

OBSERVAÇÕES:
1 - Origem das cotas: Horizontais e verticais nos eixos do pilar P49;
2 - Localização da obra deve seguir o projeto arquitetônico de implantação, locando-a a partir de edificações existentes;
3 - Convenções: B = Blobo; E = Estaca; S = Sapata; L = Laje; P = Pilar; V = Viga;
4 - A profundidade mínima de ponta das estacas deverá ser conforme tabela "LOCAÇÃO DAS ESTACAS" e na planta de detalhamento;
5 - Medidas em centímetros.

Planta de localização
escala 1:50

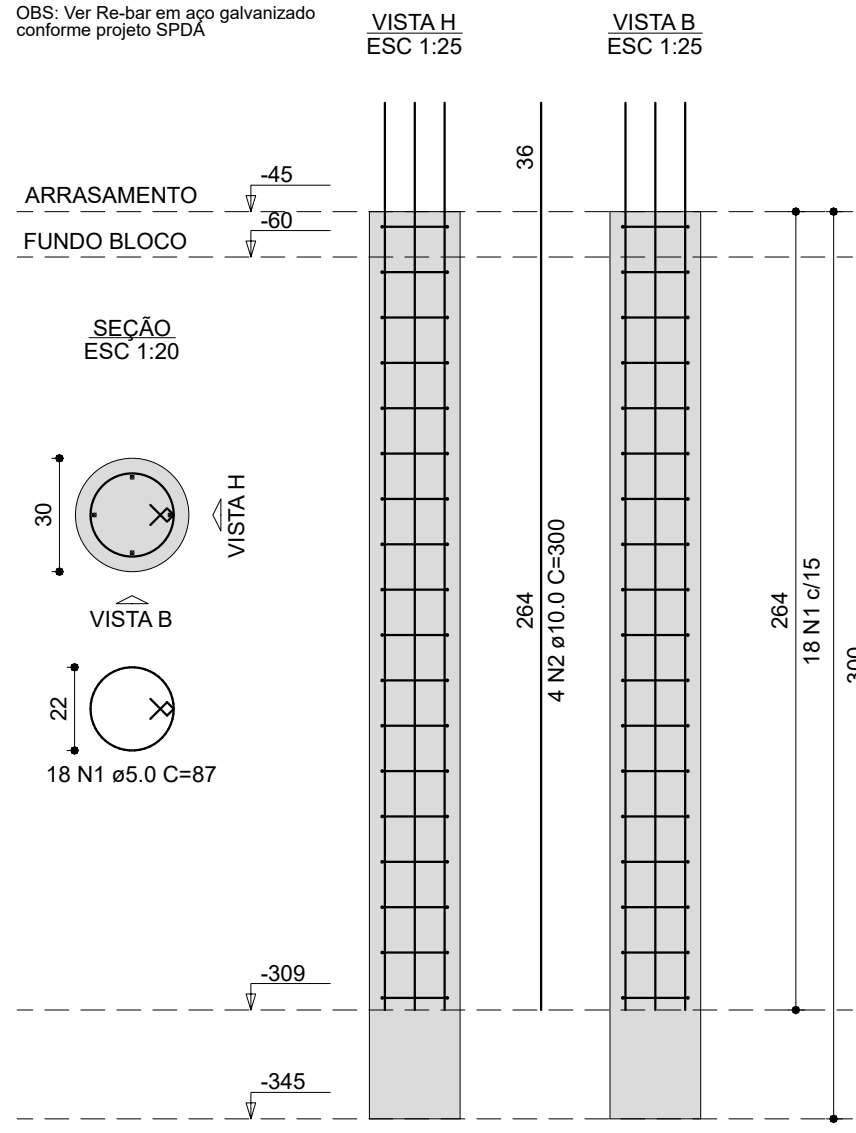
Legenda dos blocos
escala 1:25

Legenda das Sapatas
escala 1:25

Nome	Pilar										Fundação										Bloco																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Seção	X (cm)	Y (cm)	Carga Máx. (t)	Carga Min. (t)	Lado B (cm)	Lado H (cm)	N1/H (cm)	N2/H (cm)	df (cm)	Estaca	Bloco	Seção	X (cm)	Y (cm)	Carga Máx. (t)	Carga Min. (t)	Lado B (cm)	Lado H (cm)	N1/H (cm)	N2/H (cm)	df (cm)	Estaca	Bloco	Seção	X (cm)	Y (cm)	Carga Máx. (t)	Carga Min. (t)	Lado B (cm)	Lado H (cm)	N1/H (cm)	N2/H (cm)	df (cm)	Estaca	Bloco																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
P4	20x20	2071.50	1211.00	4.1	3.3	60	60	0	55	0	1	C30	-45	P5	20x20	2600.00	1211.00	3.9	3.7	60	60	0	55	0	1	C30	-45	P6	20x20	2698.00	1211.00	3.2	2.7	60	60	0	55	0	1	C30	-45	P7	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P8	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P9	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P10	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P11	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P12	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P13	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P14	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P15	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P16	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P17	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P18	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P19	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P20	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P21	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P22	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P23	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P24	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P25	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P26	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P27	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P28	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P29	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P30	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P31	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P32	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P33	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P34	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P35	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P36	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P37	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P38	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P39	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P40	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P41	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P42	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P43	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P44	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P45	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P46	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P47	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P48	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P49	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P50	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P51	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P52	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P53	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P54	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P55	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P56	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P57	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P58	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P59	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P60	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P61	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P62	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P63	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P64	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P65	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P66	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P67	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P68	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P69	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P70	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P71	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P72	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P73	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P74	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P75	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P76	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P77	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P78	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P79	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P80	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P81	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P82	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P83	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P84	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P85	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P86	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P87	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P88	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P89	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P90	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P91	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P92	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P93	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P94	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P95	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P96	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P97	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P98	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P99	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P100	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P101	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P102	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P103	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P104	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45	P105	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P106	15x30	2922.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45	P107	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45	P108	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45	P109	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45	P110	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45	P111	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45	P112	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45	P113	15x30	2922.50	923.00	11.0	9.8	60	60	

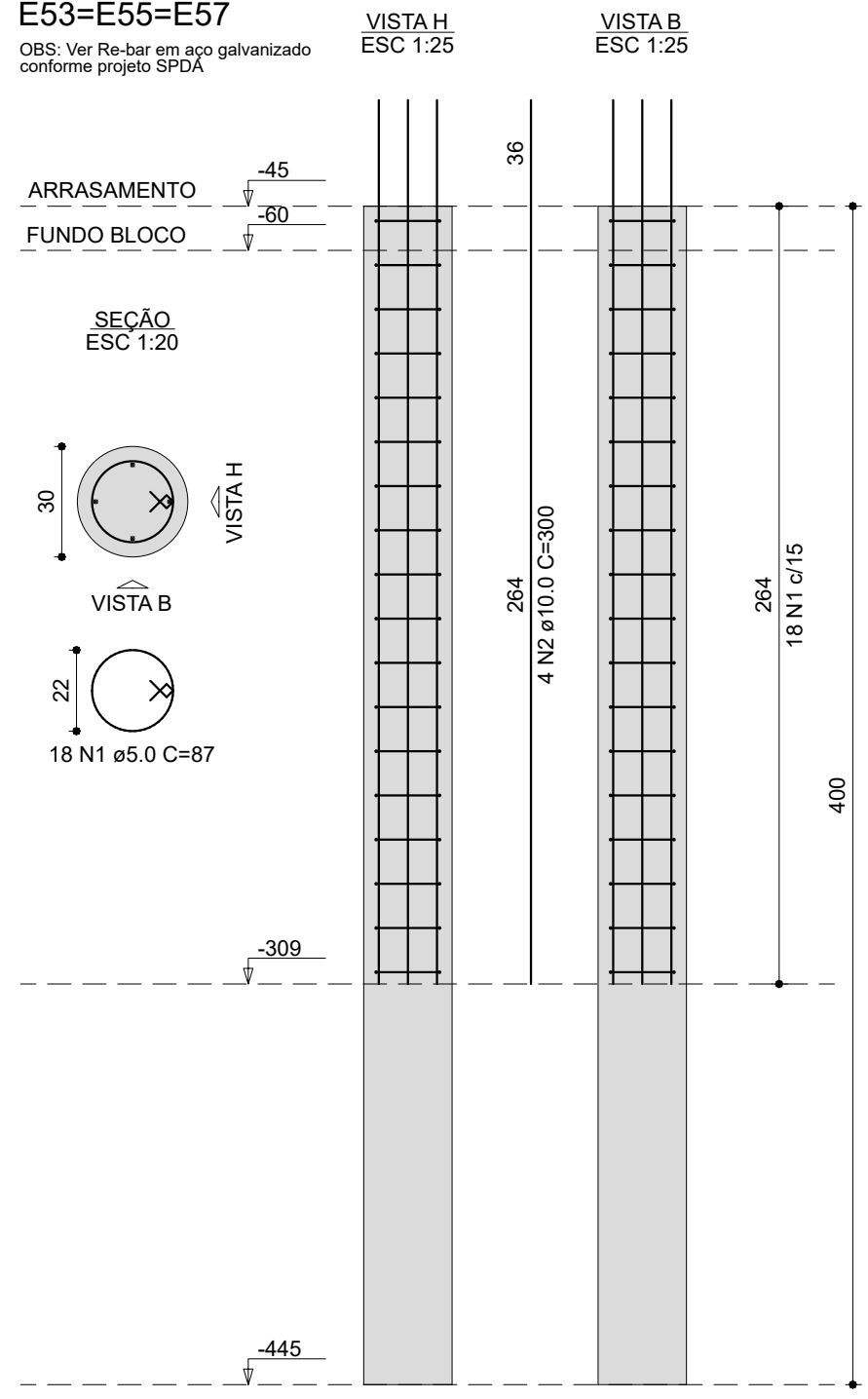
DETALHE - ESTACAS
E4=E5=E6=E29=E49

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



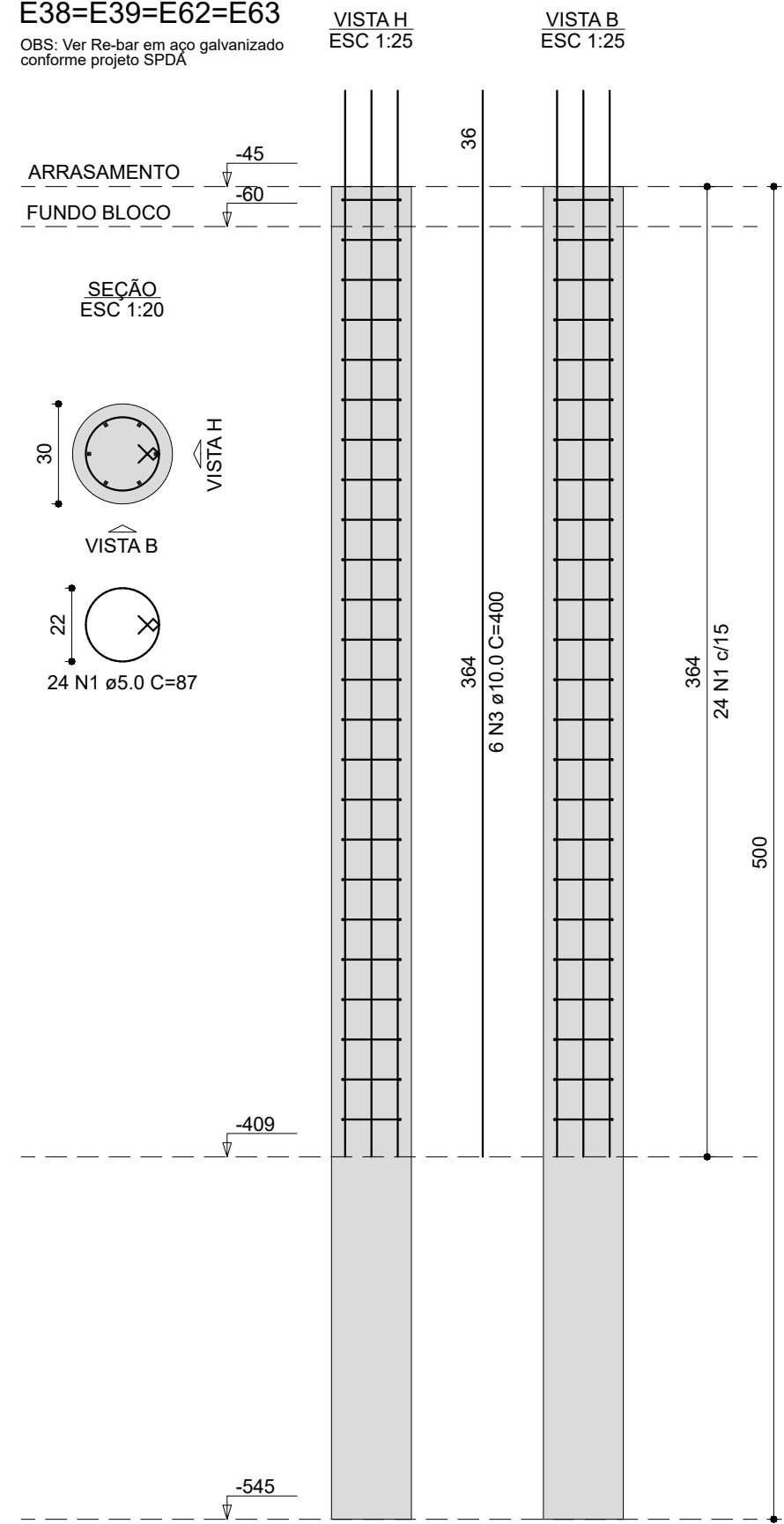
E9=E15=E30=E51
E53=E55=E57

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



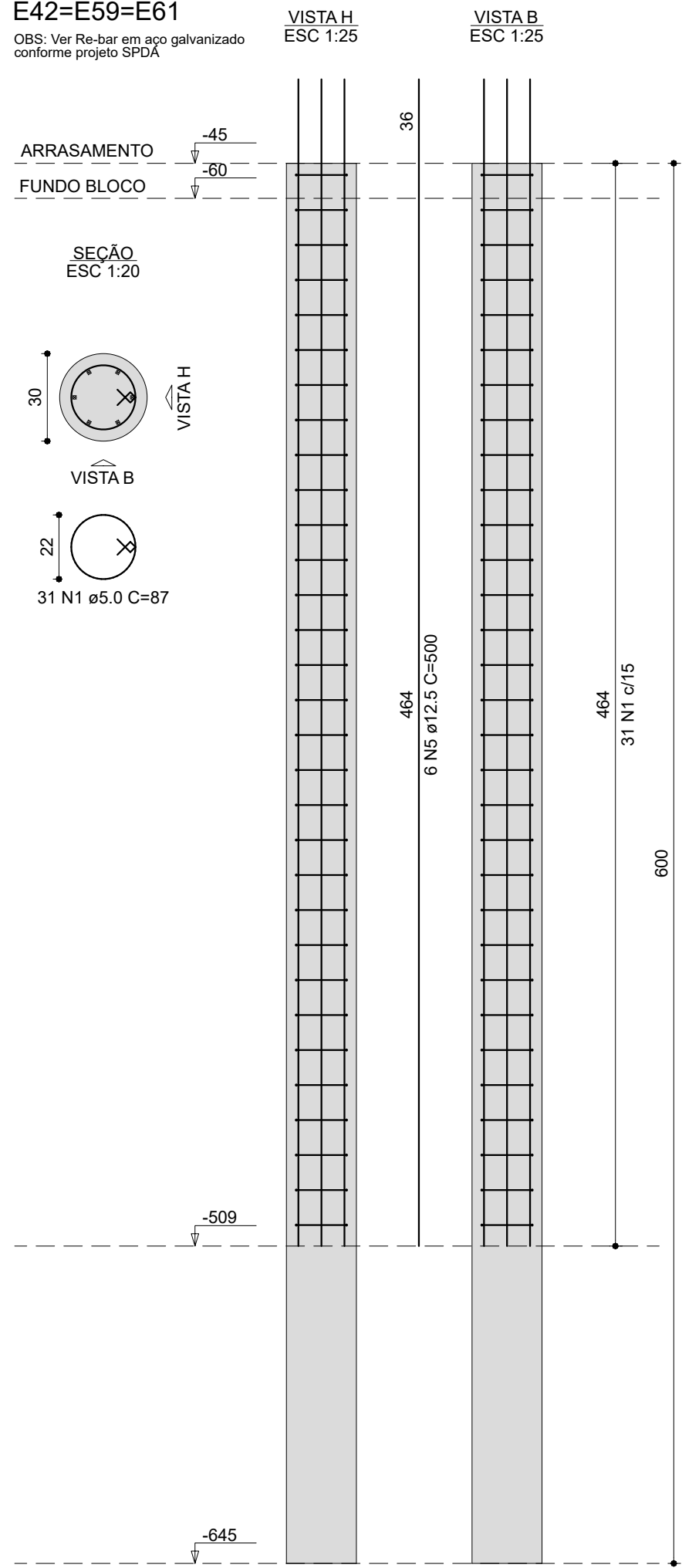
E7=E8=E36=E37
E38=E39=E62=E63

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



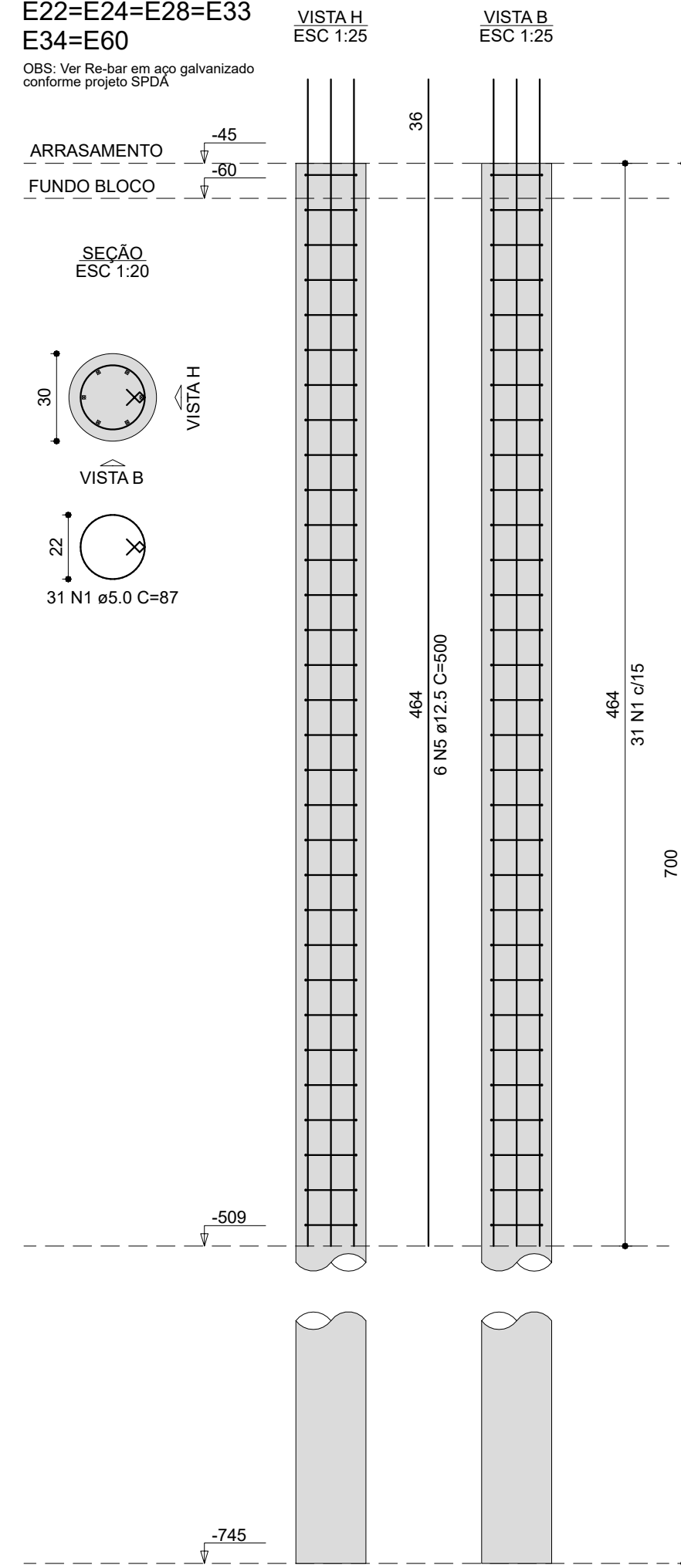
E11=E16=E18=E32
E42=E59=E61

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



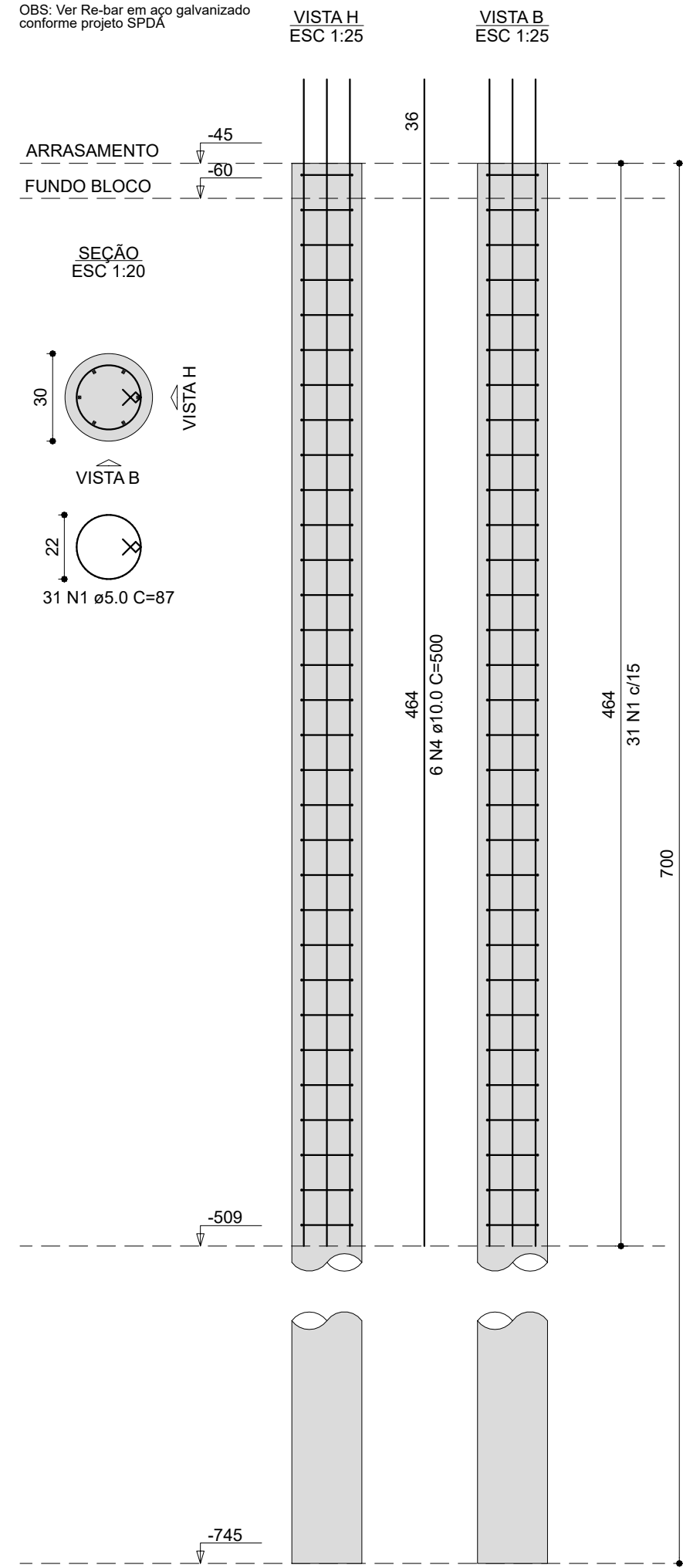
E12=E13=E14=E20
E22=E24=E28=E33
E34=E80

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



E35=E40=E41=E43=E45

OBS: Ver Re-bar em aço galvanizado
conforme projeto SPDA



RELAÇÃO DO AÇO					
8x64 7x611	7x63 10x12	8x67 8x65			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	2	5.0	1080	87	94630
CA60	3	10.0	48	300	14400
	4	10.0	40	400	16000
	5	12.5	102	500	51000

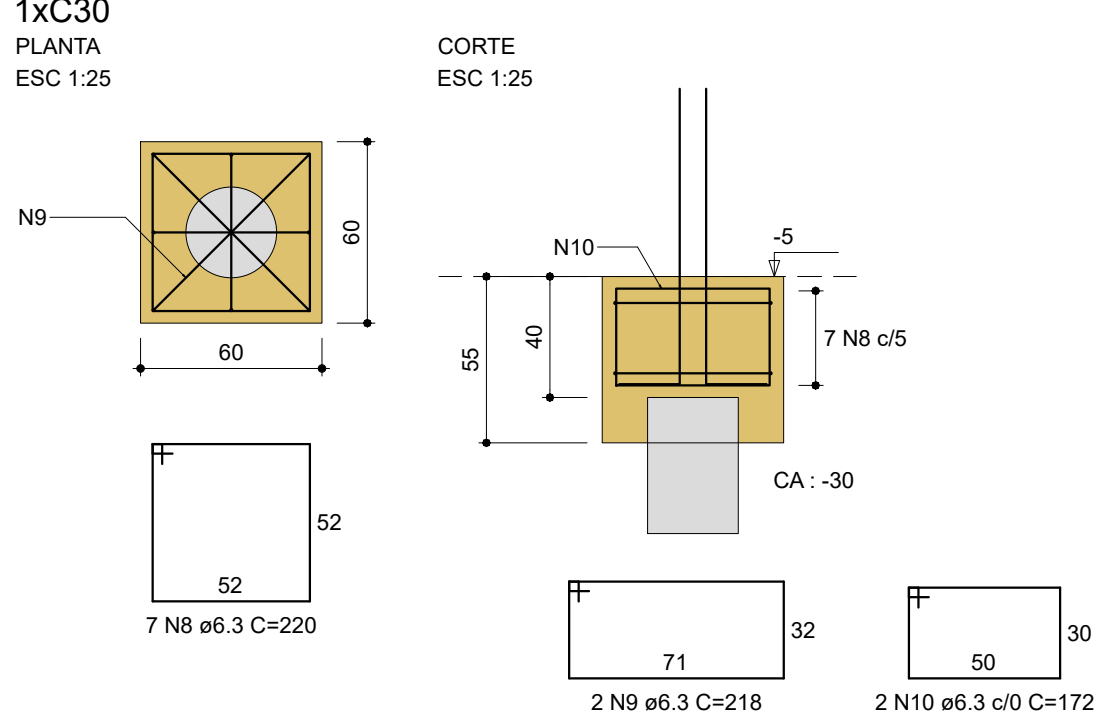
RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)	
CA50	10.0	351	238.2	
CA60	12.5	510	540.2	
	5.0	548.3	160.6	

PESO TOTAL
(kg)
CA50 778.4
CA60 166.8

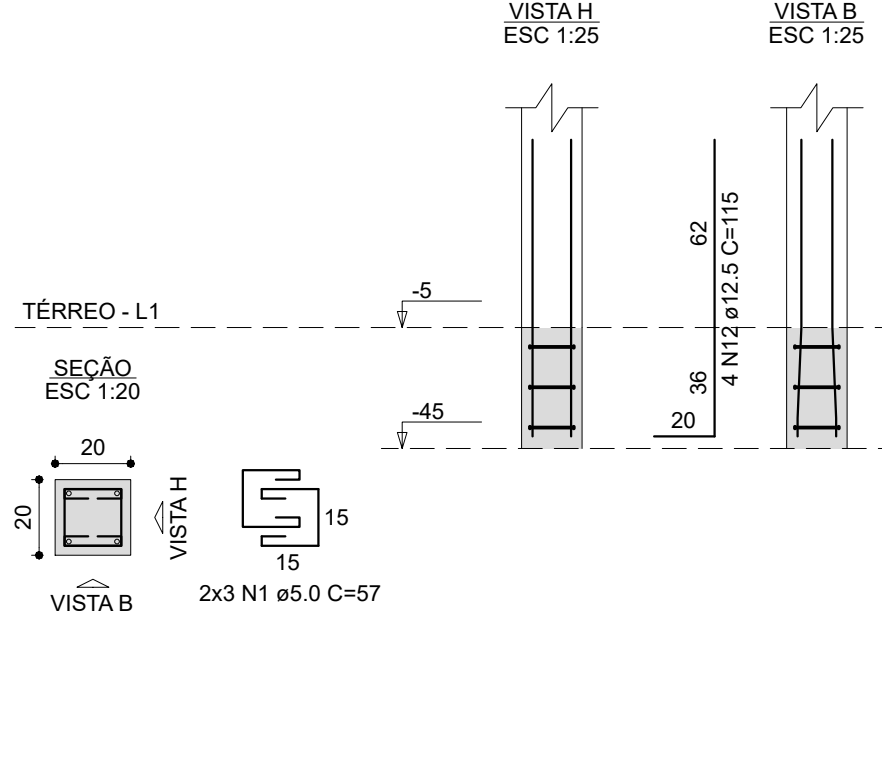
Volume de concreto (C-25) = 16.61 m³
Volume de escavação = 17.50 m³
Área de forma = 26.40 m²

DETALHE - BLOCOS

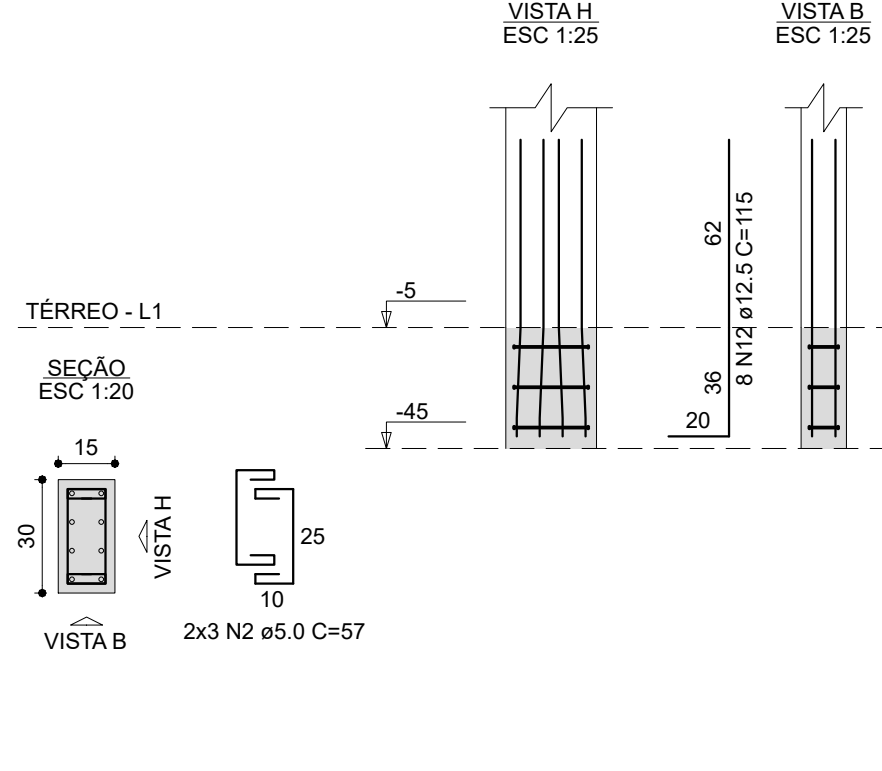
B4=B5=B6=B7=B8=B9=B11=B12=B13=B14=B15
=B16=B18=B20=B22=B24=B28=B29=B30=B32
=B33=B34=B35=B36=B37=B38=B39=B40=B41
=B42=B43=B45=B49=B51=B53=B55=B57=B59
=B60=B61=B62=B63



