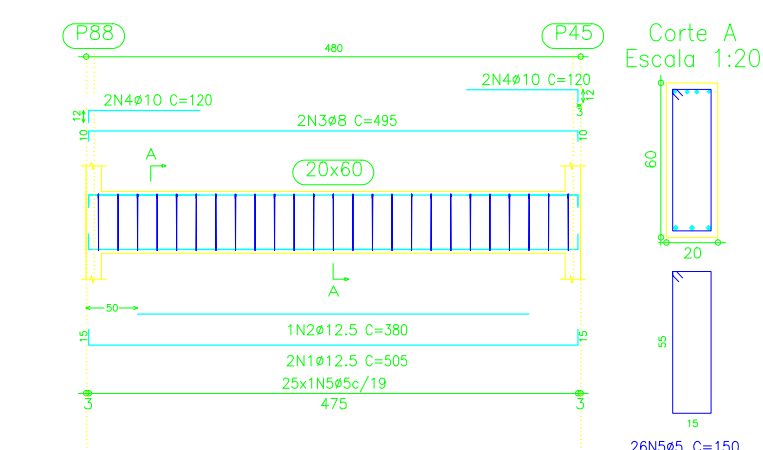
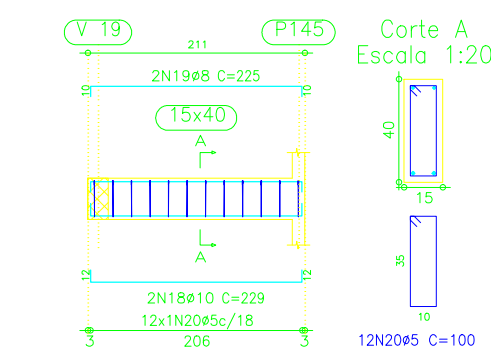


