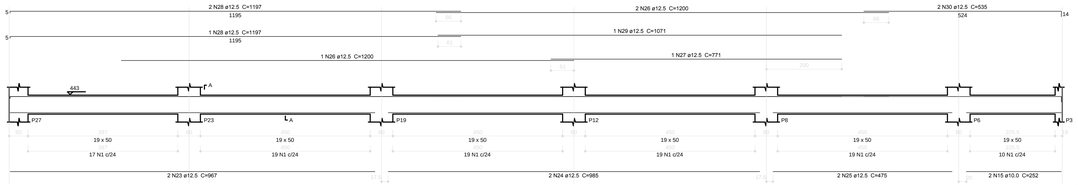
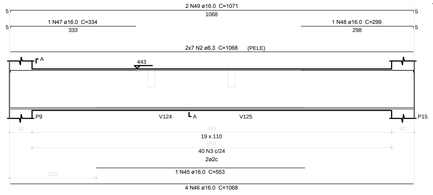
V121
ESC 1:50



SEÇÃO A-A
ESC 1:25



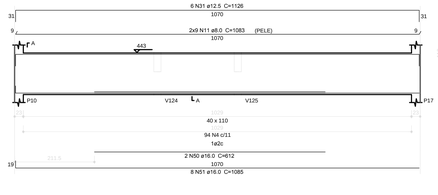
V122
ESC 1:50



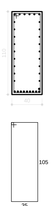
SEÇÃO A-A
ESC 1:25



V123
ESC 1:50



SEÇÃO A-A
ESC 1:25

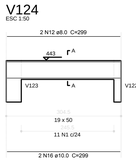


Relação do aço

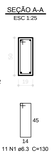
V121	V122	V123	
V124	V125	V126	
V127	V128	V129	
V130	V131	V132	
V133	V134	V135	
V136	V137	V138	
V139	V140	V141	

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	404	130	52520
	2	6.3	14	1068	14952
	3	6.3	40	250	10000
	4	6.3	940	292	274480
	5	6.3	6	106	636
	6	6.3	1	139	139
	7	6.3	18	1200	21600
	8	6.3	18	85	1530
	9	6.3	7	91	637
	10	6.3	59	258	15222
	11	8.0	18	1083	19494
	12	8.0	4	299	1196
	13	8.0	144	1081	155664
	14	8.0	18	1143	20574
	15	10.0	4	252	1008
	16	10.0	2	299	598
	17	10.0	2	306	612
	18	10.0	2	465	930
	19	10.0	1	919	919
	20	10.0	4	922	3688
	21	10.0	2	359	718
	22	10.0	4	322	1288
	23	12.5	4	967	3868
	24	12.5	9	985	7880
	25	12.5	2	475	950
	26	12.5	8	1200	9600
	27	12.5	1	771	771
	28	12.5	9	1197	10773
	29	12.5	1	1071	1071
	30	12.5	2	535	1070
	31	12.5	6	1126	6756
	32	12.5	2	311	622
	33	12.5	48	1124	53952
	34	12.5	2	527	1054
	35	12.5	1	338	338
	36	12.5	2	531	1062
	37	12.5	1	404	404
	38	12.5	5	1147	5735
	39	12.5	1	1093	1093
	40	12.5	2	540	1080
	41	12.5	4	963	3852
	42	12.5	2	338	676
	43	12.5	6	363	2178
	44	12.5	2	321	642
	45	16.0	1	553	553
	46	16.0	4	1068	4272
	47	16.0	1	334	334
	48	16.0	1	299	299
	49	16.0	2	1071	2142
	50	16.0	2	612	1224
	51	16.0	8	1085	8680
	52	16.0	10	610	6100
	53	16.0	62	1099	68138
	54	16.0	2	615	1230
	55	16.0	1	545	545
	56	16.0	4	314	1256
	57	16.0	1	750	750
	58	16.0	5	754	3770
	59	16.0	4	1169	4676
	60	16.0	2	605	1210
	61	16.0	2	826	1652
	62	16.0	2	542	1084
	63	16.0	2	516	1032
	64	16.0	1	519	519
	65	16.0	1	488	488
	66	16.0	1	243	243
	67	16.0	2	670	1340
	68	16.0	1	673	673
	69	16.0	1	672	672
	70	16.0	2	1170	2340
	71	16.0	2	247	494

