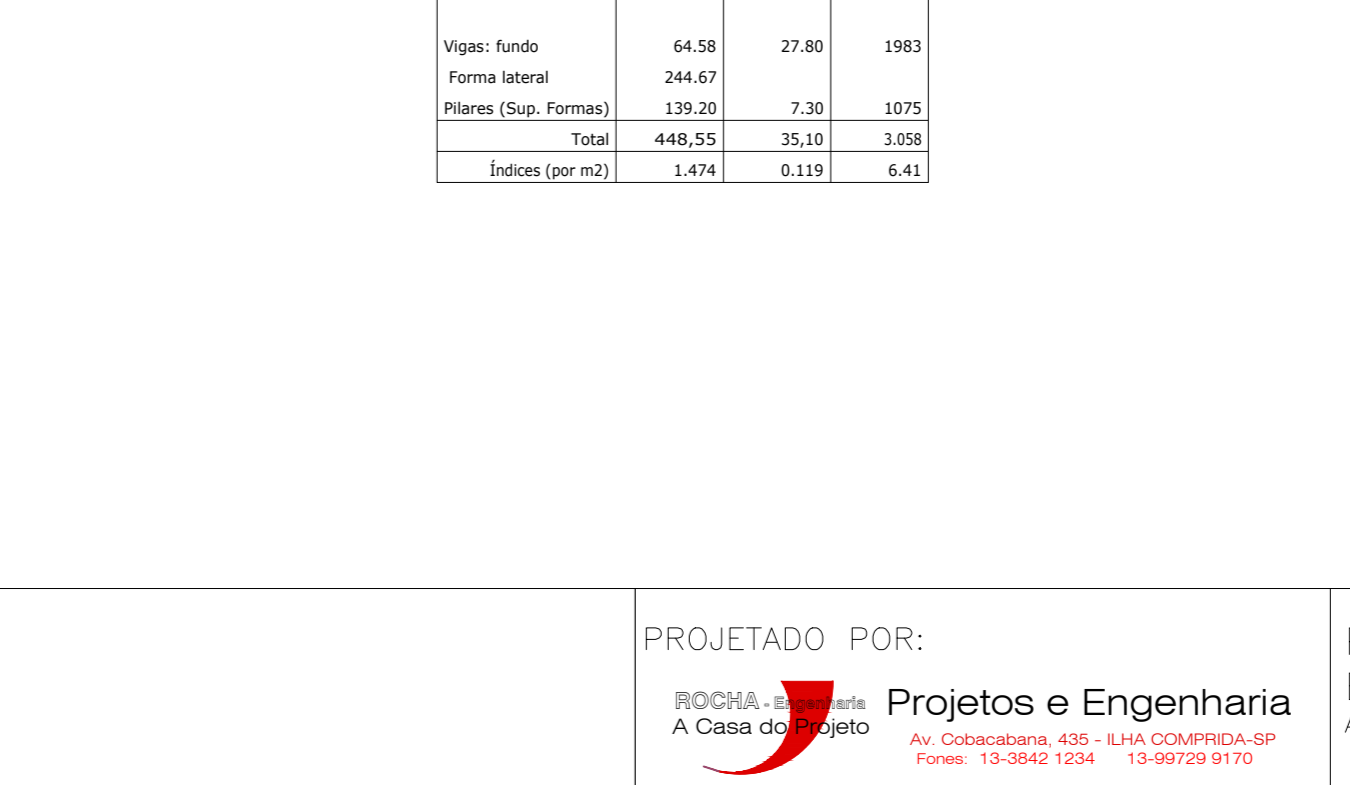
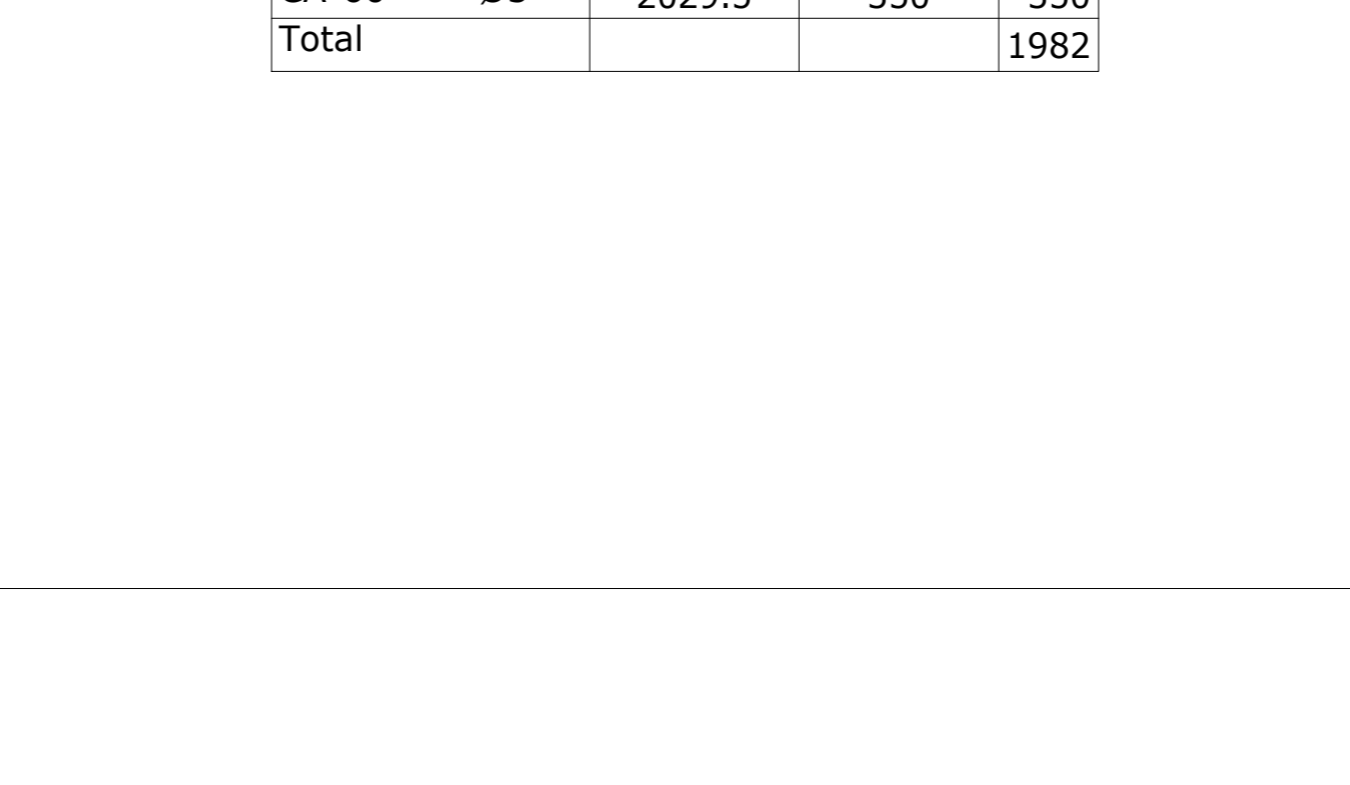
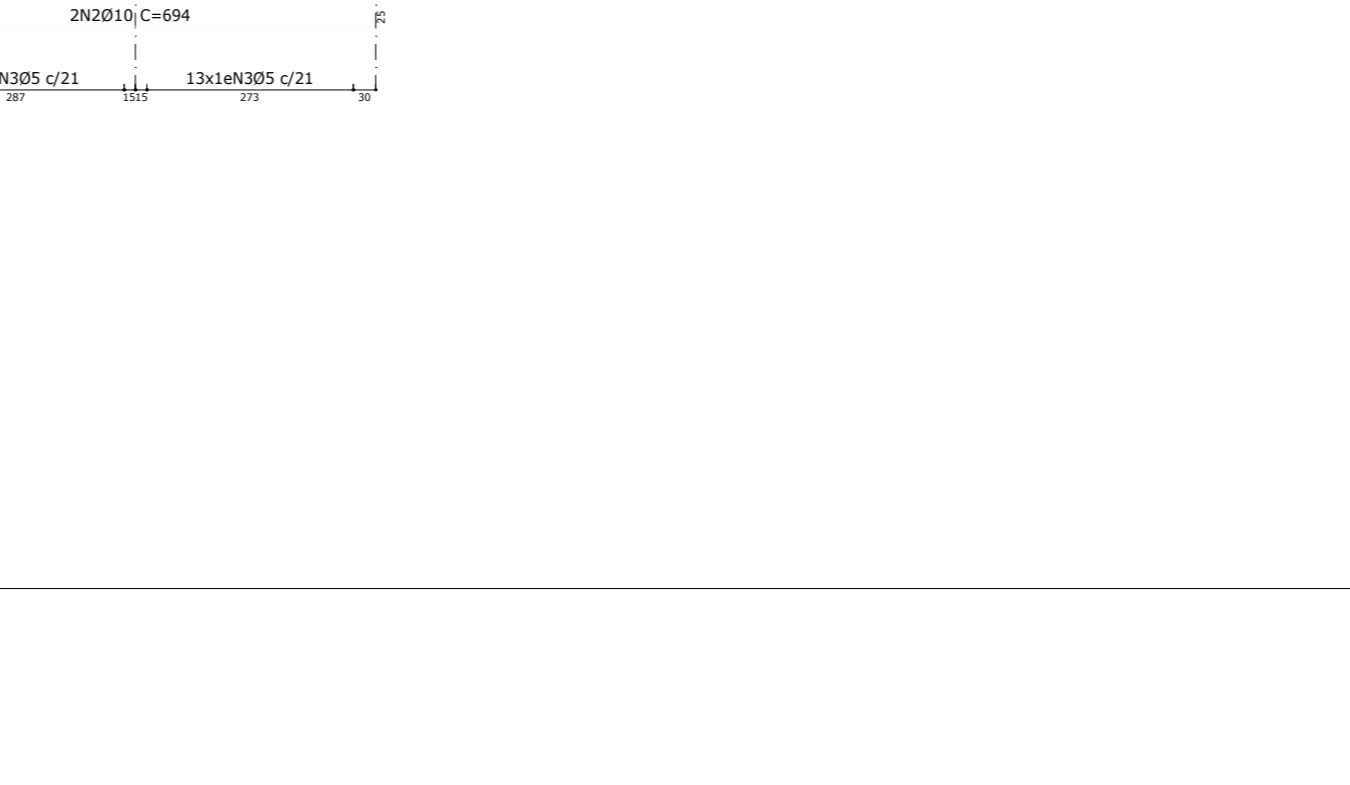
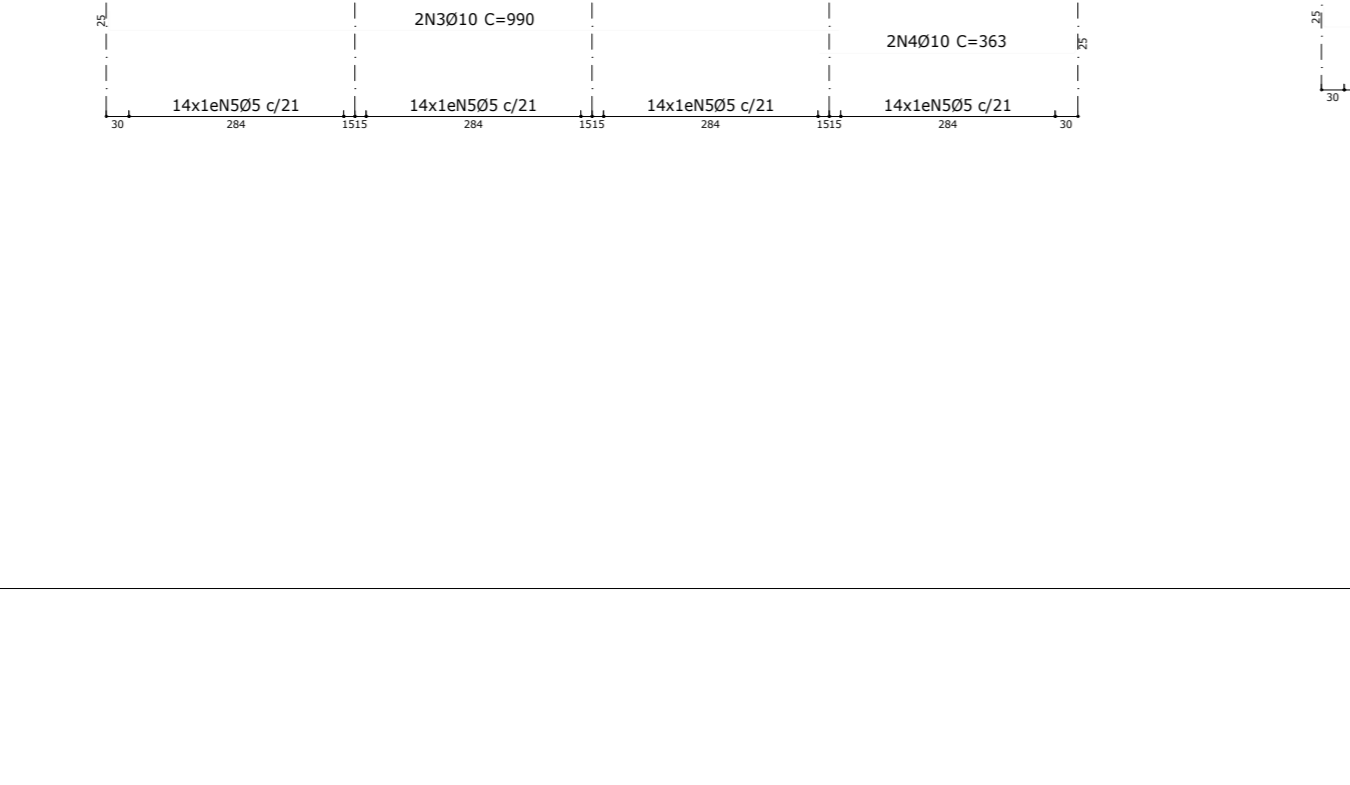
