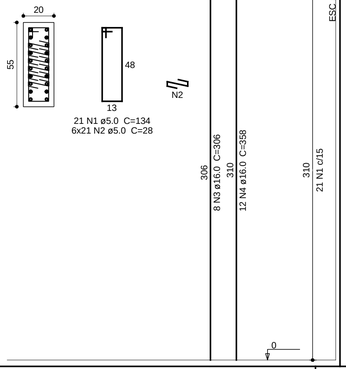
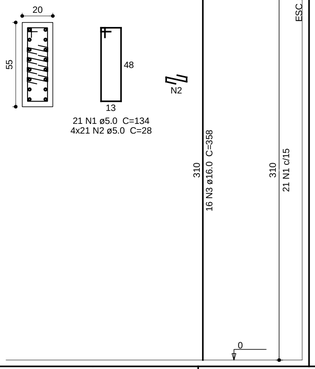
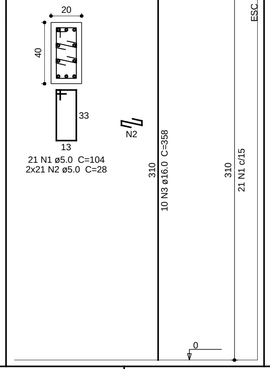
P1
TÉRREO - L2
ESC 1:20