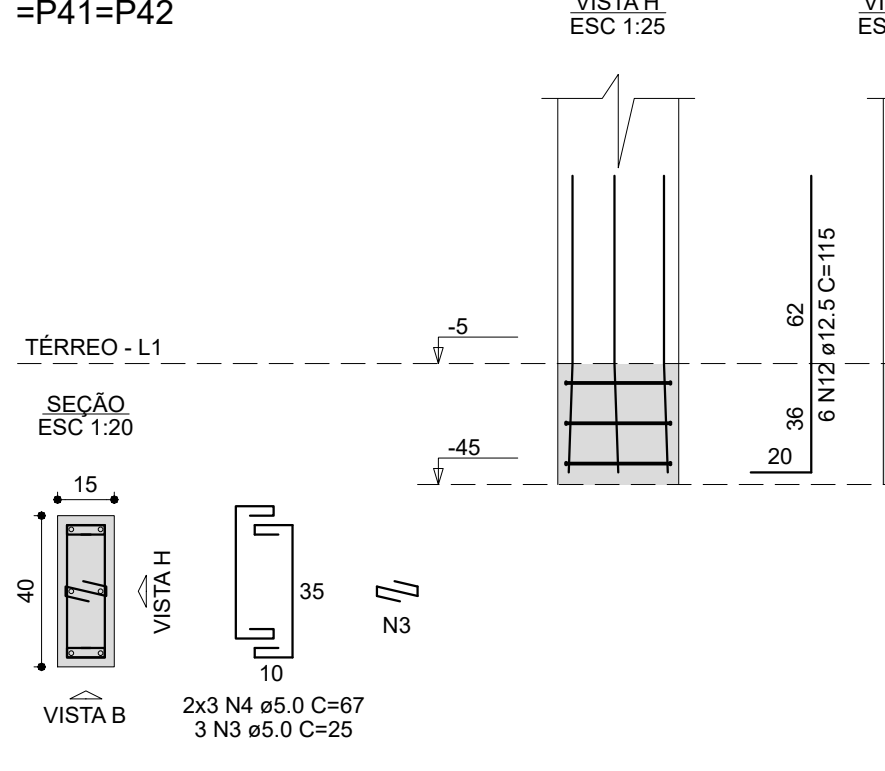
P4=P6=P29



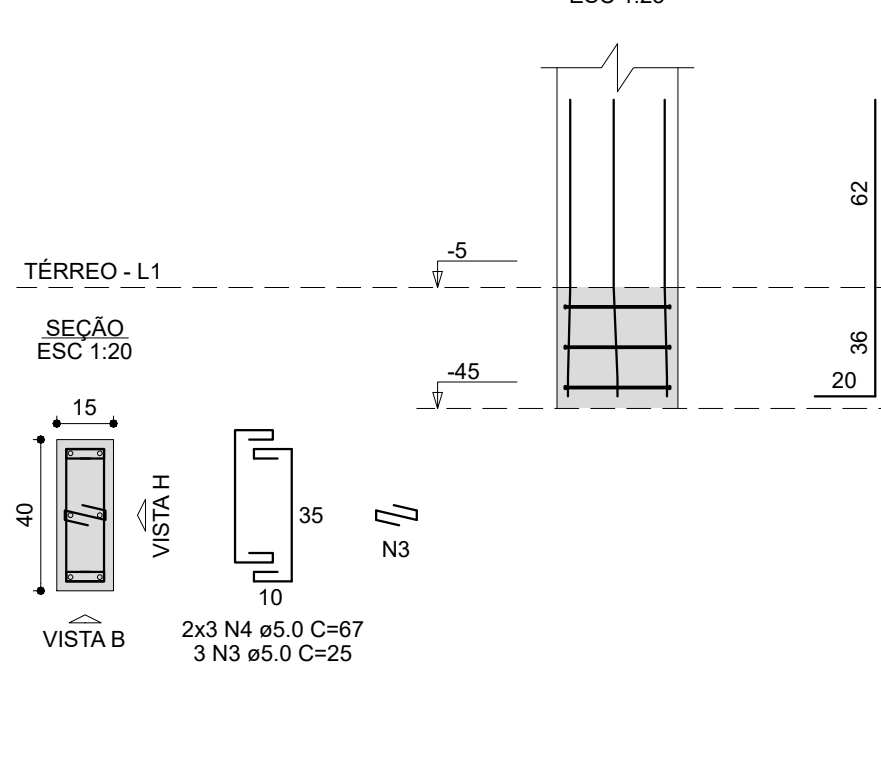
P12=P13=P14=P33



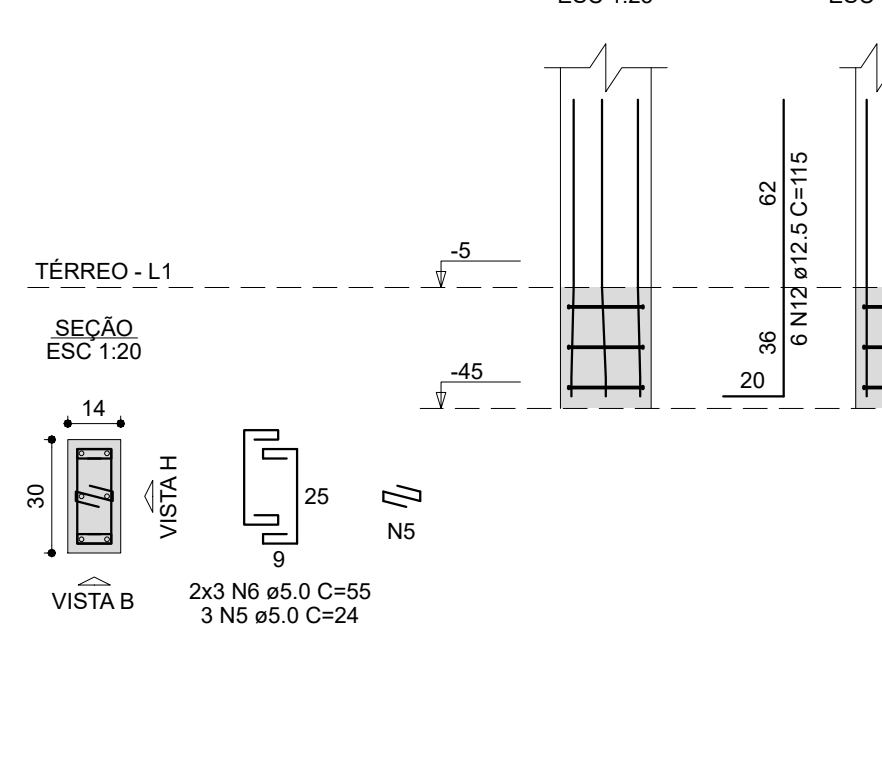
P16=P18=P20=P22=P24=P39=P40=
=P41=P42



P43



P45



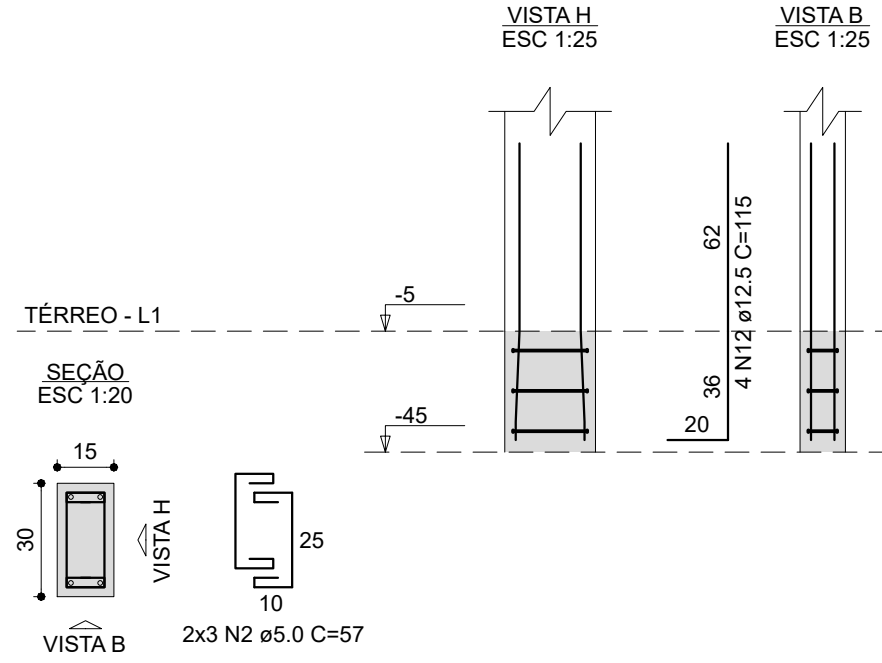
RELAÇÃO DO AÇO					
42x84 8xP7 4xP12 P45	3xP4 8xP8 8xP16 2xP40	P5 4xP11 P43 2xP40			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	28	57	1482
	2	5.0	158	57	9006
	3	5.0	57	25	1425
	4	5.0	60	57	4020
	5	5.0	3	24	72
	6	5.0	6	55	330
	7	5.0	12	87	660
	8	6.3	28	220	6660
	9	6.3	84	218	18312
	10	6.3	84	172	14448
	11	10.0	20	107	2140
	12	12.5	212	115	24380

RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)	
CA50	6.3	874.4	262.3	
	10.0	21.4	14.5	
	12.5	243.8	258.3	
CA60	5.0	171.4	29.1	

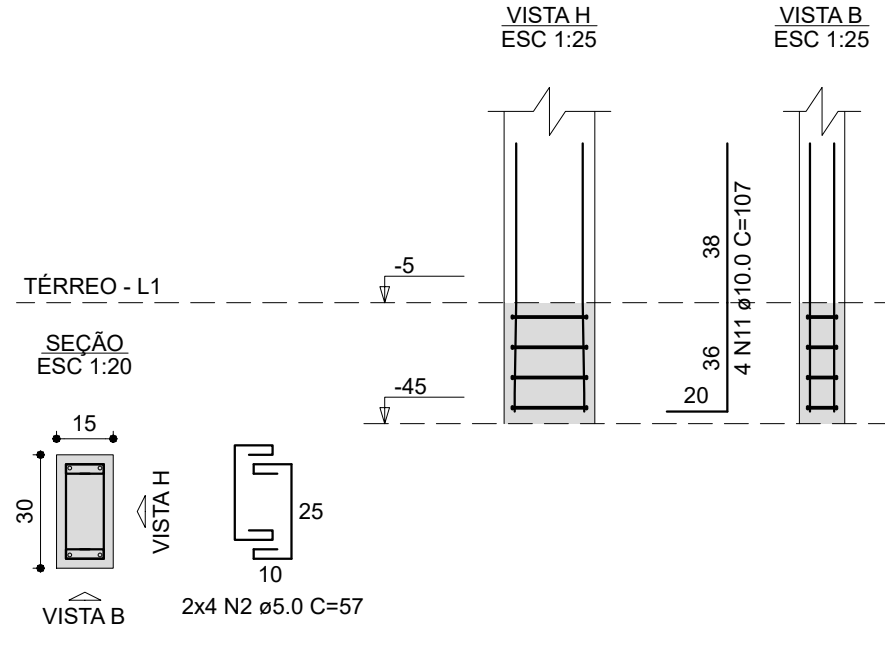
PESO TOTAL
(kg)
CA50 535.1
CA60 29.1

Volume de concreto (C-25) = 8.40 m³
Área de forma = 55.44 m²

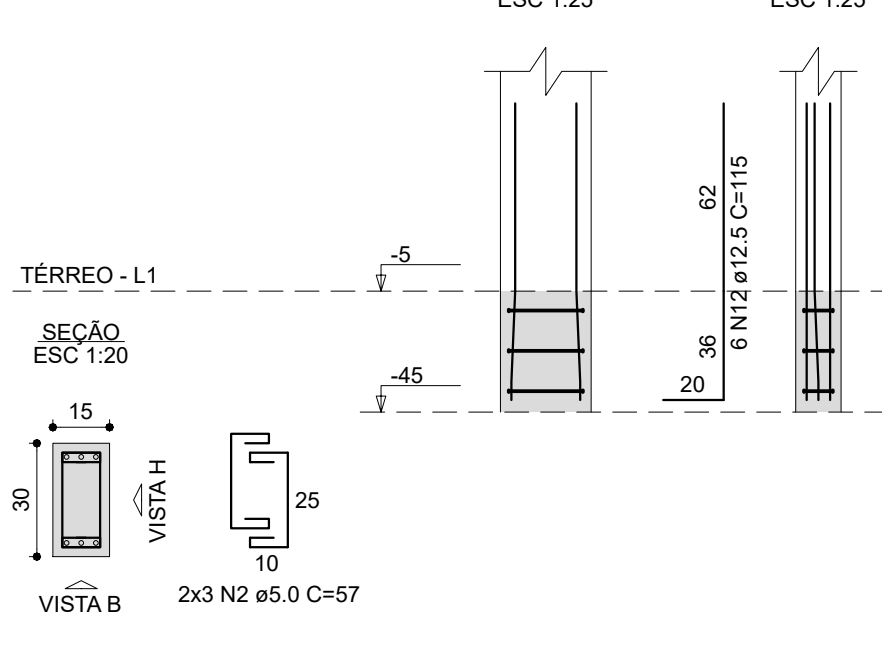
P7=P15=P30=P36=P53=P55



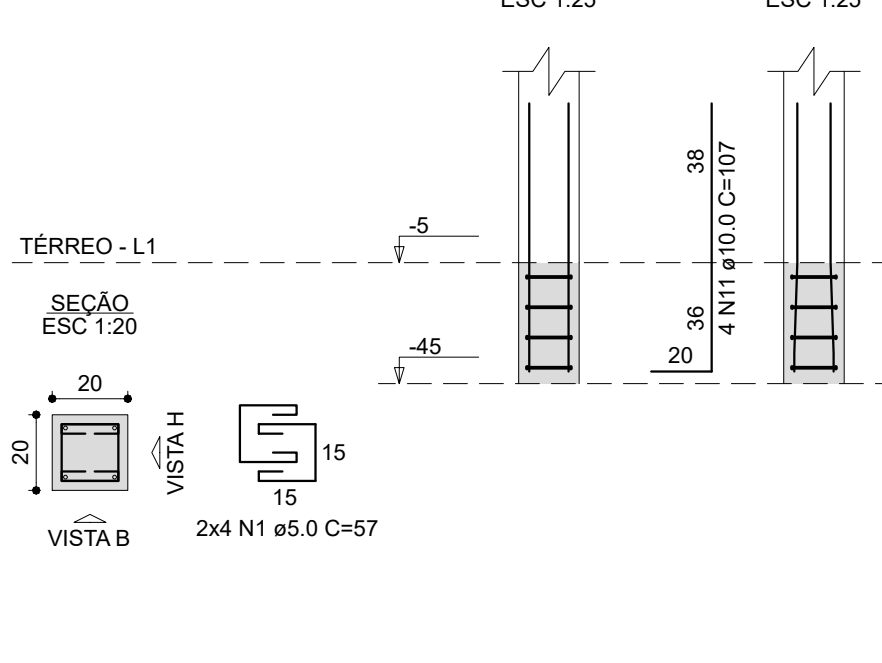
P11=P32=P51=P57



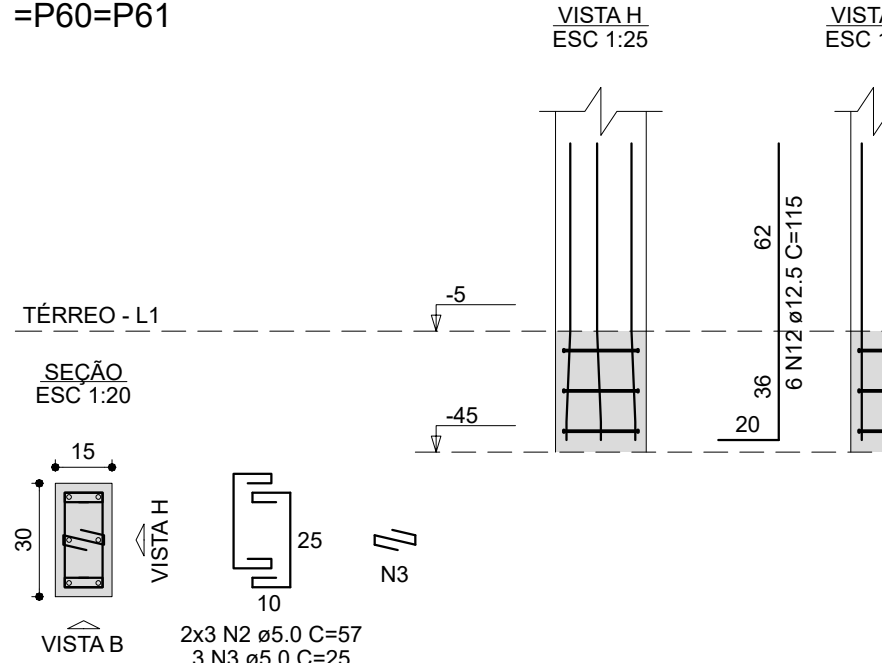
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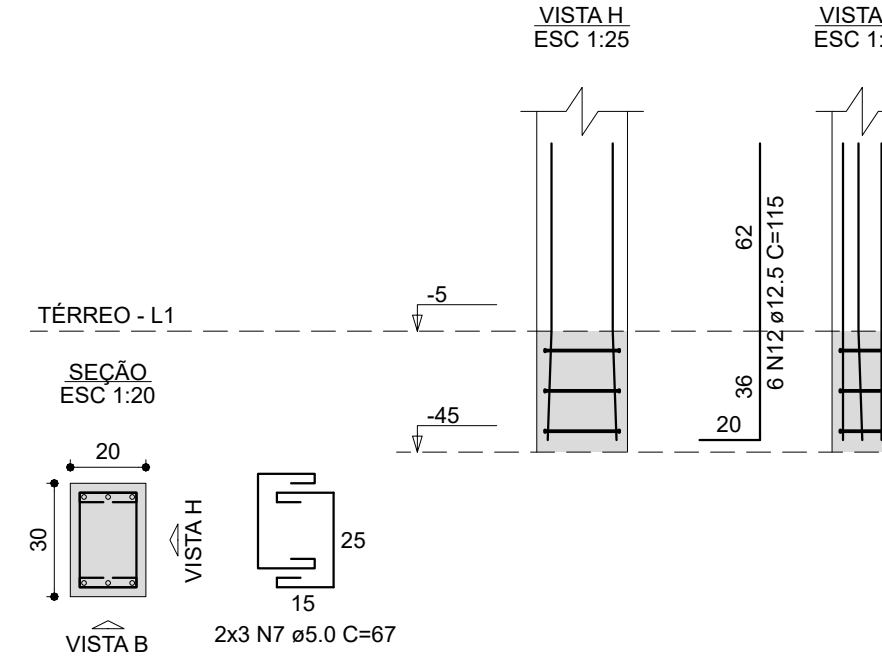
P5



P8=P9=P28=P34=P35=P37=P38=
=P60=P61



P62=P63



RELAÇÃO DO AÇO					
3xP1 P47	P2 8xS1	3xP10			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	27	59	1583
	2	5.0	24	42	1008
	3	5.0	5	71	355
	4	5.0	4	51	204
	5	5.0	5	55	275
	6	5.0	4	40	160
	7	8.0	48	92	4416
	8	8.0	48	102	4896
	9	10.0	4	81	324
	10	10.0	16	80	1280
	11	12.5	12	79	948

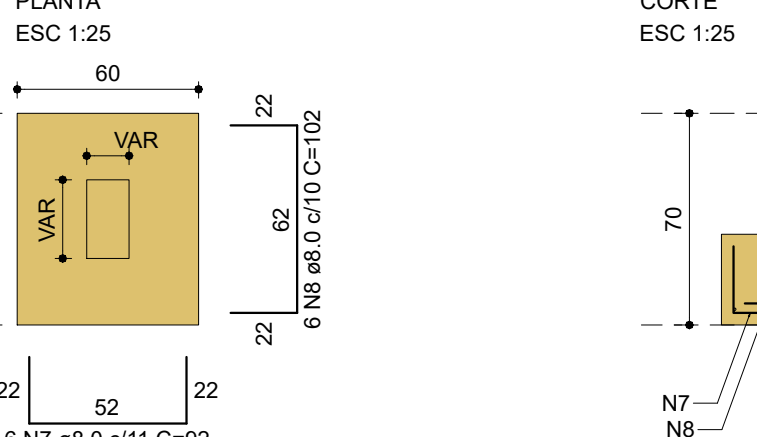
RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)	
CA50	8.0	63.1	40.4	
	10.0	16	10.9	
	12.5	9.5	10	
CA60	5.0	36	6.1	

PESO TOTAL
(kg)
CA50 61.3
CA60 6.1

Volume de concreto (C-25) = 1.21 m³
Área de forma = 10.69 m²

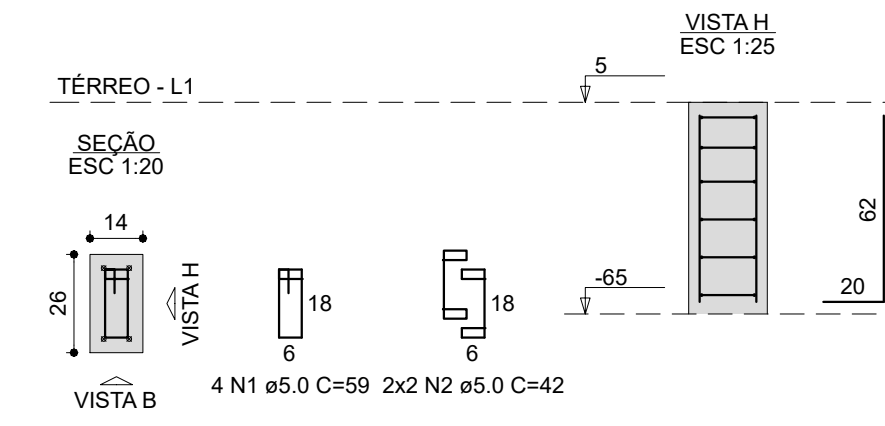
DETALHE - SAPATAS

S1=S2=S3=S10=S46=S47=S48

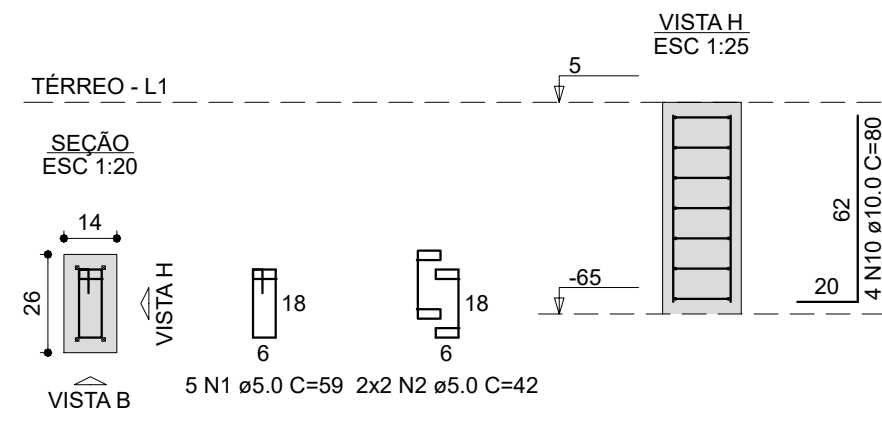


Solo compactado sobre a sapata
peso específico = 1600.00 kg/m³

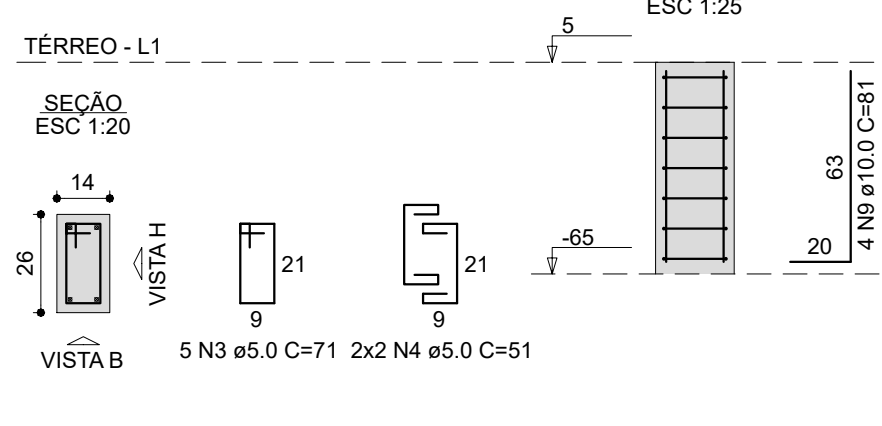
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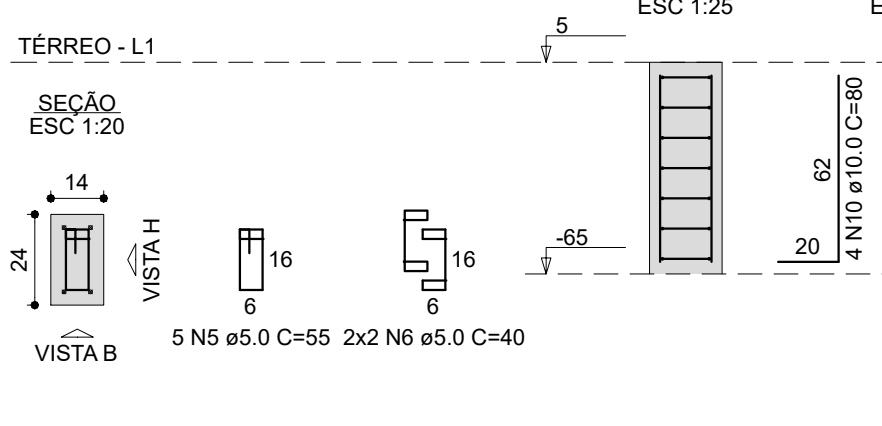
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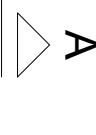
P2




P47



 UNIVERSIDADE FEDERAL DA FRONTEIRA SUL		Secretaria Especial de Obras		NOVO PAC DESENVOLVIMENTO E SUSTENTABILIDADE	
RUA DA FLORESTA, 100 - FLORESTA, 71.600-000, GOIÁS		RUA DA FLORESTA, 100 - FLORESTA, 71.600-000, GOIÁS		RUA DA FLORESTA, 100 - FLORESTA, 71.600-000, GOIÁS	
COORDENADOR GERAL: DR. JOÃO CARLOS DE SOUZA		COORDENADOR GERAL: DR. JOÃO CARLOS DE SOUZA		COORDENADOR GERAL: DR. JOÃO CARLOS DE SOUZA	
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Legenda das vigas e paredes	
	Viga

[illegible]

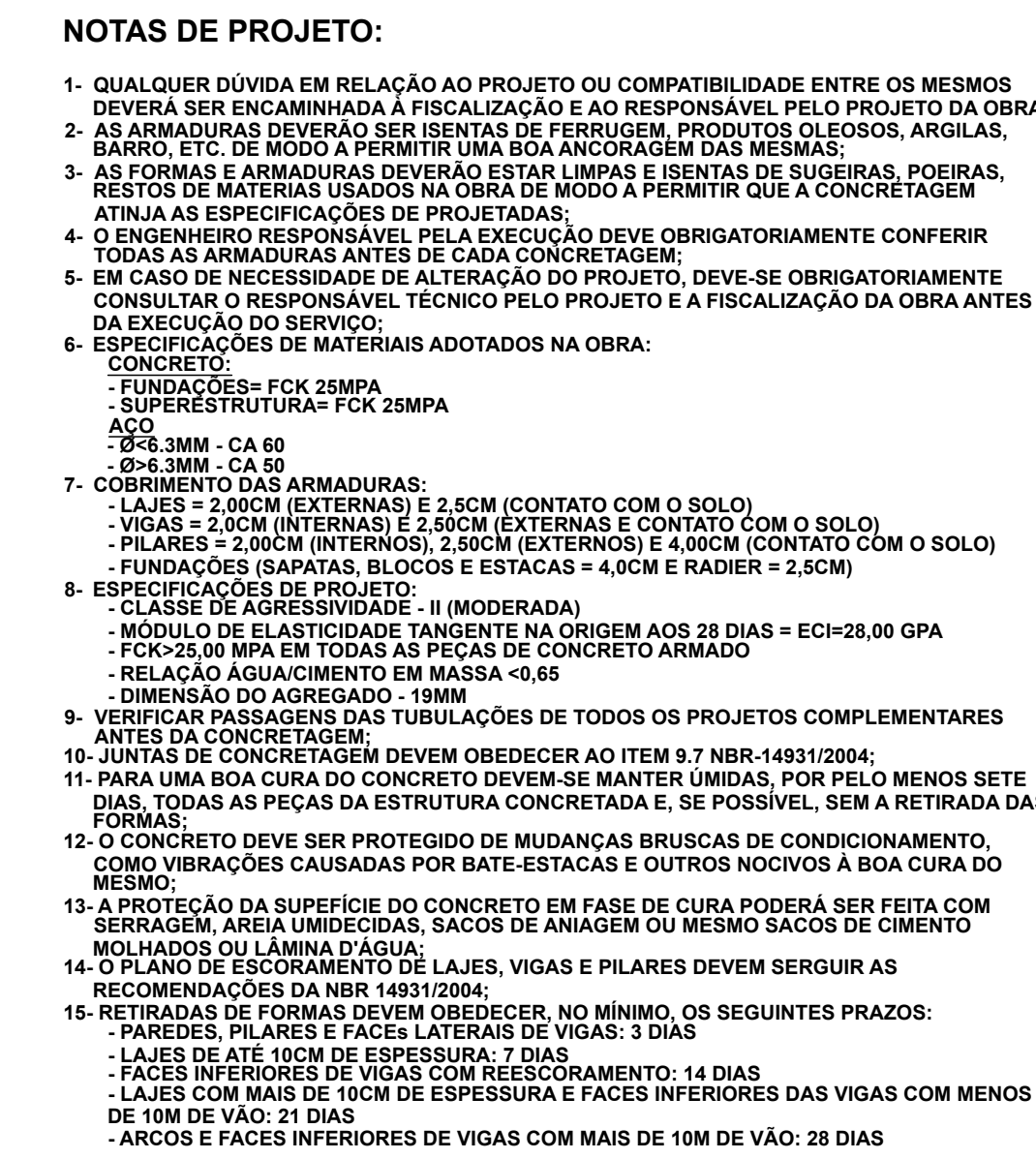


Detalhe 2 (esc. 1:30)