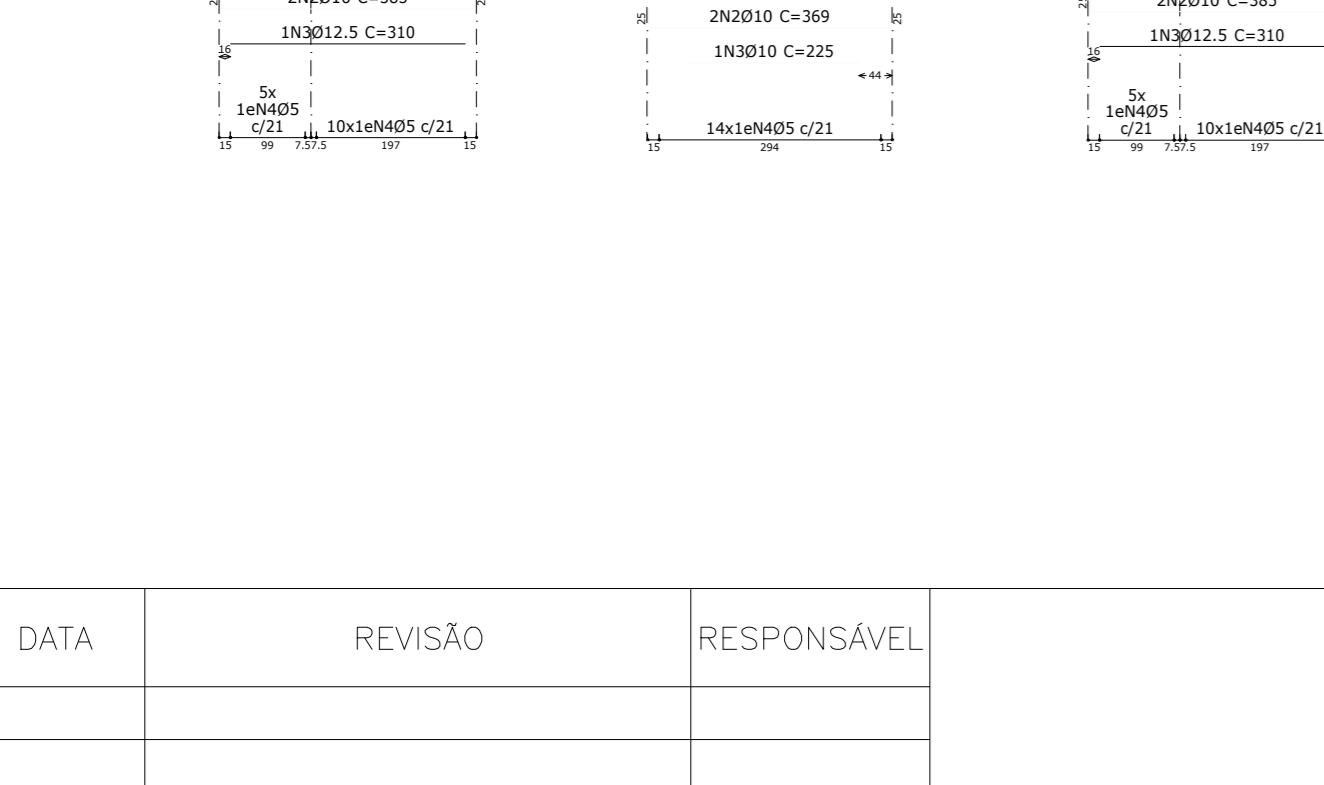
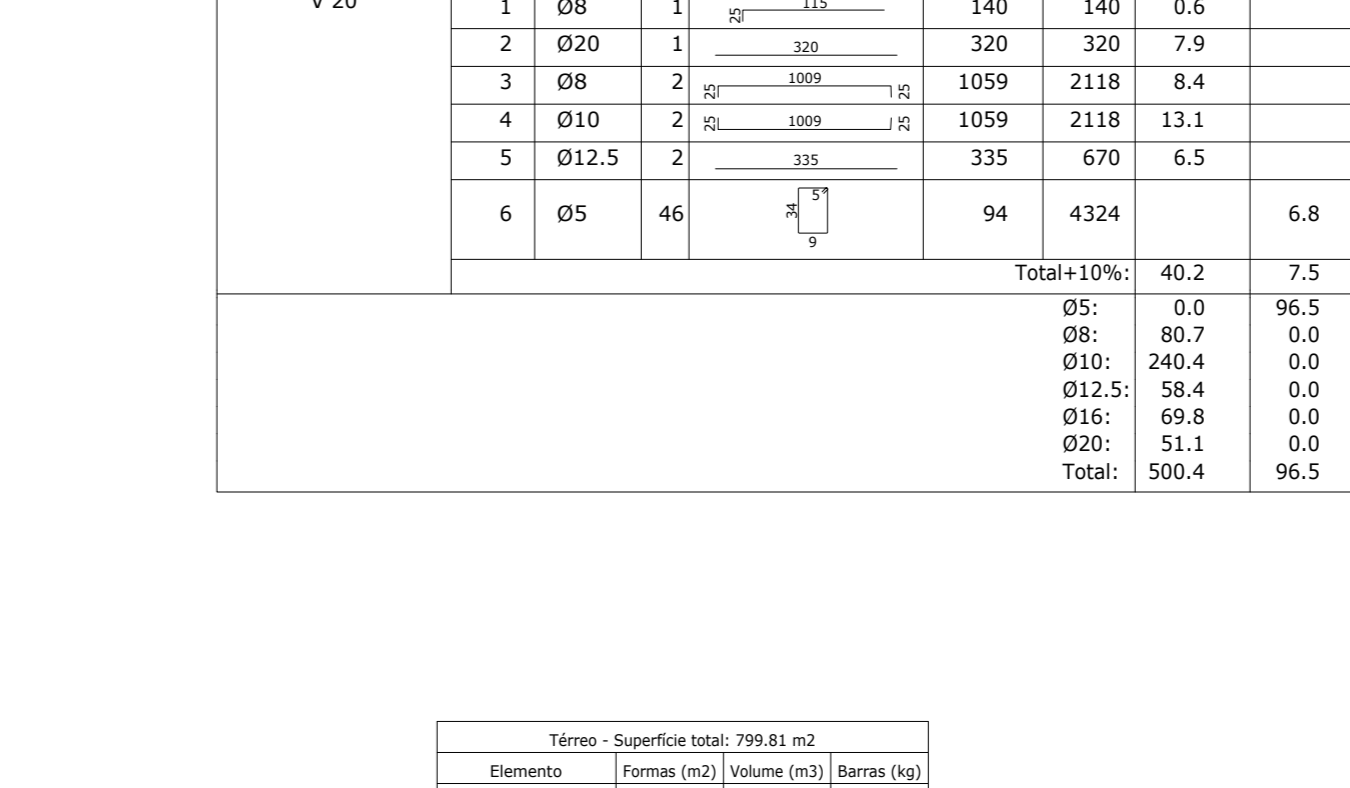
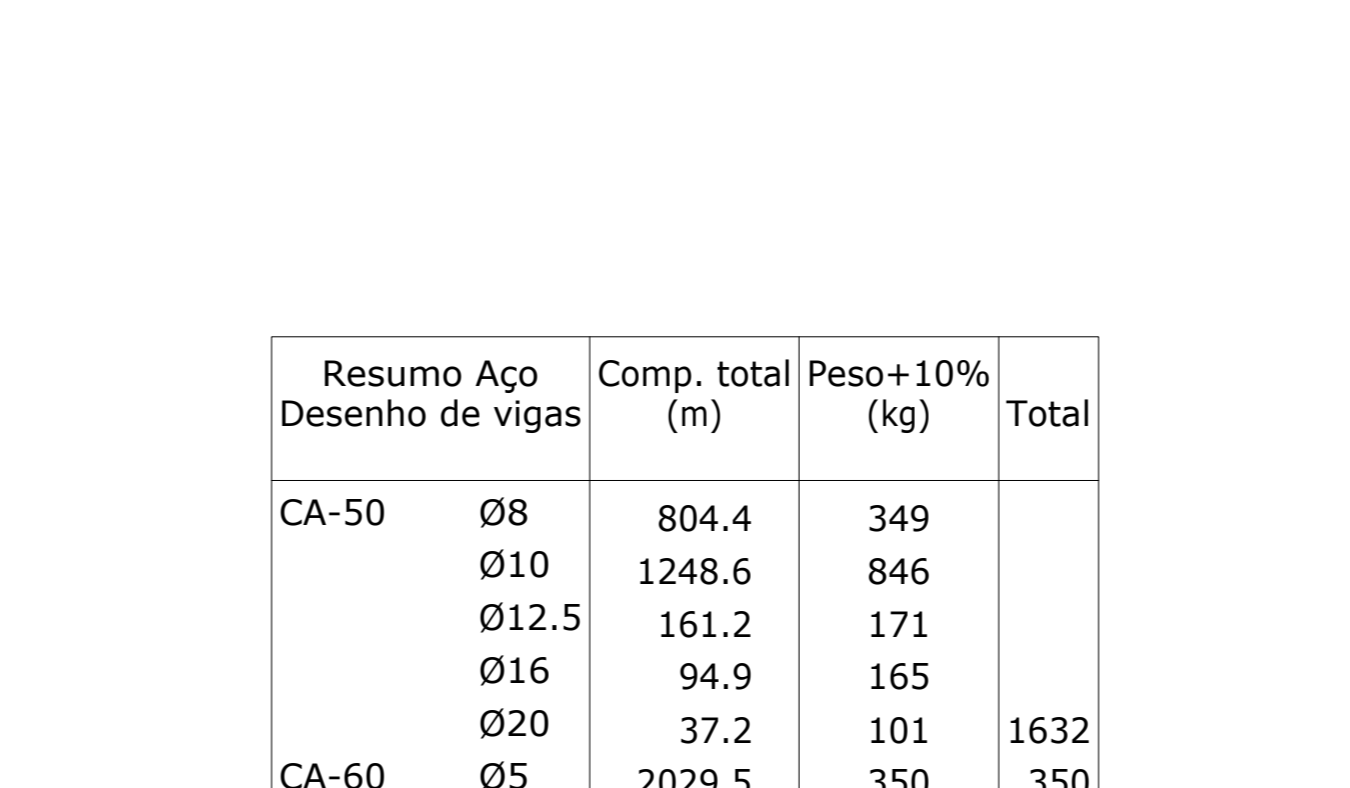
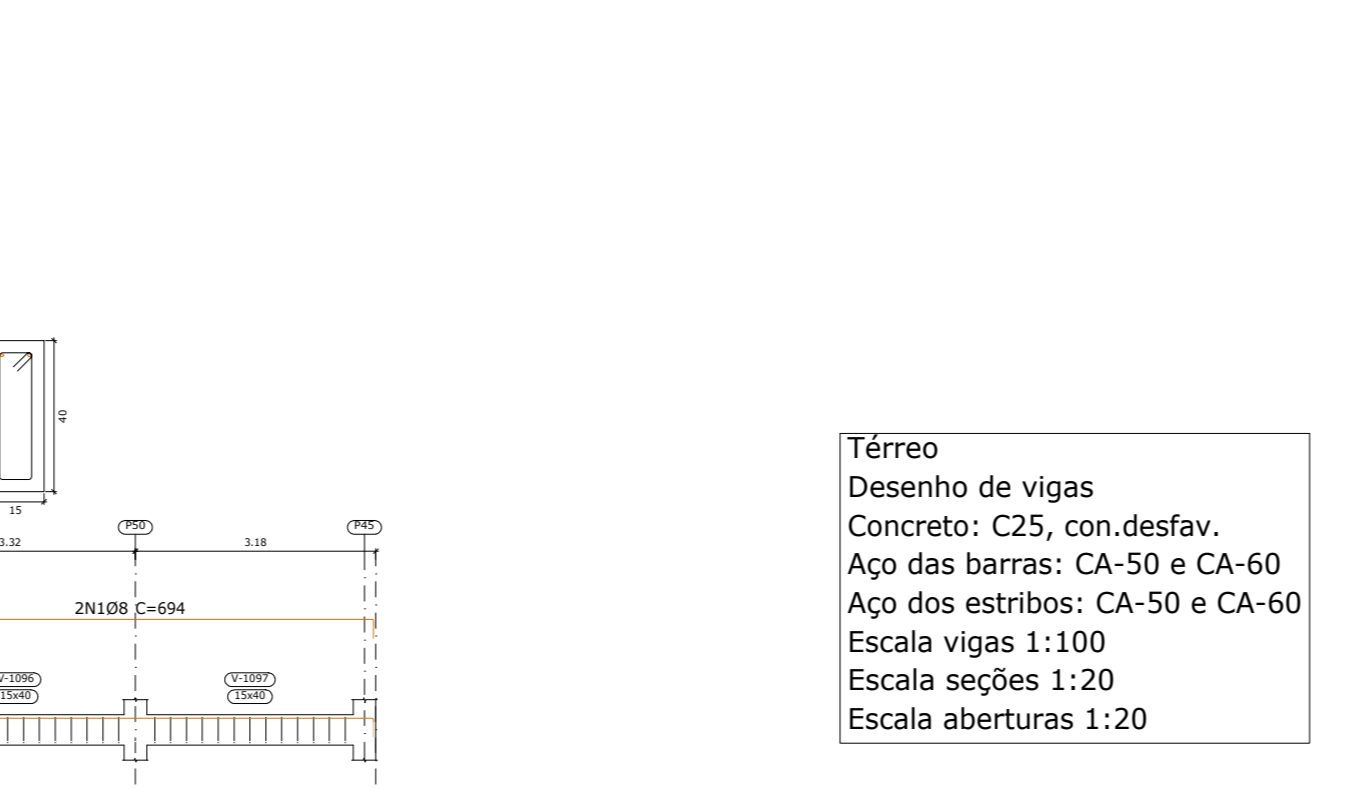
