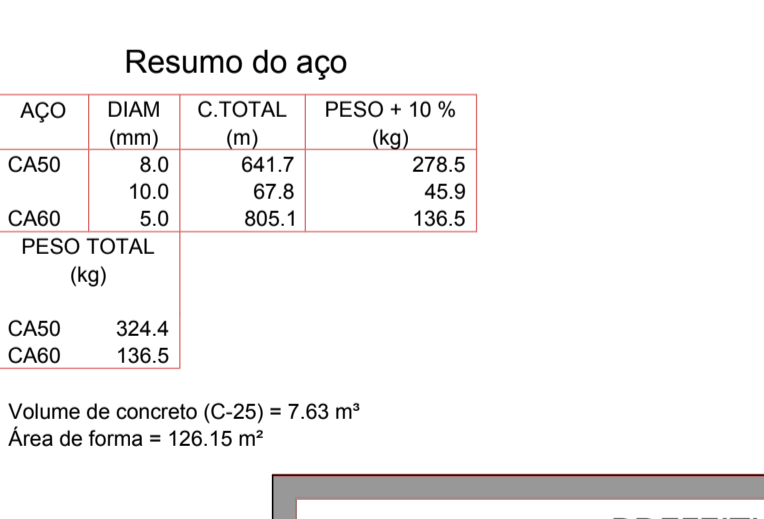
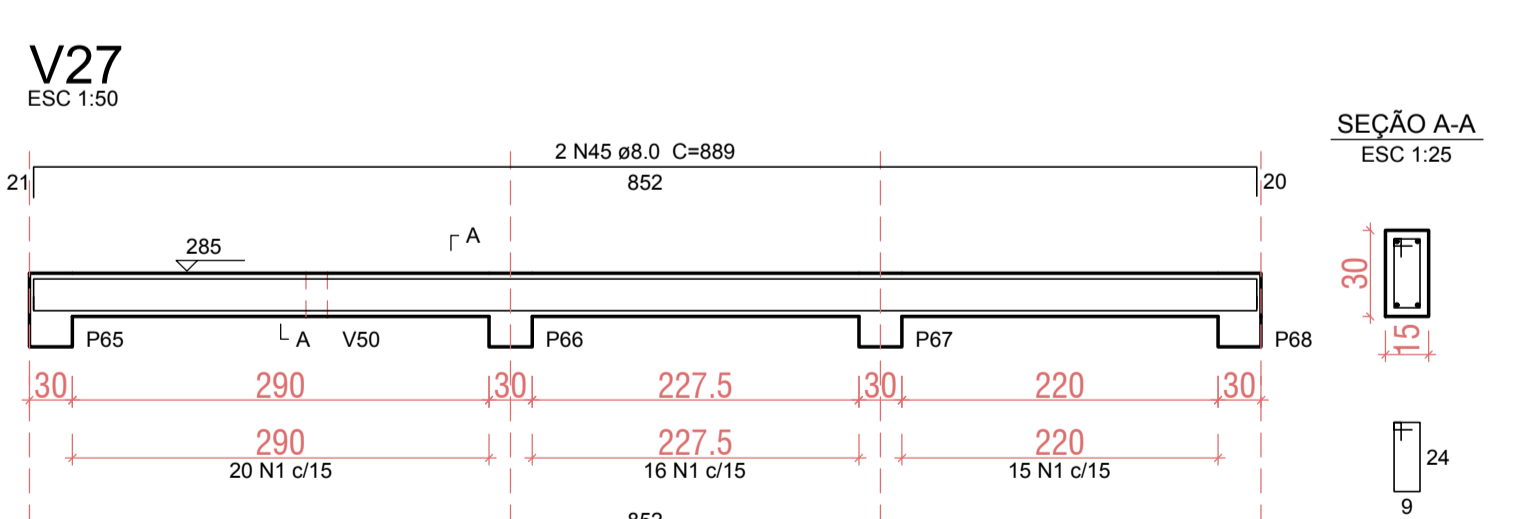
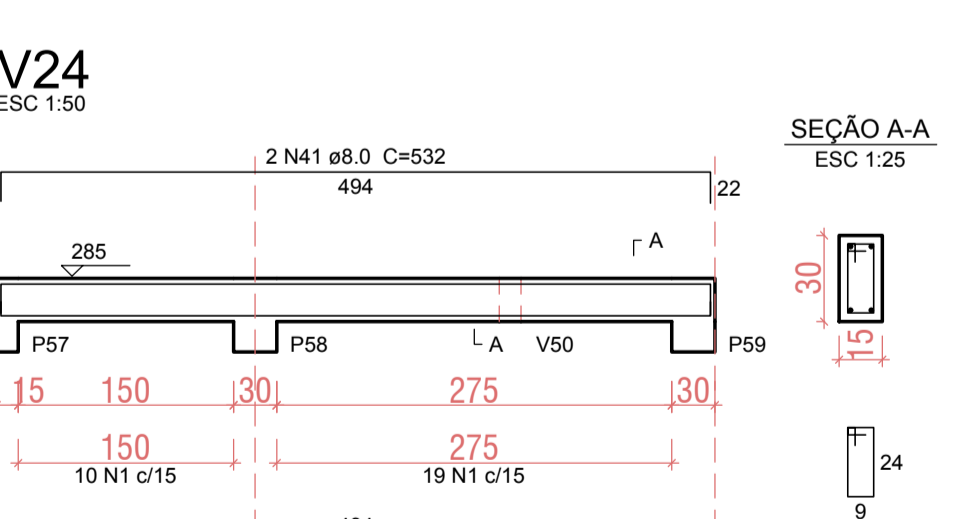
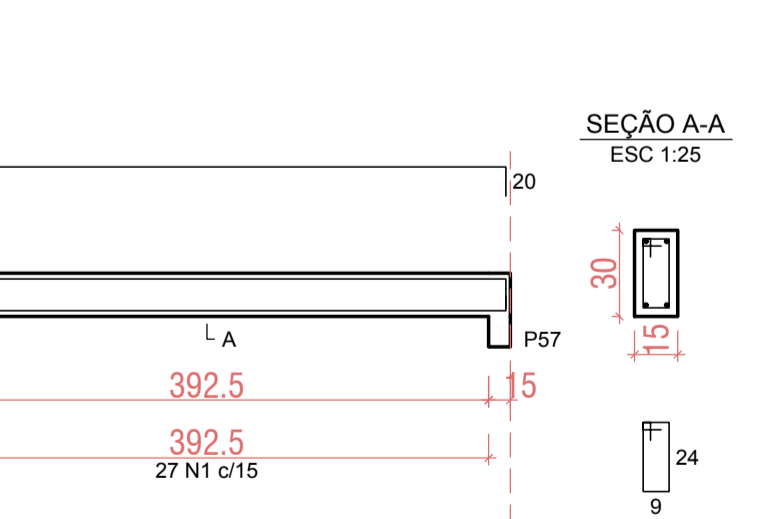
