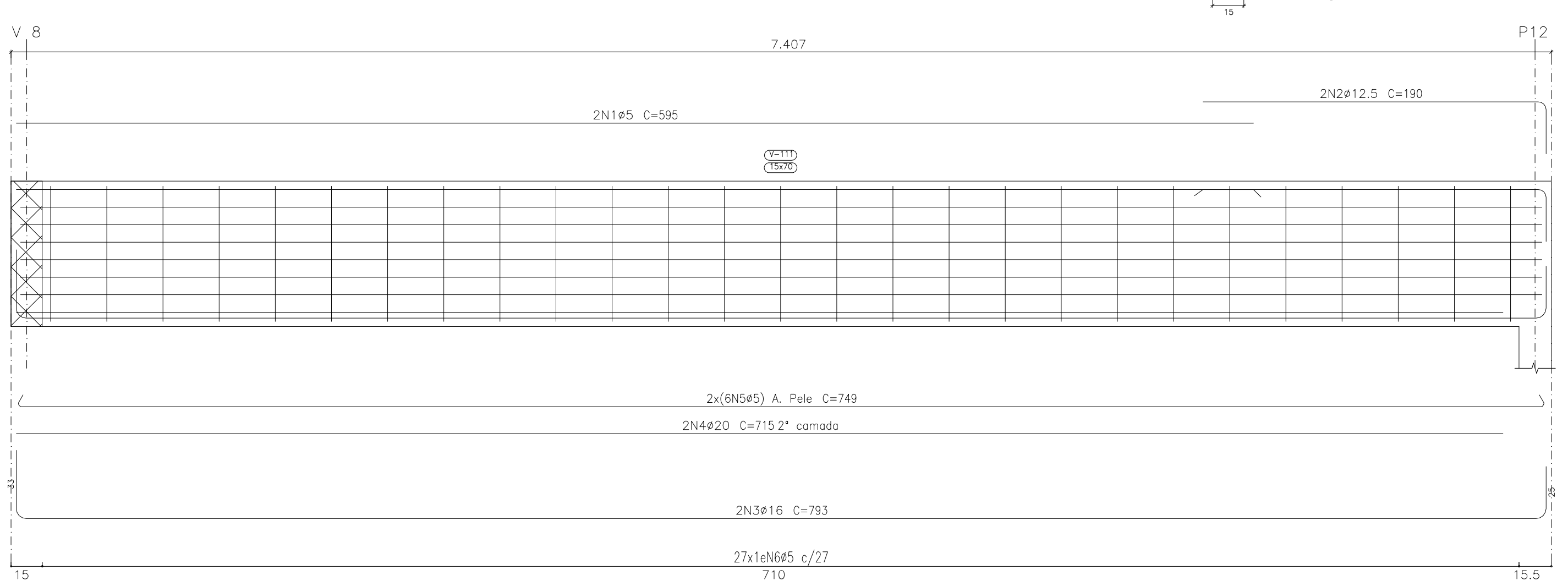
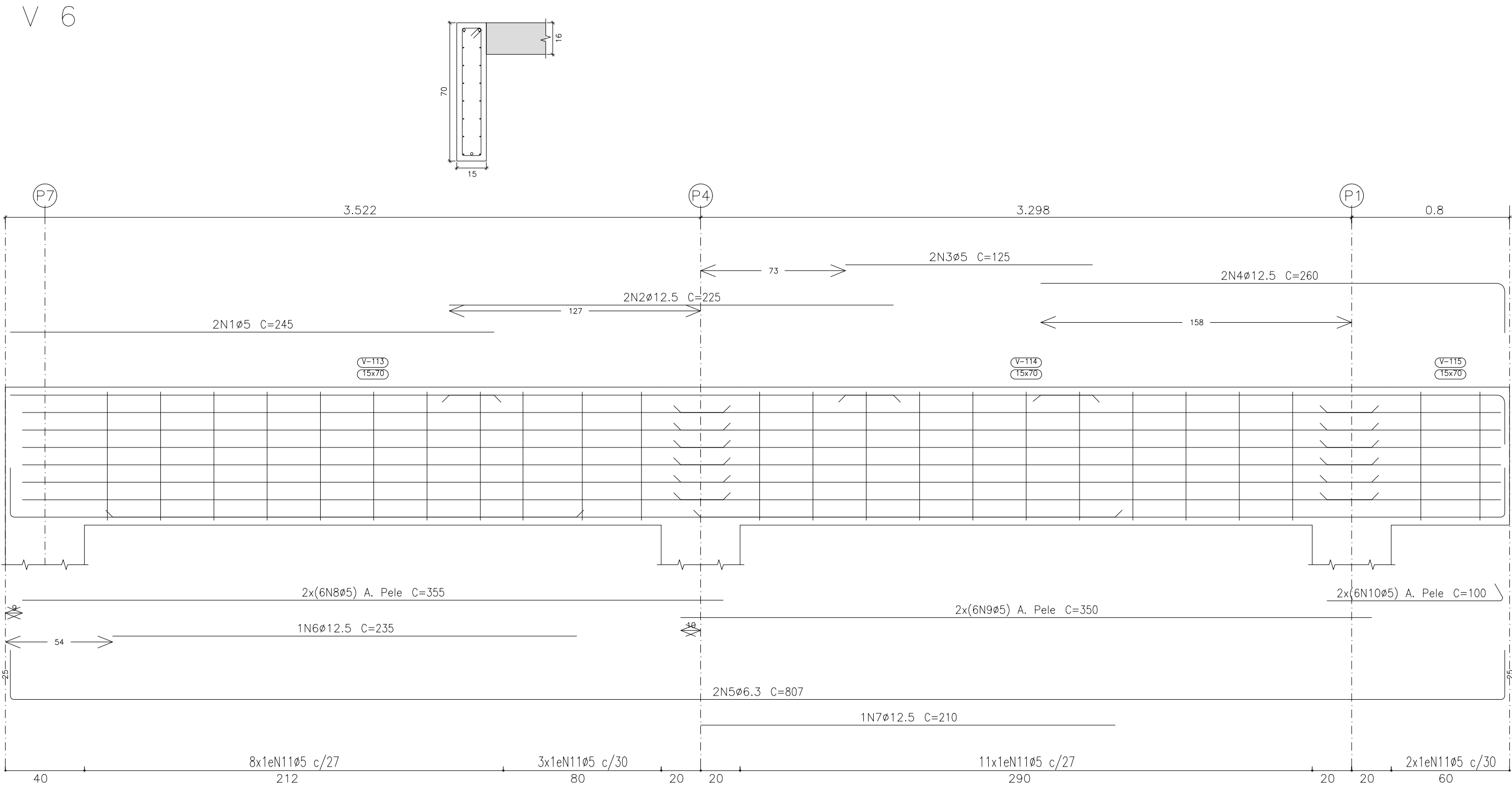


Laje  
Desenho de vigas  
Concreto: C30, em geral  
Aço das barras: CA-50 e CA-60  
Aço dos estribos: CA-50 e CA-60  
Escala vigas 1:20  
Escala seções 1:20  
Escala aberturas 1:20

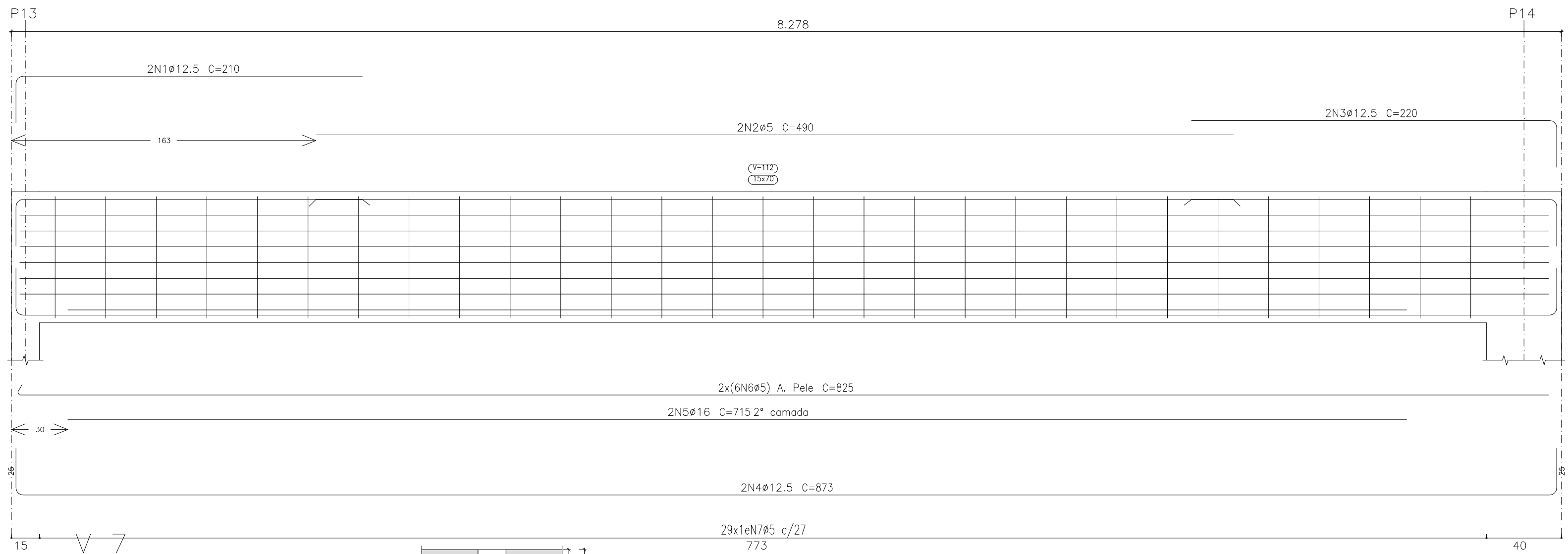
V 4



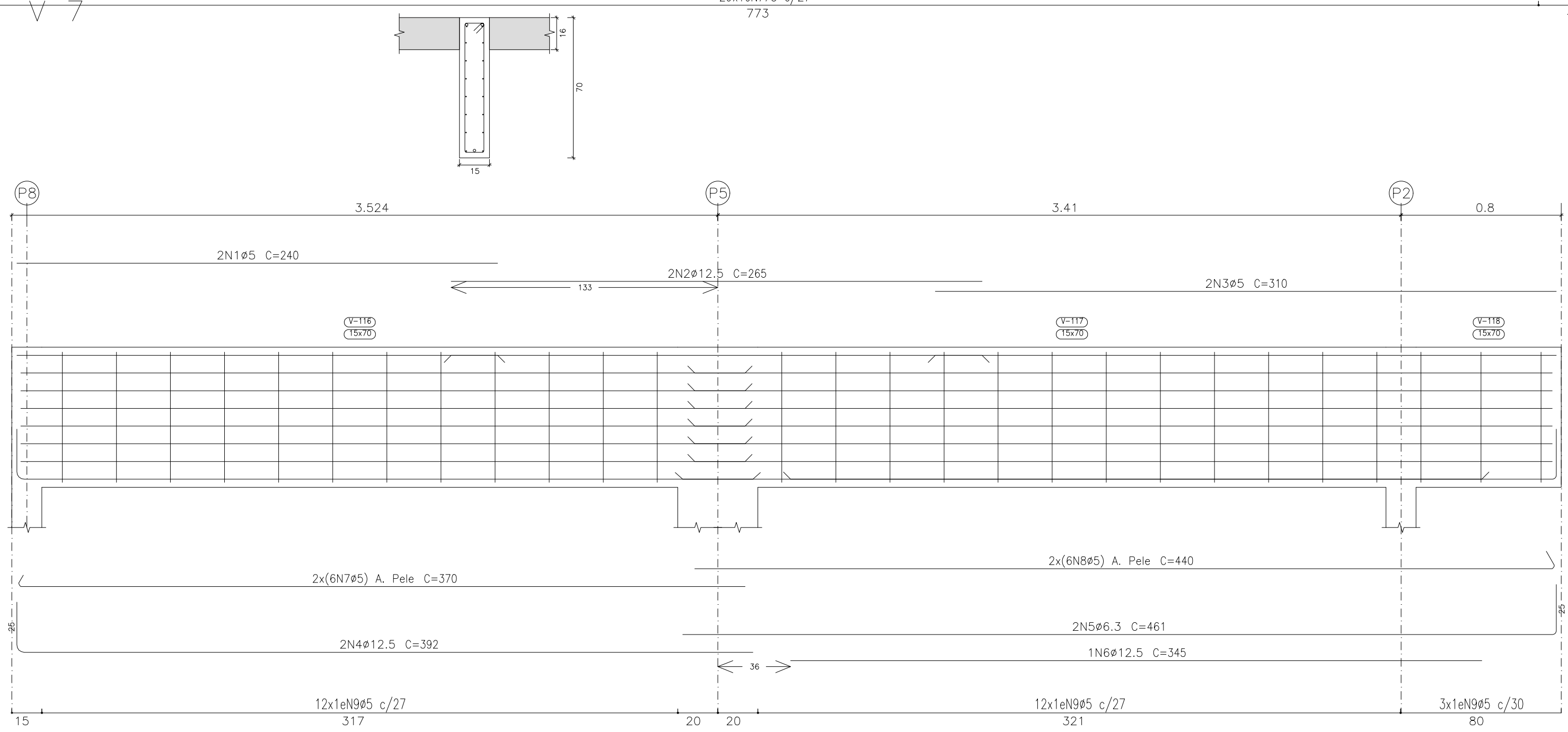
V 6



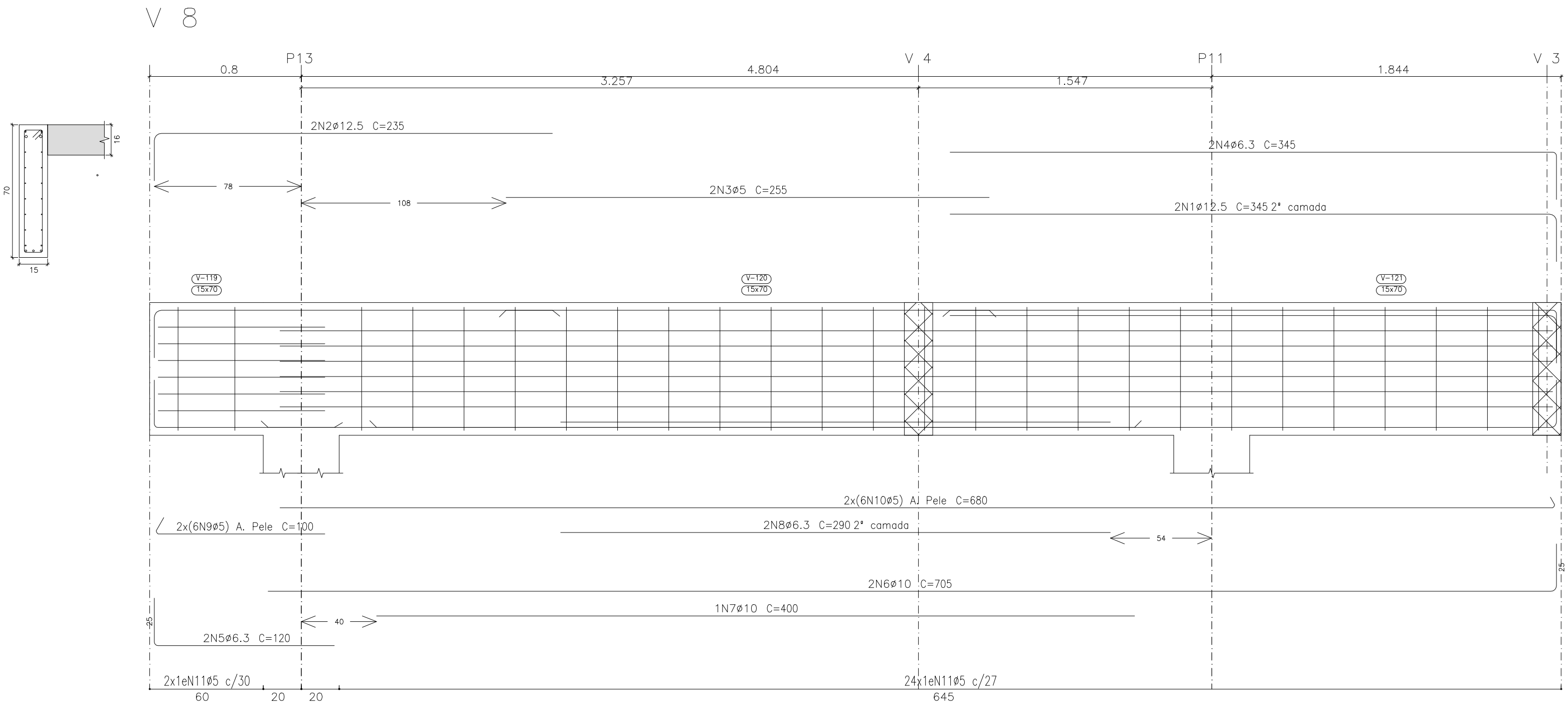
