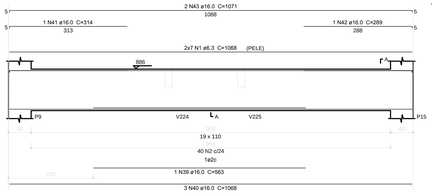
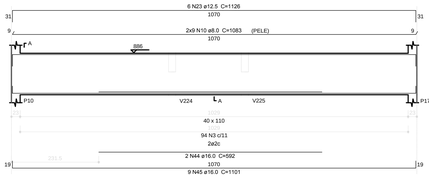
V222
ESC 1:50



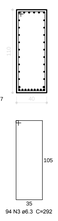
SEÇÃO A-A
ESC 1:25



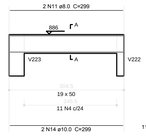
V223
ESC 1:50



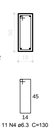
SEÇÃO A-A
ESC 1:25



V224
ESC 1:50



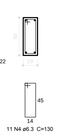
SEÇÃO A-A
ESC 1:25



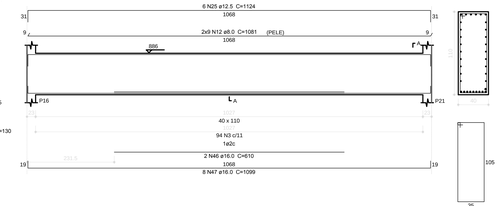
V225
ESC 1:50



SEÇÃO A-A
ESC 1:25

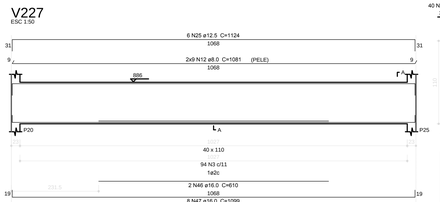


V226
ESC 1:50

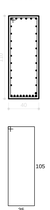


SEÇÃO A-A
ESC 1:25

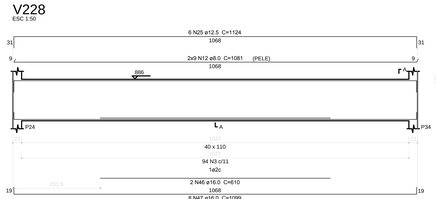
V227
ESC 1:50



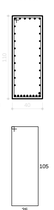
SEÇÃO A-A
ESC 1:25



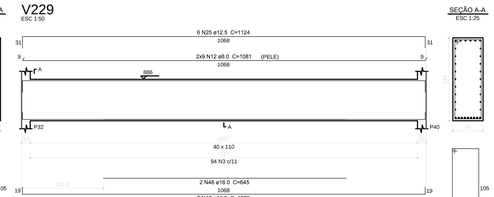
V228
ESC 1:50



SEÇÃO A-A
ESC 1:25

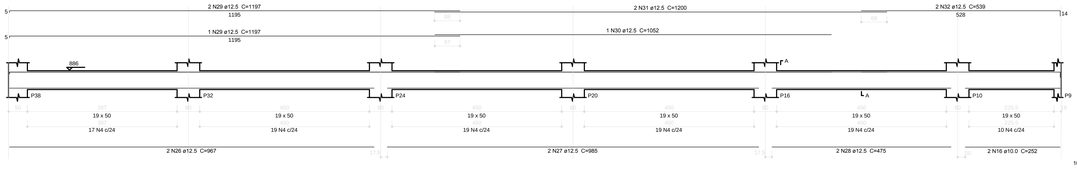


V229
ESC 1:50

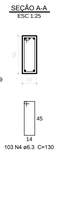


SEÇÃO A-A
ESC 1:25

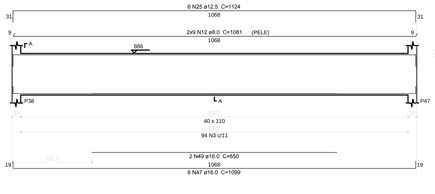
V230
ESC 1:50



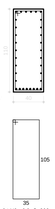
SEÇÃO A-A
ESC 1:25



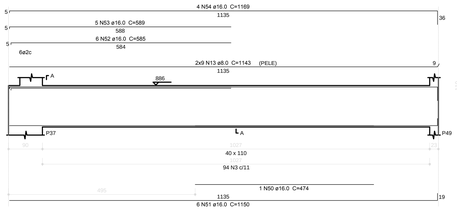
V231
ESC 1:50



SEÇÃO A-A
ESC 1:25



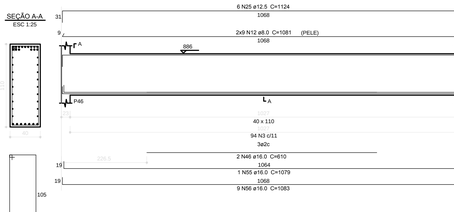
V232
ESC 1:50



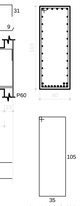
SEÇÃO A-A
ESC 1:25



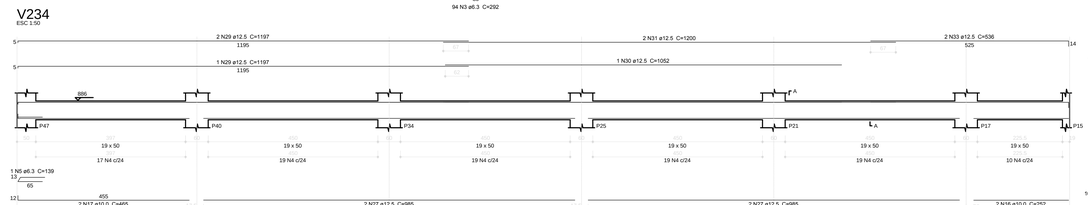
V233
ESC 1:50



SEÇÃO A-A
ESC 1:25



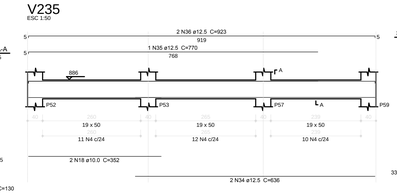
V234
ESC 1:50



SEÇÃO A-A
ESC 1:25



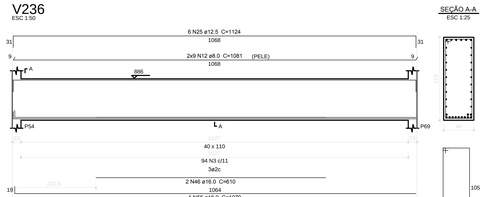
V235
ESC 1:50



SEÇÃO A-A
ESC 1:25

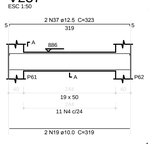


V236
ESC 1:50

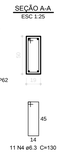


SEÇÃO A-A
ESC 1:25

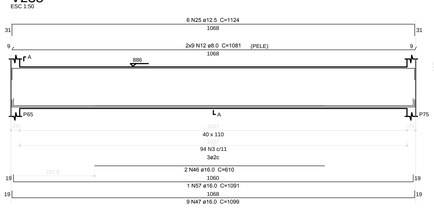
V237
ESC 1:50



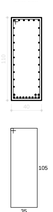
SEÇÃO A-A
ESC 1:25



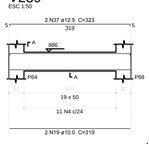
V238
ESC 1:50



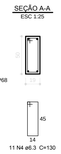
SEÇÃO A-A
ESC 1:25



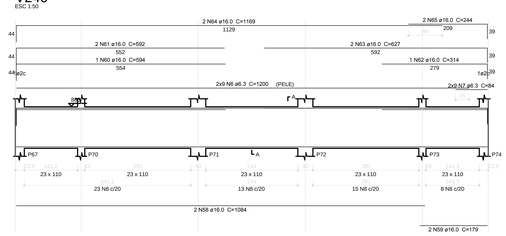
V239
ESC 1:50



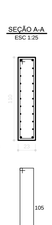
SEÇÃO A-A
ESC 1:25



V240
ESC 1:50



SEÇÃO A-A
ESC 1:25



V241
ESC 1:50



SEÇÃO A-A