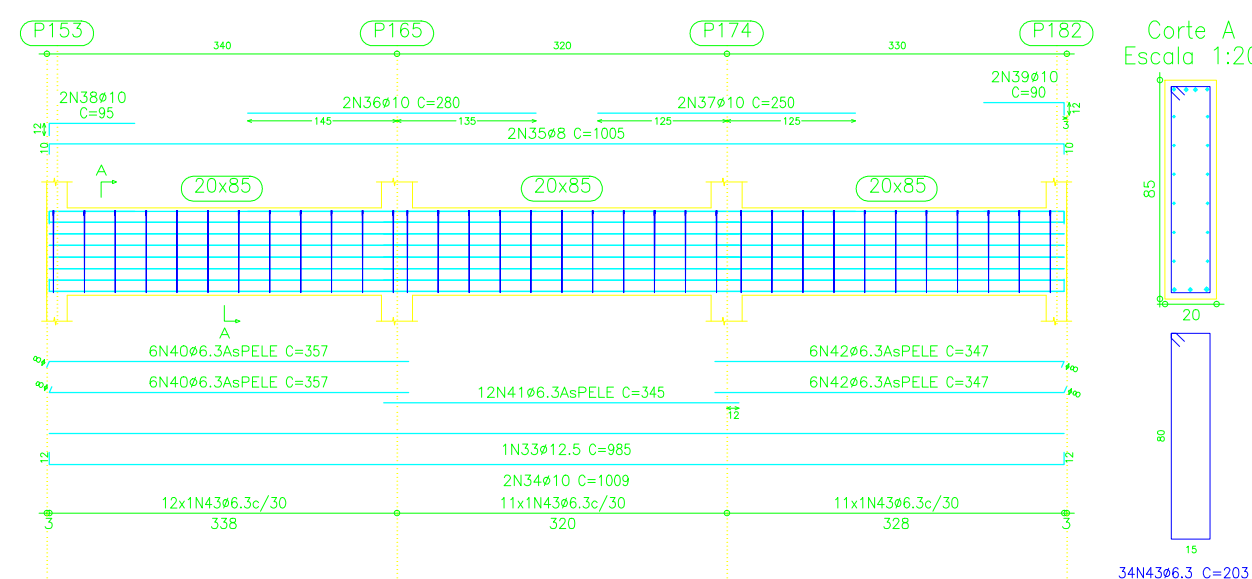
V 153
Escala 1:50



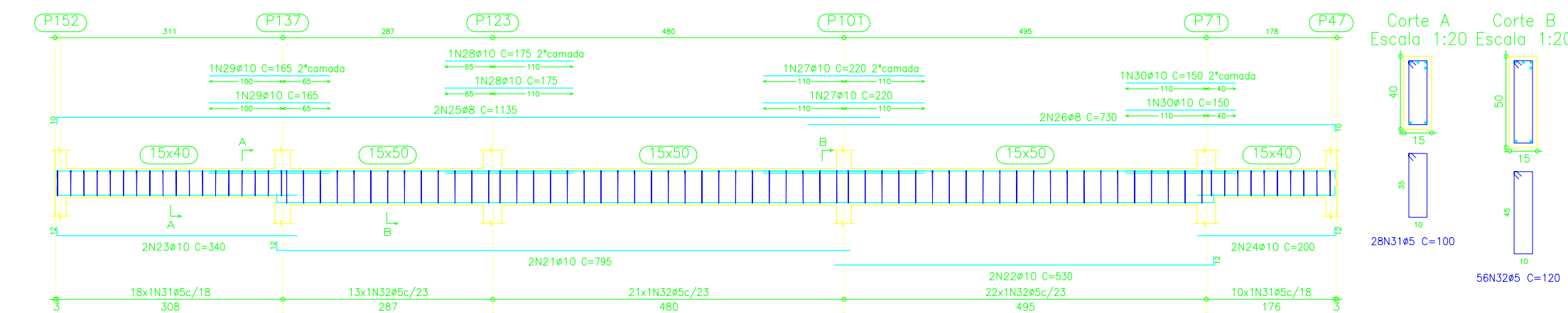
V 170
Escala 1:50



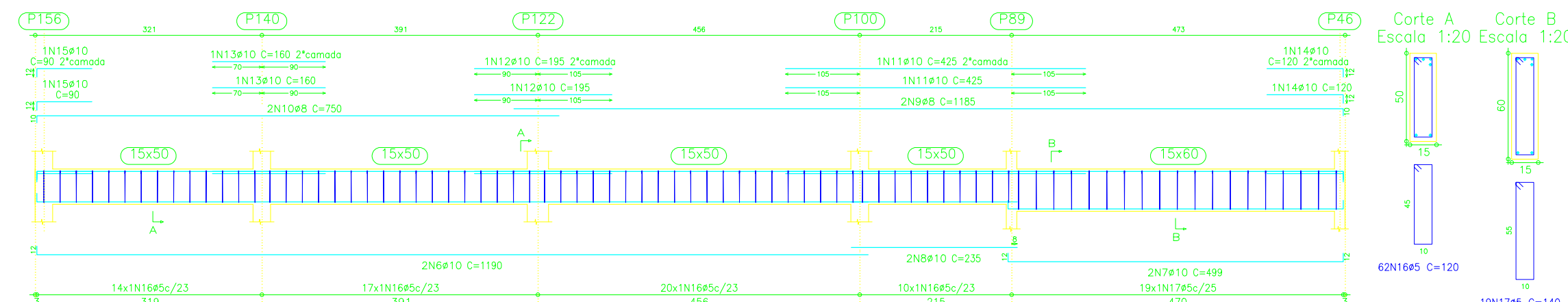
V 168
Escala 1:50