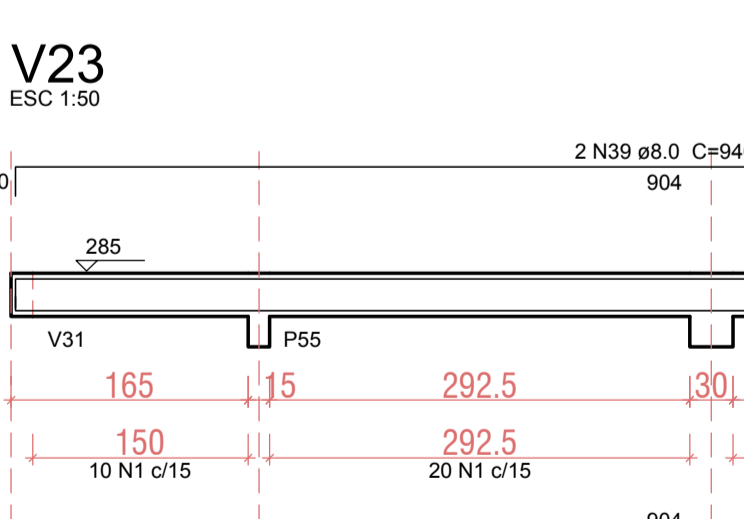
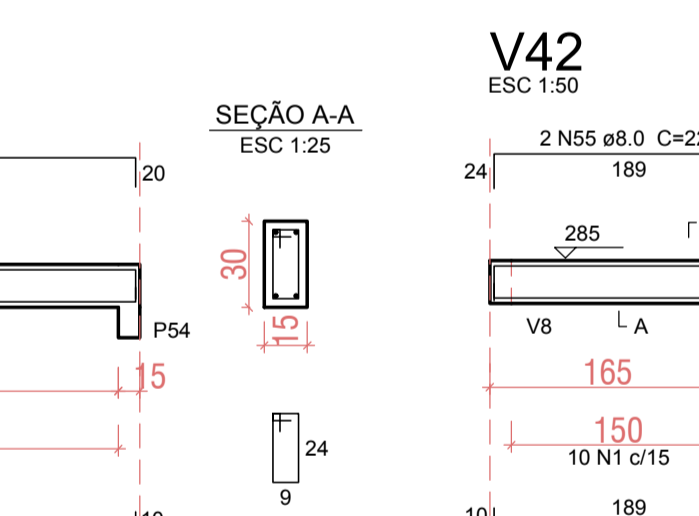
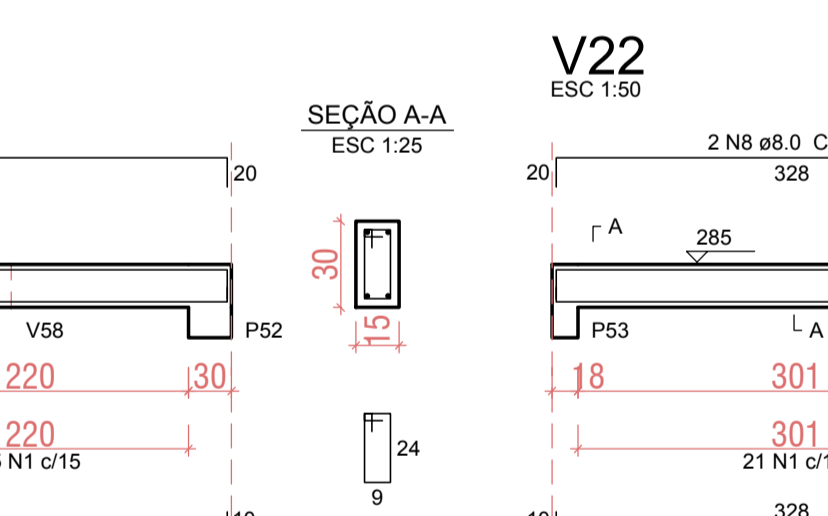
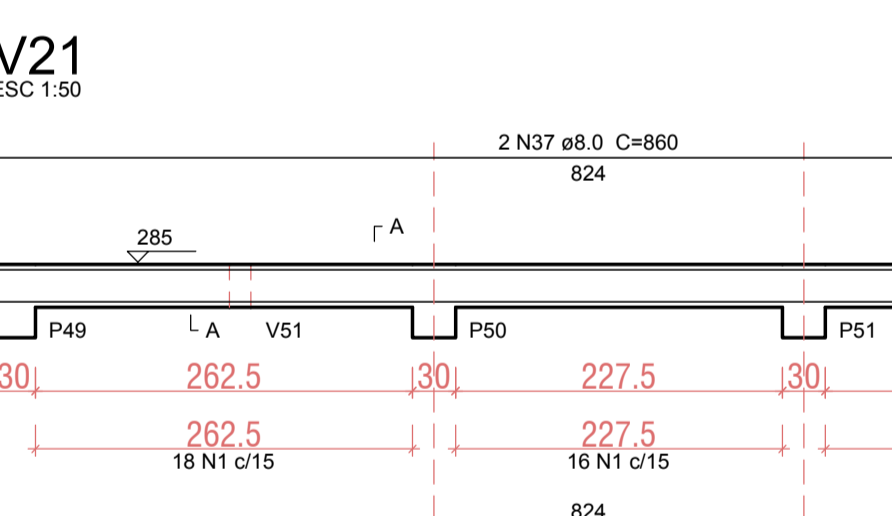
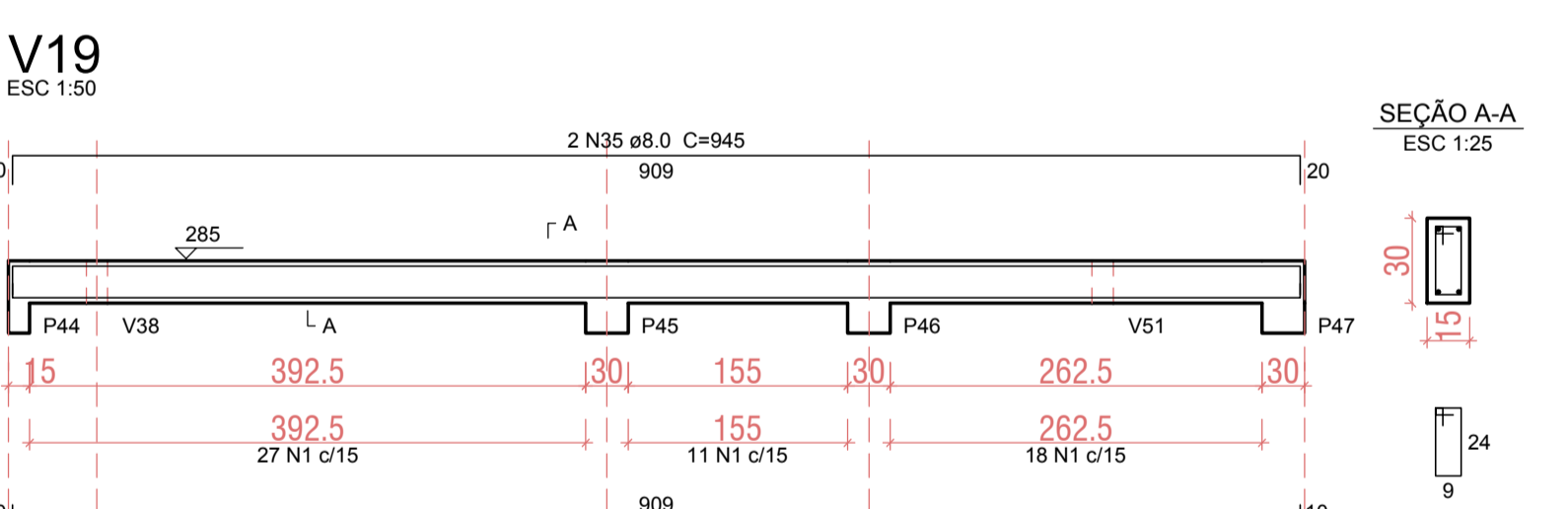
