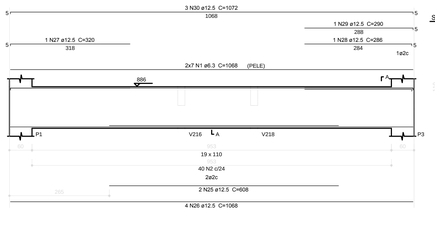
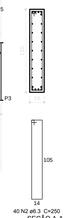
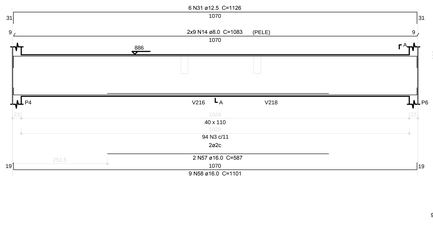
V201
ESC 1:50



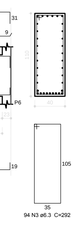
SEÇÃO A-A
ESC 1:25



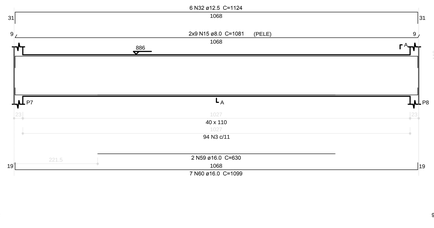
V202
ESC 1:50



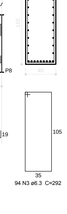
SEÇÃO A-A
ESC 1:25



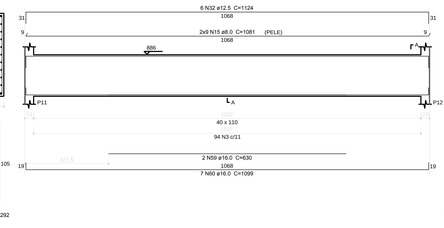
V203
ESC 1:50



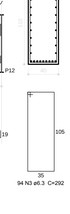
SEÇÃO A-A
ESC 1:25



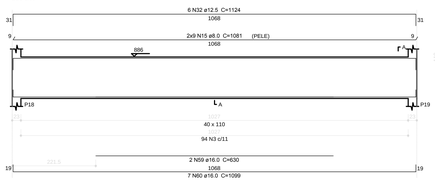
V204
ESC 1:50



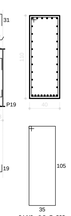
SEÇÃO A-A
ESC 1:25



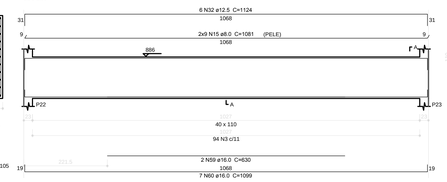
V205
ESC 1:50



SEÇÃO A-A
ESC 1:25



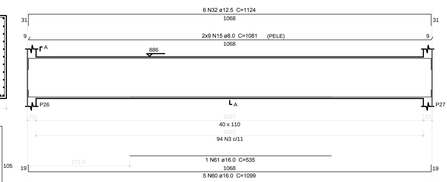
V206
ESC 1:50



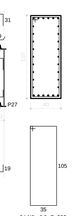
SEÇÃO A-A
ESC 1:25



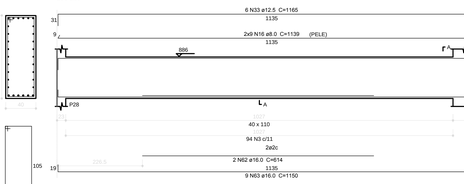
V207
ESC 1:50



SEÇÃO A-A
ESC 1:25



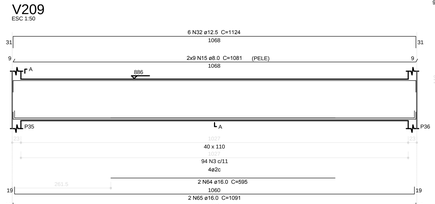
V208
ESC 1:50



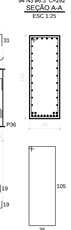
SEÇÃO A-A
ESC 1:25



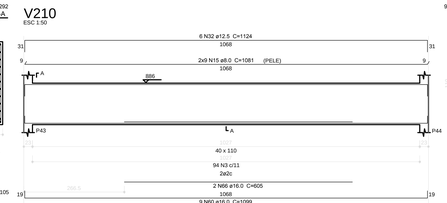
V209
ESC 1:50



SEÇÃO A-A
ESC 1:25



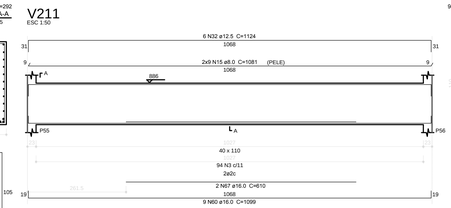
V210
ESC 1:50



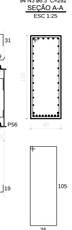
SEÇÃO A-A
ESC 1:25



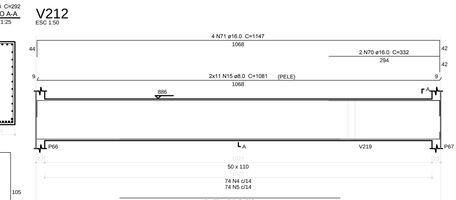
V211
ESC 1:50



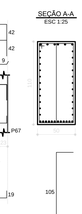
SEÇÃO A-A
ESC 1:25



V212
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

V201		V202		V203	
V204		V205		V206	
V207		V208		V209	
V210		V211		V212	
V213		V214		V215	
V216		V217		V218	
V219		V220		V221	

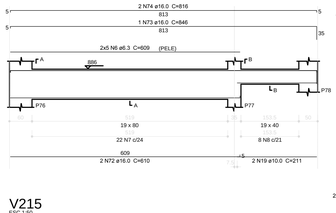
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	14	1068	14952
	2	6.3	62	250	15500
	3	6.3	940	292	274480
	4	6.3	74	312	23088
	5	6.3	74	148	10952
	6	6.3	10	609	6090
