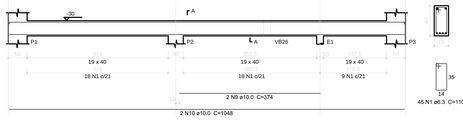
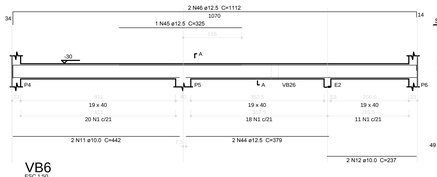
VB1
ESC 1:50



SEÇÃO A-A
ESC 1:25

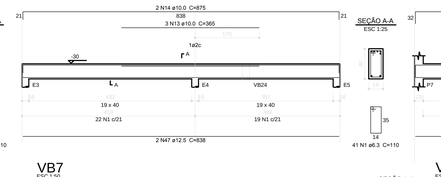
VB2
ESC 1:50



SEÇÃO A-A
ESC 1:25

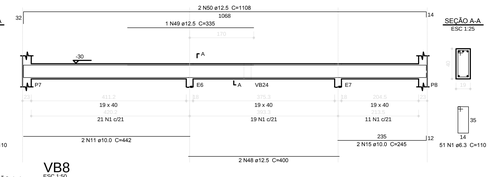


VB3
ESC 1:50



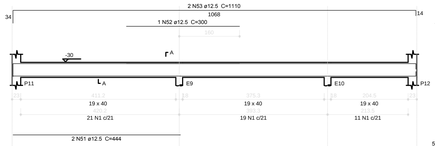
SEÇÃO A-A
ESC 1:25

VB4
ESC 1:50



SEÇÃO A-A
ESC 1:25

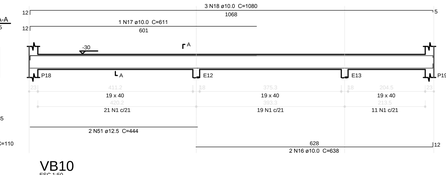
VB5
ESC 1:50



SEÇÃO A-A
ESC 1:25



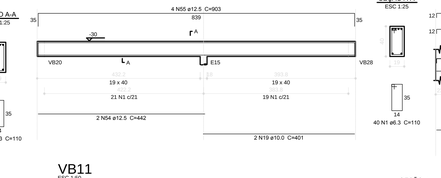
VB6
ESC 1:50



SEÇÃO A-A
ESC 1:25

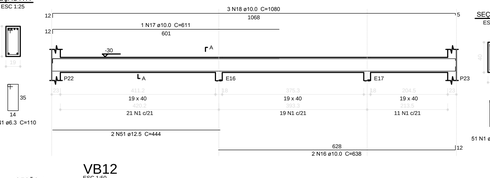


VB7
ESC 1:50



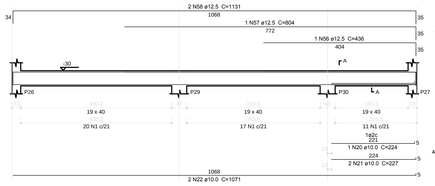
SEÇÃO A-A
ESC 1:25

VB8
ESC 1:50



SEÇÃO A-A
ESC 1:25

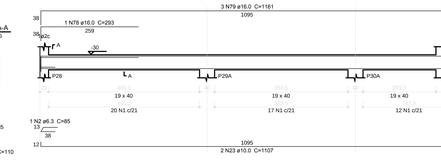
VB9
ESC 1:50



SEÇÃO A-A
ESC 1:25



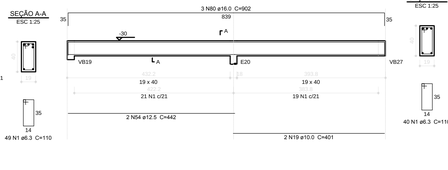
VB10
ESC 1:50



SEÇÃO A-A
ESC 1:25

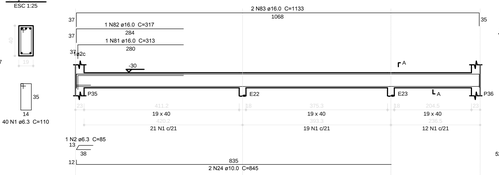


VB11
ESC 1:50



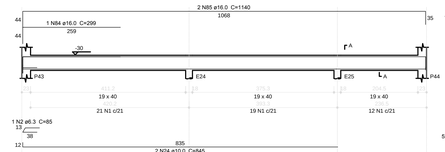
SEÇÃO A-A
ESC 1:25

VB12
ESC 1:50



SEÇÃO A-A
ESC 1:25

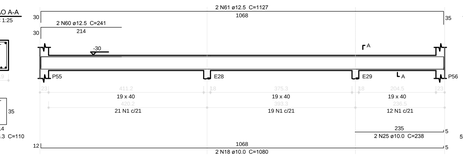
VB13
ESC 1:50



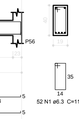
SEÇÃO A-A