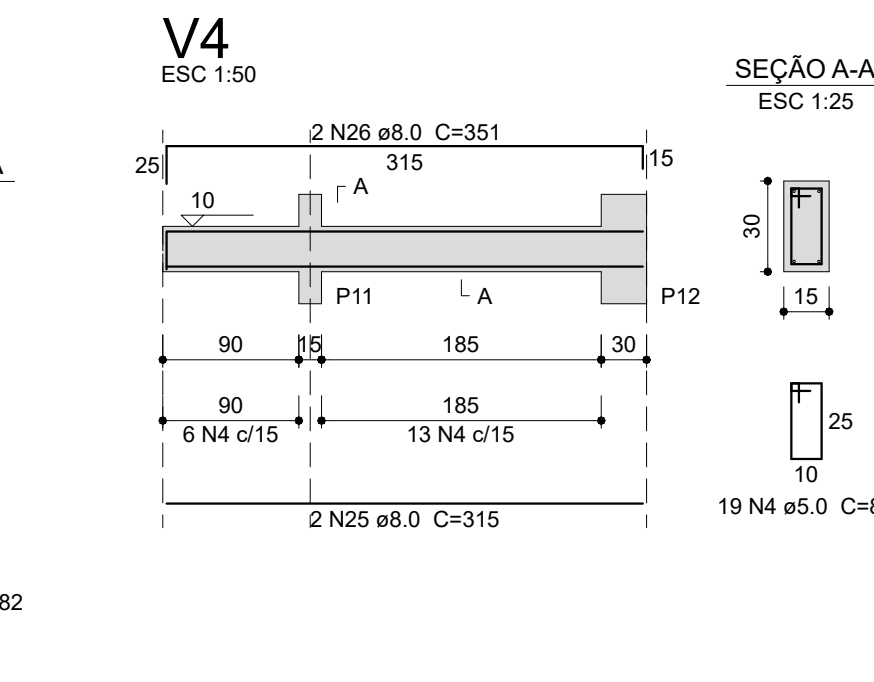
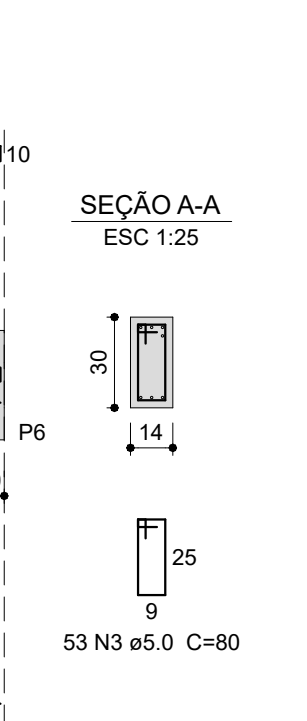
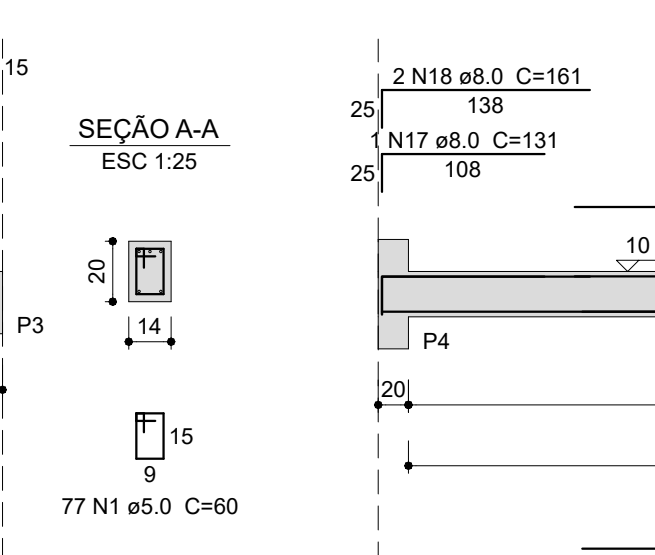
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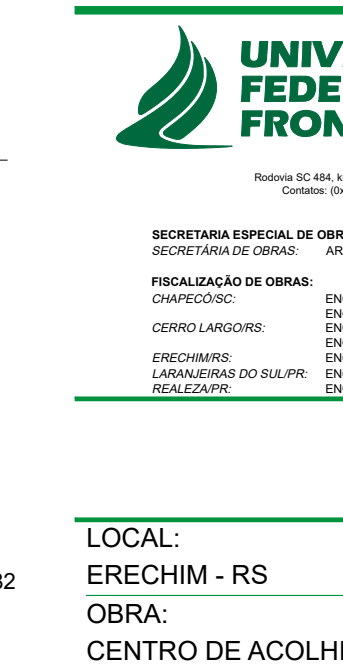
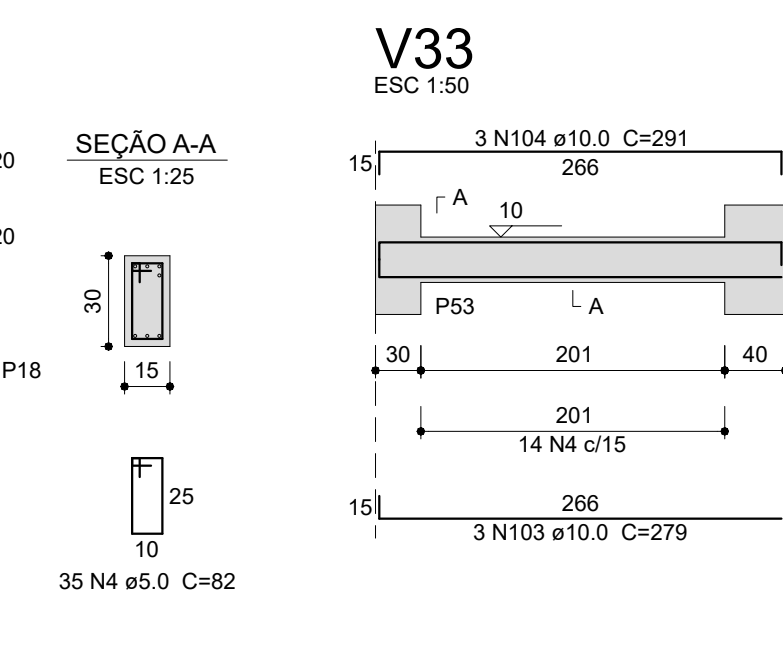
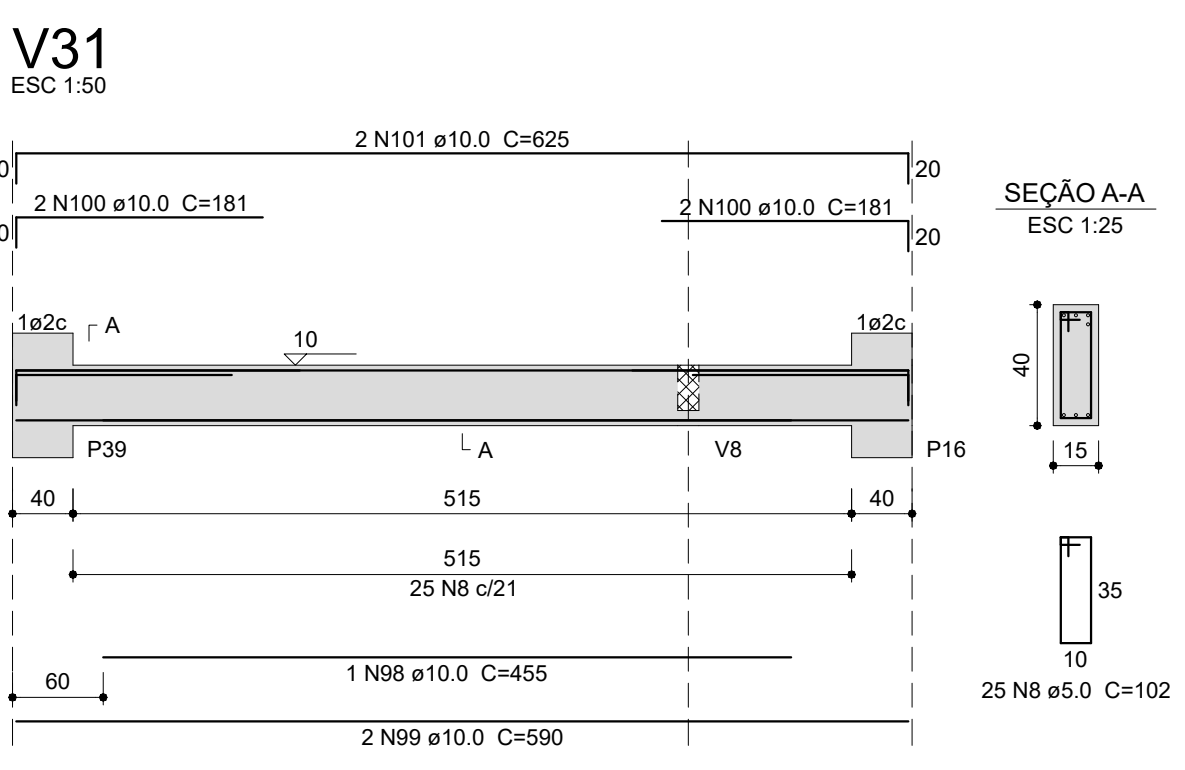
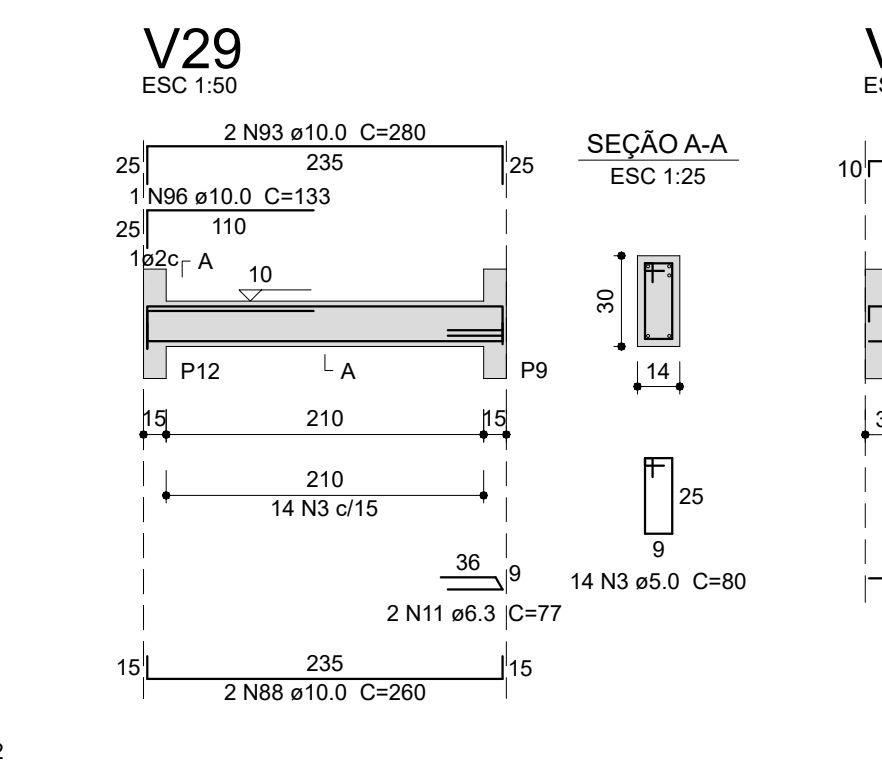
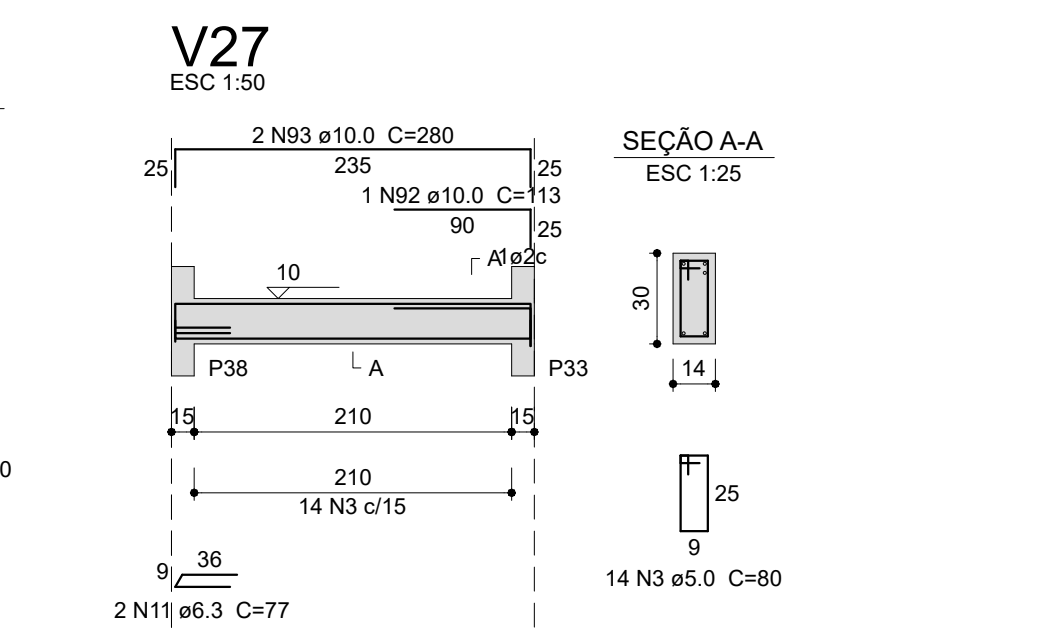
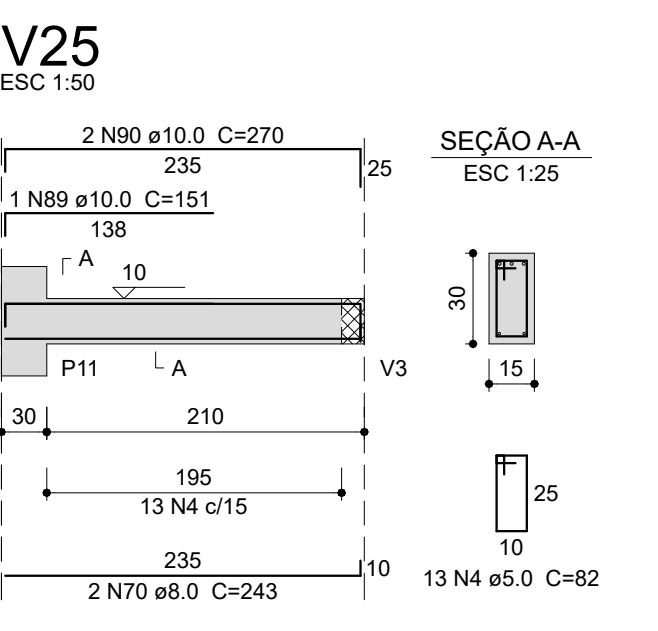
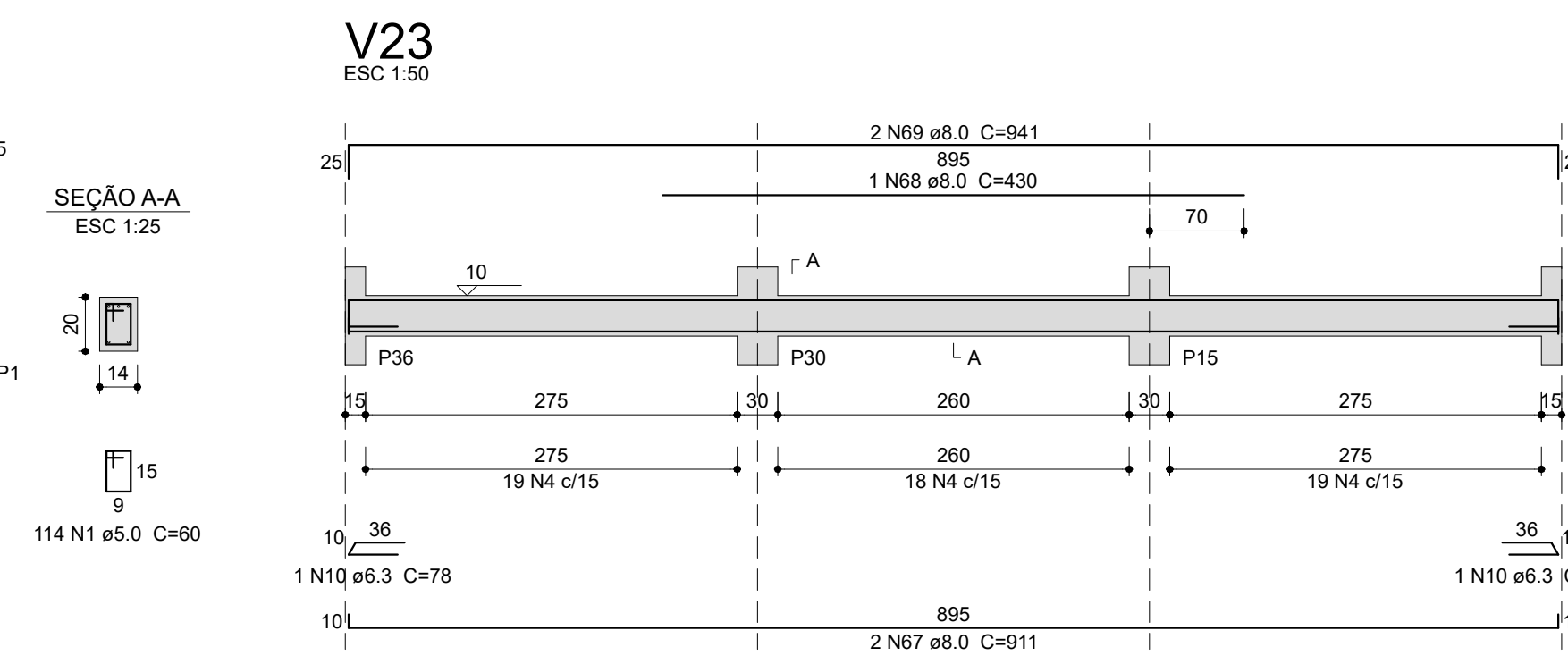
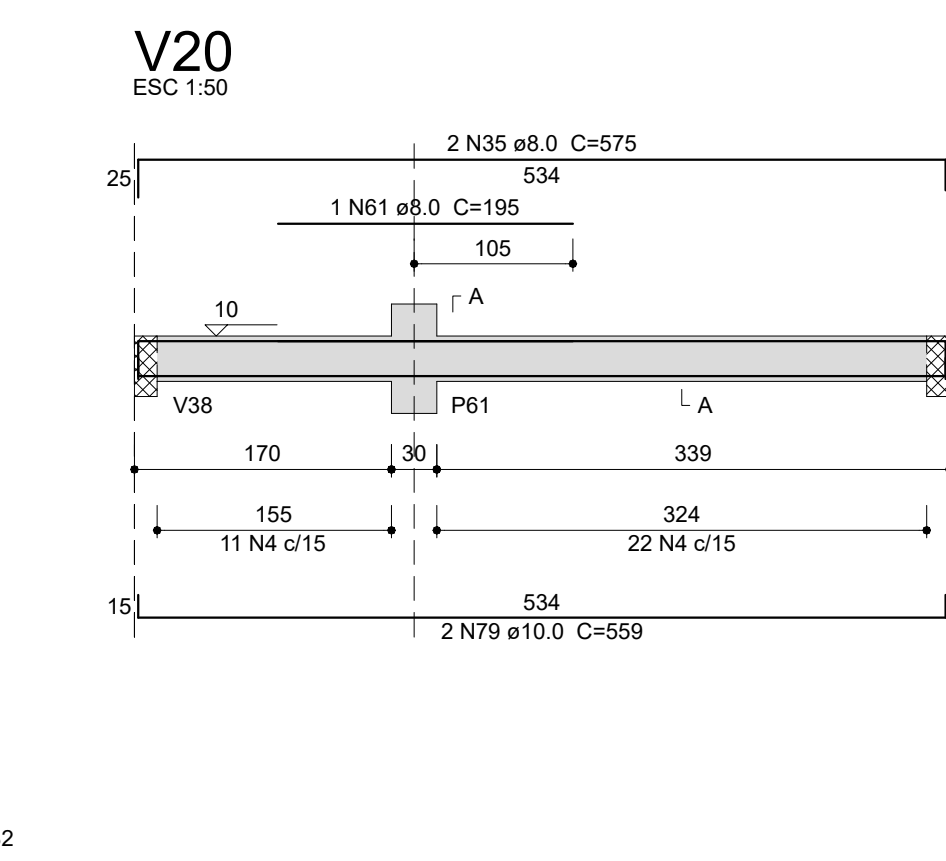
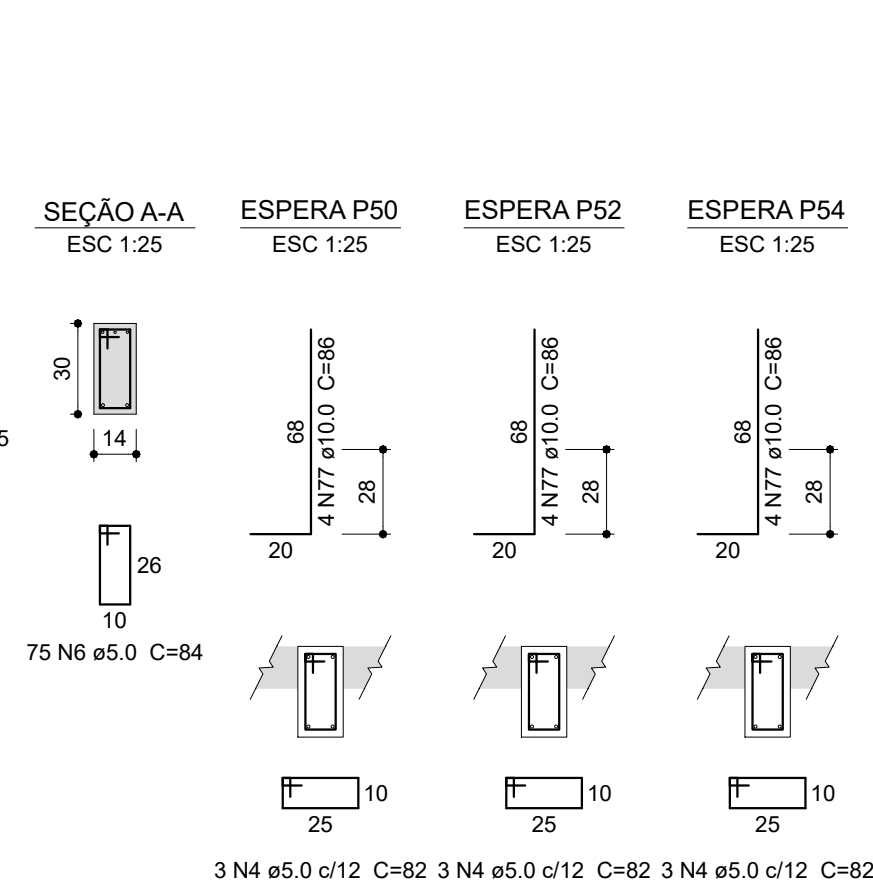
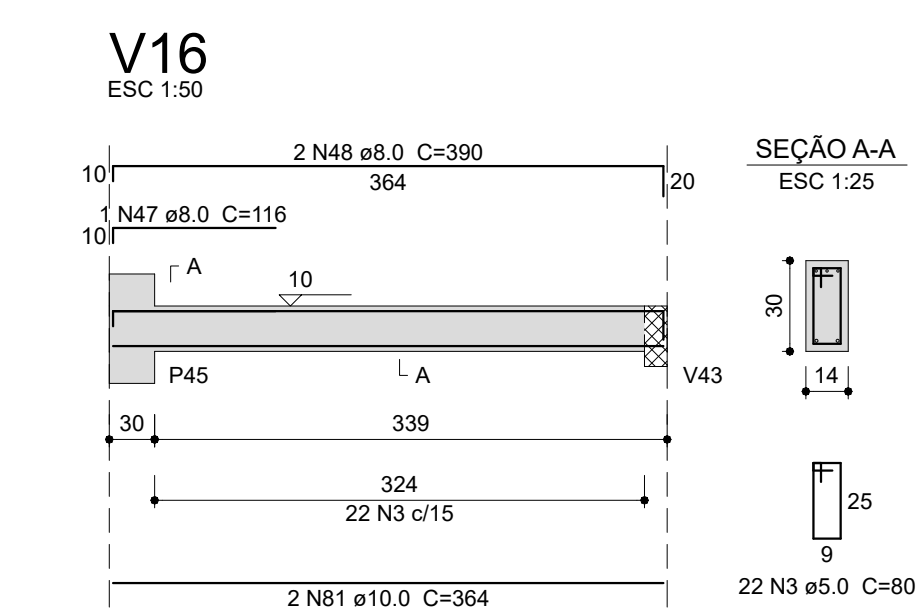
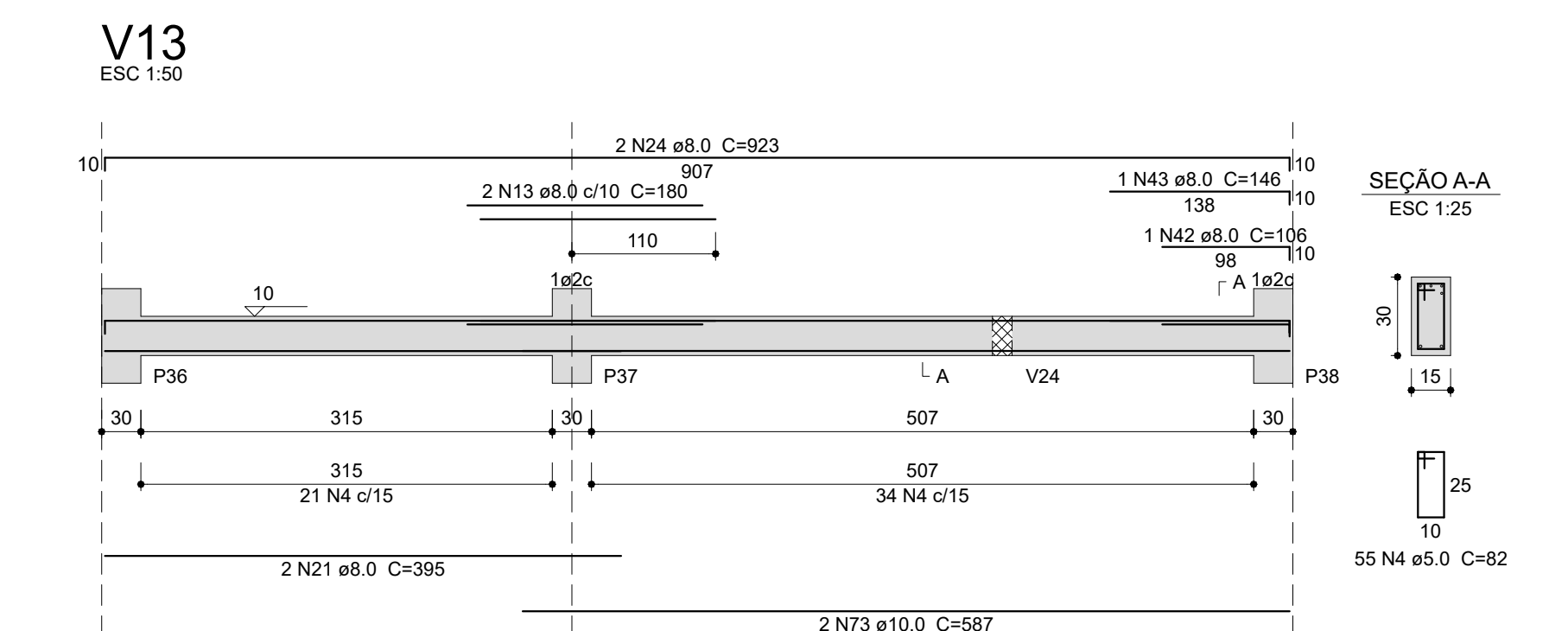
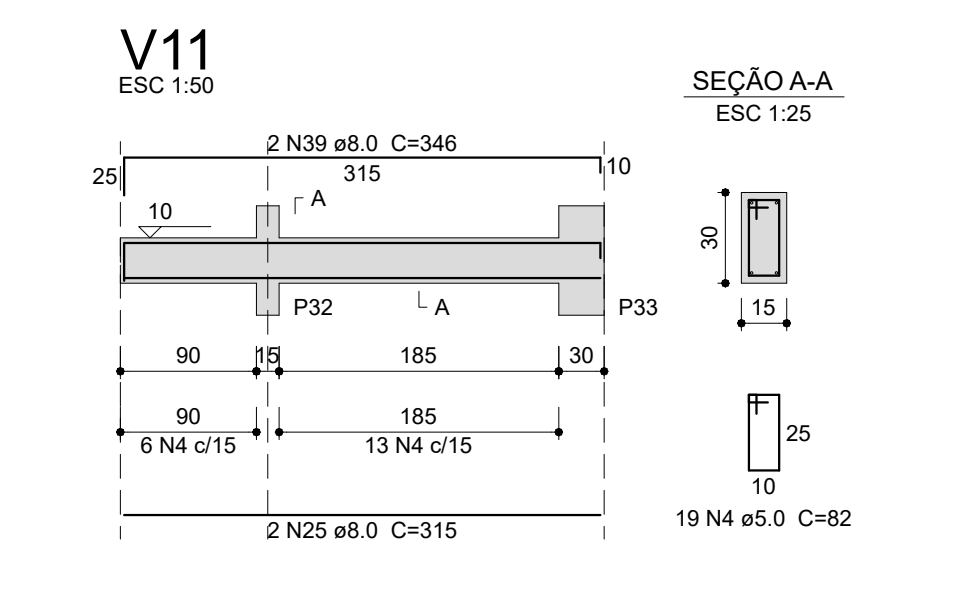
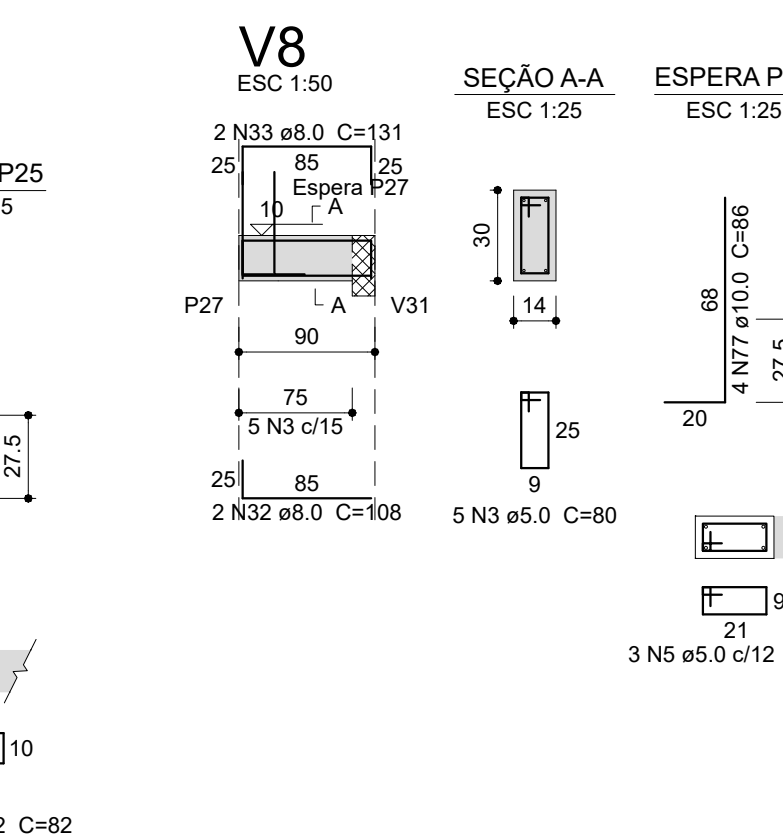
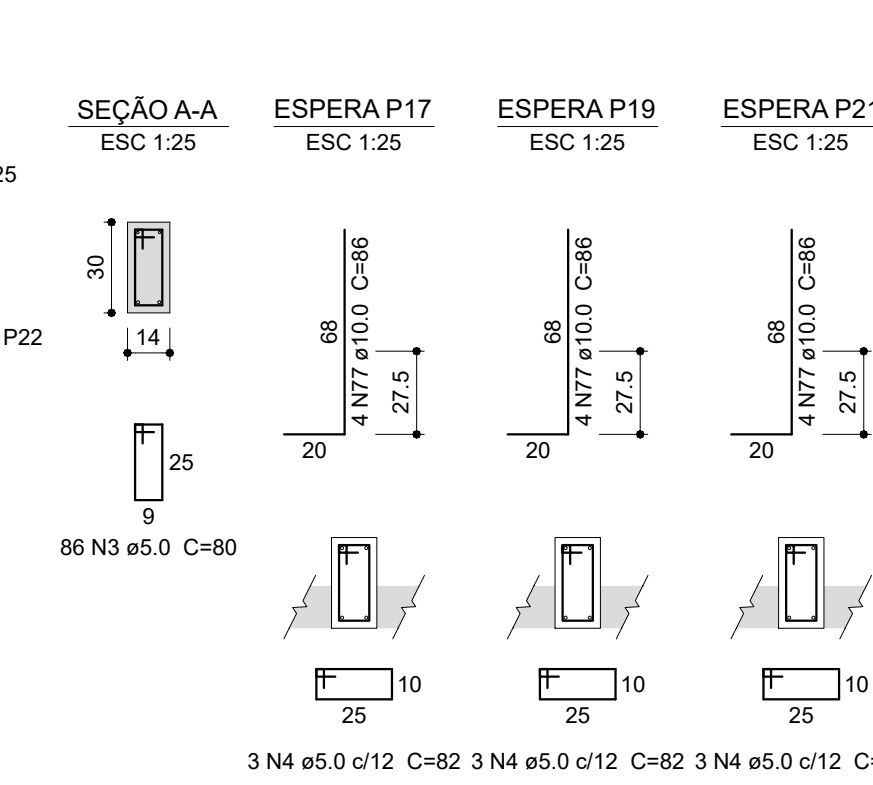