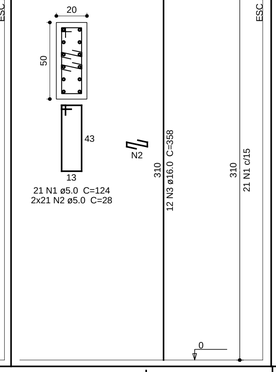
P2
TÉRREO - L2
ESC 1:20



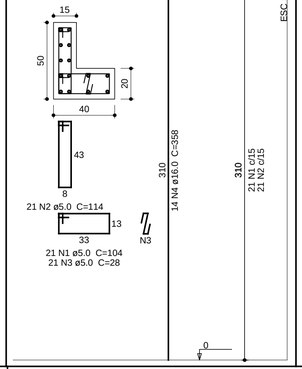
P3
TÉRREO - L2
ESC 1:20



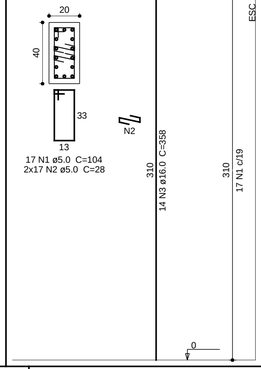
P4
TÉRREO - L2
ESC 1:20



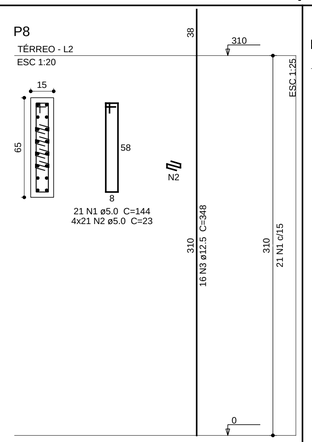
P5
TÉRREO - L2
ESC 1:20



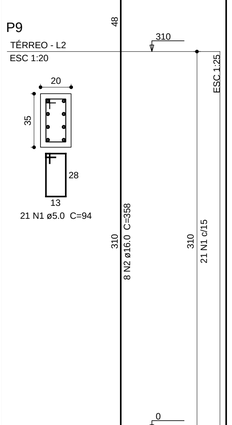
P6
TÉRREO - L2
ESC 1:20



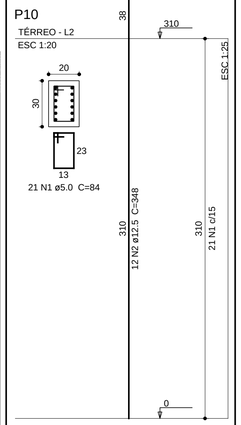
P8
TÉRREO - L2
ESC 1:20



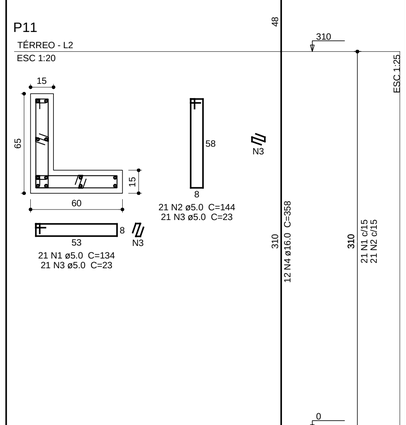
P9
TÉRREO - L2
ESC 1:20



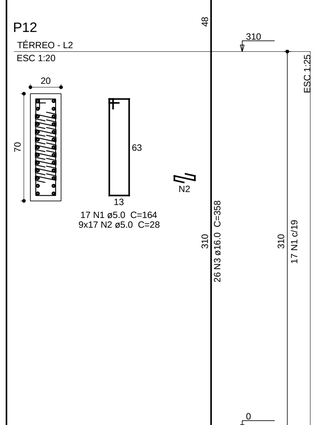
P10
TÉRREO - L2
ESC 1:20



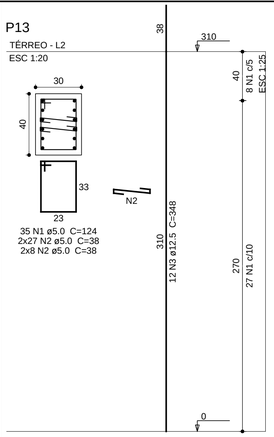
P11
TÉRREO - L2
ESC 1:20



P12
TÉRREO - L2
ESC 1:20



P13
TÉRREO - L2
ESC 1:20



P15
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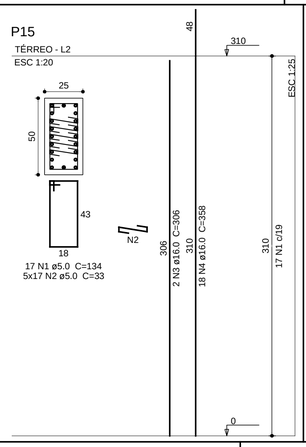
ESC 1:20



P16
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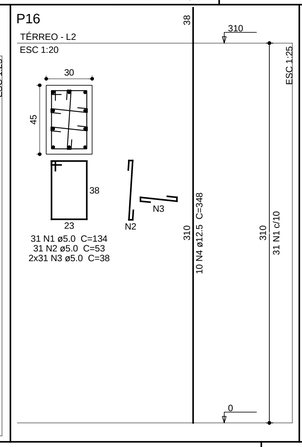
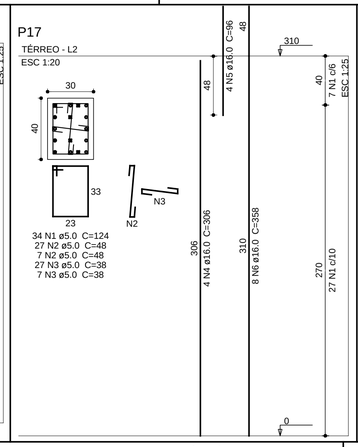
ESC 1:20



P17
TÉRREO - L2
ESC 1:20



P18
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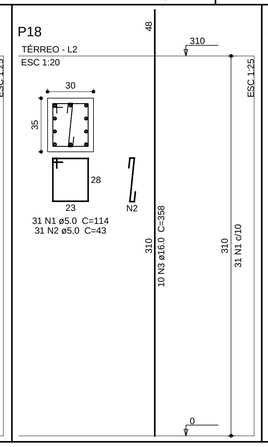
ESC 1:20



