PF-11	1172.5	P18	962.5
P18	1397.5	P17	962.5
P39	1397.5	P15	1212.5
P46	1397.5	P13	1212.5
P30	1397.5	P12	1212.5
P24	1397.5	P14	1212.5
P47	1692.5	P17	1282.5
P19	1692.5	P6	1282.5
P31	1692.5	P10	1282.5
P25	1692.5	P50	1282.5
P9	1757.5	P11	1282.5
PF-9	1757.5	P7	1512.5
PF-6	1757.5	P5	1512.5
P10	1982.5	P56	1512.5
P20	1983.7	P6	1512.5
P48	1987.5	P8	1512.5
P41	1987.5	PF-8	1512.5
P32	1987.5	PF-9	1512.5
P26	1987.5	P55	1512.5
P33	2152.5	PF-10	1512.5
P21	2152.5	PF-1	1772.5
PF-10	2400.0	PF-12	1772.5
P22	2407.5	PF-3	1772.5
P49	2407.5	PF-4	1772.5
P34	2407.5	PF-5	1772.5
PF-7	2407.5	PF-6	1772.5
P51	2567.7	P54	1772.5
P52	2567.7	PF-7	1772.5
P53	2567.7	P3	1812.5
P50	2567.7	P1	1812.5
P54	2567.7	P2	1812.5
P55	2567.7	P4	1812.5

FUNDAÇÃO 1			
Borícentros de pilares			
Pilar	X (cm)	Pilar	Y (cm)
S18	1397.5	S48	37.5
S39	1397.5	S47	37.5
S46	1397.5	S46	37.5
S30	1397.5	S41	387.5
S24	1397.5	S39	387.5
S40	1692.5	S40	387.5
S47	1692.5	S30	552.5
S19	1692.5	S31	552.5
S31	1692.5	S32	552.5
S25	1692.5	S24	792.5
S9	1757.5	S25	792.5
SF-9	1757.5	S26	792.5
SF-6	1757.5	S19	962.5
S10	1982.5	S20	962.5
S48	1987.5	S9	1282.5
S41	1987.5	S10	1282.5
S32	1987.5	SF-9	1512.5
S26	1987.5	SF-6	1772.5

FUNDAÇÃO 3			
Borícentros de pilares			
Pilar	X (cm)	Pilar	Y (cm)
S33	2152.5	S49	37.5
S21	2152.5	S53	37.5
SF-10	2400.0	S33	470.0
S22	2407.5	S34	470.0
S11	2407.5	S52	470.0
S34	2407.5	S21	885.0
S49	2407.5	S22	885.0
SF-7	2407.5	S51	885.0
S50	2567.7	S11	1282.5
S51	2567.7	S50	1282.5
S52	2567.7	SF-10	1512.5
S53	2567.7	S55	1512.5
S54	2567.7	S54	1772.5
S43	507.5	S36	383.8

CONVENÇÃO DE PILARES

Rua Quínta de Novembro, 553/405
Pelotas - RS - CEP 96201-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

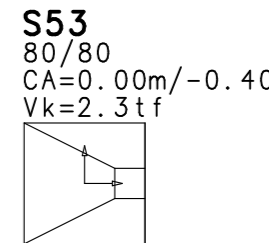
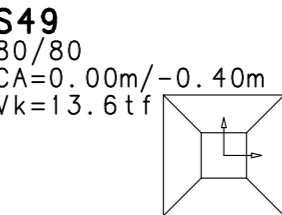
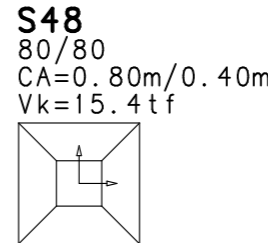
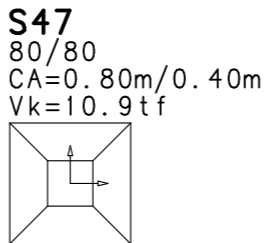
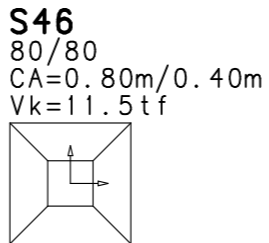
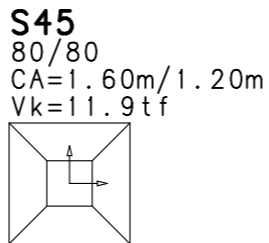
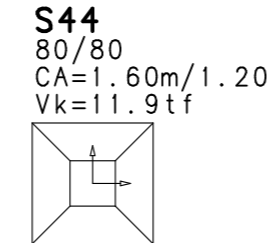
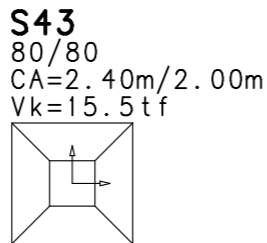
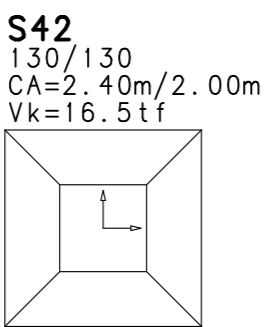
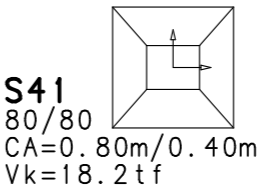
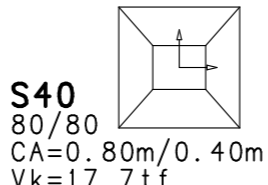
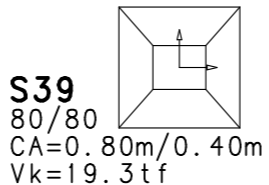
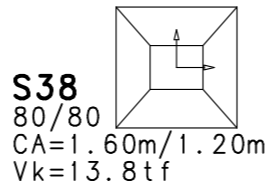
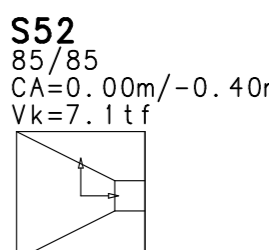
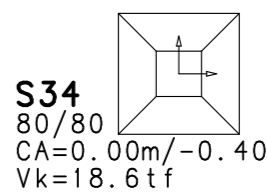
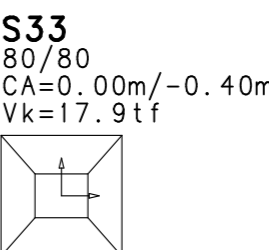
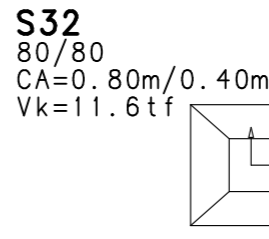
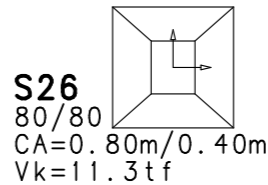
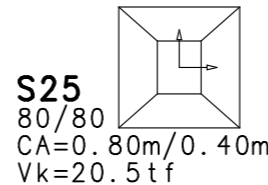
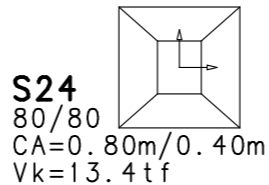
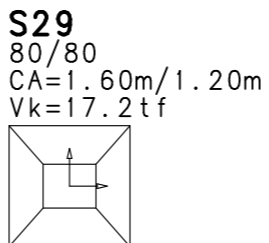
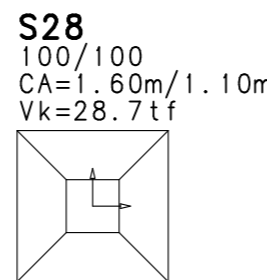
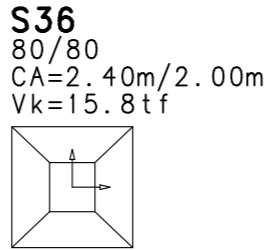
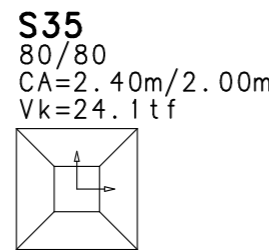
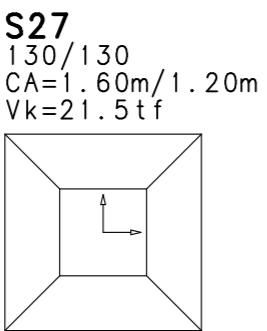
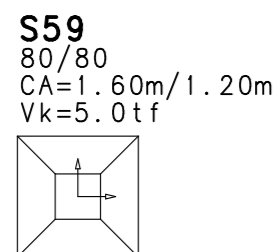
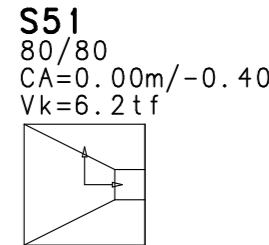
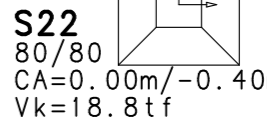
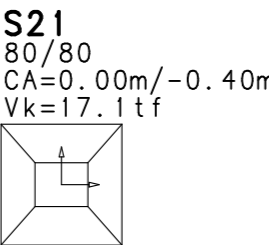
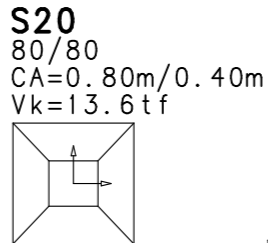
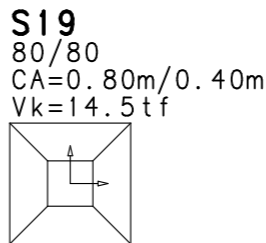
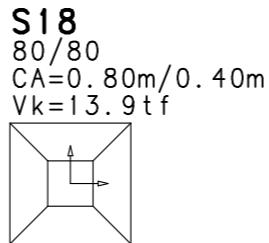
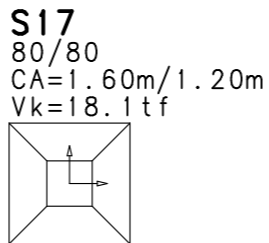
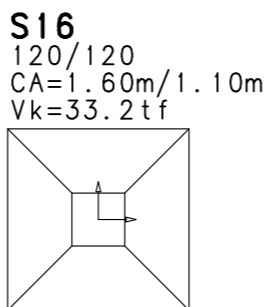
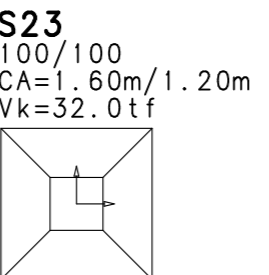
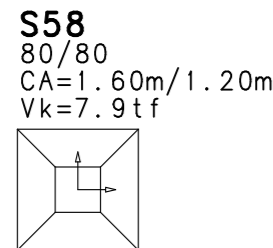
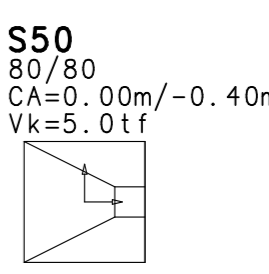
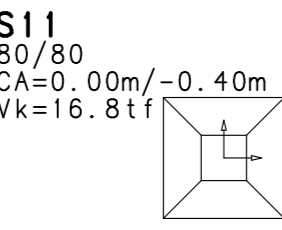
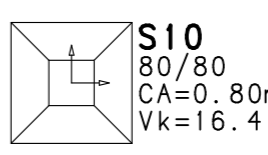
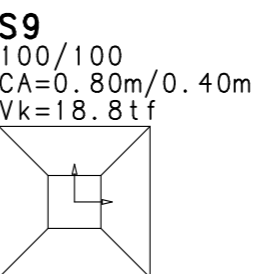
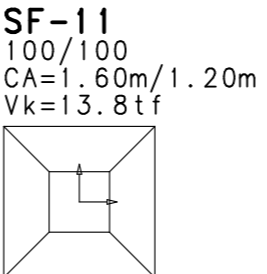
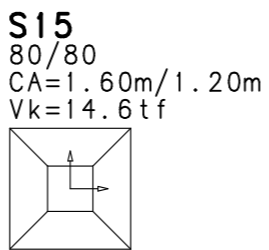
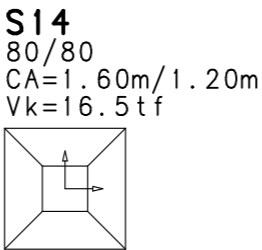
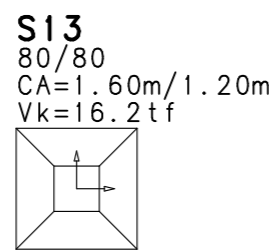
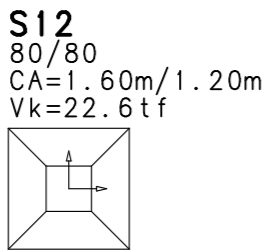
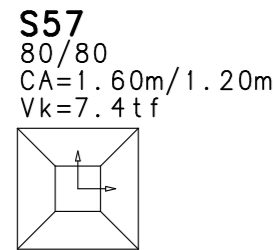
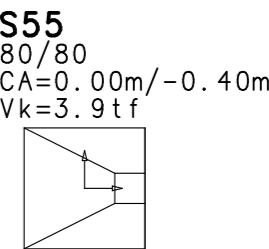
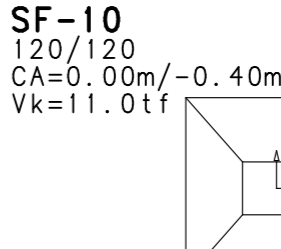
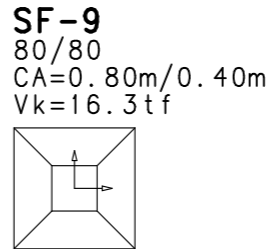
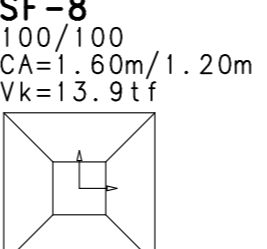
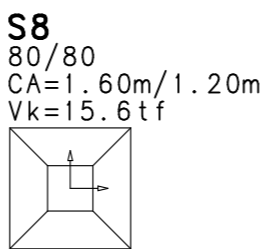
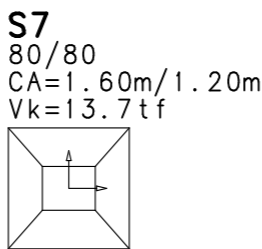
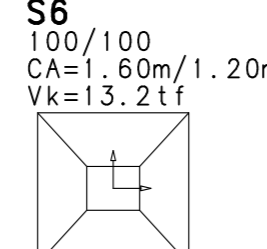
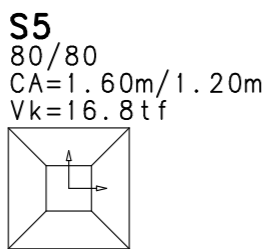
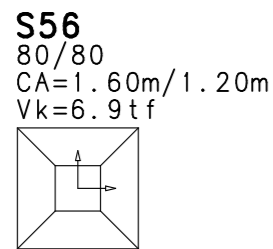
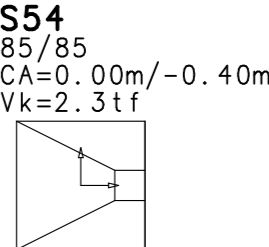
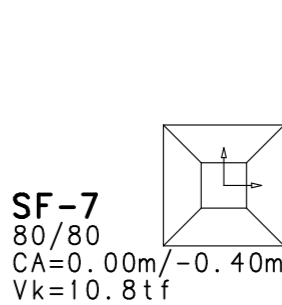
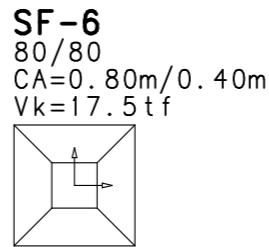
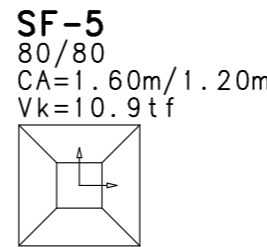
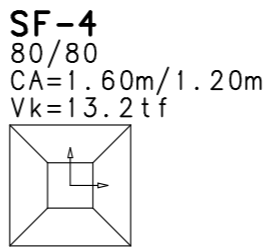
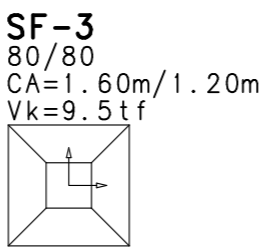
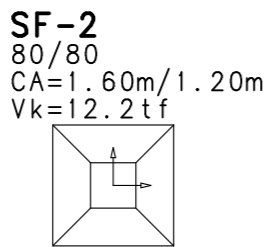
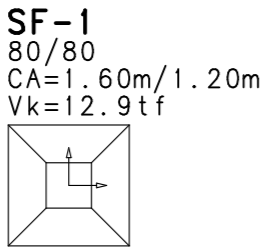
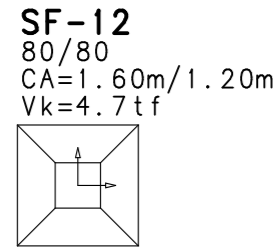
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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0	08/02/2016	Fernando	Inclusão corredor fundo
Rev	Data	Autor	Assunto

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CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º
OBRA UBS TIPO 2-CORRIENTES		001
TITULO FUNDAÇÃO LOCAÇÃO DAS SAPATAS E PILARES		REV. N.º 00
DATA 22/08/2016	ESCALA 1:50	COORD.
DESENHO UBS-F3_-FOR-001-R00		ENG.º

GIGANTE & SIMCH ENG. E COMERCIO LTDA PL. UBS-F3_-FOR-002-R00-PLT 30/08/2016 22:17:51



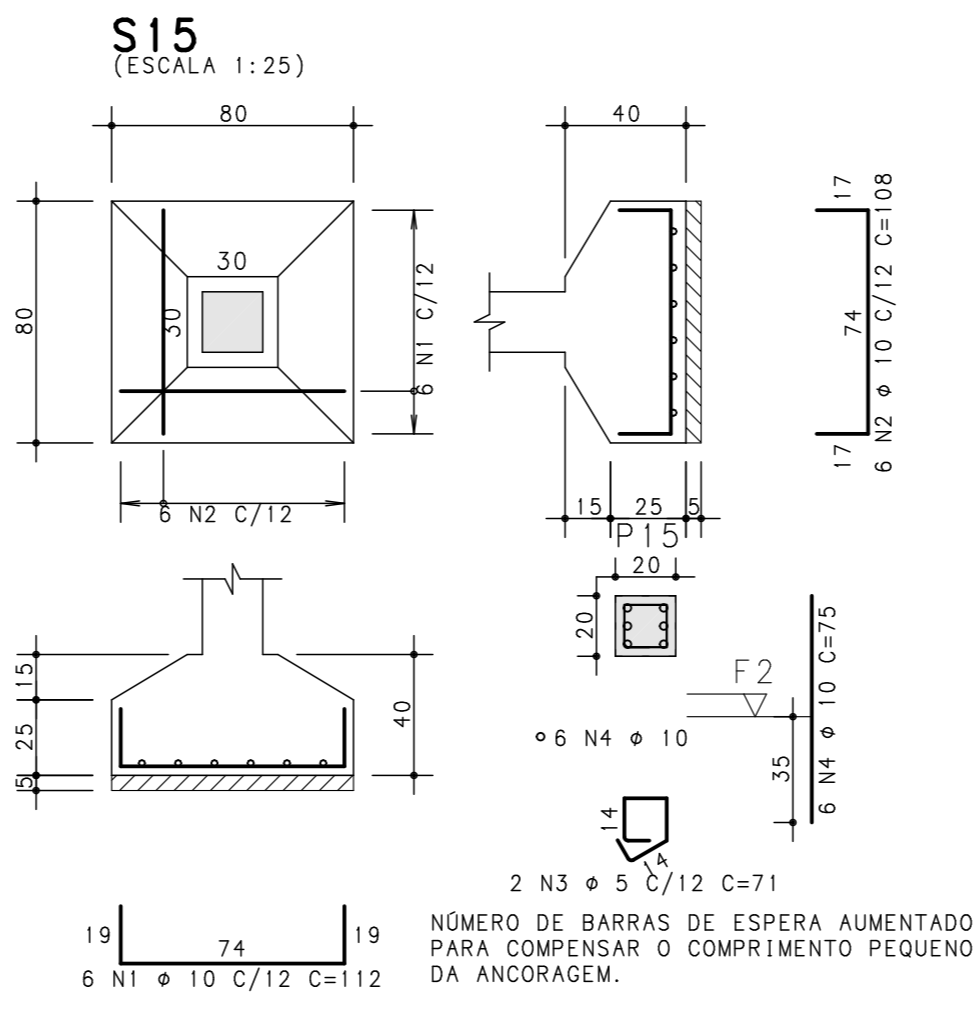
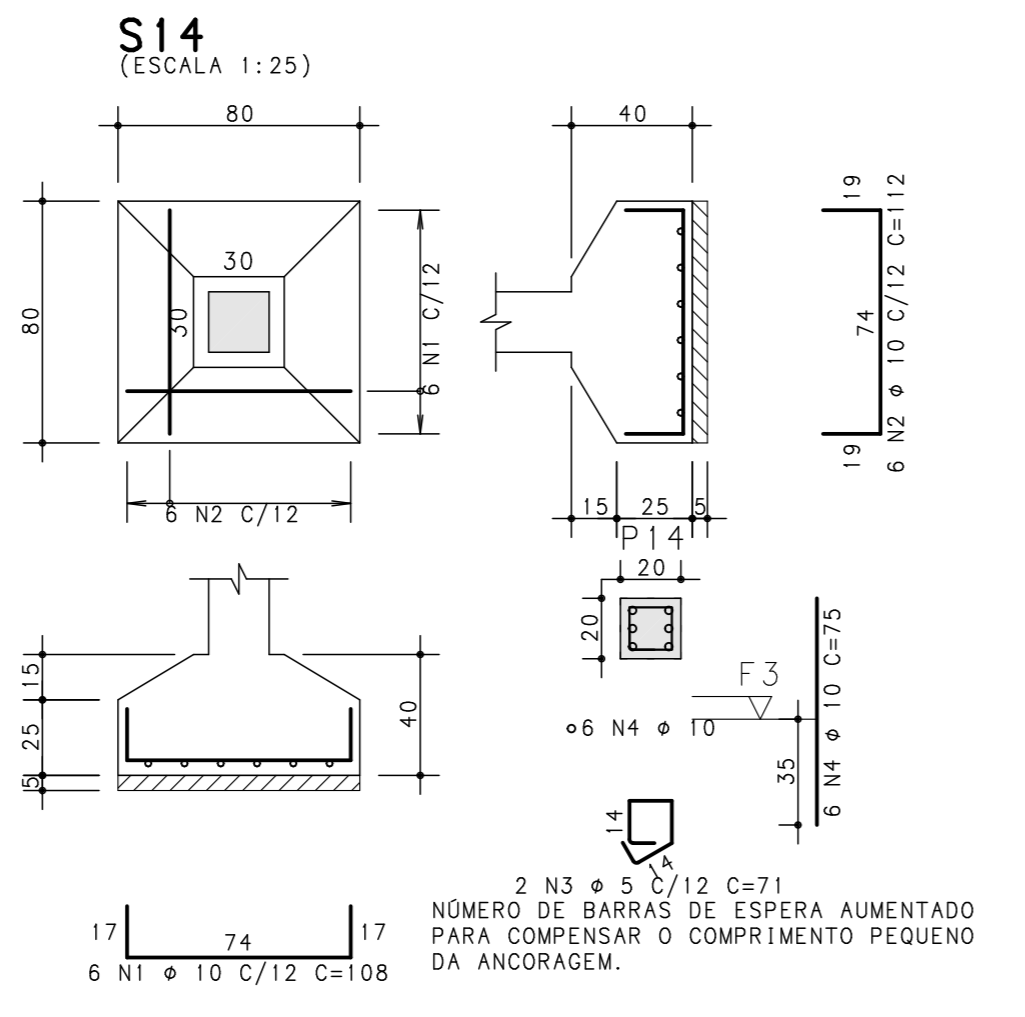
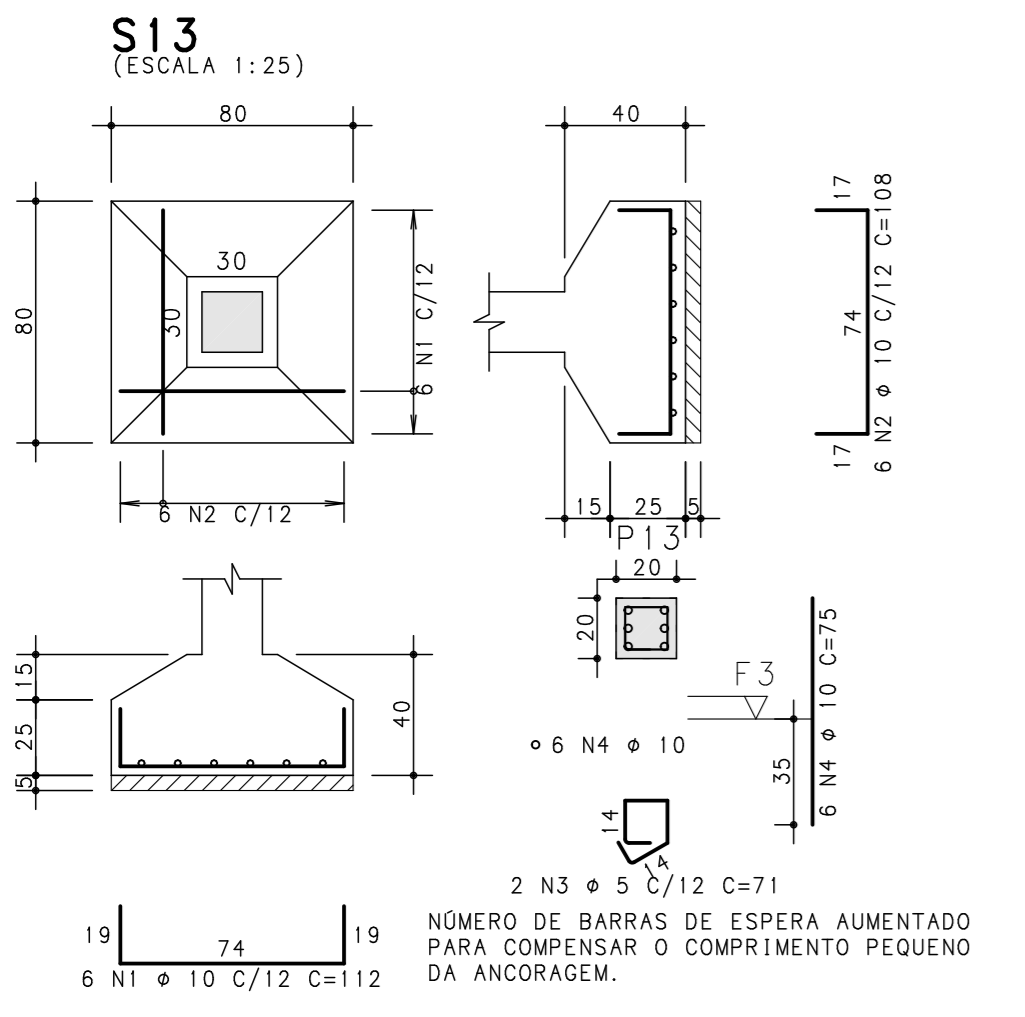
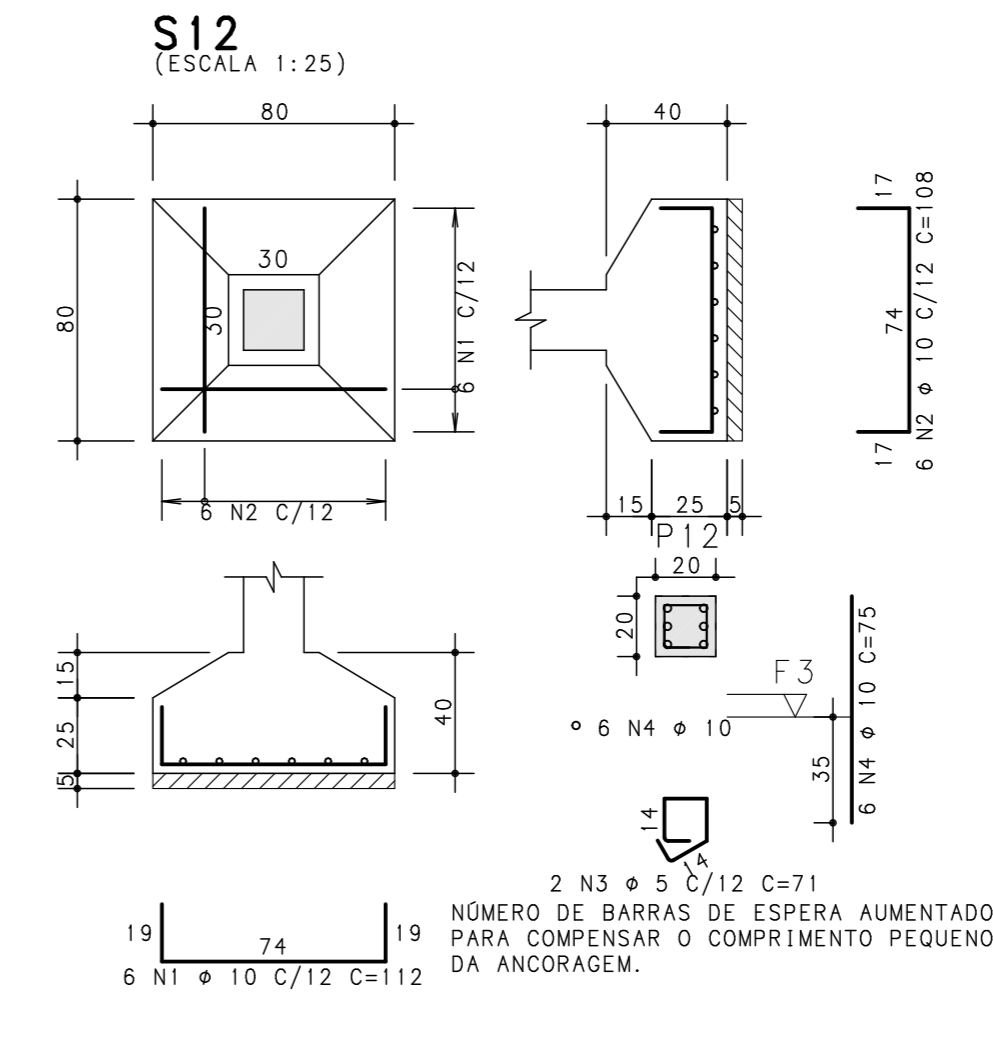
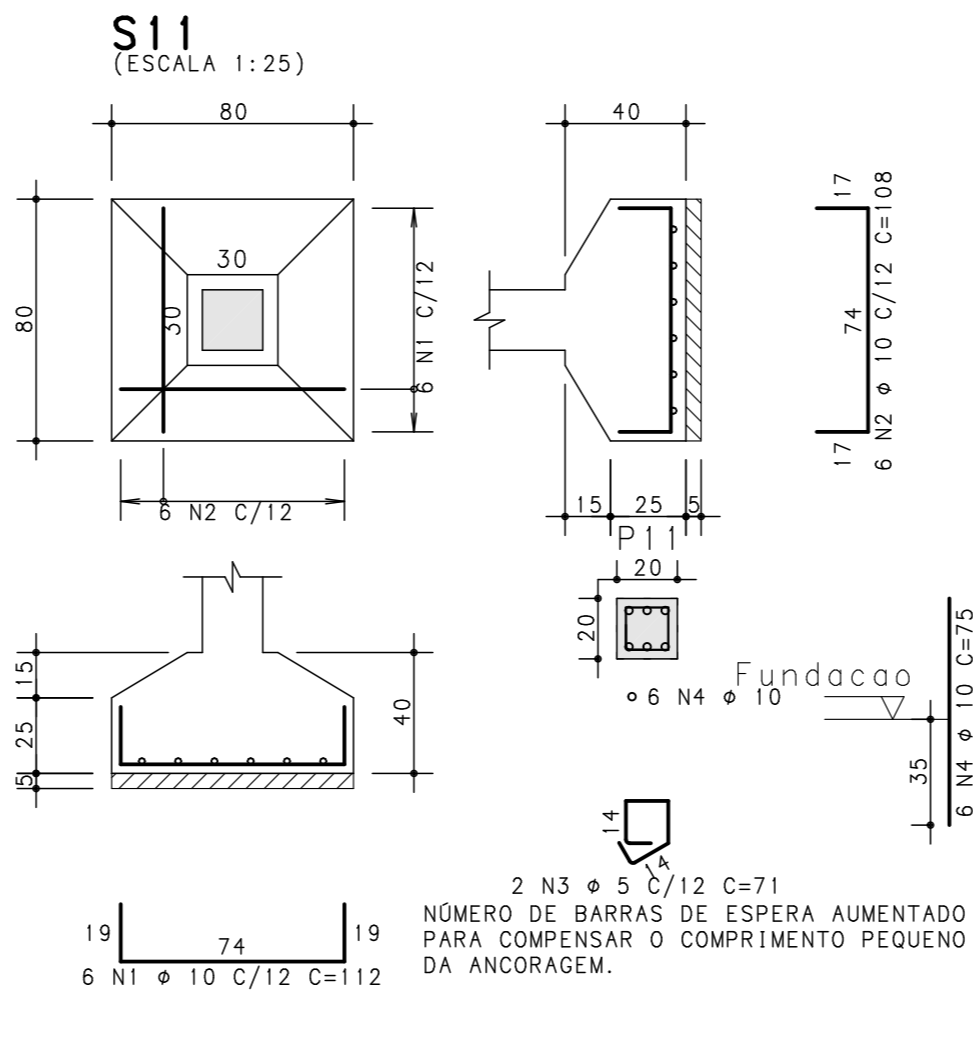
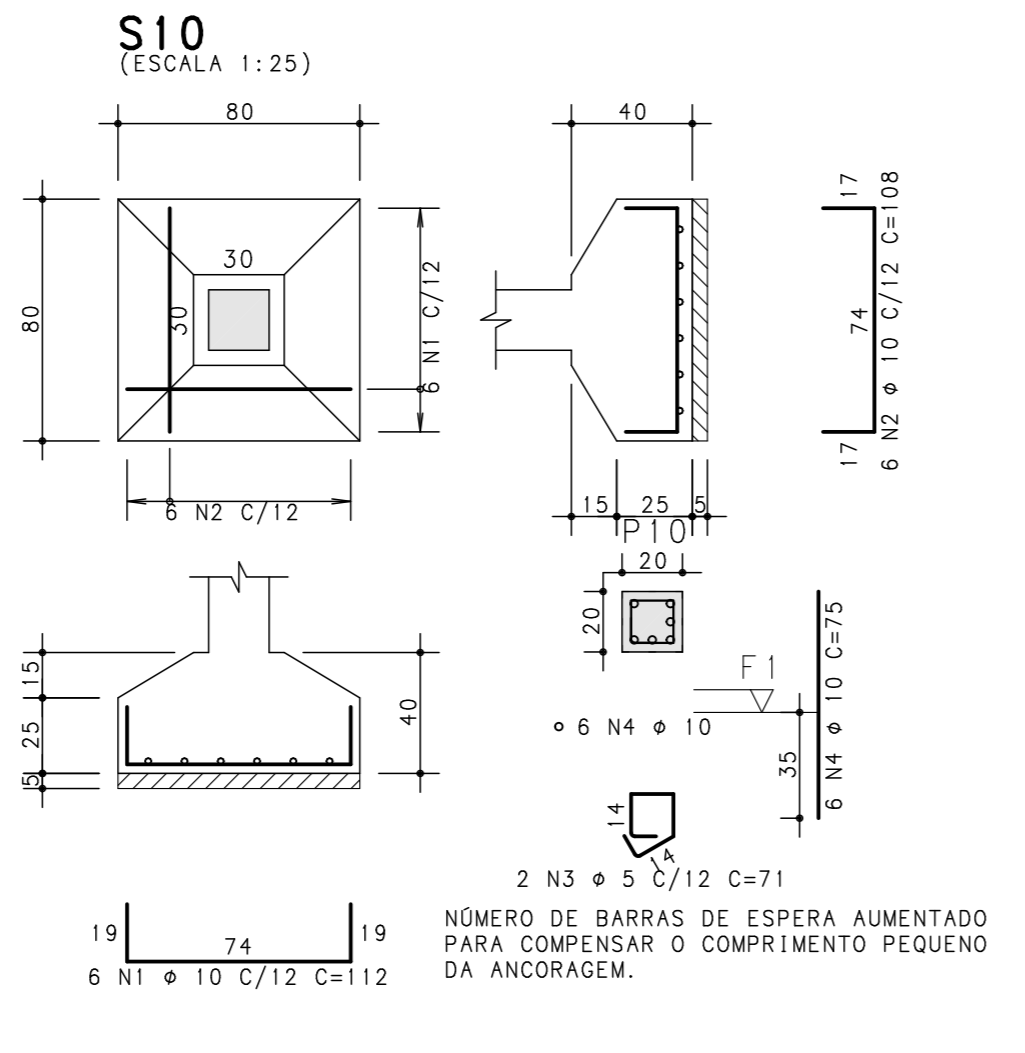
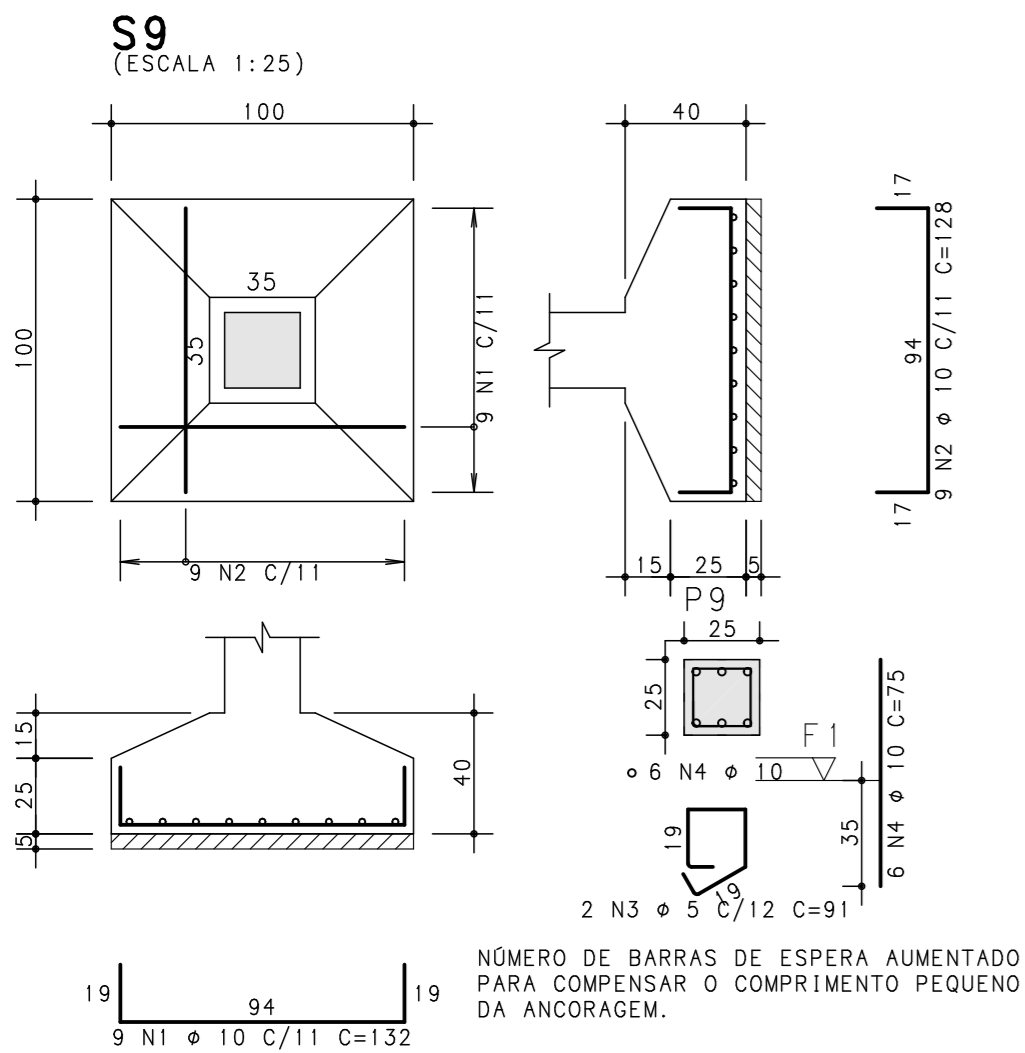
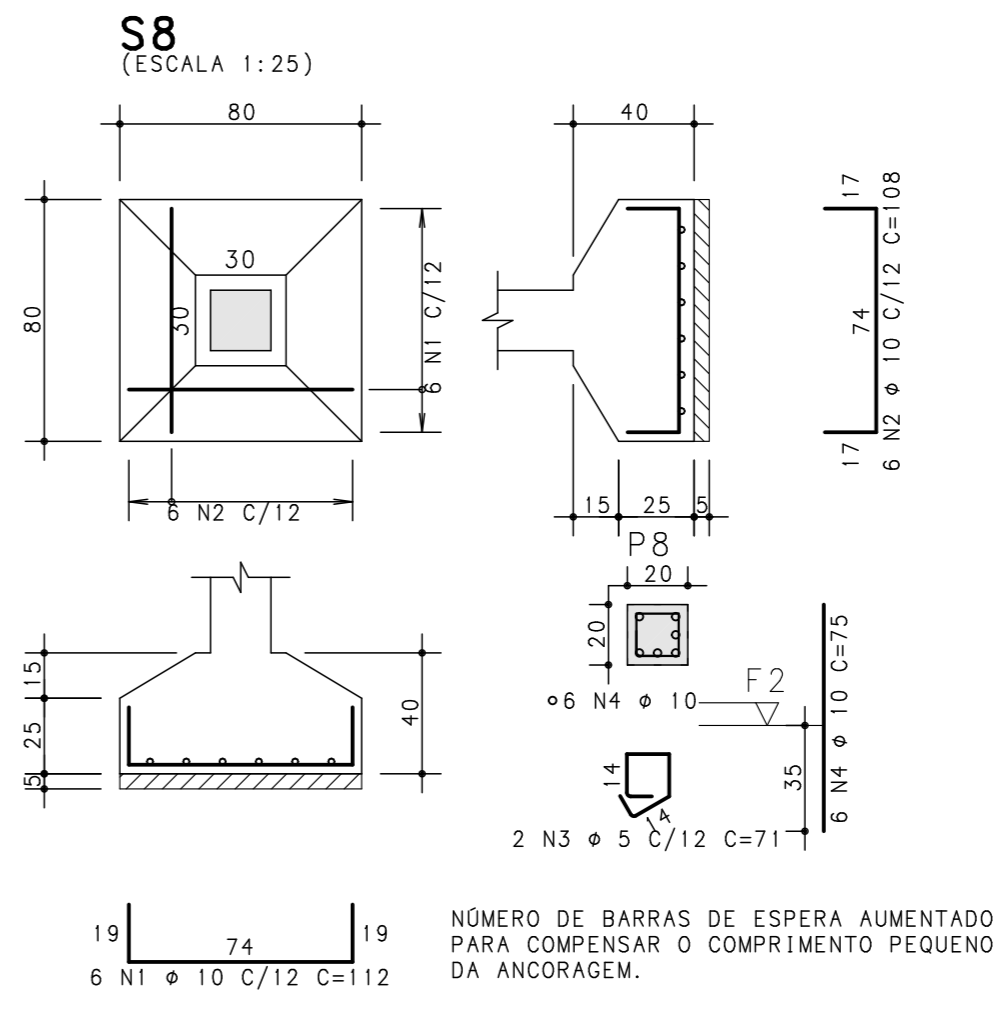
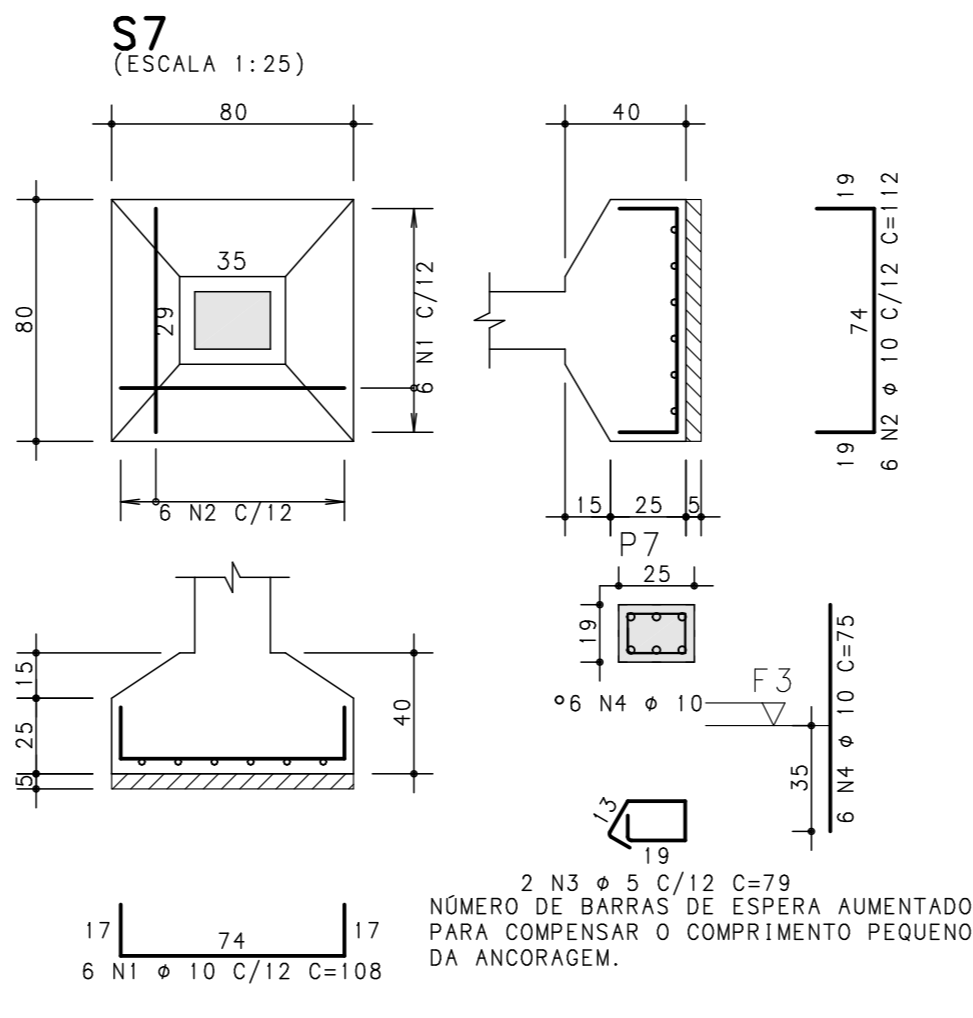
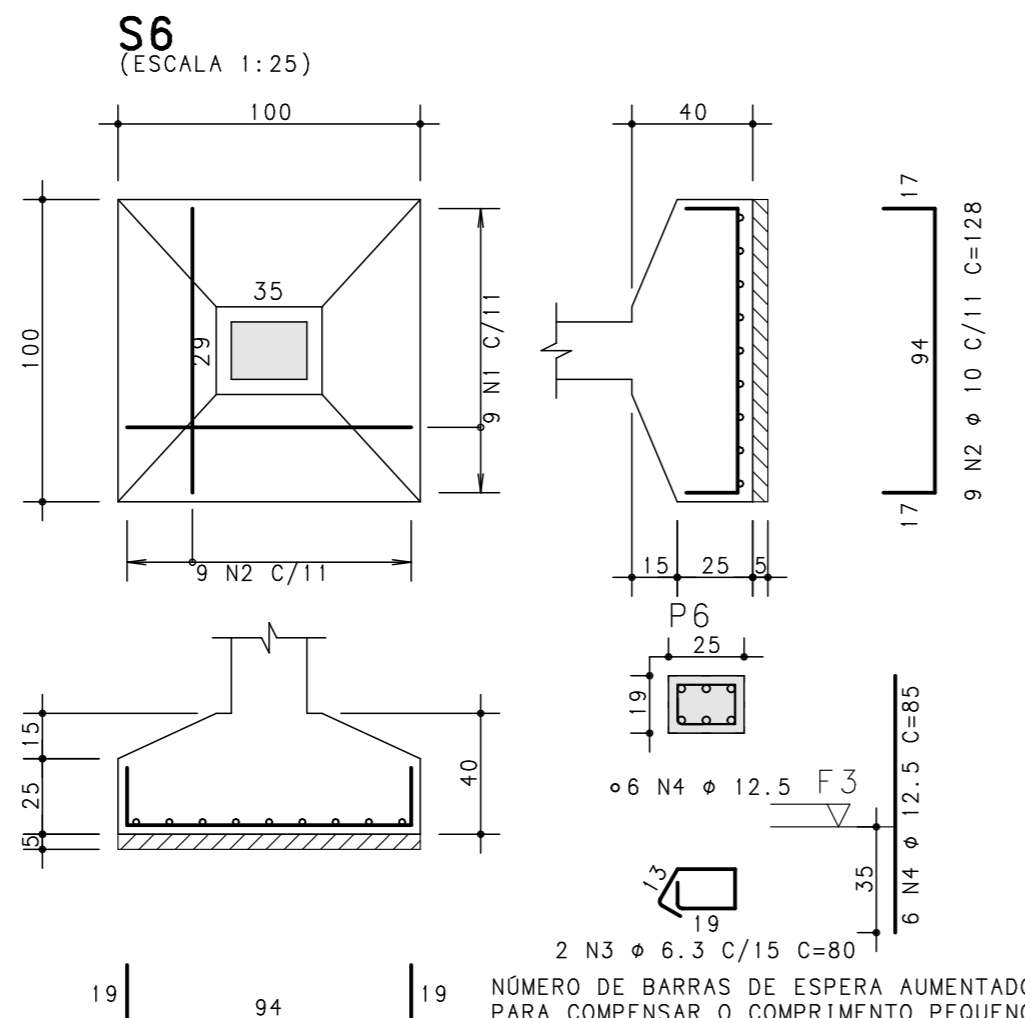
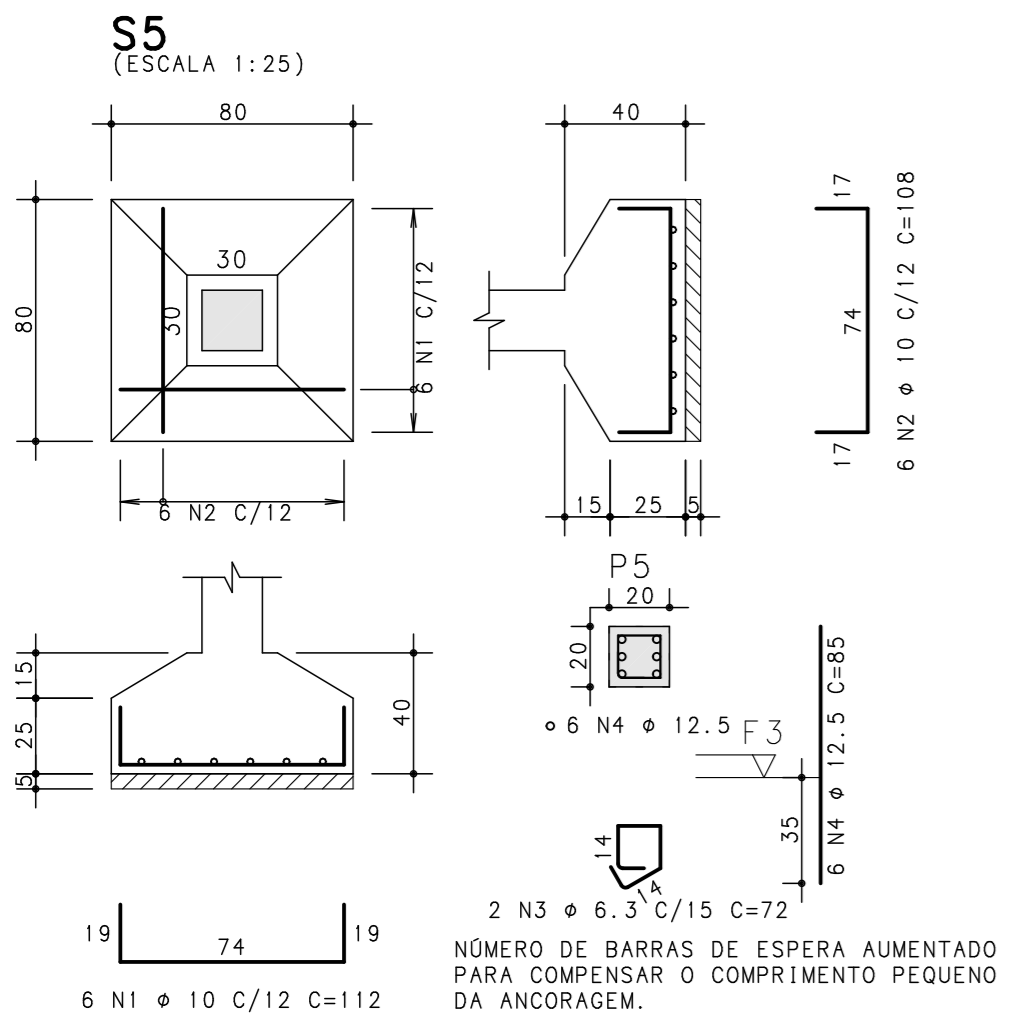
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-000
Telefone: (51) 32291500
e-mail: fernando@gsimch.com.br
e-mail: paulo@gsimch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

Rev	Data	Autor	Assunto
2	22/08-2016	J. Marques	Acréscimo das cargas nas SF12- S56-S57-S58-S59
0	08/02/2016	Fernando	Inclusão corredor fundo

CONCRETO				SOBRECARGA PREVISTA		OBRA N.º	
fck =250				kgf/cm2		0001	
CLIENTE				SECRETARIA DA SAÚDE-PELOTAS		DES. N.º	
OBRA				UBS TIPO 2-CORRIENTES		002	
TITULO				FUNDAÇÃO CARGAS		REV. N.º	
						00	
DATA		ESCALA		DESENHO		ENG.º	
22/08/2016		1:50		UBS-F3.-FOR-002-R00		COORD.	



	AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT (cm)	TOTAL (cm)
S5	50A	1	10	6	112	672
	50A	2	10	6	108	648
	50A	3	6,3	2	72	144
	50A	4	12,5	6	85	510
S6	50A	1	10	9	132	1188
	50A	2	10	9	128	1152
	50A	3	6,3	2	80	160
	50A	4	12,5	6	85	510
S7	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	79	158
	50A	4	10	6	75	450
S8	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S9	50A	1	10	9	132	1188
	50A	2	10	9	128	1152
	60B	3	5	2	91	182
	50A	4	10	6	75	450
S10	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S11	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S12	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S13	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S14	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S15	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450

RESUMO AÇO CA 50-60				
AÇO	BIT (mm)	COMPR (m)	PESO (kg)	
60B	5	13	2	
50A	6,3	3	1	
50A	10	206	127	
50A	12,5	10	10	
Peso Total		60B =	2 kg	
Peso Total		50A =	138 kg	



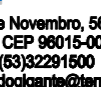
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

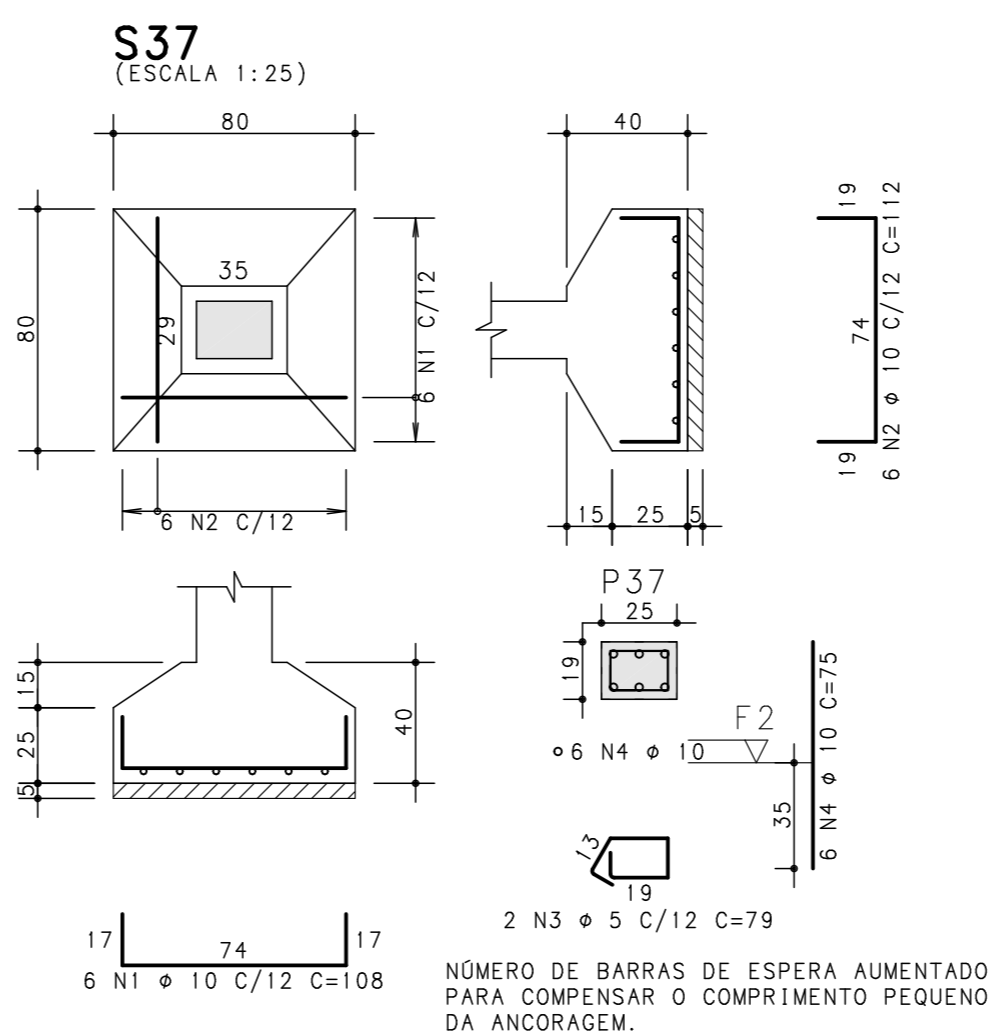
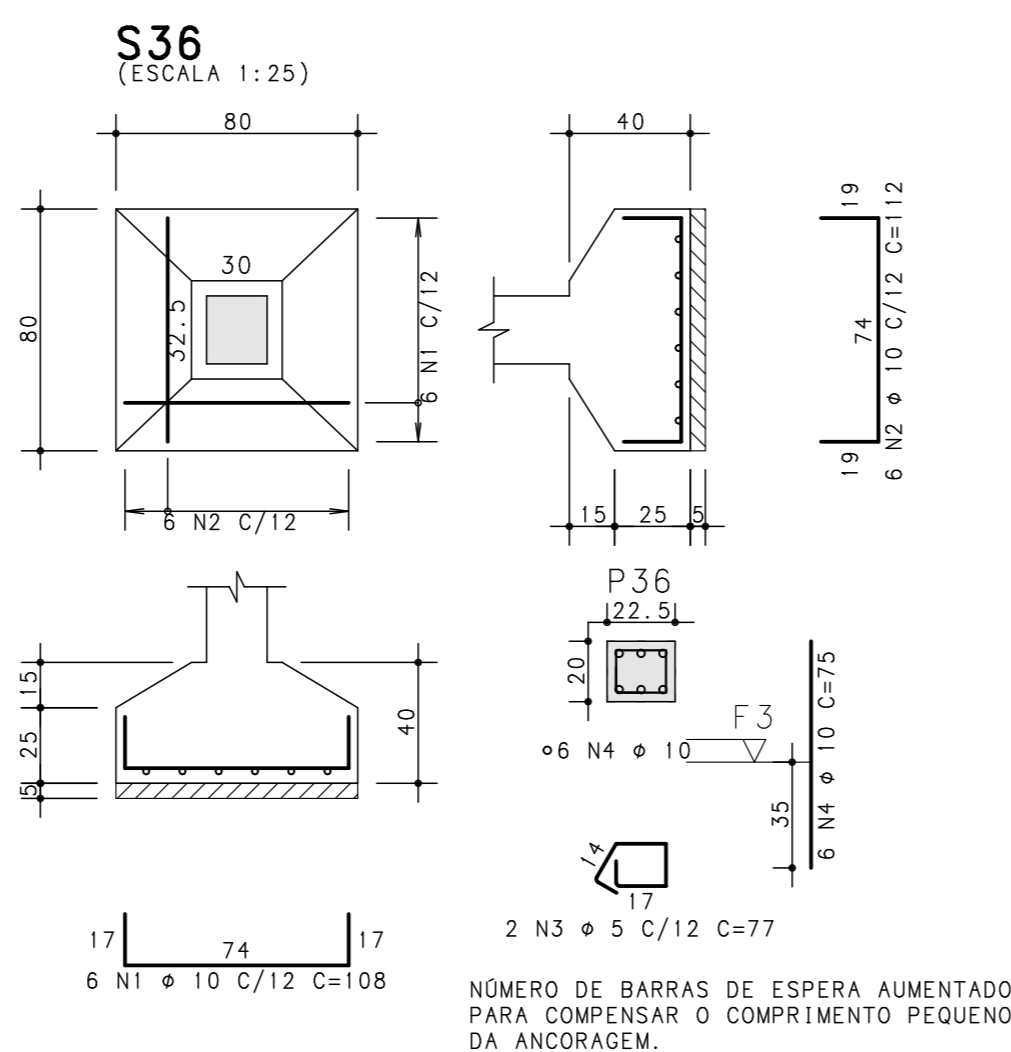
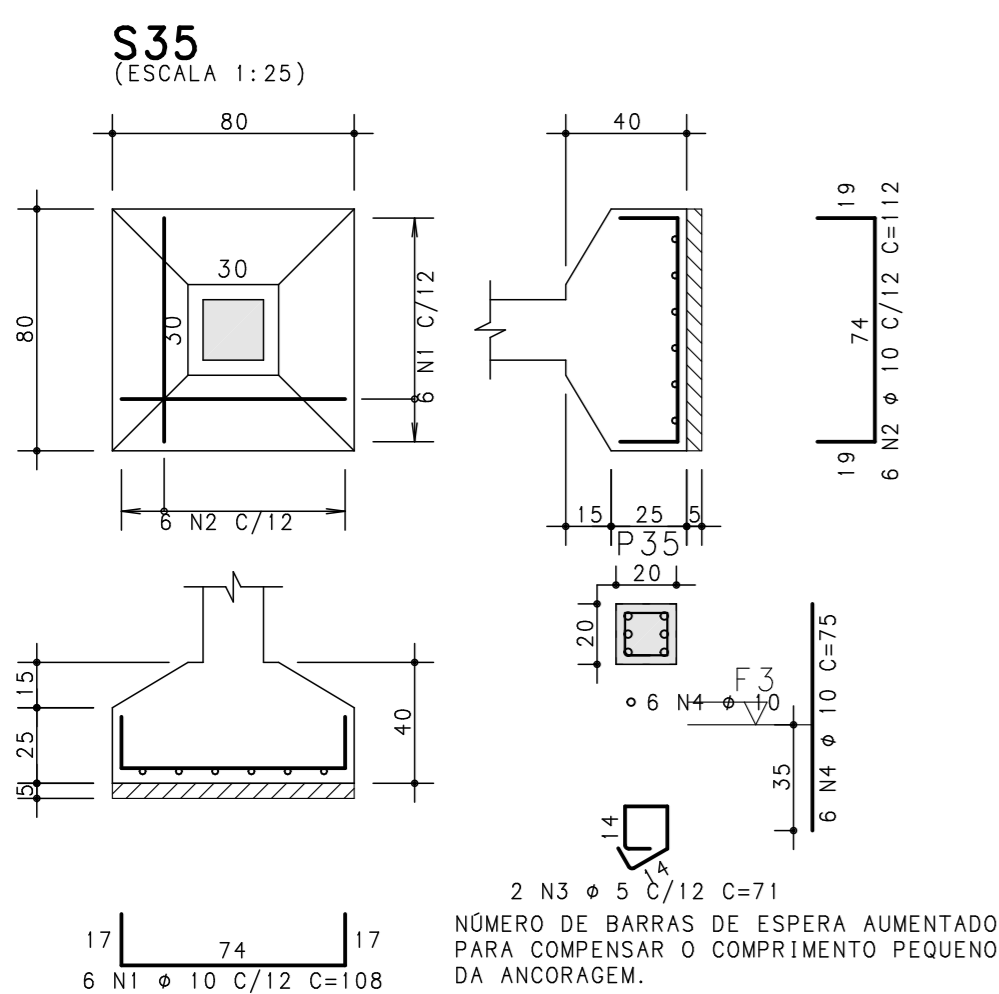
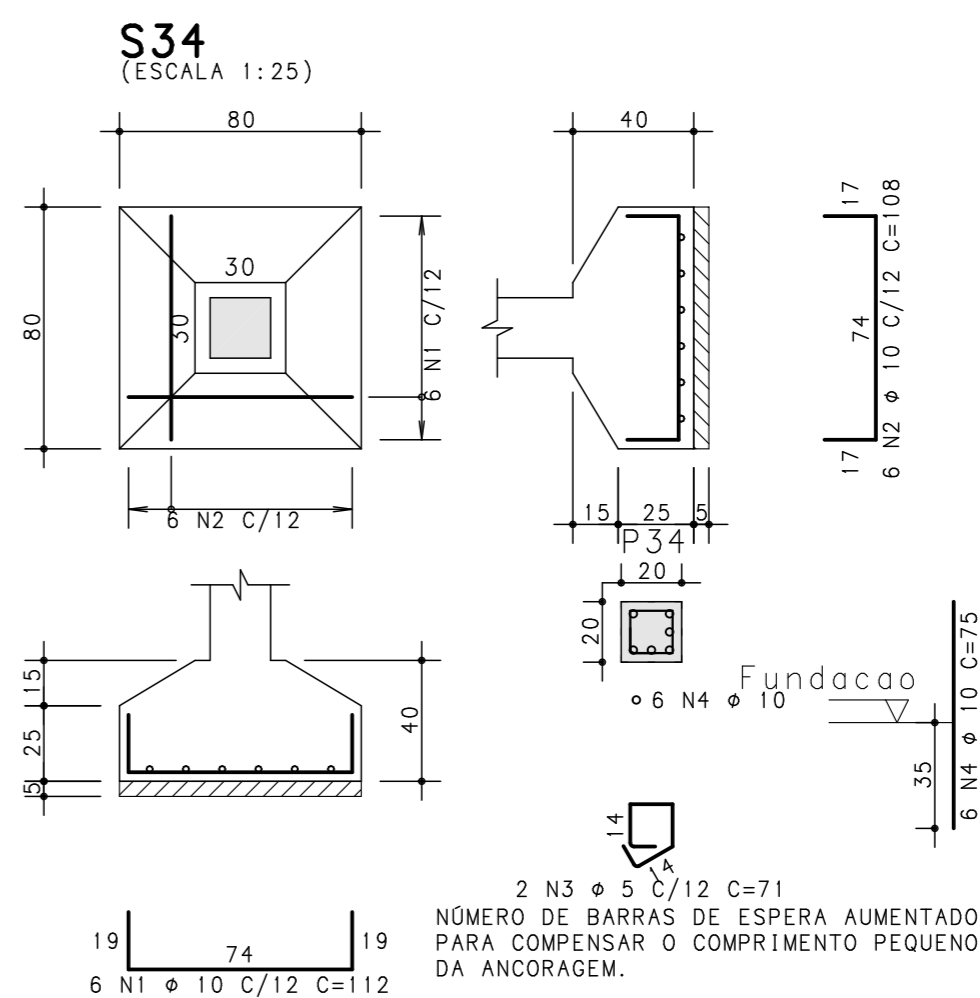
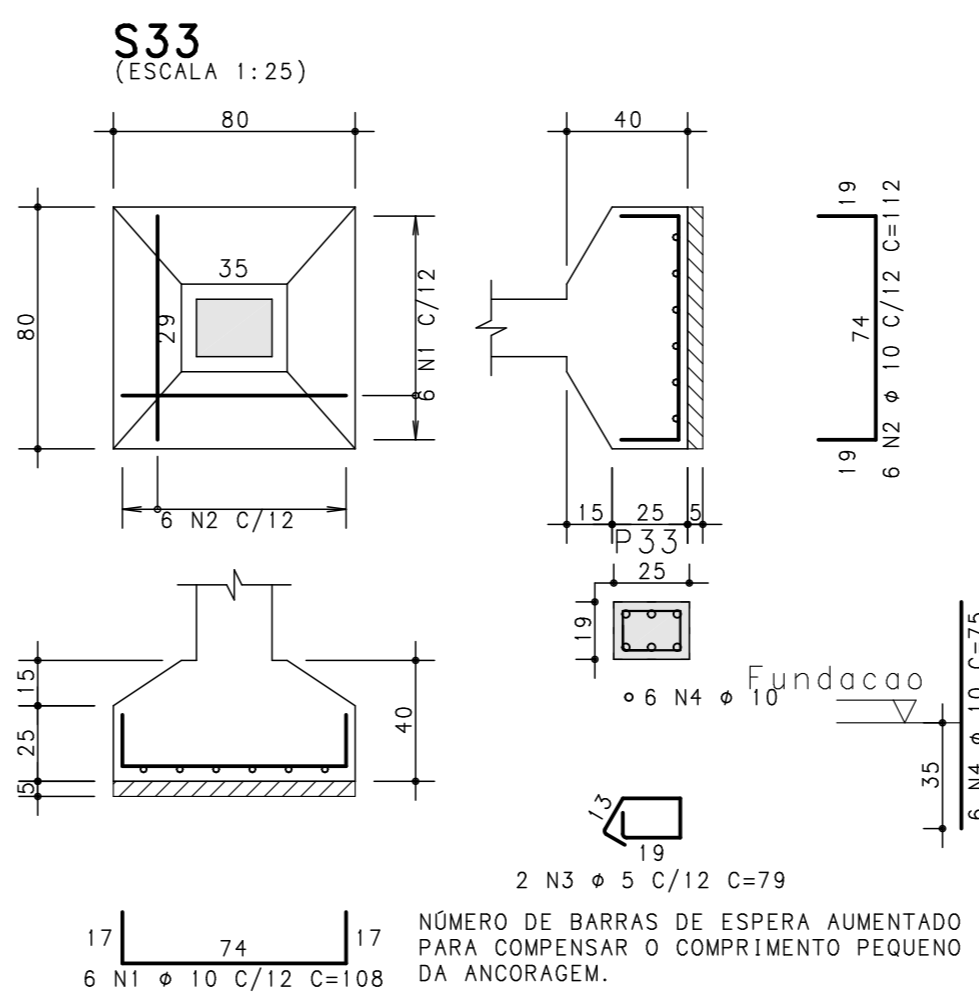
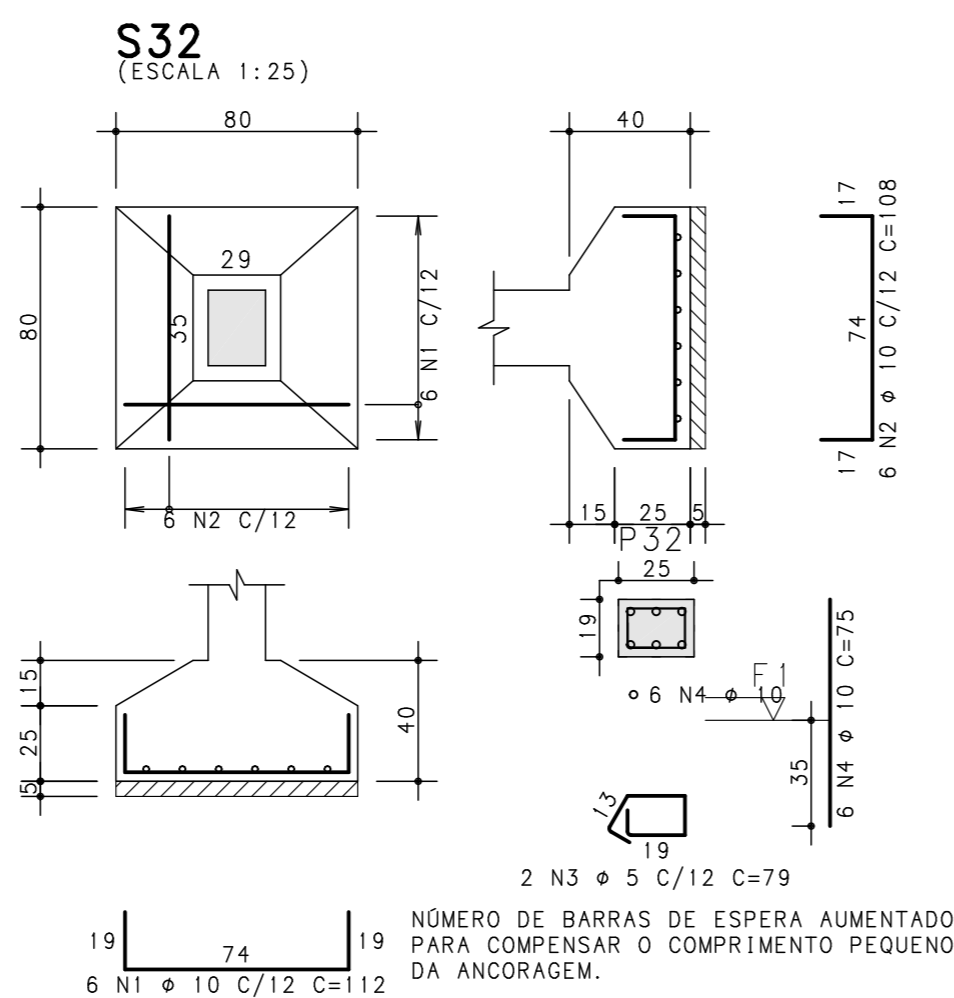
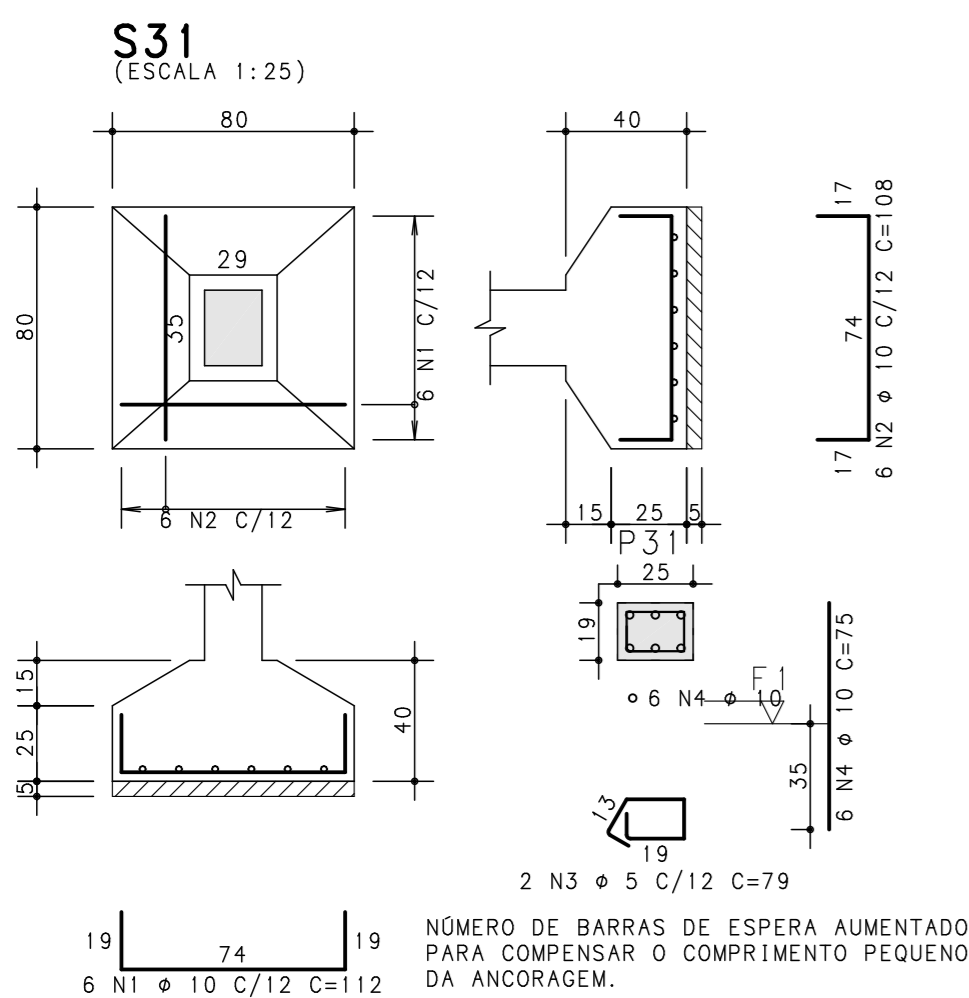
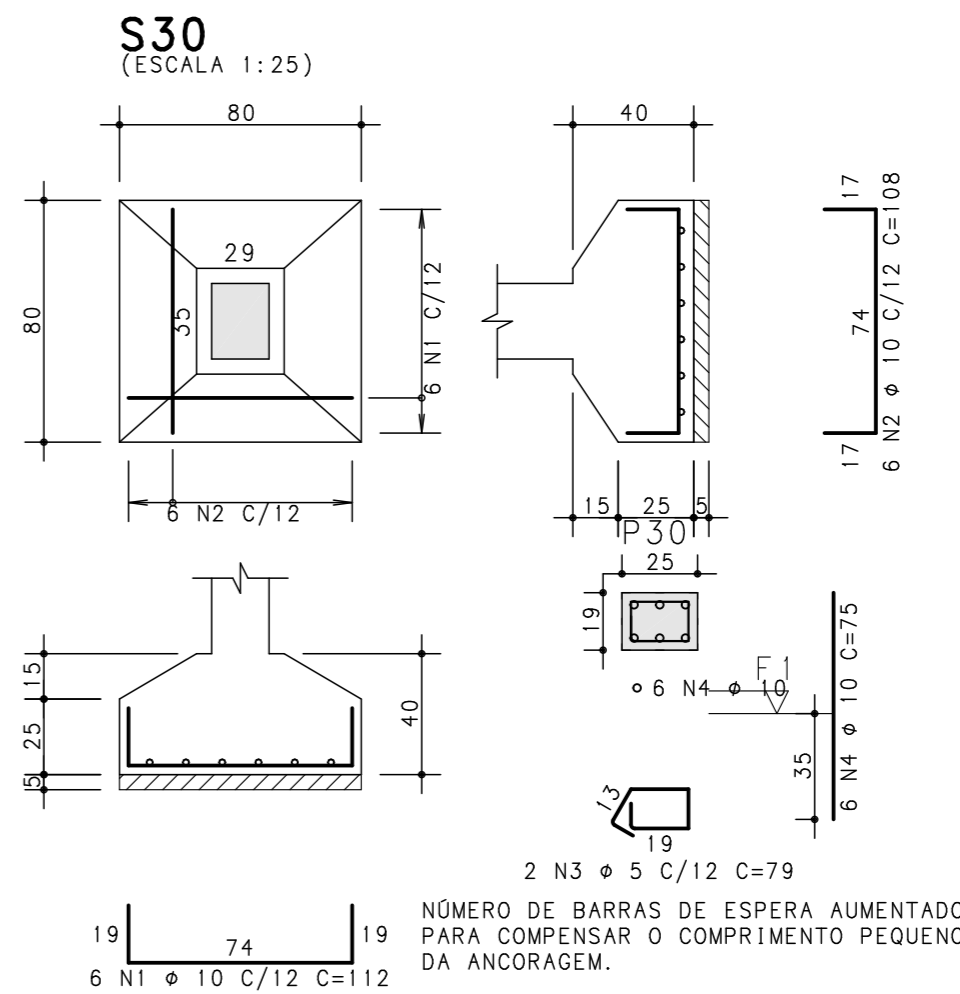
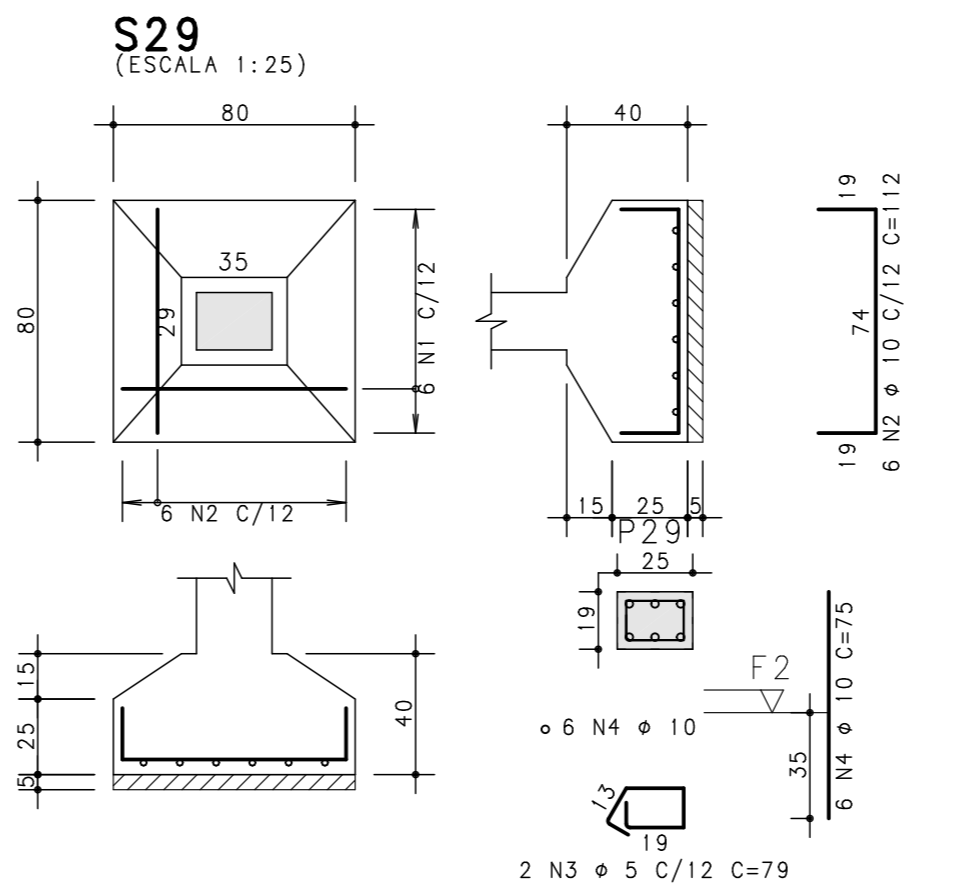
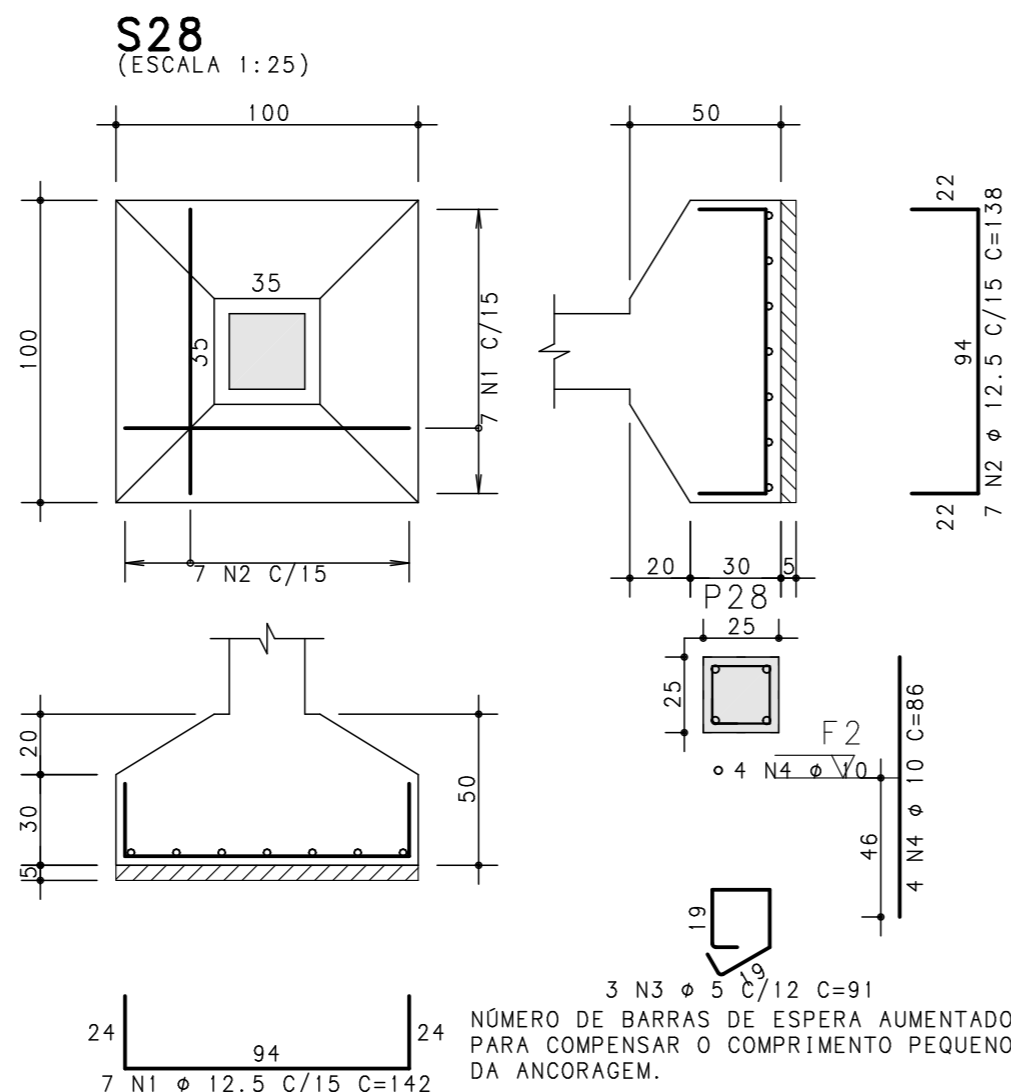
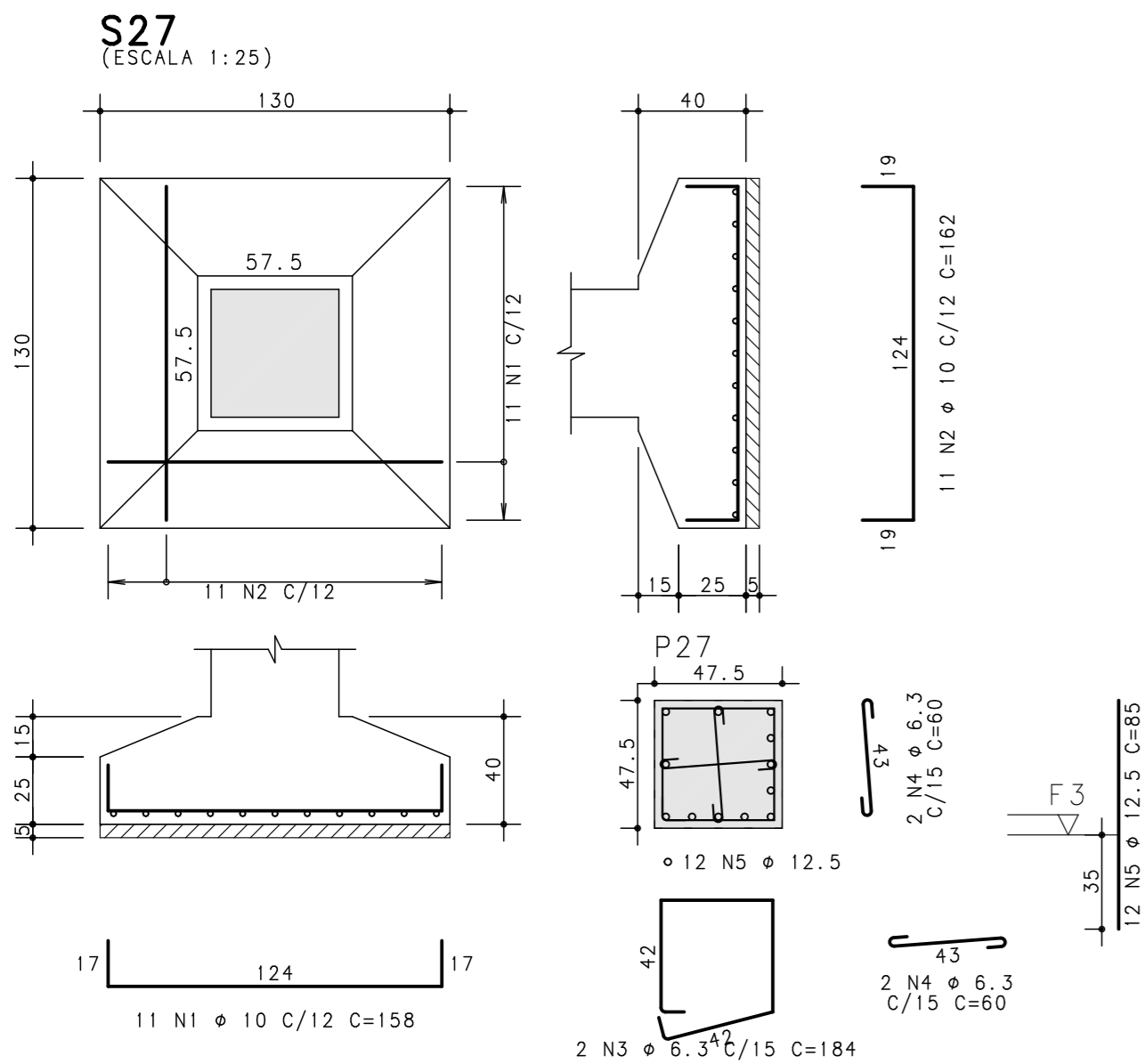
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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1			
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Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				003
TÍTULO FUNDAÇÃO ARMADURAS SAPATAS				REV. N.º
				00
DATA 8/08/2015	ESCALA 1:25	DESENHO UBS-FUN-FUN-003-R00	COORD.	ENG.º