V 5



V 7



V 8



Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp (cm)	Total (cm)	Total (kg)	Total (kg)
V 4	1	ø5	2	595	595	1190	1.9	
	2	ø12.5	2	185	190	380	3.7	
	3	ø16	2	736	793	1586	25.0	
	4	ø20	2	715	715	1430	35.3	
	5	ø5	12	736	749	8988	14.1	
	6	ø5	27	10	158	4266	6.7	
Total+10%							70.4	25.0
V 5	1	ø12.5	2	185	210	420	4.0	
	2	ø5	2	490	490	980	1.5	
	3	ø12.5	2	190	220	440	4.2	
	4	ø12.5	2	823	873	1746	16.8	
	5	ø16	2	715	715	1430	22.6	
	6	ø5	12	715	825	9900	15.5	
	7	ø5	29	10	158	4582	7.2	
Total+10%							52.4	26.6
V 6	1	ø5	2	245	245	490	0.8	
	2	ø12.5	2	225	225	450	4.3	
	3	ø5	2	125	125	250	0.4	
	4	ø12.5	2	235	260	520	5.0	
	5	ø6.3	2	737	807	1614	4.0	
	6	ø12.5	1	235	235	235	2.3	
	7	ø12.5	1	210	210	210	2.0	
	8	ø5	12	355	355	4265	6.7	
	9	ø5	12	355	350	4200	6.6	
	10	ø5	12	90	100	1200	1.9	
