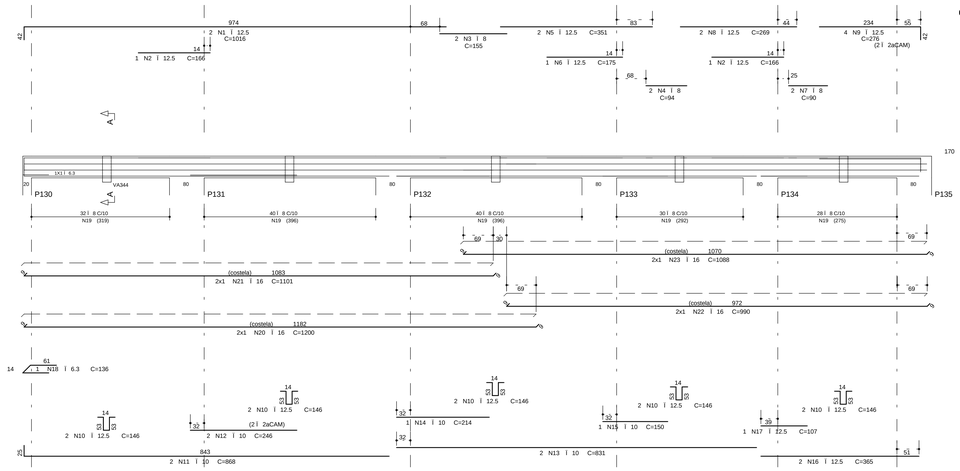
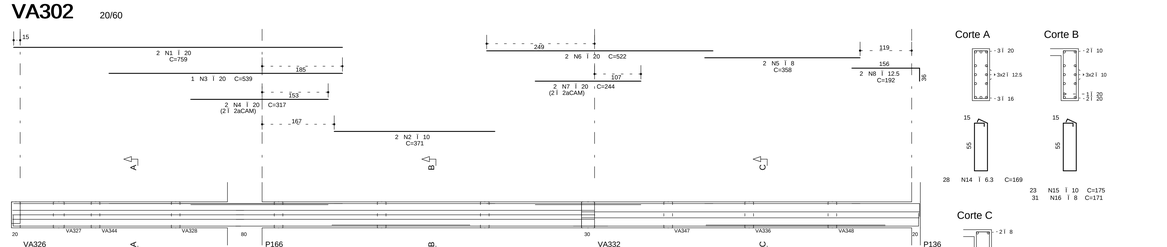
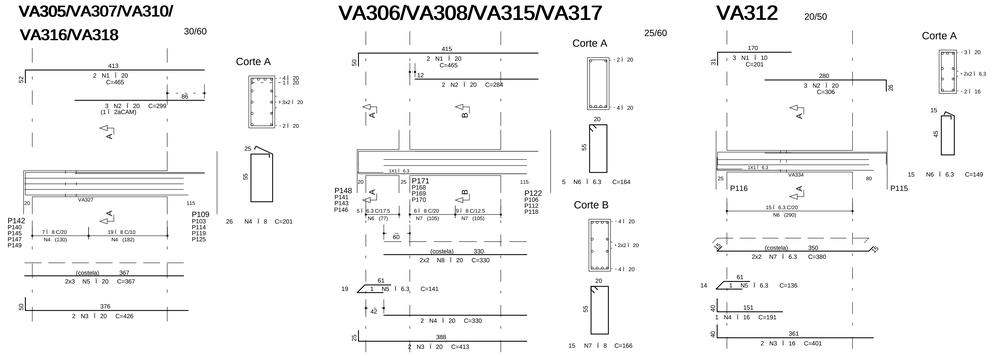
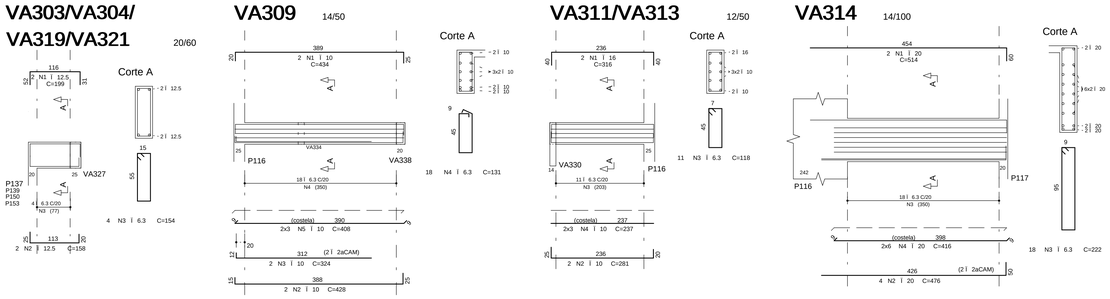


