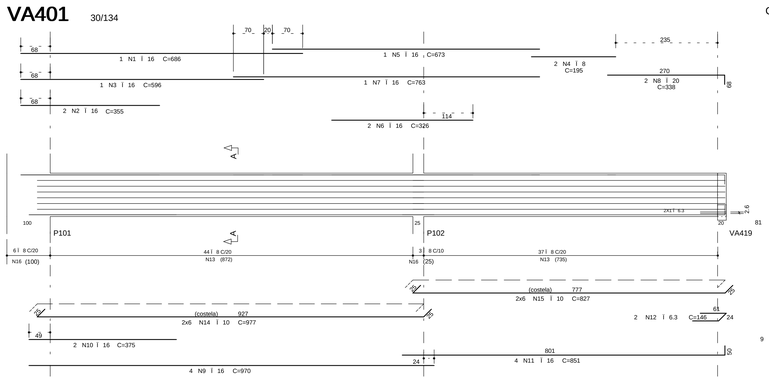

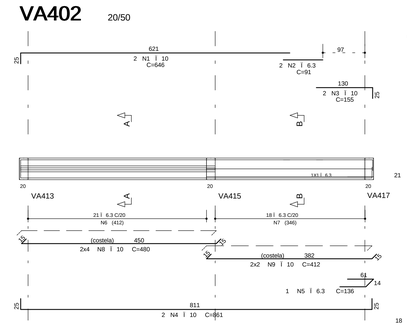

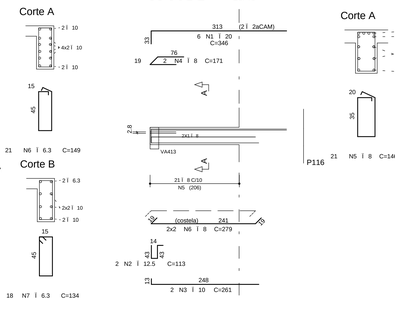

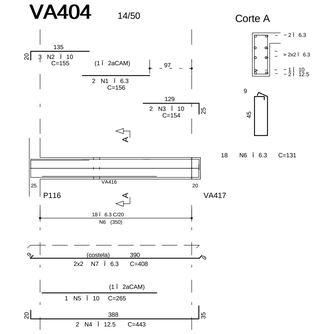

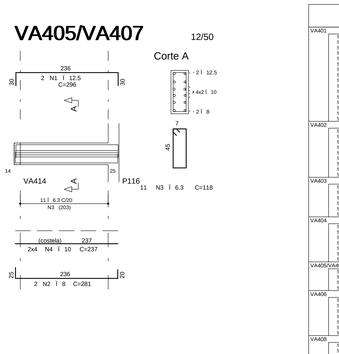

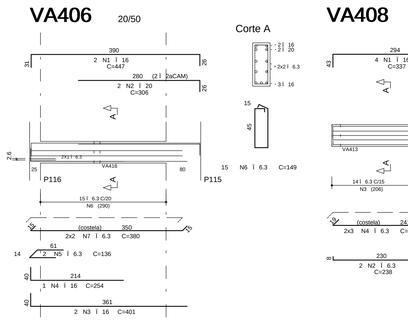

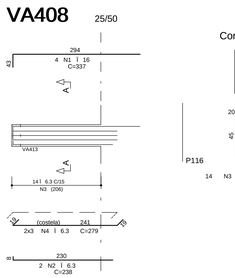

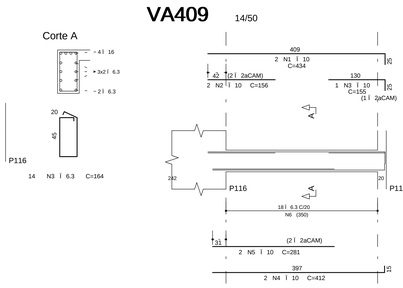

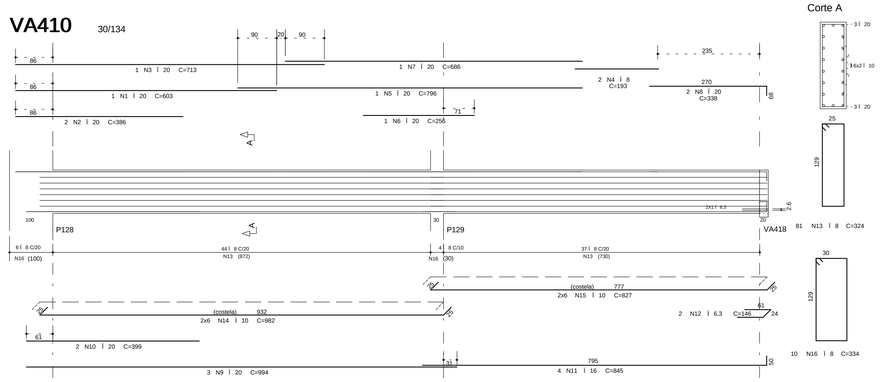

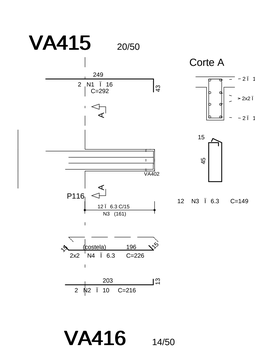

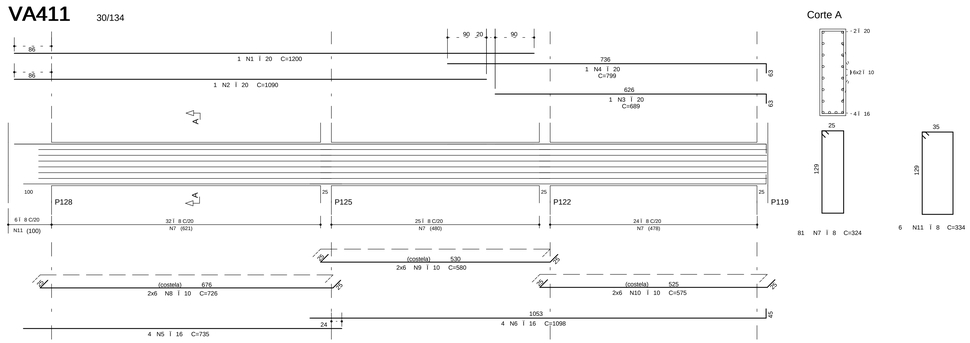

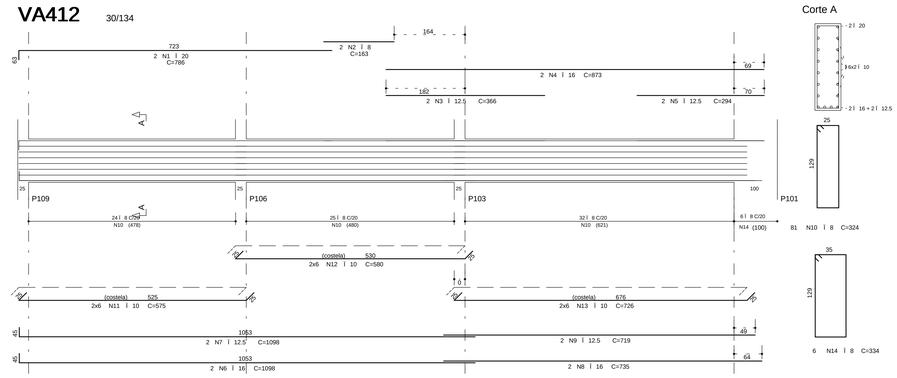

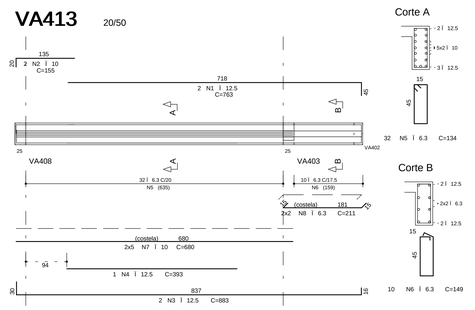

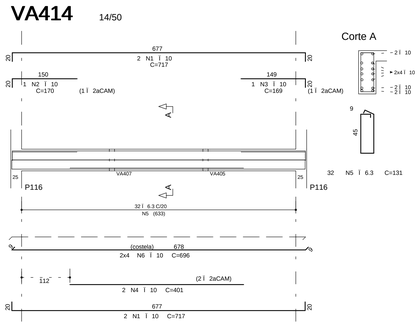

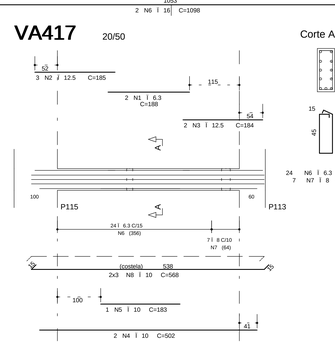

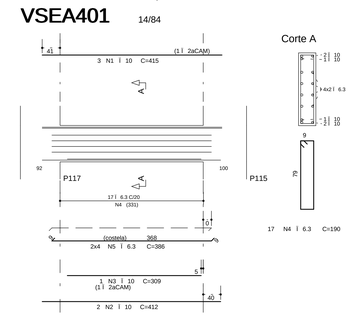

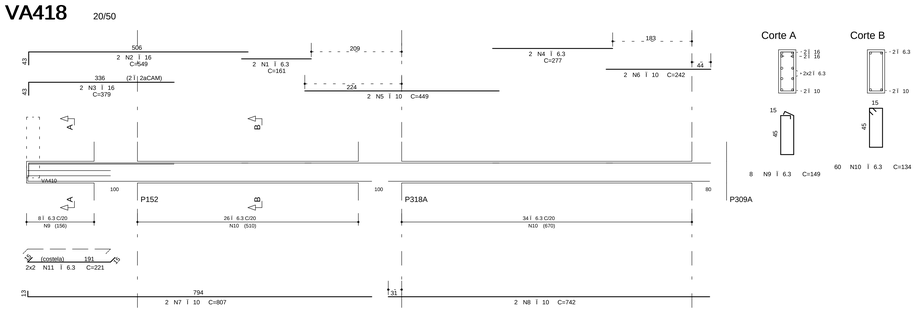

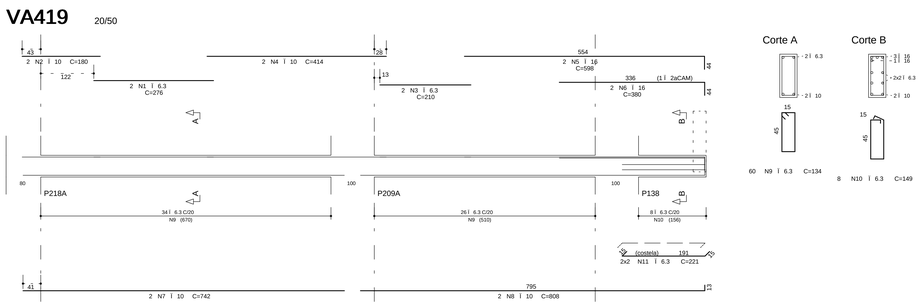

	A4 O	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
VA401	50A	1	16	1	686	686
	50A	2	16	1	355	355
	50A	3	16	1	596	596
	50A	4	6.3	1	149	149
	50A	5	16	1	673	673
	50A	6	16	1	763	763
	50A	7	16	1	326	326
	50A	8	20	2	338	676
	50A	9	20	2	870	1740
	50A	10	16	2	375	750
	50A	11	16	2	827	1654
	50A	12	6.3	2	146	292
