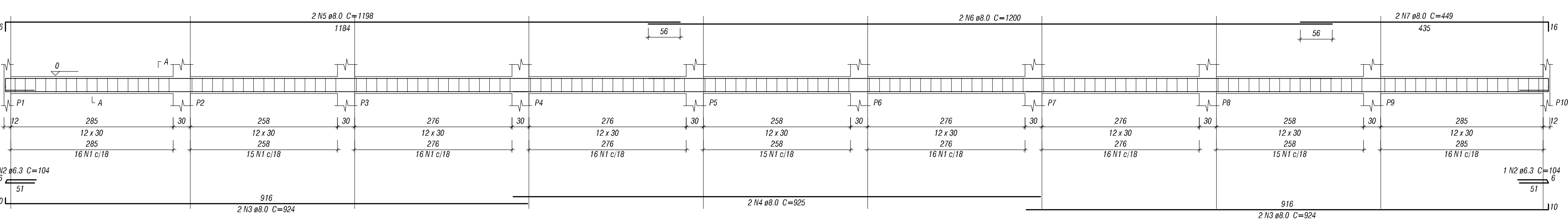
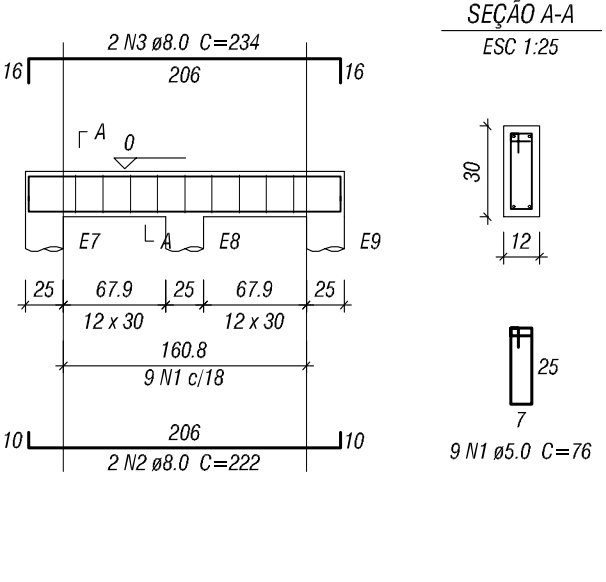


V101 (12 x 30)



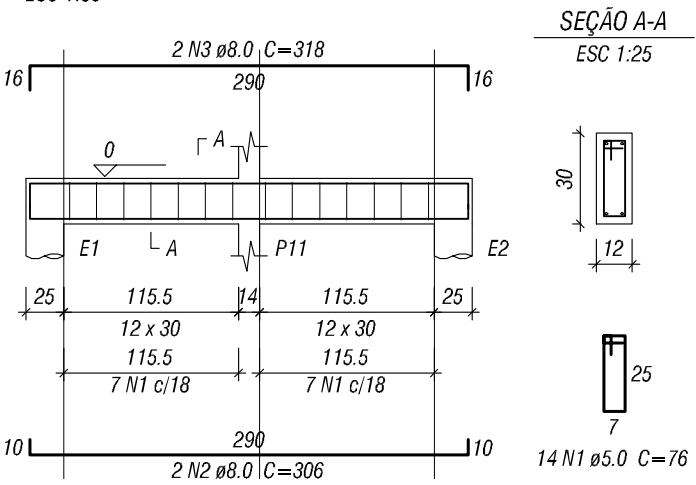
V109 (12 x 30)



