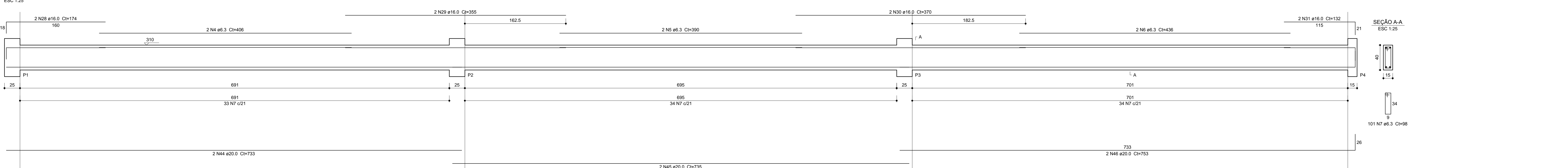
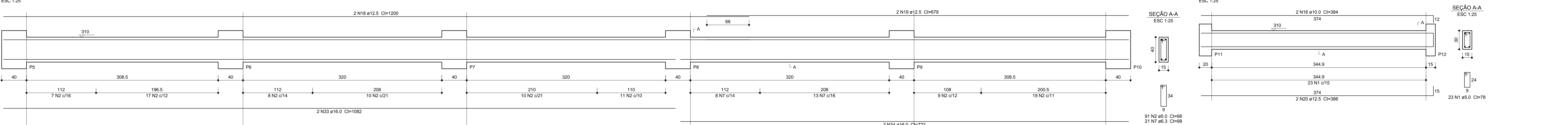


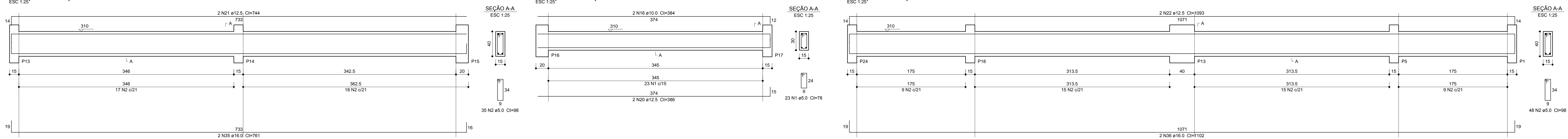
V1 (15 x 40)



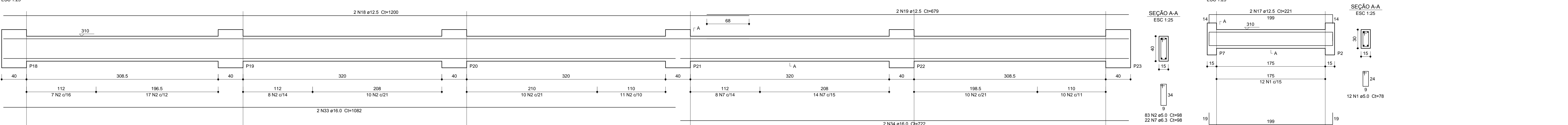
V2 (15 x 40)



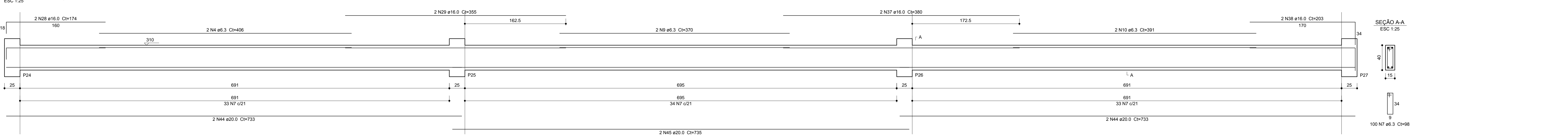
V4 (15 x 40)



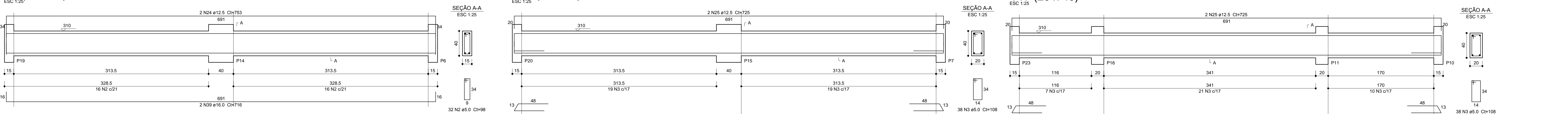
V6 (15 x 40)