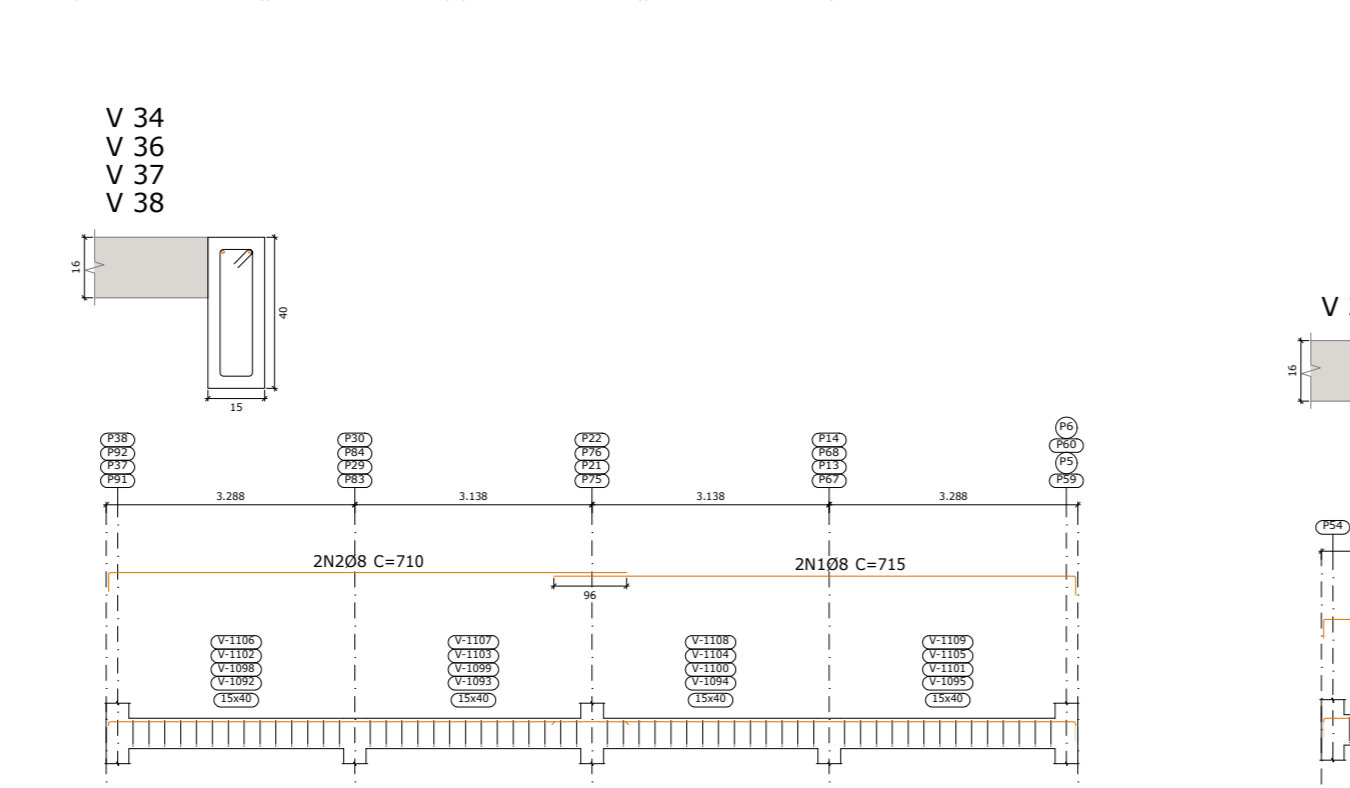
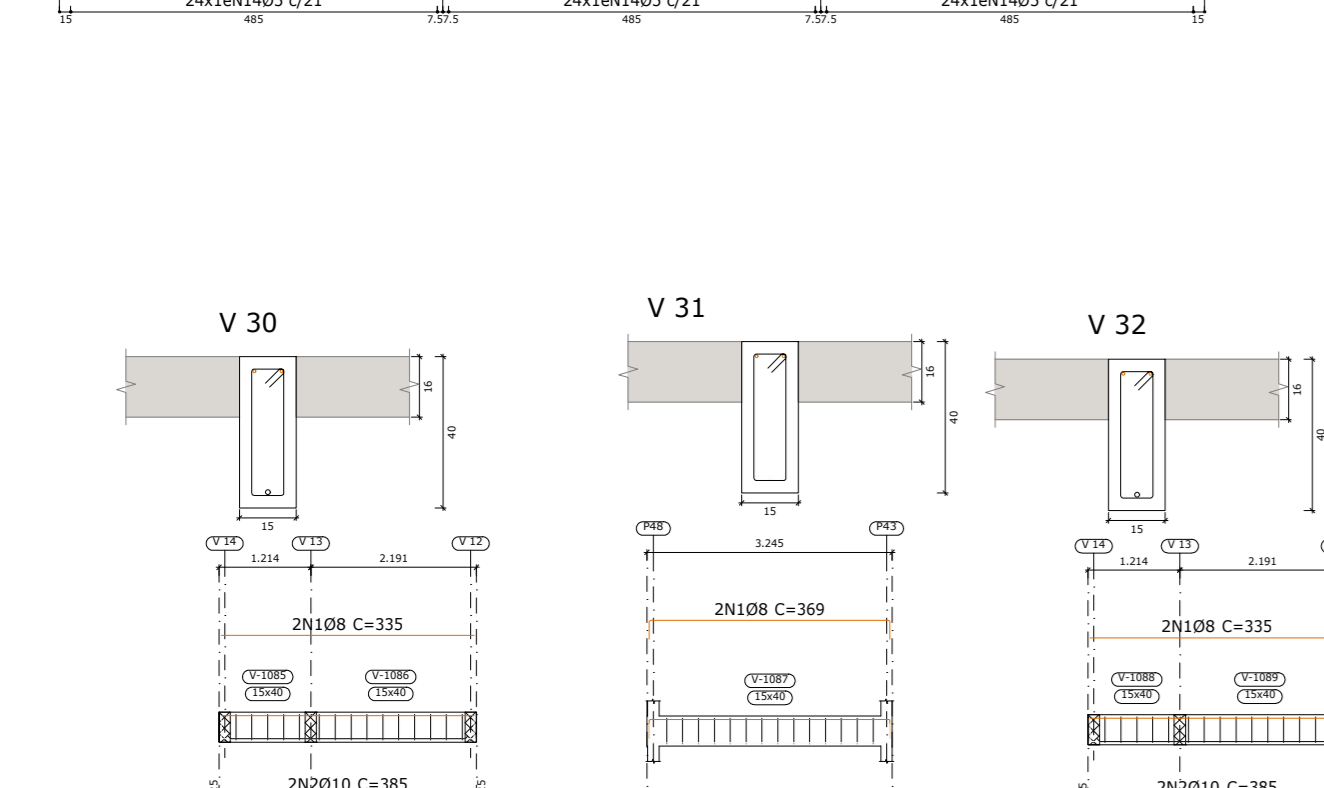
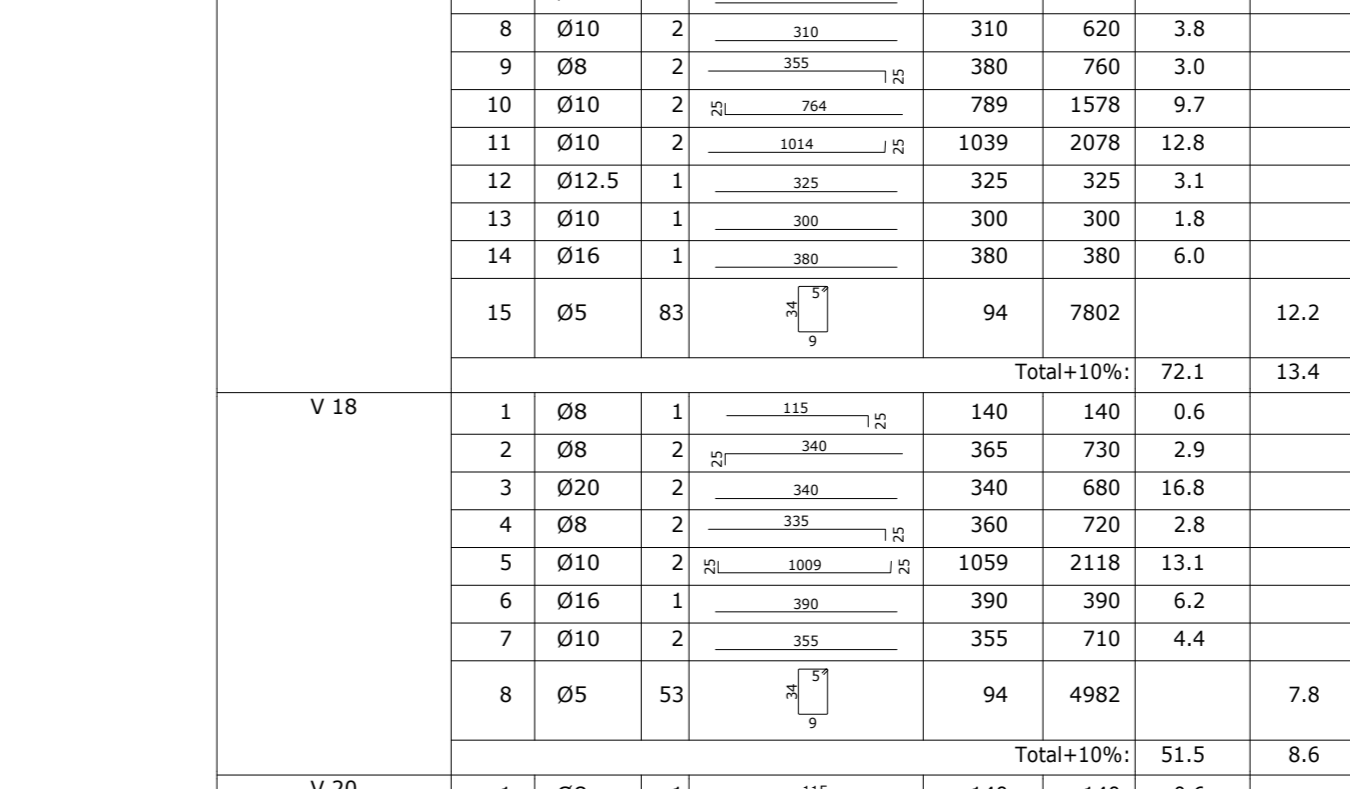
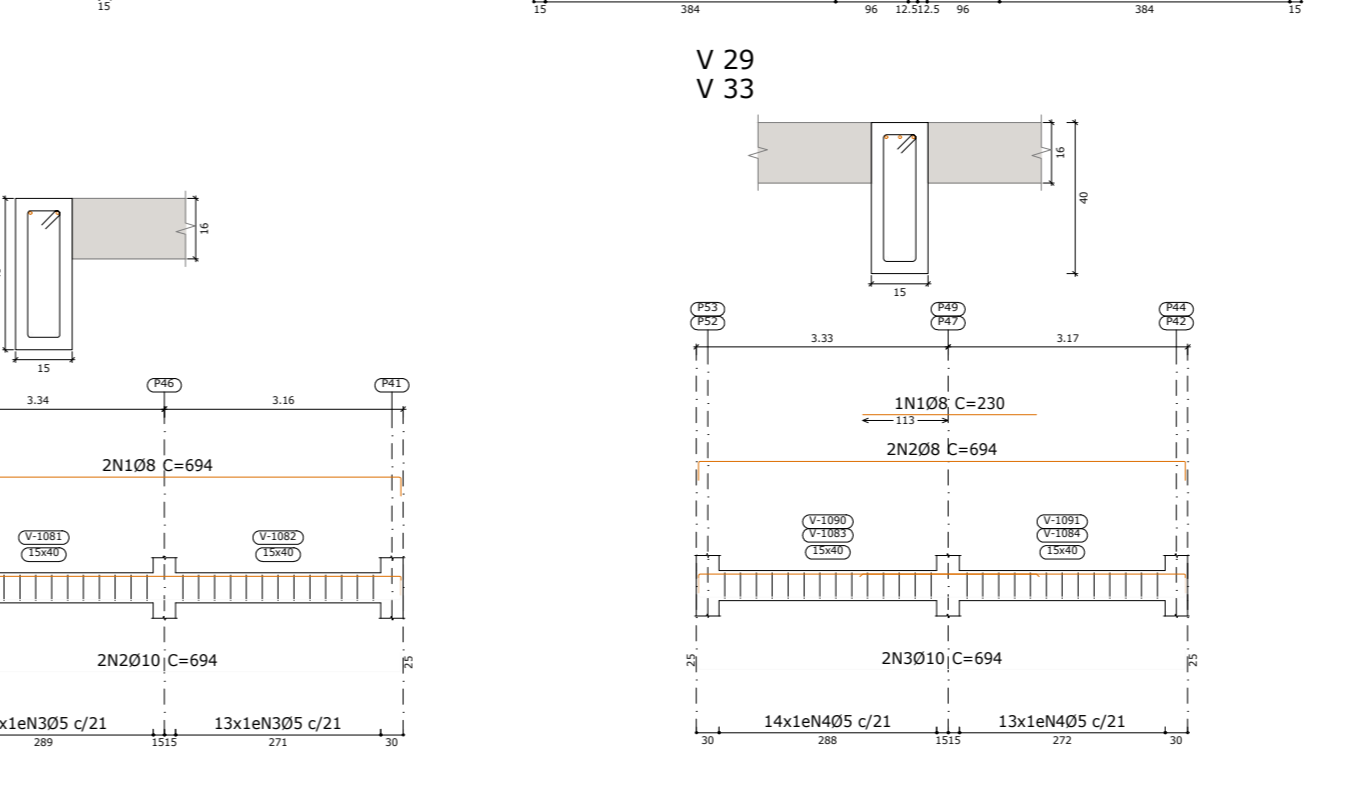
