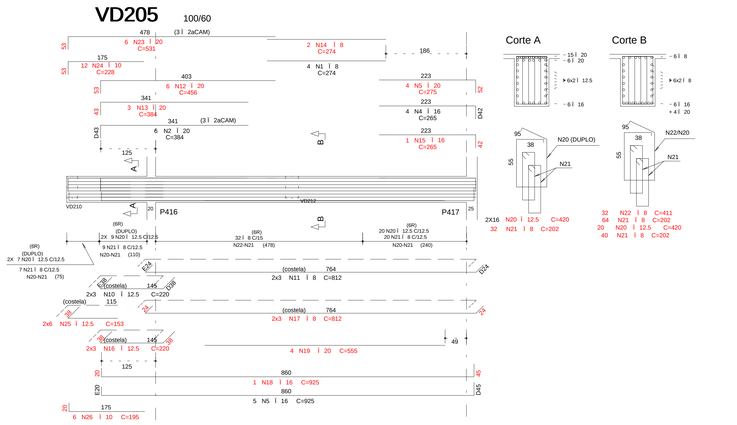
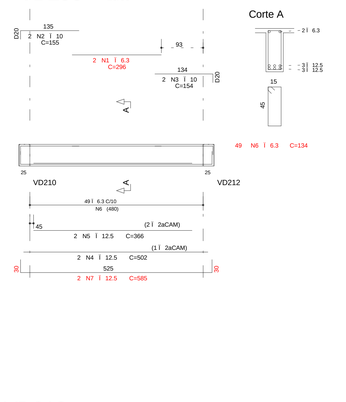
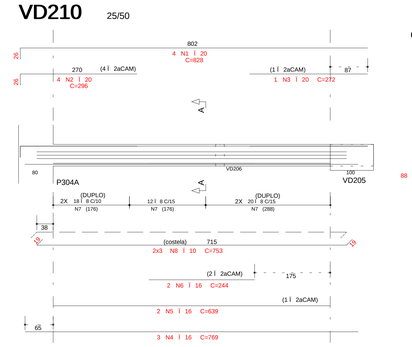
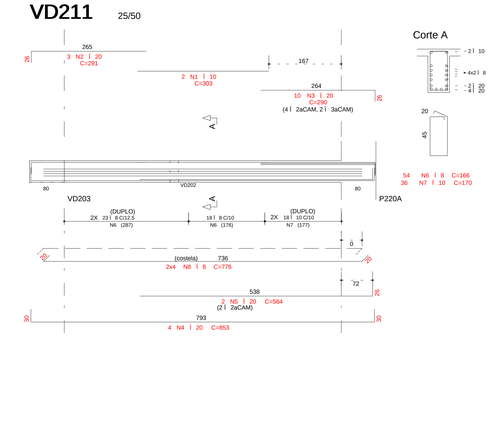