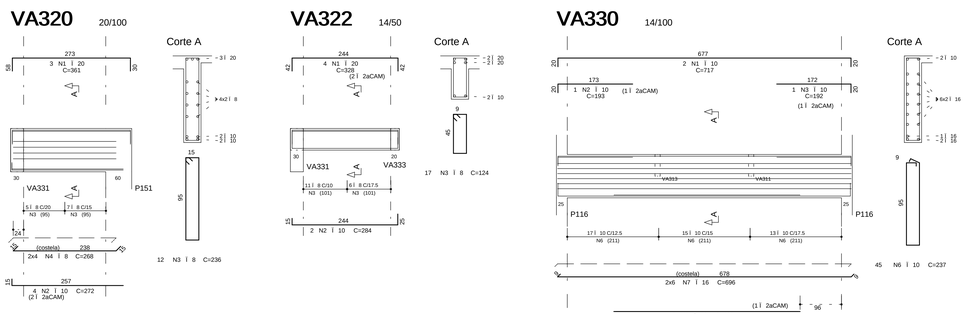


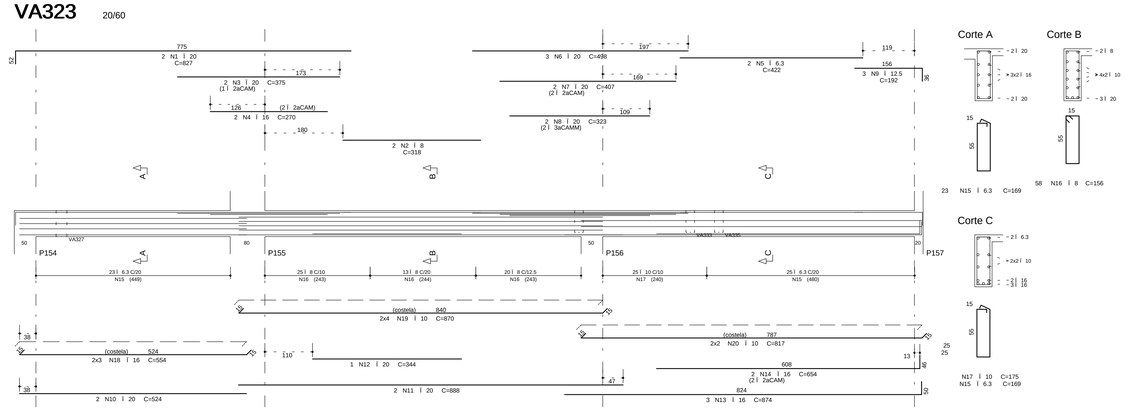
A4 O	POS	BIT (mm)	QUANT.	COMPRIMENTO UNIT. (cm)	COMPRIMENTO TOTAL (cm)
VA301					
50A	1	12.5	2	1018	2032
50A	2	12.5	2	196	392
50A	3	8	2	156	312
50A	4	8	2	186	372
50A	5	12.5	2	351	702
50A	6	12.5	1	175	175
50A	7	8	2	166	332
50A	8	12.5	2	269	538
50A	9	12.5	4	276	1104
50A	10	12.5	2	166	332
50A	11	10	2	166	332
50A	12	10	2	246	492
50A	13	10	2	214	428
50A	14	10	1	214	214
50A	15	10	1	150	150
50A	16	12.5	2	146	292
50A	17	12.5	1	107	107
50A	18	6.3	1	136	136
50A	19	8	173	151	26123
50A	20	10	7	1150	8050
50A	21	10	2	1151	2302
50A	22	10	2	1088	2176
50A	23	10	2	1101	2202
VA302					
50A	1	20	2	759	1518
50A	2	20	2	371	742
50A	3	20	1	539	539
50A	4	20	2	317	634
50A	5	20	2	364	728
50A	6	20	2	522	1044
50A	7	20	2	244	488
50A	8	12.5	2	192	384
50A	9	10	2	371	742
50A	10	20	2	859	1718
50A	11	20	1	319	319
50A	12	20	2	859	1718
50A	13	20	1	414	828
50A	14	6.3	28	195	4732
50A	15	8	28	171	4788
50A	16	8	7	171	1197
50A	17	12.5	4	564	2264
50A	18	10	2	858	1716
50A	19	10	2	810	1620
VA303 (XA1)					
50A	1	12.5	8	139	1392
50A	2	6.3	8	158	1264
50A	3	6.3	16	154	2464
VA305 (XA2)					
50A	1	20	8	298	2384
50A	2	20	15	298	4465
50A	3	20	15	406	6090
50A	4	20	15	301	4515
VA306/VA308/VA315/VA317 (XA3)					
50A	1	20	8	465	3720
50A	2	20	8	465	3720
50A	3	20	8	413	3304
50A	4	20	4	330	1320
50A	5	6.3	8	144	1152
50A	6	6.3	20	144	2880
50A	7	6	60	186	6960
50A	8	6	60	186	6960
VA309 (XA4)					
50A	1	10	2	434	868
50A	2	10	2	434	868
50A	3	10	2	324	648
50A	4	6.3	16	131	2096
50A	5	8	18	131	2358
VA311/VA313 (XA5)					
50A	1	16	4	316	1264
50A	2	6.3	8	291	2328
50A	3	6.3	11	119	2618
50A	4	8	11	119	1309
VA312					
50A	1	10	8	201	1608
50A	2	10	2	401	802
50A	3	10	2	401	802
50A	4	10	1	191	191