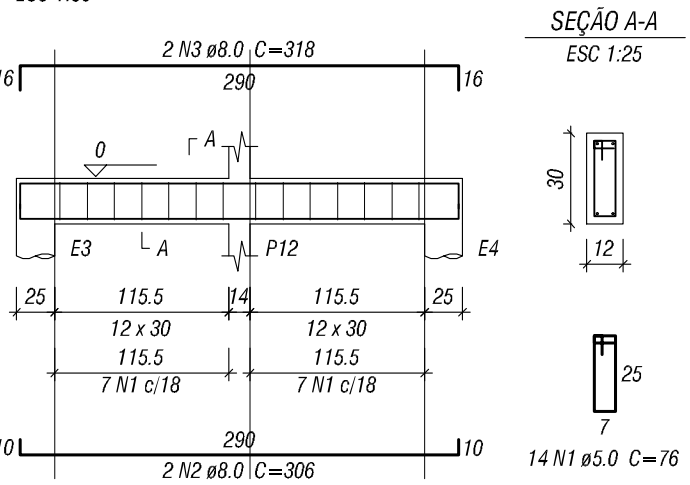
**Relação do aço**

ELEMENTO	AÇO	N	DIAM	O	UNIT (cm)	C.TOTAL (cm)
V101	C450	1	5.0	141	76	10176
	C450	2	6.3	2	104	200
	C450	3	8.0	4	824	3686
	C450	4	8.0	2	825	1850
	C450	5	8.0	2	1188	2386
	C450	6	8.0	2	1200	2400
	C450	7	8.0	2	449	888
	C450	8	5.0	14	76	104
V102	C450	2	8.0	2	306	612
	C450	3	8.0	2	318	636
	C450	1	5.0	14	76	104
V103	C450	2	8.0	2	306	612
	C450	3	8.0	2	318	636
	C450	1	5.0	14	76	104
V104	C450	2	8.0	2	306	612
	C450	3	8.0	2	318	636
	C450	1	5.0	14	76	104
V105	C450	1	5.0	17	76	1282
	C450	2	6.3	1	104	200
	C450	3	8.0	2	338	676
	C450	4	8.0	2	350	700
	C450	2	6.3	2	104	208
	C450	3	8.0	2	653	1306
	C450	4	8.0	2	665	1330
V106	C450	1	5.0	34	76	2584
	C450	2	6.3	2	104	208
	C450	3	8.0	2	653	1306
	C450	4	8.0	2	665	1330
	C450	5	8.0	2	1147	2296
	C450	6	8.0	2	1148	2296
	C450	7	8.0	2	474	948
	C450	8	5.0	2	1188	2386
	C450	9	8.0	2	1200	2400
	C450	10	8.0	2	350	700
	C450	11	5.0	9	76	684
	C450	12	5.0	9	76	684
	C450	13	8.0	2	234	468
	C450	14	8.0	2	234	468
	C450	15	5.0	106	76	10336
	C450	16	5.0	106	76	10336
	C450	17	5.0	106	76	10336
	C450	18	5.0	106	76	10336
	C450	19	5.0	106	76	10336
	C450	20	5.0	106	76	10336
	C450	21	5.0	106	76	10336
	C450	22	5.0	106	76	10336
	C450	23	5.0	106	76	10336
	C450	24	5.0	106	76	10336
	C450	25	5.0	106	76	10336
	C450	26	5.0	106	76	10336
	C450	27	5.0	106	76	10336
	C450	28	5.0	106	76	10336
	C450	29	5.0	106	76	10336
	C450	30	5.0	106	76	10336
	C450	31	5.0	106	76	10336
	C450	32	5.0	106	76	10336
	C450	33	5.0	106	76	10336
	C450	34	5.0	106	76	10336
	C450	35	5.0	106	76	10336
	C450	36	5.0	106	76	10336
	C450	37	5.0	106	76	10336
	C450	38	5.0	106	76	10336
	C450	39	5.0	106	76	10336
	C450	40	5.0	106	76	10336
	C450	41	5.0	106	76	10336
	C450	42	5.0	106	76	10336
	C450	43	5.0	106	76	10336
	C450	44	5.0	106	76	10336
	C450	45	5.0	106	76	10336
	C450	46	5.0	106	76	10336
	C450	47	5.0	106	76	10336
	C450	48	5.0	106	76	10336
	C450	49	5.0	106	76	10336
	C450	50	5.0	106	76	10336
	C450	51	5.0	106	76	10336
	C450	52	5.0	106	76	10336
	C450	53	5.0	106	76	10336
	C450	54	5.0	106	76	10336
	C450	55	5.0	106	76	10336
	C450	56	5.0	106	76	10336
	C450	57	5.0	106	76	10336
	C450	58	5.0	106	76	10336
	C450	59	5.0	106	76	10336
	C450	60	5.0	106	76	10336
	C450	61	5.0	106	76	10336
	C450	62	5.0	106	76	10336
	C450	63	5.0	106	76	10336
	C450	64	5.0	106	76	10336
	C450	65	5.0	106	76	10336
	C450	66	5.0	106	76	10336
	C450	67	5.0	106	76	10336
	C450	68	5.0	106	76	10336
	C450	69	5.0	106	76	10336
	C450	70	5.0	106	76	10336
	C450	71	5.0	106	76	10336
	C450	72	5.0	106	76	10336
	C450	73	5.0	106	76	10336
	C450	74	5.0	106	76	10336
	C450	75	5.0	106	76	10336
	C450	76	5.0	106	76	10336
	C450	77	5.0	106	76	10336
	C450	78	5.0	106	76	10336
	C450	79	5.0	106	76	10336
	C450	80	5.0	106	76	10336
	C450	81	5.0	106	76	10336
	C450	82	5.0	106	76	10336
	C450	83	5.0	106	76	10336
	C450	84	5.0	106	76	10336
	C450	85	5.0	106	76	10336
	C450	86	5.0	106	76	10336
	C450	87	5.0	106	76	10336
	C450	88	5.0	106	76	10336
	C450	89	5.0	106	76	10336
	C450	90	5.0	106	76	10336
	C450	91	5.0	106	76	10336
	C450	92	5.0	106	76	10336
	C450	93	5.0	106	76	10336
	C450	94	5.0	106	76	10336
	C450	95	5.0	106	76	10336
	C450	96	5.0	106	76	10336
	C450	97	5.0	106	76	10336
	C450	98	5.0	106	76	10336
	C450	99	5.0	106	76	10336
	C450	100	5.0	106	76	10336

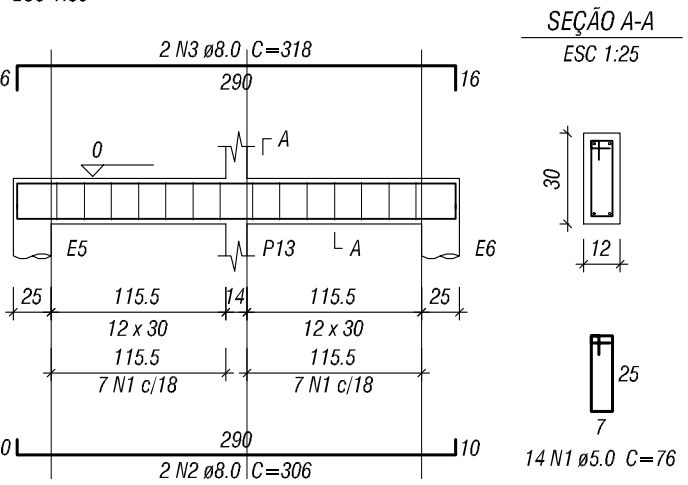
V102 (12 x 30)



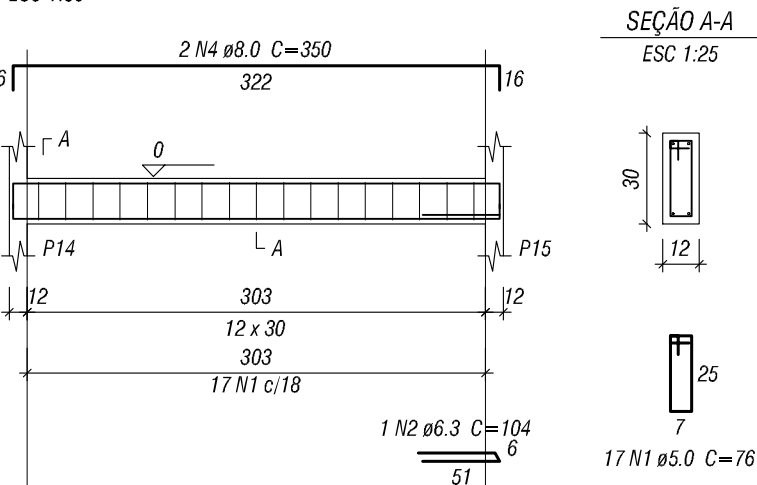
V103 (12 x 30)



