

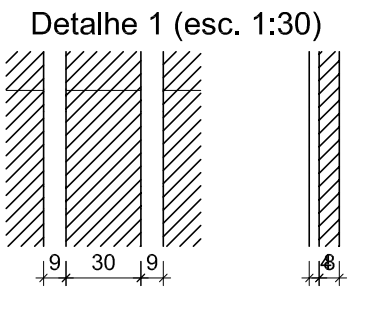
Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x40	0	340
V2	15x40	0	340
V3	20x40	0	340
V4	20x40	0	340
V5	20x40	0	340
V6	20x40	0	340
V7	20x40	0	340
V8	20x40	0	340
V9	20x40	0	340
V10	20x40	0	340
V11	15x40	0	340
V12	15x40	0	340
V13	20x40	0	340
V14	20x40	0	340
V15	20x40	0	340
V16	20x40	0	340
V17	15x40	0	340
V18	15x40	0	340
V19	15x40	0	340
V20	20x40	0	340
V21	20x40	0	340
V22	20x40	0	340
V23	15x40	0	340
V24	15x40	0	340
V25	15x40	0	340
V26	20x40	0	340
V27	15x40	0	340
V28	15x40	0	340
V29	15x40	0	340
V30	15x40	0	340
V31	15x40	0	340
V32	15x40	0	340
V33	15x40	0	340
V34	15x40	0	340
V35	15x40	0	340
V36	15x40	0	340
V37	15x40	0	340
V38	15x40	0	340
V39	15x40	0	340
V40	15x40	0	340
V41	15x40	0	340
V42	15x40	0	340
V43	15x40	0	340
V44	15x40	0	340
V45	15x40	0	340
V46	20x40	0	340
V47	15x40	0	340
V48	20x40	0	340
V49	20x40	0	340
V50	20x40	0	340

Lajes							
Nome	Tipo	Altera	Elevação	Nível	Peso próprio	Adicional	Sobrecarga
L1	Trefçada ID	12	0	340	147	100	500
L2	Trefçada ID	12	0	340	147	100	500
L3	Trefçada ID	12	0	340	147	100	500
L4	Trefçada ID	12	0	340	147	100	500
L5	Trefçada ID	12	0	340	147	100	500
L6	Trefçada ID	12	0	340	147	100	500
L7	Trefçada ID	12	0	340	147	100	500
L8	Trefçada ID	12	0	340	147	100	500
L9	Trefçada ID	12	0	340	147	100	500
L10	Trefçada ID	12	0	340	147	100	500
L11	Trefçada ID	12	0	340	147	100	500
L12	Trefçada ID	12	0	340	147	100	500
L13	Trefçada ID	12	0	340	147	100	500
L14	Trefçada ID	12	0	340	147	100	500
L15	Trefçada ID	12	0	340	147	100	500
L16	Trefçada ID	12	0	340	147	100	500
L17	Trefçada ID	12	0	340	147	100	500

Características dos materiais	
fck	Eca
(kgf/cm²)	(kgf/cm²)
300	312000


Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15 x 40	0	340
P2	15 x 40	0	340
P3	15 x 40	0	340
P4	15 x 40	0	340
P5	20 x 40	0	340
P6	20 x 40	0	340
P7	20 x 40	0	340
P8	20 x 40	0	340
P9	20 x 40	0	340
P10	20 x 40	0	340
P11	20 x 40	0	340
P12	20 x 40	0	340
P13	20 x 40	0	340
P14	20 x 40	0	340
P15	15 x 40	0	340
P16	15 x 40	0	340
P17	15 x 40	0	340
P18	15 x 40	0	340
P19	20 x 40	0	340
P20	20 x 40	0	340
P21	20 x 40	0	340
P22	20 x 40	0	340
P23	20 x 40	0	340
P24	20 x 40	0	340
P25	20 x 40	0	340
P26	20 x 40	0	340
P27	15 x 40	0	340
P28	15 x 40	0	340
P29	15 x 40	0	340
P30	15 x 40	0	340
P31	20 x 40	0	340
P32	20 x 40	0	340
P33	20 x 40	0	340
P34	20 x 40	0	340
P35	20 x 40	0	340
P36	20 x 40	0	340
P37	15 x 40	0	340
P38	15 x 40	0	340
P39	15 x 40	0	340
P40	15 x 40	0	340
P41	15 x 40	0	340
P42	15 x 40	0	340
P43	20 x 40	0	340
P44	20 x 40	0	340
P45	20 x 40	0	340
P46	20 x 40	0	340
P47	15 x 40	0	340
P48	15 x 40	0	340
P49	15 x 40	0	340
P50	15 x 40	0	340
P51	15 x 40	0	340
P52	15 x 40	0	340
P53	20 x 40	0	340
P54	20 x 40	0	340
P55	20 x 40	0	340
P56	15 x 40	0	340
P57	15 x 40	0	340
P58	15 x 40	0	340
P59	15 x 40	0	340
P60	15 x 40	0	340
P61	15 x 40	0	340
P62	20 x 40	0	340
P63	20 x 40	0	340
P64	20 x 40	0	340
P65	20 x 40	0	340
P66	15 x 40	0	340
P67	15 x 40	0	340
P68	15 x 40	0	340
P69	15 x 40	0	340
P70	15 x 40	0	340
P71	15 x 40	0	340
P72	20 x 40	0	340
P73	20 x 40	0	340
P74	20 x 40	0	340
P75	15 x 40	0	340
P76	15 x 40	0	340
P77	15 x 40	0	340
P78	15 x 40	0	340
P79	15 x 40	0	340
P80	15 x 40	0	340
P81	15 x 40	0	340
P82	15 x 40	0	340
P83	15 x 40	0	340
P84	15 x 40	0	340
P85	15 x 40	0	340
P86	15 x 40	0	340
P87	15 x 40	0	340
P88	15 x 40	0	340
P89	15 x 40	0	340
P90	15 x 40	0	340
P91	15 x 40	0	340
P92	15 x 40	0	340
P93	15 x 40	0	340
P94	15 x 40	0	340

Legenda dos Pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção



Blocos de enchimento			
Detalhe	Tipo	Nome	Quantidade
1	EPS Undirecional	B8/20/125x4,5	810

Forma do pavimento COBERTURA
escala 1:50



GOVERNO DO ESTADO DO PIAUÍ

SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO: GERÊNCIA DE ARQUITETURA E ENGENHARIA

TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA

INSCRIÇÃO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí.

TÍTULO DO DESENHO: PLANTA DE FORMA COBERTURA

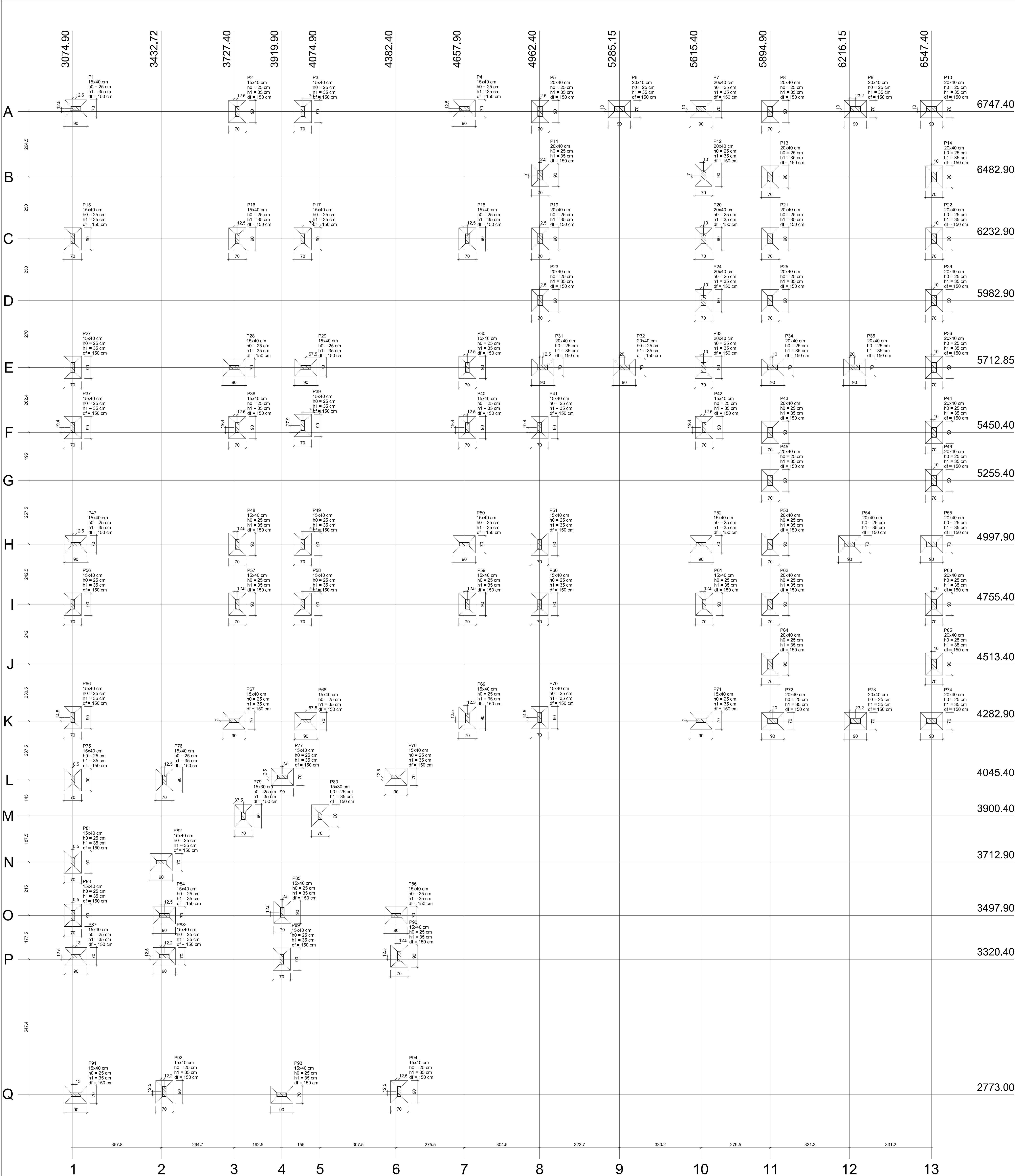
ARQUITETO(A):

DESENHO: EST1

FRANQUINHA: 01/01

ESCALA: INDICADA

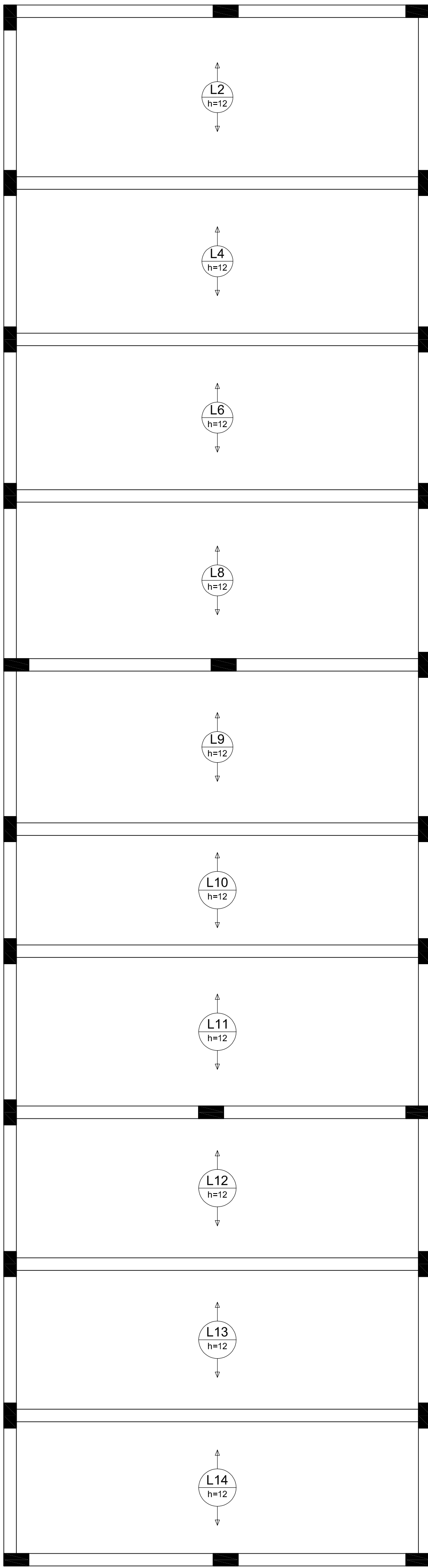
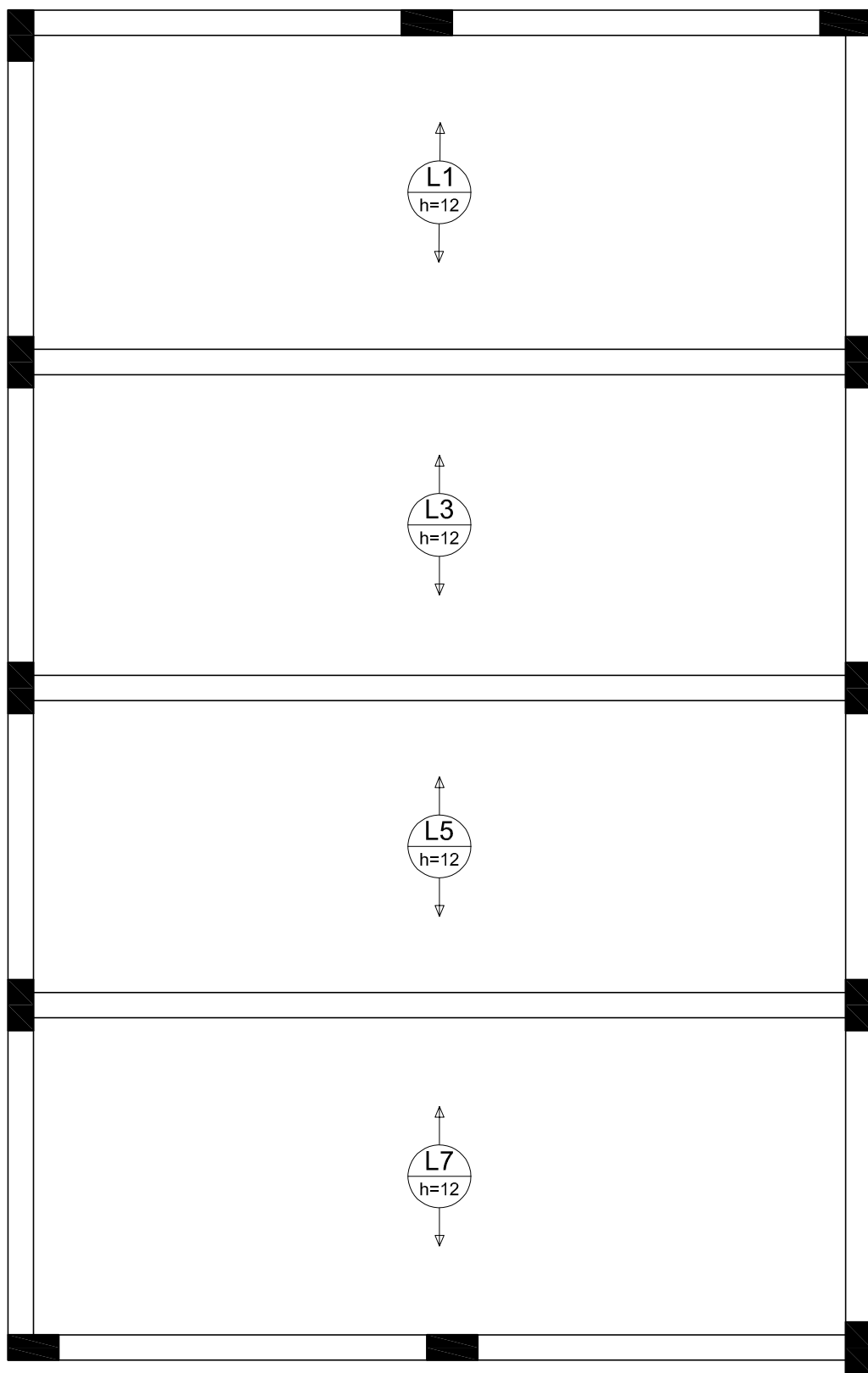
REVISÃO: 01



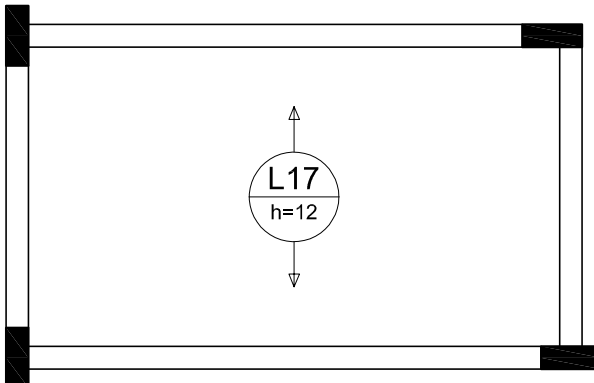
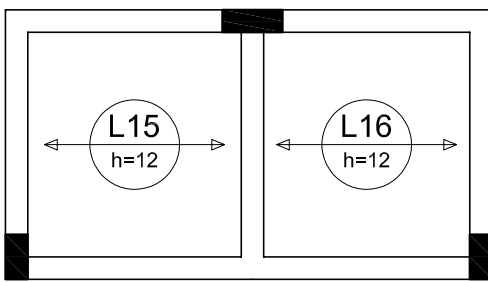
Planta de localização

escala 1:50

Nome	Seção	X (cm)	Y (cm)	Carga Max. (kgf)	Carga Min. (kgf)	Mx (kgf.m)	My (kgf.m)	Fx (kgf)	Fy (kgf)	Lado B (cm)	Lado H (cm)	Fundação	H0 (cm)	H1 (cm)	dt (cm)
P1	15x40	3087,40	6759,90	6,4	6,2	0	0	1,5	0,6	70	90	25	35	150	
P2	15x40	3739,90	6747,40	6,0	5,8	0	0	1,0	0,7	70	90	25	35	150	
P3	15x40	4004,90	6747,40	6,0	5,8	0	0	1,0	0,7	70	90	25	35	150	
P4	15x40	4657,90	6759,90	6,4	6,2	0	0	1,5	0,6	70	90	25	35	150	
P5	20x40	4984,90	6747,40	5,2	4,0	0	0	0,2	0,2	70	90	25	35	150	
P6	20x40	5285,15	6757,40	8,3	5,6	0	0	0,3	0,1	70	90	25	35	150	
P7	20x40	5915,40	6757,40	5,5	4,1	0	0	0,3	0,2	70	90	25	35	150	
P8	20x40	5894,90	6747,40	5,6	4,2	0	0	0,3	0,2	70	90	25	35	150	
P9	20x40	6239,40	6757,40	8,5	5,7	0	0	0,2	0,1	70	90	25	35	150	
P10	20x40	6547,40	6757,40	5,2	4,0	0	0	0,2	0,2	70	90	25	35	150	
P11	20x40	4984,90	6489,90	11,5	6,9	0	0	1,0	0,1	70	90	25	35	150	
P12	20x40	5255,40	6489,90	11,3	6,8	0	0	1,0	0,1	70	90	25	35	150	
P13	20x40	5894,90	6482,90	11,5	6,9	0	0	1,0	0,1	70	90	25	35	150	
P14	20x40	6557,40	6482,90	11,4	7,0	0	0	1,0	0,1	70	90	25	35	150	
P15	15x40	3074,90	6232,90	6,1	6,0	0	0	0,1	0,2	70	90	25	35	150	
P16	15x40	3739,90	6232,90	5,9	5,7	0	0	0,1	0,1	70	90	25	35	150	
P17	15x40	4004,90	6232,90	5,9	5,7	0	0	0,1	0,1	70	90	25	35	150	
P18	15x40	4670,40	6232,90	6,1	6,0	0	0	0,1	0,2	70	90	25	35	150	
P19	20x40	4984,90	6232,90	11,3	6,8	0	0	1,0	0,1	70	90	25	35	150	
P20	20x40	5255,40	6232,90	10,8	6,5	0	0	1,0	0,1	70	90	25	35	150	
P21	20x40	5894,90	6232,90	11,2	6,7	0	0	1,0	0,1	70	90	25	35	150	
P22	20x40	6557,40	6232,90	10,8	6,5	0	0	1,0	0,1	70	90	25	35	150	
P23	20x40	4984,90	5982,90	11,5	6,9	0	0	1,0	0,1	70	90	25	35	150	
P24	20x40	5255,40	5982,90	11,1	6,8	0	0	1,0	0,1	70	90	25	35	150	
P25	20x40	5894,90	5982,90	11,5	6,9	0	0	1,0	0,1	70	90	25	35	150	
P26	20x40	6557,40	5982,90	11,1	6,7	0	0	1,0	0,1	70	90	25	35	150	
P27	15x40	3074,90	5712,90	7,1	7,0	0	0	1,0	0,6	70	90	25	35	150	
P28	15x40	3727,40	5712,90	8,1	7,9	0	0	1,4	0,3	70	90	25	35	150	
P29	15x40	4017,40	5712,90	8,1	7,9	0	0	1,4	0,3	70	90	25	35	150	
P30	15x40	4670,40	5712,90	7,1	7,0	0	0	1,0	0,6	70	90	25	35	150	
P31	20x40	4974,90	5712,90	6,0	6,2	0	0	0,3	0,1	70	90	25	35	150	
P32	20x40	5305,15	5712,90	8,0	5,3	0	0	0,1	0,1	70	90	25	35	150	
P33	20x40	5925,40	5712,90	5,9	4,8	0	0	0,1	0,1	70	90	25	35	150	
P34	20x40	5904,90	5712,90	6,0	5,4	0	0	0,4	0,1	70	90	25	35	150	
P35	20x40	6235,15	5712,90	9,7	4,5	0	0	0,1	0,0	70	90	25	35	150	
P36	20x40	6557,40	5712,90	6,9	4,9	0	0	0,1	0,1	70	90	25	35	150	
P37	15x40	3074,90	5469,95	4,2	4,0	0	0	0,1	0,6	70	90	25	35	150	
P38	15x40	3739,90	5469,95	3,8	3,6	0	0	0,1	0,6	70	90	25	35	150	
P39	15x40	4004,90	5478,35	3,7	3,6	0	0	0,1	0,7	70	90	25	35	150	
P40	15x40	4670,40	5469,95	4,2	4,0	0	0	0,1	0,6	70	90	25	35	150	
P41	15x40	4982,40	5469,95	4,3	4,1	0	0	0,1	0,5	70	90	25	35	150	
P42	15x40	5627,90	5469,95	4,4	4,2	0	0	0,1	0,5	70	90	25	35	150	
P43	20x40	5894,90	5450,40	10,3	6,3	0	0	0,9	0,1	70	90	25	35	150	
P44	20x40	6557,40	5450,40	10,0	6,1	0	0	0,8	0,1	70	90	25	35	150	
P45	20x40	5894,90	5255,40	10,2	6,2	0	0	0,8	0,1	70	90	25	35	150	
P46	20x40	6557,40	5255,40	10,0	6,1	0	0	0,8	0,1	70	90	25	35	150	
P47	15x40	3087,40	4997,90	7,8	7,6	0	0	1,4	0,2	70	90	25	35	150	
P48	15x40	3739,90	4997,90	6,9	6,7	0	0	1,0	0,5	70	90	25	35	150	
P49	15x40	4004,90	4997,90	7,0	6,8	0	0	1,0	0,6	70	90	25	35	150	
P50	15x40	4657,90	4997,90	7,8	7,6	0	0	1,4	0,2	70	90	25	35	150	
P51	15x40	4982,40	4997,90	7,0	6,8	0	0	1,0	0,5	70	90	25	35	150	
P52	15x40	5615,40	4997,90	7,8	7,6	0	0	1,4	0,2	70	90	25	35	150	
P53	20x40	5894,90	4997,90	6,9	4,8	0	0	0,1	0,1	70	90	25	35	150	
P54	15x40	6216,15	4997,90	9,2	4,4	0	0	0,1	0,0	70	90	25	35	150	
P55	20x40	6547,40	4997,90	7,3	5,0	0	0	0,1	0,0	70	90	25	35	150	
P56	15x40	3074,90	4755,40	3,8	3,6	0	0	0,1	0,6	70	90	25	35	150	
P57	15x40	3739,90	4755,40	4,4	4,3	0	0	0,1	0,6	70	90	25	35	150	
P58	15x40	4004,90	4755,40	4,4	4,3	0	0	0,1	0,6	70	90	25	35	150	
P59	15x40	4670,40	4755,40	3,8	3,6	0	0	0,1	0,5	70	90	25	35	150	
P60	15x40	4982,40	4755,40	4,1	3,9	0	0	0,1	0,5	70	90	25	35	150	
P61	15x40	5627,90	4755,40	4,2	4,0	0	0	0,1	0,7	70	90	25	35	150	
P62	20x40	5894,90	4755,40	10,8	6,5	0	0	0,9	0,1	70	90	25	35	150	
P63	20x40	6557,40	4755,40	10,5	6,4	0	0	0,9	0,1	70	90	25	35	150	
P64	20x40	5894,90	4513,40	10,8	6,6	0	0	0,9	0,1	70	90	25	35	150	
P65	20x40	6557,40	4513,40	10,5	6,5	0	0	0,9	0,1	70	90	25	35	150	
P66	15x40	3074,90	4297,40	5,8	5,6	0	0	1,0	0,6	70	90	25	35	150	
P67	15x40	3727,40	4294,90	6,2	6,0	0	0	1,5	0,5	70	90	25	35	150	
P68	15x40	4017,40	4292,90	6,2	6,0	0	0	1,5	0,5	70	90	25	35	150	
P69	15x40	4670,40	4295,40	5,8	5,6	0	0	1,0	0,6	70	90	25	35	150	
P70	15x40	4982,40	4297,40	5,8	5,6	0	0	1,0	0,6	70	90	25	35	150	
P71	15x40	5615,40	4294,90	6,2	6,0	0	0	1,5	0,5	70	90	25	35	150	
P72	20x40	5904,90	4292,90	5,3	4,0	0	0	0,3	0,2	70	90	25	35	150	
P73	20x40	6239,40	4292,90	7,4	5,2	0	0	0,1	0,1	70	90	25	35	150	
P74	20x40	6547,40	4292,90	4,8	3,7	0	0	0,3	0,2	70	90	25	35	150	
P75	15x40	3075,40	4045,40	3,8	3,6	0	0	0,3	0,3	70	90	25	35	150	
P76	15x40	3445,22	4045,40	6,8	6,6	0	0	0,1	0,2	70	90	25	35	150	
P77	15x40	3922,40	4057,90	8,4	7,2	0	0	0,1	0,3	70	90	25	35	150	
P78	15x40	4362,40	4057,90	5,5	5,3	0	0	0,6	0,8	70	90	25	35	150	
P79	15x30	3764,90	3900,40	5,4	4,5	0	0	0,4	0,4	70	90	25	35	150	
P80	15x30	4074,90	3900,40	5,3	4,5	0	0	0,4	0,4	70	90	25	35	150	
P81	15x40	3075,40	3712,90	6,2	6,3	0	0	0,2	0,2	70	90	25	35	150	
P82	15x40	3432,72	3712,90	7,4	6,0	0	0	0,3	0,1	70	90	25	35	150	
P83	15x40	3075,40	3497,90	3,4	2,5	0	0	0,3	0,3	70	90	25	35	150	
P84	15x40	3445,22	3497,90	7,7	6,3	0	0	0,4	0,1	70	90	25	35	150	
P85	15x40	3922,40	3510,40	7,7	7,5	0	0	0,1	0,6	70	90	25	35	150	
P86	15x40	4362,40	3497,90	7,7	7,5	0	0	0,5	0,4	70	90	25	35	150	
P87	15x40	3087,90	3332,90	7,6	7,4	0	0	0,2	0,4	70	90	25	35	150	
P88	15x40	3444,90	3332,90	7,1	6,9	0	0	0,3	0,7	70	90	25	35	150	
P89	15x40	3919,90	3320,40	8,6	8,4	0	0	0,1	0,9	70	90	25	35	150	
P90	15x40	4394,90	3332,90	5,1	4,8	0	0	0,5	1,0	70	90	25	35	150	
P91	15x40	3087,90	2773,90	4,8	4,6	0	0	0,3	0,8	70	90	25	35	150	
P92	15x40	3444,90	2785,50	7,7	7,6	0	0	0,2	1,0	70	90	25	35	150	
P93	15x40	3919,90	2773,90	8,1	7,9	0	0	0,1	0,7	70	90	25	35	150	




Relação do aço				
AÇO	N	DIAM	Q	C.TOTAL
				(cm)
Resumo do aço				
AÇO	DIAM	C.TOTAL	PESO + 10 %	
	(m)		(kg)	
PESO TOTAL				



Armação positiva das lajes do pavimento COBERTURA (Eixo X)

escala 1:50



GOVERNO DO ESTADO DO PIAUÍ

SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO:
GERÊNCIA DE ARQUITETURA E ENGENHARIA

TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA

ENDEREÇO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí.
CEP: 64700-000

TÍTULO DO DESENHO: DETALHAMENTO DE LAJES

ARQUITETO(A):

DESENHO:
EST1

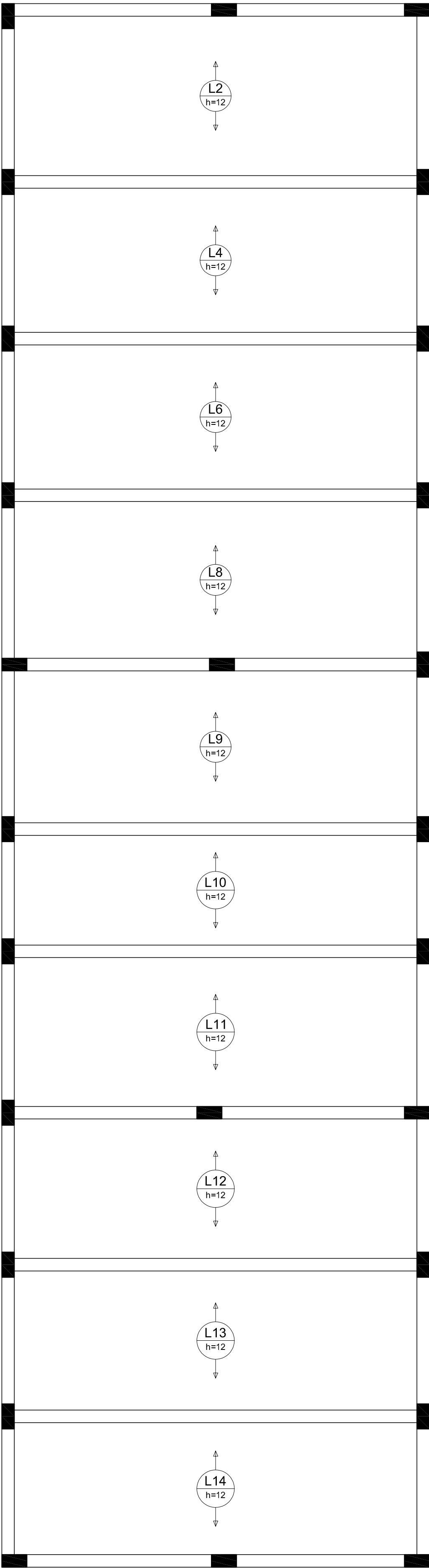
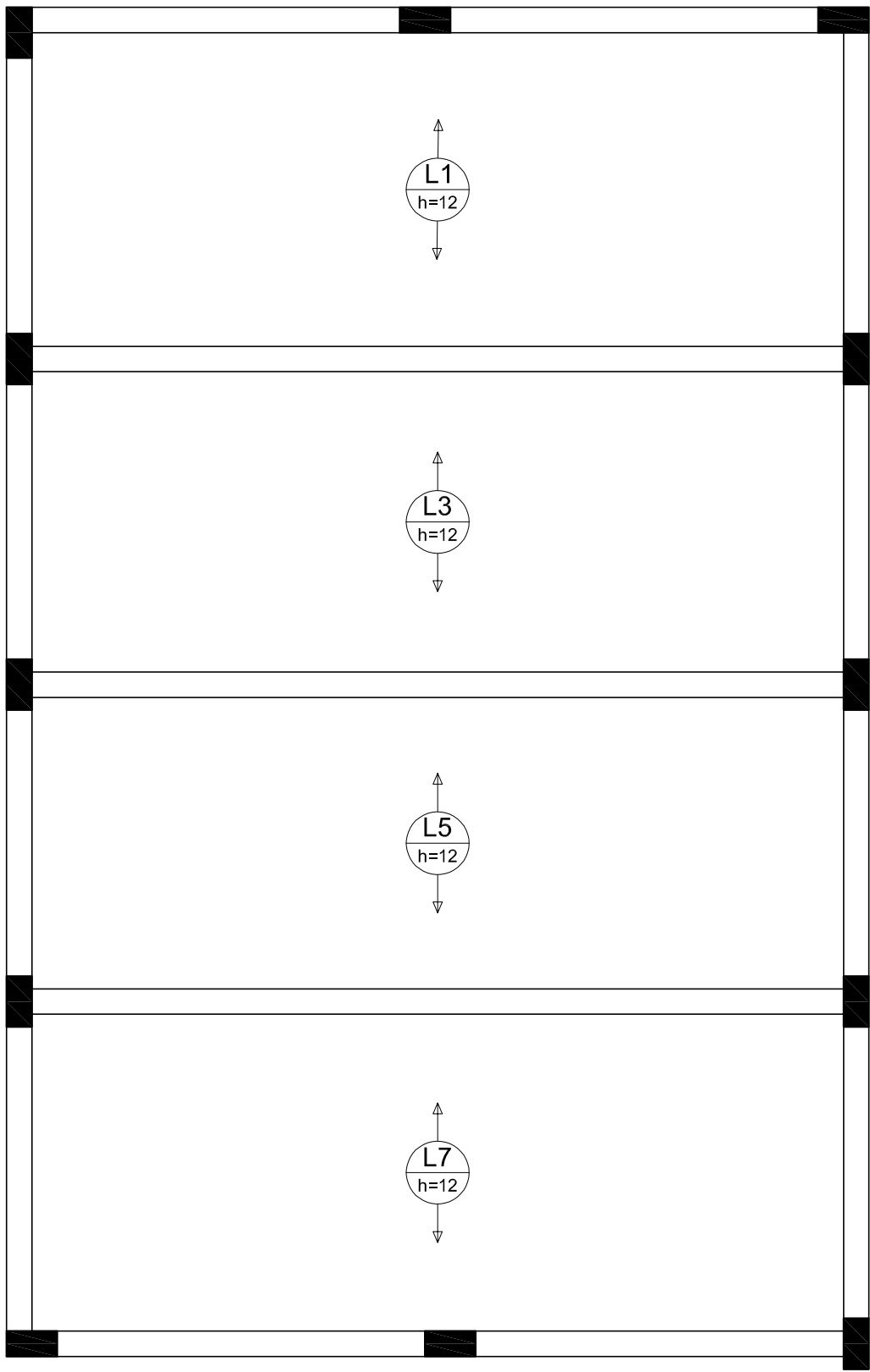
PRONOME:
01/03

ESCALA:
INDICADA

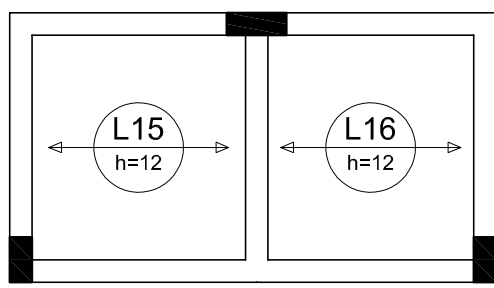
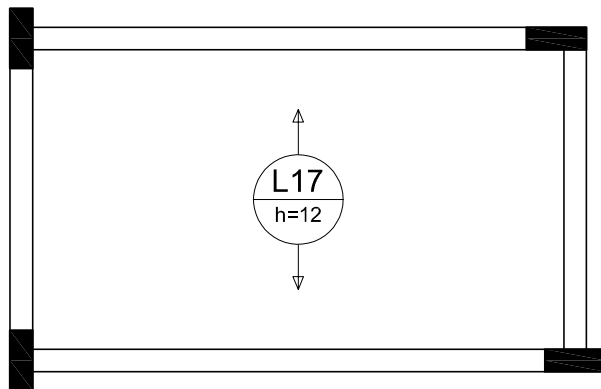
DATA:
PROJETO BÁSICO

REVISÃO:
DATA REV. ATUAL

01




Relação do aço				
AÇO	N	DIAM	Q	C.TOTAL (cm)
Resumo do aço				
AÇO	DIAM	C.TOTAL (m)	PESO * 10 % (kg)	
PESO TOTAL				



Armação positiva das lajes do pavimento COBERTURA (Eixo Y)

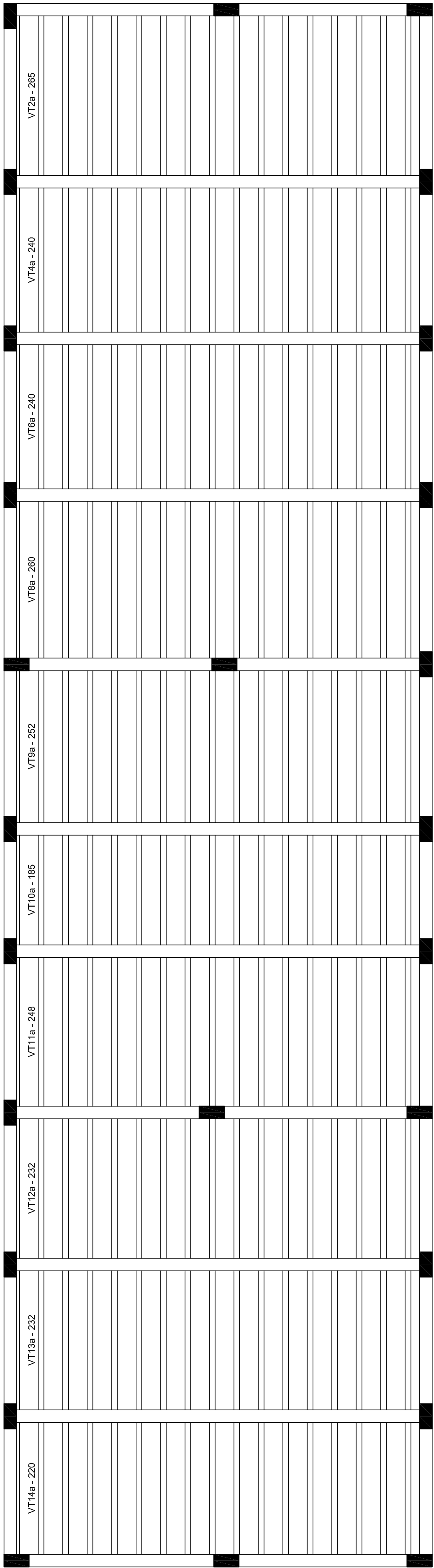
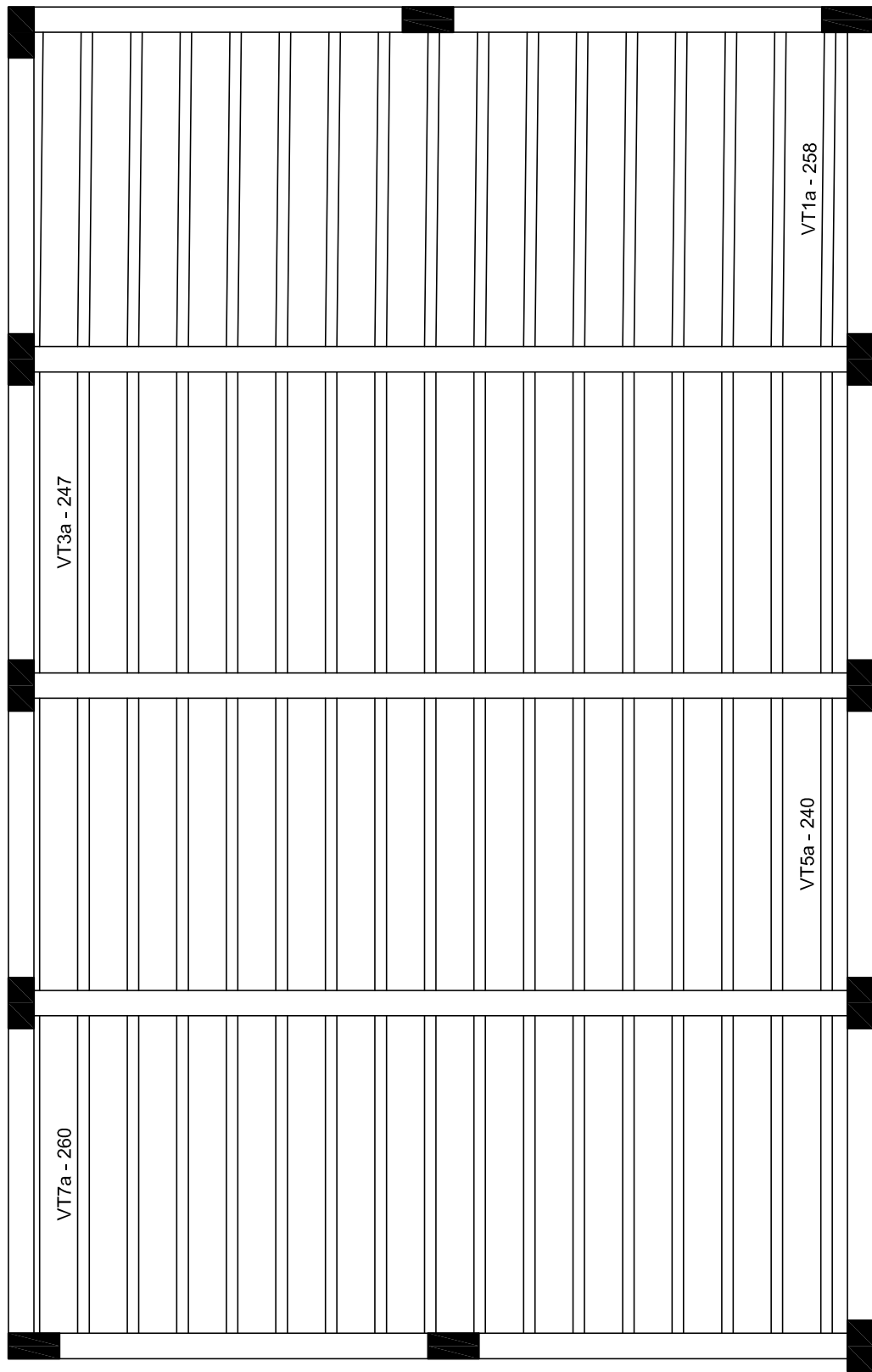
escala 1/20