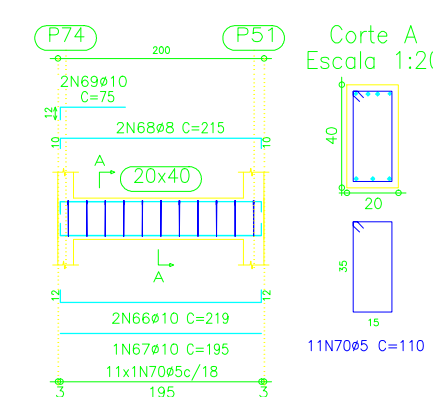
V 167
Escala 1:50



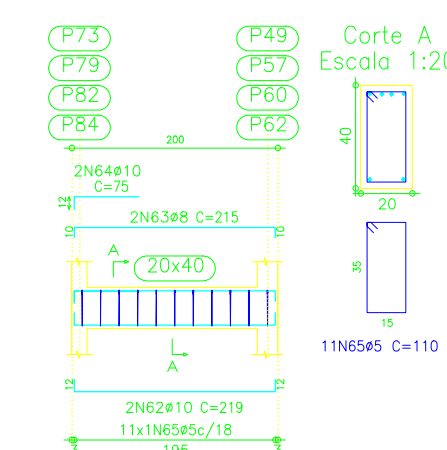
V 171
Escala 1:50



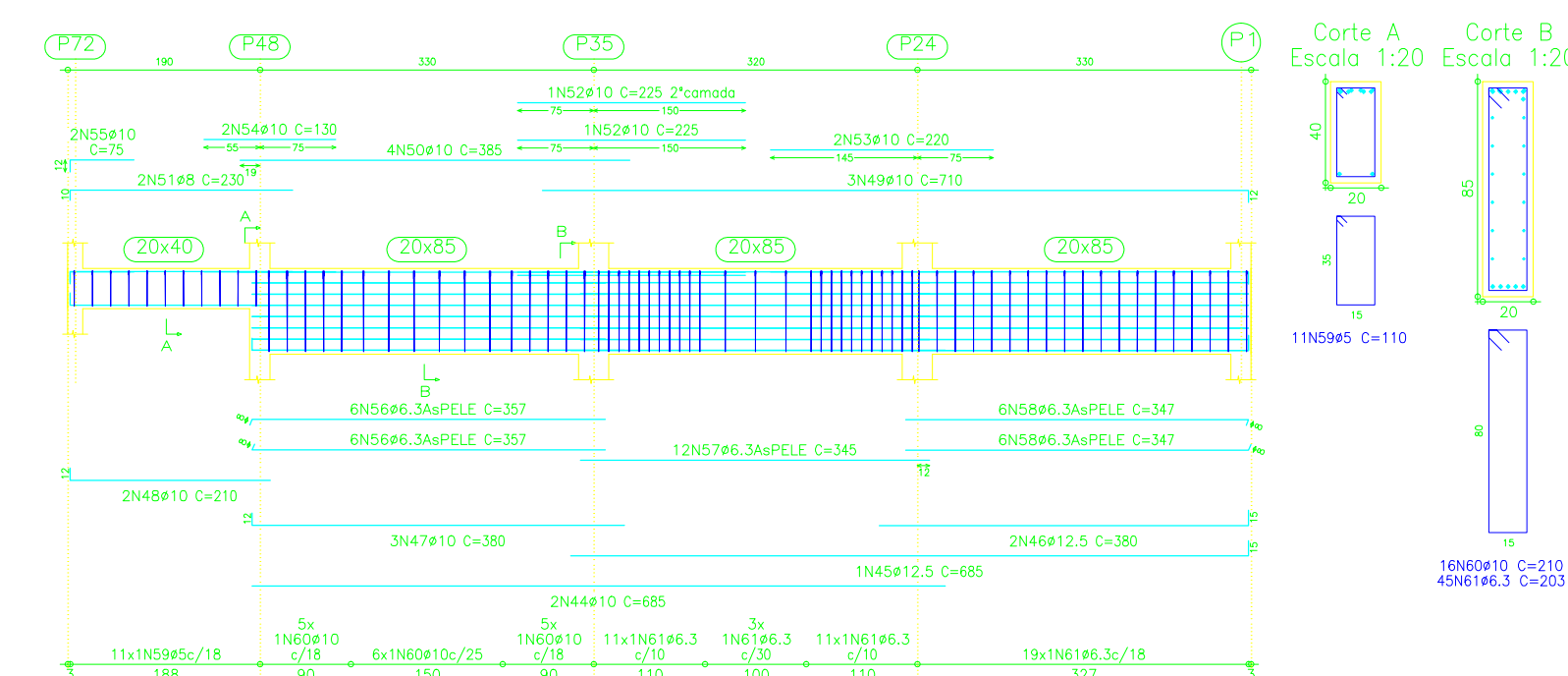
V 124
Escala 1:50



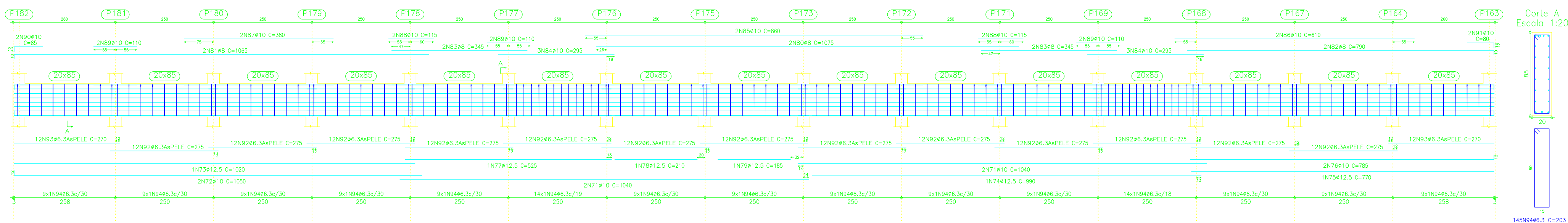
V 123
V 127
V 129
V 130
Escala 1:50



V 122
Escala 1:50



V 173
Escala 1:50



Primeiro piso
Desenho de vigas
Concreto: C25, com desloav.
Aço: CA-50-A e CA-60-B
Escala viga: 1:50
Escala seção: 1:20