 Gigante e Simch engenharia civil estruturas e sondagens		Rua Quilô de Novembro, 503/405 Pelotas - RS - CEP 96015-000 Telefone: (51) 32291600 e-mail: fernandogigante@terra.com.br e-mail: paulosimch@terra.com.br		Fernando Petrucci Gigante Eng. Civil - CREA-RS 45232		Paulo Rogério Maffini Simch Eng. Civil - CREA-RS 78208	
2							
1							
0							
Rev	Data	Autor	Assunto				
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CONCRETO fck = 250 kgf/cm ²				SOBRECARGA PREVISTA			
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				OBRA N.º <div style="font-size: 2em; text-align: center;">0001</div>			
OBRA UBS TIPO 2-CORRIENTES				DES. N.º <div style="font-size: 2em; text-align: center;">004</div>			
TITULO FUNDAÇÃO ARMADURAS SAPATAS				REV. N.º <div style="font-size: 2em; text-align: center;">00</div>			
S16 / S17 / S18 / S19 S20 / S21 / S22 / S23 S24 / S25 / S26							
DATA 18/08/2015	ESCALA 1:25	DESENHO UBS-FUN-FUN-004-R00		COORD.	ENG.º		



S27	AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT (cm)	TOTAL (cm)
S27	50A	1	10	11	158	1738
	50A	2	10	11	162	1782
	50A	3	6.3	2	184	368
	50A	4	6.3	4	60	240
	50A	5	12.5	12	85	1020
S28	50A	1	12.5	7	142	994
	50A	2	12.5	7	138	966
	60B	3	5	3	91	273
	50A	4	10	4	86	344
S29	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	79	158
	50A	4	10	6	75	450
S30	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	79	158
	50A	4	10	6	75	450
S31	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	79	158
	50A	4	10	6	75	450
S32	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	79	158
	50A	4	10	6	75	450
S33	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S34	50A	1	10	6	112	672
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S35	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S36	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	77	154
	50A	4	10	6	75	450
S37	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	79	158
	50A	4	10	6	75	450

RESUMO AÇO CA 50-60				
AÇO	BIT (mm)	COMPR (m)	PESO (kg)	
60B	5	17	3	
50A	6.3	6	1	
50A	10	198	122	
50A	12.5	30	29	
Peso Total		60B =	3 kg	
Peso Total		50A =	152 kg	



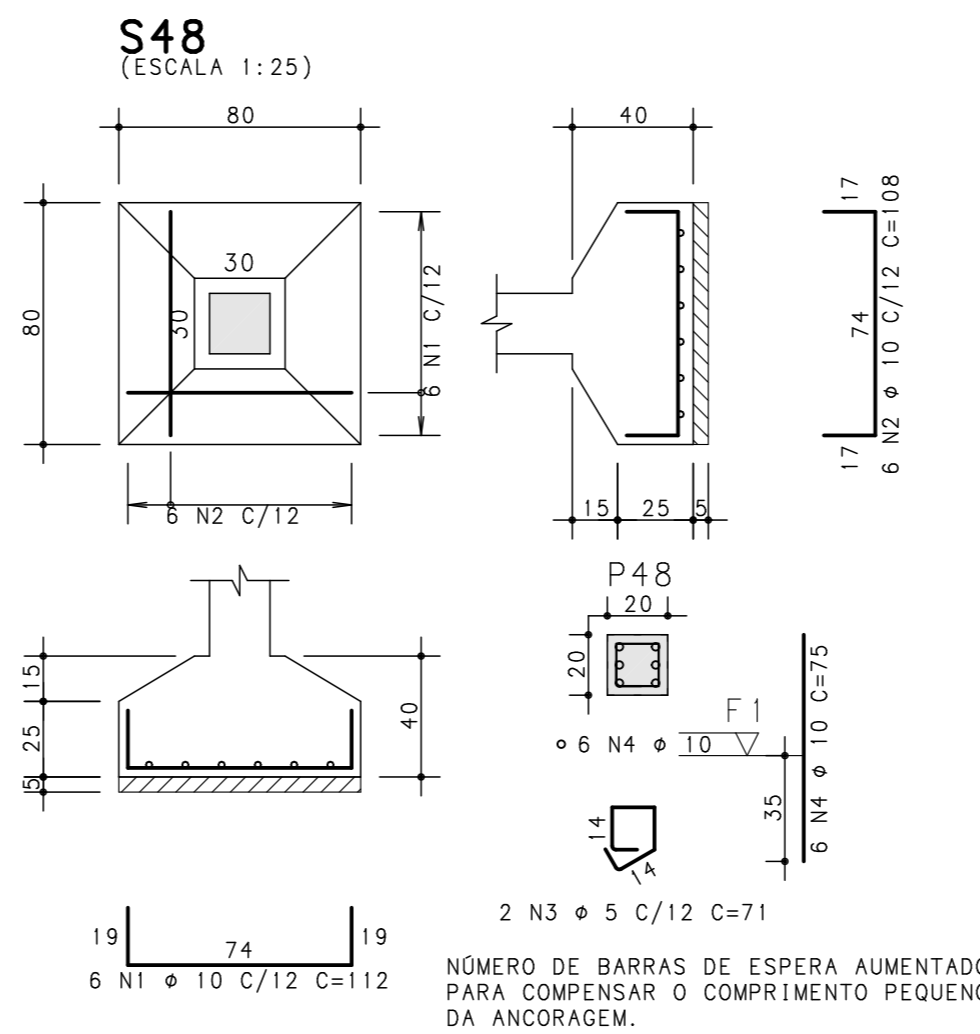
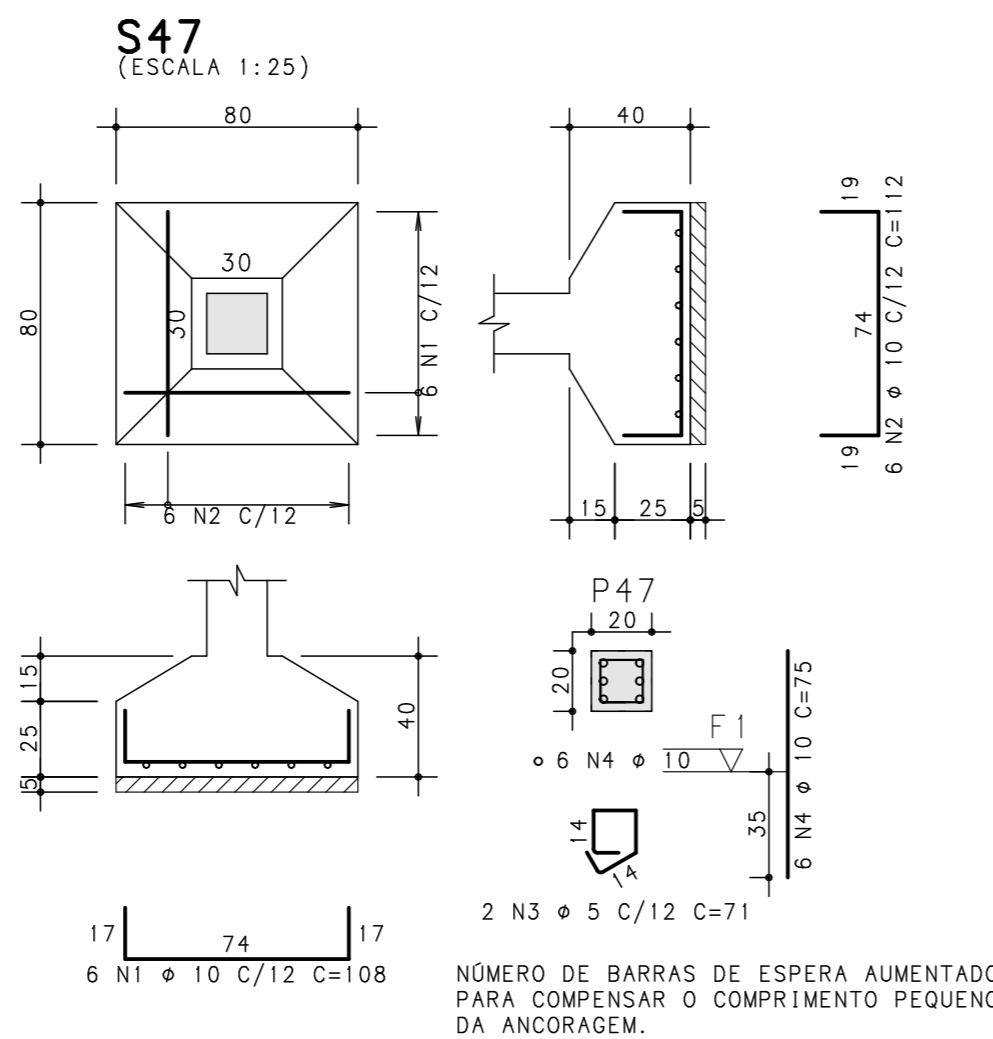
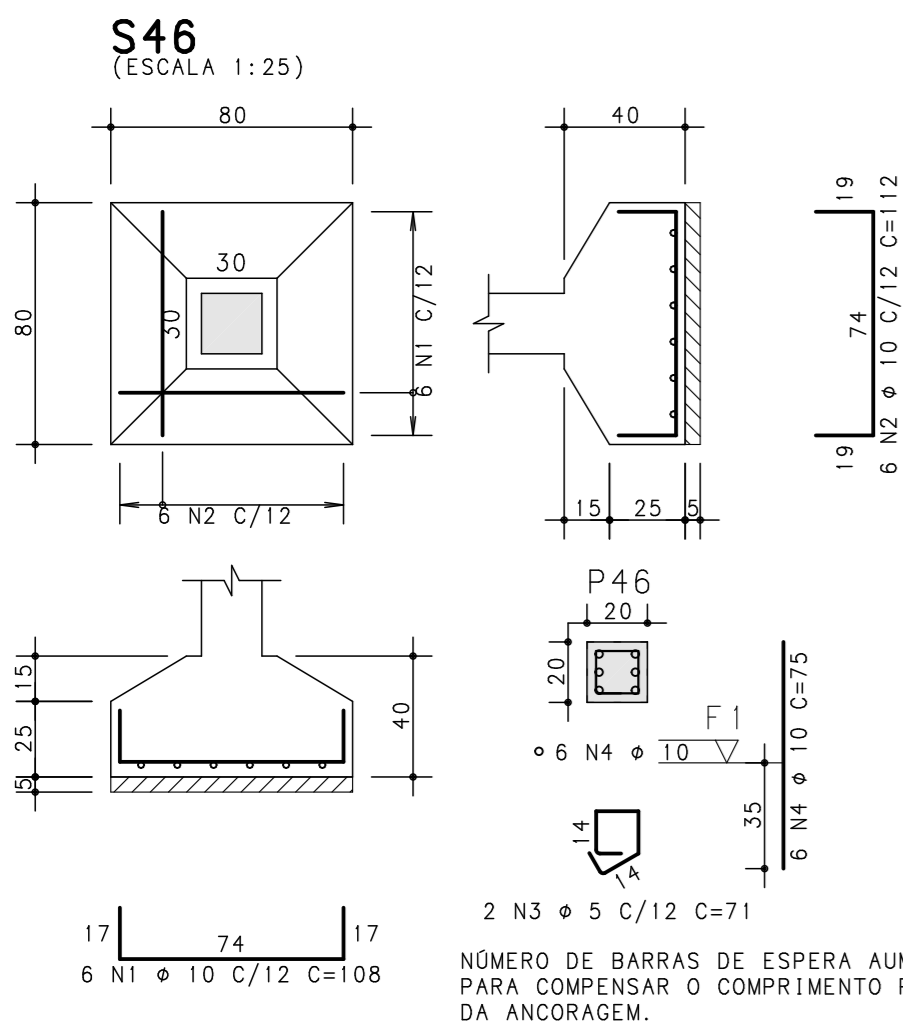
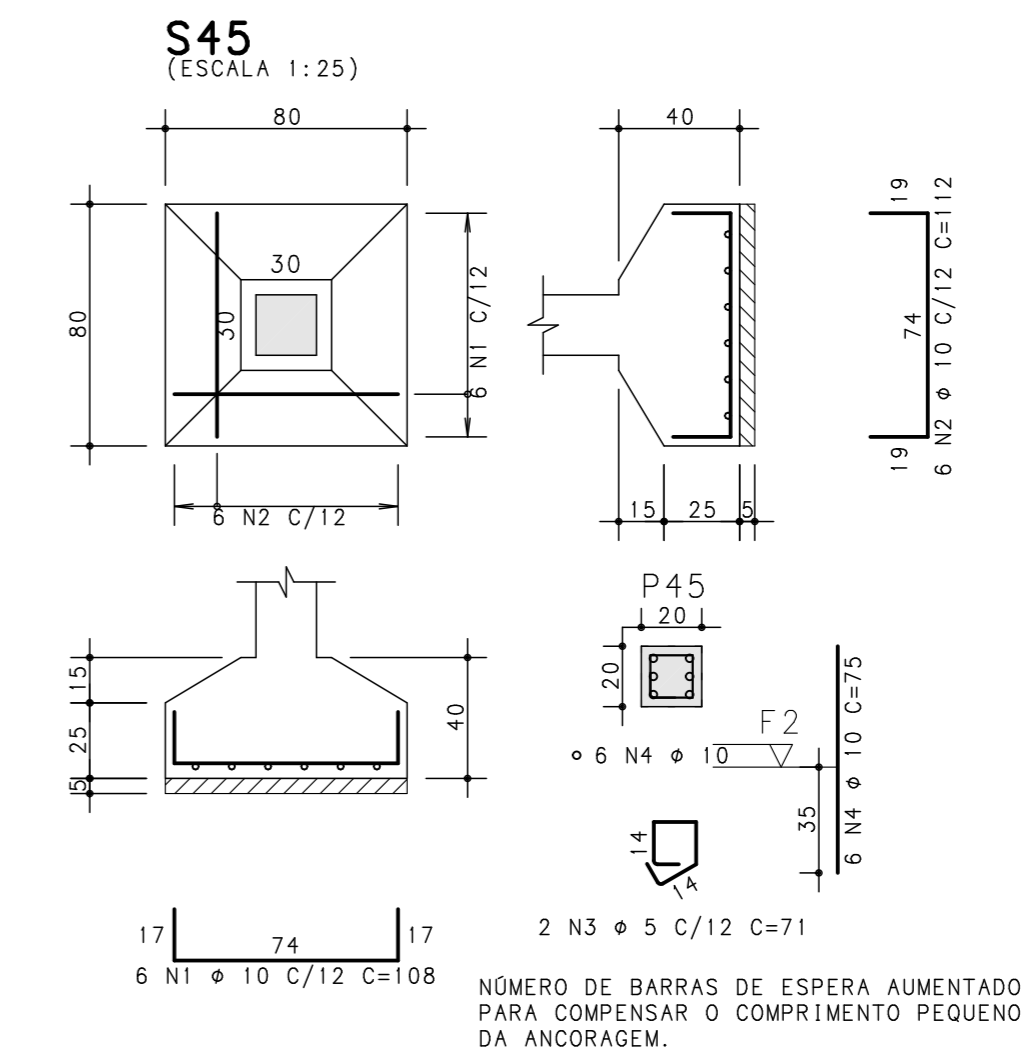
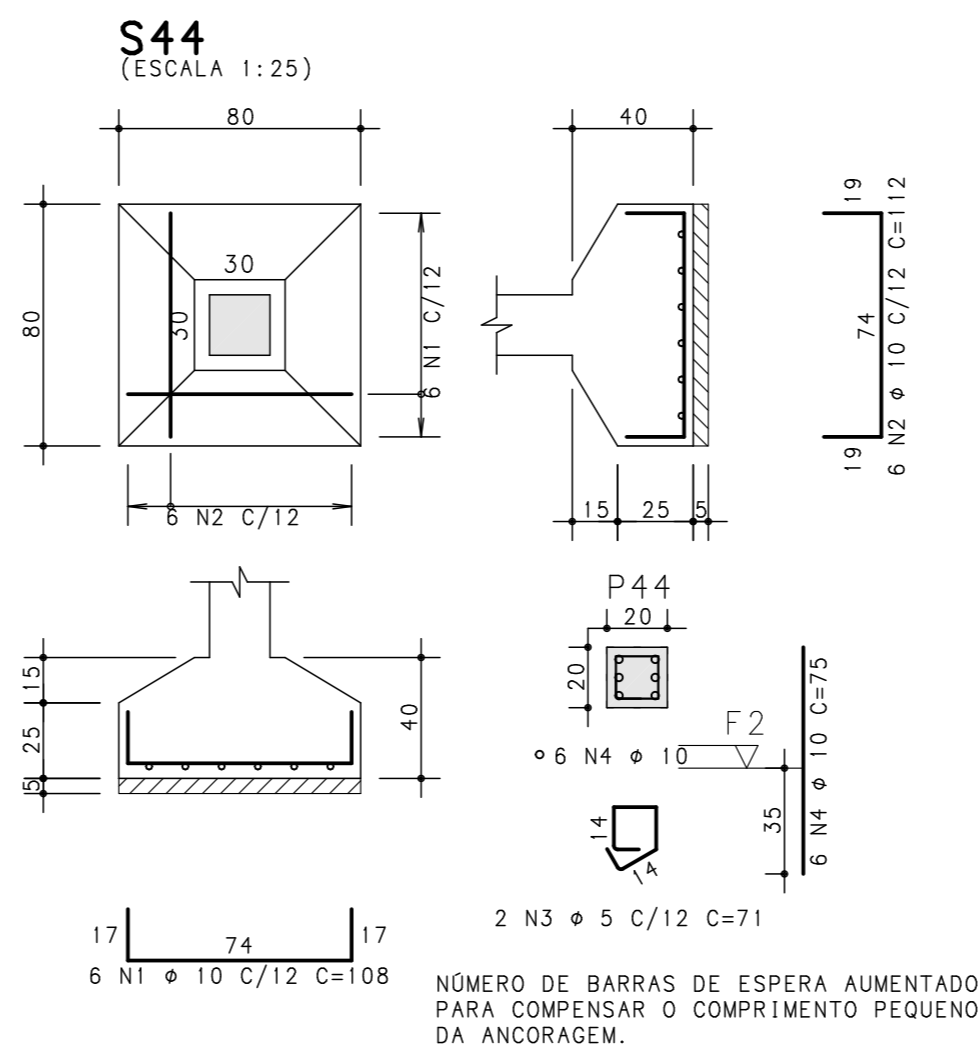
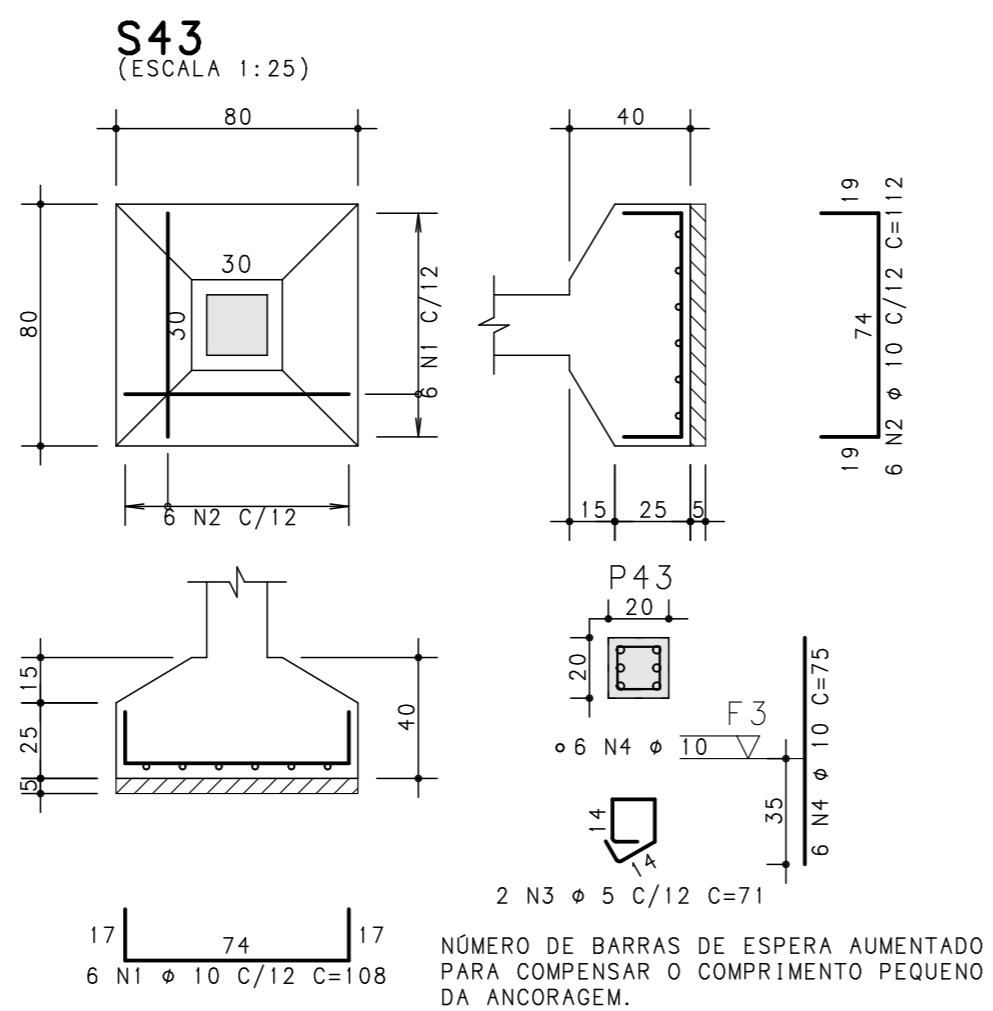
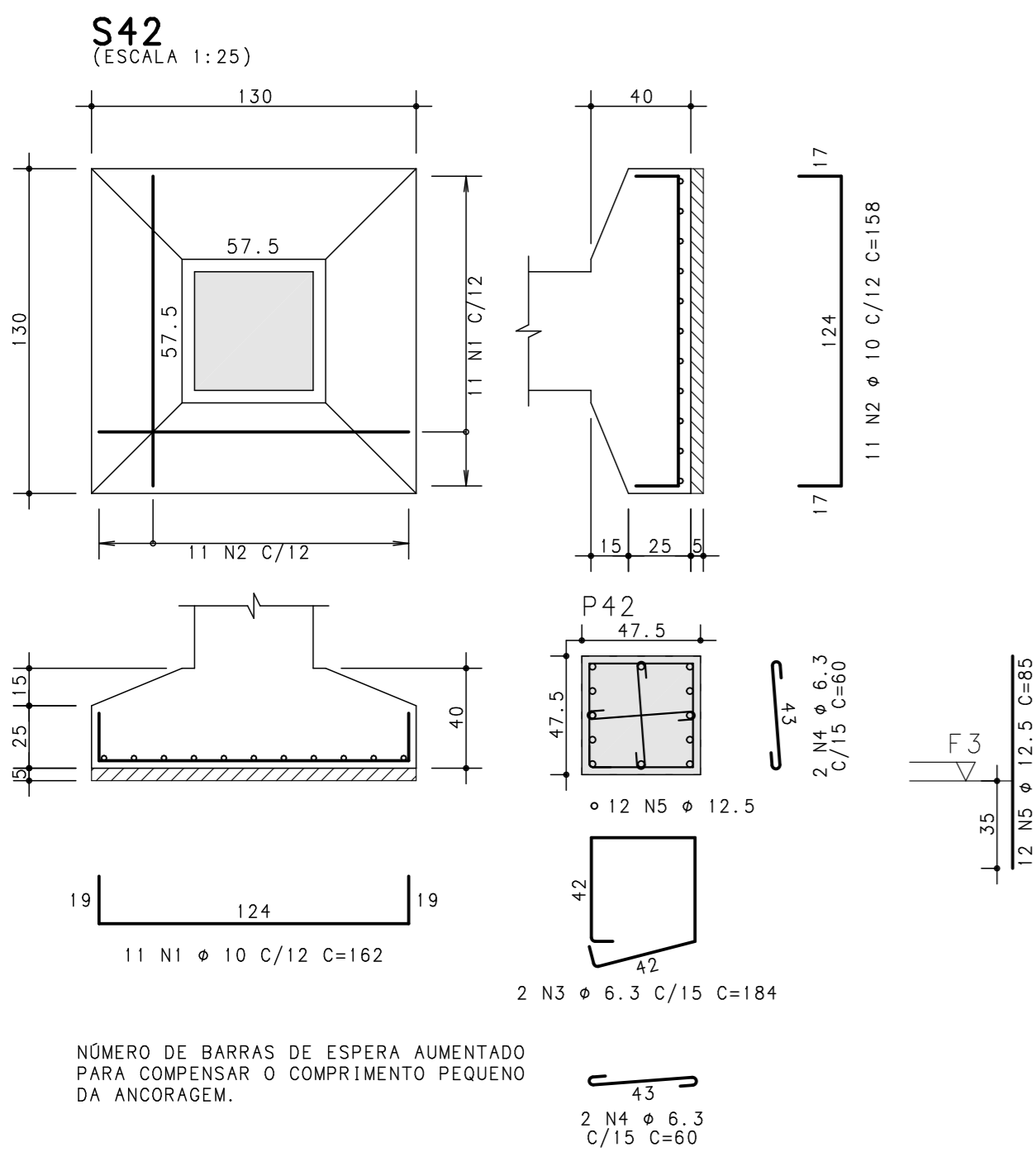
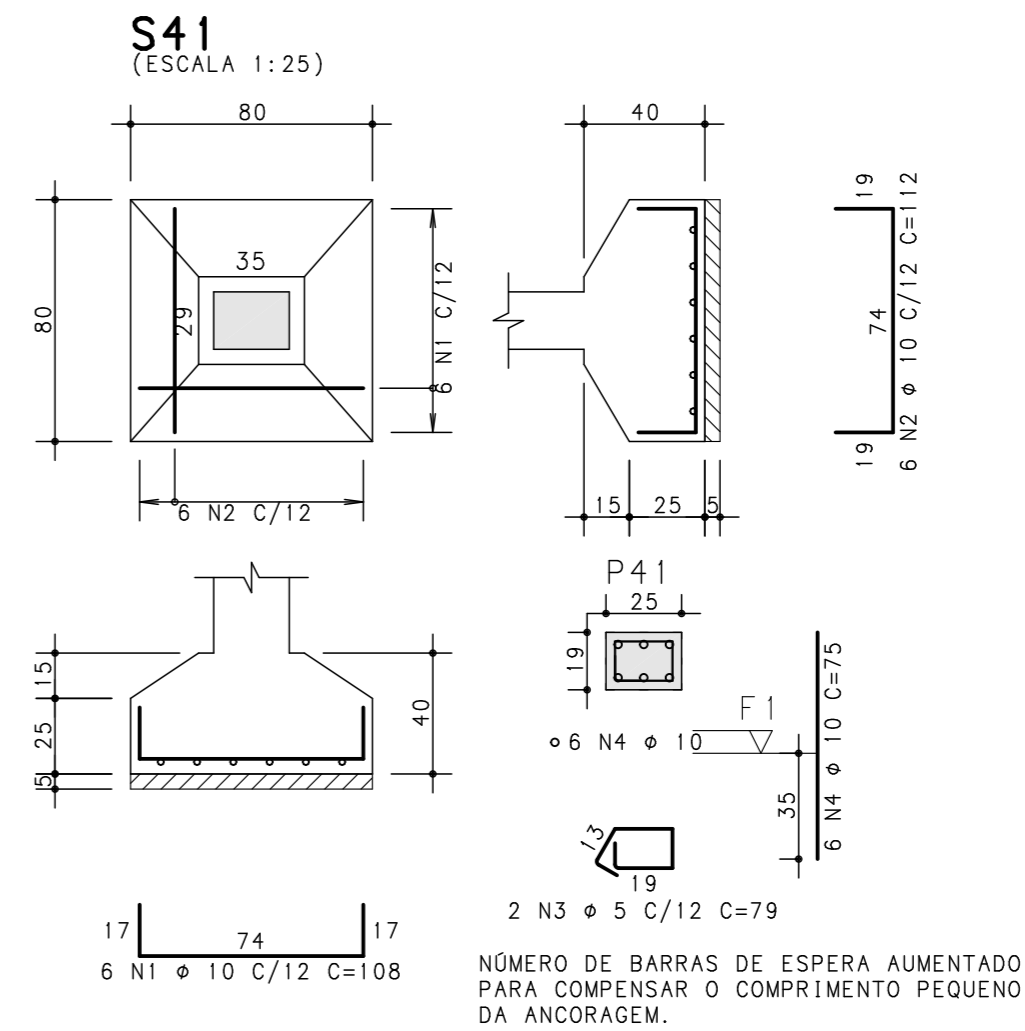
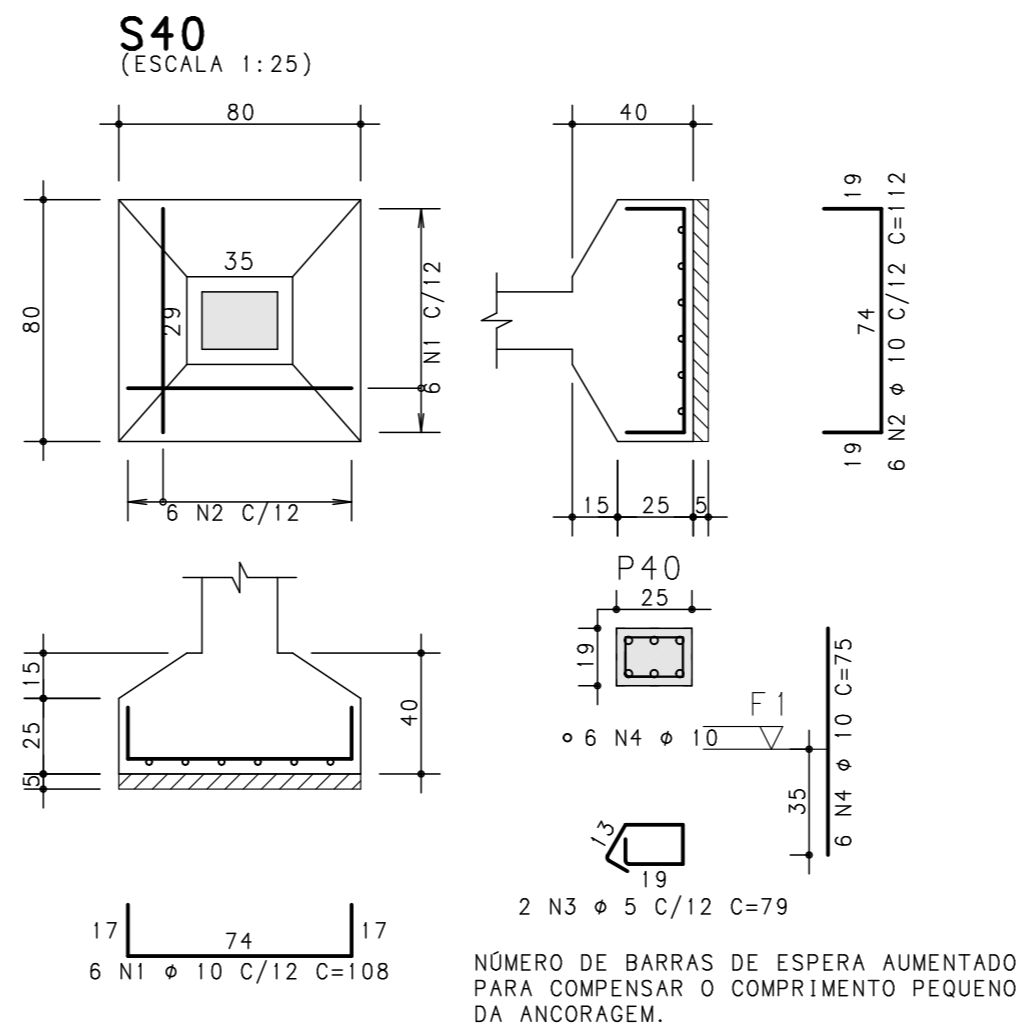
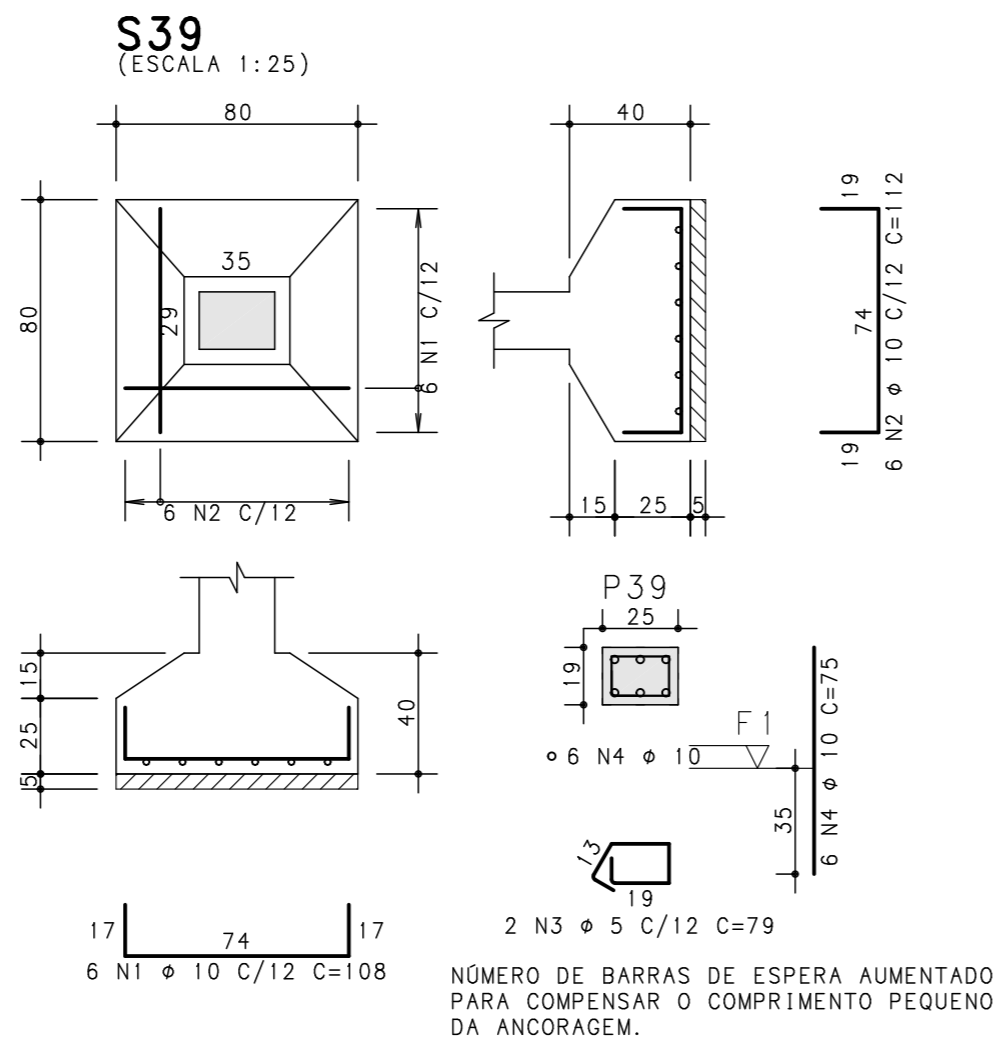
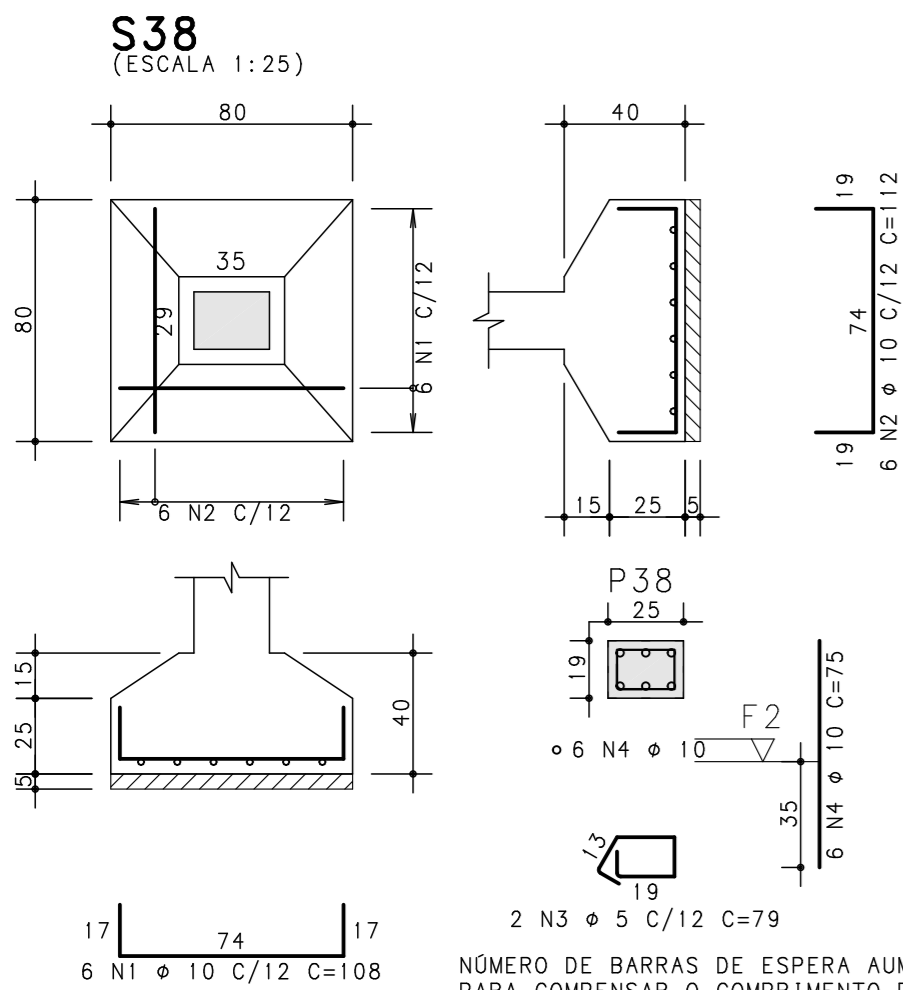
Rua Quinze de Novembro, 563/405
Pelotas - RS - CEP 96201-600
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm2			SOBRECARGA PREVISTA		OBRA N.º 0001		
CLIENTE SECRETARIA DA SAÚDE-PELOTAS					DES. N.º		
OBRA UBS TIPO 2-CORRIENTES					005		
TÍTULO FUNDAÇÃO ARMADURAS SAPATAS							
S27 / S28 / S29 / S30 S31 / S32 / S33 / S34 S35 / S36 / S37					REV. N.º 00		
DATA 18/08/2015		ESCALA 1 : 25		DESENHO UBS-FUN-FUN-005-R00		COORD.	ENG.º



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
S38	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	79
	50A	4	10	6	75
S39	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	79
	50A	4	10	6	75
S40	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	79
	50A	4	10	6	75
S41	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	79
	50A	4	10	6	75
S42	50A	1	10	11	162
	50A	2	10	11	158
	50A	3	6,3	2	184
	50A	4	6,3	4	60
S43	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	71
	50A	4	10	6	75
S44	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	71
	50A	4	10	6	75
S45	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	71
	50A	4	10	6	75
S46	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	71
	50A	4	10	6	75
S47	50A	1	10	6	108
	50A	2	10	6	112
	60B	3	5	2	71
	50A	4	10	6	75
S48	50A	1	10	6	112
	50A	2	10	6	108
	60B	3	5	2	71
	50A	4	10	6	75

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	15	2
50A	6,3	6	1
50A	10	212	131
50A	12,5	10	10
Peso Total		60B =	2 kg
Peso Total		50A =	142 kg



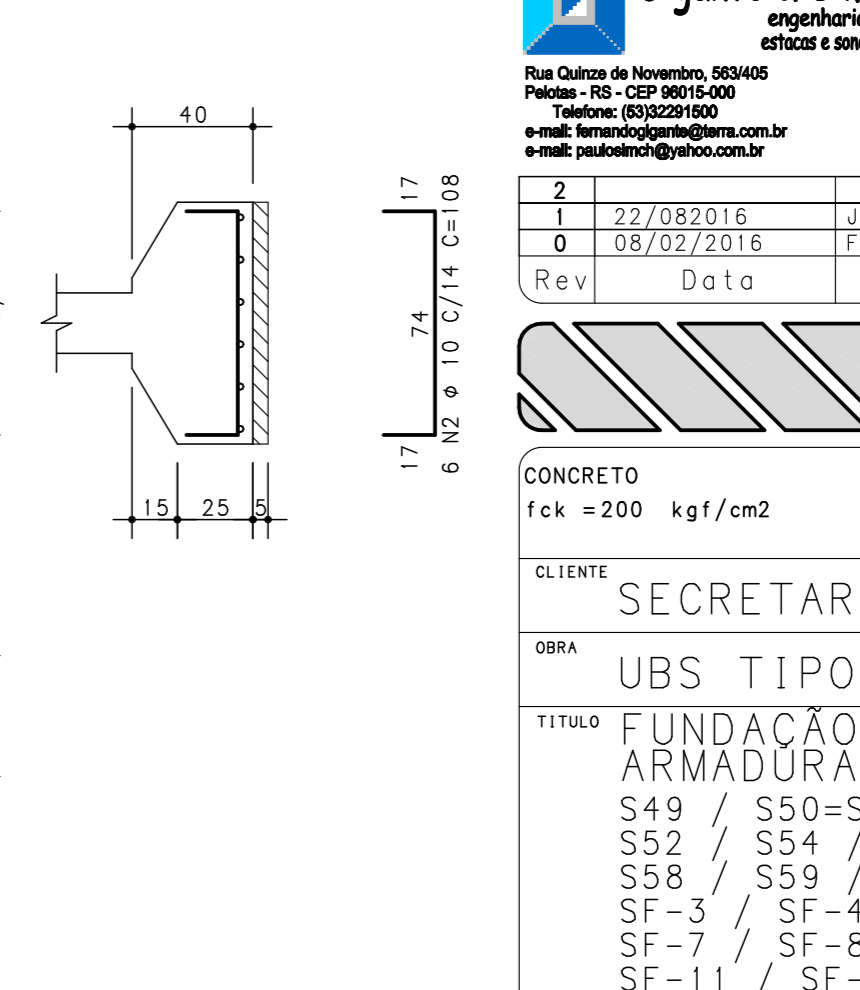
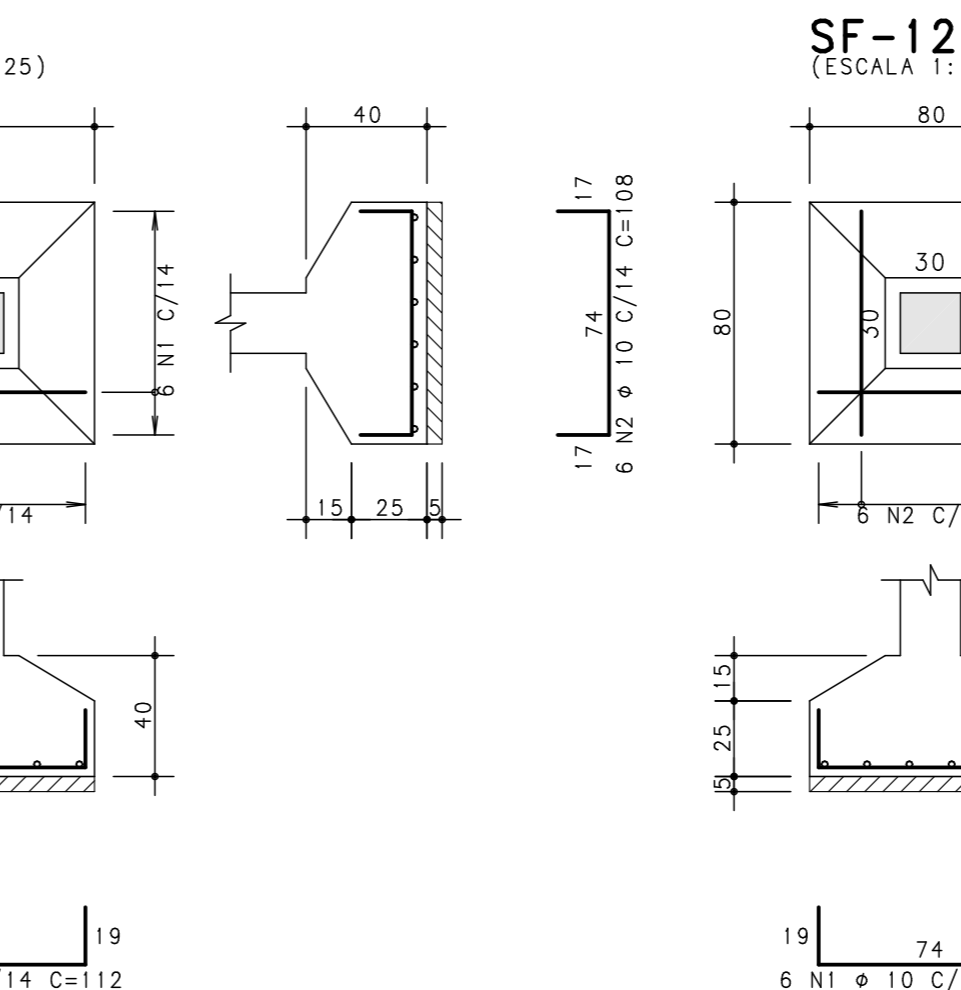
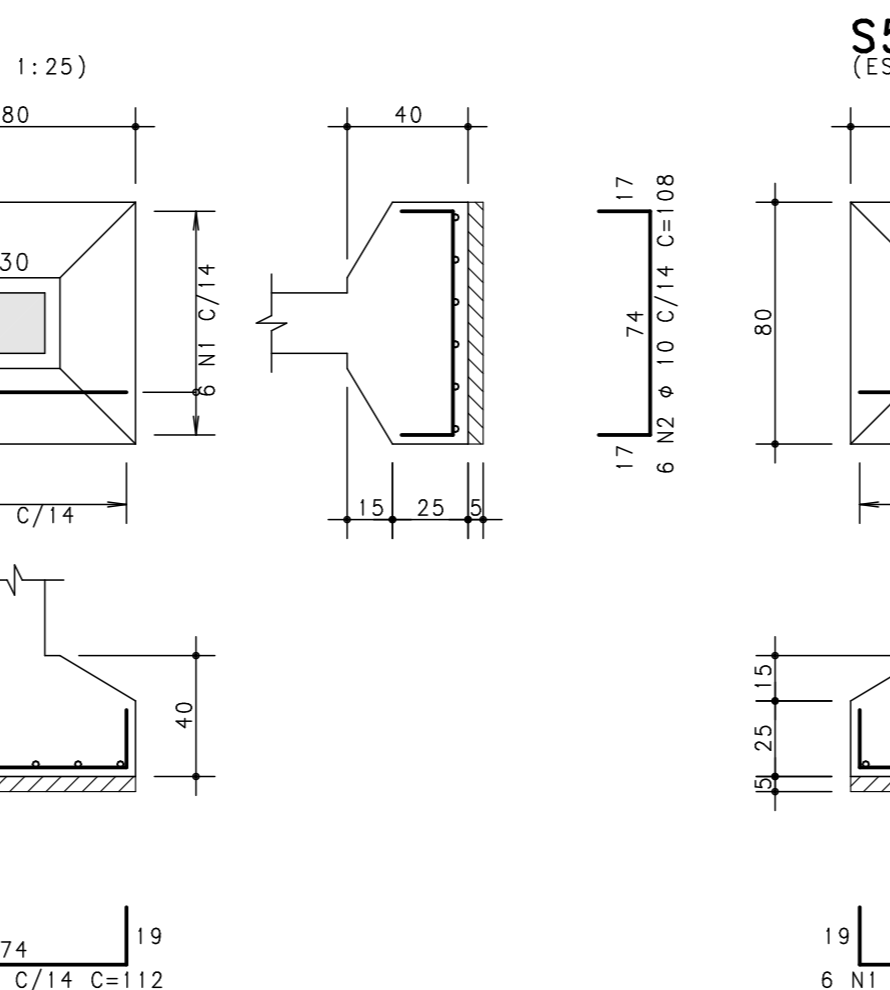
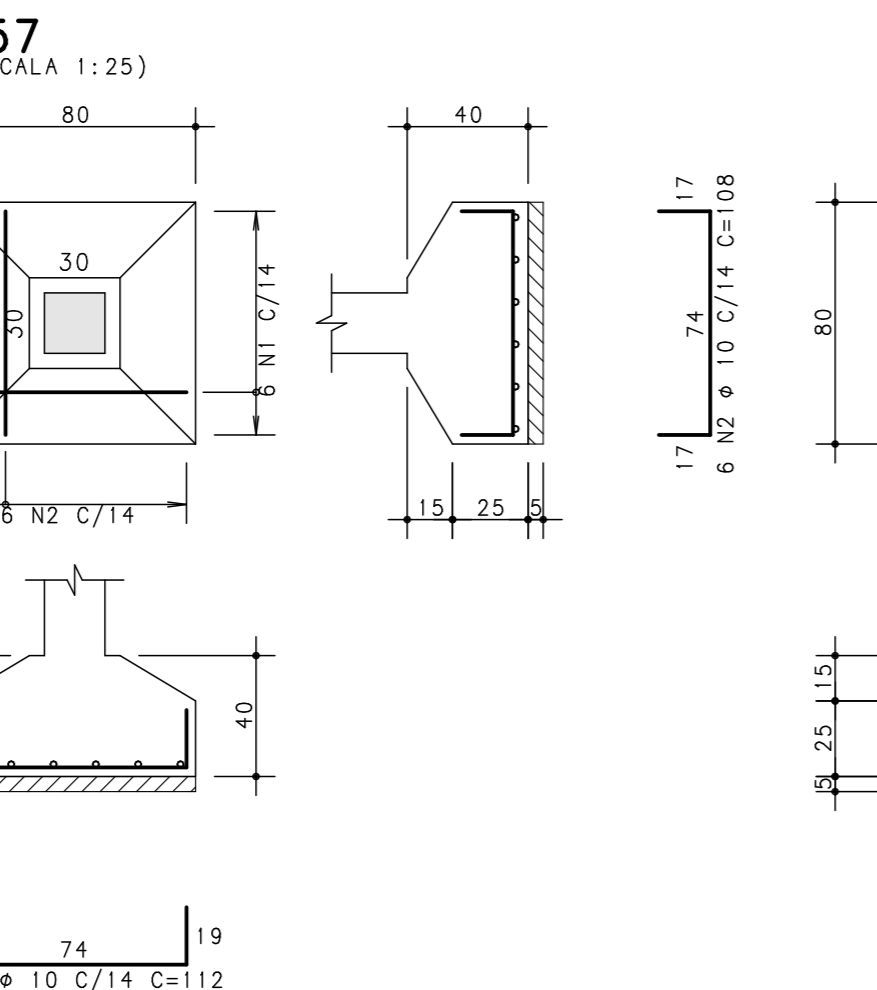
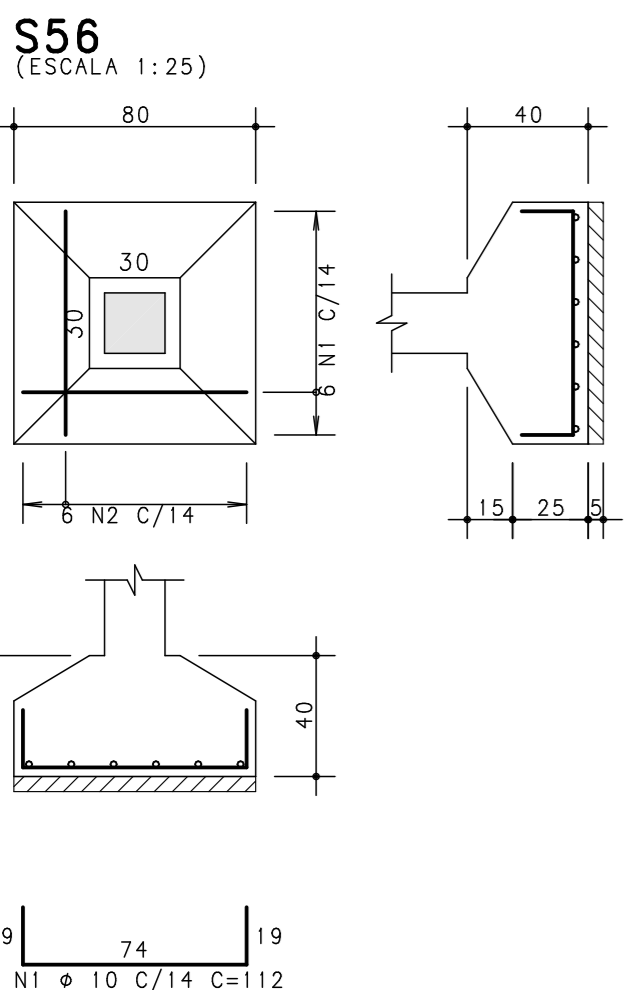
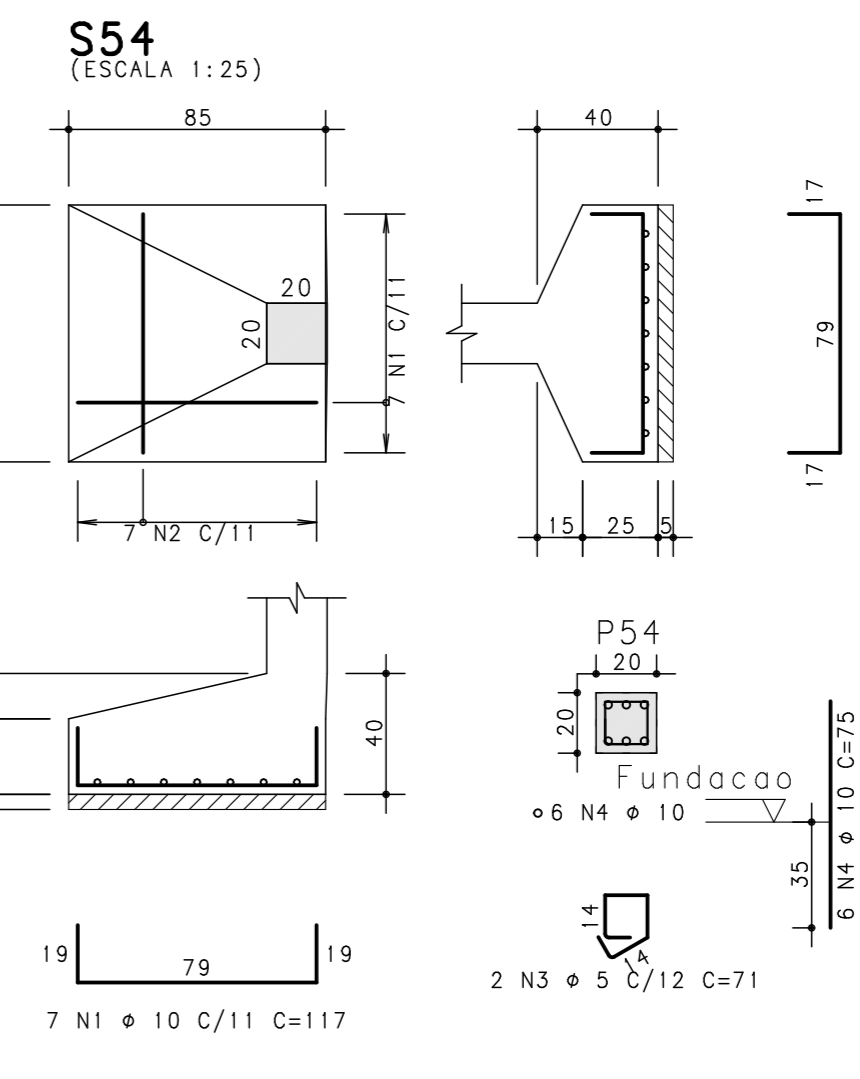
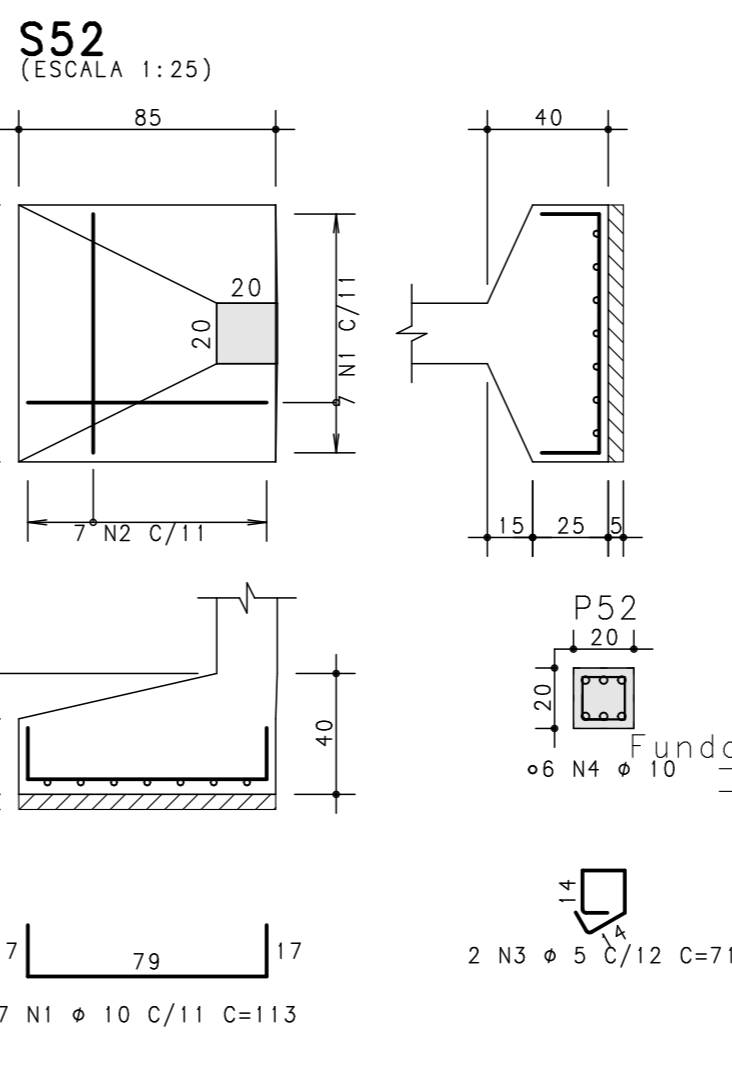
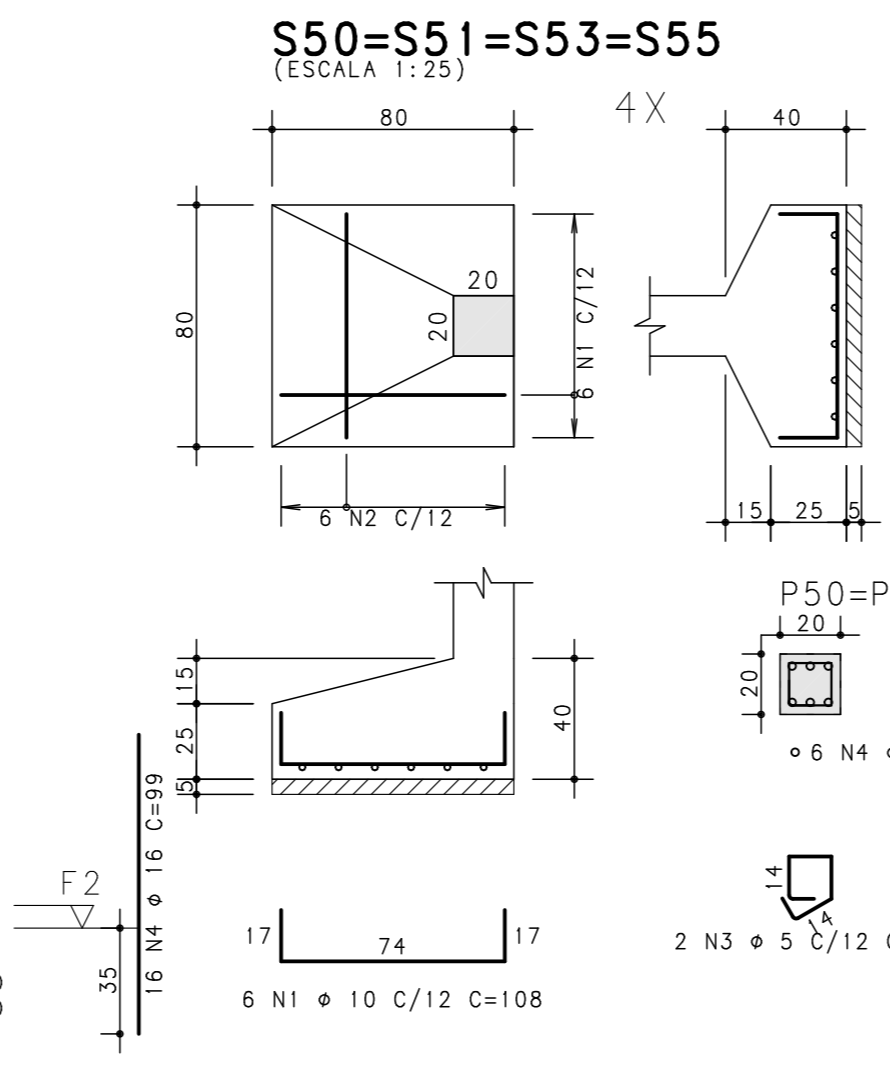
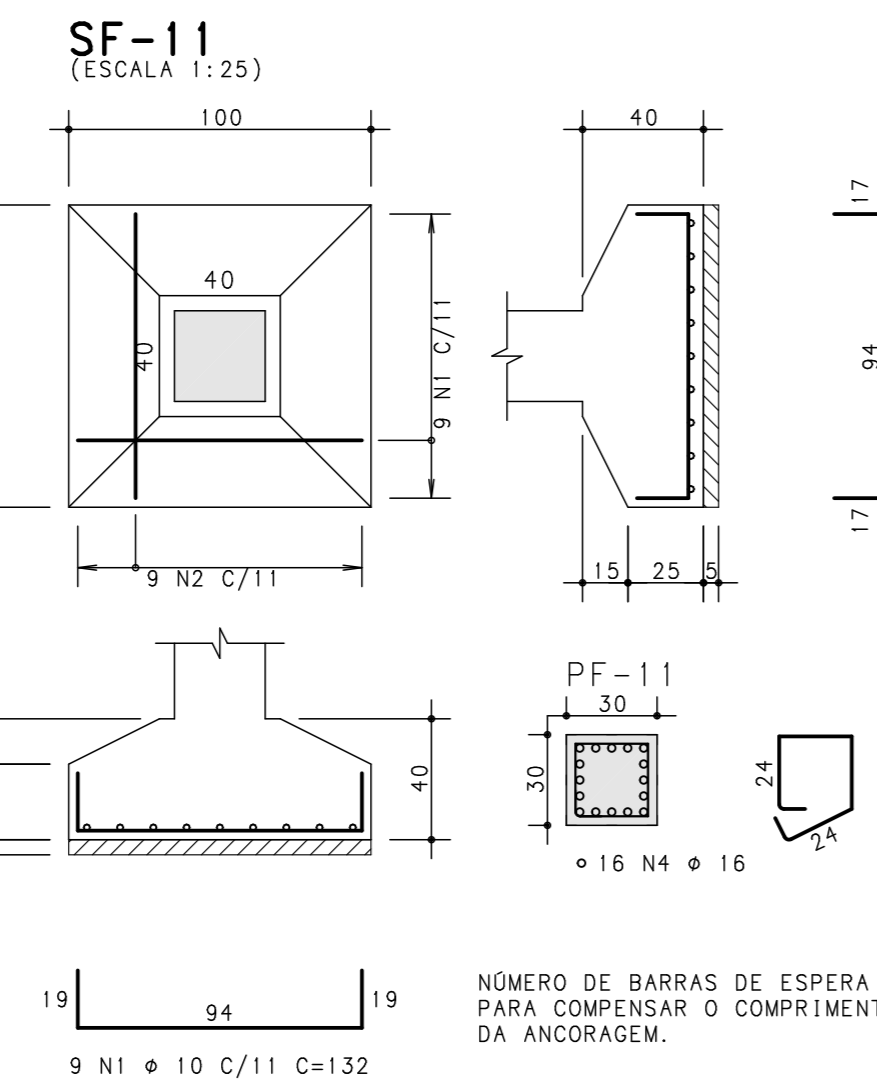
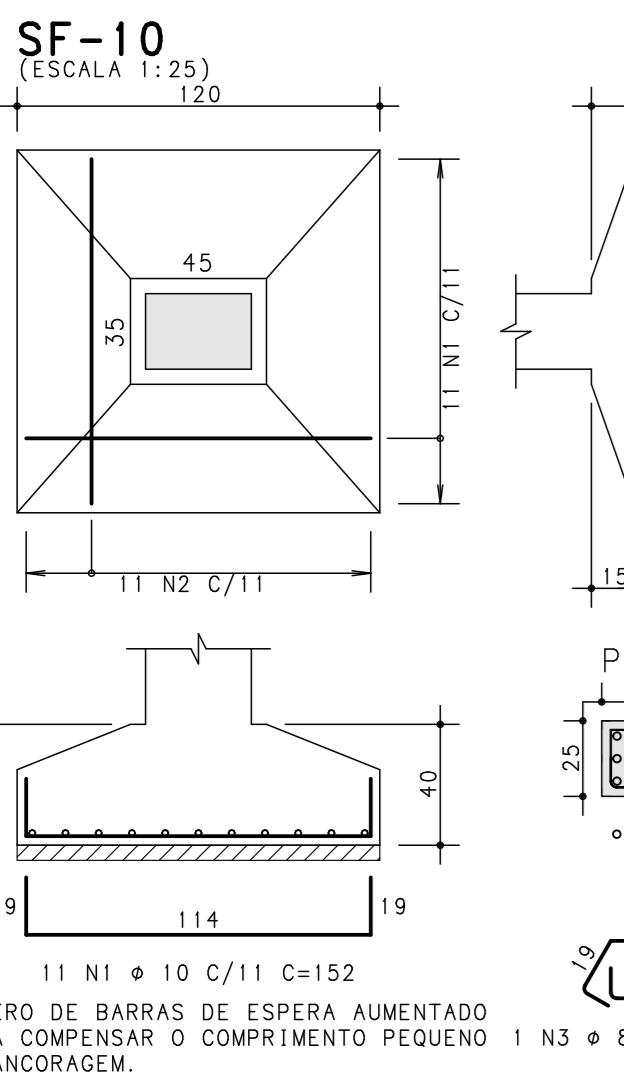
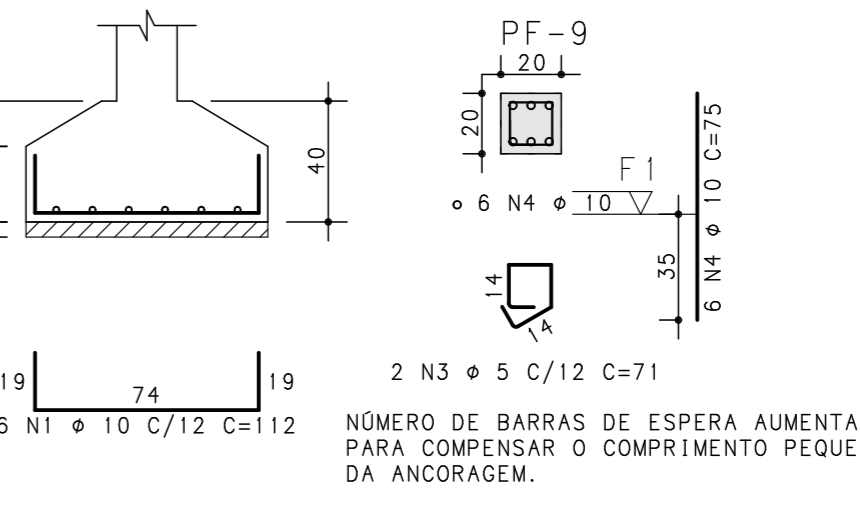
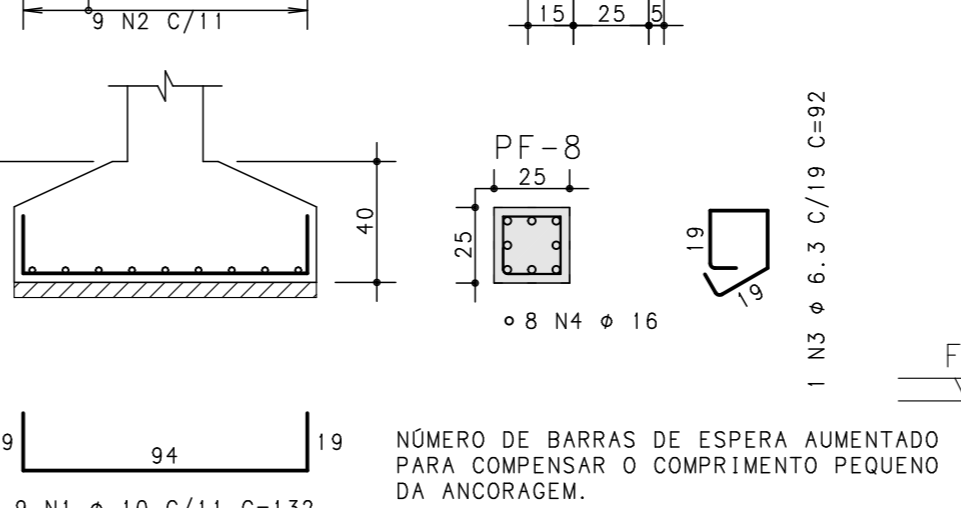
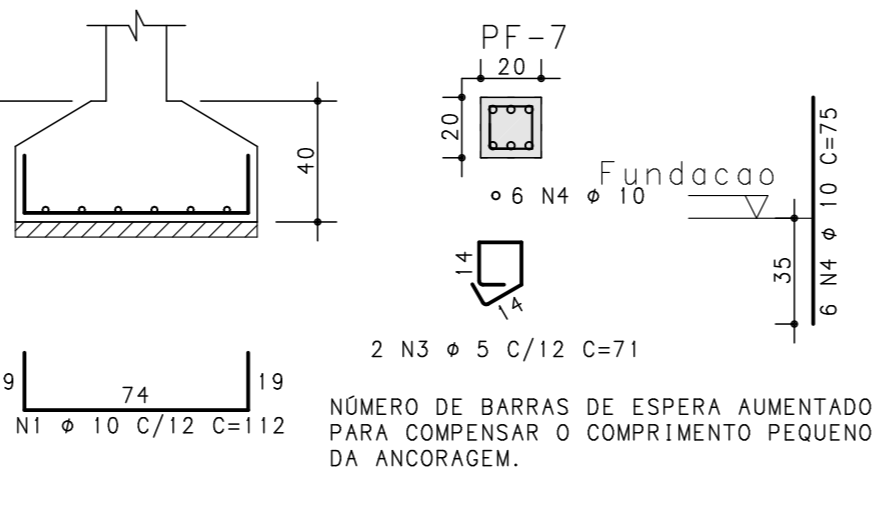
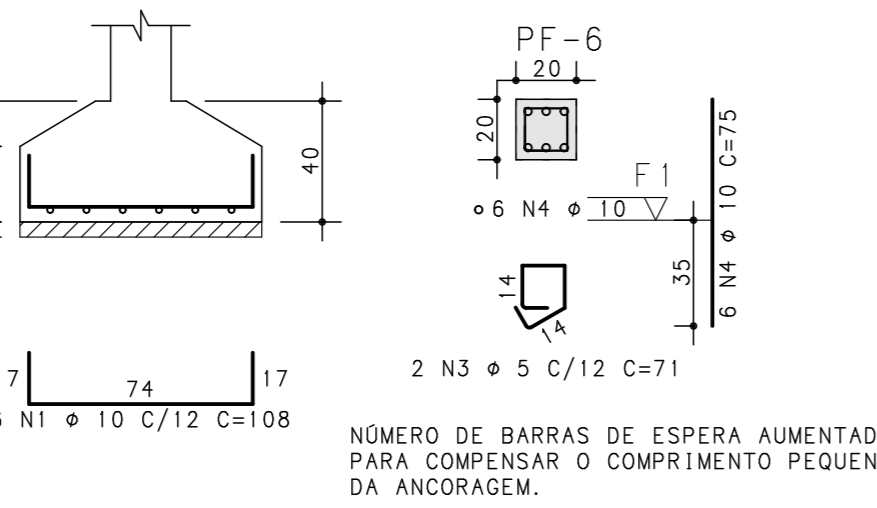
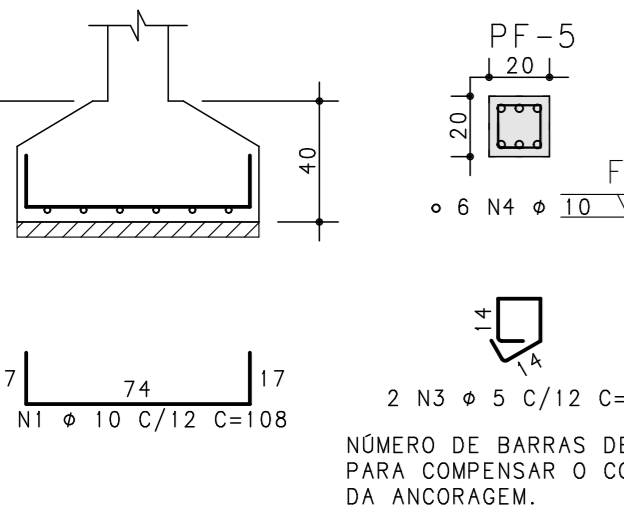
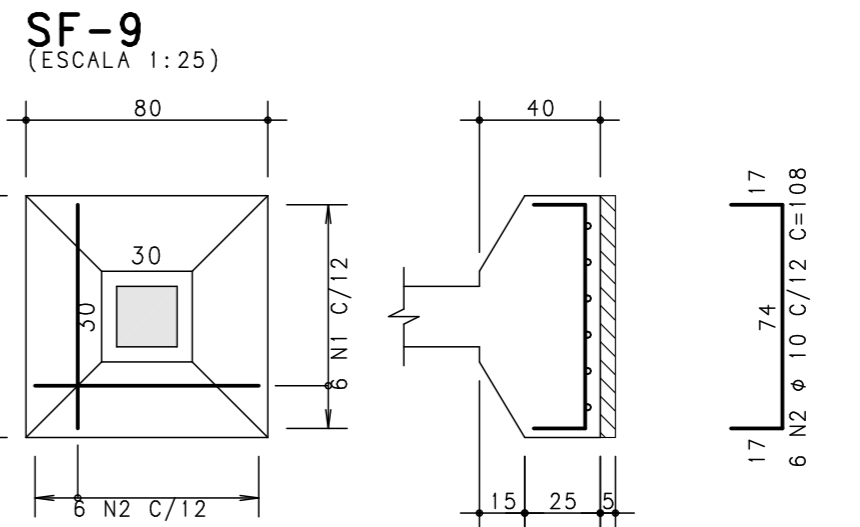
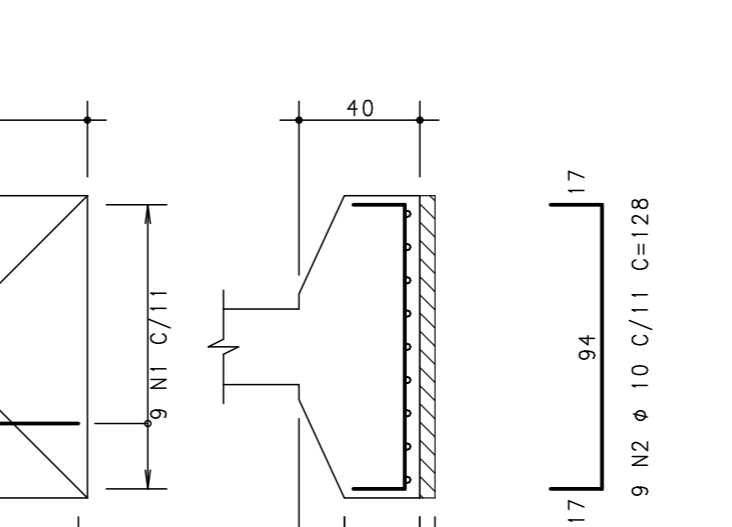
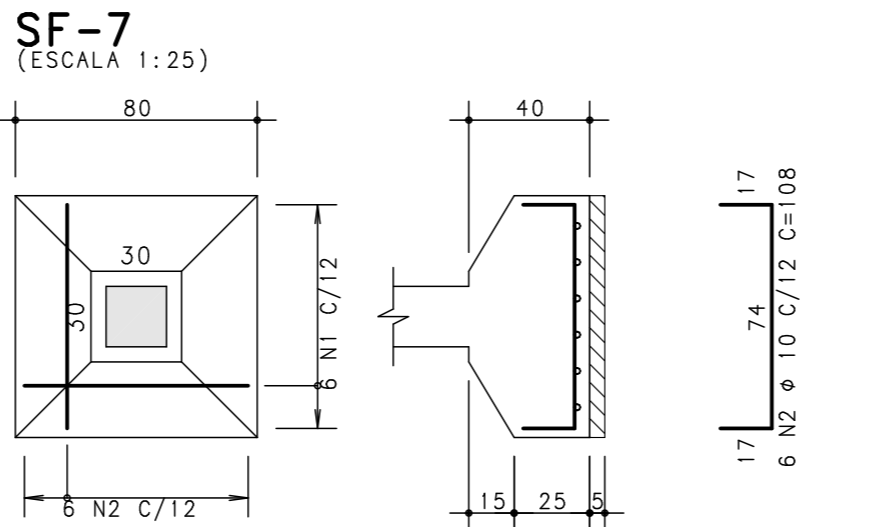
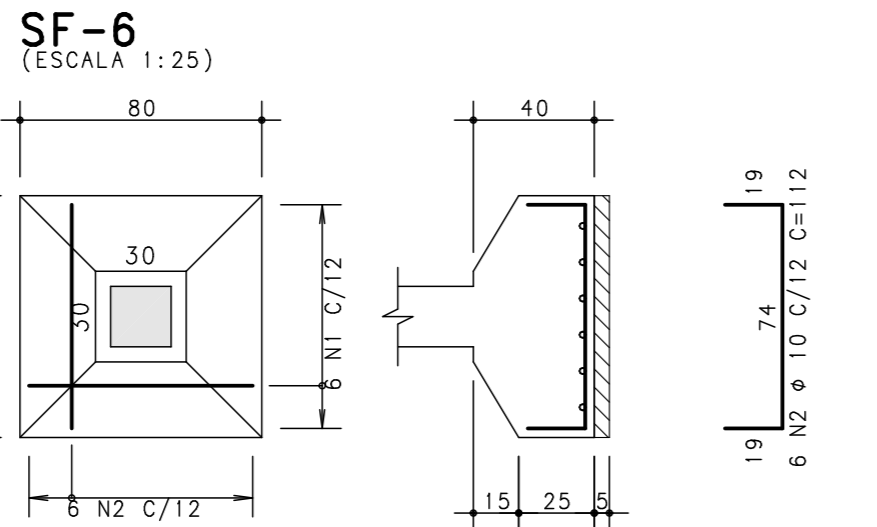
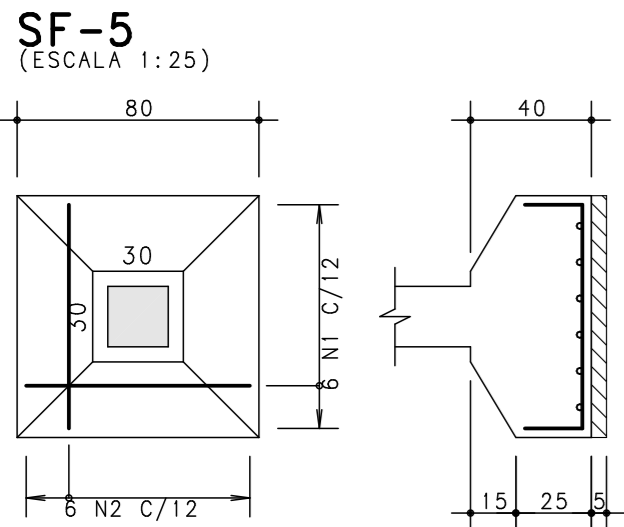
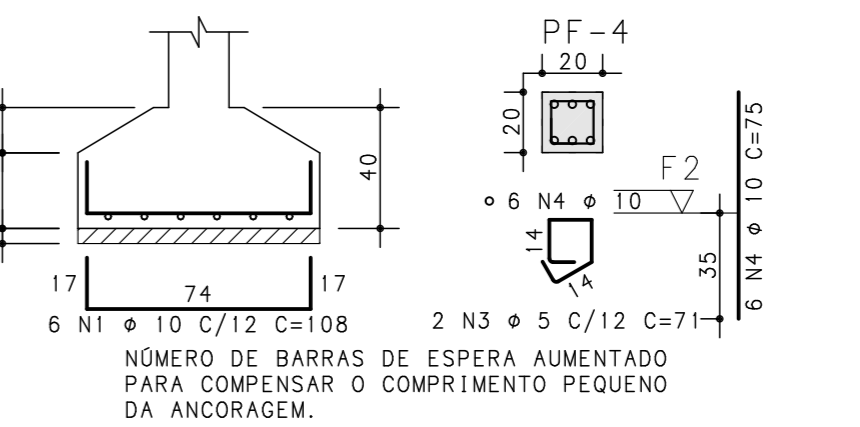
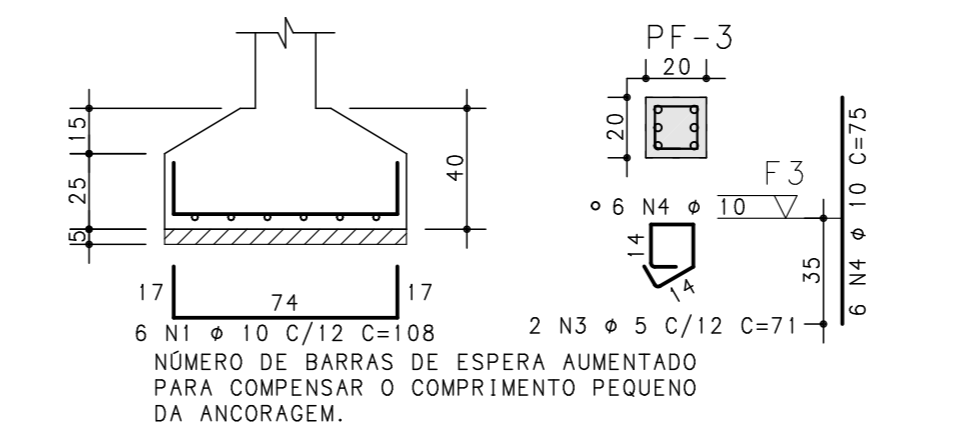
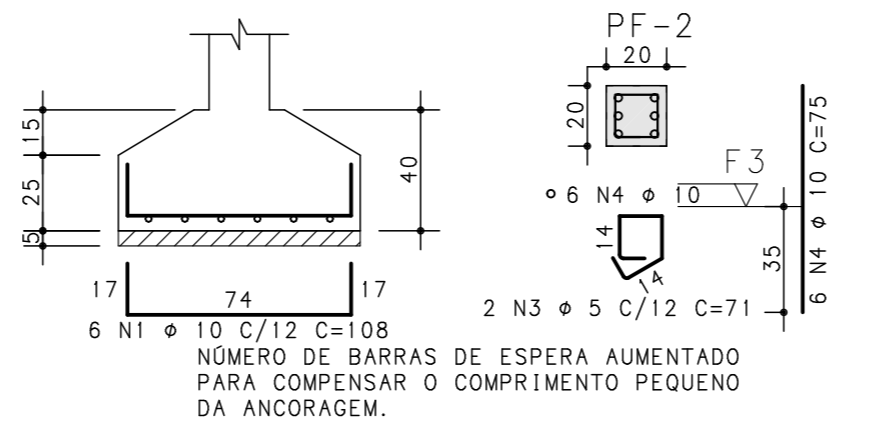
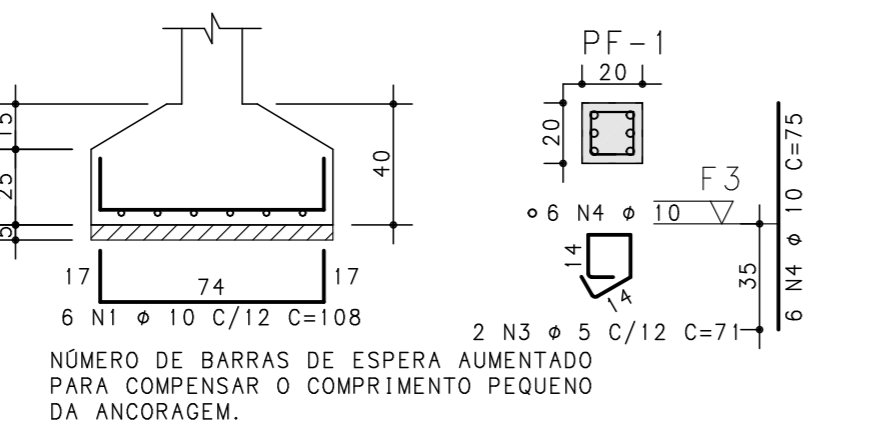
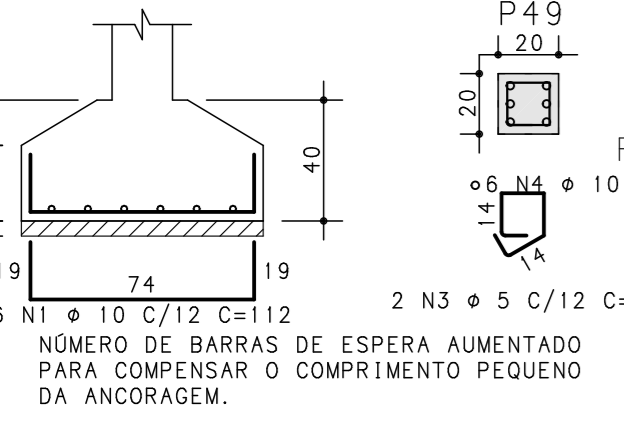
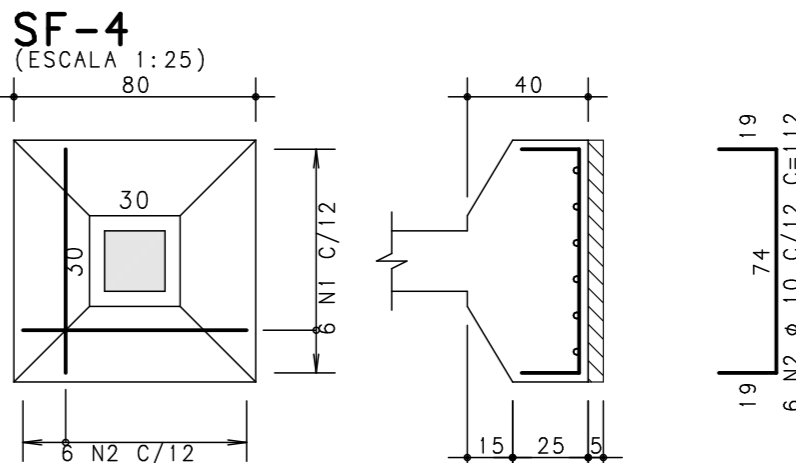
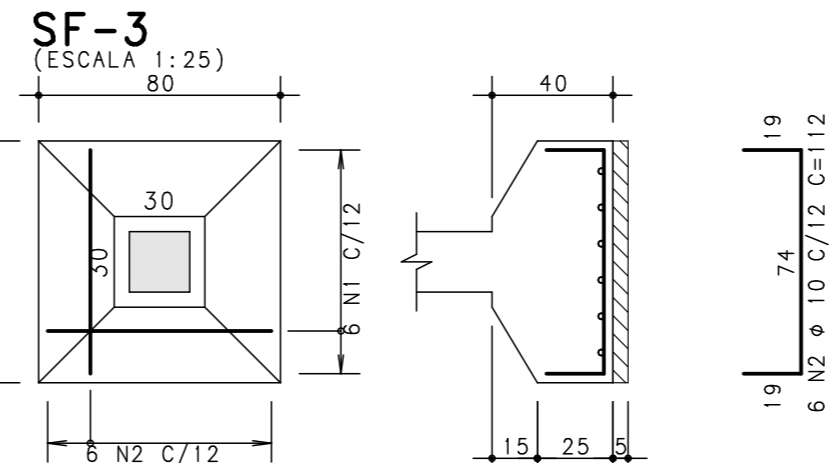
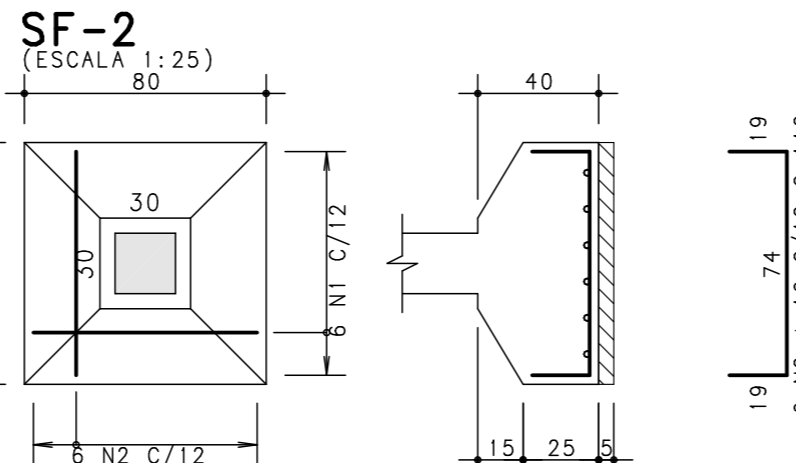
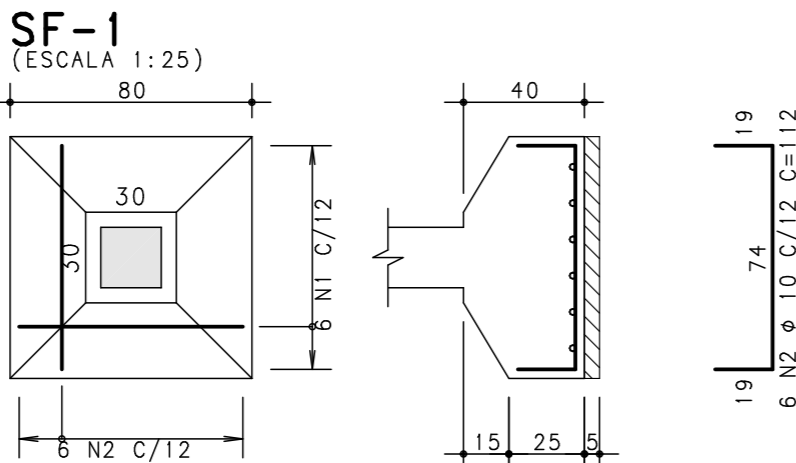
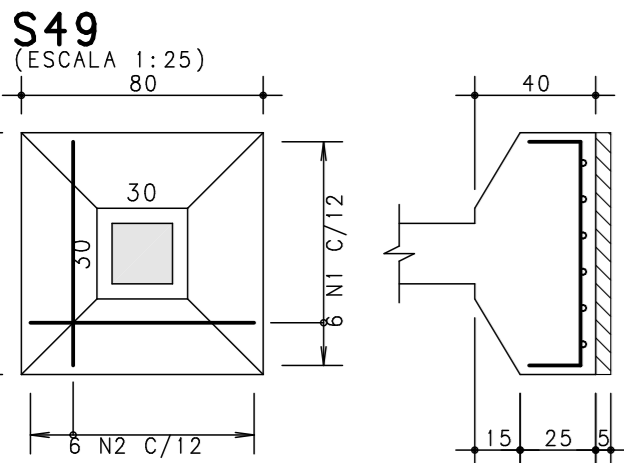
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-500
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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1			
0			
Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm2				SOBRECARGA PREVISTA			
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				OBRA N.º 0001			
OBRA UBS TIPO 2-CORRIENTES				DES. N.º			
TÍTULO FUNDAÇÃO ARMADURAS SAPATAS				006			
S38 / S39 / S40 / S41 S42 / S43 / S44 / S45 S46 / S47 / S48				REV. N.º 00			
DATA 18/08/2015		ESCALA 1:25		DESENHO UBS-FUN-FUN-006-R00		COORD.	
ENG.º							



	ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT (cm)	TOTAL (cm)
S49	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S50=S51=S53=S55 (X4)						
S50	50A	1	10	24	108	2592
	50A	2	10	24	112	2688
	60B	3	5	8	71	568
	50A	4	10	24	75	1800
S52	50A	1	10	7	113	791
	50A	2	10	7	117	819
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S54	50A	1	10	7	117	819
	50A	2	10	7	113	791
	60B	3	5	2	71	142
	50A	4	10	6	75	450
S56	50A	1	10	6	112	672
	50A	2	10	6	108	648
S57	50A	1	10	6	112	672
	50A	2	10	6	108	648
S58	50A	1	10	6	112	672
	50A	2	10	6	108	648
S59	50A	1	10	6	112	672
	50A	2	10	6	108	648
SF-1	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-2	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-3	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-4	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-5	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-6	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-7	50A	1	10	6	108	648
	50A	2	10	6	112	672
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-8	50A	1	10	9	132	1188
	50A	2	10	9	128	1152
	50A	3	6.3	1	92	92
	50A	4	16	8	99	792
SF-9	50A	1	10	6	112	672
	50A	2	10	6	108	648
	60B	3	5	2	71	142
	50A	4	10	6	75	450
SF-10	50A	1	10	11	152	1672
	50A	2	10	11	148	1628
	50A	3	8	1	114	114
	50A	4	25	12	135	1620
SF-11	50A	1	10	9	132	1188
	50A	2	10	9	128	1152
	50A	3	6.3	1	112	112
	50A	4	16	16	99	1584
SF-12	50A	1	10	6	112	672
	50A	2	10	6	108	648

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	21	3
50A	6.3	2	0
50A	8	1	0
50A	10	417	257
50A	16	24	37
50A	25	16	62
Peso Total		60B =	3 kg
Peso Total		50A =	358 kg



Rua Quinze de Novembro, 553/405
Piedade - RS - CEP 95015-000
Telefone: (51) 32291500
e-mail: fernando@gsimch.com.br
e-mail: paulo@gsimch.com.br

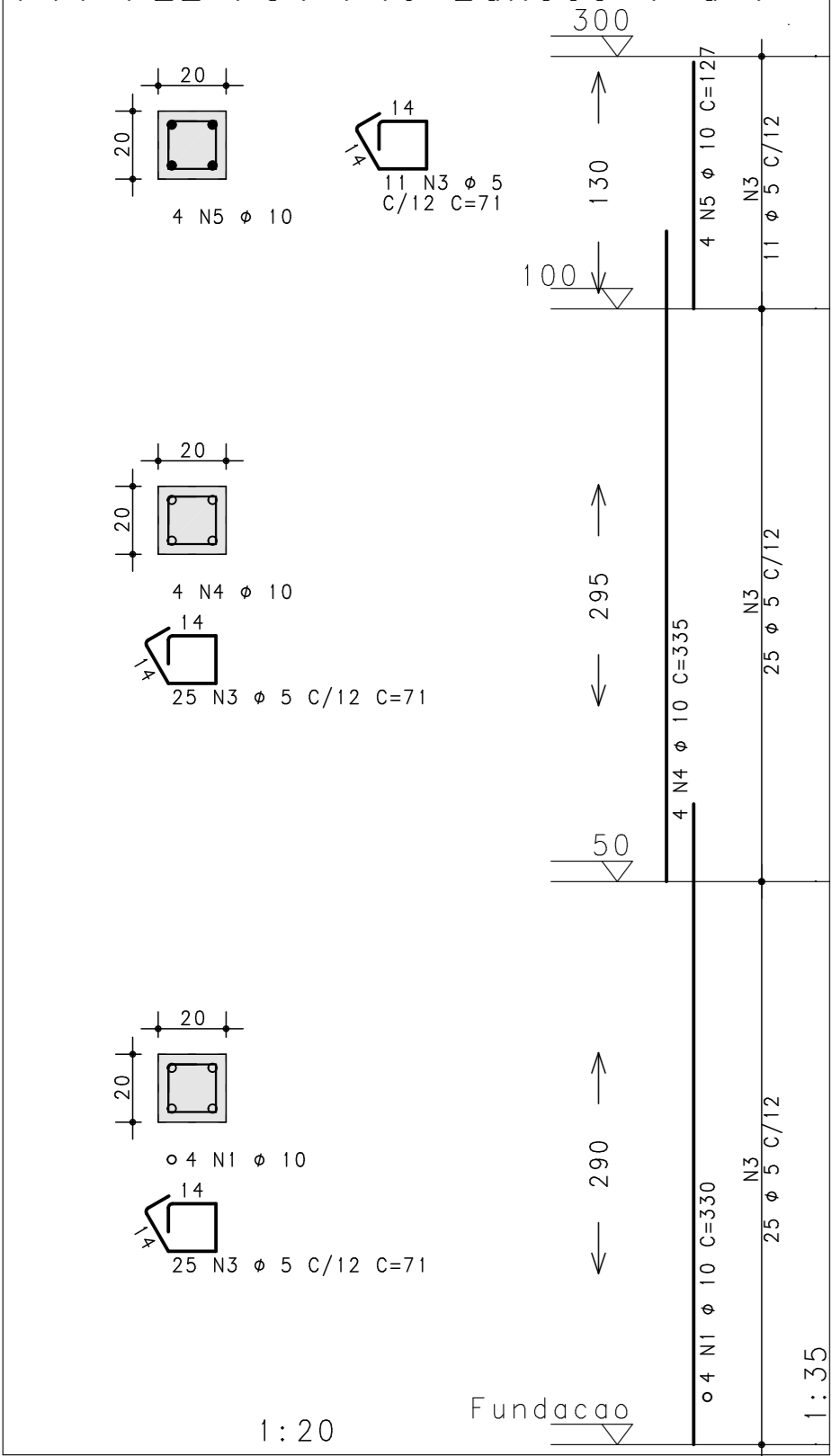
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

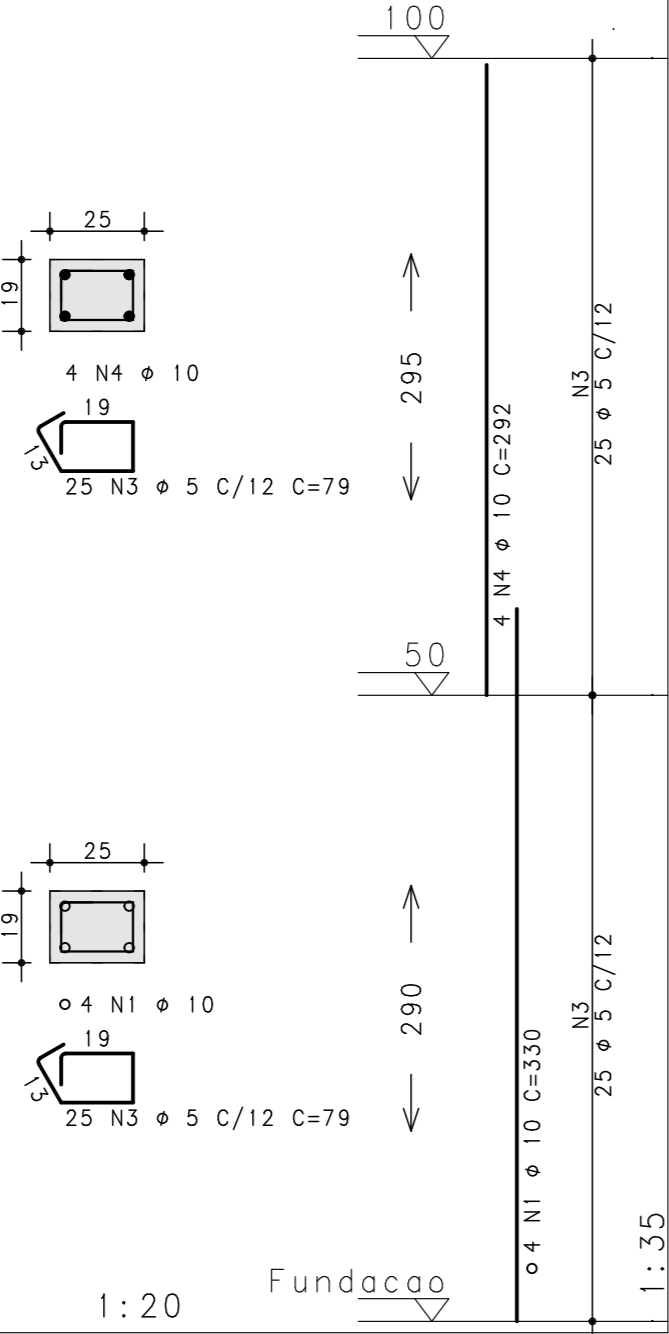
Rev	Data	Autor	Assunto
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1	08/02/2016	Fernando	Inclusão corredor fundo - Sapatas S50 até S55

CONCRETO fck = 200 kgf/cm2	SOBRECARGA PREVISTA	OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º
OBRA UBS TIPO 2-CORRIENTES		007
TÍTULO FUNDAÇÃO ARMADURAS SAPATAS S49 / S50=S51=S53=S55 S52 / S54 / S56 / S57 S58 / S59 / SF-1 / SF-2 SF-3 / SF-4 / SF-5 / SF-6 SF-7 / SF-8 / SF-9 / SF-10 SF-11 / SF-12		REV. N.º 00
DATA 22/08/2016	ESCALA 1:25	COORD. UBS-FUN-FUN-007-R00
ENG.º		

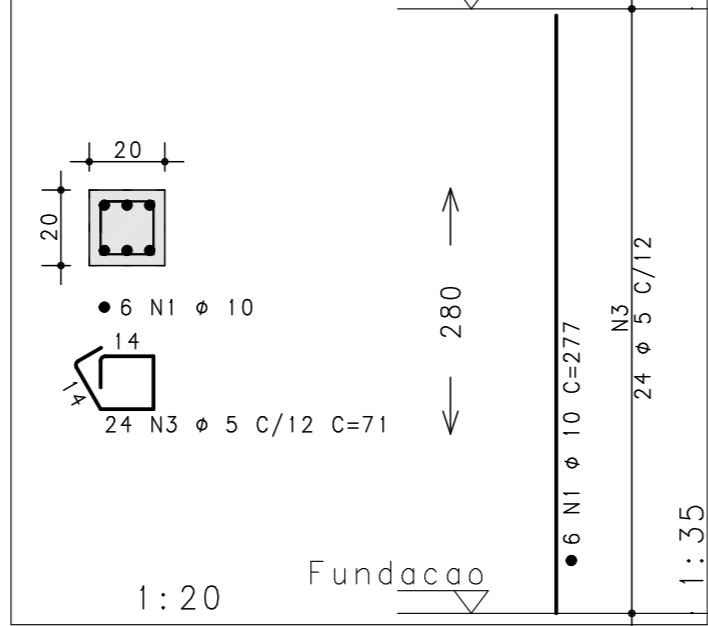
P11=P22=P34=P49 Lances 1 a 7



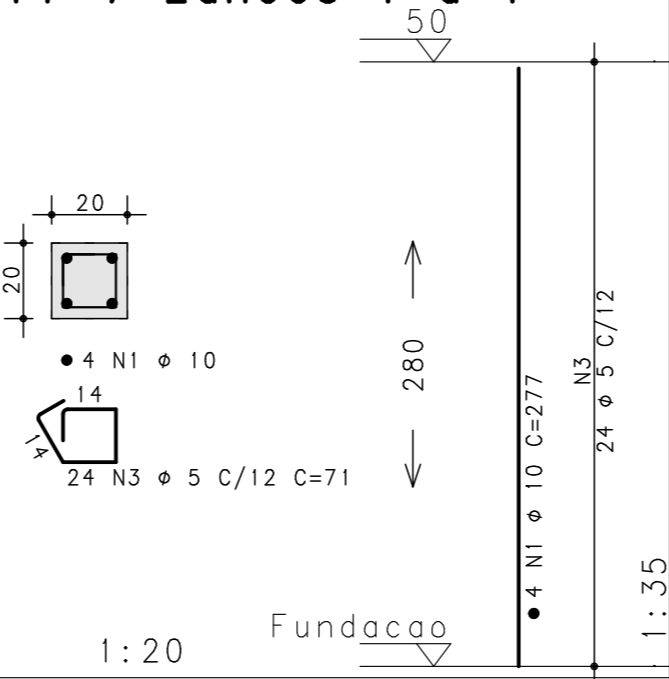
P21=P33 Lances 1 a 5



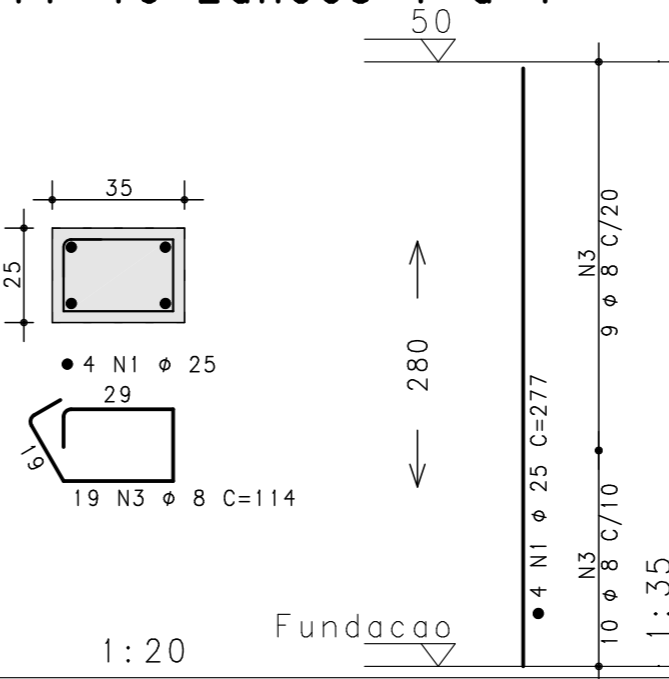
P50=P51=P52=P53=P54=P55 Lances 1 a 4



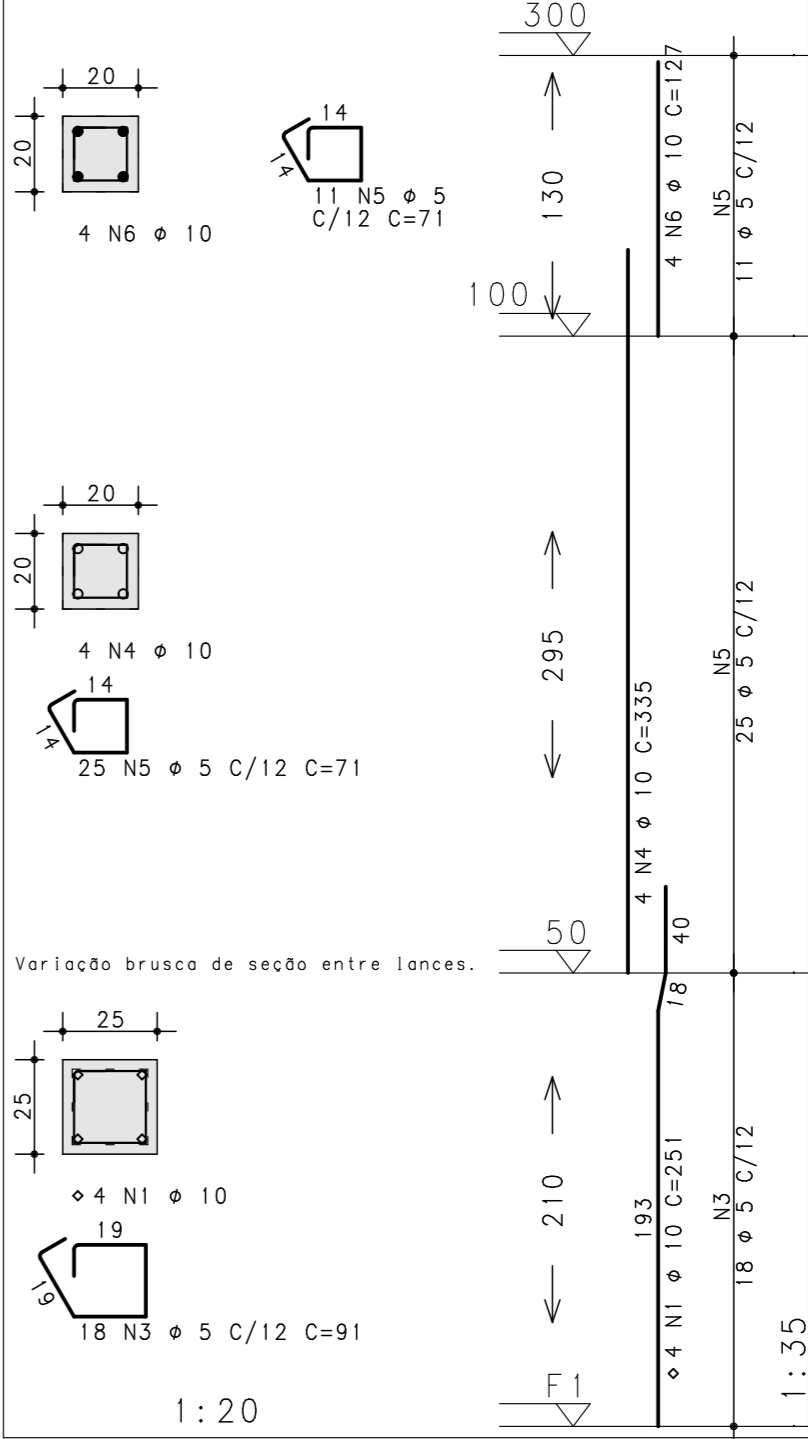
PF-7 Lances 1 a 4



PF-10 Lances 1 a 4



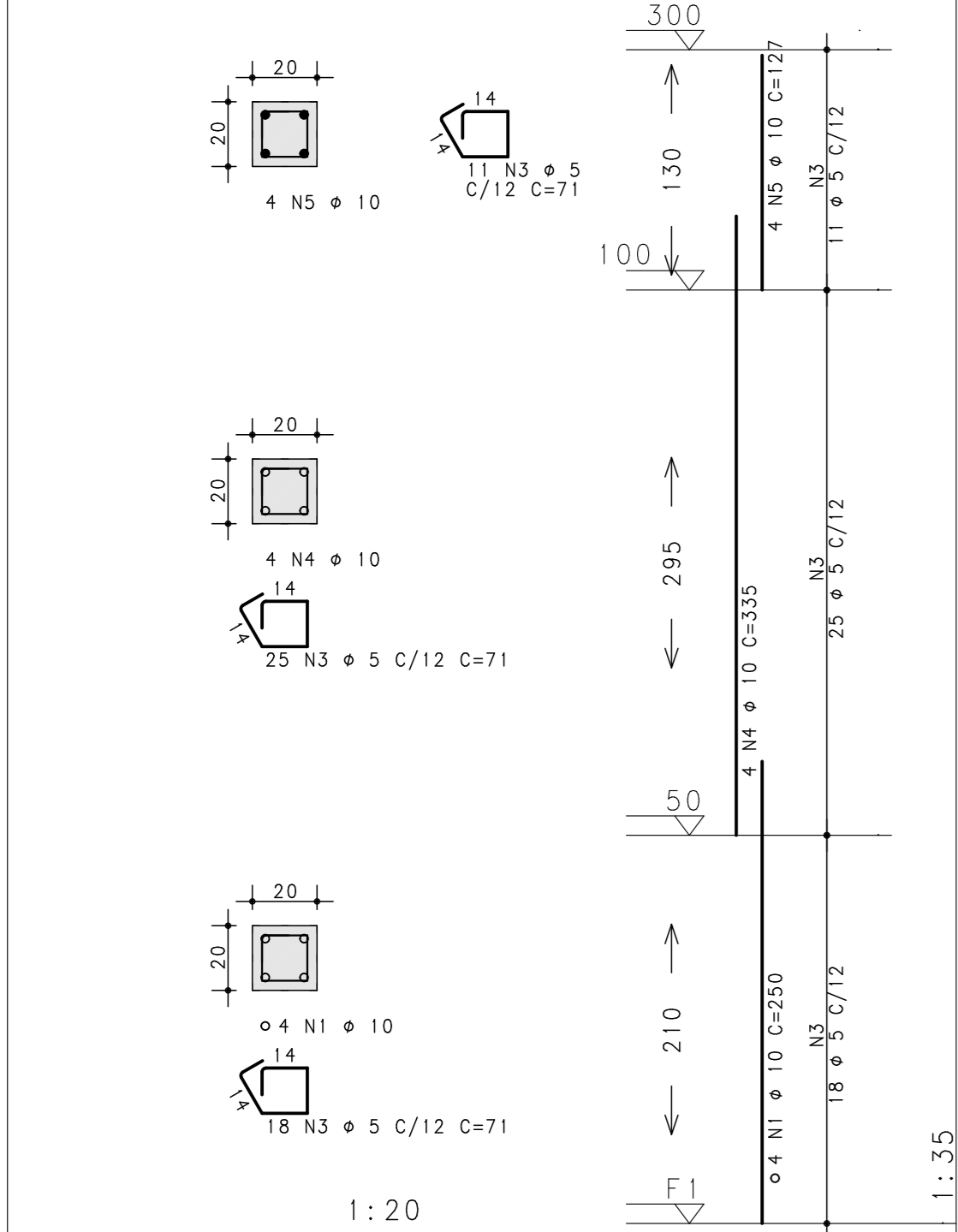
P9 Lances 2 a 7



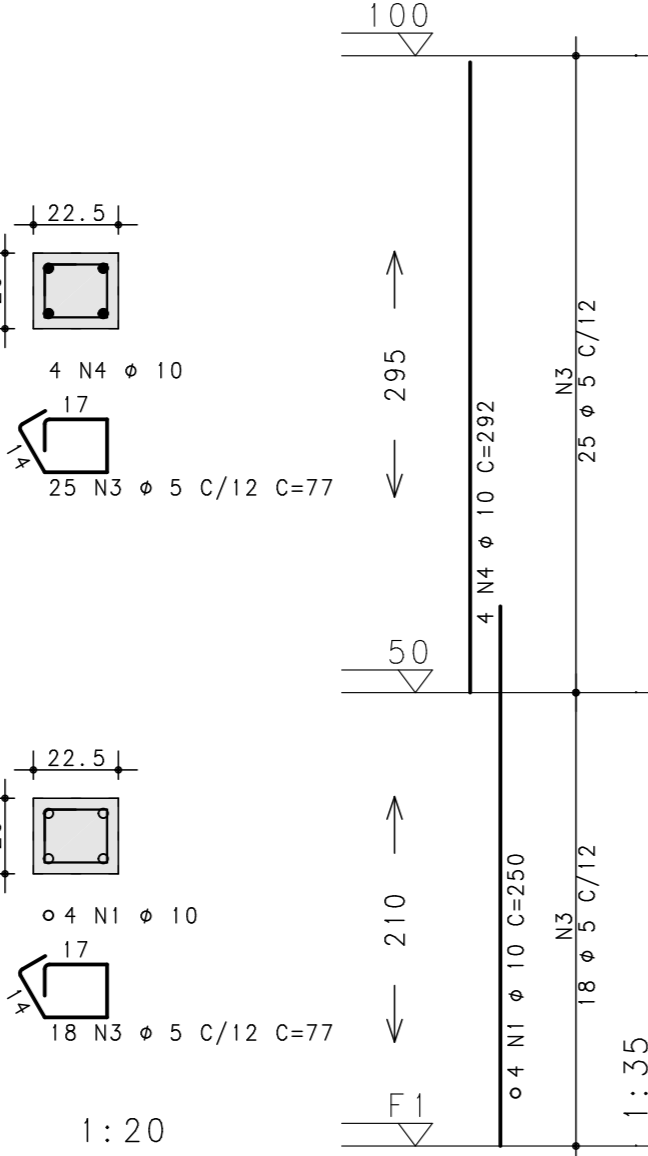
ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P11=P22=P34=P49 Lances 1 a 7 (X4)					
50A	1	10	16	330	5280
60B	3	5	244	71	17324
50A	4	10	16	335	5360
50A	5	10	16	127	2032
P21=P33 Lances 1 a 5 (X2)					
50A	1	10	8	330	2640
60B	3	5	100	79	7900
50A	4	10	8	292	2336
Lances 1 a 4 (X6)					
50A	1	10	36	277	9972
60B	3	5	144	71	10224
PF-7 Lances 1 a 4					
50A	1	10	4	277	1108
60B	3	5	24	71	1704
PF-10 Lances 1 a 4					
50A	1	25	4	277	1108
50A	3	8	19	114	2166
P9 Lances 2 a 7					
50A	1	10	4	251	1004
60B	3	5	18	91	1638
50A	4	10	4	335	1340
60B	5	5	36	71	2556
50A	6	10	4	127	508
P10=P18=P19=P46=P47=P48 Lances 2 a 7 (X6)					
50A	1	10	24	250	6000
60B	3	5	324	71	23004
50A	4	10	24	335	8040
50A	5	10	24	127	3048
P20 Lances 2 a 5					
50A	1	10	4	250	1000
60B	3	5	43	77	3311
50A	4	10	4	292	1168
P24=P25=P26=P30=P32=P39=P40=P41 Lances 2 a 8 (X8)					
50A	1	10	32	250	8000
60B	3	5	488	79	38552
50A	4	10	32	335	10720
50A	5	10	32	100	3200
50A	6	10	32	150	4800
P31 Lances 2 a 6					
50A	1	10	4	250	1000
60B	3	5	48	79	3792
50A	4	10	4	352	1408

RESUMO AÇO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	1100	169
50A	8	22	9
50A	10	800	493
50A	25	11	43
Peso Total 60B =			169 kg
Peso Total 50A =			545 kg

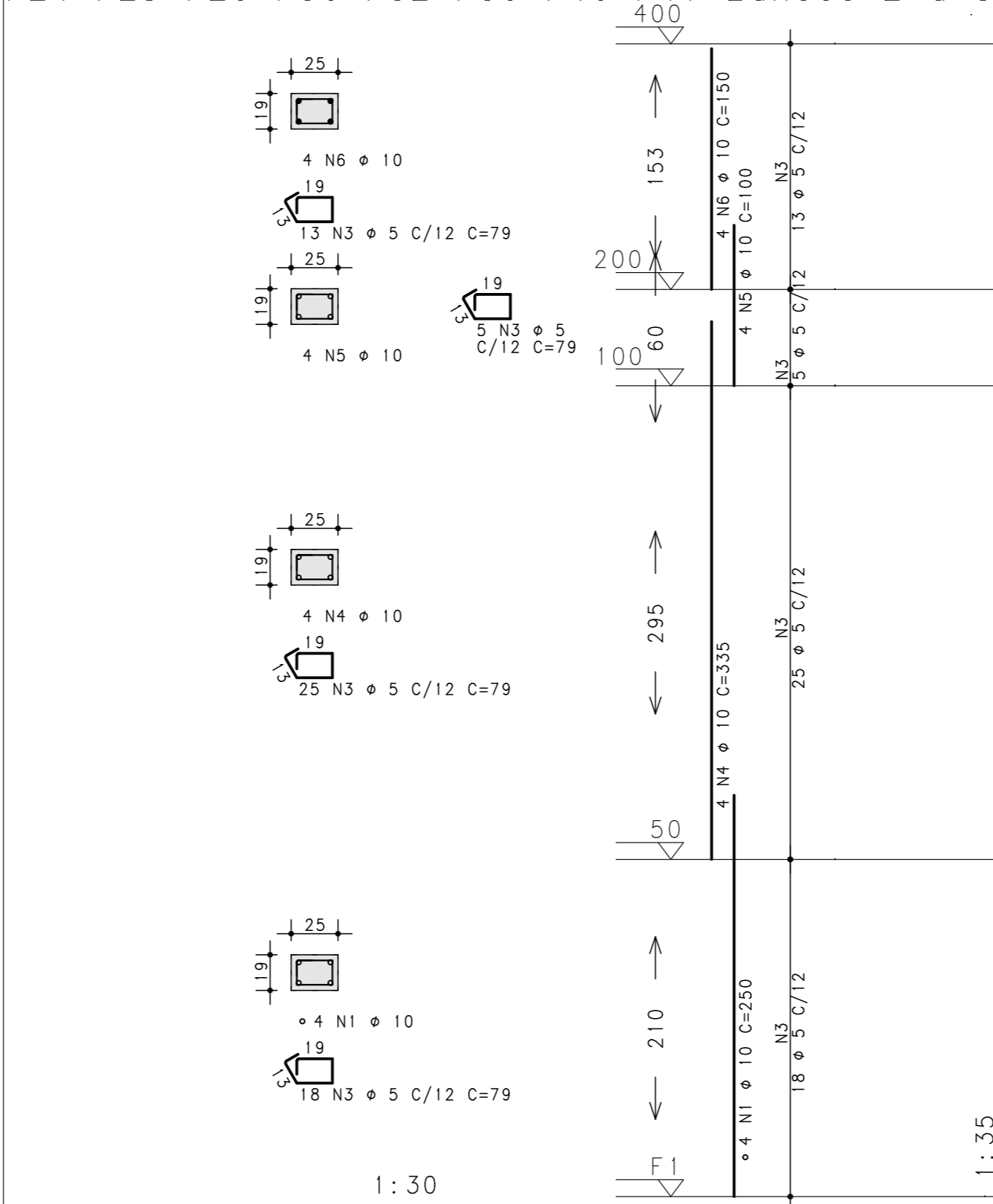
P10=P18=P19=P46=P47=P48 Lances 2 a 7



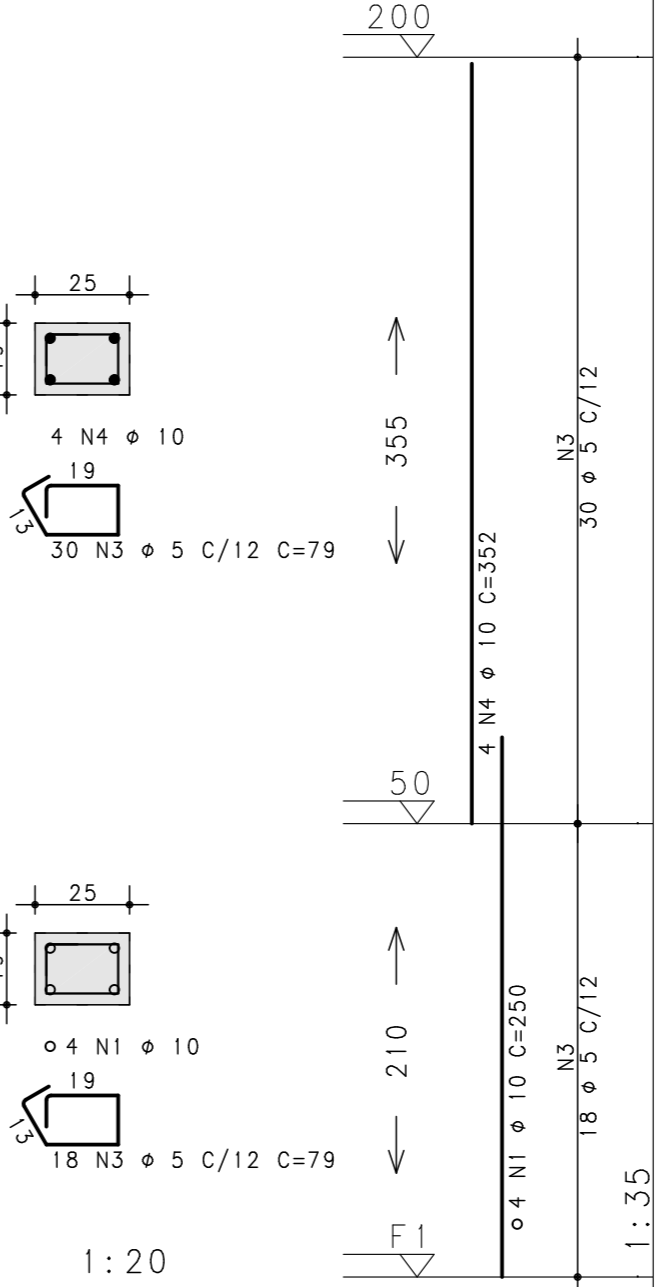
P20 Lances 2 a 5



P24=P25=P26=P30=P32=P39=P40=P41 Lances 2 a 8



P31 Lances 2 a 6



P9 Lances 2 a 7
P10=P18=P19=P46=P47=P48 Lances 2 a 7
P11=P22=P34=P49 Lances 1 a 7
P20 Lances 2 a 5
P21=P33 Lances 1 a 5
P24=P25=P26=P30=P32=P39=P40=P41 Lances 2 a 8
P31 Lances 2 a 6
P50=P51=P52=P53=P54=P55
PF-7 Lances 1 a 4
PF-10 Lances 1 a 4



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-600
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

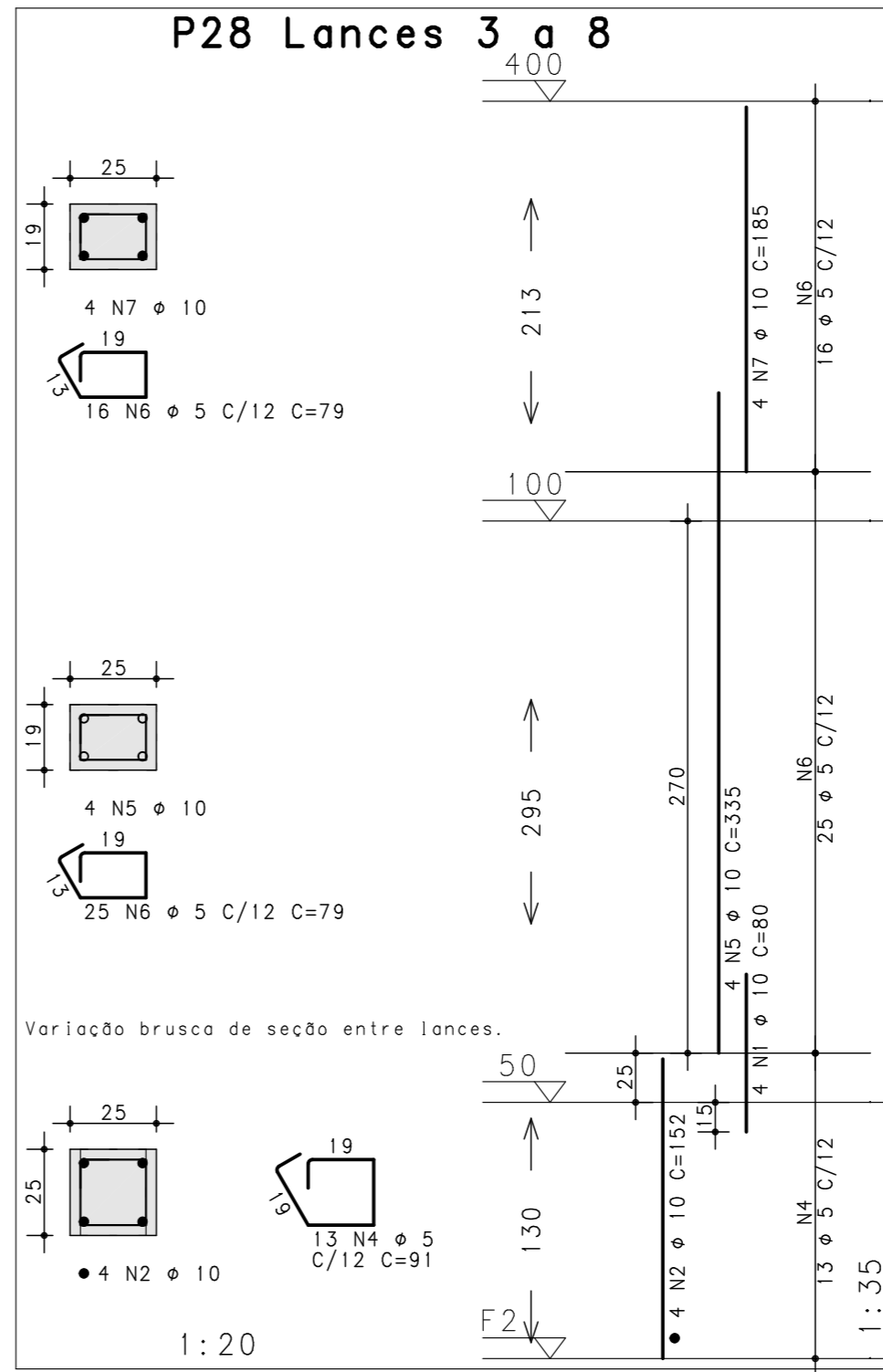
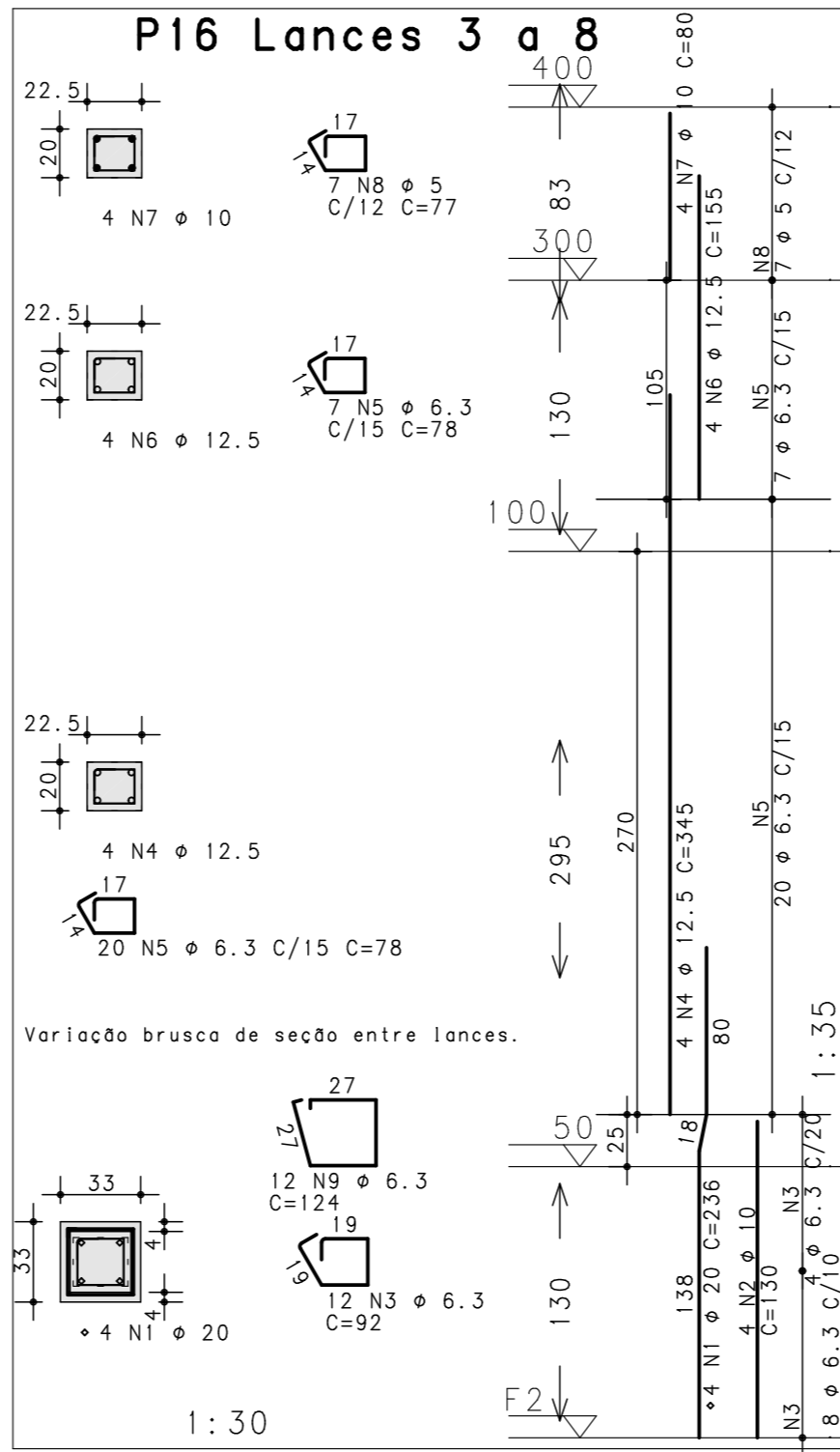
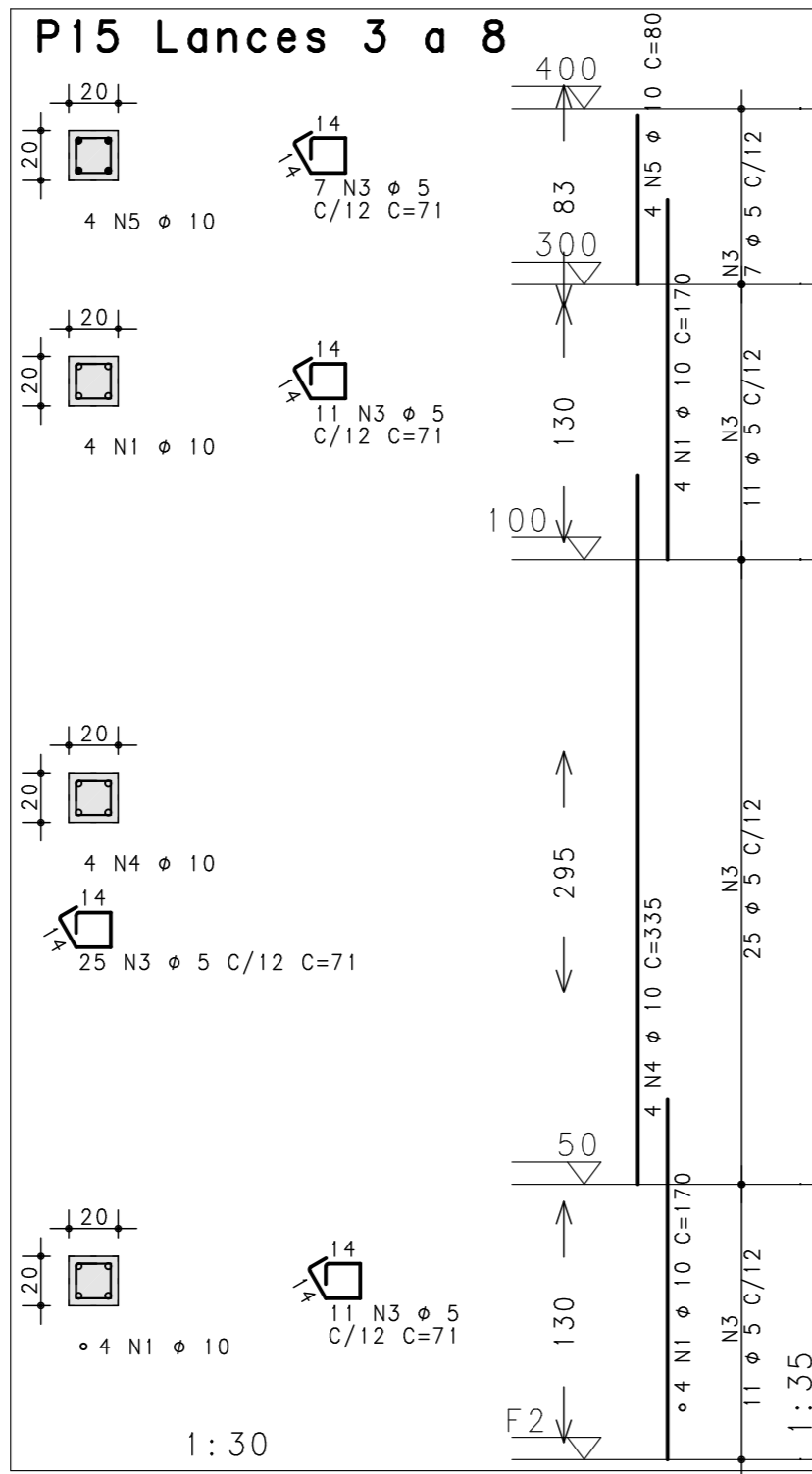
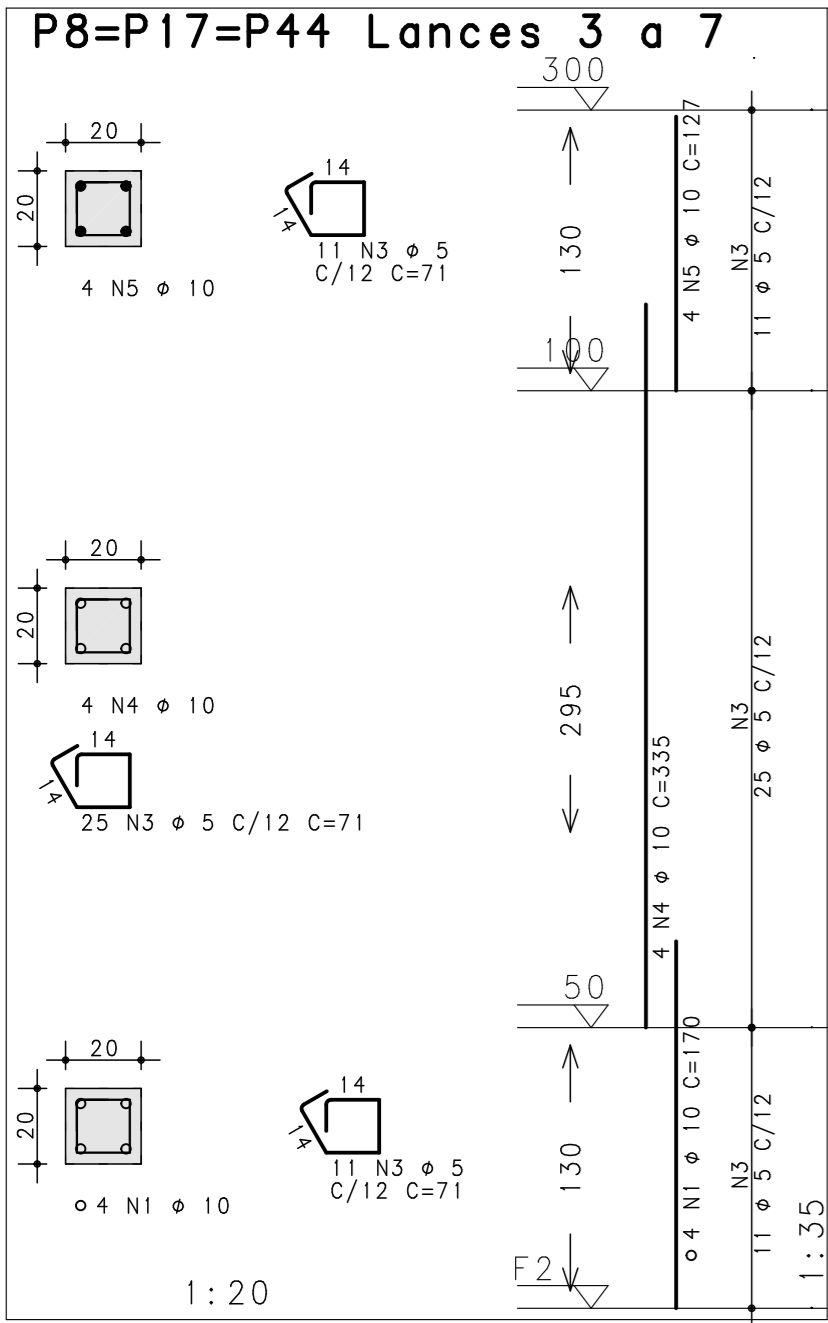
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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0	08/02/2016	Fernando
Rev	Data	Assunto

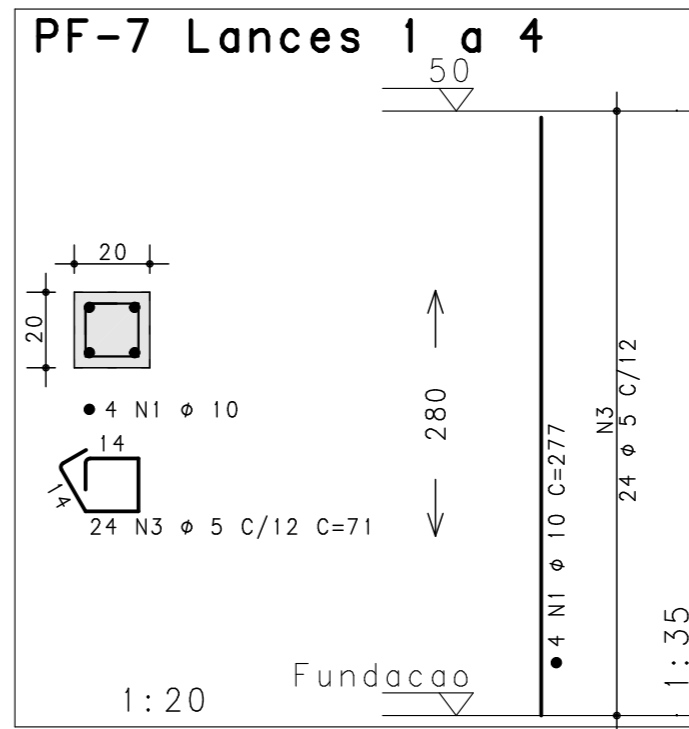
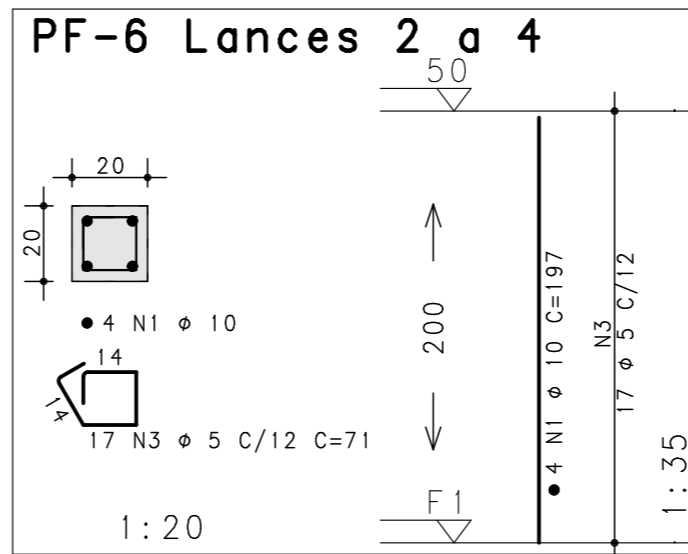
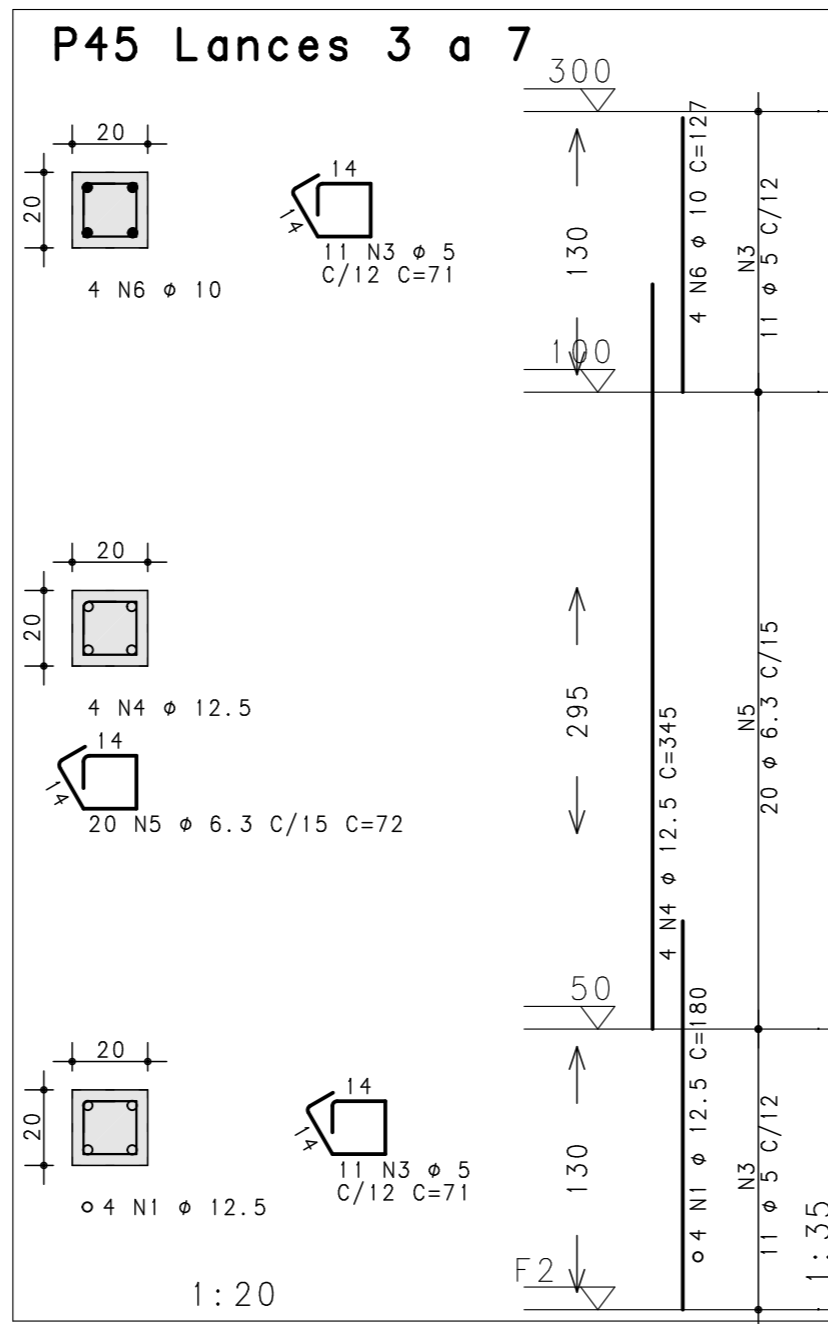
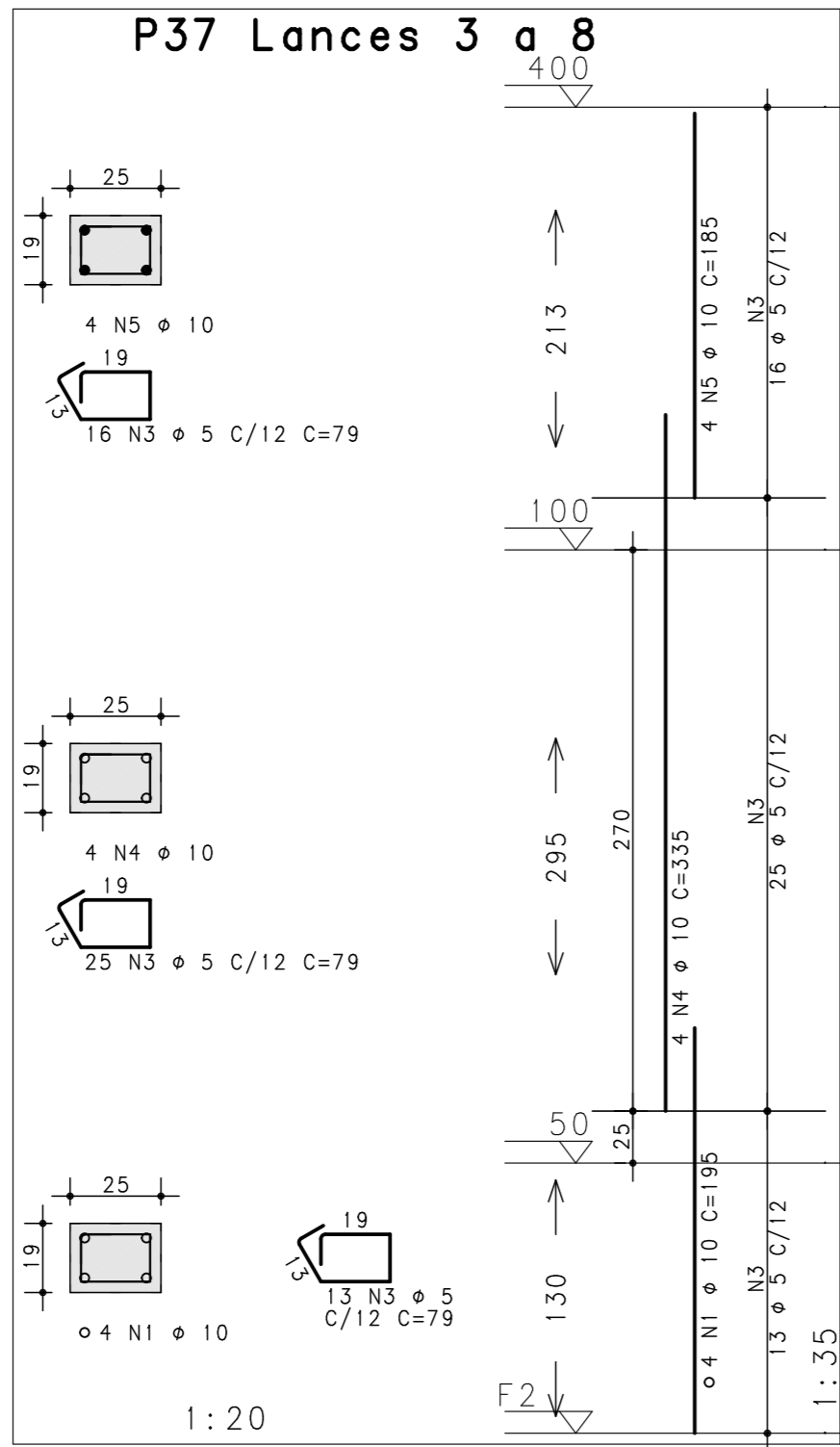
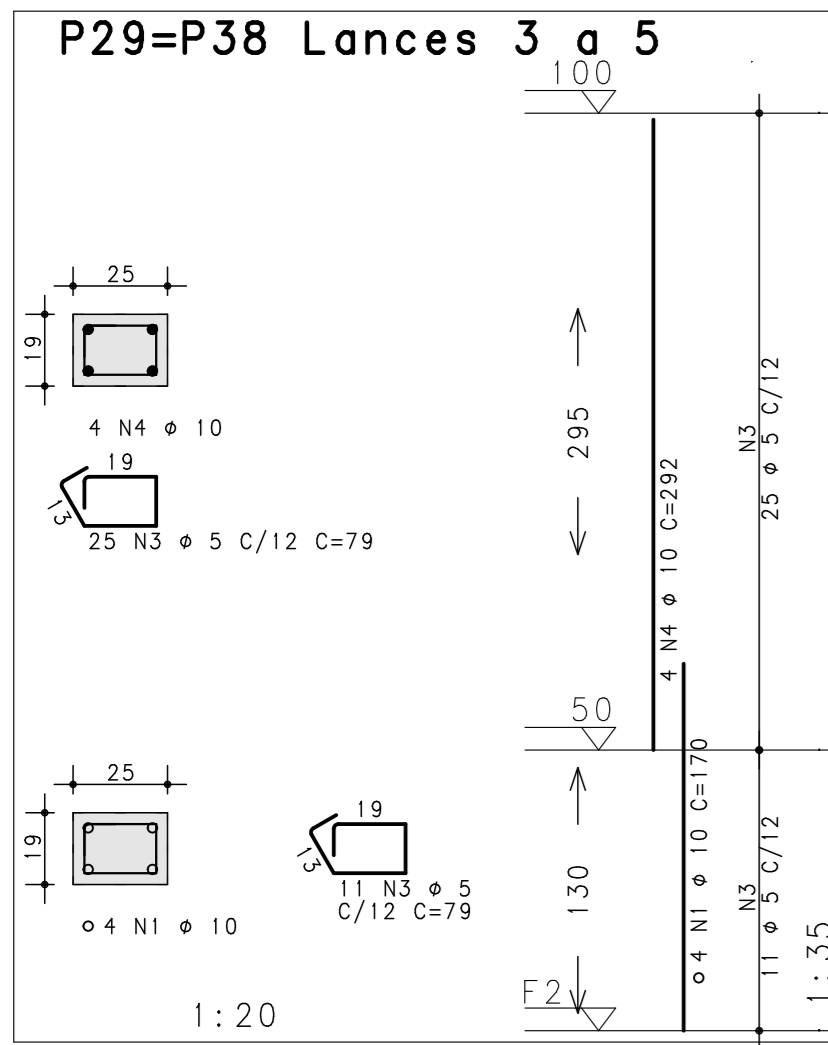
CONCRETO				SOBRECARGA PREVISTA		OBRA N.º	
fck =200 kgf/cm2						0001	
CLIENTE				SECRETARIA DA SAÚDE-PELOTAS		DES. N.º	
OBRA				UBS TIPO 2-CORRIENTES		008	
TÍTULO				PILARES ARMADURAS DOS PILARES		REV. N.º	
						00	
DATA		ESCALA	DESENHO		COORD.	ENG.º	
22/08/2016		Indicada	UBS-PIL-PIL-008-R00				

GIGANTE & SIMCH ENGE E COMERCIO LTDA PL UBS-PIL-PIL-009-R00-PLY 30/08/2016 23:05:22



AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO		
				UNIT (cm)	TOTAL (cm)	
PF-7 Lances 1 a 4						
	50A	1	10	4	277	1108
	60B	3	5	24	71	1704
PF-6 Lances 2 a 4						
	50A	1	10	4	197	788
	60B	3	5	17	71	1207
P8=P17=P44 Lances 3 a 7 (X3)						
	50A	1	10	12	170	2040
	60B	3	5	141	71	10011
	50A	4	10	12	335	4020
	50A	5	10	12	127	1524
P15 Lances 3 a 8						
	50A	1	10	8	170	1360
	60B	3	5	54	71	3834
	50A	4	10	4	335	1340
	50A	5	10	5	80	320
P16 Lances 3 a 8						
	50A	1	20	4	236	944
	50A	2	10	4	130	520
	50A	3	6.3	12	92	1104
	50A	4	12.5	4	345	1380
	50A	5	6.3	27	78	2106
	50A	6	12.5	4	155	620
	50A	7	10	4	80	320
	60B	8	5	7	77	539
	50A	9	6.3	12	124	1488
P28 Lances 3 a 8						
	50A	1	10	4	80	320
	50A	2	10	4	152	608
	60B	4	5	13	91	1183
	50A	5	10	4	335	1340
	60B	6	5	41	79	3239
	50A	7	10	4	185	740
P29=P38 Lances 3 a 5 (X2)						
	50A	1	10	8	170	1360
	60B	3	5	72	79	5688
	50A	4	10	8	292	2336
P37 Lances 3 a 8						
	50A	1	10	4	195	780
	60B	3	5	54	79	4266
	50A	4	10	4	335	1340
	50A	5	10	4	185	740
P45 Lances 3 a 7						
	50A	1	12.5	4	180	720
	60B	3	5	22	71	1562
	50A	4	12.5	4	345	1380
	50A	5	6.3	20	72	1440
	50A	6	10	4	127	508

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	332	51
50A	6.3	61	15
50A	10	234	144
50A	12.5	41	39
50A	20	9	23
Peso Total		60B =	51 kg
Peso Total		50A =	222 kg



P8=P17=P44 Lances 3 a 7
P15 Lances 3 a 8
P16 Lances 3 a 8
P28 Lances 3 a 8
P29=P38 Lances 3 a 5
P37 Lances 3 a 8
P45 Lances 3 a 7
PF-6 Lances 2 a 4
PF-7 Lances 1 a 4



Rua Quinze de Novembro, 563/405
Pelotas - RS - CEP 96215-600
Telefone: (51) 32291500
e-mail: fernando@gsimcha.com.br
e-mail: paulo@gsimcha.com.br