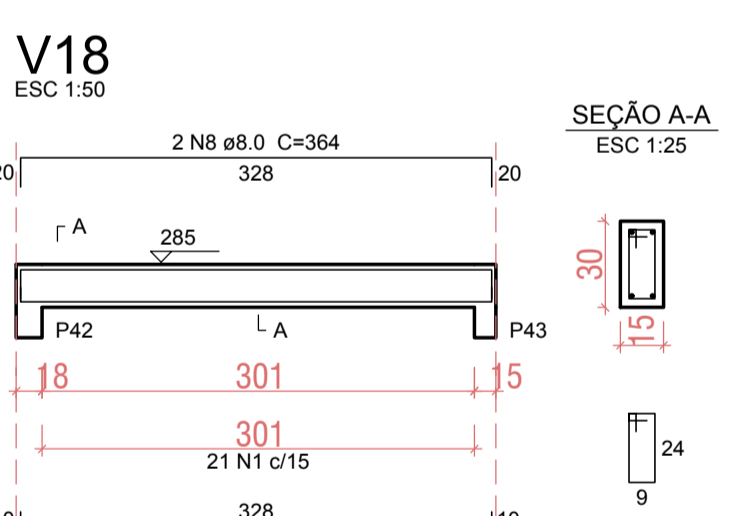
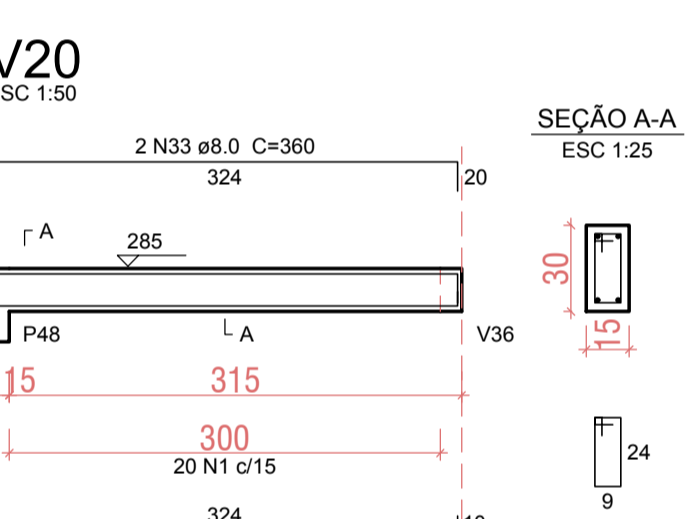
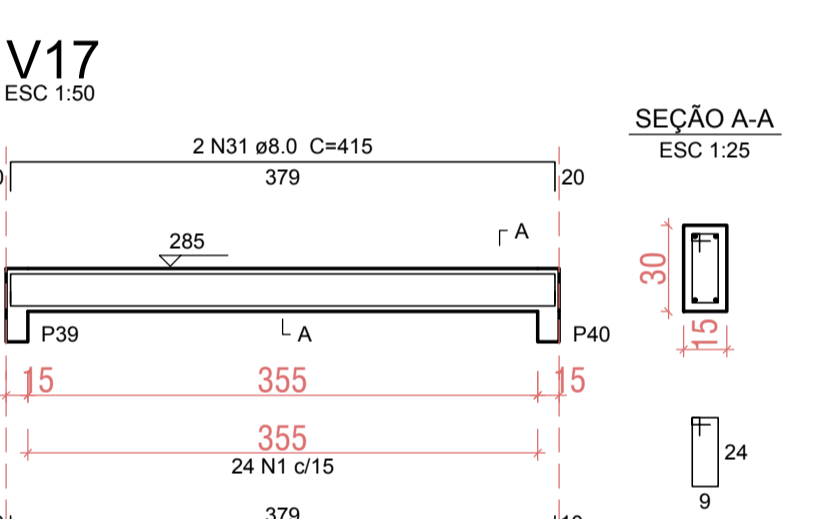
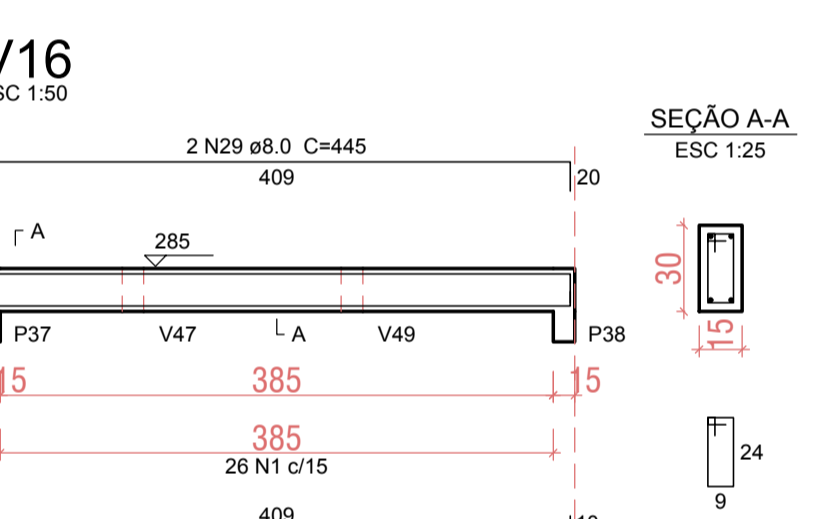