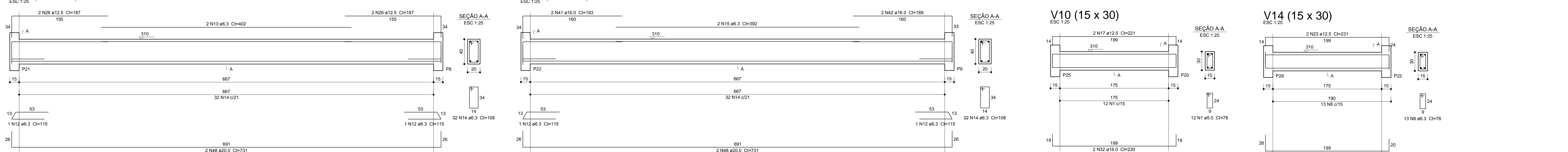
V7 (15 x 40)



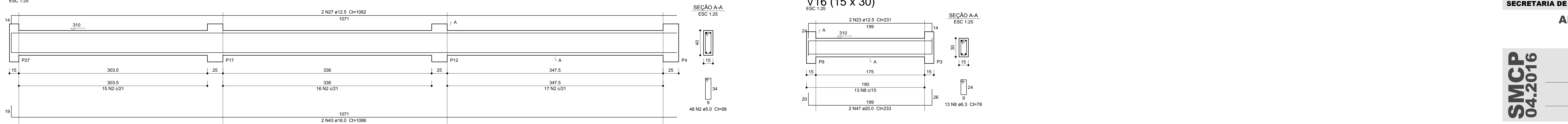
V9 (15 x 40)



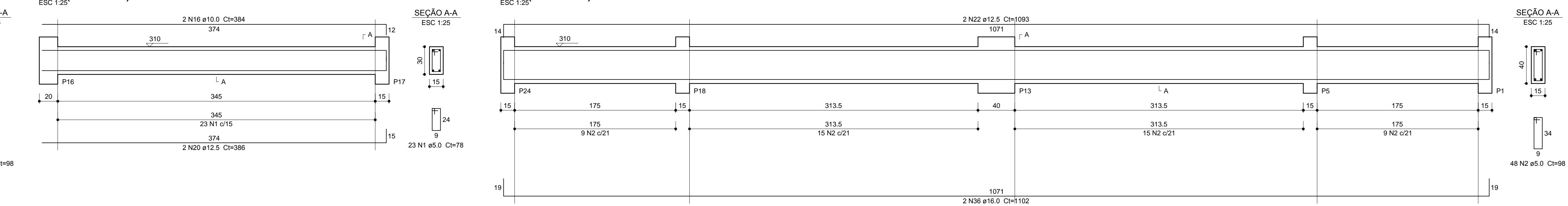
V13 (20 x 40)



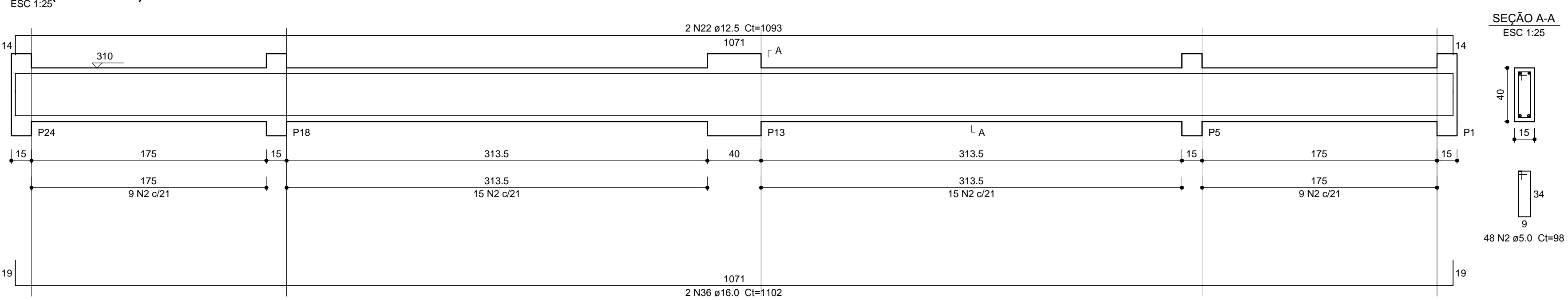
V18 (15 x 40)