V1
ESC 1:50

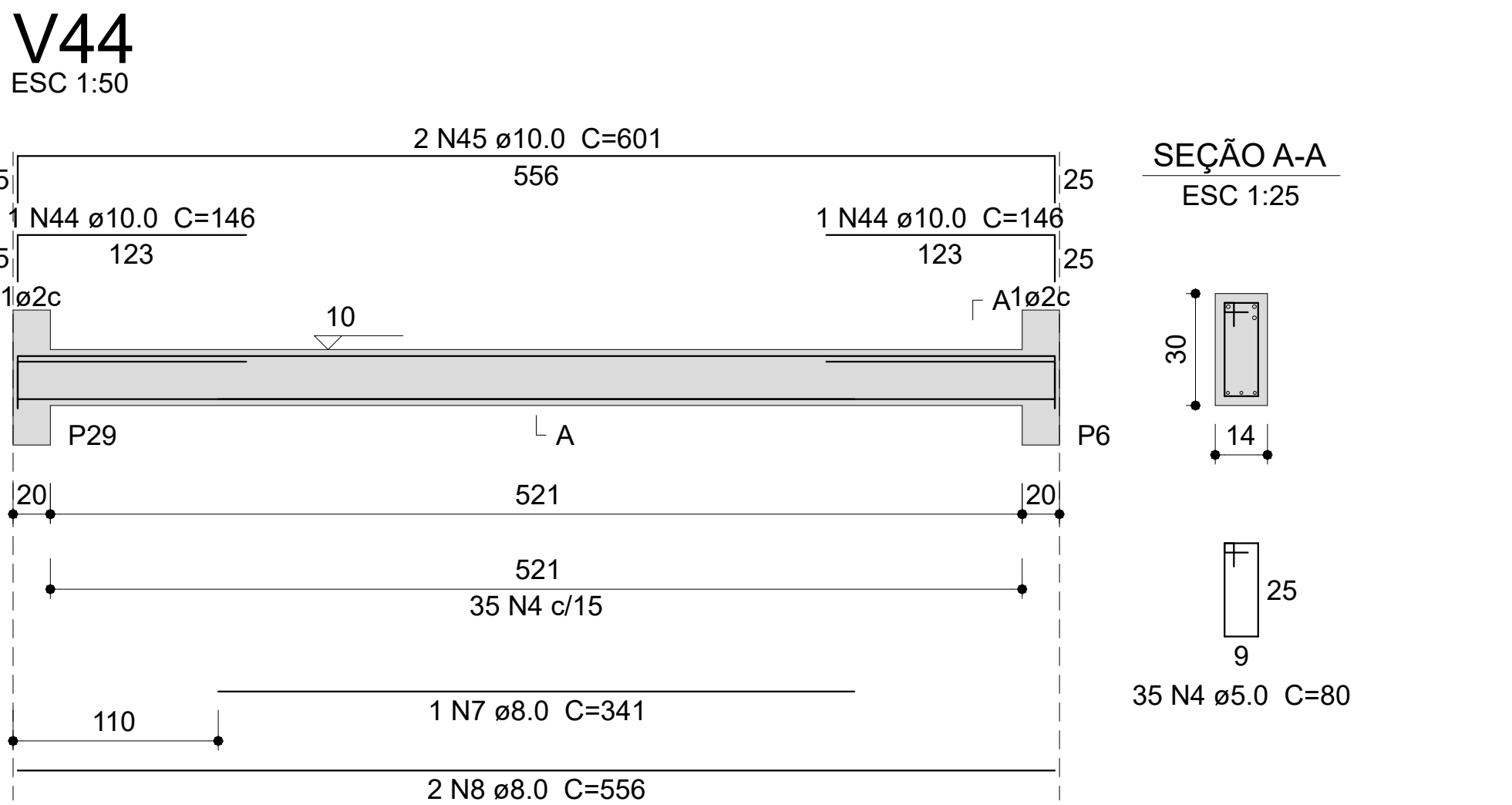
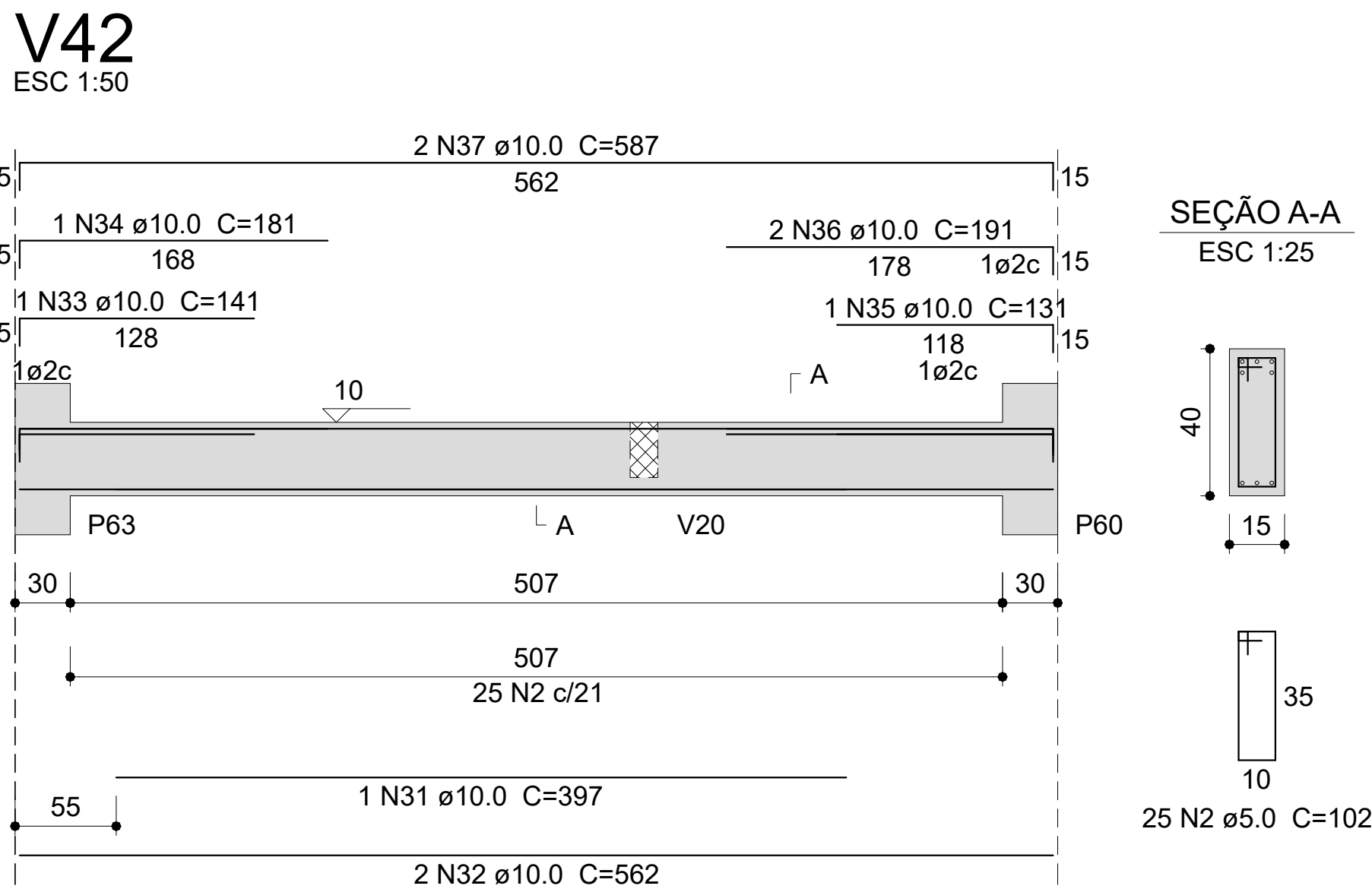
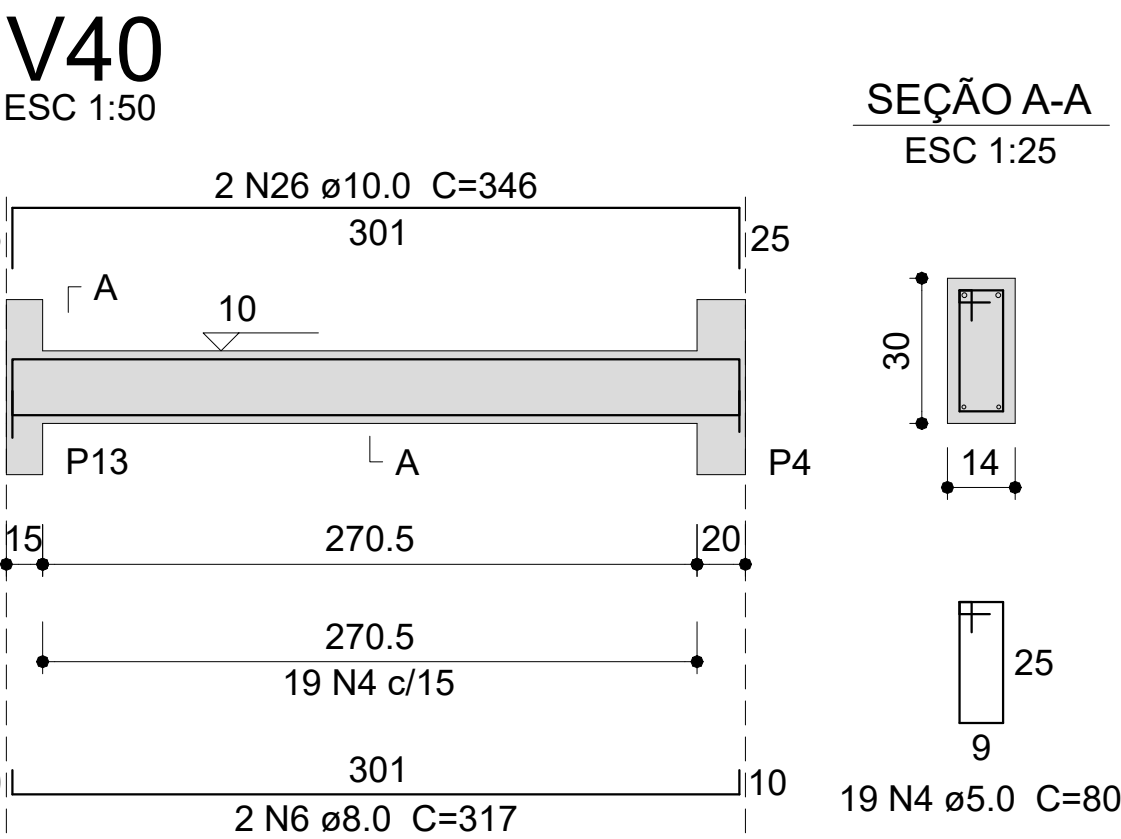
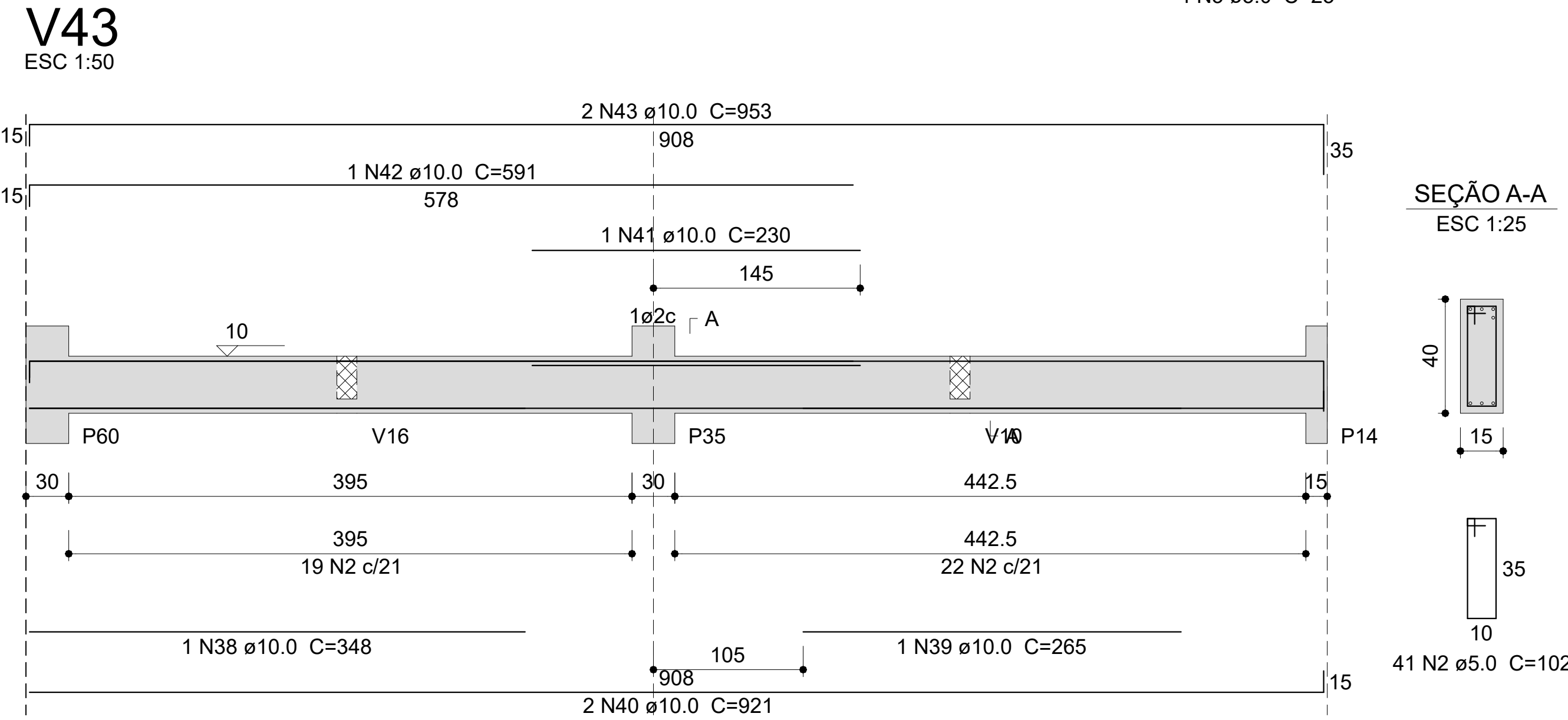
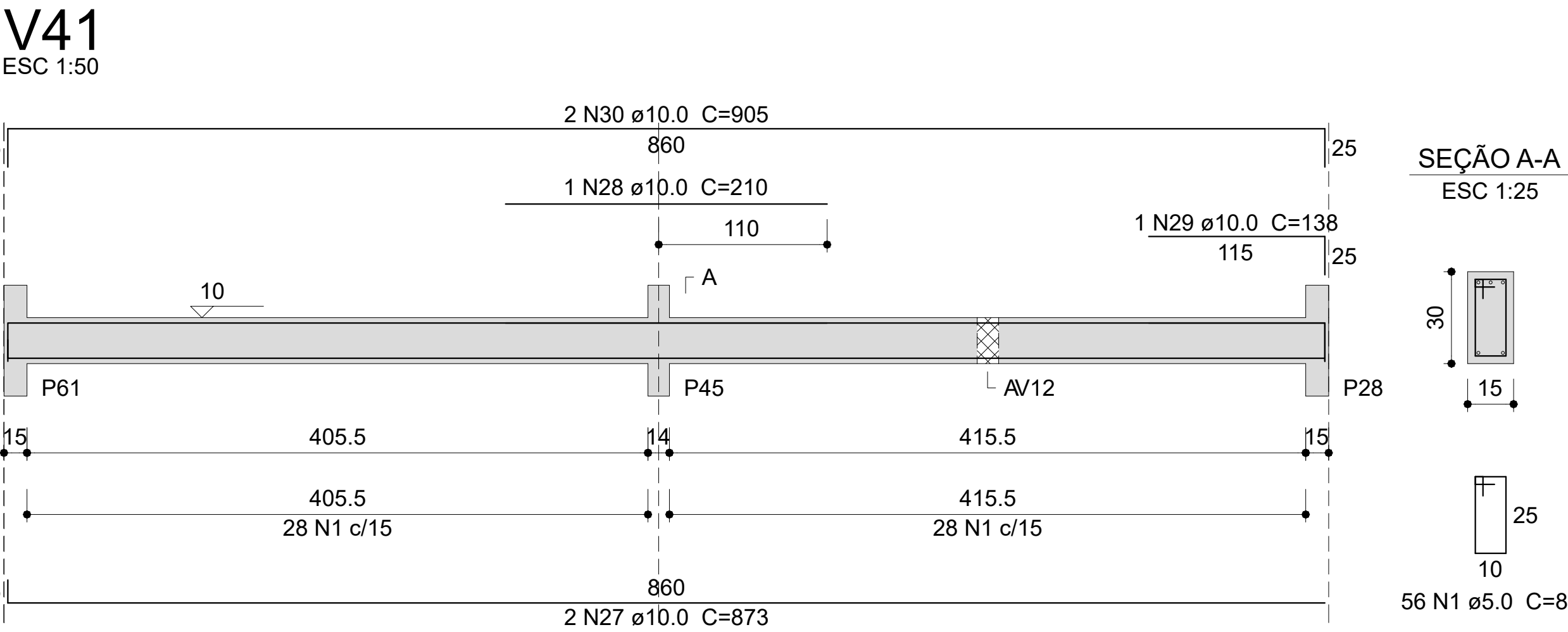
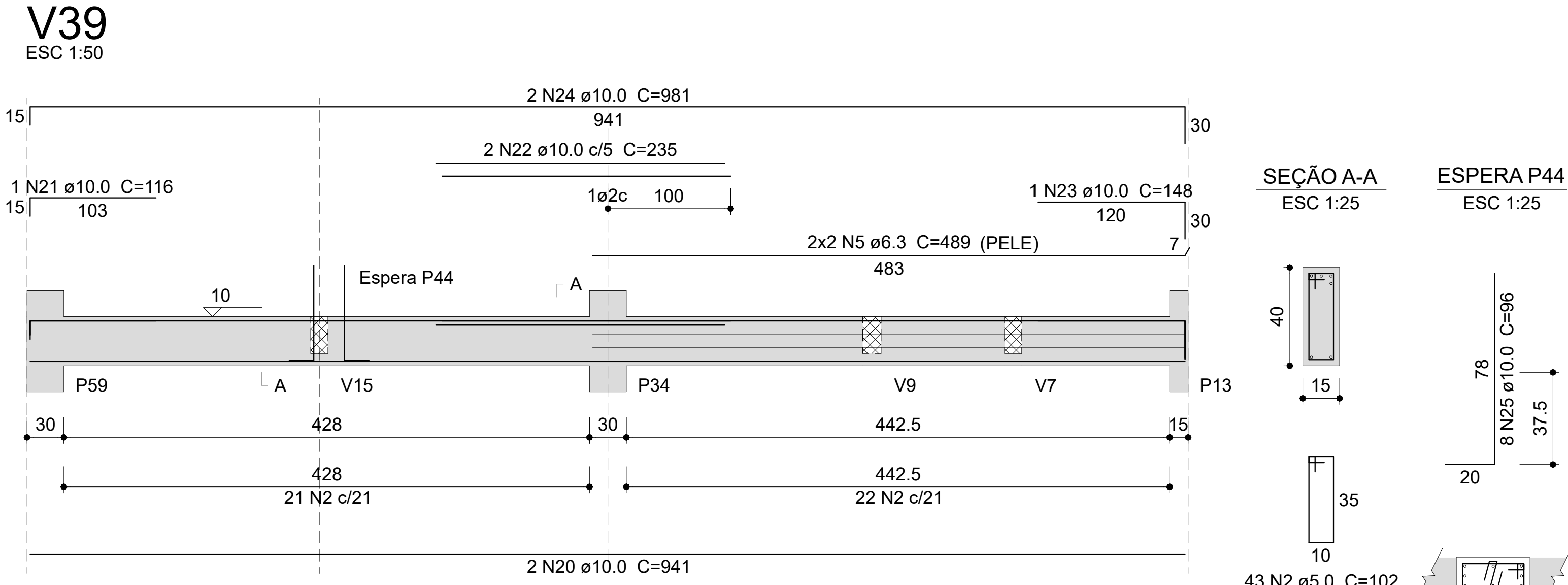
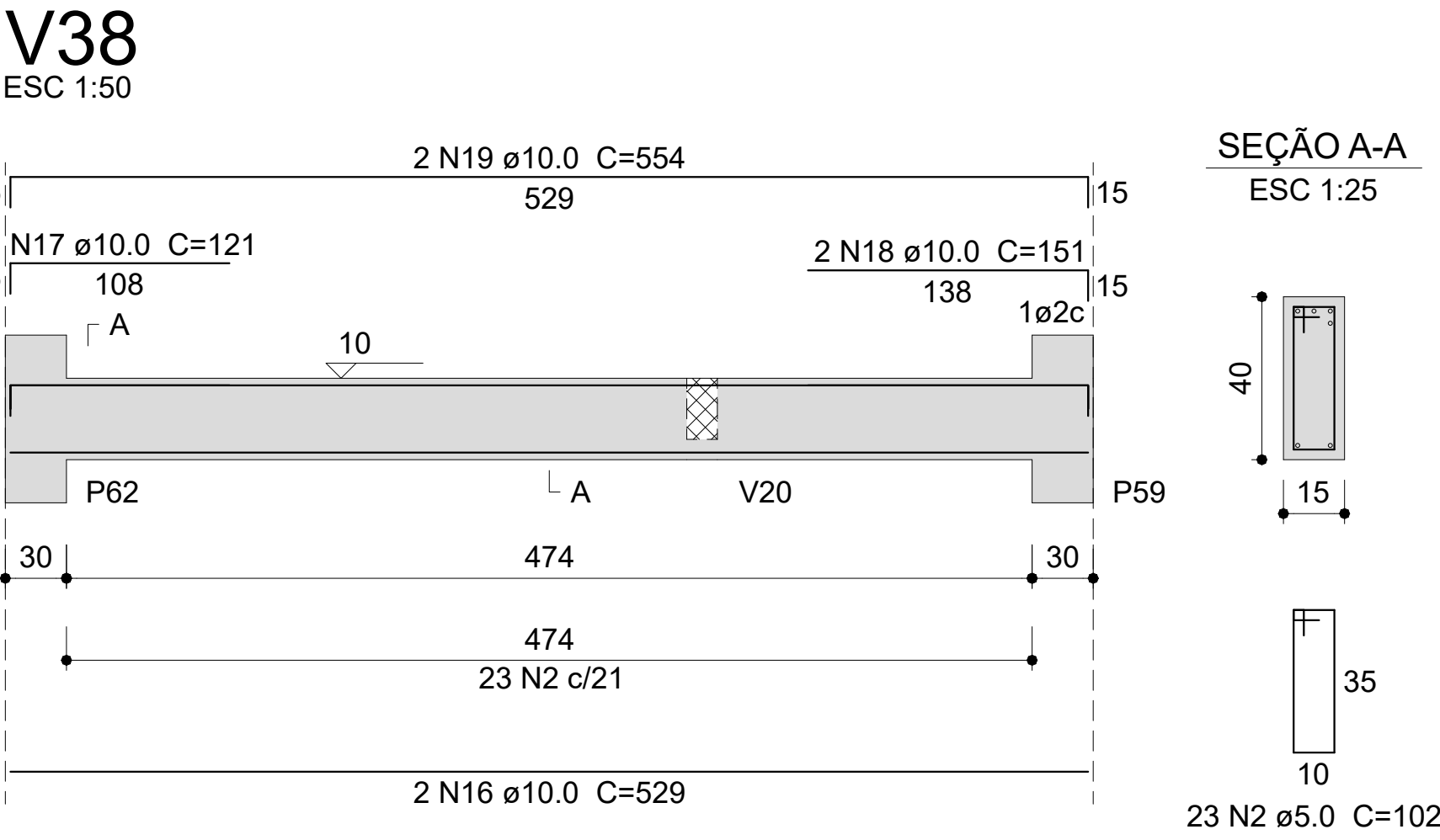
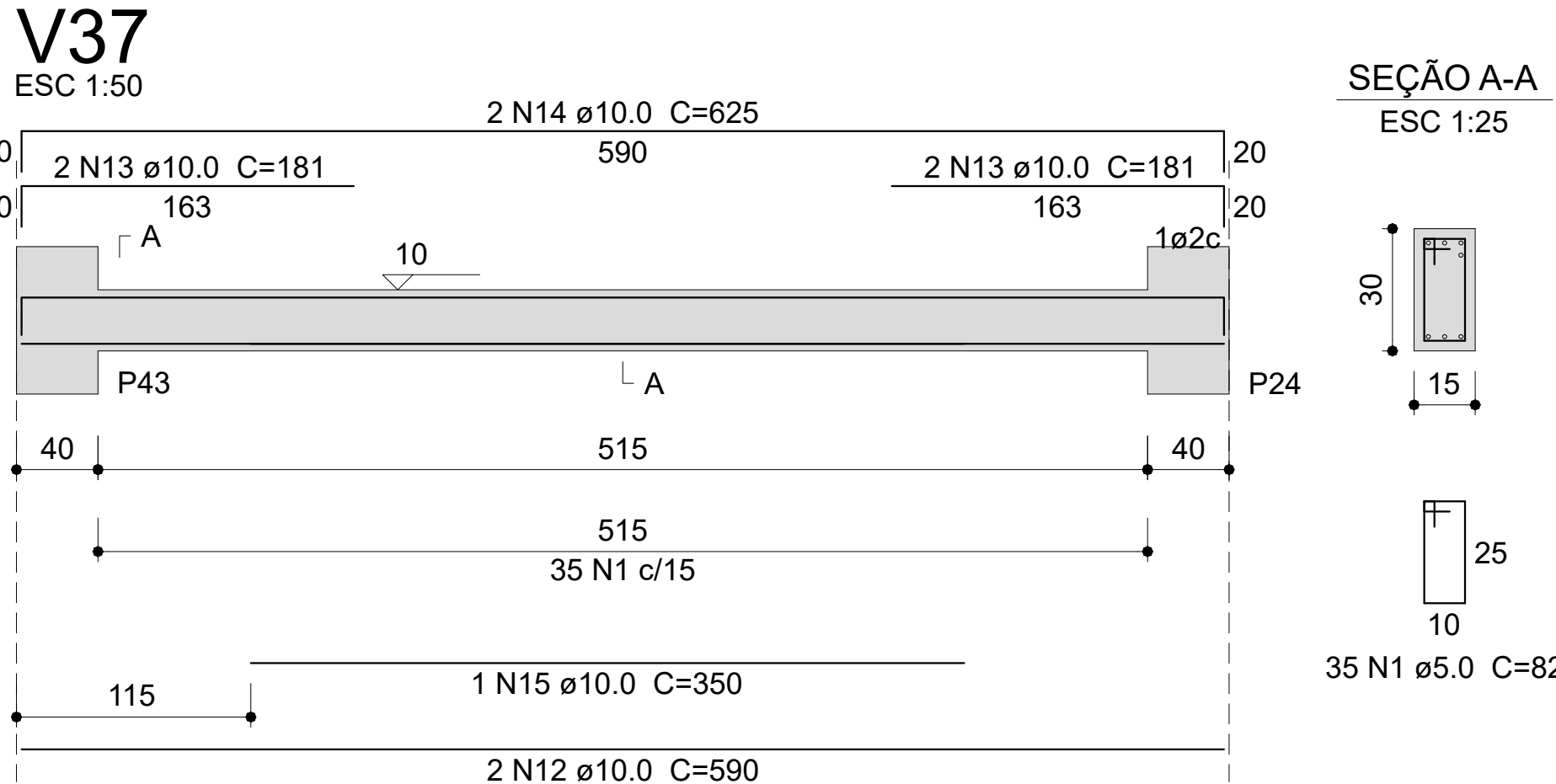
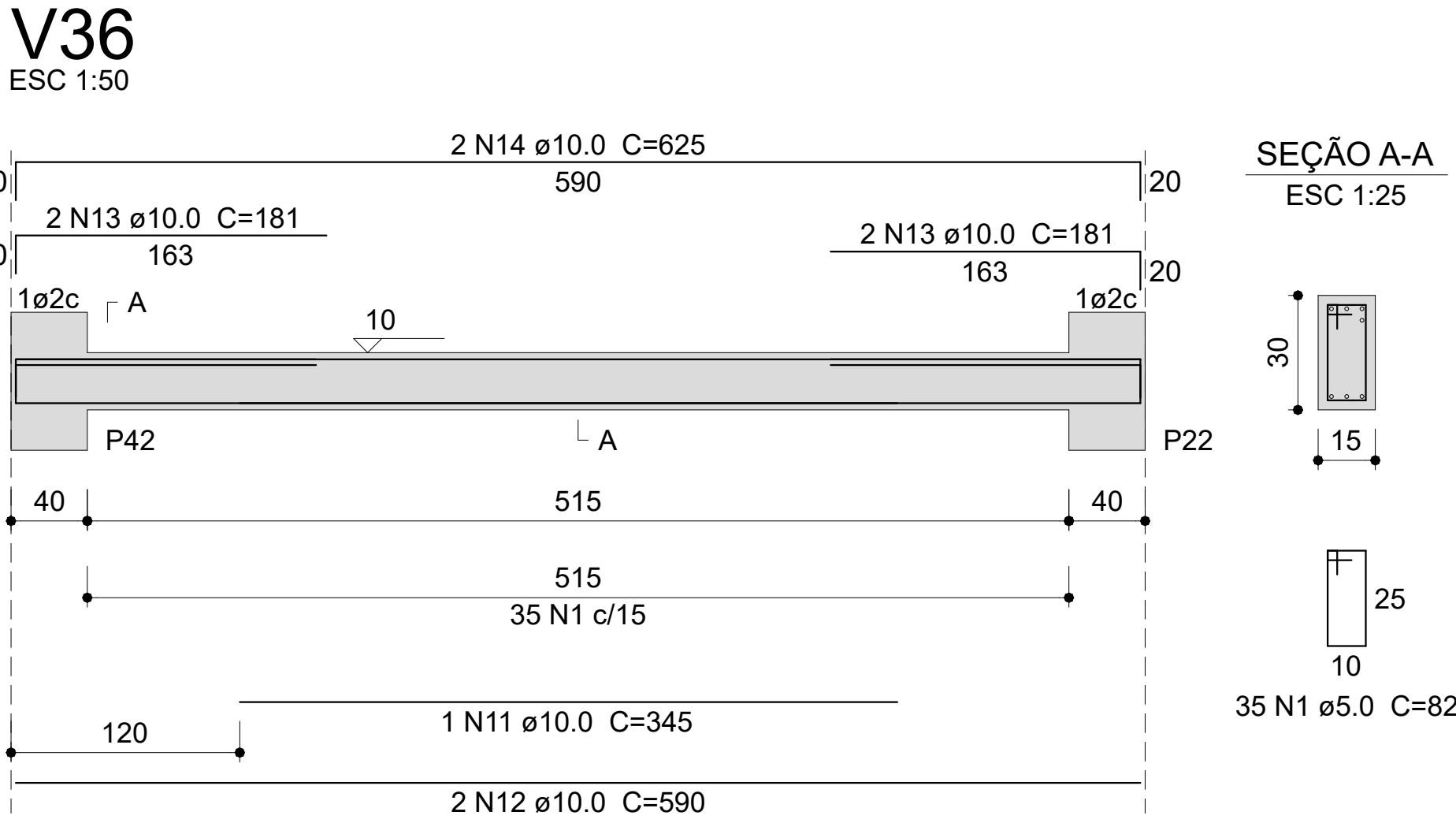
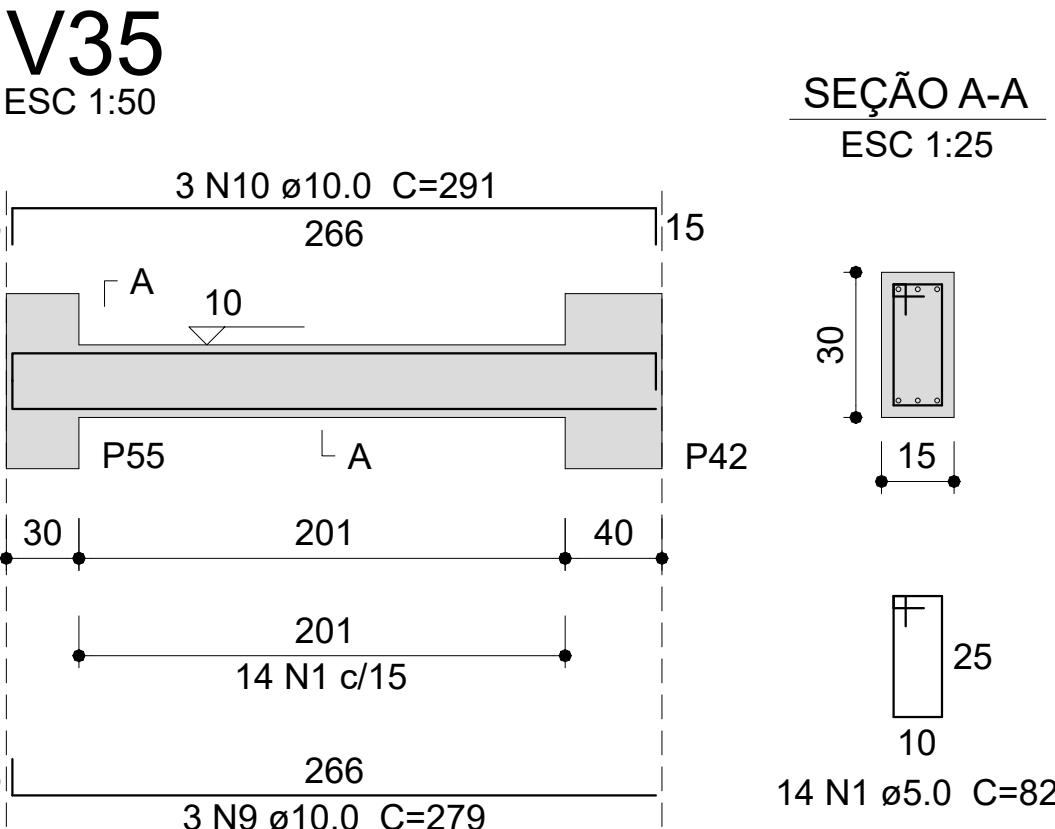


Resumo do aço

Volume de concreto (C-25) = 8.84 m³
Área de forma = 153.7 m²



DETALHE - VIGAS TÉRREO



Relação do aço

V35	V36	V37			
V38	V39	V40			
V41	V42	V43			
V44					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	144	82	11808
	2	5.0	132	102	13464
	3	5.0	4	25	100
CA50	4	5.0	54	80	4320
	5	6.3	4	489	1956
	6	8.0	2	317	634
	7	8.0	1	341	341
	8	8.0	2	556	1112
	9	10.0	3	279	837
	10	10.0	3	291	873
	11	10.0	1	345	345
	12	10.0	4	590	2360
	13	10.0	8	181	1448
	14	10.0	4	625	2500
	15	10.0	1	350	350
	16	10.0	2	529	1058
	17	10.0	1	121	121
	18	10.0	2	151	302
	19	10.0	2	554	1108
	20	10.0	2	941	1882
	21	10.0	1	116	116
	22	10.0	2	235	470
	23	10.0	1	148	148
	24	10.0	2	981	1962
	25	10.0	8	96	768
	26	10.0	2	346	692
	27	10.0	2	873	1746
	28	10.0	1	210	210
	29	10.0	1	138	138
	30	10.0	2	905	1810
	31	10.0	1	397	397
	32	10.0	2	562	1124
	33	10.0	1	141	141
	34	10.0	1	181	181
	35	10.0	1	131	131
	36	10.0	2	191	382
	37	10.0	2	587	1174
	38	10.0	1	348	348
	39	10.0	1	265	265
	40	10.0	2	921	1842
	41	10.0	1	230	230
	42	10.0	1	591	591
	43	10.0	2	953	1906
	44	10.0	2	146	292
	45	10.0	2	601	1202