GOVERNO DO ESTADO DO PIAUÍ

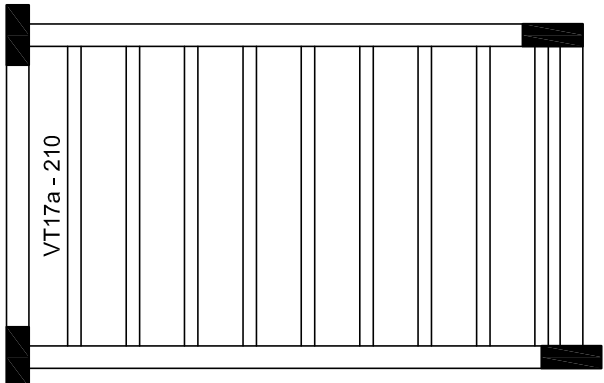
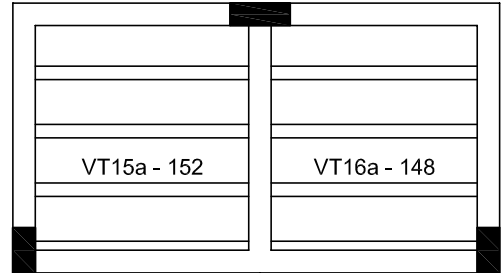
SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO: GERÊNCIA DE ARQUITETURA E ENGENHARIA		DESENHO: EST1	
TÍTULO DO PROJETO-PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA		PRANCHAS:	
ENDEREÇO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí. CEP: 64700-000		02/03	
TÍTULO DO DESENHO: DETALHAMENTO DE LAJES			
ARQUITETO(A):	MUNICÍPIO: Socorro do Piauí-PI	ZONA: URBANA	DESENHO: ESCALA: INDICADA
PASS:	PROJETO BÁSICO	DATA: DATA REV.ATUAL	REVISÃO: 01




Relação do aço					
AÇO	N	DIAM	Q	UNIT	C.TOTAL
				(cm)	(cm)

Resumo do aço			
AÇO	DIAM	C.TOTAL	PESO + 10 %
		(m)	(kg)
PESO TOTAL			



Planta de vigotas pré-moldadas

escala 1:50



GOVERNO DO ESTADO DO PIAUÍ

SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO:
GERÊNCIA DE ARQUITETURA E ENGENHARIA

TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA

ENDEREÇO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí.
CEP: 64700-000

TÍTULO DO DESENHO: DETALHAMENTO DE LAJES

DESENHO:
EST1

PRONCHIA:
03/03

ARQUITETO(A):
MUNICÍPIO:
FASE:

DESENHO:
ZONA:
DATA:

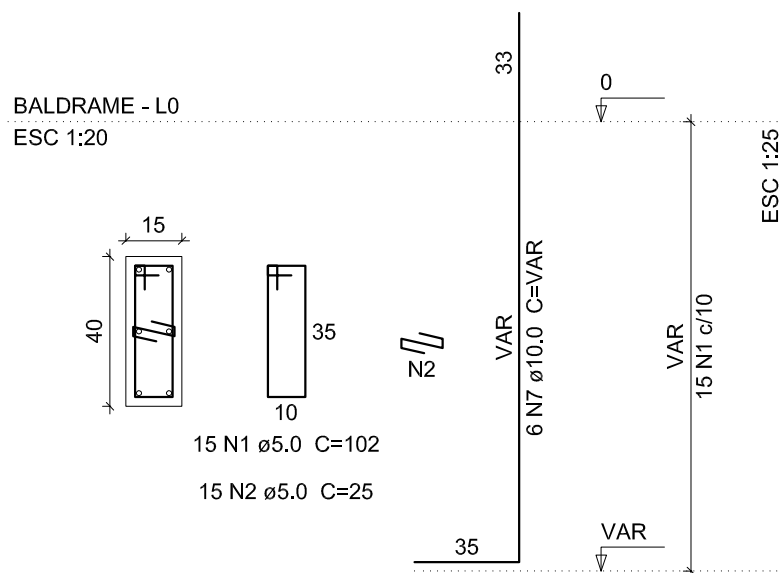
DESENHO:
ZONA:
DATA:

DESENHO:
ZONA:
DATA:

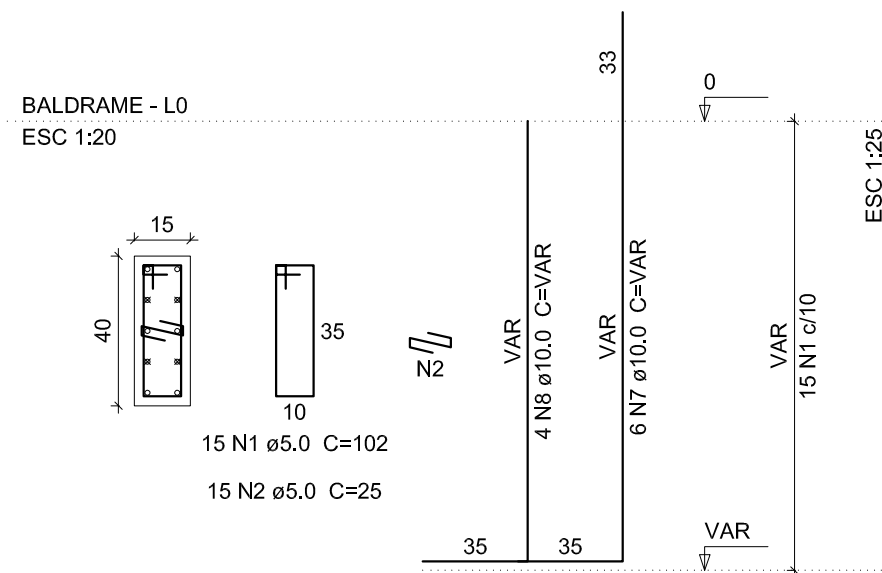
ESCALA:
INDICADA

REVISÃO:
01

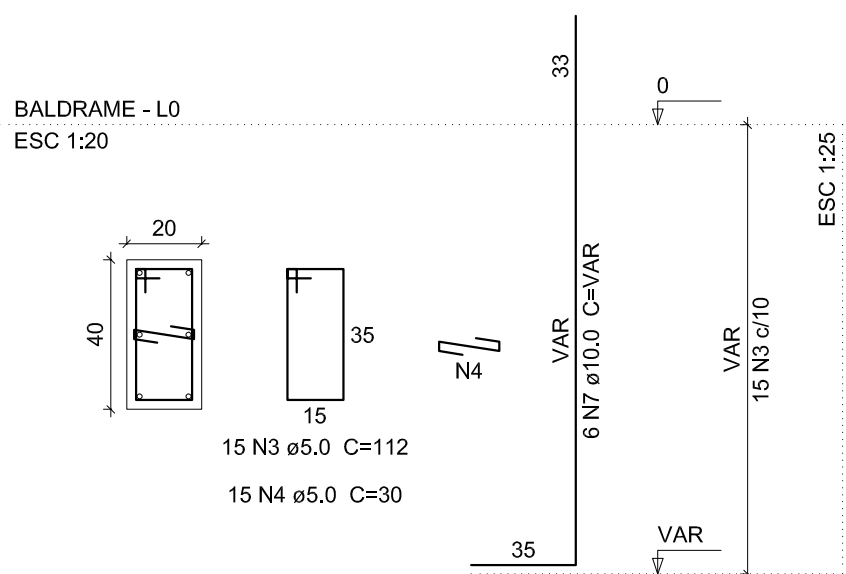
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=P58=P59=P60=P61=P67=P68=P71=P75=P76
=P77=P81=P82=P83=P84=P85=P86=P87=P88
=P89=P90=P91=P92=P93=P94



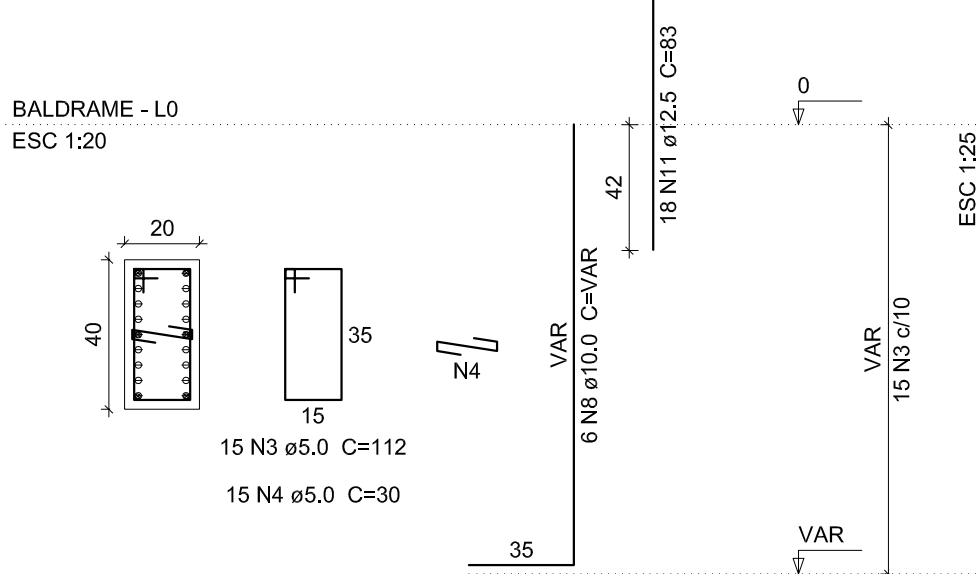
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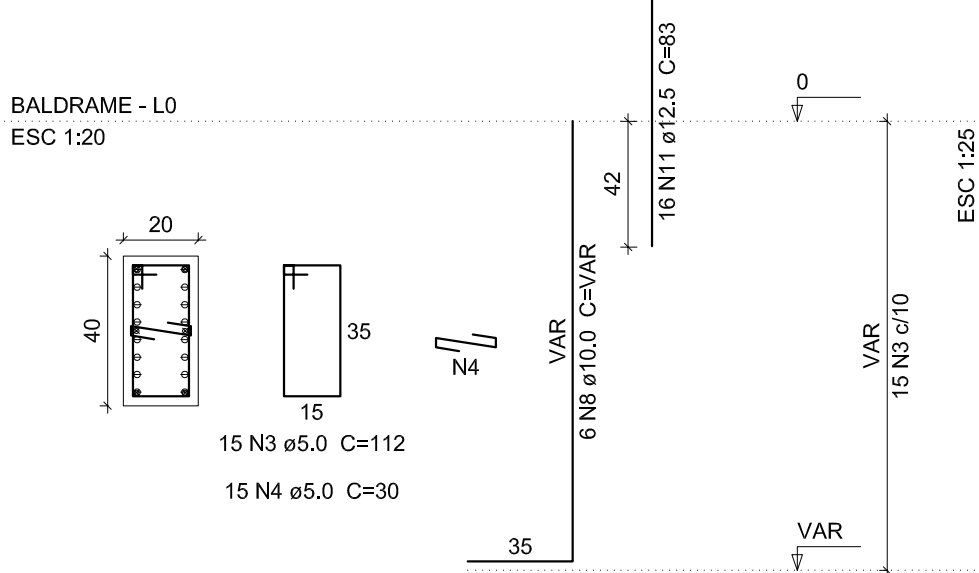
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P11=P12=P13=P14=P19=P20=P21=P22=P23=P24
=P25=P26=P62=P63=P65



P43=P44=P45=P46=P64



Relação do aço

BALDRAME: 43xP1 10xP2
18xP5 15xP11
50xP43 P78
24xP79
COBERTURA: 54xP1 18xP5
15xP11 60xP43
24xP79

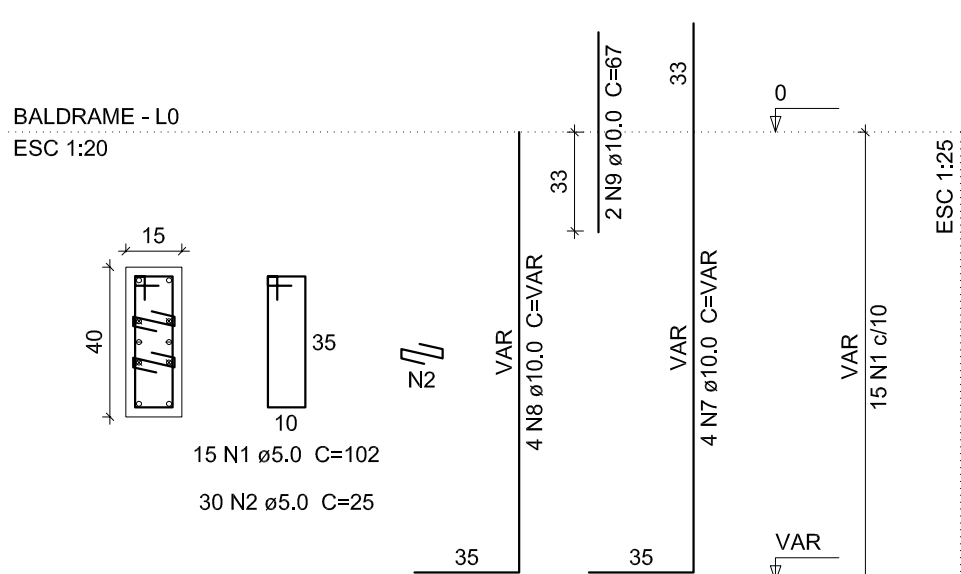
AÇO	N	DIAM	Q	UNIT	C.TOTAL
				(cm)	(cm)
CASO	1	5.0	2646	102	669892
	2	5.0	2661	25	66525
	3	5.0	1642	112	183904
	4	5.0	1182	30	35460
	5	5.0	88	82	8036
	6	5.0	460	30	13800
CASO	7	10.0	438	VAR	VAR
	8	10.0	104	VAR	VAR
	9	10.0	2	67	134
	10	10.0	440	337	148389
	11	12.5	350	83	29050
	12	12.5	350	337	117850

Resumo do aço

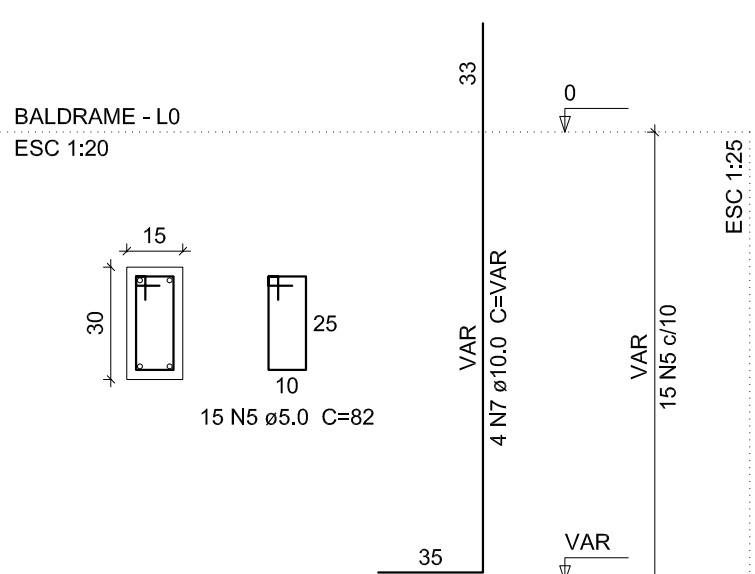
AÇO	DIAM	C.TOTAL	PESO + 10 %
		(m)	(kg)
CASO	10.0	2725.5	1848.4
CASO	5.0	5776.2	1567.7
PESO TOTAL			3416.1
CASO		3406.1	
CASO		979.3	

Vol. de concreto total (C=30) = 31.21 m³
Área de forma total = 523.32 m²

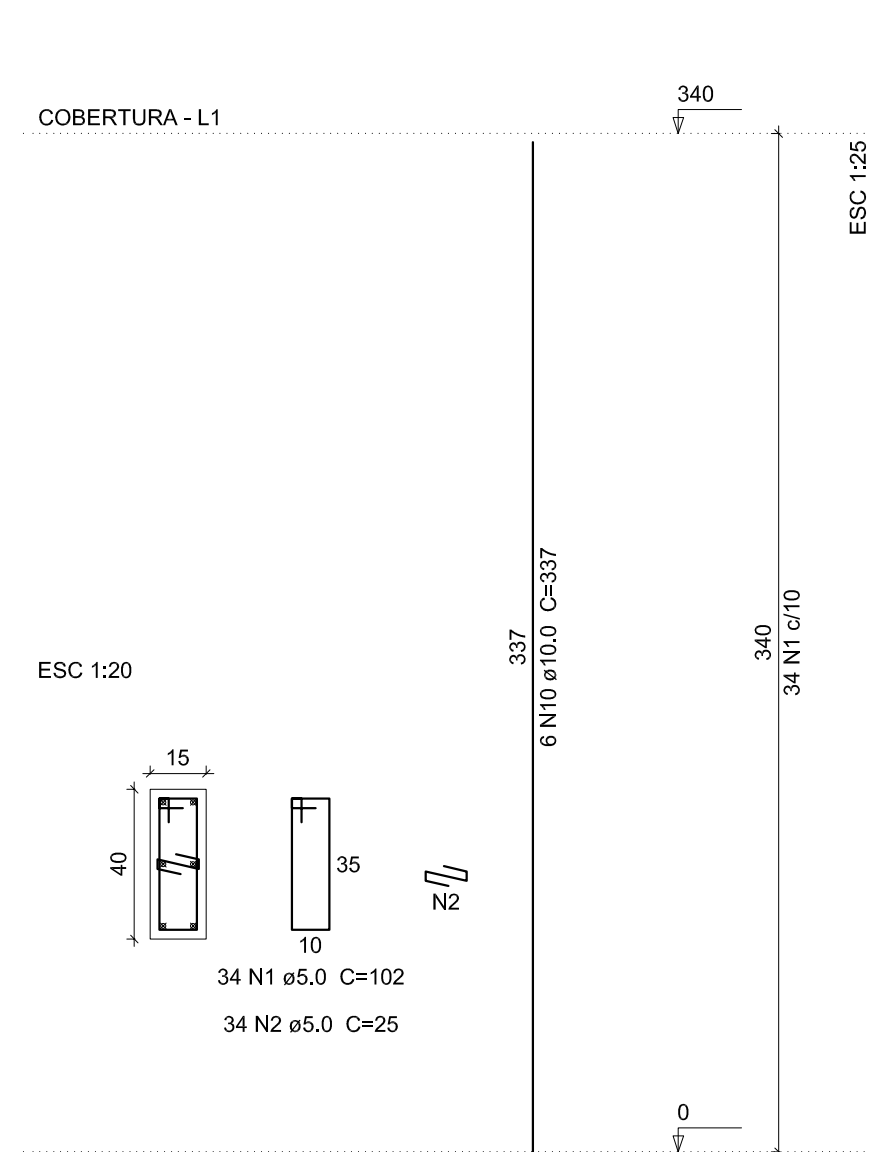
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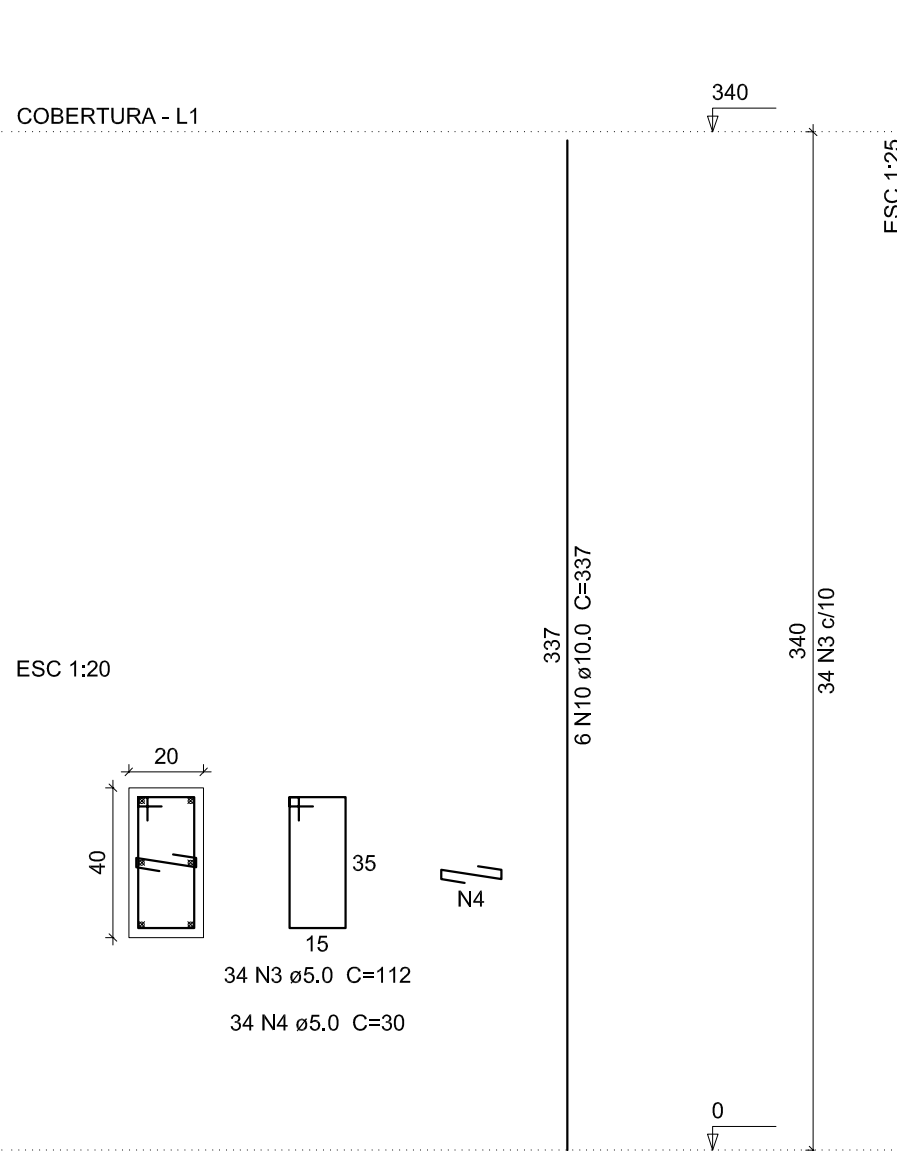
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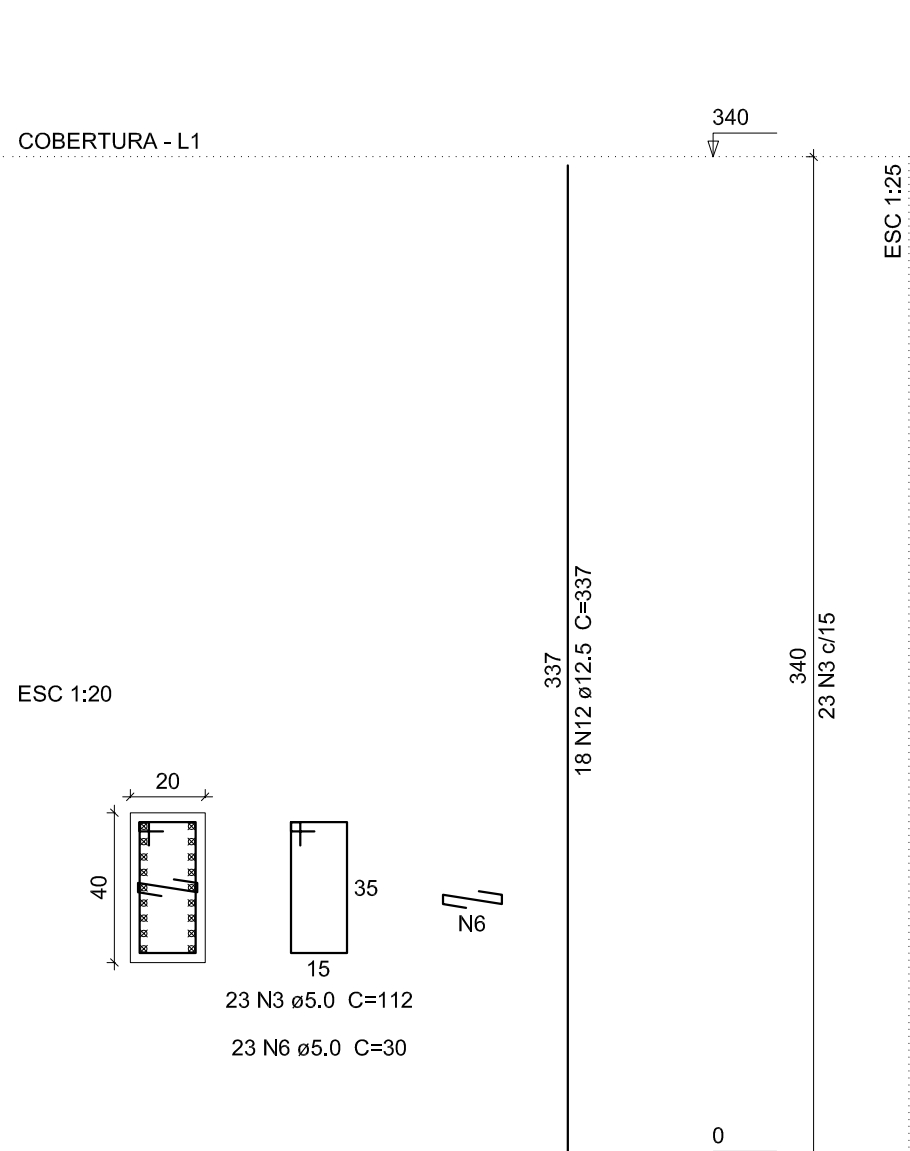
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=P77=P78=P81=P82=P83=P84=P85=P86=P87
=P88=P89=P90=P91=P92=P93=P94



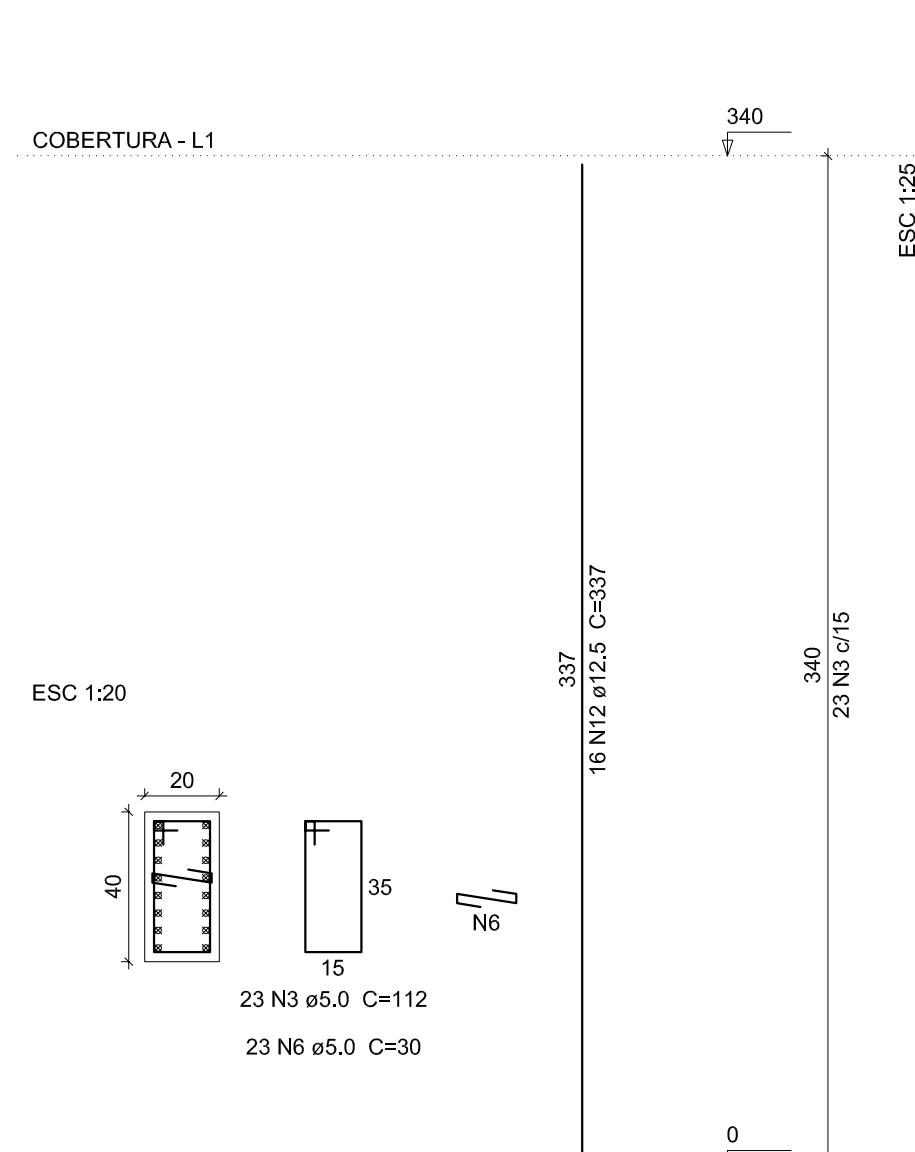
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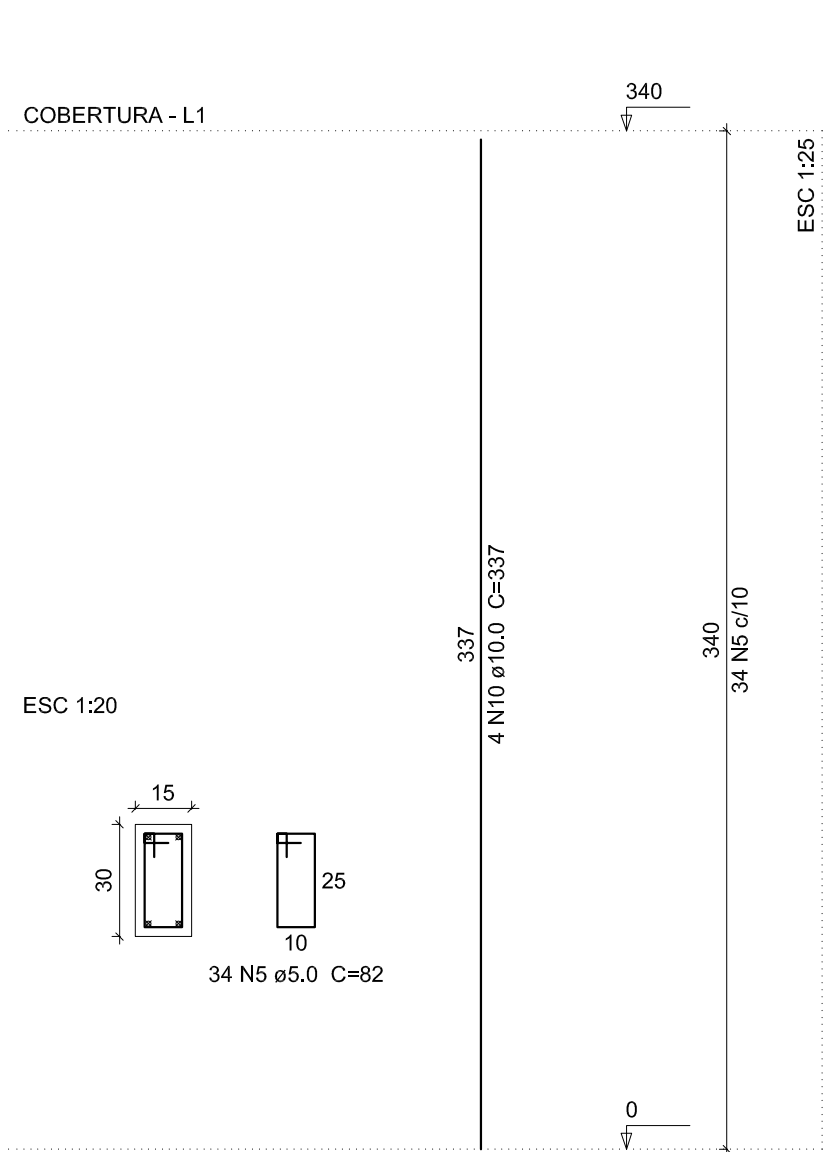
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P43=P44=P45=P46=P64



P79=P80



GOVERNO DO ESTADO DO PIAUÍ

SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO: GERÊNCIA DE ARQUITETURA E ENGENHARIA	DESENHO: EST1
TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA	PRANCHAS: 01/01
ENDEREÇO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí. CEP: 64700-000	
TÍTULO DO DESINHO: DETALHAMENTO DE PILARES	
ARQUITETO(A):	MUNICÍPIO: Socorro do Piauí-PI
PÁSI:	ZONA: URBANA
	DESENHO: DATA: DATA REVATUAL
	ESCALA: INDICADA
	REVISÃO: 01

