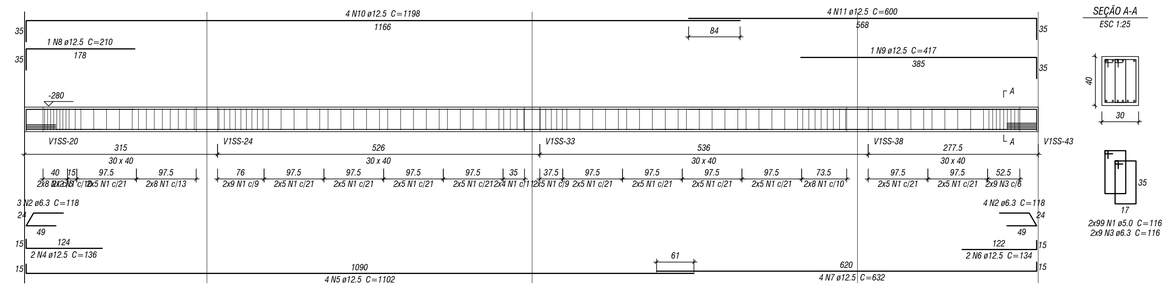
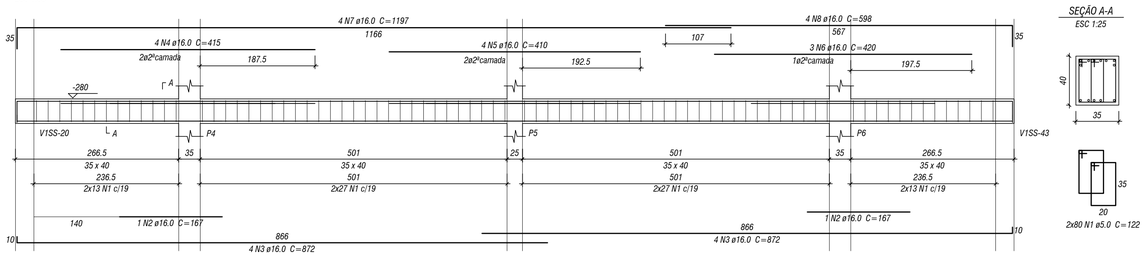
V1SS-1 (30 x 40)
ESC 1:50