50A	5	6.3	1	191	191
50A	6	6.3	15	148	2220
50A	7	6.3	4	380	1520
VA314					
50A	1	20	2	414	1828
50A	2	20	14	223	3906
50A	3	20	12	416	5992
VA320					
50A	1	10	2	361	1082
50A	2	10	2	272	1088
50A	3	8	4	268	1072
50A	4	8	4	268	1072
VA322					
50A	1	20	4	329	1316
50A	2	20	2	284	568
50A	3	8	17	124	2108
VA323					
50A	1	20	2	827	1654
50A	2	20	2	375	750
50A	3	20	2	275	550
50A	4	6.3	2	270	540
50A	5	8	2	270	540
50A	6	20	2	498	996
50A	7	20	2	407	814
50A	8	20	2	407	814
50A	9	12.5	2	192	384
50A	10	20	2	524	1048
50A	11	20	2	324	648
50A	12	20	1	244	244
50A	13	10	1	374	1522
50A	14	10	2	318	636
50A	15	6.3	49	108	5292
50A	16	8	58	136	9548
50A	17	8	8	136	1088
50A	18	10	4	870	3480
50A	19	10	4	870	3480
50A	20	10	2	1151	2302
VA330					
50A	1	10	2	717	1434
50A	2	10	2	192	384
50A	3	10	2	192	384
50A	4	16	2	765	1530
50A	5	16	2	430	860
50A	6	16	2	191	382
50A	7	16	11	191	2102
VA349					
50A	1	10	2	400	800
50A	2	10	2	281	562
50A	3	20	2	219	438
50A	4	20	2	837	1674
50A	5	20	2	529	1058
50A	6	20	2	394	788
50A	7	10	5	296	1530
50A	8	10	5	296	1530
VA350					
50A	1	10	4	225	900
50A	2	10	2	603	1206
50A	3	10	2	287	574
50A	4	16	4	197	788
50A	5	16	2	197	394
50A	6	20	2	245	490
50A	7	20	5	966	4830
50A	8	20	5	966	4830
50A	9	10	10	229	2290
50A	10	10	28	170	4760
50A	11	10	28	170	4760
50A	12	10	6	433	2598
VA351					
50A	1	10	2	285	570
50A	2	16	11	223	2899
50A	3	16	2	223	446
50A	4	16	5	146	370
50A	5	20	4	733	2932
50A	6	20	4	620	2480
50A	7	10	2	311	622
50A	8	10	24	450	10800
50A	9	10	10	450	4500
50A	10	10	10	701	7010
50A	11	10	24	480	11040

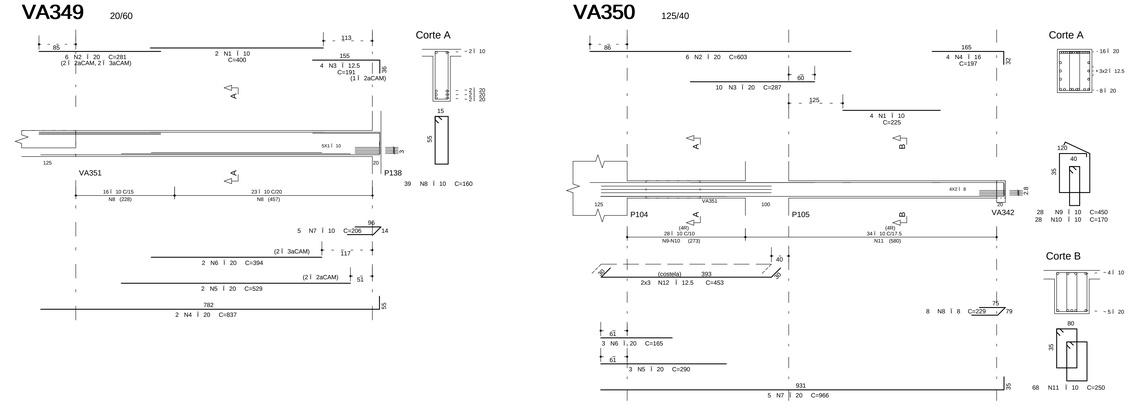
RESUMO A4.O C.A. 50-60			
A4.O	BIT (mm)	COMPR. (cm)	PESO (kg)
50A	6.3	2540	98
50A	8	1360	1357
50A	10	1362	859
50A	12.5	187	187
50A	16	197	197
50A	20	966	2386
Peso Total 50A =			4671 kg