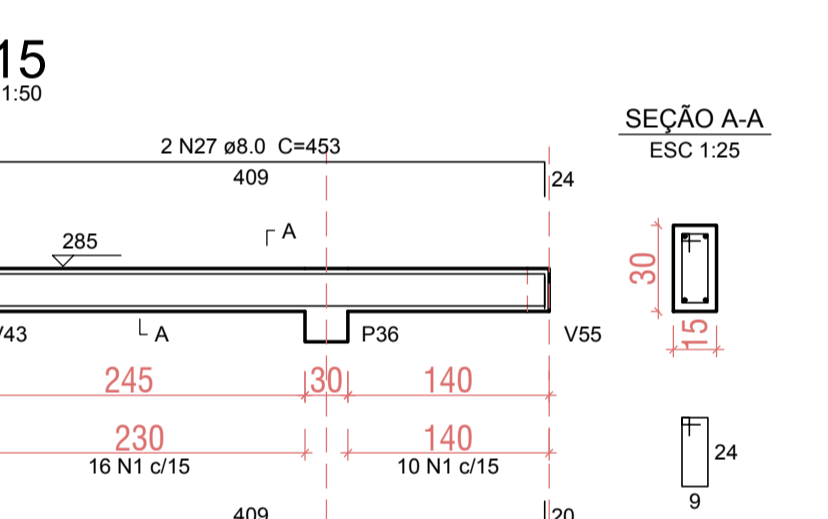
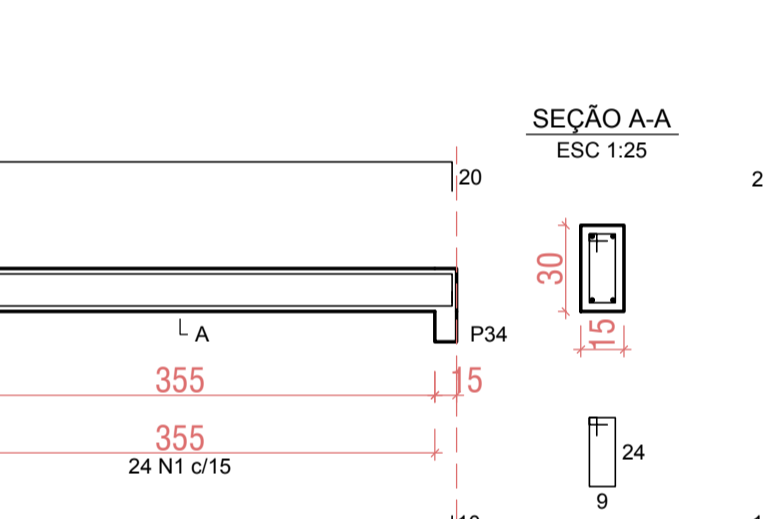
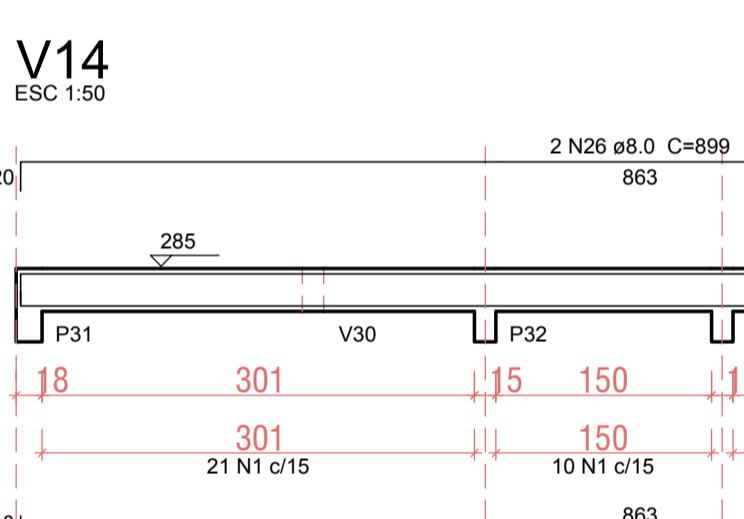
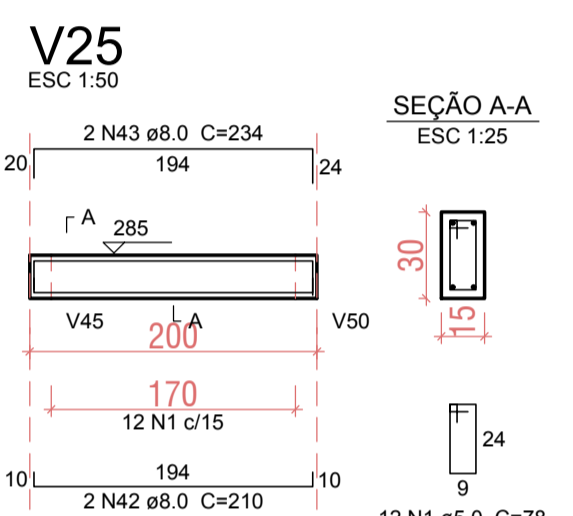