	50A	13	6	81	324	26244
	50A	14	10	12	977	11724
	50A	15	10	12	827	9924
	50A	16	6	3	334	3006
VA402	50A	1	10	2	646	1292
	50A	2	6.3	2	91	182
	50A	3	10	2	155	310
	50A	4	6.3	2	149	298
	50A	5	6.3	1	136	136
	50A	6	6.3	21	149	3129
	50A	7	6.3	18	134	2412
	50A	8	10	8	480	3840
	50A	9	6.3	3	417	1251
VA403	50A	1	20	6	346	2076
	50A	2	10	2	112	224
	50A	3	10	2	261	522
	50A	4	6.3	2	113	226
	50A	5	8	21	146	3066
	50A	6	8	4	279	1116
VA404	50A	1	6.3	2	156	312
	50A	2	10	2	265	530
	50A	3	12.5	2	194	388
	50A	4	12.5	2	443	886
	50A	5	10	2	265	530
	50A	6	6.3	18	131	2358
	50A	7	6.3	2	237	474
VA405/VA407 (X2)	50A	1	12.5	4	296	1184
	50A	2	6.3	2	118	236
	50A	3	6.3	22	118	2596
	50A	4	10	8	237	1896
VA406	50A	1	16	2	447	894
	50A	2	20	2	306	612
	50A	3	16	2	401	802
	50A	4	20	1	254	254
	50A	5	6.3	1	149	149
	50A	6	6.3	15	226	3390
	50A	7	6.3	2	380	760
VA408	50A	1	16	4	337	1348
	50A	2	6.3	3	238	476
	50A	3	6.3	2	149	298
	50A	4	6.3	2	273	1074
VA409	50A	1	10	2	434	868
	50A	2	10	2	156	312
	50A	3	10	2	112	224
	50A	4	10	2	412	824
	50A	5	10	2	281	562
	50A	6	6.3	18	137	2466
VA410	50A	1	20	1	603	603
