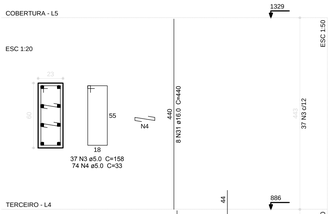
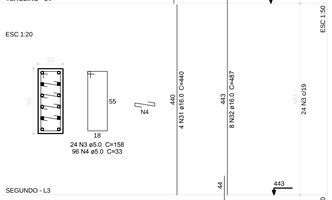
P36

COBERTURA - L5



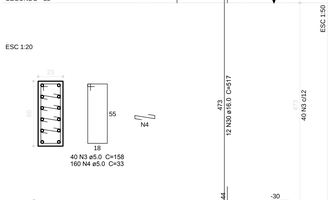
37 N3 ø5.0 C=158
74 N4 ø5.0 C=33

TERCEIRO - L4



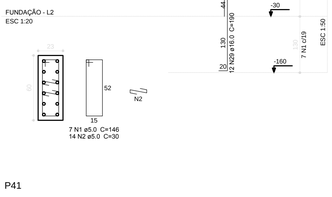
24 N3 ø5.0 C=158
96 N4 ø5.0 C=33

SEGUNDO - L3



40 N3 ø5.0 C=158
160 N4 ø5.0 C=33

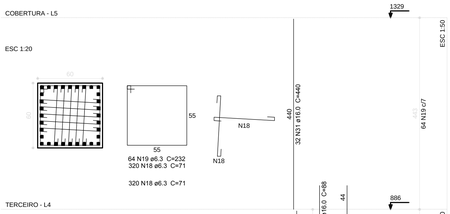
FUNDAÇÃO - L2



7 N1 ø5.0 C=146
14 N2 ø5.0 C=30

P37

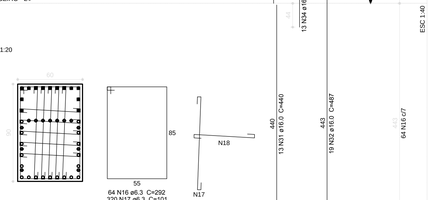
COBERTURA - L5



64 N19 ø6.3 C=232
320 N18 ø6.3 C=71

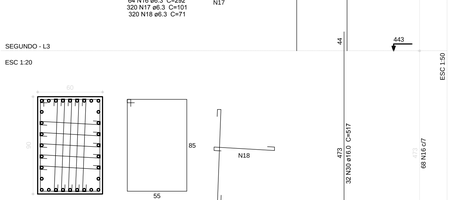
320 N18 ø6.3 C=71

TERCEIRO - L4



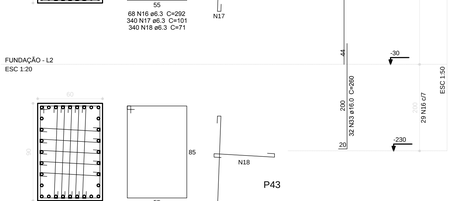
64 N16 ø6.3 C=292
320 N17 ø6.3 C=101
320 N18 ø6.3 C=71

