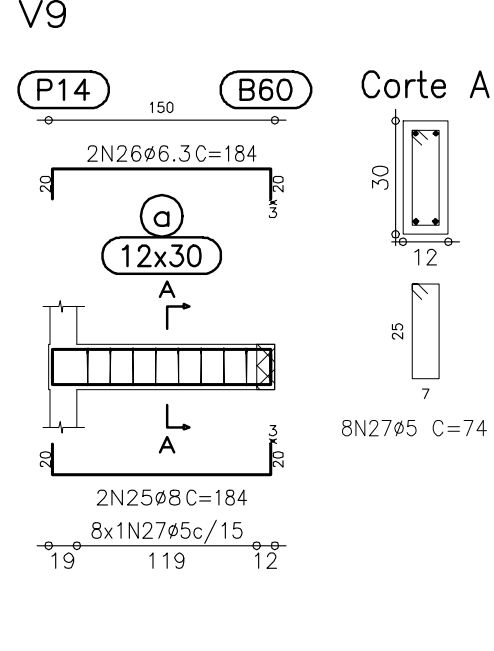
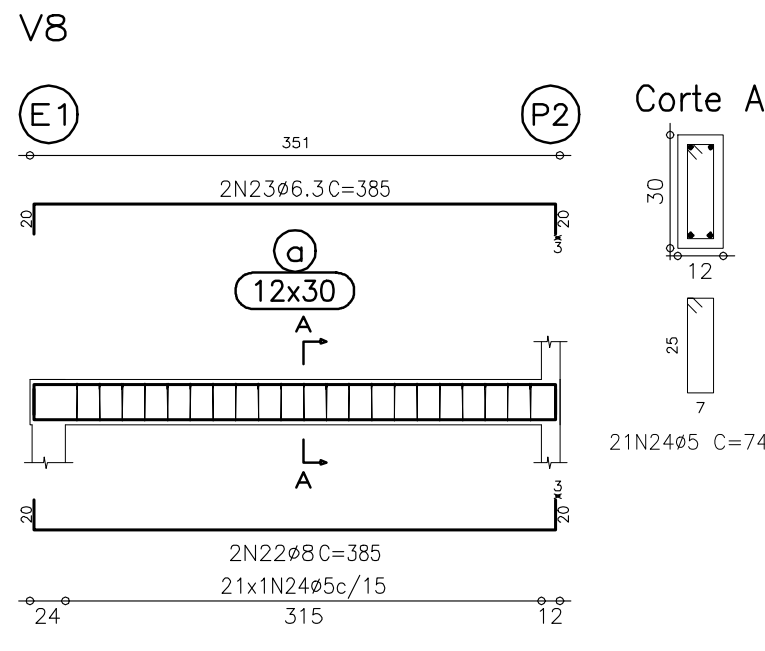
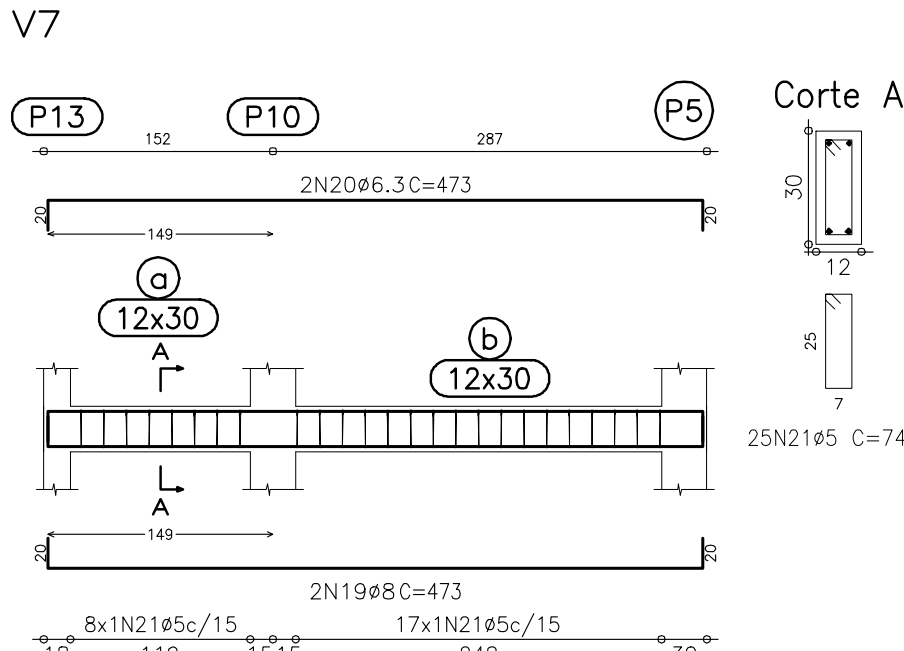
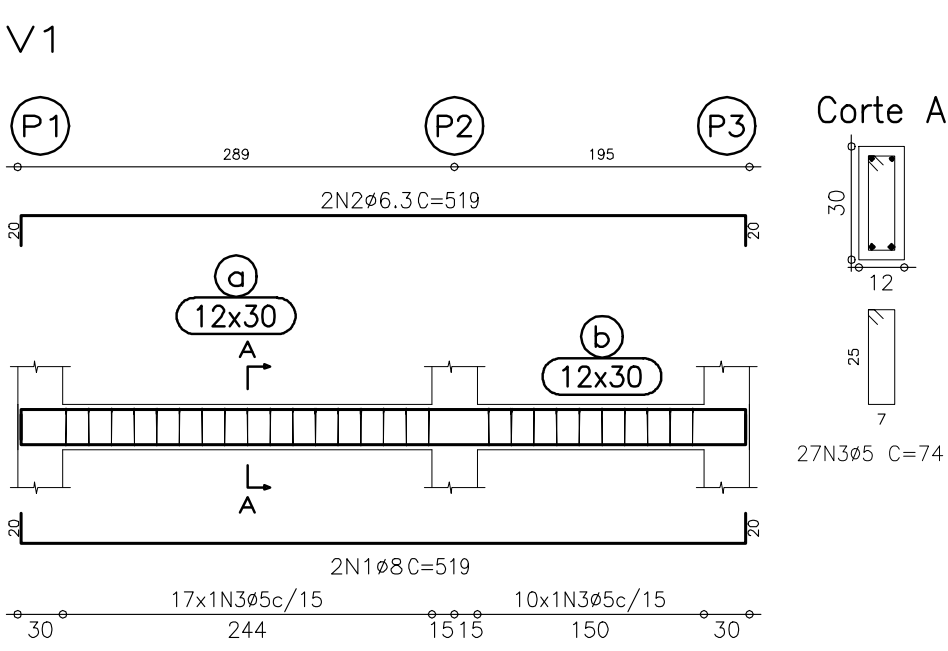


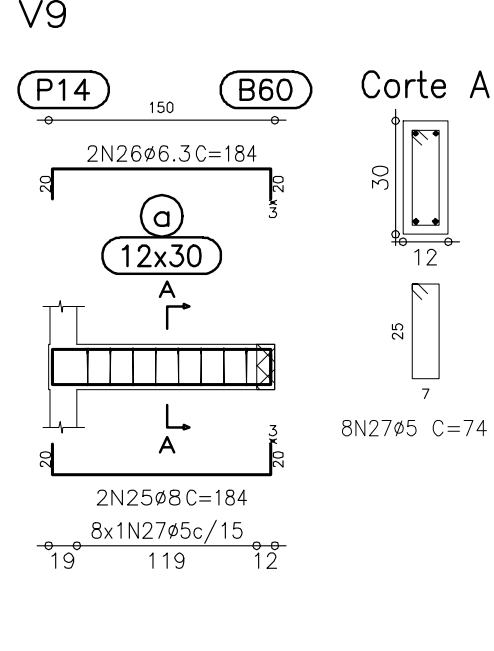
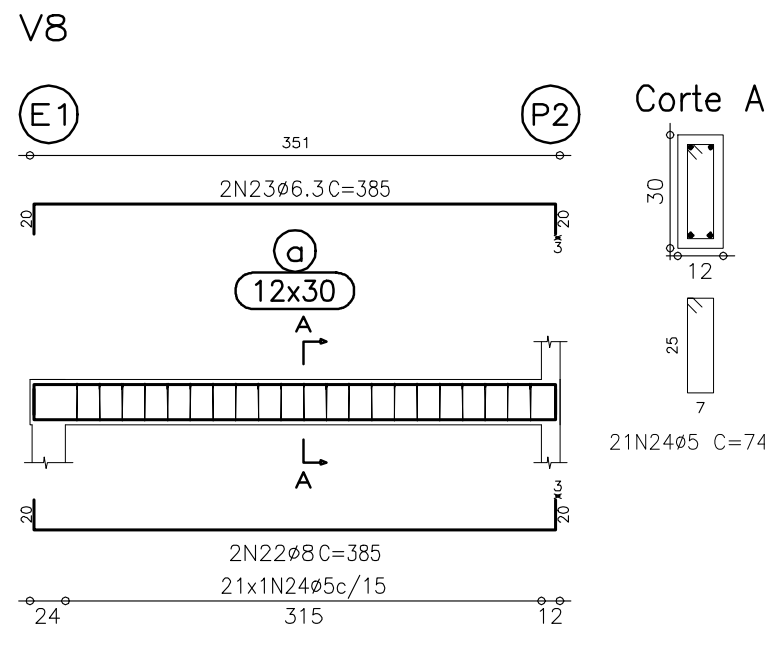
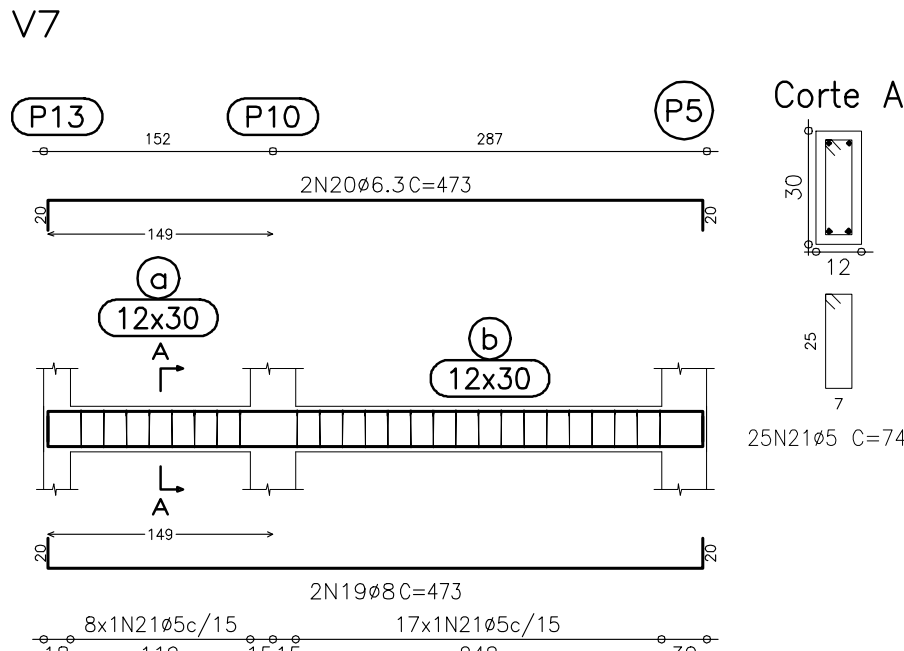
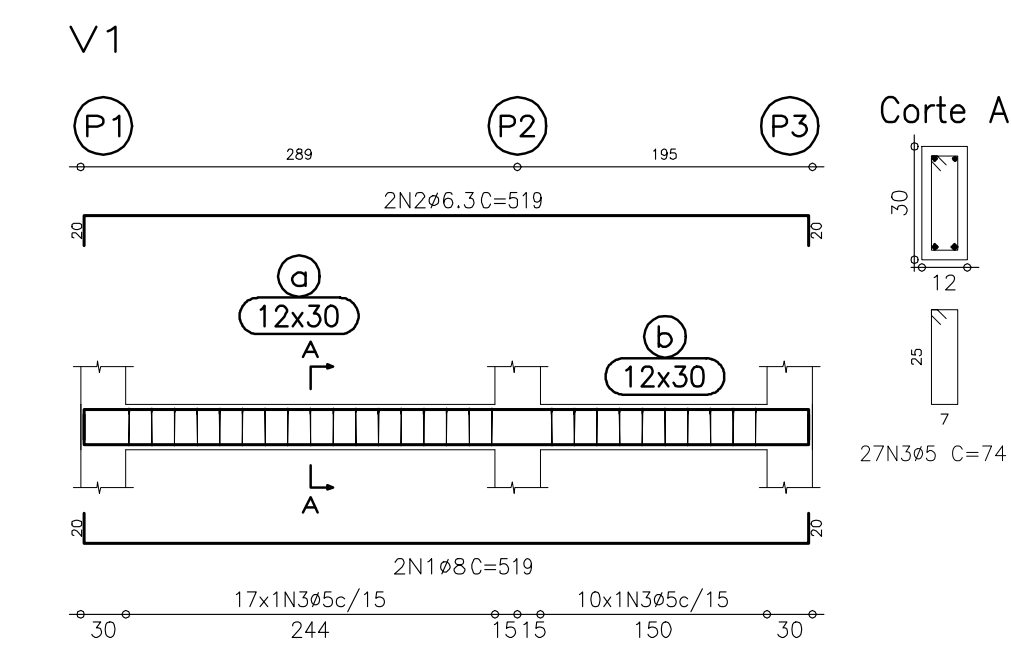
Resumo Aço Baldrame Vigas	Comp. total (m)	Peso (kg)	Total
CA-50-A Ø6.3	97.7	24	64
Ø8	102.3	40	31
CA-60-B Ø5	200.5	31	95
Total			

Baldrame  
Desenho de vigas  
Concreto: C20, em geral  
Aço: CA-50-A e CA-60-B  
Escala vigas: 1:50  
Escala seções: 1:20



Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reto (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V1	1	ø8	2	20	479	20	519	1038	4.1	
	2	ø6.3	2	20	479	20	519	1038	2.6	
	3	ø5	27	20			74	1998		3.1
Total:									6.7	3.1
V2	4	ø8	2	20	254	20	294	588	2.3	
	5	ø6.3	2	20	254	20	294	588	1.5	
	6	ø5	16	20			74	1184		1.9
Total:									3.8	1.9
V3	7	ø8	2	20	826	20	866	1732	4.8	
	8	ø6.3	2	20	826	20	866	1732	6.3	
	9	ø5	50	20			74	3700		5.8