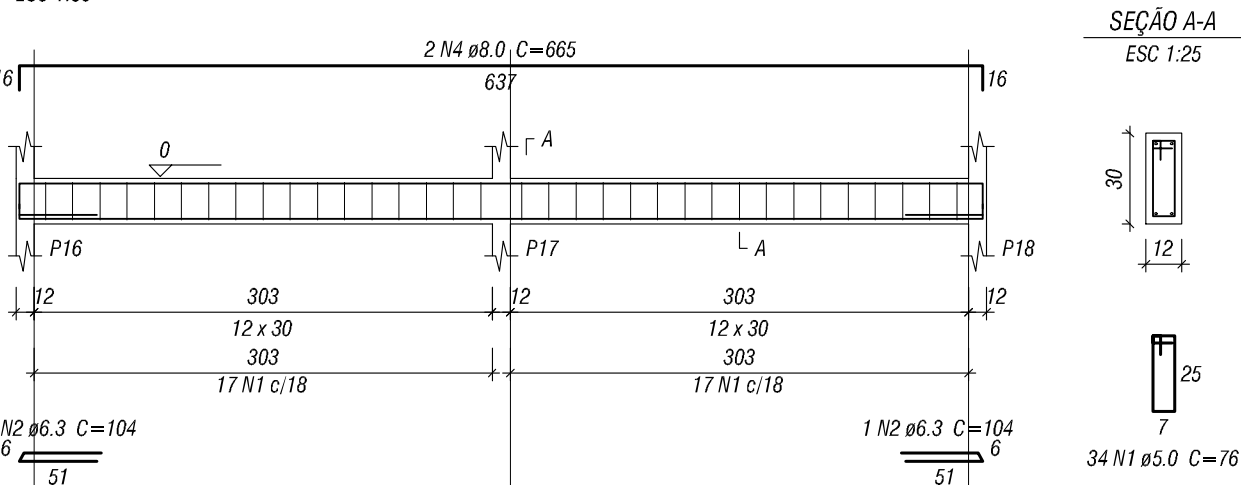
V104 (12 x 30)



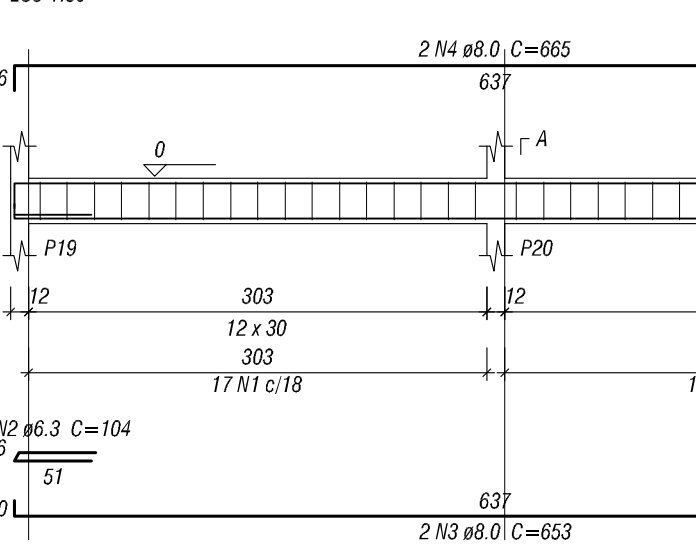
V105 (12 x 30)



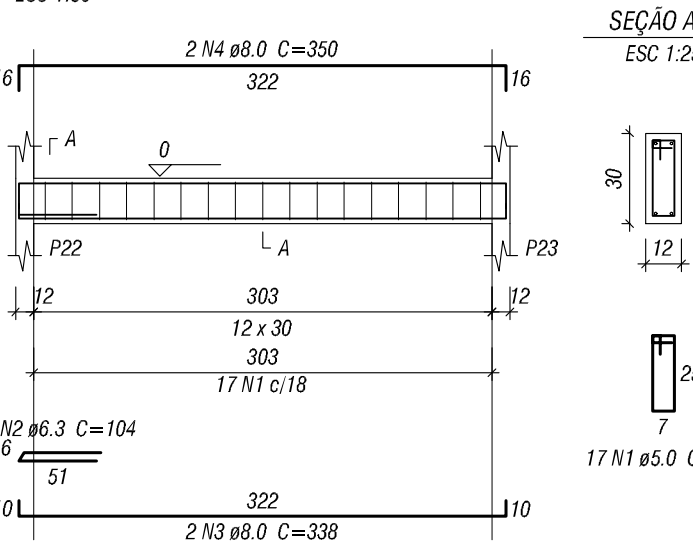
V106 (12 x 30)



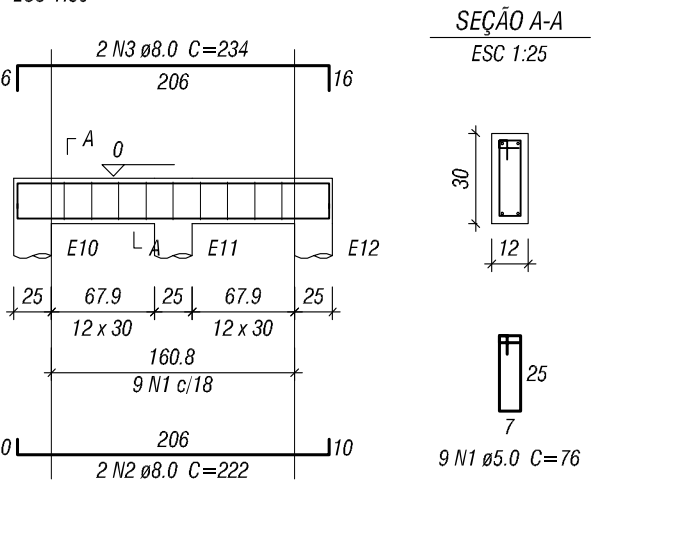
V107 (12 x 30)