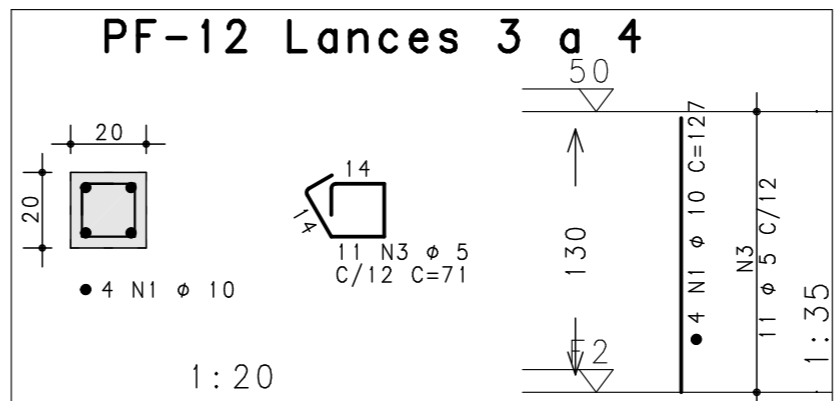
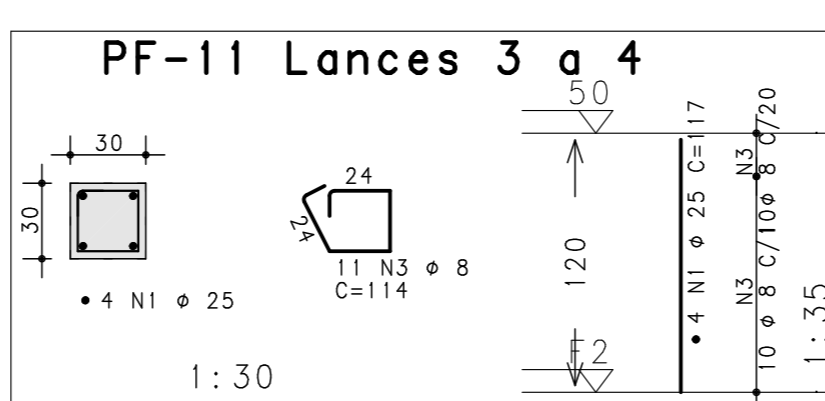
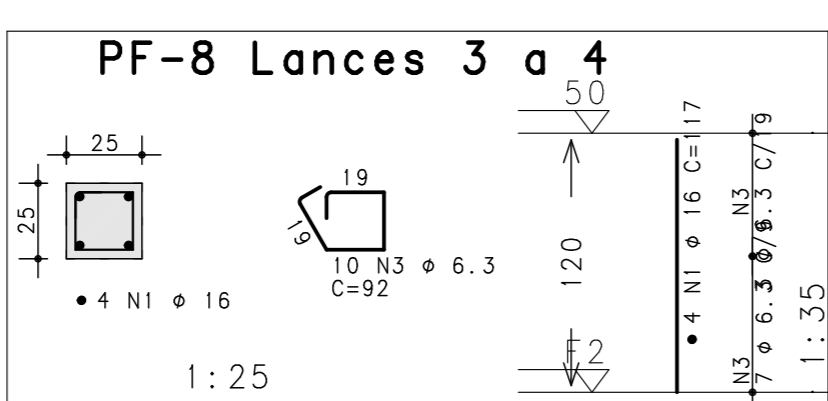
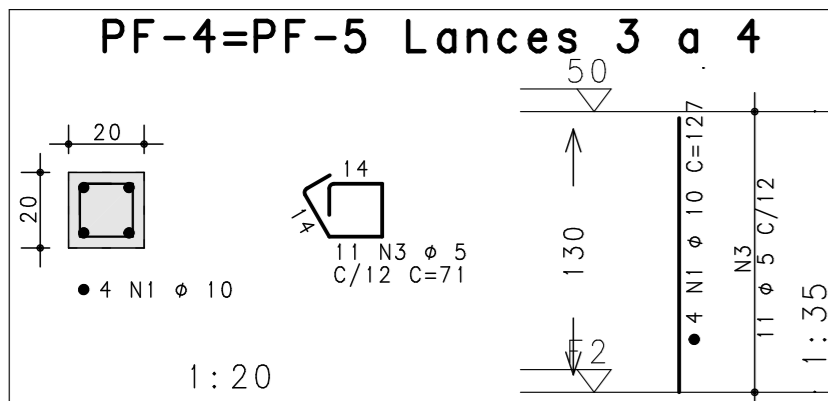
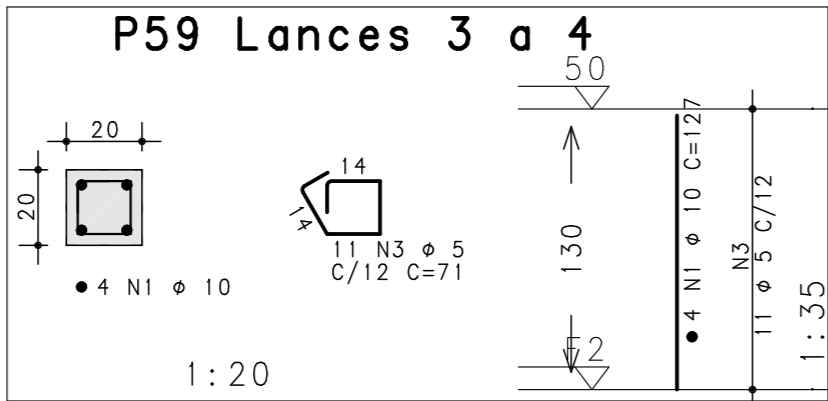
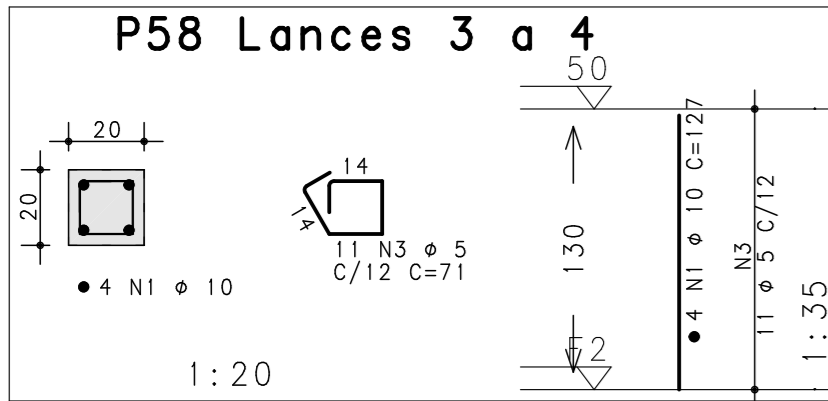
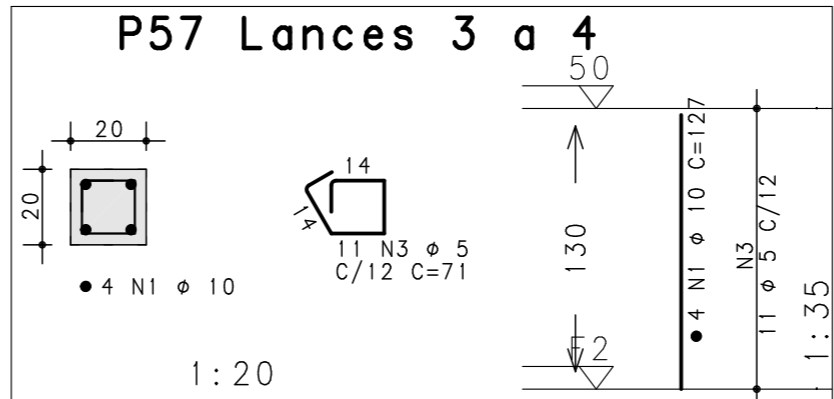
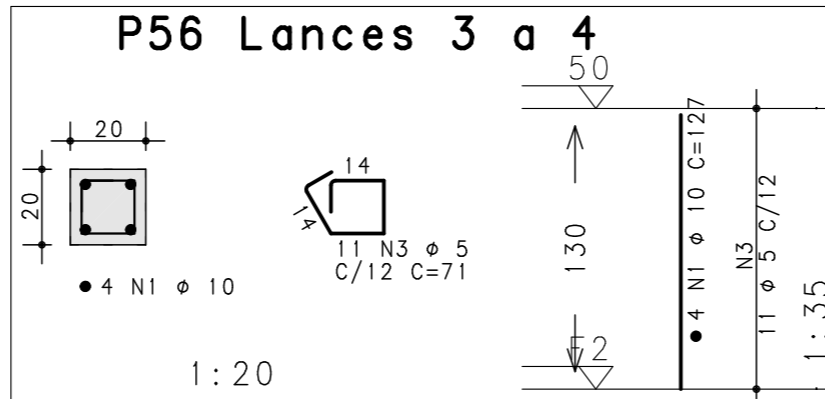
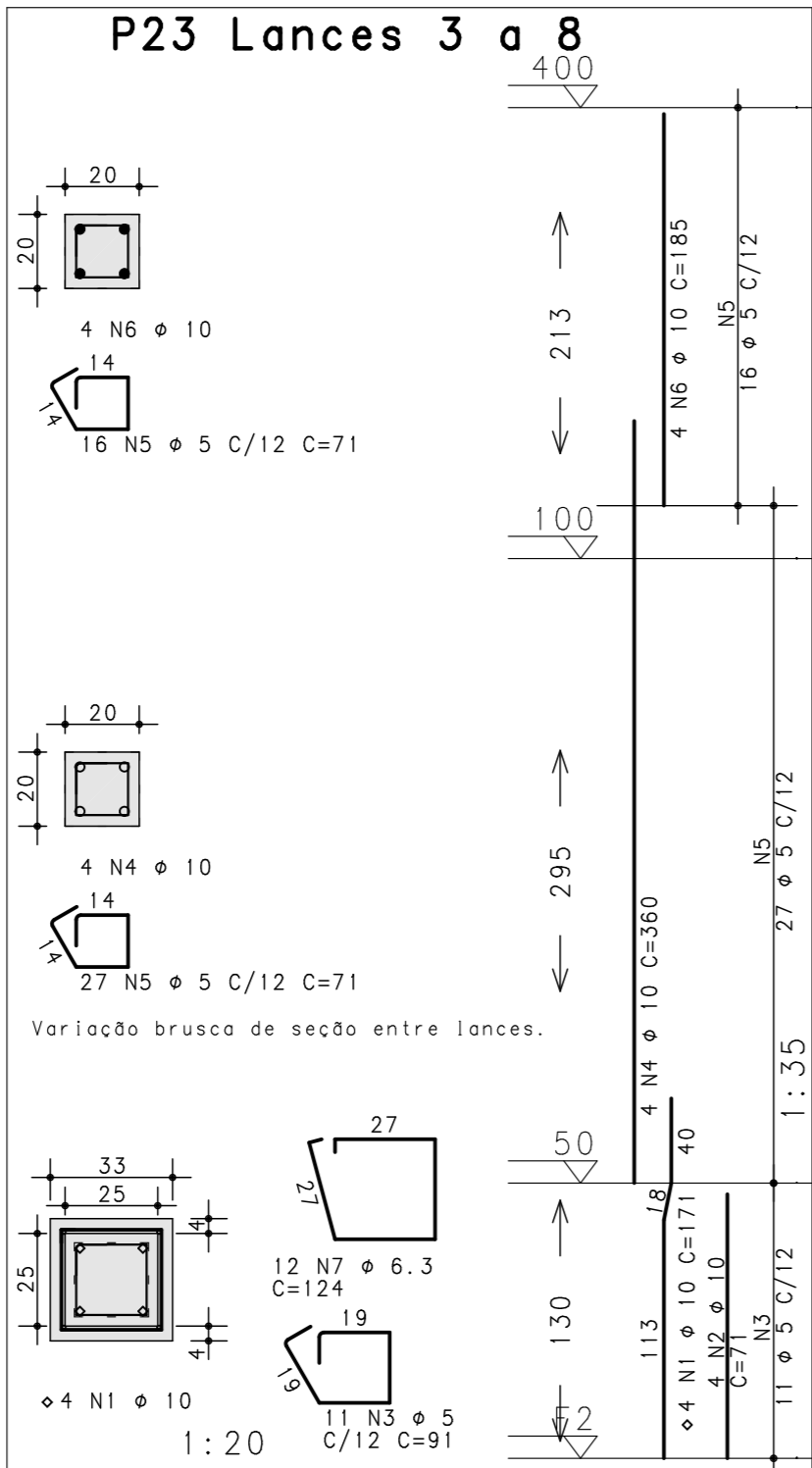
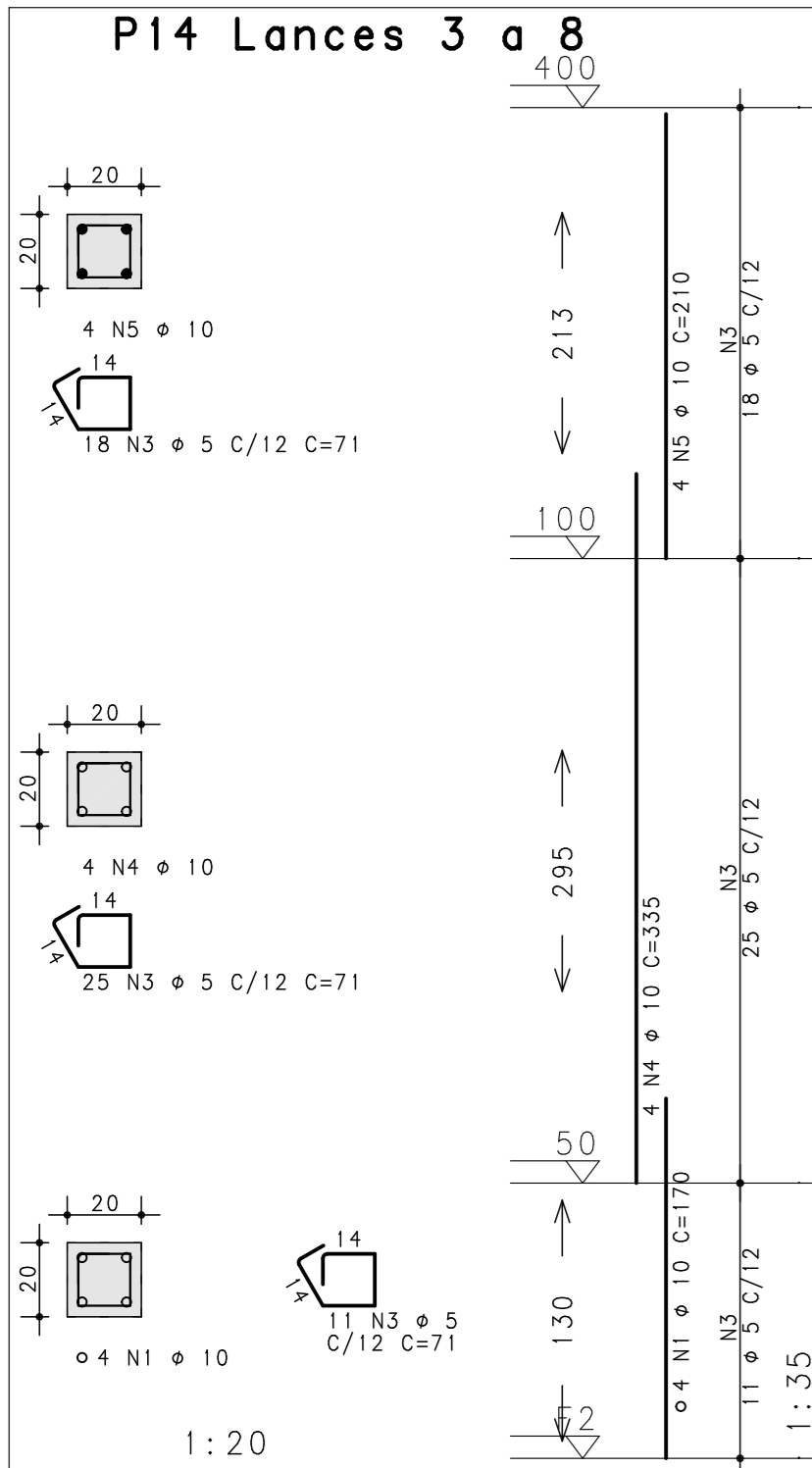
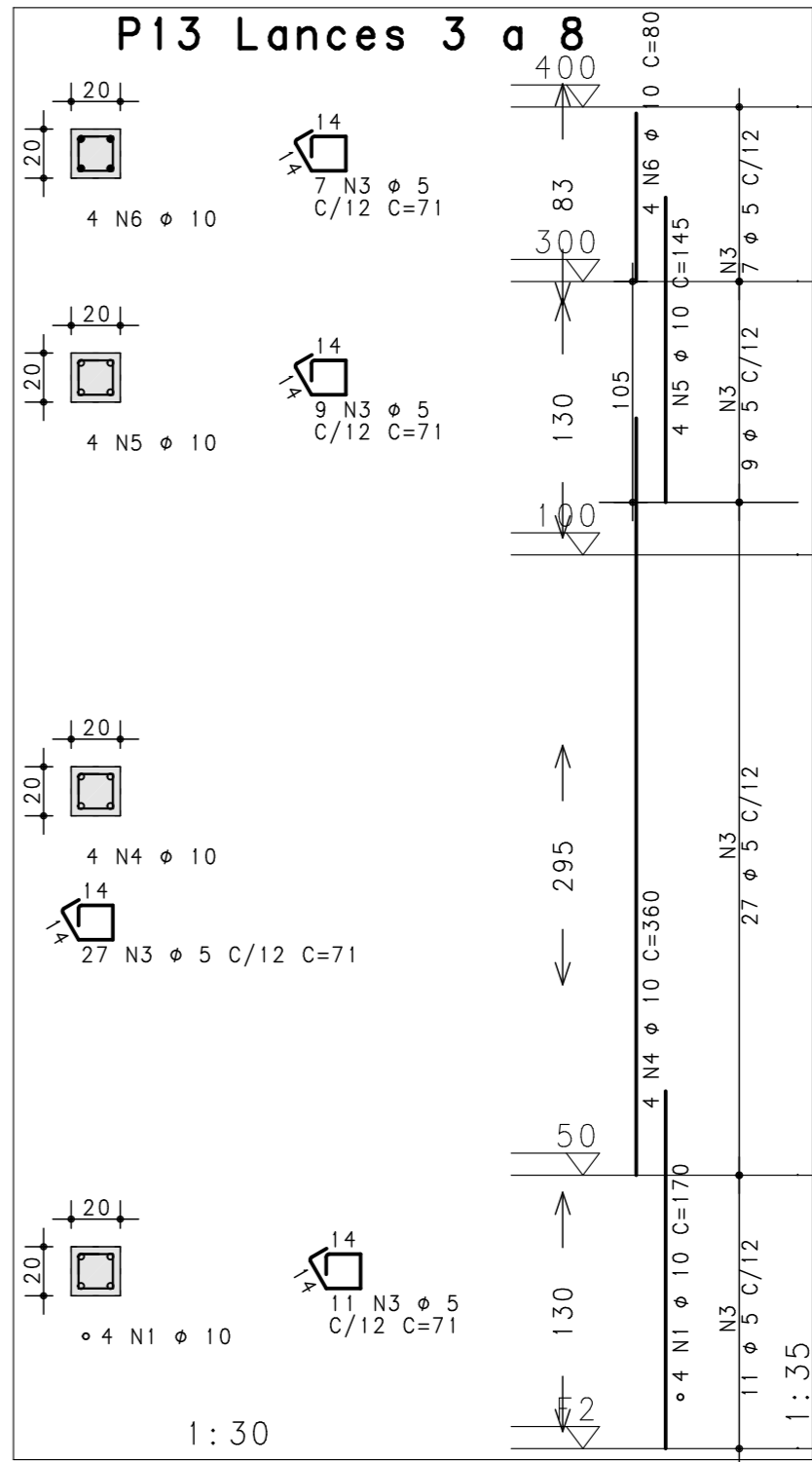
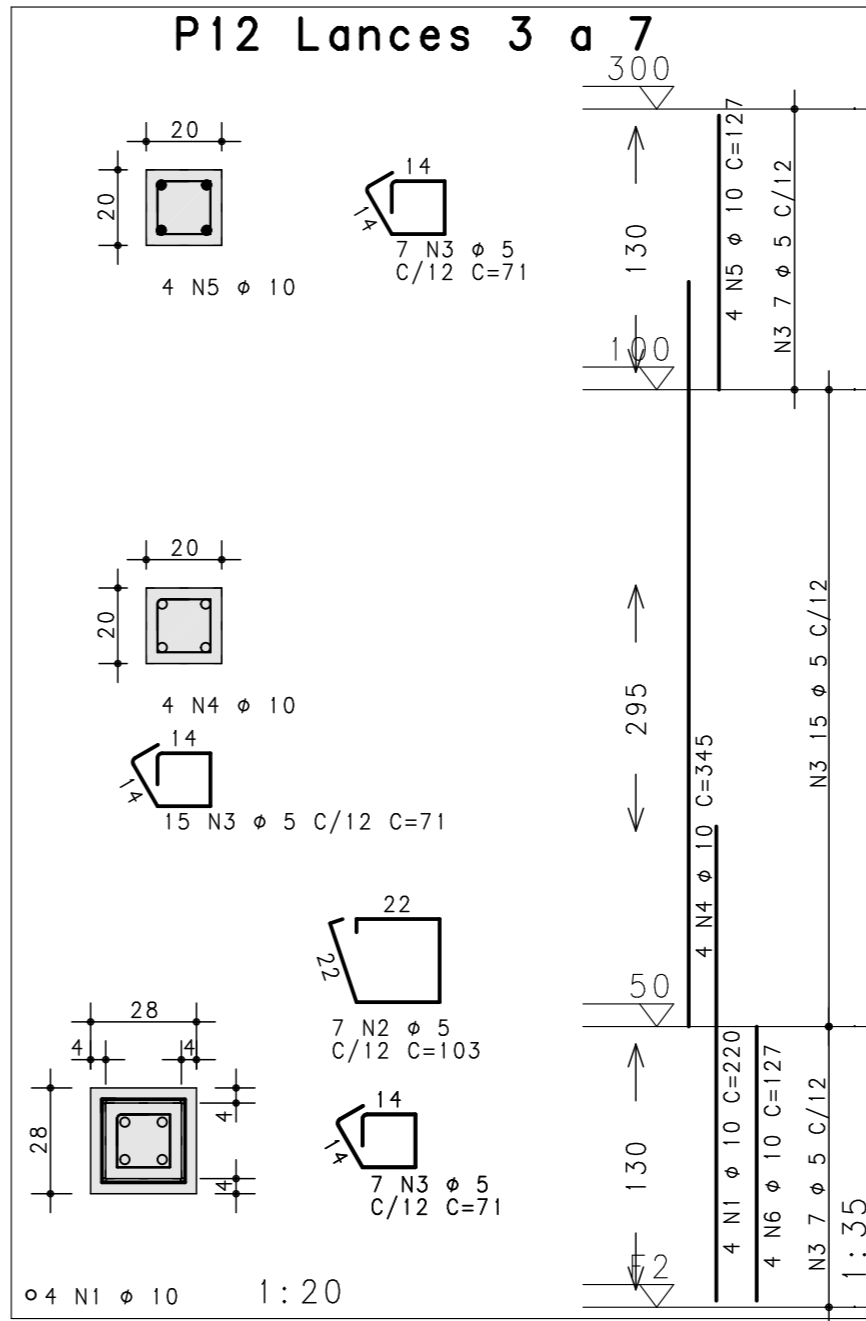
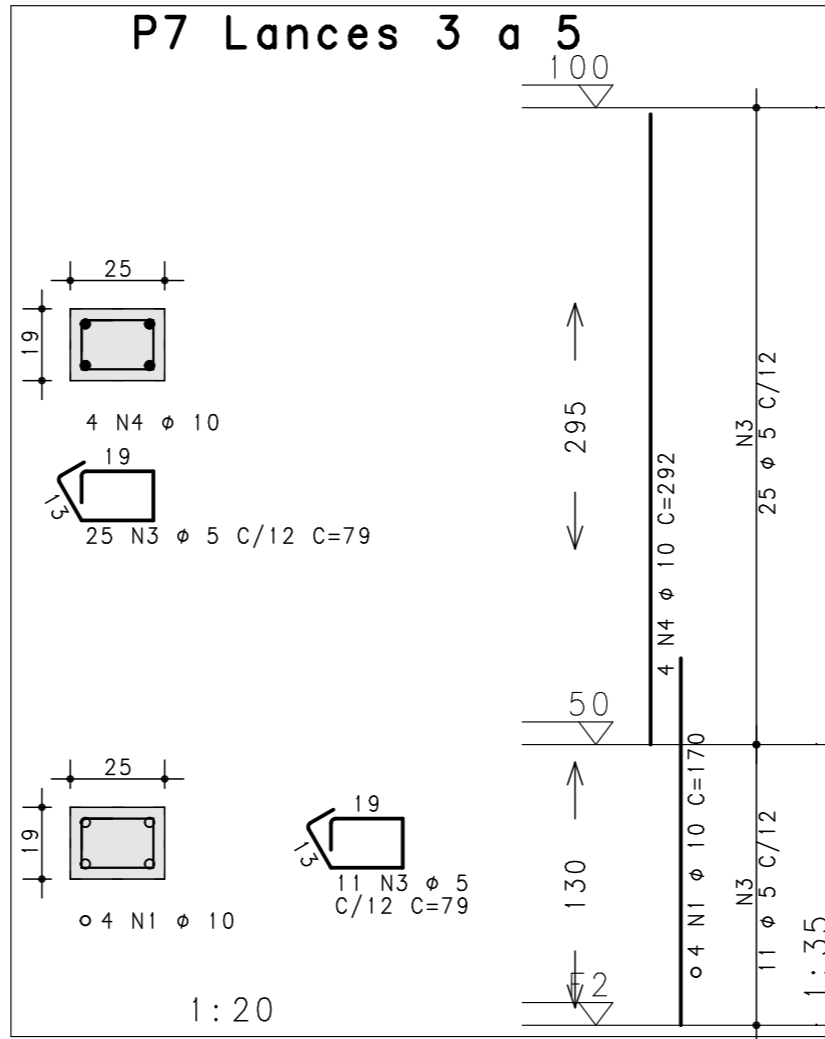
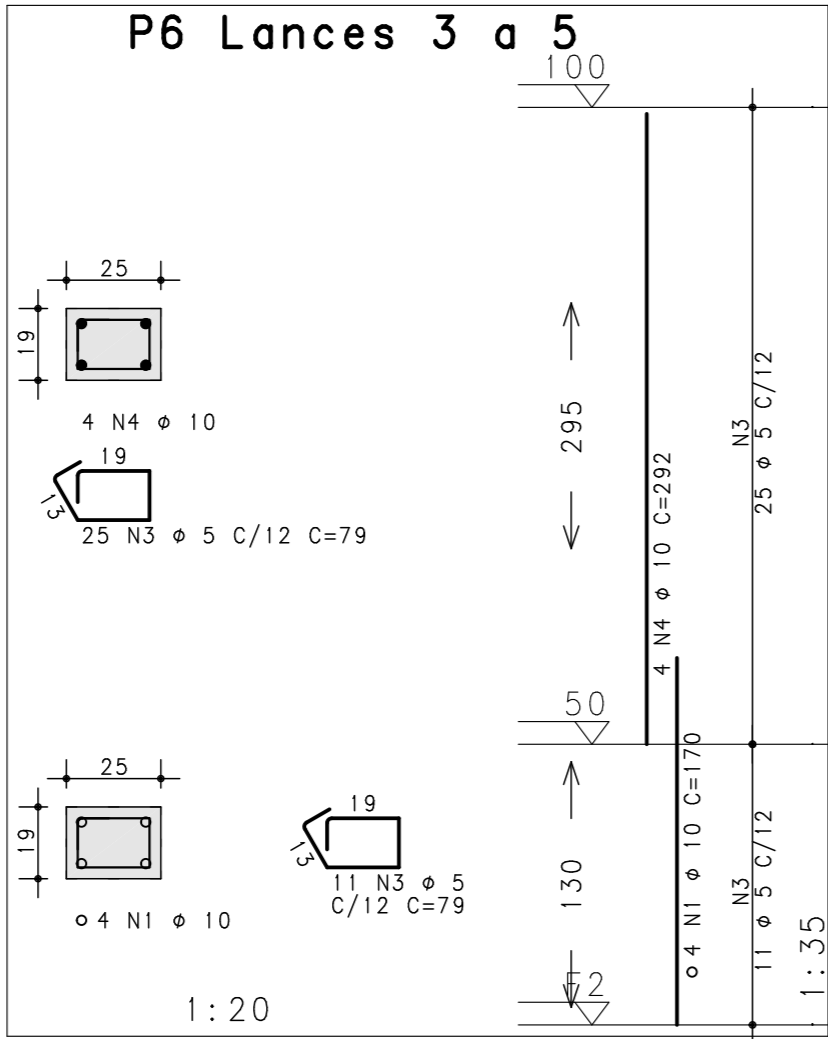
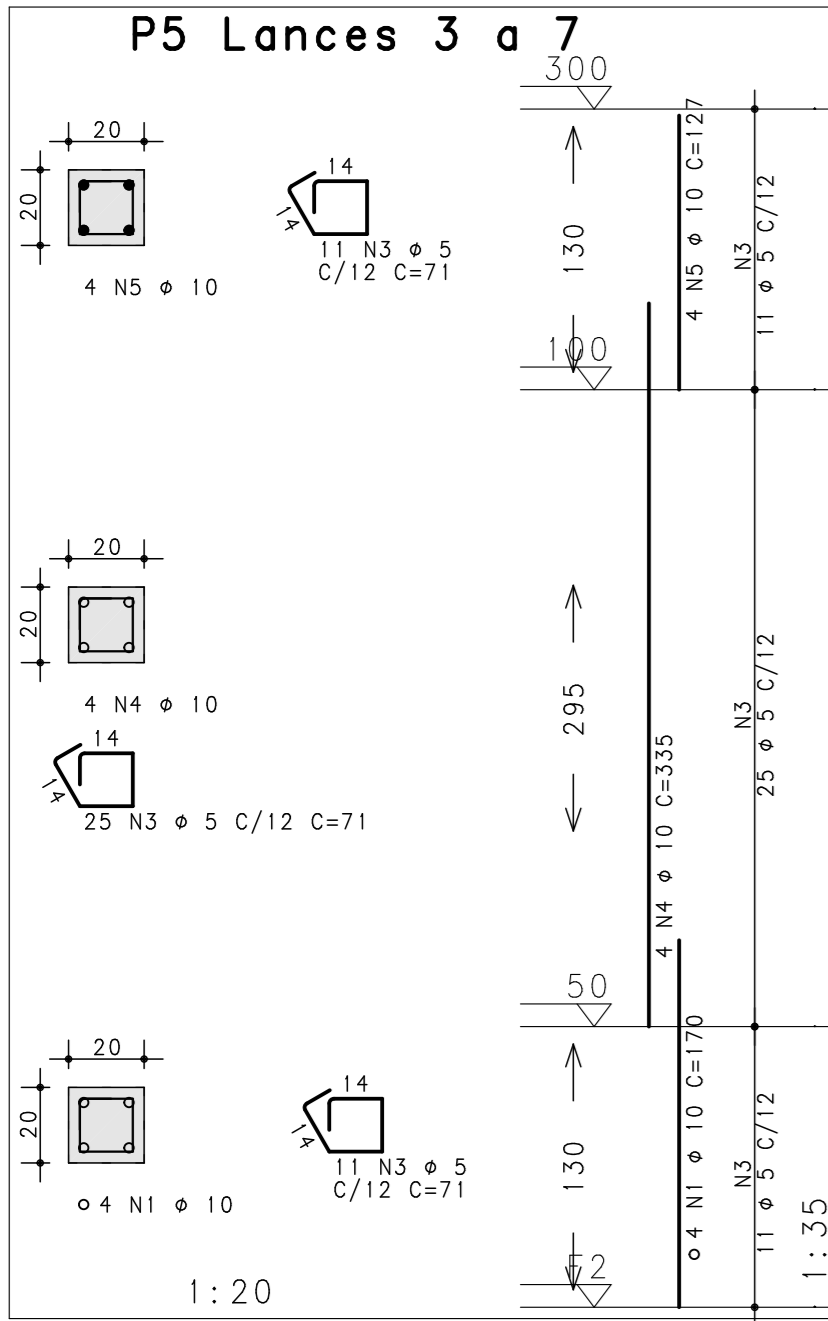
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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1			
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Rev	Data	Autor	Assunto

CONCRETO fck = 200 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001	
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º	
OBRA UBS TIPO 2-CORRIENTES				009	
TÍTULO PILARES ARMADURAS DOS PILARES				REV. N.º	
				00	
DATA 23/08/2016	ESCALA Indicada	DESENHO UBS=PIL-PIL-009-R00	COORD.	ENG.º	

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	ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT (cm)	TOTAL (cm)
P5	Lances 3 a 7					
	50A	1	10	4	170	680
	60B	3	5	47	71	3337
	50A	4	10	4	335	1340
	50A	5	10	4	127	508
P6	Lances 3 a 5					
	50A	1	10	4	170	680
	60B	3	5	36	79	2844
	50A	4	10	4	292	1168
P7	Lances 3 a 5					
	50A	1	10	4	170	680
	60B	3	5	36	79	2844
	50A	4	10	4	292	1168
P12	Lances 3 a 7					
	50A	1	10	4	220	880
	60B	2	5	7	103	721
	60B	3	5	36	71	2556
	50A	4	10	4	345	1380
	50A	5	10	4	127	508
	50A	6	10	4	127	508
P13	Lances 3 a 8					
	50A	1	10	4	170	680
	60B	3	5	54	71	3834
	50A	4	10	4	360	1440
	50A	5	10	4	145	580
	50A	6	10	4	80	320
P14	Lances 3 a 8					
	50A	1	10	4	170	680
	60B	3	5	54	71	3834
	50A	4	10	4	335	1340
	50A	5	10	4	210	840
P23	Lances 3 a 8					
	50A	1	10	4	171	684
	50A	2	10	4	71	284
	60B	3	5	11	91	1001
	50A	4	10	4	360	1440
	60B	5	5	43	71	3053
	50A	6	10	4	185	740
	50A	7	6.3	12	124	1488
P56	Lances 3 a 4					
	50A	1	10	4	127	508
	60B	3	5	11	71	781
P57	Lances 3 a 4					
	50A	1	10	4	127	508
	60B	3	5	11	71	781
P58	Lances 3 a 4					
	50A	1	10	4	127	508
	60B	3	5	11	71	781
P59	Lances 3 a 4					
	50A	1	10	4	127	508
	60B	3	5	11	71	781
PF-4=PF-5	Lances 3 a 4 (X2)					
	50A	1	10	8	127	1016
	60B	3	5	22	71	1562
PF-8	Lances 3 a 4					
	50A	1	16	4	117	468
	50A	3	6.3	10	92	920
PF-11	Lances 3 a 4					
	50A	1	25	4	117	468
	50A	3	8	11	114	1254
PF-12	Lances 3 a 4					
	50A	1	10	4	127	508
	60B	3	5	11	71	781

RESUMO ACO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	295	45
50A	6.3	24	6
50A	8	13	5
50A	10	221	136
50A	16	5	7
50A	25	5	18
Peso Total 60B =			45 kg
Peso Total 50A =			173 kg

P5 Lances 3 a 7
P6 Lances 3 a 5
P7 Lances 3 a 5
P12 Lances 3 a 7
P13 Lances 3 a 8
P14 Lances 3 a 8
P23 Lances 3 a 8
P56 Lances 3 a 4
P57 Lances 3 a 4
P58 Lances 3 a 4
P59 Lances 3 a 4
PF-4=PF-5 Lances 3 a 4
PF-8 Lances 3 a 4
PF-11 Lances 3 a 4
PF-12 Lances 3 a 4



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

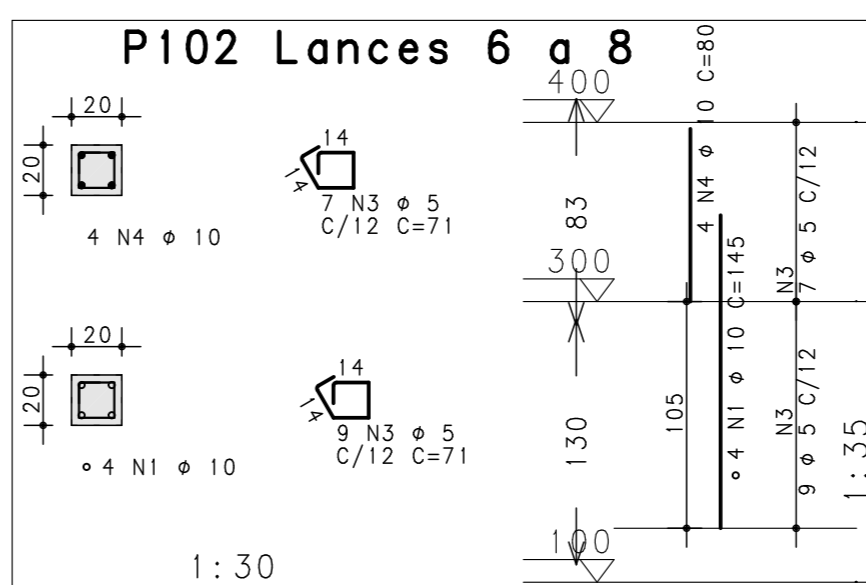
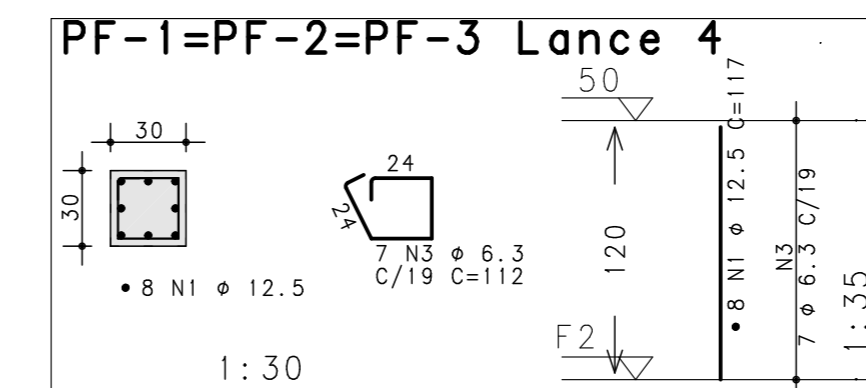
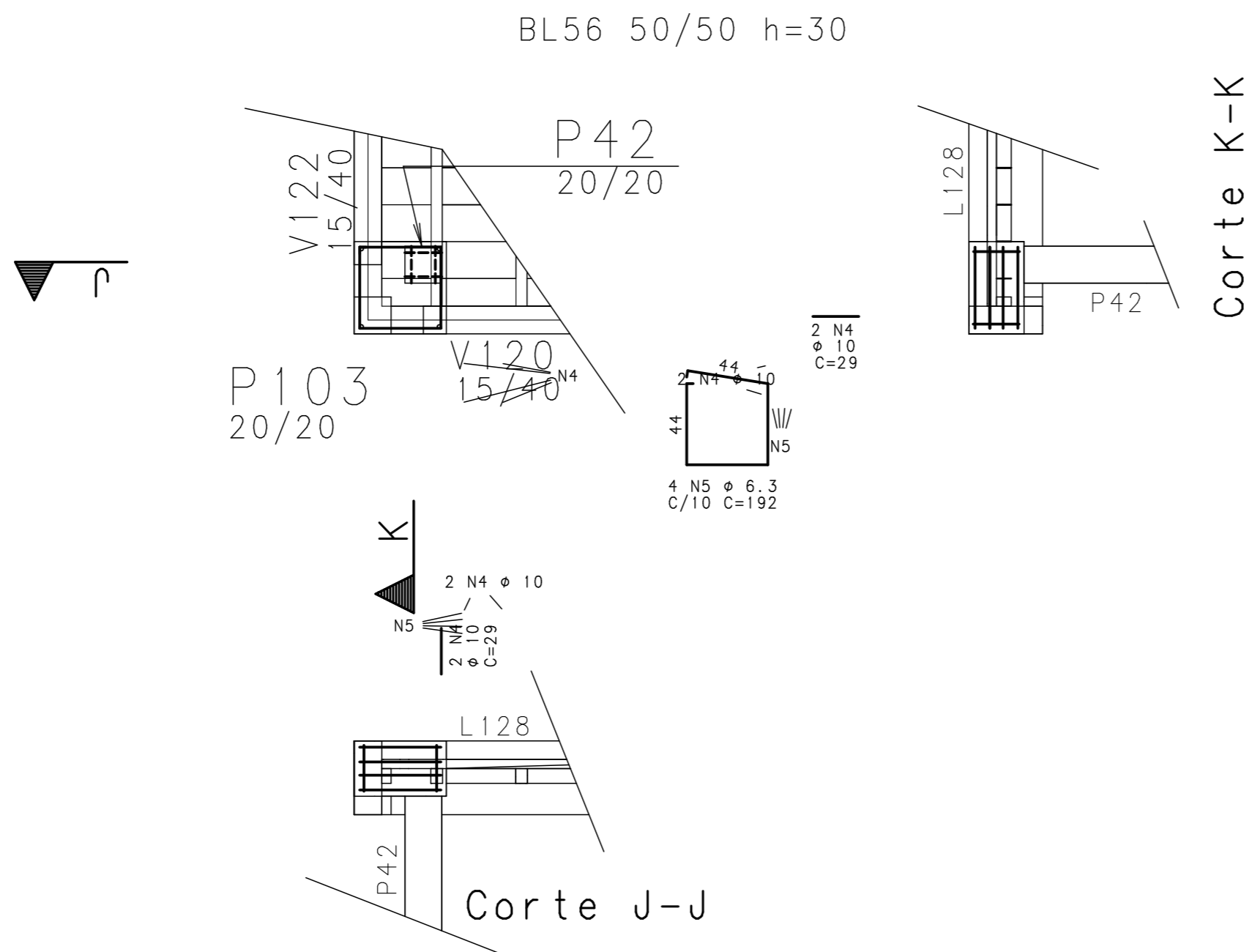
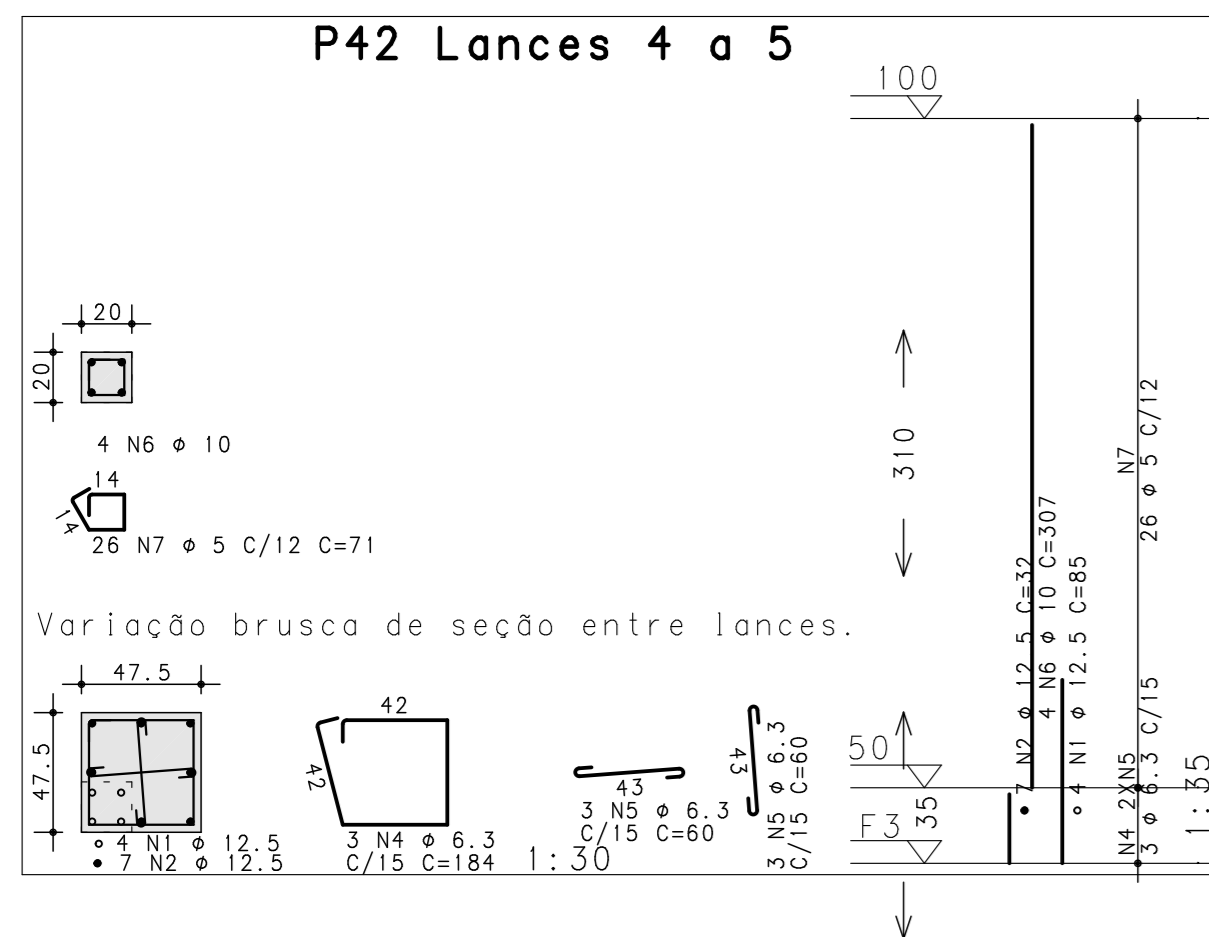
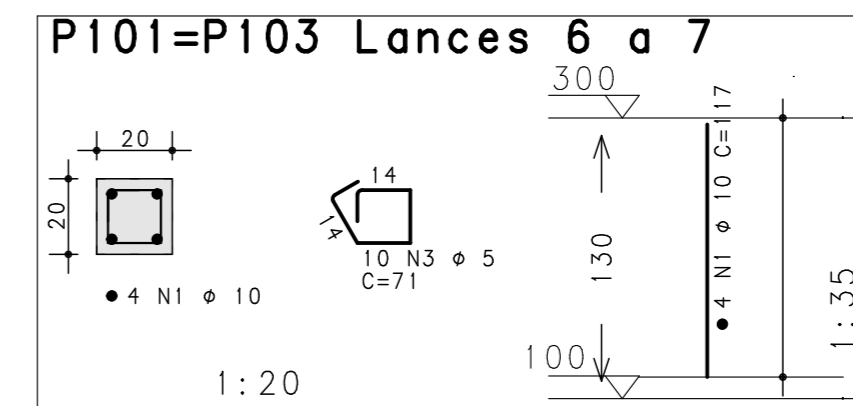
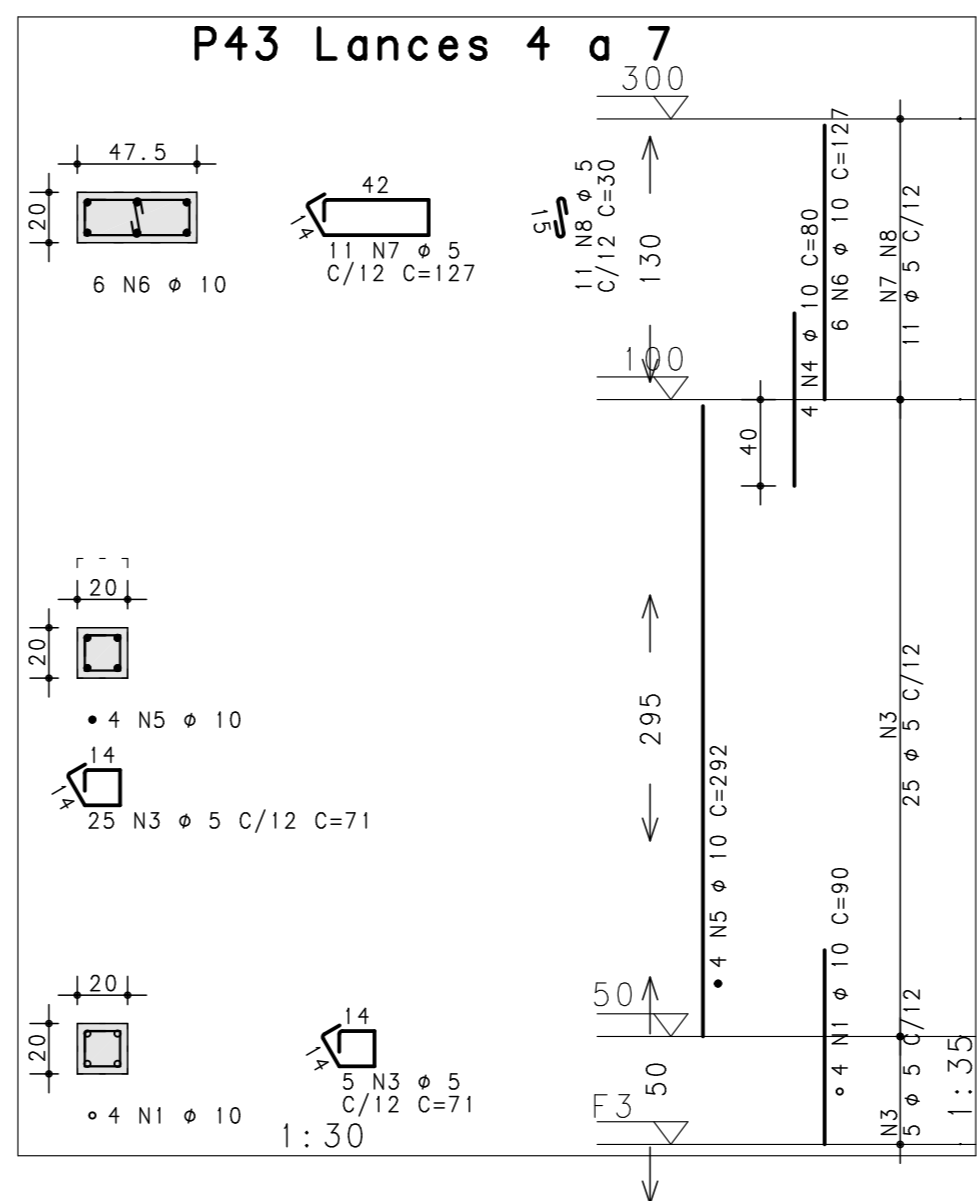
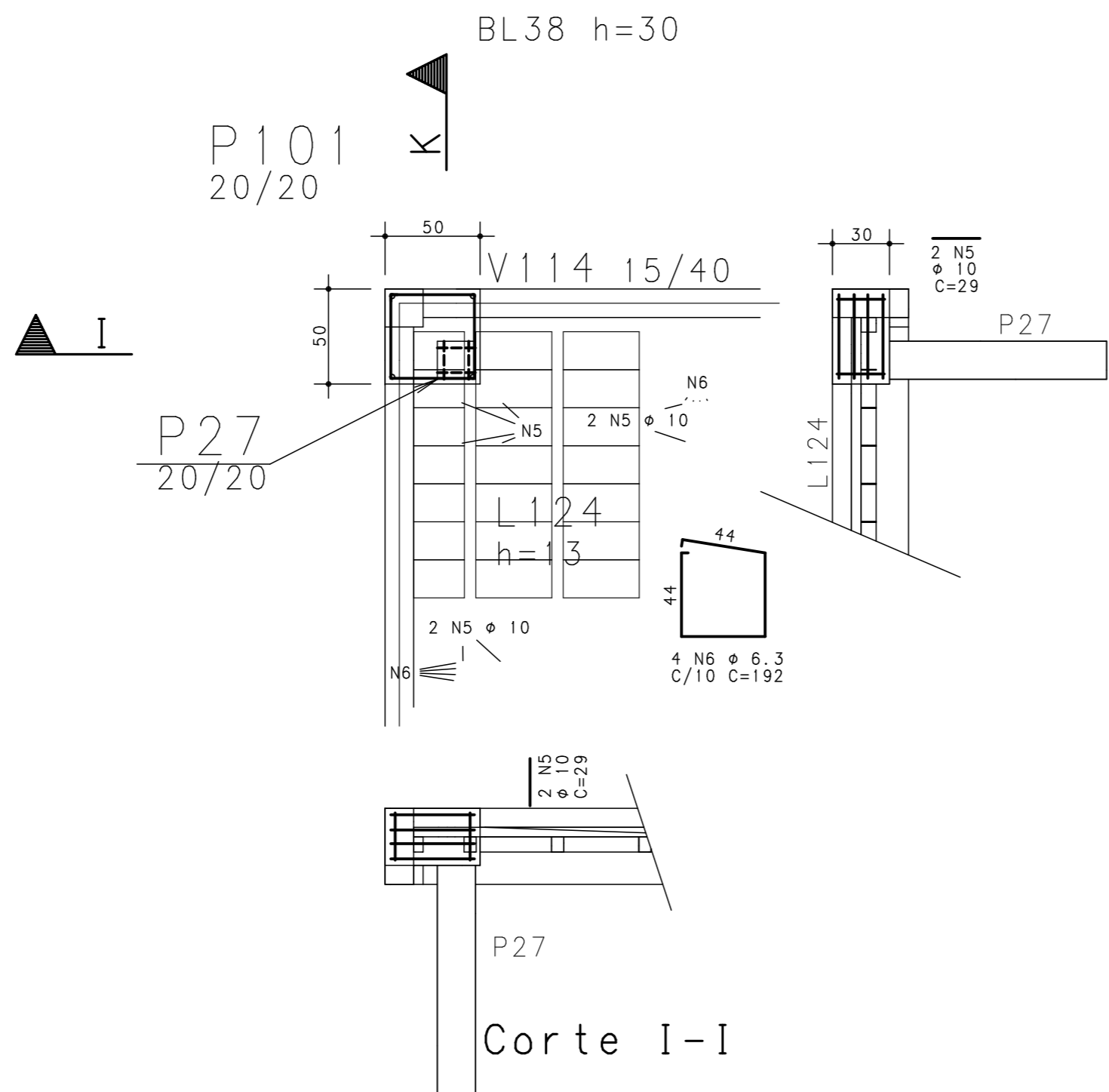
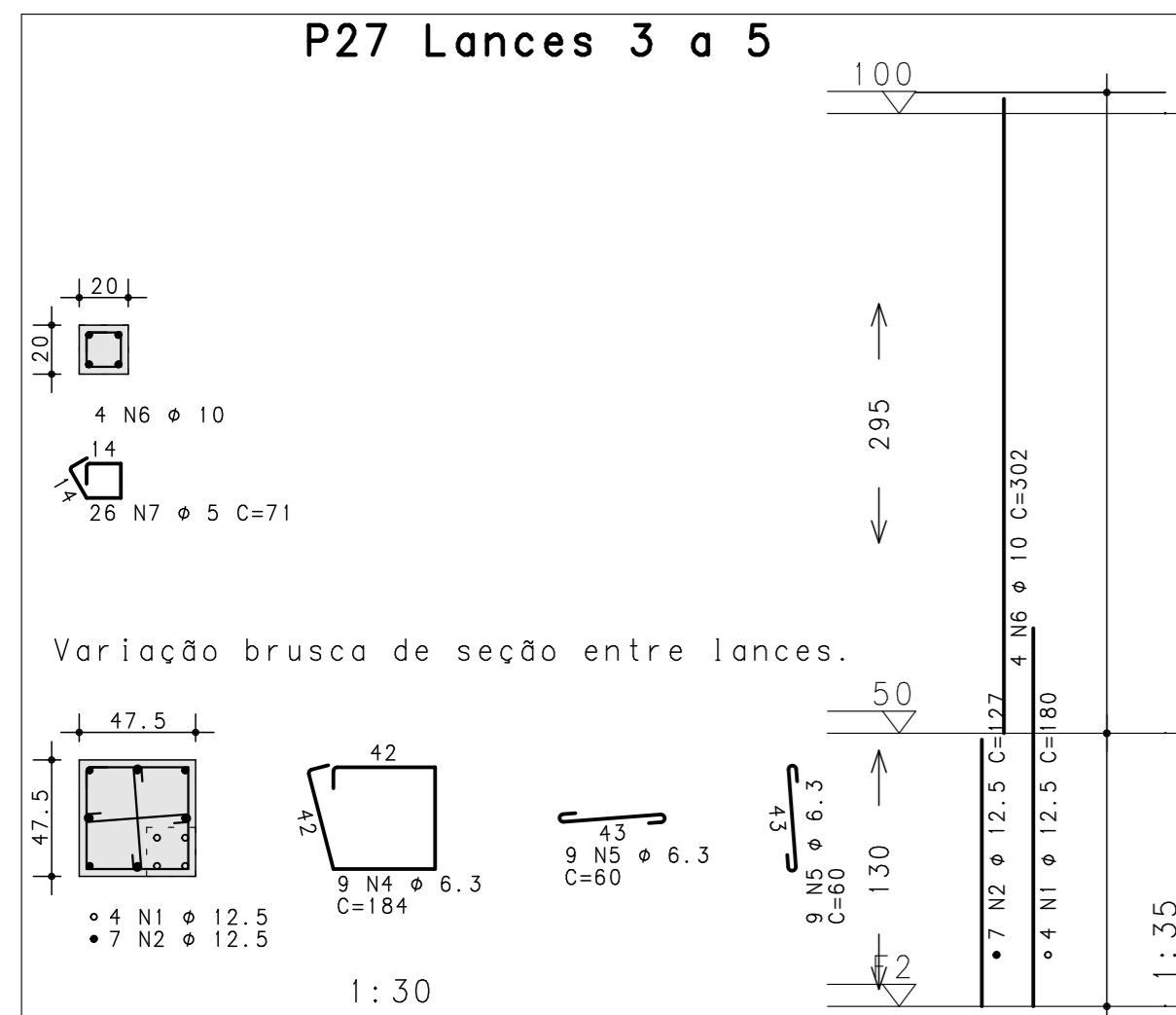
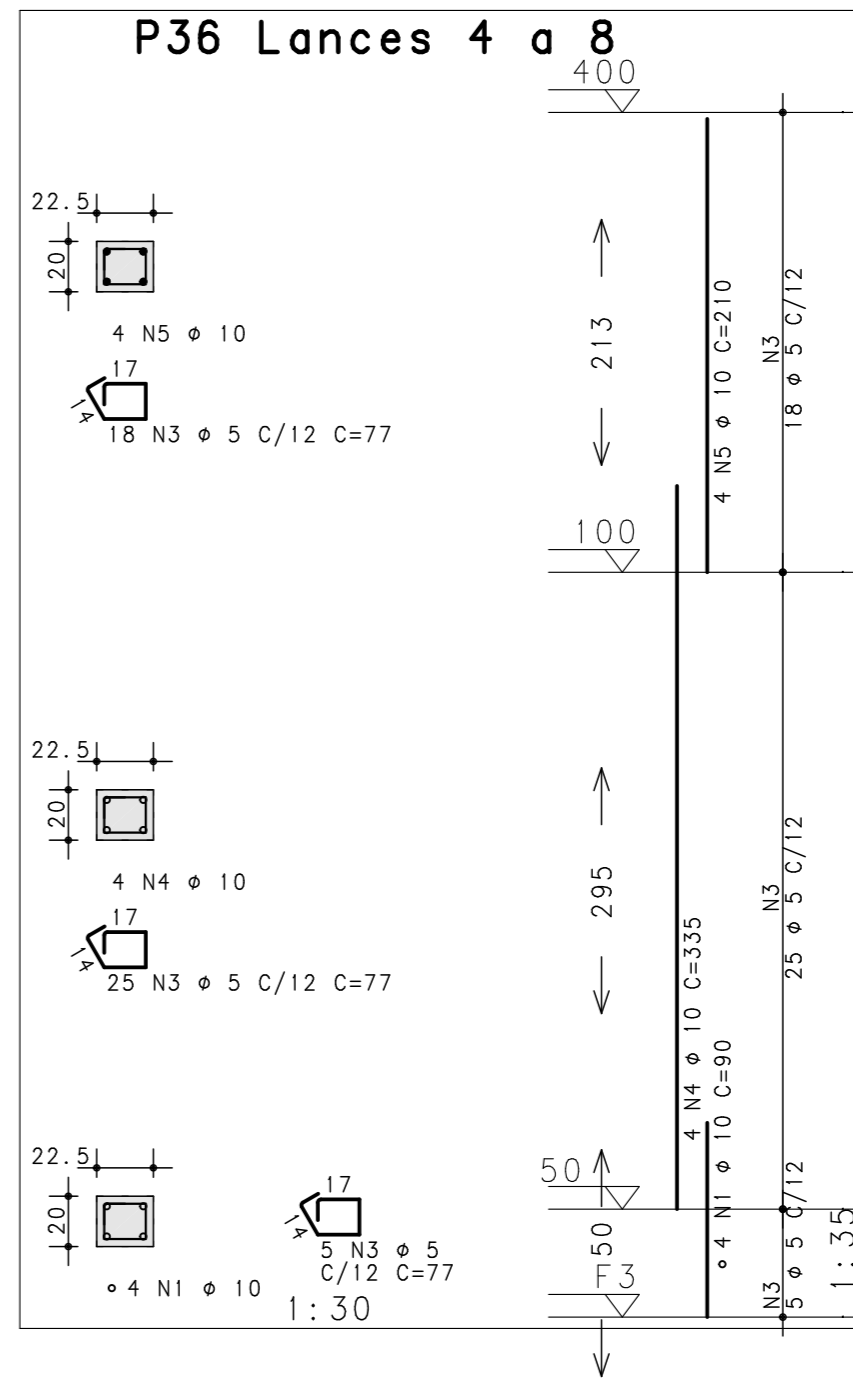
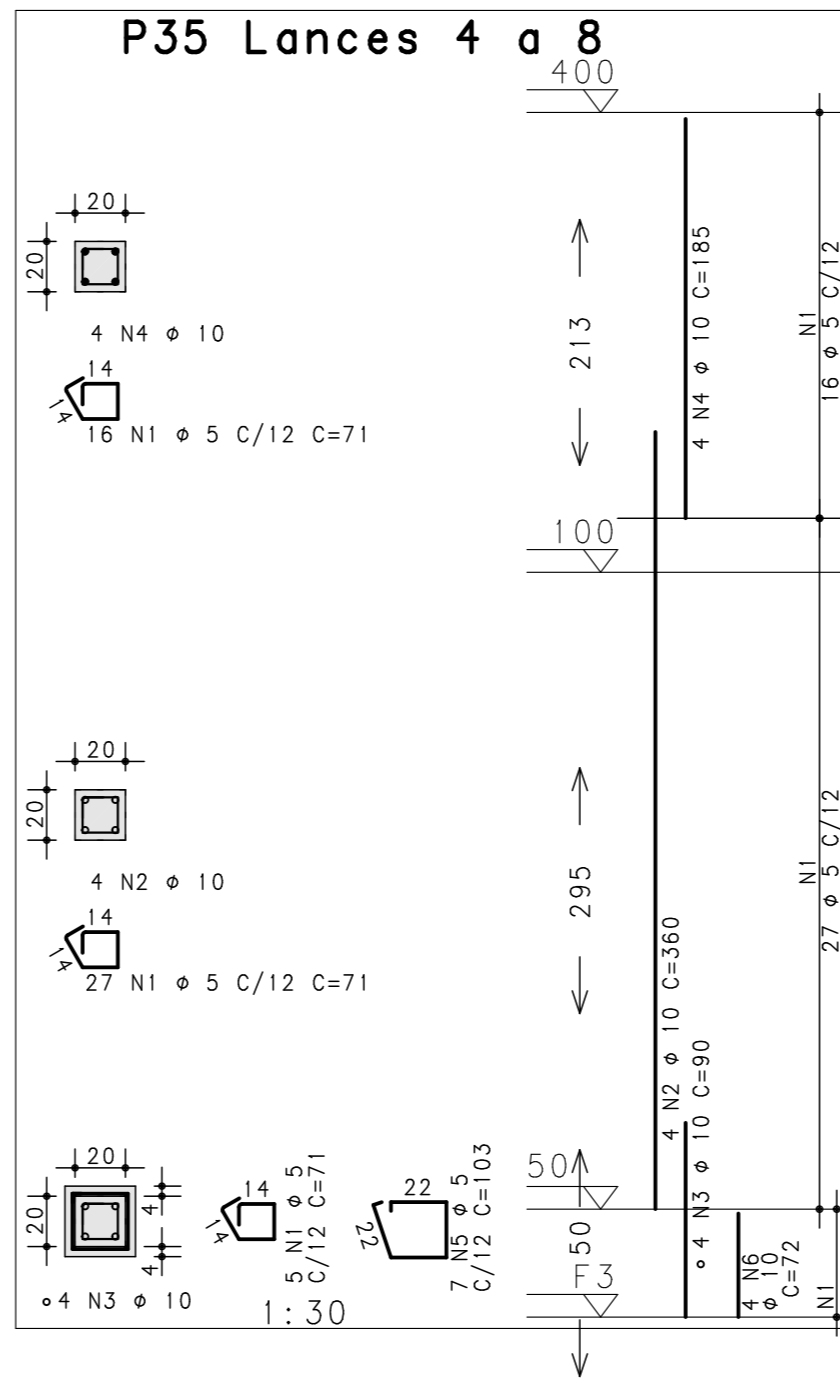
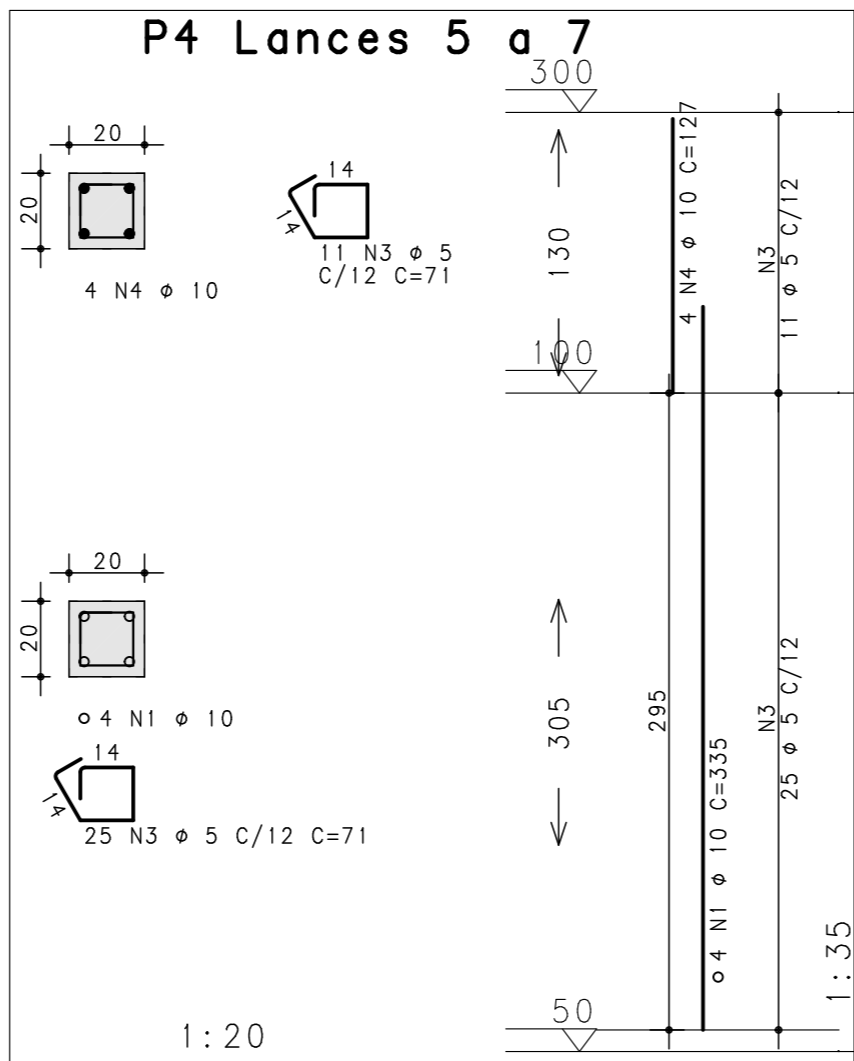
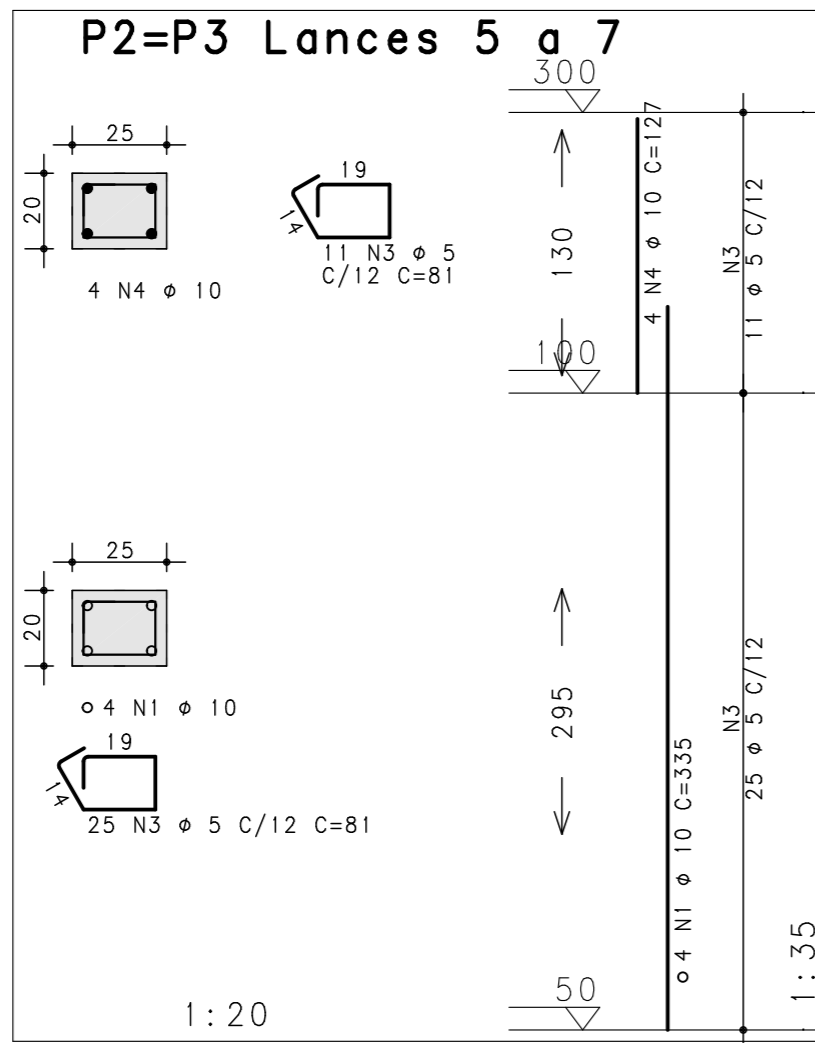
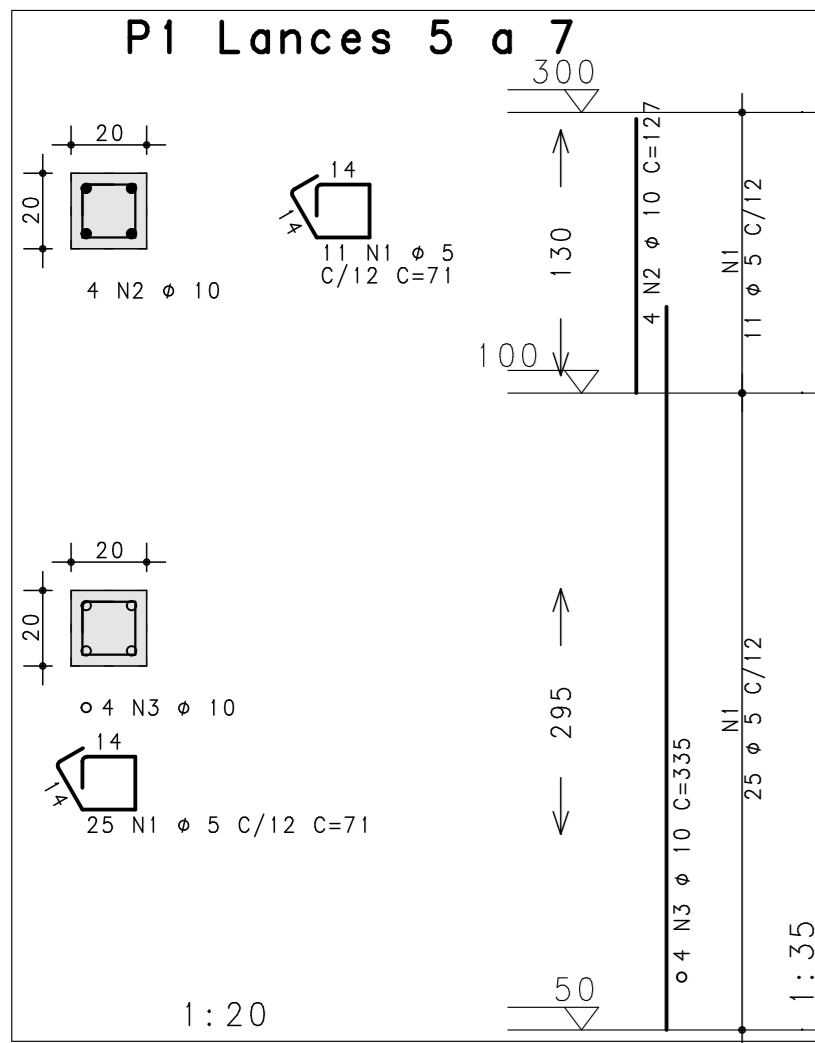
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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0	23/08/2016	J. Marques
Rev	Data	Assunto

CONCRETO fck = 200 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				010
TÍTULO PILARES ARMADURAS DOS PILARES				REV. N.º
				00
DATA 23/08/2016	ESCALA Indicada	DESENHO UBS-PIL-PIL-010-R00	COORD.	ENG.º

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AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
P27 Lances 3 a 5					
50A	1	12.5	4	180	720
50A	2	12.5	7	127	889
50A	4	6.3	9	184	1656
50A	5	6.3	18	60	1080
50A	6	10	4	302	1208
60B	7	5	26	71	1846
PF-1=PF-2=PF-3 Lance 4 (X3)					
50A	1	12.5	24	117	2808
50A	3	6.3	21	112	2352
P35 Lances 4 a 8					
60B	1	5	48	71	3408
50A	2	10	4	360	1440
50A	3	10	4	90	360
50A	4	10	4	185	740
60B	5	5	7	103	721
50A	6	10	4	72	288
P36 Lances 4 a 8					
50A	1	10	4	90	360
60B	3	5	48	77	3696
50A	4	10	4	335	1340
50A	5	10	4	210	840
P42 Lances 4 a 5					
50A	1	12.5	4	85	340
50A	2	12.5	7	32	224
50A	4	6.3	3	184	552
50A	5	6.3	6	60	360
50A	6	10	4	307	1228
60B	7	5	26	71	1846
P43 Lances 4 a 7					
50A	1	10	4	90	360
60B	3	5	30	71	2130
50A	4	10	4	80	320
50A	5	10	4	292	1168
50A	6	10	6	127	762
60B	7	5	11	127	1397
60B	8	5	11	30	330
P1 Lances 5 a 7					
60B	1	5	36	71	2556
50A	2	10	4	127	508
50A	3	5	4	335	1340
P2=P3 Lances 5 a 7 (X2)					
50A	1	10	8	335	2680
60B	3	5	72	81	5832
50A	4	10	8	127	1016
P4 Lances 5 a 7					
50A	1	10	4	335	1340
60B	3	5	36	71	2556
50A	4	10	4	127	508
P101=P103 Lances 6 a 7 (X2)					
50A	1	10	8	117	936
60B	3	5	20	71	1420
P102 Lances 6 a 8					
50A	1	10	4	145	580
60B	3	5	16	71	1136
50A	4	10	4	80	320

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	289	44
50A	6.3	60	15
50A	10	196	121
50A	12.5	50	48
Peso Total		60B =	44 kg
Peso Total		50A =	184 kg

P1 Lances 5 a 7
P2=P3 Lances 5 a 7
P4 Lances 5 a 7
P27 Lances 3 a 5
P35 Lances 4 a 8
P36 Lances 4 a 8
P42 Lances 4 a 5
P43 Lances 4 a 7
P101=P103 Lances 6 a 7
P102 Lances 6 a 8
PF-1=PF-2=PF-3 Lance 4



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

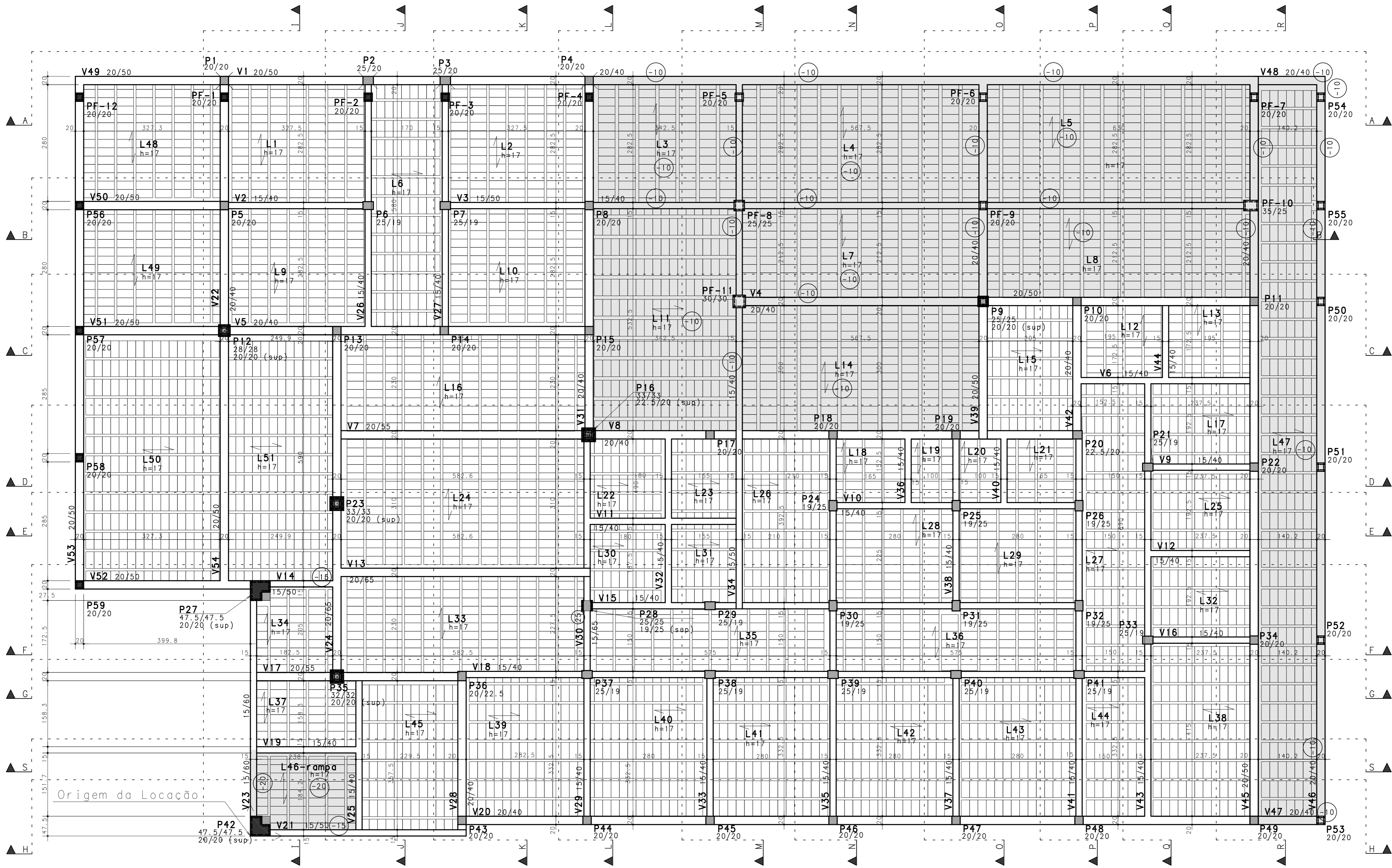
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

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Eng. Civil - CREA-RS 78208

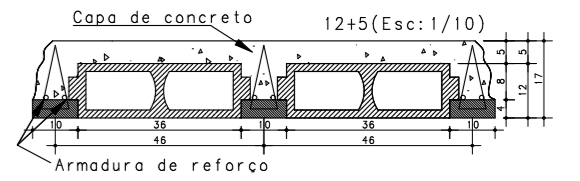
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Rev	Data	Autor	Assunto

CONCRETO fck = 200 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				011
TÍTULO PILARES ARMADURAS DOS PILARES				REV. N.º
				00
DATA 23/08/2016	ESCALA Indicada	DESENHO UBS-PIL-PIL-011-R00	COORD.	ENG.º

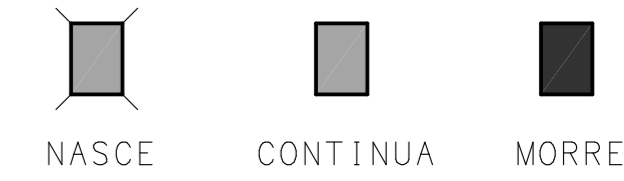
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Baricentros de pilares			
Pilar	X (cm)	Pilar	Y (cm)
PF-1	-62.5	P42	23.8
P1	-62.5	P49	37.5
P5	-62.5	P48	37.5
P12	-62.5	P47	37.5
P42	23.8	P46	37.5
P27	23.8	P45	37.5
P23	207.3	P44	37.5
P13	207.3	P43	37.5
P35	207.5	P35	382.5
PF-2	282.5	P36	383.8
P2	282.5	P37	387.5
P6	282.5	P41	387.5
P14	465.0	P39	387.5
P7	467.5	P40	387.5
PF-3	467.5	P38	387.5
P3	467.5	P33	470.0
P36	507.5	P34	470.0
P43	507.5	P28	552.5
P37	807.5	P30	552.5
P28	807.5	P31	552.5
P44	807.5	P29	552.5
P16	811.2	P32	552.5
P15	812.5	P27	588.7
P4	812.5	P24	792.5
PF-4	812.5	P25	792.5
P8	812.5	P26	792.5
P45	1102.5	P23	797.5
P38	1102.5	P21	885.0
P17	1102.5	P22	885.0
P29	1102.5	P16	962.5
PF-5	1172.5	P19	962.5
PF-8	1172.5	P20	962.5
PF-11	1172.5	P18	962.5
P18	1397.5	P17	962.5
P39	1397.5	P15	1212.5
P46	1397.5	P13	1212.5
P30	1397.5	P14	1212.5
P24	1397.5	P12	1212.5
P40	1692.5	PF-11	1282.5
P47	1692.5	P9	1282.5
P31	1692.5	P10	1282.5
P19	1692.5	P11	1282.5
P25	1692.5	P7	1512.5
P9	1757.5	P5	1512.5
PF-9	1757.5	P6	1512.5
PF-6	1757.5	P8	1512.5
P10	1982.5	PF-8	1512.5
P20	1983.7	PF-9	1512.5
P48	1987.5	PF-10	1512.5
P41	1987.5	PF-1	1772.5
P32	1987.5	PF-3	1772.5
P26	1987.5	PF-2	1772.5
P33	2152.5	PF-4	1772.5
P21	2152.5	PF-5	1772.5
PF-10	2400.0	PF-6	1772.5
P22	2407.5	PF-7	1772.5
P34	2407.5	P3	1812.5
P11	2407.5	P1	1812.5
P49	2407.5	P2	1812.5
PF-7	2407.5	P4	1812.5



CONVENÇÃO DE PILARES



Rua Quatro de Novembro, 553/405
Pelotas - RS - CEP 96201-000
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

Rev	Data	Autor	Assunto
2	22/08/2016	J. Marques	Inclusão-PF12-P56 ao P59-L48 A L51-V49 A V54
1	08/02/2016	Fernando	Inclusão corredor fundo - ajuste treliças

CONCRETO fck = 250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				012
TÍTULO NÍVEL 50 FÔRMAS-LAJE TRELIÇADA				REV. N.º 00
DATA 22/08/2016	ESCALA 1:50	DESENHO UBS-50 - LAJ-012-R00	COORD.	ENG.º

Projeto de fabricação de vigotas treliçadas
Sem escala

VT1A L1 6 Unidades		VT12A L12 3 Unidades		VT23A L23 4 Unidades		VT34B L34 3 Unidades		VT45A L45 7 Unidades	
VT2A L2 6 Unidades		VT13A L13 4 Unidades		VT24A L24 12 Unidades		VT35A L35 11 Unidades		VT46A L46-rampa 1 Unidades	
VT3A L3 6 Unidades		VT14A L14 11 Unidades		VT25A L25 3 Unidades		VT36A L36 12 Unidades		VT46B L46-rampa 4 Unidades	
VT4A L4 11 Unidades		VT15A L15 6 Unidades		VT26A L26 8 Unidades		VT37A L37 5 Unidades		VT47A L47 37 Unidades	
VT5A L5 13 Unidades		VT16A L16 12 Unidades		VT27A L27 15 Unidades		VT38A L38 8 Unidades		VT48A L48 7 Unidades	
VT6A L6 12 Unidades		VT17A L17 4 Unidades		VT28A L28 6 Unidades		VT39A L39 7 Unidades		VT49A L49 7 Unidades	
VT7A L7 11 Unidades		VT18A L18 3 Unidades		VT29A L29 5 Unidades		VT40A L40 7 Unidades		VT50A L50 12 Unidades	
VT8A L8 13 Unidades		VT19A L19 2 Unidades		VT30A L30 4 Unidades		VT41A L41 7 Unidades		VT51A L51 12 Unidades	
VT9A L9 6 Unidades		VT20A L20 1 Unidades		VT31A L31 4 Unidades		VT42A L42 7 Unidades			
VT10A L10 6 Unidades		VT21A L21 3 Unidades		VT32A L32 4 Unidades		VT43A L43 7 Unidades			
VT11A L11 11 Unidades		VT22A L22 4 Unidades		VT33A L33 12 Unidades		VT44A L44 7 Unidades			

Dados		Vãos / Apoios				Tabela de Vigotas Treliçadas				Armadura Adicional (1)			
Laje	Vigota	No	LapE cm	Liv cm	LapD cm	Ltot cm	Treliça	Unit cm	Total cm	No bar	Ø mm	DE cm	DD cm
L1	VT1A	6	10	282	10	302	TR12645	302	1815	2	5.0	5	5
L2	VT2A	6	10	282	10	302	TR12645	302	1815	1	5.0	5	5
L3	VT3A	6	10	282	10	302	TR12645	302	1815	2	5.0	5	5
L4	VT4A	11	10	282	10	302	TR12645	302	3327	2	5.0	5	5
L5	VT5A	13	10	282	10	302	TR12645	302	3932	2	5.0	5	5
L6	VT6A	12	10	170	10	190	TR12645	190	2280	2	5.0	5	5
L7	VT7A	11	10	213	10	233	TR12645	233	2558	2	5.0	5	5
L8	VT8A	13	10	213	10	233	TR12645	233	3023	2	5.0	5	5
L9	VT9A	6	10	283	10	303	TR12645	303	1815	2	5.0	5	5
L10	VT10A	6	10	283	10	303	TR12645	303	1815	2	5.0	5	5
L11	VT11A	11	10	342	10	362	TR12645	362	3987	1	10.0	10	10
L12	VT12A	3	10	172	10	192	TR12645	192	577	2	5.0	5	5
L13	VT13A	4	10	172	10	192	TR12645	192	770	2	5.0	5	5
L14	VT14A	11	10	300	10	320	TR12645	320	3520	2	5.0	5	5
L15	VT15A	6	10	205	10	225	TR12645	225	1350	2	5.0	5	5
L16	VT16A	12	10	230	10	250	TR12645	250	3000	2	5.0	5	5
L17	VT17A	4	10	238	10	258	TR12645	258	1030	2	5.0	5	5
L18	VT18A	3	10	153	10	173	TR12645	173	518				
L19	VT19A	2	10	153	10	173	TR12645	173	345				
L20	VT20A	1	10	153	10	173	TR12645	173	173	2	5.0	5	5
L21	VT21A	3	10	153	10	173	TR12645	173	518	2	5.0	5	5
L22	VT22A	4	10	180	10	200	TR12645	200	800	2	5.0	5	5
L23	VT23A	4	10	155	10	175	TR12645	175	700	2	5.0	5	5
L24	VT24A	12	10	310	10	330	TR12645	330	3960	2	5.0	5	5
L25	VT25A	3	10	238	10	258	TR12645	258	773	1	5.0	5	5
L26	VT26A	8	10	210	10	230	TR12645	230	1840	2	5.0	5	5
L27	VT27B	15	15	150	10	175	TR12645	175	2625	2	5.0	5	5
L28	VT28A	6	10	225	10	245	TR12645	245	1470				
L29	VT29A	5	10	225	10	245	TR12645	245	1225				
L30	VT30A	4	10	180	10	200	TR12645	200	800	2	5.0	5	5
L31	VT31A	4	10	155	10	175	TR12645	175	700	2	5.0	5	5
L32	VT32A	4	10	238	10	258	TR12645	258	1030				
L33	VT33A	12	10	230	10	250	TR12645	250	3000	2	5.0	5	5
L34	VT34B	1	10	172	20	202	TR12645	202	202	2	5.0	5	5
L35	VT35A	11	10	150	10	170	TR12645	170	1870	2	5.0	5	5
L36	VT36A	12	10	150	10	170	TR12645	170	2040	2	5.0	5	5
L37	VT37A	5	10	158	10	178	TR12645	178	891	2	5.0	5	5
L38	VT38A	8	10	238	10	258	TR12645	258	2060	1	5.0	5	5
L39	VT39A	7	10	282	10	302	TR12645	302	2117	1	5.0	5	5
L40	VT40A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L41	VT41A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L42	VT42A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L43	VT43A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L44	VT44A	7	10	150	10	170	TR12645	170	1190				
L45	VT45A	7	10	230	10	250	TR12645	250	1747	2	5.0	5	5
L46	VT46A	1	20	182	10	192	TR12645	192	82	1	8.0	8	8
L47	VT47A	37	10	140	10	160	TR12645	160	5926	2	5.0	5	5
L48	VT48A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L49	VT49A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	5
L50	VT50A	12	10	327	10	347	TR12645	347	4168	2	5.0	5	5
L51	VT51A	12	10	250	10	270	TR12645	270	3239	1	5.0	5	5



Rua Quinze de Novembro, 563/405
Pelotas - RS - CEP 96201-000
Telefone: (51) 3229-1500
e-mail: fernando@gigante.com.br
e-mail: paulo@simch.com.br

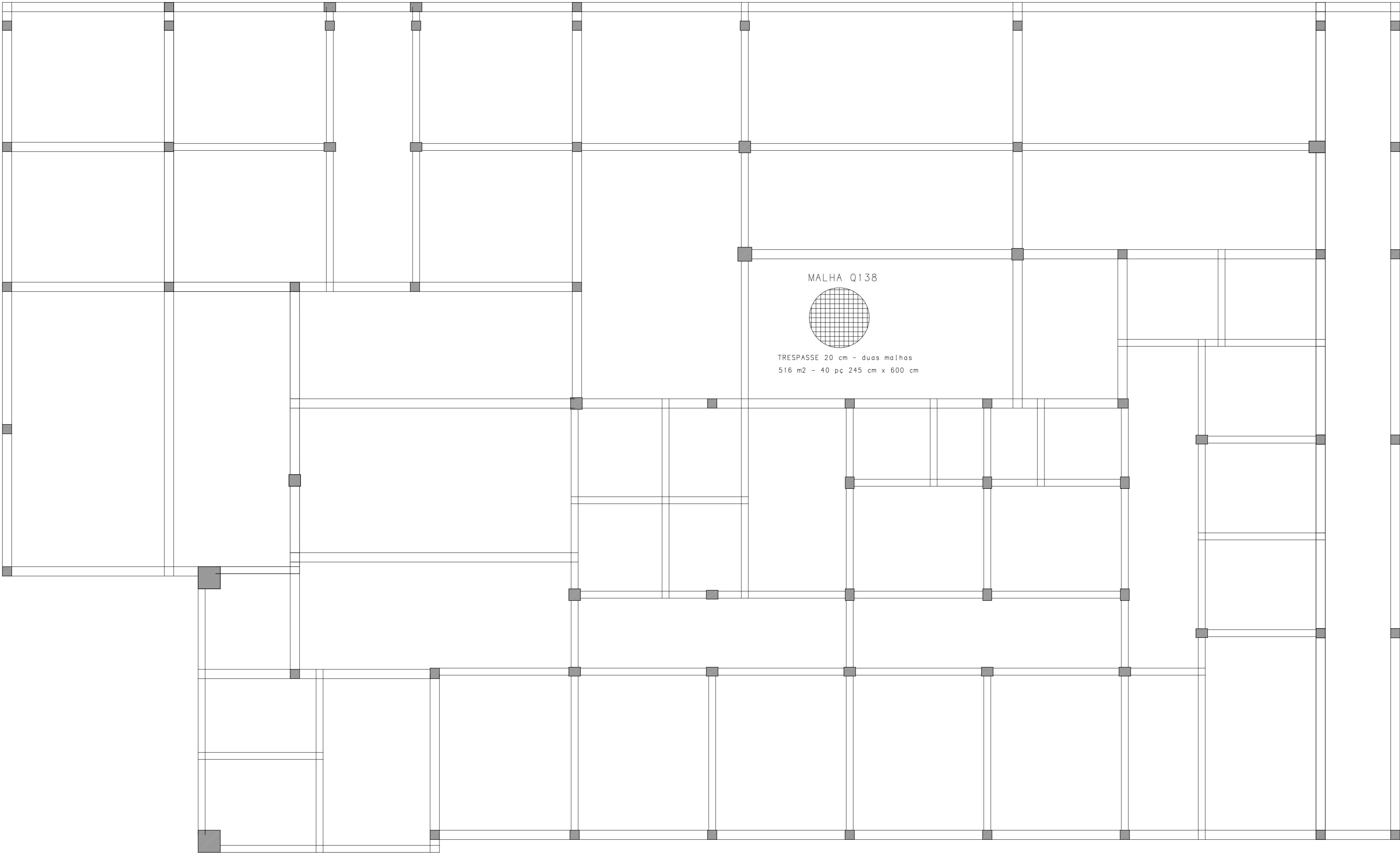
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2	23/08/2016	J. Marques	Inclusão das vigotas das lajes L48-L49-L50-L51
0	08/02/2016	Fernando	Inclusão corredor fundo - ajuste treliças
Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				013
TÍTULO NÍVEL 50 VIGOTAS E TABELA				REV. N.º 00
DATA 23/08/2016	ESCALA SEM ESCALA	DESENHO UBS-50_-LAJ-013-R00	COORD.	ENG.º