Total:									11.1	5.8
V4	10	ø8	2	20	636	20	676	1352	5.3	
	11	ø6.3	2	20	636	20	676	1352	3.3	
	12	ø5	40	20			74	2960		4.6
Total:									8.6	4.6
V5	13	ø8	2	20	286	20	326	652	2.6	
	14	ø6.3	2	20	286	20	326	652	1.6	
	15	ø5	17	20			74	1258		2.0
Total:									4.2	2.0
V6	16	ø8	2	20	339	20	379	758	3.0	
	17	ø6.3	2	20	339	20	379	758	1.9	
	18	ø5	22	20			74	1628		2.6
Total:									4.9	2.6
V7	19	ø8	2	20	433	20	473	946	3.7	
	20	ø6.3	2	20	433	20	473	946	2.3	
	21	ø5	25	20			74	1850		2.9
Total:									6.0	2.9
V8	22	ø8	2	20	345	20	385	770	3.0	
	23	ø6.3	2	20	345	20	385	770	1.9	
	24	ø5	21	20			74	1554		2.4
Total:									4.9	2.4
V9	25	ø8	2	20	144	20	184	368	1.4	
	26	ø6.3	2	20	144	20	184	368	0.9	
	27	ø5	8	20			74	592		0.9
Total:									2.3	0.9
V10	28	ø8	2	20	339	20	379	758	3.0	
	29	ø6.3	2	20	339	20	379	758	1.9	
	30	ø5	21	20			74	1554		2.4
Total:									4.9	2.4
V11	31	ø8	2	20	74	20	114	228	0.9	
	32	ø8	2	20	74	20	114	228	0.9	
	33	ø5	4	20			74	296		0.5
Total:									1.8	0.5
V12	34	ø8	2	20	364	20	404	808	3.2	
