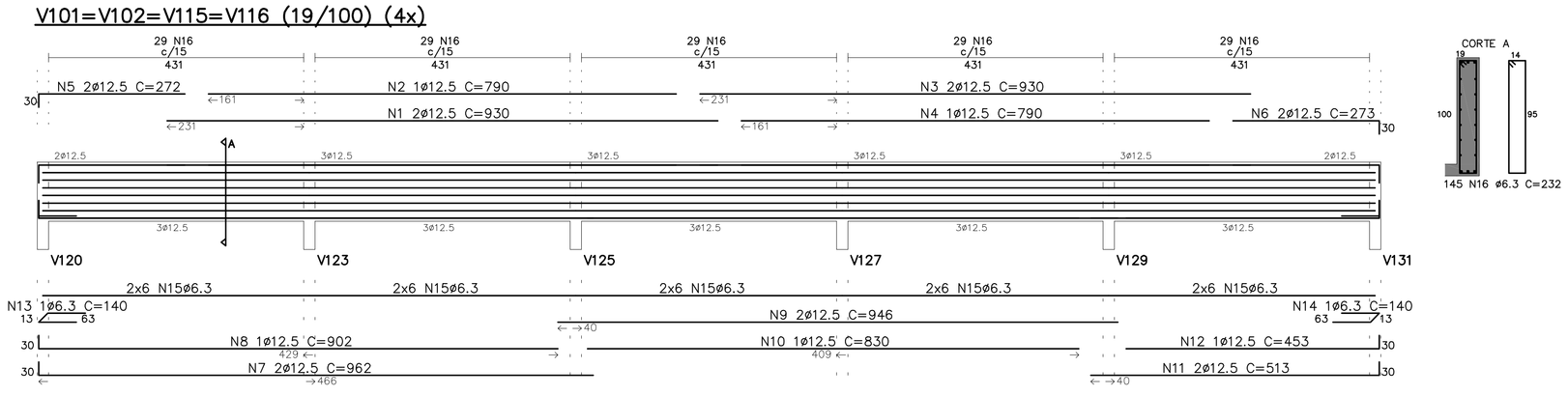
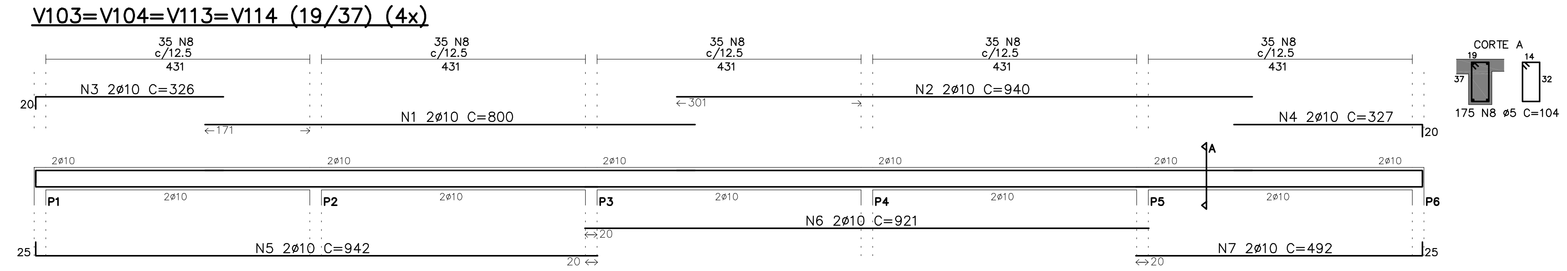
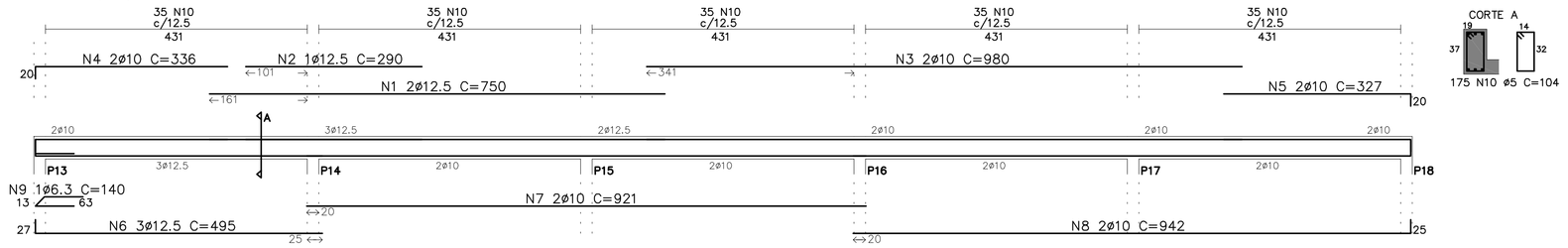
V101=V102=V115=V116 (19/100) (4x)