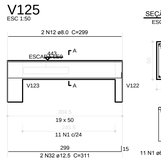
V124
ESC 1:50



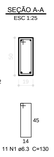
SEÇÃO A-A
ESC 1:25



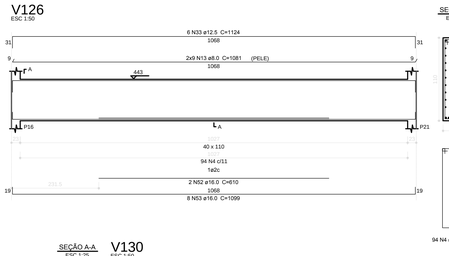
V125
ESC 1:50



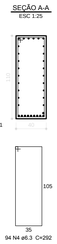
SEÇÃO A-A
ESC 1:25



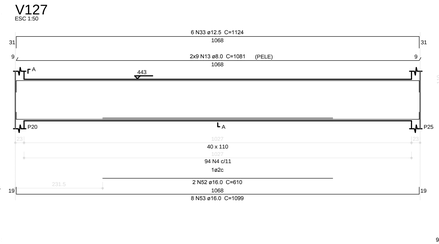
V126
ESC 1:50



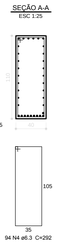
SEÇÃO A-A
ESC 1:25



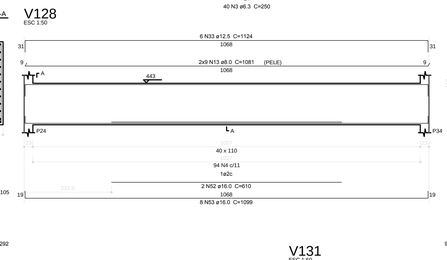
V127
ESC 1:50



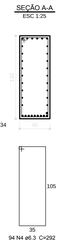
SEÇÃO A-A
ESC 1:25



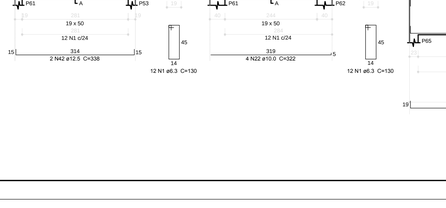
V128
ESC 1:50



SEÇÃO A-A
ESC 1:25



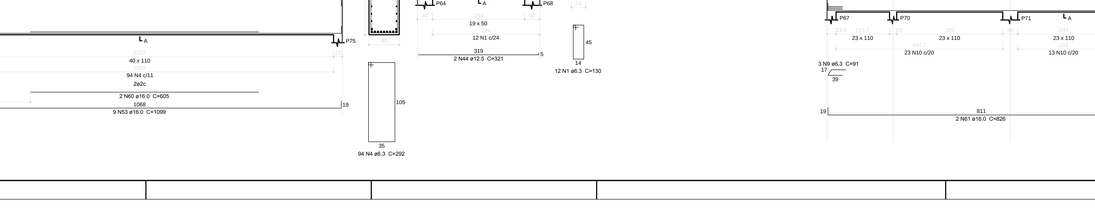
V129
ESC 1:50



SEÇÃO A-A
ESC 1:25



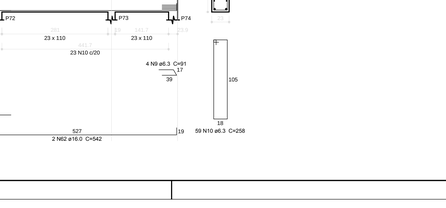
V130
ESC 1:50



SEÇÃO A-A
ESC 1:25



V131
ESC 1:50



SEÇÃO A-A
ESC 1:25

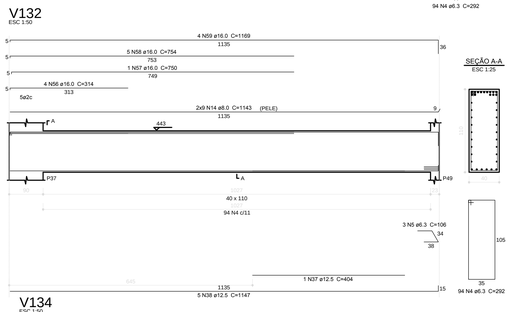


Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	3917.2	1054.4
	8.0	1969.3	854.8