SEGUNDO - L3



68 N16 ø6.3 C=292
340 N17 ø6.3 C=101
340 N18 ø6.3 C=71

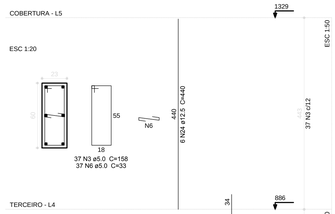
FUNDAÇÃO - L2



29 N16 ø6.3 C=292
145 N17 ø6.3 C=101
145 N18 ø6.3 C=71

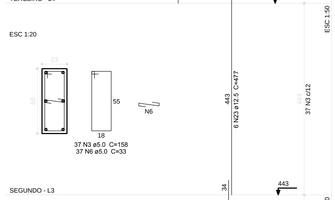
P38

COBERTURA - L5



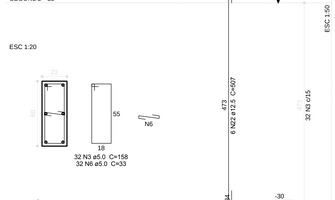
37 N3 ø5.0 C=158
37 N6 ø5.0 C=33

TERCEIRO - L4



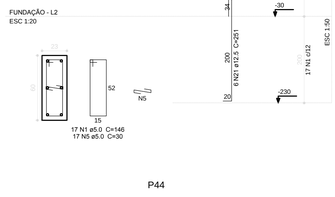
37 N3 ø5.0 C=158
37 N6 ø5.0 C=33

SEGUNDO - L3



32 N3 ø5.0 C=158
32 N6 ø5.0 C=33

FUNDAÇÃO - L2



17 N1 ø5.0 C=146
17 N5 ø5.0 C=30

P39

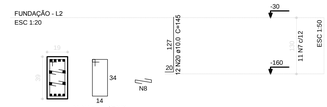
FUNDAÇÃO - L2



11 N7 ø5.0 C=108

P39A

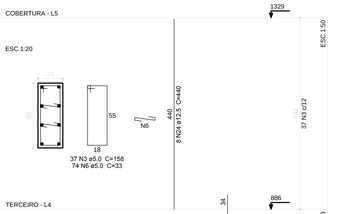
FUNDAÇÃO - L2



11 N7 ø5.0 C=108
22 N8 ø5.0 C=29

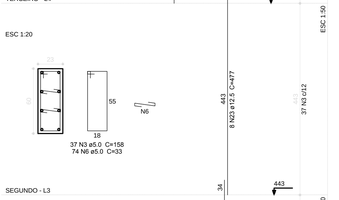
P40

COBERTURA - L5



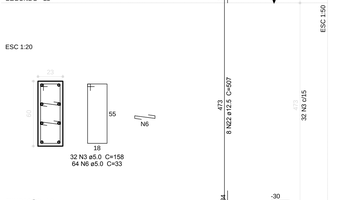
37 N3 ø5.0 C=158
74 N6 ø5.0 C=33

TERCEIRO - L4



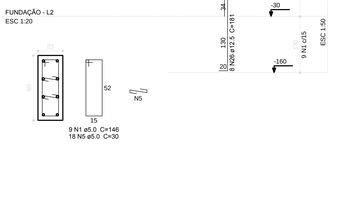
37 N3 ø5.0 C=158
74 N6 ø5.0 C=33

SEGUNDO - L3



32 N3 ø5.0 C=158
64 N6 ø5.0 C=33

FUNDAÇÃO - L2



9 N1 ø5.0 C=146
18 N5 ø5.0 C=30

Relação do aço

P36	P37	P38
P39	P39A	P40
P41	P42	P42A
P43	P44	P45
P46		

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	56	146	8176
	2	5.0	56	30	1680
	3	5.0	640	158	101120
	4	5.0	977	33	32241
	5	5.0	53	30	1590
	6	5.0	479	33	15807
	7	5.0	44	108	4752
	8	5.0	33	29	957
	9	5.0	32	292	9344
	10	5.0	160	99	15840
	11	5.0	224	69	15456
	12	5.0	10	98	980
	13	5.0	10	26	260
	14	5.0	24	110	2640
	15	5.0	24	29	696
CA50	16	6.3	225	292	65700
	17	6.3	1125	101	113625
	18	6.3	2405	71	170755
	19	6.3	128	232	29696
	20	10.0	30	145	4350
	21	12.5	6	251	1506
	22	12.5	22	507	11154
	23	12.5	20	477	9540
	24	12.5	22	440	9680
	25	12.5	6	144	864
	26	12.5	22	181	3982
	27	12.5	4	143	572
	28	12.5	6	320	1920
	29	16.0	72	190	13680
	30	16.0	102	517	52734
	31	16.0	128	440	56320
	32	16.0	66	487	32142
	33	16.0	32	260	8320
	34	16.0	26	88	2288
	35	16.0	2	470	940