50 - Armadura de distribuição-tela

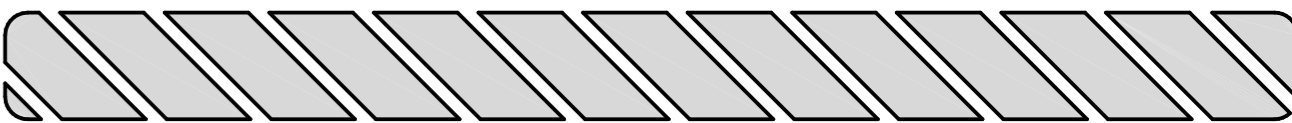


Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

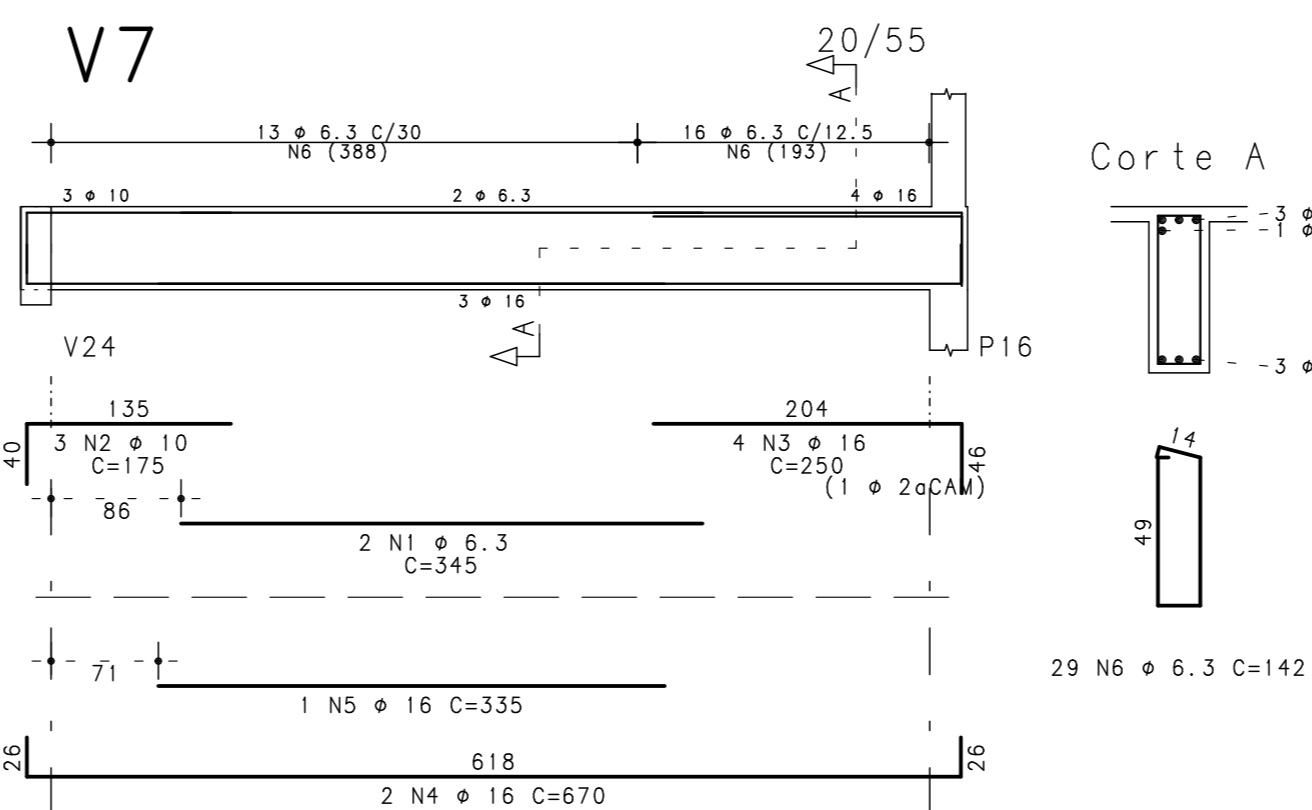
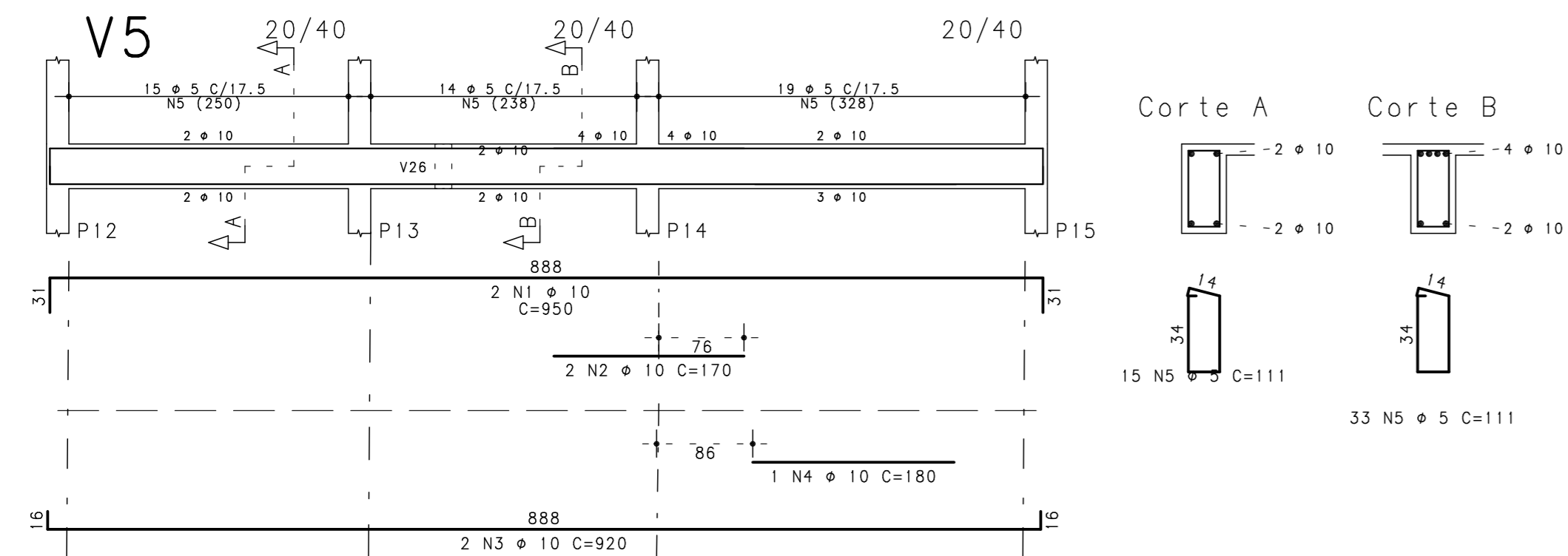
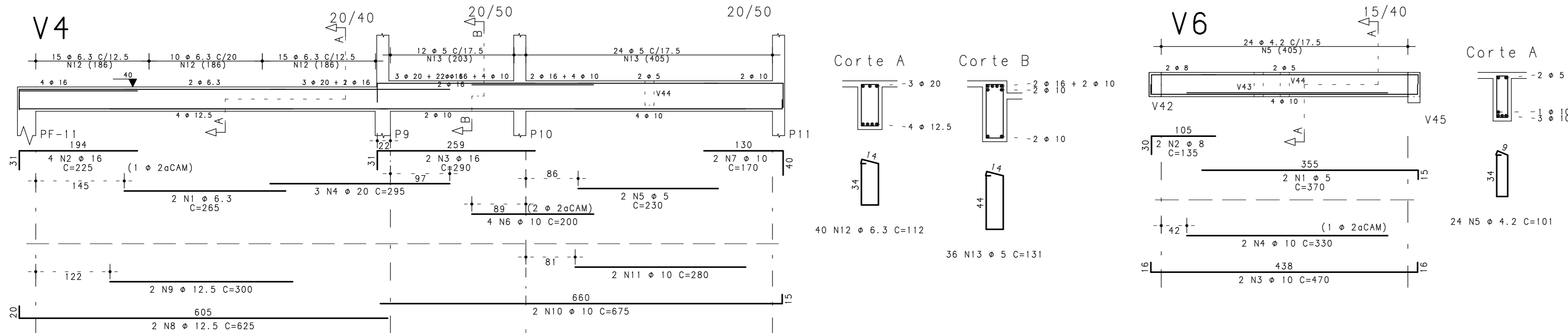
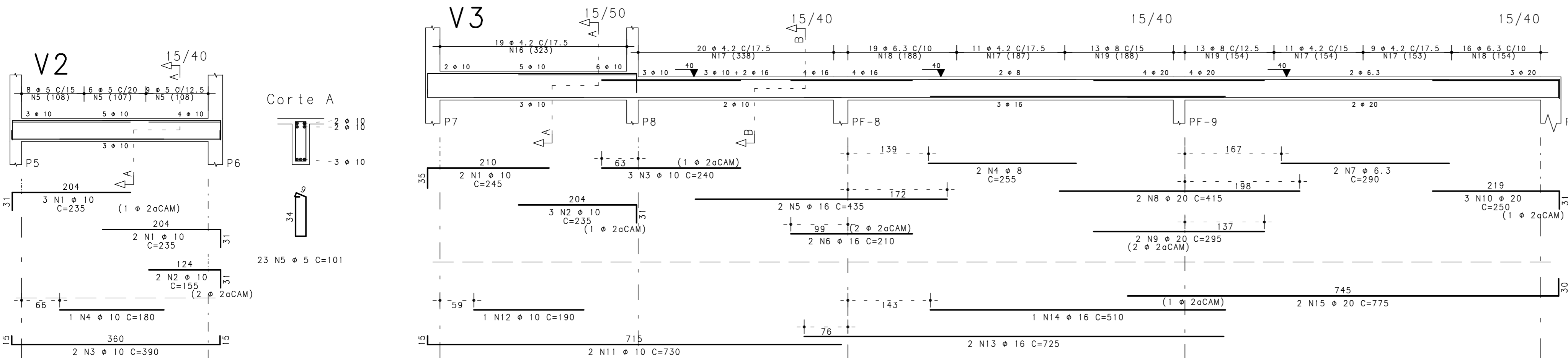
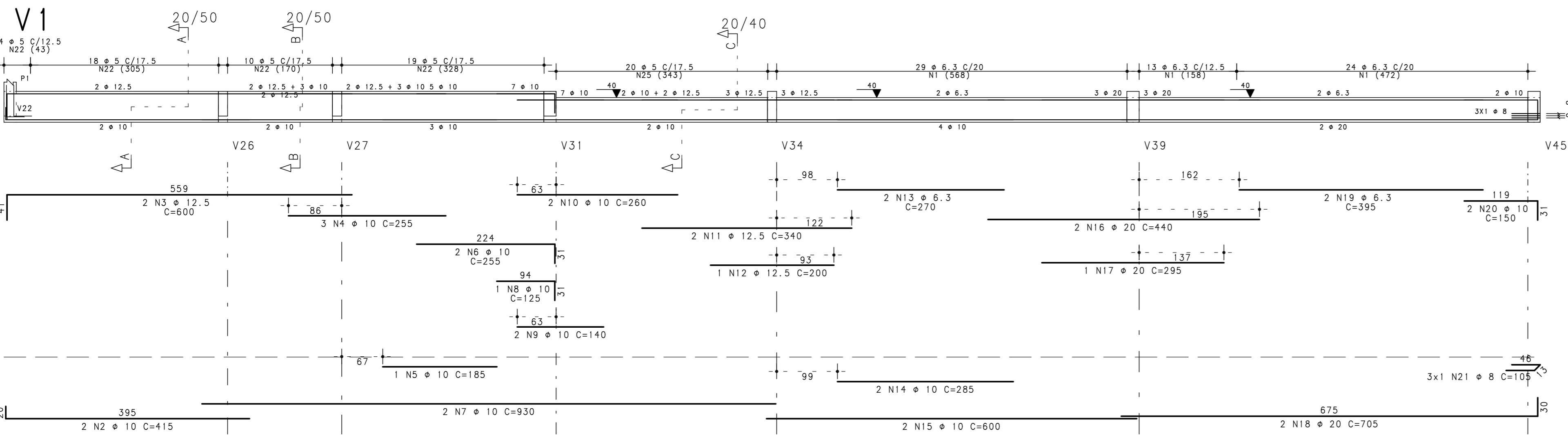
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2	22/08/2016	J. Marques	Inclusão das Lajes L48-L49-L50-L51
1	08/02/2016	Fernando	Inclusão corredor fundo - ajuste treliças
0			
Rev	Data	Autor	Assunto



CONCRETO fck = 200 kgf/cm2	SOBRECARGA PREVISTA	OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º
OBRA UBS TIPO 2-CORRIENTES		014
TÍTULO NÍVEL 50 ARMADURA DE DISTRIBUIÇÃO-TELA		REV. N.º
		00
DATA 22/08/2016	ESCALA 1:50	DESENHO UBS-50_-LAJ-014-R00
		COORD.
		ENG.º

GIGANTE & SIMCH ENGENHARIA CIVIL
RUA QUINTA DE NOVEMBRO, 553/405
PELOTAS - RS - CEP 96201-500
TELEFONE: (51) 3229-1500
E-MAIL: fernando@simch.com.br
E-MAIL: paulo@simch.com.br



	AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO		
					UNIT (cm)	TOTAL (cm)	
V1	50A	1	6.3	66	112	7392	
	50A	2	10	2	415	830	
	50A	3	12.5	2	600	1200	
	50A	4	10	3	255	765	
	50A	5	10	1	185	185	
	50A	6	10	2	255	510	
	50A	7	10	2	930	1860	
	50A	8	10	1	125	125	
	50A	9	10	2	140	280	
	50A	10	10	2	260	520	
	50A	11	12.5	2	340	680	
	50A	12	12.5	1	200	200	
	50A	13	6.3	2	270	540	
	50A	14	10	2	285	570	
	50A	15	10	2	600	1200	
	50A	16	20	2	440	880	
	50A	17	20	1	295	295	
	50A	18	20	2	705	1410	
	50A	19	6.3	2	395	790	
	50A	20	10	2	150	300	
	50A	21	8	3	105	315	
	60B	22	5	51	131	6681	
	60B	23	5	3	71	213	
	50A	24	10	4	87	348	
	60B	25	5	20	111	2220	
V2	50A	1	10	5	235	1175	
	50A	2	10	2	155	310	
	50A	3	10	2	390	780	
	50A	4	10	1	180	180	
60B	5	5	23	101	2323		
	V3	50A	1	10	2	245	490
		50A	2	10	3	235	705
		50A	3	10	3	240	720
50A		4	8	2	255	510	
50A		5	16	2	435	870	
50A		6	16	2	210	420	
50A		7	6.3	2	290	580	
50A		8	20	2	415	830	
50A		9	20	2	295	590	
50A		10	20	3	250	750	
50A		11	10	2	730	1460	
50A		12	10	1	190	190	
50A		13	16	2	725	1450	
50A		14	16	1	510	510	
50A		15	20	2	775	1550	
60B		16	4.2	19	121	2299	
60B	17	4.2	51	101	5151		
	50A	18	6.3	35	102	3570	
	50A	19	8	26	104	2704	
	V4	50A	1	6.3	2	265	530
50A		2	16	4	225	900	
50A		3	16	2	290	580	
50A		4	20	3	295	885	
60B		5	5	2	230	460	
50A		6	10	4	200	800	
50A		7	10	2	170	340	
50A		8	12.5	2	625	1250	
50A	9	12.5	2	300	600		
50A	10	2	2	675	1350		
50A	11	10	2	280	560		
50A	12	6.3	40	112	4480		
60B	13	5	36	131	4716		
V5	50A	1	10	2	950	1900	
	50A	2	10	2	170	340	
	50A	3	10	2	920	1840	
	50A	4	10	1	180	180	
60B	5	5	48	111	5328		
V6	60B	1	5	2	370	740	
	50A	2	8	2	135	270	
	50A	3	10	2	470	940	
	50A	4	10	2	330	660	
60B	5	4.2	24	101	2424		
V7	50A	1	6.3	2	345	690	
	50A	2	10	3	175	525	
	50A	3	16	4	250	1000	
	50A	4	16	2	670	1340	
	50A	5	16	1	335	335	
	50A	6	6.3	29	142	4118	

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	99	11
60B	5	227	35
50A	6.3	227	56
50A	8	38	15
50A	10	229	142
50A	12.5	39	38
50A	16	74	117
50A	20	72	177
Peso Total		60B =	46 kg
Peso Total		50A =	544 kg



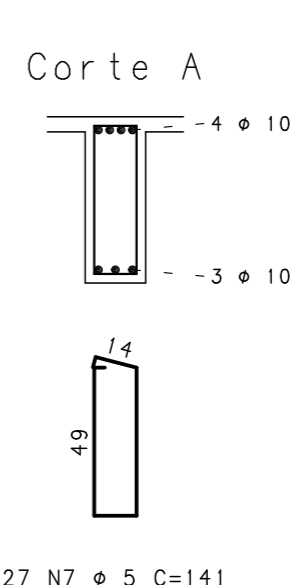
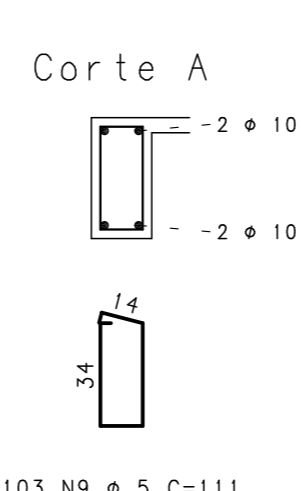
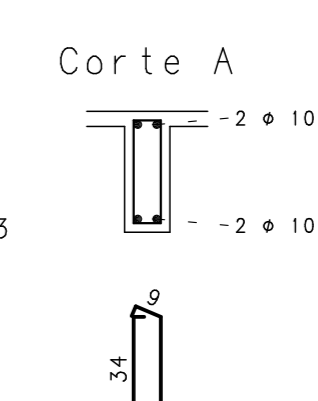
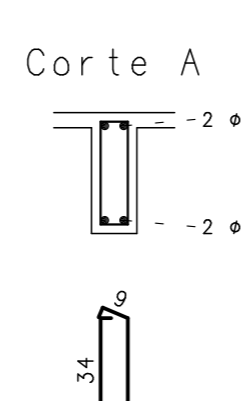
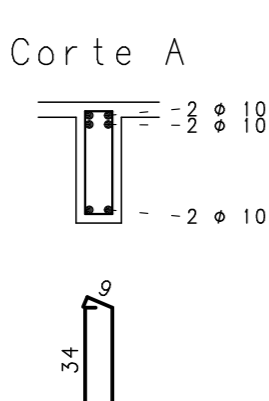
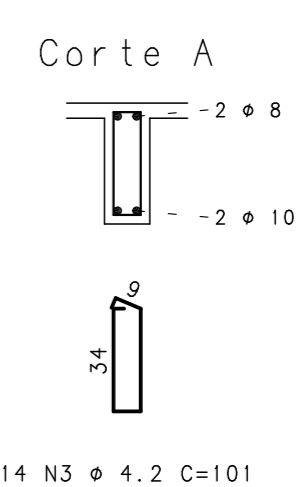
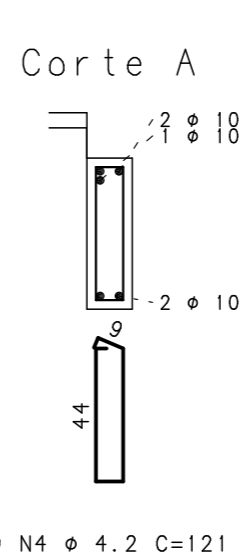
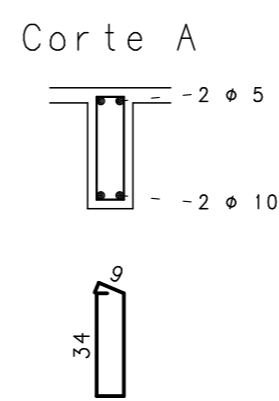
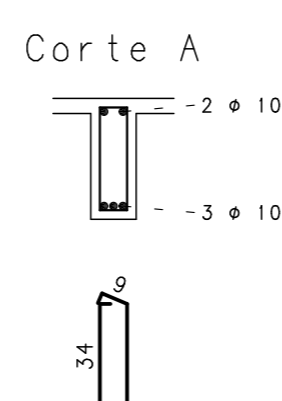
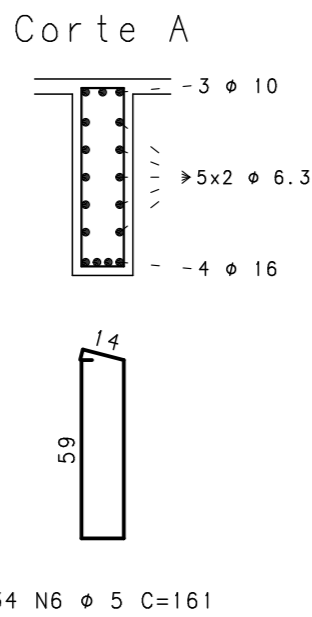
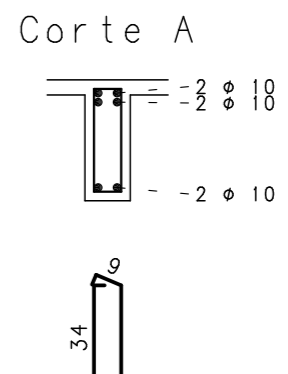
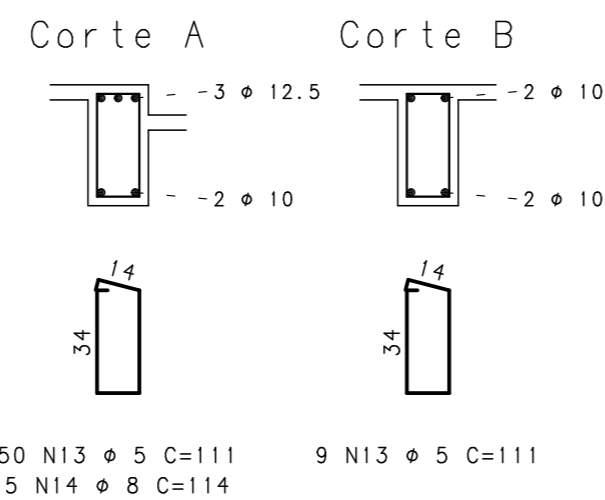
Rua Quinta de Novembro, 553/405
Pelotas - RS - CEP 96201-500
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

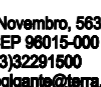
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

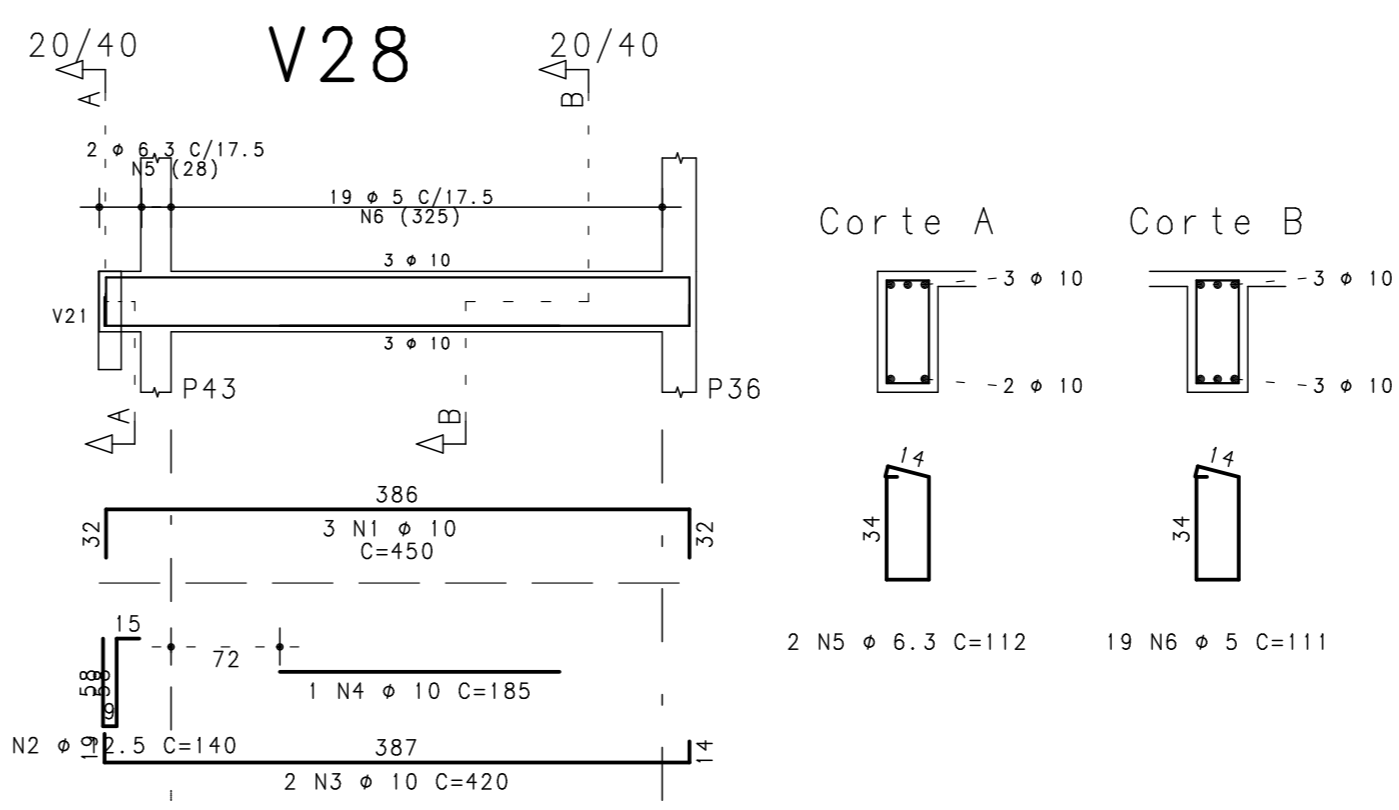
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Rev	Data	Autor	Assunto

CONCRETO fck = 200 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				015
TÍTULO NÍVEL 50 ARMADURAS DAS VIGAS				REV. N.º
V1 / V2 / V3 / V4 / V5 V6 / V7				00
DATA 23/08/2016	ESCALA 1:50	DESENHO UBS-50-VIG-015-R00	COORD.	ENG.º

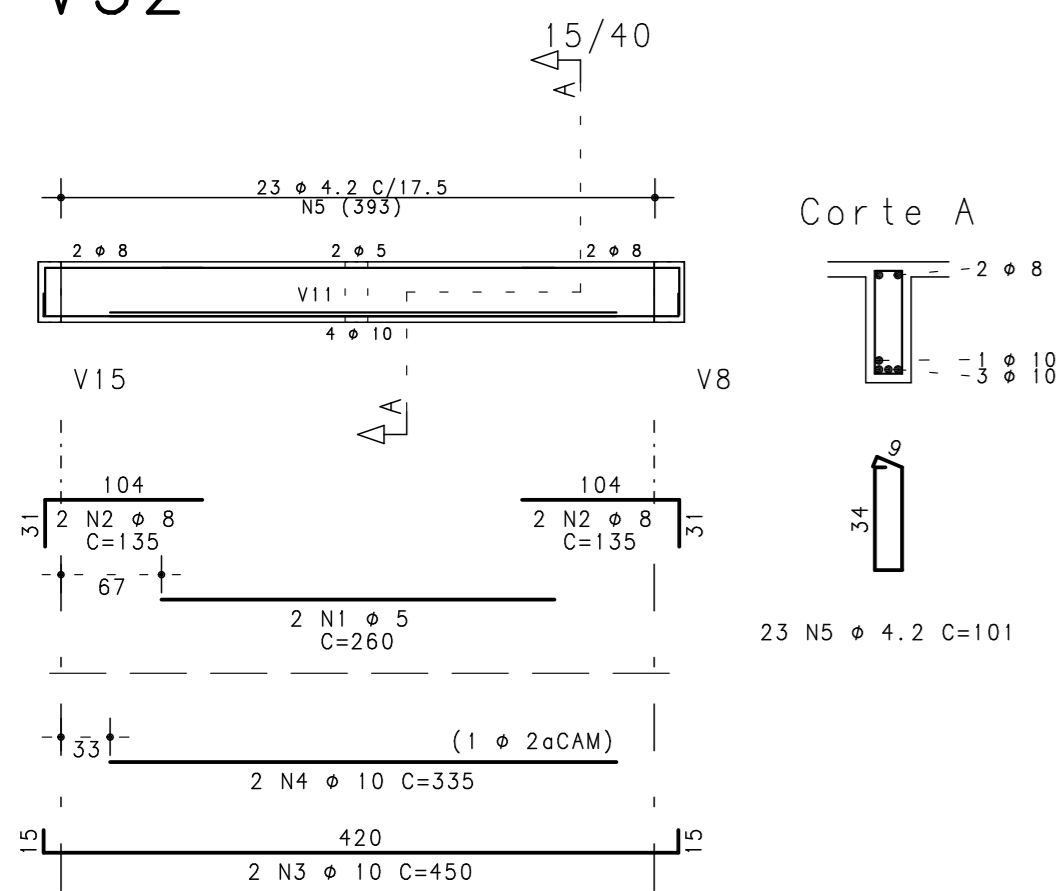


RESUMO ACO. CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	212	23
60B	5	313	48
50A	6.3	87	21
8A	8	25	10
50A	10	392	242
50A	12.5	20	19
50A	16	25	39
Peso Total		60A =	71 kg
Peso Total			332 kg

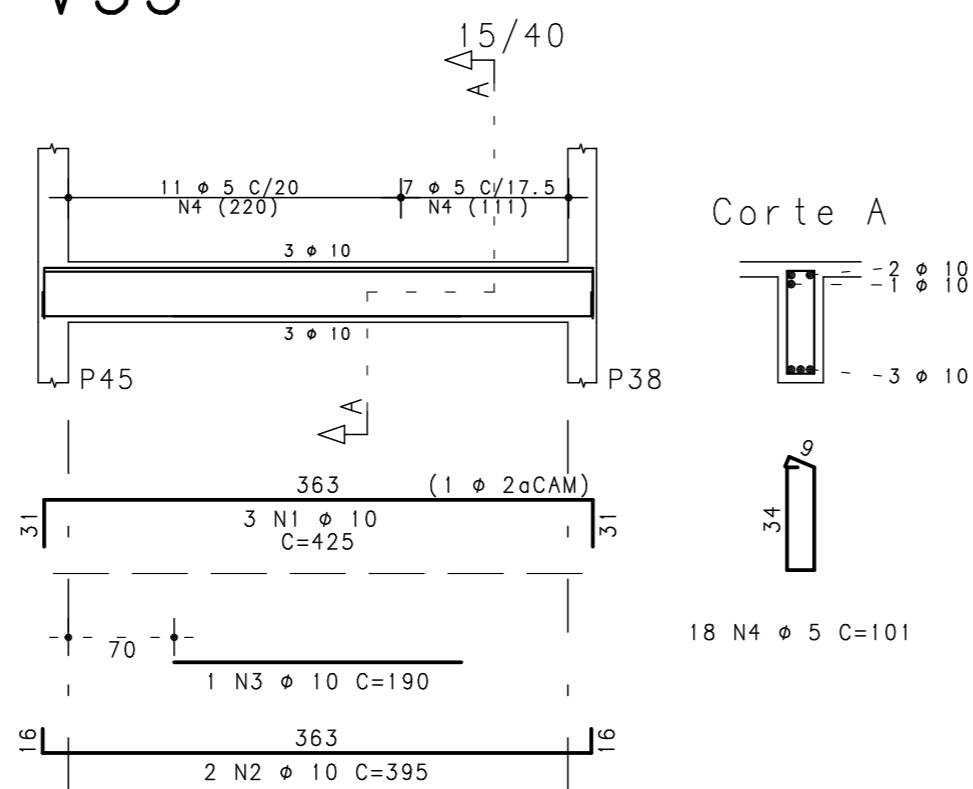
 Gigante & Simch engenharia civil projetos e sondagens		Rua Quintino de November, 553/405 Foneax - RS - CEP 96151-500 Telefone: (51) 32291800 e-mail: fernando.gigante@gsma.com.br e-mail: paolrogerio@gyfnet.com.br		Fernando Petrucci Gigante Eng. Civil - CREA-RS 45232		Paulo Rogério Maffini Simch Eng. Civil - CREA-RS 78208	
2							
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Rev	Data	Autor		Assunto			
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CONCRETO fck = 200 kgf/cm2				SOBRECARGA PREVISTA			
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				OBRA N.º 0001			
OBRA UBS TIPO 2-CORRIENTES				DES. N.º			
TÍTULO NÍVEL 50 ARMADURAS DAS VIGAS V8 / V9 / V10 / V11 / V12 V13 / V14 / V15 / V16 V17 / V18 / V20				016			
				REV. N.º 00			
DATA 23/08/2016		ESCALA 1:50		RESENHO UBS-50.-VIG-016-R00		COORD.	
						ENG.º	



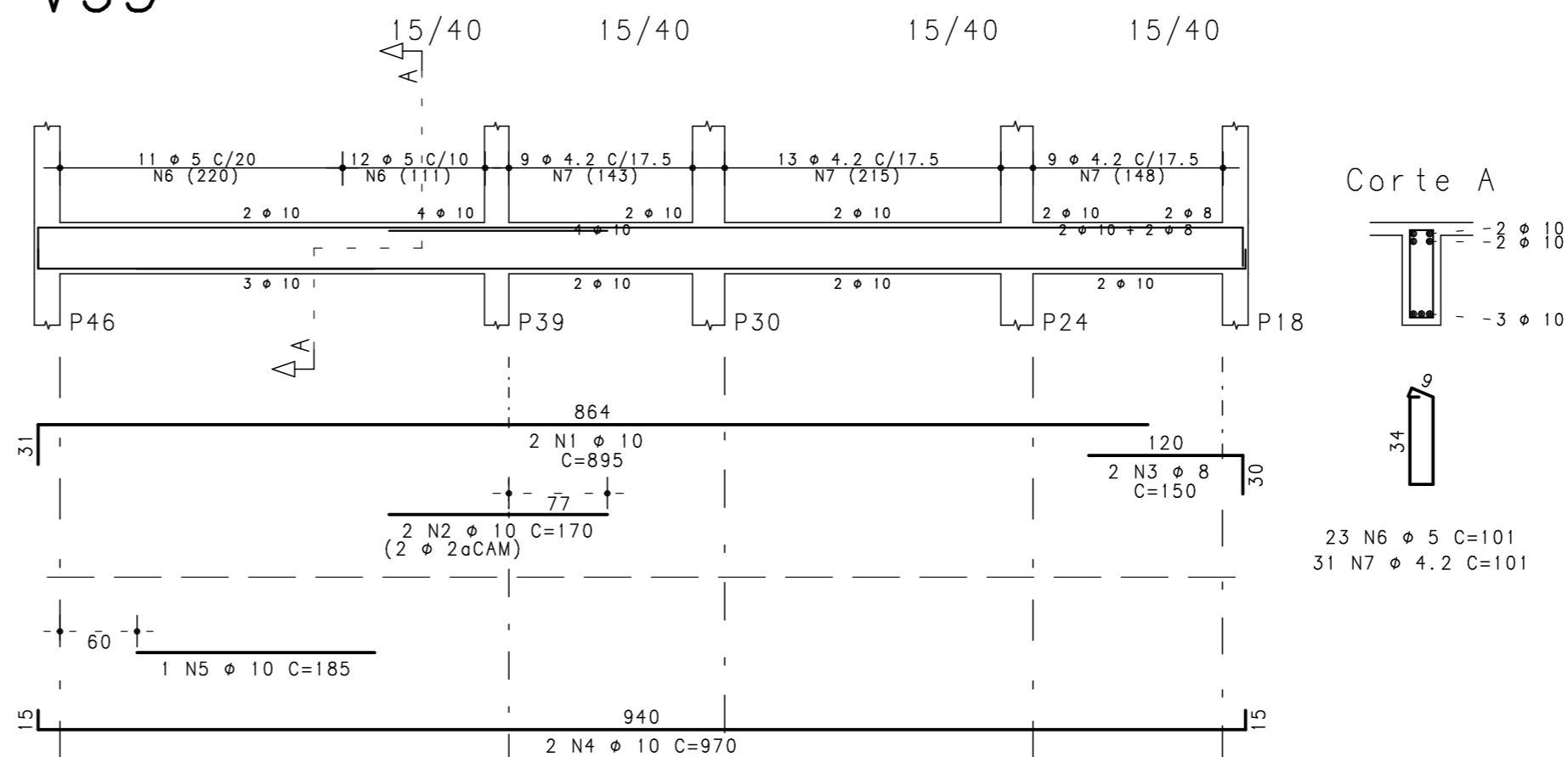
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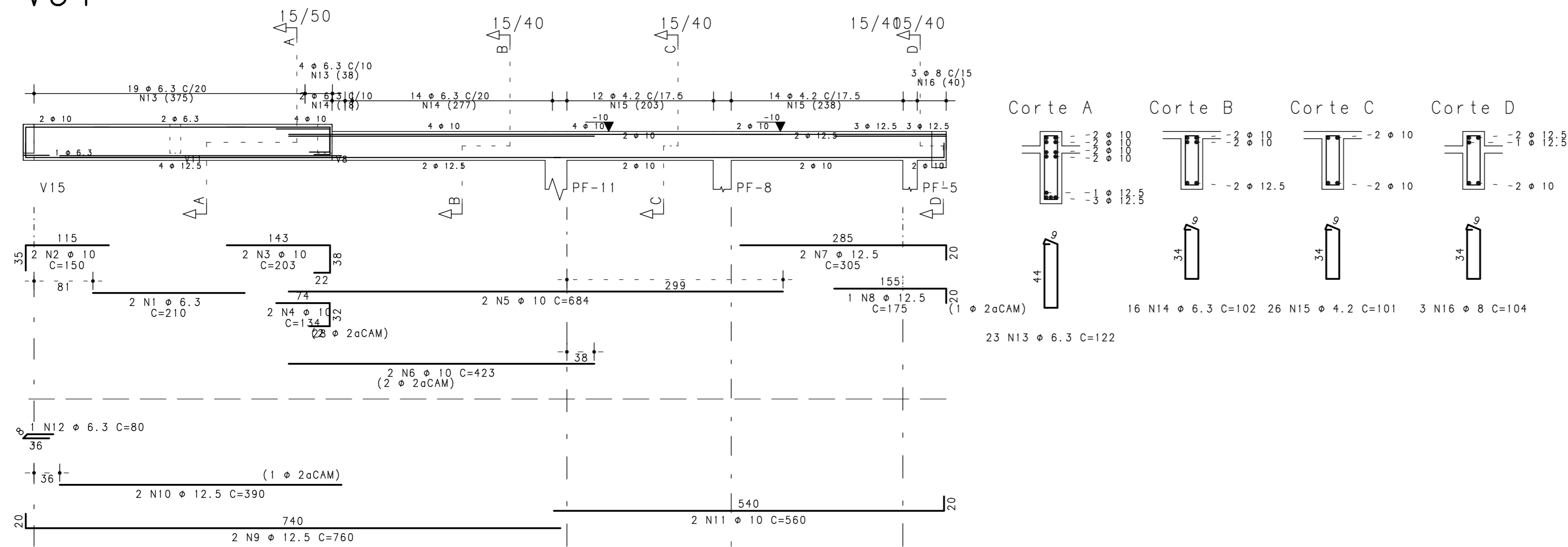
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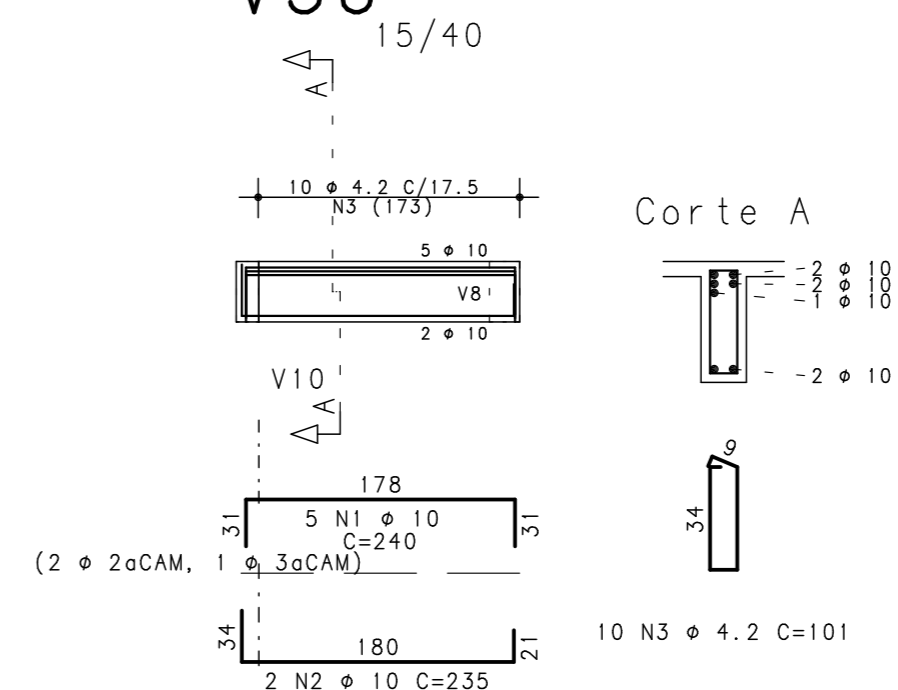
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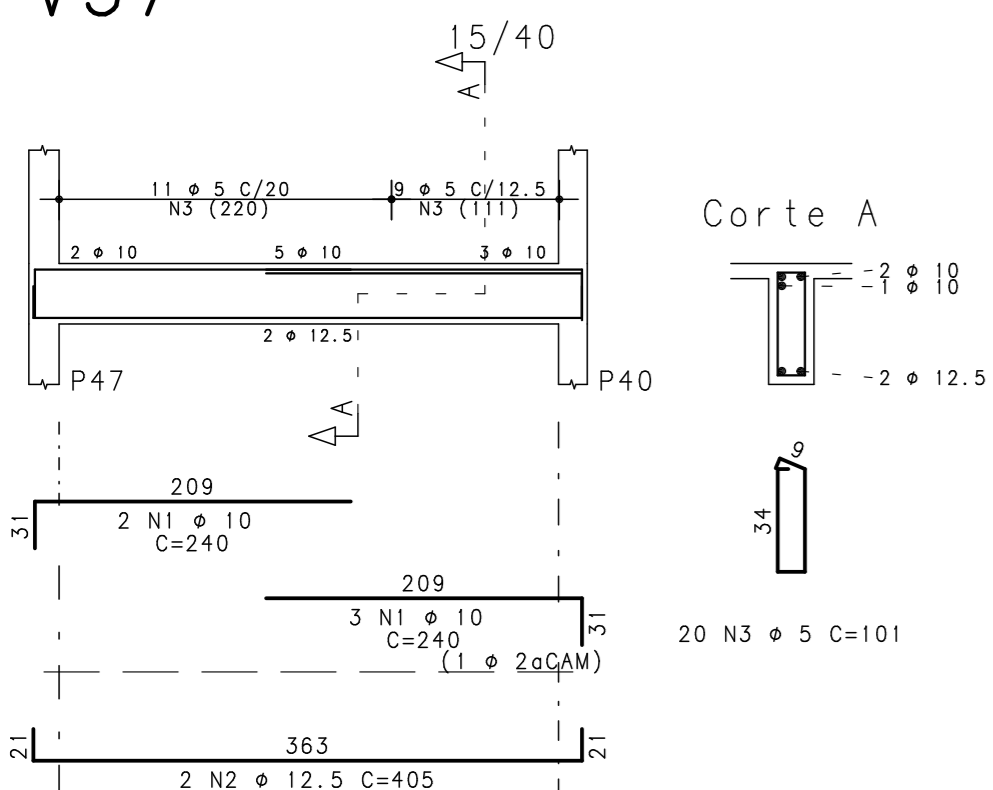
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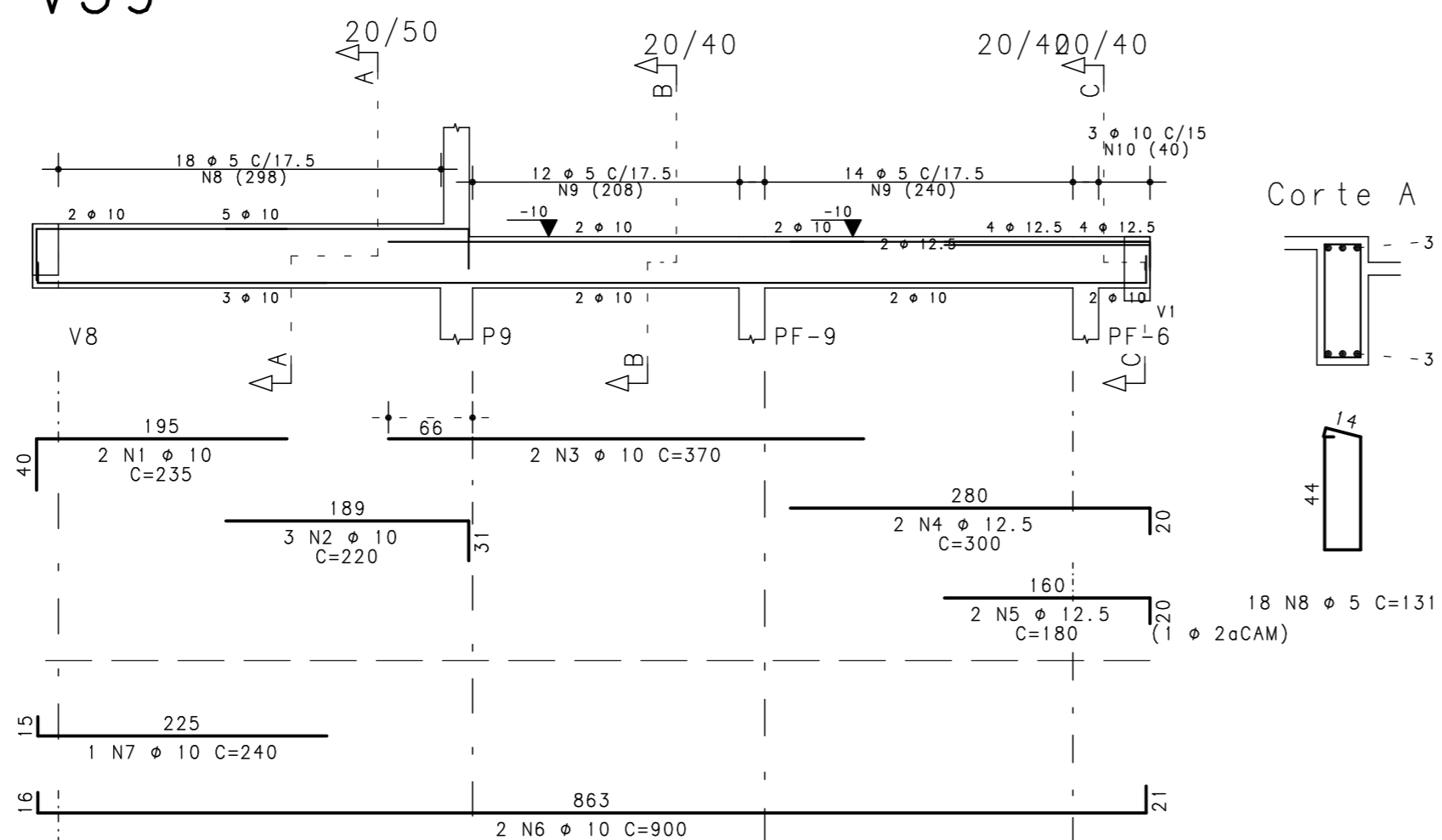
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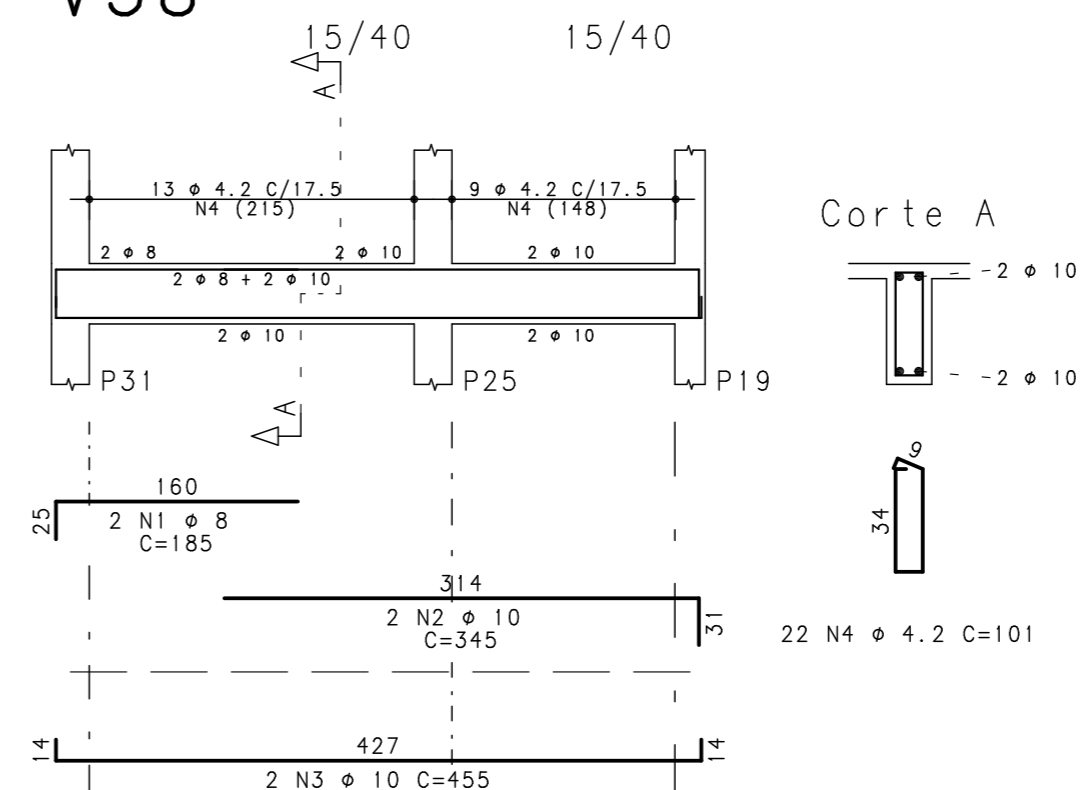
V37



V39



V38



ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V32	60B	1	5	2	260
	50A	2	8	4	135
	50A	3	10	2	450
	50A	4	10	2	335
	60B	5	4.2	23	101
V33	50A	1	10	3	425
	50A	2	10	2	395
	50A	3	10	1	190
	60B	4	5	18	101
V34	50A	1	6.3	2	210
	50A	2	10	2	150
	50A	3	10	2	203
	50A	4	10	2	134
	50A	5	10	2	684
	50A	6	10	2	423
	50A	7	12.5	2	305
	50A	8	12.5	1	175
	50A	9	12.5	2	760
	50A	10	12.5	2	390
	50A	11	10	2	560
	50A	12	6.3	1	80
V35	50A	13	6.3	23	122
	50A	14	6.3	16	102
	60B	15	4.2	26	101
	50A	16	8	3	104
	50A	1	10	2	895
	50A	2	10	2	170
	50A	3	8	2	150
V36	50A	4	10	2	970
	50A	5	10	1	185
	60B	6	5	23	101
	60B	7	4.2	31	101
	50A	1	10	5	240
	50A	2	10	2	235
	60B	3	4.2	10	101
V37	50A	1	10	5	240
	50A	2	12.5	2	405
	60B	3	5	20	101
V38	50A	1	8	2	185
	50A	2	10	2	345
	50A	3	10	2	455
	60B	4	4.2	22	101
V39	50A	1	10	2	235
	50A	2	10	3	220
	50A	3	10	2	370
	50A	4	12.5	2	300
	50A	5	12.5	2	180
	50A	6	10	2	900
	50A	7	10	1	240
	60B	8	5	18	131
	60B	9	5	26	111
	50A	10	10	3	119

RESUMO ACO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	113	12
60B	5	119	18
50A	6.3	49	12
50A	8	15	6
50A	10	211	130
50A	12.5	49	47
Peso Total		60B =	31 kg
Peso Total		50A =	195 kg



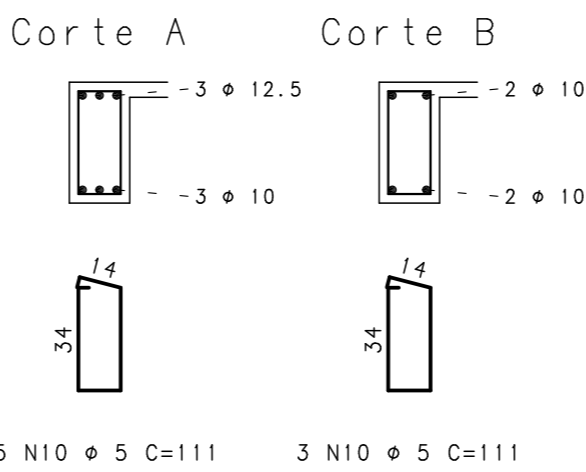
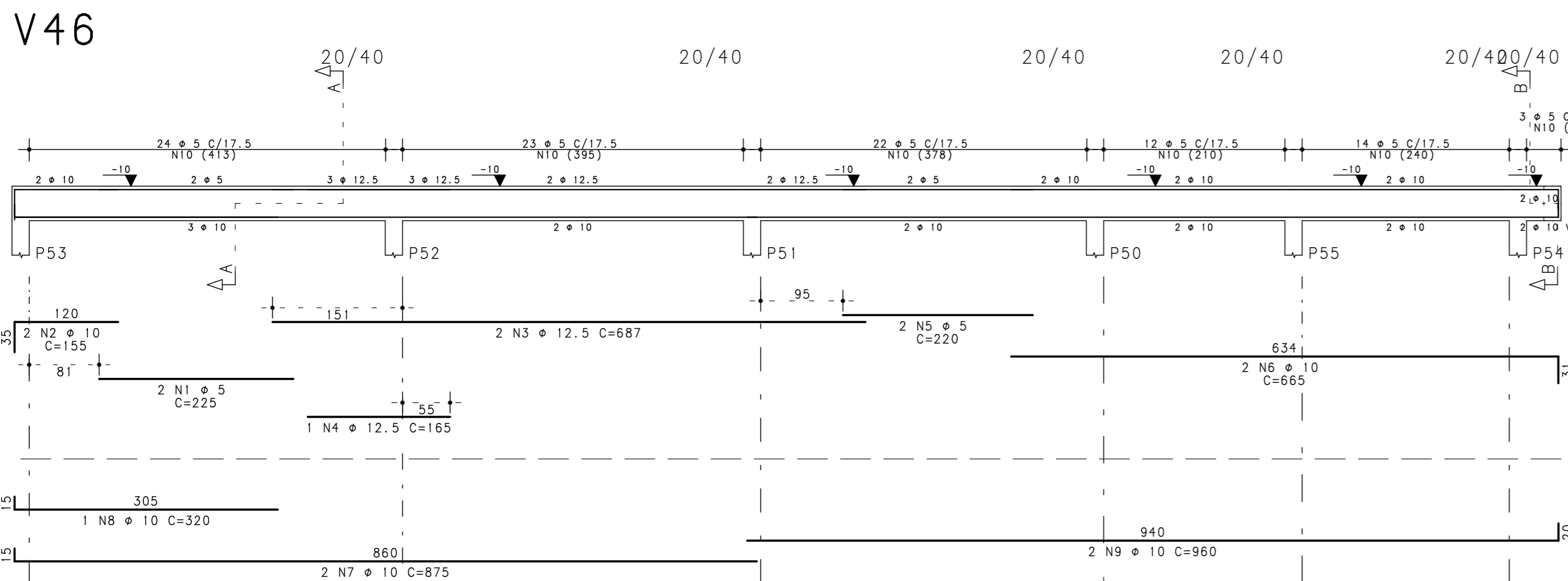
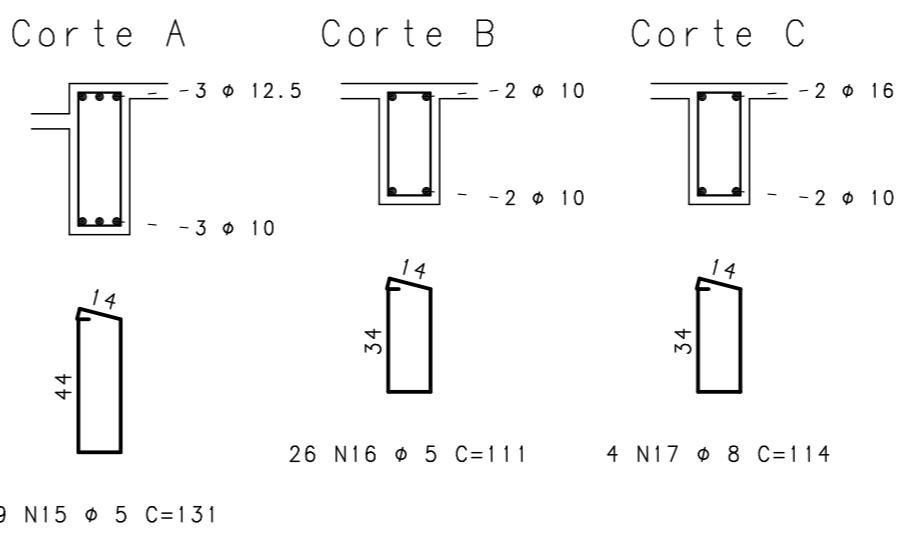
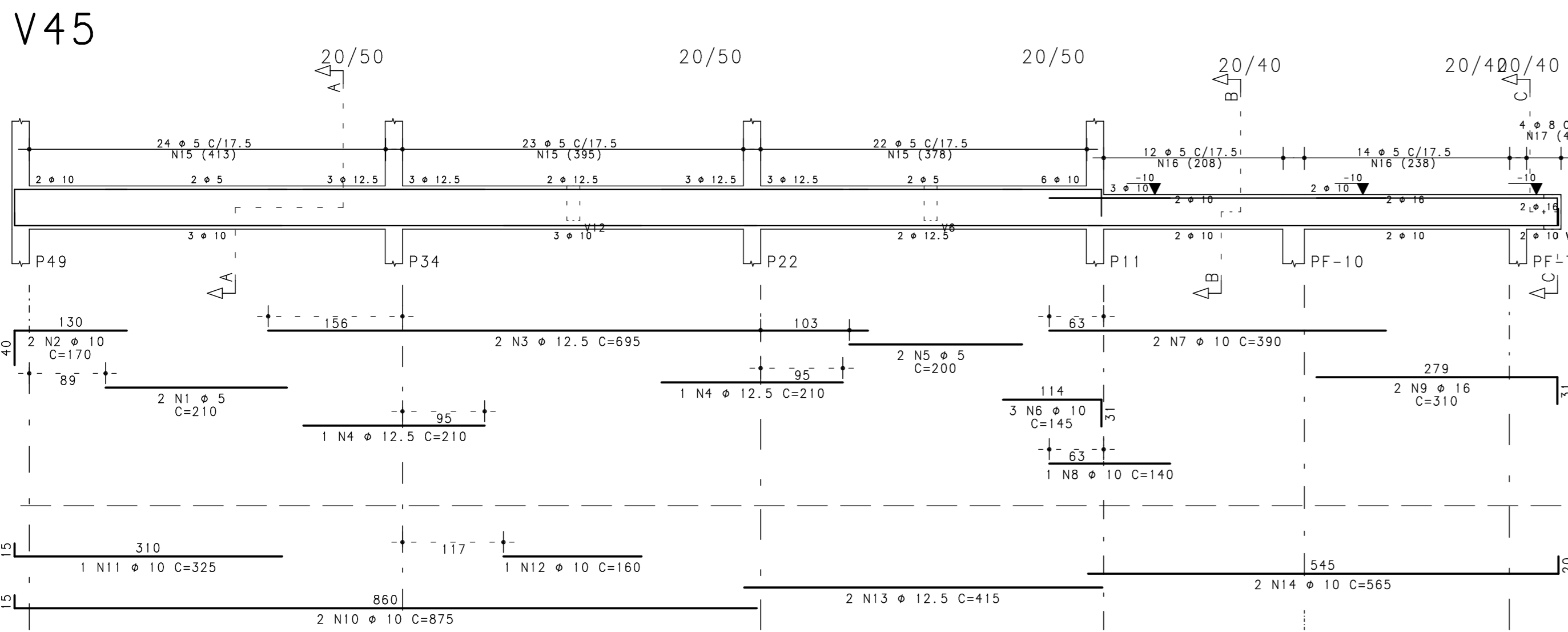
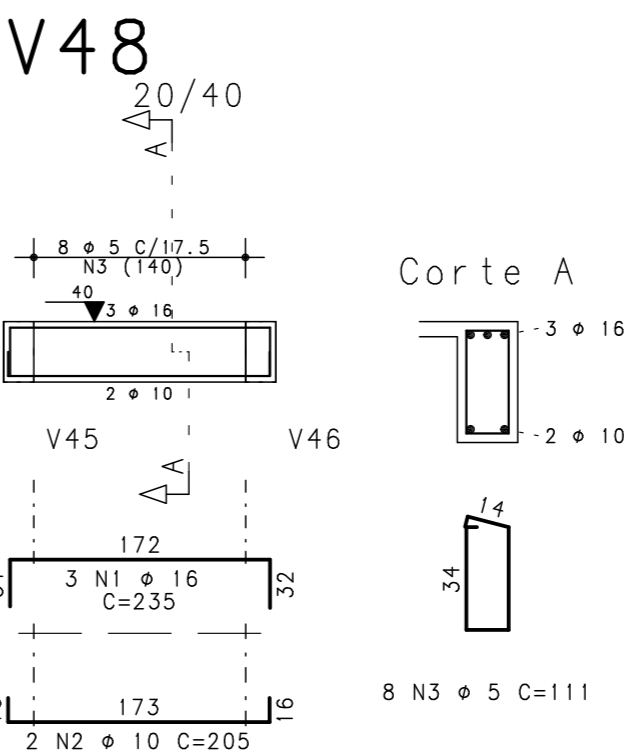
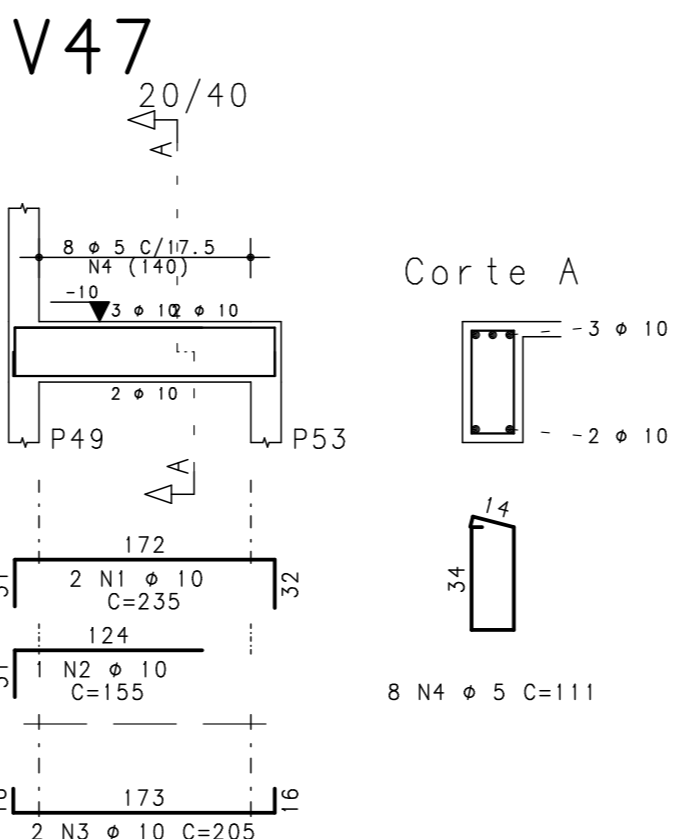
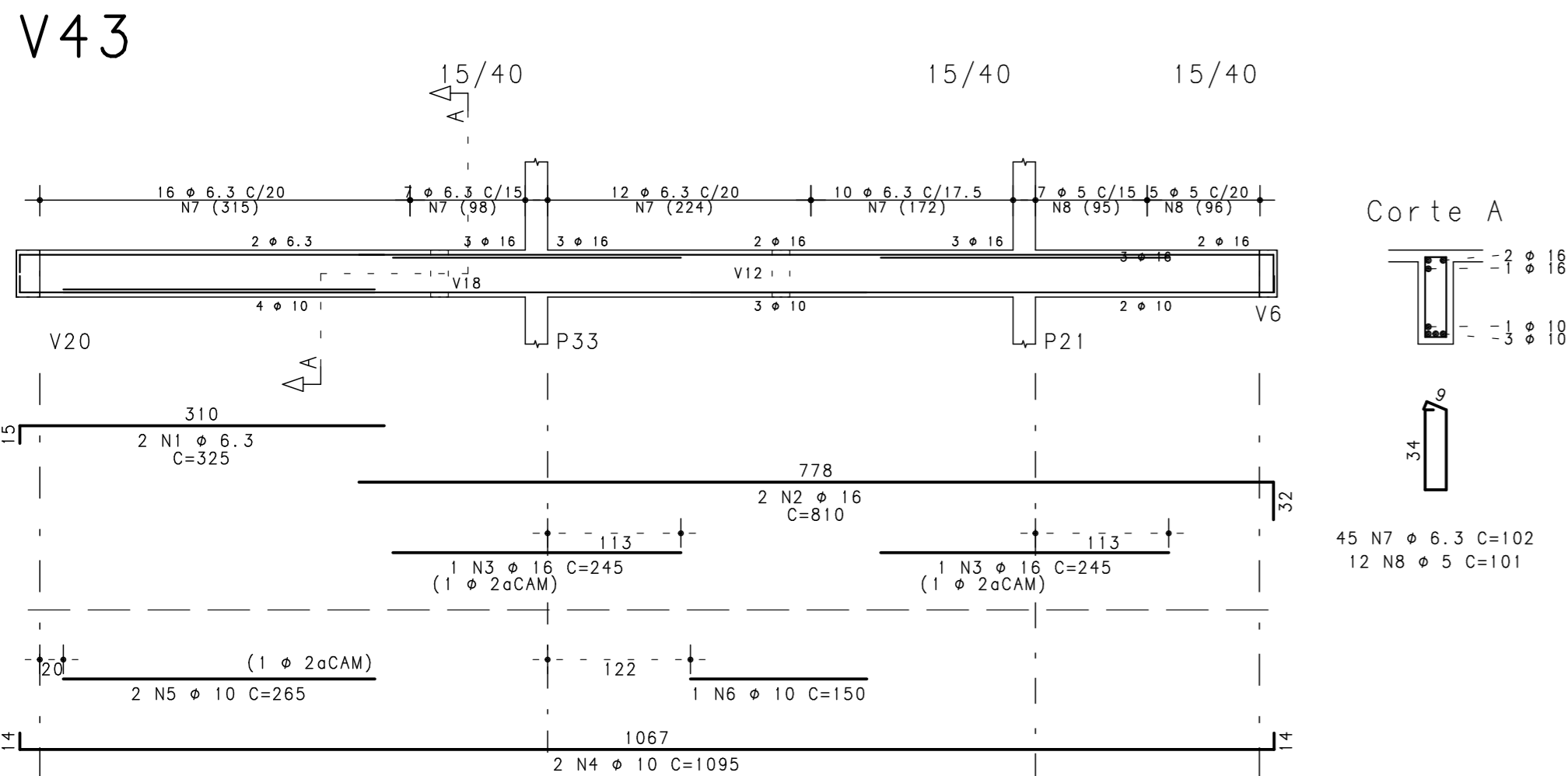
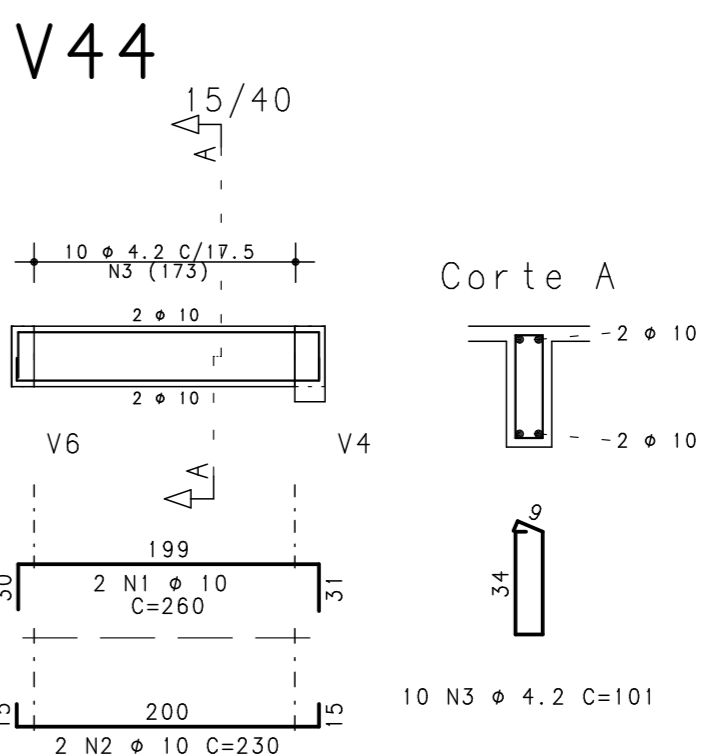
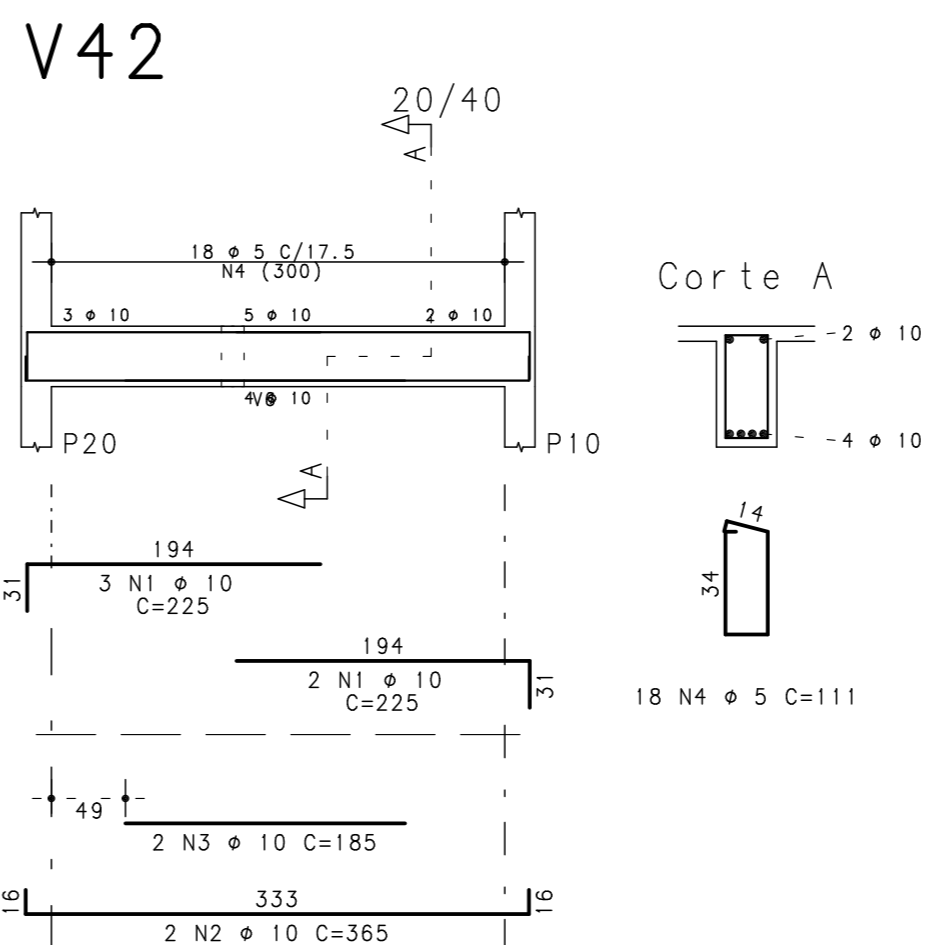
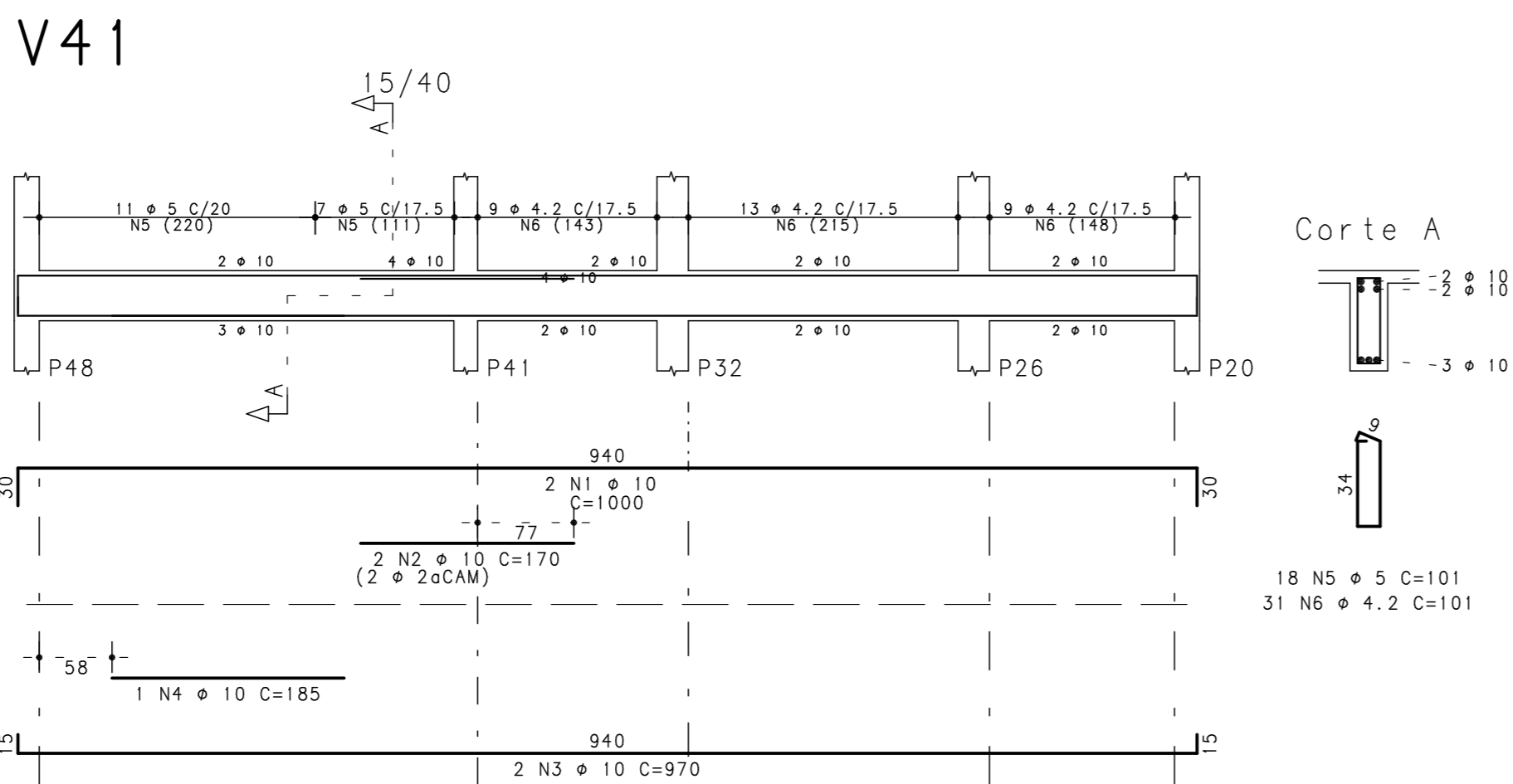
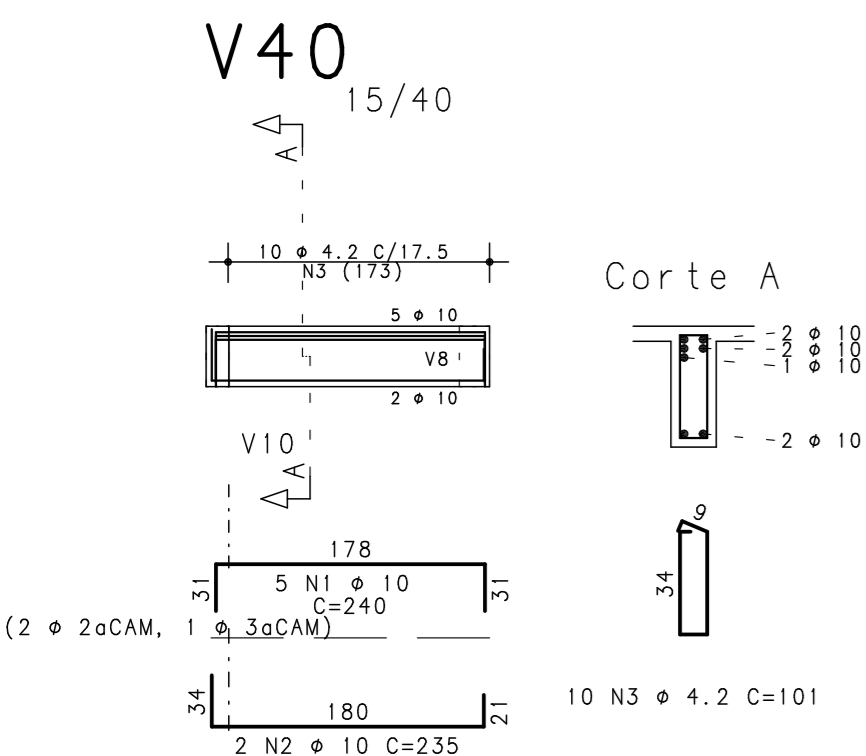
Rua Quilmes de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO fck = 200 kgf/cm2				SOBRECARGA PREVISTA	
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				OBRA N.º 0001	
				DES. N.º	
OBRA UBS TIPO 2-CORRIENTES				018	
TÍTULO NÍVEL 50 ARMADURAS DAS VIGAS					
V32 / V33 / V34 / V35 V36 / V37 / V38 / V39				REV. N.º 00	
DATA 23/08/2016		ESCALA 1:50		DESENHO UBS-50_-VIG-018-R00	
		COORD.		ENG.º	



	ACO	POS	BIT (mm)	QUANT	COMPRIMENTO			
					UNIT (cm)	TOTAL (cm)		
V40		50A	1	10	5	240	1200	
		50A	2	10	2	235	470	
		60B	3	4.2	10	101	1010	
V41		50A	1	10	2	1000	2000	
		50A	2	10	2	170	340	
		50A	3	10	2	970	1940	
		50A	4	10	1	185	185	
		60B	5	5	18	101	1818	
		60B	6	4.2	31	101	3131	
V42		50A	1	10	5	225	1125	
		50A	2	10	2	365	730	
		60B	3	10	2	185	370	
		60B	4	5	18	111	1998	
	V43		50A	1	6.3	2	325	650
			50A	2	16	2	810	1620
		50A	3	16	2	245	490	
		50A	4	10	2	1095	2190	
		50A	5	10	2	265	530	
		50A	6	10	1	150	150	
		50A	7	6.3	45	102	4590	
		60B	8	5	12	101	1212	
V44		50A	1	10	2	260	520	
		50A	2	10	2	230	460	
		60B	3	4.2	10	101	1010	
V45		60B	1	5	2	210	420	
		50A	2	10	2	170	340	
		50A	3	12.5	2	695	1390	
		50A	4	12.5	2	210	420	
		60B	5	5	2	200	400	
		50A	6	10	3	145	435	
		50A	7	10	2	390	780	
		50A	8	10	1	140	140	
		50A	9	16	2	310	620	
		50A	10	10	2	875	1750	
		50A	11	10	1	325	325	
		50A	12	10	1	160	160	
		50A	13	12.5	2	415	830	
		50A	14	10	2	565	1130	
		60B	15	5	69	131	9039	
		60B	16	5	26	111	2886	
		50A	17	8	4	114	456	
	V46		60B	1	5	2	225	450
		50A	2	10	2	155	310	
		50A	3	12.5	2	687	1374	
		50A	4	12.5	1	165	165	
		60B	5	5	2	220	440	
		50A	6	10	2	665	1330	
		50A	7	10	2	875	1750	
		50A	8	10	1	320	320	
		50A	9	10	2	960	1920	
		60B	10	5	98	111	10878	
V47		50A	1	10	2	235	470	
		50A	2	10	1	155	155	
		50A	3	10	2	205	410	
		60B	4	5	8	111	888	
V48		50A	1	16	3	235	705	
		50A	2	10	2	205	410	
		60B	3	5	8	111	888	

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	52	6
60B	5	313	48
50A	6.3	52	13
50A	8	5	2
50A	10	243	150
50A	12.5	42	40
50A	16	34	54
Peso Total		60B =	54 kg
Peso Total		50A =	259 kg



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

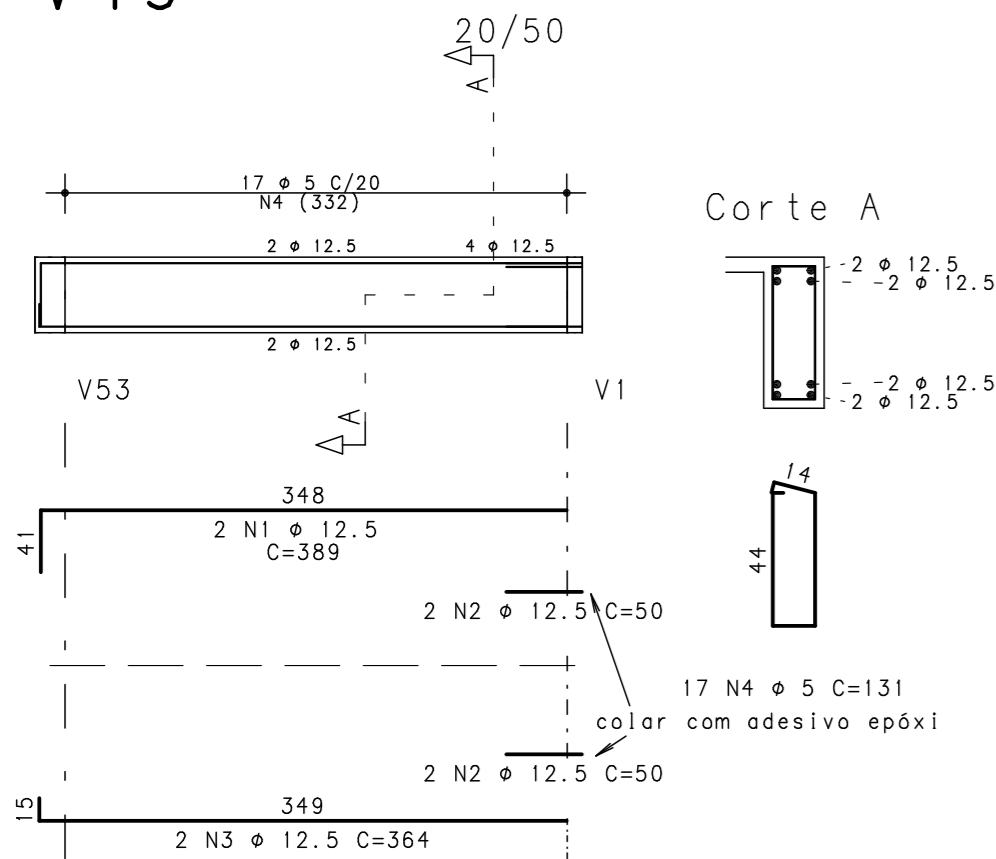
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

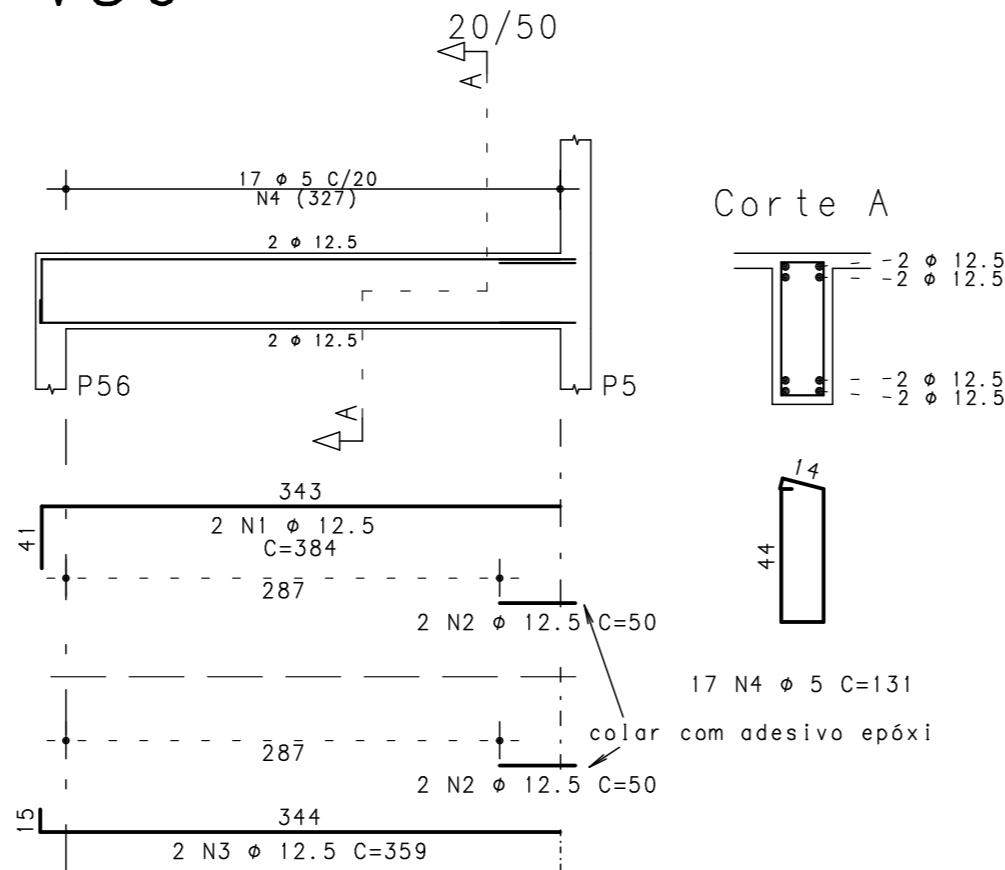
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Rev	Data	Autor	Assunto