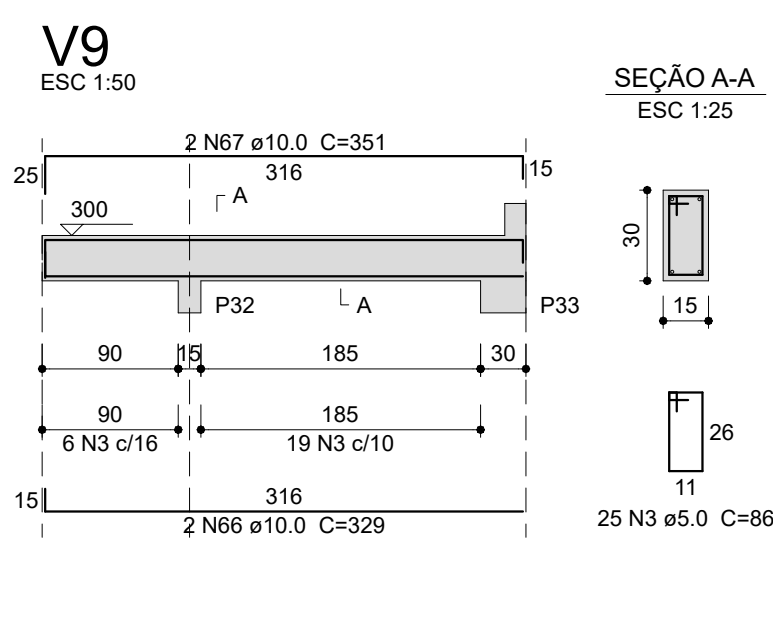
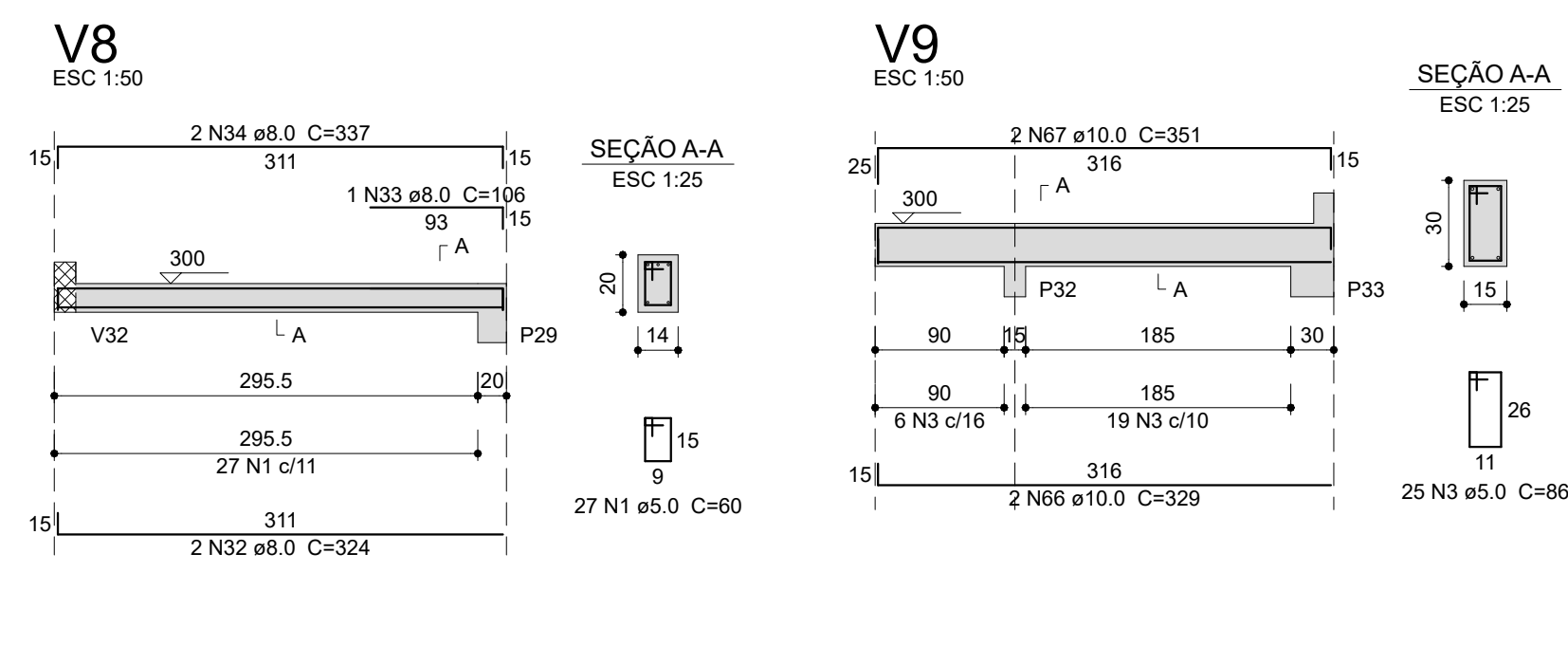
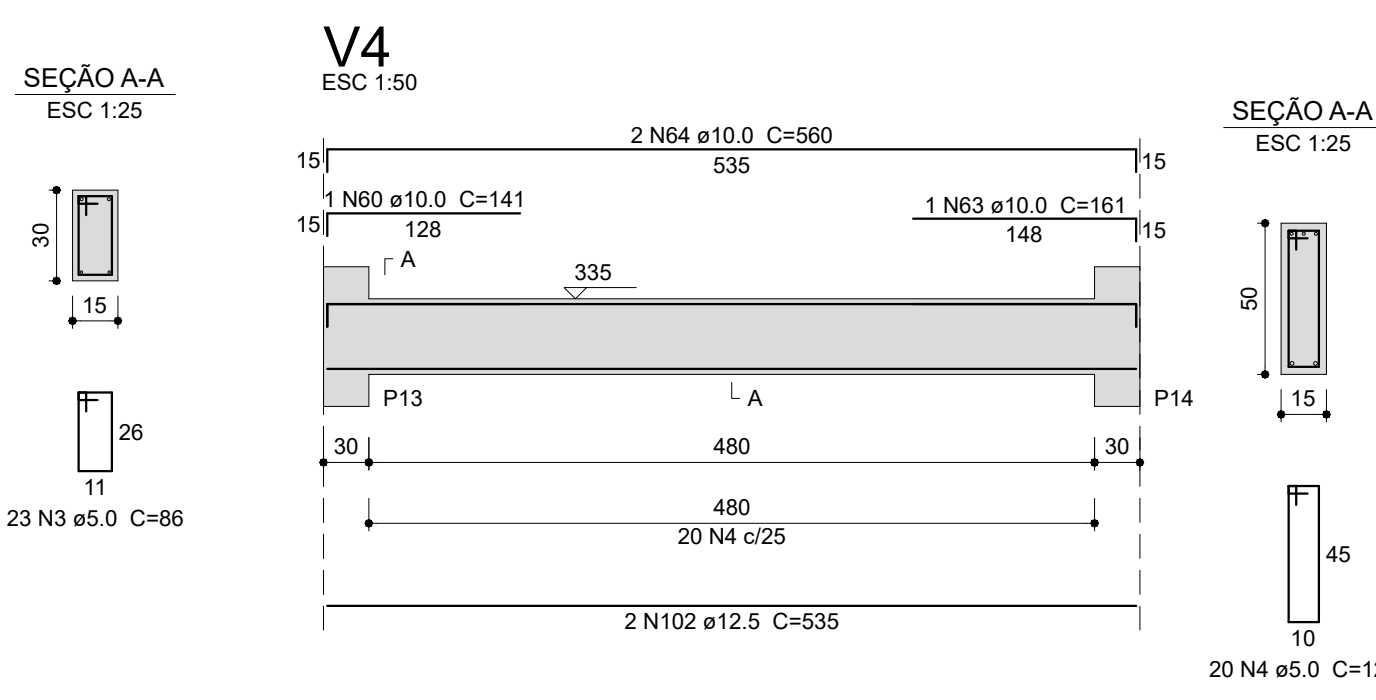
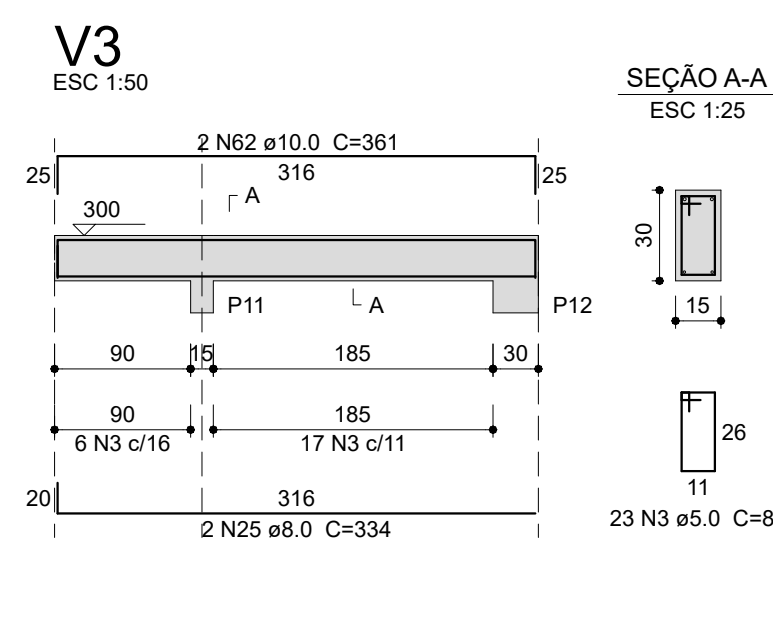
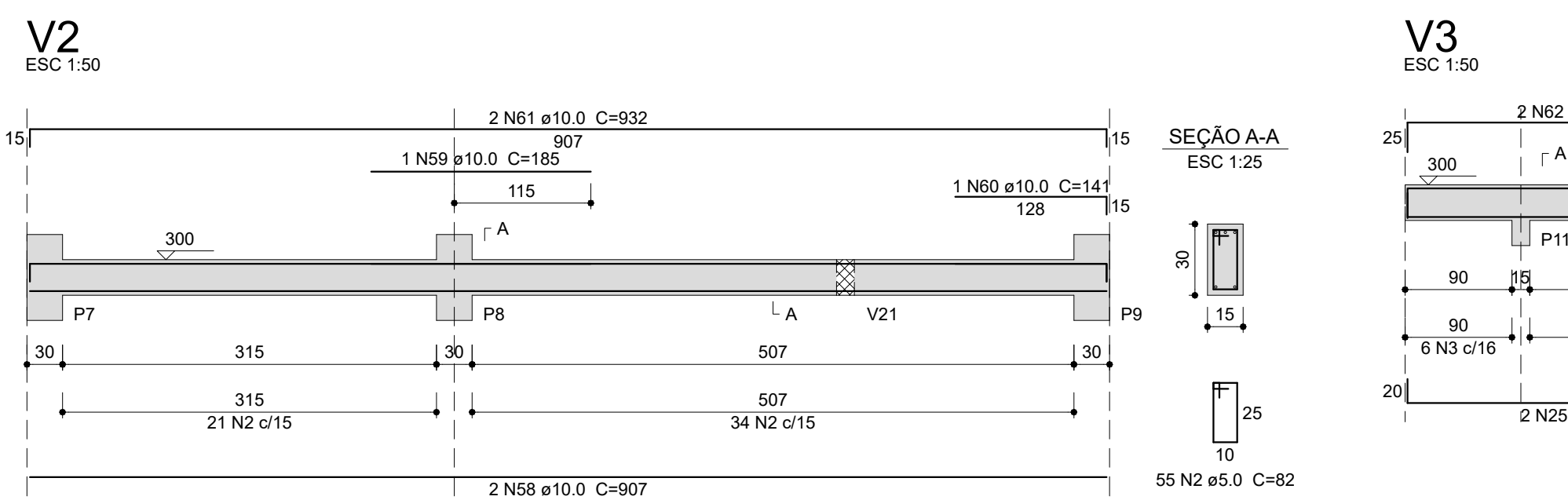
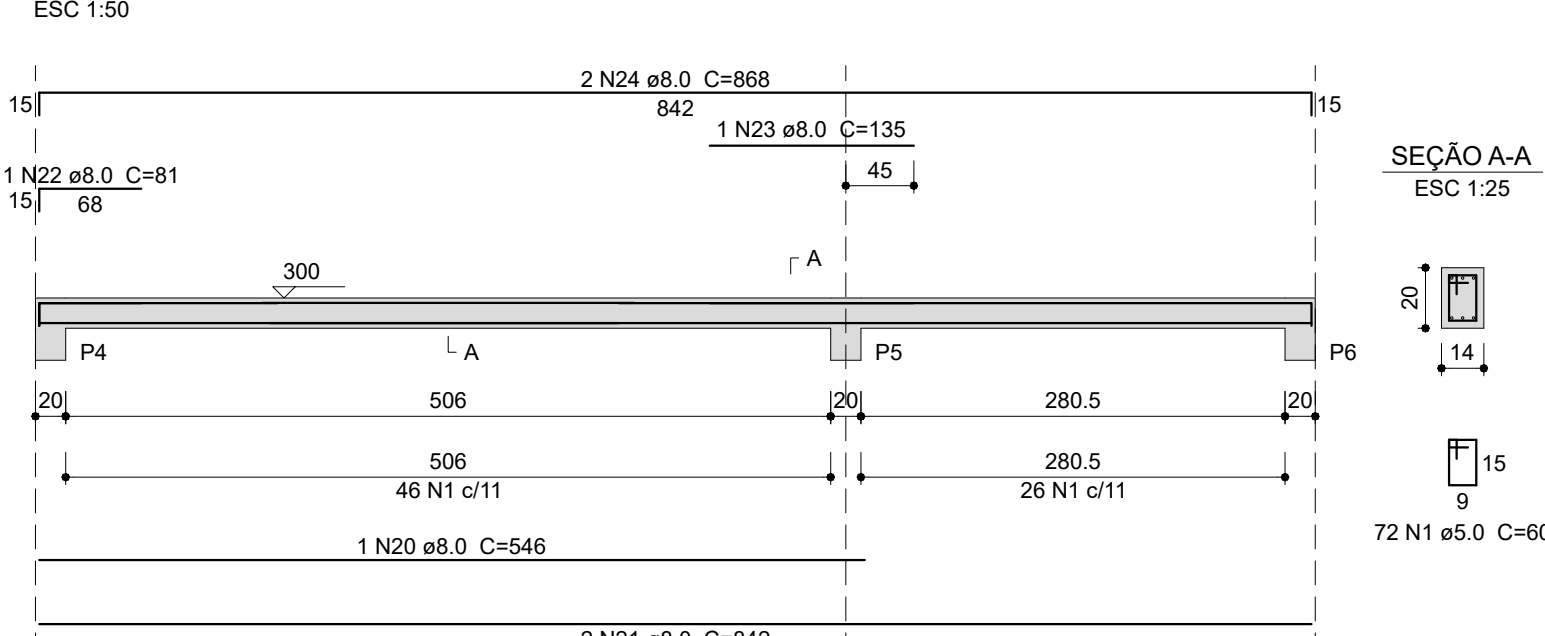
Resumo do aço

ÁÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	19.6	5.3
	8.0	20.9	9.1
	10.0	314.5	213.3
CA60	5.0	297	50.3
PESO TOTAL (kg)			
CA50	227.6		
CA60	50.3		

Volume de concreto (C-25) = 3.19 m³
Área de forma = 51.97 m²



LOCAL: ERECHIM - RS	FASE: EXECUTIVO	ESCALA: 1:25 E 1:50
OBRA: CENTRO DE ACOLHIMENTO	REVISÃO Nº: R00	TAMANHO FOLHA: 950 X 750
PROJETO: ESTRUTURAL	DATA: 07/10/2025	Nº PRANCHA: 07
CONTEÚDO: DETALHE - VIGAS TÉRREO (V35 A V44)	DESENHADO POR: RODRIGO	15
ENDEREÇO: RODOVIA ERS 135, KM 72, 200	NOME DO ARQUIVO: CENTRO-ACOLHIMENTO_LFPA_EPA_ESTRUT	14