P20
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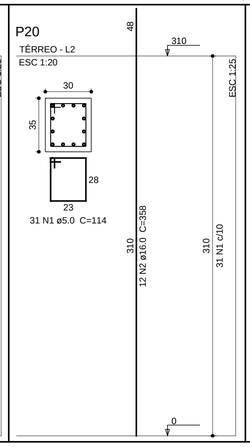
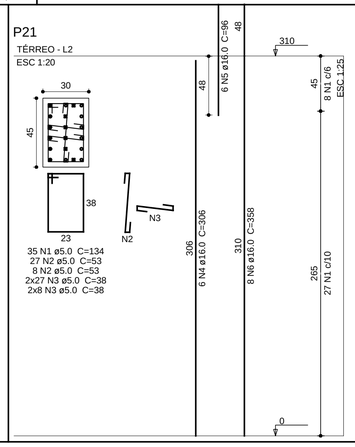
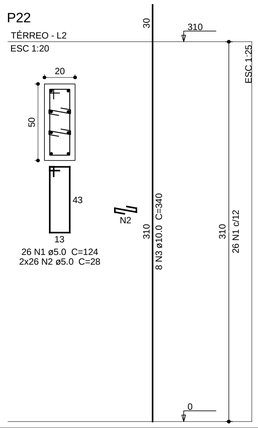
ESC 1:20



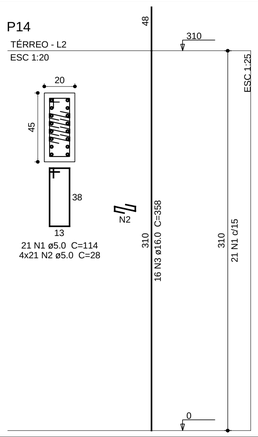
P21
TÉRREO - L2
ESC 1:20



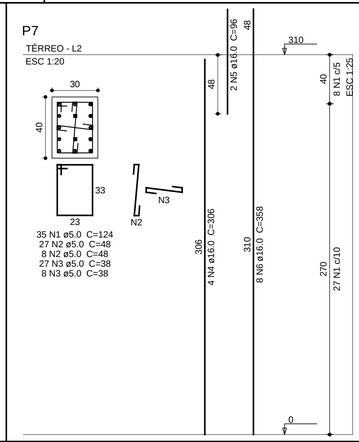
P22
TÉRREO - L2
ESC 1:20



P14
TÉRREO - L2
ESC 1:20



P7
TÉRREO - L2
ESC 1:20



PENAS

RED	0.1mm	BLACK
YELLOW	0.2mm	BLACK
GREEN	0.3mm	BLACK
CYAN	0.4mm	BLACK
BLUE	0.5mm	BLACK
MAGENTA	0.6mm	BLACK
10	0.1mm	10
62	0.1mm	62
96	0.1mm	96
156	0.1mm	156
160	(0.2mm)	160
254	0.1mm	254