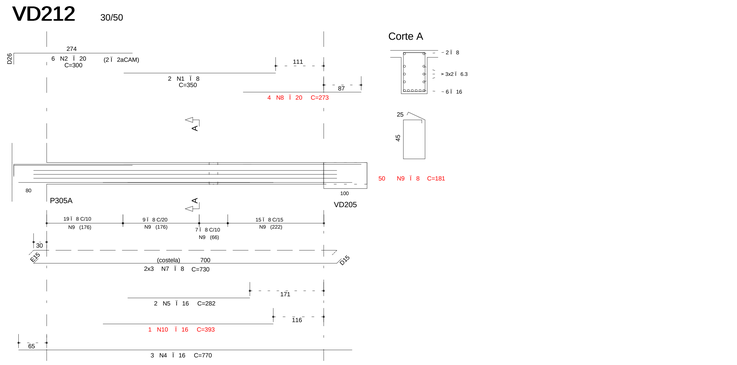


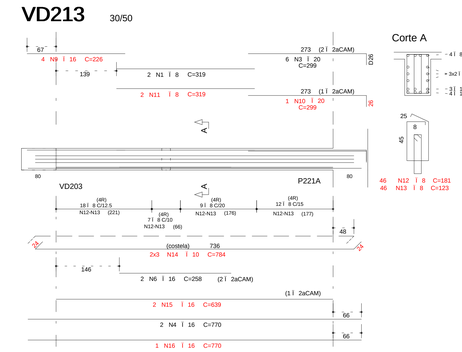


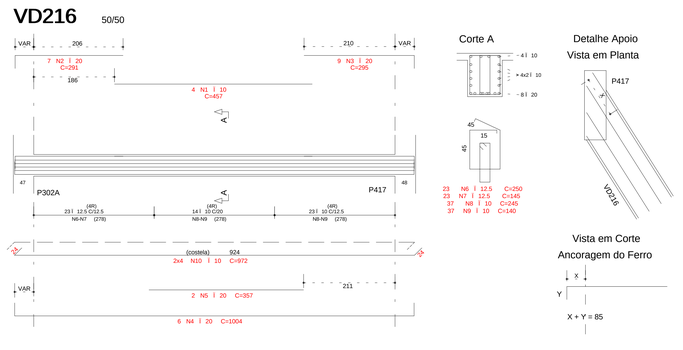


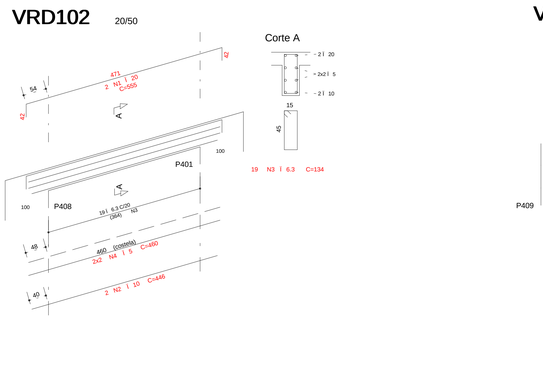
	AÉO	POS	BIT (mm)	QUANT.	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
VD205						
	50A	5	20	4	275	1100
	50A	10	20	2	456	912
	50A	14	8	2	384	768
	50A	15	20	2	384	768
	50A	16	12.5	4	220	880
	50A	17	8	2	812	1624
	50A	18	16	1	925	925
	50A	19	20	4	555	2220
	50A	20	12.5	2	153	306
	50A	21	8	4	138	552
	50A	22	8	2	82	164
	50A	23	8	2	202	404
	50A	24	10	2	128	256
	50A	26	12.5	2	153	306
	50A	25	8	5	195	975
VD206						
	50A	1	6.3	2	296	592
	50A	2	12.5	2	366	732
	50A	3	12.5	2	585	1170
VD210						
	50A	1	20	4	828	3312
	50A	2	20	4	296	1184
	50A	3	20	2	272	544
	50A	4	16	2	769	1538
	50A	5	16	2	639	1278
	50A	6	16	2	244	488
	50A	7	8	8	88	1408
	50A	8	10	8	753	6024
VD211						
	50A	1	10	2	303	606
	50A	2	20	1	291	373
	50A	3	20	4	853	3412
	50A	4	20	4	853	3412
	50A	5	20	2	564	1128
	50A	6	20	4	166	664
	50A	7	10	36	170	6120
	50A	8	8	8	776	6208
VD212						
	50A	9	8	4	172	688
	50A	10	8	2	181	362
	50A	11	8	2	191	382
VD213						
	50A	8	16	4	226	904
	50A	10	20	1	299	299
	50A	11	8	2	319	638
	50A	12	8	4	319	1276
	50A	13	8	4	46	184
	50A	14	10	8	784	6704
	50A	15	10	2	181	362
	50A	16	10	1	770	770
VD215						
	50A	1	8	4	459	1836
	50A	2	20	2	274	548
	50A	3	20	11	271	2981
	50A	4	20	2	459	918
	50A	5	20	2	416	832
	50A	6	8	129	166	20618
	50A	7	10	8	925	7400
VD216						
	50A	1	16	4	457	1828
	50A	2	20	2	291	2037
	50A	3	20	9	295	2655
	50A	4	20	2	357	1428
	50A	5	20	2	357	714
	50A	6	12.5	23	230	5750
	50A	7	12.5	23	145	3335
	50A	8	10	37	145	5365
	50A	9	10	37	140	5180
	50A	10	8	8	872	7776
VD217						
	50A	1	8	4	406	1624
	50A	2	20	2	299	598
	50A	3	20	7	287	2009
	50A	4	20	3	1084	3255
	50A	5	20	2	385	770
	50A	6	8	112	166	18592
	50A	7	10	8	971	7768
VRD101						
VRD102						
	50A	1	20	2	559	1118
	50A	2	10	2	446	892
	50A	3	6.3	19	134	2546
	50A	4	5	4	98	392
VRD103						
VRD104						
VRD105						
VRD106						
VRD107						
VRD108						
	50A	1	6.3	2	114	228
	50A	2	12.5	2	145	290
	50A	3	6.3	2	197	394
	50A	4	12.5	2	197	394
	50A	5	12.5	1	243	243
	50A	6	12.5	2	158	316
	50A	7	8	2	114	228
	50A	8	10	2	208	416
	50A	9	6.3	47	114	5358