$V =$ 

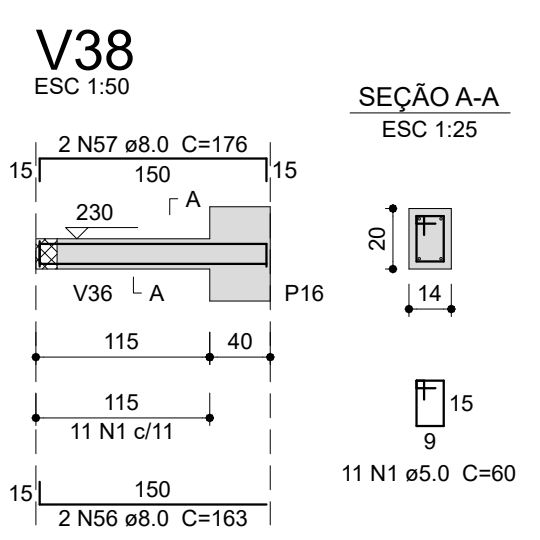
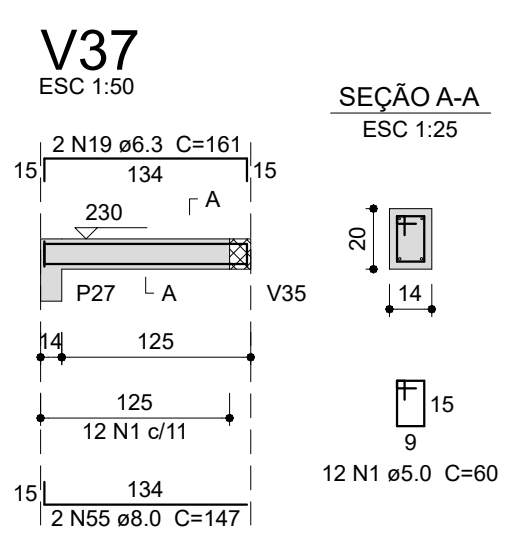
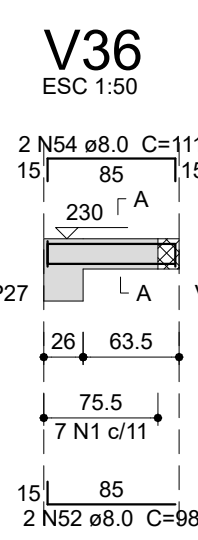
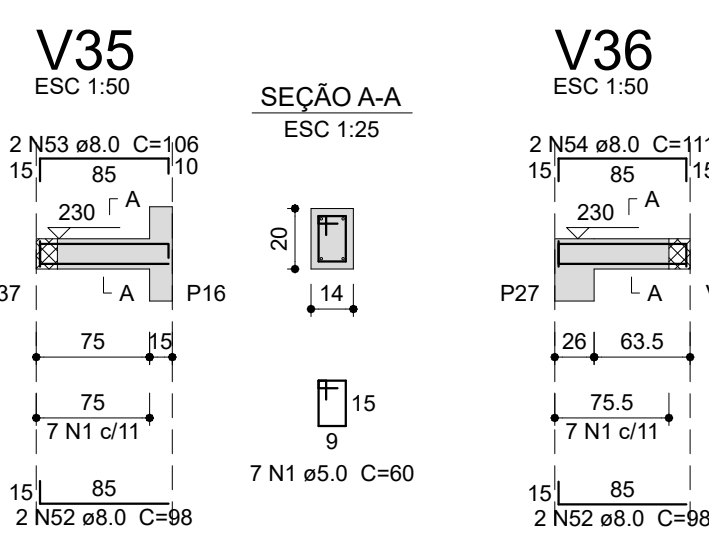
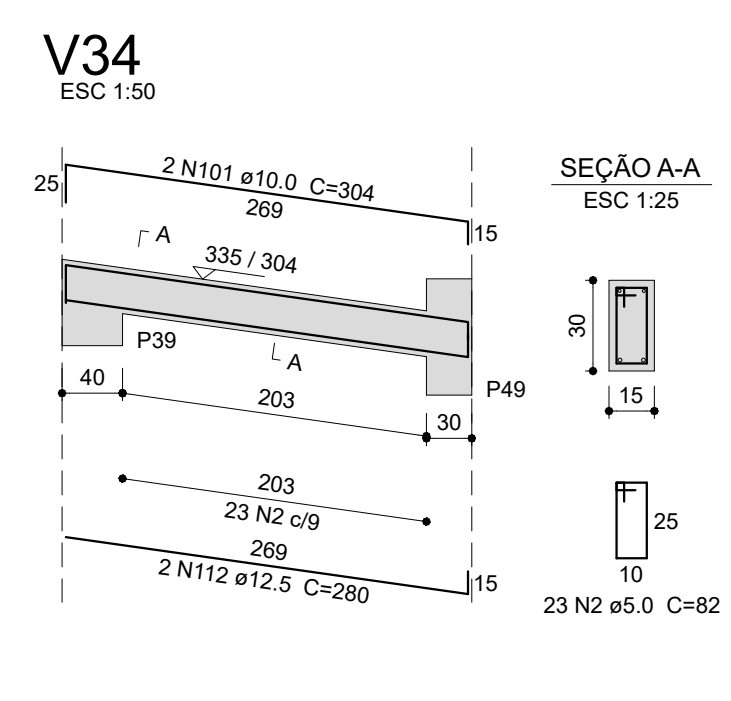
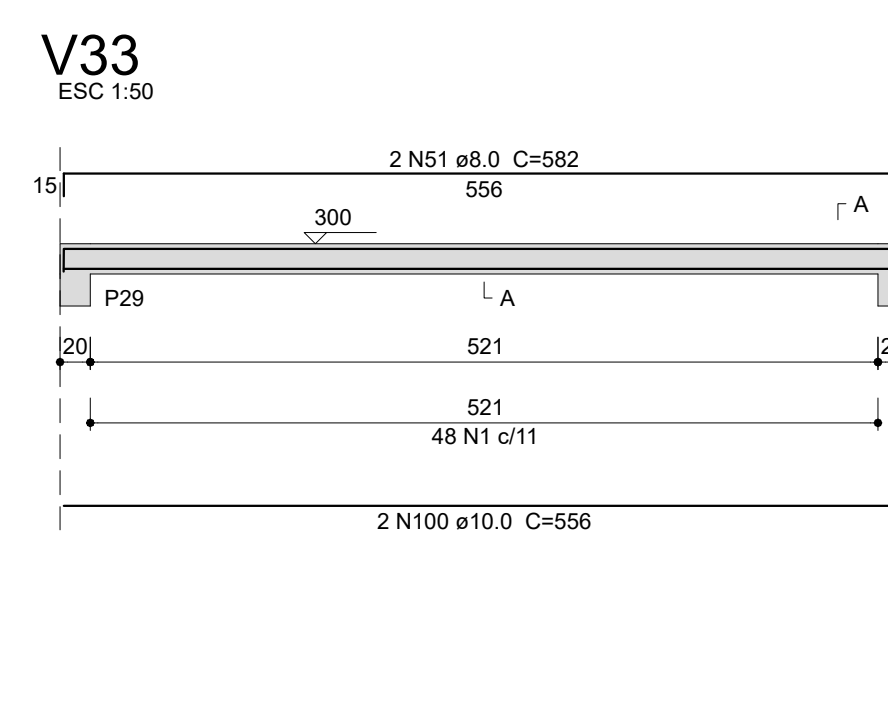
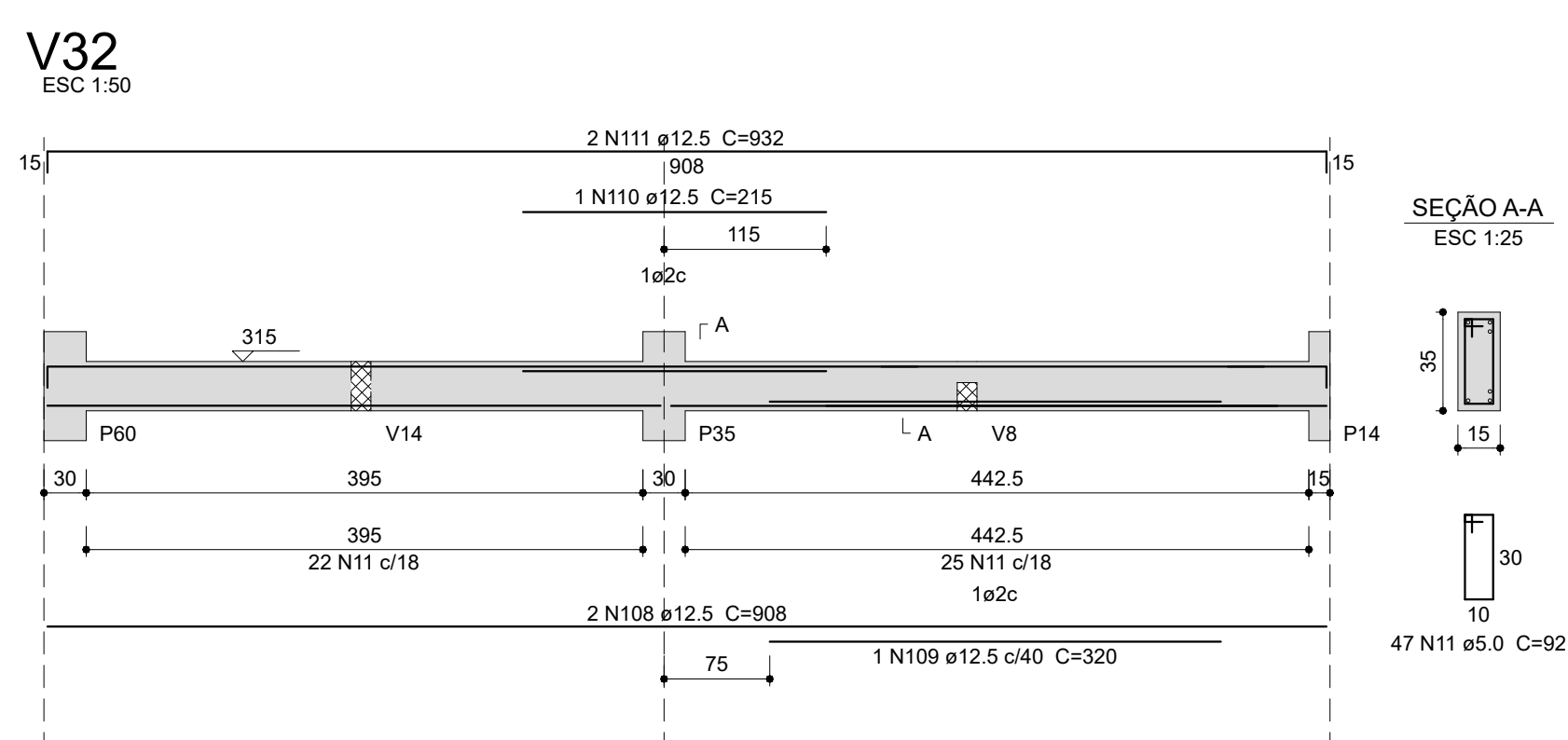
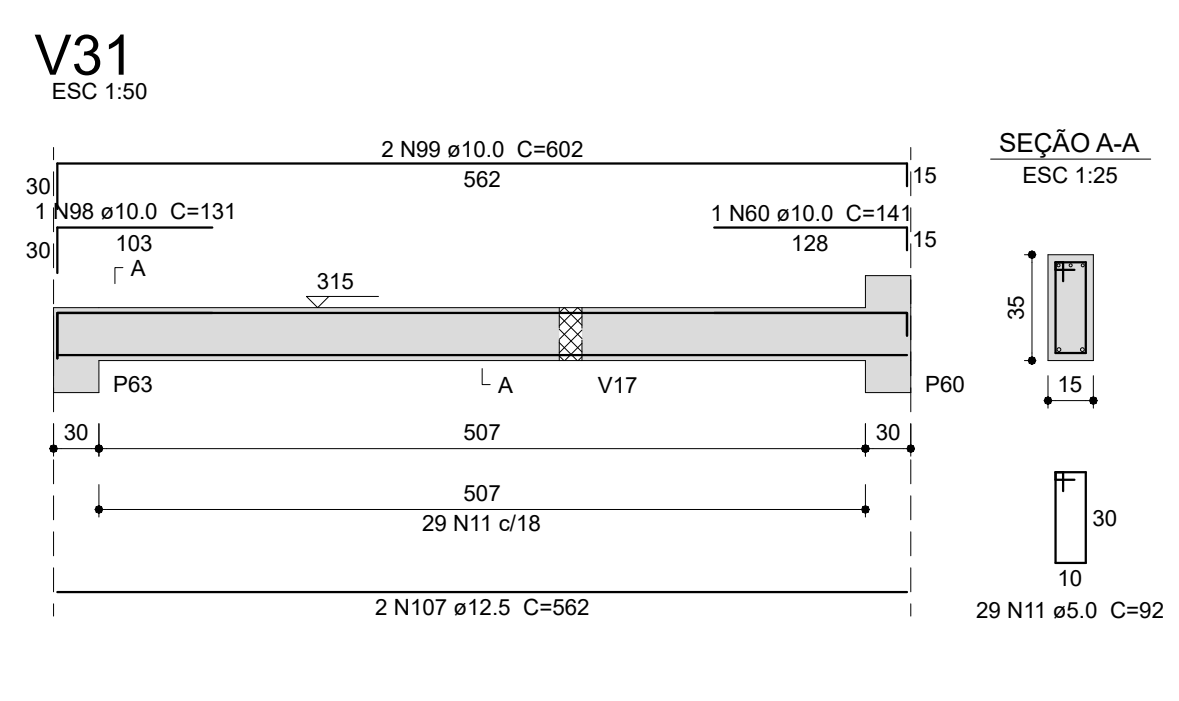
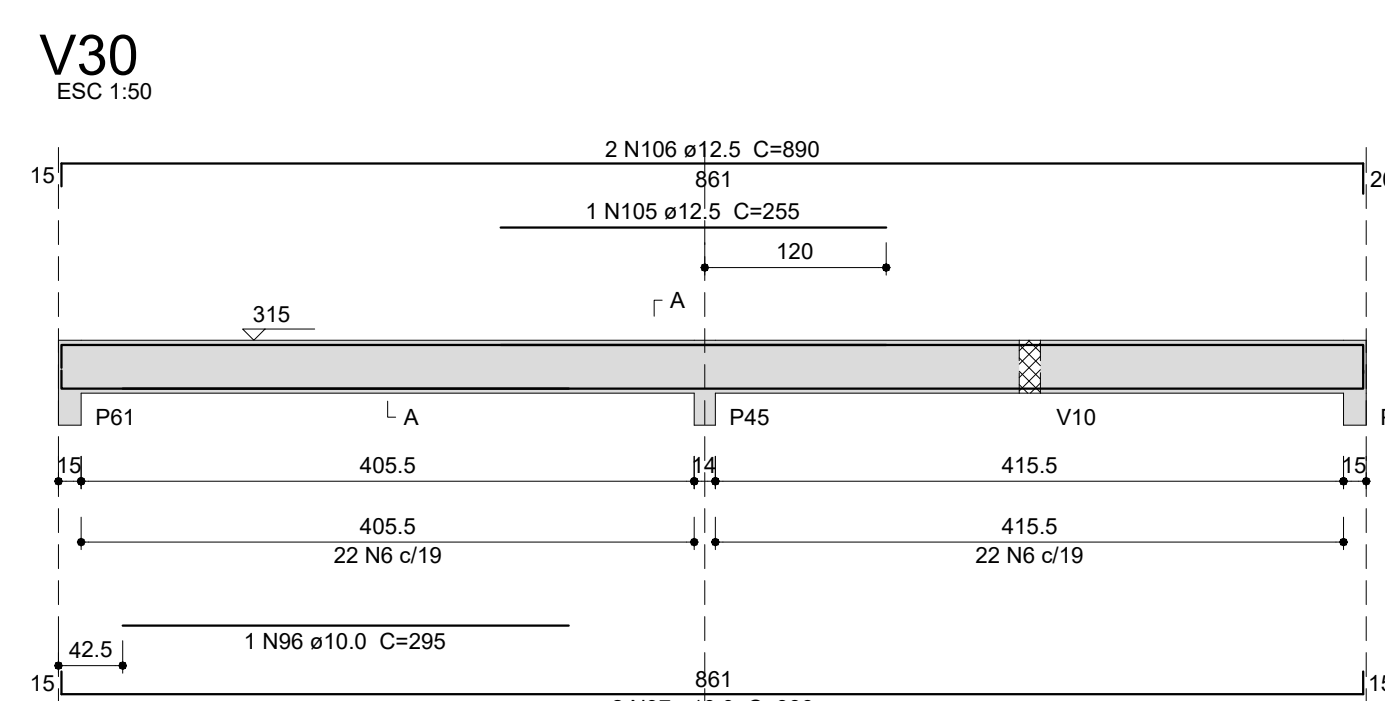
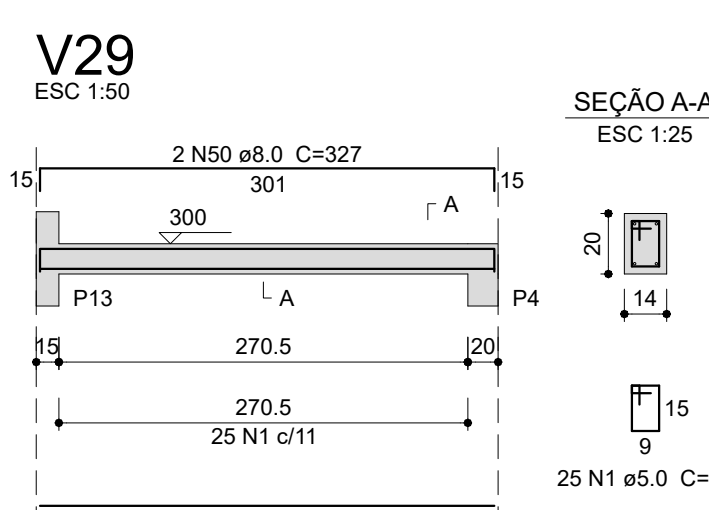
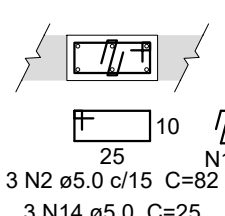
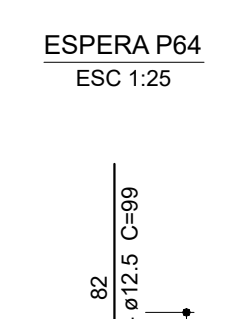
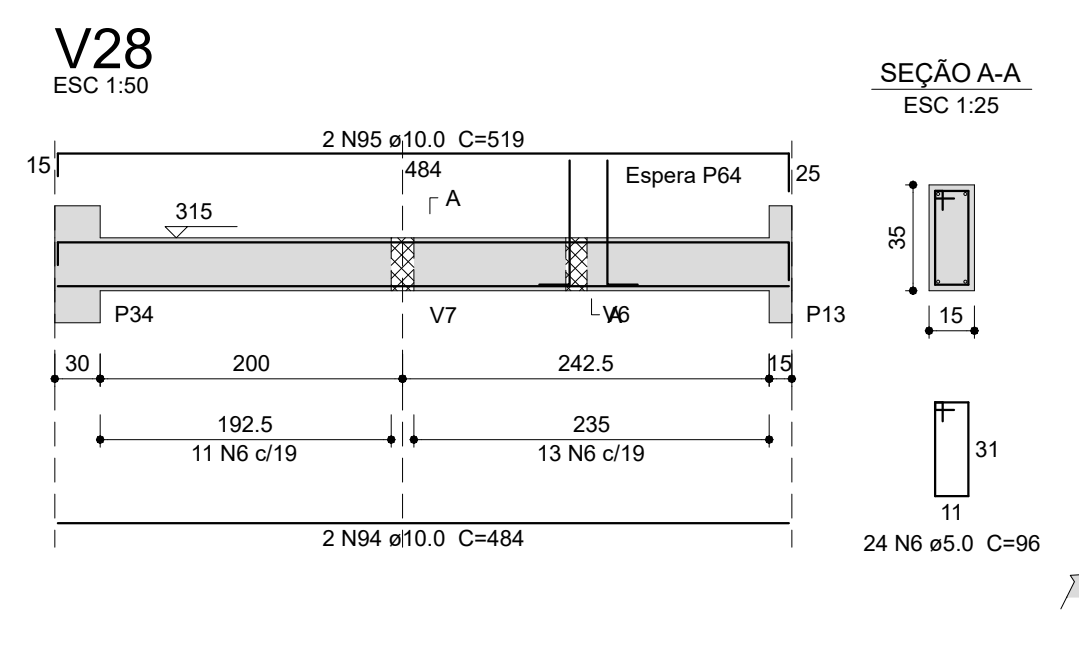
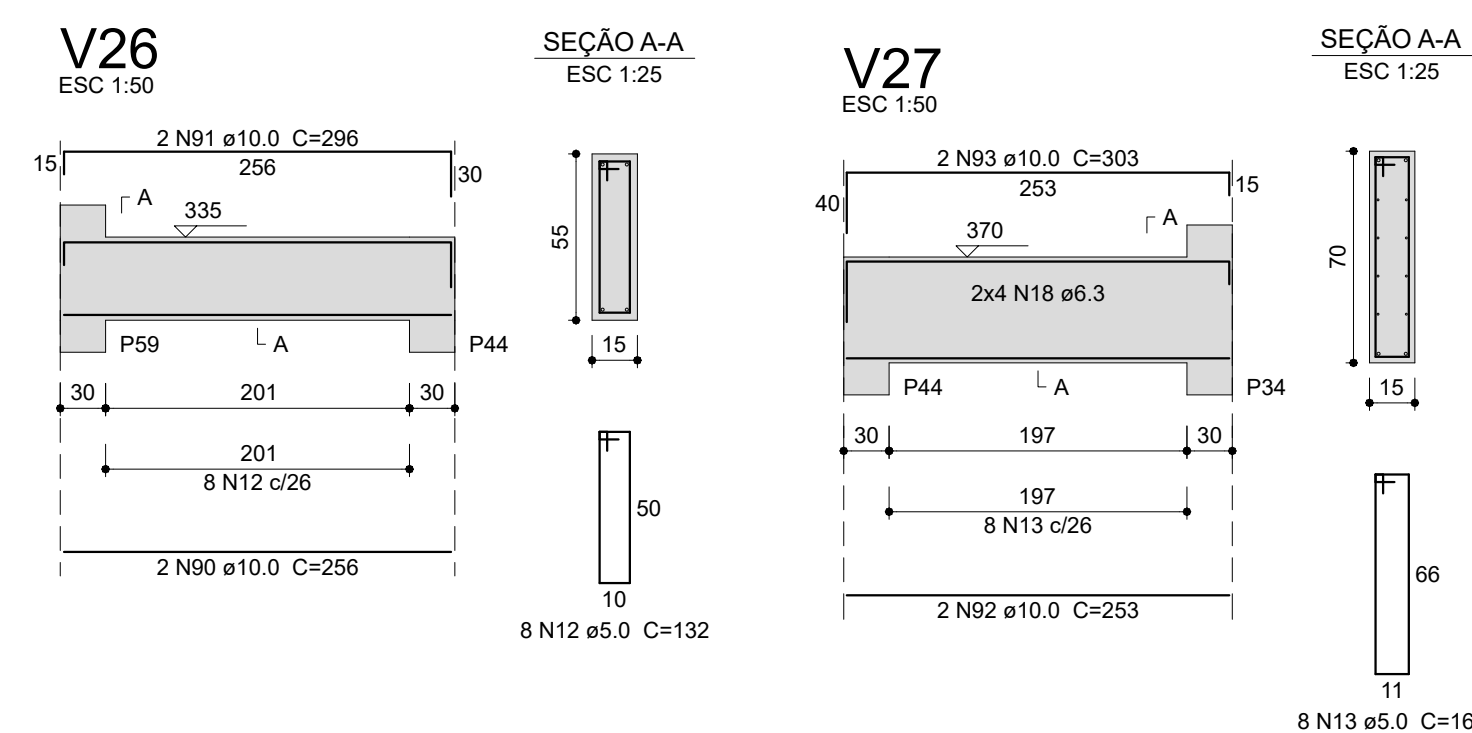
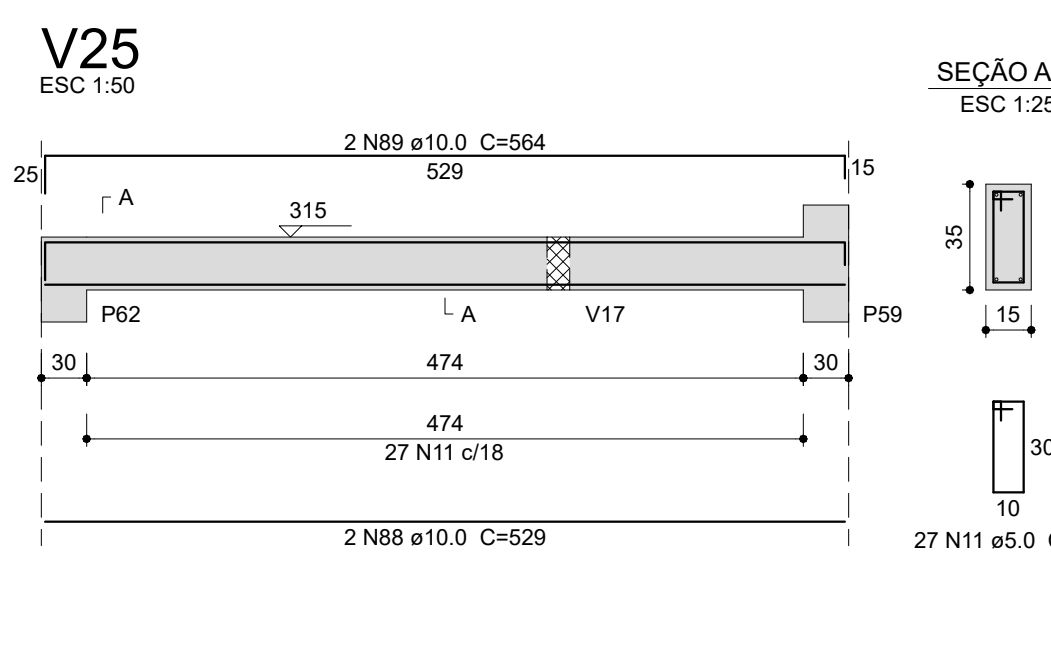
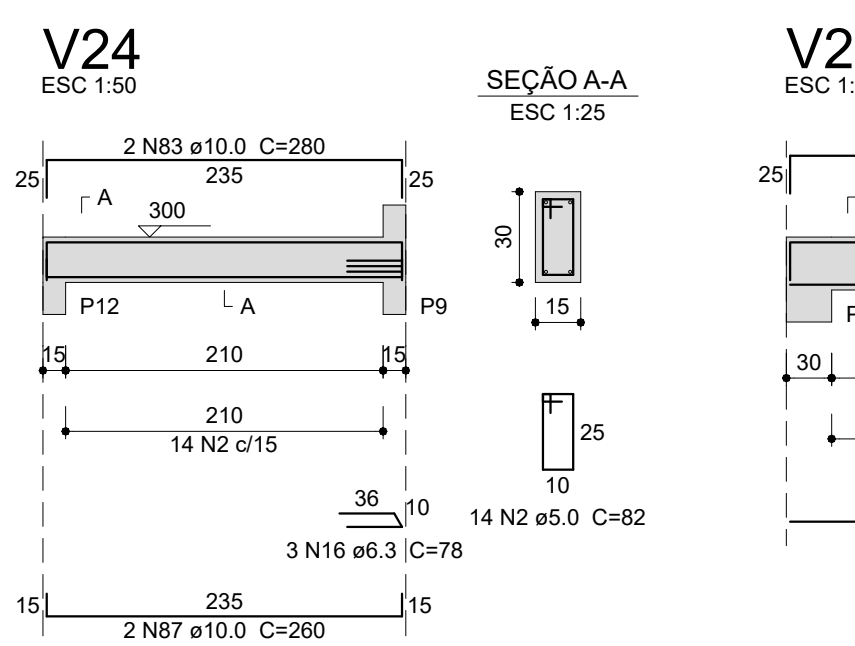
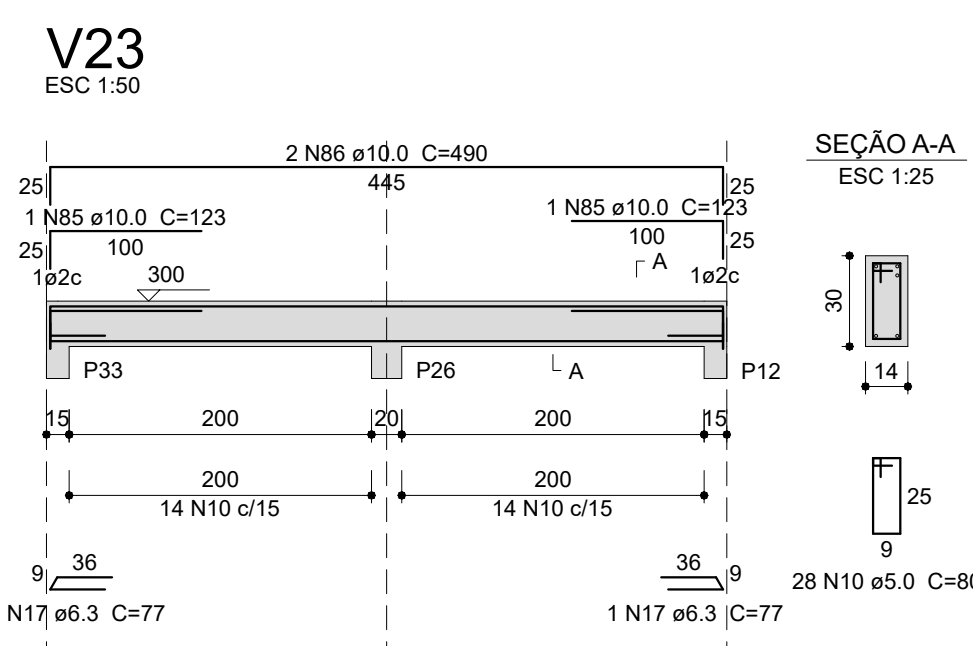
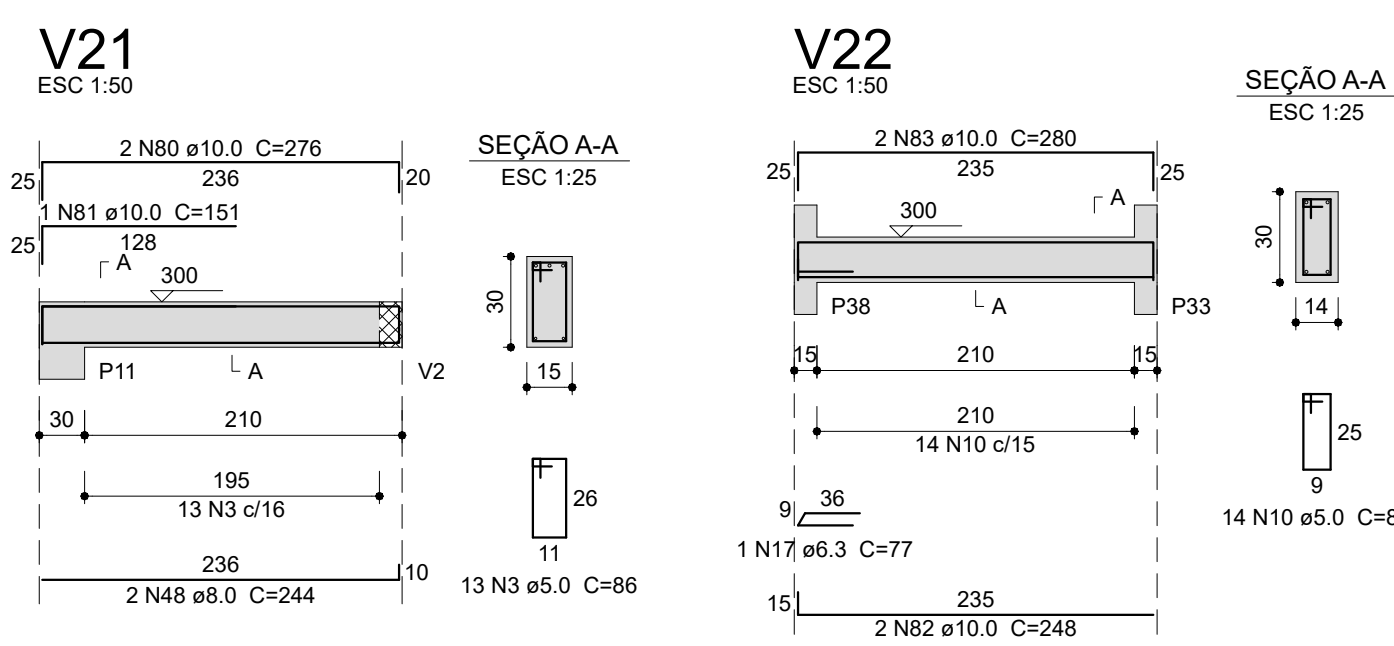
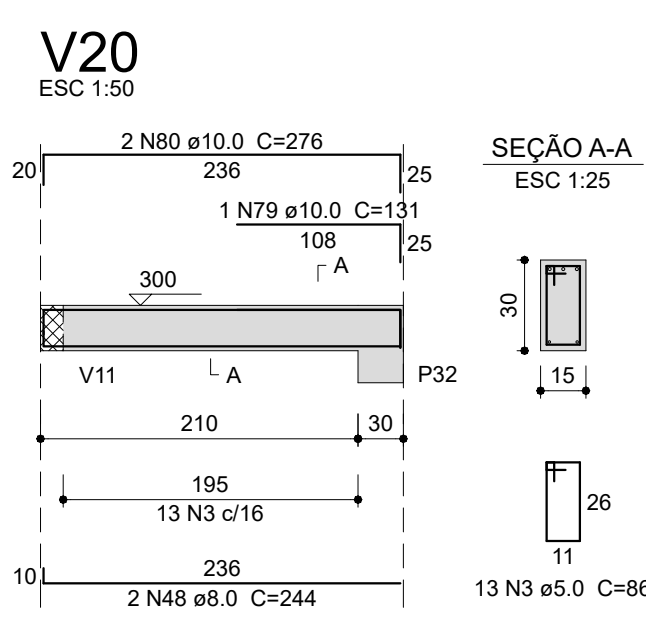
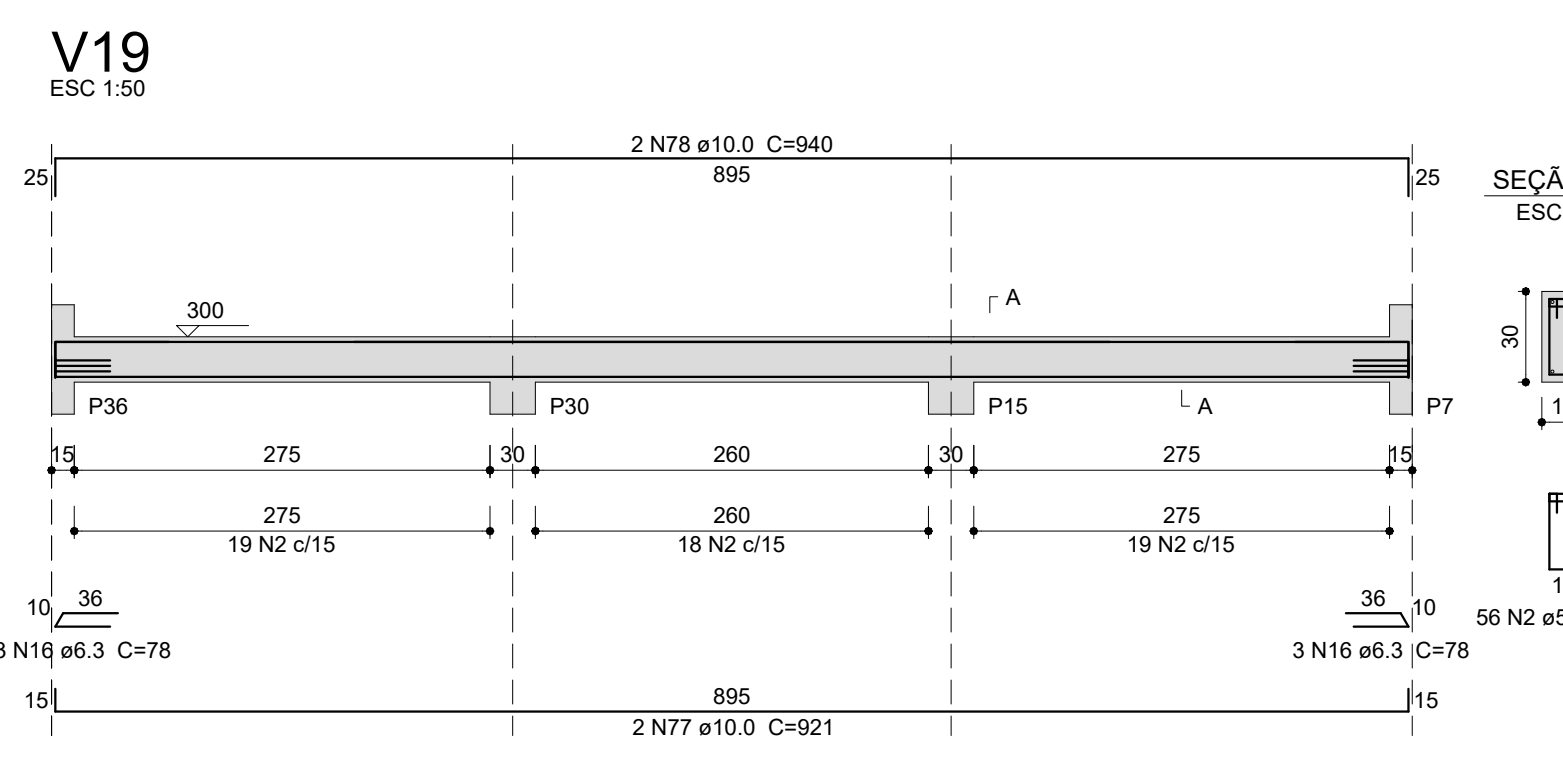
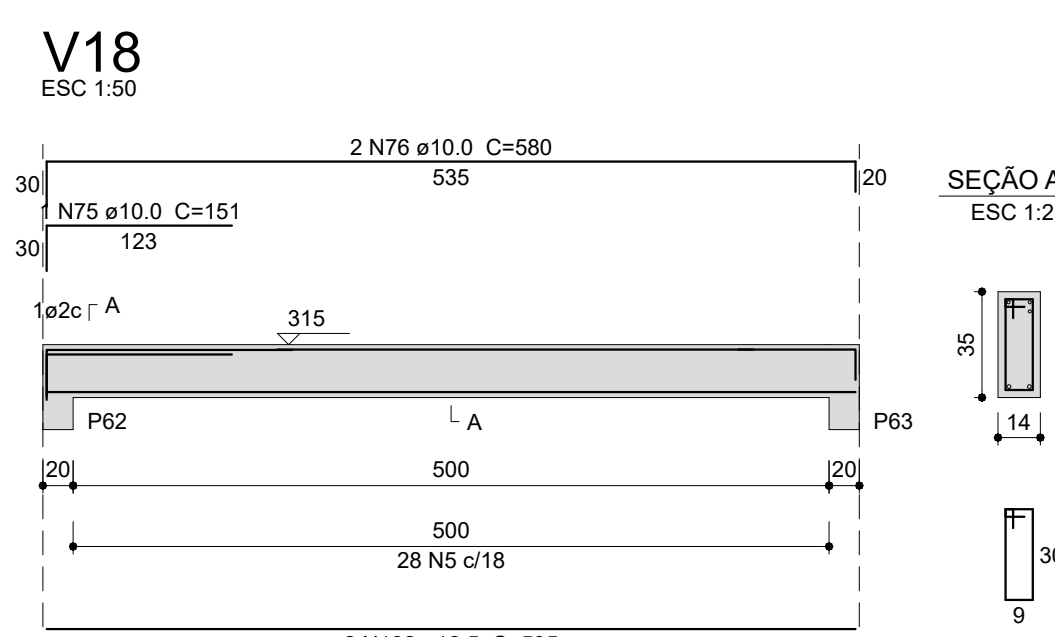
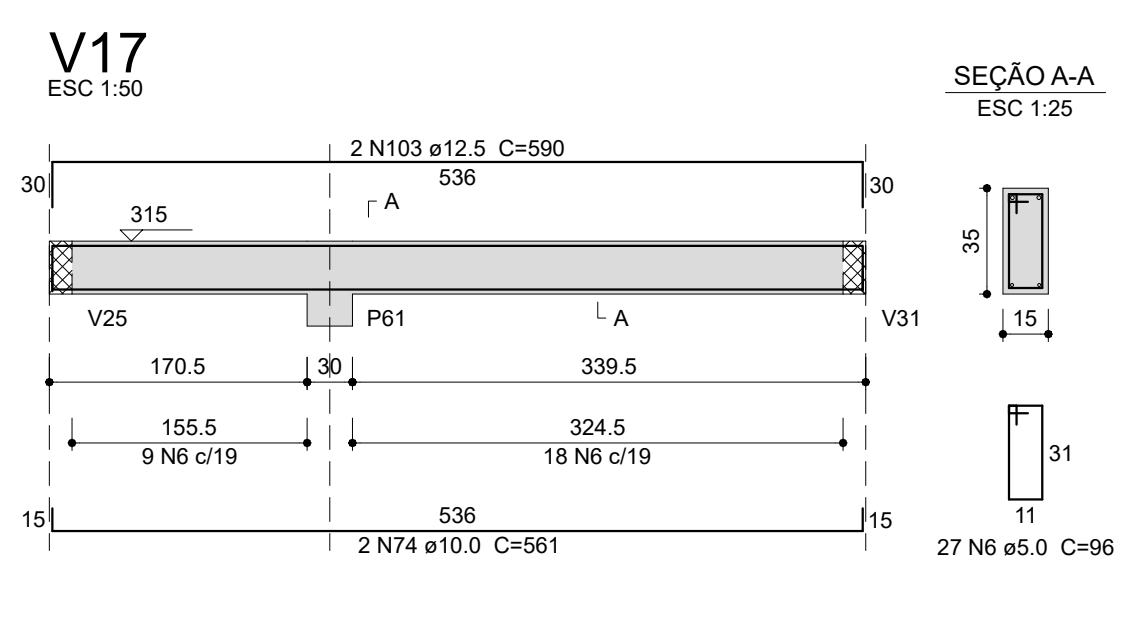
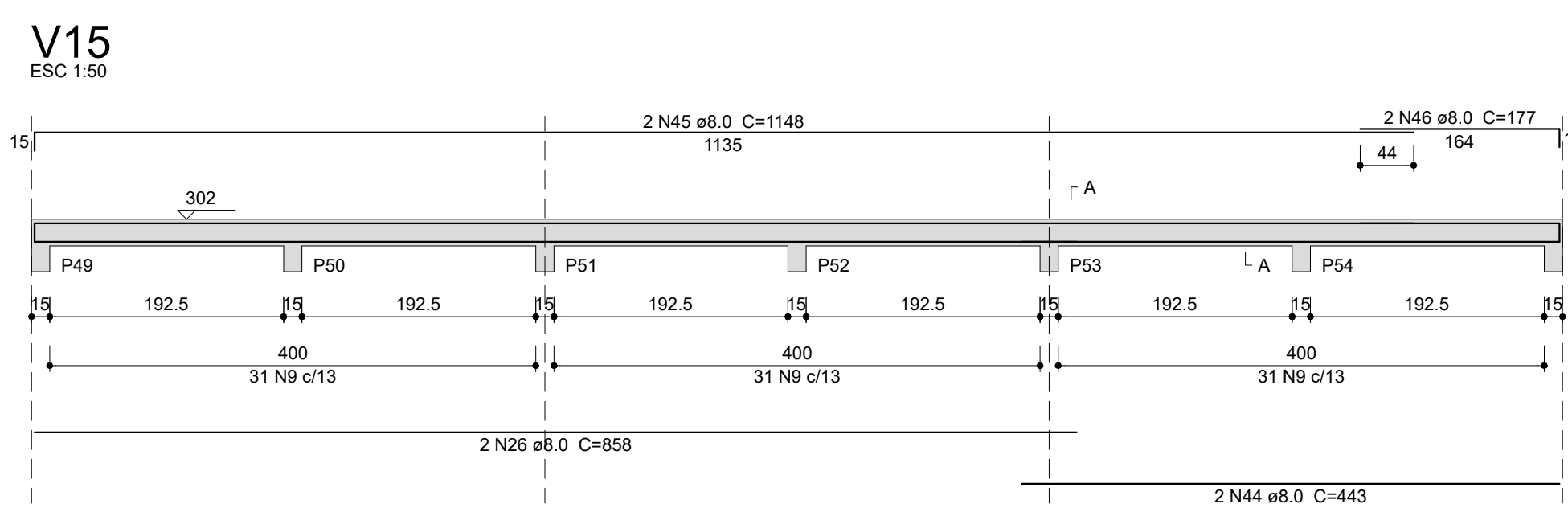
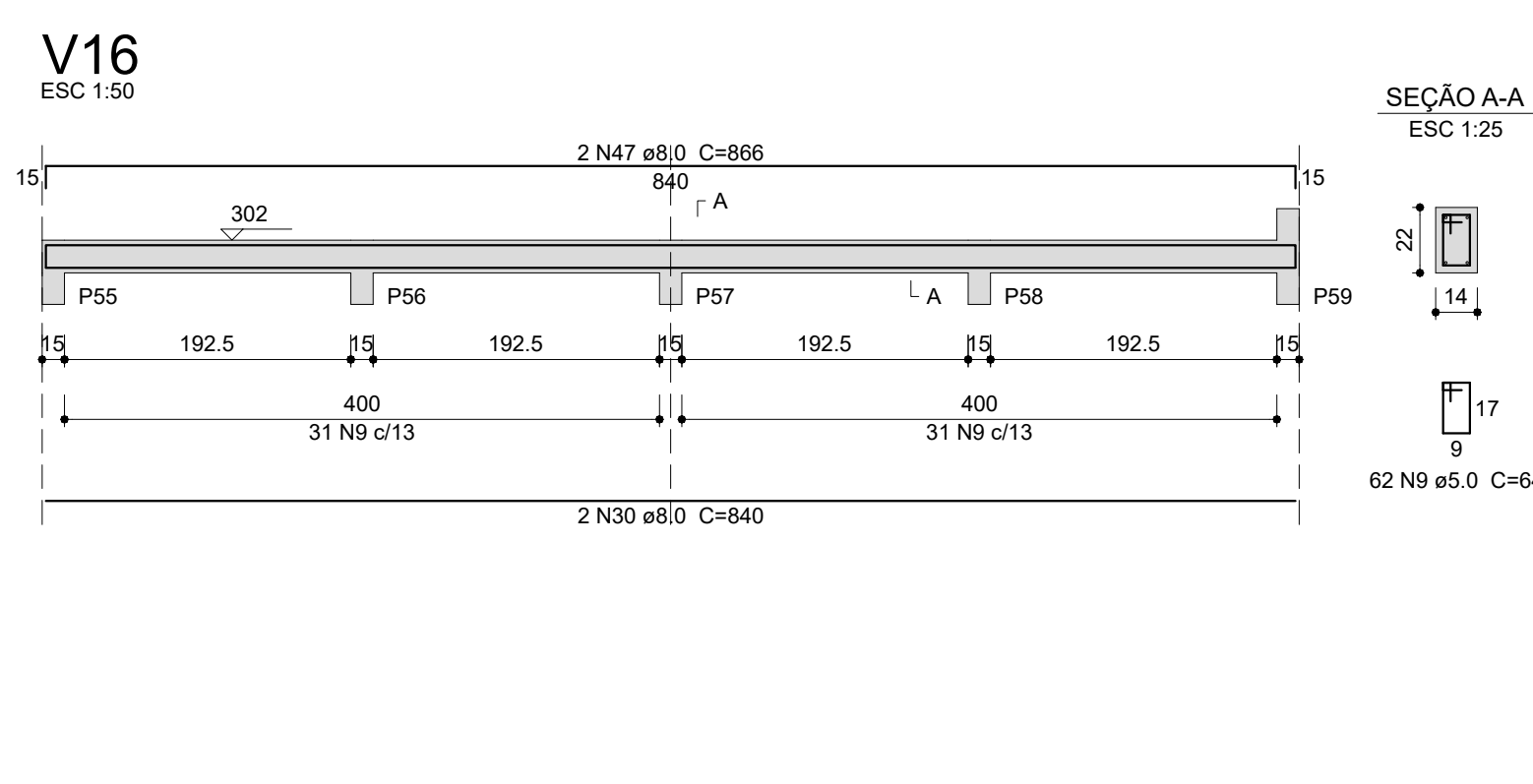
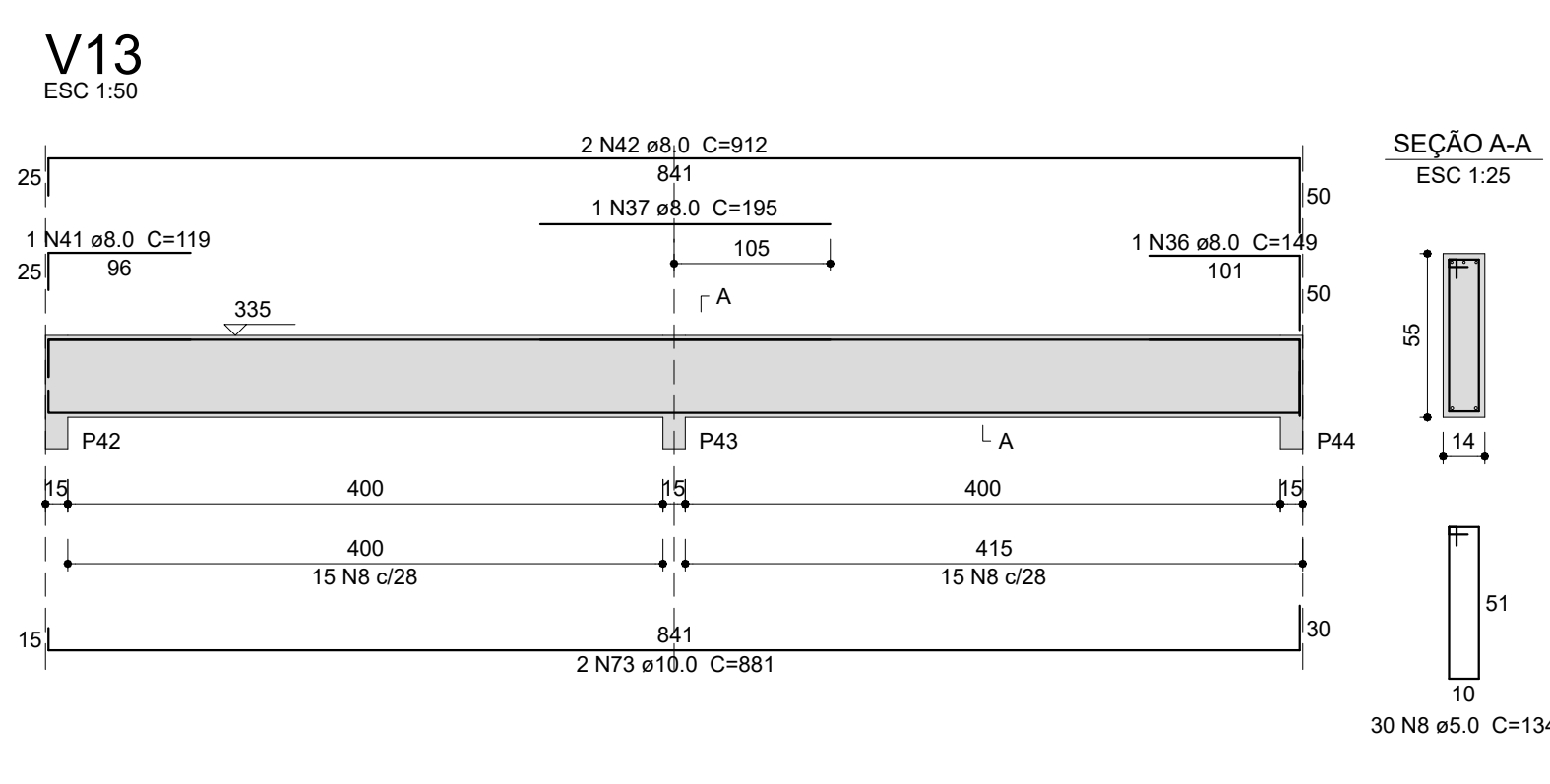
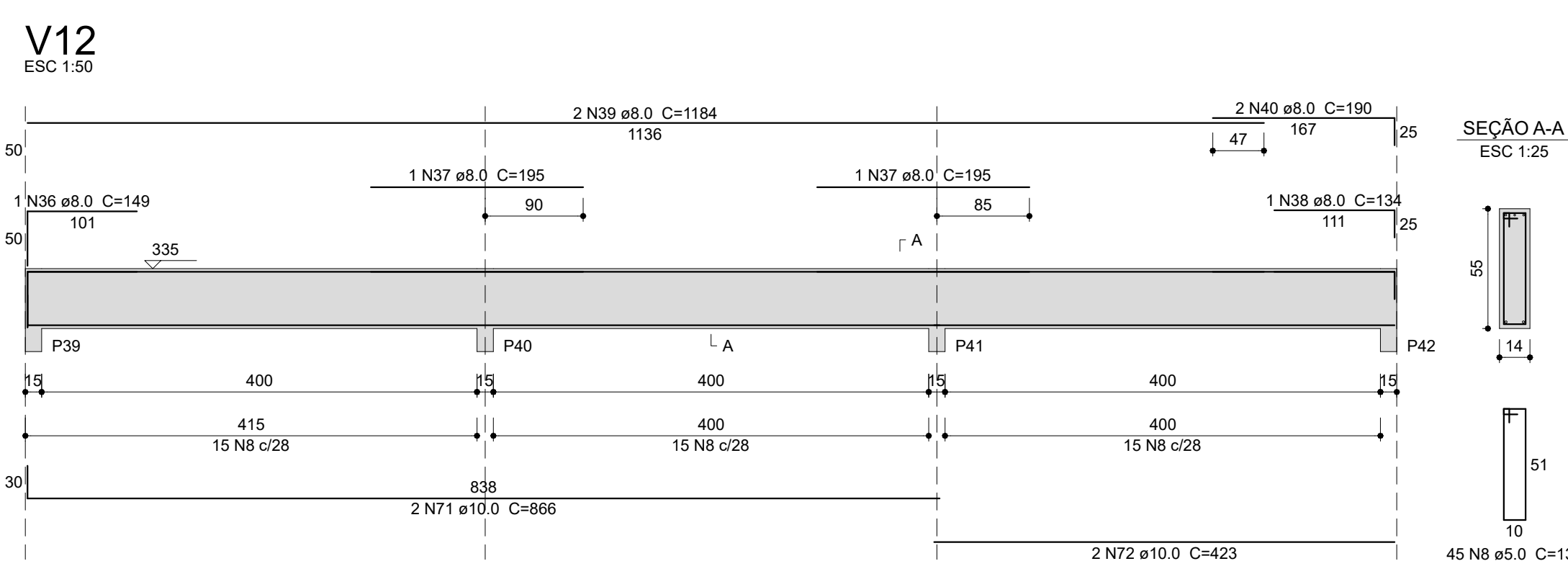
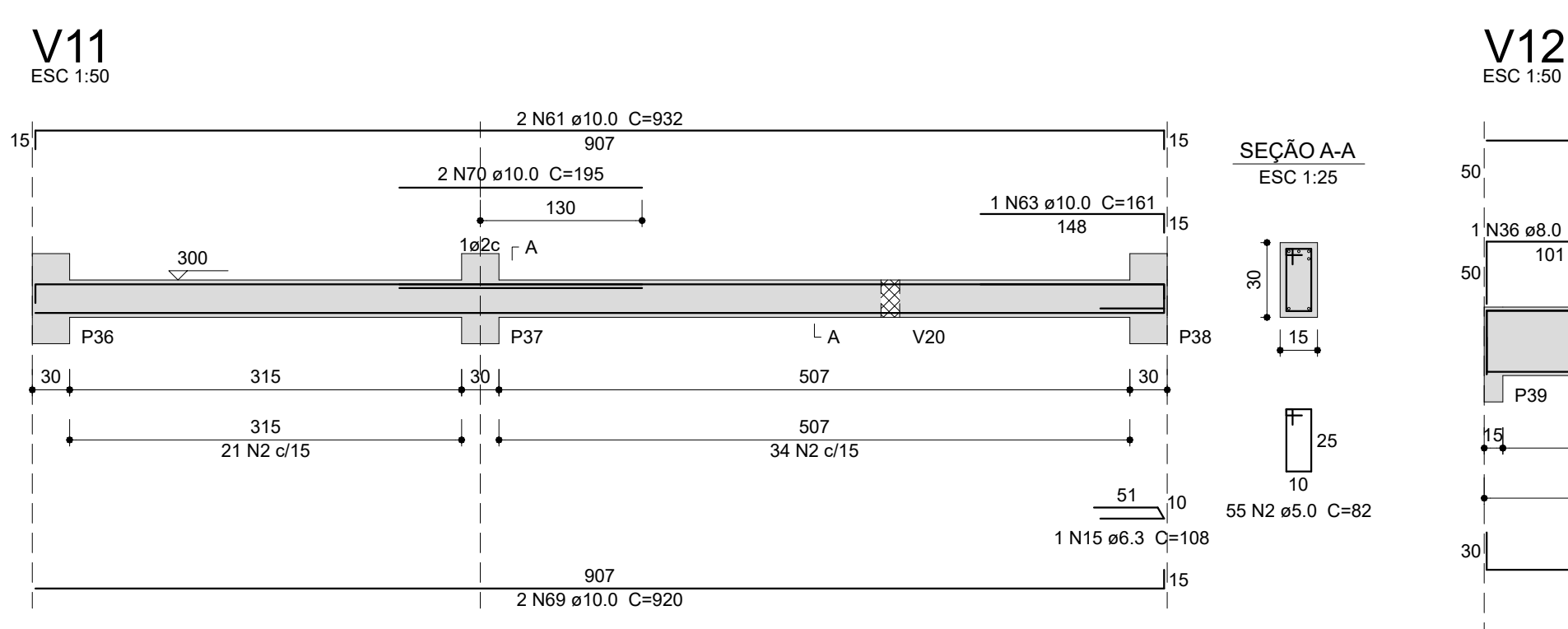
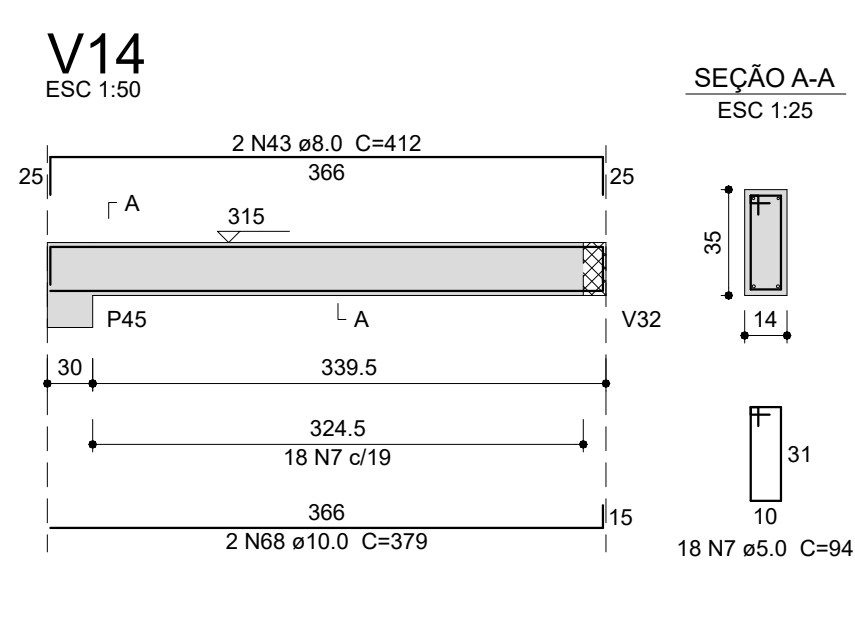
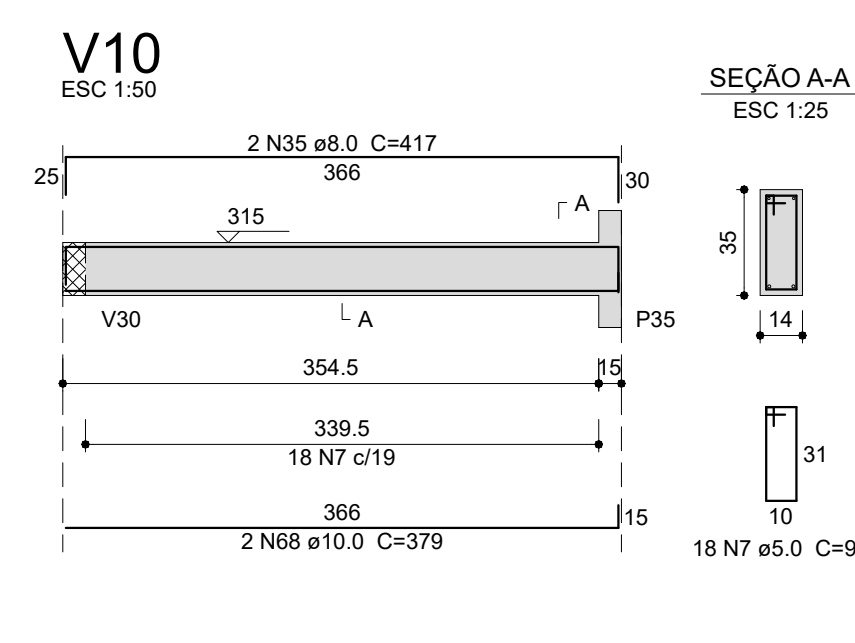
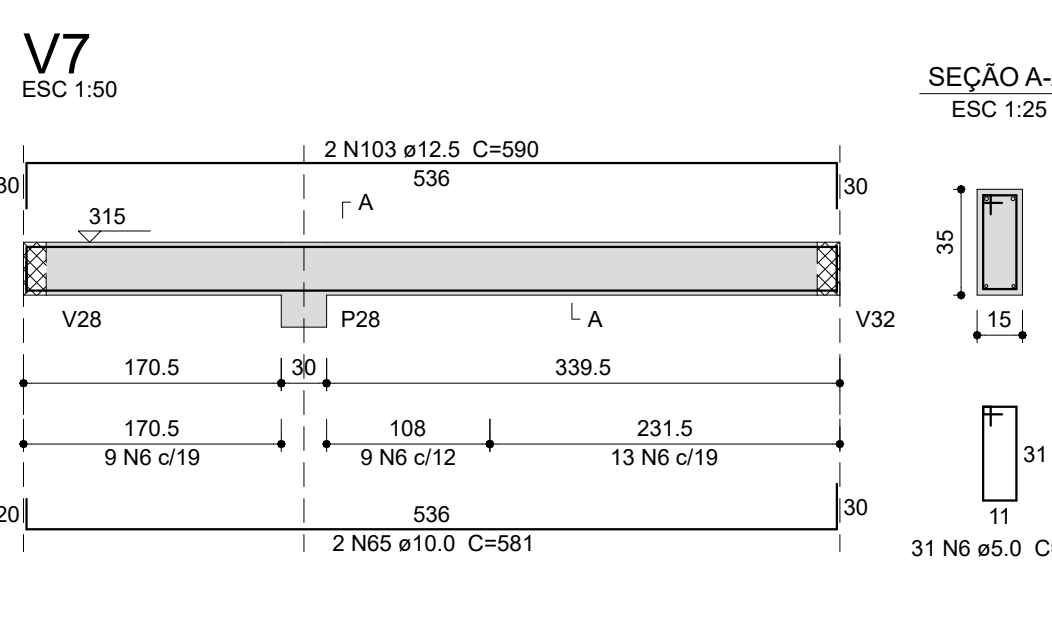
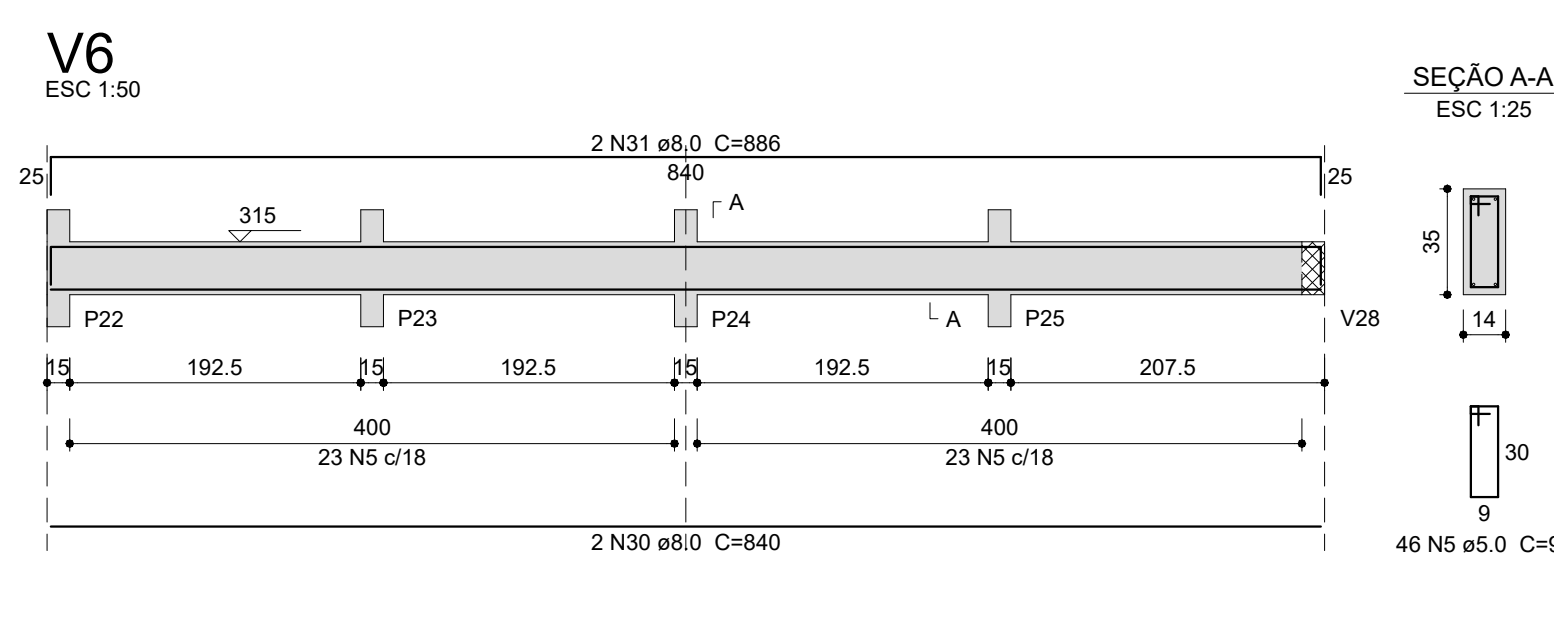
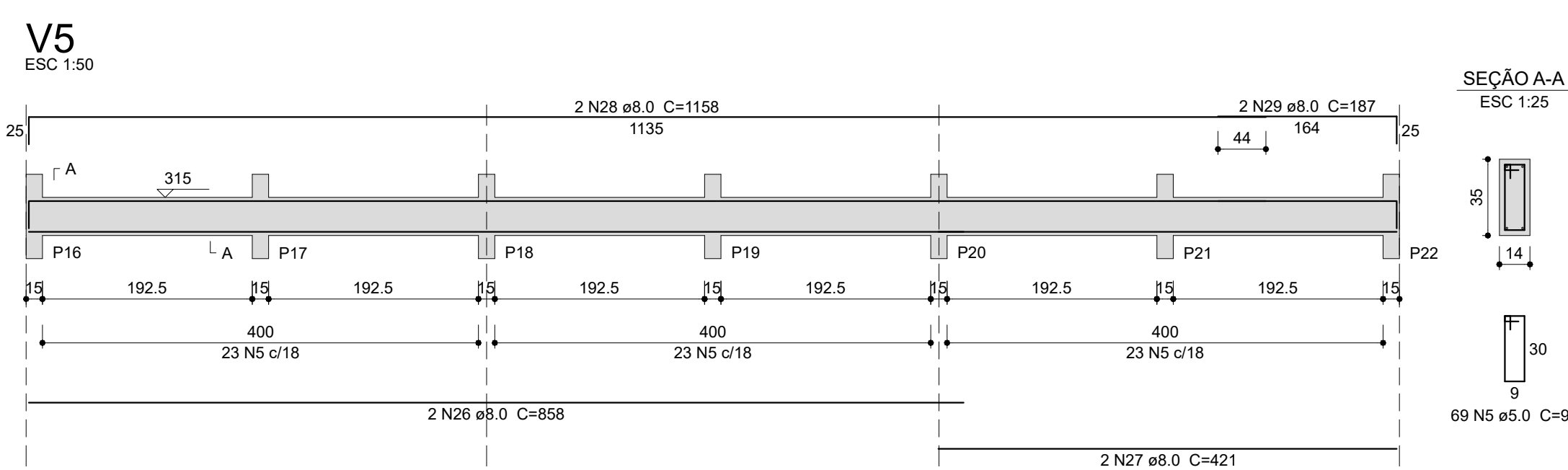
Relação do aço						
V1	V4	V5	V6	V3		
V7	V10	V11	V12			
V13	V14	V15	V16			
V17	V18	V19	V20	V21		
V22	V23	V24	V25	V26		
V27	V28	V29	V30	V31		
V32	V33	V34	V35	V36		
V37	V38					
AÇO	N	DIA1 (mm)	QUANT	C.UNIT	C.TOTAL (mm)	
CASO 0	1	5,0	209	80	12540	
	2	5,0	206	80	12500	
	3	5,0	74	86	6384	
	4	5,0	20	122	2440	
	5	5,0	143	80	11560	
	6	5,0	126	96	12096	
	7	5,0	36	136	4944	
	8	5,0	75	134	10050	
	9	5,0	155	84	9600	
	10	5,0	142	80	11360	
CASO 5	11	5,0	103	92	9472	
	12	5,0	8	132	1056	
	13	5,0	8	168	1328	
	14	5,0	3	25	75	
	15	5,0	9	78	702	
	16	6,3	3	97	291	
	17	6,3	3	97	291	
	18	6,3	8	CORR	204	
	19	6,3	2	161	322	
	20	6,3	1	546	546	
	21	8,0	2	842	1684	
	22	8,0	1	61	61	
	23	8,0	1	135	135	
	24	8,0	2	886	1736	
	25	8,0	3	666	1332	
	26	8,0	4	858	3432	
	27	8,0	2	842	1684	
	28	8,0	2	1155	2310	
	29	8,0	2	187	374	
	30	8,0	1	840	3840	
	31	8,0	2	866	1732	
	32	8,0	2	417	834	
	33	8,0	1	108	108	
	34	8,0	3	337	674	
	35	8,0	2	417	834	
	36	8,0	2	149	298	
	37	8,0	2	108	216	
	38	8,0	1	134	134	
	39	8,0	2	1194	2388	
	40	8,0	2	159	318	
41	8,0	1	119	119		
42	8,0	2	442	884		
43	8,0	2	412	824		
44	8,0	2	416	832		
45	8,0	2	442	884		
46	8,0	2	177	354		
47	8,0	2	866	1732		
48	8,0	4	244	976		
49	8,0	2	301	602		
50	8,0	2	582	1164		
51	8,0	2	302	604		
52	8,0	2	302	604		
53	8,0	2	108	216		
54	8,0	2	112	224		
55	8,0	2	147	294		
56	8,0	2	163	326		
57	8,0	2	178	356		
58	10,0	2	907	1814		
59	10,0	1	165	165		
60	10,0	3	141	423		
61	10,0	4	932	3728		
62	10,0	2	381	762		
63	10,0	2	161	322		
64	10,0	2	178	356		
65	10,0	2	551	1102		
66	10,0	2	329	658		
67	10,0	2	370	740		
68	10,0	2	379	758		
69	10,0	2	301	602		
70	10,0	2	195	390		
71	10,0	2	866	1732		
72	10,0	2	866	1732		
73	10,0	2	881	1762		
74	10,0	2	881	1762		
75	10,0	2	181	361		
76	10,0	2	580	1160		
77	10,0	2	580	1160		
78	10,0	2	940	1880		
79	10,0	1	131	131		
80	10,0	2	176	352		
81	10,0	1	151	151		
82	10,0	2	248	496		
83	10,0	2	248	496		
84	10,0	2	248	496		
85	10,0	2	123	246		
86	10,0	2	450	900		
87	10,0	2	500	1000		
88	10,0	2	529	1058		
89	10,0	2	529	1058		
90	10,0	2	256	512		
91	10,0	2	256	512		
92	10,0	2	256	512		
93	10,0	2	303	606		
94	10,0	2	303	606		
95	10,0	2	519	1038		
96	10,0	1	235	235		
97	10,0	2	886	1772		
98	10,0	1	191	191		
99	10,0	2	602	1204		
100	10,0	2	556	1112		
101	10,0	2	304	608		
102	10,0	2	338	676		
103	12,5	4	590	2360		
104	12,5	4	594	2376		
105	12,5	1	255	255		