BALDRAME - L0
ESC 1:20

15
40
10
35
33
N2
6 N8 Ø10 C=VAR
35
VAR
15 N1 Ø5.0 C=101
15 N2 Ø5.0 C=25
VAR
0
ESC 1:25

BALDRAME - L0
ESC 1:20

33

0

ESC 1:20

VAR

6 N8 Ø10.0 C=VAR

15 N3 Ø10.0 C=VAR

15 N3 Ø5.0 C=111

15 N4 Ø5.0 C=30

35

VAR

40

20

35

15

4

BALDRAME - L0
ESC 1:20

40 20 35

15N3 050.0 C=111
15N4 05.0 C=30

VAR 6N 010.0 C=VAR 15N3 010

42 18 N1 Ø12.5 C=30

0 F

ESC 1:25

VAR

35

BALDRAVE - L10
ESC 1/20

15
40
35
10
35
35
0
125
ESC 1/25

N2

15 N1 Ø5.0 C=I01
15 N2 Ø5.0 C=25

VAR
4 N2 Ø10.0 C=VAR
VAR
6 N1 Ø10.0 C=VAR
VAR
15 N1 Ø10

BALDRAME L0
ESC 1:20

40 20 35

15 N4 Ø5.0 C=111
15 N4 Ø5.0 C=30

VAR 42 16 N1 Ø12.5 C=33 0 VAR ESC 1:25

BALDRAME - L0
ESC 1:20

15
40
15 N1 Ø5.0 C=101
30 N2 Ø5.0 C=25

35

VAR

4 N1 Ø10.0 C=VAR

35

2 N1 Ø10.0 C=47

33

VAR

4 N1 Ø10.0 C=VAR

VAR

15 N1 Ø10

ESC 1:25

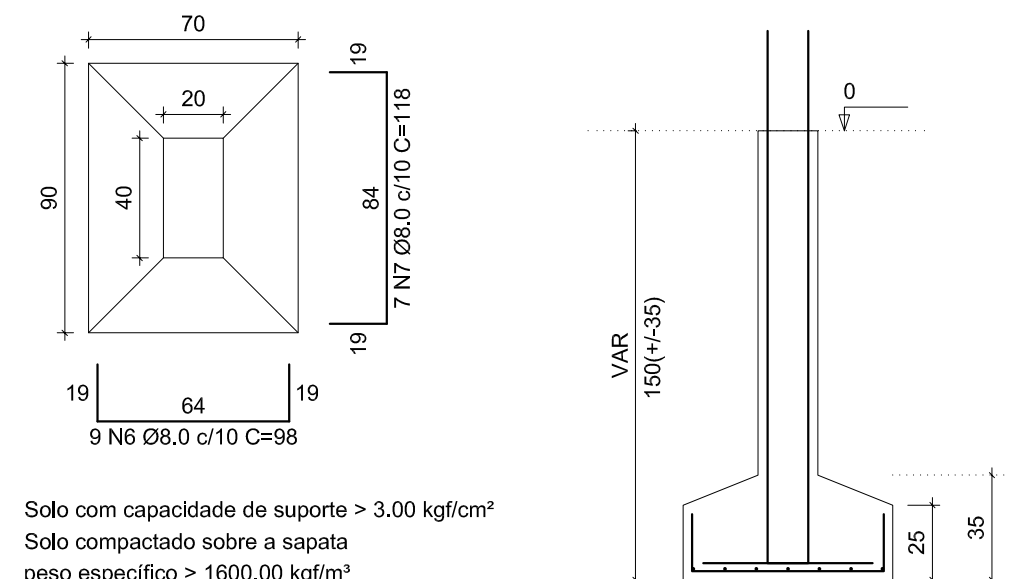
BALDRAME - L0
ESC 1:20

15
30
25
15 NS Ø5.0 C=81

VAR 33
VAR 15 NS ±10

=S94
PLANTA
ESC 1:25

CORTE
ESC 1:25

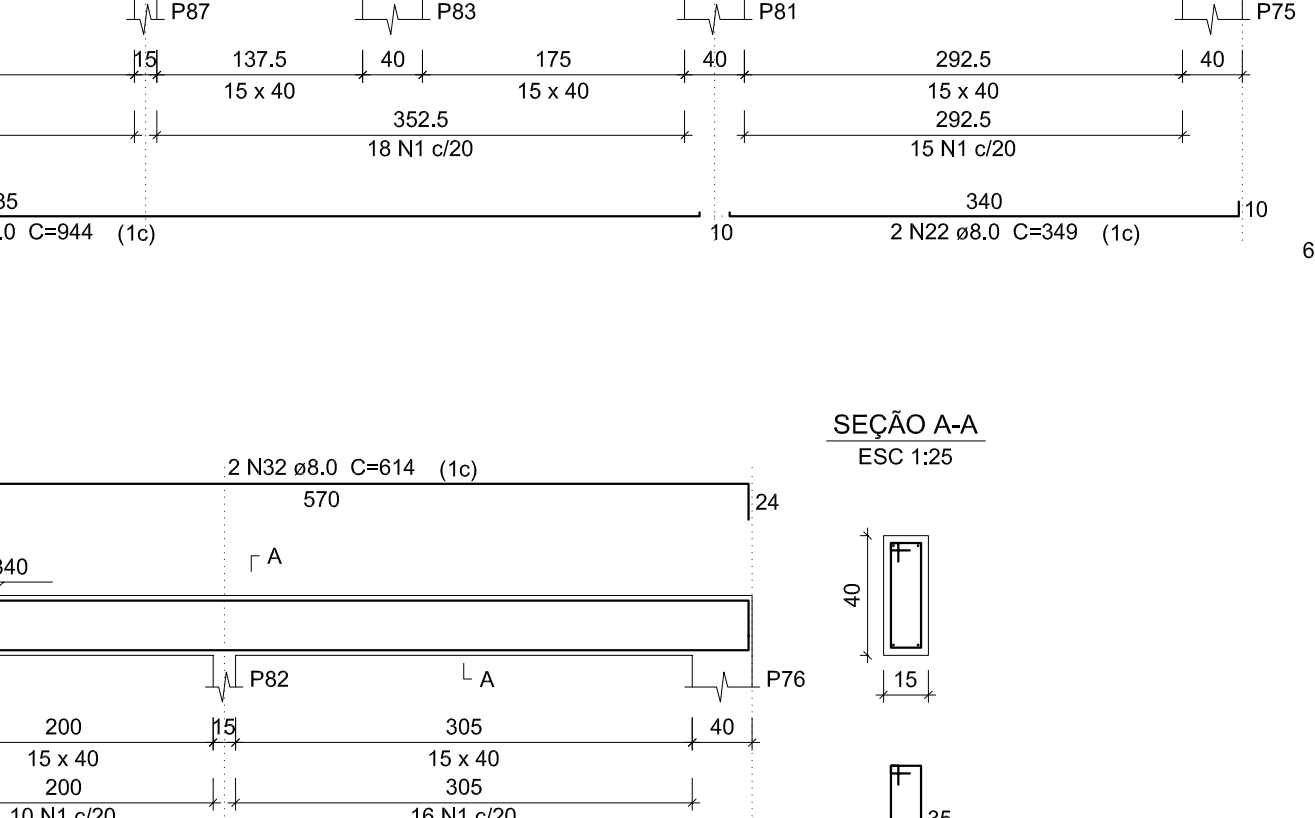
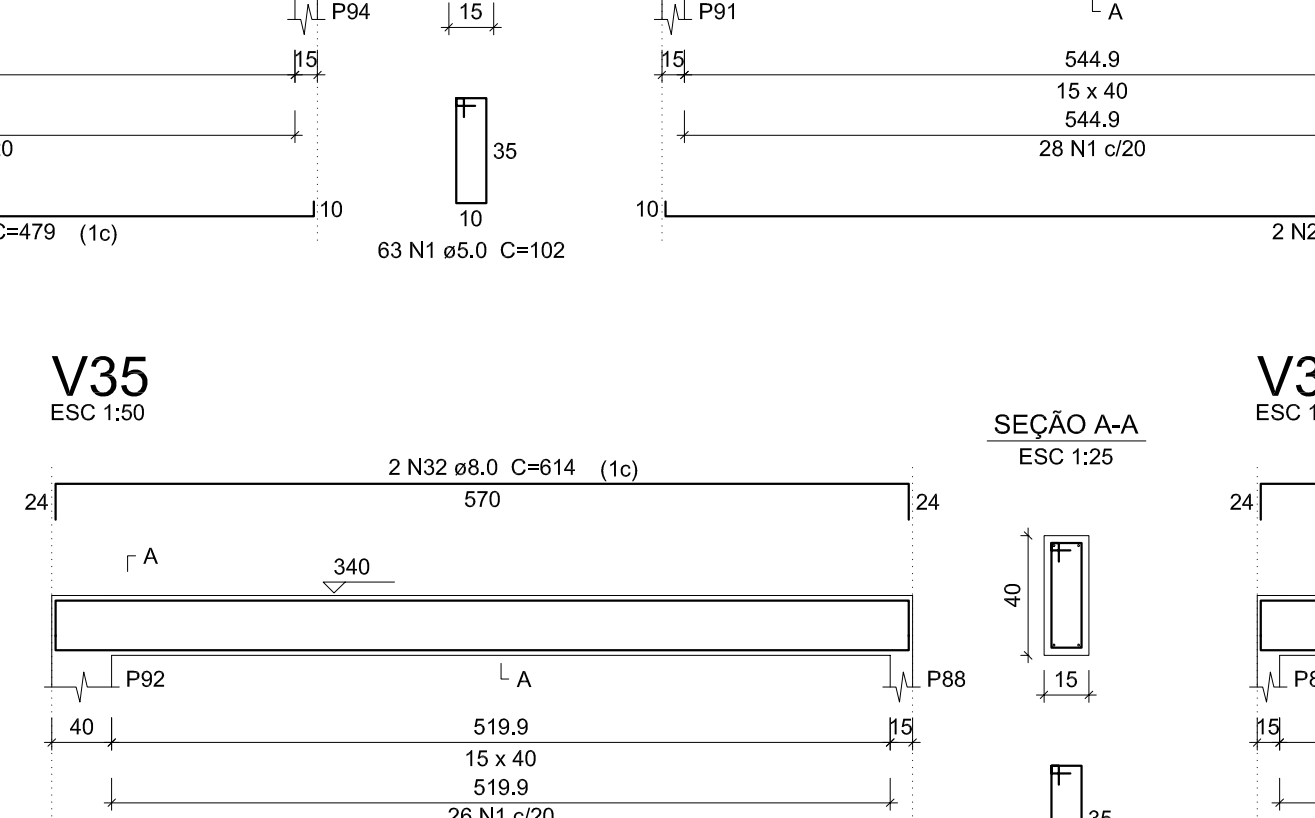
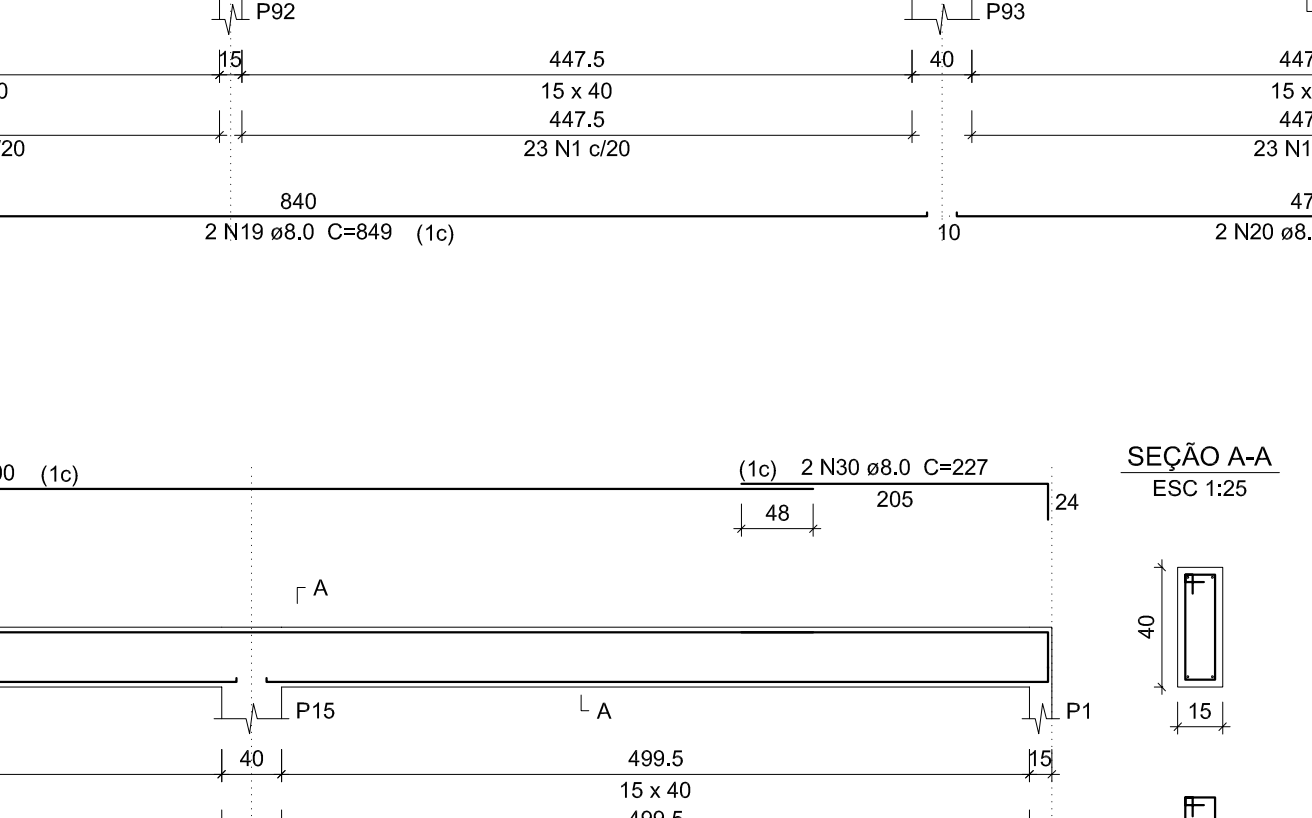
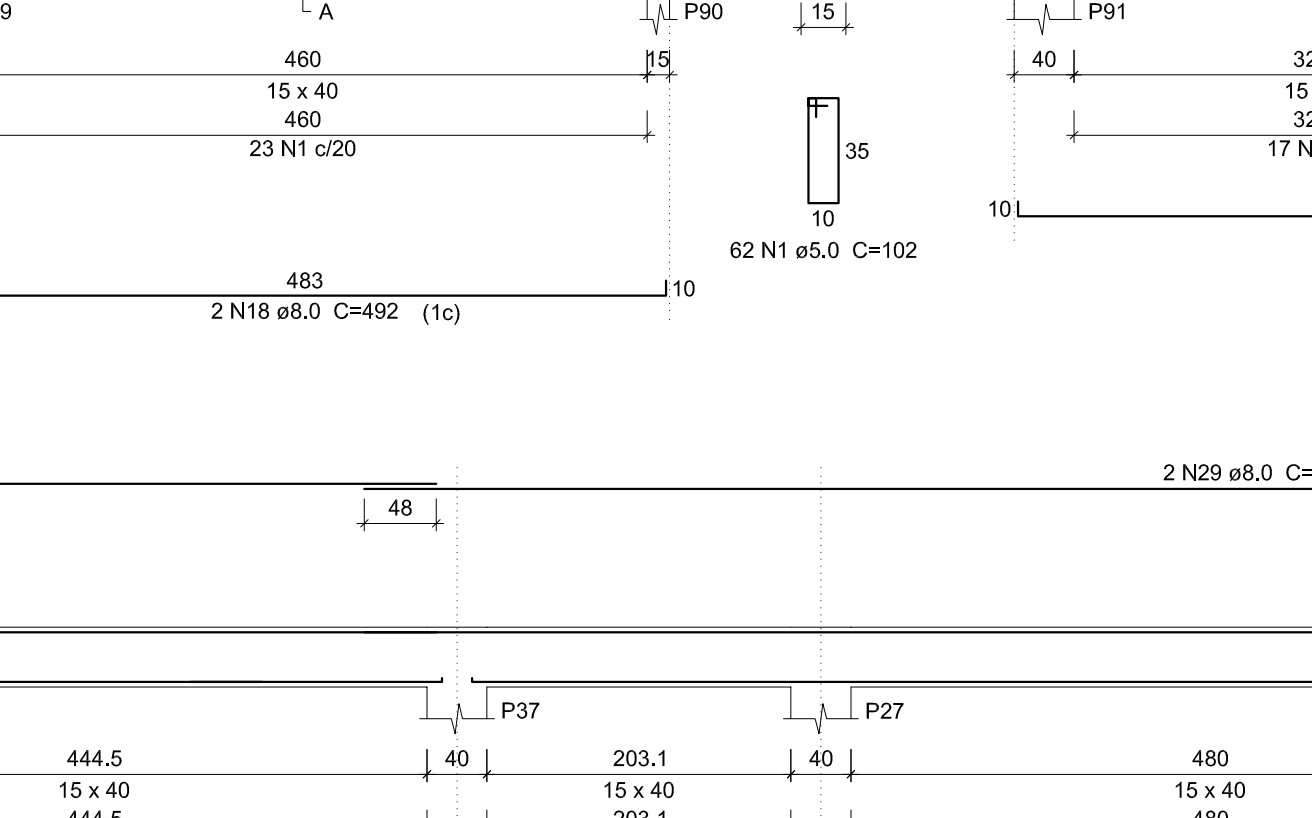
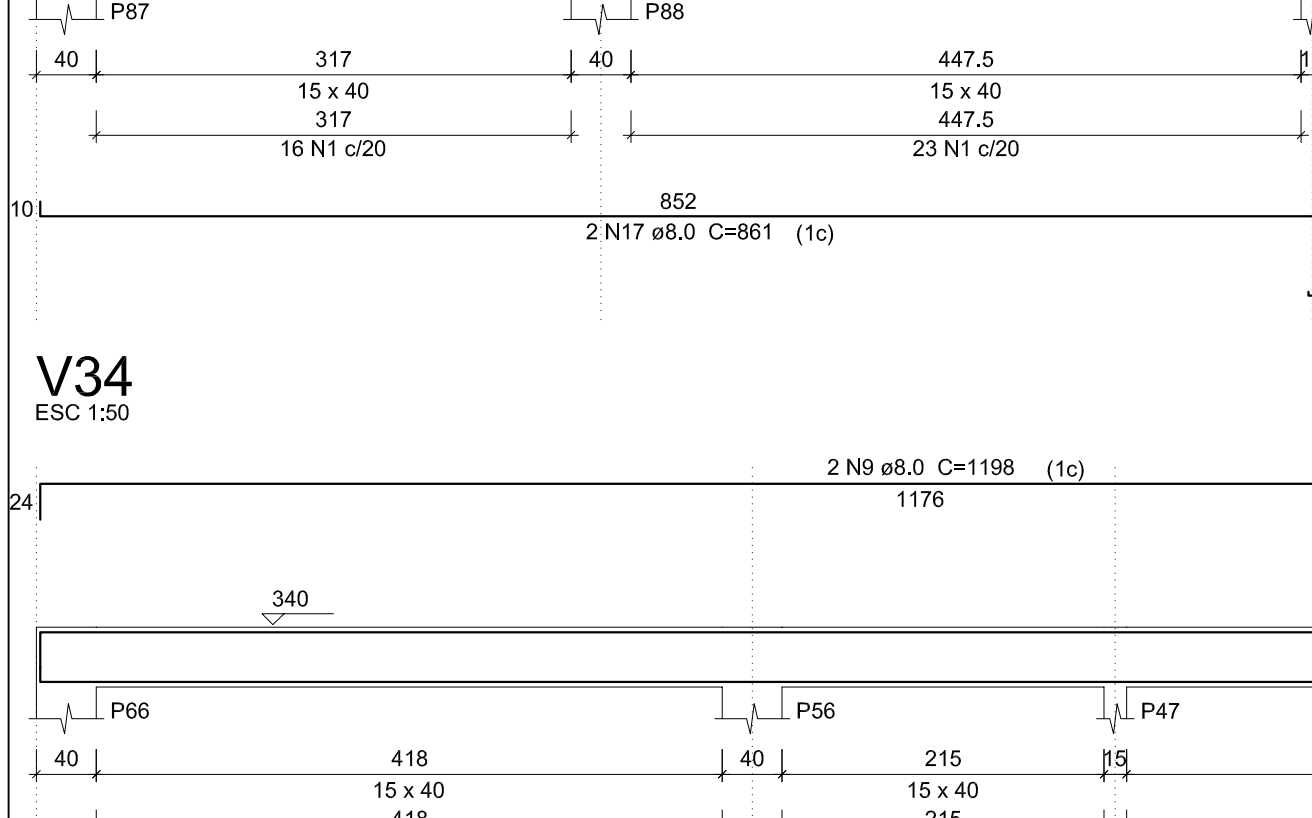
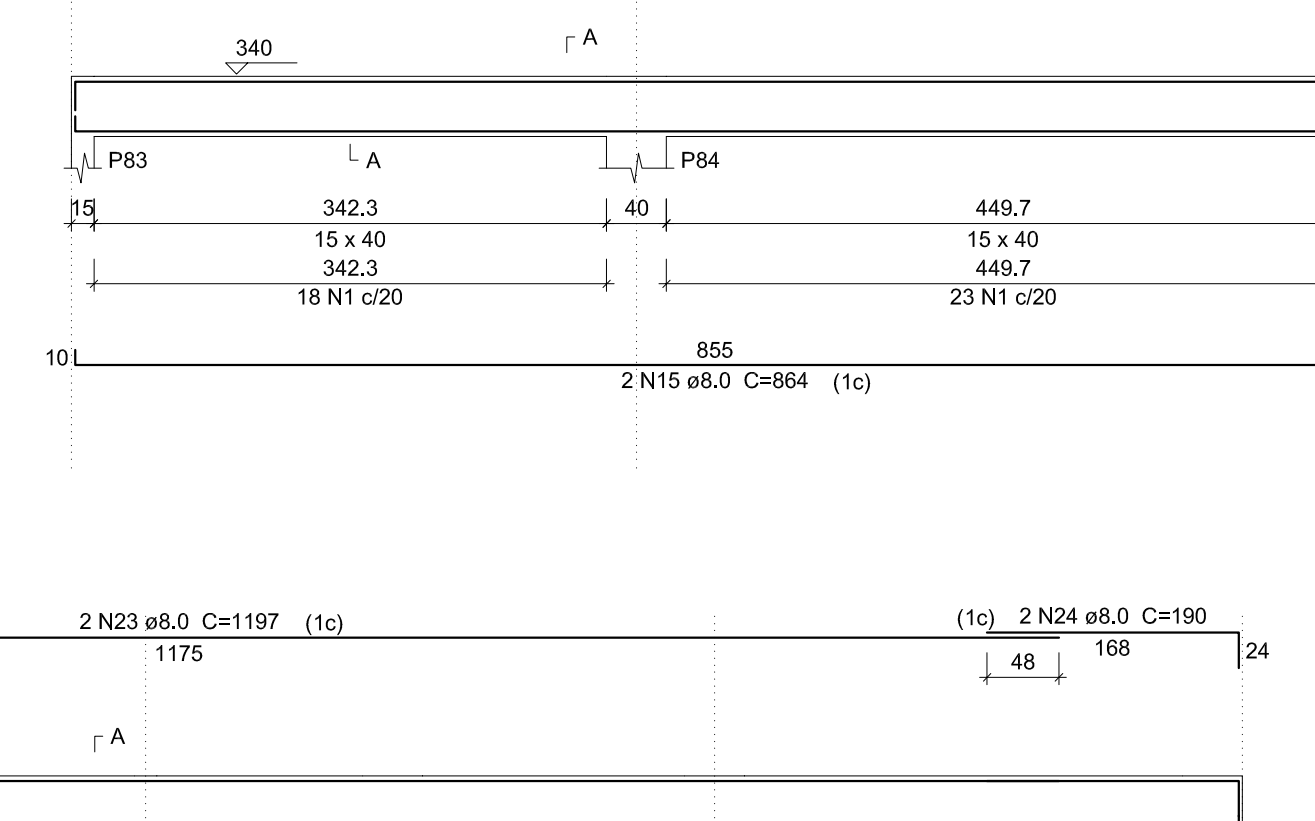
