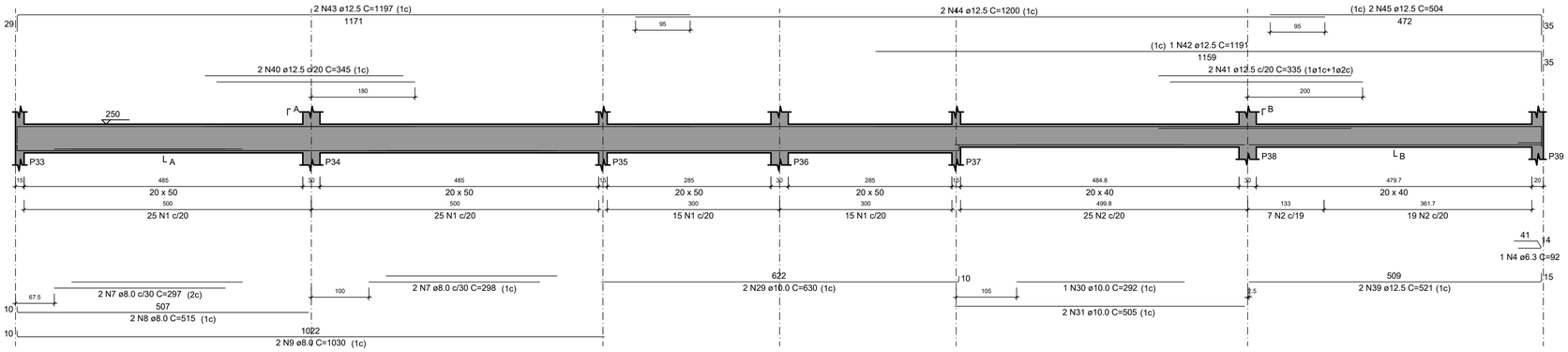
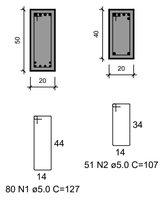
V11
ESC 1:50