Resumo do aço

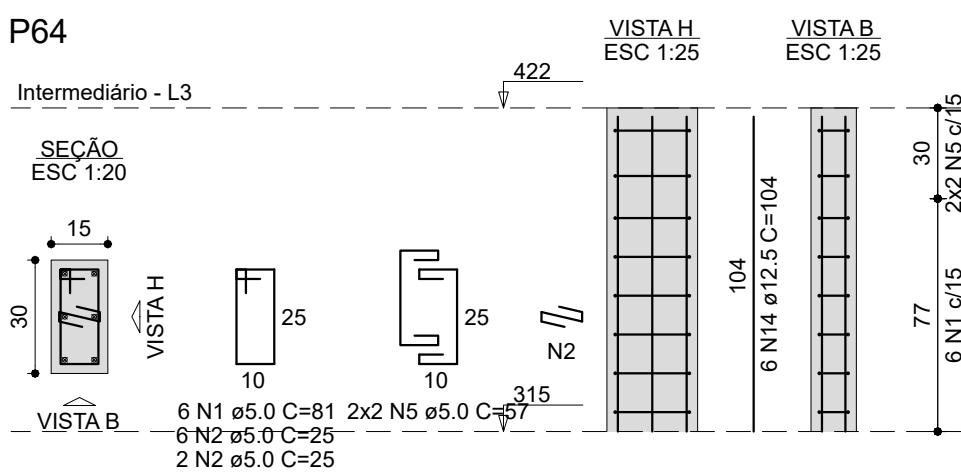
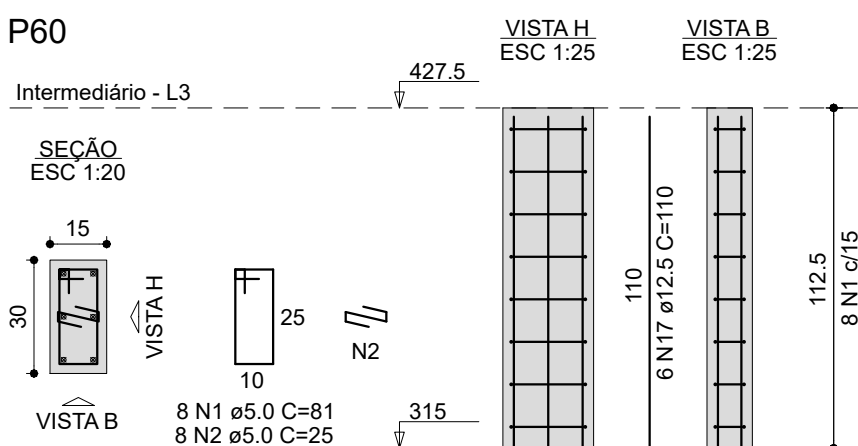
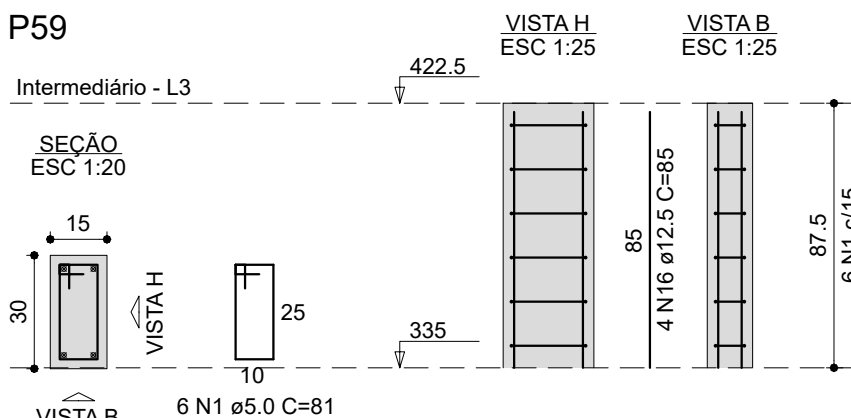
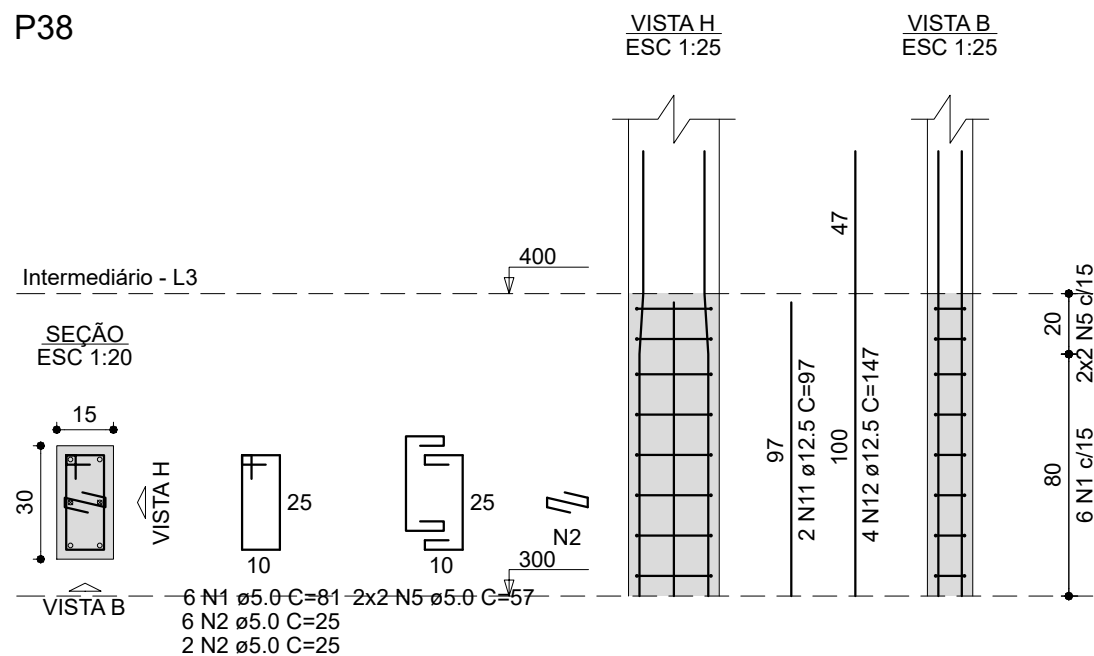
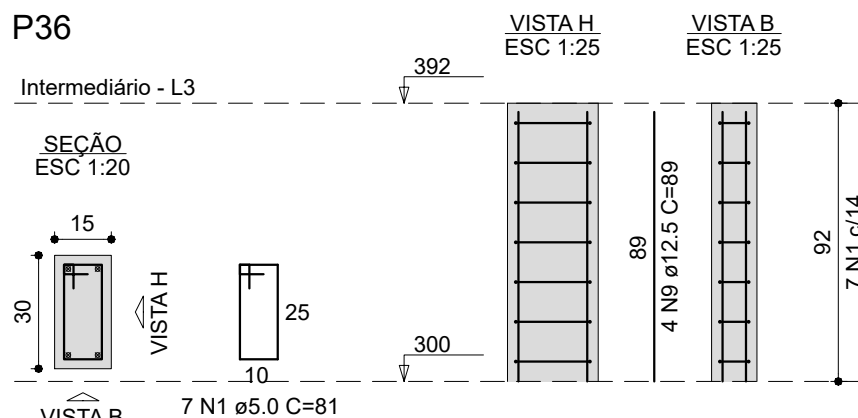
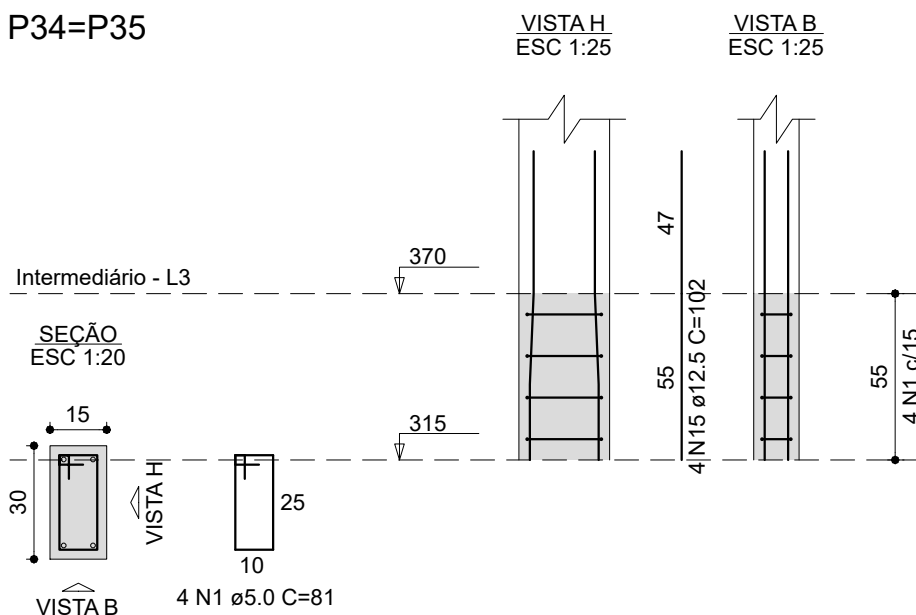
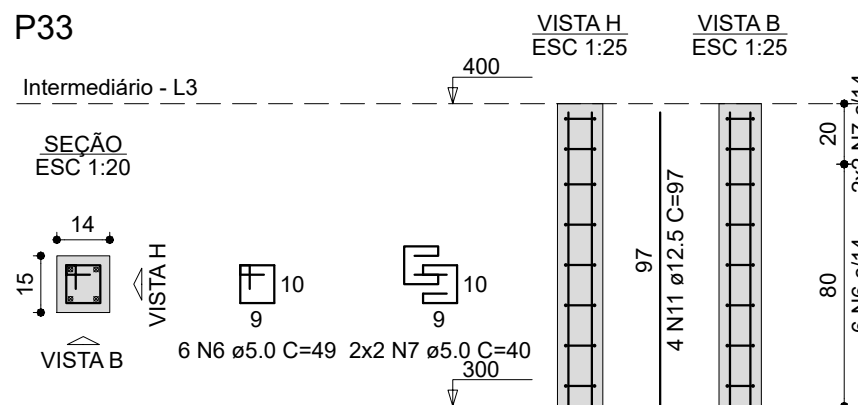
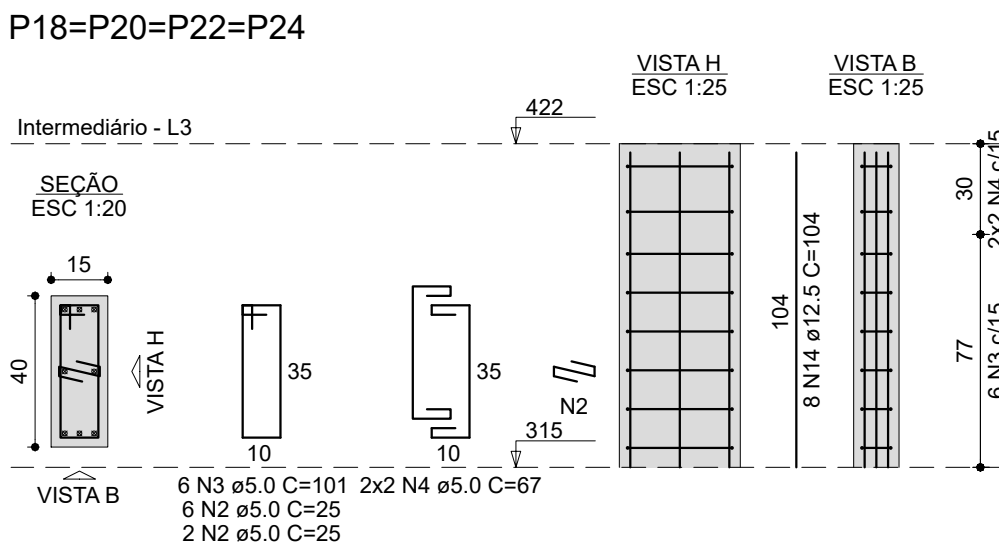
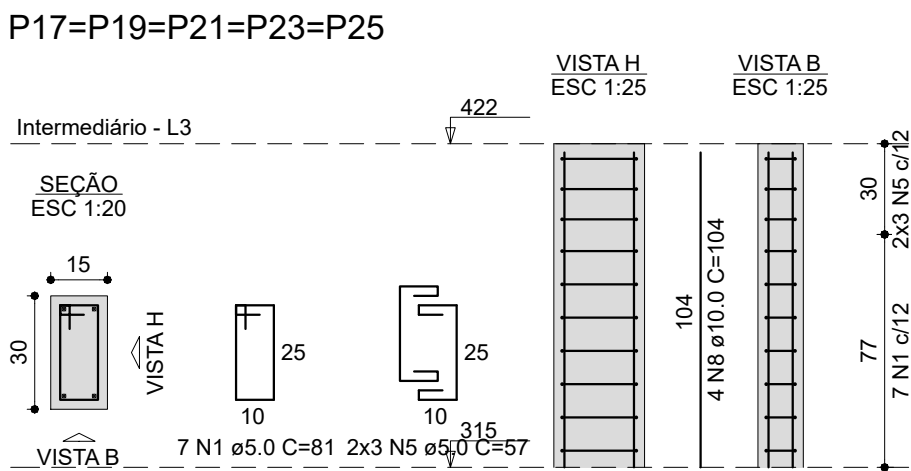
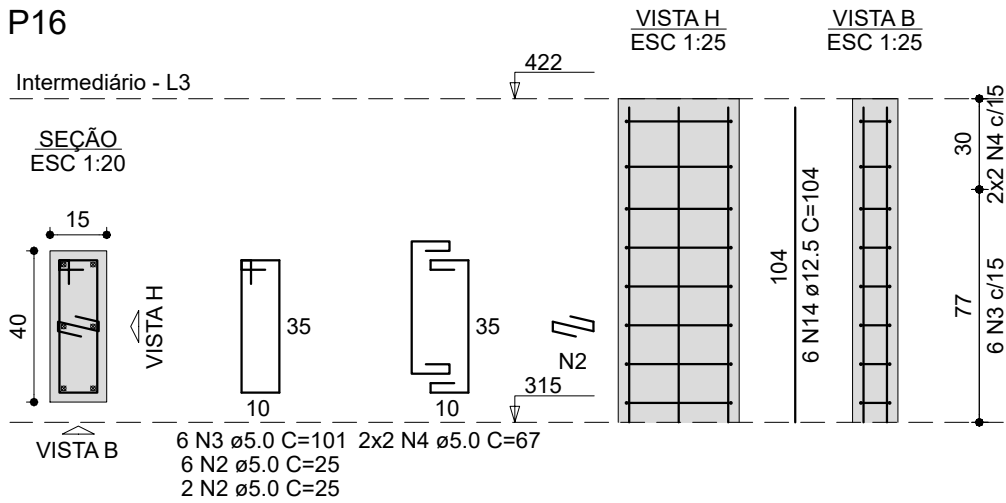
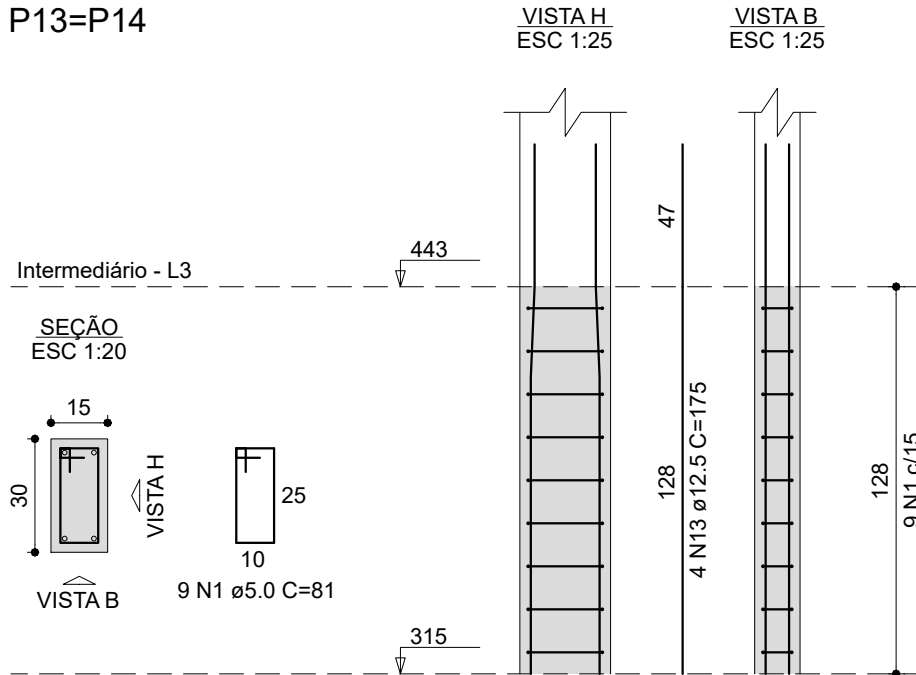
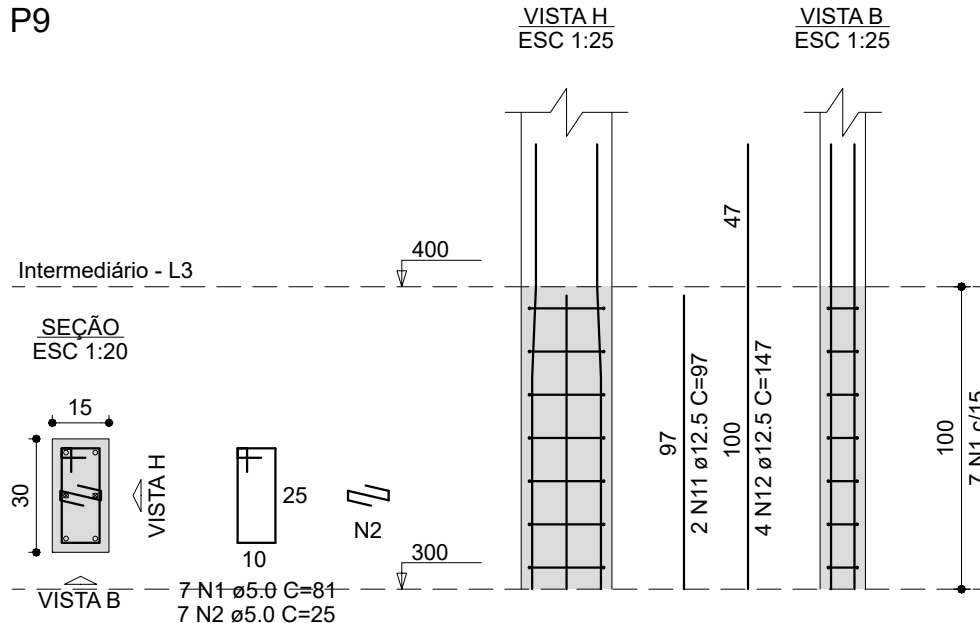
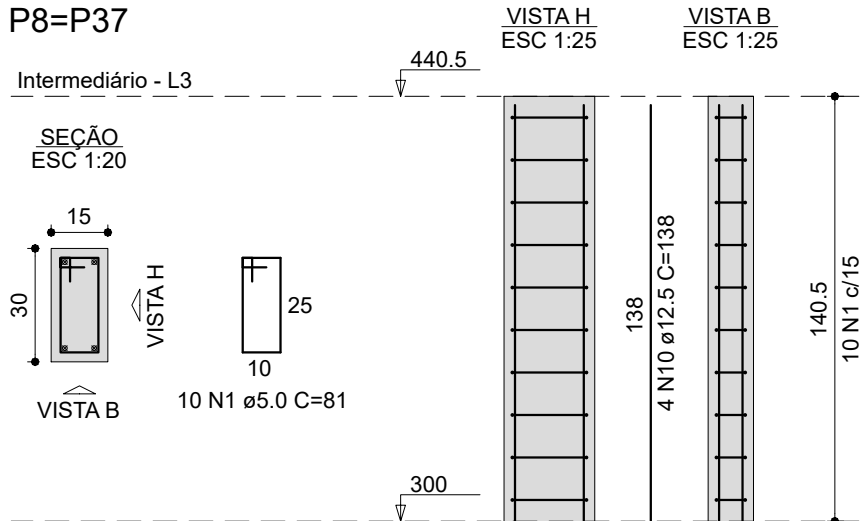
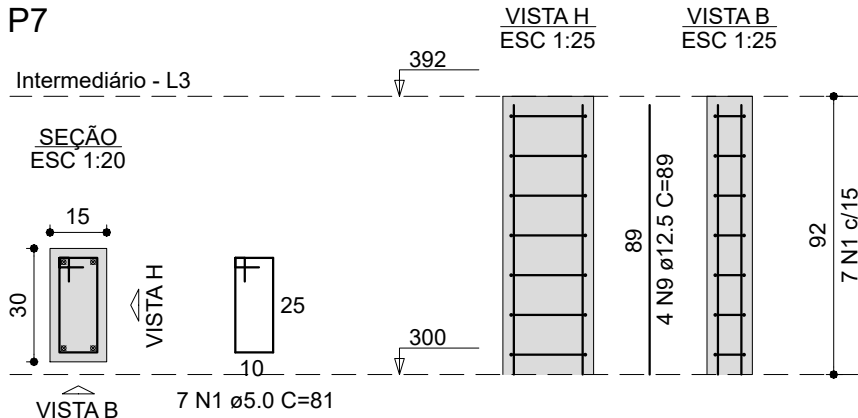
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	33.9	9.1
	8.0	362.1	157.1
	10.0	423	286.8
	12.5	130.3	138.1
CA60	5.0	1018.6	172.7
PESO TOTAL (kg)			
CA50	591.1		
CA60	172.7		