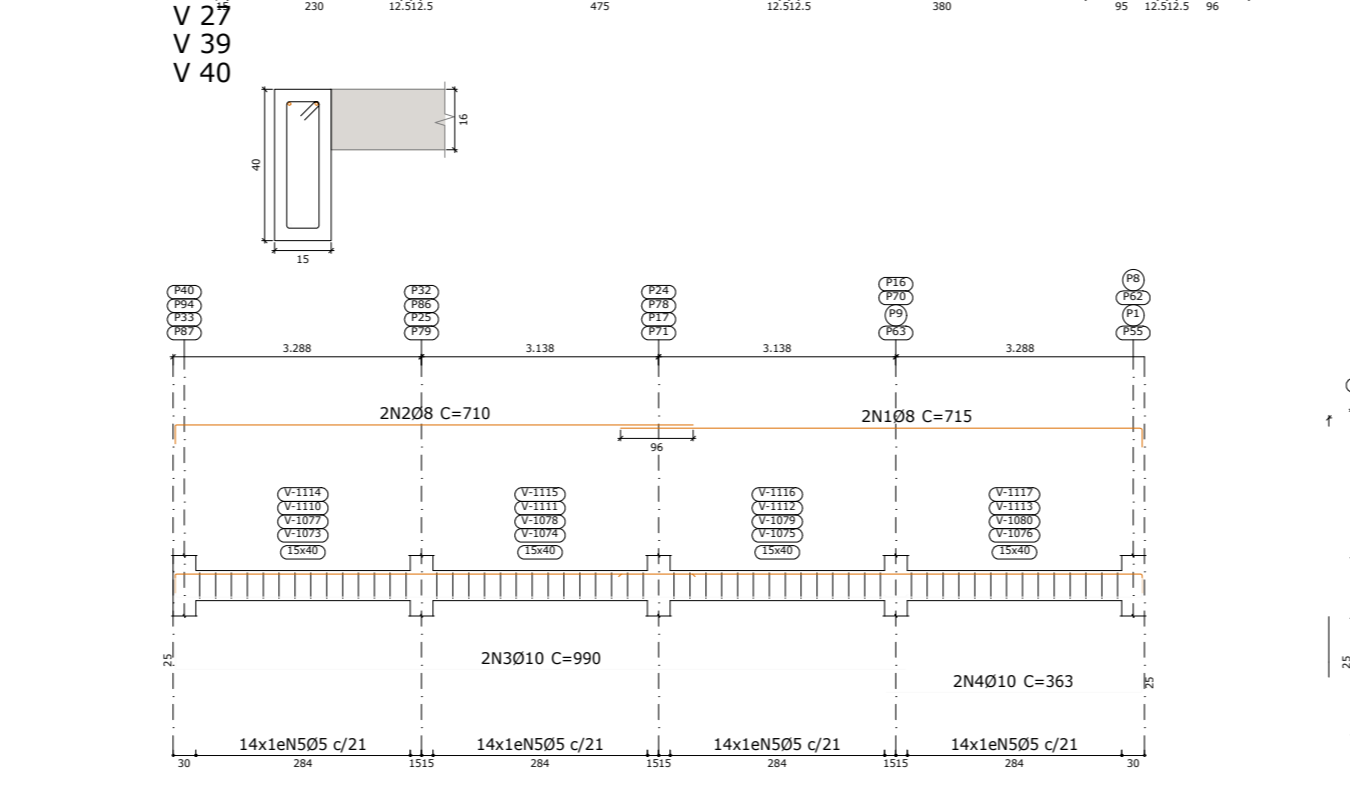
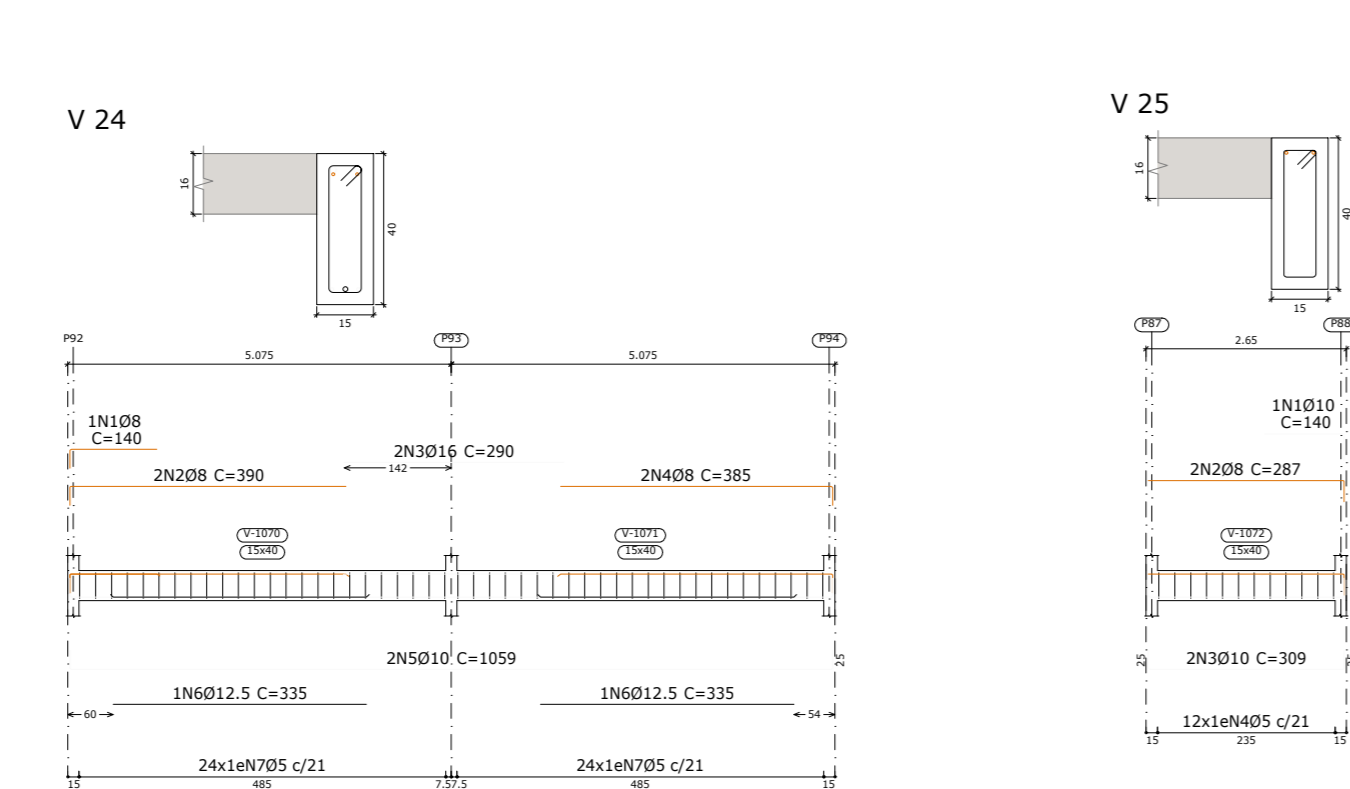
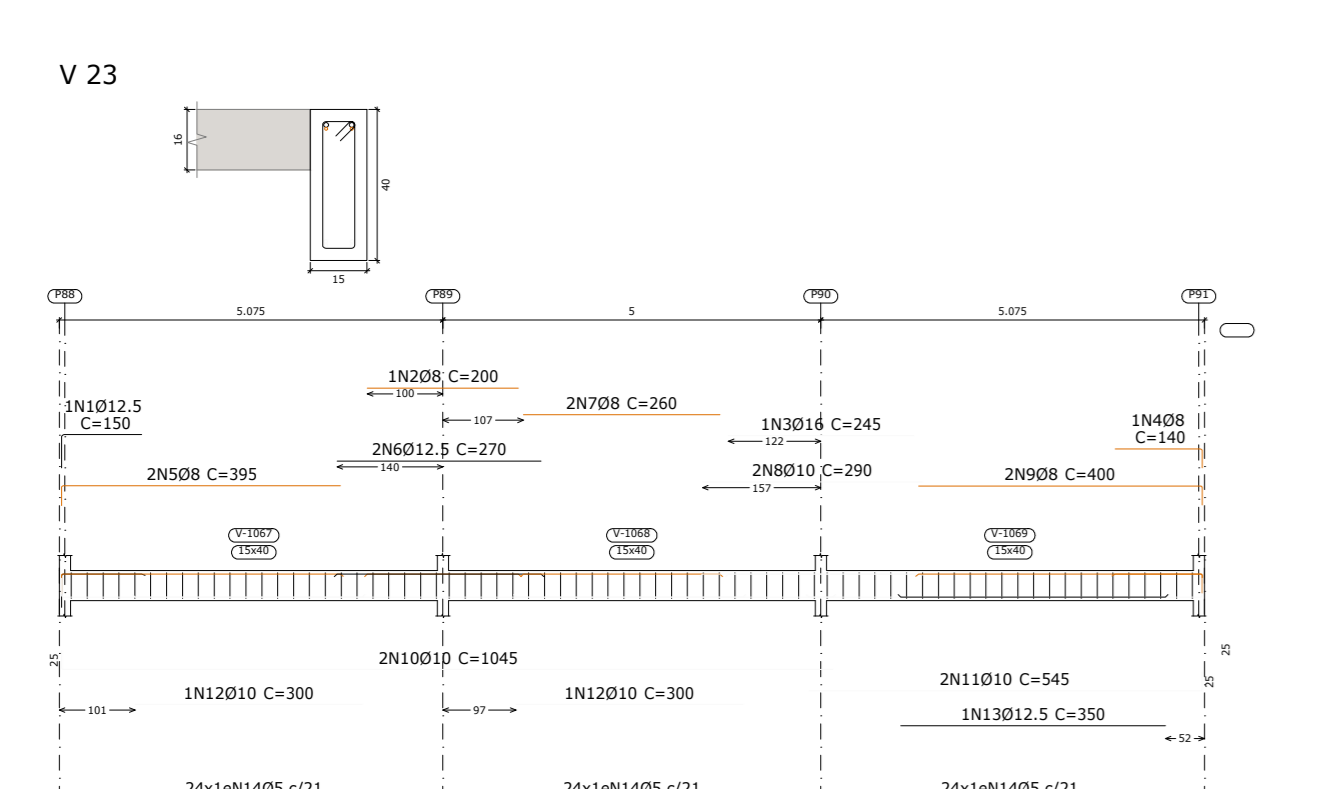