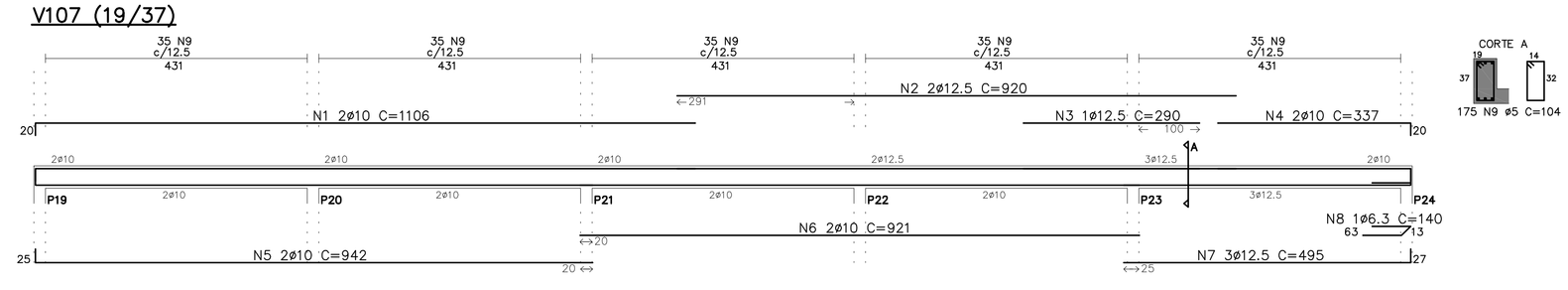
V103=V104=V113=V114 (19/37) (4x)



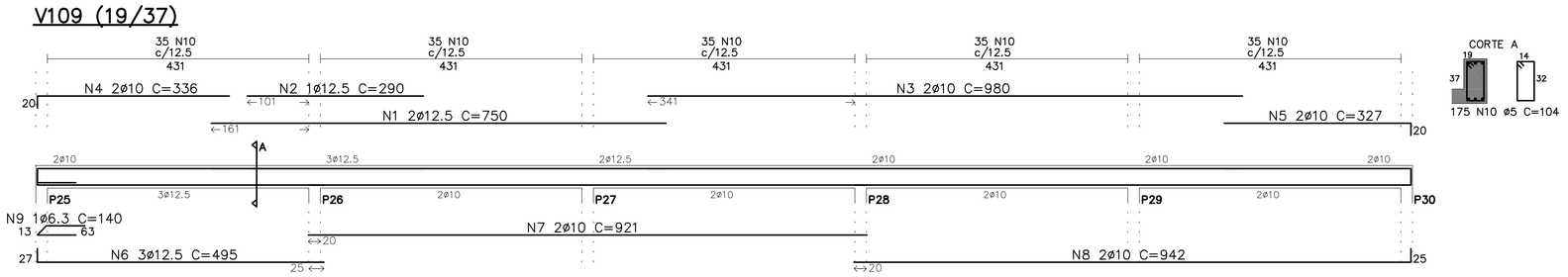
V105 (19/37)



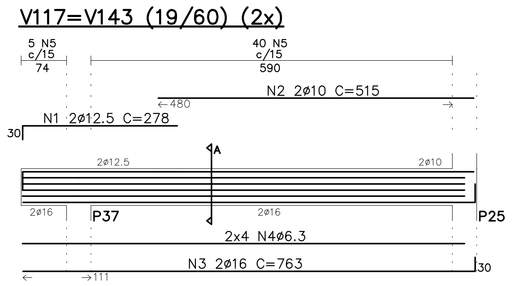
V107 (19/37)