	50A	2	20	1	386	386
	50A	3	20	1	713	713
	50A	4	8	1	193	386
	50A	5	20	1	796	796
	50A	6	20	1	256	256
	50A	7	16	2	686	1372
	50A	8	20	2	338	676
	50A	9	20	3	994	2982
	50A	10	20	2	399	798
	50A	11	16	2	845	1690
	50A	12	6.3	2	146	292
	50A	13	6	81	324	26244
	50A	14	10	12	977	11724
	50A	15	10	12	827	9924
	50A	16	6	3	334	3006
VA411	50A	1	20	1	1200	1200
	50A	2	20	1	1090	1090
	50A	3	20	1	689	689
	50A	4	16	1	799	799
	50A	5	16	4	726	2904
	50A	6	16	4	1088	4352
	50A	7	8	1	721	3034
	50A	8	16	12	726	8712
	50A	9	10	12	575	6900
	50A	10	10	12	575	6900
	50A	11	6	6	334	2004
VA412	50A	1	20	2	786	1572
	50A	2	8	2	163	326
	50A	3	12.5	2	366	732
	50A	4	16	2	873	1746
	50A	5	12.5	2	294	588
	50A	6	12	2	1098	2196
	50A	7	12.5	2	1098	2196
	50A	8	16	2	735	1470
	50A	9	12.5	2	719	1438
	50A	10	10	12	580	6960
	50A	11	10	12	575	6900
	50A	12	10	12	580	6960
	50A	13	10	12	726	8712
	50A	14	6	6	334	2004
VA413	50A	1	12.5	2	362	724
	50A	2	10	2	155	310
	50A	3	12.5	2	880	1760
	50A	4	12.5	1	393	393
	50A	5	6.3	2	149	298
	50A	6	6.3	10	149	1490
	50A	7	10	10	680	6800
	50A	8	6.3	4	211	844