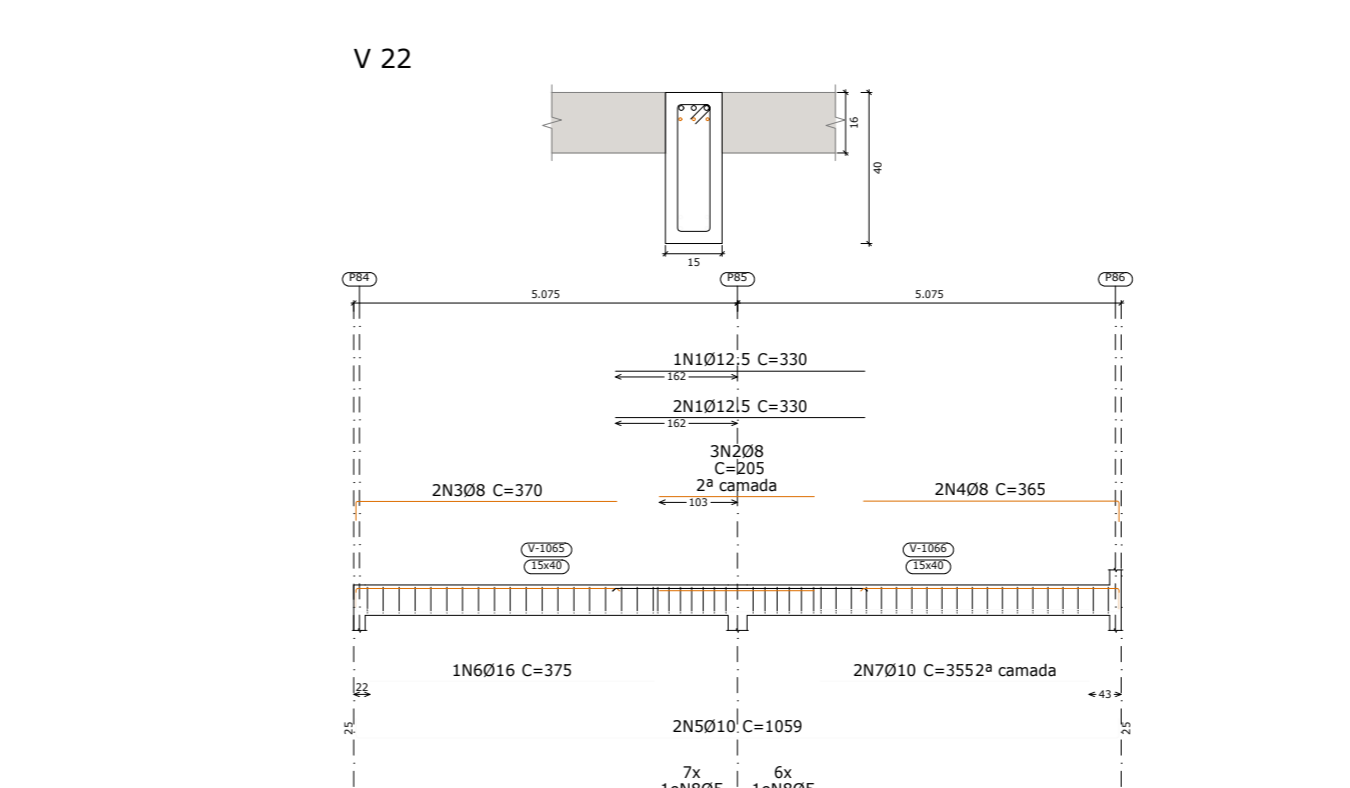
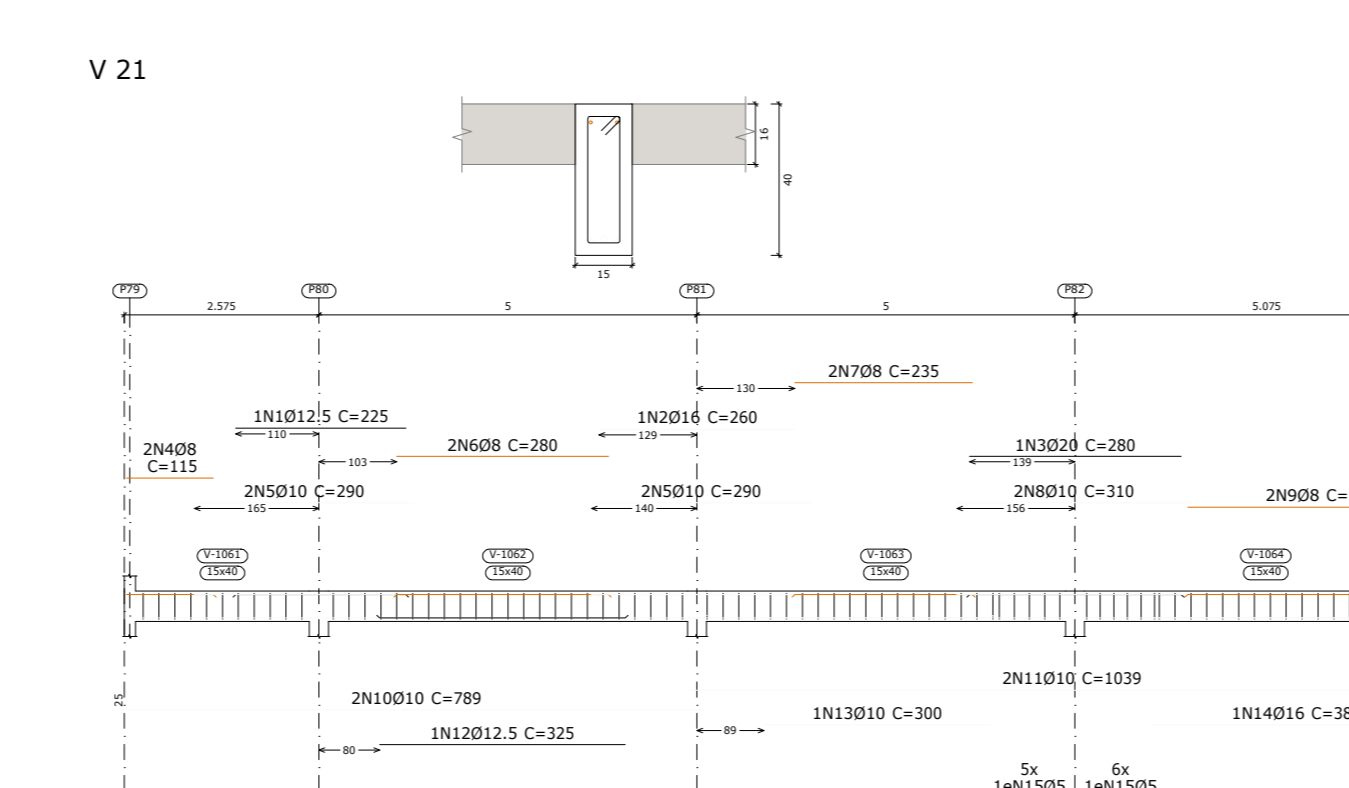
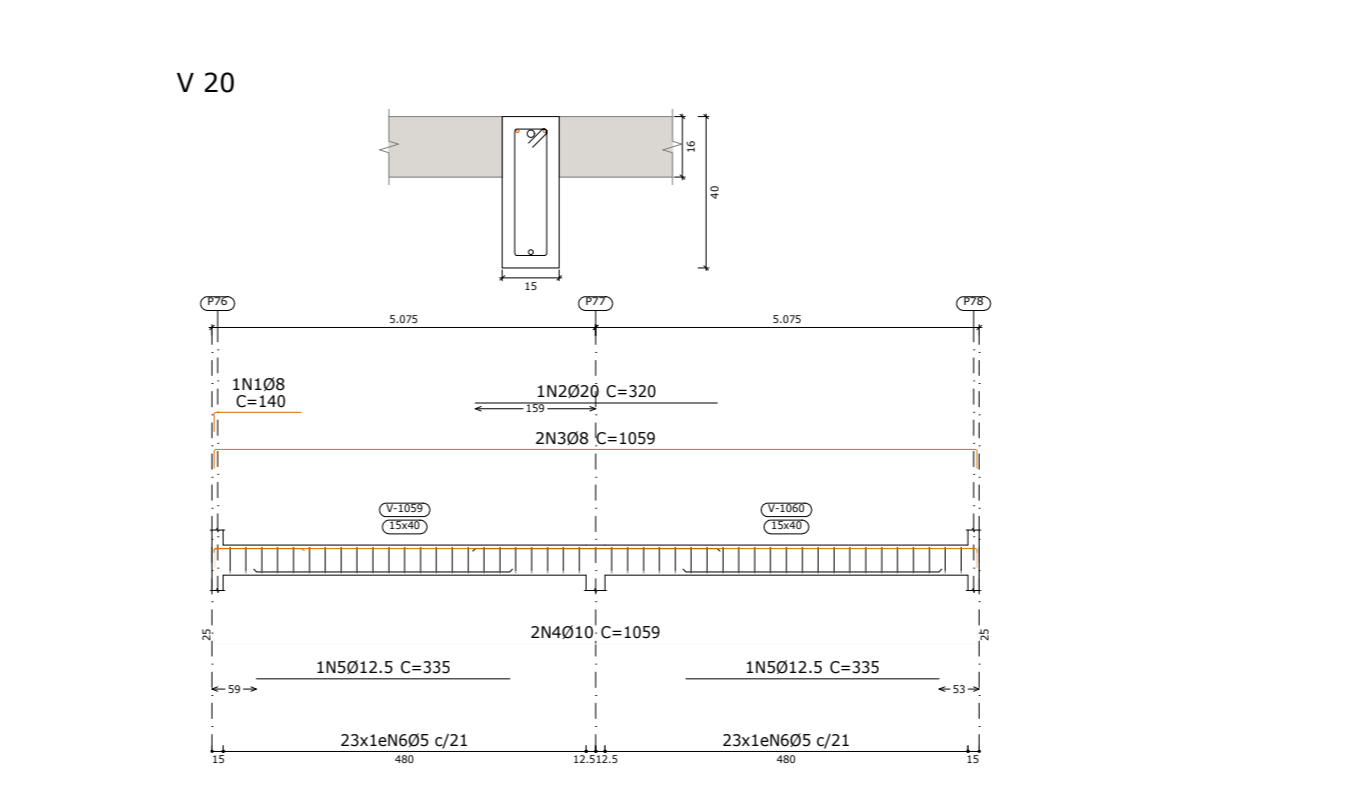
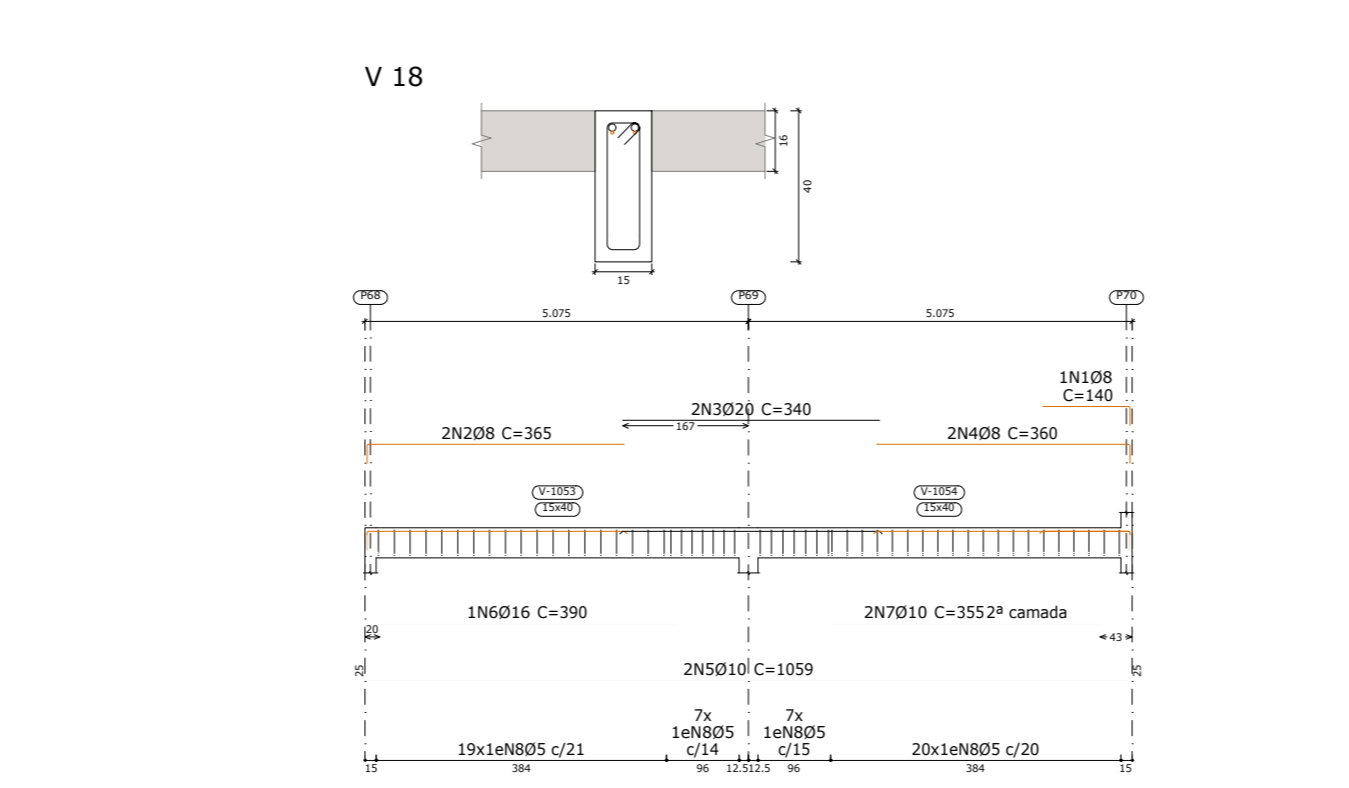