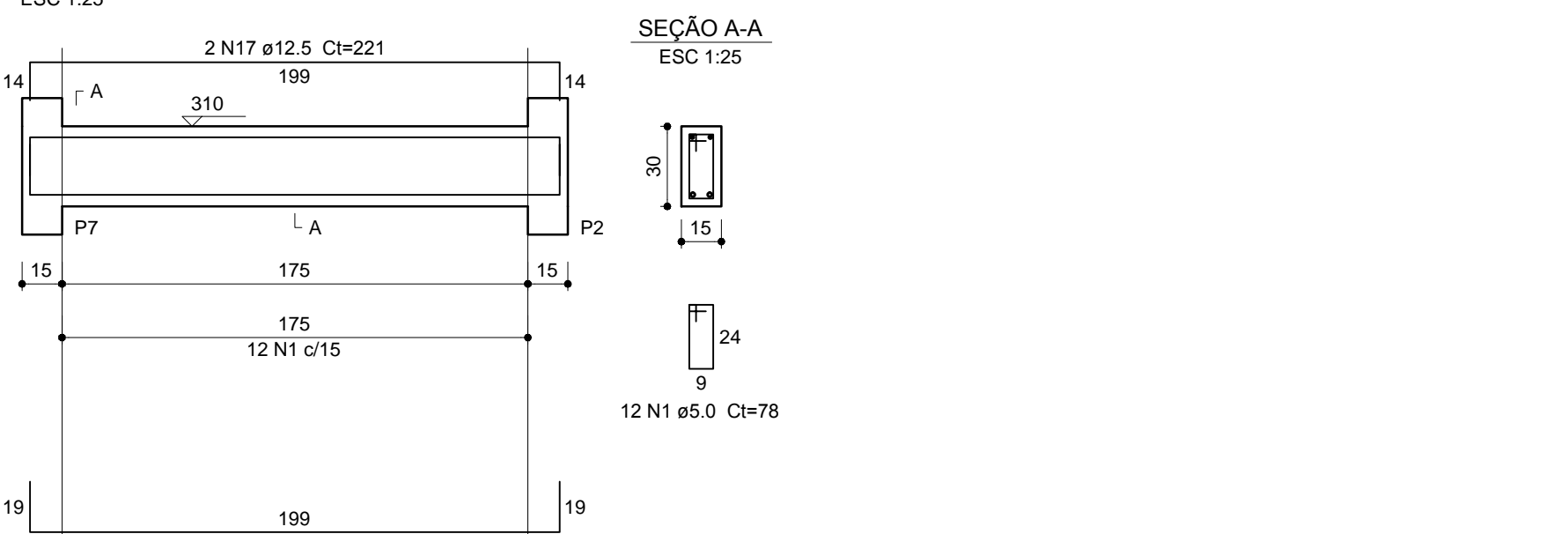
V5 (15 x 30)



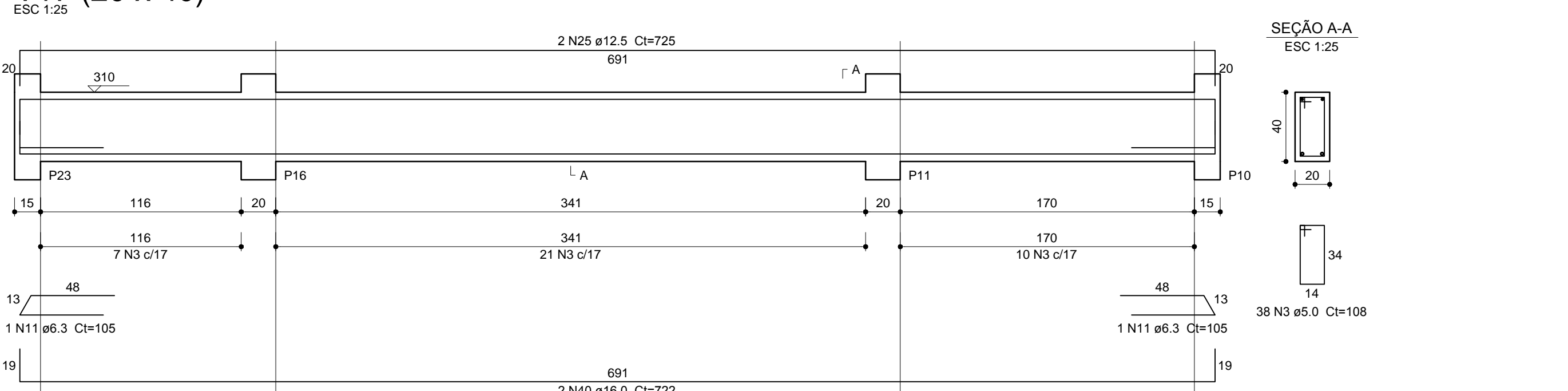
V8 (15 x 40)