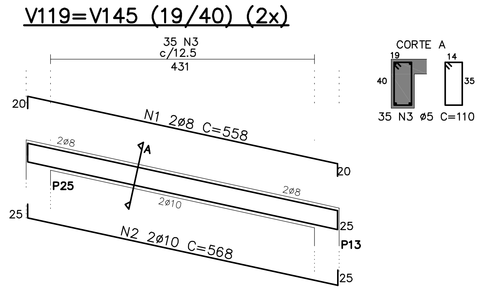
V109 (19/37)



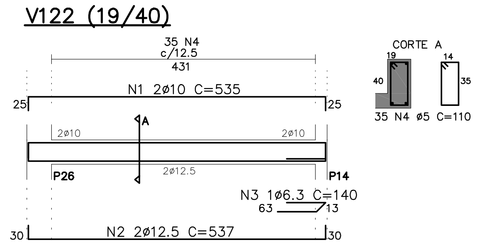
V117=V143 (19/60) (2x)



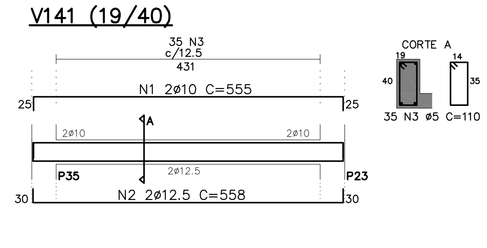
V119=V145 (19/40) (2x)



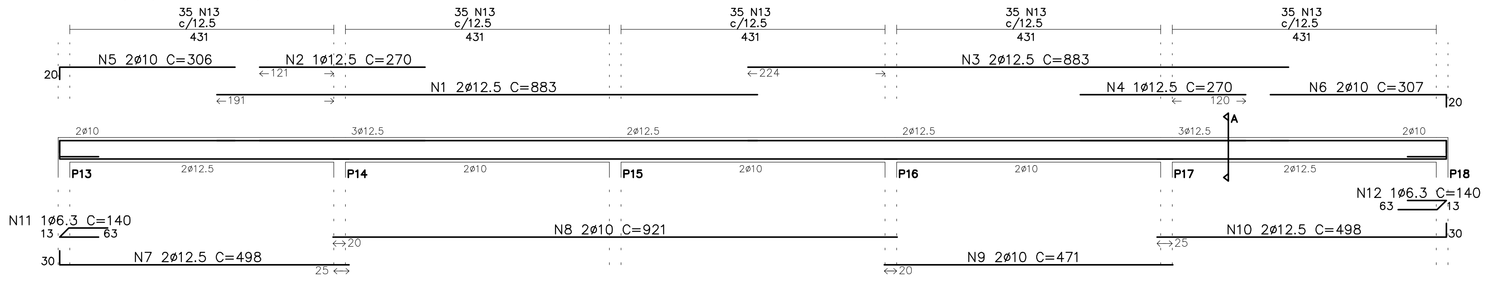
V122 (19/40)



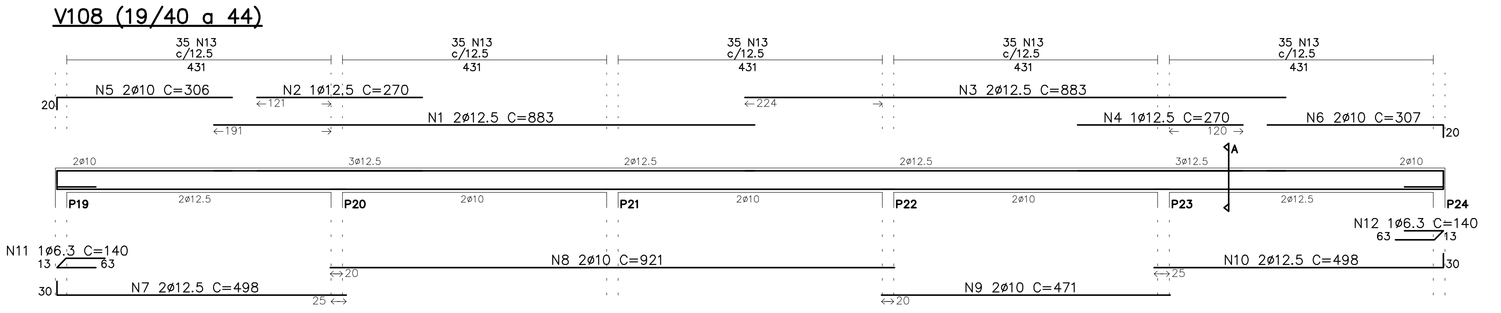
V141 (19/40)