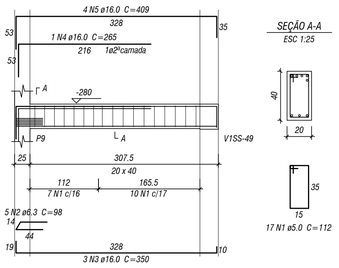
SEÇÃO A-A
ESC 1:25

V1SS-2 (35 x 40)
ESC 1:50



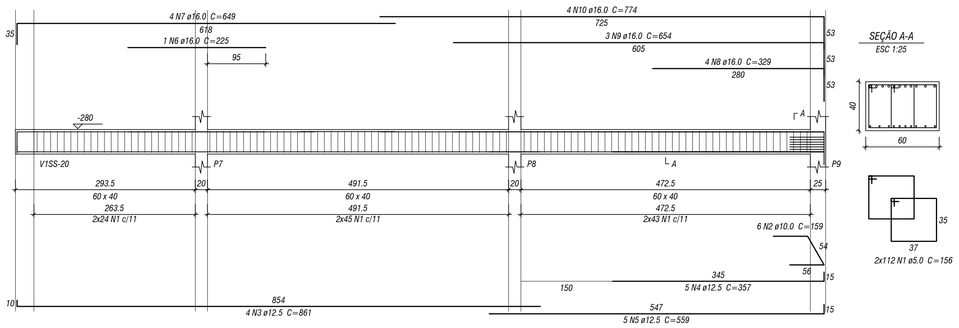
SEÇÃO A-A
ESC 1:25

V1SS-3 (20 x 40)
ESC 1:50



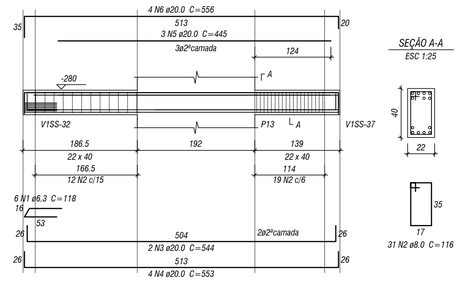
SEÇÃO A-A
ESC 1:25

V1SS-4 (60 x 40)
ESC 1:50



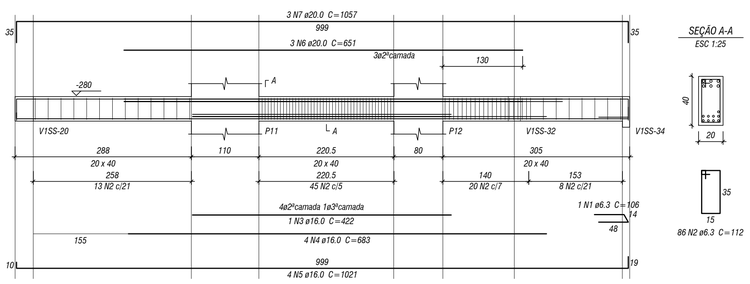
SEÇÃO A-A
ESC 1:25

V1SS-5 (22 x 40)
ESC 1:50



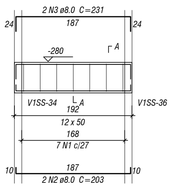
SEÇÃO A-A
ESC 1:25

V1SS-6 (20 x 40)
ESC 1:50



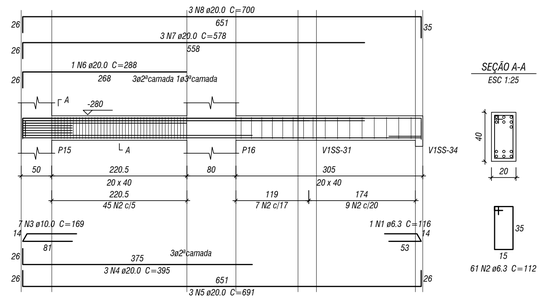
SEÇÃO A-A
ESC 1:25

V1SS-7 (12 x 50)
ESC 1:50



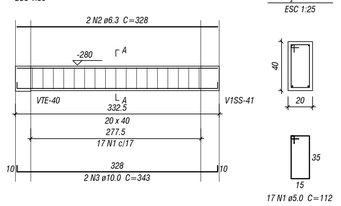
SEÇÃO A-A
ESC 1:25

V1SS-8 (20 x 40)
ESC 1:50



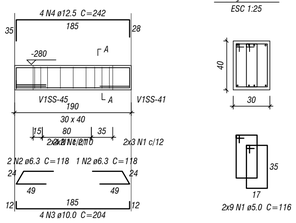
SEÇÃO A-A
ESC 1:25

V1SS-11 (20 x 40)
ESC 1:50



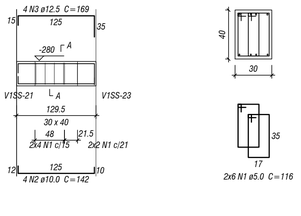
SEÇÃO A-A
ESC 1:25

V1SS-13 (30 x 40)
ESC 1:50



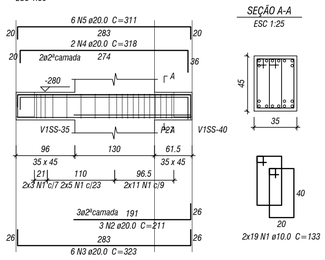
SEÇÃO A-A
ESC 1:25

V1SS-14 (30 x 40)
ESC 1:50



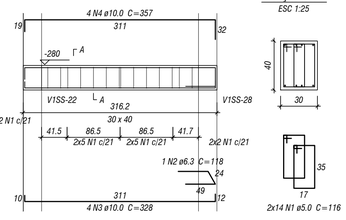
SEÇÃO A-A
ESC 1:25

V1SS-17 (35 x 45)
ESC 1:50



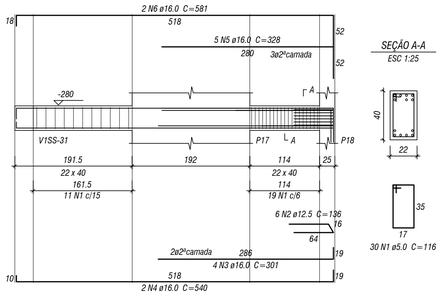
SEÇÃO A-A
ESC 1:25

V1SS-18 (30 x 40)
ESC 1:50



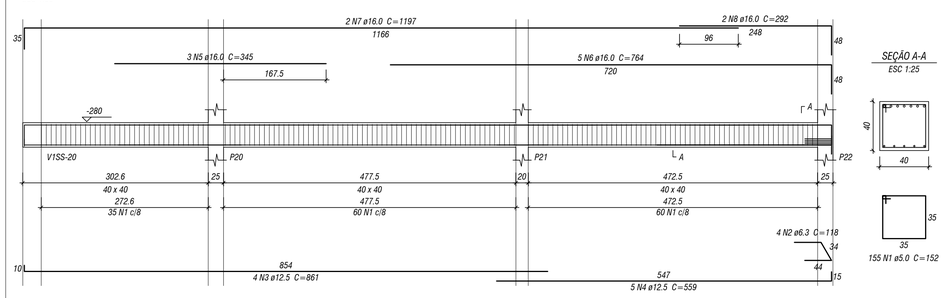
SEÇÃO A-A
ESC 1:25

V1SS-9 (22 x 40)
ESC 1:50



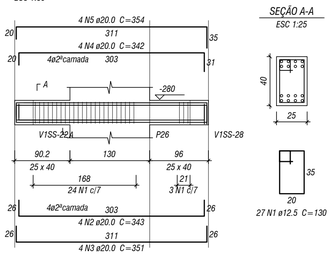
SEÇÃO A-A
ESC 1:25

V1SS-10 (40 x 40)
ESC 1:50



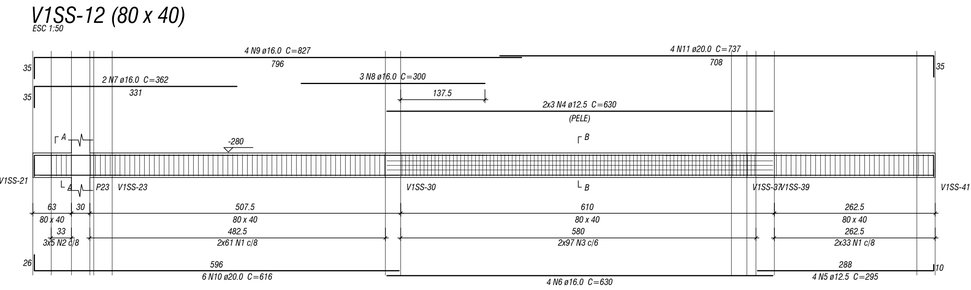
SEÇÃO A-A
ESC 1:25

V1SS-16 (25 x 40)
ESC 1:50



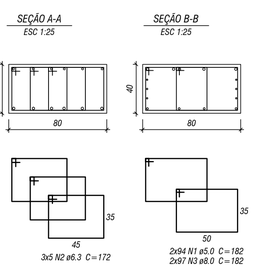
SEÇÃO A-A
ESC 1:25

V1SS-12 (80 x 40)
ESC 1:50

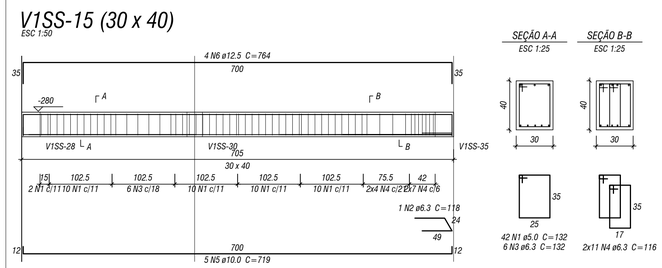


SEÇÃO A-A
ESC 1:25

SEÇÃO B-B
ESC 1:25



V1SS-15 (30 x 40)