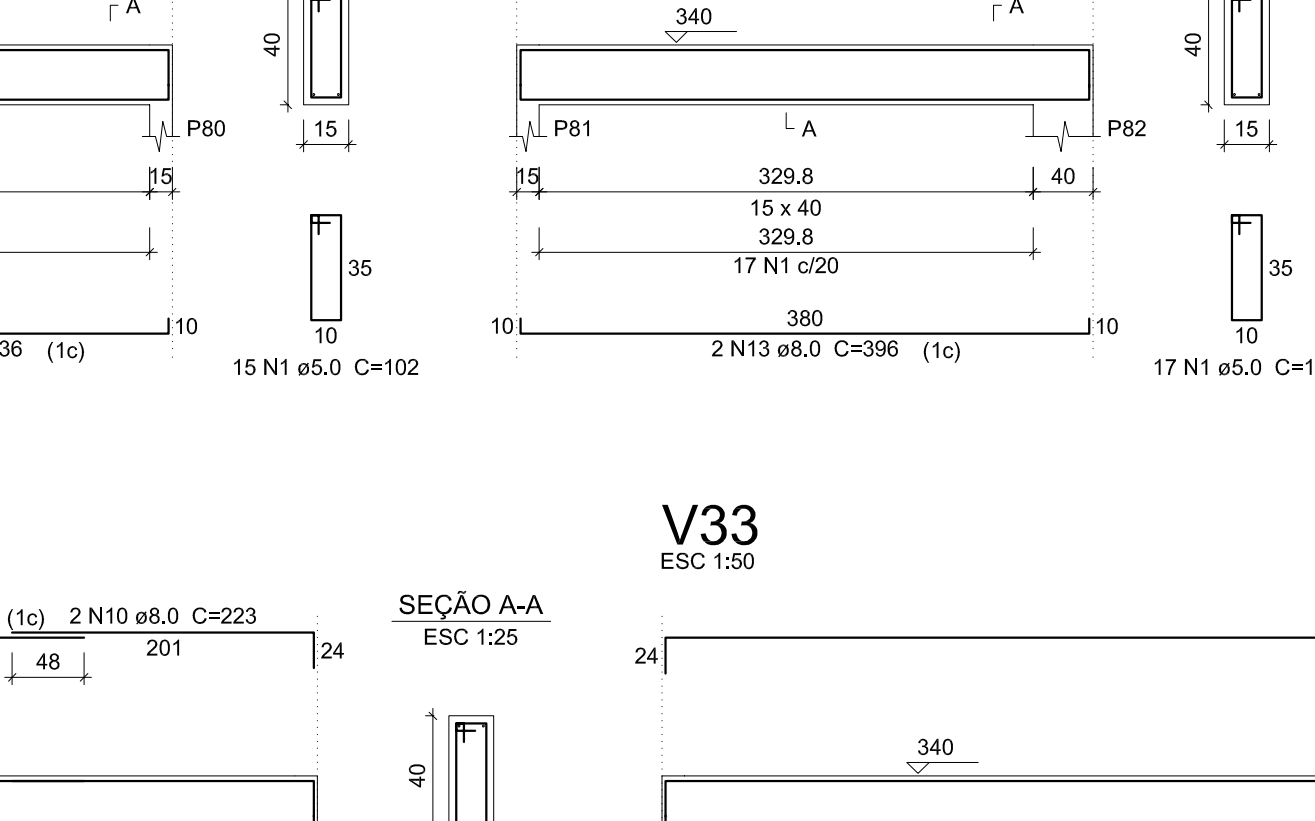
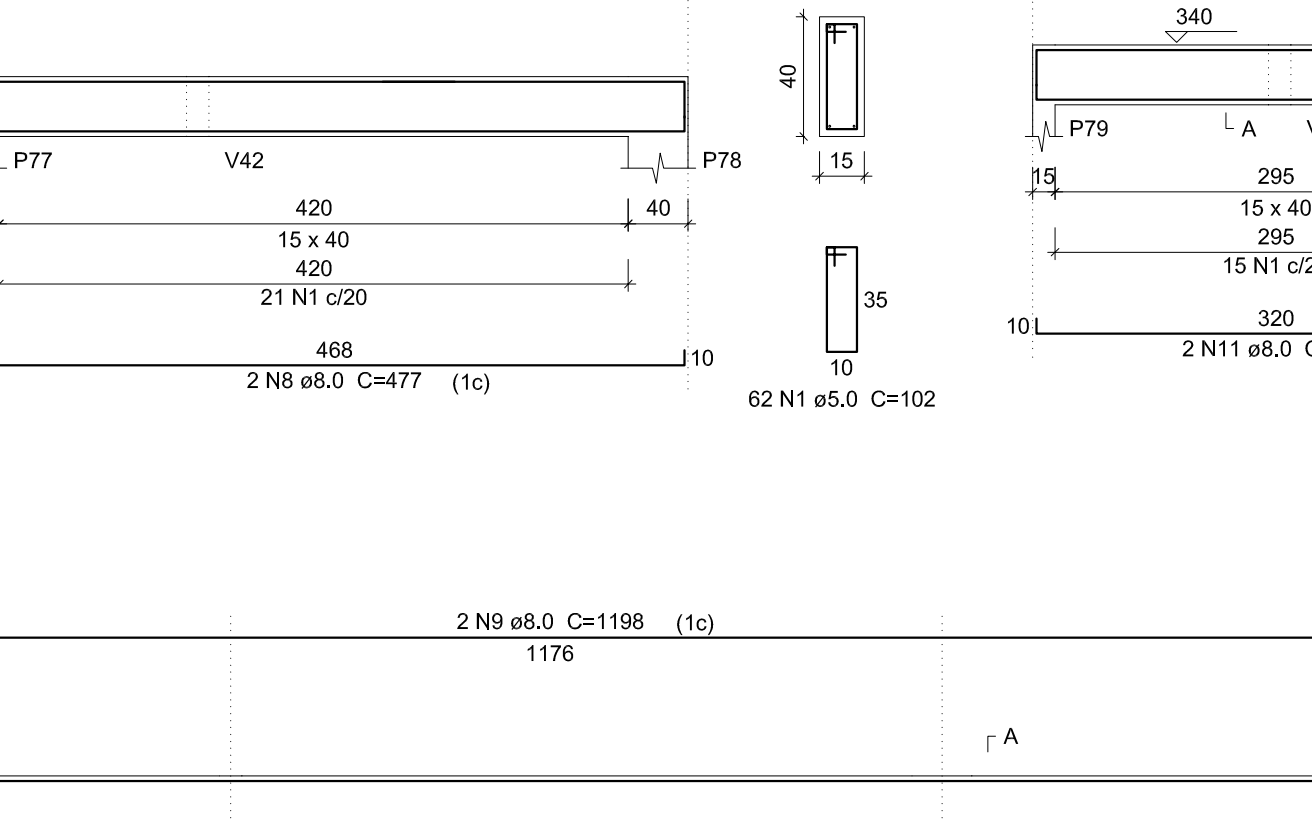
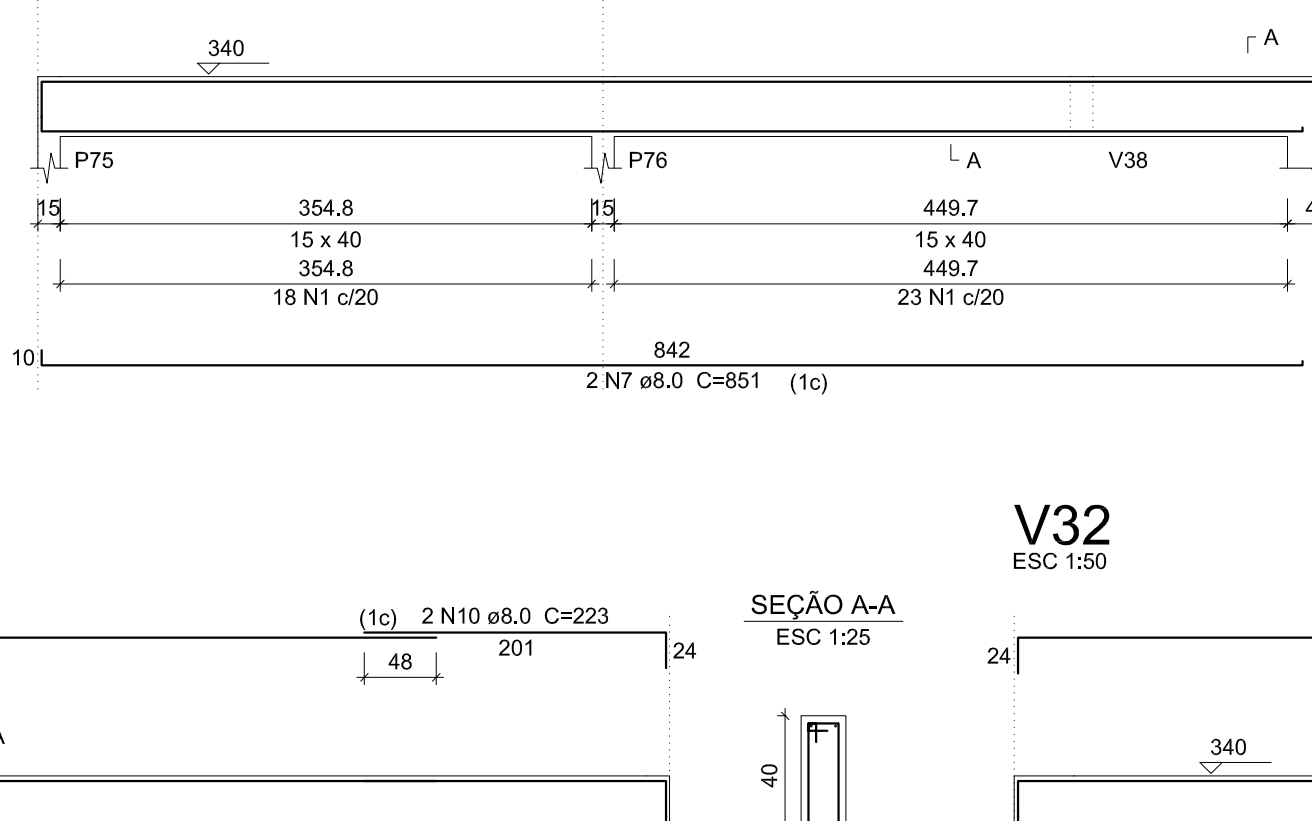
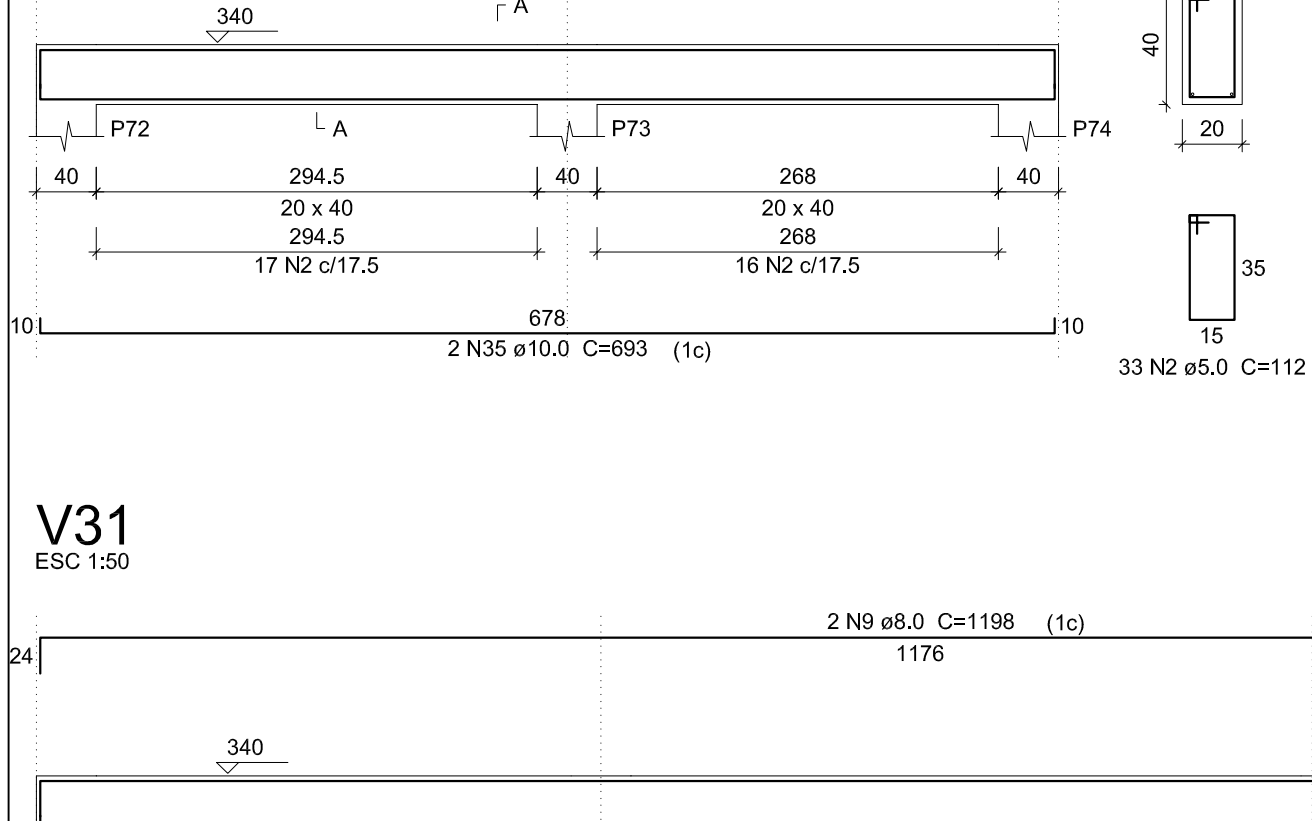
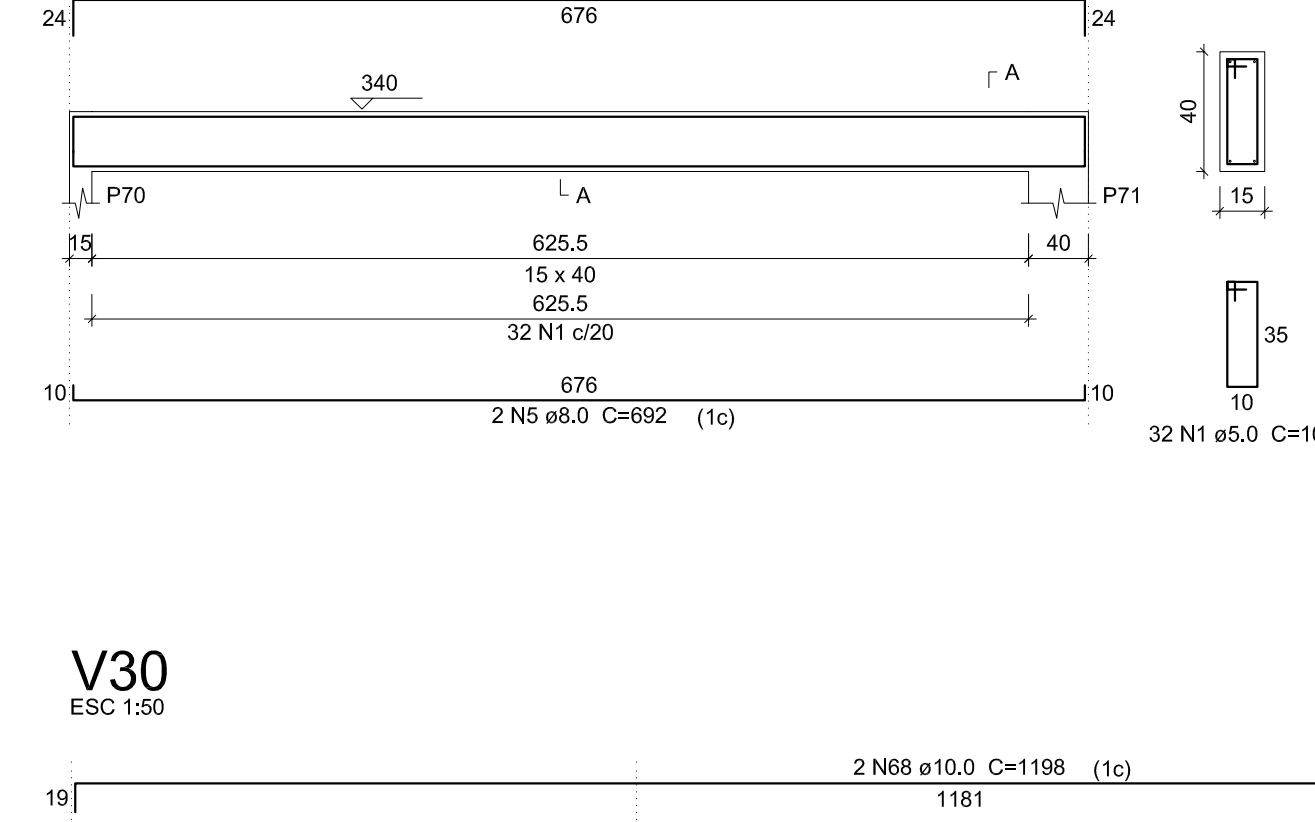
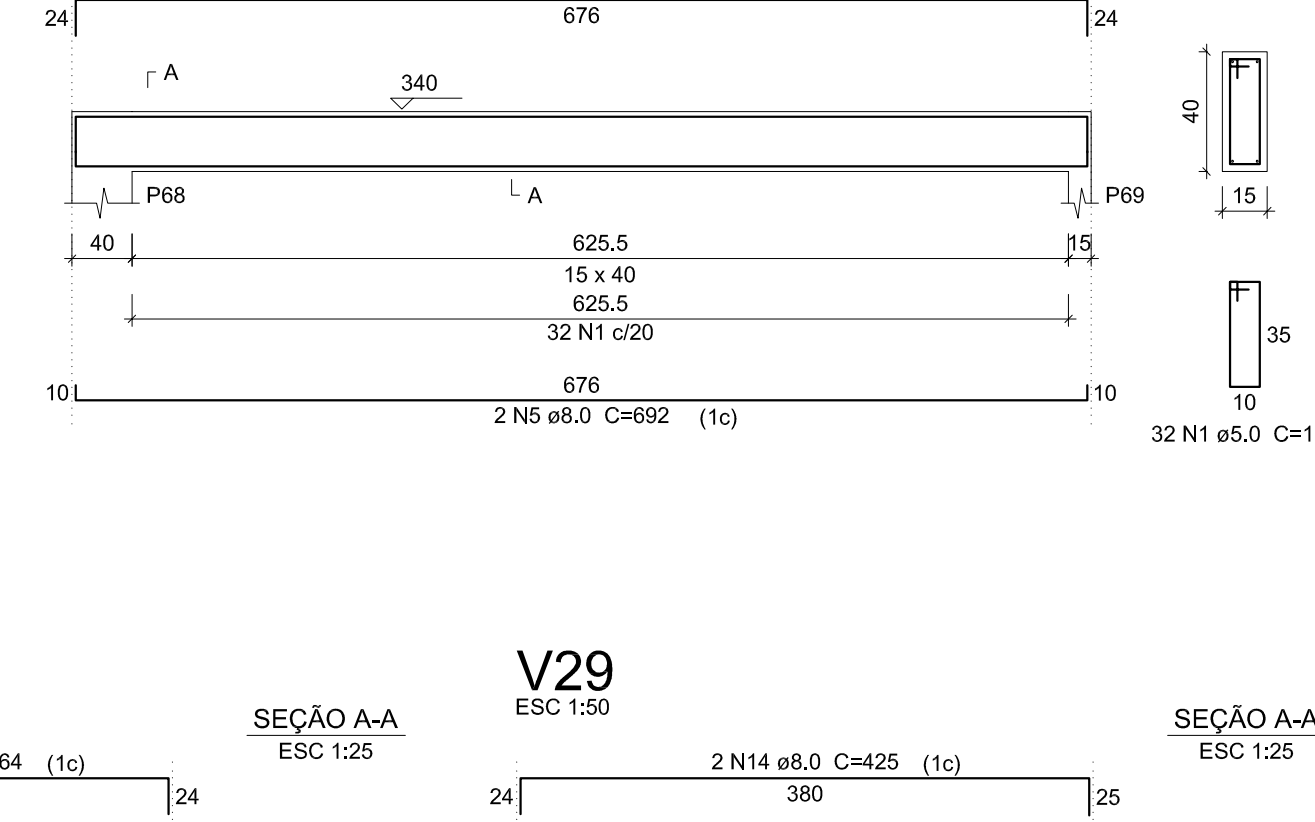
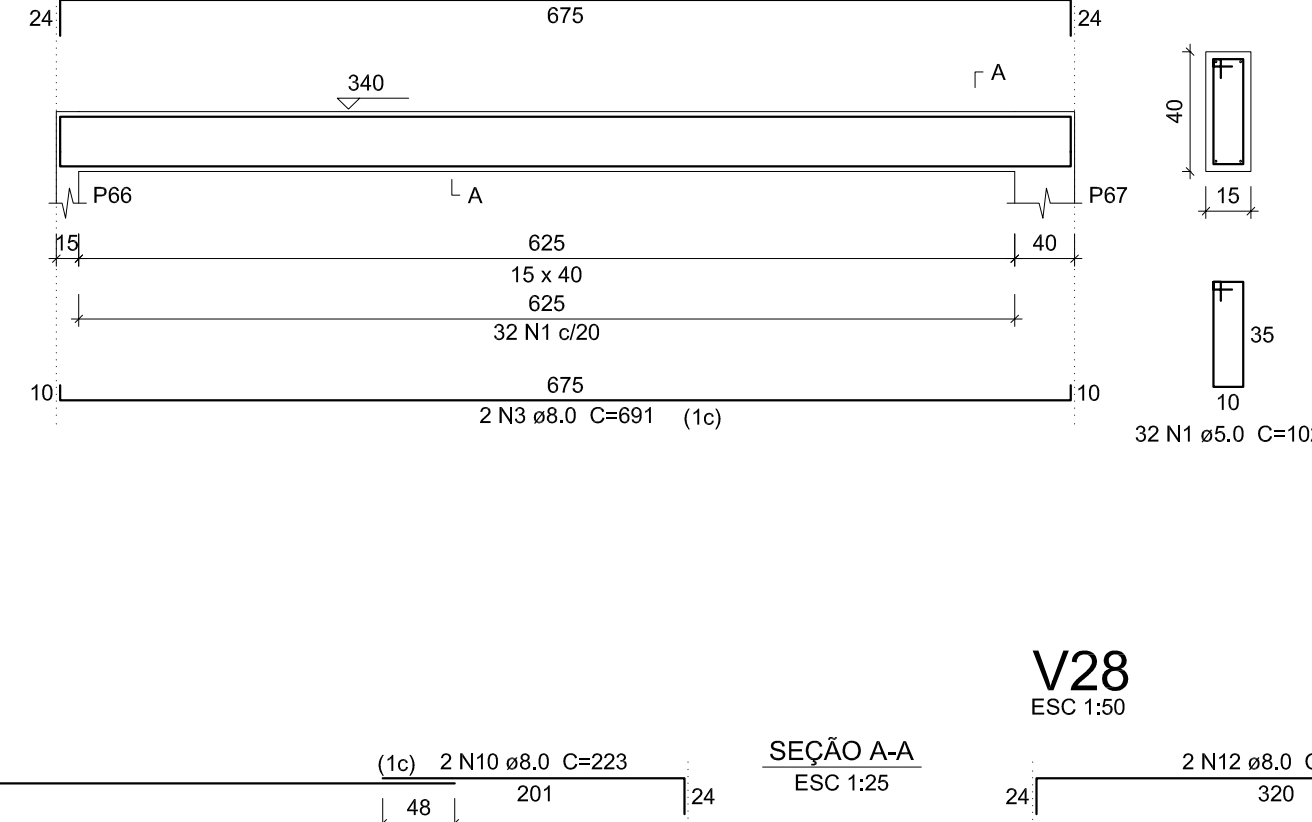
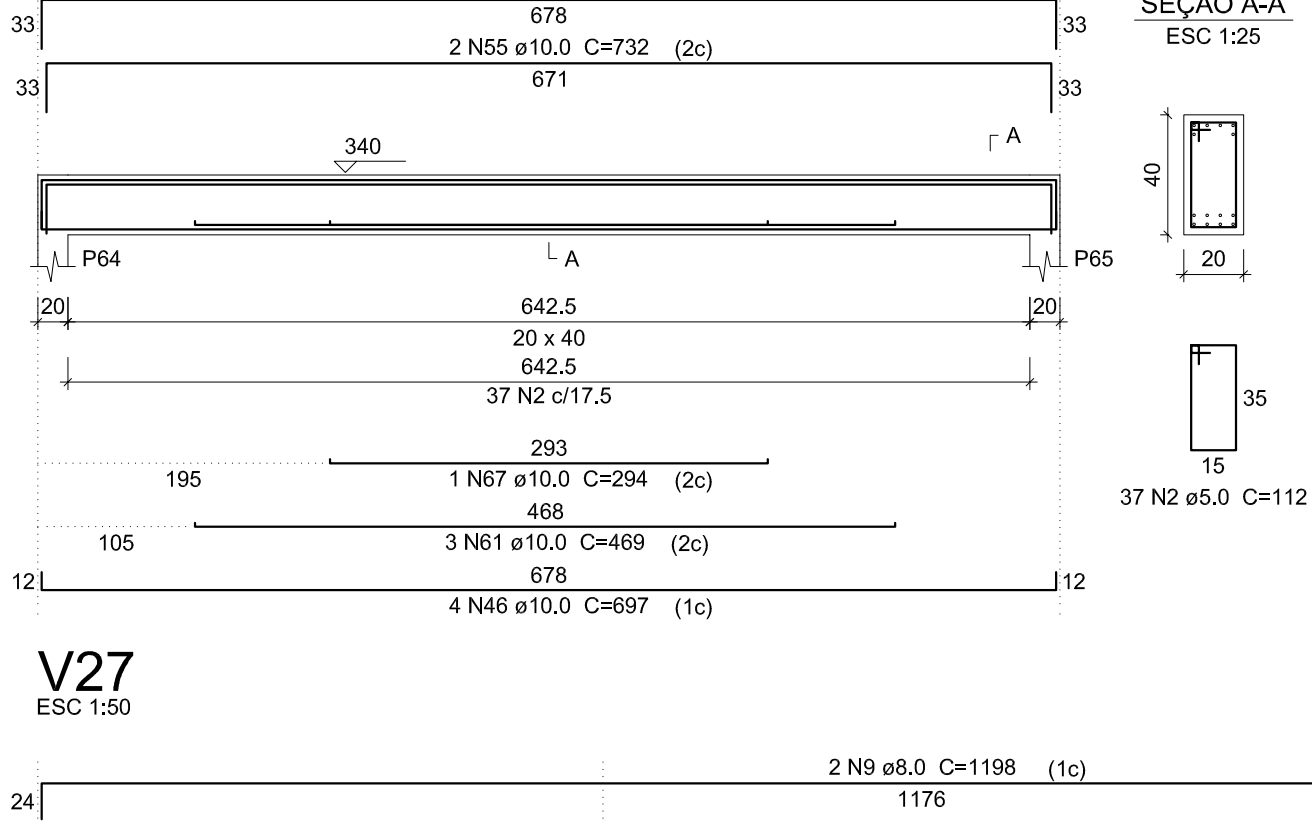
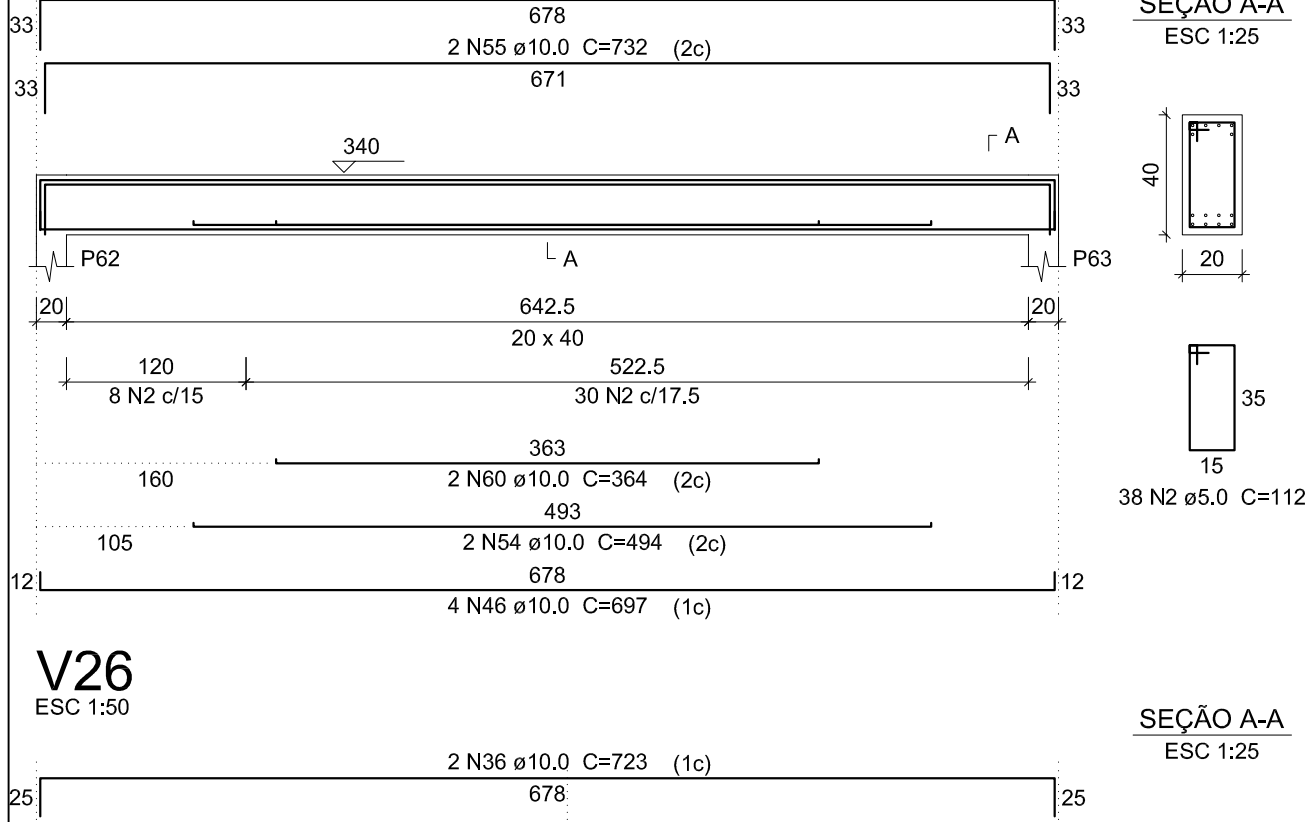
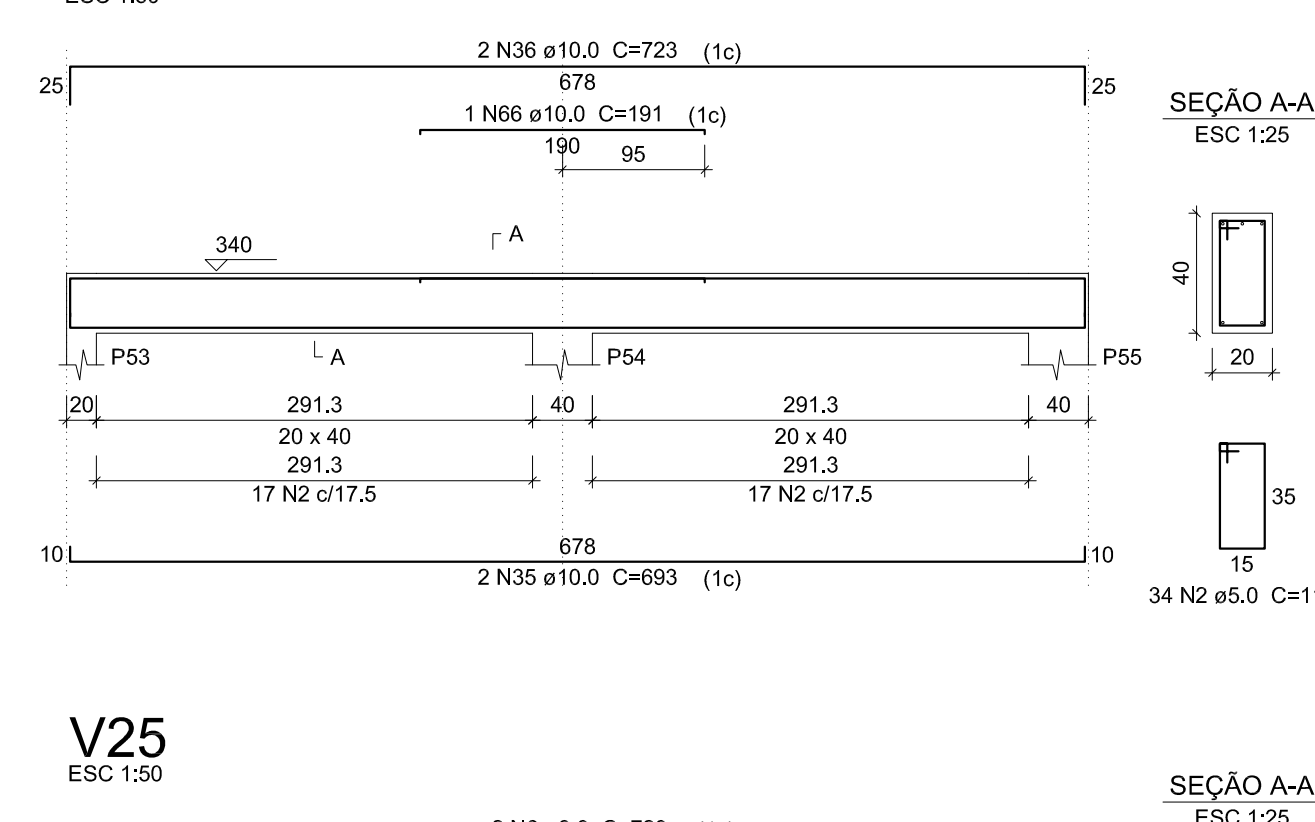
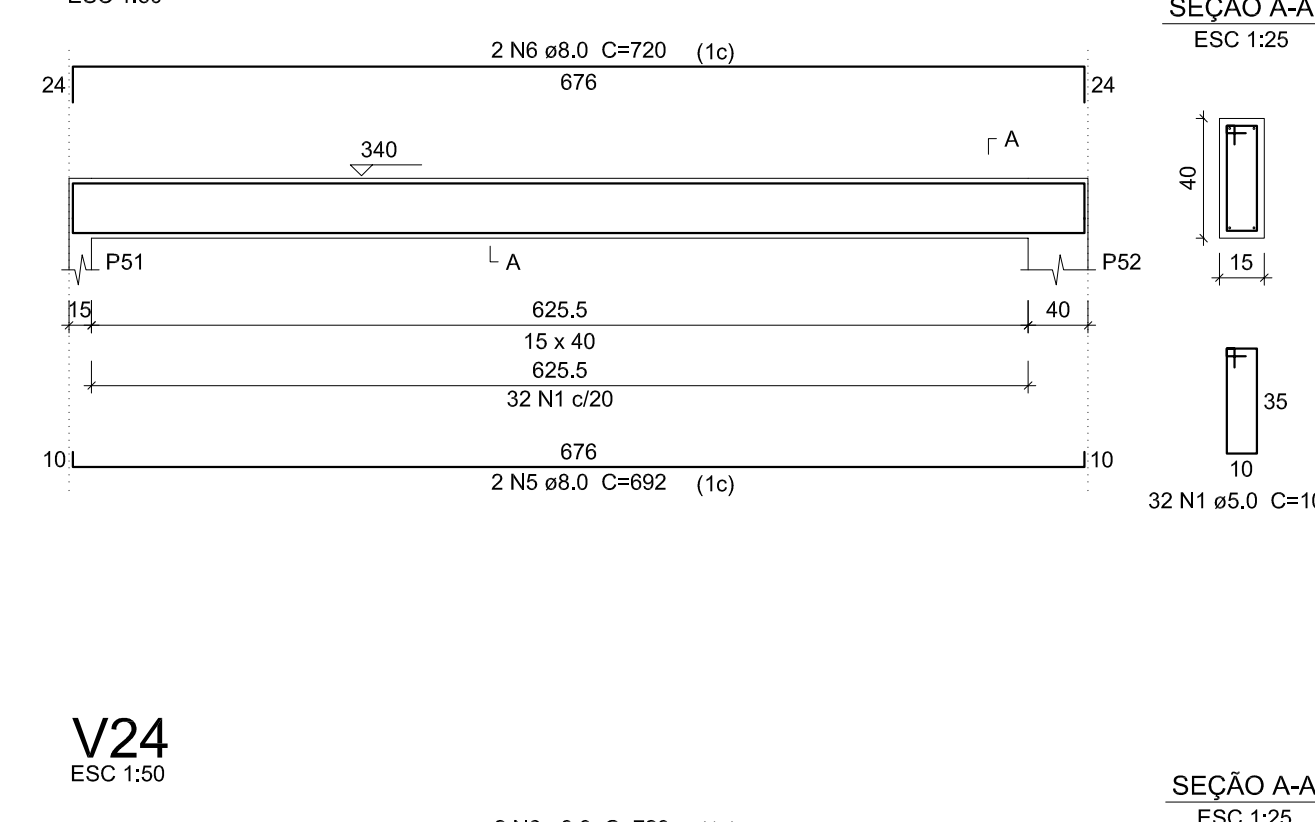
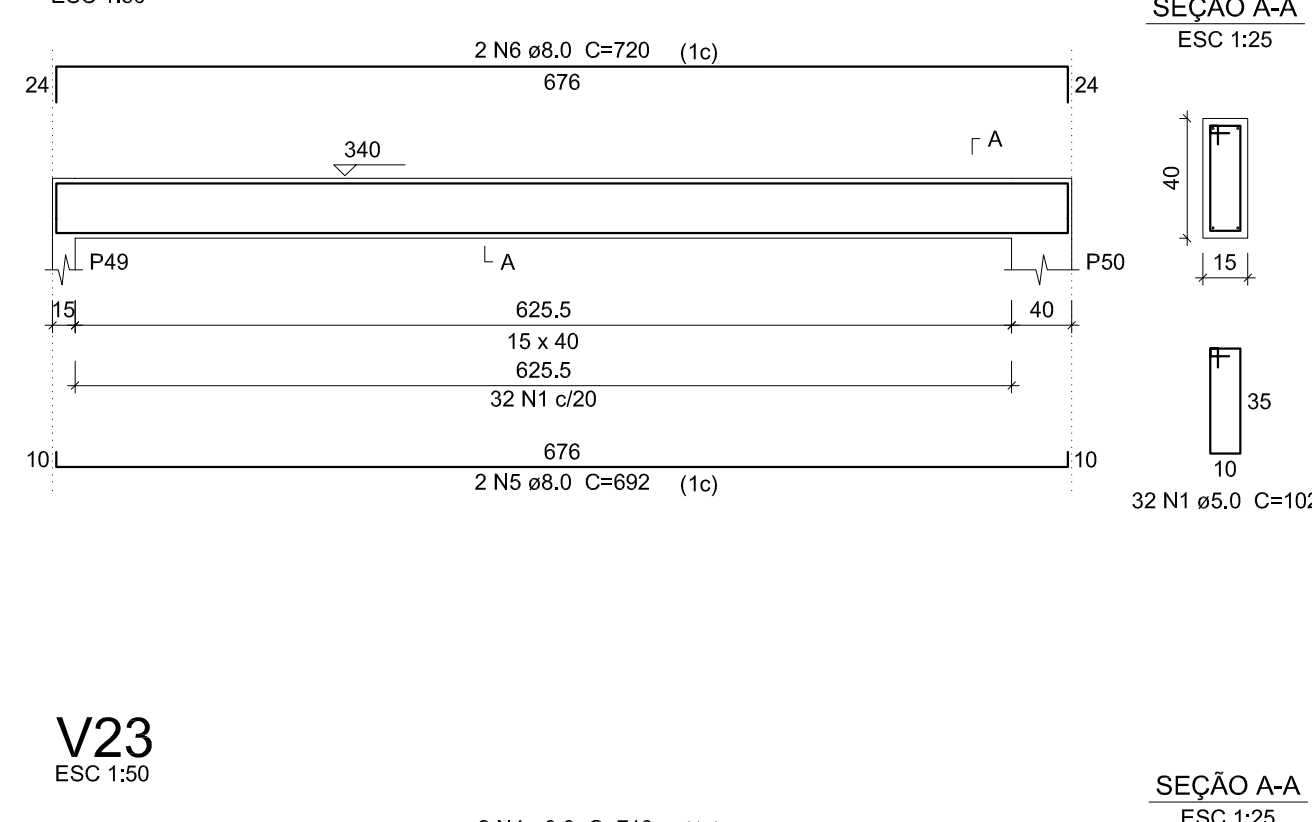
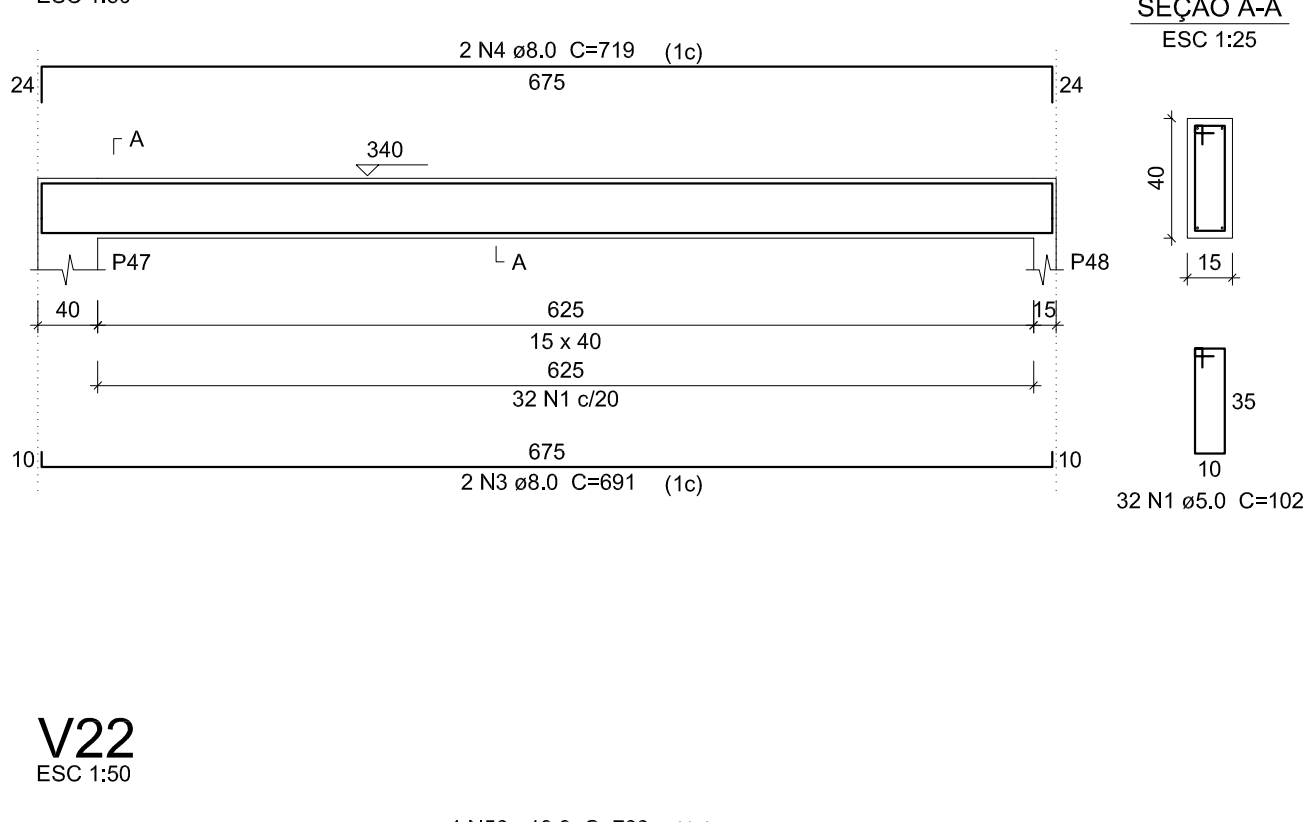
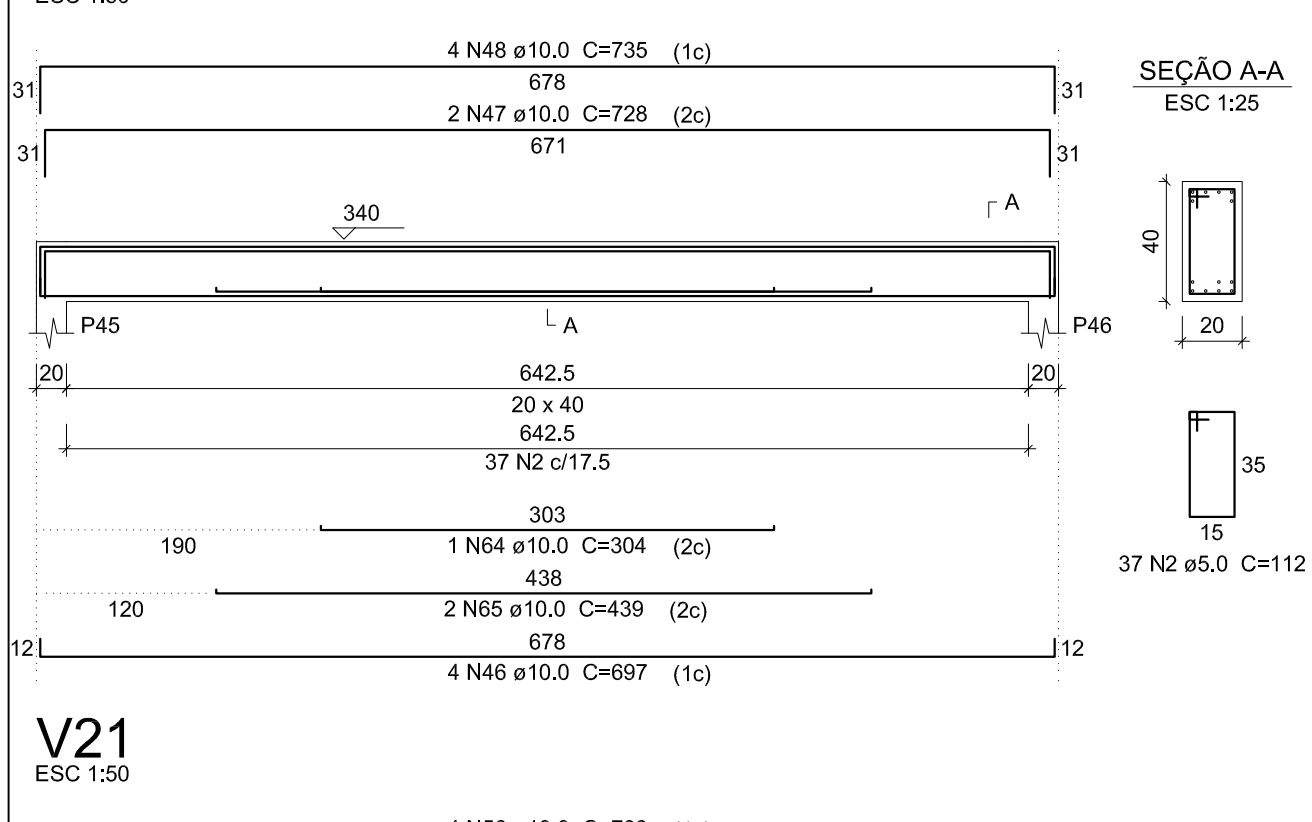
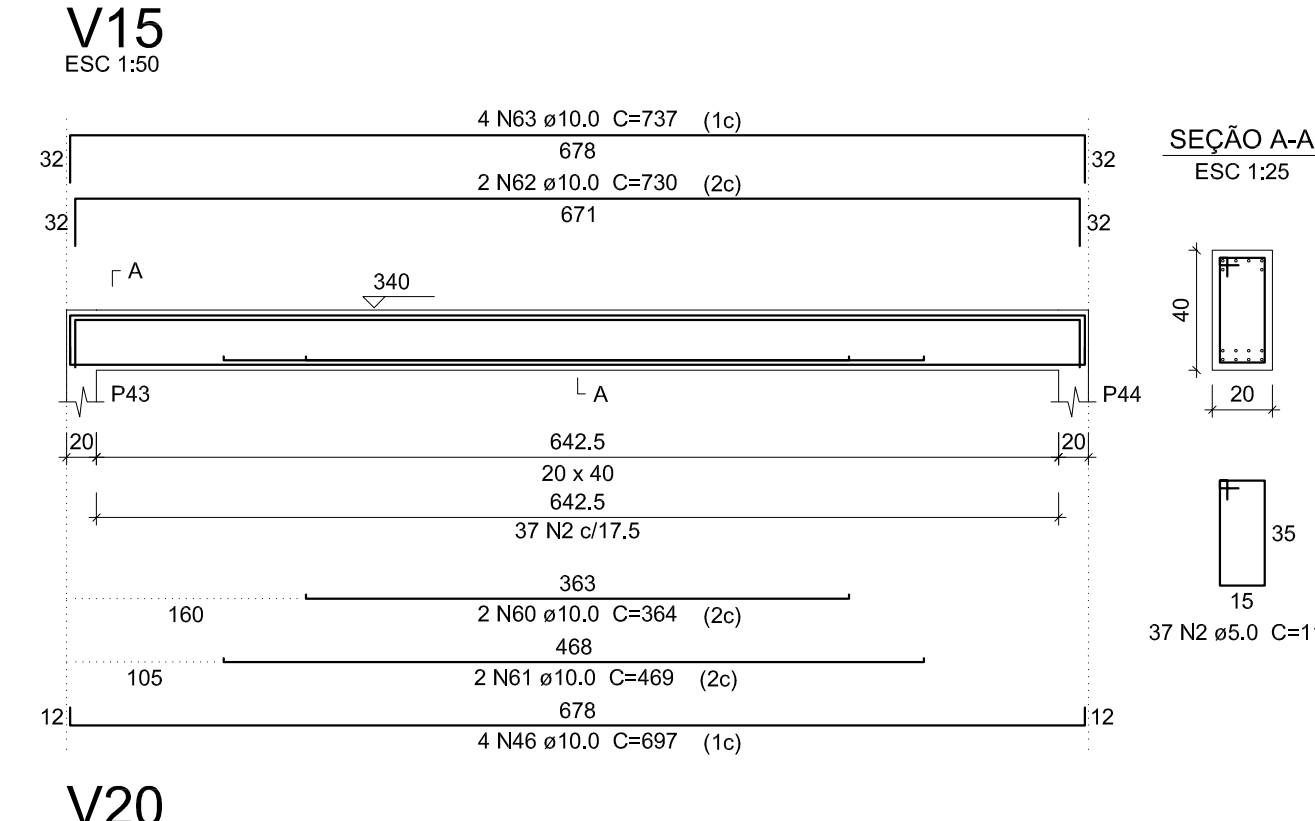
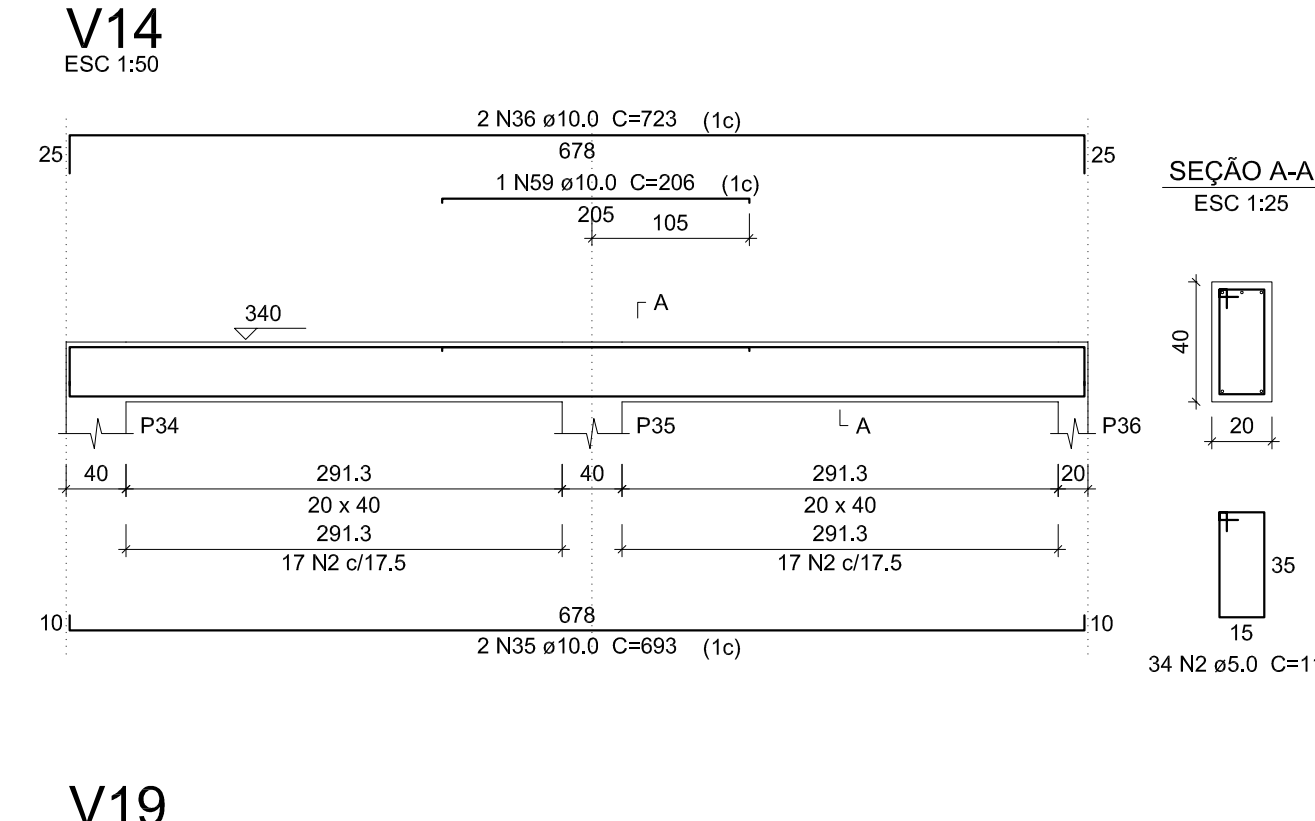
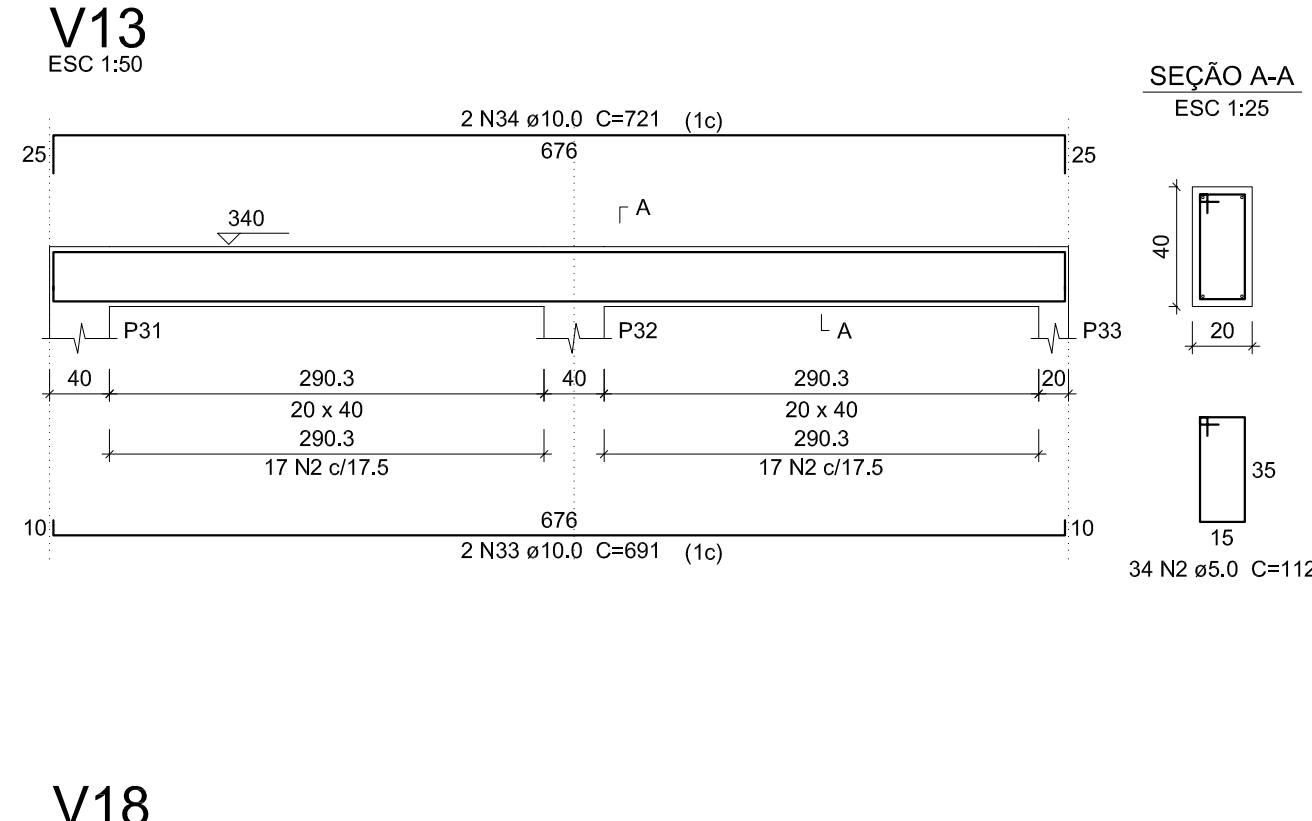
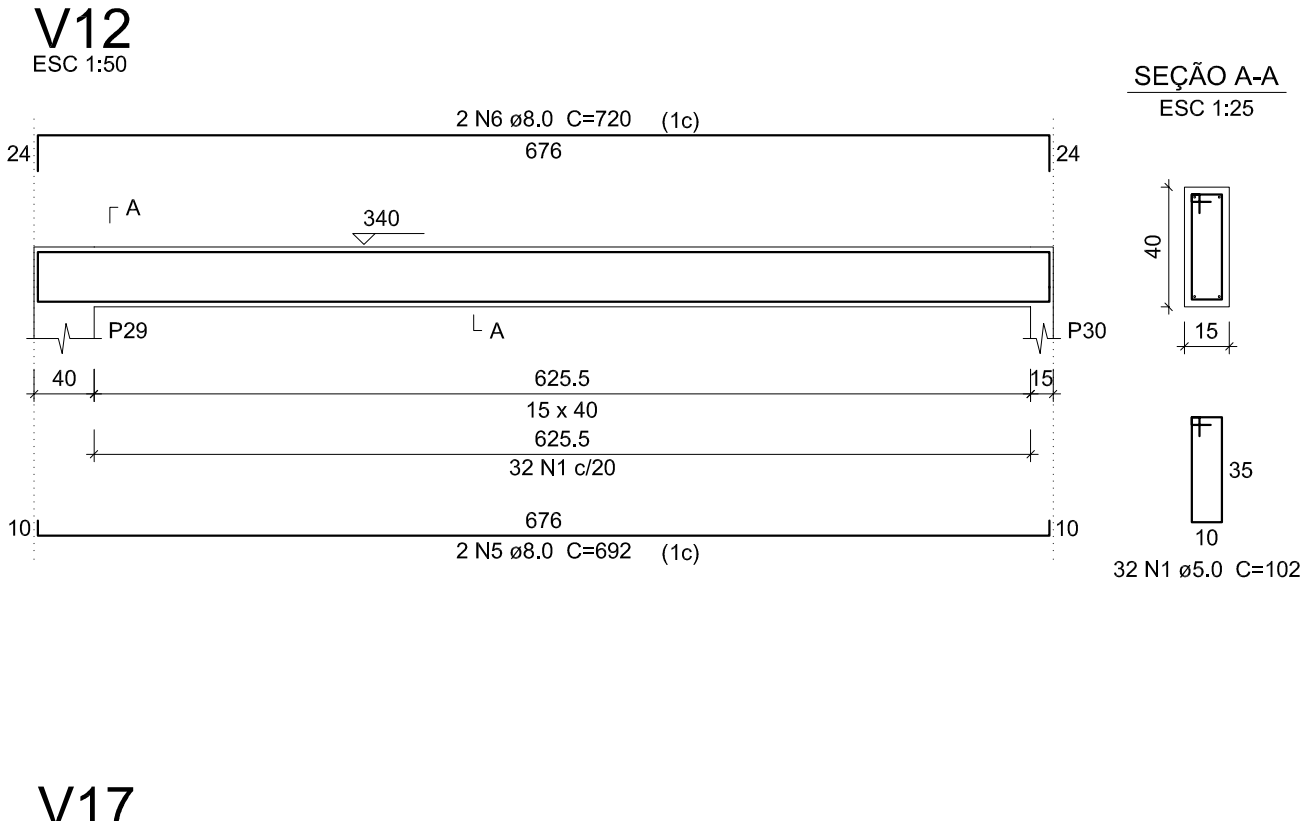
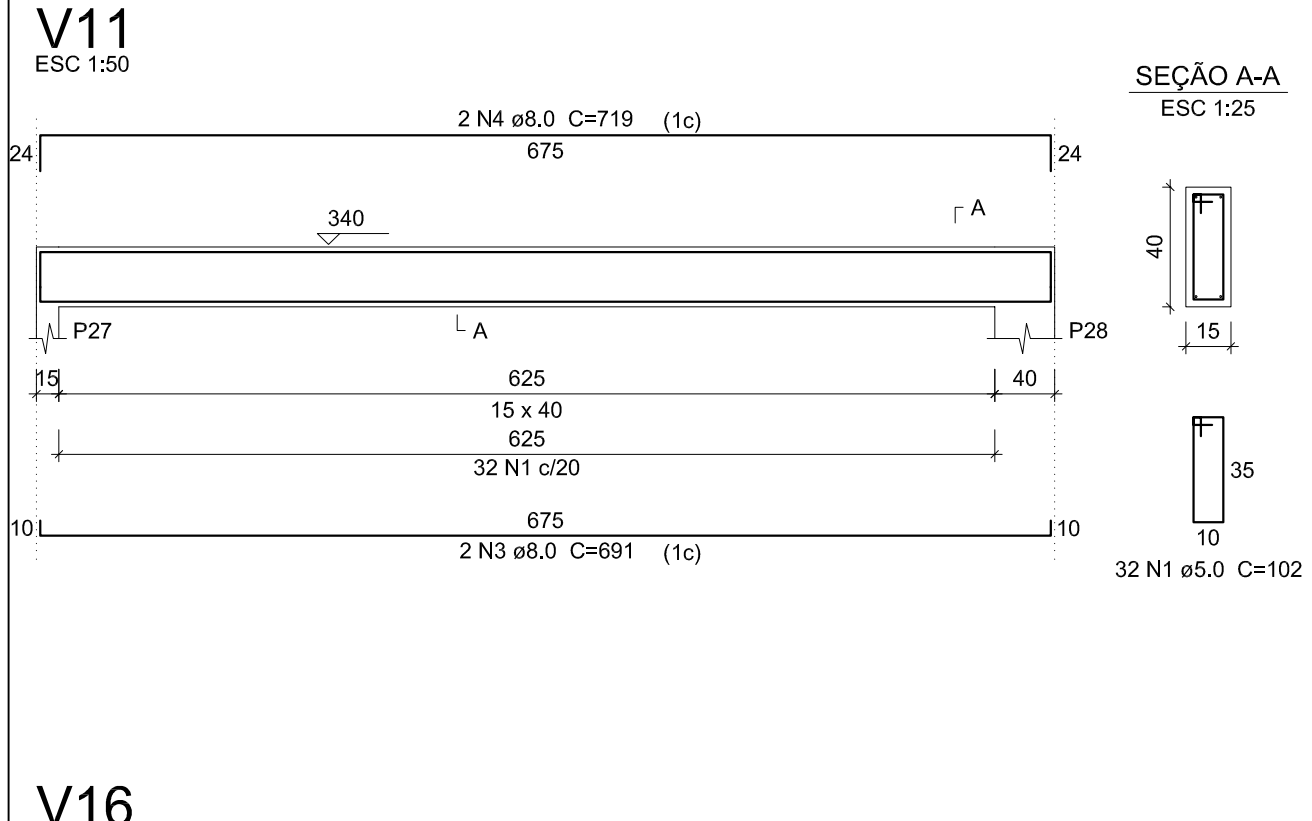
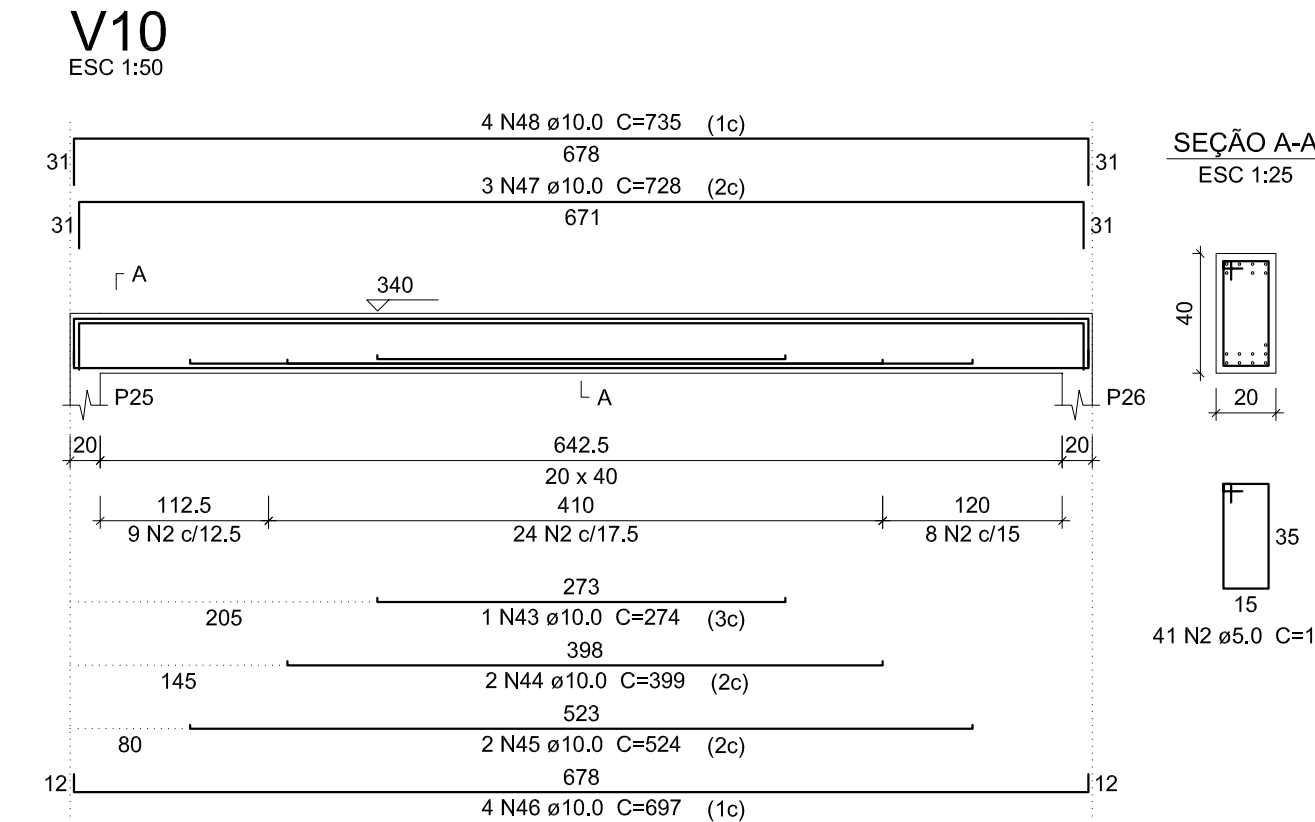
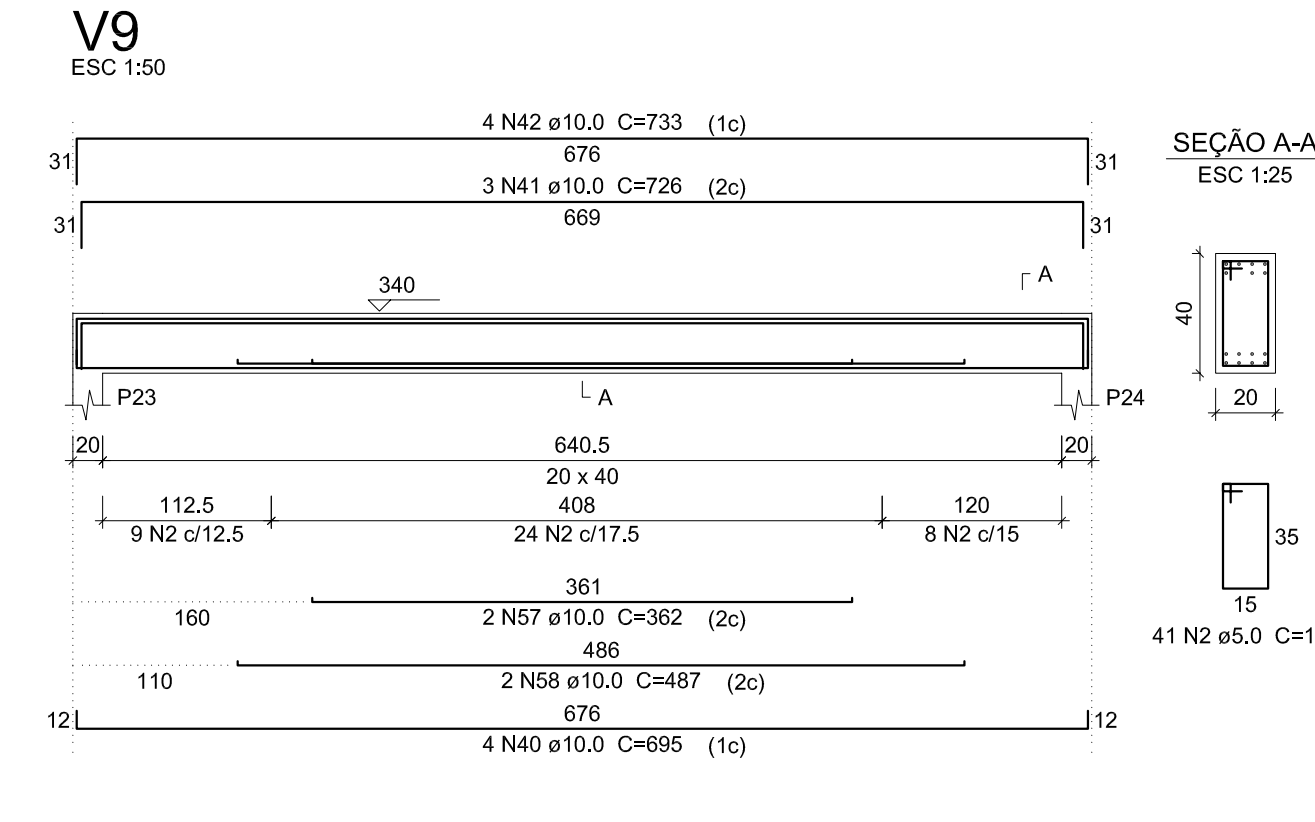
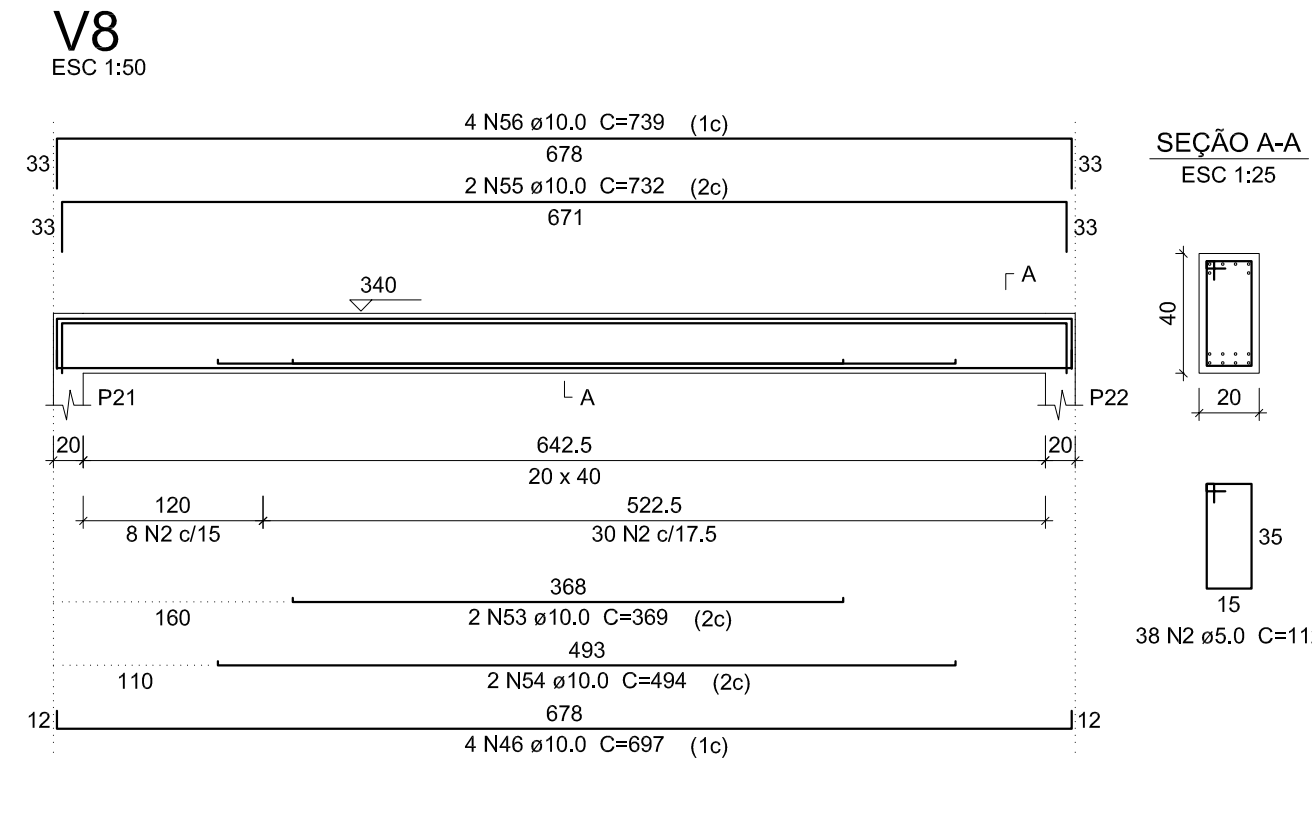
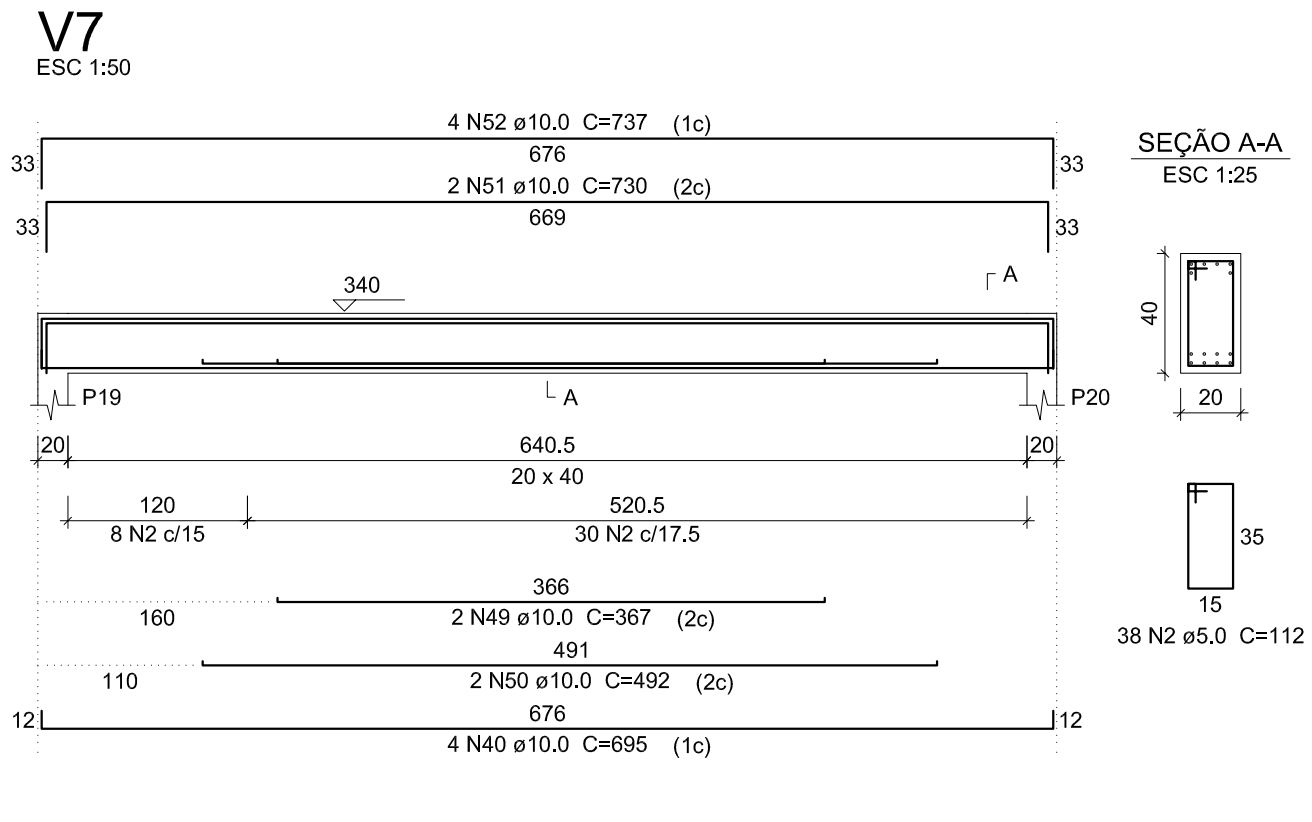
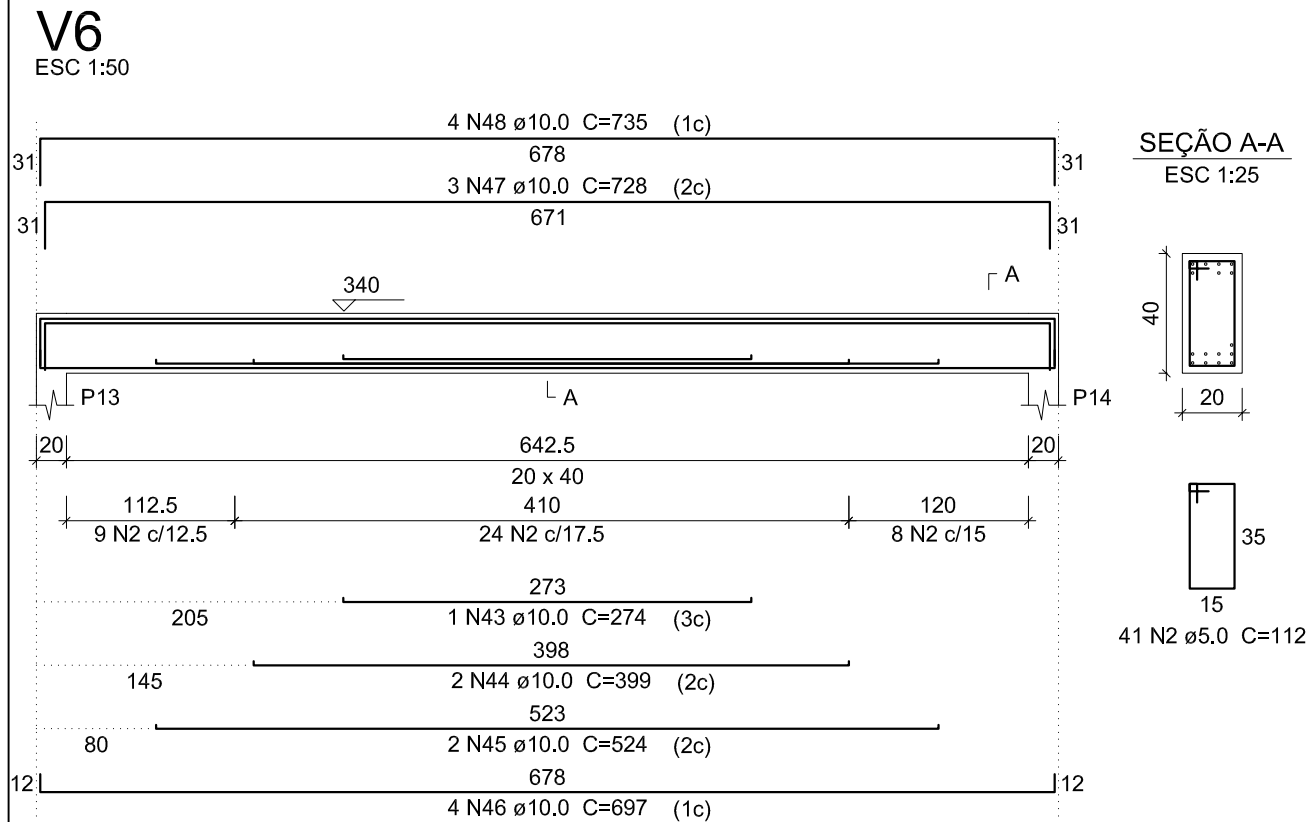
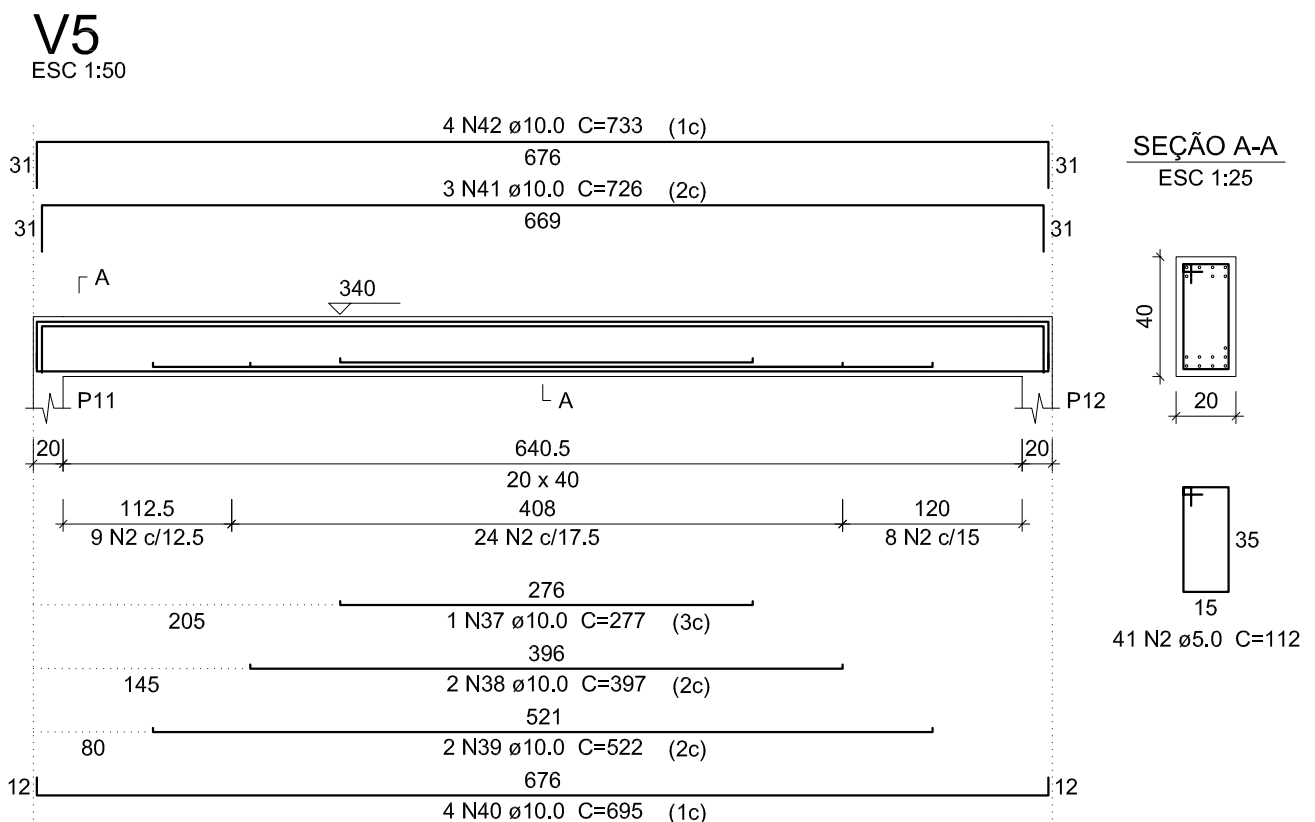
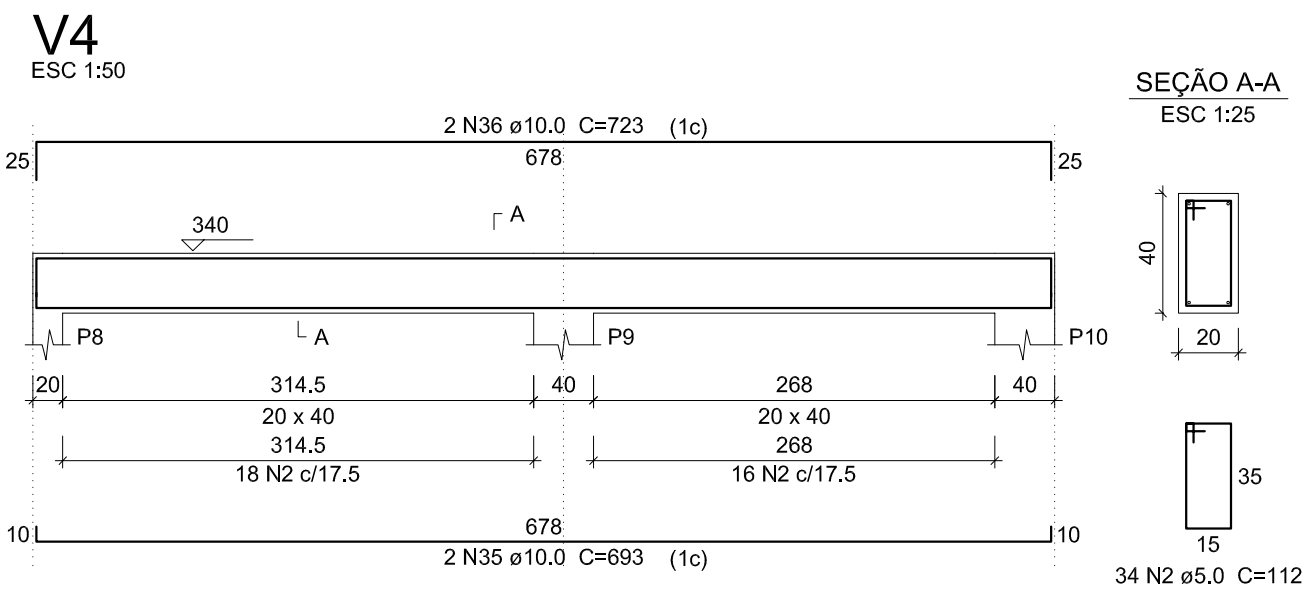
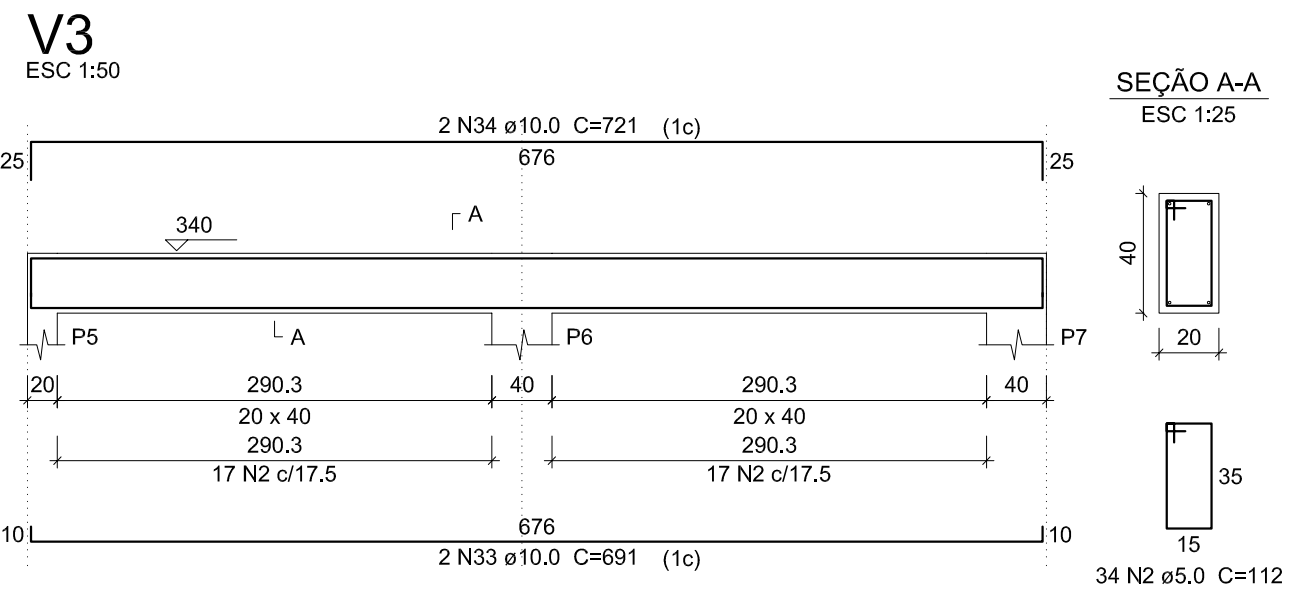
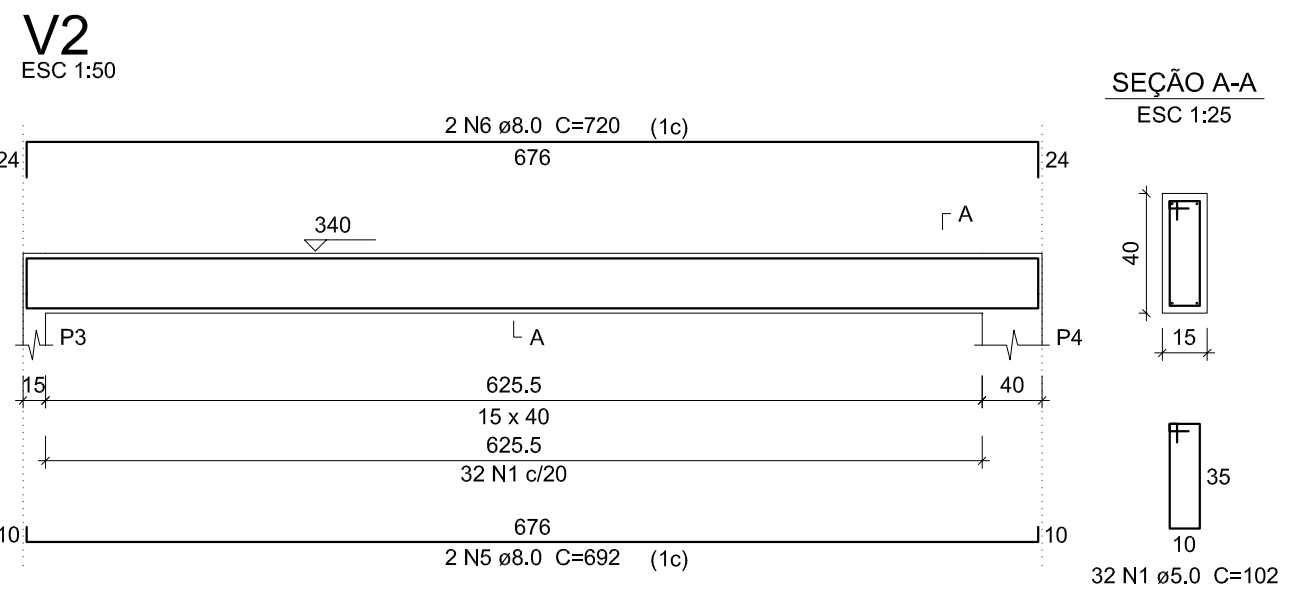
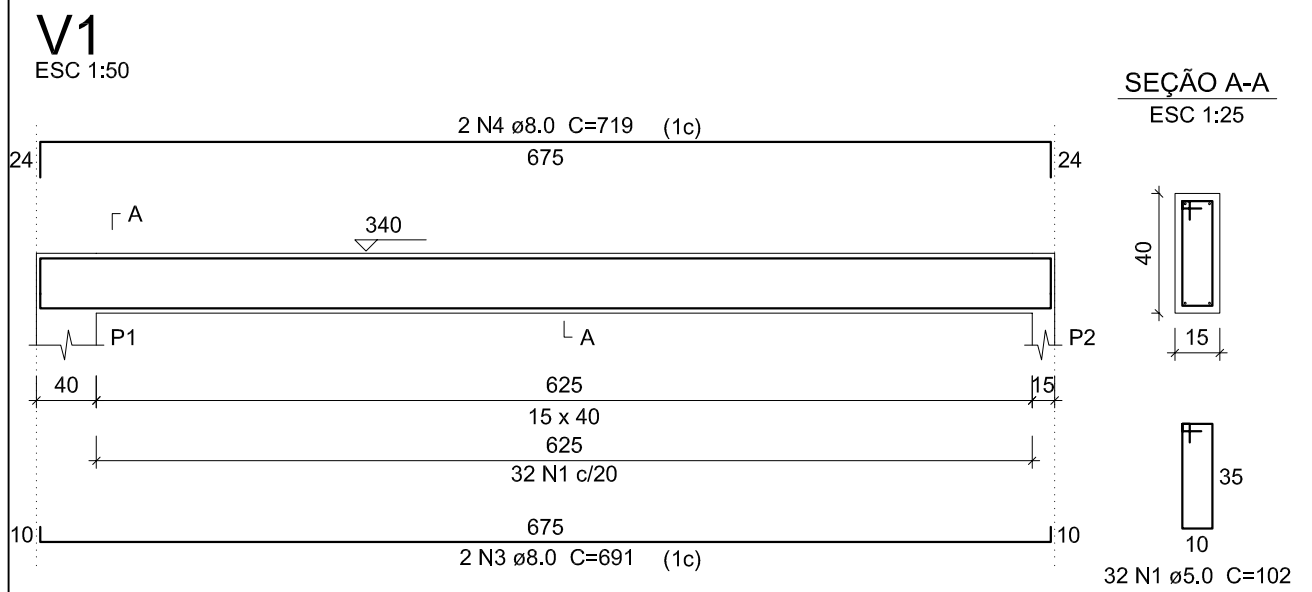