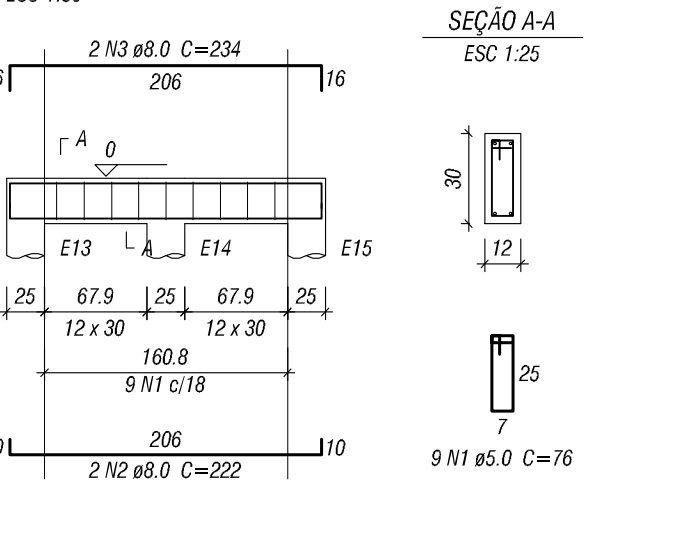
V108 (12 x 30)



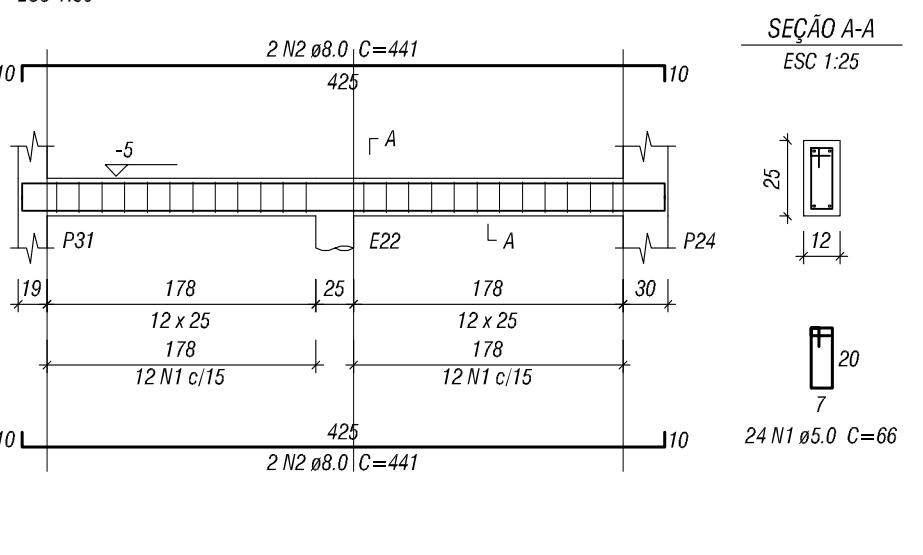
V110 (12 x 30)



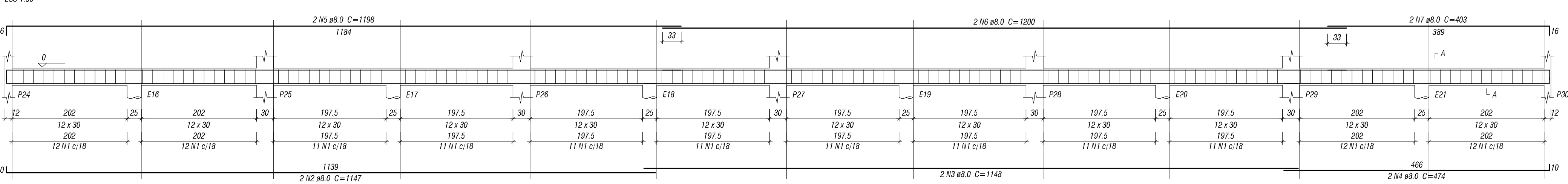
V111 (12 x 30)



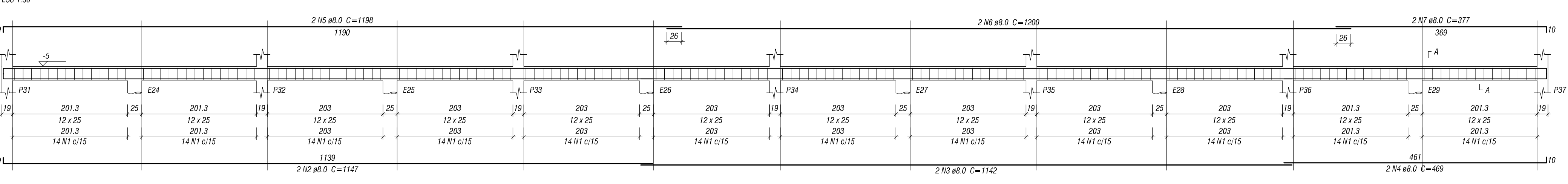
V114 (12 x 25)



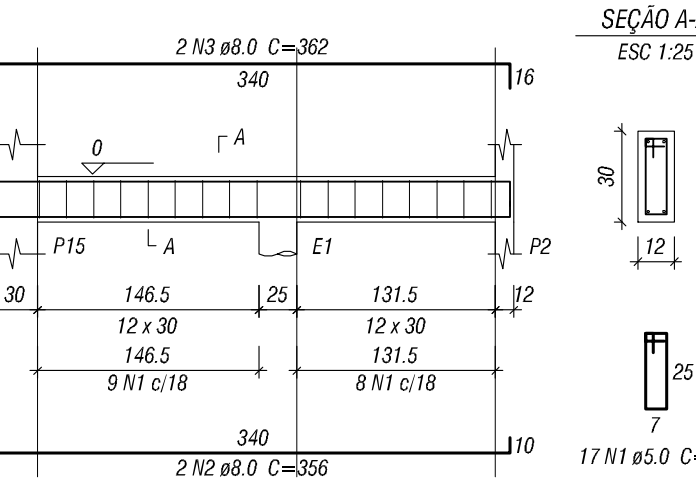
V112 (12 x 30)