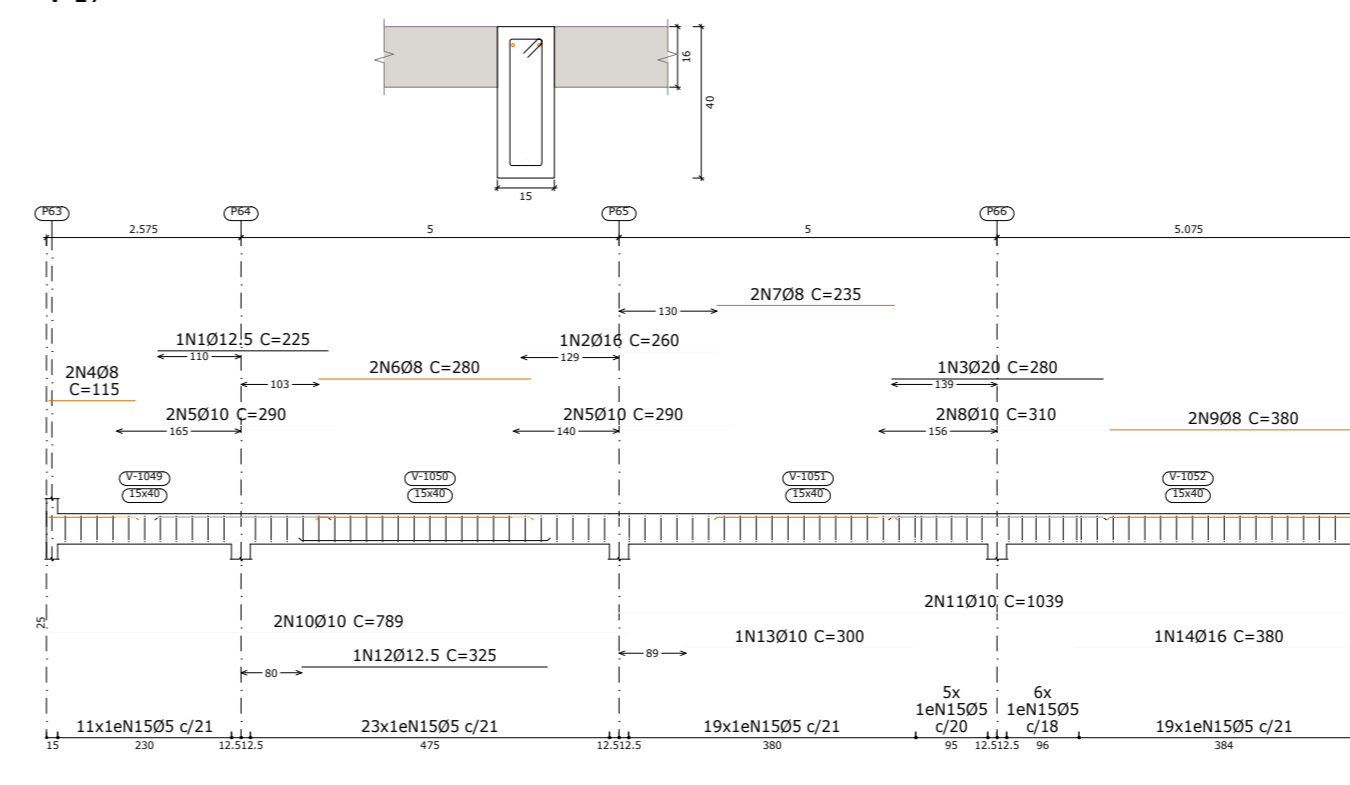
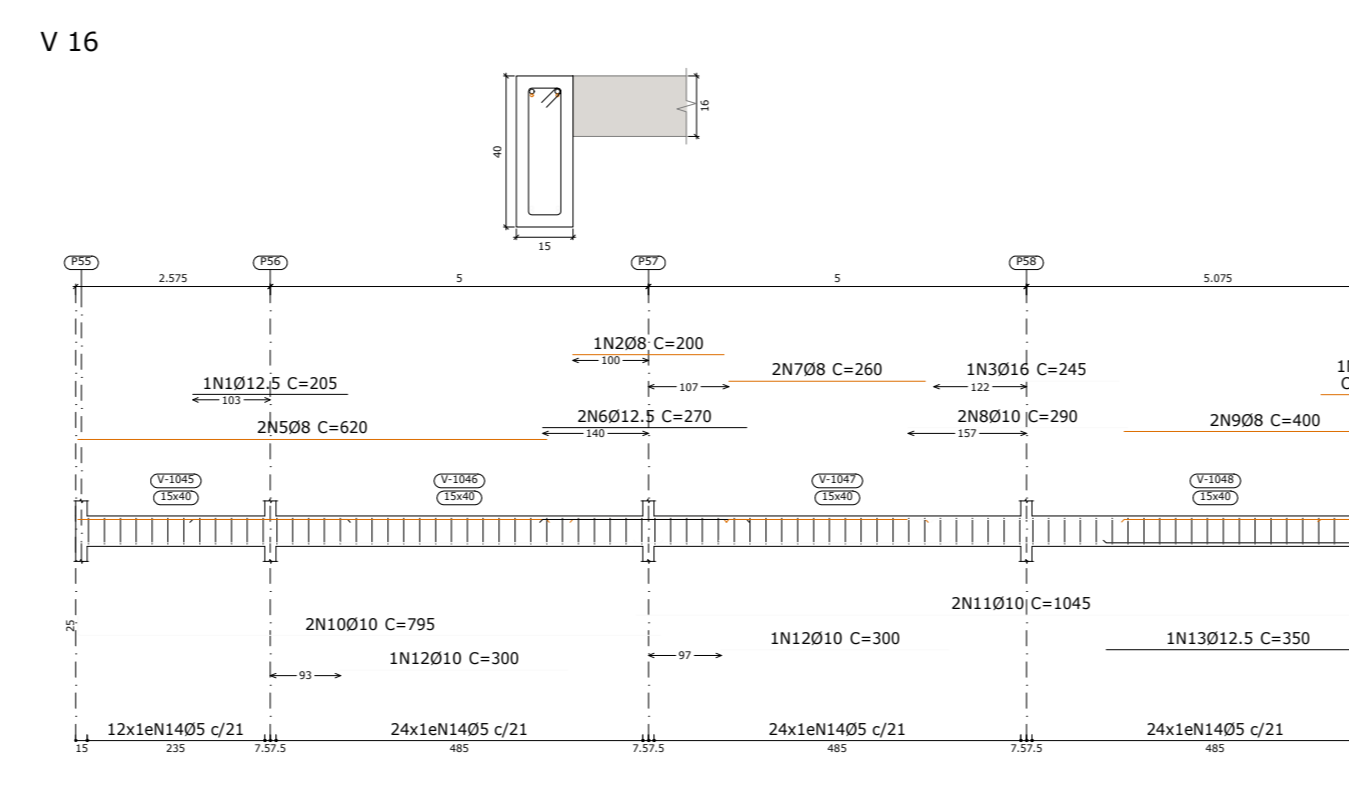
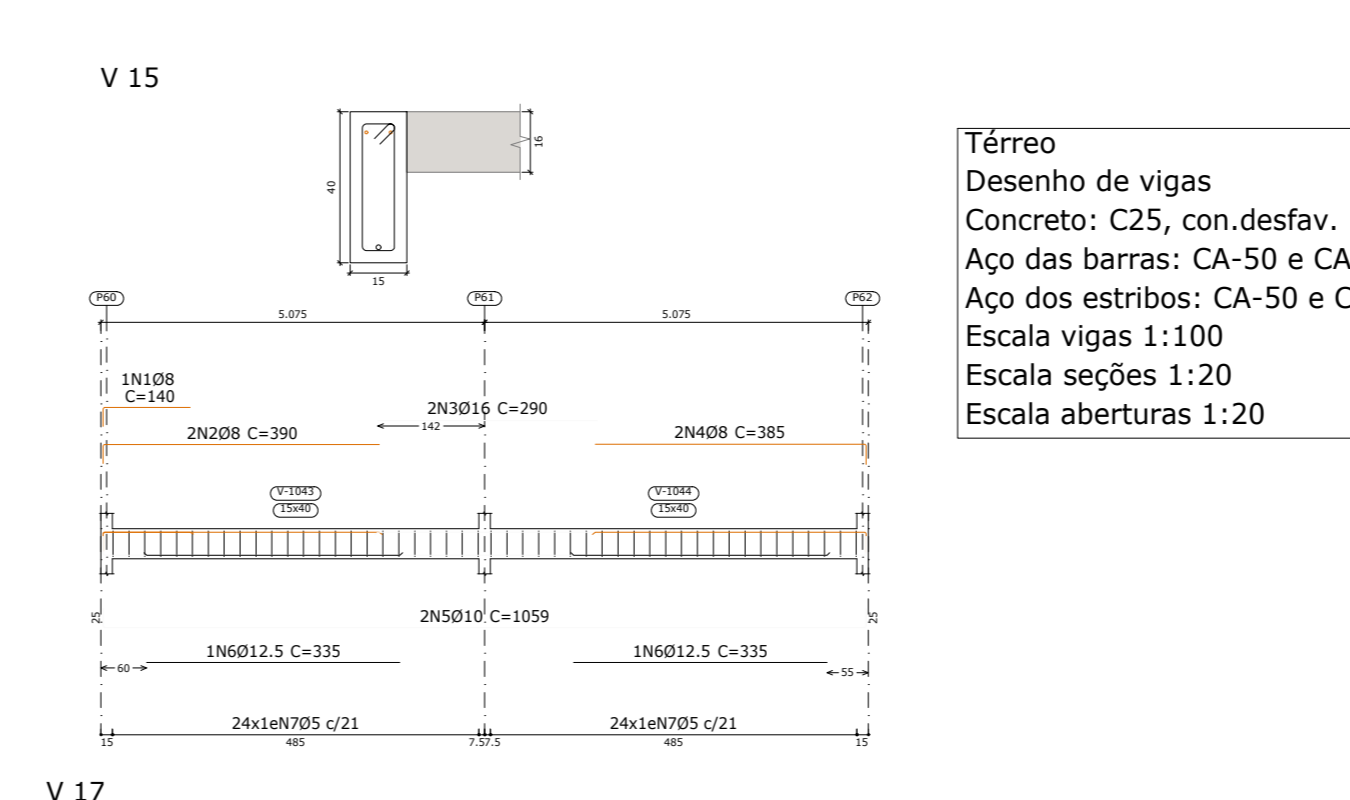
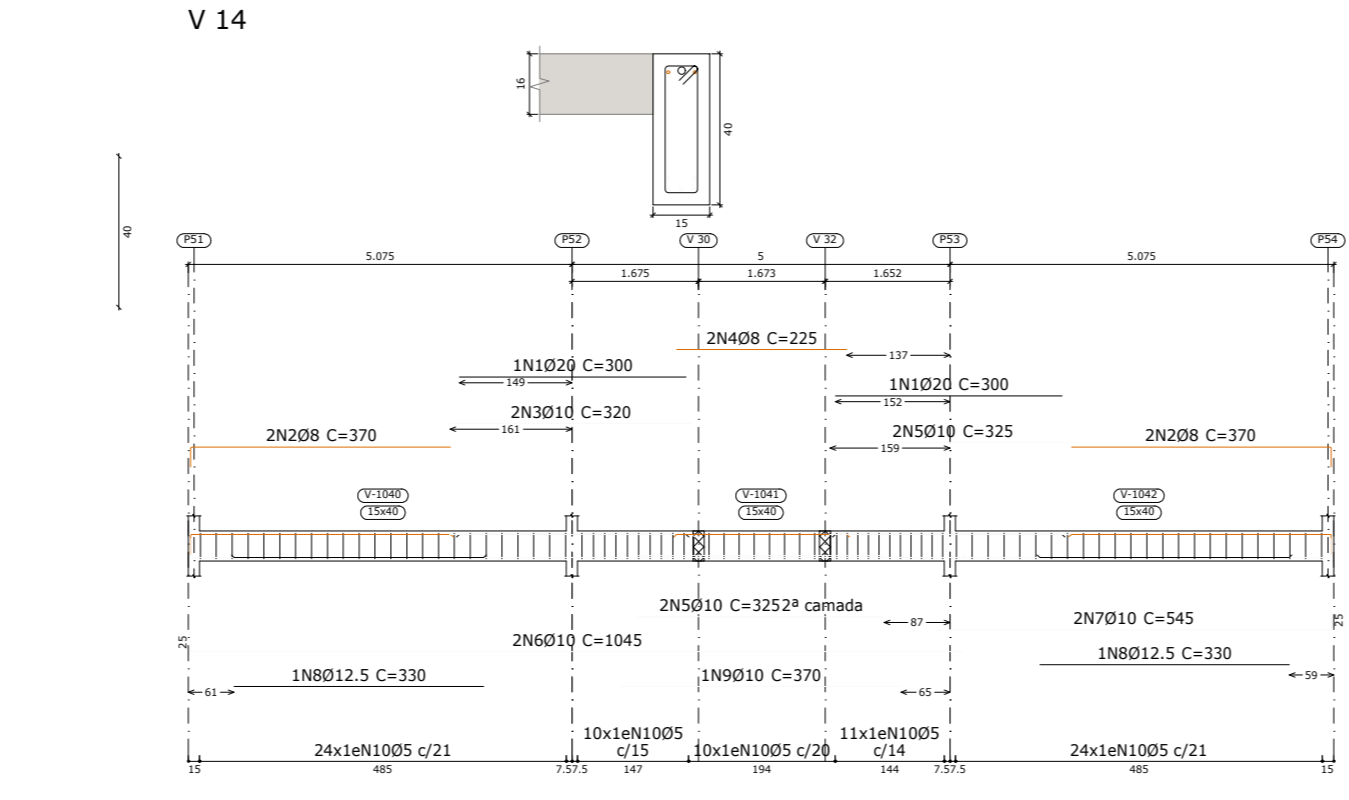