ESC 1:50



SEÇÃO A-A
ESC 1:25

SEÇÃO B-B
ESC 1:25

PENAS PARA PLOTAGEM

ESP.	PENA Nº	ESP.
1 (fino)	0,25	0,06
2 (médio)	0,27	0,10
3 (grosso)	0,50	0,60
4 (cotas)	0,50	0,60
5 (hachuras)	0,40	0,40
6 (magenta)	0,40	0,22
7 (verde)	0,22	

Relação do aço

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
V1SS-1	CA60	1	5.0	198	116	22968
	CA50	2	6.3	7	118	826
	CA50	3	6.3	18	116	2088
	CA50	4	12.5	2	136	272
	CA50	5	12.5	4	1102	4408
	CA50	6	12.5	2	134	268
	CA50	7	12.5	4	632	2528
	CA50	8	12.5	1	210	210
	CA50	9	12.5	1	417	417
	CA50	10	12.5	4	1198	4792
	CA50	11	12.5	4	600	2400
V1SS-2	CA60	1	5.0	160	122	19520
	CA50	2	16.0	2	167	334
	CA50	3	16.0	8	872	6976
	CA50	4	16.0	4	415	1660
	CA50	5	16.0	4	410	1640
	CA50	6	16.0	3	420	1260
	CA50	7	16.0	4	1197	4788
	CA50	8	16.0	4	598	2392
V1SS-3	CA60	1	5.0	17	112	1904
	CA50	2	6.3	5	98	490
	CA50	3	16.0	3	350	1050
	CA50	4	16.0	1	265	265
	CA50	5	16.0	4	409	1636
V1SS-4	CA60	1	5.0	224	156	34944
	CA50	2	10.0	6	159	954
	CA50	3	12.5	4	861	3444
	CA50	4	12.5	5	357	1785
	CA50	5	12.5	5	559	2795
	CA50	6	16.0	1	225	225
	CA50	7	16.0	4	649	2596
	CA50	8	16.0	4	329	1316
	CA50	9	16.0	3	654	1962
	CA50	10	16.0	4	774	3096
V1SS-5	CA50	1	6.3	6	118	708
	CA50	2	8.0	31	116	3596
	CA50	3	20.0	2	544	1088
	CA50	4	20.0	4	553	2212
	CA50	5	20.0	3	445	1335
	CA50	6	20.0	4	556	2224
V1SS-6	CA50	1	6.3	1	106	106
	CA50	2	6.3	86	112	9632
	CA50	3	16.0	1	422	422
	CA50	4	16.0	4	683	2732
	CA50	5	16.0	4	1021	4084
	CA50	6	20.0	3	651	1953
	CA50	7	20.0	3	1057	3171
V1SS-7	CA60	1	5.0	7	116	812
	CA50	2	8.0	2	203	406
	CA50	3	8.0	2	231	462
V1SS-8	CA50	1	6.3	1	116	116