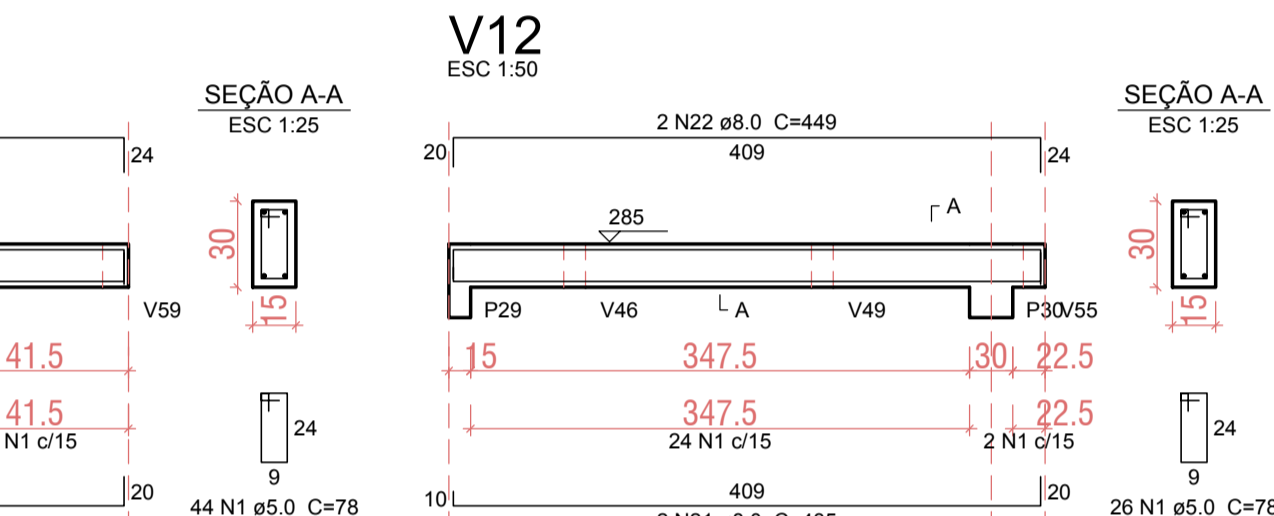
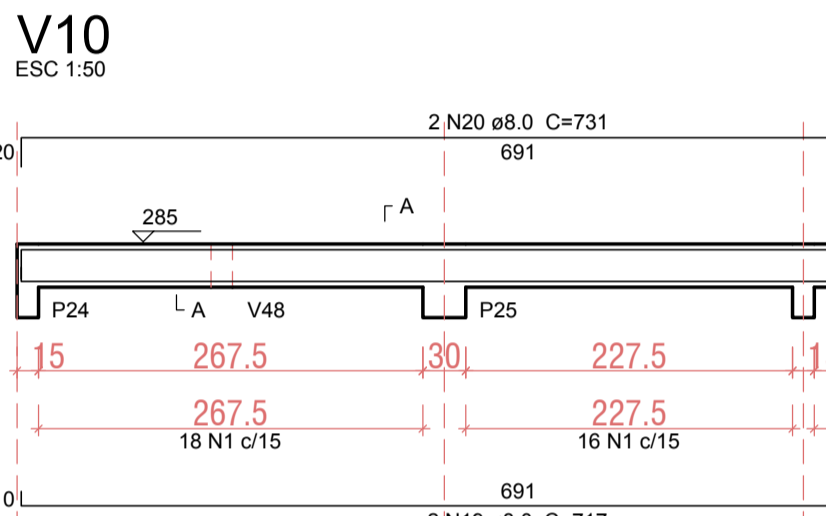
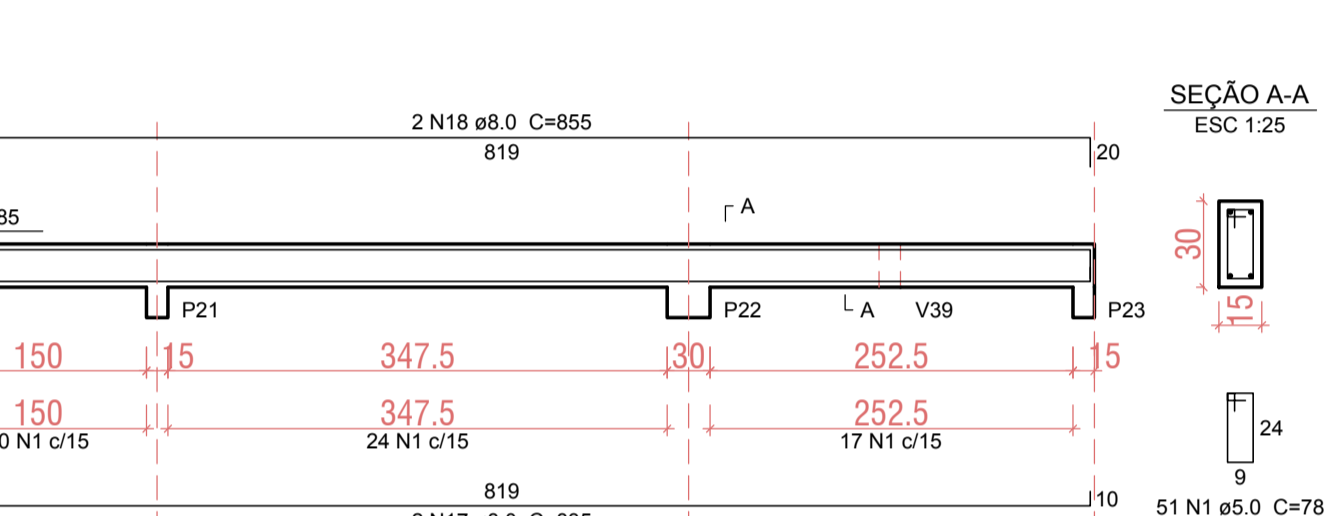
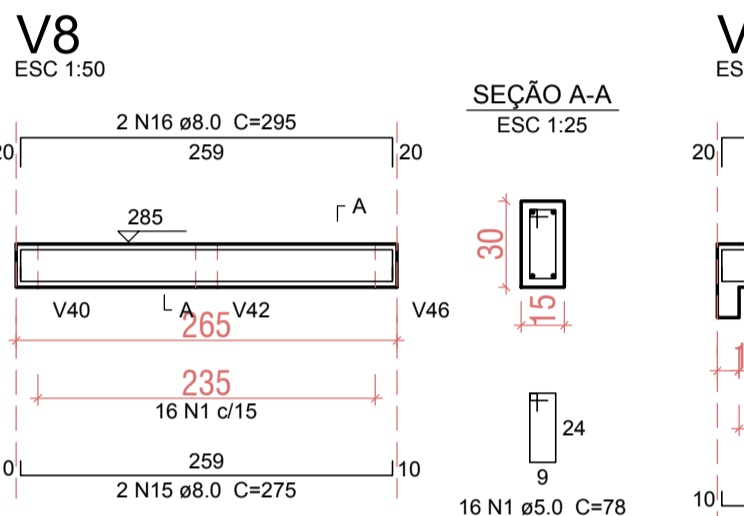
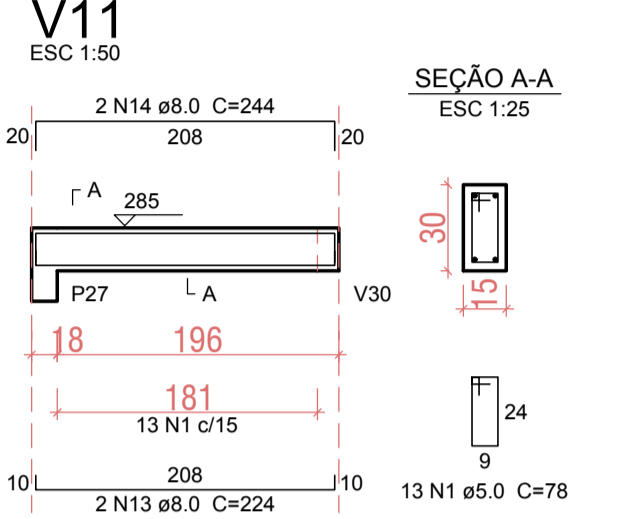