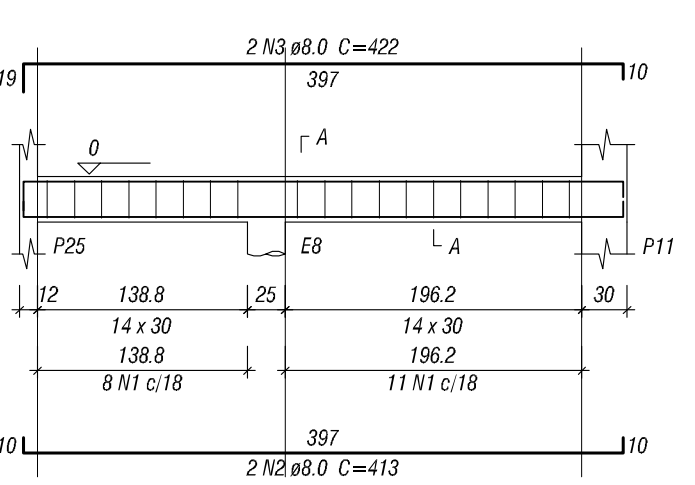
V113 (12 x 25)



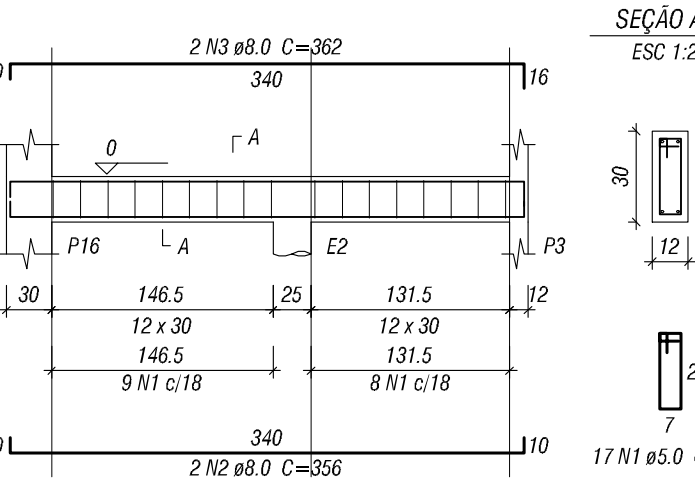
V116 (12 x 30)



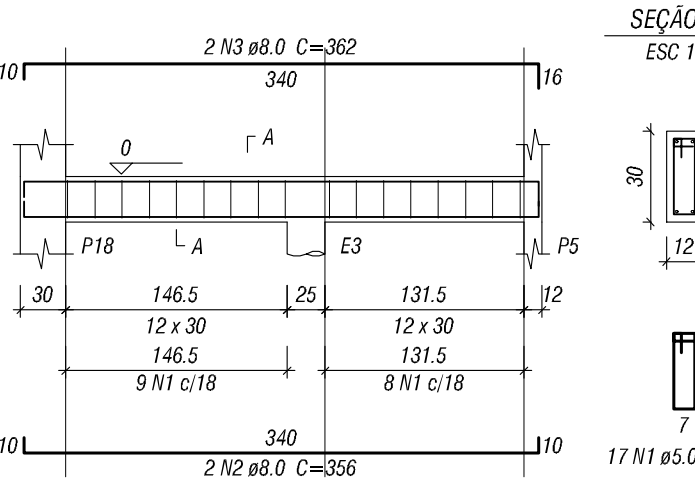
V117 (14 x 30)



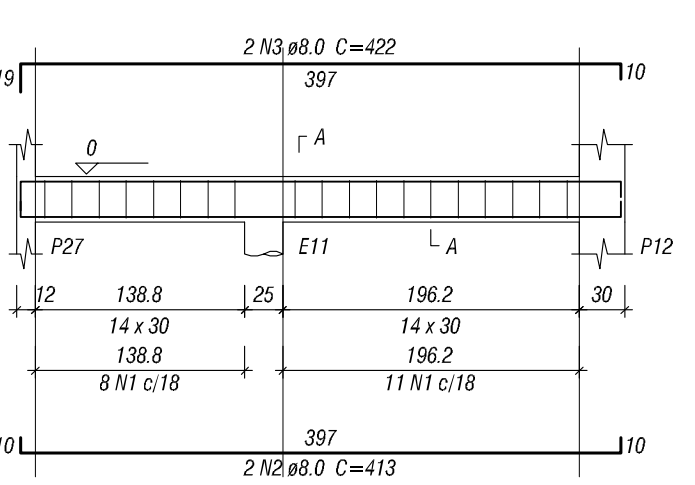
V118 (12 x 30)



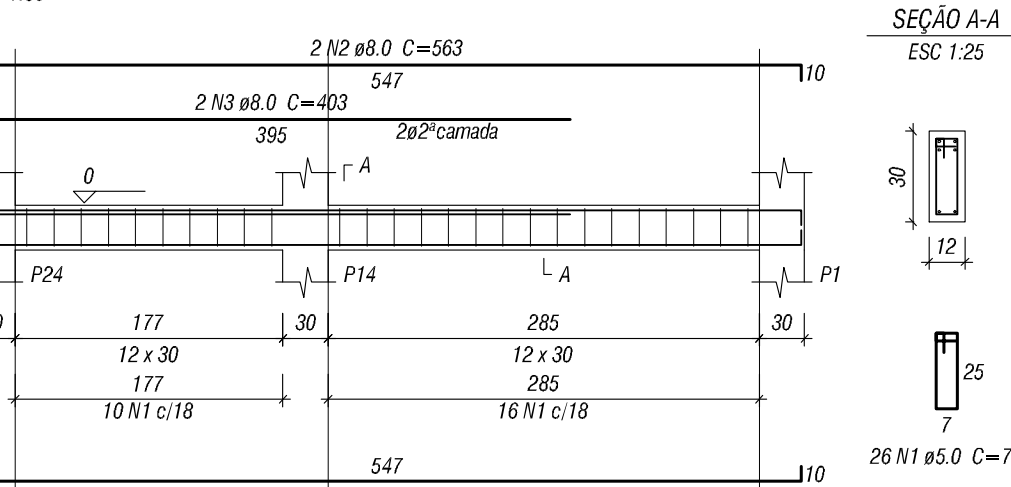
V120 (12 x 30)