	CA50	2	6.3	61	112	6832
	CA50	3	10.0	7	169	1183
	CA50	4	20.0	3	395	1185
	CA50	5	20.0	3	691	2073
	CA50	6	20.0	1	288	288
	CA50	7	20.0	3	578	1734
	CA50	8	20.0	3	700	2100
V1SS-9	CA60	1	5.0	30	116	3480
	CA50	2	12.5	6	136	816
	CA50	3	16.0	4	301	1204
	CA50	4	16.0	2	540	1080
	CA50	5	16.0	5	328	1640
	CA50	6	16.0	2	581	1162
V1SS-10	CA60	1	5.0	155	152	23560
	CA50	2	6.3	4	118	472
	CA50	3	12.5	4	861	3444
	CA50	4	12.5	5	559	2795
	CA50	5	16.0	3	345	1035
	CA50	6	16.0	5	764	3820
	CA50	7	16.0	2	1197	2394
	CA50	8	16.0	2	292	584
V1SS-11	CA60	1	5.0	17	112	1904
	CA50	2	6.3	2	328	656
	CA50	3	10.0	2	343	686
V1SS-12	CA60	1	5.0	188	182	34216
	CA50	2	6.3	15	172	2580
	CA50	3	8.0	194	182	35308
	CA50	4	12.5	6	630	3780
	CA50	5	12.5	4	295	1180
	CA50	6	16.0	4	630	2520
	CA50	7	16.0	2	362	724
	CA50	8	16.0	3	300	900
	CA50	9	16.0	4	827	3308
	CA50	10	20.0	6	616	3696
	CA50	11	20.0	4	737	2948
V1SS-13	CA60	1	5.0	18	116	2088
	CA50	2	6.3	3	118	354
	CA50	3	10.0	4	204	816
	CA50	4	12.5	4	242	968
V1SS-14	CA60	1	5.0	12	116	1392
	CA50	2	10.0	4	142	568
	CA50	3	12.5	4	169	676
V1SS-15	CA60	1	5.0	42	132	5544
	CA50	2	6.3	1	118	118
	CA50	3	6.3	6	132	792
	CA50	4	6.3	22	116	2552
	CA50	5	10.0	5	719	3595
	CA50	6	12.5	4	764	3056
V1SS-16	CA50	1	12.5	27	130	3510
	CA50	2	20.0	4	343	1372
	CA50	3	20.0	4	351	1404
	CA50	4	20.0	4	342	1368
	CA50	5	20.0	4	354	1416
V1SS-17	CA50	1	10.0	38	133	5054
	CA50	2	20.0	3	211	633
	CA50	3	20.0	6	323	1938
	CA50	4	20.0	2	318	636
	CA50	5	20.0	6	311	1866
V1SS-18	CA60	1	5.0	28	116	3248
	CA50	2	6.3	1	118	118
	CA50	3	10.0	4	328	1312
	CA50	4	10.0	4	357	1428