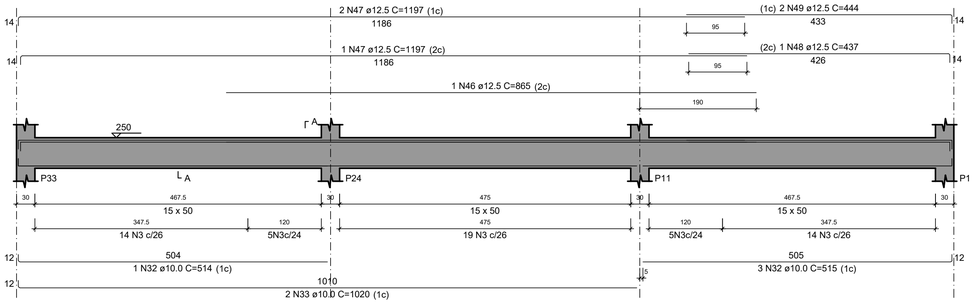


SEÇÃO A-A
ESC 1:25

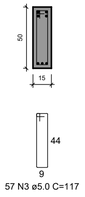


SEÇÃO B-B
ESC 1:25

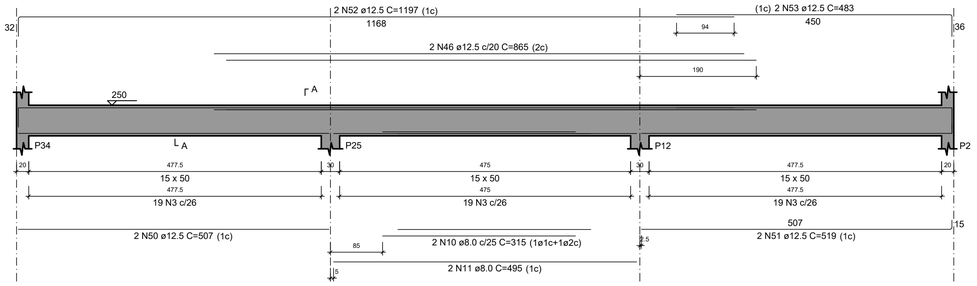
V12
ESC 1:50



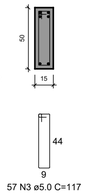
SEÇÃO A-A
ESC 1:25



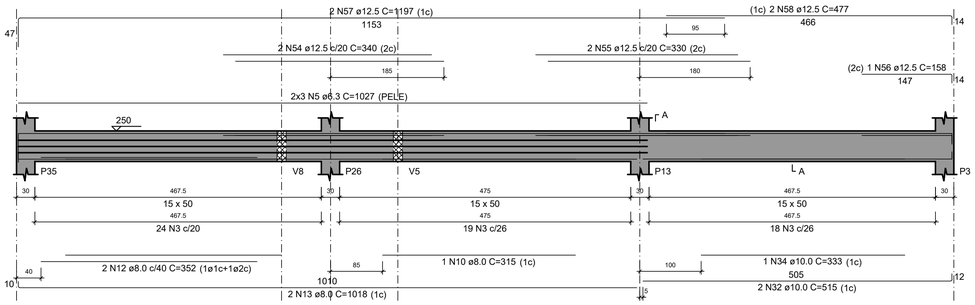
V13
ESC 1:50



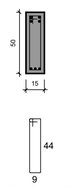
SEÇÃO A-A
ESC 1:25



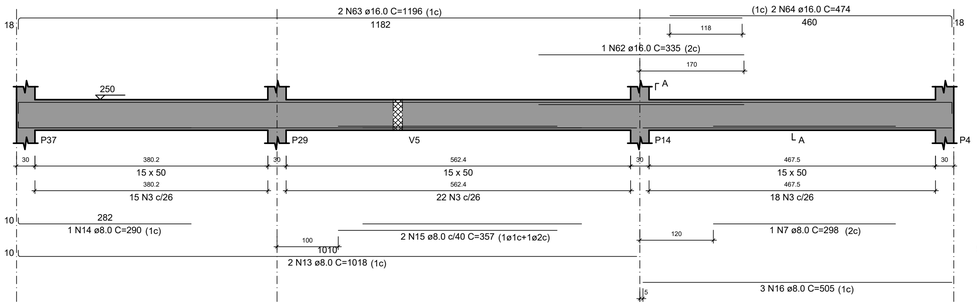
V14
ESC 1:50



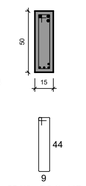
SEÇÃO A-A
ESC 1:25



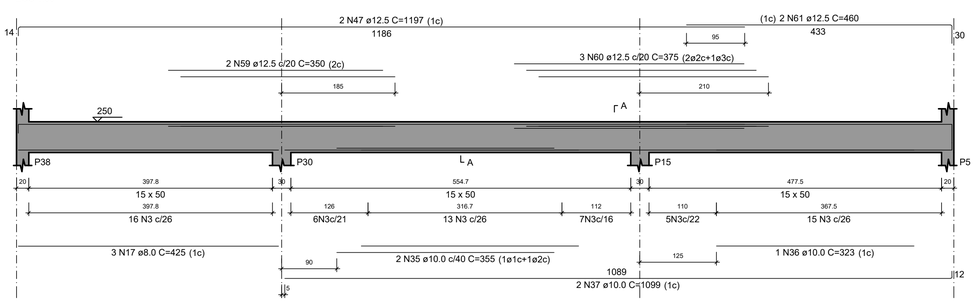
V15
ESC 1:50



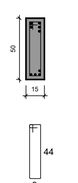
SEÇÃO A-A
ESC 1:25



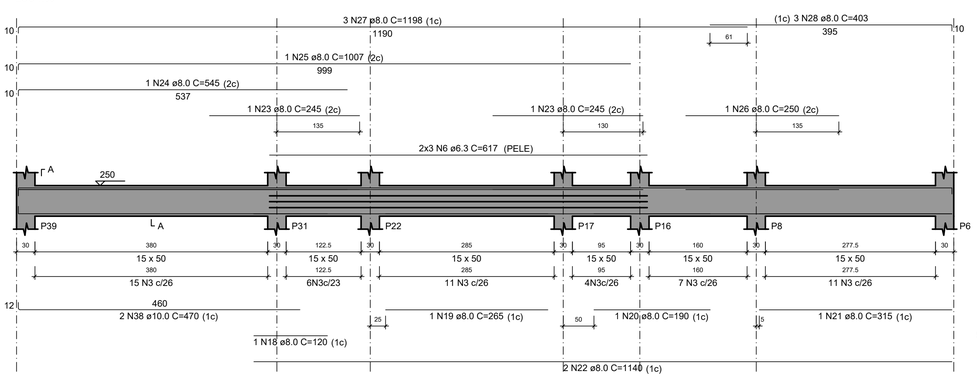
V16
ESC 1:50



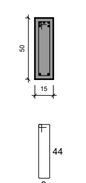
SEÇÃO A-A
ESC 1:25



V17
ESC 1:50



SEÇÃO A-A
ESC 1:25



RELAÇÃO DO AÇO

V11 V12 V13
V14 V15 V16
V17

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	80	127	10160
	2	5.0	51	107	5457
	3	5.0	346	117	40462
CA50	4	6.3	1	92	92
	5	6.3	6	1027	6162
	6	6.3	6	617	3702
	7	8.0	5	297	1485
	8	8.0	2	515	1030
	9	8.0	2	1030	2060
	10	8.0	3	315	945
	11	8.0	2	495	990
	12	8.0	2	352	704
	13	8.0	4	1018	4072
	14	8.0	1	290	290
	15	8.0	2	357	714
	16	8.0	3	505	1515
	17	8.0	3	425	1275
	18	8.0	1	120	120
	19	8.0	1	265	265
	20	8.0	1	190	190
	21	8.0	1	315	315