	35	ø6.3	2	20	364	20	404	808	2.0	
	36	ø5	20	20			74	1480		2.3
Total:									5.2	2.3
									ø5: 0.0	31.4
									ø6.3: 24.2	0.0
									ø8: 40.2	0.0
									Total: 64.4	31.4

Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reto (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V1	1	ø8	2	20	479	20	519	1038	4.1	
	2	ø8	2	20	479	20	519	1038	4.1	
	3	ø5	27	20			74	1998		3.1
Total:									8.2	3.1
V2	4	ø8	2	20	354	20	394	788	3.1	
	5	ø8	2	20	354	20	394	788	3.1	
	6	ø5	23	20			74	1702		2.7
Total:									6.2	2.7
V3	7	ø8	2	20	479	20	519	1038	4.1	
	8	ø8	2	20	195	20	195	195	0.8	
	9	ø8	2	20	479	20	519	1038	4.1	
V4	10	ø8	2	20	120	20	120	240	0.9	
	11	ø5	29	20			74	2146		3.4
Total:									9.9	3.4
V5	12	ø8	2	20	636	20	676	1352	5.3	
	13	ø8	2	20	636	20	676	1352	5.3	
	14	ø8	2	20	145	20	145	290	1.1	
V6	15	ø5	40	20			74	2960		4.6
Total:									11.7	4.6
V7	16	ø8	2	20	339	20	379	758	3.0	
	17	ø8	2	20	200	20	200	200	0.8	
	18	ø8	2	20	339	20	379	758	3.0	
V8	19	ø5	22	20			74	1628		2.6
Total:									6.8	2.6