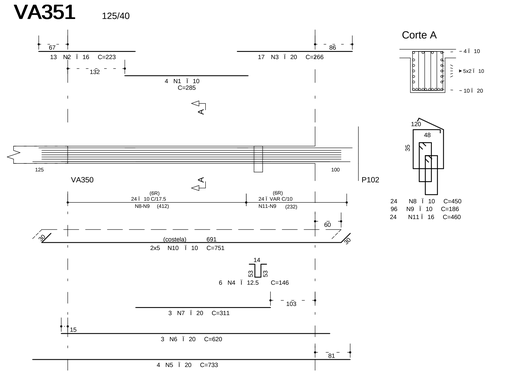












COBRIMENTO DA ARMADURA:

- LAJES = 2,0 cm
- VIGAS E PILARES = 2,5 cm
- BLOCOS,BALDRAMES E CONTENCOES (FACE EM CONTATO COM A TERRA) = 3,0 cm

1. ESSES COBRIMENTOS DEVERAO SER GARANTIDOS COM O USO DE ESPACADORES OU PASTILHAS.
COBRIMENTOS ESPECIFICOS EM CONTRARIO AOS VALORES INDICADOS ACIMA, ESTAO INDICADOS NOS DESENHOS DE FORMAS DOS PAVIMENTOS.

NORMAS UTILIZADAS:

NBR-6118/2003 - PROJETO E EXECUCAO DE OBRAS DE CONCRETO ARMADO
NBR-6120/1980 - CARGAS PARA O CALCULO DE ESTRUTURAS DE EDIFICACOES

INDICE:

VA301 A VA323, VA330, VA349 A VA351

FCK= 35 MPa
EC = 28 GPa (MODULO DE ELASTICIDADE SECANTE AOS 28 DIAS).
A/C = 0,65 (FATOR AGUA CIMENTO)

REV	DATA	DESCRICAO
3	20/08/2014	NUMERACAO FINAL
2	22/08/2012	REVISAO DA VA350 E VA351
1	25/07/2012	ALTERACAO: INCLUSAO DAS VIGAS VA349, VA350 e VA351
0	16/07/2012	EMISSAO INICIAL

Simetria Engenharia
SIA QUADRA AC No 53 SALAS 201 A 203
BRASILIA-DF CEP: 71200-045
PABX: (0XX61) 3036-9633
simetria@simetria.eng.br

PROJETO ESTRUTURAL

CLIENTE:	GENT INCORPORADORA LTDA		
OBRA:	ED. RESIDENCIAL/COMERCIAL PAINEIRAS	No OBRA:	XXX
ENDEREKCO OBRA:	RUA 30 NORTE LOTE 03 - RUA DAS PAINEIRAS - AGUAS CLARAS DF		
DESCRICAO:	ARMACAO DAS VIGAS - TORRE 1 JUNTA A - TERREO (01/02)	DESENHO No:	BL1 042-090

DESENHISTA:	DATA:	ESCALA:	UNIDADE	No PROJ. SIMETRIA:
TOSI PRISCILLA	16/07/2012	1:50	CM	478

ARQUIVO:PLT
478 -EST-BL1- 042-090 -R03 -VIG.PLT

PROPRIETARIO: RESPONSAVEL TECNICO

RESPONSAVEL TECNICO PELO PROJETO ESTRUTURAL
SIMETRIA ENGENHARIA E PROJETOS S/C LTDA
CREA:2725/RF

SIMETRIA ENGENHARIA E PROJETOS S/C LTDA PLT:V:\Projetos\PR - COSMOPOLITAN - TORRE 1 - JUNTA A\02 TERREO\VIGAS\VIGAS.PLT 20/08/2014 14:26:34