Relação do aço

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P1	CA60	1	5.0	21	134	2814
	CA60	2	5.0	126	28	3528
	CA50	3	16.0	8	306	2448
	CA50	4	16.0	12	358	4296
P2	CA60	1	5.0	21	134	2814
	CA60	2	5.0	84	28	2352
	CA50	3	16.0	16	358	5728
P3	CA60	1	5.0	21	104	2184
	CA60	2	5.0	42	28	1176
	CA50	3	16.0	10	358	3580
P4	CA60	1	5.0	21	124	2604
	CA60	2	5.0	42	28	1176
	CA50	3	16.0	12	358	4296
P5	CA60	1	5.0	21	104	2184
	CA60	2	5.0	21	114	2394
	CA60	3	5.0	21	28	588
	CA50	4	16.0	14	358	5012
P6	CA60	1	5.0	17	104	1768
	CA60	2	5.0	34	28	952
	CA50	3	16.0	14	358	5012
P7	CA60	1	5.0	35	124	4340
	CA60	2	5.0	35	48	1680
	CA60	3	5.0	35	38	1330
	CA50	4	16.0	4	306	1224
	CA50	5	16.0	2	96	192
	CA50	6	16.0	8	358	2864
P8	CA60	1	5.0	21	144	3024
	CA60	2	5.0	84	23	1932
	CA50	3	12.5	16	348	5568
P9	CA60	1	5.0	21	94	1974
	CA50	2	16.0	8	358	2864
P10	CA60	1	5.0	21	84	1764
	CA50	2	12.5	12	348	4176
P11	CA60	1	5.0	21	134	2814
	CA60	2	5.0	21	144	3024
	CA60	3	5.0	42	23	966
	CA50	4	16.0	12	358	4296
P12	CA60	1	5.0	17	164	2788
	CA60	2	5.0	153	28	4284
	CA50	3	16.0	26	358	9308
P13	CA60	1	5.0	35	124	4340
	CA60	2	5.0	70	38	2660
	CA50	3	12.5	12	348	4176
P14	CA60	1	5.0	21	114	2394
	CA60	2	5.0	84	28	2352
	CA50	3	16.0	16	358	5728
P15	CA60	1	5.0	17	134	2278
	CA60	2	5.0	85	33	2805
	CA50	3	16.0	2	306	612
	CA50	4	16.0	18	358	6444
P16	CA60	1	5.0	31	134	4154
	CA60	2	5.0	31	53	1643
	CA60	3	5.0	62	38	2356
	CA50	4	12.5	10	348	3480
P17	CA60	1	5.0	34	124	4216
	CA60	2	5.0	34	48	1632
	CA60	3	5.0	34	38	1292
	CA50	4	16.0	4	306	1224
	CA50	5	16.0	4	96	384
	CA50	6	16.0	8	358	2864
P18	CA60	1	5.0	31	114	3534
	CA60	2	5.0	31	43	1333
	CA50	3	16.0	10	358	3580
P20	CA60	1	5.0	31	114	3534
	CA50	2	16.0	12	358	4296
P21	CA60	1	5.0	35	134	4690
	CA60	2	5.0	35	53	1855
	CA60	3	5.0	70	38	2660
	CA50	4	16.0	6	306	1836
	CA50	5	16.0	6	96	576
	CA50	6	16.0	8	358	2864
P22	CA60	1	5.0	26	124	3224
	CA60	2	5.0	52	28	1456
	CA50	3	10.0	8	340	2720

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	10.0	27.2	16.8
	12.5	174	167.6
	16.0	815.3	1286.8
CA60	5.0	1108.7	170.9

PESO TOTAL (kg)	
CA50	1471.2
CA60	170.9

Volume de concreto (C35) = 7.11 m³
Área de forma = 94.86 m²

Nº	REVISÃO	DATA
00	EMISSÃO INICIAL	13/06/2016

ESTEL ENGENHARIA
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Tel: (047) 3046-2001 Fax: (047) 3046-2004
estel@estelengenharia.com.br - www.estelengenharia.com.br

PROJETO Nº 1280/16

PROJETO ESTRUTURAL

CLIENTE: MUNICÍPIO DE PARANAGUÁ

PROJETO: PRÉDIO ADM. DA PREFEITURA DE PARANAGUÁ

CONTEÚDO: ARMAÇÃO DOS PILARES DO TÉRREO

PRANCHA Nº 26/75

RESPONSÁVEL TÉCNICO: SÉRGIO LUIZ DO AMARAL LOZOVEY, CREA/SC 13708-0

PROPRIETÁRIO: PREFEITURA DE PARANAGUÁ, UNIDADE DE GERENCIAMENTO DE PROGRAMAS

AUTOR DO PROJETO	CAD	DATA	REVISÃO	CONTROLE DE PROJETOS
SÉRGIO LOZOVEY	ARLINE DEPINÉ	03/2016	00	PROJETO DEFINITIVO (X)
ÁREA: 1.850,00 m²	VERIFICAÇÃO: RENATO REIS	ESCALA: IND.	ARQUIVO: 1280-EST-26-R0	PROJETO NÃO DEFINITIVO ( )