Volume de concreto (C-25) = 10.1 m³

Area de forma = 169.26 m²



DETALHE - PILARES INTERMEDIÁRIO



RELAÇÃO DO AÇO

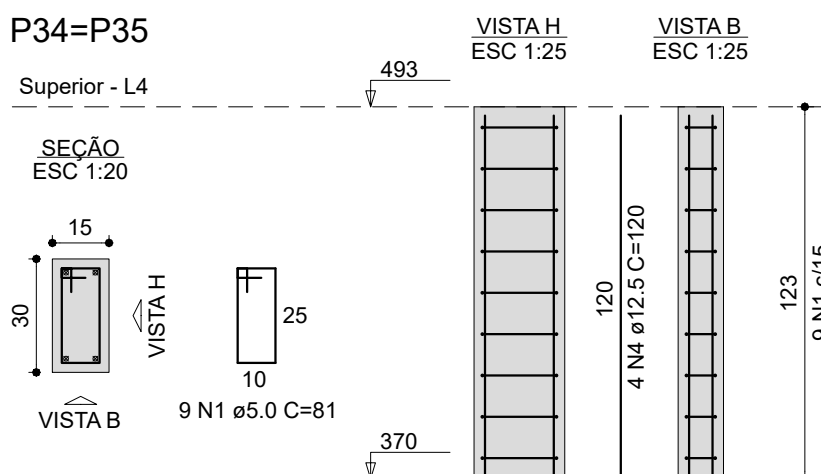
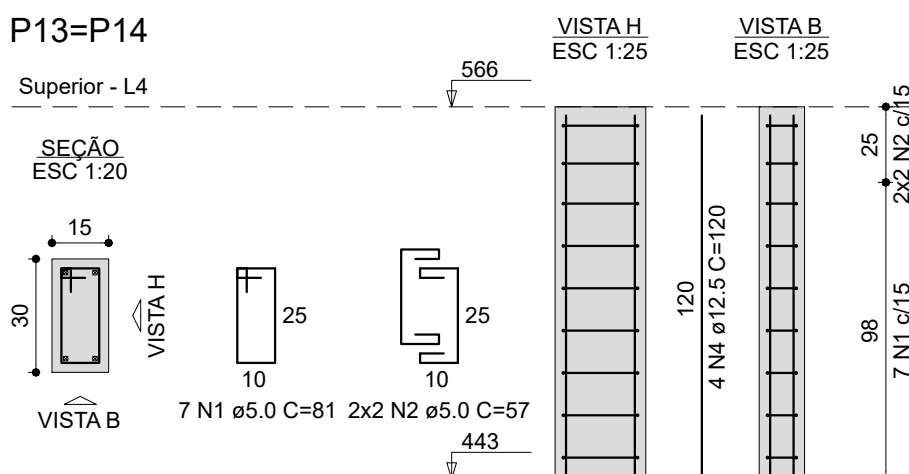
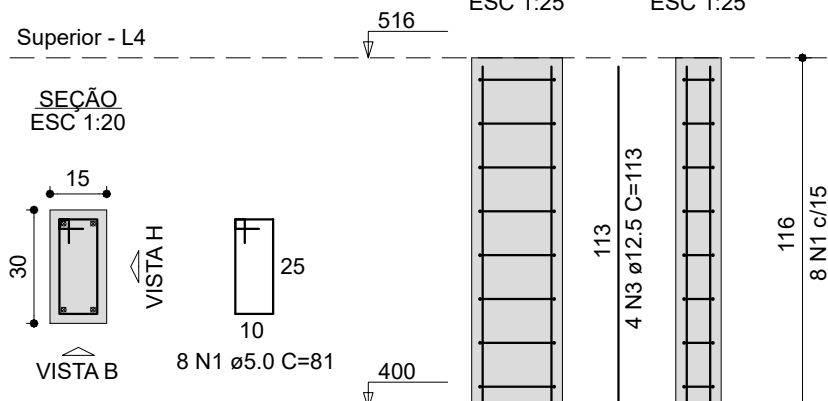
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	128	81	10368
	2	5.0	71	25	1775
	3	5.0	30	101	3030
	4	5.0	20	67	1340
	5	5.0	38	57	2166
CA50	6	5.0	6	49	294
	7	5.0	4	40	160
	8	10.0	20	104	2080
	9	12.5	8	89	712
	10	12.5	8	138	1104
	11	12.5	8	97	776
	12	12.5	8	147	1176
	13	12.5	8	175	1400
	14	12.5	44	104	4576
	15	12.5	8	102	816
	16	12.5	4	85	340
	17	12.5	6	110	660

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	20.8	14.1
	12.5	115.6	122.5
CA60	5.0	191.3	32.4
PESO TOTAL (kg)			
CA50		136.6	
CA60		32.4	

Volume de concreto (C-25) = 1.18 m³
Área de forma = 23.32 m²

DETALHE - PILARES SUPERIOR



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	48	81	3888
	2	5.0	8	57	456
CA50	3	12.5	8	113	904
	4	12.5	16	120	1920


RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	12.5	28.2	29.9
CA60	5.0	43.4	7.4

PESO TOTAL (kg)

CA50	29.9
CA60	7.4

Volume de concreto (C-25) = 0.33 m³
Área de forma = 6.52 m²



Secretaria Especial de Obras

NOVO PAC

DESENVOLVIMENTO E SUSTENTABILIDADE

Eng.º Roberto C. F. de Azeite - SCS 001
Rua São João, 100 - 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

SECRETARIA ESPECIAL DE OBRAS

SECRETARIA DE OBRAS

ARQ. URB. DIANE REGINA VALENTINI

CAUBR A51414.4

EQUIPE TÉCNICA DE OBRAS

ARQ. URB. ADRIANA FREITAS MOUTT

CAUBR A51225.6

ARQ. URB. WELLINGTON TOSCANI

CAUBR A55024.6

ENG. CIV. CLAUDIO LUIZ POMPERMAIER

CREA/RG 177728-6

ENG. CIV. FÁBIO CORRÊA CASPARIETTO

CREA/RG 05022-6

ENG. CIV. RODRIGO EMMER

CREA/RG 103628-6

ENG. ELETRIC. PAULO ROBERTO RIBEIRO

CREA/RG 107012

ENG. CIV. ANTONIO TESTON

CREA/RG 113882-2

ENG. SANIT. ADRIANA TAVANI

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ENG. CIVIL RODRIGO EMMER

CREA/RG 103628-6

RESPONSÁVEL TÉCNICO

LOCAL: ERECHIM - RS

OBRA: CENTRO DE ACOLHIMENTO

PROJETO: ESTRUTURAL

CONTEÚDO: DETALHE - PILARES INTERMEDIÁRIO

DETALHE - PILARES SUPERIOR

ENDEREÇO: RODOVIA ERS 135, KM 72, 200

FASE: EXECUTIVO

REVISÃO Nº: R00

DATA: 07/10/2025

DESENHADO POR: RODRIGO

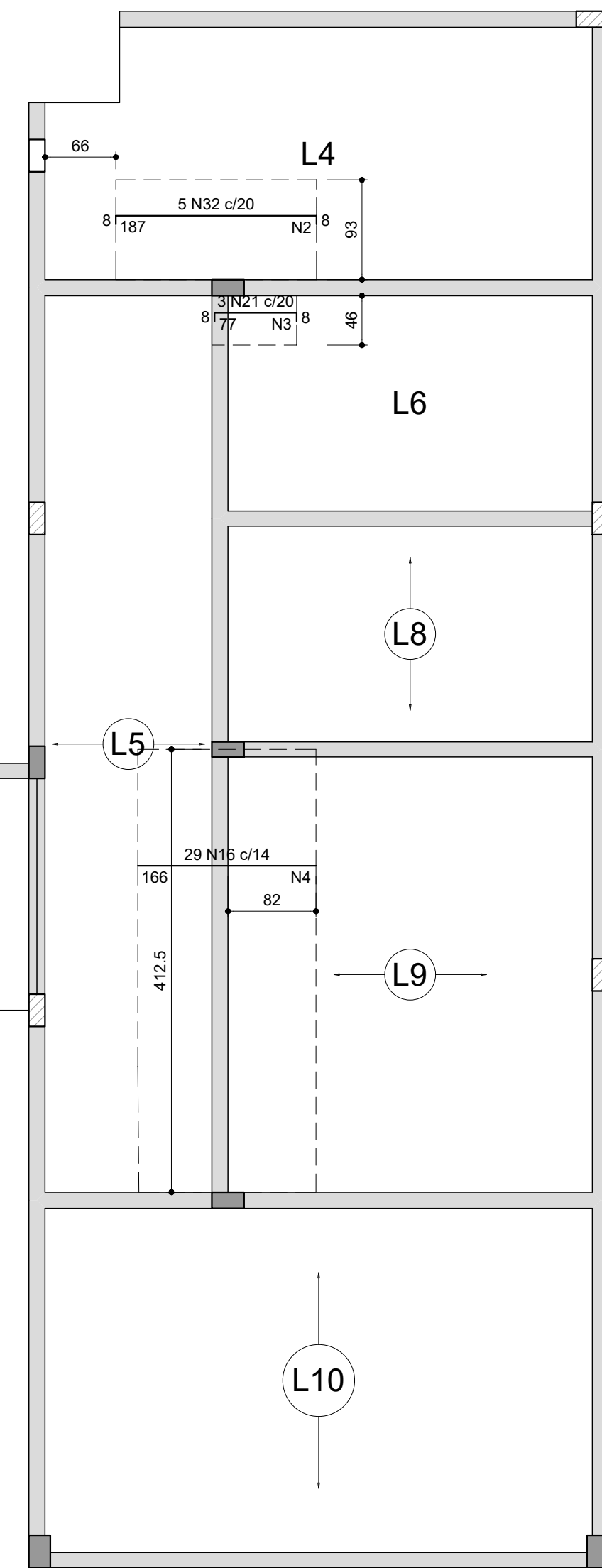
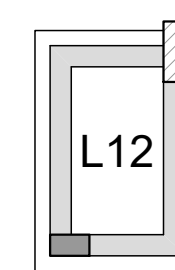
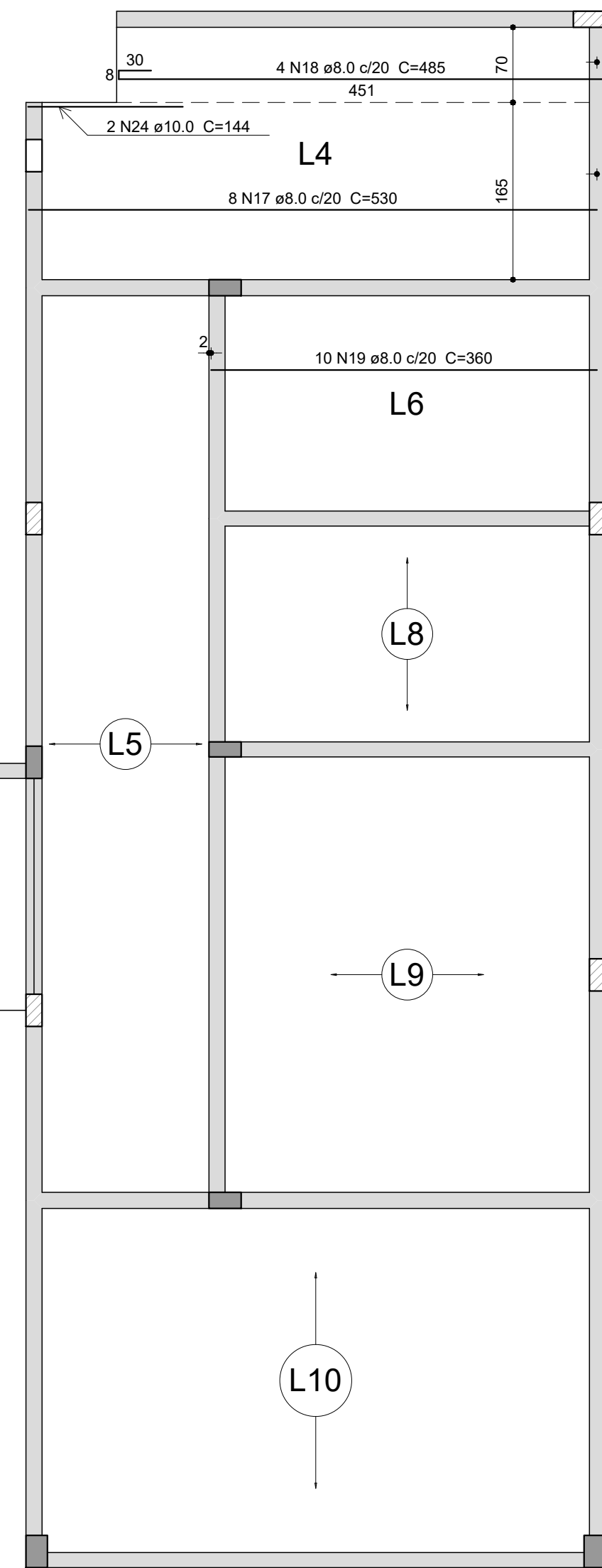
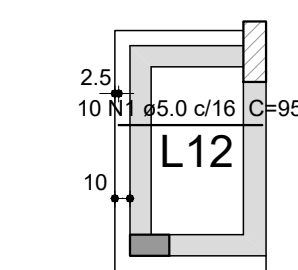
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ESCALA: 1:25 E 1:50

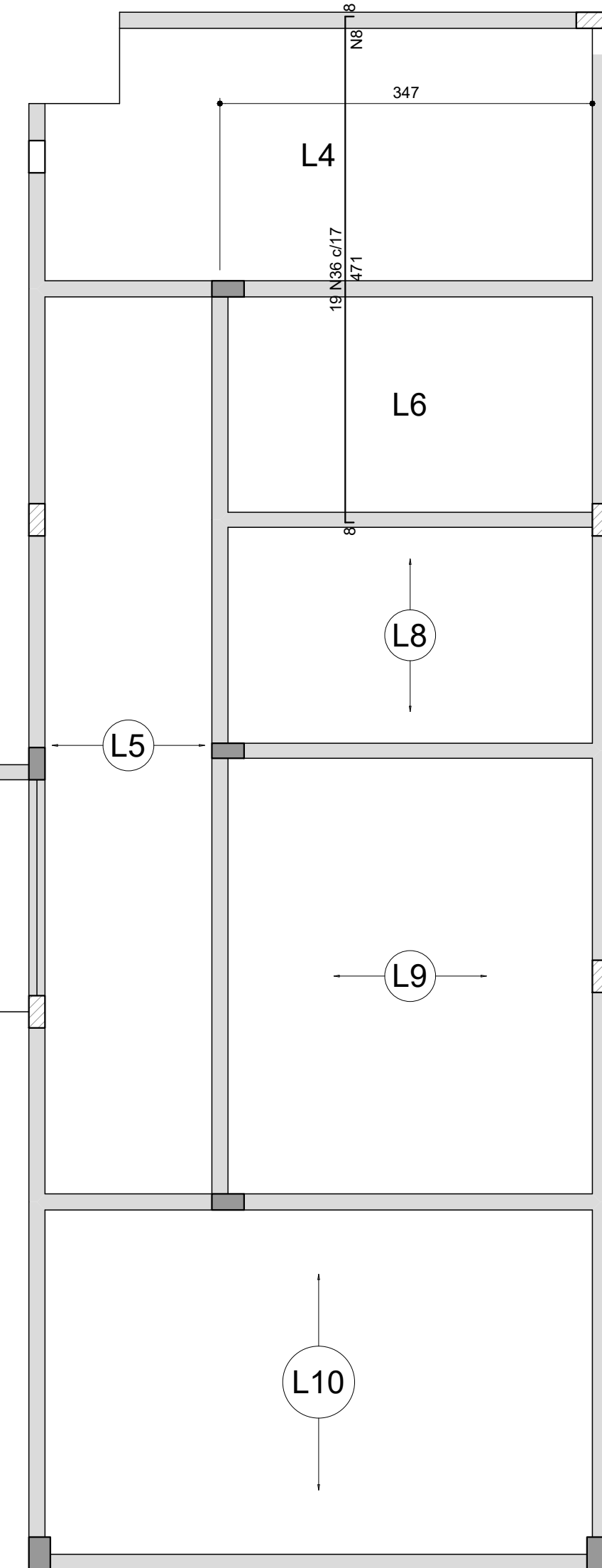
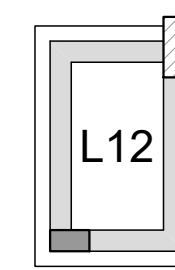
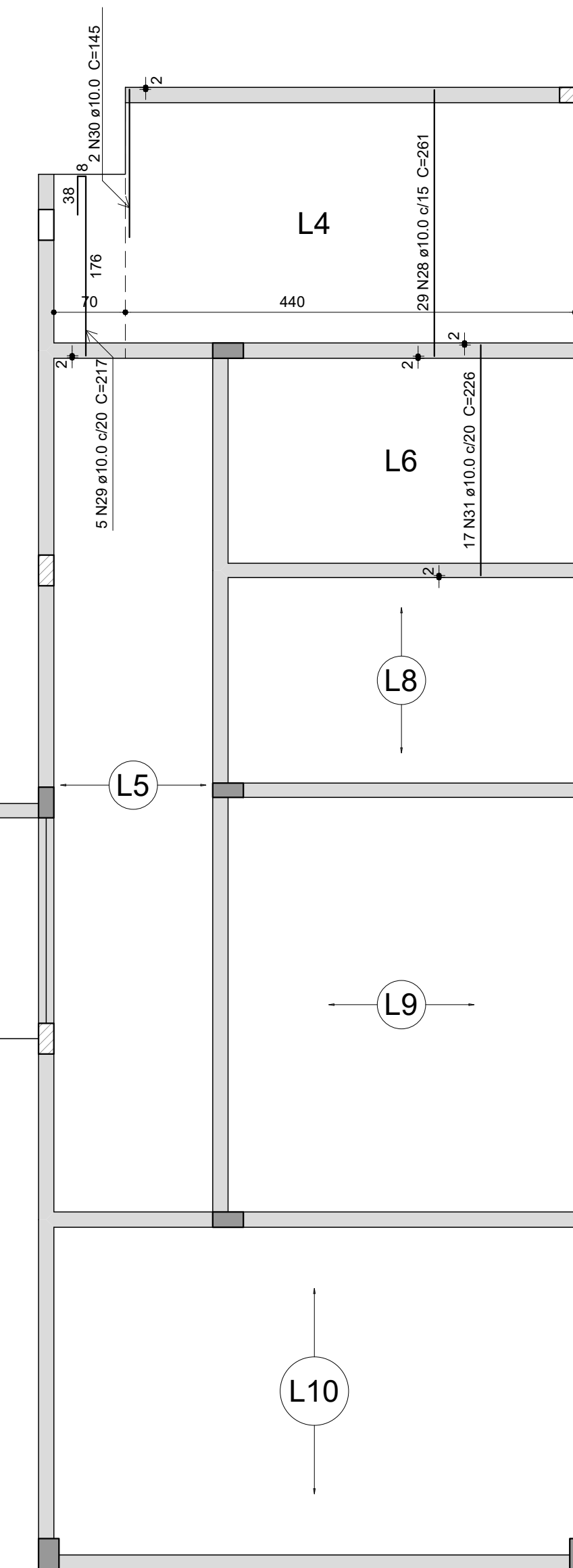
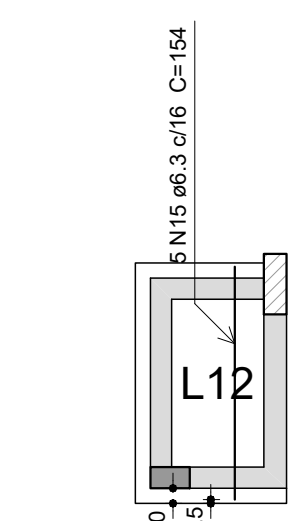
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Nº PRANCHA: 11

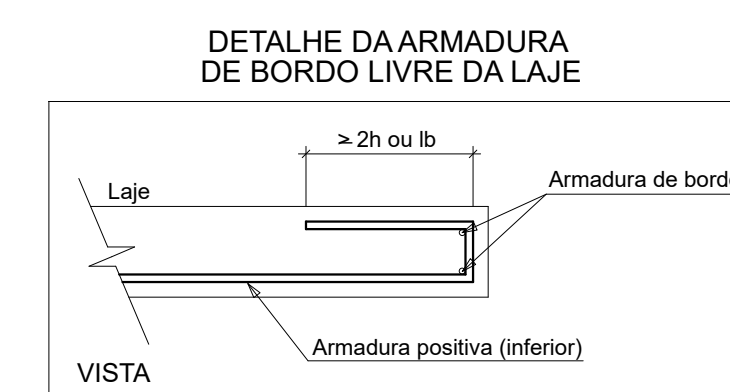
EST 14



Armação negativa das lajes - Cintamento (Eixo X)
escala 1:50



Armação negativa das lajes - Cintamento (Eixo Y)
escala 1:50



Armaduras de distribuição	
Armadura	Armadura de distribuição
N32	10 N2 e5.0 c/20 C=93
N21	4 N3 e5.0 c/20 C=46
N16	9 N4 e5.0 c/20 C=405
N22	32 N5 e5.0 c/20 C=190
N34	22 N6 e5.0 c/20 C=222
N35	20 N7 e5.0 c/20 C=201
N36	17 N8 e5.0 c/20 C=347

		Relação do aço					
ACO	N	DIAM	QUANT	C. LÍMIT	C. TOTAL		
CA50	2	5,0	10	90	900		
	2	5,0	10	93	930		
	3	4,0	4	184	736		
	4	5,0	9	405	3645		
CA50	5	10,0	32	1000	3200		
	5	10,0	22	222	2220		
	5	10,0	22	222	2220		
	8	10,0	7	347	2819		
	10	6,3	11	218	2220		
	10	6,3	3	184	552		
	11	6,3	3	186	558		
	12	6,3	3	201	603		
	12	6,3	11	220	2420		
	12	6,3	11	222	2420		
	15	6,3	5	154	770		
	15	6,3	5	156	780		
	17	8,0	8	330	4240		
	17	8,0	8	330	4240		
19	8,0	10	360	3600			
20	8,0	10	324	2240			
22	10,0	3	89	890			
22	8,0	8	175	1730			
24	10,0	2	144	720			
24	10,0	2	146	688			
26	10,0	3	244	732			
26	10,0	3	246	738			
28	10,0	3	261	759			
28	10,0	3	277	1085			
30	10,0	2	145	290			
31	10,0	2	128	3842			
32	10,0	3	188	590			
33	12,5	3	148	1314			
33	12,5	3	146	1256			
35	12,5	24	129	3006			
35	12,5	24	129	3006			

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	215.5	60.2
	8.0	196.2	85.1
	10.0	236.1	160.1
	12.5	188.1	199.3
CA60	5.0	265.9	45
PESO TOTAL (kg)			
CA50		504.7	
CA60		45	

Volume de concreto (C-25) = 7.80 m³
 Área de forma = 41.79 m²



ENG. CIVIL FABRÍCIO BALESTRIN CREA/CB 108701 RESPONSÁVEL TÉCNICO		ENG. CIVIL RODRIGO EMMER CREA/CB 108694 RESPONSÁVEL TÉCNICO	
LOCAL:	FASE:	ESCALA:	
ERECHIM - RS	EXECUTIVO	1:50	
OBRA:	REVISÃO Nº:	TAMANHO FOLHA:	
CENTRO DE ACOLHIMENTO	R00	A1	
PROJETO:	DATA:	Nº PRANCHA:	
ESTRUTURAL	07/10/2025		
CONTEÚDO:	DESENHADO POR:	EST 13	14
DETALHE - LAJES INTERMEDIÁRIO	RODRIGO		
ENDEREÇO:	NOME DO ARQUIVO:		
RODOVIA ERS 135, KM 72- 200	C:\PROVA\QUADRO\ENFERM\108694.TB.DWG		

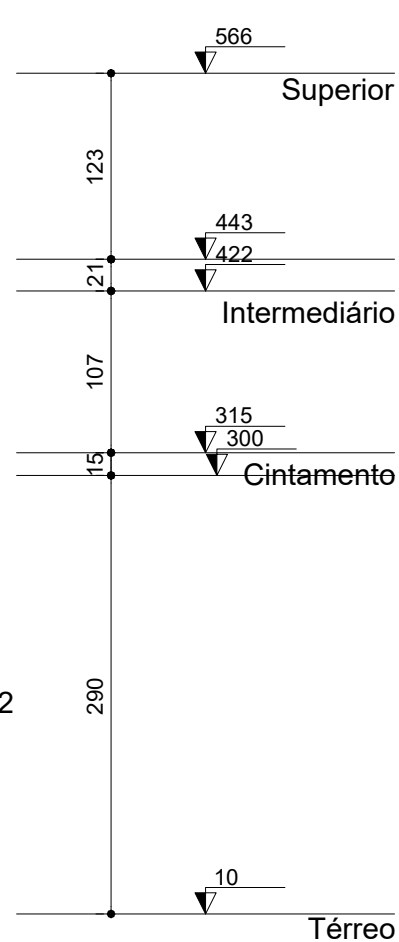


Diagrama de perfil longitudinal de la Vía 17. Muestra una línea vertical con puntos de elevación: 566 (Superior), 422 (intermediario), 315 (Cintamento), 10 (Térreo) y -5 (V17). Las distancias entre puntos son 144, 107 y 305.

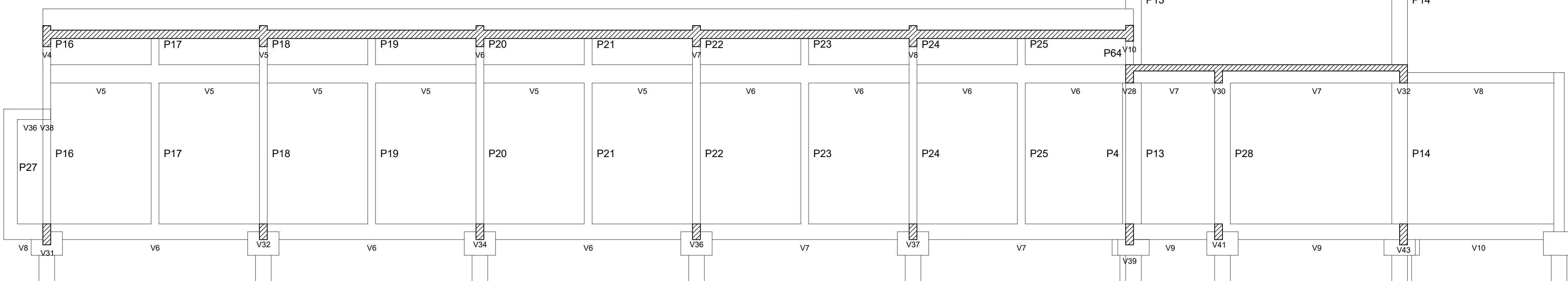
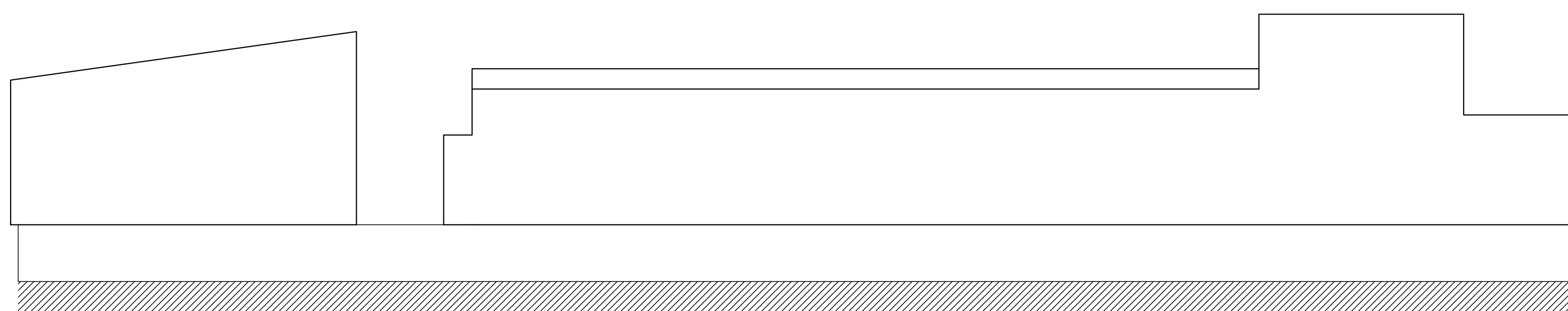


Diagrama de perfil longitudinal da estrada de acesso ao P29. O diagrama mostra uma estrada com quatro níveis de elevação: Superior (566), Intermediário (422), 315 e Térreo (10). A estrada é dividida em trechos com comprimentos de 144, 107 e 305 metros. Há uma seta apontando para cima no trecho de 144 metros e uma seta apontando para baixo no trecho de 107 metros.



Nível de Escolaridade	Indivíduos	Porcentagem
Superior	400	100%
Intermediário	315	80%
Cintoamento	190	47.5%
Térreo	10	2.5%



Projeto Nº ITEM 3 - PROJETO_ESTRUTURAL_ER_1-14/2025 - DAADM (10.55.01)
(Nº do Documento: 53)

(Nº do Protocolo: NÃO PROTOCOLADO)

(Assinado digitalmente em 10/10/2025 16:25)

FABRICIO BALESTRIN
SECRETARIO(A) - TITULAR
SEO (10.55)
Matrícula: ###730#5

(Assinado digitalmente em 10/10/2025 19:03)

RODRIGO EMMER
ENGENHEIRO-AREA
DPA (10.55.04)
Matrícula: ###708#2

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, ano: **2025**, tipo: **Projeto**, data de emissão: **10/10/2025** e o código de verificação: **c383edaeb3**