ESC 1:25



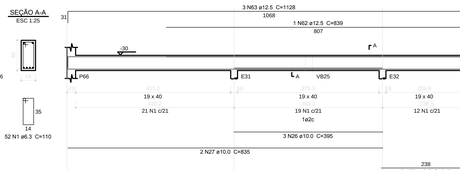
VB14
ESC 1:50



SEÇÃO A-A
ESC 1:25

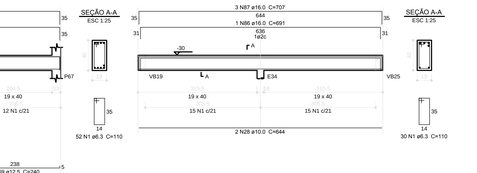


VB15
ESC 1:50



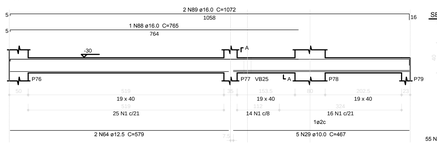
SEÇÃO A-A
ESC 1:25

VB16
ESC 1:50



SEÇÃO A-A
ESC 1:25

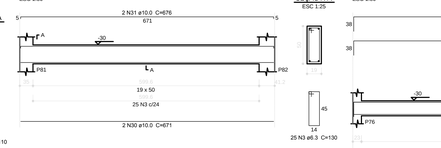
VB17
ESC 1:50



SEÇÃO A-A
ESC 1:25

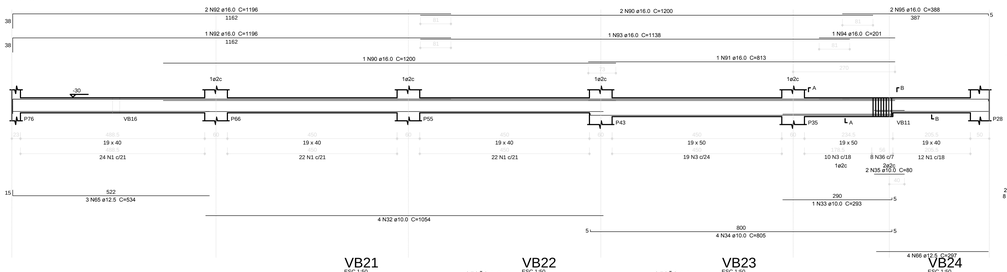


VB18
ESC 1:50



SEÇÃO A-A
ESC 1:25

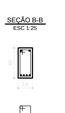
VB19
ESC 1:50



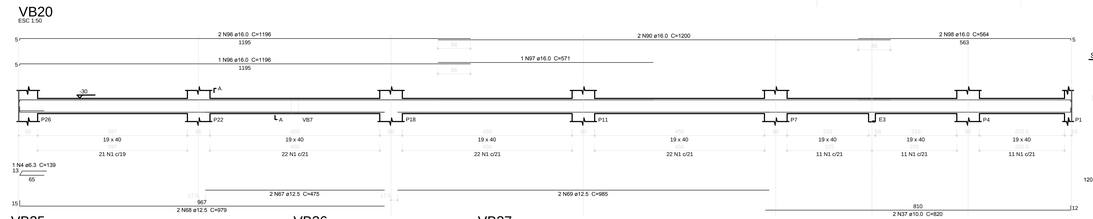
SEÇÃO A-A
ESC 1:25



SEÇÃO B-B
ESC 1:25



VB20
ESC 1:50



SEÇÃO A-A
ESC 1:25

VB21
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB22
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB23
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB24
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB25
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB26
ESC 1:50

SEÇÃO A-A
ESC 1:25

VB27
ESC 1:50

SEÇÃO A-A
ESC 1:25

Relação do aço

VB1	VB2	VB3	
VB4	VB5	VB6	
VB7	VB8	VB9	
VB10	VB11	VB12	
VB13	VB14	VB15	
VB16	VB17	VB18	
VB19	VB20	VB21	
VB22	VB23	VB24	
VB25	VB26	VB27	