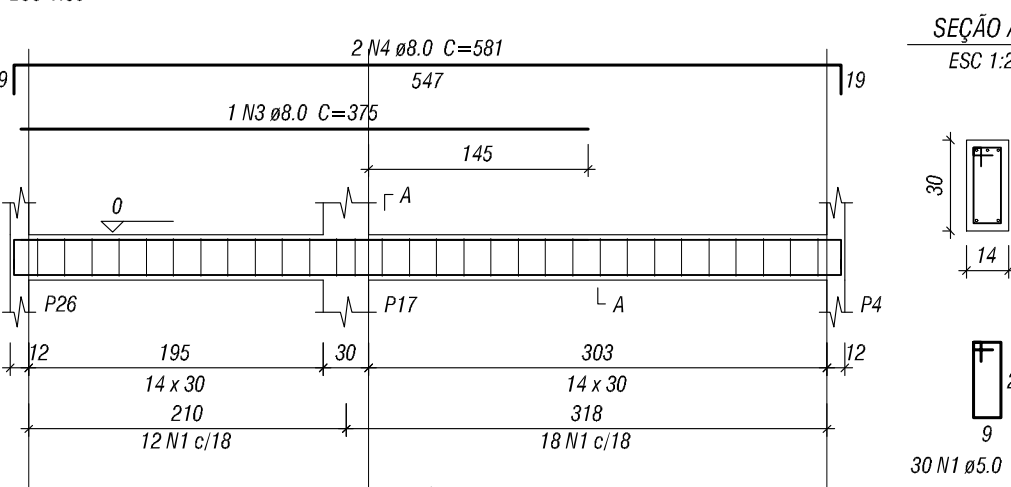
V121 (14 x 30)



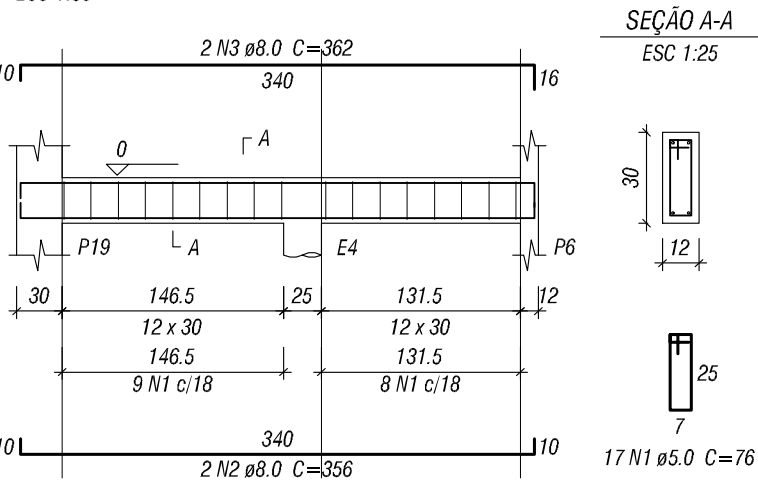
V115 (12 x 30)



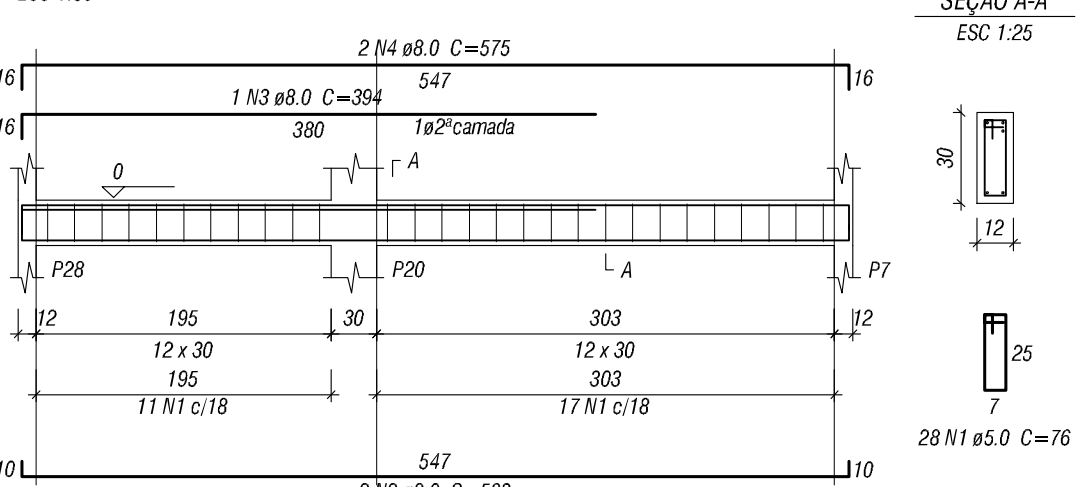
V119 (14 x 30)



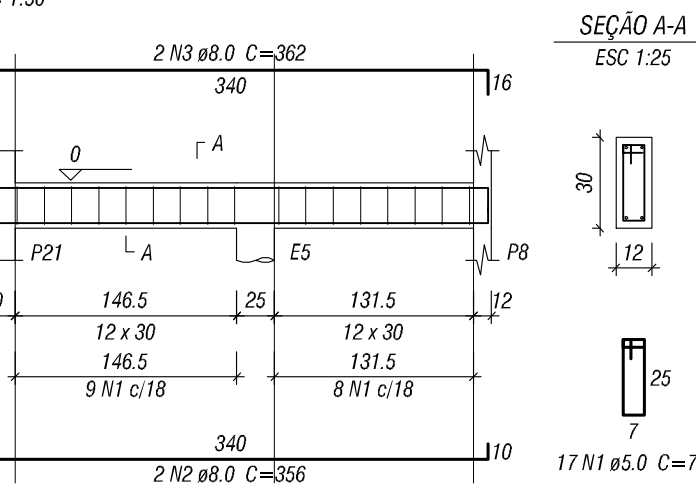
V122 (12 x 30)



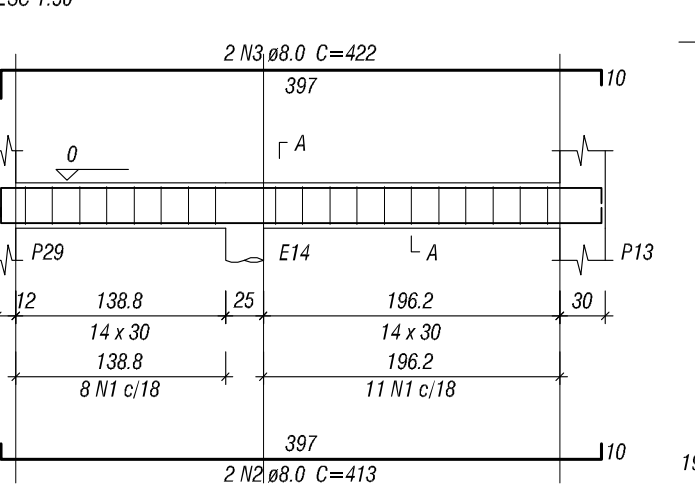
V123 (12 x 30)