V9	20	ø8	2	20	297	20	337	674	2.6	
	21	ø8	2	20	297	20	337	674	2.6	
	22	ø5	17	20			74	1258		2.0
Total:									5.2	2.0
V10	23	ø8	2	20	339	20	379	758	3.0	
	24	ø8	2	20	339	20	379	758	3.0	
	25	ø5	21	20			74	1554		2.4
Total:									6.0	2.4
V11	26	ø8	2	20	364	20	404	808	3.2	
	27	ø8	2	20	364	20	404	808	3.2	
	28	ø5	20	20			74	1480		2.3
Total:									6.4	2.3
									ø5: 0.0	23.1
									ø8: 60.4	0.0
									Total: 60.4	23.1



Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reto (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V1	1	ø8	2	20	479	20	519	1038	4.1	
	2	ø6.3	2	20	479	20	519	1038	2.6	
	3	ø5	27				74	1998		3.1
Total:									6.7	3.1
V2	4	ø8	2	20	254	20	294	588	2.3	
	5	ø6.3	2	20	254	20	294	588	1.5	
	6	ø5	16				74	1184		1.9
Total:									3.8	1.9
V3	7	ø8	2	20	826	20	866	1732	6.8	
	8	ø6.3	2	20	826	20	866	1732	4.3	
	9	ø5	50				74	3700		5.8
Total:									11.1	5.8
V4	10	ø8	2	20	636	20	676	1352	5.3	
	11	ø6.3	2	20	636	20	676	1352	3.3	
	12	ø5	40				74	2960		4.6
Total:									8.6	4.6