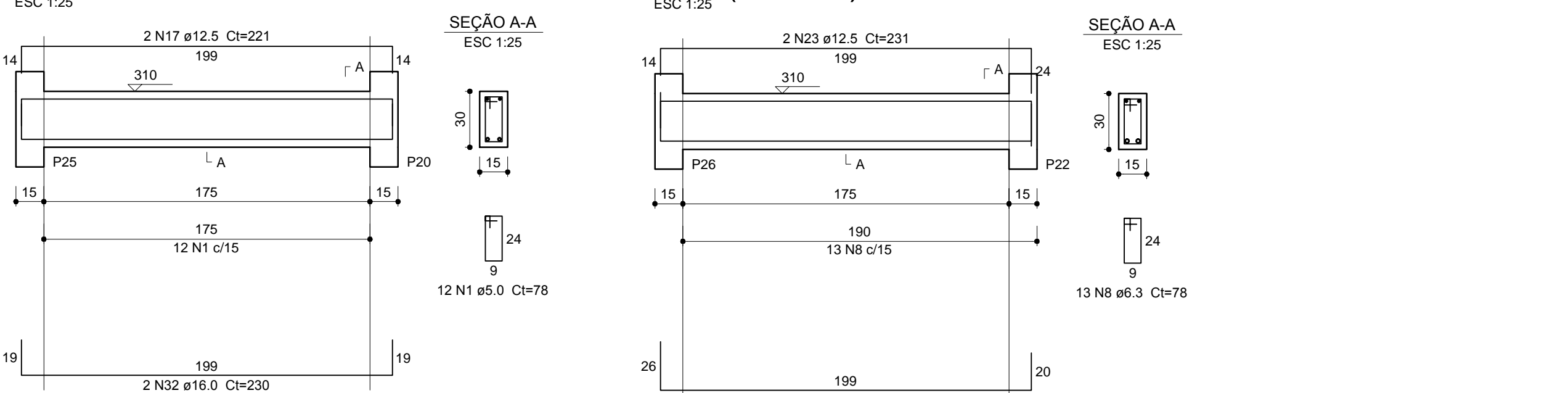
V12 (15 x 30)