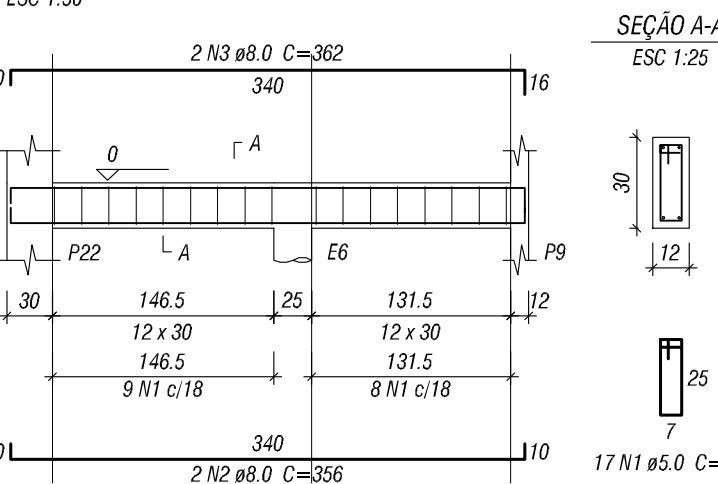
V124 (12 x 30)



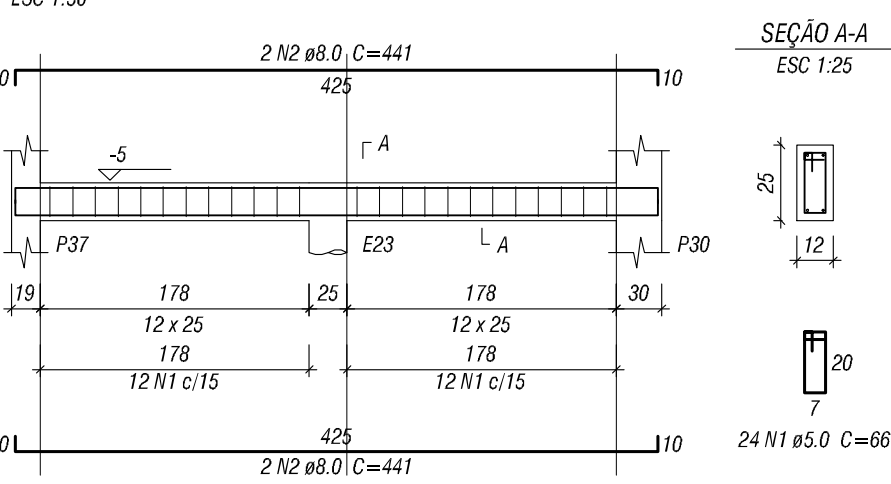
V125 (14 x 30)



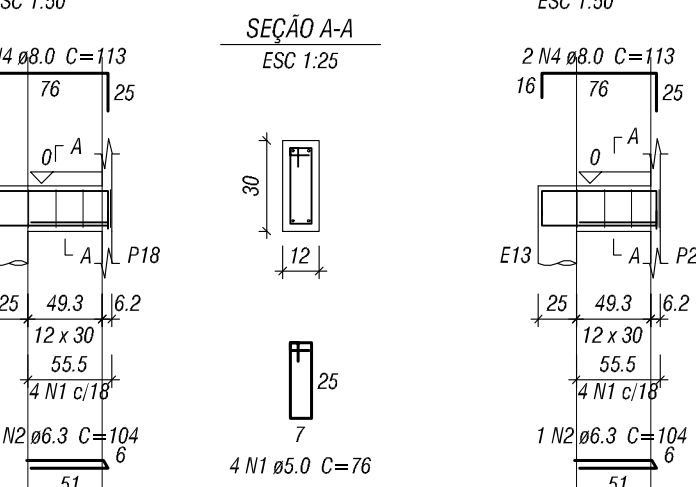
V126 (12 x 30)



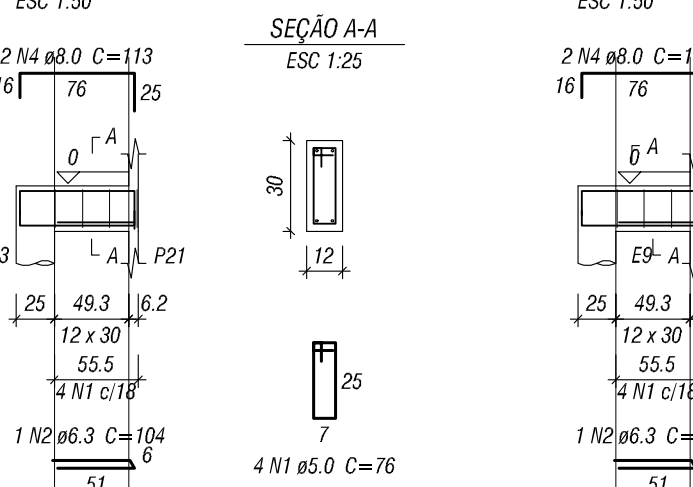
V127 (12 x 25)



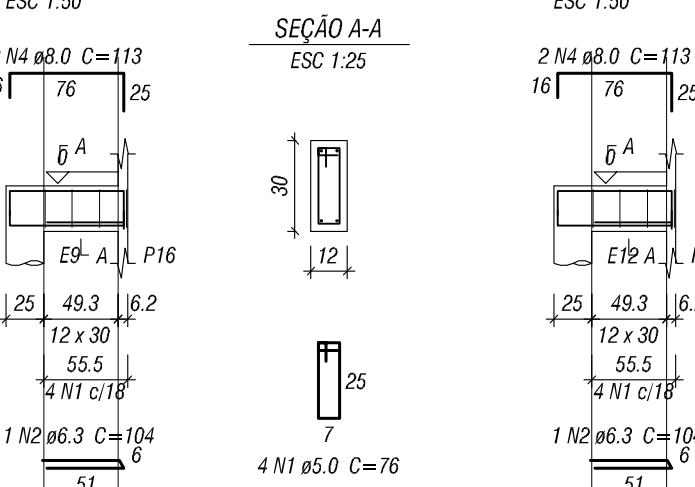
V130 (12 x 30)