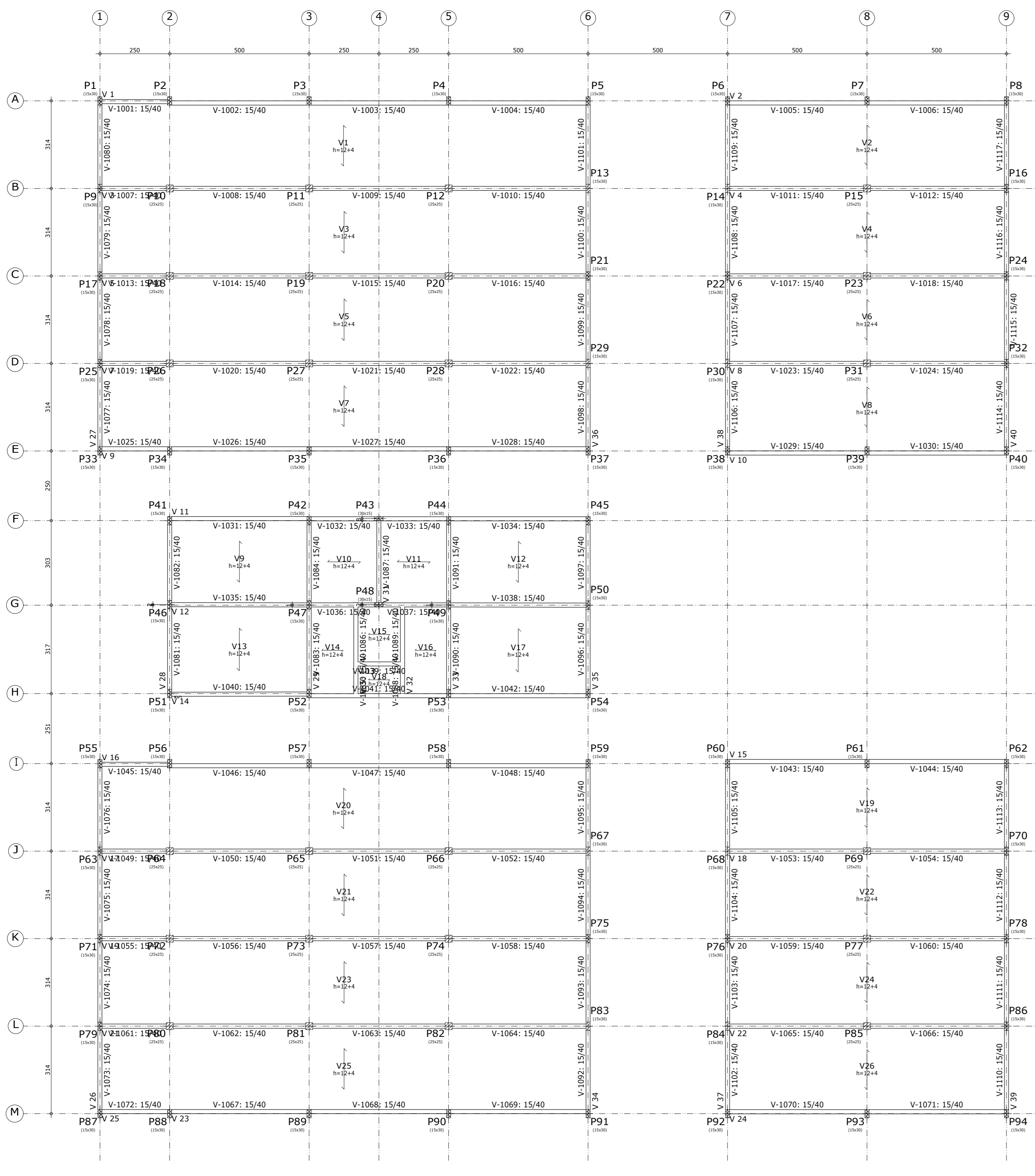


FORMAS DAS VIGAS DE BALDRAME (PISO)

VIGAS DE BALDRAME (PISO)



Térreo
Desenho de vigas
Concreto: C25, con.desfav.