Solo com capacidade de suporte $> 3,00 \text{ kgf/cm}^2$
Solo compactado sobre a sapata
peso específico $> 1600,00 \text{ kgf/m}^3$

43xP1	10xP2	18xP5
15xP11	5xP43	P78
2xP79	94xS10	

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	1605.5	696.9
	10.0	1242.8	842.7
	12.5	290.5	307.8
CA60	5.0	1652.4	314.1
PESO TOTAL			
CA50	1847.4		
CA60	314.1		

Vol. concreto (C-30) = 27.29 m³
Área de forma total = 235.40 m²



Relação do aço						
V1	V2	V3				
V4	V5	V6				
V7	V8	V9				
V10	V11	V12				
V13	V14	V15				
V16	V17	V18				
V19	V20	V21				
V22	V23	V24				
V25	V26	V27				
V28	V29	V30				
V31	V32	V33				
V32	V34	V35				
AÇO	N	DIAM	G	UNITE	C.TOTAL	
					[cm]	
CA50	1	5.0	630	102	84660	
	2	5.0	630	102	84660	
	3	8.0	6	691	5528	
	4	8.0	6	691	5528	
	5	8.0	12	692	8304	
	6	8.0	12	720	8640	
	7	8.0	2	851	1702	
	8	8.0	2	847	1654	
	9	8.0	6	1109	8648	
	10	8.0	6	223	1338	
CA80	1	5.0	2	336	672	
	2	5.0	2	336	672	
	3	8.0	2	396	792	
	4	8.0	2	425	850	
	5	8.0	2	864	1728	
	6	8.0	2	459	918	
	7	15.0	2	861	1722	
	8	2.0	2	492	984	
	9	8.0	2	849	1698	
	10	8.0	2	479	958	
CA50	1	21.0	2	944	1888	
	2	21.0	2	349	698	
	3	8.0	2	1127	2254	
	4	24.0	2	1090	2180	
	5	25.0	2	1068	2136	
	6	28.0	2	1155	2310	
	7	28.0	2	745	1490	
	8	28.0	2	511	1022	
	9	28.0	2	1200	2400	
	10	28.0	2	227	454	
CA50	1	8.0	4	569	1138	
	2	8.0	4	614	1228	
	3	8.0	4	694	1388	
	4	10.0	4	711	2884	
	5	10.0	6	693	3465	
	6	10.0	8	723	5784	
	7	10.0	8	277	277	
	8	10.0	2	396	794	
	9	10.0	2	522	1044	
	10	10.0	12	695	1390	
CA50	1	10.0	6	726	4326	
	2	10.0	6	733	4398	
	3	10.0	2	274	548	
	4	10.0	2	399	798	
	5	10.0	4	524	1048	
	6	10.0	28	697	19516	
	7	10.0	8	728	2892	
	8	10.0	12	735	8820	
	9	10.0	2	360	724	
	10	10.0	2	492	984	
CA50	1	10.0	2	730	1460	
	2	10.0	2	730	1460	
	3	10.0	2	369	738	
	4	10.0	4	454	908	
	5	10.0	6	732	4392	
	6	10.0	12	738	8868	
	7	10.0	2	362	724	
	8	10.0	2	487	974	
	9	10.0	2	1096	2196	
	10	10.0	4	364	1456	
CA50	1	10.0	5	462	2310	
	2	10.0	2	730	1460	
	3	10.0	4	737	2948	
	4	10.0	1	304	604	
	5	10.0	2	411	811	
	6	10.0	2	294	584	
	7	10.0	2	1198	2396	
	8	10.0	2	284	564	
	9	10.0	2	434	864	
	10	10.0	2	434	864	

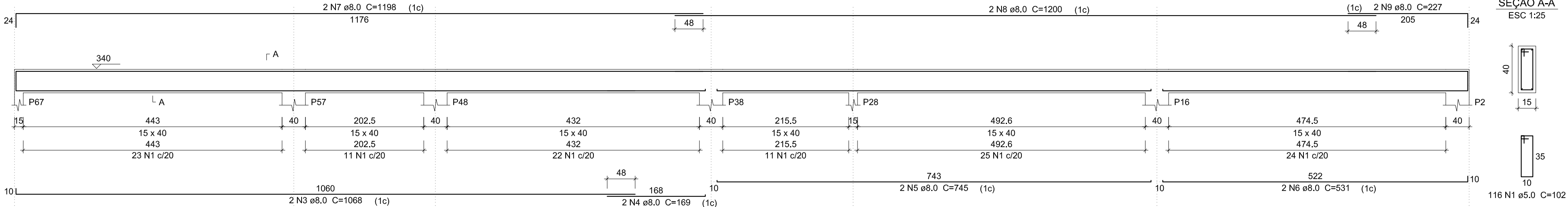
Resumo do aço			
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8,0	709,6	308
	10,0	1127,7	764,7
CA80	5,0	1509,7	296
PESO TOTAL			
CA50	1072,7		
CA80	256		

Vol. de concreto total (C-30) = 19,4 m³
Área de forma total = 278,11 m²

		GOVERNO DO ESTADO DO PIAUÍ	
SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO			
DEPARTAMENTO: GERÊNCIA DE ARQUITETURA E ENGENHARIA	TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA	DESENHO: EST1	FRANCHA:
INSCRIÇÃO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí. CNPJ: 647700-0/000	TÍTULO DO DESENHO: DETALHAMENTO DE VIGAS COBERTURA	DATA: 01/02	REVISÃO: 01
ARQUITETO(A): MUNICÍPIO: Socorro do Piauí-PI	DESENHO: ZONA: URBANA	ESCALA: INDICADA	REVISÃO: 01
PÁG: PROJETO BÁSICO	DATA: DATA REVATUAL	REVISÃO: 01	

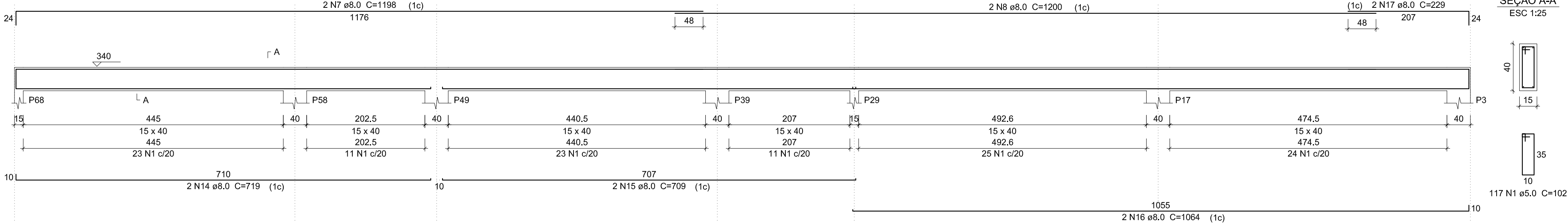
V37

ESC 1:50



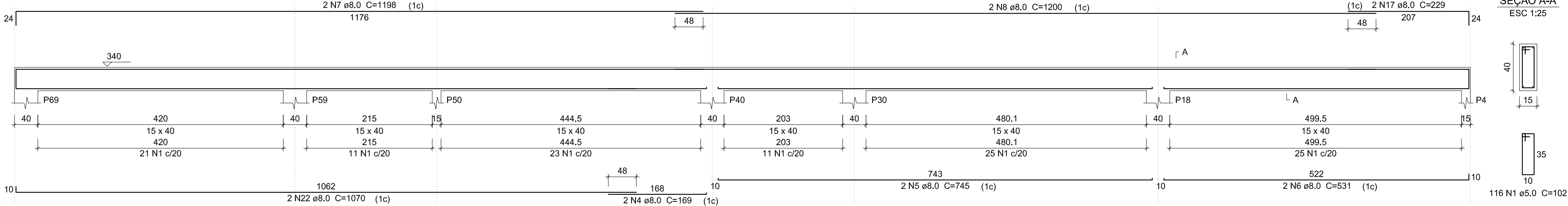
V41

ESC 1:50



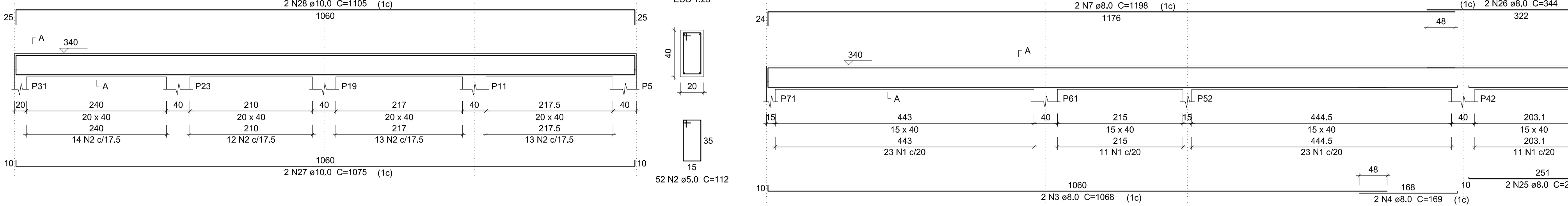
V44

ESC 1:50



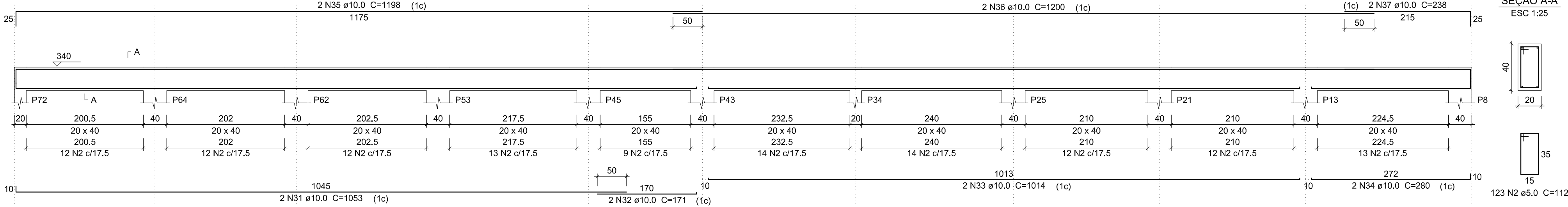
V46

ESC 1:50



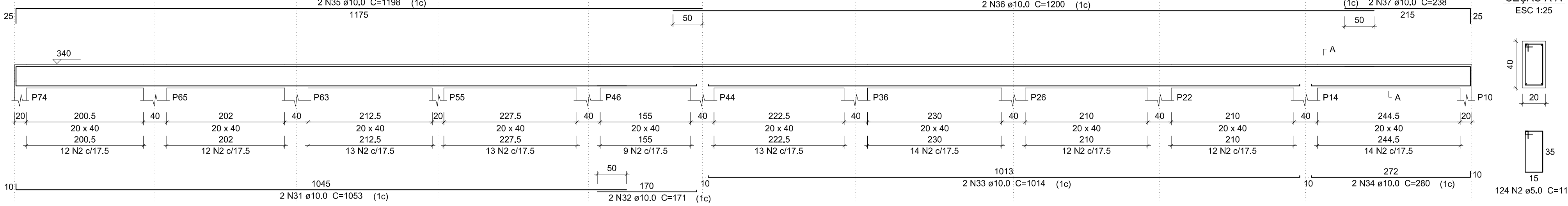
V49

ESC 1:50



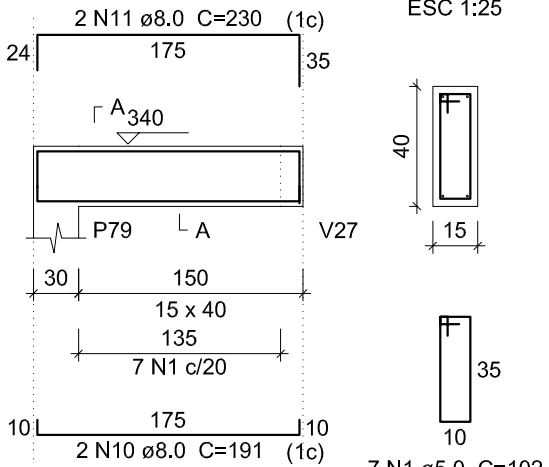
V50

ESC 1:50



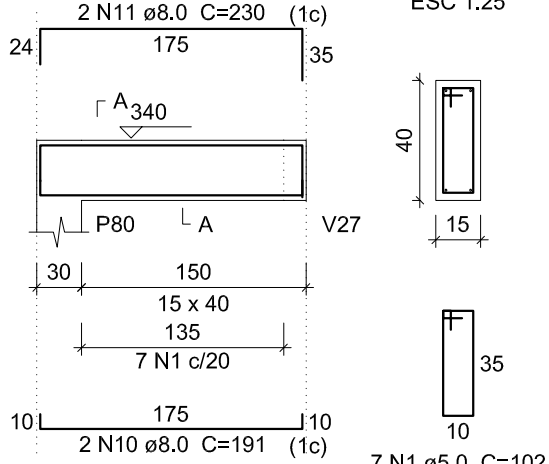
V38

ESC 1:25



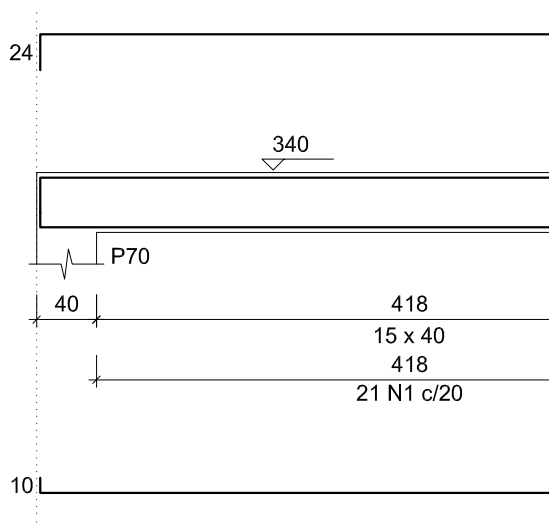
V42

ESC 1:50



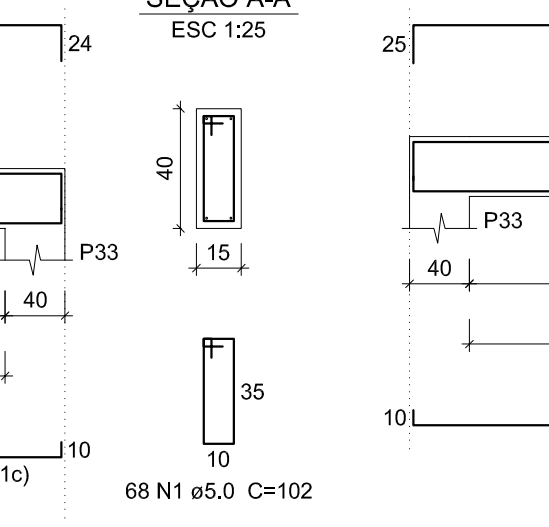
V45

ESC 1:50



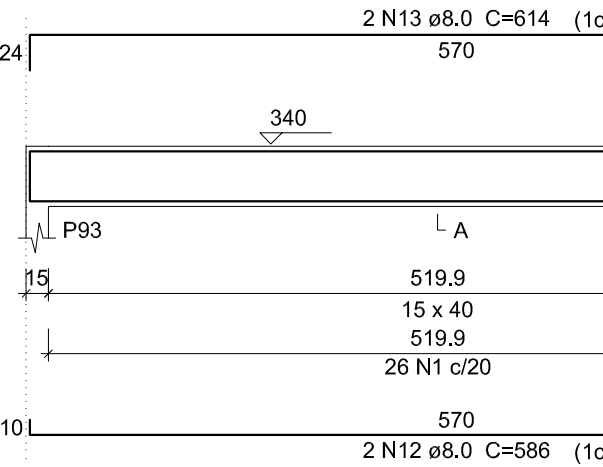
V48

ESC 1:50



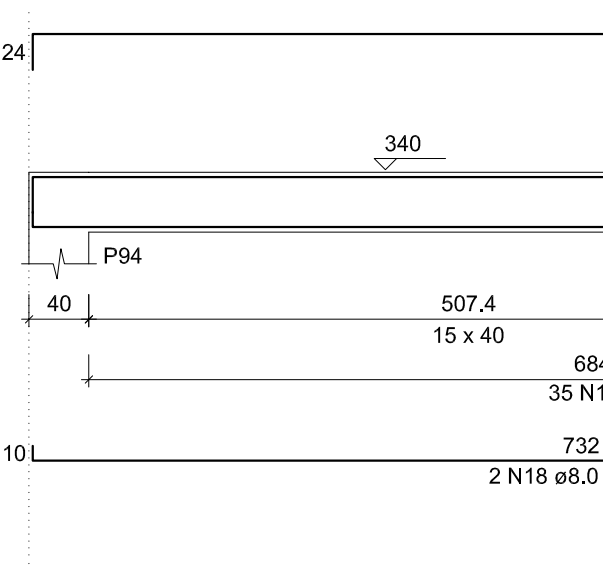
V39

ESC 1:50



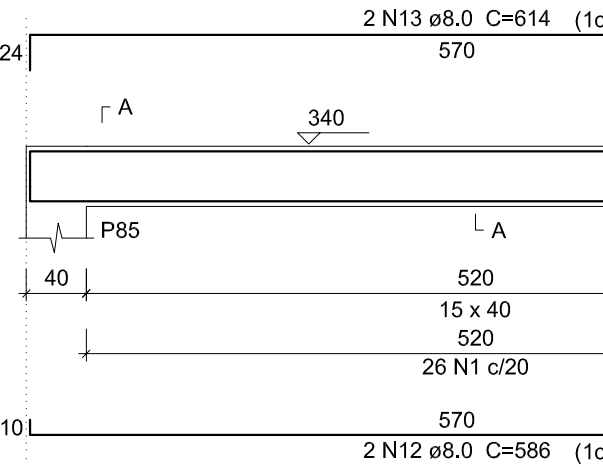
V43

ESC 1:50



V40

ESC 1:50



Relação do aço

ACO	N	DIAM	Q	UNF	C.TOTAL
V38	1	5.0	611	(cm)	6332
V40	2	5.0	352	112	39424
V43	3	8.0	6	1088	6608
V46	4	8.0	8	169	1352
V49	5	8.0	4	745	2980
	6	8.0	4	531	2124
	7	8.0	10	1198	11980
	8	8.0	6	1200	7200
	9	8.0	2	227	454
	10	8.0	4	191	764
	11	8.0	4	230	920
	12	8.0	4	586	2344
	13	8.0	4	614	2456
	14	8.0	2	719	1438
	15	8.0	2	709	1418
	16	8.0	2	1084	2168
	17	8.0	4	229	916
	18	8.0	2	741	1482
	19	8.0	2	577	1154
	20	8.0	2	1197	2394
	21	8.0	2	190	380
	22	8.0	2	1070	2140
	23	8.0	2	250	500
	24	8.0	2	334	668
	25	8.0	2	260	520
	26	8.0	2	344	688
	27	10.0	2	1075	2150
	28	10.0	2	1105	2210
	29	10.0	2	1085	2170
	30	10.0	2	1115	2230
	31	10.0	4	1053	4212
	32	10.0	4	171	684
	33	10.0	4	1014	4056
	34	10.0	4	280	1120
	35	10.0	4	1198	4792
	36	10.0	4	1200	4800
	37	10.0	4	238	952