VA414	50A	1	10	4	717	2868
	50A	2	10	1	170	170
	50A	3	10	1	169	169
	50A	4	10	2	401	802
	50A	5	6.3	32	131	4192
	50A	6	10	8	684	5688
VA416	50A	1	10	2	323	646
	50A	2	10	2	321	642
	50A	3	6.3	13	122	1586
	50A	4	10	8	399	3192
VA417	50A	1	6.3	2	188	376
	50A	2	12.5	2	185	555
	50A	3	12.5	2	184	368
	50A	4	10	2	502	1004
	50A	5	10	1	183	183
	50A	6	6.3	3	149	447
	50A	7	8	1	207	207
	50A	8	10	8	568	3408
VA418	50A	1	6.3	2	161	322
	50A	2	10	2	506	1012
	50A	3	16	2	379	758
	50A	4	6.3	2	277	554
	50A	5	10	2	449	898
	50A	6	10	2	242	484
	50A	7	10	2	568	1136
	50A	8	10	2	742	1484
	50A	9	6.3	8	149	1192
	50A	10	6.3	80	134	8040
	50A	11	6.3	4	221	884
VA419	50A	1	6.3	2	216	432
	50A	2	10	2	180	360
	50A	3	6.3	2	210	420
	50A	4	10	2	414	828
	50A	5	16	2	598	1196
	50A	6	10	2	380	760
	50A	7	10	2	742	1484
	50A	8	10	2	568	1136
	50A	9	6.3	80	134	8040
	50A	10	6.3	8	149	1192
	50A	11	6.3	4	221	884
VSEA401	50A	1	16	2	412	1648
	50A	2	10	2	412	824
	50A	3	10	1	309	309
	50A	4	6.3	17	190	3230
	50A	5	6.3	8	386	3088
VA415	50A	1	16	2	292	584
	50A	2	10	2	216	432
	50A	3	6.3	12	149	1788
	50A	4	6.3	4	226	904