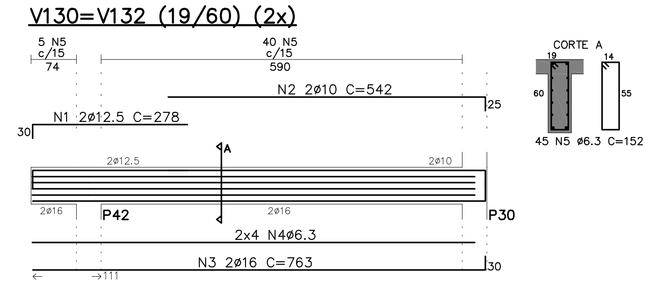
V106 (19/40 a 44)



V108 (19/40 a 44)



V130=V132 (19/60) (2x)



V101=V102=V115=V116 (4x)				
N	ø	Q	UNI	TOTAL
1	12.5	2	930	1860
2	12.5	1	790	790
3	12.5	2	930	1860
4	12.5	1	790	790
5	12.5	2	272	544
6	12.5	2	273	546
7	12.5	2	962	1924
8	12.5	1	902	902
9	12.5	2	946	1892
10	12.5	1	830	830
11	12.5	2	513	1026
12	12.5	1	453	453
13	6.3	1	140	140
14	6.3	1	140	140
15	6.3			27540
16	6.3	145	232	33640

V103=V104=V113=V114 (4x)				
N	ø	Q	UNI	TOTAL
1	10	2	800	1600
2	10	2	940	1880
3	10	2	326	652
4	10	2	327	654
5	10	2	942	1884
6	10	2	921	1842
7	10	2	492	984
8	5	175	104	18200

V105				
N	ø	Q	UNI	TOTAL
1	12.5	2	750	1500
2	12.5	1	290	290
3	10	2	980	1960
4	10	2	336	672
5	10	2	327	654
6	12.5	3	495	1485
7	10	2	921	1842
8	10	2	942	1884
9	6.3	1	140	140
10	5	175	104	18200

V106				
N	ø	Q	UNI	TOTAL
1	12.5	2	883	1766
2	12.5	1	270	270
3	12.5	2	883	1766
4	12.5	1	270	270
5	10	2	306	612
6	10	2	307	614
7	12.5	2	498	996
8	10	2	921	1842
9	10	2	942	1884
10	12.5	2	498	996
11	6.3	1	140	140
12	6.3	1	140	140
13	5	175	114	19950

V107				
N	ø	Q	UNI	TOTAL
1	10	2	1106	2212
2	12.5	2	920	1840
3	12.5	1	290	290
4	10	2	337	674
5	10	2	942	1884
6	10	2	921	1842
7	12.5	3	495	1485
8	6.3	1	140	140
9	5	175	104	18200

V108				
N	ø	Q	UNI	TOTAL
1	12.5	2	883	1766
2	12.5	1	270	270
3	12.5	2	883	1766
4	12.5	1	270	270
5	10	2	306	612
6	10	2	307	614
7	12.5	2	498	996
8	10	2	921	1842
9	10	2	471	942
10	12.5	2	498	996
11	6.3	1	140	140
12	6.3	1	140	140
13	5	175	114	19950

V109				
N	ø	Q	UNI	TOTAL
1	12.5	2	750	1500
2	12.5	1	290	290
3	10	2	980	1960
4	10	2	336	672
5	10	3	327	654
6	12.5	3	495	1485
7	10	2	921	1842
8	10	2	942	1884
9	6.3	1	140	140
10	5	175	104	18200