Resumo do aço

ACO	DIAM	C.TOTAL	PESO + 10 %
CA50	8.0	648.1	237.9
CA60	10.0	293.5	195.2
CA80	5.0	1017.5	172.5
CA50		437.1	
CA80		172.5	

Vol. de concreto total (C-30) = 13,61 m³

Área de forma total = 198,54 m²



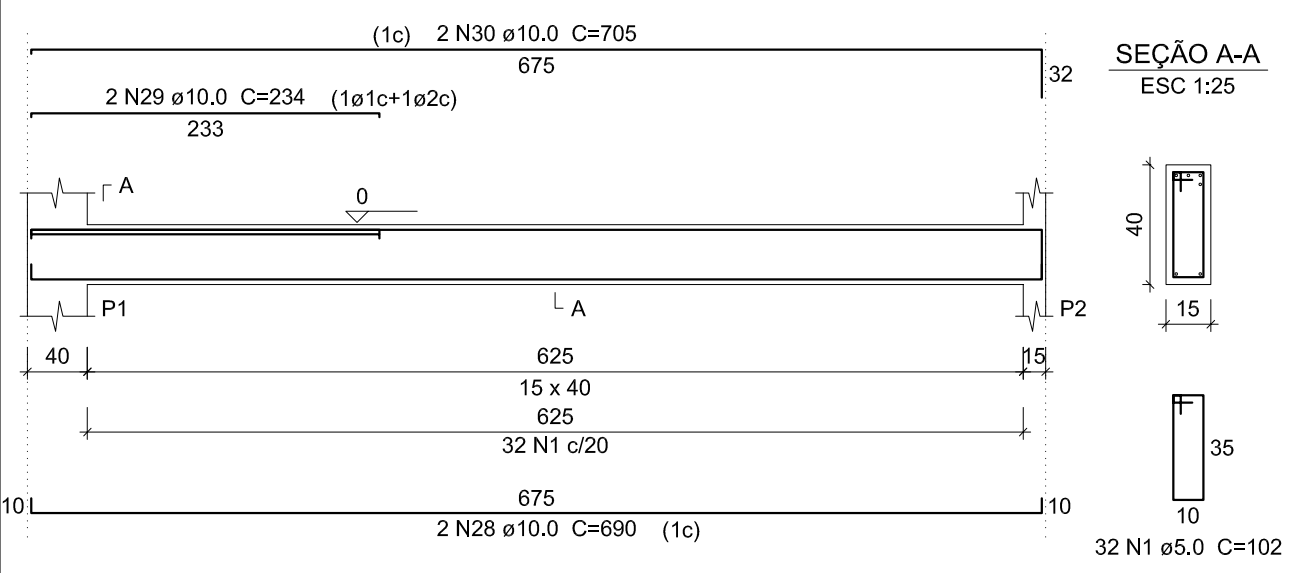
GOVERNO DO ESTADO DO PIAUÍ

SEDUC - SECRETARIA DE ESTADO DA EDUCAÇÃO

DEPARTAMENTO: GERÊNCIA DE ARQUITETURA E ENGENHARIA	DESENHO: EST1
TÍTULO DO PROJETO: PROJETO DE CONSTRUÇÃO - U.E AMÉRICO JOSÉ DE SOUSA	FRANCHA:
ENDEREÇO DO SERVIÇO: Rua Joaquim C. de Santana, S/N, Centro, Socorro do Piauí.	02/02
TÍTULO DO DESENHO: DETALHAMENTO DE VIGAS COBERTURA	ESCALA:
ARQUITETO(A):	REVISÃO:
MUNICÍPIO: Socorro do Piauí-PI	ZONA: URBANA
PÁSI:	DATA: DATA REVATUAL