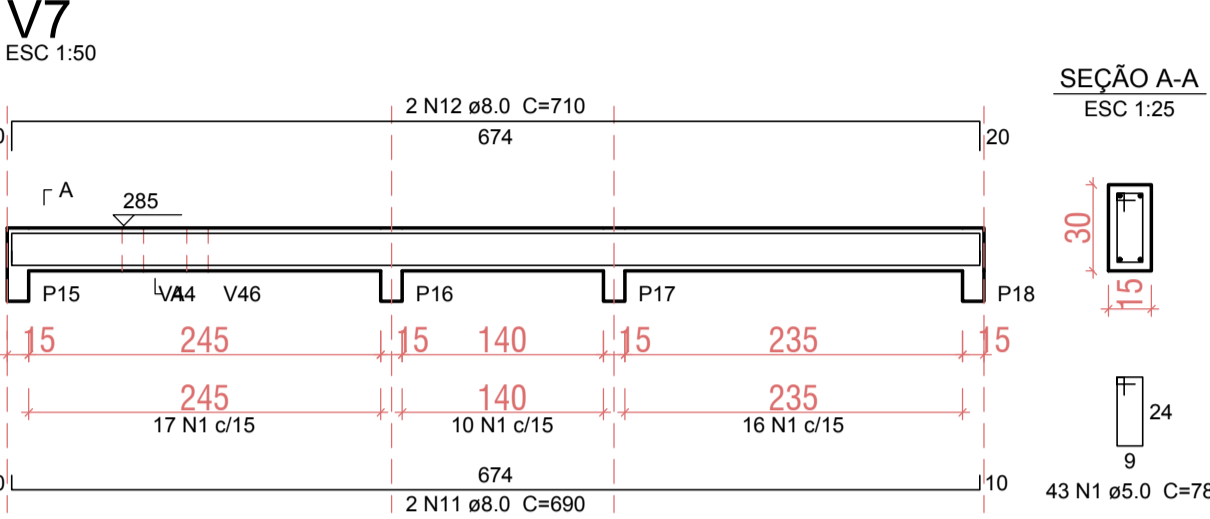
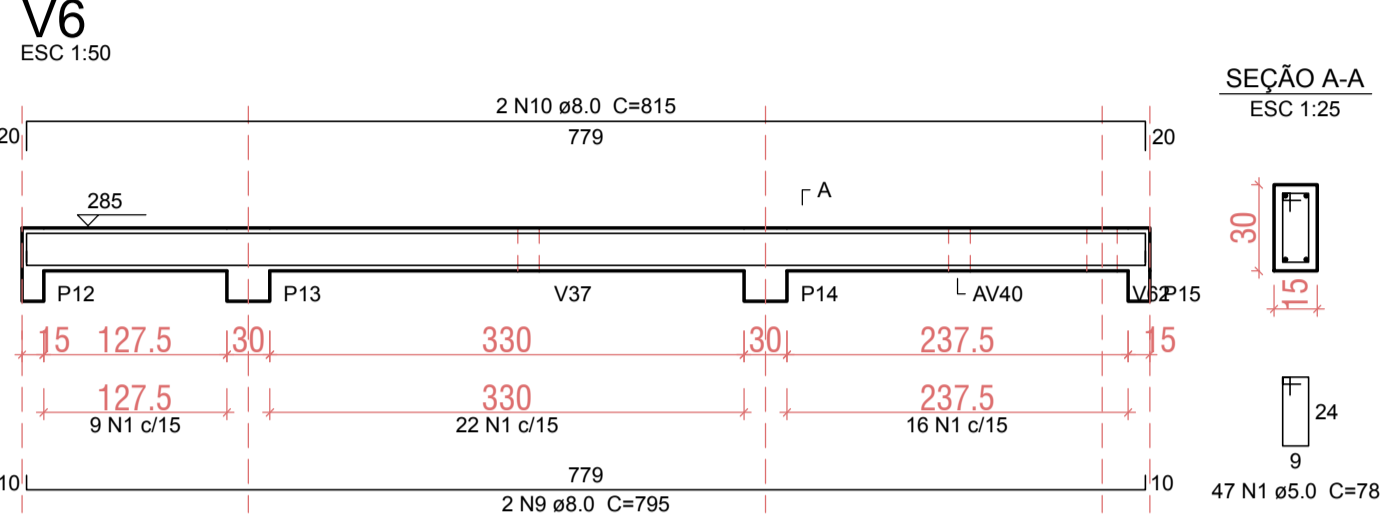
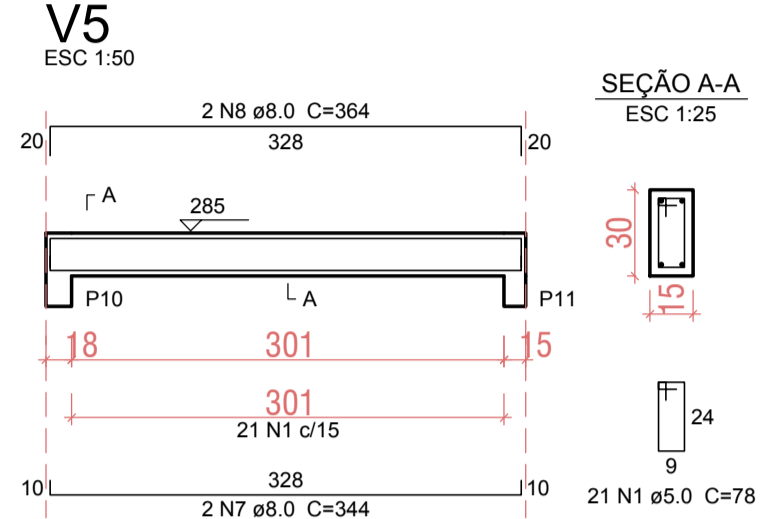
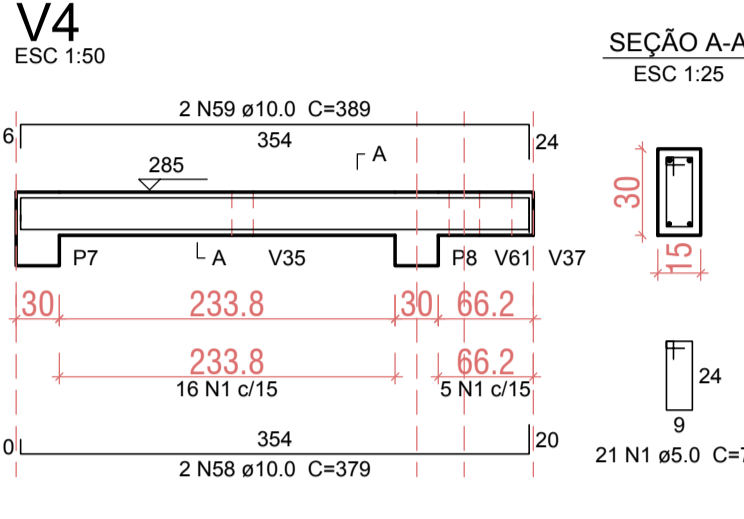