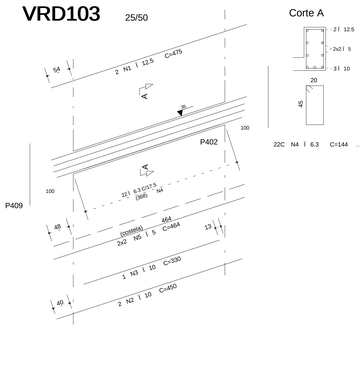
RESUMO AÉO CA 50-60			
AÉO	BIT (mm)	COMPR. (m)	PESO (kg)
50A	5	1	1
50A	6.3	157	95
50A	8	1407	571
50A	10	922	362
50A	12.5	1	1
50A	16	99	156
50A	20	572	1420
Peso Total 608			3 kg
Peso Total 50A =			2931 kg











ARMADURA ANTIGA

	ACO	POS	BIT (mm)	QUANT.	COMPRIMENTO UNIT (cm)	COMPRIMENTO TOTAL (cm)
VD205						
	50A	1	8	4	325	1300
	50A	2	20	6	384	2304
	50A	3	20	6	384	2304
	50A	4	10	2	556	1112
	50A	5	16	1	925	4625
	50A	6	12.5	2	153	2420
	50A	7	8	4	138	552
	50A	8	8	4	211	8284
	50A	9	8	44	229	5975
	50A	10	12.5	8	153	1950
	50A	11	8	2	212	424
VD206						
	50A	1	6.3	2	208	417
	50A	2	12.5	2	366	732
	50A	3	10	2	224	448
	50A	4	12.5	2	502	1004
	50A	5	12.5	2	585	1170
	50A	6	10	8	126	1008
VD210						
	50A	1	8	4	638	1752
	50A	2	12.5	4	191	764
	50A	3	12.5	4	210	840
	50A	4	16	2	769	3076
	50A	5	16	2	527	2108
	50A	6	8	65	166	10790
	50A	7	10	8	795	6720
VD211						
	50A	1	8	2	446	892
	50A	2	12.5	2	196	588
	50A	3	12.5	2	188	388
	50A	4	8	2	459	918
	50A	5	10	2	408	816
	50A	6	16	2	518	636
	50A	7	8	2	459	1836
	50A	8	5.0	4	76	3040
VD212						
	50A	1	8	2	350	700
	50A	2	20	2	300	1000
	50A	3	12.5	2	154	308
	50A	4	8	2	172	344
	50A	5	10	2	752	1504
	50A	6	8	38	166	6474
	50A	7	10	6	730	4380
VD213						
	50A	1	8	2	350	700
	50A	2	12.5	2	185	370
	50A	3	20	6	299	1794
	50A	4	8	2	319	638
	50A	5	16	2	421	842
	50A	6	16	2	258	516
	50A	7	8	2	319	638
	50A	8	5.0	4	76	3012
VRD101						
	50A	1	12.5	2	185	370
	50A	2	12.5	2	194	388
	50A	3	12.5	2	194	388
	50A	4	20	2	530	1060
	50A	5	12.5	2	530	1060
	50A	6	12.5	2	518	1036
	50A	7	8	2	194	388
	50A	8	10	2	251	502
VRD102						
	50A	1	10	2	446	892
	50A	2	20	2	555	1110
	50A	3	20	2	559	1118
	50A	4	8	2	274	548
	50A	5	6.3	47	134	6298
	50A	6	8	2	446	892
	50A	7	10	2	446	892
	50A	8	10	2	531	1062
VRD103						
	50A	1	12.5	2	475	950