CONCRETO fck = 200 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º		019
OBRA UBS TIPO 2-CORRIENTES		REV. N.º		00
TÍTULO NÍVEL 50 ARMADURAS DAS VIGAS		DATA 23/08/2016		ENG.º
V40 / V41 / V42 / V43 V44 / V45 / V46 / V47 V48		ESCALA 1:50		COORD.
DESIGNO UBS-50-VIG-019-R00				

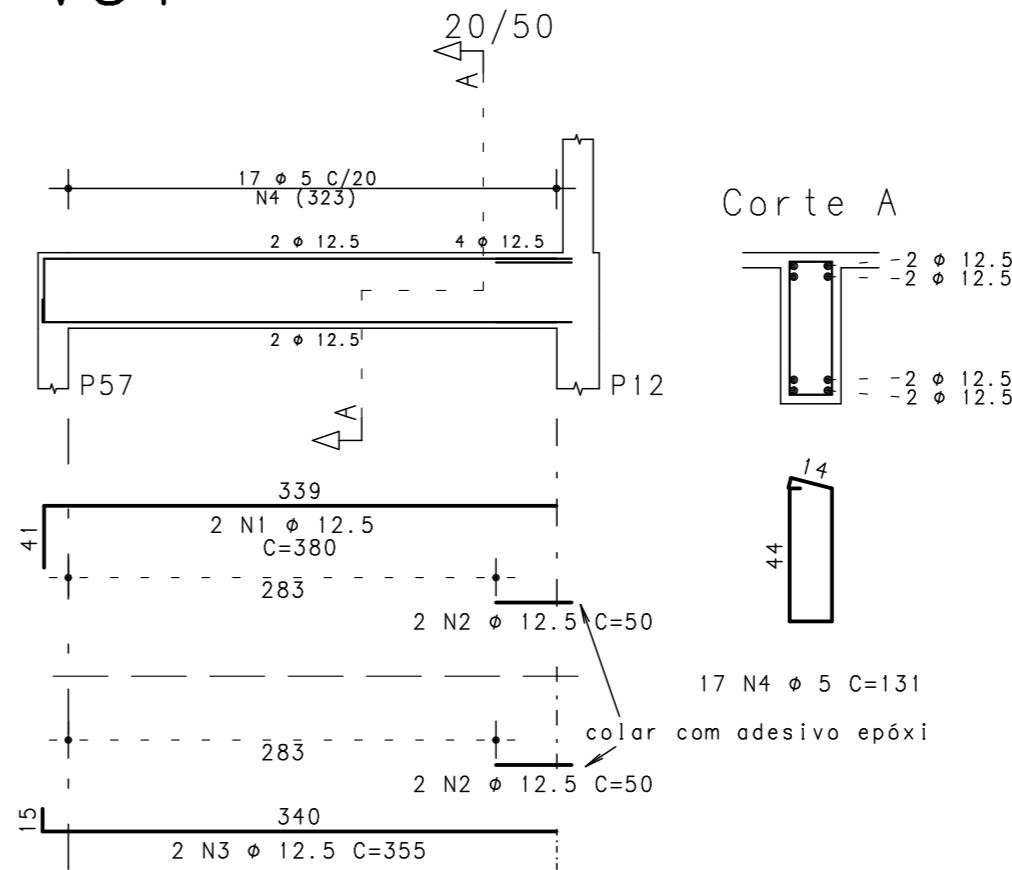
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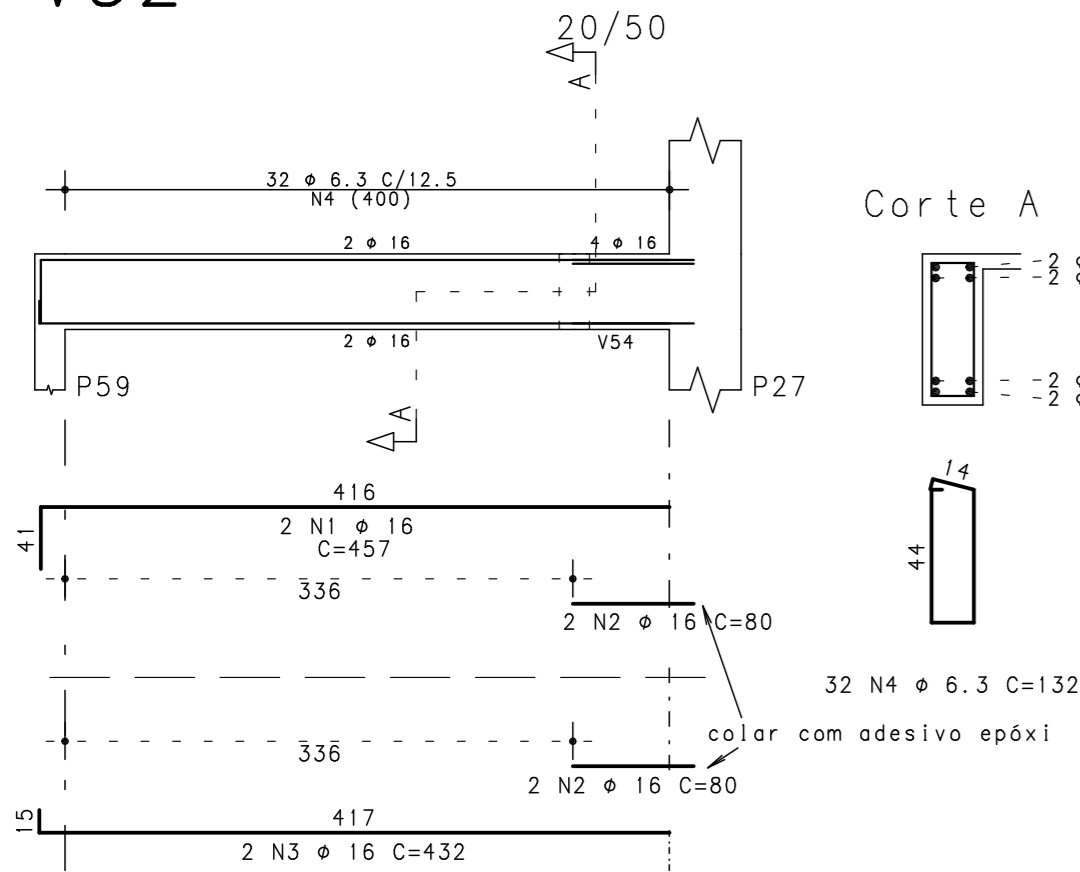
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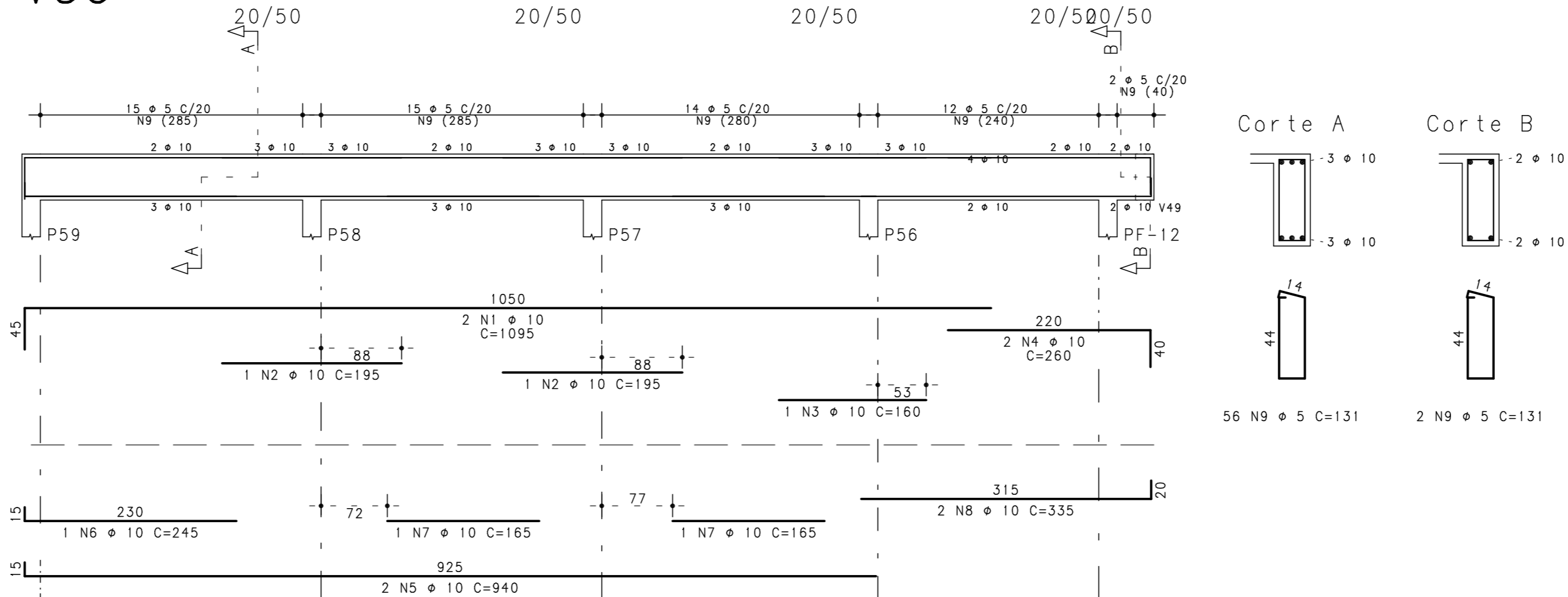
V51



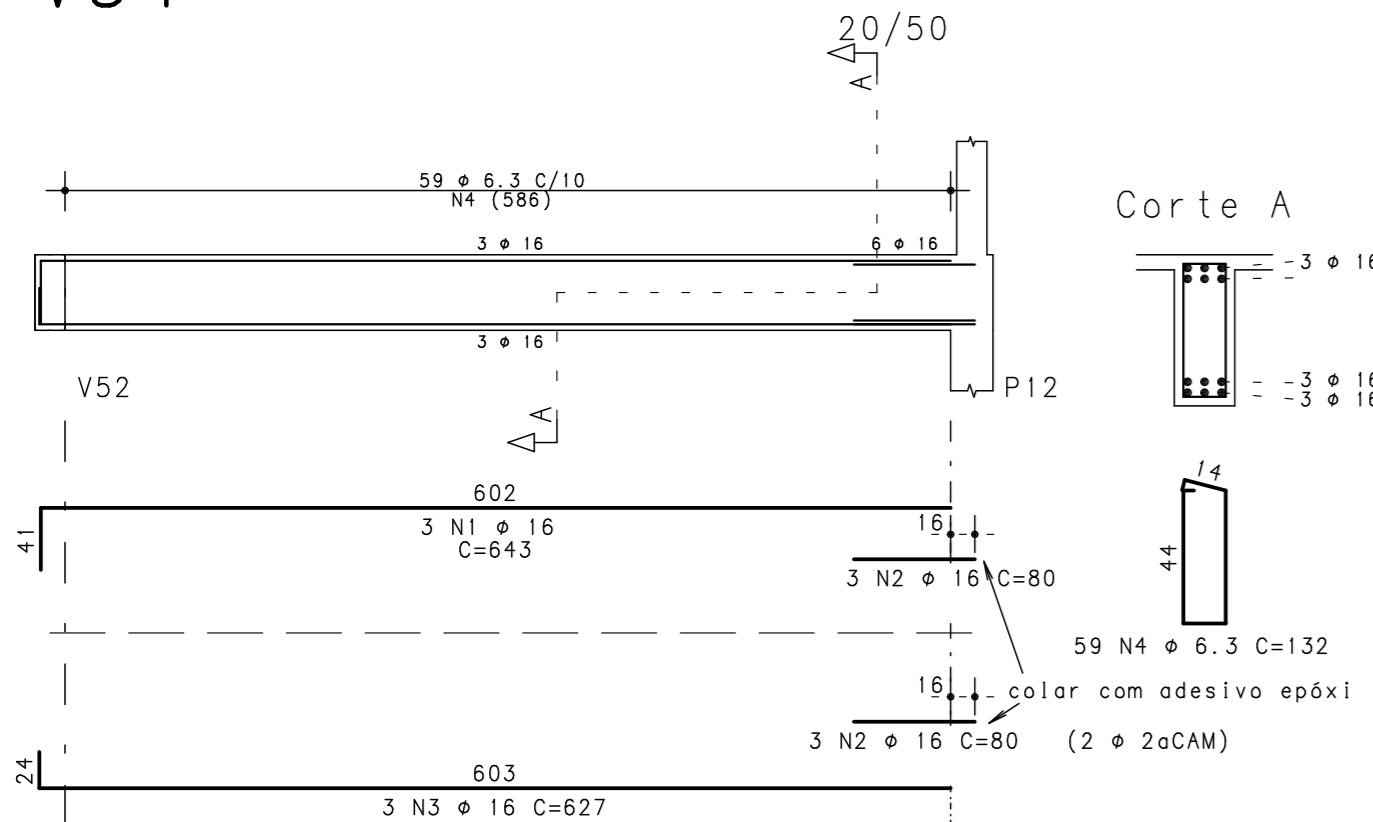
V52



V53



V54



ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V49	50A	1	12.5	2	389
	50A	2	12.5	4	50
	50A	3	12.5	2	364
	60B	4	5	17	131
V50	50A	1	12.5	2	384
	50A	2	12.5	4	50
	50A	3	12.5	2	359
	60B	4	5	17	131
V51	50A	1	12.5	2	380
	50A	2	12.5	4	50
	50A	3	12.5	2	355
	60B	4	5	17	131
V52	50A	1	16	2	457
	50A	2	16	4	80
	50A	3	16	2	432
	50A	4	6.3	32	132
V53	50A	1	10	2	1095
	50A	2	10	2	195
	50A	3	10	1	160
	50A	4	10	2	260
	50A	5	10	2	940
	50A	6	10	1	245
	50A	7	10	2	165
	50A	8	10	2	335
	60B	9	5	58	131
V54	50A	1	16	3	643
	50A	2	16	6	80
	50A	3	16	3	627
	50A	4	6.3	59	132

RESUMO AÇO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	5	143	22
50A	6.3	120	29
50A	10	64	39
50A	12.5	51	49
50A	16	64	101
Peso Total		60B =	22 kg
Peso Total		50A =	218 kg



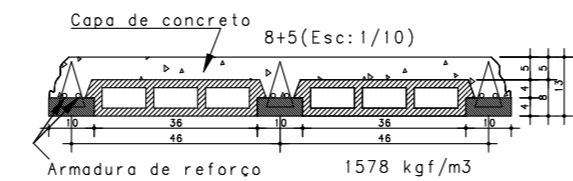
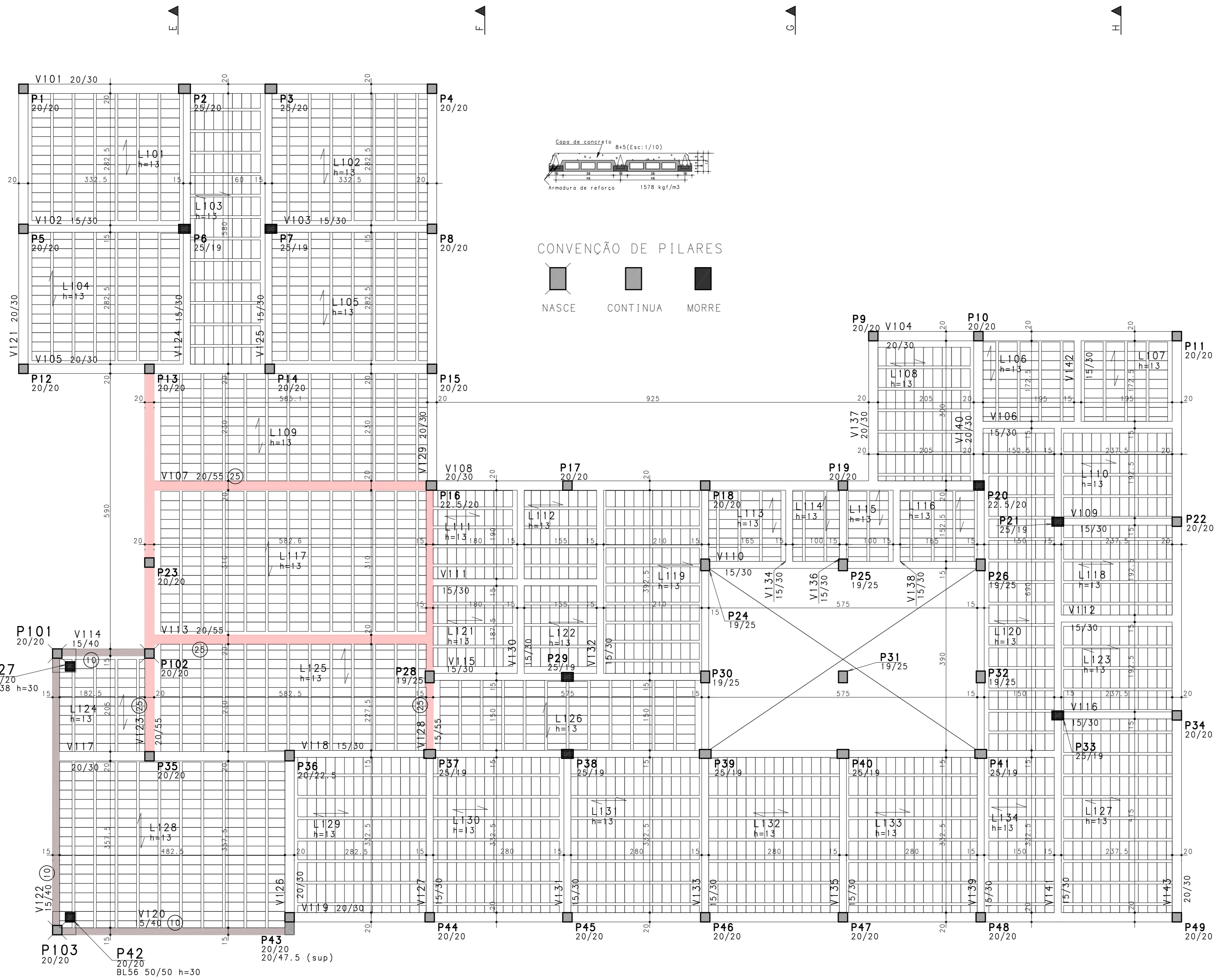
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

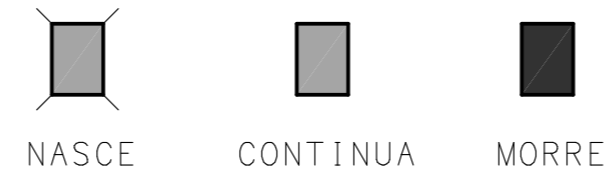
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1	23/08/2016	J. Marques	Inclusão das Vigas V49-V50-V51-V52-V53-V54
0	08/02/2016	Fernando	Alteração V45 - inclusão V46-V47-V48
Rev	Data	Autor	Assunto

CONCRETO fck =200 kgf/cm2			SOBRECARGA PREVISTA		
CLIENTE SECRETARIA DA SAÚDE-PELOTAS			OBRA N.º 0001		
OBRA UBS TIPO 2-CORRIENTES			DES. N.º		
TÍTULO NÍVEL 50 ARMADURAS DAS VIGAS			020		
V49 / V50 / V51 / V52 V53 / V54			REV. N.º 00		
DATA 23/08/2016	ESCALA 1:50	DESENHO UBS-50_-VIG-020-R00	COORD.	ENG.º	



CONVENÇÃO DE PILARES



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-500
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm²		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				021
TÍTULO NÍVEL 100 FÔRMAS-LAJE TRELIÇADA				REV. N.º 00
DATA 9/08/2015	ESCALA 1:50	DESENHO UBS-100-LAJ-021-R00	COORD.	ENG.º

100 - Armadura distribuição - malha

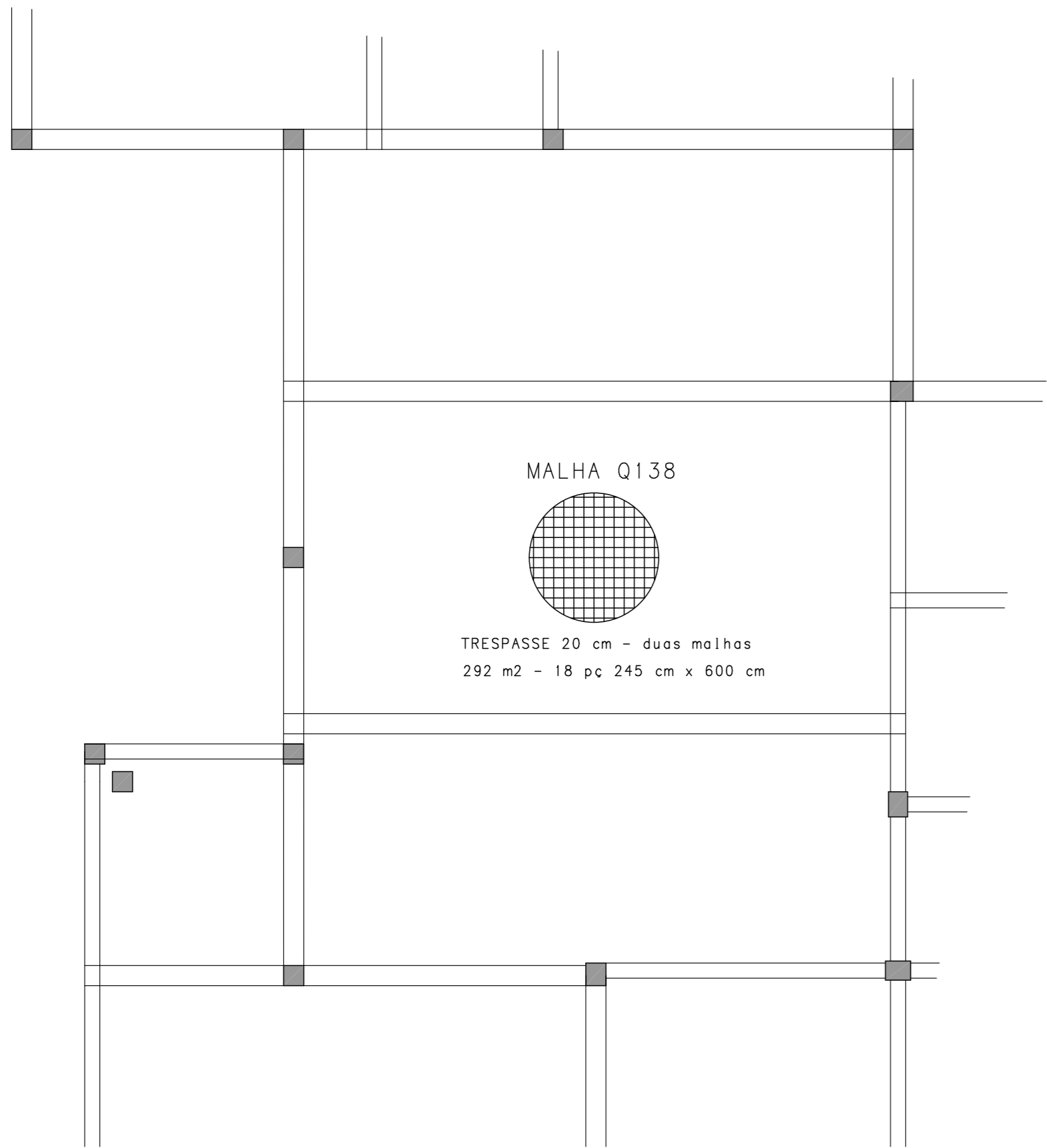



Tabela de Vigotas Treliçadas														
Dados			Vãos / Apoios			Armação Treliçada			Armadura Adicional (I)					
Laje	Vigota	No	LapE cm	Liv cm	LapD cm	Ltot cm	Treliça Unit cm	Total cm	No bar	φ mm	DE cm	DD cm	Unit cm	Total cm
L101	VT101A	6	10	282	10	302	TR12645	302	1815	1	5.0	5	312	1875
L102	VT102A	7	10	282	10	302	TR12645	302	2117	1	5.0	5	312	2187
L103	VT103A	12	10	160	10	180	TR12645	180	2160	1	5.0	5	190	2280
L104	VT104A	6	10	283	10	303	TR12645	303	1815	1	5.0	5	313	1875
L105	VT105A	7	10	283	10	303	TR12645	303	2118					
L106	VT106A	4	10	172	10	192	TR12645	192	770					
L107	VT107A	3	10	172	10	192	TR12645	192	577					
L108	VT108A	6	10	205	10	225	TR12645	225	1350					
L109	VT109A	12	10	230	10	250	TR12645	250	3000					
L110	VT110A	3	10	238	10	258	TR12645	258	773					
L111	VT111A	4	10	180	10	200	TR12645	200	800					
L112	VT112A	4	10	155	10	175	TR12645	175	700					
L113	VT113A	3	10	153	10	173	TR12645	173	518					
L114	VT114A	2	10	153	10	173	TR12645	173	345					
L115	VT115A	1	10	153	10	173	TR12645	173	173					
L116	VT116A	3	10	153	10	173	TR12645	173	518	1	5.0	5	183	548
L117	VT117A	12	10	310	10	330	TR12645	330	3960	1	5.0	5	340	4080
L118	VT118A	4	10	238	10	258	TR12645	258	1030					
L119	VT119A	9	10	210	10	230	TR12645	230	2070	1	5.0	5	240	2160
L120	VT120A	13	10	152	10	172	TR12645	172	2236	1	5.0	5	182	2366
L121	VT121A	3	10	180	10	200	TR12645	200	600					
L122	VT122A	3	10	155	10	175	TR12645	175	525					
L123	VT123A	3	10	238	10	258	TR12645	258	773	1	5.0	5	268	803
L124	VT124A	4	10	205	10	225	TR12645	225	900	1	5.0	5	235	940
L125	VT125A	12	10	230	10	250	TR12645	250	3000					
L126	VT126A	11	10	150	10	170	TR12645	170	1870					
L127	VT127A	9	10	238	10	258	TR12645	258	2318	1	5.0	5	268	2408
L128	VT128A	10	10	358	10	378	TR12645	378	3775	2	5.0	5	388	7750
L129	VT129A	7	10	282	10	302	TR12645	302	2117	1	5.0	5	312	2187
L130	VT130A	7	10	280	10	300	TR12645	300	2100					
L131	VT131A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	310	2170
L132	VT132A	7	10	280	10	300	TR12645	300	2100					
L133	VT133A	7	10	280	10	300	TR12645	300	2100	1	5.0	5	310	2170
L134	VT134A	7	10	150	10	170	TR12645	170	1190					

Projeto de fabricação de vigotas treliçadas							
Sem escala							
VT101A L101 6 Unidades		VT112A L112 4 Unidades		VT123A L123 3 Unidades			
VT102A L102 7 Unidades		VT113A L113 3 Unidades		VT124A L124 4 Unidades			
VT103A L103 12 Unidades		VT114A L114 2 Unidades		VT125A L125 12 Unidades			
VT104A L104 6 Unidades		VT115A L115 1 Unidades		VT126A L126 11 Unidades			
VT105A L105 7 Unidades		VT116A L116 3 Unidades		VT127A L127 9 Unidades			
VT106A L106 4 Unidades		VT117A L117 12 Unidades		VT128A L128 10 Unidades			
VT107A L107 3 Unidades		VT118A L118 4 Unidades		VT129A L129 7 Unidades			
VT108A L108 6 Unidades		VT119A L119 9 Unidades		VT130A L130 7 Unidades			
VT109A L109 12 Unidades		VT120A L120 13 Unidades		VT131A L131 7 Unidades			
VT110A L110 3 Unidades		VT121A L121 3 Unidades		VT132A L132 7 Unidades			
VT111A L111 4 Unidades		VT122A L122 3 Unidades		VT133A L133 7 Unidades			



Gigante & Simch
engenharia civil
estacas e sondagens

Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96015-000
Telefone: (51) 32915000
e-mail: fernando@gsimch.com.br
e-mail: paulo@gsimch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO
fck = 250 kgf/cm2

SOBRECARGA PREVISTA

OBRA N.º
0001

CLIENTE
SECRETARIA DA SAÚDE-PELOTAS

OBRA
UBS TIPO 2-CORRIENTES

TÍTULO
NÍVEL 100
ARMADURA DE DISTRIBUIÇÃO-VIGOTAS-MALHA-TABELA

REV. N.º
00

DATA
9/08/2015

ESCALA
1:50

DESENHO
UBS-100-LAJ-022-R00

COORD.

ENG.º

V101

Top View Dimensions: 20/30 (left), 20/30 (middle), 20/30 (right)

Reinforcement Details (Top View):

- Top Left: 2 ϕ 8, 2 ϕ 8 + 2 ϕ 10, 2 ϕ 10
- Top Middle: 11 ϕ 5 C/15, 2 ϕ 10
- Top Right: 22 ϕ 5 C/15, 2 ϕ 10 + 2 ϕ 8, 2 ϕ 8
- Bottom: 2 ϕ 10, 2 ϕ 8, 2 ϕ 10

Section Line: A-A

Side View Dimensions: 21 (left), 194 (left), 218 (middle), 194 (right), 21 (right)

Reinforcement Details (Side View):

- Top Left: 2 N1 ϕ 8, C=215
- Top Right: 2 N1 ϕ 8, C=215
- Middle: 2 N2 ϕ 10, C=595
- Bottom: 2 N4 ϕ 8, C=185
- Bottom Left: 2 N3 ϕ 10, C=370
- Bottom Right: 2 N3 ϕ 10, C=370

Section Line: 13-13

V102

Corte A

22 ϕ 4.2 C=15
N3 (323)
2 ϕ 10
P5
P6
15/30
A

Corte B

20
360
2 N1 ϕ 10
C=400
20

Corte C

22 N3 ϕ 4.2 C=81
2 N2 ϕ 10 C=390
15

24
14
24
9

55 N5 ϕ 5 C=91

V103

Technical drawing of a component (V103) showing two views: a side view and a front view.

Side View (Top):

- Overall length: 360
- Central hole: 22 N3 ± 0.2 C=15
- Outer hole: 2 N1 ± 0.10 C=400
- Outer hole: 2 N2 ± 0.10 C=390
- Thickness: 15
- Section cut: Corte A

Front View (Bottom):

- Overall width: 20
- Central hole: 2 N1 ± 0.10 C=400
- Outer hole: 2 N2 ± 0.10 C=390
- Height: 15

[illegible][illegible]

V106

V140

27 ϕ 4.2 C=15

N4 (405)

2 ϕ 8

2 ϕ 5

V2 40 101 ϕ 2

15/30

Corte A

24

2 ϕ 8

2 ϕ 10

99

N2 ϕ 8

C=120

365

2 N1 ϕ 5

C=380

15

27 N4 ϕ 4.2 C=81

438

2 N3 ϕ 10 C=470

16

V107

20/55

34 ϕ 5, 6/17.5
N6 (563)

3 ϕ 10

320

2 ϕ 5

3 ϕ 10

3 ϕ 12.5

V123

135

3 N2 ϕ 10
C=175

92

145

3 N3 ϕ 10
C=185

40

2 N1 ϕ 5
C=390

20

460

1 N5 ϕ 12.5 C=480

21

618

2 N4 ϕ 12.5 C=660

P16

Corte A

14

49

3 ϕ 10

3 ϕ 12.5

34 N6 ϕ 5 C=141

V108

20/30 20/30 20/30 20/30

18 ϕ 5 C/15 N6 (270) 19 ϕ 5 C/15 N6 (275) 19 ϕ 5 C/15 N6 (275) 18 ϕ 5 C/15 N6 (270)

3 ϕ 10 2 ϕ 10 2 ϕ 10 2 ϕ 10 2 ϕ 10 2 ϕ 10 2 ϕ 8

P16 V130 P17 V132 2 ϕ 8 P18 V134 P19 V137 2 ϕ 8 P20

1059 174

2 N1 ϕ 10 C=1080 2 N3 ϕ 8 C=195

119 2 N2 ϕ 10 C=140 74 N6 ϕ 5 C=91

305 2 N4 ϕ 10 C=320 131 2 N5 ϕ 8 C=595 305 2 N4 ϕ 10 C=320

Corte A

2 ϕ 10 2 ϕ 10 24 1/4 2 N3 ϕ 8 2 N4 ϕ 10

V109

15/30

16 ϕ 4.2 C/15
N3 (233)

2 ϕ 8

2 ϕ 10

P21

P22

270

20

2 N1 ϕ 8
C=310

15

270

2 N2 ϕ 10 C=300

Corte A

2 ϕ 8

2 ϕ 10

24

16 N3 ϕ 4.2 C=81

V110

15/30

15/30

Corte A

- 2 Ø 8

- 2 Ø 8

603

2 N1 Ø 8 C=645

38 N2 Ø 4.2 C=81

2 N1 Ø 8 C=645

603

The technical drawing shows two views of a mechanical component labeled V110. The top view is a front elevation showing a long rectangular profile with two vertical sections labeled P24 and P25. It features two sets of holes: two Ø 8 holes near each end and two Ø 4.2 holes in the center section. Dimensions include a total length of 603, a central section width of 15/30, and hole spacings of 19, 4.2, and 276. Section line A-A is indicated. The bottom view is a side elevation showing the same profile from the side, with dimensions 21, 603, and 2 N1 Ø 8 C=645. A note indicates 38 N2 Ø 4.2 C=81. Section line B-B is also shown.

Technical drawing of a mechanical part, likely a shaft or axle, showing dimensions and section views.

Main View Dimensions:

- 12 Ø 4.2 C/15
- N3 (180)
- 2 Ø 10
- 2 Ø 8
- 11 Ø 4.2 C/15
- N3 (155)
- 2 Ø 10
- 2 Ø 8

Section Views:

- V128
- V130
- V132

Detail View Dimensions:

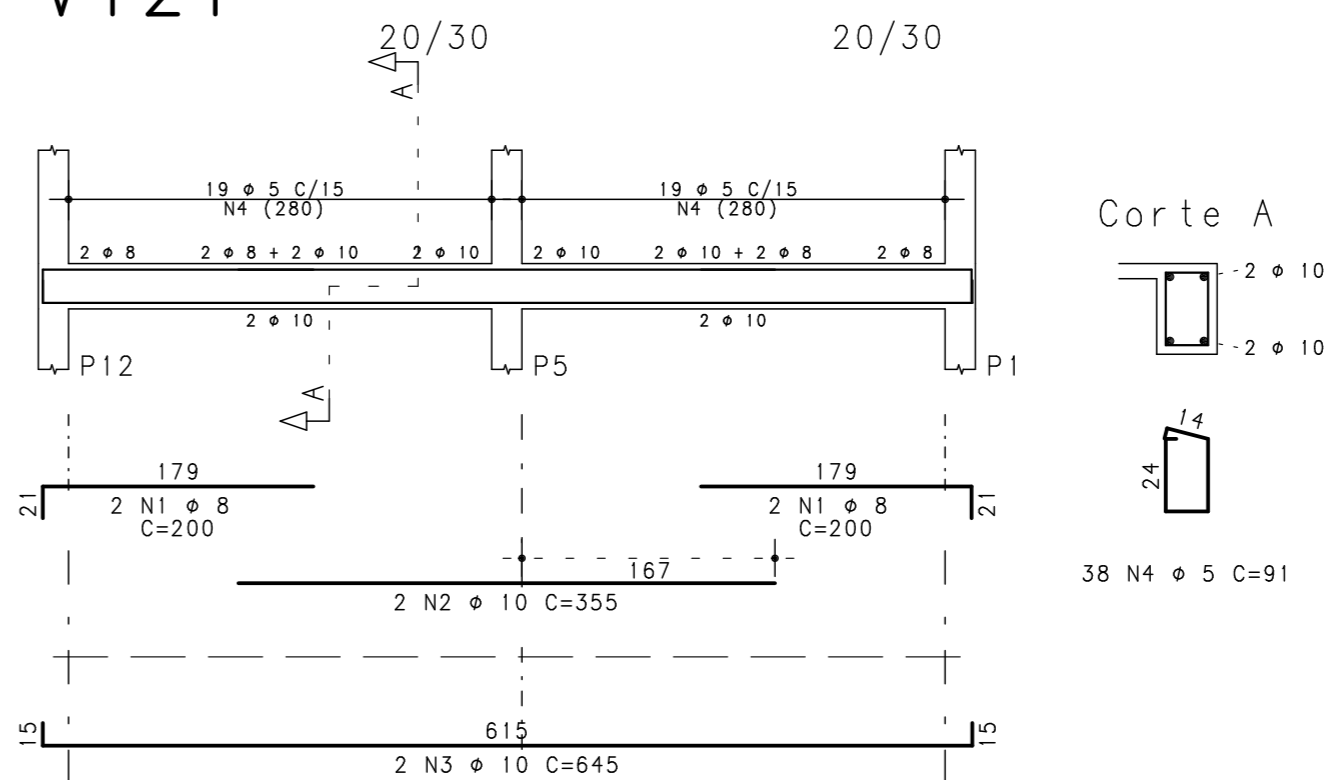
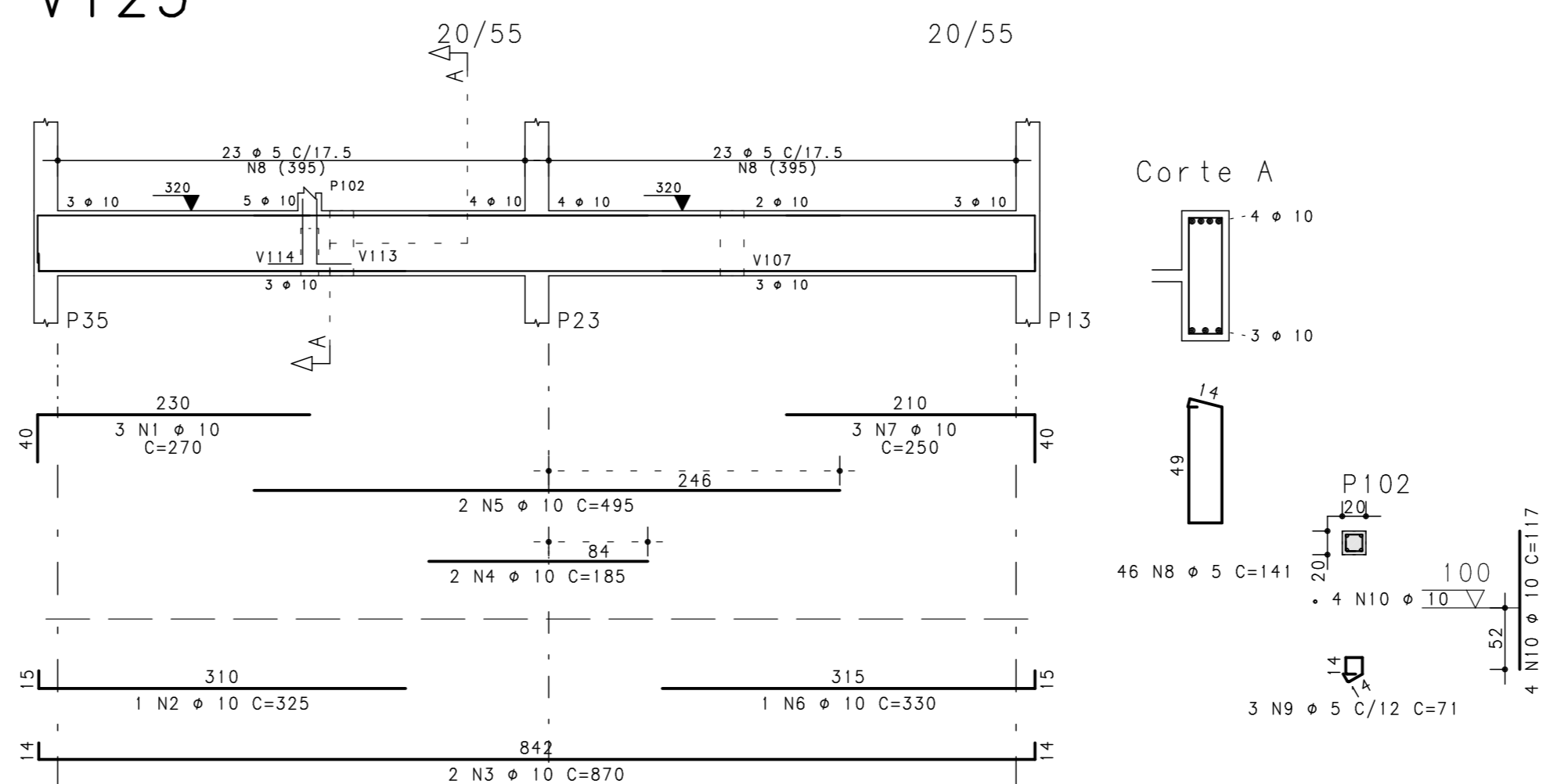
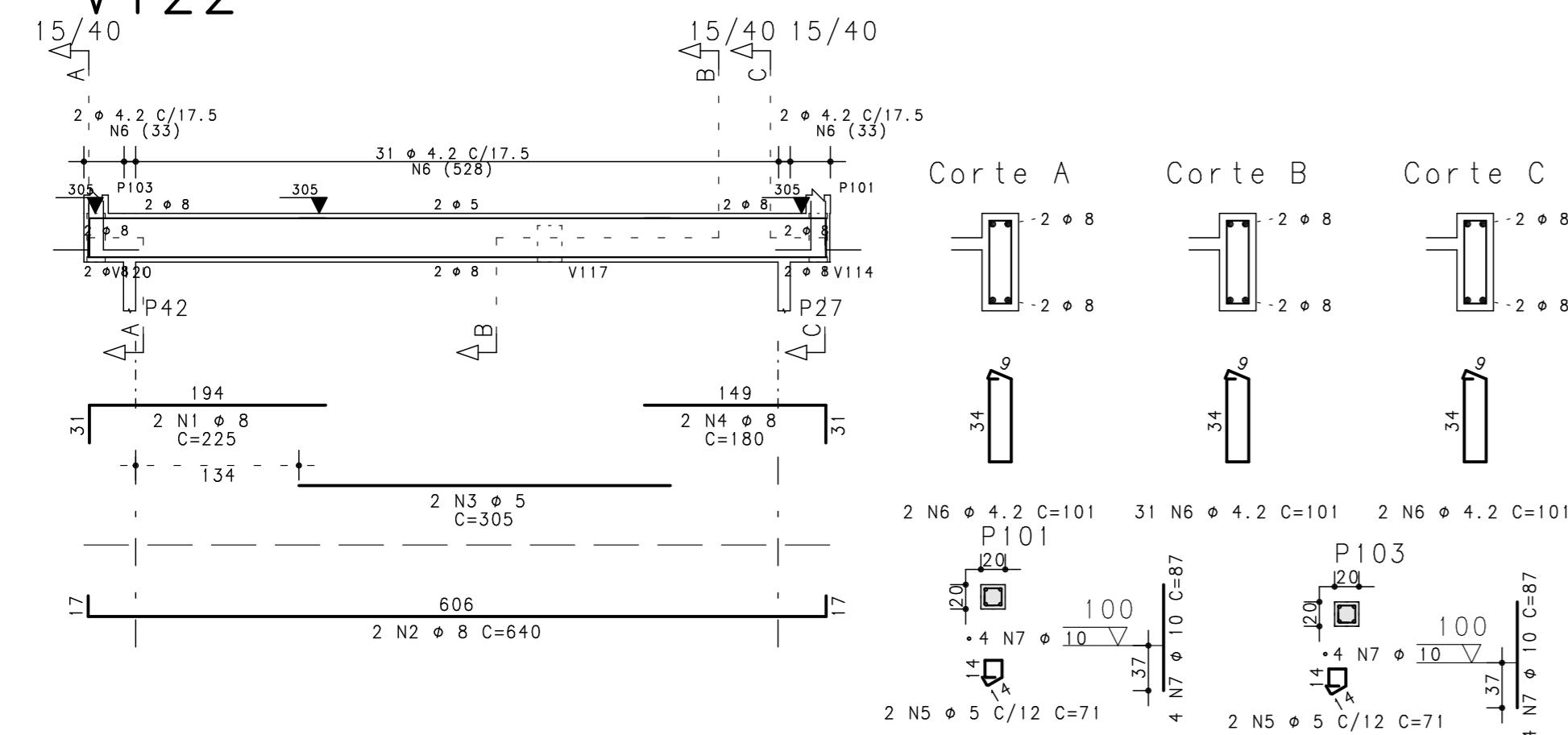
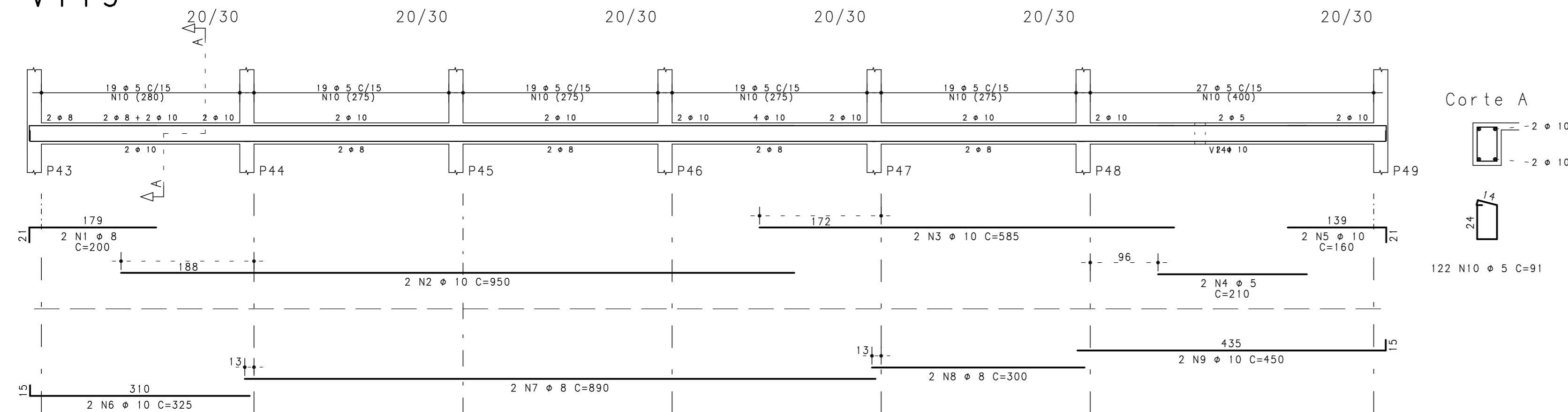
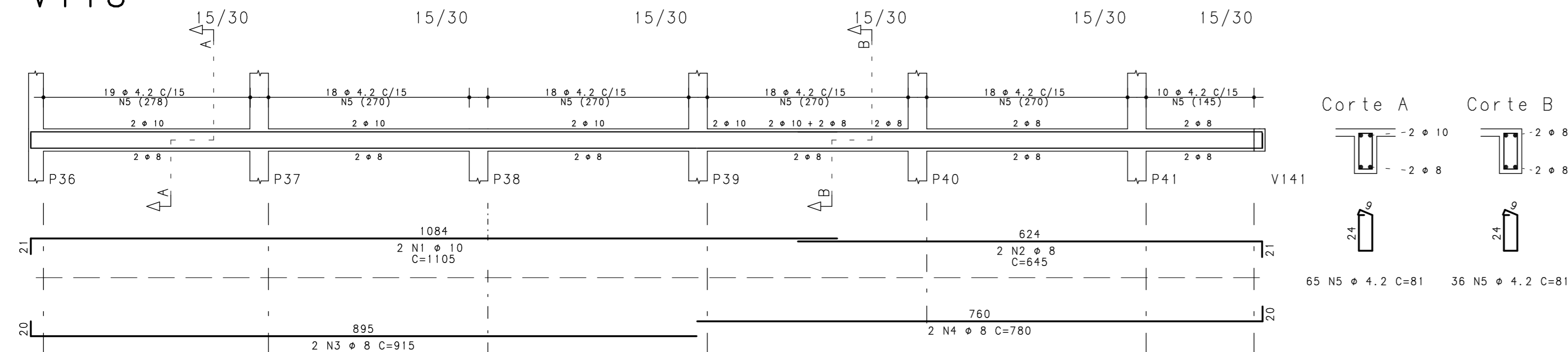
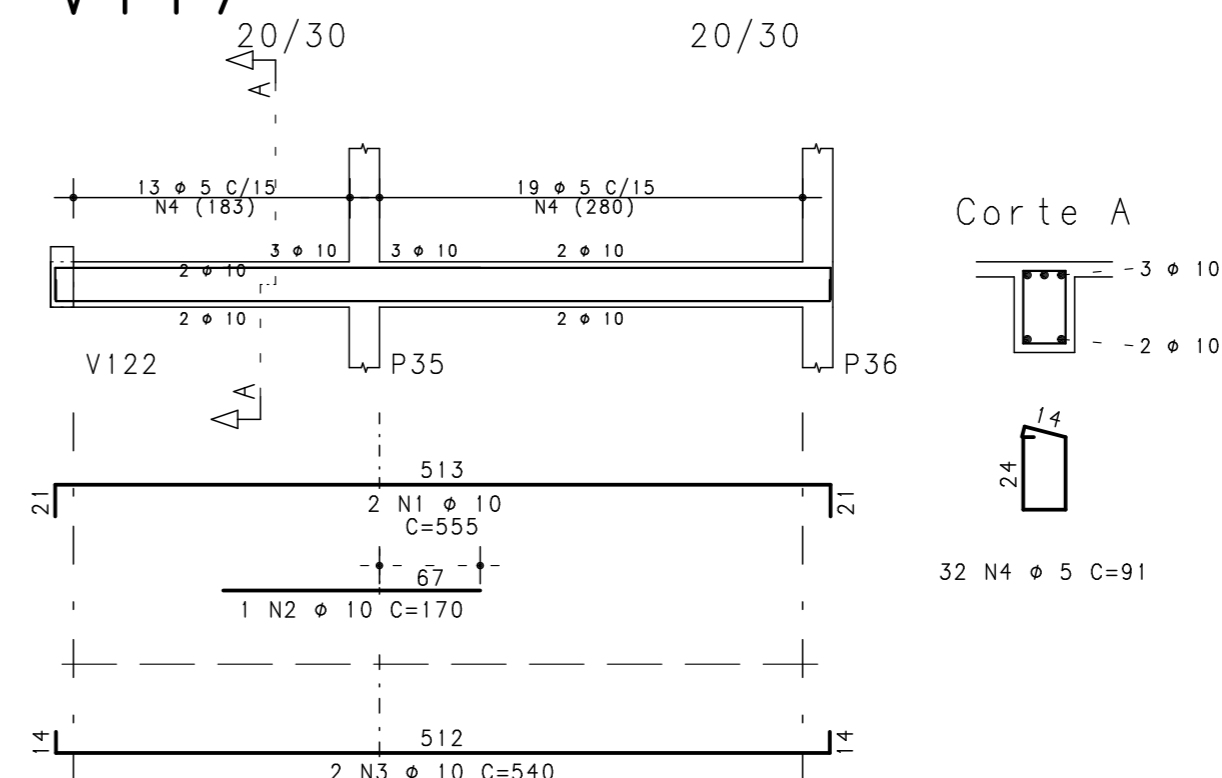
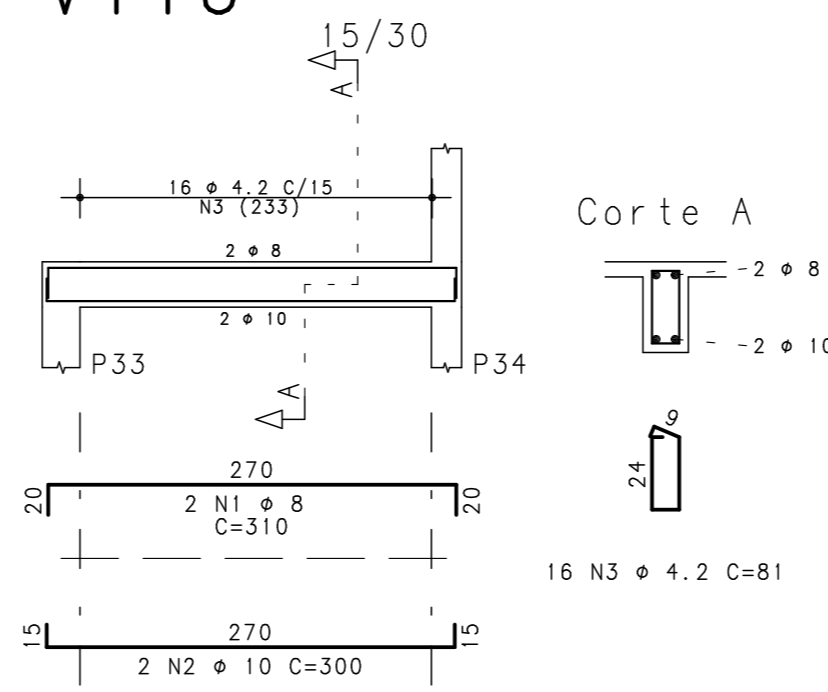
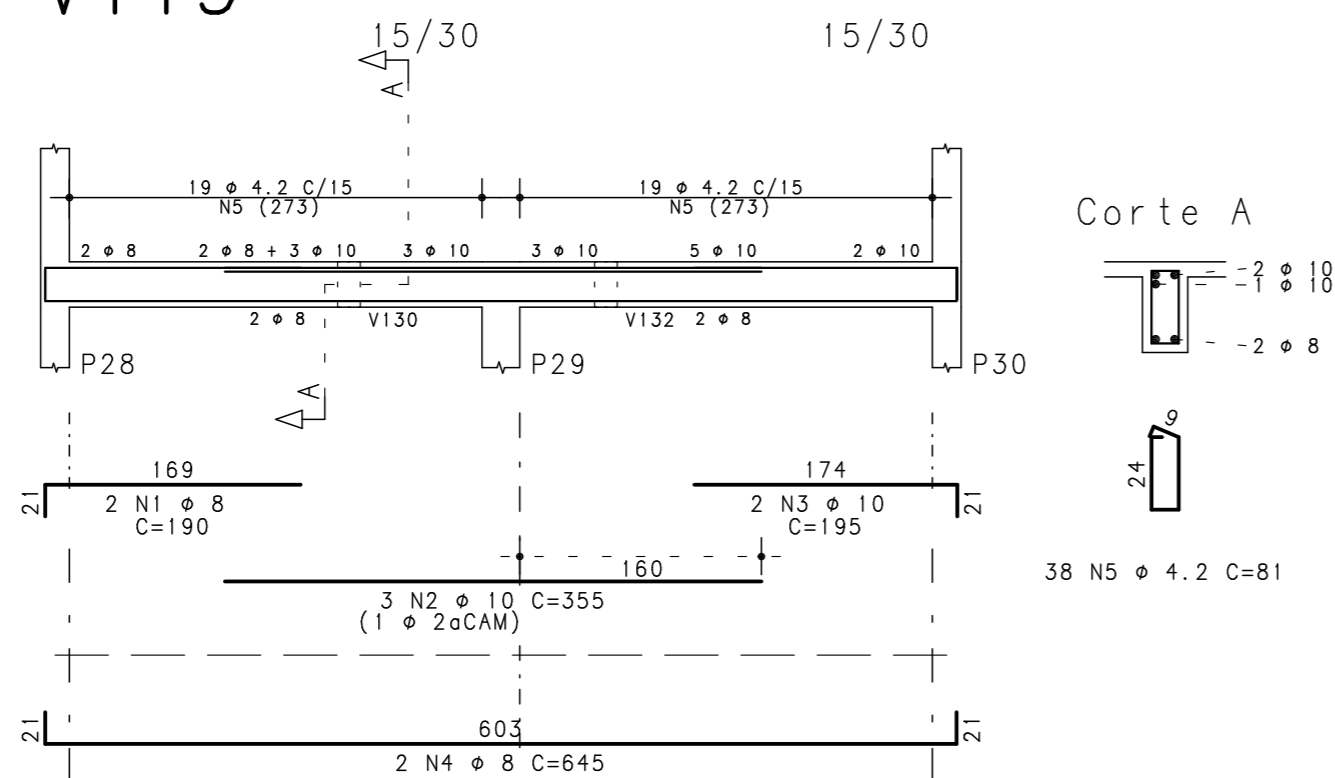
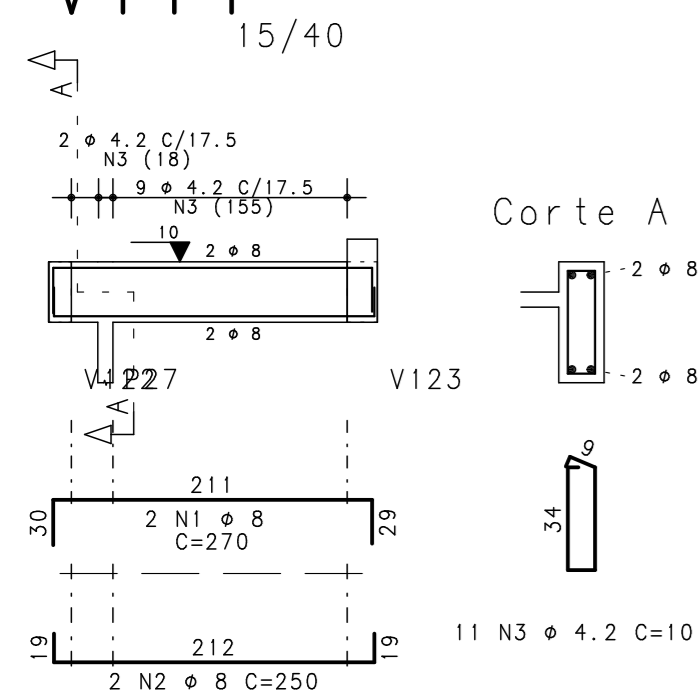
- 24
- Ø
- 23 N3 Ø 4.2 C=81

[illegible]

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	133	14
60B	5	335	52
50A	6.3	2	1
50A	8	82	32
50A	10	196	121
50A	12.5	44	42
Peso Total		60B =	66 kg
Peso Total		50A =	196 kg



CONCRETO fck = 250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				023
TÍTULO NÍVEL 100 ARMADURAS DAS VIGAS V101 / V102 / V103 / V104 V105 / V106 / V107 / V108 V109 / V110 / V111 / V112 V113				
				REV. N.º 00
DATA 19/08/2015	ESCALA : 50	DESENHO UBS-100-VIG-023-R00	COORD.	ENG.º



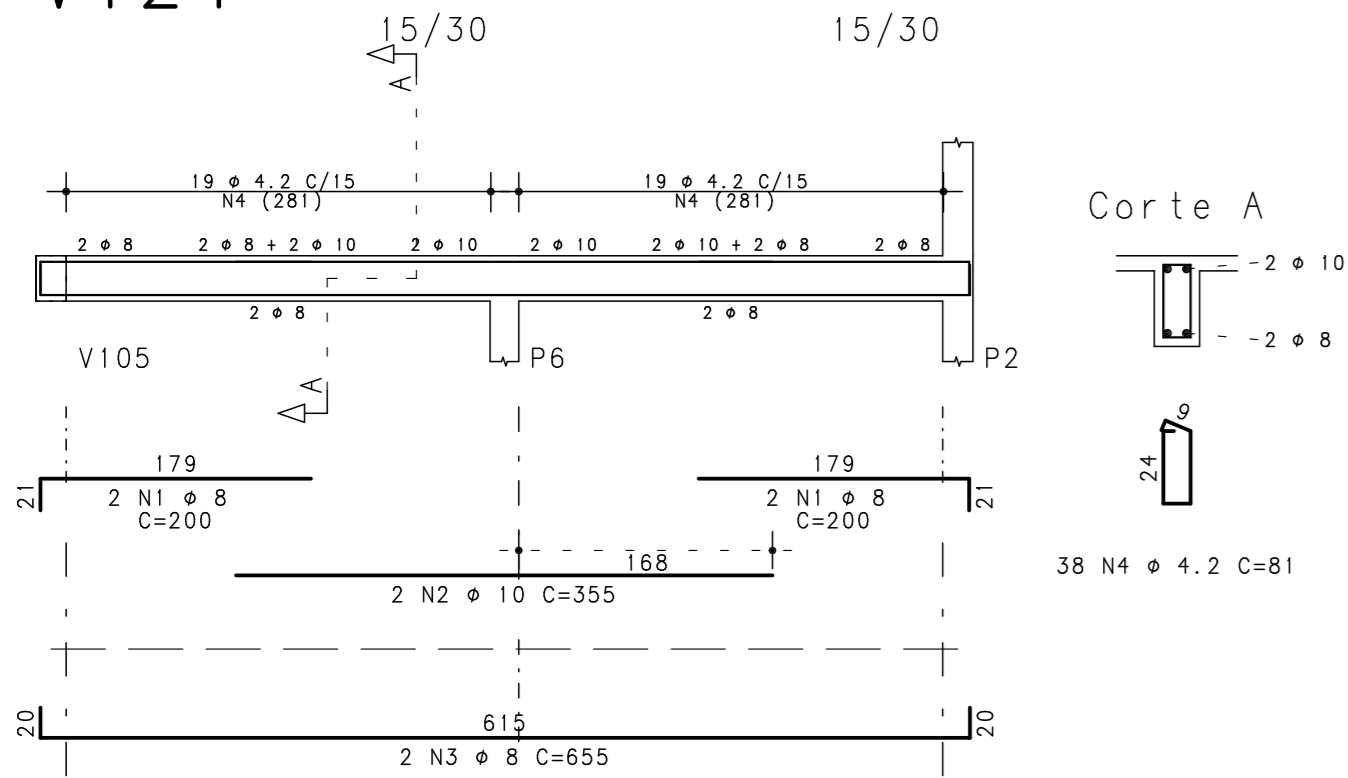
RESUMO AÇO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4,2	200	22
60B	5	261	40
50A	8	140	55
50A	10	214	132
50A	12,5	4	3
Peso Total		60B =	62 kg
Peso Total		50A =	191 kg

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

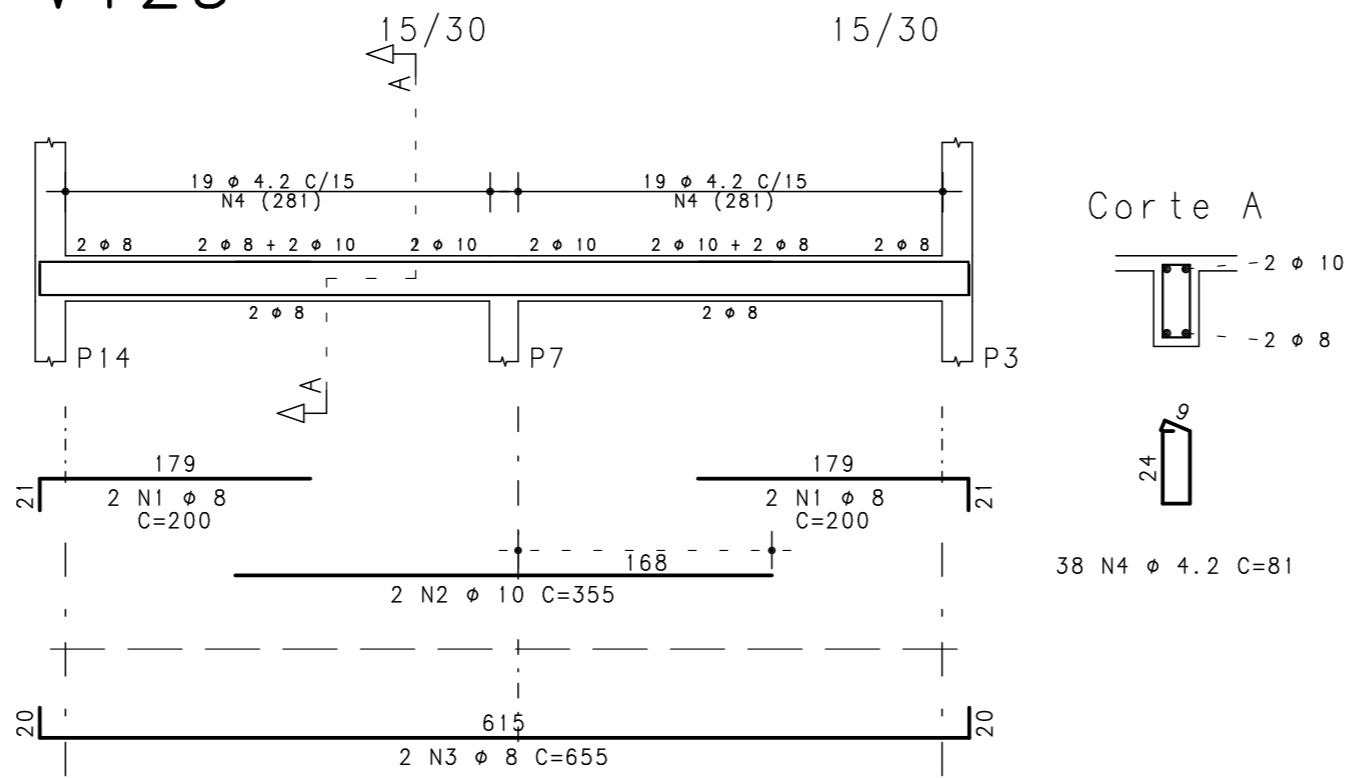
RESUMO AÇO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4,2	200	22
60B	5	261	40
50A	8	140	55
50A	10	214	132
50A	12,5	4	3
Peso Total		60B =	62 kg
Peso Total		50A =	191 kg

10. *Journal of the American Medical Association*, 2000; 283: 2689-2694.

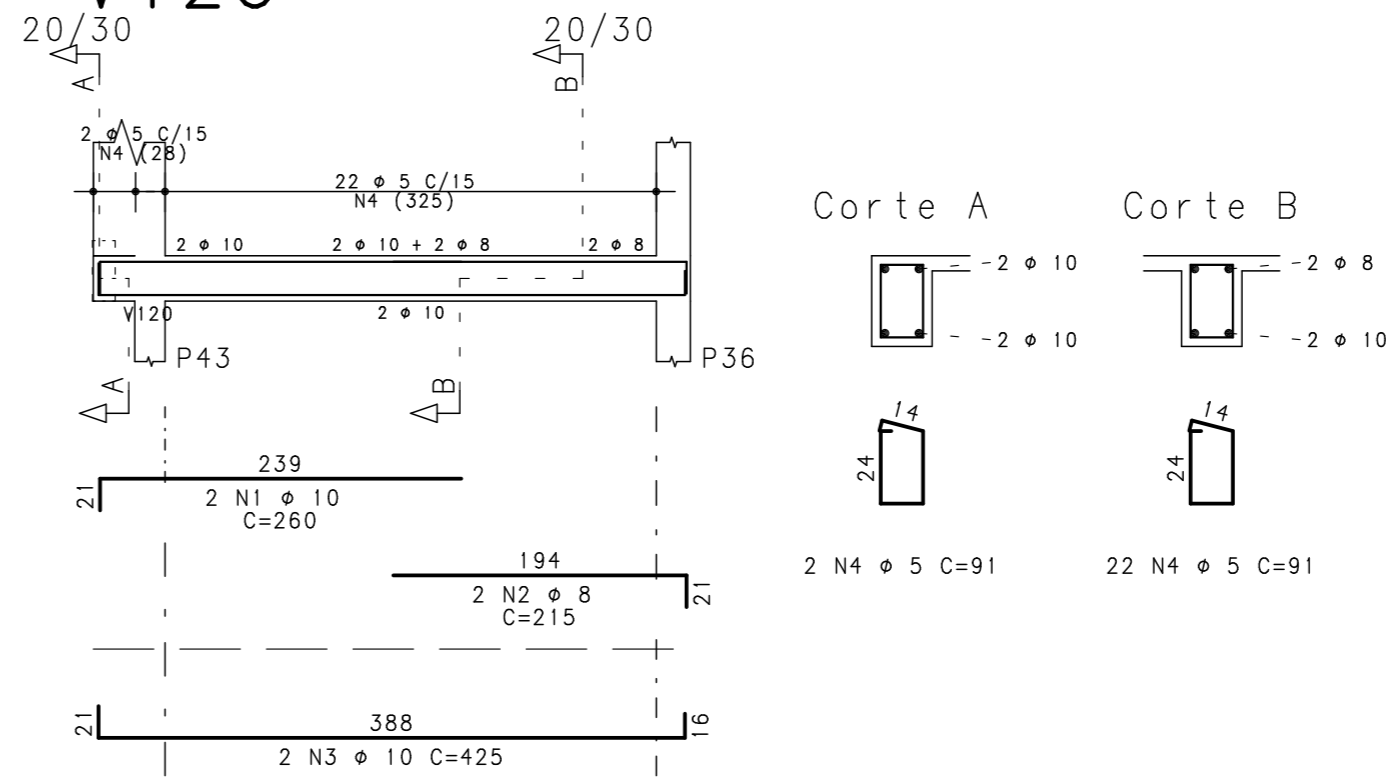
V124



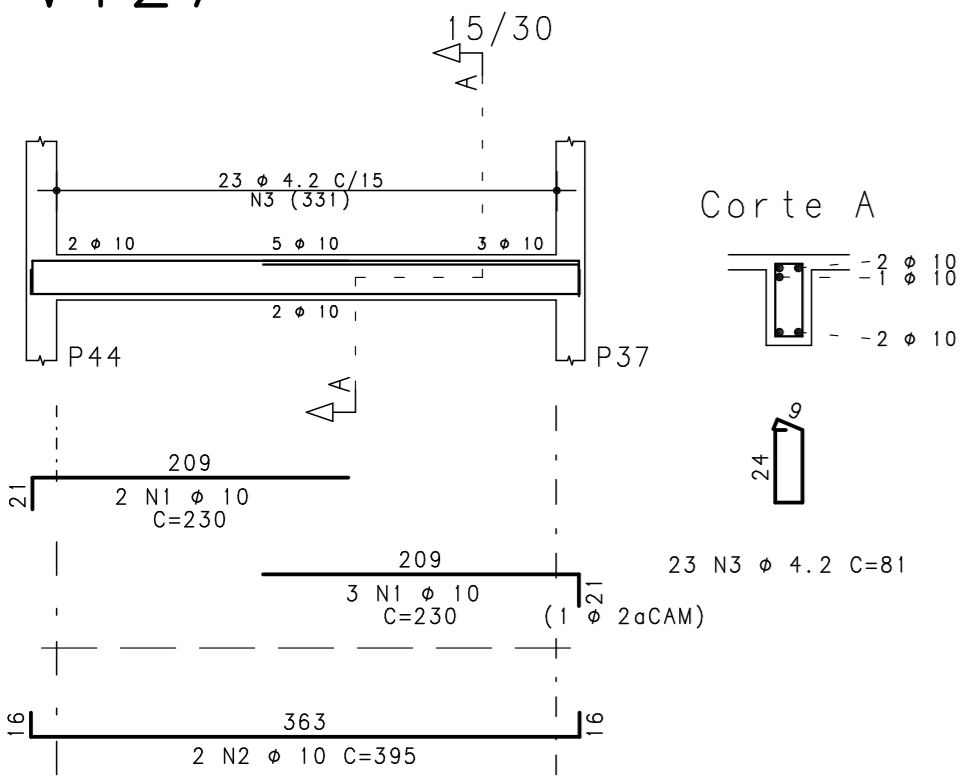
V125



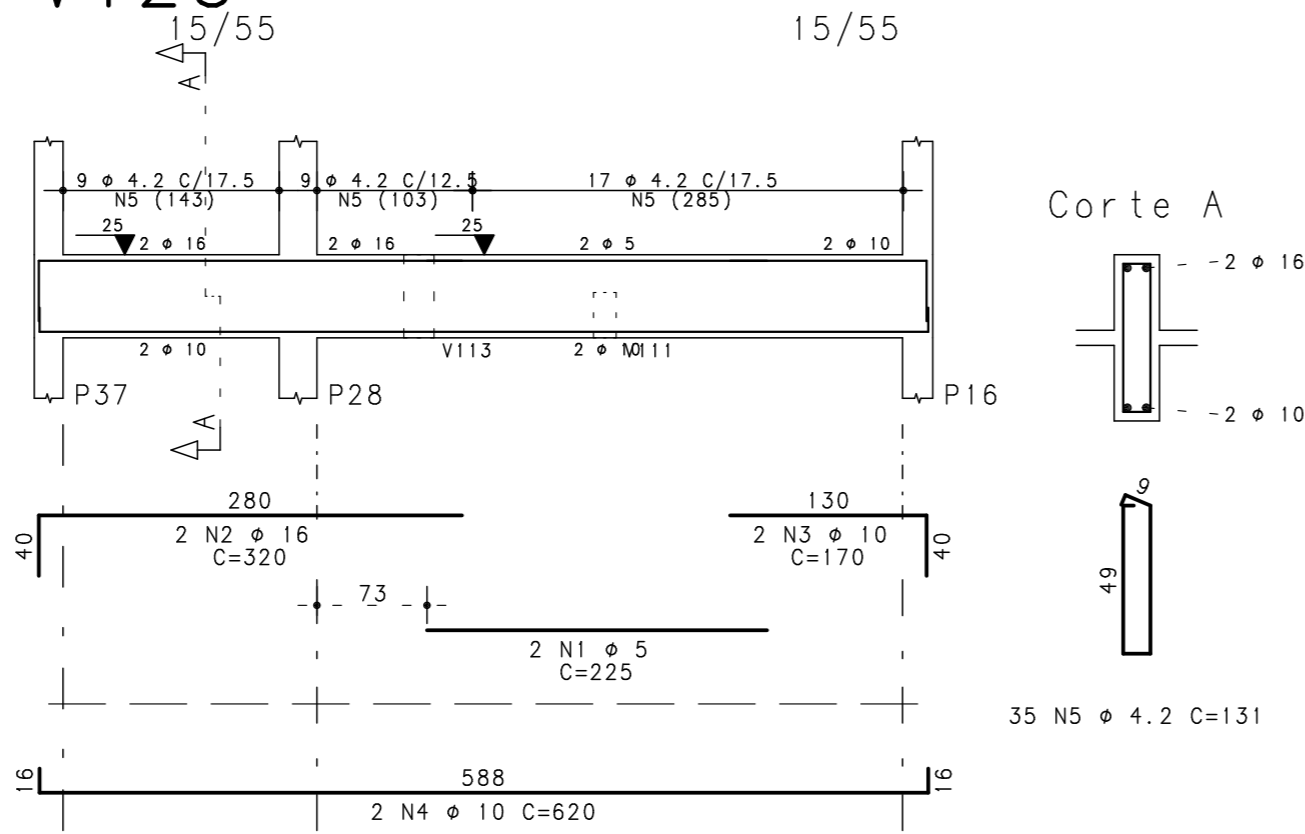
V126



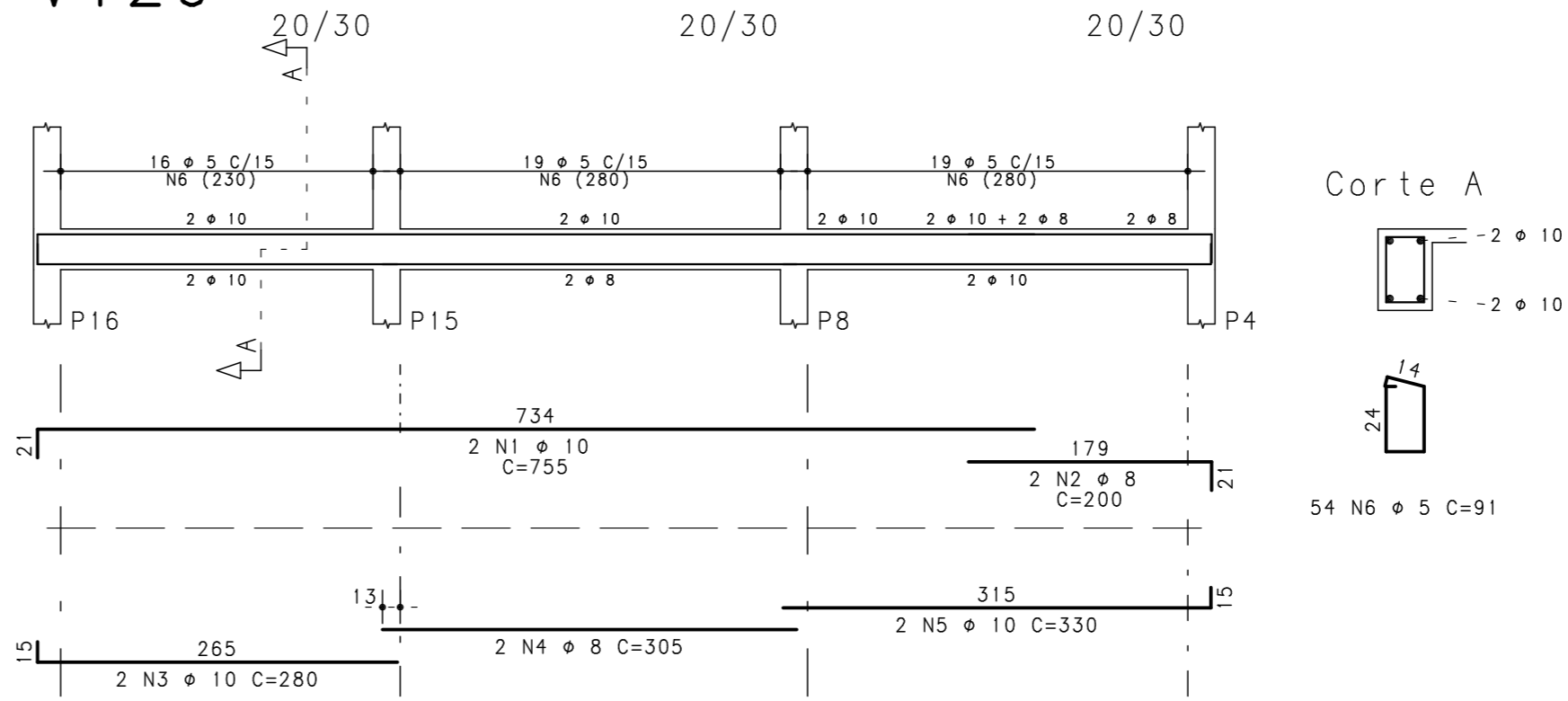
V127



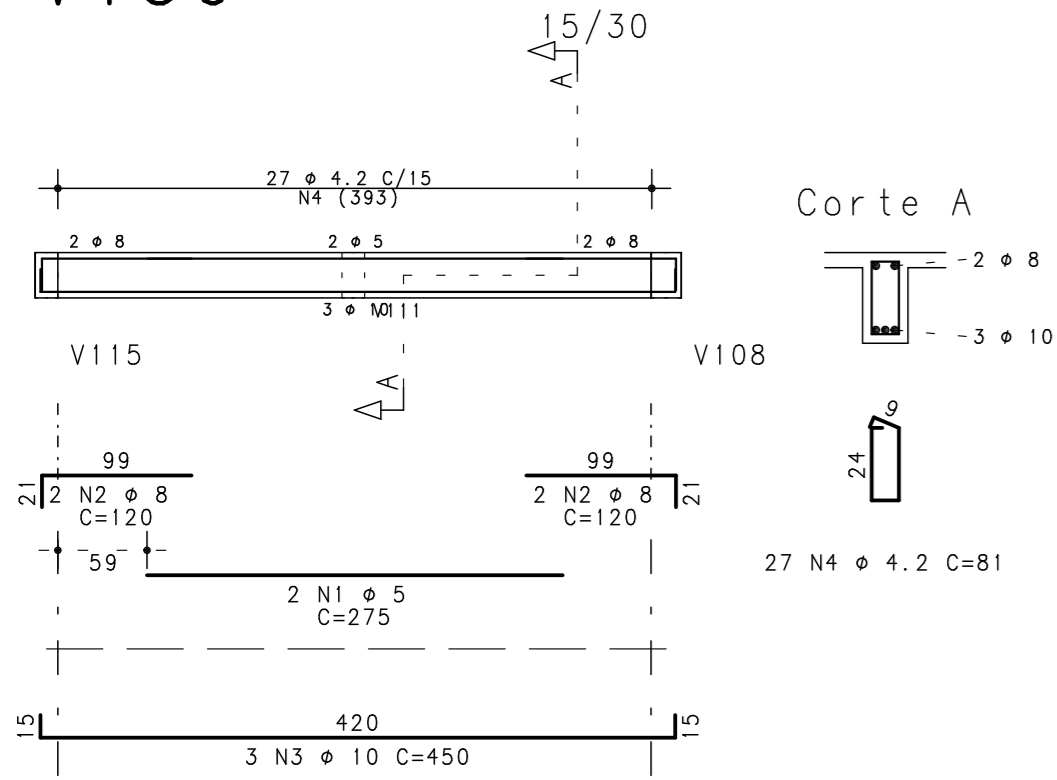
V128



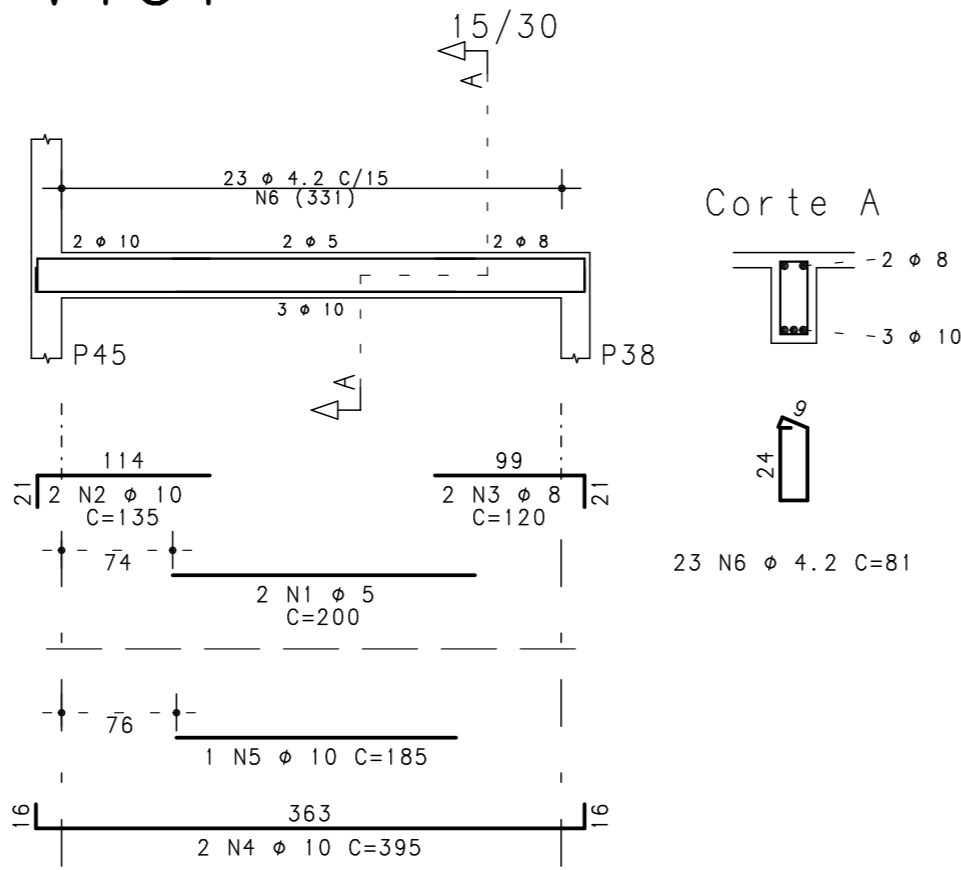
V129



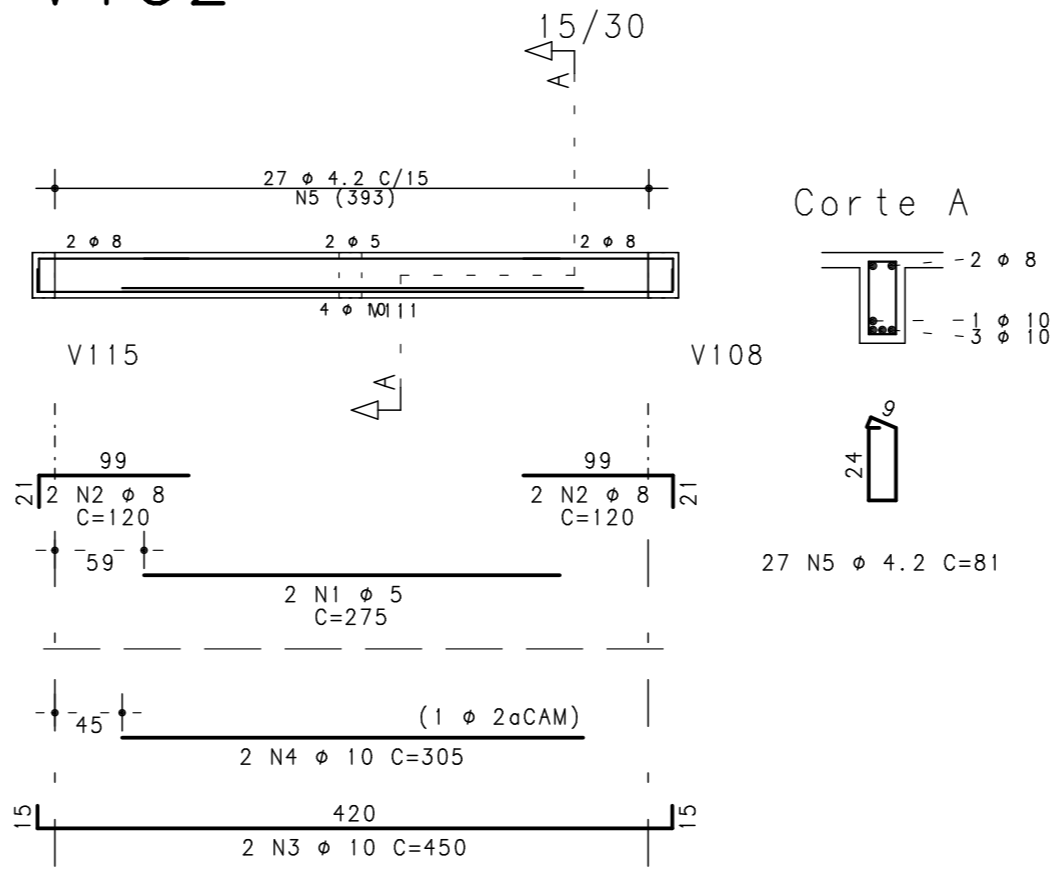
V130



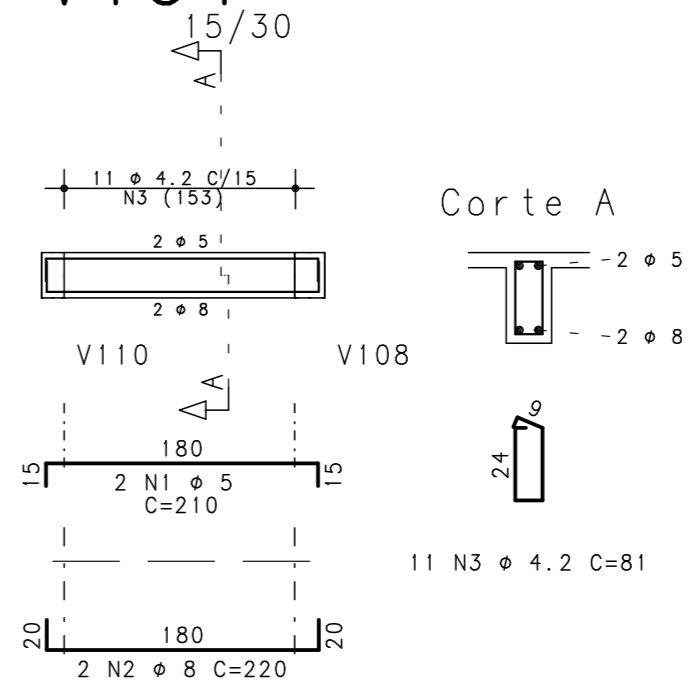
V131



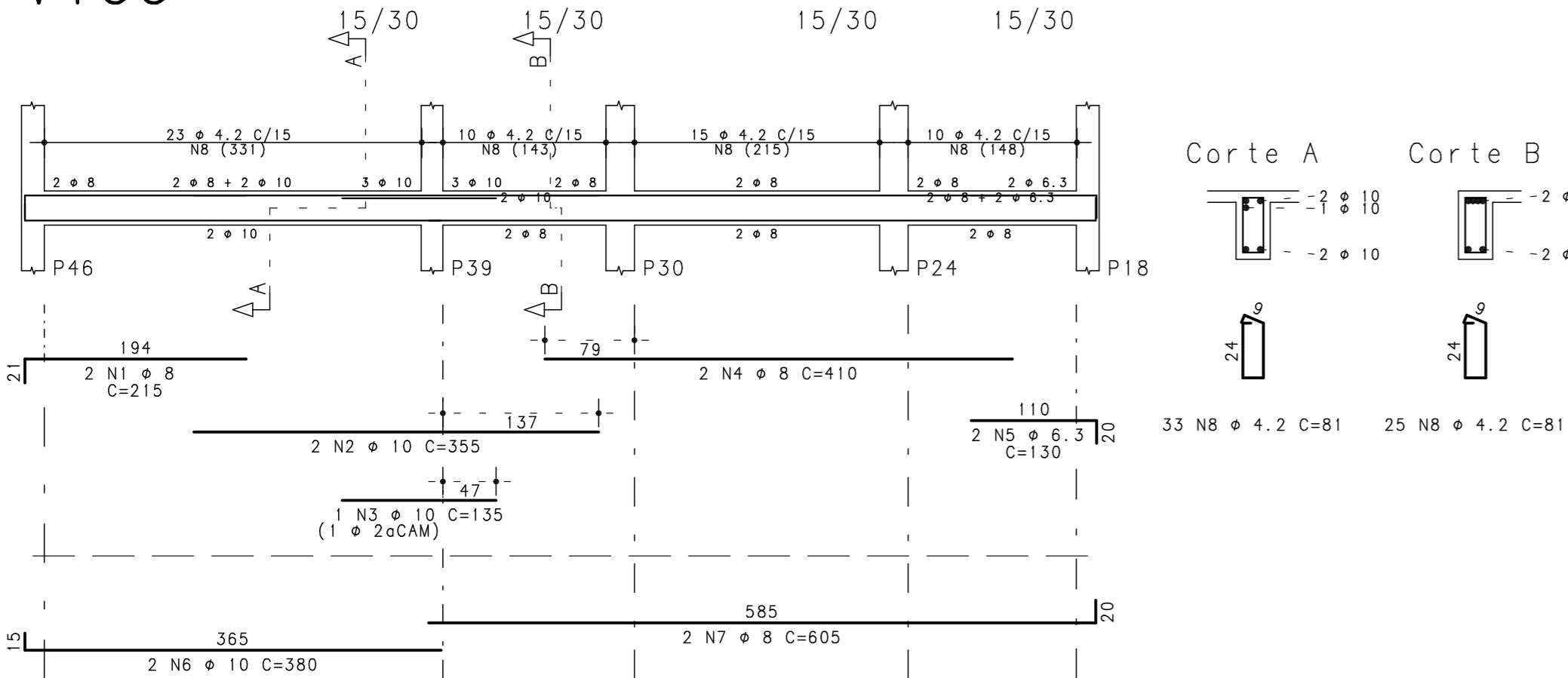
V132



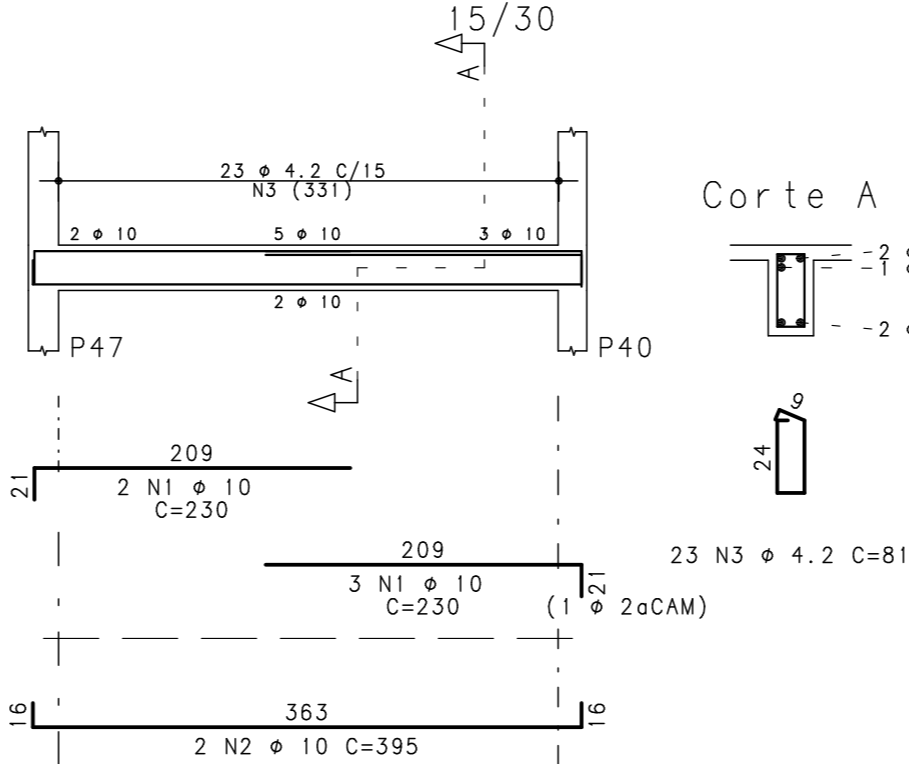
V134



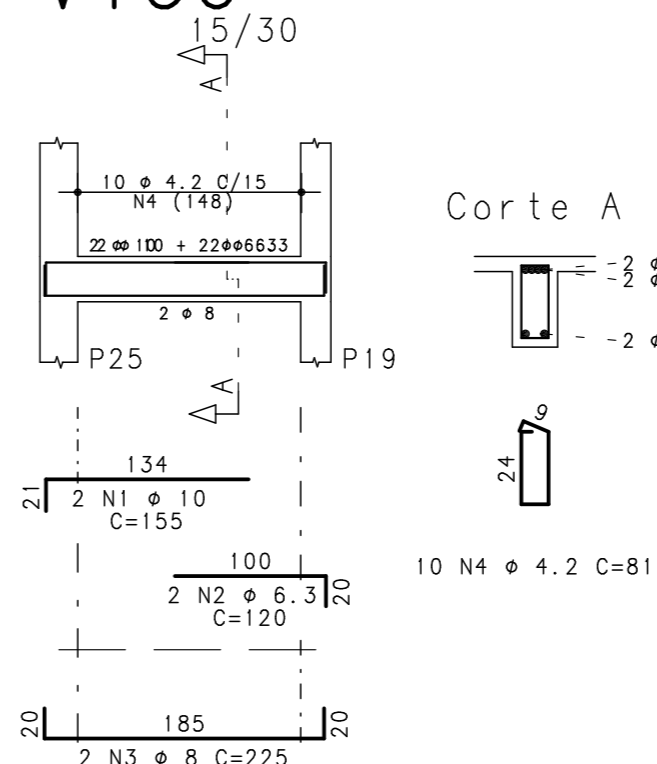
V133



V135



V136



ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V124	50A	1	8	4	200
	50A	2	10	2	355
	50A	3	8	2	655
	60B	4	4.2	38	81
V125	50A	1	8	4	200
	50A	2	10	2	355
	50A	3	8	2	655
	60B	4	4.2	38	81
V126	50A	1	10	2	260
	50A	2	8	2	215
	50A	3	10	2	425
	60B	4	5	24	91
V127	50A	1	10	5	230
	50A	2	10	2	395
V128	50A	1	10	2	225
	50A	2	10	2	170
V129	50A	1	10	2	755
	50A	2	10	2	200
V130	50A	1	10	2	275
	50A	2	10	2	120
V131	50A	1	10	2	200
	50A	2	10	2	135
V132	50A	1	10	2	275
	50A	2	10	2	120
V133	50A	1	10	2	215
	50A	2	10	2	355
V134	50A	1	10	2	155
	50A	2	10	2	120
V135	50A	1	10	5	230
	50A	2	10	2	395
V136	50A	1	10	2	155
	50A	2	10	2	120