RESUMO A4 O CA 50-60			
A4 O	BIT (mm)	COMPR (m)	PESO (kg)
50A	6.3	715	178
50A	6	1231	493
50A	10	1231	1231
50A	12.5	119	119
50A	16	359	575
50A	20	170	425
Peso Total 50A =			2682 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

FCK= 35 MPa
EC = 28 GPa (MODULO DE ELASTICIDADE SECANTE AOS 28 DIAS).
A/C = 0.65 (FATOR AGUA CIMENTO)

REV	DATA	DESCRICAO
1	20/08/2014	NUMERACAO FINAL
0	30/07/2012	EMISSAO INICIAL

Simetria Engenharia
SIA QUADRA AC No 01 SALAS 201 A 205
BRASILIA-DF CEP: 71200-045
FABX: (0XX61) 3036-9633
simetria@simetria.eng.br

PROJETO ESTRUTURAL

CLIENTE:	GENT INCORPORADORA LTDA
OBRA:	ED.RESIDENCIAL/COMERCIAL COSMOPOLITAN
No OBRA:	
ENDEREKO OBRA:	RUA 30 NORTE LOTE 03 - RUA DAS PAINEIRAS - AGUAS CLARAS DF
DESCRICAO:	ARMA¢ è O VIGAS TORRE1 JUNTA A-SOBRELOJA
DESENHO No:	048-090

DESENHISTA	DATA	ESCALA	UNIDADE	No PROJ. SIMETRIA
TQS/ DENI	30/07/2012		CM	478

ARQUIVO PLT: 478 -EST-BL1-048-090-R01-VIG.PLT

PROPRIETARIO: RESPONSAVEL TECNICO

RESPONSAVEL TECNICO PELO PROJETO ESTRUTURAL

SIMETRIA ENGENHARIA E PROJETOS S/C LTDA
CREA 2725/RF

SIMETRIA ENGENHARIA DE PROJETOS S/C LTDA P:\E1\DGW\ACIB - COSMOPOLITAN - TORRE 1 - JUNTA A\AB-SOBRELOJA\VIGAS\VIGAS.PLT 20/08/2014 15:27:07