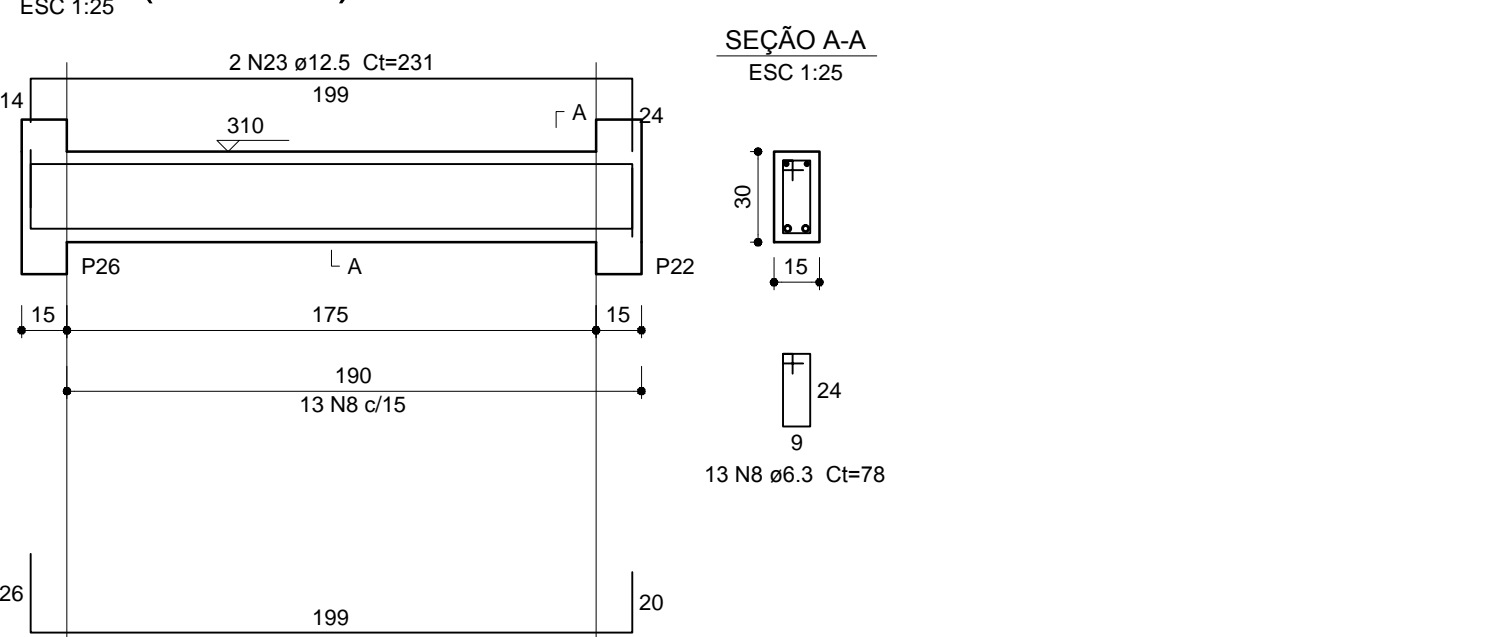
V17 (20 x 40)



V10 (15 x 30)



V14 (15 x 30)



V16 (15 x 30)



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	70	78	5460
	2	5.0	337	98	33026
	3	5.0	79	106	8398
	4	6.3	4	406	1624
	5	6.3	2	436	872
	6	6.3	2	380	760
	7	6.3	244	98	23912
	8	6.3	26	78	2028
	9	6.3	2	370	740
	10	6.3	2	391	782
	11	6.3	4	105	420
	12	6.3	4	115	460
	13	6.3	2	402	804
	14	6.3	64	108	6912
	15	6.3	2	392	784
	16	10.0	4	384	1536
	17	12.5	4	221	884
	18	12.5	4	1200	4800
	19	12.5	4	679	2716
	20	12.5	4	386	1544
	21	12.5	2	744	1488
	22	12.5	2	1093	2186
	23	12.5	4	231	924
	24	12.5	2	753	1506
	25	12.5	4	725	2900
	26	12.5	4	167	748
	27	12.5	2	1082	2164
	28	16.0	4	174	696
	29	16.0	4	355	1420
	30	16.0	2	370	740
	31	16.0	2	132	264
	32	16.0	4	230	920
	33	16.0	3	1082	4328
	34	16.0	4	722	2888
	35	16.0	2	781	1562
	36	16.0	2	1102	2204
	37	16.0	2	380	760
	38	16.0	2	203	406
	39	16.0	2	716	1432
	40	16.0	4	722	2888
	41	16.0	2	193	386
	42	16.0	2	189	378
	43	16.0	2	1086	2172
	44	20.0	6	733	4398
	45	20.0	4	735	2940
	46	20.0	2	753	1506
	47	20.0	4	233	932
	48	20.0	4	731	2924

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (cm)	FESO 10% (kg)
CA50	6.3	401.2	108
	10.0	15.4	10.4
	12.5	218.6	231.6
	16.0	234.1	406.3
	20.0	127	344.5
CA60	5.0	467	79.2
FESO TOTAL (kg)			
CA50	1100.9		
CA60	79.2		

Volume de concreto (C-30) = 9.89 m³
Área de forma = 149.72 m²

PREFEITURA MUNICIPAL DO RIO GRANDE
SECRETARIA DE MUNICÍPIO DE COORDENAÇÃO E PLANEJAMENTO

AMPLIAÇÃO E REFORMA E.M.E.F

PORTO SEGURO

RUA DAS ALGAS, 340, RIO GRANDE | RS

SMCP
04.2016

ESTRUTURAL OBRA 2

VIGAS COBERTURA

MICHELE SCHNEIDER
Engenheira Civil - CREA-RS 02080

EVERTON MENA LOPES
Engenheiro Civil - R3 106022

06/07

ESC. 1/25