	7	6.3	22	190	4180
	8	6.3	8	110	880
	9	6.3	393	130	51090
	10	6.3	2	125	250
	11	6.3	22	162	3564
	12	6.3	14	560	7840
	13	6.3	3	119	357
	14	8.0	18	1083	19494
	15	8.0	166	1081	179446
	16	8.0	18	1139	20502
	17	8.0	4	299	1196
	18	8.0	3	148	444
	19	10.0	2	211	422
	20	10.0	4	306	1224
	21	10.0	4	359	1436
	22	10.0	2	299	598
	23	10.0	2	518	1036
	24	10.0	2	820	1640
	25	12.5	2	608	1216
	26	12.5	4	1068	4272
	27	12.5	1	320	320
	28	12.5	1	286	286
	29	12.5	1	290	290
	30	12.5	3	1072	3216
	31	12.5	6	1126	6756
	32	12.5	48	1124	53952
	33	12.5	6	1165	6990
	34	12.5	6	985	5910
	35	12.5	1	500	500
	36	12.5	2	1010	2020
	37	12.5	1	415	415
	38	12.5	4	1197	4788
	39	12.5	2	1082	2164
	40	12.5	2	189	378
	41	12.5	5	1200	6000
	42	12.5	2	341	682
	43	12.5	4	967	3868
	44	12.5	4	527	2108
	45	12.5	2	299	598
	46	12.5	3	353	1059
	47	12.5	3	574	1722
	48	12.5	3	411	1233
	49	12.5	1	415	415
	50	12.5	3	664	1992
	51	12.5	2	1020	2040
	52	12.5	1	940	940
	53	12.5	5	1197	5985
	54	12.5	3	696	2088
	55	12.5	1	754	754
	56	12.5	2	541	1082
	57	16.0	2	587	1174
	58	16.0	9	1101	9909
	59	16.0	8	630	5040
	60	16.0	60	1099	65940
	61	16.0	1	535	535
	62	16.0	2	614	1228
	63	16.0	9	1150	10350
	64	16.0	2	596	1190
	65	16.0	2	1091	2182
	66	16.0	2	605	1210
	67	16.0	2	610	1220
	68	16.0	2	585	1170
	69	16.0	10	1083	10830
	70	16.0	2	332	664
	71	16.0	4	1147	4588
	72	16.0	2	610	1220
	73	16.0	1	846	846
	74	16.0	2	816	1632
	75	16.0	2	540	1080
	76	16.0	2	1196	2392
	77	16.0	2	1200	2400
	78	16.0	2	554	1108

Resumo do aço

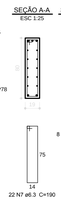
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	4132.3	1112.3
	8.0	2210.9	959.6
	10.0	63.6	43.1
	12.5	1260.4	1335.6
	16.0	1279.1	2220.7
PESO TOTAL (kg)			
CA50	5671.3		