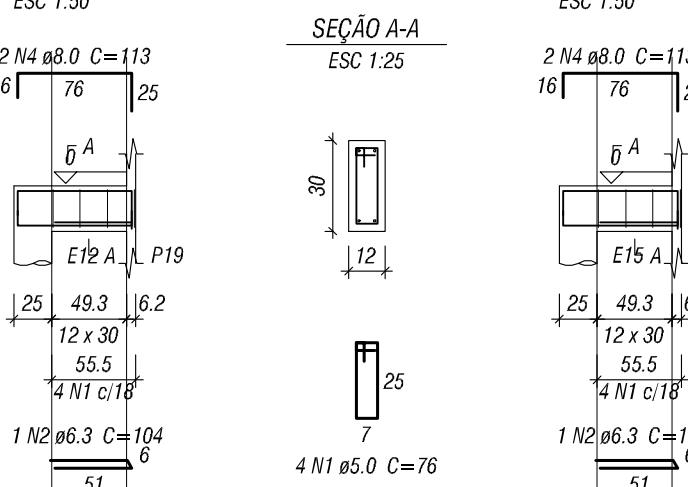
V131 (12 x 30)



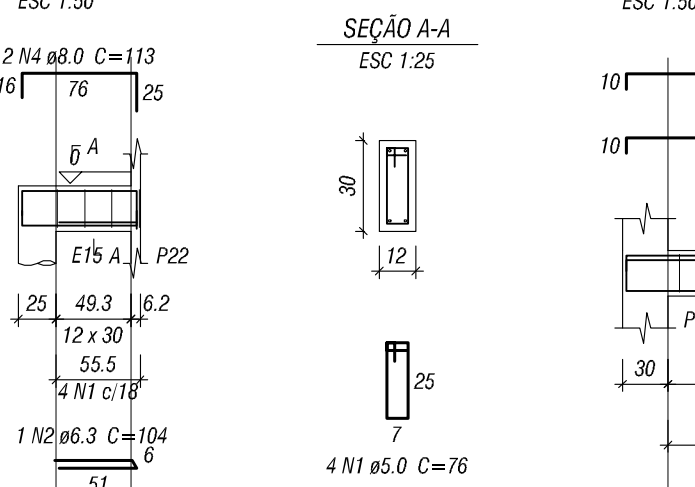
V132 (12 x 30)



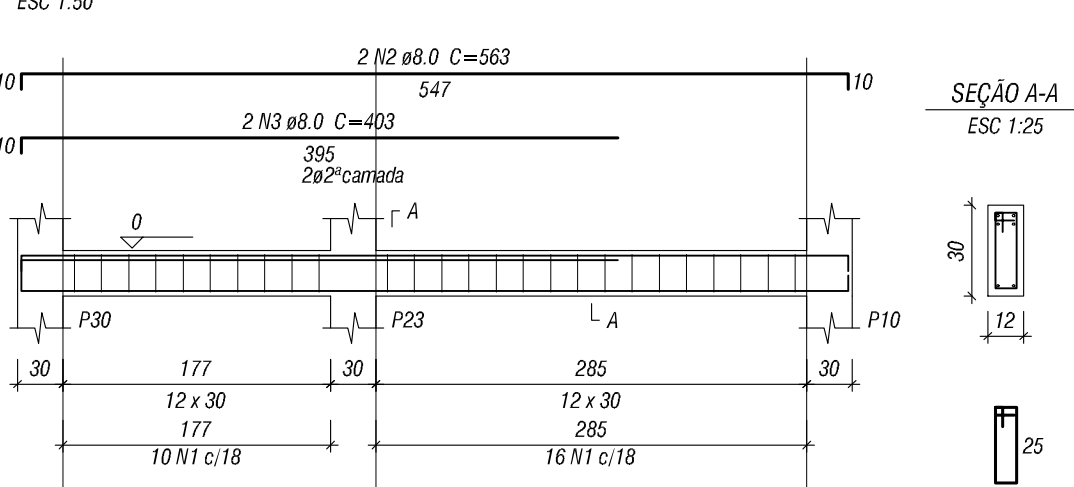
V133 (12 x 30)



V134 (12 x 30)



V128 (12 x 30)



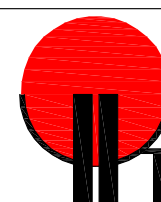
Resumo do aço

AÇO	DIAM	C.TOTAL	PESO
C450	6.3	12.6	2.3
C450	8.0	790.2	311.8
C450	5.0	709.2	109.3
PESO TOTAL			
C450	315.1		
C450	108.3		

Vol. de concreto total (C=25) = 6.32 m³

Área de forma total = 120.39 m²

CONTROLE DAS REVISÕES:	REVISÃO	DATA	DESCRIÇÃO



**ENGENHARIA**

Engenharia de Estruturas e Engenharia de Segurança do Trabalho

Excelência em projetos estruturais de concreto armado, concreto protendido, concreto pré-moldado, estruturas metálicas e alvenaria estrutural

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Fone/Fax: (44) 3026-8993 - e-mail: jk@ykengeharia.com.br - Visite nosso site! http://www.ykengeharia.com.br

ESTRUTURAL EM CONCRETO ARMADO			
CLIENTE:			
UENP - UNIVERS. EST. DO NORTE DO PARANÁ			
OBRA:			
PARA CONSTRUÇÃO DE UMA EDIFICAÇÃO DE ENSINO - CASA DO VISITANTE INTERNACIONAL			
LOCAL:			
Alameda Padre Magno, nº 841 - Nova Jacareizinho - Jacareizinho - Paraná			
REFERÊNCIA(S):		REVISÃO:	FRANCHA:
DETALHES DAS VIGAS DO TERREO (BALDRAME)		R-00	07
RESPONSÁVEL TÉCNICO:		DATA CRIAÇÃO:	09
		20/11/2013	
Engº Esp. Yutaka Mario Kobayashi Junior CREA PR-89.749/D		ART Nº:	PROJETO Nº:
		20134714220	P-304
			ESCALAS:
			INDICADAS