	22	8.0	2	1140	2280
	23	8.0	2	245	490
	24	8.0	1	545	545
	25	8.0	1	1007	1007
	26	8.0	1	250	250
	27	8.0	3	1198	3594
	28	8.0	3	403	1209
	29	10.0	2	630	1260
	30	10.0	1	292	292
	31	10.0	2	505	1010
	32	10.0	6	514	3084
	33	10.0	2	1020	2040
	34	10.0	1	333	333
	35	10.0	2	355	710
	36	10.0	1	323	323
	37	10.0	2	1099	2198
	38	10.0	2	470	940
	39	12.5	2	521	1042
	40	12.5	2	345	690
	41	12.5	2	335	670
	42	12.5	1	1191	1191
	43	12.5	2	1197	2394
	44	12.5	2	1200	2400
	45	12.5	2	504	1008
	46	12.5	3	865	2595
	47	12.5	5	1197	5985
	48	12.5	1	437	437
	49	12.5	2	444	888
	50	12.5	2	507	1014
	51	12.5	2	519	1038
	52	12.5	2	1197	2394
	53	12.5	2	483	966
	54	12.5	2	340	680
	55	12.5	2	330	660
	56	12.5	1	158	158
	57	12.5	2	1197	2394
	58	12.5	2	477	954
	59	12.5	2	350	700
	60	12.5	3	375	1125
	61	12.5	2	460	920
	62	16.0	1	335	335
	63	16.0	2	1196	2392
	64	16.0	2	474	948

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	99.6	26.8
	8.0	253.5	110
	10.0	122	82.7
	12.5	323	342.3
	16.0	36.8	63.8
CA60	5.0	561	95.1

PESO TOTAL (kg)	
CA50	625.6
CA60	95.1

Volume de concreto (C-25) = 9.34 m³
Área de forma = 135.44 m²

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ENGENHEIRO CIVIL
CREA 5062060134
TEL. (016) 999978248

Estrutural - Vigas

CONSTRUÇÃO - COMERCIAL