Volume de concreto (C-40) = 68.61 m³
Área de forma = 402.77 m²

V213
ESC 1:50



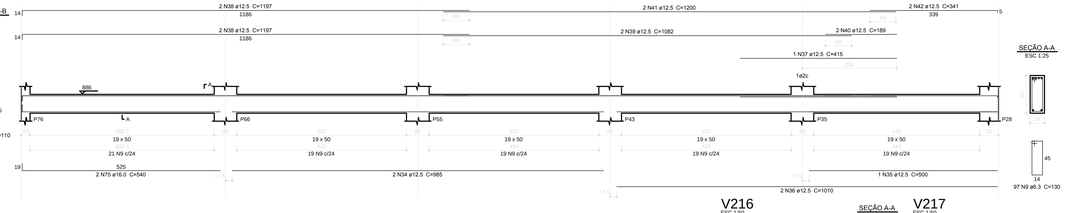
SEÇÃO A-A
ESC 1:25



SEÇÃO B-B
ESC 1:25

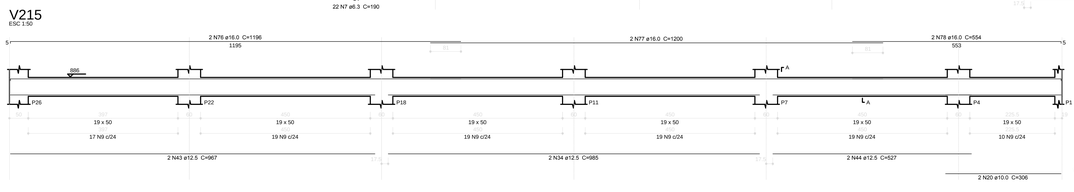


V214
ESC 1:50

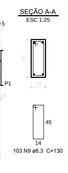


SEÇÃO A-A
ESC 1:25

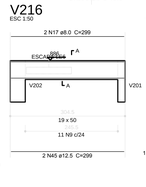
V215
ESC 1:50



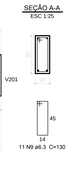
SEÇÃO A-A
ESC 1:25



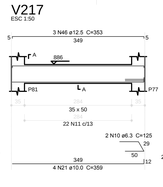
V216
ESC 1:50



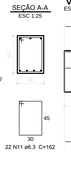
SEÇÃO A-A
ESC 1:25



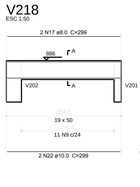
V217
ESC 1:50



SEÇÃO A-A
ESC 1:25



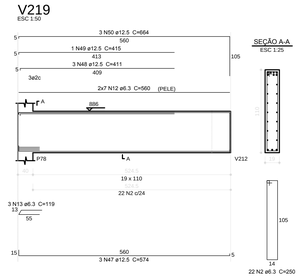
V218
ESC 1:50



SEÇÃO A-A
ESC 1:25

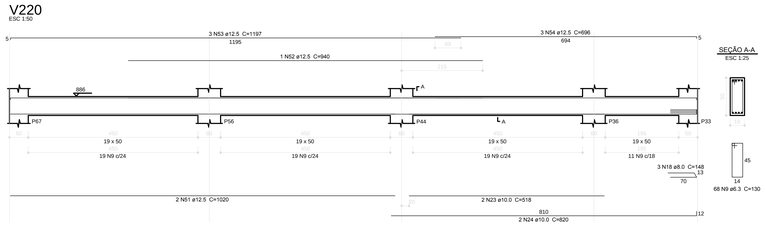


V219
ESC 1:50



SEÇÃO A-A
ESC 1:25

V220
ESC 1:50



SEÇÃO A-A
ESC 1:25

V221
ESC 1:50

SEÇÃO A-A
ESC 1:25

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

PROJETO

TÍTULO:
PROJETO EXECUTIVO - ENGENHARIAS

CONTEÚDO:
PROJETO DE ESTRUTURA
VIGAS: V201 À V220

AUTOR DO PROJETO:
MARIUS OLIVEIRA COSTA CREA 90786/D

EXECUÇÃO DE OBRA:

APROVAÇÃO DO LAYOUT (PROF. RESPONSÁVEL):

DATA:	REVISÃO DATA:	PROJETO:
03/09/2018		ESTRUTURA
ESCALA:	ÁREA: (m²):	FOLHA:
INDICADA	4772,00 m²	24/40