V117=V143 (2x)				
N	ø	Q	UNI	TOTAL
1	12.5	2	278	556
2	10	2	515	1030
3	16	2	763	1526
4	6.3			5892
5	6.3	45	152	6840

V118=V144 (2x)				
N	ø	Q	UNI	TOTAL
1	10	2	556	1112
2	12.5	2	558	1116
3	5	35	110	3850

V119=V145 (2x)				
N	ø	Q	UNI	TOTAL
1	8	2	523	1046
2	10	2	556	1112
3	5	35	110	3850

V122				
N	ø	Q	UNI	TOTAL
1	10	2	535	1070
2	12.5	2	537	1074
3	6.3	1	140	140
4	5	35	110	3850

V130=V132 (2x)				
N	ø	Q	UNI	TOTAL
1	12.5	2	278	556
2	10	2	542	1084
3	16	2	763	1526
4	6.3			5892
5	6.3	45	152	6840

V141				
N	ø	Q	UNI	TOTAL
1	10	2	555	1110
2	12.5	2	558	1116
3	5	35	110	3850

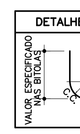
RESUMO DAS VIGAS DA COBERTURA (01/02)

ACO	ø	COMPR(cm)	PESO(kg)
60B	5	189860	304
50A	6.3	297888	745
50A	8	2162	9
50A	10	77520	489
50A	12.5	82607	827
50A	16	6104	98
50A	20	–	–
50A	25	–	–
PESO TOTAL (kg)			2472

NOTAS:

01–CONCRETO= fck ≥25 MPa
02–AÇO= CA–50 – fyk=500 MPa
CA–60 – fyk=600 MPa
03–MEDIDAS EM cm, NÍVEIS EM m.
04–NÃO TIRAR MEDIDAS EM ESCALA.
05–CONFIRMAR MEDIDAS NO LOCAL.
06– COBRIMENTO=2,5cm

DETALHE DO RAIO DE CURVATURA (R)



ø (mm)	R (cm)	C.C. (cm)
12.5	10	16
16	13	21
20	16	25
25	20	31

C.C.=COMPRIMENTO DA CURVA

CR-1 - PADRÃO ESTACA 206

No.	MODIFICAÇÕES	APROVAÇÃO	DATA	APROVAÇÃO	DATA
		AUTOR DO PROJETO		FDE	

OBSERVAÇÕES

DESENHO DE REFERENCIA | No. | APROVAÇÃO | DATA
FDE

APROVAÇÃO | DATA
AUTOR DO PROJETO

PROJETO EXECUTIVO: FDE FUNDAÇÃO PARA O DESENVOLVIMENTO DA EDUCAÇÃO

PROJETO DE IMPLANTAÇÃO DE ARQUITETURA: apiacás arquitetos
ARQUITETOS | ANDERSON FROTAS, PEDRO BARROS, ACACIA FURUYA
R GENERAL JARDIM 482 CJ.132 VILA BUARQUE CEP 01223-010 SÃO PAULO PABX (11) 3159 1970
apiacas@apiacasarquitetos.com.br
RESPONSAVEL TECNICO: PEDRO AMANDO DE BARROS – CAU NºA92385-0

FUNDAÇÃO PARA O DESENVOLVIMENTO DA EDUCAÇÃO – F D E

ESCOLA – NOME/LOCAL: TERRENO TERRENO JARDIM DONA EMÍLIA – JAÚ/SP		CODIGO: 1202400
INTERVENÇÃO: OBRA NOVA DE CRECHE		No. LOTE: 01
ETAPA/AREA TECNICA: PROJETO EXECUTIVO DE ESTRUTURA	TIPO PROJETO: PAD CR–1	DATA: AGO/2015
CONTEÚDO: ARMAÇÃO DAS VIGAS DA COBERTURA (01/02)	ESCALA: INDICADA	FOLHA: 07/08

ETAPA/AREA TECNICA: PE – EST
REVISÃO: 00

DESENHO GERADO PELO SISTEMA CAD – PDR ENGECALC ENGENHARIA E PROJETOS ESTRUTURAIS S/C LTDA

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