	10.0	97.7	66.2
	12.5	1154.3	1223.1
	16.0	1157.2	2009
PESO TOTAL (kg)			
CA50	5207.5		

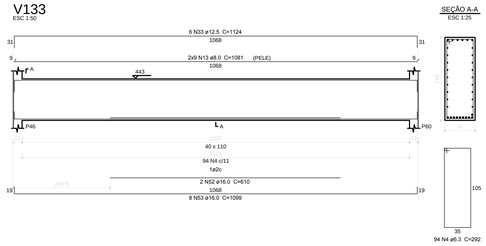
Volume de concreto (C-40) = 63.26 m³
Área de forma = 466.33 m²

V132
ESC 1:50



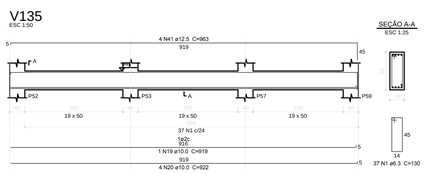
SEÇÃO A-A
ESC 1:25

V133
ESC 1:50



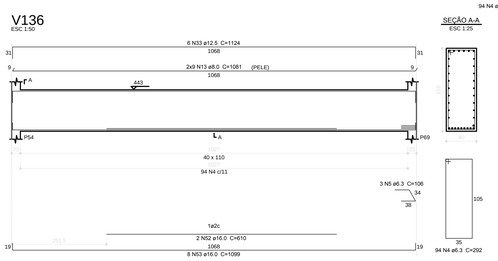
SEÇÃO A-A
ESC 1:25

V135
ESC 1:50



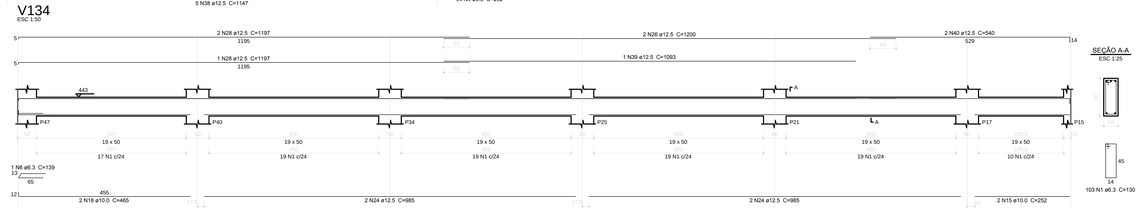
SEÇÃO A-A
ESC 1:25

V136
ESC 1:50



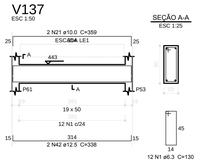
SEÇÃO A-A
ESC 1:25

V134
ESC 1:50



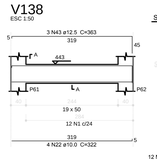
SEÇÃO A-A
ESC 1:25

V137
ESC 1:50



SEÇÃO A-A
ESC 1:25

V138
ESC 1:50



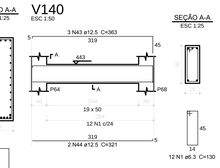
SEÇÃO A-A
ESC 1:25



V139
ESC 1:50

SEÇÃO A-A
ESC 1:25

V140
ESC 1:50



SEÇÃO A-A
ESC 1:25

V141
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: V121 À V141

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: 17/40