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:100
Escala seções 1:20

Térreo
Desenho de vigas
Concreto: C25, con.desfav.
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:100
Escala seções 1:20

Resumo Aço		Comp. total	Peso+10%	Total
Desenho de vigas		(m)	(kg)	
CA-50	Ø8	804.4	349	
	Ø10	1248.6	846	
	Ø12.5	161.2	171	
	Ø16	94.9	165	
	Ø20	37.2	101	1632
CA-60	Ø5	2029.5	350	350
Total				1982

Elemento	Pos.	Diam. (Q.)	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V10	1	Ø8	1	140	140	0.6	
	2	Ø8	2	390	780	3.1	
	3	Ø16	2	290	580	9.2	
	4	Ø8	2	385	770	3.0	
	5	Ø10	2	1059	2118	13.1	
	6	Ø12.5	2	335	670	6.5	
	7	Ø5	48		94	4512	
				Total+10%	39.1	7.8	
V11	1	Ø8	2	140	280	1.1	
	2	Ø12.5	1	225	225	2.1	
	3	Ø12.5	1	225	225	2.2	
	4	Ø8	2	390	780	3.1	
	5	Ø10	2	310	620	3.8	
	6	Ø8	2	295	590	1.6	
	7	Ø10	2	290	580	3.6	
	8	Ø8	2	410	820	3.2	
	9	Ø10	2	1045	2090	12.8	
	10	Ø10	2	545	1090	6.7	
	11	Ø12.5	2	355	710	6.8	
	12	Ø5	70		94	6580	
				Total+10%	51.8	11.3	
V12	1	Ø8	2	140	280	1.1	
	2	Ø8	2	390	780	3.1	
	3	Ø16	2	290	580	9.2	
	4	Ø8	2	385	770	3.0	
	5	Ø10	2	1045	2090	12.9	
	6	Ø10	2	545	1090	6.7	
	7	Ø10	2	390	780	4.8	
	8	Ø10	4	340	1360	8.4	
	9	Ø5	76		94	7144	
				Total+10%	71.4	12.3	
V13	1	Ø8	2	176	352	1.4	
	2	Ø10	2	226	452	2.8	
	3	Ø5	8		94	752	
				Total+10%	4.6	1.3	
V14	1	Ø20	2	300	600	14.8	
	2	Ø8	4	370	1480	5.8	
	3	Ø10	2	320	640	3.9	
	4	Ø8	2	225	450	1.8	
	5	Ø10	4	325	1300	8.0	
	6	Ø10	2	1045	2090	12.9	
	7	Ø10	2	545	1090	6.7	
	8	Ø12.5	2	330	660	6.4	
	9	Ø10	1	370	370	2.3	
	10	Ø5	79		94	7426	
				Total+10%	68.9	12.9	
V15	1	Ø8	1	140	140	0.6	
	2	Ø8	2	390	780	3.1	
	3	Ø16	2	290	580	9.2	
	4	Ø8	2	385	770	3.0	
	5	Ø10	2	1059	2118	13.1	
	6	Ø12.5	2	335	670	6.5	
	7	Ø5	48		94	4512	
				Total+10%	39.1	7.8	
V16	1	Ø12.5	1	205	205	2.0	
	2	Ø8	1	200	200	0.8	
	3	Ø16	1	245	245	3.9	
	4	Ø8	1	140	140	0.6	
	5	Ø8	1	140	140	0.6	
	6	Ø12.5	2	270	540	5.2	
	7	Ø8	2	260	520	2.1	
	8	Ø10	2	290	580	3.6	
	9	Ø8	2	325	650	3.2	
	10	Ø10	2	795	1590	9.8	
	11	Ø10	2	1059	2118	12.9	
	12	Ø10	2	300	600	3.7	
	13	Ø12.5	1	350	350	3.4	
	14	Ø5	84		94	7896	
				Total+10%	61.7	13.6	
V17	1	Ø12.5	1	225	225	2.2	
	2	Ø16	1	260	260	4.1	
	3	Ø20	1	280	280	6.9	
	4	Ø8	2	115	230	0.9	
	5	Ø10	4	290	1160	7.1	
	6	Ø8	2	280	560	2.2	
	7	Ø8	2	235	470	1.9	
	8	Ø10	2	310	620	3.8	
	9	Ø8	2	380	760	3.0	
	10	Ø10	2	789	1578	9.7	
	11	Ø10	2	1039	2078	12.8	
	12	Ø12.5	1	325	325	3.1	
	13	Ø10	1	300	300	1.8	
	14	Ø16	1	380	380	6.0	
	15	Ø5	83		94	7802	
				Total+10%	72.1	13.4	
V18	1	Ø8	1	140	140	0.6	
	2	Ø8	2	365	730	2.9	
	3	Ø20	2	340	680	16.8	
	4	Ø8	2	360	720	2.8	
	5	Ø10	2	1059	2118	13.1	
	6	Ø16	1	390	390	6.2	
	7	Ø10	2	355	710	4.4	
	8	Ø5	53		94	4982	
				Total+10%	51.5	8.6	
V20	1	Ø8	1	140	140	0.6	
	2	Ø20	1	320	320	7.9	
	3	Ø8	2	1059	2118	13.1	
	4	Ø10	2	1059	2118	13.1	
	5	Ø12.5	2	335	670	6.5	
	6	Ø5	46		94	4324	
				Total+10%	40.2	7.5	
				Ø5:	0.0	96.5	
				Ø8:	80.7	0.0	
				Ø10:	240.4	0.0	
				Ø12.5:	58.4	0.0	
				Ø16:	66.0	0.0	
				Ø20:	51.1	0.0	
				Total:	500.4	96.5	

Elemento	Formas (m2)	Volume (m3)	Barras (kg)
Vigas fundo	64.58	27.80	1983
Forma lateral	244.47		
Forma (Esp. Formas)	139.20	7.30	1075
Total	448.25	35.10	3108
Índice (por m2)	1.474	0.119	6.43

Elemento	Pos.	Diam. (Q.)	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V1	1	Ø12.5	1	205	205	2.0	
	2	Ø8	1	200	200	0.8	
	3	Ø16	1	245	245	3.9	
	4	Ø8	1	140	140	0.6	
	5	Ø8	2	620	1240	4.9	
	6	Ø12.5	2	270	540	5.2	
	7	Ø8	2	260	520	2.1	
	8	Ø10	2	290	580	3.6	
	9	Ø8	2	325	650	3.2	
	10	Ø10	2	795	1590	9.8	
	11	Ø10	2	1045	2090	12.9	
	12	Ø10	2	300	600	3.7	
	13	Ø12.5	1	350	350	3.4	
	14	Ø5	84		94	7896	
				Total+10%	61.7	13.6	
V2	1	Ø8	1	140	140	0.6	
	2	Ø8	2	390	780	3.1	
	3	Ø16	2	290	580	9.2	
	4	Ø8	2	385	770	3.0	
	5	Ø10	2	1045	2090	12.9	
	6	Ø12.5	2	335	670	6.5	
	7	Ø5	48		94	4512	
				Total+10%	39.1	7.8	
V3	1	Ø12.5	1	225	225	2.2	
	2	Ø16	1	260	260	4.1	
	3	Ø20	1	280	280	6.9	
	4	Ø8	2	115	230	0.9	
	5	Ø10	4	290	1160	7.1	
	6	Ø8	2	280	560	2.2	
	7	Ø8	2	235	470	1.9	
	8	Ø10	2	310	620	3.8	
	9	Ø8	2	380	760	3.0	
	10	Ø10	2	789	1578	9.7	
	11	Ø10	2	1039	2078	12.8	
	12	Ø12.5	1	325	325	3.1	
	13	Ø10	1	300	300	1.8	
	14	Ø16	1	380	380	6.0	
	15	Ø5	83		94	7802	
				Total+10%	72.1	13.4	
V4	1	Ø12.5	3	330	990	9.5	
	2	Ø8	3	205	615	2.4	
	3	Ø8	2	370	740	2.9	
	4	Ø8	2	365	730	2.9	
	5	Ø10	4	1059	4236	26.2	
	6	Ø16	1	375	375	5.9	
	7	Ø10	2	355	710	4.4	
	8	Ø5	52		94	4888	
				Total+10%	45.2	8.5	
V5-V19	1	Ø10	3	290	870	5	