Relação do aço

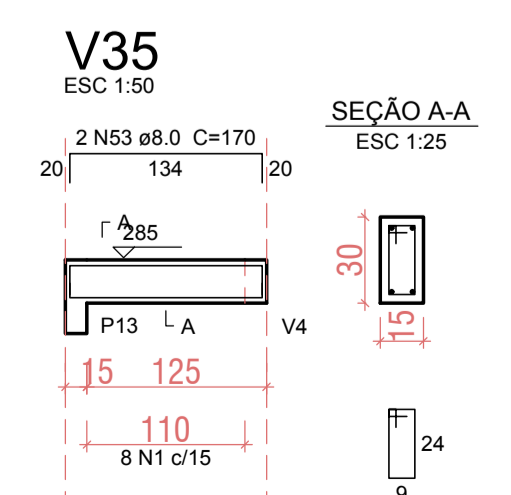
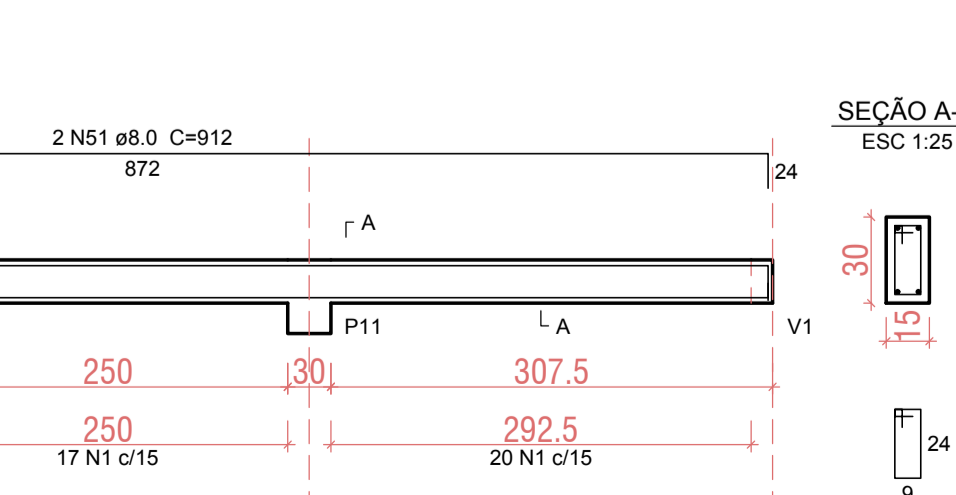
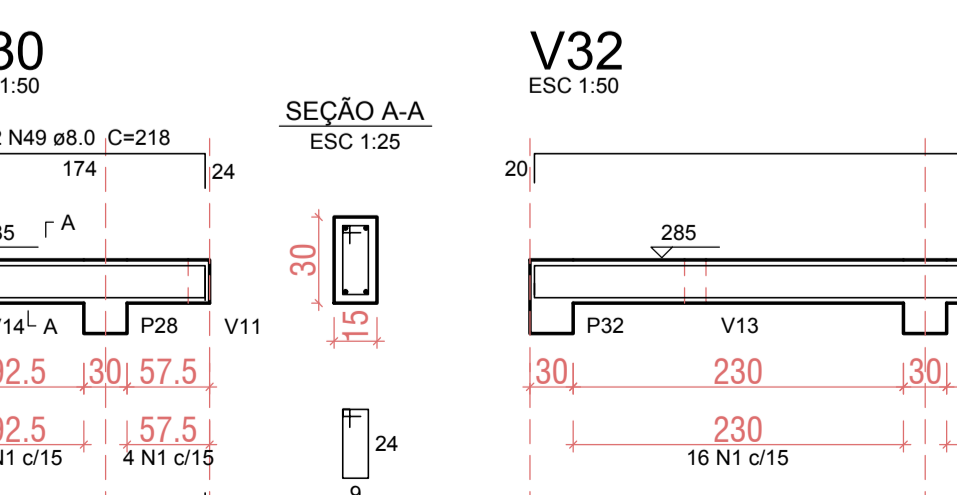
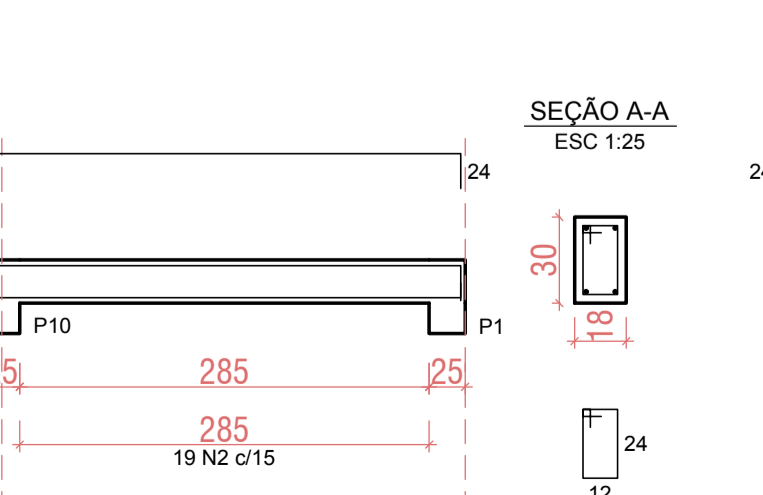
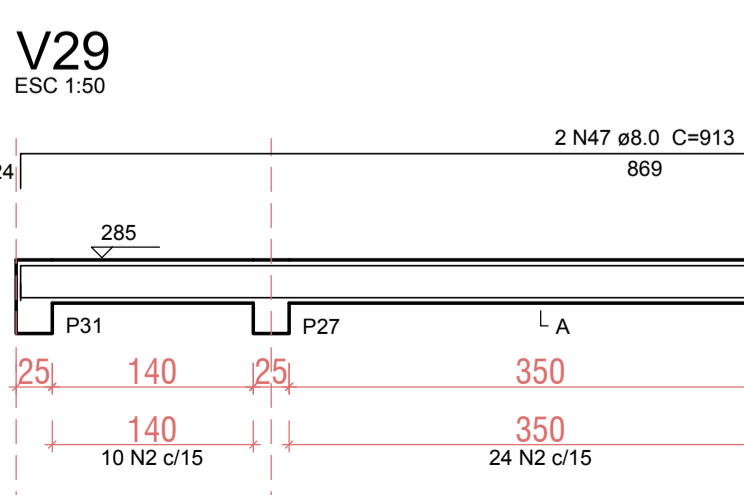
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	975	78	76050
CA50	2	5.0	53	84	4452
	3	8.0	2	1100	2200
	4	8.0	2	1123	2246
	5	8.0	2	416	832
	6	8.0	2	436	872
	7	8.0	6	344	2064
	8	8.0	6	364	2184
	9	8.0	2	795	1590
	10	8.0	2	815	1630
	11	8.0	2	690	1380
	12	8.0	2	710	1420
	13	8.0	2	224	448
	14	8.0	2	244	488
	15	8.0	2	275	550
	16	8.0	2	295	590
	17	8.0	2	835	1670
	18	8.0	2	855	1710
	19	8.0	2	717	1434
	20	8.0	2	731	1462
	21	8.0	4	435	1740
	22	8.0	2	449	898
	23	8.0	2	145	290
	24	8.0	2	169	338
	25	8.0	2	879	1758
	26	8.0	2	899	1798
	27	8.0	2	453	906
	28	8.0	2	425	850
	29	8.0	2	445	890
	30	8.0	2	395	790
	31	8.0	2	415	830
	32	8.0	2	340	680
	33	8.0	2	360	720
	34	8.0	2	925	1850
	35	8.0	2	945	1890
	36	8.0	2	840	1680
	37	8.0	2	860	1720