ESC 1:25

Relação do aço

V222	V223	V224	
V225	V226	V227	
V228	V229	V230	
V231	V232	V233	
V234	V235	V236	
V237	V238	V239	
V240	V241		

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	14	1068	14952
	2	6.3	40	250	10000
	3	6.3	940	292	274480
	4	6.3	313	130	40690
	5	6.3	1	139	139
	6	6.3	18	1200	21600
	7	6.3	18	84	1512
	8	6.3	59	258	15222
	9	6.3	1	77	77
	10	8.0	18	1083	19494
	11	8.0	2	299	598
	12	8.0	144	1081	155664
	13	8.0	18	1143	20574
	14	10.0	2	299	598
	15	10.0	2	364	728
	16	10.0	4	252	1008
	17	10.0	2	465	930
	18	10.0	2	352	704
	19	10.0	4	319	1276
	20	10.0	2	261	522
	21	10.0	2	704	1408
	22	10.0	2	811	1622
	23	12.5	6	1126	6756
	24	12.5	2	299	598
	25	12.5	48	1124	53952
	26	12.5	2	967	1934
	27	12.5	6	985	5910
	28	12.5	2	475	950
	29	12.5	6	1197	7182
	30	12.5	2	1052	2104
	31	12.5	4	1200	4800
	32	12.5	2	539	1078
	33	12.5	2	536	1072
	34	12.5	2	636	1272
	35	12.5	1	770	770
	36	12.5	2	923	1846
	37	12.5	4	323	1292
	38	12.5	2	518	1036
	39	16.0	1	563	563
	40	16.0	3	1068	3204
	41	16.0	1	314	314
	42	16.0	1	289	289
	43	16.0	2	1071	2142
	44	16.0	2	592	1184
	45	16.0	9	1101	9909
	46	16.0	12	610	7320
	47	16.0	46	1099	50554
	48	16.0	2	645	1290
	49	16.0	2	650	1300
	50	16.0	1	474	474
	51	16.0	6	1150	6900
	52	16.0	6	585	3510
	53	16.0	5	589	2945
	54	16.0	4	1169	4676
	55	16.0	2	1079	2158
	56	16.0	18	1083	19494
	57	16.0	1	1091	1091
	58	16.0	2	1084	2168
	59	16.0	2	179	358
	60	16.0	1	594	594
	61	16.0	2	592	1184
	62	16.0	1	314	314
	63	16.0	2	627	1254
	64	16.0	2	1169	2338
	65	16.0	2	244	488

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO = 10 % (kg)
CA50	6.3	3786.8	1019.3
	8.0	1963.3	852.2
	10.0	88	59.7
	12.5	925.6	980.7
	16.0	1280.2	2222.6
PESO TOTAL (kg)			
CA50	5134.4		

Volume de concreto (C-40) = 61.06 m³
Área de forma = 438.7 m²

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

PROJETO

TITULO:
PROJETO EXECUTIVO - ENGENHARIAS

CONTEUDO:
PROJETO DE ESTRUTURA
VIGAS: V221 À V239

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: INDICADA	ÁREA: (m²) 4772,00 m²	FOLHA: 25/40