V5	13	ø8	2	20	286	20	326	652	2.6	
	14	ø6.3	2	20	286	20	326	652	1.6	
	15	ø5	17				74	1258		2.0
Total:									4.2	2.0
V6	16	ø8	2	20	339	20	379	758	3.0	
	17	ø6.3	2	20	339	20	379	758	1.9	
	18	ø5	22				74	1628		2.6
Total:									4.9	2.6
V7	19	ø8	2	20	433	20	473	946	3.7	
	20	ø6.3	2	20	433	20	473	946	2.3	
	21	ø5	25				74	1850		2.9
Total:									6.0	2.9
V8	22	ø8	2	20	345	20	385	770	3.0	
	23	ø6.3	2	20	345	20	385	770	1.9	
	24	ø5	21				74	1554		2.4
Total:									4.9	2.4
V9	25	ø8	2	20	144	20	184	368	1.4	
	26	ø6.3	2	20	144	20	184	368	0.9	
	27	ø5	8				74	592		0.9
Total:									2.3	0.9
V10	28	ø8	2	20	339	20	379	758	3.0	
	29	ø6.3	2	20	339	20	379	758	1.9	
	30	ø5	21				74	1554		2.4
Total:									4.9	2.4
V11	31	ø8	2	20	74	20	114	228	0.9	
	32	ø6.3	2	20	74	20	114	228	0.9	
	33	ø5	4				74	296		0.5
Total:									1.8	0.5
V12	34	ø8	2	20	364	20	404	808	3.2	
	35	ø6.3	2	20	364	20	404	808	2.0	
	36	ø5	20				74	1480		2.3
Total:									5.2	2.3
ø5:									0.0	31.4
ø6.3:									24.2	0.0
ø8:									40.2	0.0
Total:									64.4	31.4