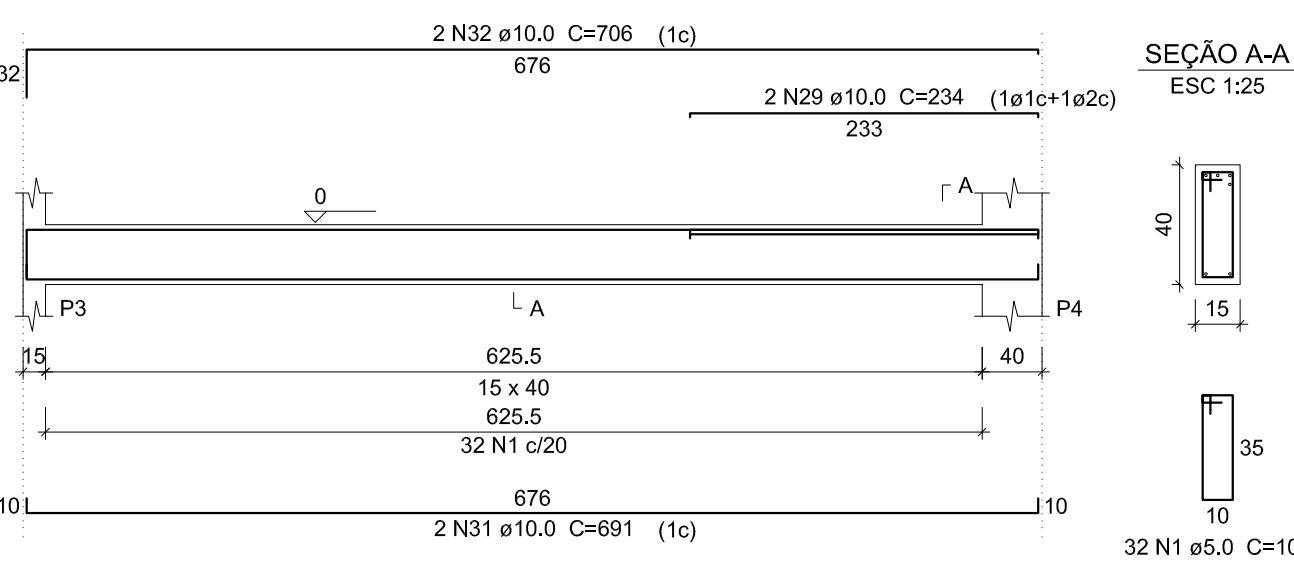
V1

ESC 1:50



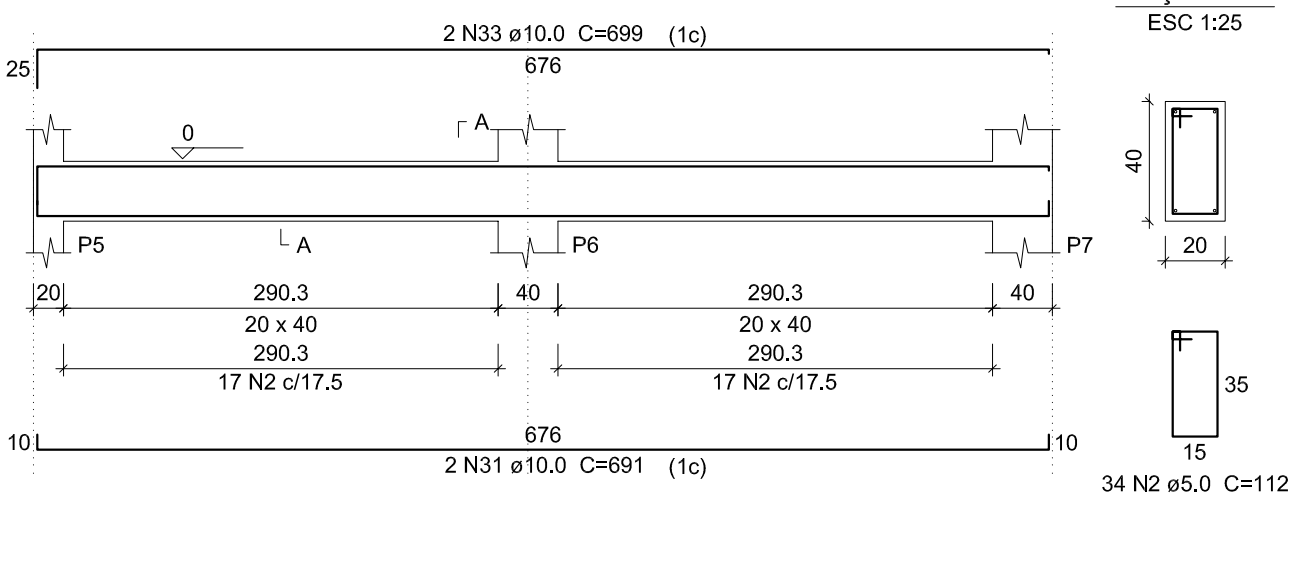
V2

ESC 1:50



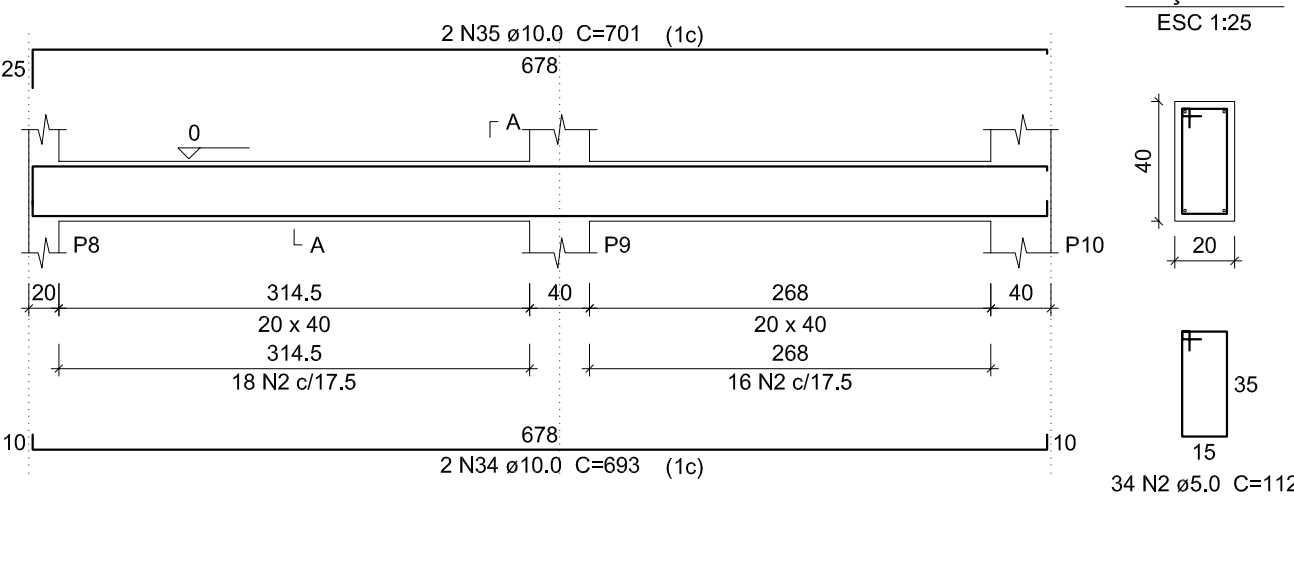
V3

ESC 1:50



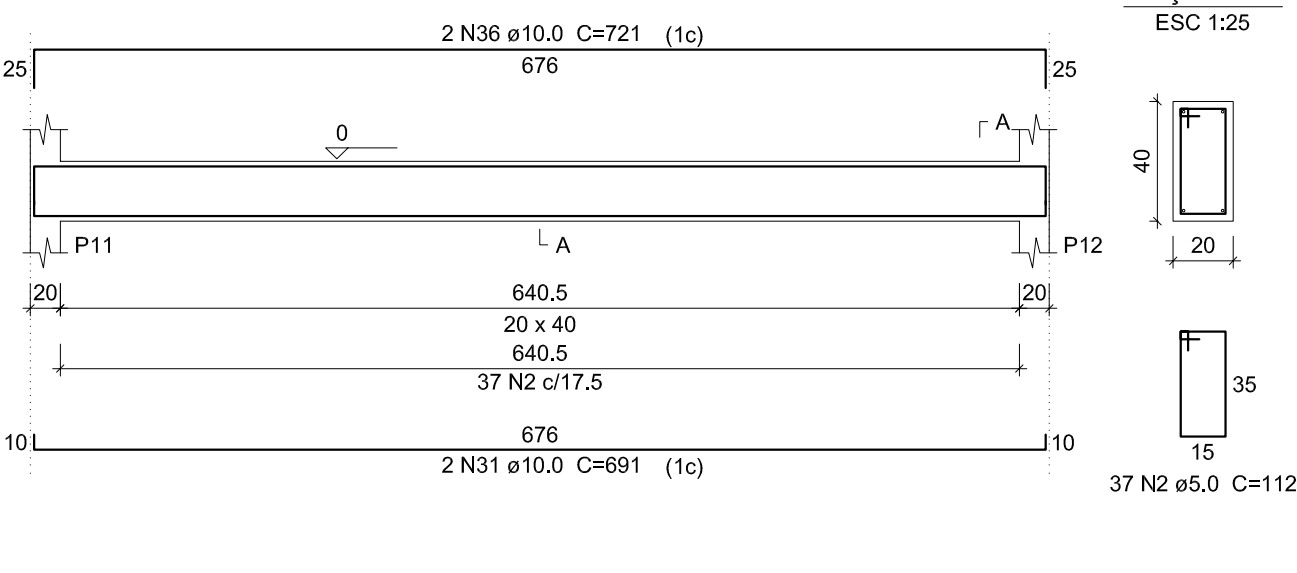
V4

ESC 1:50



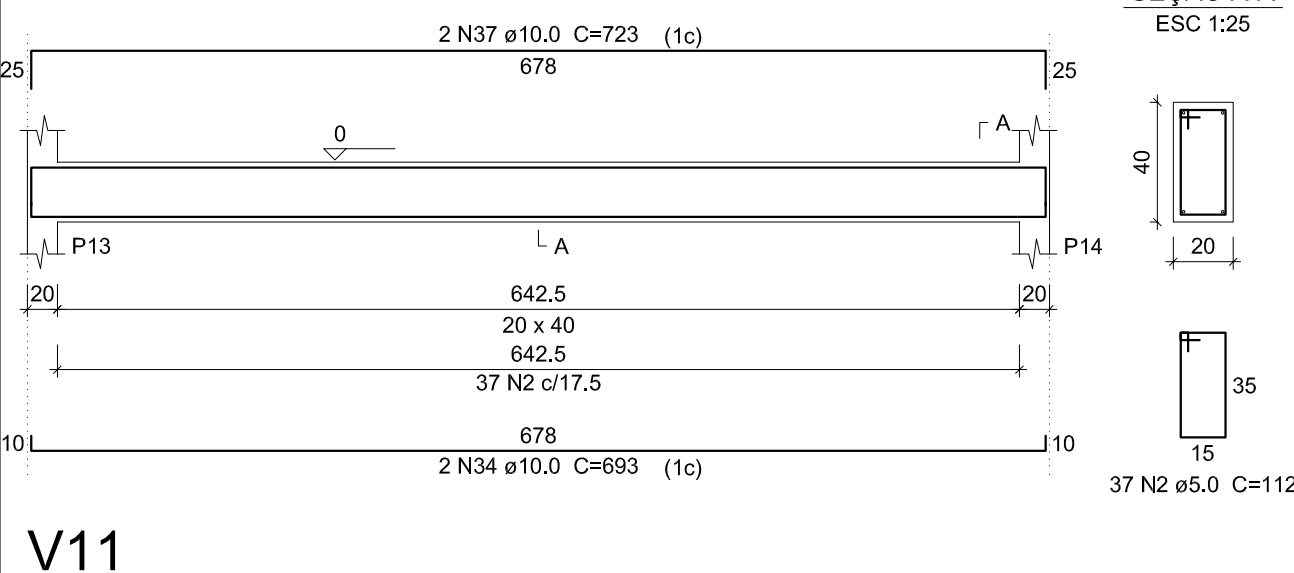
V5

ESC 1:50



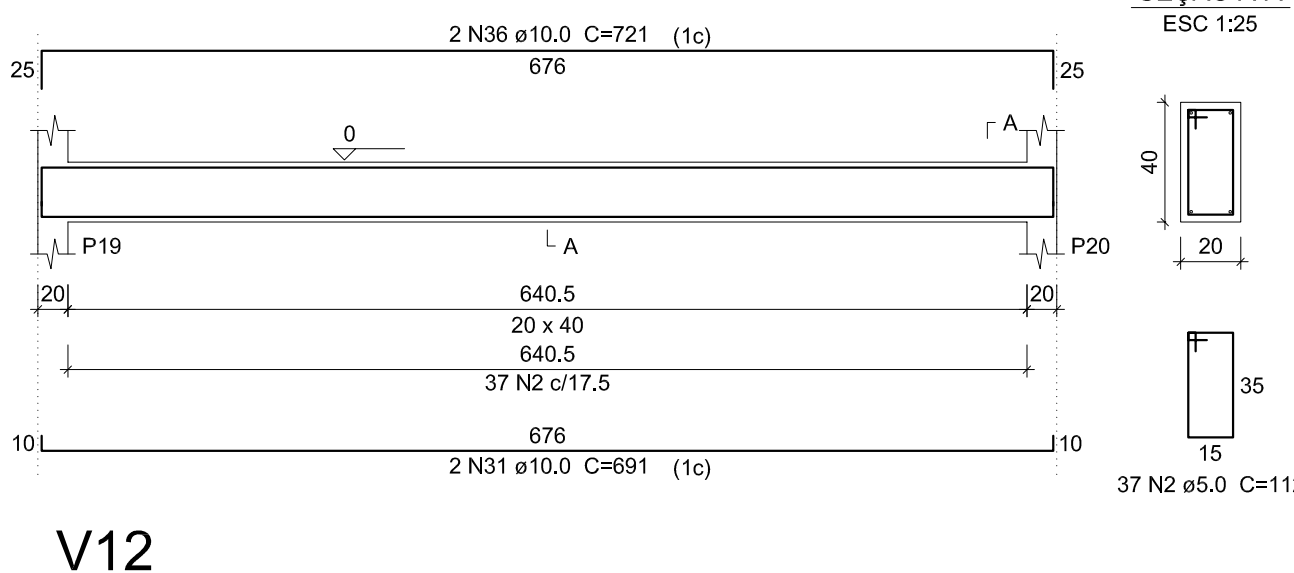
V6

ESC 1:50



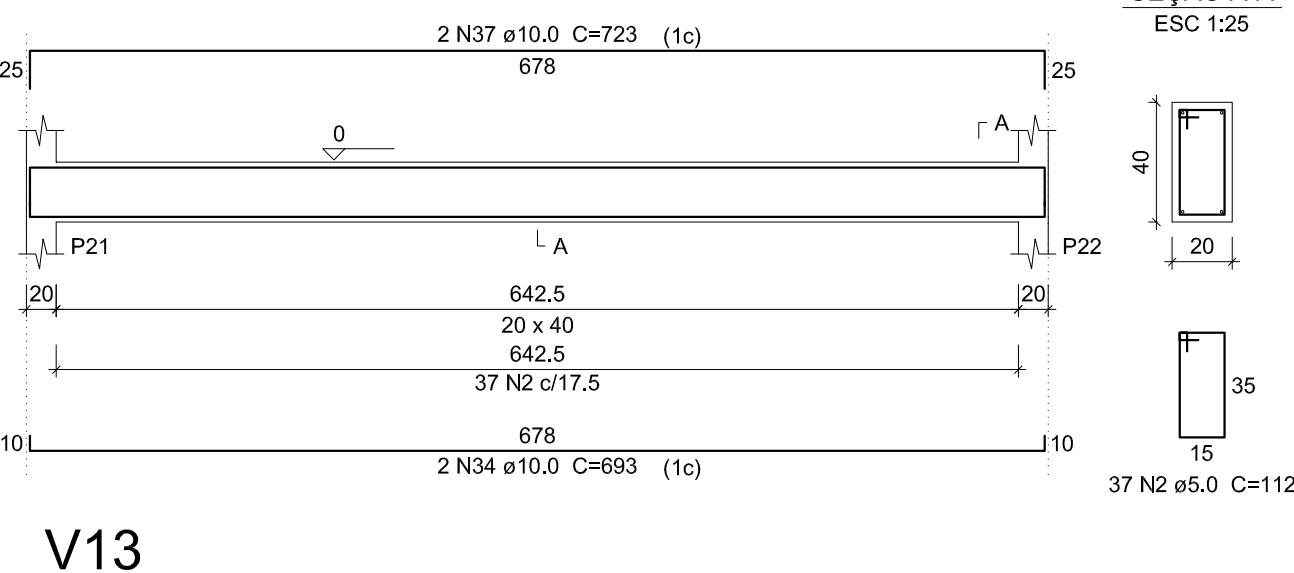
V7

ESC 1:50



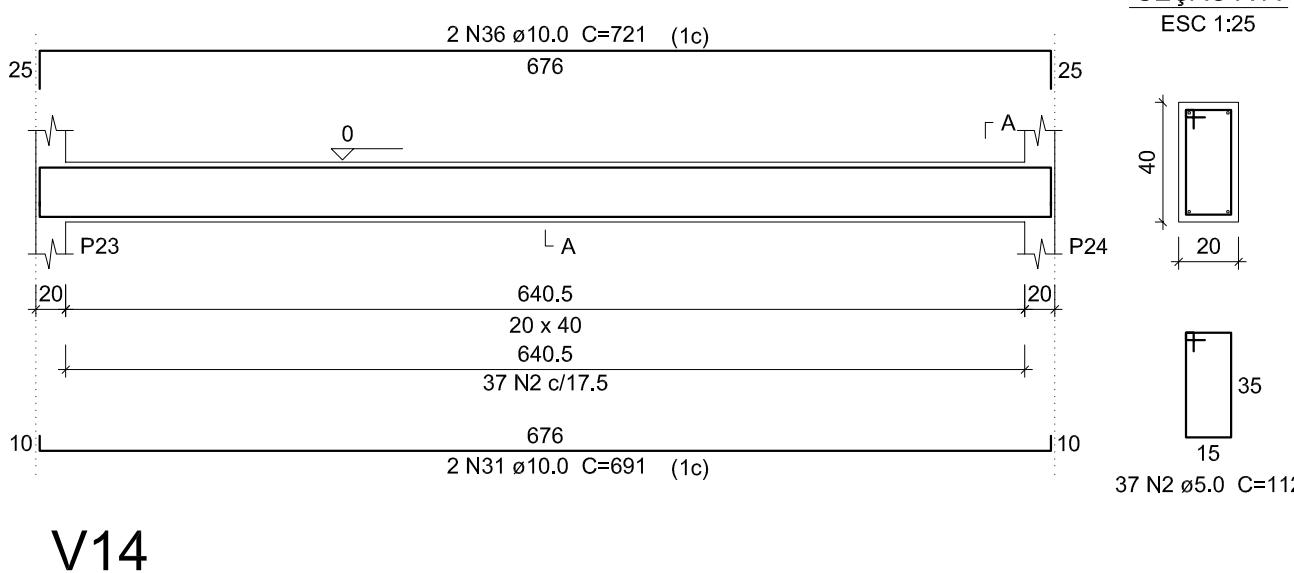
V8

ESC 1:50



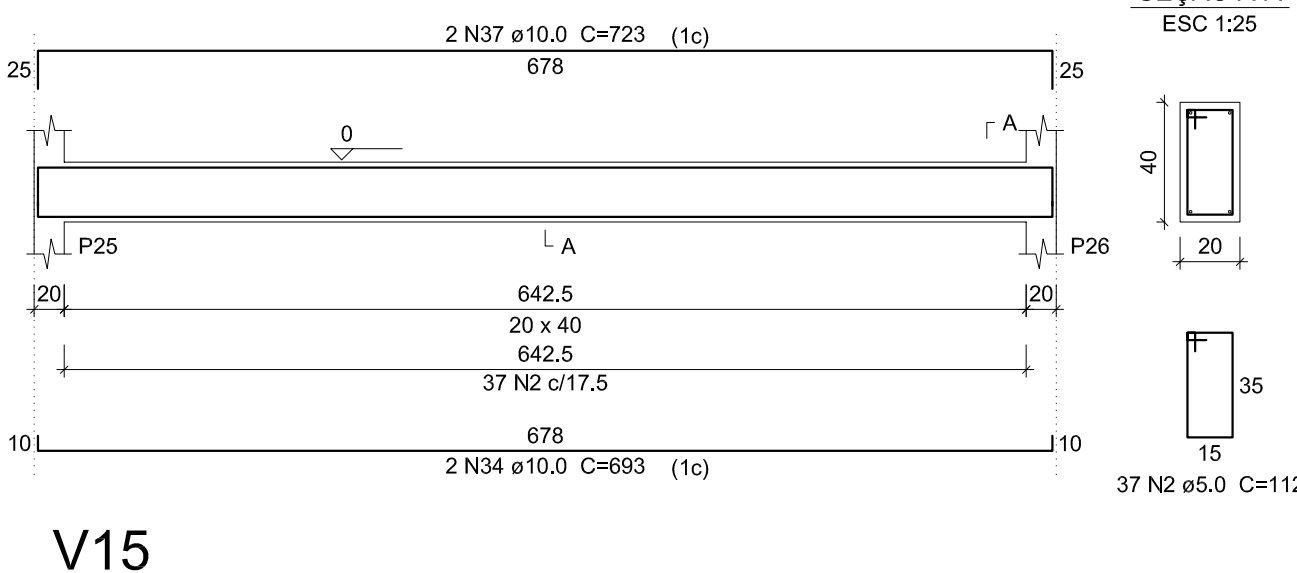
V9

ESC 1:50



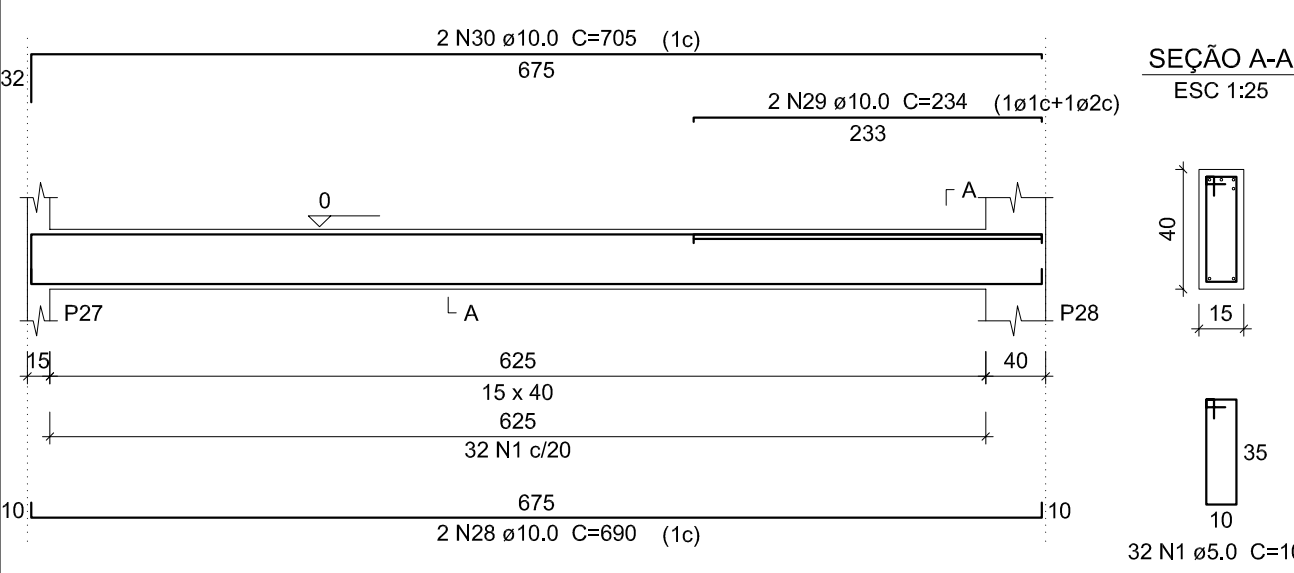
V10

ESC 1:50



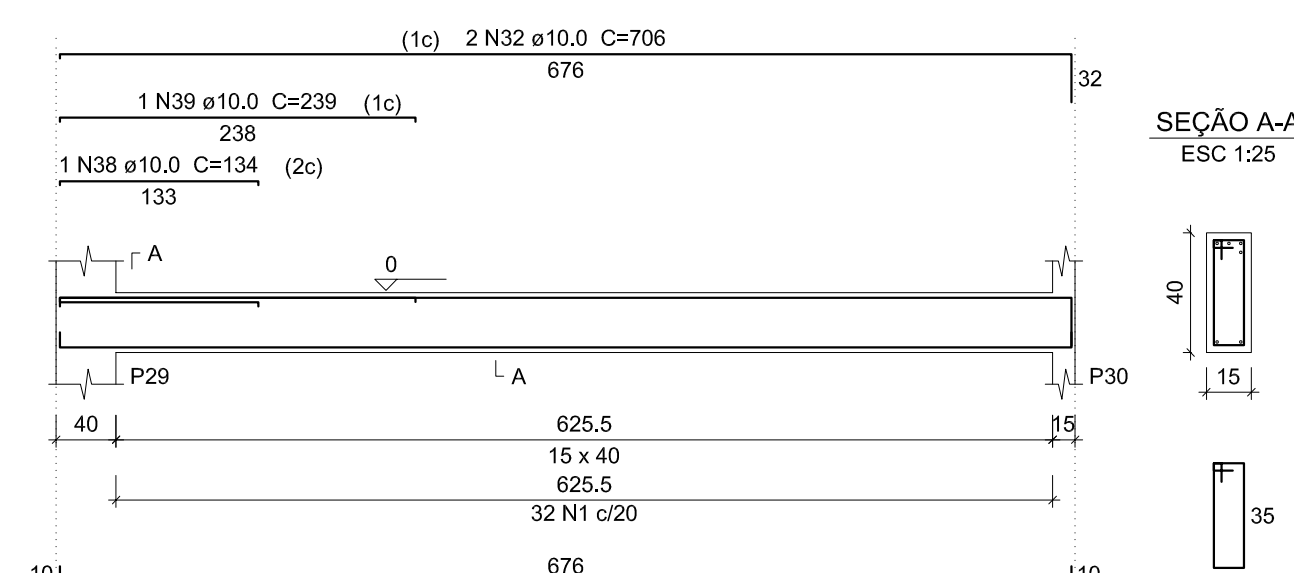
V11

ESC 1:50



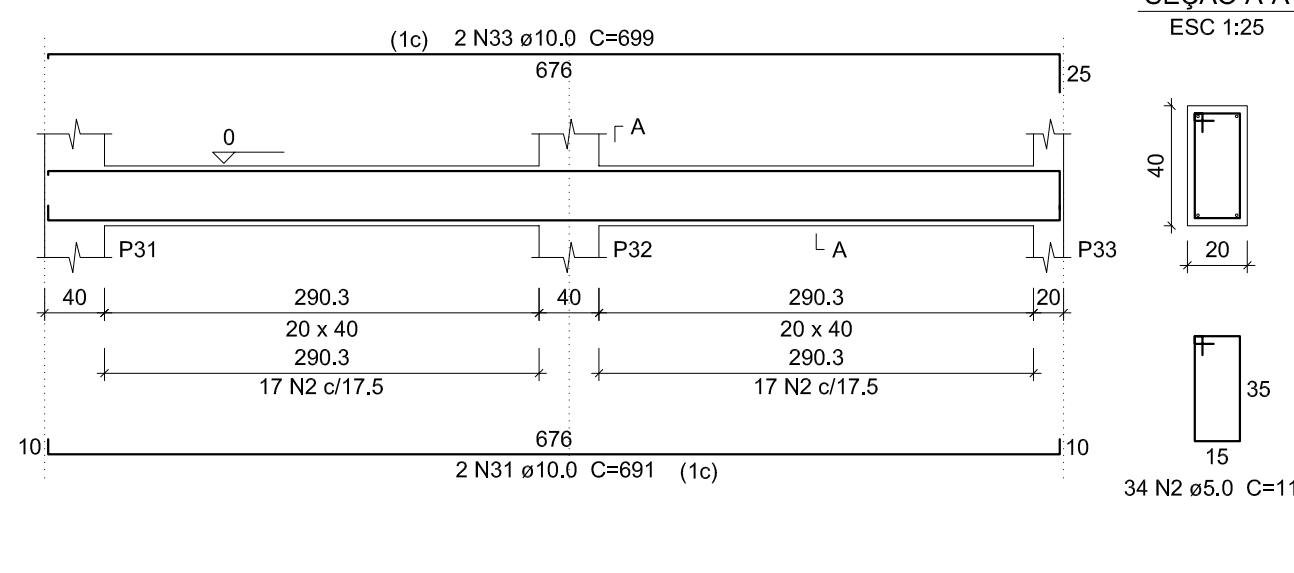
V12

ESC 1:50



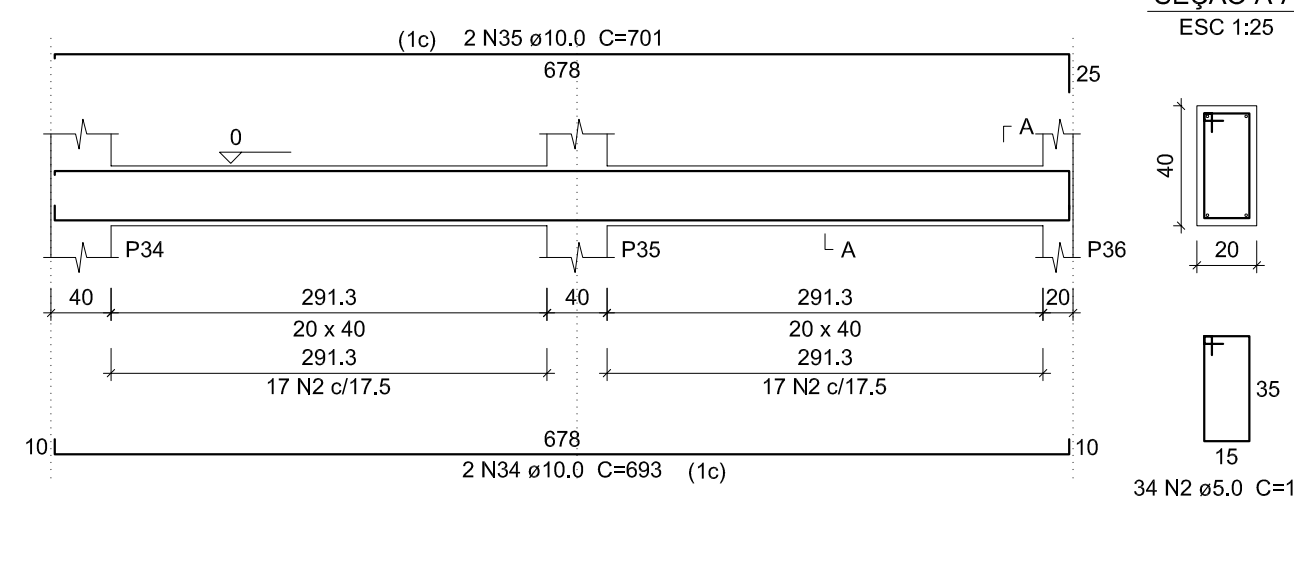
V13

ESC 1:50



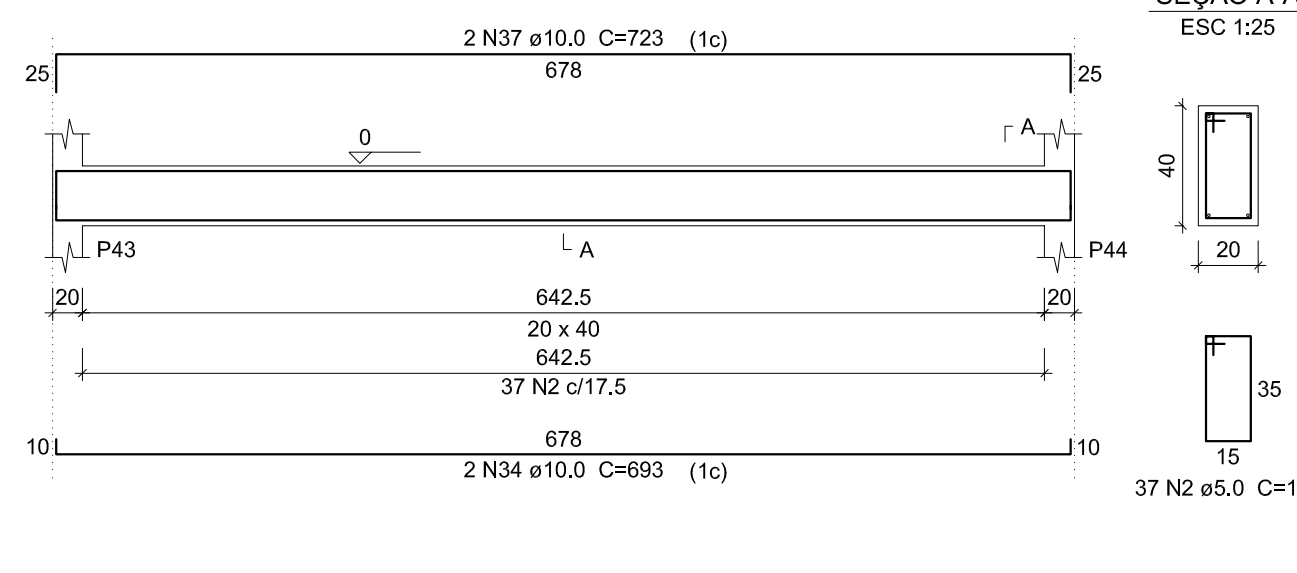
V14

ESC 1:50



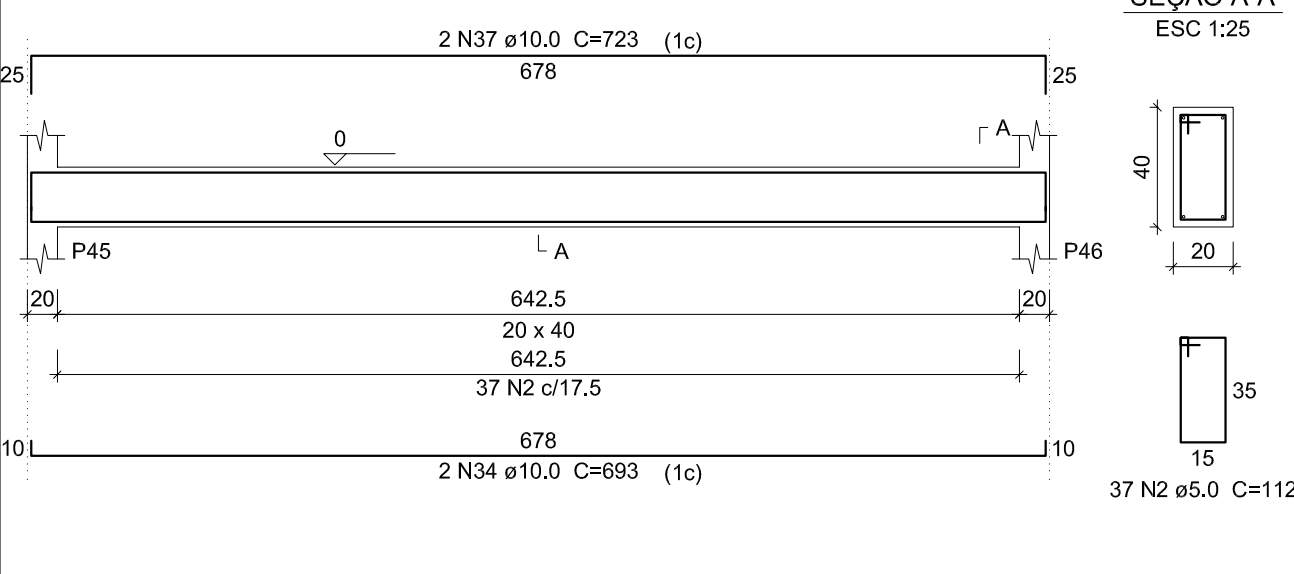
V15

ESC 1:50



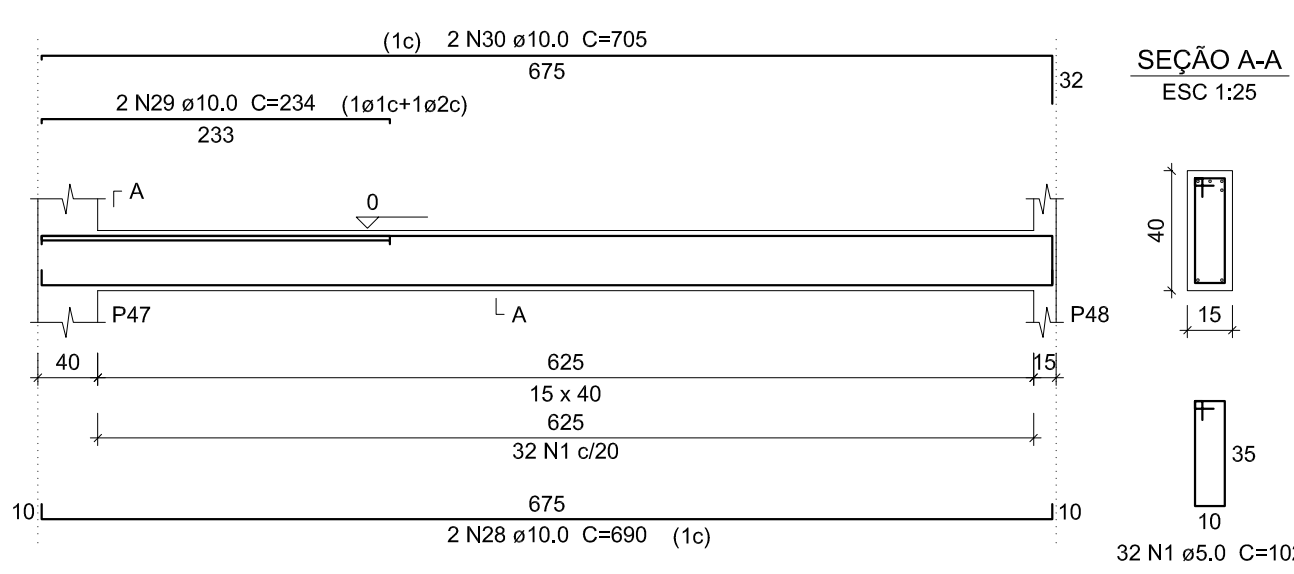
V16

ESC 1:50



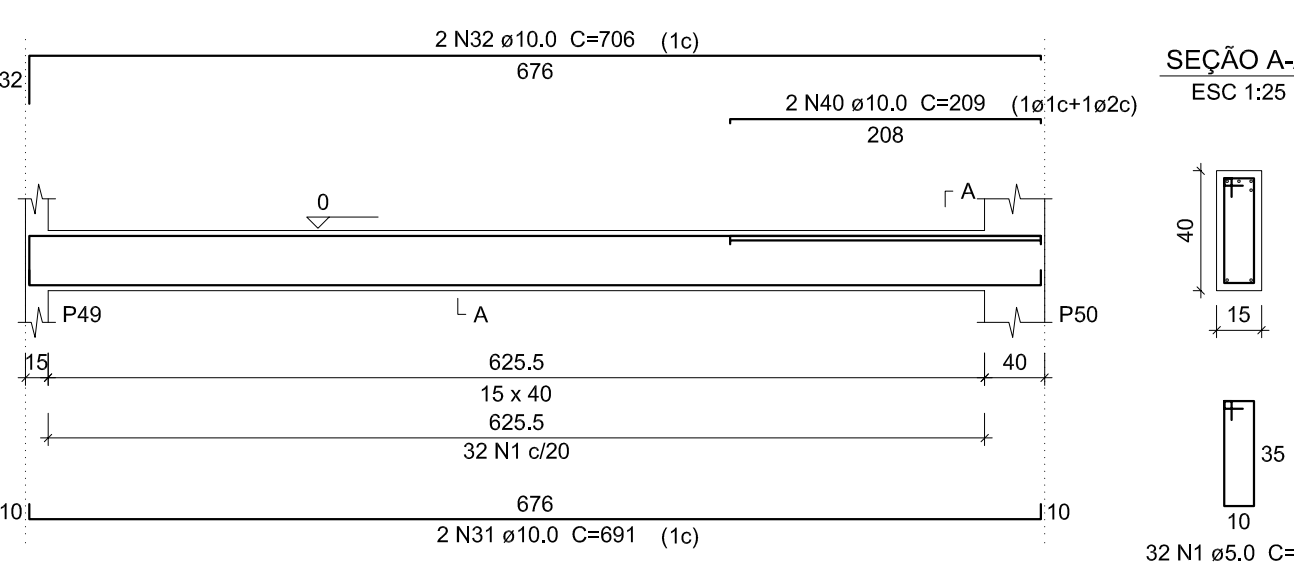
V17

ESC 1:50



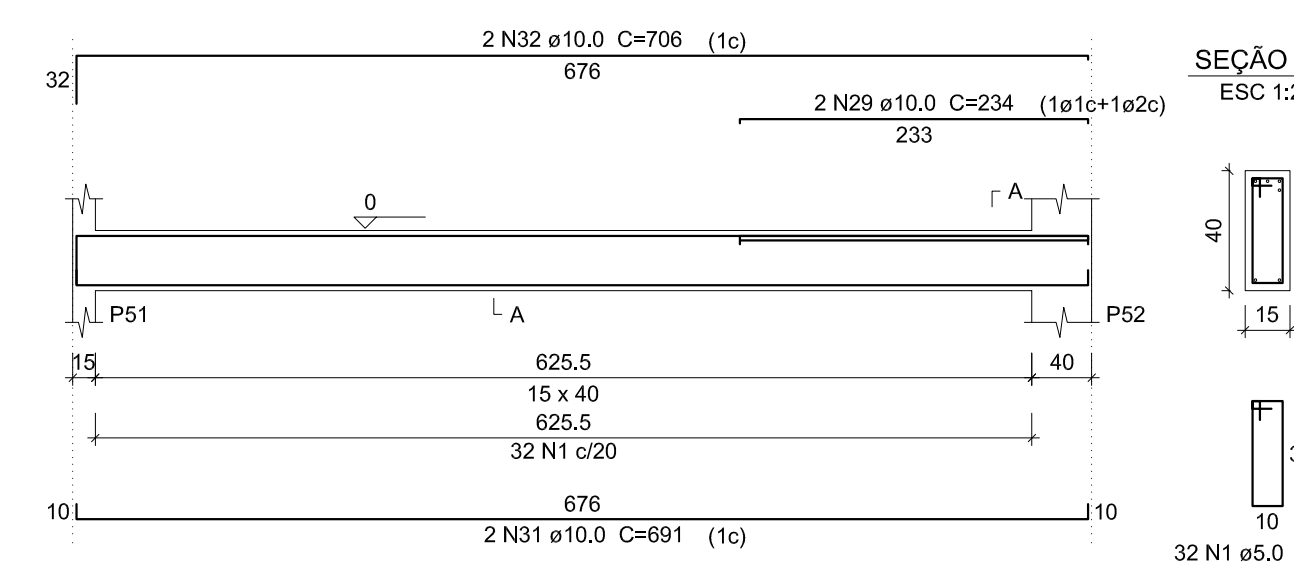
V18

ESC 1:50



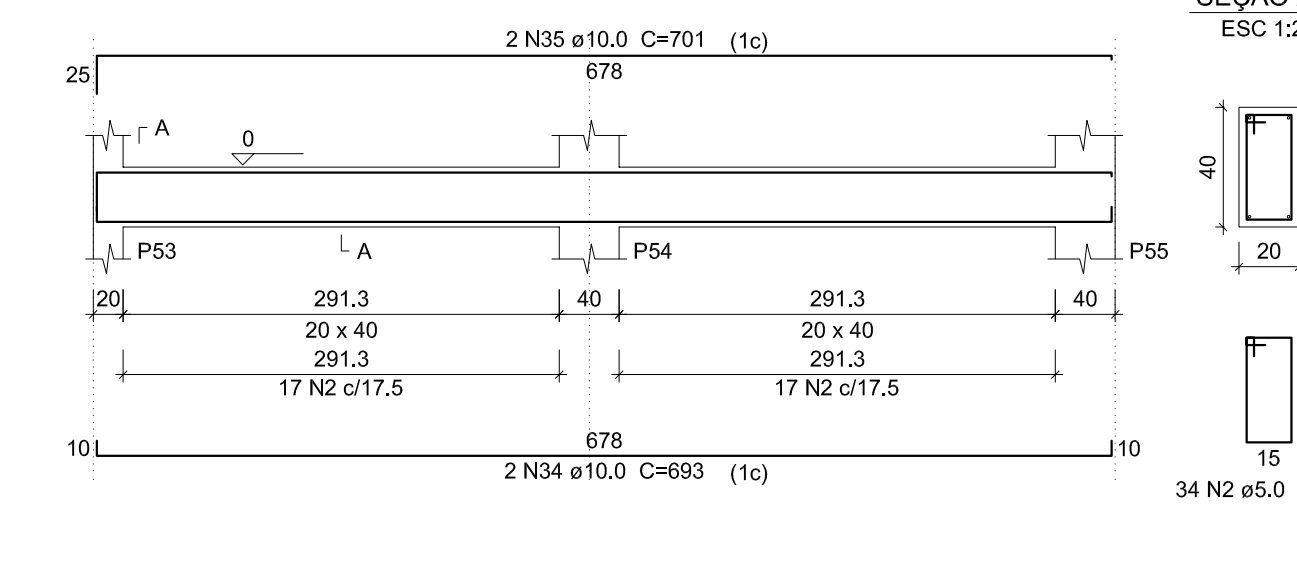
V19

ESC 1:50



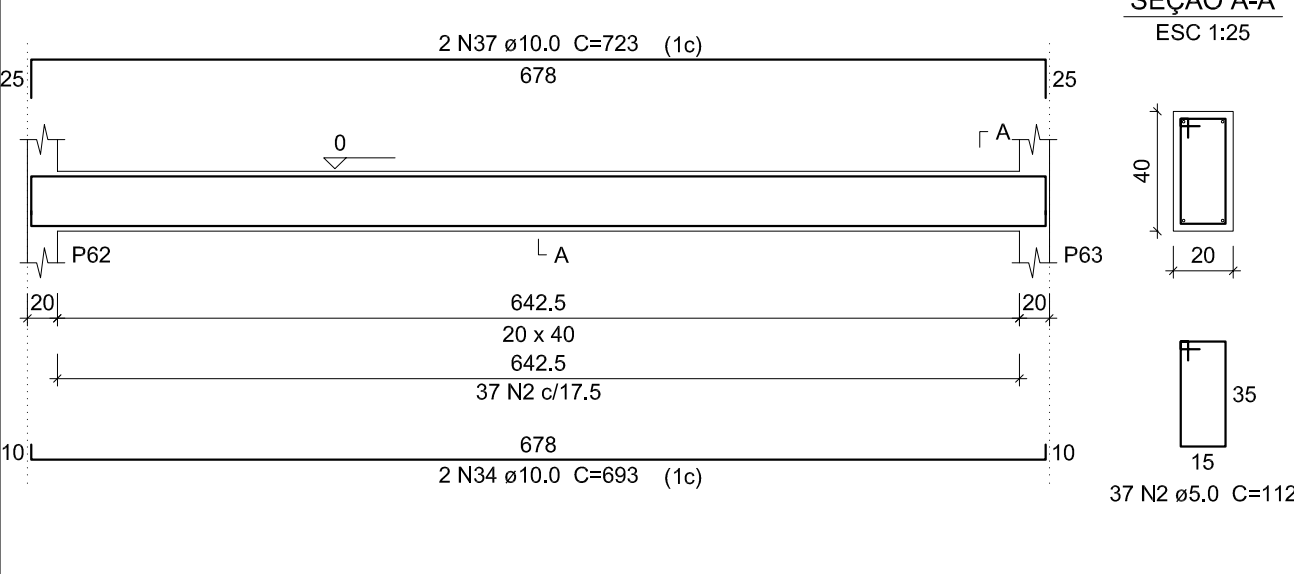
V20

ESC 1:50



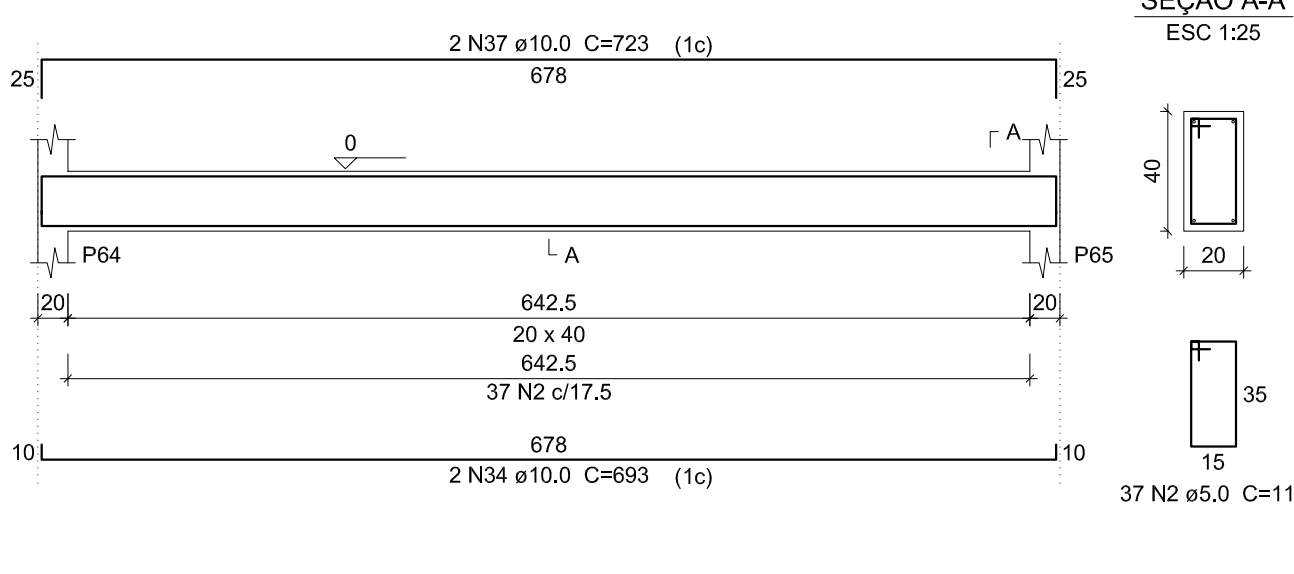
V21

ESC 1:50



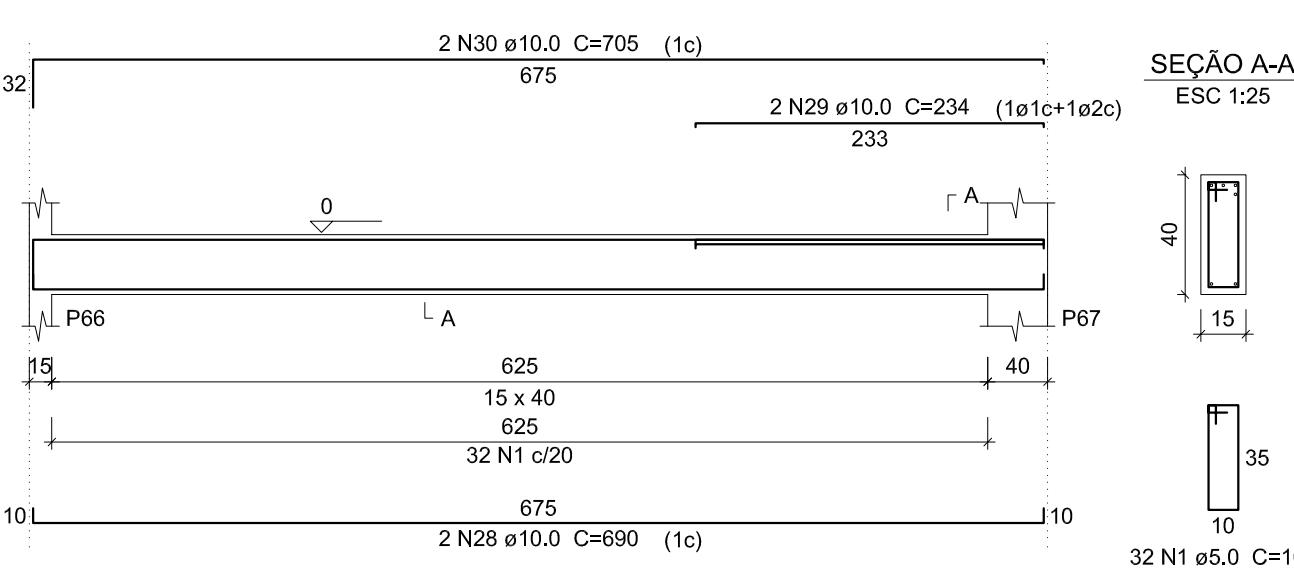
V22

ESC 1:50



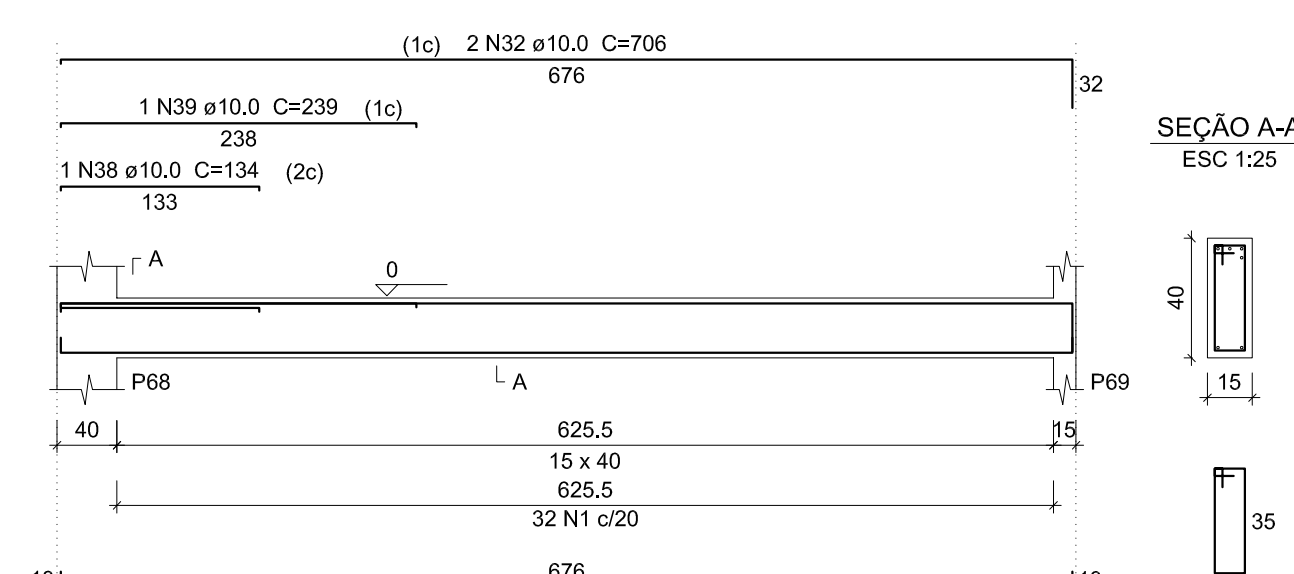
V23

ESC 1:50



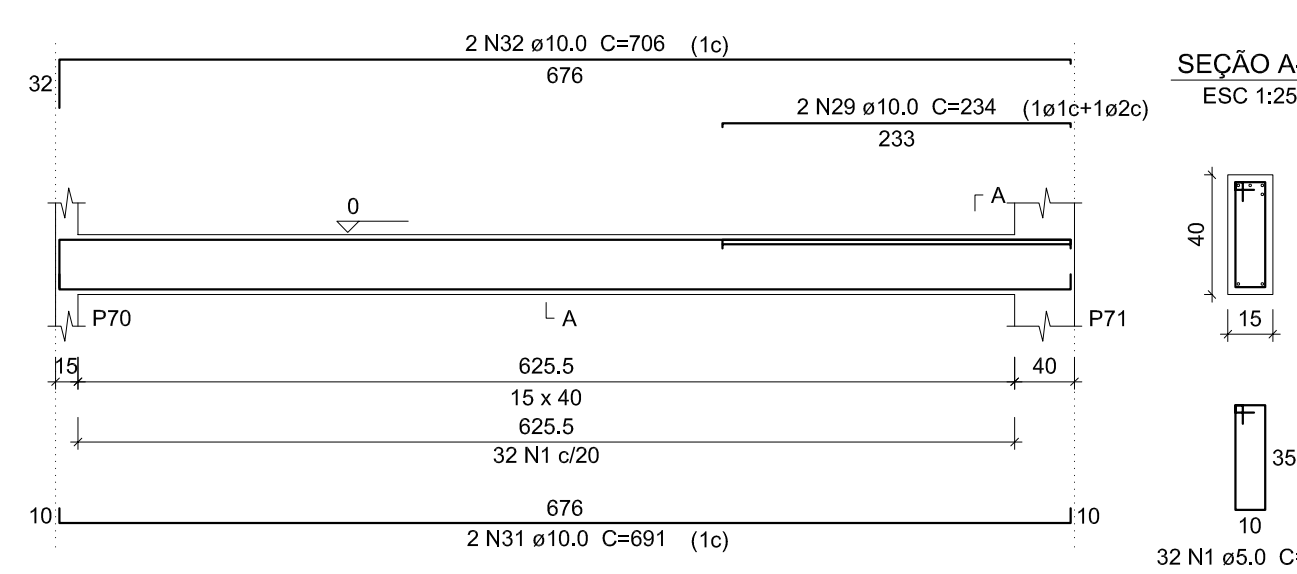
V24

ESC 1:50



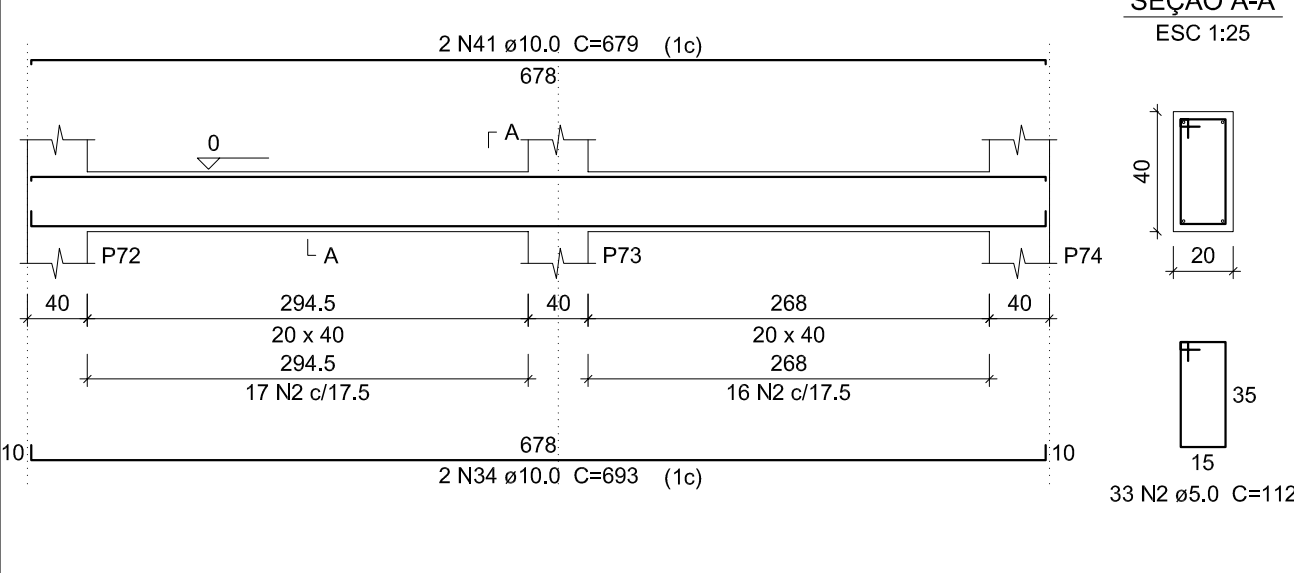
V25

ESC 1:50



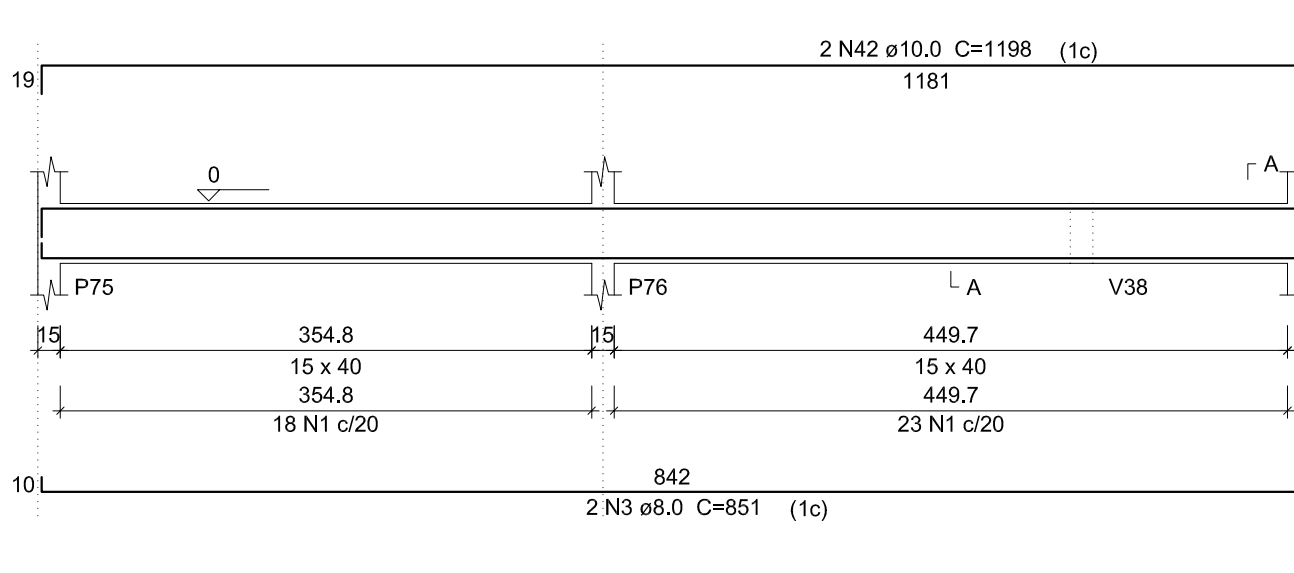
V26

ESC 1:50



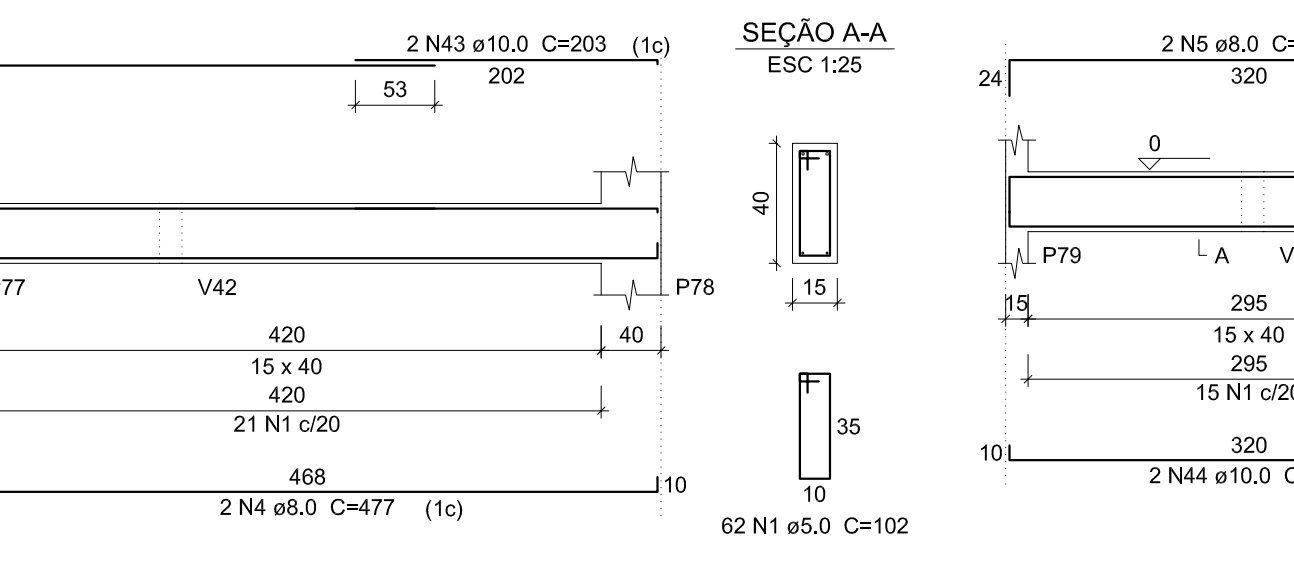
V27

ESC 1:50



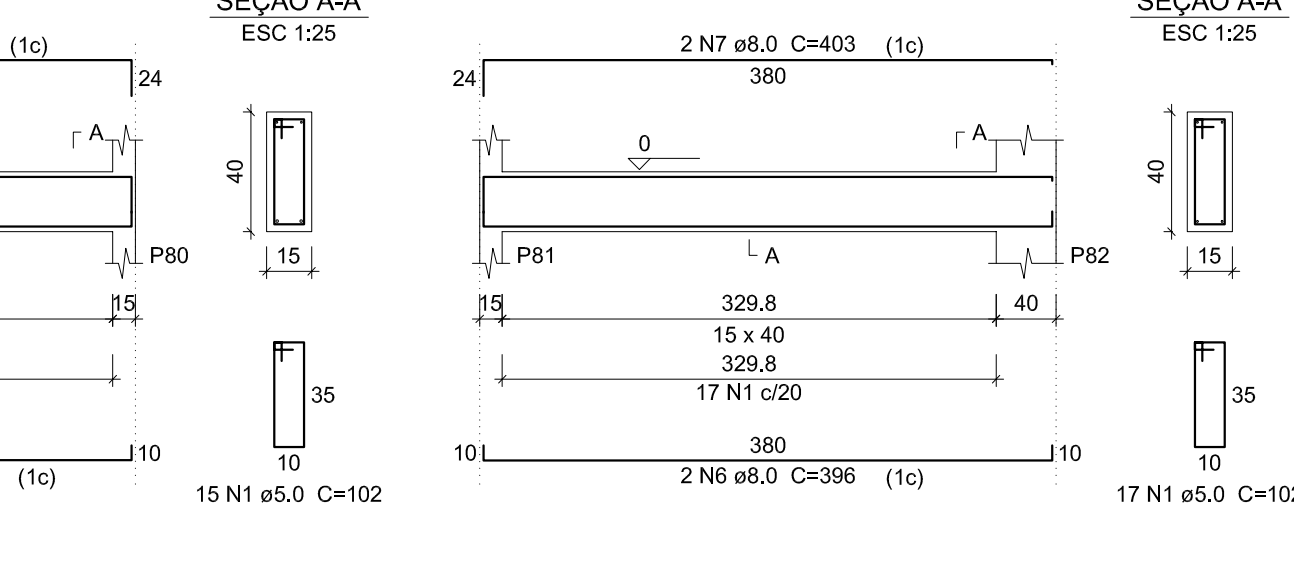
V28

ESC 1:50



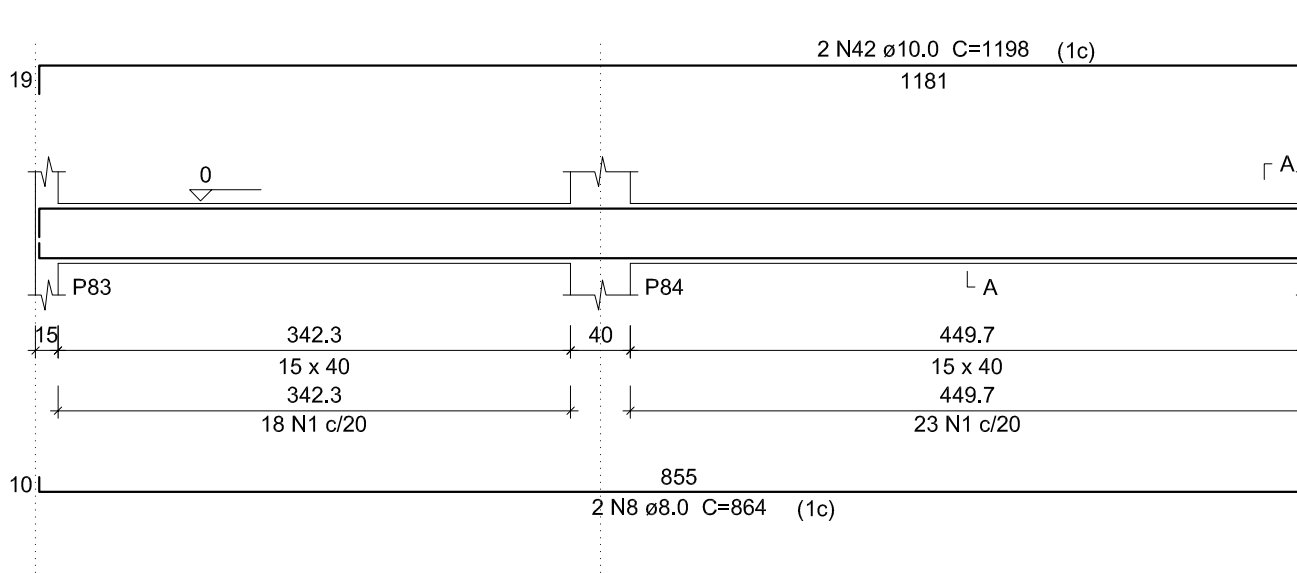
V29

ESC 1:50



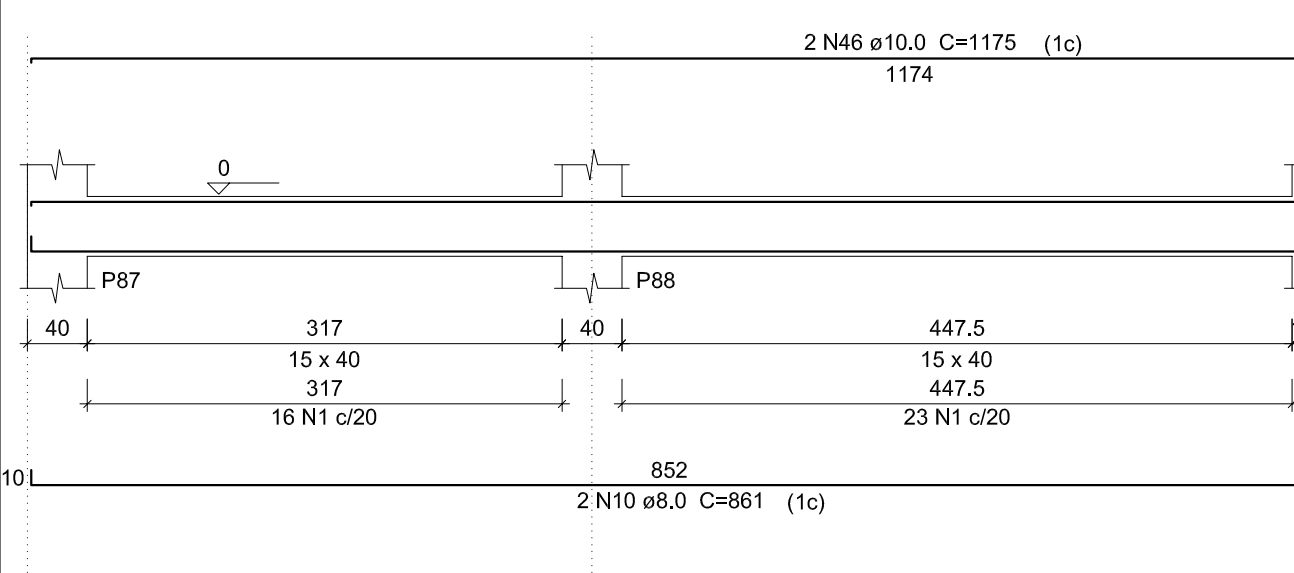
V30

ESC 1:50



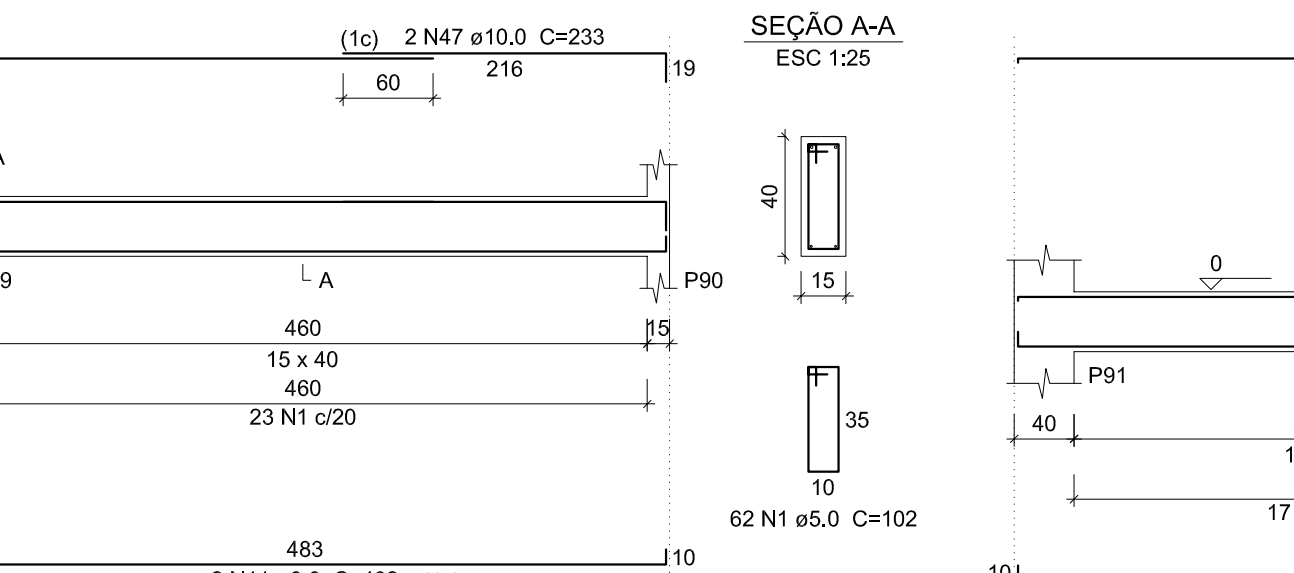
V31

ESC 1:50



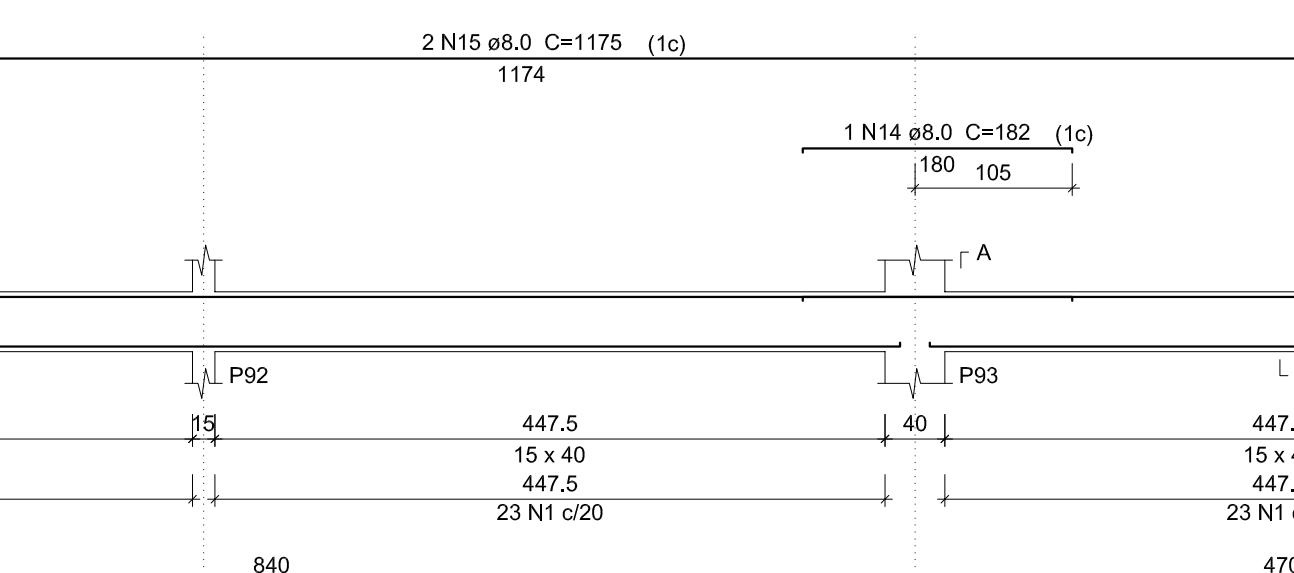
V32

ESC 1:50



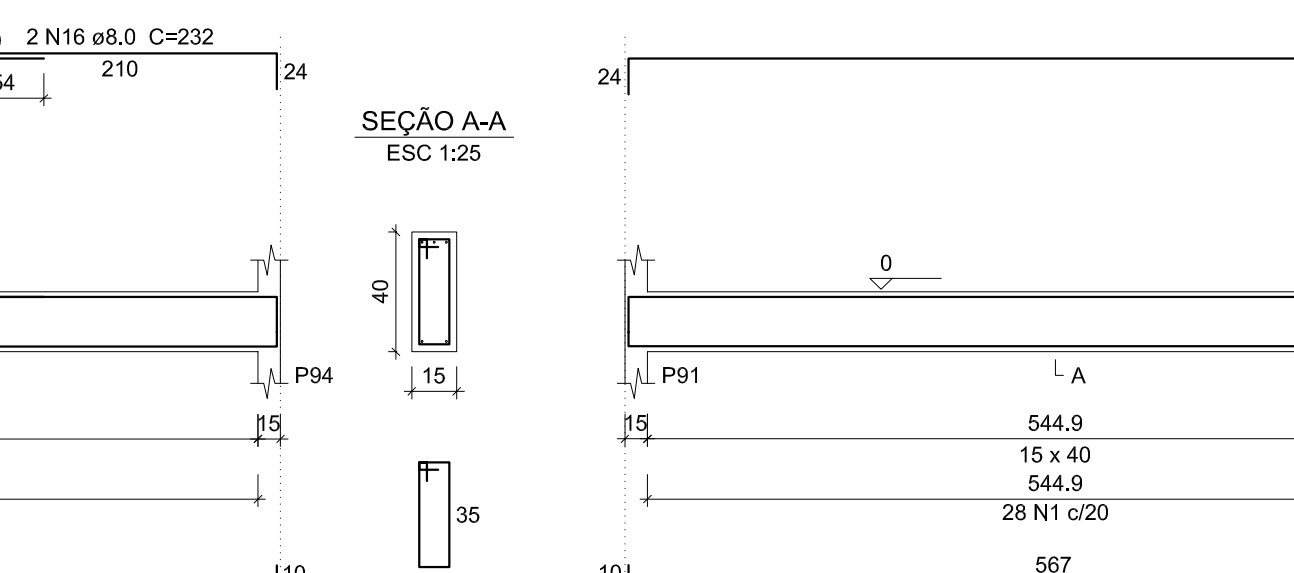
V33

ESC 1:50



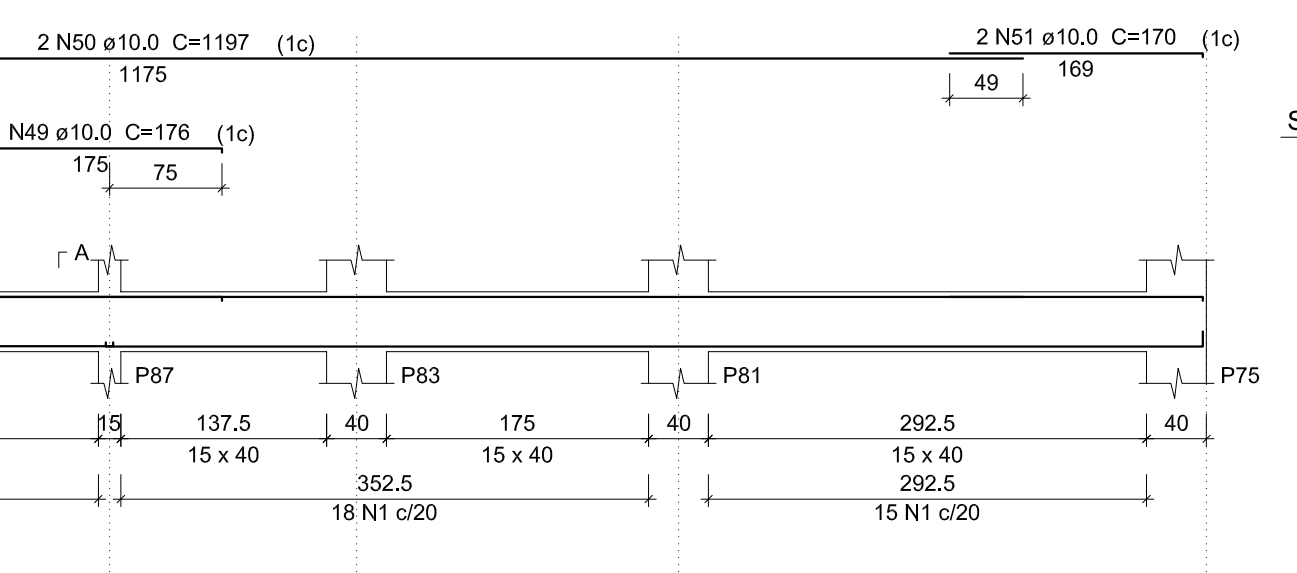
V34

ESC 1:50



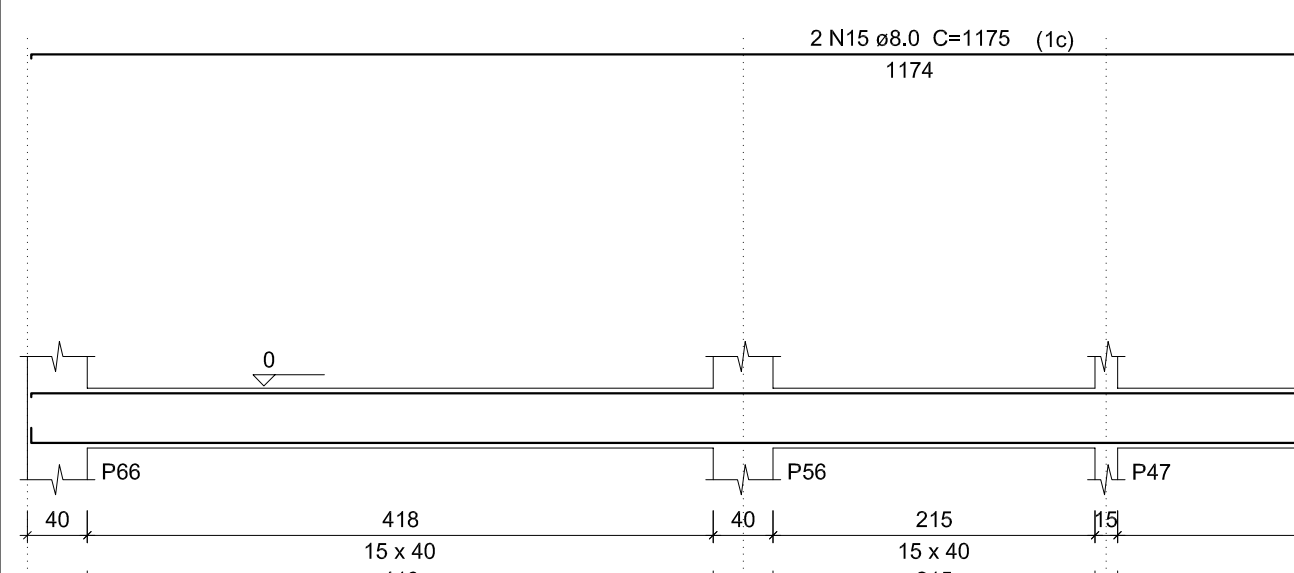
V35

ESC 1:50



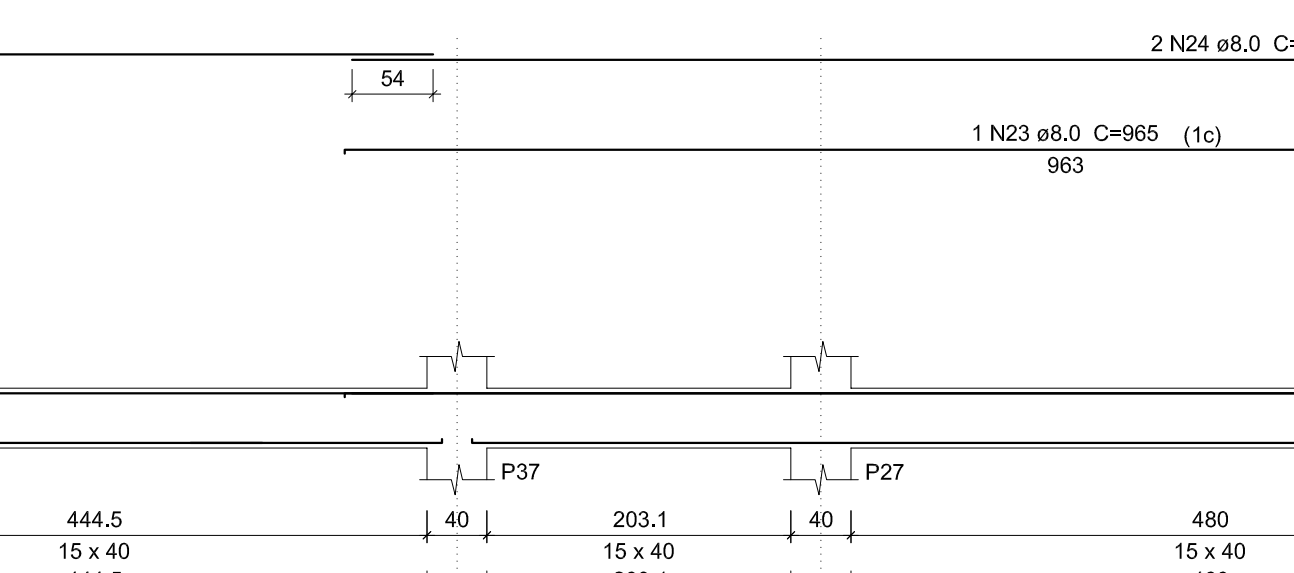
V36

ESC 1:50



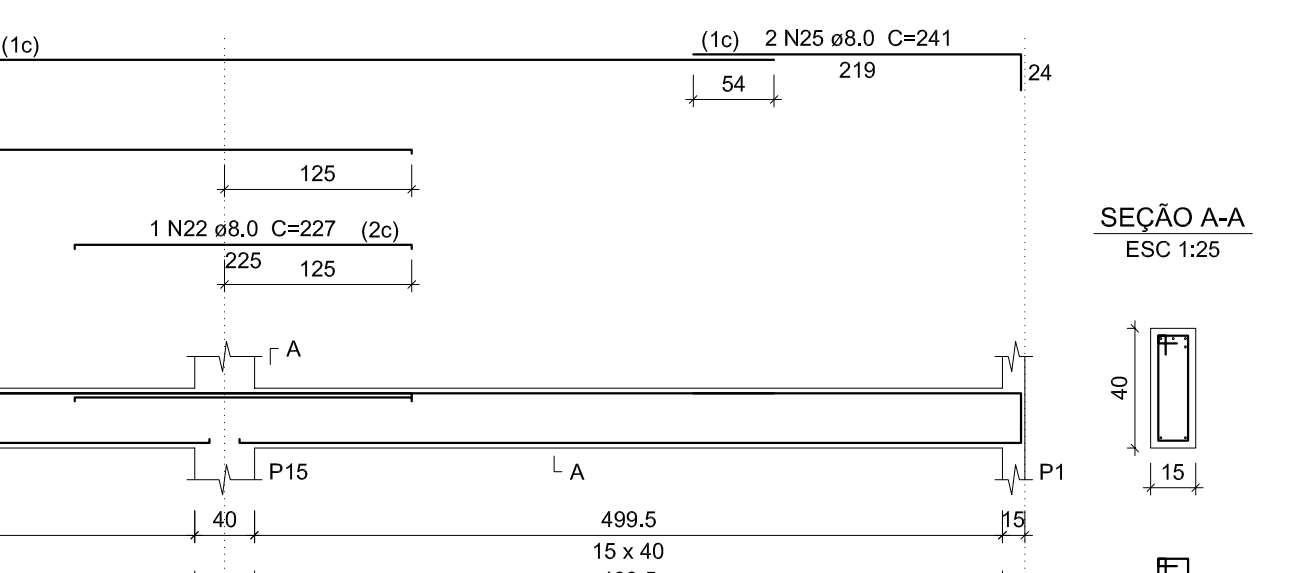
V37

ESC 1:50



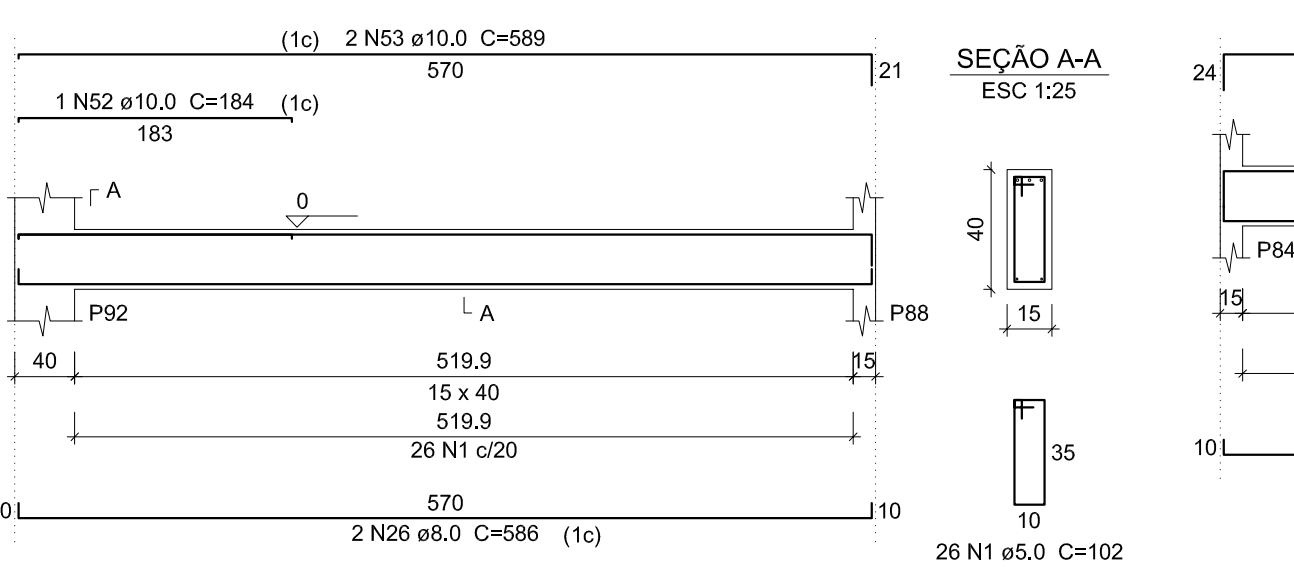
V38

ESC 1:50



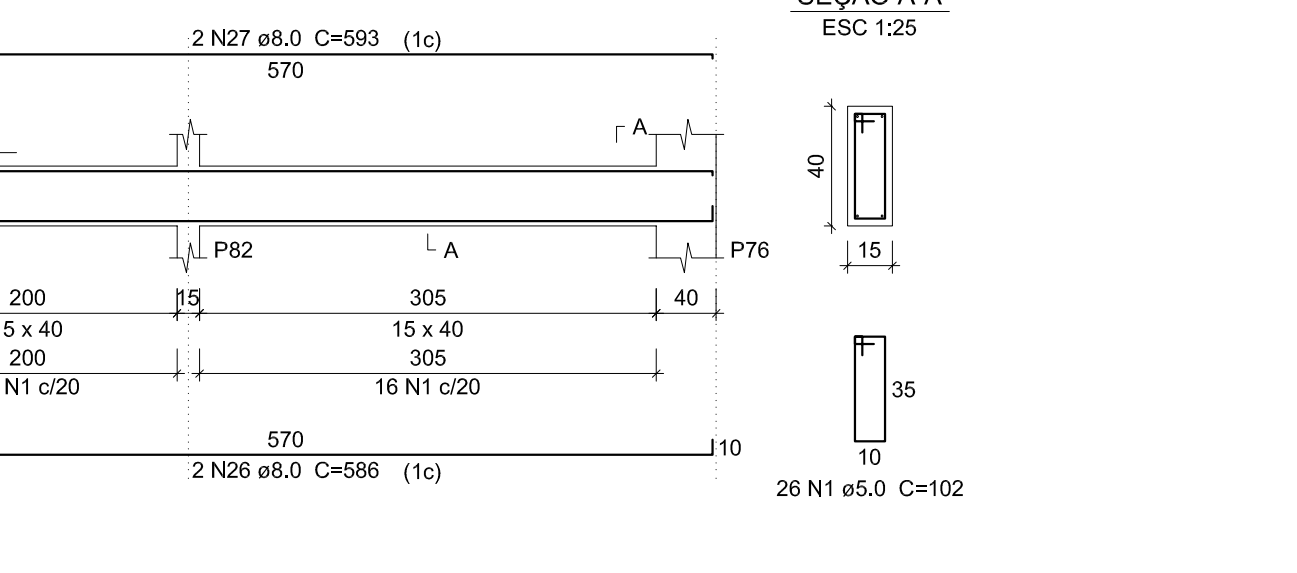
V39

ESC 1:50



V40

ESC 1:50

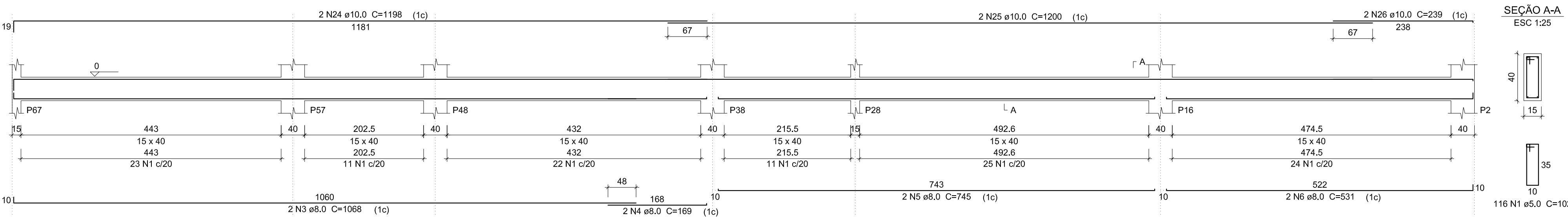
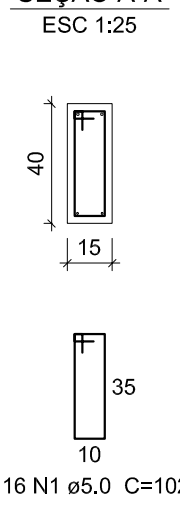
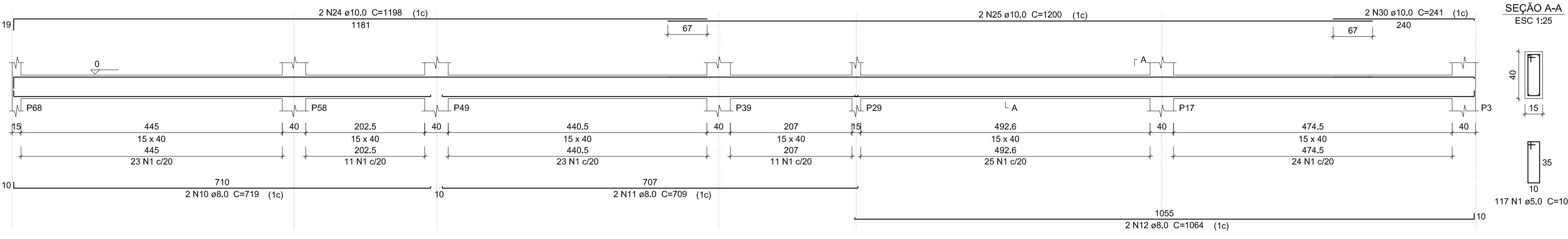
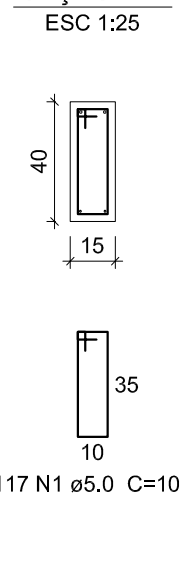
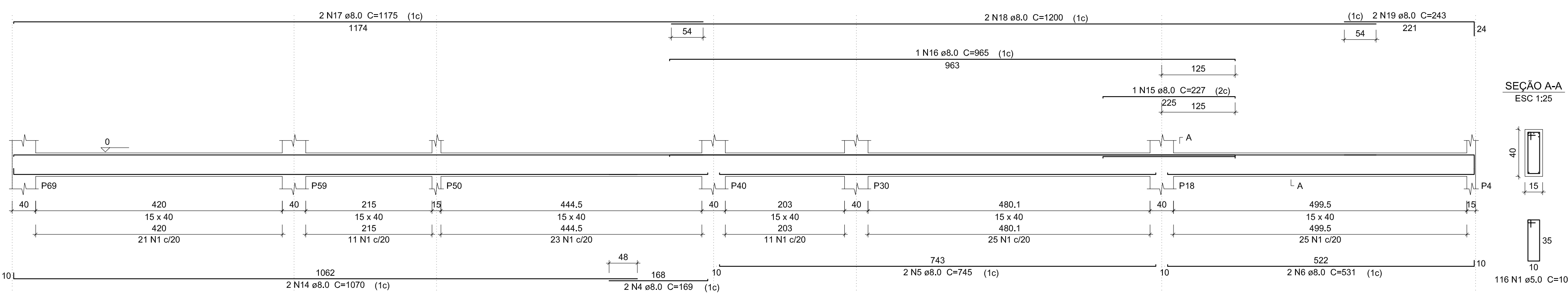
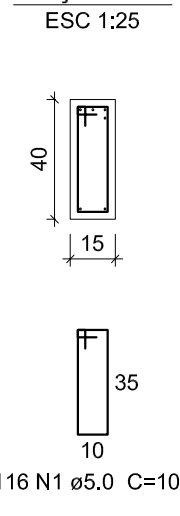
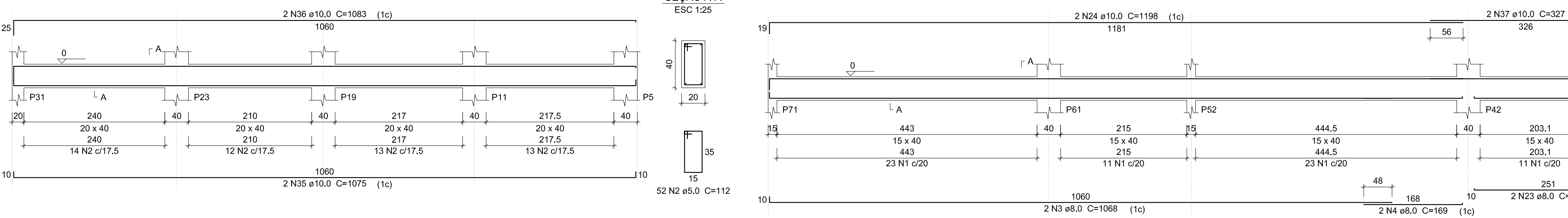
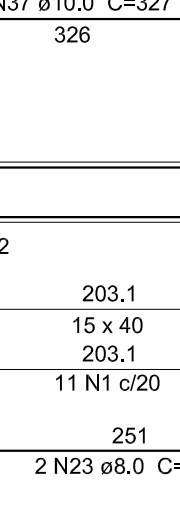
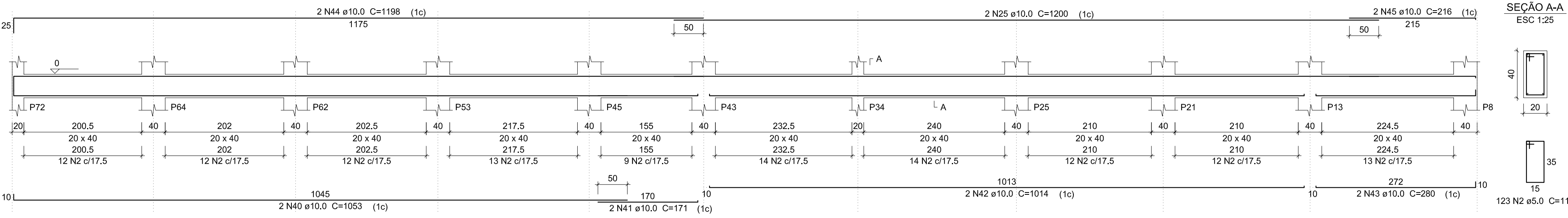
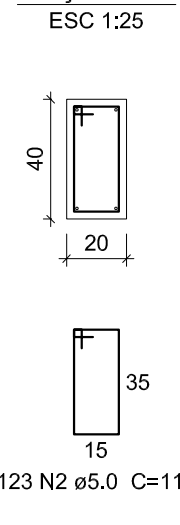
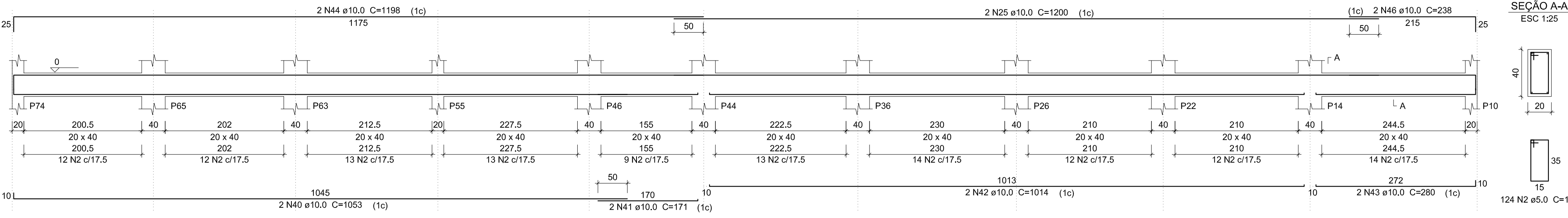
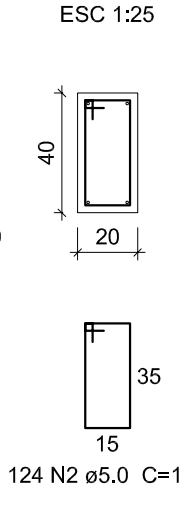
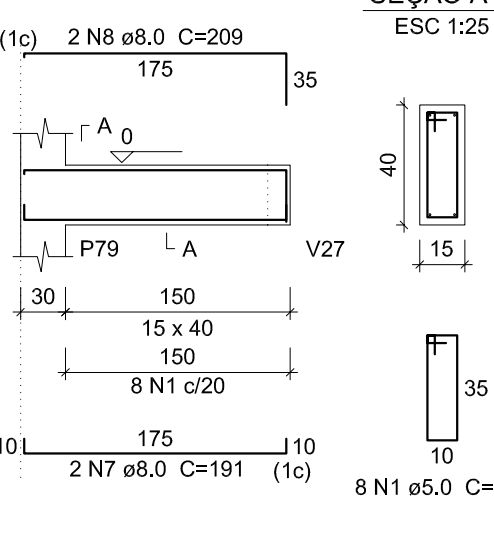
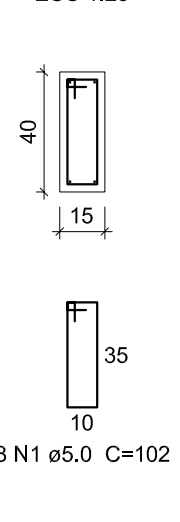
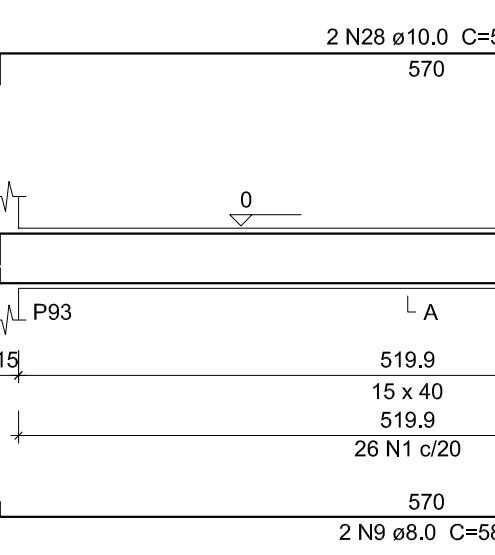
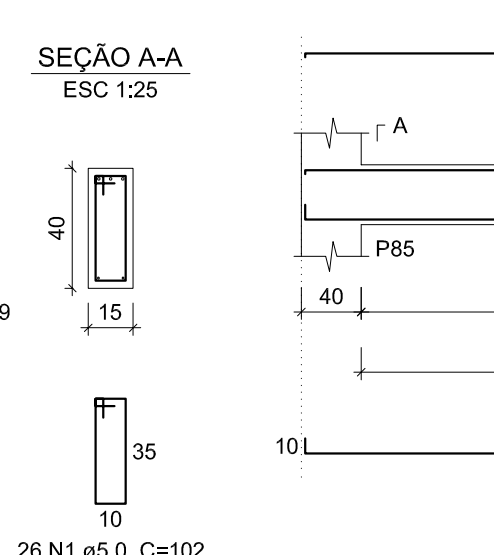
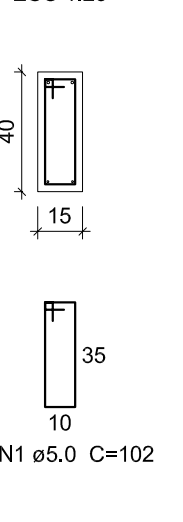
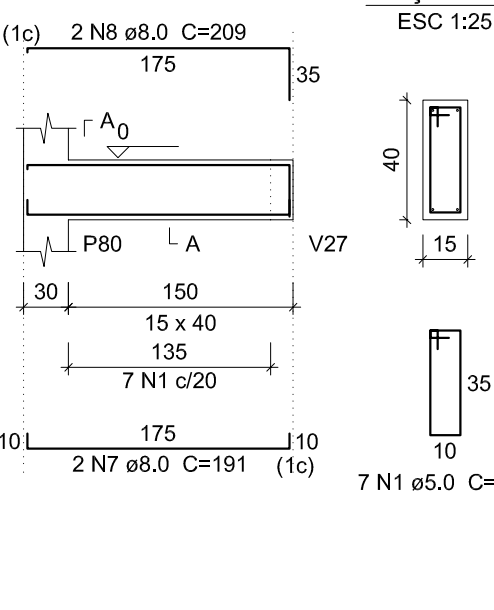
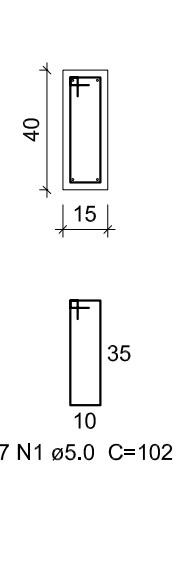
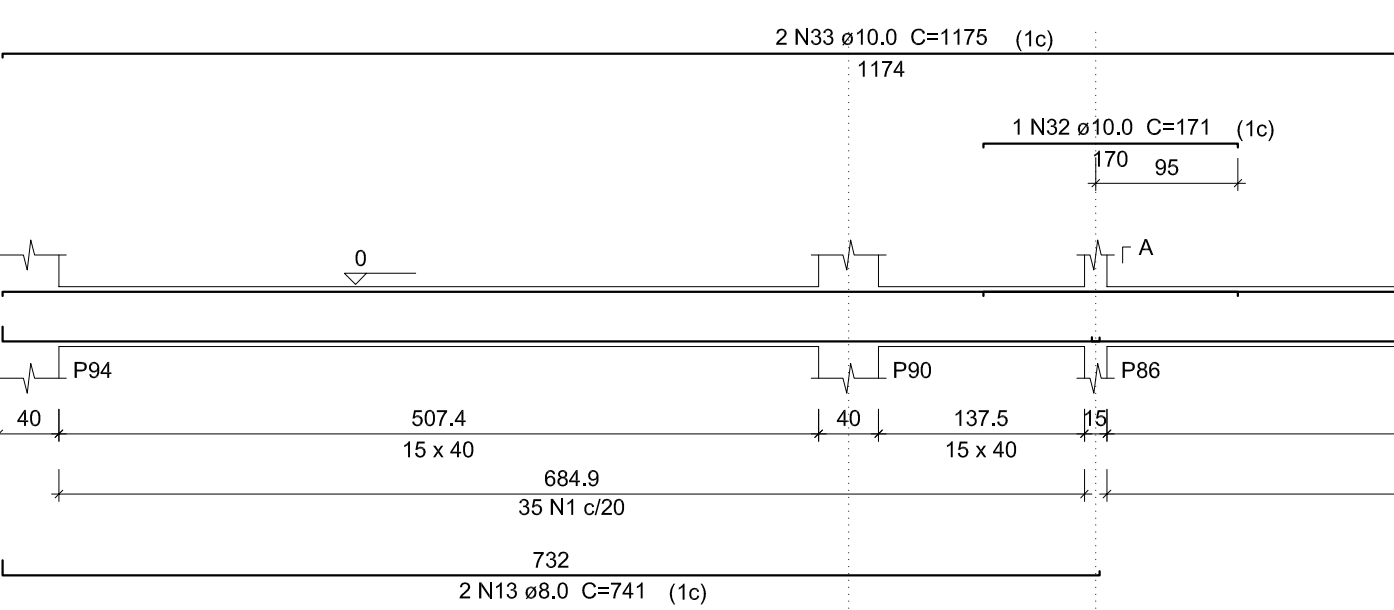
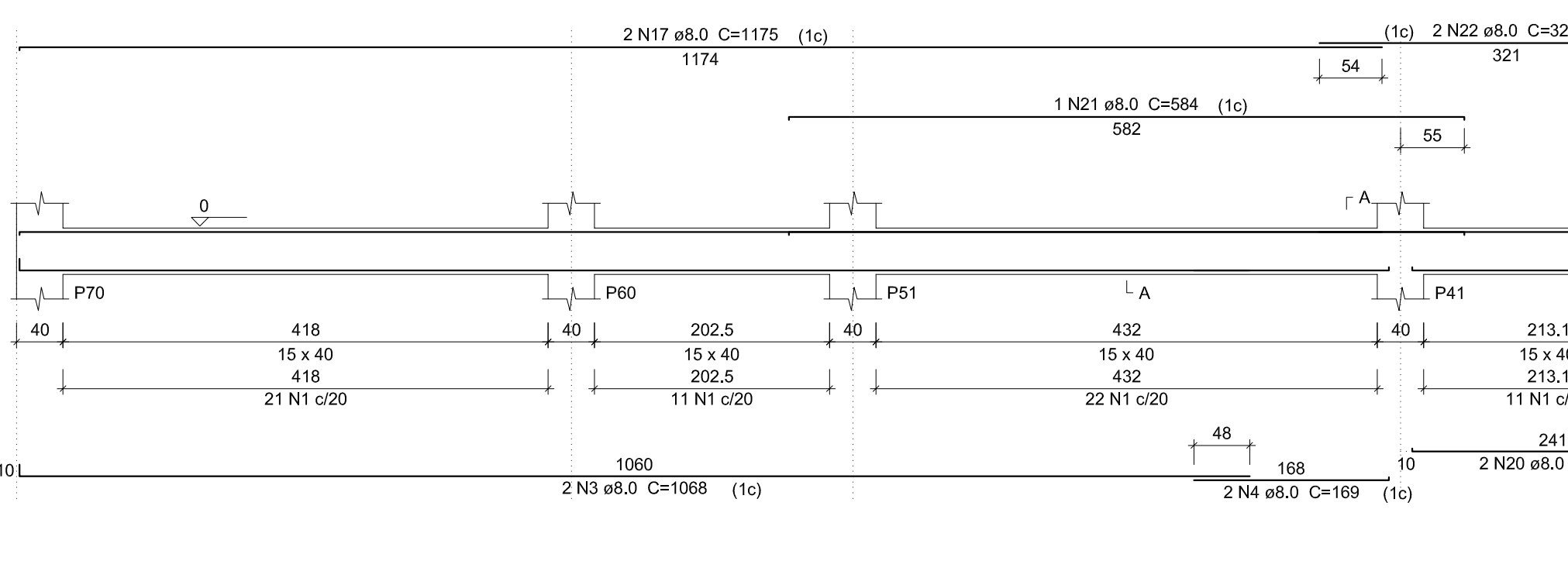
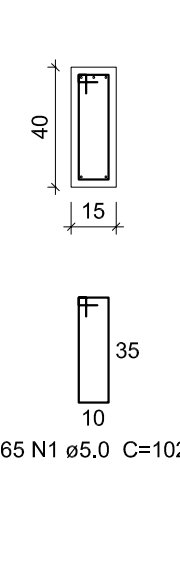
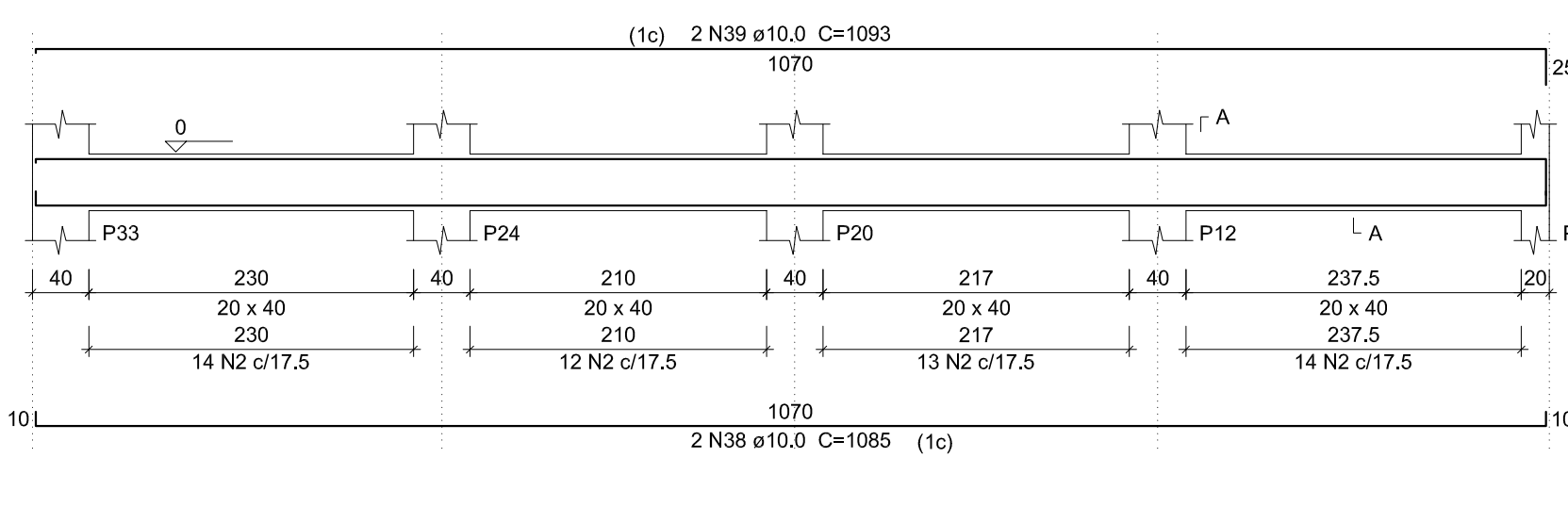
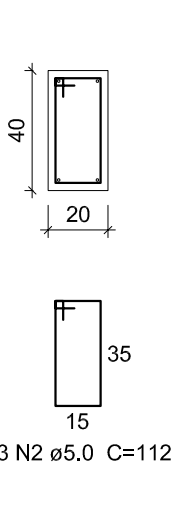


Relação do aço

AÇO	N	DIAM	Q	UNIT	C.TOTAL
V1	1	5,0	830	102	84660
V4	2	5,0	573	112	64178
V7	3	8,0	2	651	1702
V10	4	8,0	2	477	954
V13	5	8,0	2	384	738
V16	6	8,0	2	396	752
V19	7	8,0	2	453	806
V22	8	8,0	2	864	1728
V25	9	8,0	2	489	978
V28	10	8,0	2	482	964
V31	11	8,0	2	482	964
V34	12	8,0	2	849	1698
V37	13	8,0	2	479	958
V40	14	8,0	2	182	364
V43	15	8,0	4	1175	4700
V46	16	8,0	2	232	464
V49	17	8,0	2	742	1484
V52	18	8,0	2	1068	2136
V55	19	8,0	2	169	338
V58	20	8,0	2	745	1490
V61	21	8,0	2	531	1062