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	6.3	284.4	69.6
	8.0	397.8	156.9
	10.0	156	96.2
	12.5	435.5	419.5
	16.0	588.1	928.1
	20.0	366.4	903.6
CA60	5.0	1555.8	239.8
PESO TOTAL			
CA50	2573.9		
CA60	239.8		

Vol. de concreto total (C-30) = 19.54 m³
Área de forma total = 152.56 m²

CONTROLE DAS REVISÕES:

REVISÃO	DATA	DESCRIÇÃO

ENGENHARIA
Engenharia de Estruturas e Engenharia de Segurança do Trabalho
Excelência em Projetos Estruturais de Concreto Armado, Protendido, Pré-Moldado, Estruturas Metálicas e Alvenaria Estrutural
Avenida Pingüim, Nº 304 | Sala 01 | Gleba Ribeirão Pingüim | Maringá - Paraná | CEP: 87065-675
Fone/Fax: (44) 3026-8993 - e-mail: yk@ykengenharia.com.br - Visite nosso site! http://www.ykengenharia.com.br

PROJETO:
ESTRUTURAL EM CONCRETO ARMADO

CLIENTE:
RODRIGO KOJO

OBRA:
Para Construção de Uma Edificação Residencial Coletiva - Edifício Jardins de France

LOCAL:
Rua Francisco Glicério, nº 1.033 - Zona 07 - Maringá - Paraná

REFERÊNCIA(s):
Detalhes das Vigas do Subsolo 1 (Folha 01 de 03)
<>
<>

REVISÃO: **R-00**

PRANCHA: **11** / **68**

RESPONSÁVEL TÉCNICO:
Eng° Esp Yutaka Mario Kobayashi Júnior
CREA PR-89.748/D

DATA CRIAÇÃO: 09/04/2013

DATA DA REVISÃO: N/C

ART Nº: 20122498064

PROJETO Nº: P-181

ESCALAS: INDICADAS