	11	ø5	24	10	158	3792	6.0	
Total+10%							19.4	24.6
V 7	1	ø5	2	240	240	480	0.8	
	2	ø12.5	2	265	265	530	5.1	
	3	ø5	2	310	310	620	1.0	
	4	ø12.5	2	307	392	784	7.6	
	5	ø6.3	2	436	461	922	2.3	
	6	ø12.5	1	345	345	345	3.3	
	7	ø5	12	384	370	4440	7.0	
	8	ø5	12	430	440	5280	8.3	
	9	ø5	27	10	158	4266	6.7	
Total+10%							20.1	26.2
V 8	1	ø12.5	2	305	345	690	6.6	
	2	ø12.5	2	230	235	470	4.5	
	3	ø5	2	255	255	510	0.8	
	4	ø6.3	2	350	345	690	1.7	
	5	ø6.3	2	95	120	240	0.6	
	6	ø10	2	480	705	1410	8.7	
	7	ø10	1	400	400	400	2.5	
	8	ø6.3	2	290	290	580	1.4	
	9	ø5	12	90	100	1200	1.9	
	10	ø5	12	674	680	8160	12.8	
	11	ø5	26	10	158	4108	6.4	
Total+10%							28.6	24.1
							ø5:	0.0
							ø6.3:	11.0
							ø10:	12.3
							ø12.5:	76.4
							ø16:	52.4
							ø20:	38.8
							Total:	190.9
								126.5