Resumo do aço

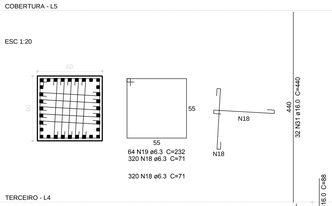
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	3797.8	1022.3
	10.0	43.5	29.5
	12.5	392.2	415.6
	16.0	1664.3	2889.4
CA60	5.0	2115.4	358.7

PESO TOTAL (kg)	
CA50	4356.7
CA60	358.7

Volume de concreto (C-40) = 28.02 m³
Área de forma = 246.97 m²

P41

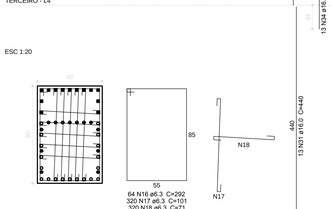
COBERTURA - L5



64 N19 ø6.3 C=232
320 N18 ø6.3 C=71

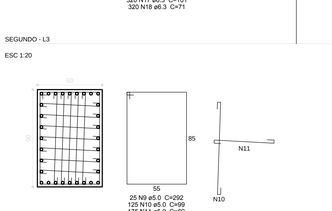
320 N18 ø6.3 C=71

TERCEIRO - L4



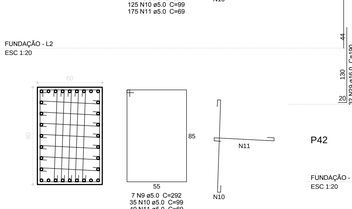
64 N16 ø6.3 C=292
320 N17 ø6.3 C=101
320 N18 ø6.3 C=71

SEGUNDO - L3



25 N9 ø5.0 C=292
125 N10 ø5.0 C=99
175 N11 ø5.0 C=69

FUNDAÇÃO - L2



7 N9 ø5.0 C=292
35 N10 ø5.0 C=99
49 N11 ø5.0 C=69

P42

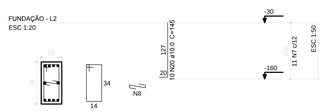
FUNDAÇÃO - L2



11 N7 ø5.0 C=108

P42A

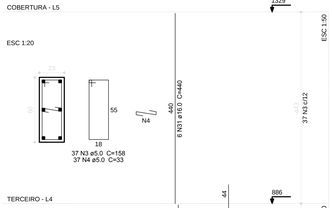
FUNDAÇÃO - L2



11 N7 ø5.0 C=108
11 N8 ø5.0 C=29

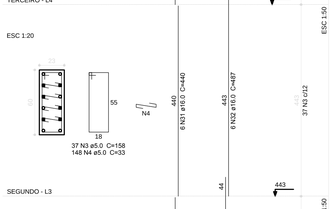
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COBERTURA - L5