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	1208	110	132880
	2	6.3	3	85	255
	3	6.3	66	130	8580
	4	6.3	1	139	139
	5	6.3	2	109	218
	6	8.0	3	86	258
	7	8.0	2	269	538
	8	8.0	2	279	558
	9	10.0	2	374	748
	10	10.0	2	1048	2096
	11	10.0	4	442	1768
	12	10.0	2	237	474
	13	10.0	3	365	1095
	14	10.0	2	875	1750
	15	10.0	2	245	490
	16	10.0	6	638	3829
	17	10.0	2	611	1222
	18	10.0	8	1080	8640
	19	10.0	4	401	1604
	20	10.0	1	224	224
	21	10.0	2	227	454
	22	10.0	2	1071	2142
	23	10.0	2	1107	2214
	24	10.0	4	845	3380
	25	10.0	2	238	476
	26	10.0	3	395	1185
	27	10.0	2	835	1670
	28	10.0	2	644	1288
	29	10.0	5	467	2335
	30	10.0	2	671	1342
	31	10.0	2	676	1352
	32	10.0	4	1054	4216
	33	10.0	1	293	293
	34	10.0	4	805	3220
	35	10.0	2	80	160
	36	10.0	8	131	1048
	37	10.0	2	820	1640
	38	10.0	4	269	1076
	39	10.0	2	320	640
	40	10.0	2	316	632
	41	10.0	2	595	1190
	42	10.0	2	279	558
	43	10.0	2	512	1024
	44	12.5	2	379	758
	45	12.5	1	325	325
	46	12.5	2	1112	2224
	47	12.5	2	838	1676
	48	12.5	2	400	800
	49	12.5	1	335	335
	50	12.5	2	1108	2216
	51	12.5	6	444	2664
	52	12.5	1	300	300
	53	12.5	2	1110	2220
	54	12.5	4	442	1768
	55	12.5	4	903	3612
	56	12.5	1	436	436
	57	12.5	1	804	804
	58	12.5	2	1131	2262
	59	12.5	9	240	2160
	60	12.5	2	241	482
	61	12.5	2	1127	2254
	62	12.5	1	839	839
	63	12.5	3	1128	3384
	64	12.5	2	579	1158
	65	12.5	3	534	1602
	66	12.5	4	297	1188
	67	12.5	2	475	950
	68	12.5	2	979	1958
	69	12.5	2	985	1970
	70	12.5	2	291	582
	71	12.5	2	361	722
	72	12.5	2	212	424
	73	12.5	2	353	706
	74	12.5	2	1051	2102
	75	12.5	2	517	1034
	76	12.5	4	531	2124
	77	16.0	2	1051	2102
	78	16.0	1	293	293
	79	16.0	3	1161	3483
	80	16.0	3	902	2706
	81	16.0	1	313	313
	82	16.0	1	317	317
	83	16.0	2	1133	2266
	84	16.0	1	299	299
	85	16.0	2	1140	2280
	86	16.0	1	691	691
	87	16.0	3	707	2121
	88	16.0	1	765	765
	89	16.0	2	1072	2144
	90	16.0	7	1200	8400
	91	16.0	1	813	813
	92	16.0	3	1196	3588
	93	16.0	1	1138	1138
	94	16.0	1	201	201
	95	16.0	2	388	776
	96	16.0	3	1196	3588
	97	16.0	1	571	571
	98	16.0	2	564	1129
	99	16.0	1	567	567
	100	16.0	3	575	1725
	101	16.0	1	272	272
	102	16.0	1	335	335
	103	16.0	1	395	395
	104	16.0	2	1196	2392
	105	16.0	2	395	790

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1420.8	382.4
	8.0	13.6	5.9
	10.0	574.8	389.8
	12.5	480.4	509.1
	16.0	464.6	806.6
PESO TOTAL (kg)			
CA50	2093.7		

Volume de concreto (C-40) = 21.47 m³
Área de forma = 278.86 m²

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

PROJETO

TÍTULO:
PROJETO EXECUTIVO - ENGENHARIAS

CONTEÚDO:
PROJETO DE ESTRUTURA
VIGAS: VB01 À VB27

AUTOR DO PROJETO:
MARIUS OLIVEIRA COSTA CREA 90766/D

EXECUÇÃO DE OBRA:

APROVAÇÃO DO LAYOUT (PROF. RESPONSÁVEL):

DATA:	REVISÃO DATA:	PROJETO:
03/09/2018		ESTRUTURA
ESCALA: INDICADA	ÁREA: (m²) 4772,00 m²	FOLHA: 07/40