	50A	2	10	2	450	900
	50A	3	12.5	2	464	928
	50A	4	6.3	12	144	1728
	50A	5	5	4	454	1816
VRD104						
	50A	1	8	2	292	584
	50A	2	8	2	292	584
	50A	3	8	2	304	608
	50A	4	8	2	833	1666
	50A	5	8	2	791	1582
	50A	6	8	4	208	832
VRD105						
	50A	1	10	2	288	576
	50A	2	8	4	200	800
	50A	3	16	2	311	622
	50A	4	8	2	363	726
	50A	5	12.5	4	191	764
	50A	6	10	2	363	726
	50A	7	8	2	363	726
	50A	8	6.3	35	104	3640
	50A	9	8	42	106	4452
VRD106						
	50A	1	10	2	341	682
	50A	2	20	2	248	496
	50A	3	12.5	4	288	1152
VRD107						
	50A	1	8	4	410	1640
	50A	2	10	4	158	632
	50A	3	16	2	718	1436
	50A	4	20	4	715	2860
	50A	5	8	8	165	1320
	50A	6	8	8	165	1320
	50A	7	6.3	12	106	1272

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:

VD205, VD206, VD210 A VD213, VRD101 A VRD108

FCK= 35 MPa

EC = 28 GPa (MODULO DE ELASTICIDADE SECANTE AOS 28 DIAS).

A/C = 0,65 (FATOR AGUA CIMENTO)

REV	DATA	DESCRICAO
5	02/09/2014	NUMERACAO FINAL
4	19/03/2013	ALTERA4 éO: VD205, VD206, VD210 e VD211
3	25/02/2013	ALTERA4 éO DA VRD102
2	15/02/2013	REVISéO DA VD215 A VD217
1	08/02/2013	SUBSTITUI é O DE PRANCHA
0	29/11/2012	EMISSAO INICIAL

Simetria Engenharia
SIA QUADRA AC Nu 51 SALAS 201 A 203
BRASILIA-DF CEP: 71200-045
FABX: (0XX61) 3036-9633
simetria@simetria.eng.br

PROJETO ESTRUTURAL

CLIENTE: GENT INCORPORADORA LTDA
OBRA: ED. RESIDENCIAL/COMERCIAL PAINEIRAS — No OBRA: XXX
ENDEREECO OBRA: RUA 30 NORTE LOTE 03 - RUA DAS PAINEIRAS - AGUIAS CLARAS DF
DESCRICAO: ARMACAO DAS VIGAS - EMBASAMENTO - JUNTA D 1o SUBSOLO (02/02)
DESENHO No: BL4 019-052
DESENHISTA: TQS/ THIAGO — DATA: 29/11/2012 — ESCALA: 1:50 — UNIDADE: CM — No PROJ. SIMETRIA: 478
ARQUIVO PLT: 478 -EST-BL4- 019-052 -R05 -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 PL C:\TQS\WINNT\ - EMBAS - JUNTA D\02-10 SUBSOLO\VIGAS\VIGAS05.PLT 02/09/2014 08:02:12