V64	22	8,0	1	227	227
V67	23	8,0	1	965	965
V70	24	8,0	2	1200	2400
V73	25	8,0	2	241	482
V76	26	8,0	4	586	2344
V79	27	8,0	2	593	1186
V82	28	10,0	8	690	5520
V85	29	10,0	14	234	3276
V88	30	10,0	8	705	5640
V91	31	10,0	22	691	15202
V94	32	10,0	12	706	8472
V97	33	10,0	4	699	2796
V100	34	10,0	22	693	15246
V103	35	10,0	6	791	4206
V106	36	10,0	6	721	4326
V109	37	10,0	14	723	10122
V112	38	10,0	2	134	268
V115	39	10,0	2	239	478
V118	40	10,0	2	209	418
V121	41	10,0	2	679	1358
V124	42	10,0	4	1198	4792
V127	43	10,0	2	203	406
V130	44	10,0	2	335	670
V133	45	10,0	2	202	404
V136	46	10,0	2	1175	2350
V139	47	10,0	2	233	466
V142	48	10,0	2	575	1150
V145	49	10,0	2	170	340
V148	50	10,0	2	1197	2394
V151	51	10,0	2	170	340
V154	52	10,0	1	164	164
V157	53	10,0	2	589	1178

AÇO	N	DIAM	Q	UNIT	C.TOTAL
CA50	2	5,0	573	112	64178
CA50	3	8,0	2	651	1702
CA50	4	8,0	2	477	954
CA50	5	8,0	2	384	738
CA50	6	8,0	2	396	752
CA50	7	8,0	2	453	806
CA50	8	8,0	2	864	1728
CA50	9	8,0	2	489	978
CA50	10	8,0	2	482	964
CA50	11	8,0	2	482	964
CA50	12	8,0	2	849	1698
CA50	13	8,0	2	479	958
CA50	14	8,0	2	182	364
CA50	15	8,0	4	1175	4700
CA50	16	8,0	2	232	464
CA50	17	8,0	2	742	1484
CA50	18	8,0	2	1068	2136
CA50	19	8,0	2	169	338
CA50	20	8,0	2	745	1490
CA50	21	8,0	2	531	1062
CA50	22	8,0	1	227	227
CA50	23	8,0	1	965	965
CA50	24	8,0	2	1200	2400
CA50	25	8,0	2	241	482
CA50	26	8,0	4	586	2344
CA50	27	8,0	2	593	1186
CA50	28	10,0	8	690	5520
CA50	29	10,0	14	234	3276
CA50	30	10,0	8	705	5640
CA50	31	10,0	22	691	15202
CA50	32	10,0	12	706	8472
CA50	33	10,0	4	699	2796
CA50	34	10,0	22	693	15246
CA50	35	10,0	6	791	4206
CA50	36	10,0	6	721	4326
CA50	37	10,0	14	723	10122
CA50	38	10,0	2	134	268
CA50	39	10,0	2	239	478
CA50	40	10,0	2	209	418
CA50	41	10,0	2	679	1358
CA50	42	10,0	4	1198	4792
CA50	43	10,0	2	203	406
CA50	44	10,0	2	335	670
CA50	45	10,0	2	202	404
CA50	46	10,0	2	1175	2350
CA50	47	10,0	2	233	466
CA50	48	10,0	2	575	1150
CA50	49	10,0	2	170	340
CA50	50	10,0	2	1197	2394
CA50	51	10,0	2	170	340
CA50	52	10,0	1	164	164
CA50	53	10,0	2	589	1178

9	8,0	2	489	978
10	8,0	2	861	1722
11	8,0	2	492	984
12	8,0	2	849	1698
13	8,0	2	479	958
14	8,0	1	182	182
15	8,0	4	1175	4700
16	8,0	2	232	464
17	8,0	2	742	1484
18	8,0	2	1068	2136
19	8,0	2	169	338

V37
ESC 1:50SEÇÃO A-A
ESC 1:25V41
ESC 1:50SEÇÃO A-A
ESC 1:25V44
ESC 1:50SEÇÃO A-A
ESC 1:25V46
ESC 1:50SEÇÃO A-A
ESC 1:25V49
ESC 1:50SEÇÃO A-A
ESC 1:25V50
ESC 1:50SEÇÃO A-A
ESC 1:25V38
ESC 1:50SEÇÃO A-A
ESC 1:25V39
ESC 1:50V40
ESC 1:50SEÇÃO A-A
ESC 1:25V42
ESC 1:50SEÇÃO A-A
ESC 1:25V43
ESC 1:50SEÇÃO A-A
ESC 1:25V45
ESC 1:50SEÇÃO A-A
ESC 1:25V48
ESC 1:50SEÇÃO A-A
ESC 1:25

Relação do aço

AÇO	N	DIAM	Q	UNIT	C.TOTAL
V37	1	5.0	612	102	62424
V40	2	5.0	352	112	39424
V43	3	8.0	6	1068	6408
V45	4	8.0	8	169	1352
V46	5	8.0	4	745	2980
V48	6	8.0	4	531	2124
V49	7	8.0	4	191	764
V50	8	8.0	4	209	836
	9	8.0	4	586	2344
	10	8.0	2	719	1438
	11	8.0	2	709	1418
	12	8.0	2	1064	2128
	13	8.0	1	741	1462
	14	8.0	2	1070	2140
	15	8.0	1	227	227
	16	8.0	1	965	965
	17	8.0	4	1175	4700
	18	8.0	2	1200	2400
	19	8.0	2	243	486
	20	8.0	2	350	550
	21	8.0	1	584	584
	22	8.0	2	329	658
	23	8.0	2	260	520
	24	10.0	6	1198	7188
	25	10.0	8	1200	9600
	26	10.0	2	239	478
	27	10.0	1	184	184
	28	10.0	2	569	1138
	29	10.0	2	587	1174
	30	10.0	2	241	482
	31	10.0	2	576	1152
	32	10.0	1	171	171
	33	10.0	2	1175	2350
	34	10.0	2	207	414
	35	10.0	2	1075	2150
	36	10.0	2	1083	2166
	37	10.0	2	327	654
	38	10.0	2	1085	2170
	39	10.0	2	1093	2186
	40	10.0	4	1053	4212
	41	10.0	4	171	684
	42	10.0	4	1014	4056
	43	10.0	4	280	1120
	44	10.0	4	1198	4792
	45	10.0	2	216	432
	46	10.0	2	239	478

Resumo do aço

AÇO	DIAM	C.TOTAL	PESO + 10 %
CA50	8.0	364.6	158.2
CA50	10.0	494.7	335.5
CA60	5.0	1018.5	172.7
PESO TOTAL			
CA50	493.7		
CA60	172.7		

Vol. de concreto total (C=30) = 13,61 m³

Área de forma total = 196,54 m²