RESUMO ACO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	271	30
50A	5	95	15
50A	6.3	5	40
50A	8	102	105
50A	10	170	105
50A	16	6	10
Peso Total		60B =	44 kg
Peso Total		50A =	157 kg



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
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Rev	Data	Autor	Assunto

CONCRETO fck ≈250 kgf/cm2			SOBRECARGA PREVISTA		
CLIENTE SECRETARIA DA SAÚDE-PELOTAS			OBRA N.º 0001		
OBRA UBS TIPO 2-CORRIENTES			DES. N.º		
TÍTULO NÍVEL 100 ARMADURAS DAS VIGAS V124 / V125 / V126 / V127 V128 / V129 / V130 / V131 V132 / V133 / V134 / V135 V136			025		
			REV. N.º 00		
DATA 19/08/2015	ESCALA 1:50	DESENHO UBS-100-VIG-025-R00		COORD.	ENG.º

Technical drawing of a mechanical part, V108, showing a side view and a cross-section A-A.

Side View Dimensions:

- Top flange thickness: 20
- Top flange hole: 20 ϕ 5 C/15
- Top flange hole tolerance: N3 (306)
- Central hole diameter: 2 ϕ 8
- Central hole position: 2 ϕ 10
- Bottom flange thickness: 20
- Bottom flange hole: 20 ϕ 5 C/15
- Bottom flange hole tolerance: N3 (306)
- Central hole position: 2 ϕ 10
- Overall length: 333
- Part label: V108
- Part label: P9

Corte A-A Dimensions:

- Width: 24
- Height: 14
- Top flange hole: 20 ϕ 5
- Bottom flange hole: 20 ϕ 5
- Overall length: 333
- Part label: V108
- Part label: P9

Technical drawing of a mechanical part, likely a bracket or support, showing top, front, and side views with dimensions and section lines.

Top View: Shows a rectangular base with a central slot. Dimensions include a total width of 110, a central slot width of 50, and a distance of 15 from the left edge to the start of the slot. A section line A-A is indicated.

Front View: Shows the profile of the part with a total height of 180. It features a central vertical slot with a width of 50 and a distance of 15 from the left edge to the start of the slot. A section line A-A is indicated.

Side View: Shows the part's profile with a total width of 110 and a central slot width of 50. A section line A-A is indicated.

Section A-A: A detailed cross-section of the part, showing a rectangular profile with a width of 24 and a height of 180. The section is labeled "Corte A" and "11 N3 4.2 C=81".

Longitudinal Section:

- Beam: 23 ϕ 4.2 C/15 N7 (331)
- Supports: P48, P41, P32, P26, P20
- Dimensions: 194, 215, 132, 47, 365, 585, 489, 215, 146
- Reinforcement: 2 N1 ϕ 8 C=215, 2 N2 ϕ 10 C=350, 1 N3 ϕ 10 C=135 (1 ϕ 2aCAM), 2 N4 ϕ 8 C=510, 2 N5 ϕ 10 C=380, 2 N6 ϕ 8 C=605

Corte A:

- Dimensions: 24, 2 ϕ 10, 2 ϕ 8

Corte B:

- Dimensions: 24, 2 ϕ 10 + 2 ϕ 8, 2 ϕ 8

Reinforcement Details:

- 33 N7 ϕ 4.2 C=81
- 25 N7 ϕ 4.2 C=81

Technical drawing of a mechanical part, showing two views: a front view and a side view labeled "Corte A".

Front View:

- Total length: 676 mm.
- Central hole: $\varnothing 10$ mm, length 333 mm.
- Top surface: Chamfered edge, 20 x 30 mm.
- Bottom surface: Profile P20.
- Material specification: 20 N3 $\varnothing 5$ C=91.

Corte A (Side View):

- Width: 24 mm.
- Height: 10 mm.

Technical drawing of a reinforced concrete slab (V106) showing reinforcement details. The drawing includes a plan view of the slab with reinforcement bars (N9, N12, N15, N18, N20, N25, N30) and their respective diameters and spacings. A section line A-A is indicated, and a detail view of the slab edge is shown. The drawing is labeled "Corte A" and "V106".

Technical drawing of a mechanical part, showing a side view and a cross-section A-A.

Side View Dimensions:

- Top: 15, 12, 4, 2, C=15, N3 (173), 2, 5, 8, 1
- Bottom: 200, 2, N1, 5, C=230, 15, 20, 2, N2, 8, C=240, 20

Cross-section A-A Dimensions:

- Top: 2, 4, 8, 2, 4, 8
- Bottom: 12, N3, 4, 2, C=81

The text "Corte A" is written above the cross-section.

[illegible]

Technical drawing of a bridge deck cross-section (Corte A) showing reinforcement details. The drawing includes a top view of the deck with reinforcement bars (N10, N12, N16, N20) and stirrups (C=250, C=260, C=135, C=205, C=555, C=425, C=875). Dimensions are given in meters (m) and centimeters (cm). The drawing is divided into three sections by vertical lines, with dimensions 20/30 and 20/30 indicated. A section line 'A-A' is shown on the left. A detail view of a reinforcement bar is shown on the right, labeled 'Corte A'.

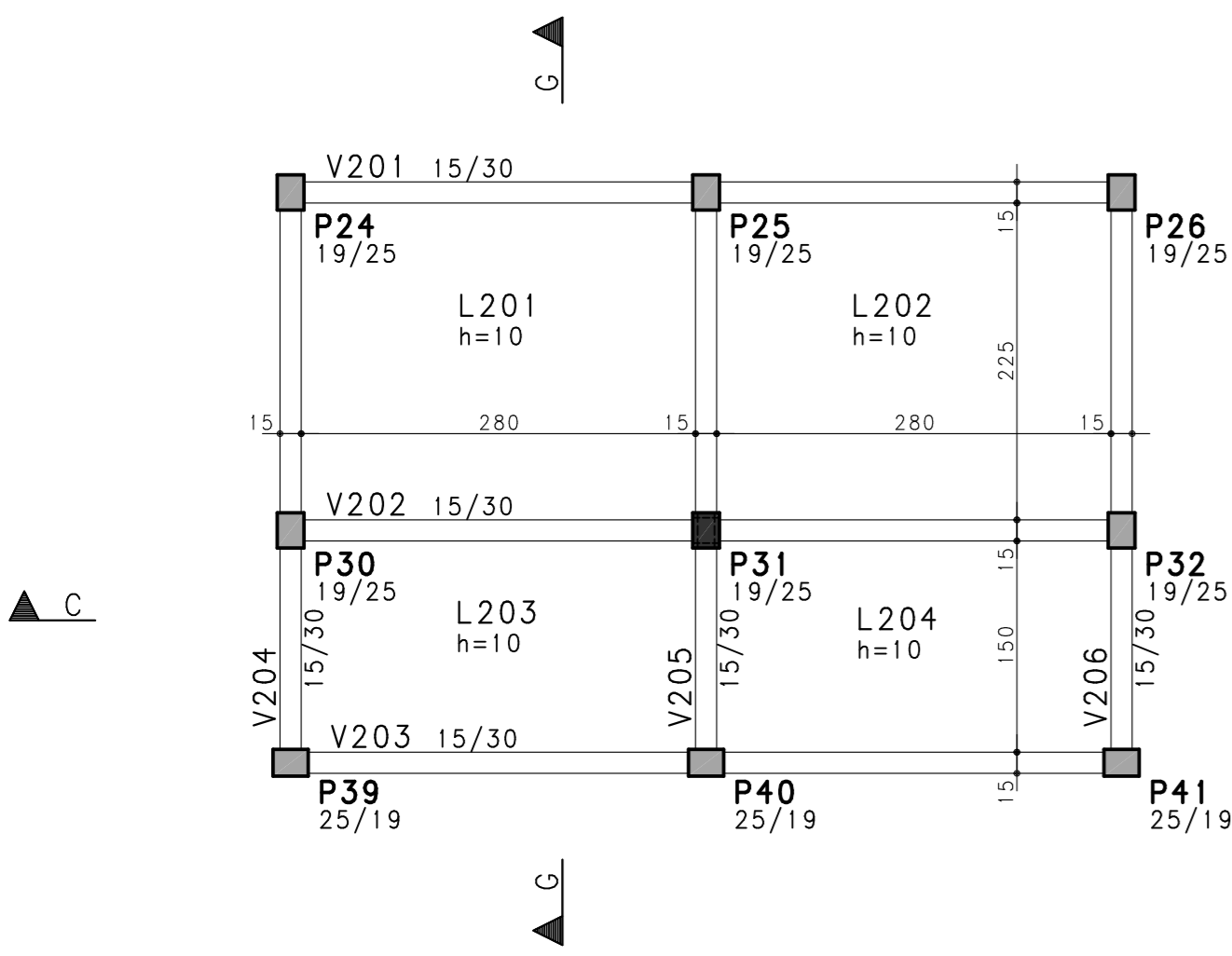
RESUMO ACO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	147	16
60B	5	141	22
50A	6.3	1	0
50A	8	64	25
50A	10	120	74
50A	12.5	12	11
Peso Total		60B =	38 kg
Peso Total			110 kg

Rua Quinze de Novembro, 563/405
Pelotas - RS - CEP 96015-000
Telefone: (53) 32291500
e-mail: fernandogigante@terra.com.br
e-mail: pauloslmch@yahoo.com.br

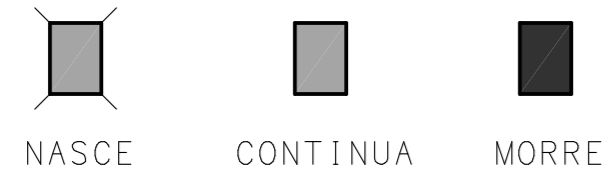
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
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Rev	Data	Autor	Assunto

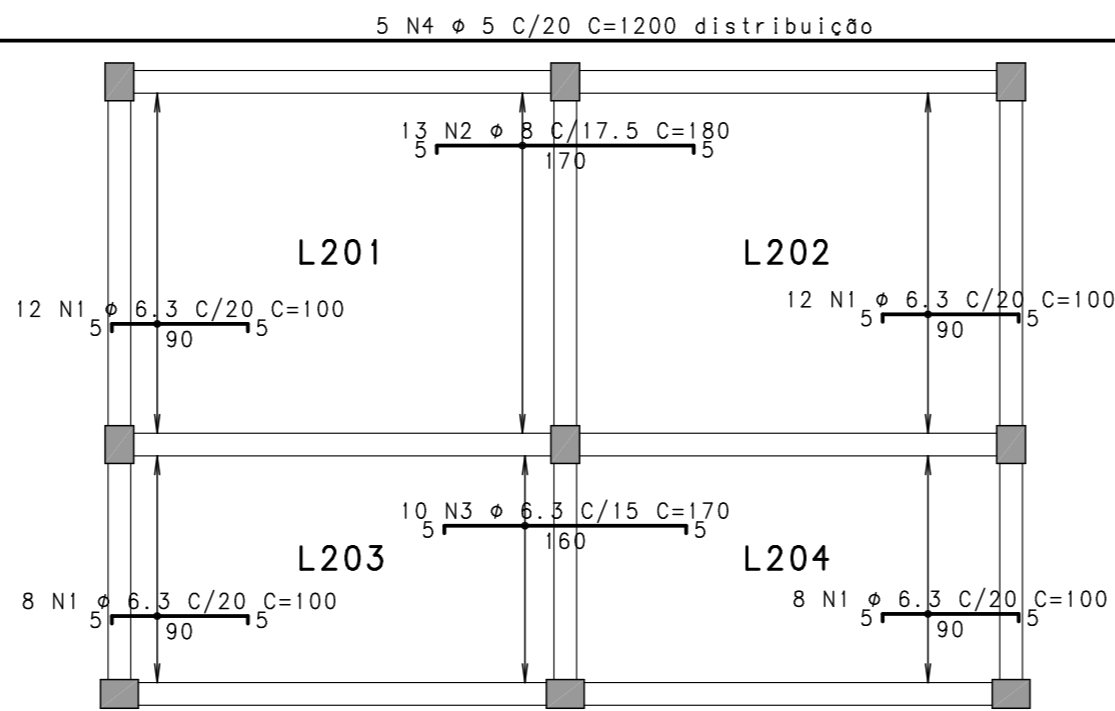
CONCRETO		SOBRECARGA PREVISTA		OBRA N.º
fck = 250 kgf/cm2				0001
CLIENTE	SECRETARIA DA SAÚDE-PELOTAS			DES. N.º
OBRA	UBS TIPO 2-CORRIENTES			026
TÍTULO	NÍVEL 100 ARMADURAS DAS VIGAS			
V137 / V138 / V139 / V140 V141 / V142 / V143 / V144				REV. N.º
				00
DATA	ESCALA	DESENHO	COORD.	ENG.º
9/08/2015	1:50	UBS-100-VIG-026-R00		



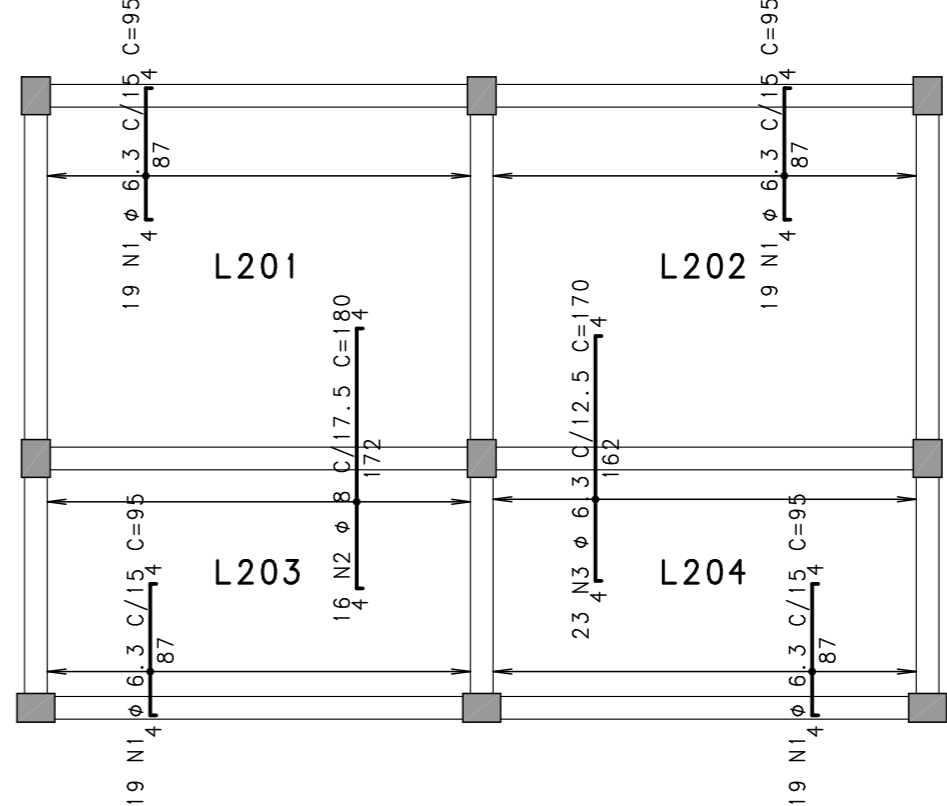
CONVENÇÃO DE PILARES



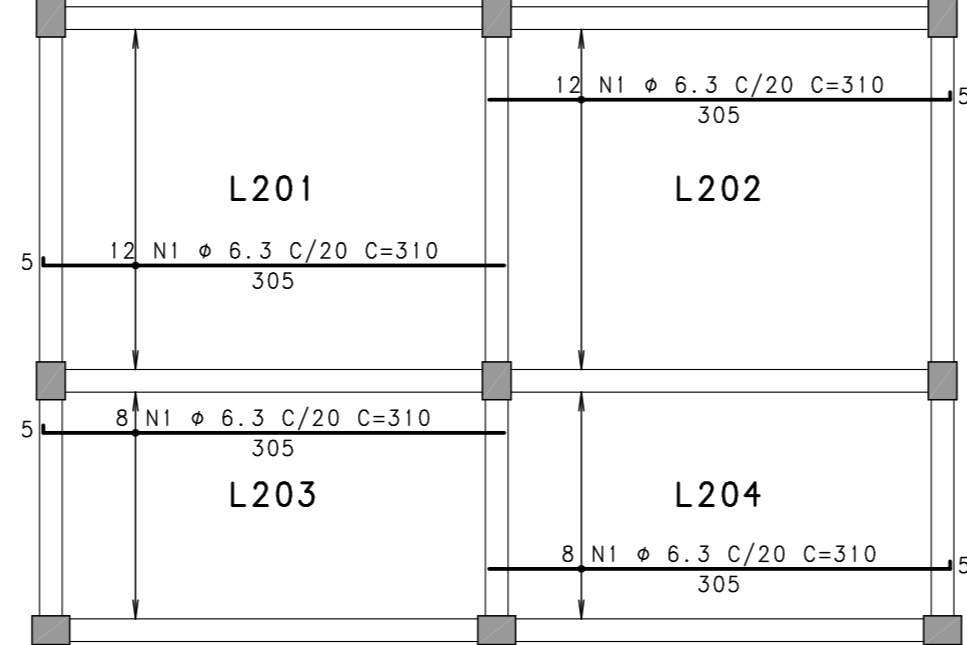
200 - Armadura negativa horizontal



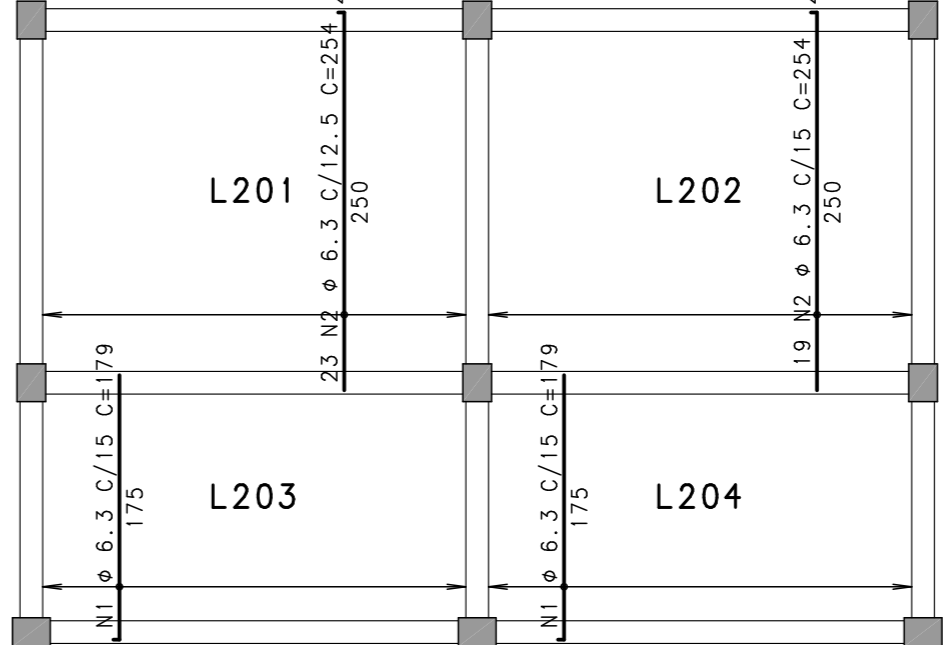
200 - Armadura negativa vertical



200 - Armadura positiva horizontal



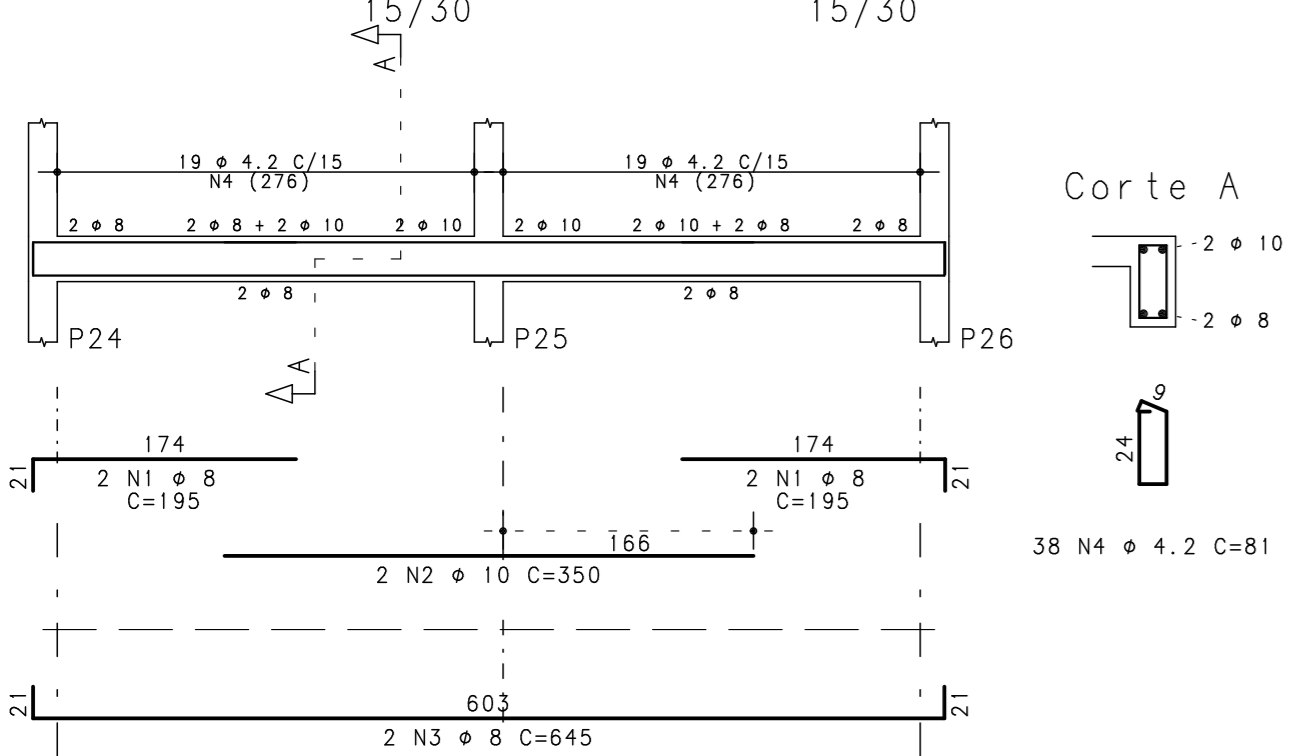
200 - Armadura positiva vertical



ACO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V201	50A	1	8	4	195
	50A	2	10	2	350
	50A	3	8	2	645
	60B	4	4.2	36	81
V202	50A	1	10	4	200
	50A	2	16	2	365
	50A	3	10	2	635
	60B	4	5	46	81
V203	50A	1	8	4	200
	50A	2	10	2	350
	50A	3	8	2	650
	60B	4	4.2	36	81
V204	50A	1	8	2	465
	50A	2	8	2	460
	60B	3	4.2	25	81
V205	50A	1	10	2	465
	50A	2	10	1	150
	50A	3	10	2	450
	60B	4	4.2	25	81
V206	50A	1	8	2	465
	50A	2	8	2	460
	60B	3	4.2	25	81
200 - Armadura negativa horizontal					
50A	1	6.3	40	100	4000
50A	2	8	13	180	2340
50A	3	6.3	10	170	1700
60B	4	5	5	1200	6000
200 - Armadura negativa vertical					
50A	1	6.3	76	95	7220
50A	2	8	16	180	2880
50A	3	6.3	23	170	3910
200 - Armadura positiva horizontal					
50A	1	6.3	40	310	12400
200 - Armadura positiva vertical					
50A	1	6.3	38	179	6802
50A	2	6.3	42	254	10668

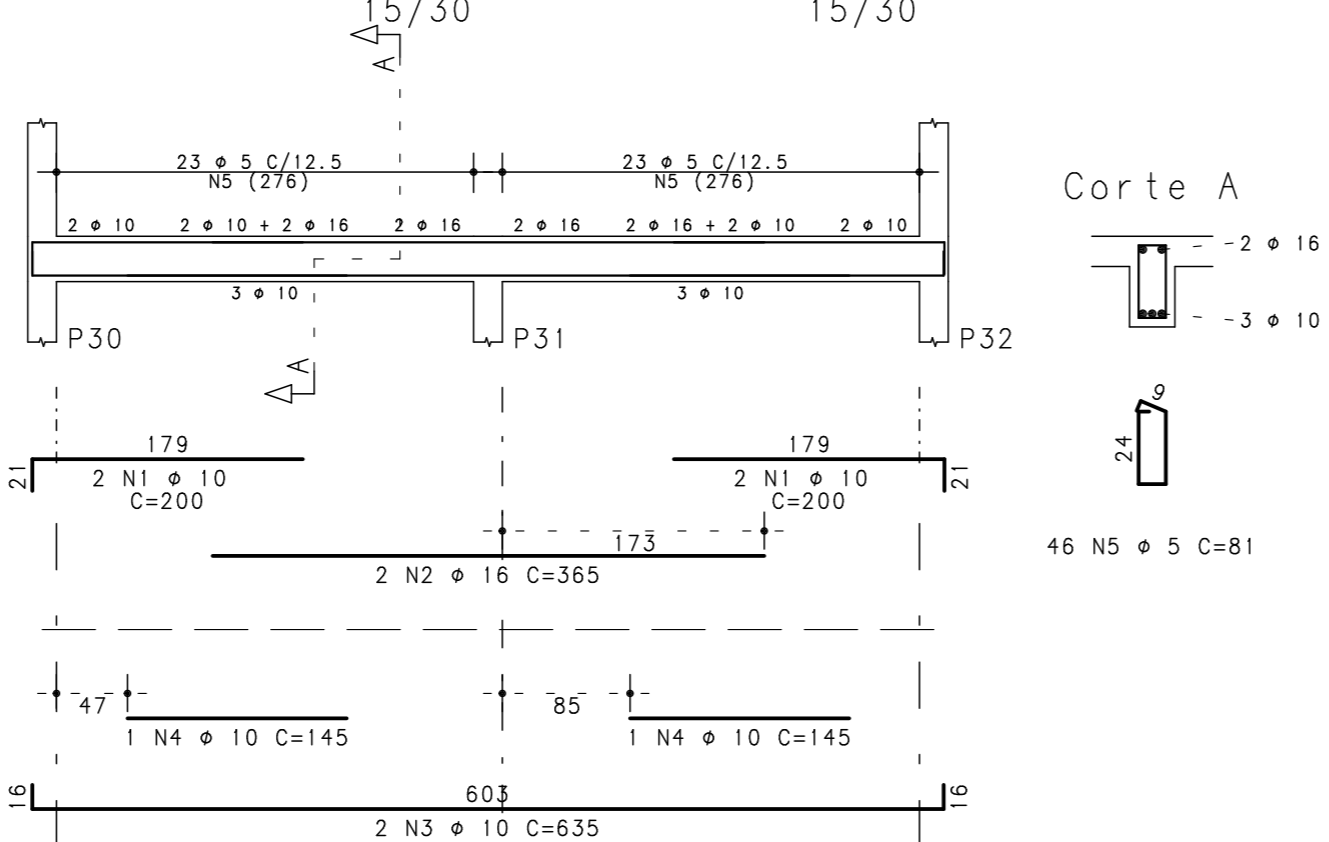
RESUMO AÇO CA 50-60				
ACO	BIT (mm)	COMPR (m)	PESO (kg)	
60B	4.2	121	13	
60B	5	97	15	
50A	6.3	467	114	
50A	8	131	52	
50A	10	57	35	
50A	16	7	12	
Peso Total		60B =	28 kg	
Peso Total		50A =	213 kg	

V201



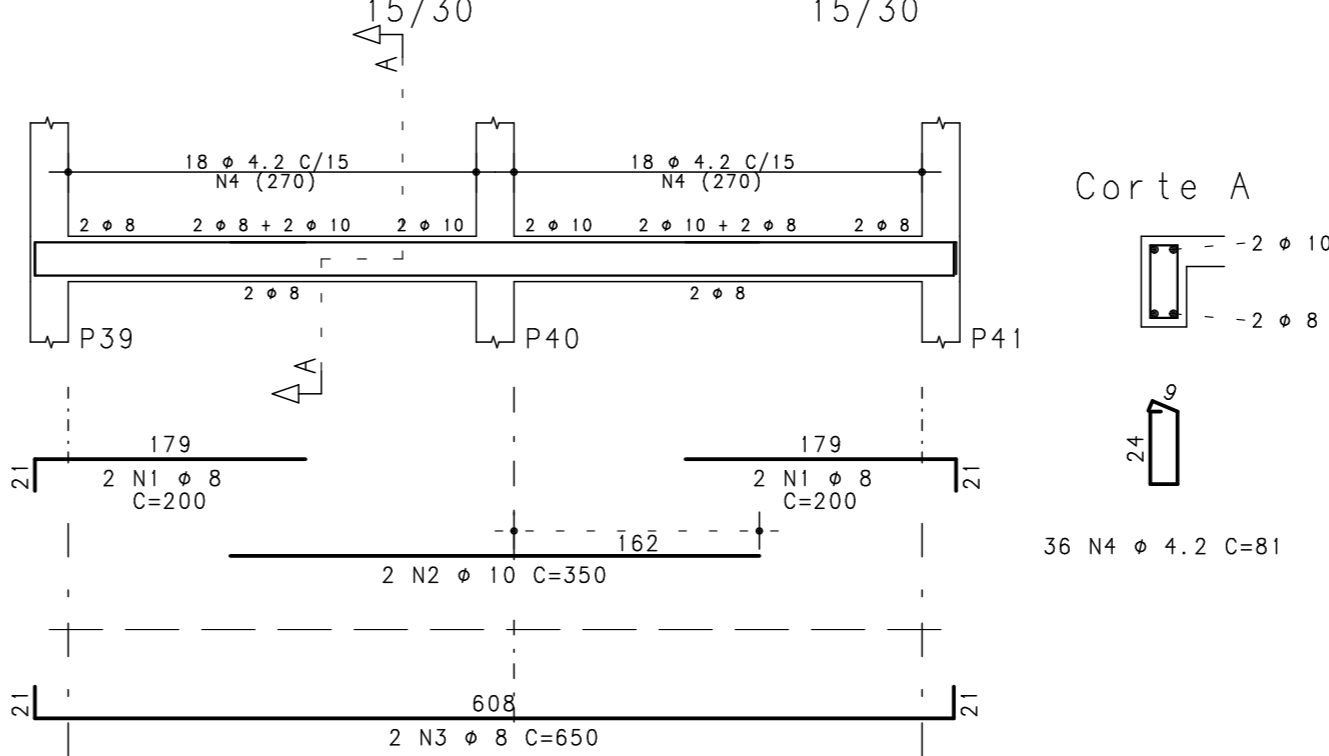
Corte A

V202



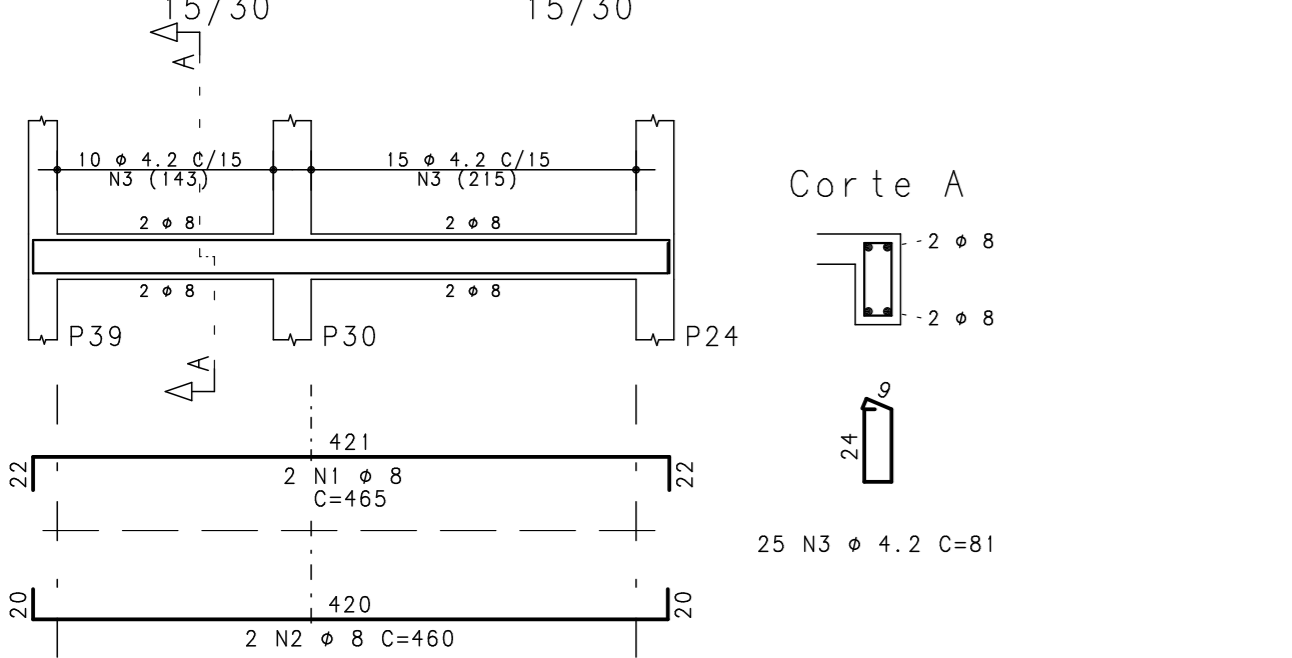
Corte A

V203



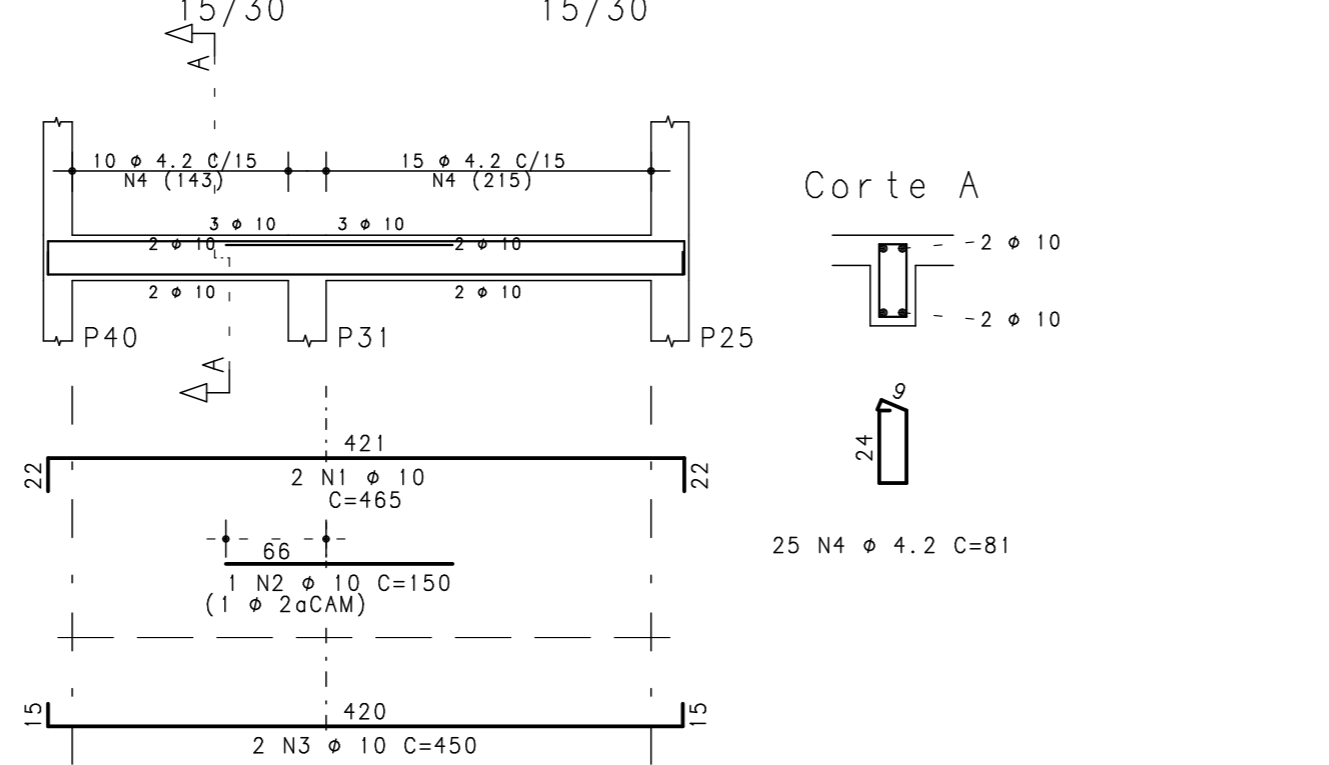
Corte A

V204



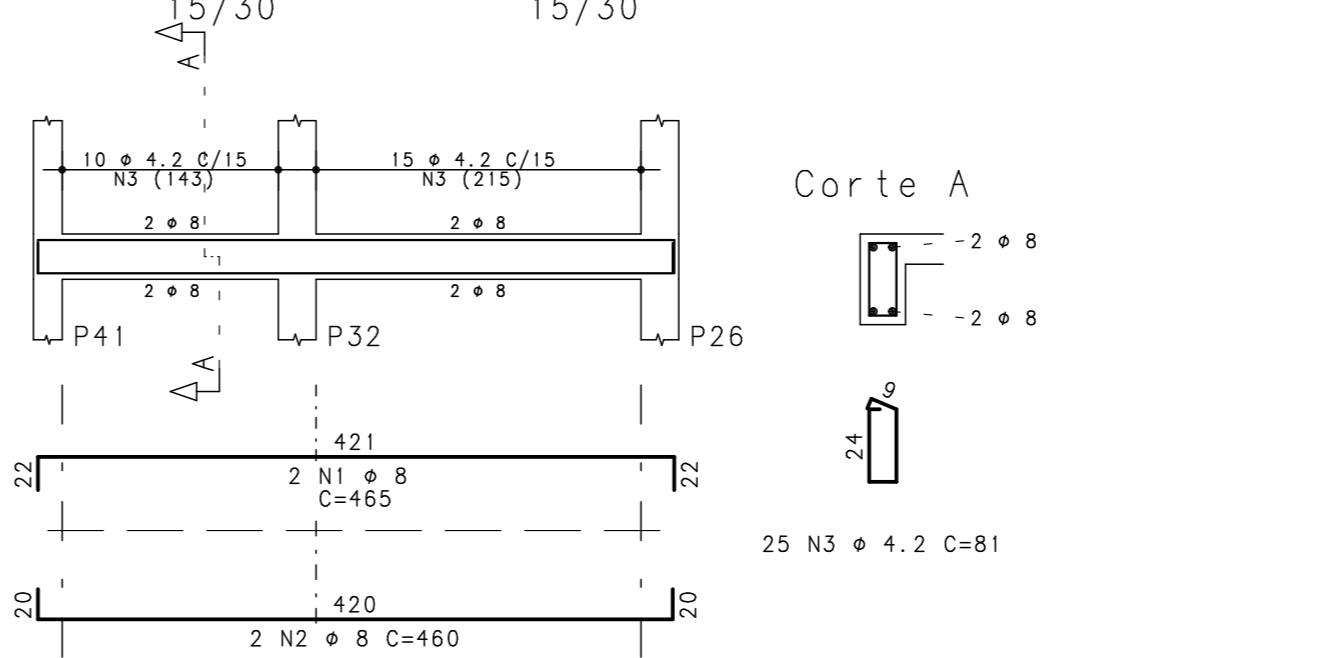
Corte A

V205



Corte A

V206



Corte A



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
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Rev	Data	Autor	Assunto

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CONCRETO fck =250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º <div>0001</div>
CLIENTE SECRETARIA DA SAÚDE-PELOTAS				DES. N.º
OBRA UBS TIPO 2-CORRIENTES				<div>027</div>
TÍTULO NÍVEL 200 FÔRMAS-ARMADURAS DAS LAJES E VIGAS				
200 - Armadura negativa horizontal				
200 - Armadura negativa vertical				
200 - Armadura positiva horizontal				
200 - Armadura positiva vertical				
V201 / V202 / V203 / V204 V205 / V206				
DATA 19/08/2015	ESCALA 1:50	DESENHO UBS-200-VIG-027-R00	COORD.	REV. N.º <div>00</div>
			ENG.º	

A

B

C

D

E

F

G

H

A

B

C

D

E

F

G

H

CONVENÇÃO DE PILARES



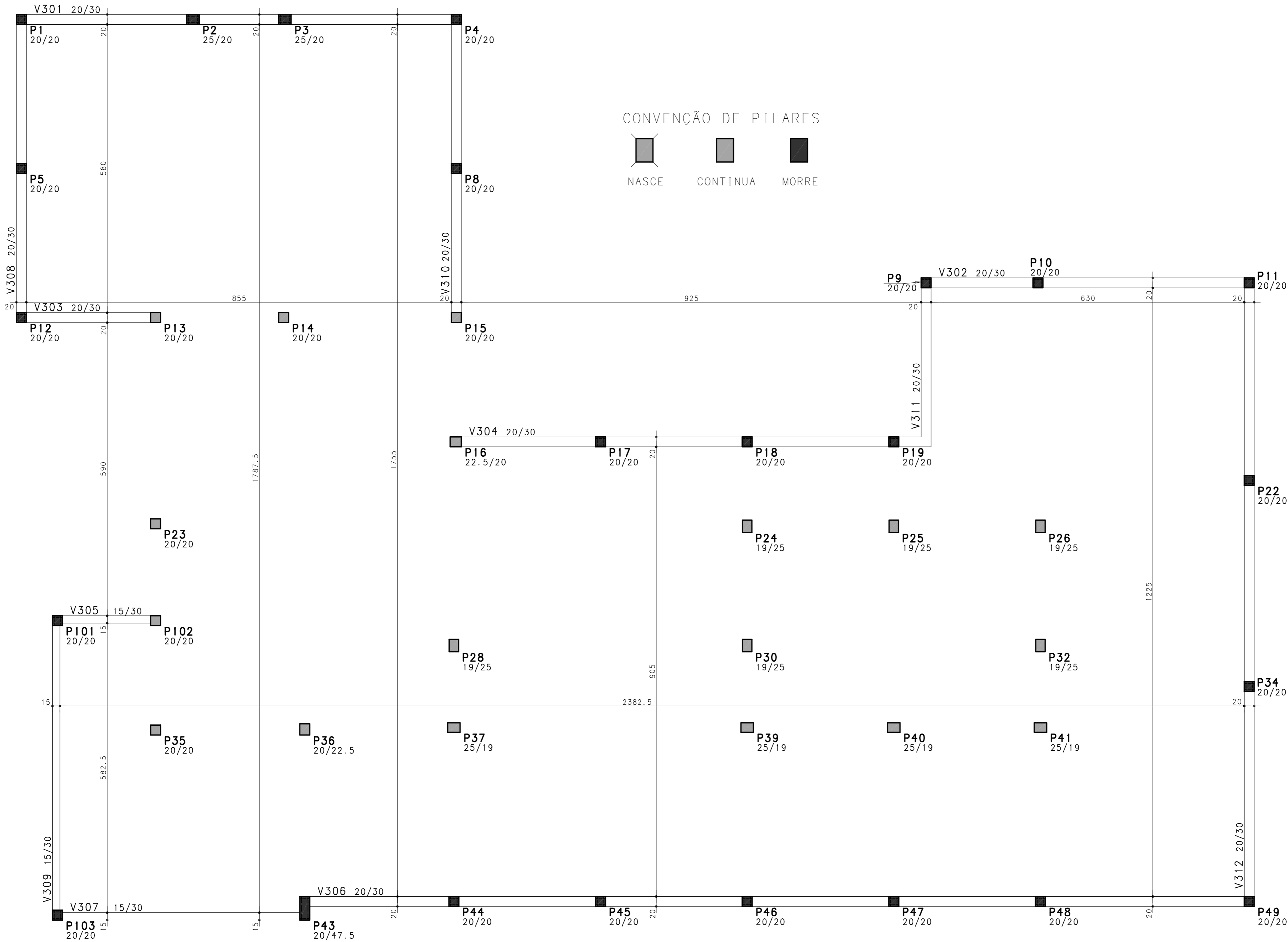
NASCE



CONTINUA



MORRE

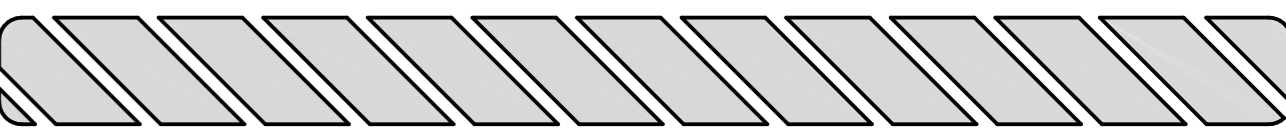


Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

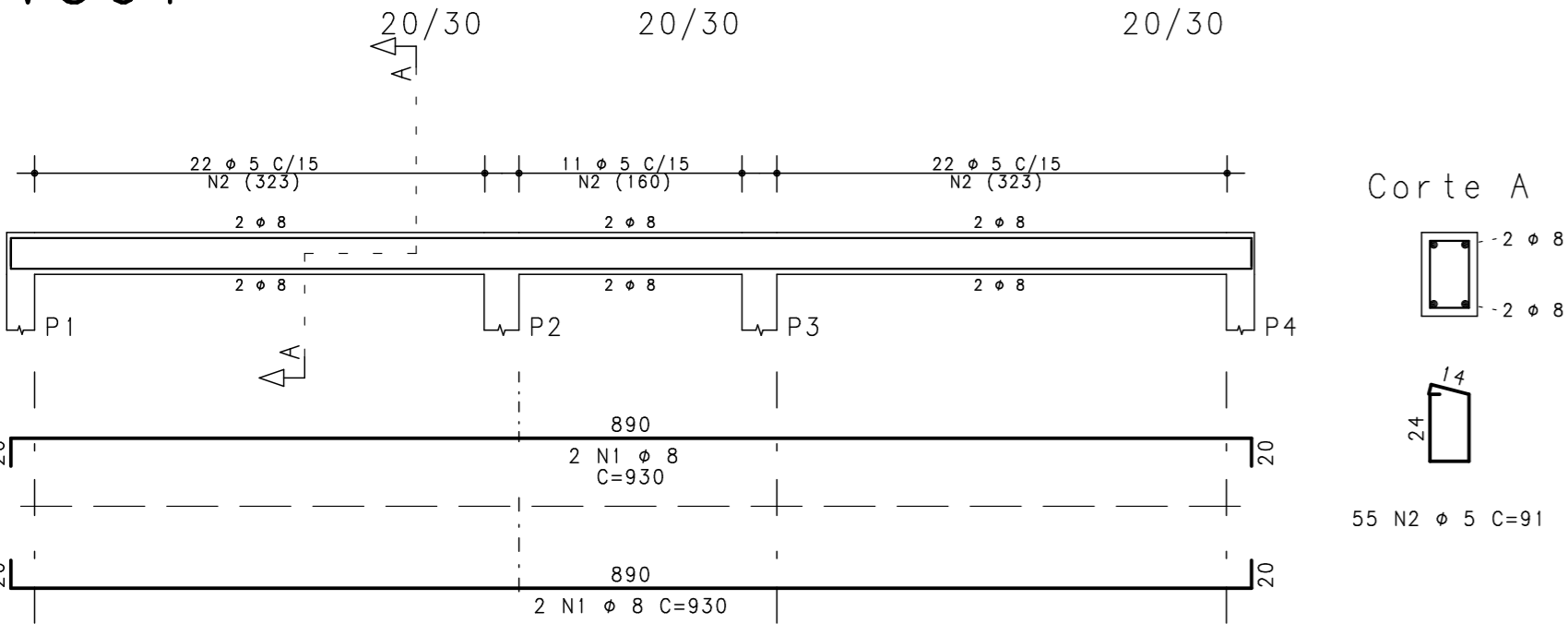
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

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Rev	Data	Autor	Assunto

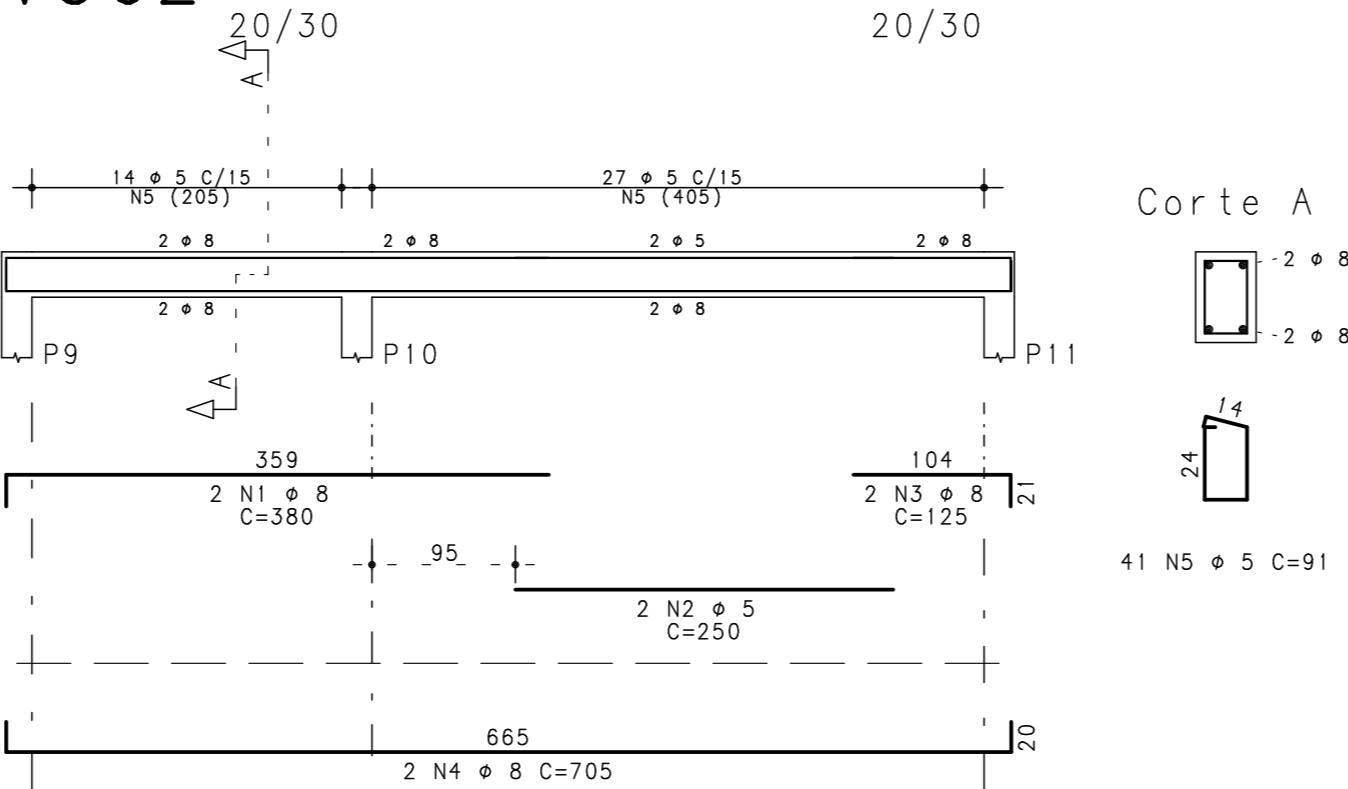


CONCRETO fck = 250 kgf/cm ²	SOBRECARGA PREVISTA	OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º 028
OBRA UBS TIPO 2-CORRIENTES		REV. N.º 00
TÍTULO NÍVEL 300 FÓRMAS		ENG.º
DATA 9/08/2015	ESCALA 1:50	DESENHO UBS-300-FOR-028-R00
	COORD.	

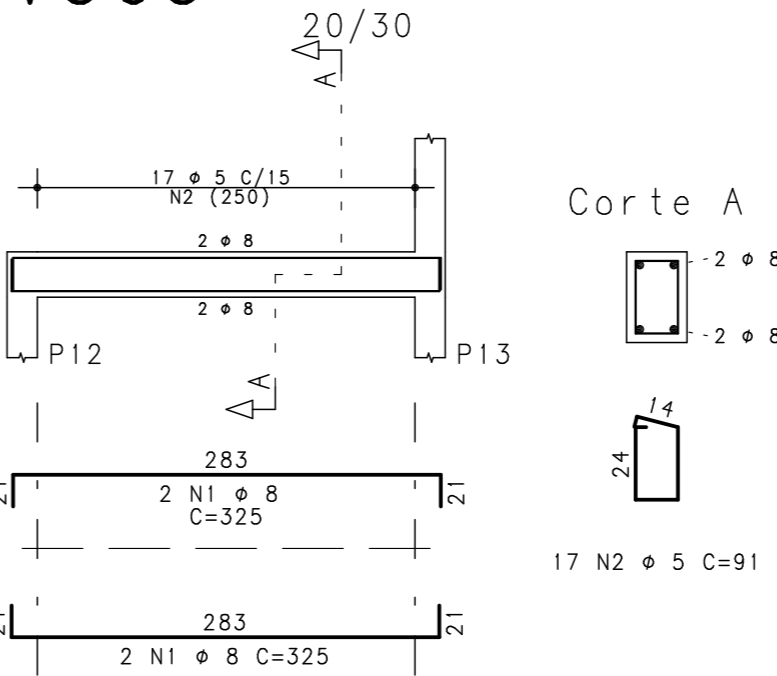
V301



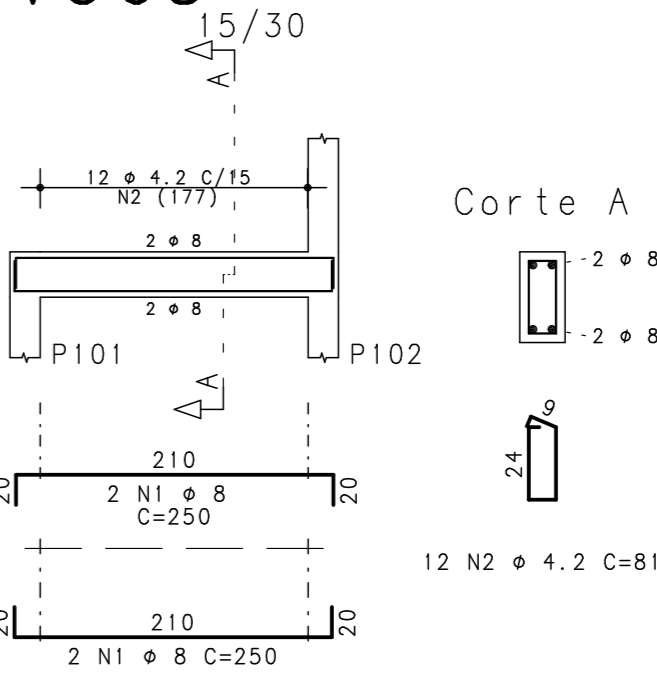
V302



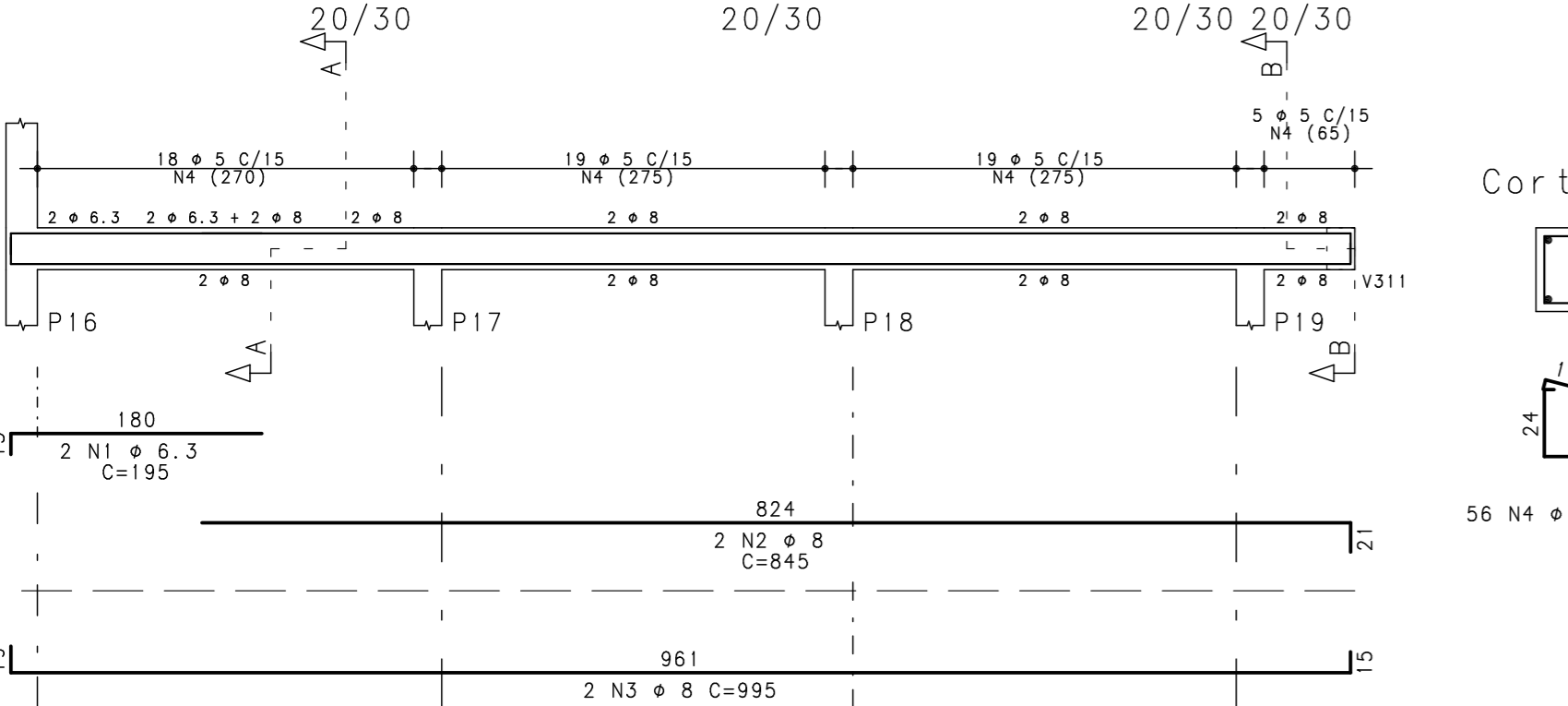
V303



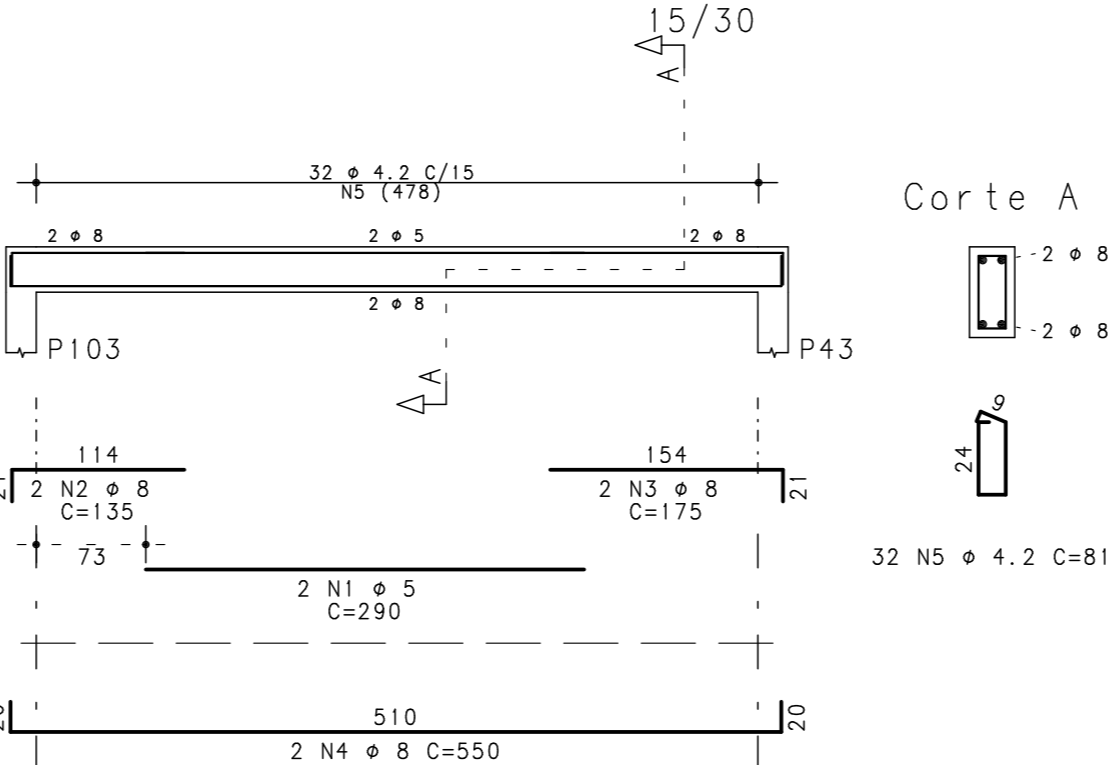
V305



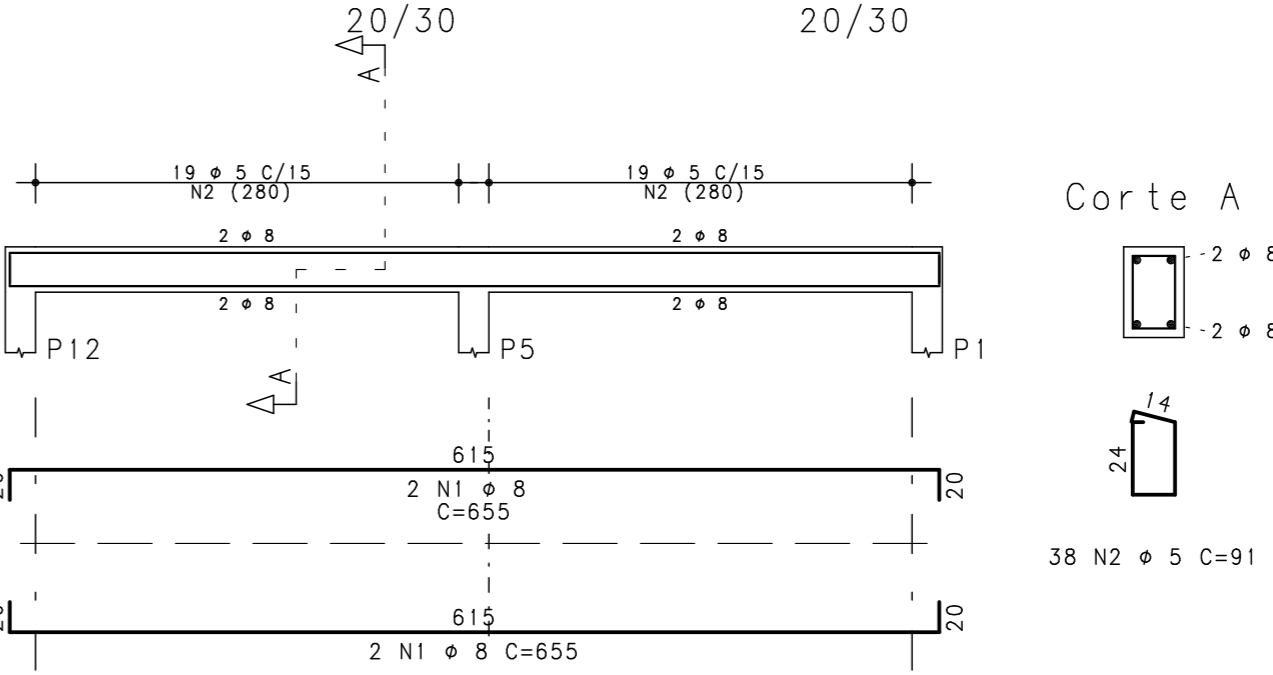
V304



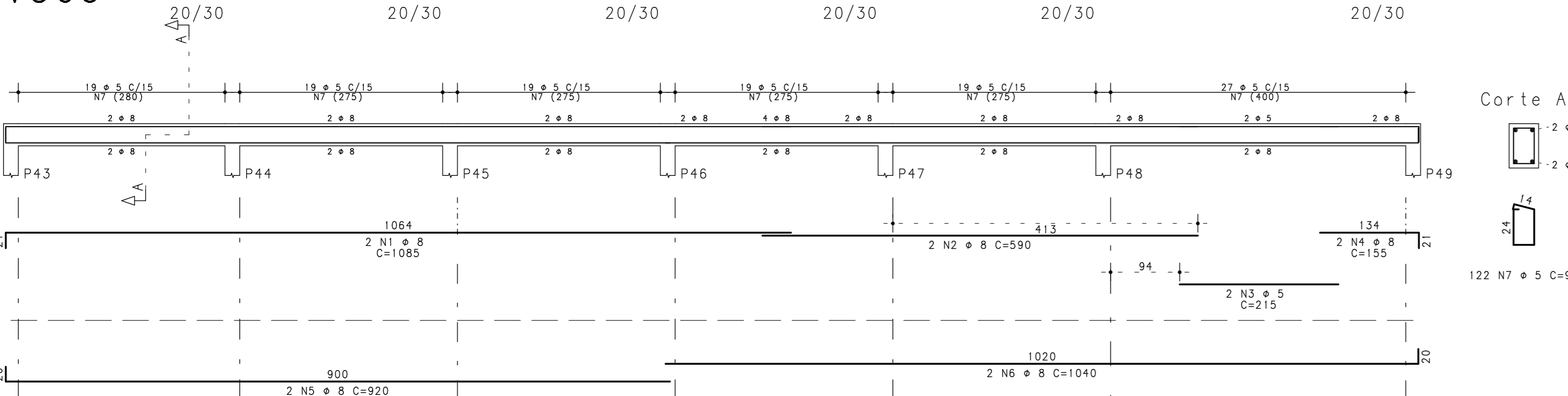
V307



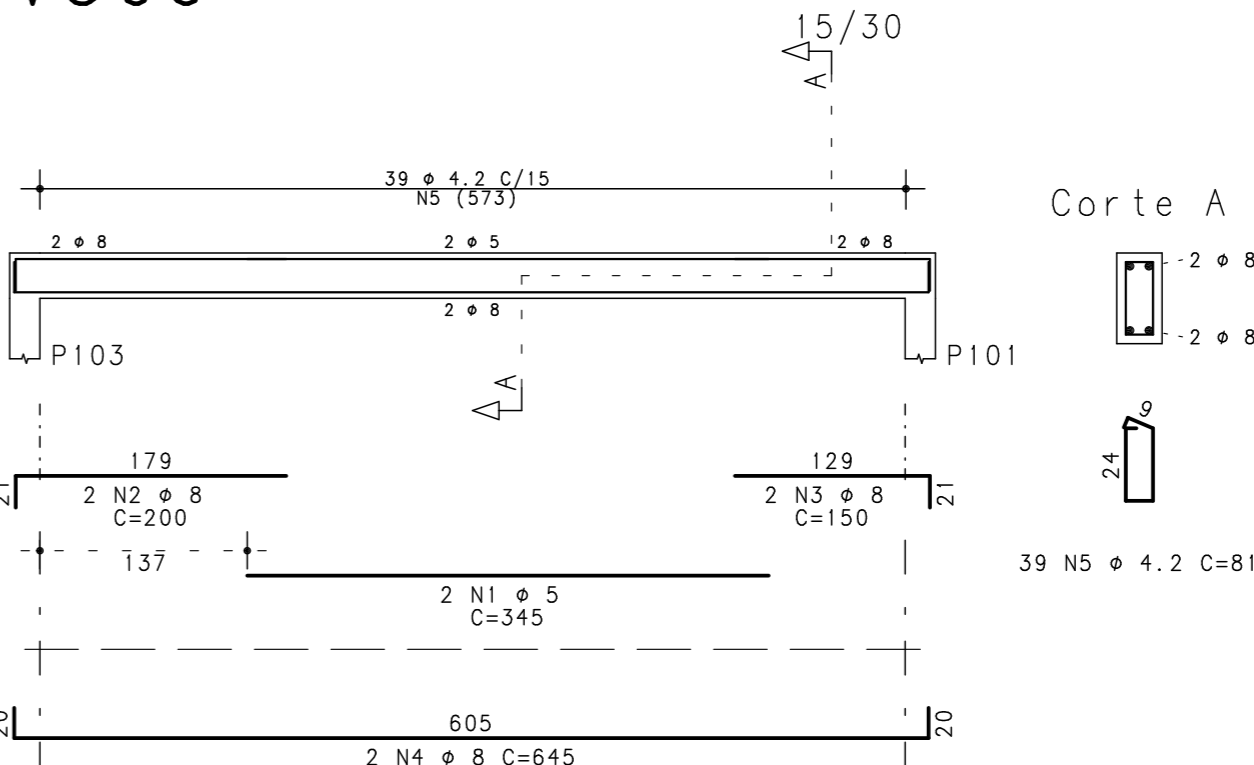
V308



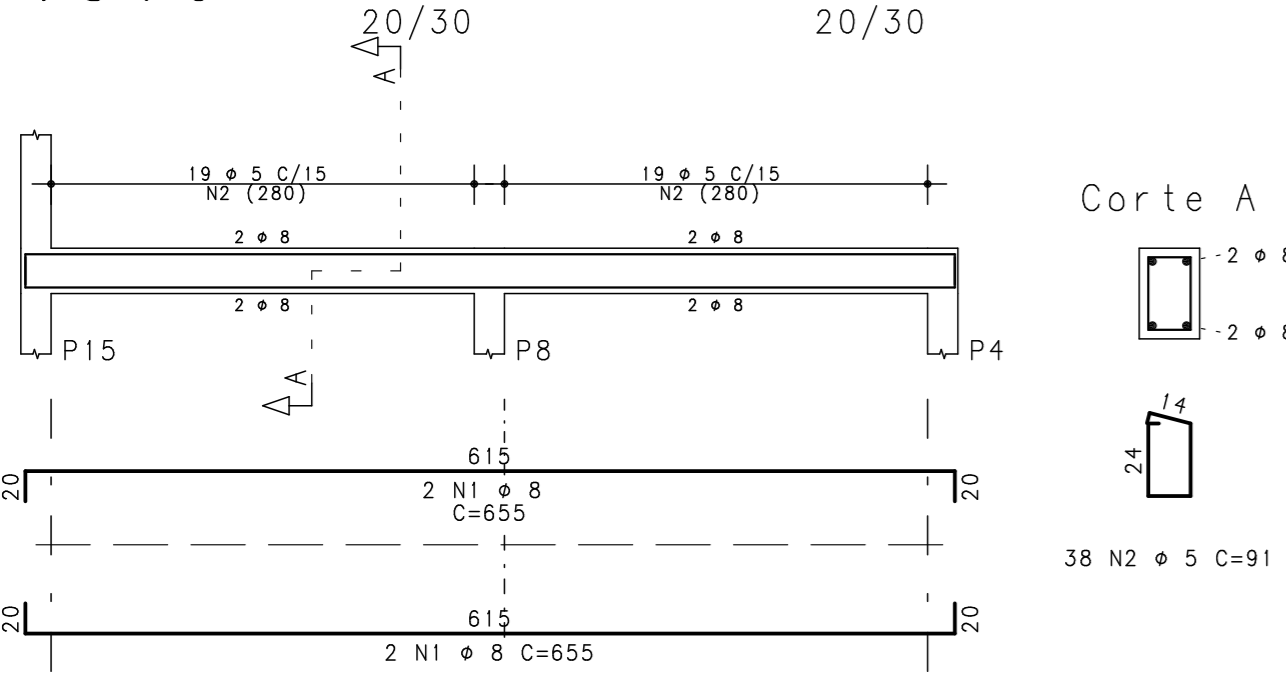
V306



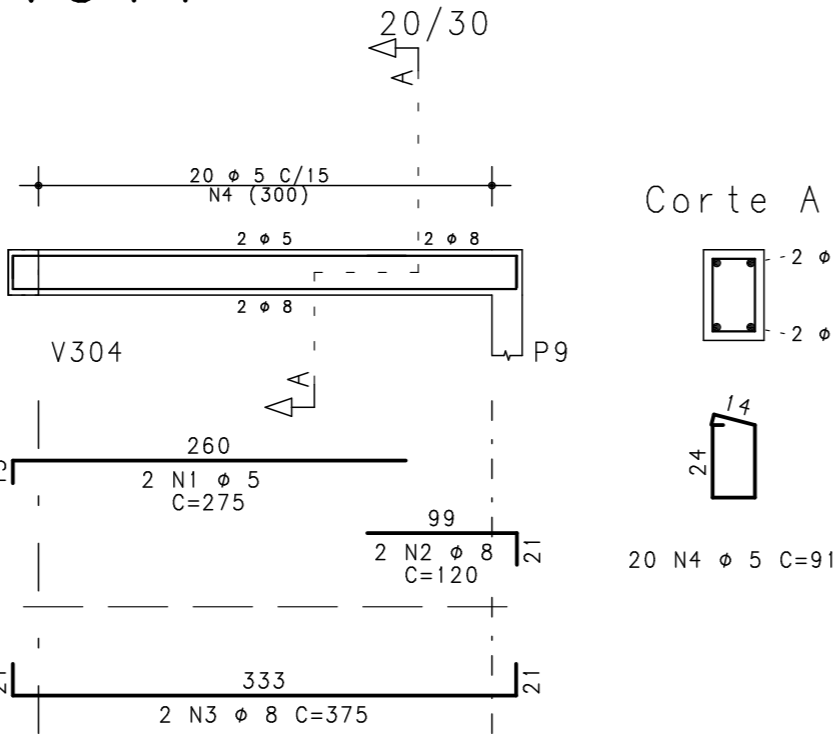
V309



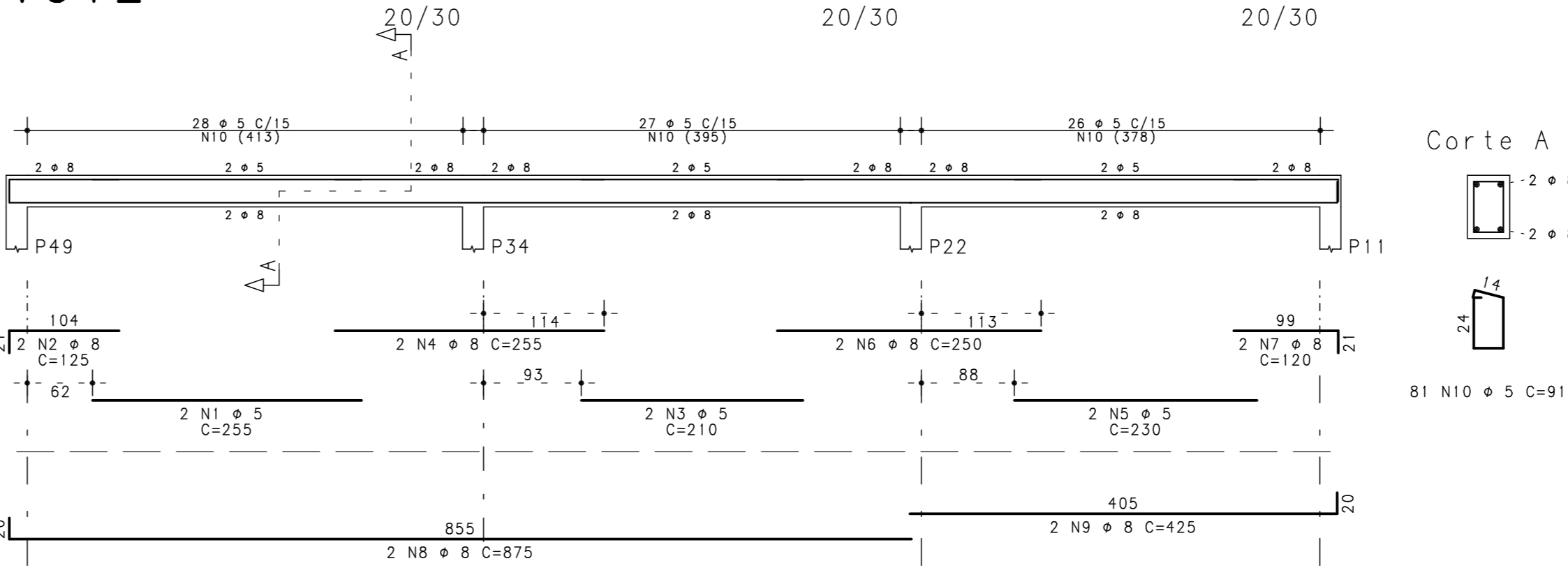
V310



V311



V312



V301	AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
					UNIT	TOTAL
					(cm)	(cm)
V301	50A	1	8	4	930	3720
	60B	2	5	55	91	5005
V302	50A	1	8	2	380	760
	60B	2	5	2	250	500
	50A	3	8	2	125	250
	60B	4	5	4	705	1410
V303	50A	1	8	4	325	1300
V304	60B	2	5	17	91	1547
V305	50A	1	8	2	195	390
	50A	2	8	2	845	1690
	50A	3	8	2	995	1990
	60B	4	5	6	1	5551
V306	50A	1	8	4	250	1000
	60B	2	4.2	12	81	972
V307	50A	1	8	2	1085	2170
	50A	2	8	2	590	1180
	60B	3	5	2	215	430
	50A	4	8	2	155	310
	50A	5	8	2	920	1840
	60B	6	8	2	1040	2080
	60B	7	5	122	91	11102
V308	60B	1	5	2	290	580
	50A	2	8	2	135	270
	50A	3	8	2	175	350
	50A	4	8	2	550	1100
	60B	5	4.2	32	81	2592
V309	50A	1	8	4	655	2620
V310	60B	2	5	38	91	3458
V311	60B	1	5	2	345	690
	50A	2	8	2	200	400
	50A	3	8	2	150	300
	60B	4	8	2	645	1290
V312	60B	5	4.2	39	81	3159
V312	50A	1	8	4	655	2620
	60B	2	5	38	91	3458
V312	60B	1	5	2	275	550
	50A	2	8	2	120	240
	50A	3	8	2	375	750
	60B	4	5	20	91	1820
V312	60B	1	5	2	255	510
	50A	2	8	2	125	250
	60B	3	5	2	210	420
	50A	4	8	2	255	510
	60B	5	5	2	230	460
	50A	6	8	2	250	500
	50A	7	8	2	120	240
	50A	8	8	2	875	1750
	50A	9	8	2	425	850
	60B	10	5	81	91	7371