	38	8.0	2	920	1840
	39	8.0	2	940	1880
	40	8.0	2	510	1020
	41	8.0	2	532	1064
	42	8.0	2	210	420
	43	8.0	2	234	468
	44	8.0	2	868	1736
	45	8.0	2	889	1778
	46	8.0	2	885	1770
	47	8.0	2	913	1826
	48	8.0	2	210	420
	49	8.0	2	218	436
	50	8.0	2	868	1736
	51	8.0	2	912	1824
	52	8.0	2	150	300
	53	8.0	2	170	340
	54	8.0	2	205	410
	55	8.0	2	229	458
	56	10.0	2	1026	2052
	57	10.0	3	1061	3183
	58	10.0	2	379	758
	59	10.0	2	389	778



Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	641.7	278.5
CA60	10.0	67.8	45.9
CA80	5.0	805.1	136.5
PESO TOTAL (kg)			
CA50		324.4	
CA60		136.5	

Volume de concreto (C-25) = 7.63 m³
Área de forma = 126.15 m²



PREFEITURA MUNICIPAL DE PARANAGUÁ

TÍTULO: PROJETO ESTRUTURAL

LÍBRERA: U.B.S. PRAIA DE ENCANTADAS - ILHA DO MEL

CONTEÚDO: VIGAS DE COBERTURA 1

RESP. TÉCNICO PROJETO: RUY JOSÉ RIBEIRO (CREA: 18.898-D)

PROPRIETÁRIO: MUNICÍPIO DE PARANAGUÁ

DATA: JULHO 2017

ESCALA: INDICADA

FUNDO: R/R

ÁREA CONSTRUIDA: 405,95 m²

PROJETO: 08/11