Elemento	Pos.	Diam.	Q.	Doç.	Reid.	Doç.	Comp.	Toto.	CA-50	CA-60-B
V 153	1	ø12.5	2	15	475	15	555	1010	9.8	
	2	ø12.5	4	10	380	10	380	380	3.7	
	3	ø8	4	10	475	10	495	980	5.8	
	4	ø10	4	12	108	12	120	480	3.0	
	5	ø5	25					150	3750	5.9
Total=108									22.6	6.5
V 171	6	ø10	2	12	1178	12	1190	2380	14.9	
	7	ø10	2	12	475	12	490	980	6.3	
	8	ø10	23	235	1175	10	235	470	3.0	
	9	ø8	2	12	1175	10	1185	2370	9.3	
	10	ø8	23	740	750	1500	5.9			
	11	ø10	23	425	425	800	5.3			
	12	ø10	23	195	195	390	2.4			
	13	ø10	23	160	160	320	2.0			
	14	ø10	12	108	120	240	1.5			
	15	ø10	12	78	90	180	1.1			
	16	ø5	6	1	120	2200				11.5
	17	ø5	19		140	2660				4.2
Total=108									56.9	17.3
V 136	18	ø10	2	12	205	12	225	458	2.9	
	19	ø8	23	10	205	10	225	450	1.8	
	20	ø5	12					100	1200	1.9
Total=108									5.2	2.1
V 167	21	ø10	2	12	783	12	795	1590	10.0	
	22	ø10	2	12	518	12	530	1060	6.7	
	23	ø10	23	328	340	680	4.3			
	24	ø10	23	198	12	200	400	2.5		
	25	ø8	23	1125	1135	2270	8.9			
	26	ø8	2	12	730	1460	5.7			
	27	ø10	23	220	220	440	2.8			
	28	ø10	23	175	175	350	2.2			
	29	ø10	23	165	165	330	2.1			
	30	ø10	23	150	150	300	1.9			
	31	ø5	28		100	2800				4.4
	32	ø5	56		120	6720				10.6
Total=108									51.8	16.5
V 168	33	ø12.5	1	985	985	9.7				
	34	ø10	2	12	985	12	1009	2018	12.7	
	35	ø8	2	10	985	10	1009	2010	7.9	
	36	ø10	2	10	280	280	560	3.5		
	37	ø10	2	10	250	250	500	3.1		
	38	ø10	23	12	63	95	190	1.2		
	39	ø10	2	78	12	95	190	1.2		
	40	ø6.3	12	8	348	357	4284	10.6		
	41	ø6.3	12	345	345	4140	10.2			
	42	ø6.3	12	339	8	347	4164	10.3		
	43	ø6.3	34		203	6902	17.1			
Total=108									96.1	
V 122	44	ø10	2	685	685	6.6				
	45	ø12.5	2	670	15	380	760	7.5		
	46	ø10	2	12	368	380	760	7.5		
	47	ø10	2	12	368	210	420	2.6		
	48	ø10	3	688	12	710	1310	13.4		
V 124	49	ø10	4	385	385	1540	9.7			
	50	ø10	23	220	220	440	2.8			
	51	ø8	23	220	230	460	1.8			
	52	ø10	23	225	225	450	2.8			
	53	ø10	23	220	220	440	2.8			
	54	ø10	23	130	130	260	1.6			
	55	ø10	23	12	63	75	150	0.9		
	56	ø6.3	12	8	348	357	4284	10.6		
	57	ø6.3	12	345	345	4140	10.2			
	58	ø6.3	12	339	8	347	4164	10.3		
	59	ø6.3	11		110	1210				1.9
	60	ø10	16	175	210	3380	21.1			
	61	ø6.3	44		203	6902	22.1			
Total=108									153.9	2.1
V 123+V 127+V 129+V 130	62	ø10	2	12	195	12	219	438	2.8	
	63	ø8	2	10	195	10	215	430	1.7	
	64	ø10	2	12	63	75	150	0.9		
	65	ø5	11			110	1210			1.9
Total=108									5.9	8.4
V 124	66	ø10	2	12	195	12	219	438	2.8	
	67	ø10	2	10	195	10	215	430	1.7	
	68	ø8	2	10	195	10	215	430	1.7	
	69	ø10	2	12	63	75	150	0.9		
	70	ø5	11			110	1210			1.9
Total=108									7.3	2.1
V 173	71	ø10	4	1040	1040	4160	26.1			
	72	ø10	2	12	1038	1050	2100	13.2		
	73	ø12.5	1	1020	1020	1020	10.0			
	74	ø12.5	1	990	990	990	9.7			
	75	ø12.5	1	770	770	770	7.6			
	76	ø10	2	773	785	1570	9.9			
	77	ø12.5	1	525	525	525	5.2			
	78	ø12.5	1	210	210	210	2.1			
	79	ø12.5	1	185	185	185	1.8			
	80	ø8	2	1075	1075	2150	6.4			
	81	ø8	2	1020	1060	2120	6.4			
	82	ø8	2	780	790	1580	6.2			
	83	ø8	4	545	545	1090	5.4			
	84	ø10	6	295	295	1770	11.1			
	85	ø10	2	860	860	1720	10.8			
	86	ø10	2	610	610	1220	7.7			
	87	ø10	2	380	380	760	4.8			
	88	ø10	4	115	115	460	2.9			
	89	ø10	6	110	110	860	4.1			
	90	ø10	2	72	80	170	1.1			
	91	ø10	2	68	12	80	160	0.0		
	92	ø6.3	156	275	275	42900	106.1			
	93	ø6.3	24	270	270	6480	16.0			
	94	ø6.3	145		203	29430	72.8			
Total=108									387.6	
									ø5:	0.0
									ø6.3:	325.8
									ø8:	90.1
									ø10:	307.8
									ø12.5:	81.3
									Total:	855.0
										55.0

OBSERVAÇÕES

- Medidas das cotas em cm (exceto onde indicado)
- Verificar medidas na obra
- Molhar as formas antes da concret