RESUMO AÇO CA 50-60			
AÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4.2	67	7
60B	5	472	73
50A	6.3	4	1
50A	8	337	133
Peso Total		60B =	80 kg
Peso Total		50A =	134 kg



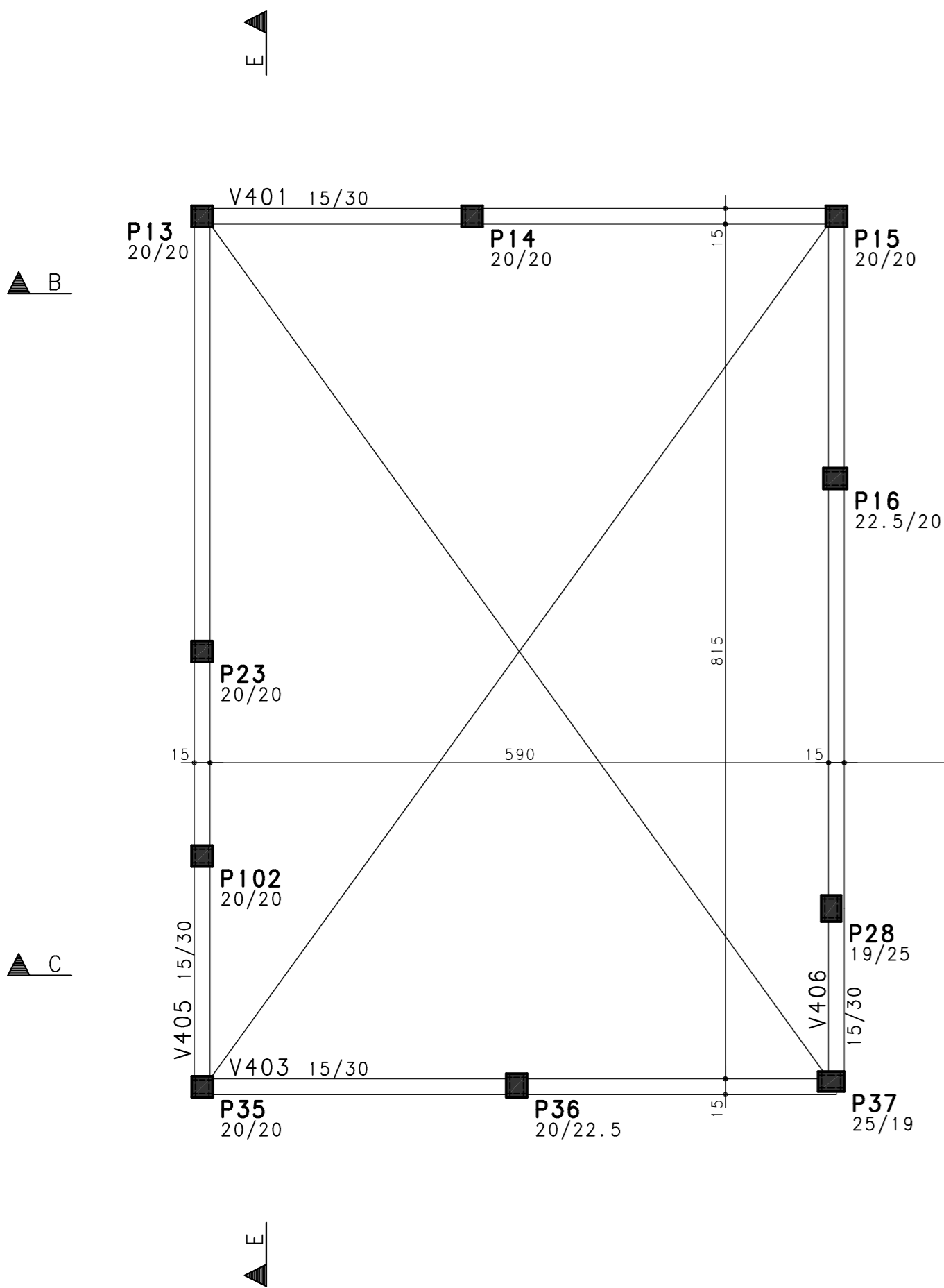
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 3229-1500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

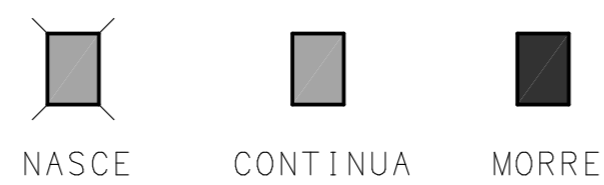
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO			SOBRECARGA PREVISTA	OBRA N.º
fck = 250 kgf/cm2				0001
CLIENTE				DES. N.º
SECRETARIA DA SAÚDE-PELOTAS				
OBRA				
UBS TIPO 2-CORRIENTES				029
TÍTULO				REV. N.º
NÍVEL 300 ARMADURAS DAS VIGAS				00
V301 / V302 / V303 / V304 V305 / V306 / V307 / V308 V309 / V310 / V311 / V312				
DATA	ESCALA	DESENHO	COORD.	ENG.º
9/08/2015	1:50	UBS-300-VIG-029-R00		



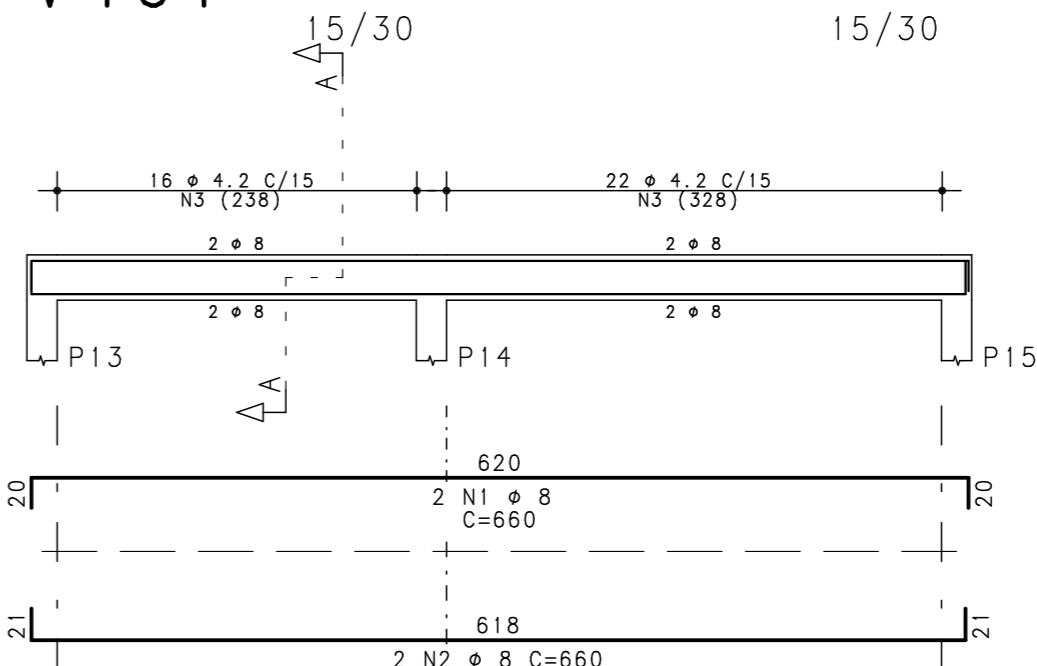
CONVENÇÃO DE PILARES



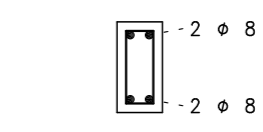
B

C

V401

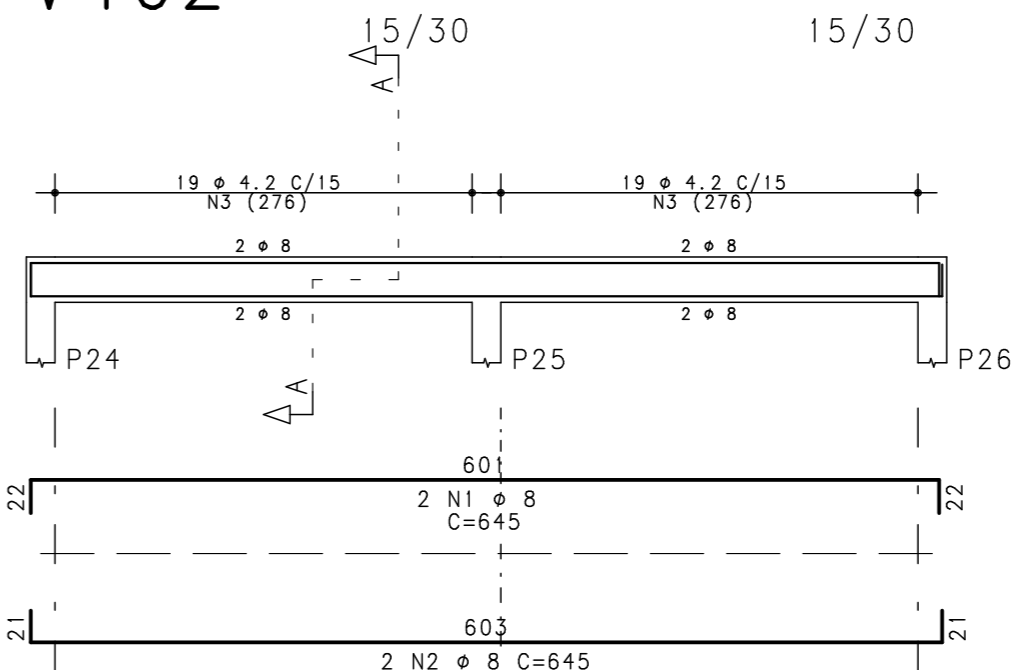


Corte A

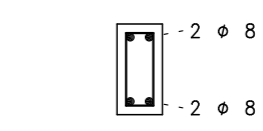


38 N3 Ø 4.2 C=81

V402

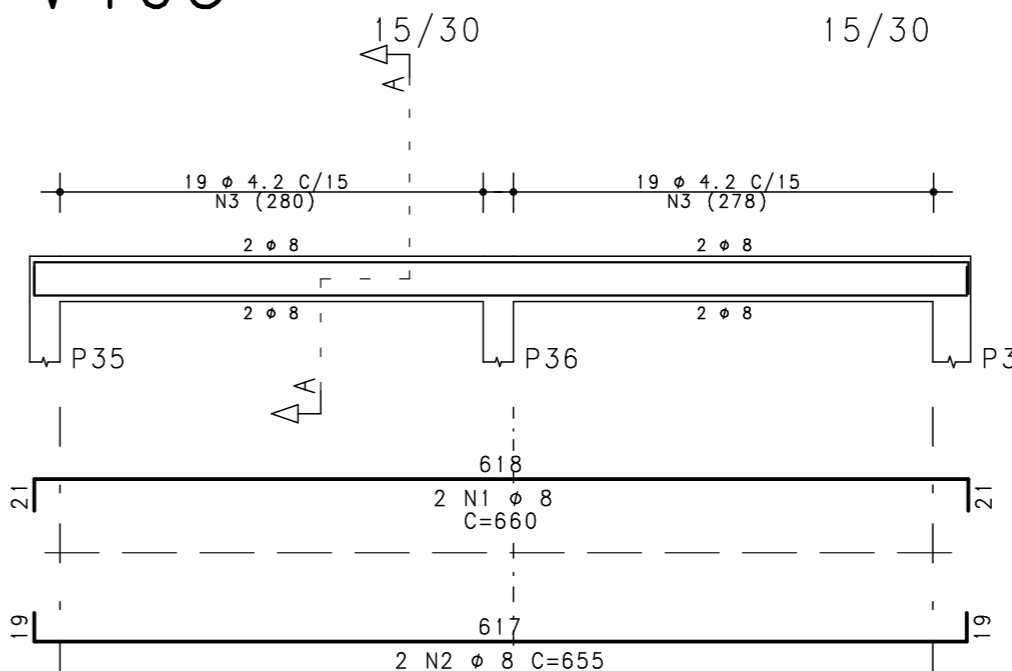


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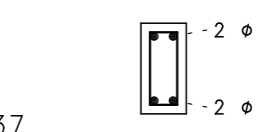


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V403

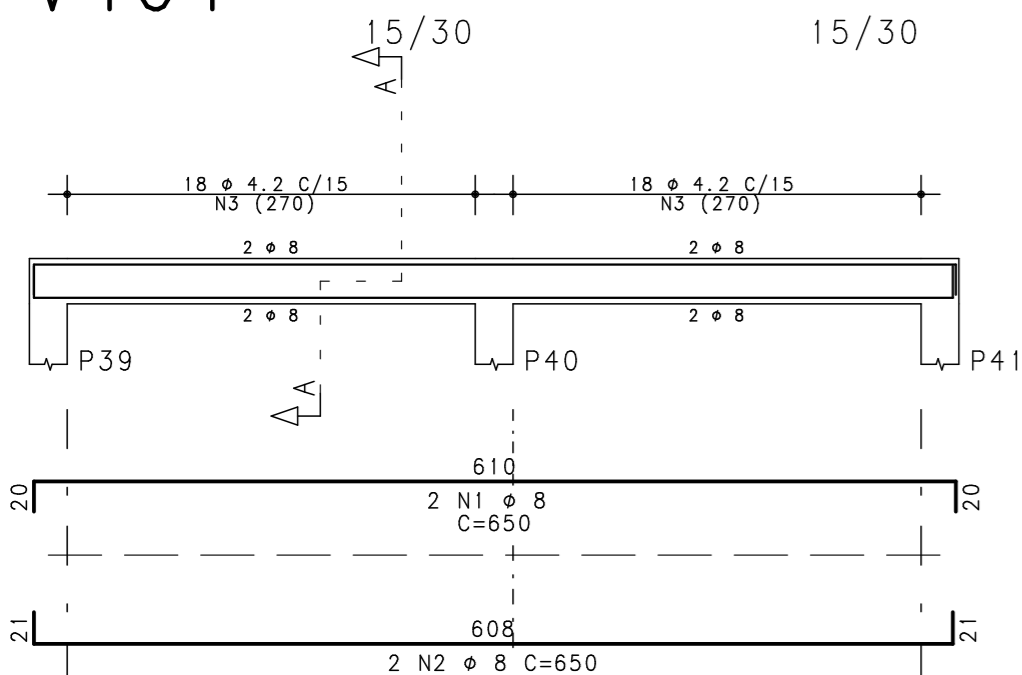


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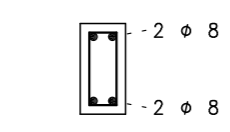


38 N3 Ø 4.2 C=81

V404

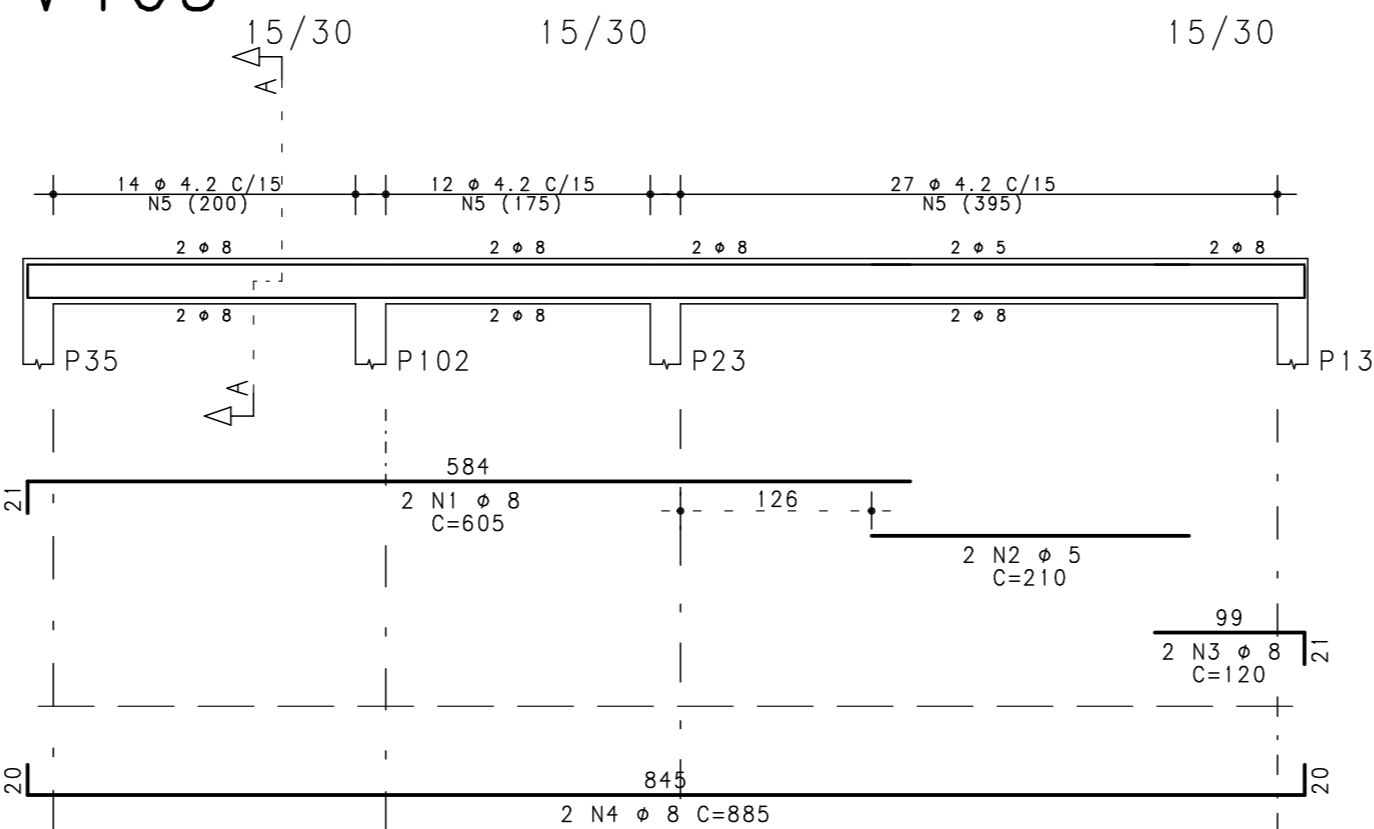


Corte A

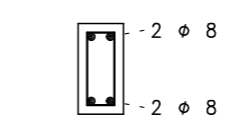


36 N3 Ø 4.2 C=81

V405

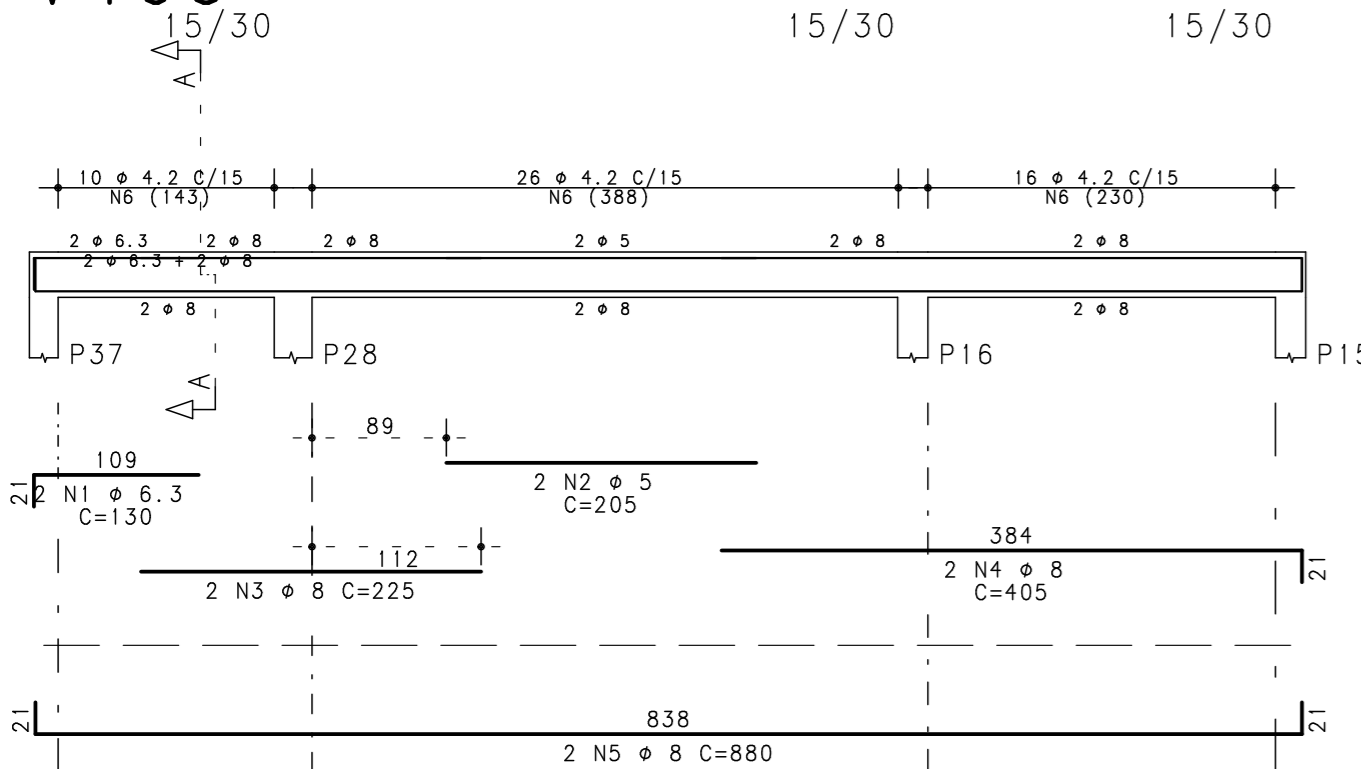


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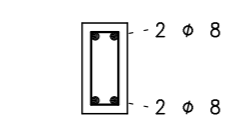


53 N5 Ø 4.2 C=81

V406

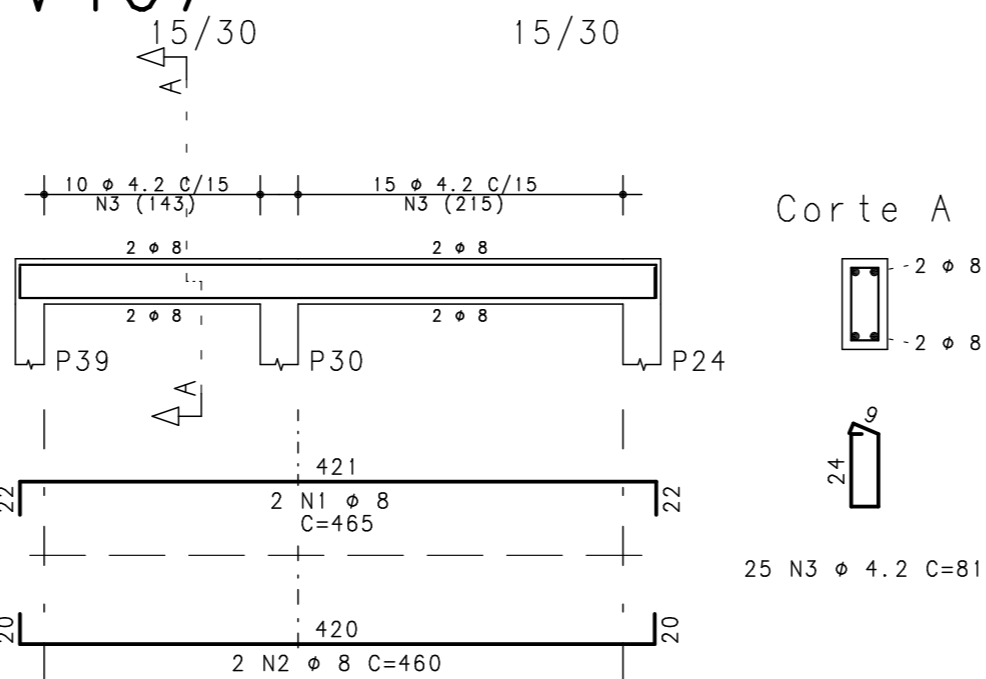


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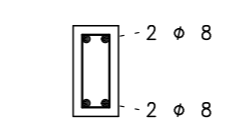


52 N6 Ø 4.2 C=81

V407

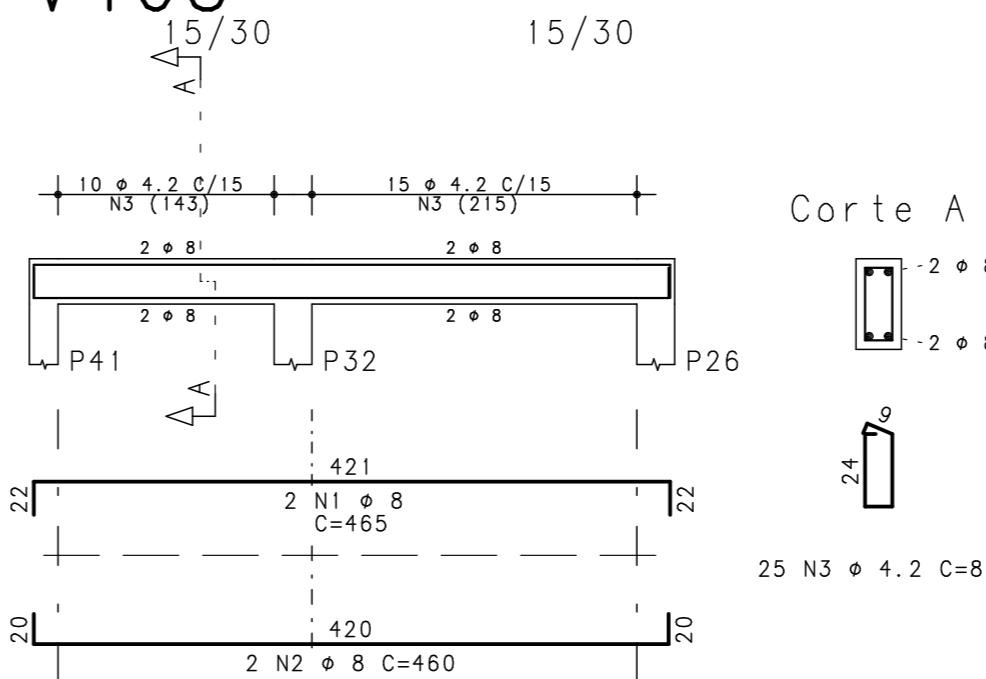


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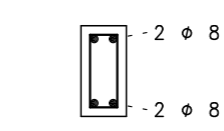


25 N3 Ø 4.2 C=81

V408



Corte A



25 N3 Ø 4.2 C=81

AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
V401	50A	1	8	2	660
	50A	2	8	2	660
	60B	3	4.2	38	81
V402	50A	1	8	2	645
	50A	2	8	2	645
	60B	3	4.2	38	81
V403	50A	1	8	2	660
	50A	2	8	2	655
	60B	3	4.2	38	81
V404	50A	1	8	2	650
	50A	2	8	2	650
	60B	3	4.2	36	81
V405	50A	1	8	2	605
	50A	2	5	2	210
	50A	3	8	2	120
	50A	4	8	2	885
	60B	5	4.2	53	81
V406	50A	1	6.3	2	130
	60B	2	5	2	205
	50A	3	8	2	225
	50A	4	8	2	405
	60B	5	8	2	880
V407	50A	1	8	2	465
	50A	2	8	2	460
	60B	3	4.2	25	81
V408	50A	1	8	2	465
	50A	2	8	2	460
	60B	3	4.2	25	81

RESUMO AÇO CA 50-60				
AÇO	BIT (mm)	COMPR (m)	PESO (kg)	
60B	4.2	247	27	
60B	5	8	1	
50A	6.3	3	1	
50A	8	204	81	
Peso Total		60B =	28 kg	
Peso Total		50A =	81 kg	



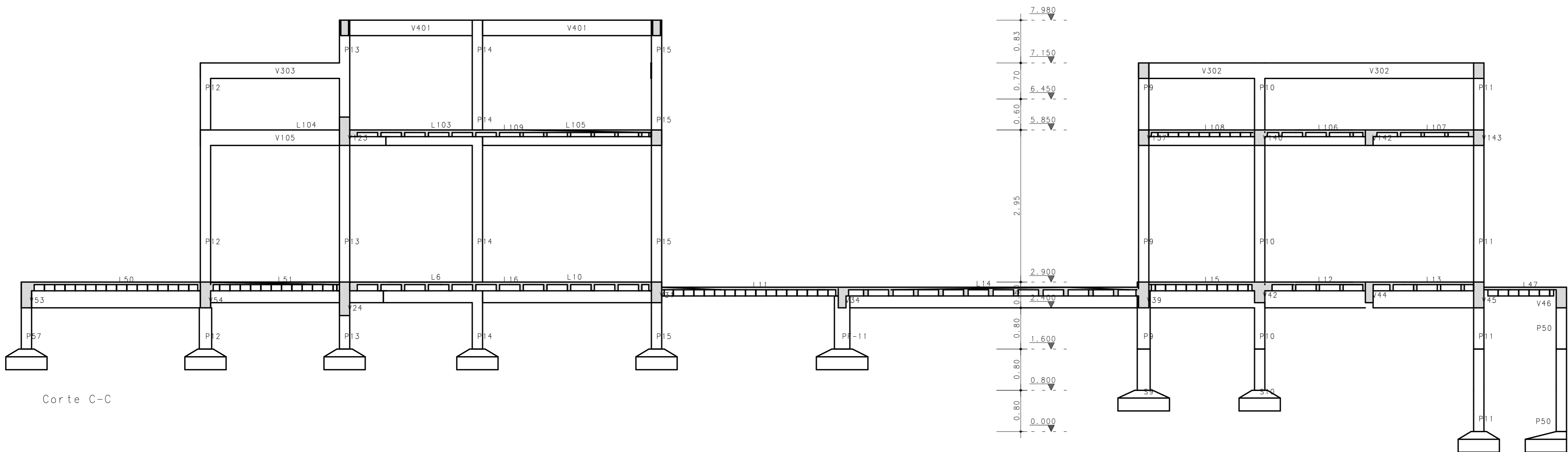
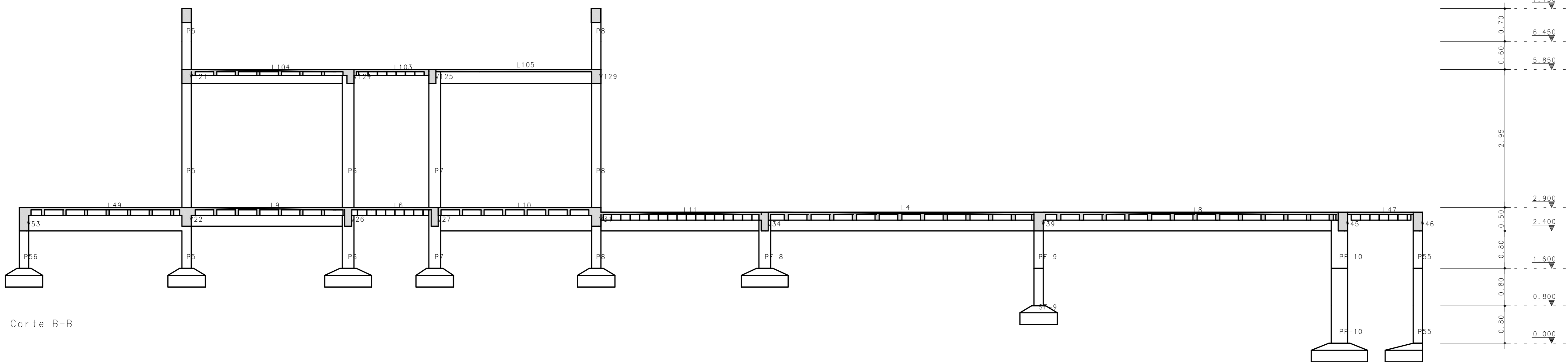
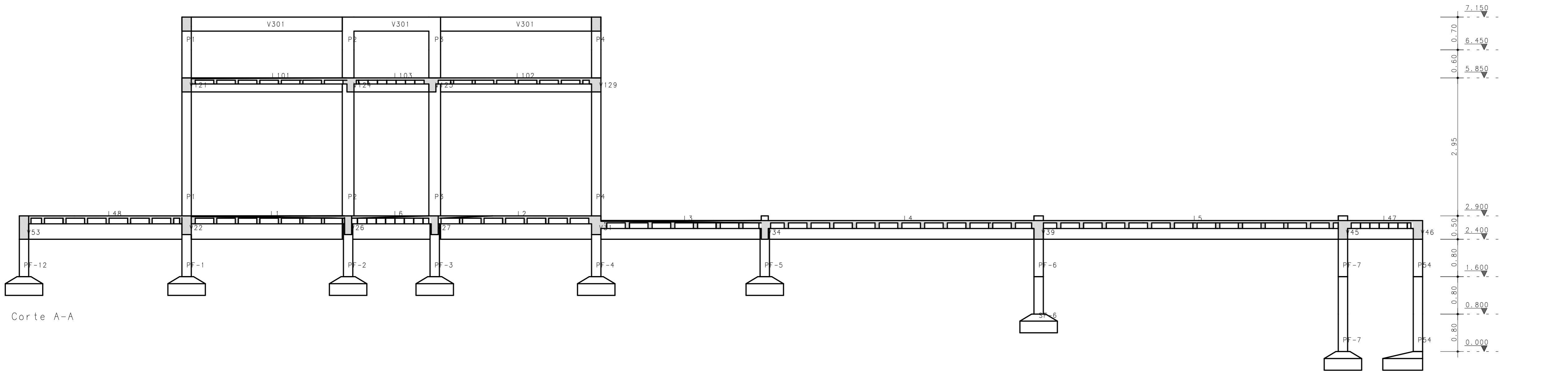
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96201-5000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto

CONCRETO fck = 250 kgf/cm2		SOBRECARGA PREVISTA		OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º		030
OBRA UBS TIPO 2-CORRIENTES		REV. N.º		00
TÍTULO NÍVEL 400 FÔRMAS-ARMADURAS DAS VIGAS		ENG.º		
V401 / V402 / V403 / V404 V405 / V406 / V407 / V408		DATA 9/08/2015		ESCALA 1:50
		DESENHO UBS-400-VIG-030-R00		COORD.



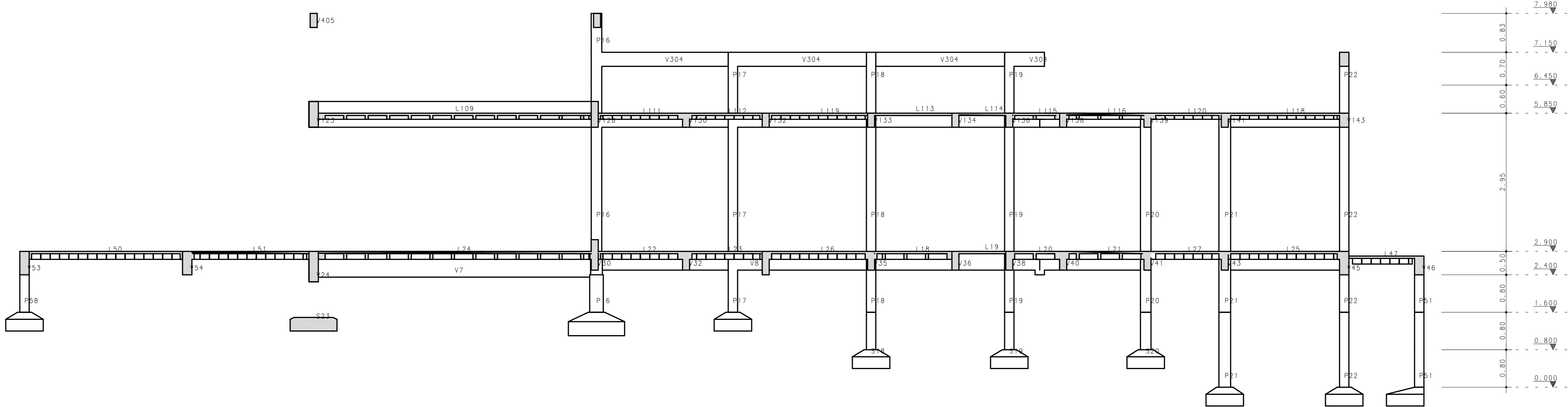
Rua Quatro de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

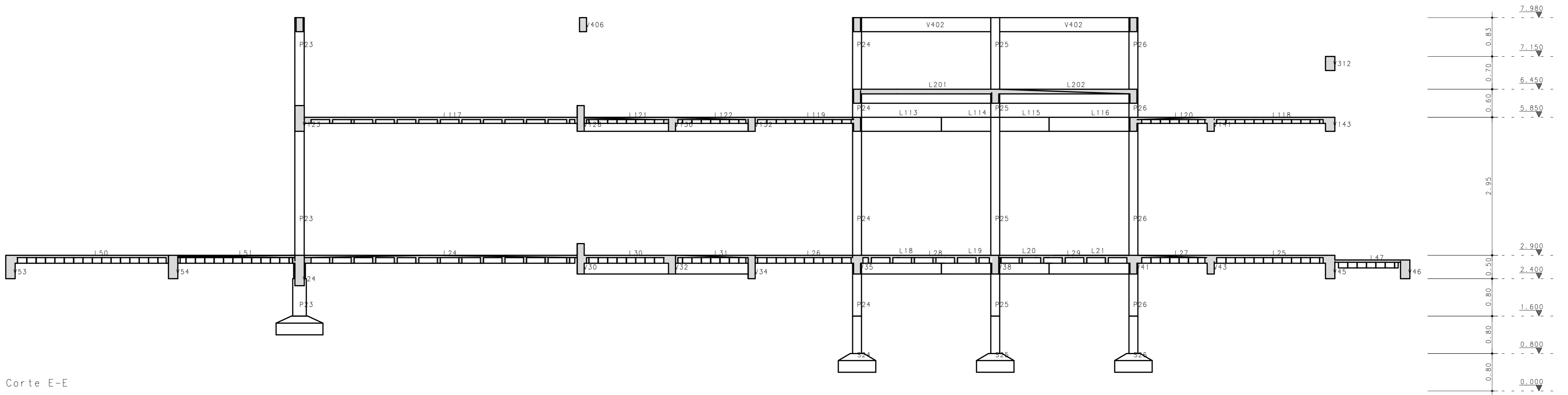
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

Rev	Data	Autor	Assunto
2	23/08/2016	J. Marques	Modificação dos Cortes-AA-BB-CC
0	08/02/2016	Fernando	Inclusão corredor fundo

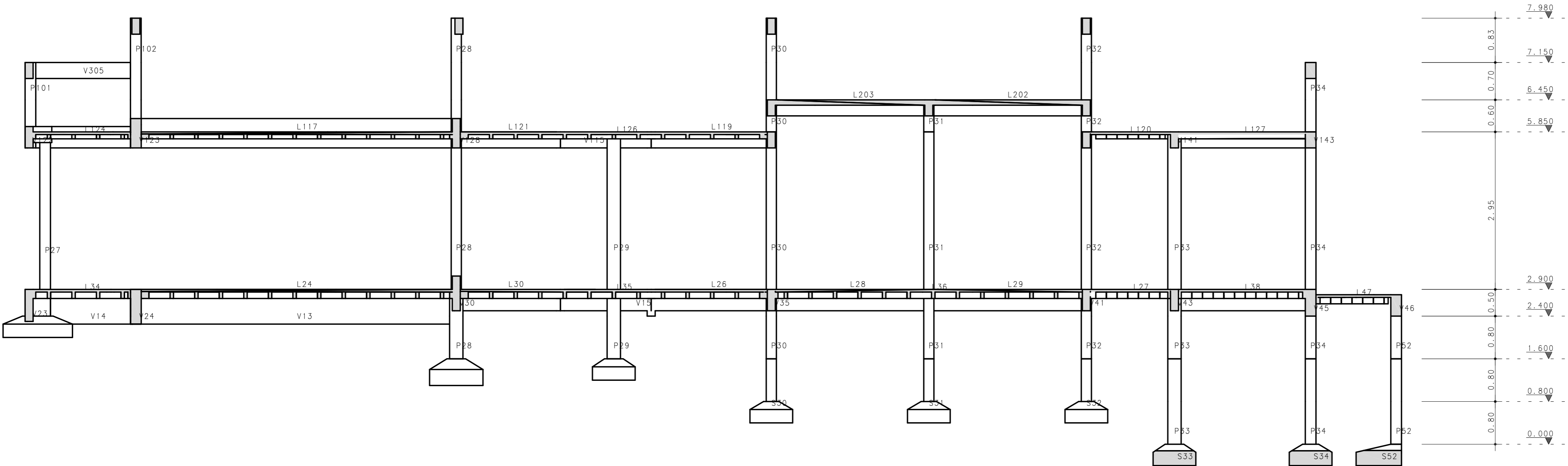
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CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º 031
OBRA UBS TIPO 2-CORRIENTES		REV. N.º 00
TÍTULO CORTES CORTES-AA-BB-CC		ENG.º
DATA 23/08/2016	ESCALA 1:50	DESENHO UBS=ESP-FOR-031-R00
	COORD.	



Corte D-D



Corte E-E



Corte F-F



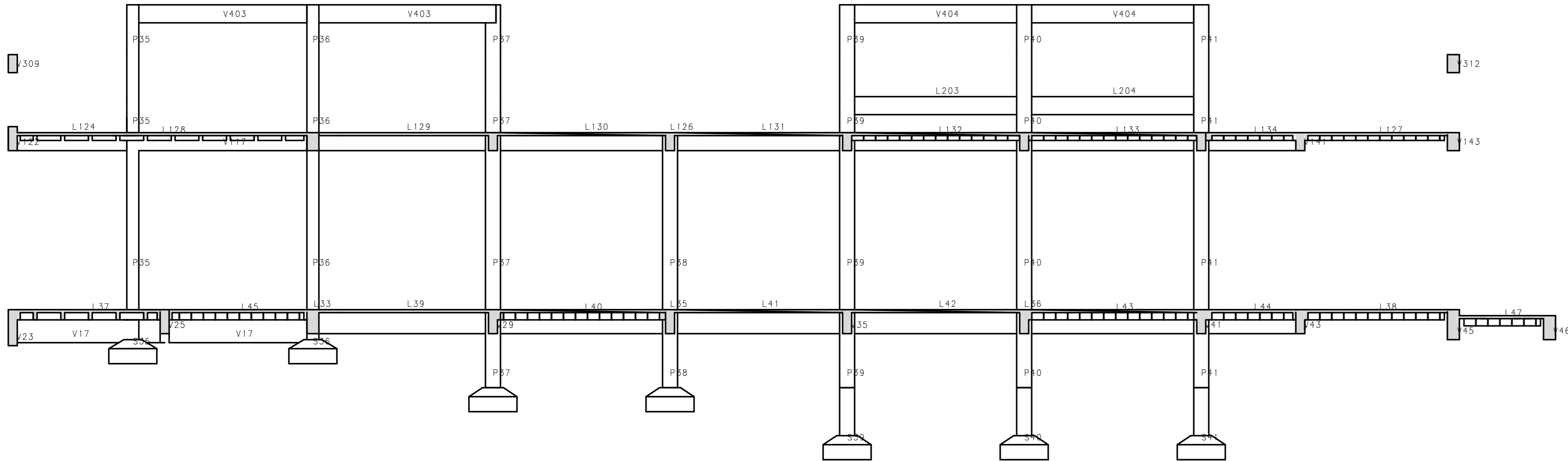
Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

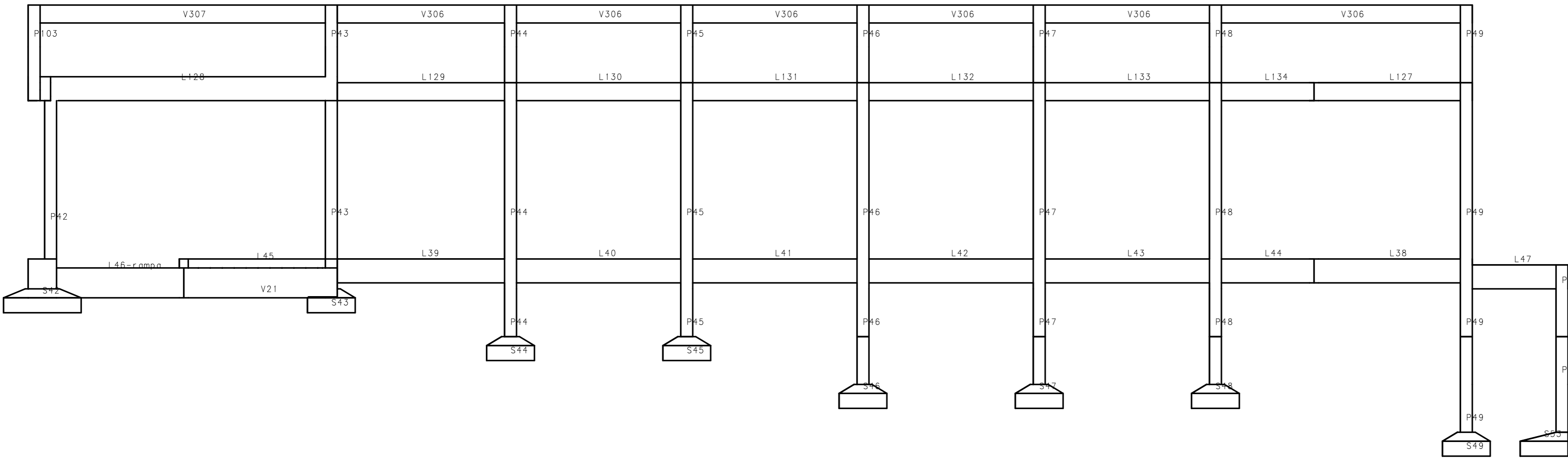
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

Rev	Data	Autor	Assunto
2	23/08/2016	J. Marques	Modificação dos Cortes-DD-EE
0	08/02/2016	Fernando	Inclusão corredor fundo

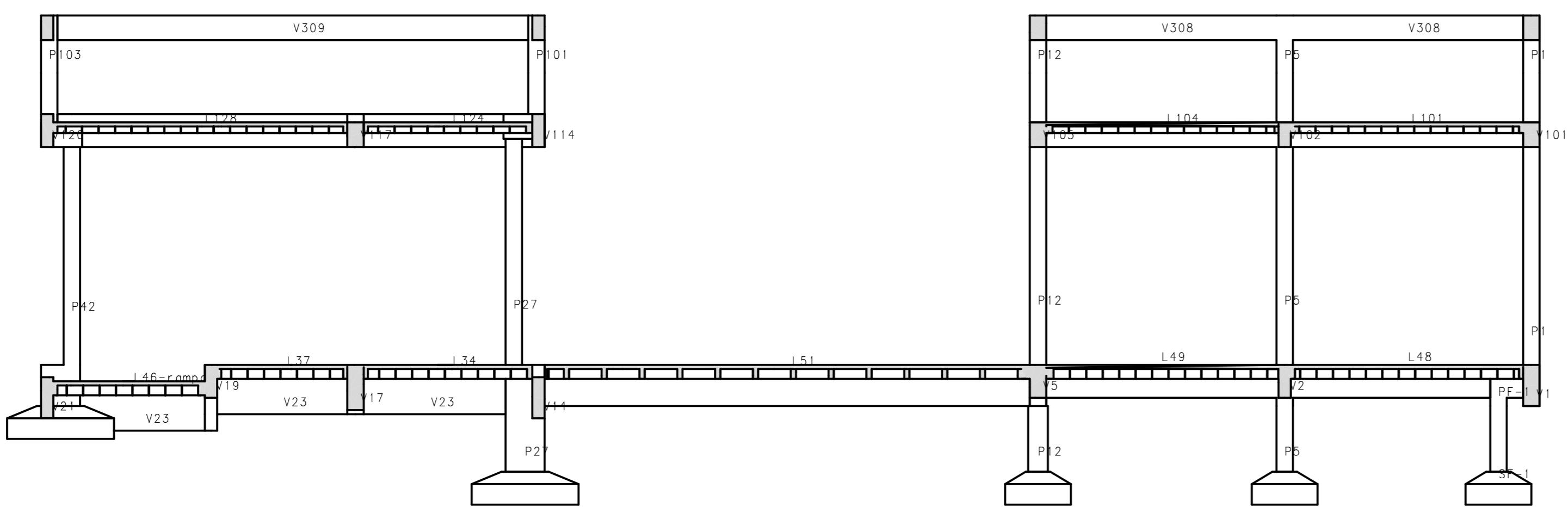
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CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º
OBRA UBS TIPO 2-CORRIENTES		032
TÍTULO CORTES CORTES-DD-EE-FF		REV. N.º 00
DATA 23/08/2016	ESCALA 1:50	DESENHO UBS-ESP-FOR-032-R00
	COORD.	ENG.º



Corte G-G



Corte H-H



Corte I-I



Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

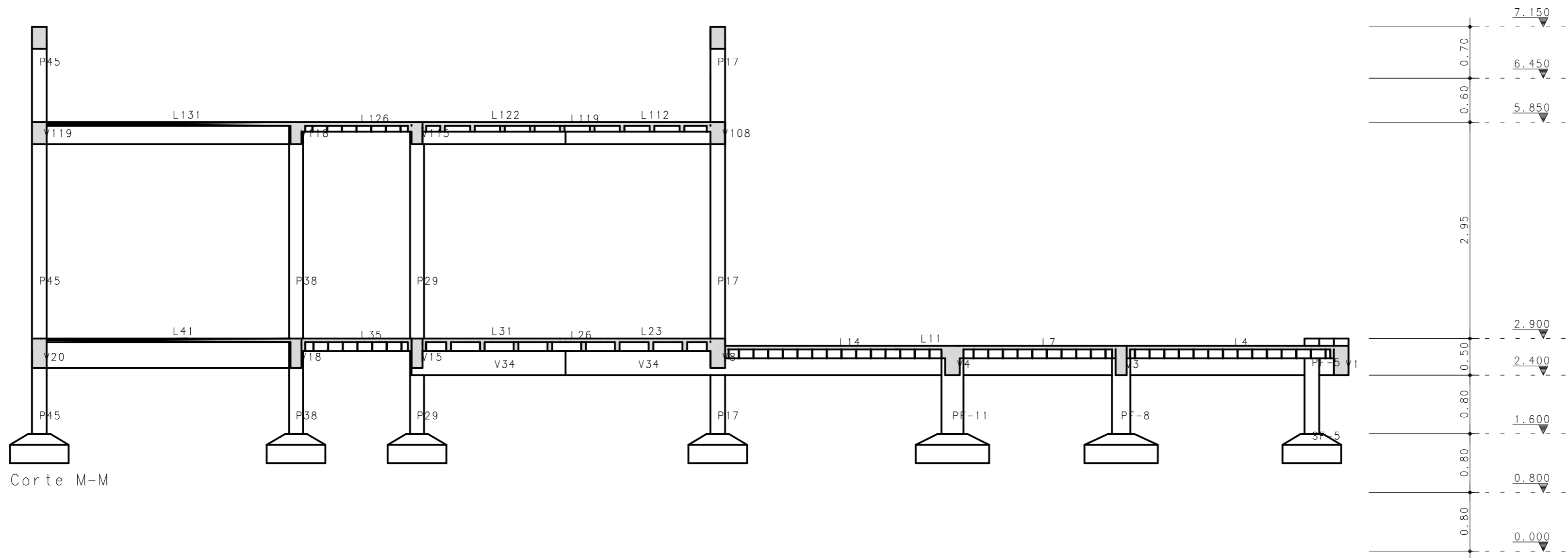
Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

Rev	Data	Autor	Assunto
2	23/08/2016	J. Marques	Modificação do Corte-II
0	08/02/2016	Fernando	Inclusão corredor fundo

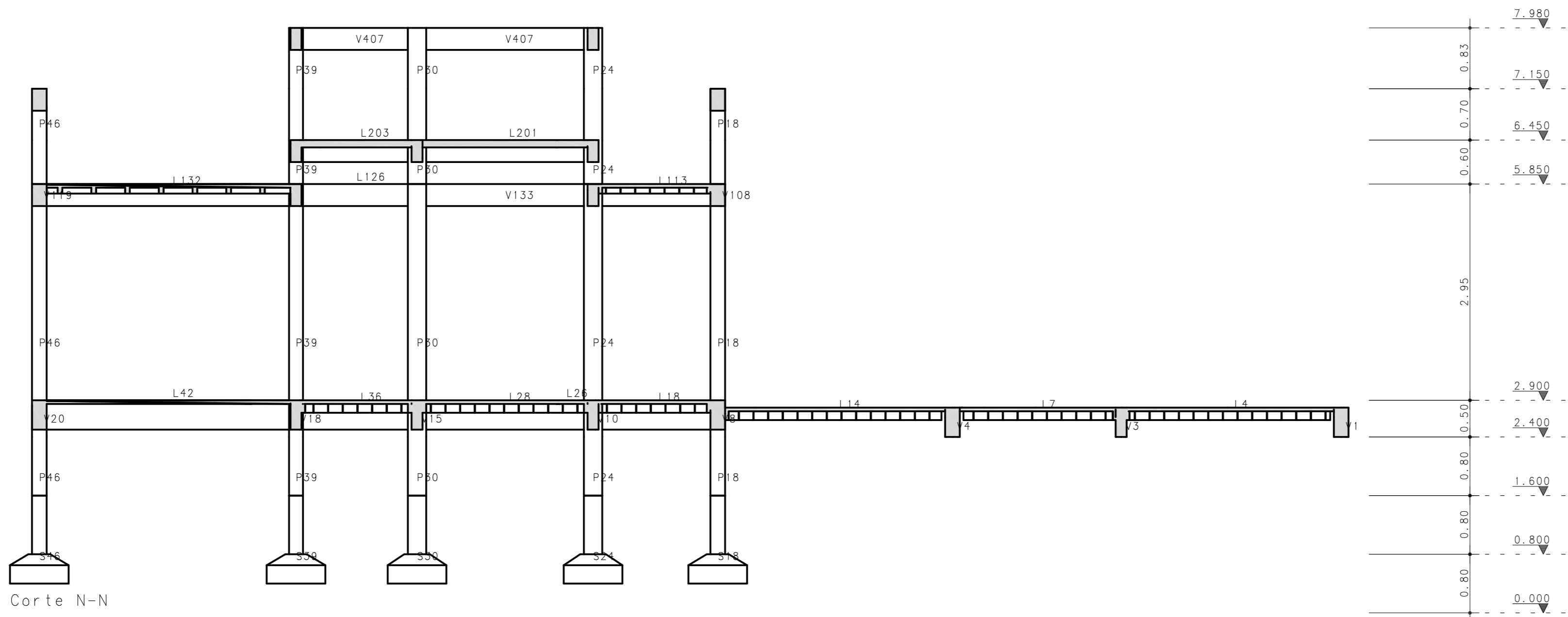
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fck =			kgf/cm²	0001
CLIENTE			DES. N.º	033
OBRA			UBS TIPO 2-CORRIENTES	REV. N.º
TÍTULO			CORTES CORTES-GG-HH-II	00
DATA	ESCALA	DESENHO	COORD.	ENG.º
23/08/2016	1:50	UBS=ESP-FOR-033-R00		



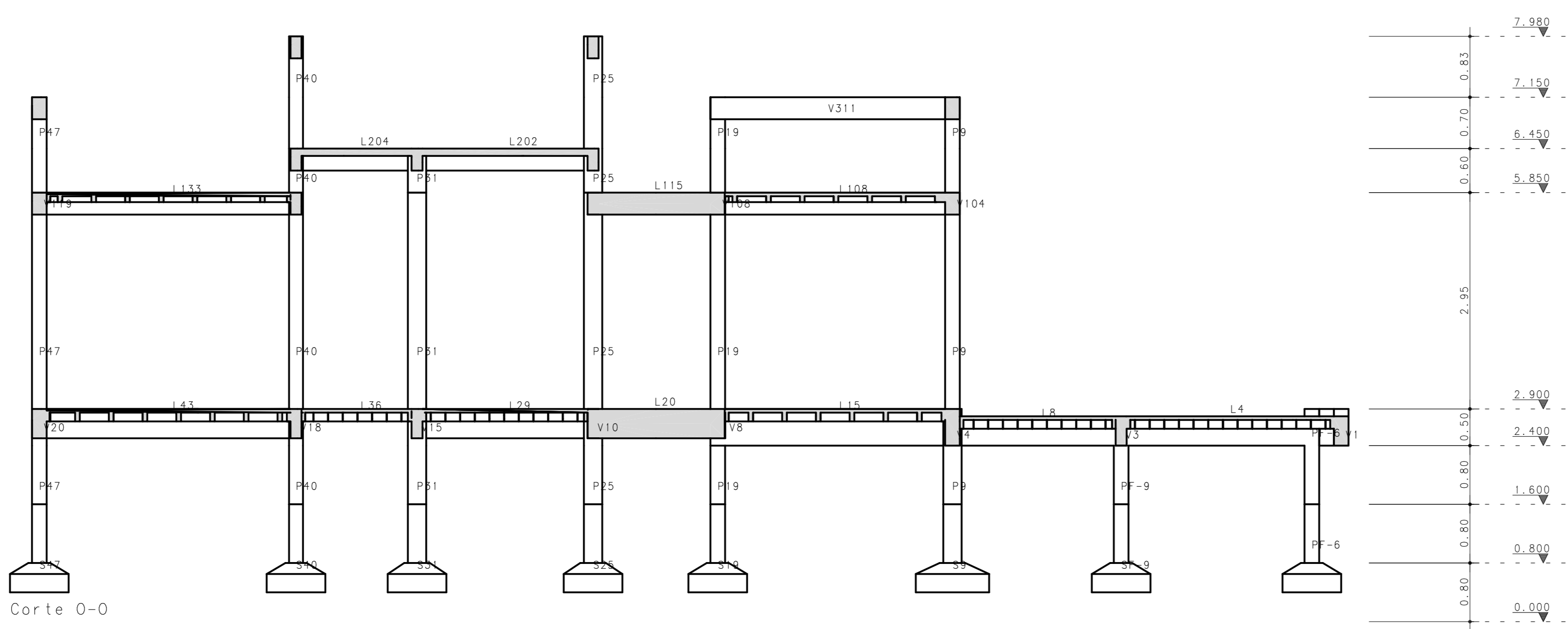
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fck =250 kgf/cm2				0001
CLIENTE	SECRETARIA DA SAÚDE-PELOTAS			DES. N °
OBRA	UBS TIPO 2-CORRIENTES			034
TITULO	CORTES CORTES-JJ-KK-LL			
DATA	ESCALA	DESENHO	COORD.	REV. N °
19/08/2015	: 50	UBS-ESP-FOR-034-R00		00
				ENG °



Corte M-M



Corte N-N



Corte O-O

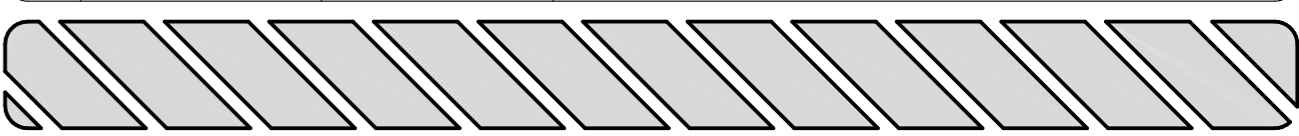


Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

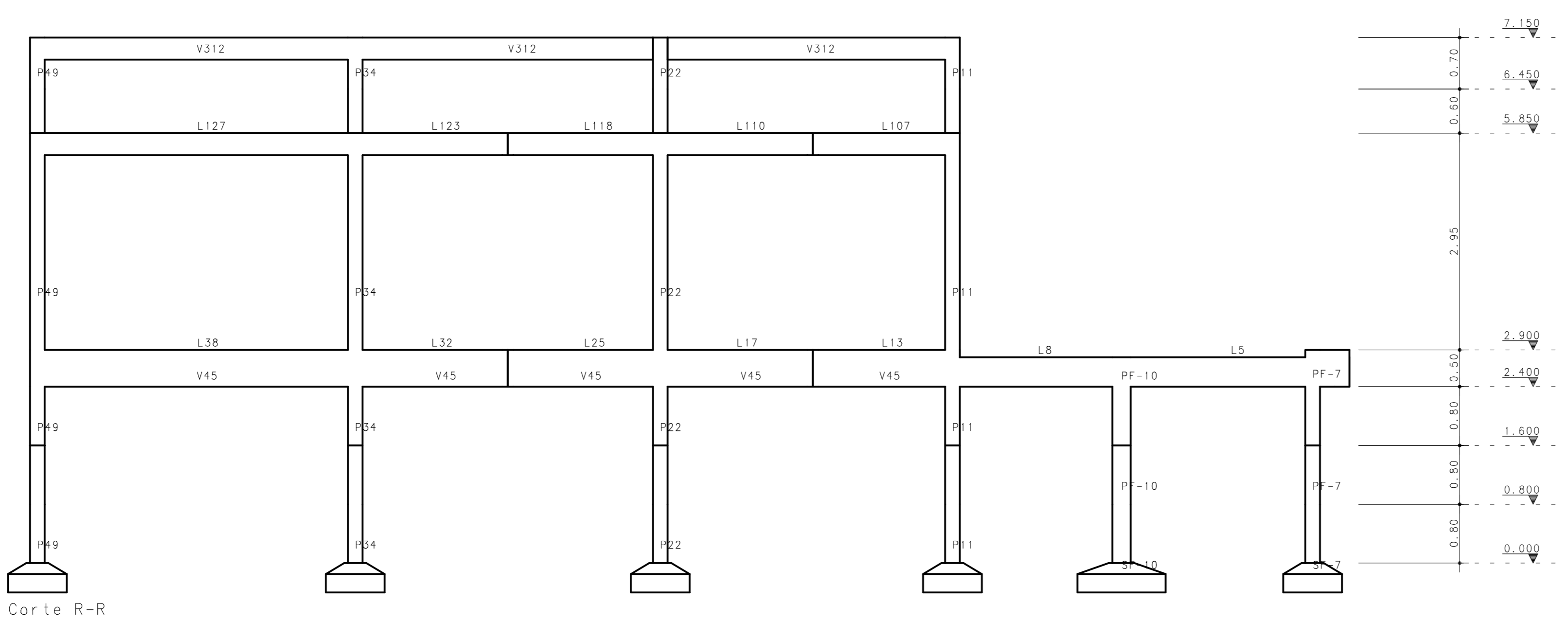
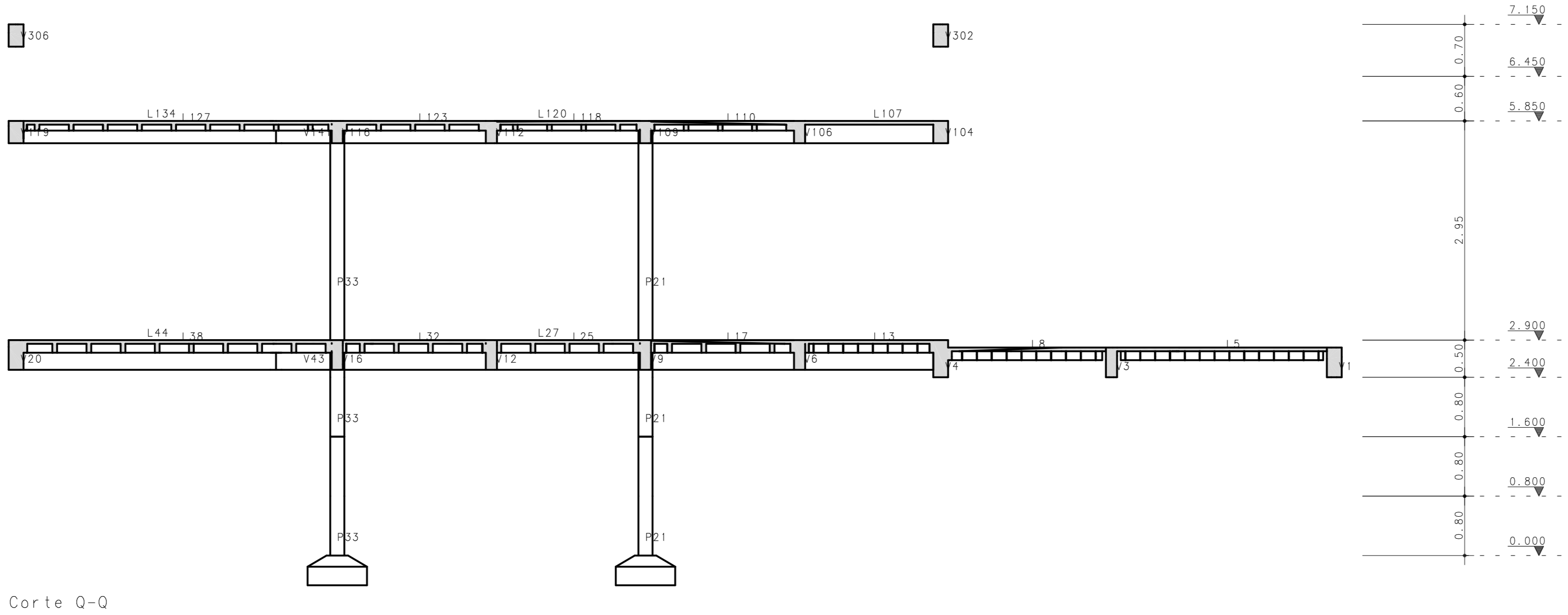
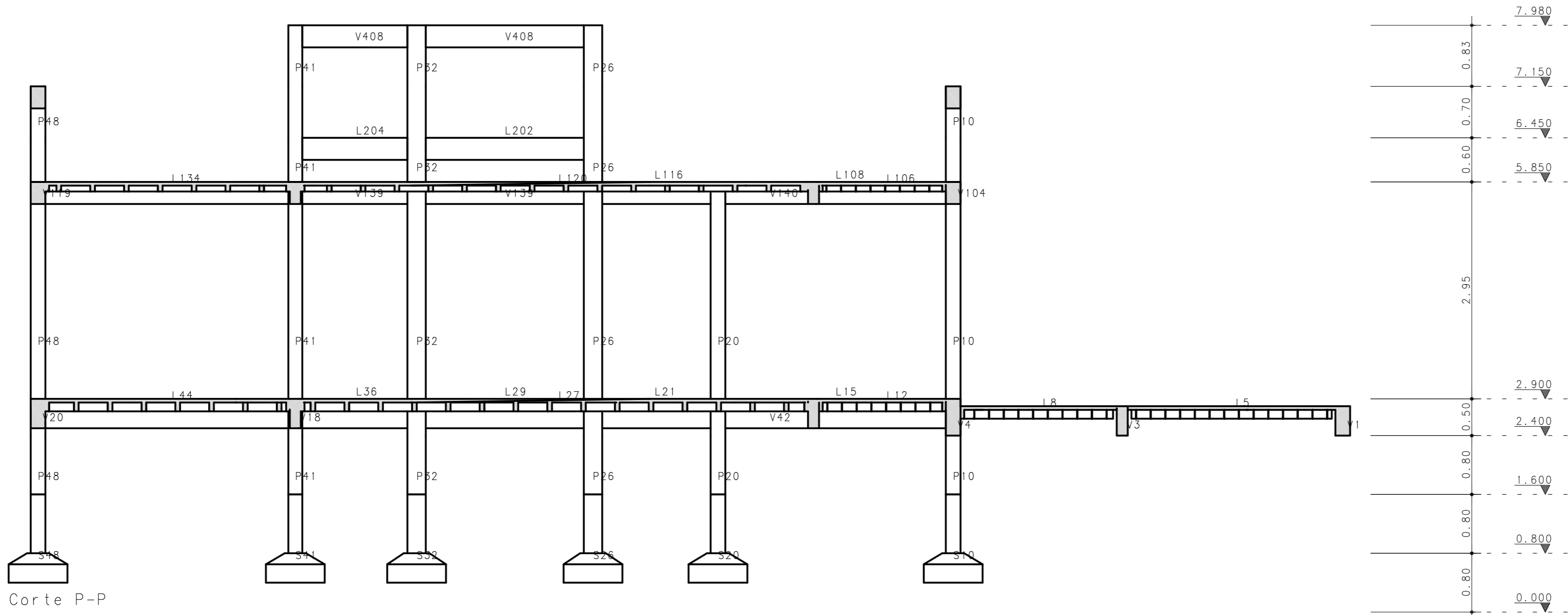
Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
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Rev	Data	Autor	Assunto



CONCRETO fck = 250 kgf/cm2	SOBRECARGA PREVISTA	OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º
OBRA UBS TIPO 2-CORRIENTES		035
TÍTULO CORTES CORTES-MM-NN-OO		REV. N.º 00
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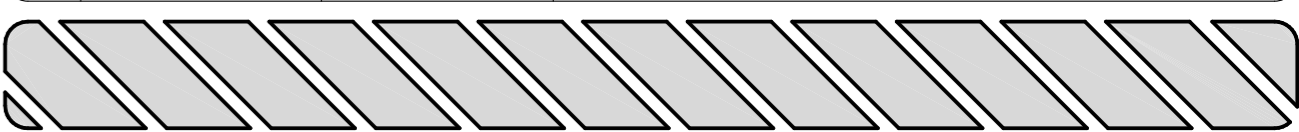


Rua Quinze de Novembro, 553/405
Pelotas - RS - CEP 96215-000
Telefone: (51) 32291500
e-mail: fernando@simch.com.br
e-mail: paulo@simch.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0			
Rev	Data	Autor	Assunto



CONCRETO fck = 250 kgf/cm2	SOBRECARGA PREVISTA	OBRA N.º 0001
CLIENTE SECRETARIA DA SAÚDE-PELOTAS		DES. N.º 036
OBRA UBS TIPO 2-CORRIENTES		REV. N.º 00
TÍTULO CORTES CORTES-PP-QQ-RR		ENG.º
DATA 9/08/2015	ESCALA 1:50	DESENHO UBS-ESP-FOR-036-R00
	COORD.	

[illegible][illegible][illegible]

Piso 5: 100																	
	3.2	4.2	5.0	6.3	8.0	10.0	12.5	16.0	20.0	22.0	25.0	37.0	40.0	Agua	Concrete	Ferro	Fes
Plataforma	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
Barra	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
Uso	82	129	2	152	439	57	10							553	33	21	35
Uso														872	15.6	121	23
Uso															15.6		23
Uso																23	
Uso	82	254	0	152	822	84	10							1424	5.5	212	

P 50 4 : 50

[illegible][illegible]

Piso 1: Fl

Piso 0: Fundaco																	
	3.2	4.2	5.0	6.3	8.0	10.0	12.5	16.0	20.0	22.0	25.0	32.0	40.0	Ac	Concrete	Form	Fe-4
	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	m3	kg	mm
Barra																	35
Alambre																	35
Vigas																	25
Losas																	25
Indicadores		12	5	0	738	89	37	25			62				999		22
Travesaños																	22
Travesaños		13	5		738	89	37	25			62				999		22

[illegible]

Resumo de formas de nervuras		
	Prémio de 8+5	Prémio de 12+5
Pile 5: 102	2882	
Pile 4: 50		5163
Totals	2882	5163
		5050
		2882
		Totals

Indices	
Epessura média (m)	0.13
Teor de fôrma (m ² /m ²)	0.97
Teor de sêc (kg/m ²)	6.93
Teor de sêc (kg/m ³)	52.87

Gigante & Simch
engenharia civil
estacas e sondagens

Rua Quinze de Novembro, 563/405
Pelotas - RS - CEP 96015-000
Telefone: (51) 32291500
e-mail: fernando.gigante@terra.com.br
e-mail: neto@estagysul.valegma.com.br

Fernando Petrucci Gigante
Eng. Civil - CREA-RS 45232

Paulo Rogério Maffini Simch
Eng. Civil - CREA-RS 78208

2			
1			
0	08/02/2016	Fernando	Inclusão corredor fundo
Rev	Data	Autor	Assunto

CONCRETO		SOBRECARGA PREVISTA	
fck =	kgf/cm2		
CLIENTE	SECRETARIA DA SAÚDE-PELOTAS		
OBRA	UBS TIPO 2-CORRIENTES		
TITULO	CORTES CORTE-SS-CORTE ESQUEMÁTICO-RESUMO		
DATA	08/02/2016	ESCALA	Indicada
		DESENHO	UBS-ESP-FOR-037-R00
			COORD.

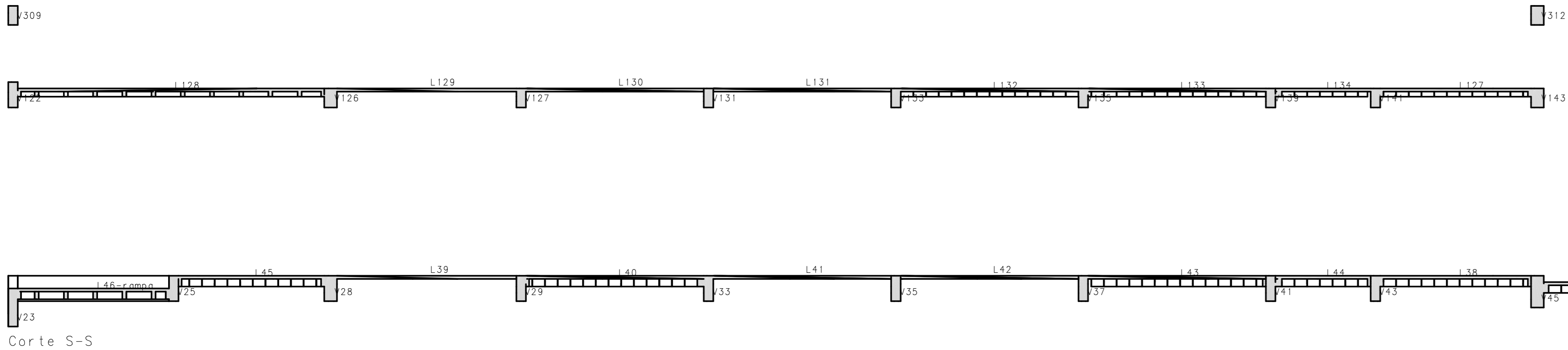
OBRA N.º
0001

DES. N 9

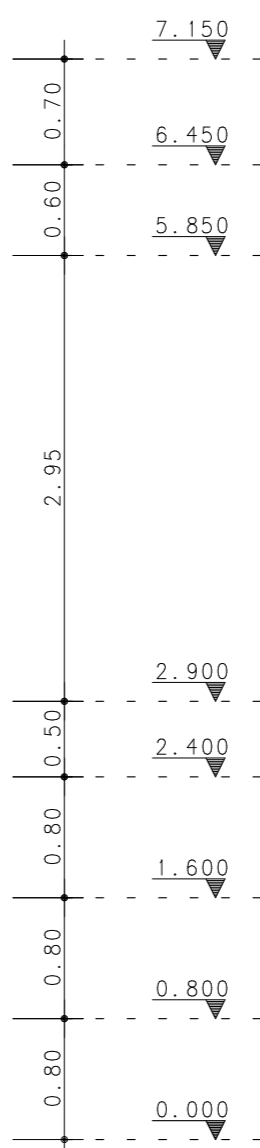
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REV. N 9

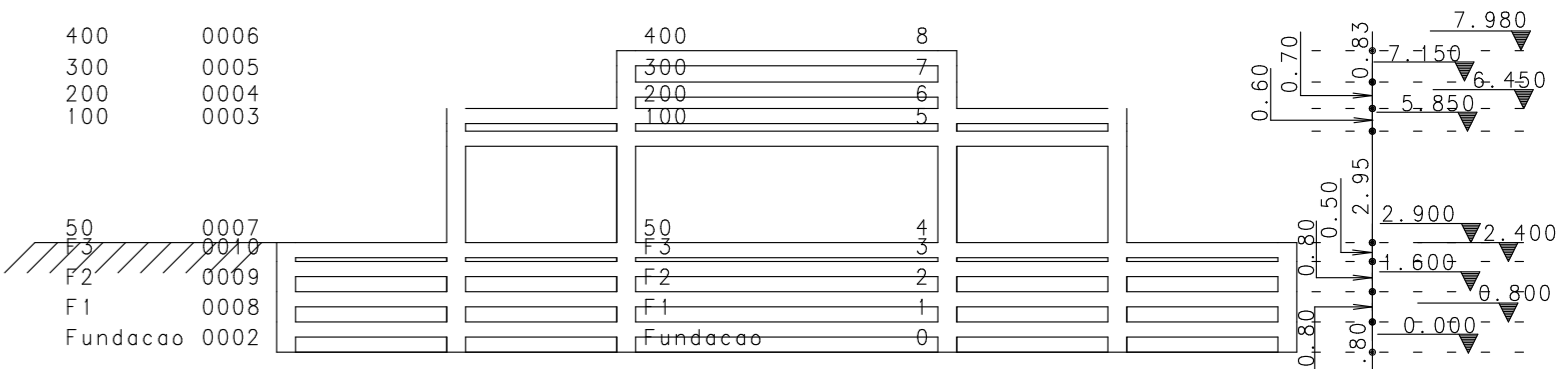
39



Corte S-S



Corte esquemático



Reforços nos pilares P12, P16, P23 e P35
Conforme o detalhamento nas plantas de pilares as faces do pilar devem ser apicoadas

N1 - estribos
N2 - armaduras longitudinais - coladas com epóxi

N3 $\phi 10$ C/24 C=6
N1 - pinos $\phi 10$ mm
entram 5 cm no concreto existente

CONSUMOS DE MATERIAIS RECUPERAÇÃO E REFORÇO				
PILARES		PREVISÃO	42,6	m
formas			51,12	m2
armaduras		10 mm	161,9	kg
		5 mm	68,2	kg
Graute			65	sc 25 kg
VIGAS		PREVISÃO	70,6	m
formas			102,36	m2
armaduras		10 mm	35,3	kg
		MALHA L196	82,1	kg
Graute			32	sc 25 kg
CONSUMO CONCRETO PARA FINALIZAÇÃO VIGAS 50				
PREVISÃO			10	m3

Diagrama de uma seção original de pilar com detalhes de montagem e materiais:

- sarrafo 2,5x7,5 a cada 50 cm
- fechar a medida que avança o grauteamento
- compensado plastificado 14 mm
- compensado 14 mm
- sarrafo 2,5x7
- graute - 4 cm
- seção original pilar

Diagrama de uma laje de concreto armado com reforço e reparação.

Seção transversal (esquerda):

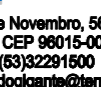
- Reforço superior: sarrafo 2,5x10 c/100
- Compensado: 14 mm
- Reforço lateral: sarrafo 2,5x7,5 c/50
- Reforço inferior: sarrafo 2,5x7,5
- Grout: grout >= 4 cm
- Seção original viga

Plano (direita):

- Tela L196 nas duas laterais
- Dimensões: 100 (largura total), 30 (largura da área de reparação)
- Altura da laje: 10, 14, 4

Legenda:

- N1 ϕ 10 C/30 c=6
- N1 - pinos ϕ 10 mm
- entram 5 cm no concreto existente

 Gigante e Simch engenharia civil estruturas e sondagens		Rua Quilô de Novembro, 503/405 Portão - RJ - CEP 20075-000 Telefone: (83) 32291600 e-mail: fernandogigante@gsma.com.br e-mail: psulesternch@yehoo.com.br		Fernando Petrucci Gigante Eng. Civil - CREA-RS 45232		Paulo Rogério Maffini Simch Eng. Civil - CREA-RS 78208	
2							
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Rev	Data	Autor		Assunto			
CONCRETO fck = 200 kgf/cm ²				SOBRECARGA PREVISTA		OBRA N.º <div style="font-size: 2em; text-align: center;">0001</div>	
CLIENTE <div style="font-size: 1.2em;">SECRETARIA DA SAÚDE-PELOTAS</div>				DES. N.º		<div style="font-size: 3em;">038</div>	
OBRA <div style="font-size: 1.2em;">UBS TIPO 2-CORRIENTES</div>				REV. N.º			
TÍTULO <div style="font-size: 1.2em;">Reforços Reparos prumos e cobrimentos</div>				REV. N.º <div style="font-size: 2em; text-align: center;">00</div>			
<div style="font-size: 1.2em;">reforços em pilares - 1/25 reforços em vigas - 1/25</div>							
DATA 01/09/2016	ESCALA 1:25	DESENHO UBS-REF-LAJ-038-R00		COORD.	ENG.º		