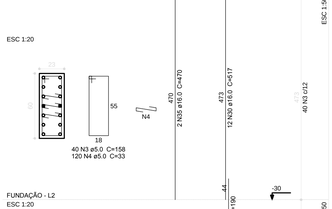
37 N3 ø5.0 C=158
37 N4 ø5.0 C=33

TERCEIRO - L4



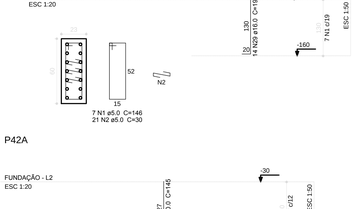
37 N3 ø5.0 C=158
148 N4 ø5.0 C=33

SEGUNDO - L3



40 N3 ø5.0 C=158
120 N4 ø5.0 C=33

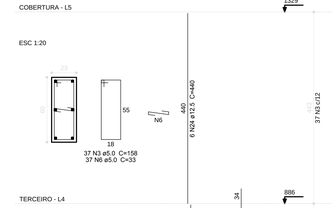
FUNDAÇÃO - L2



7 N1 ø5.0 C=146
21 N2 ø5.0 C=30

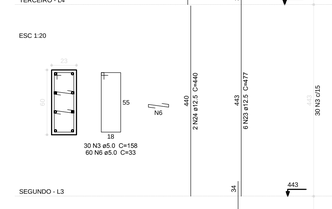
P44

COBERTURA - L5



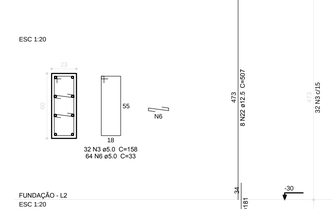
37 N3 ø5.0 C=158
37 N6 ø5.0 C=33

TERCEIRO - L4



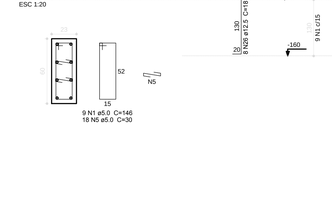
30 N3 ø5.0 C=158
60 N6 ø5.0 C=33

SEGUNDO - L3



32 N3 ø5.0 C=158
64 N6 ø5.0 C=33

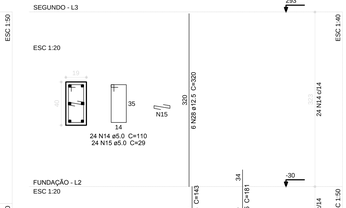
FUNDAÇÃO - L2



9 N1 ø5.0 C=146
18 N5 ø5.0 C=30

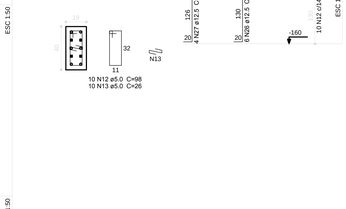
P45

SEGUNDO - L3



24 N14 ø5.0 C=110
24 N15 ø5.0 C=29

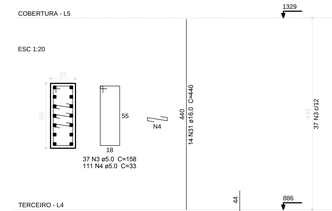
FUNDAÇÃO - L2



10 N12 ø5.0 C=98
10 N13 ø5.0 C=26

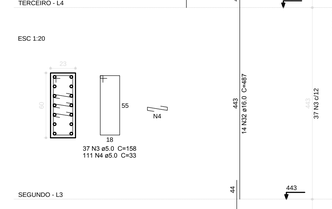
P46

COBERTURA - L5



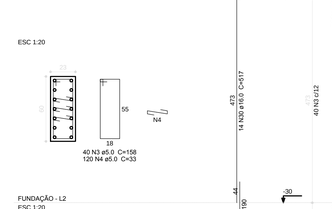
37 N3 ø5.0 C=158
111 N4 ø5.0 C=33

TERCEIRO - L4



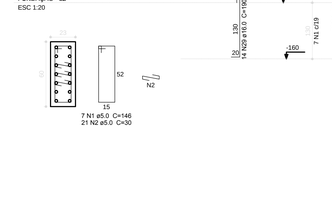
37 N3 ø5.0 C=158
111 N4 ø5.0 C=33

SEGUNDO - L3



40 N3 ø5.0 C=158
120 N4 ø5.0 C=33

FUNDAÇÃO - L2



7 N1 ø5.0 C=146
21 N2 ø5.0 C=30

REVISÃO	OBSERVAÇÃO	DATA

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

PROJETO

TÍTULO:
PROJETO EXECUTIVO - ENGENHARIAS

CONTEÚDO:
PROJETO DE ESTRUTURA
PILARES: P36 À P46

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	36/40