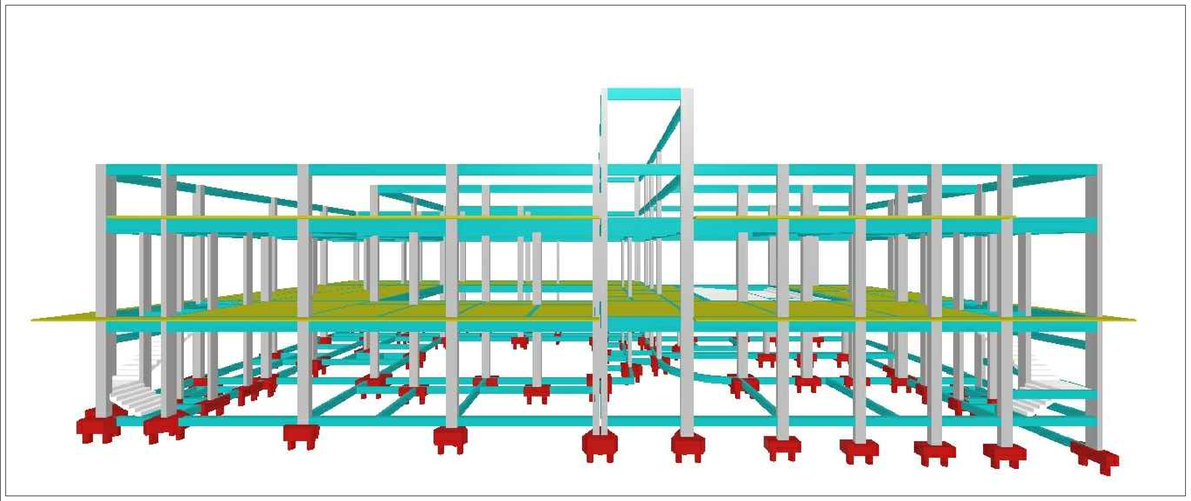
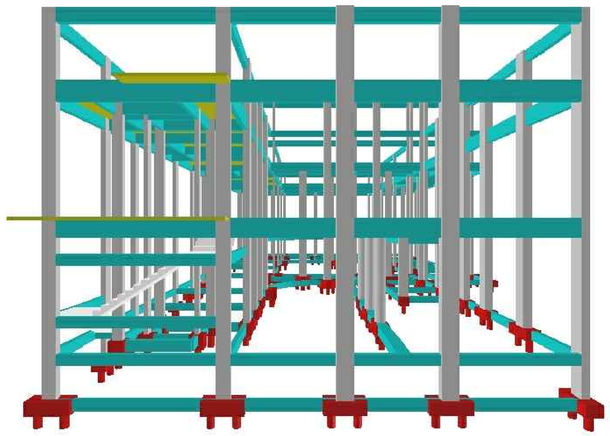
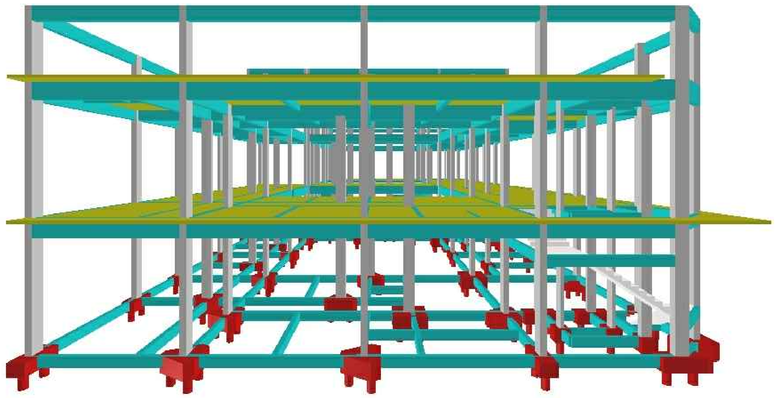
VISTA FRONTAL



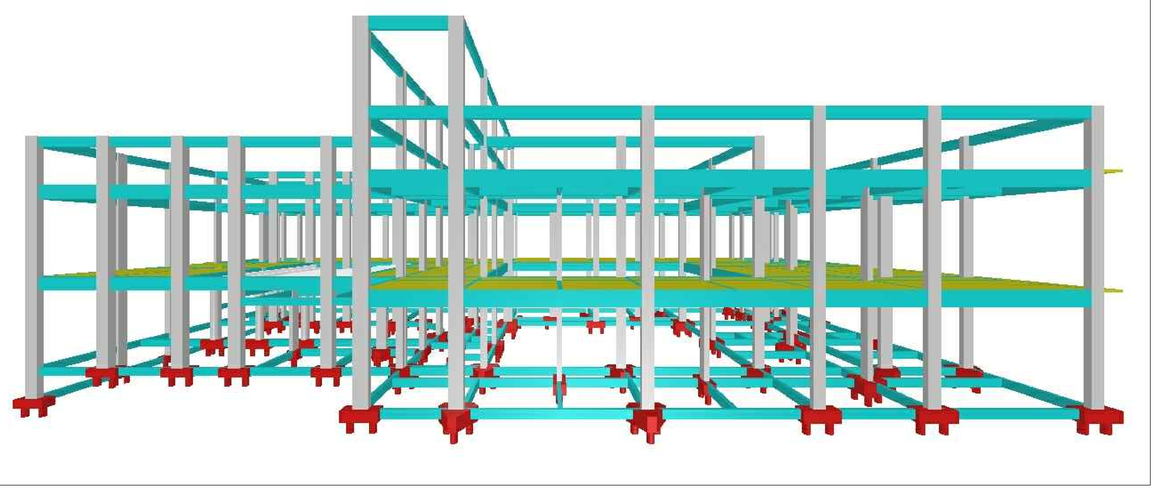
VISTA LATERAL DIREITA



VISTA LATERAL ESQUERDA



VISTA FUNDO



PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
GRIS	0,13

A0
1181x841mm

GRUPO:
MOUNTAIN
Engenharia Estrutural e Arquitetura

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

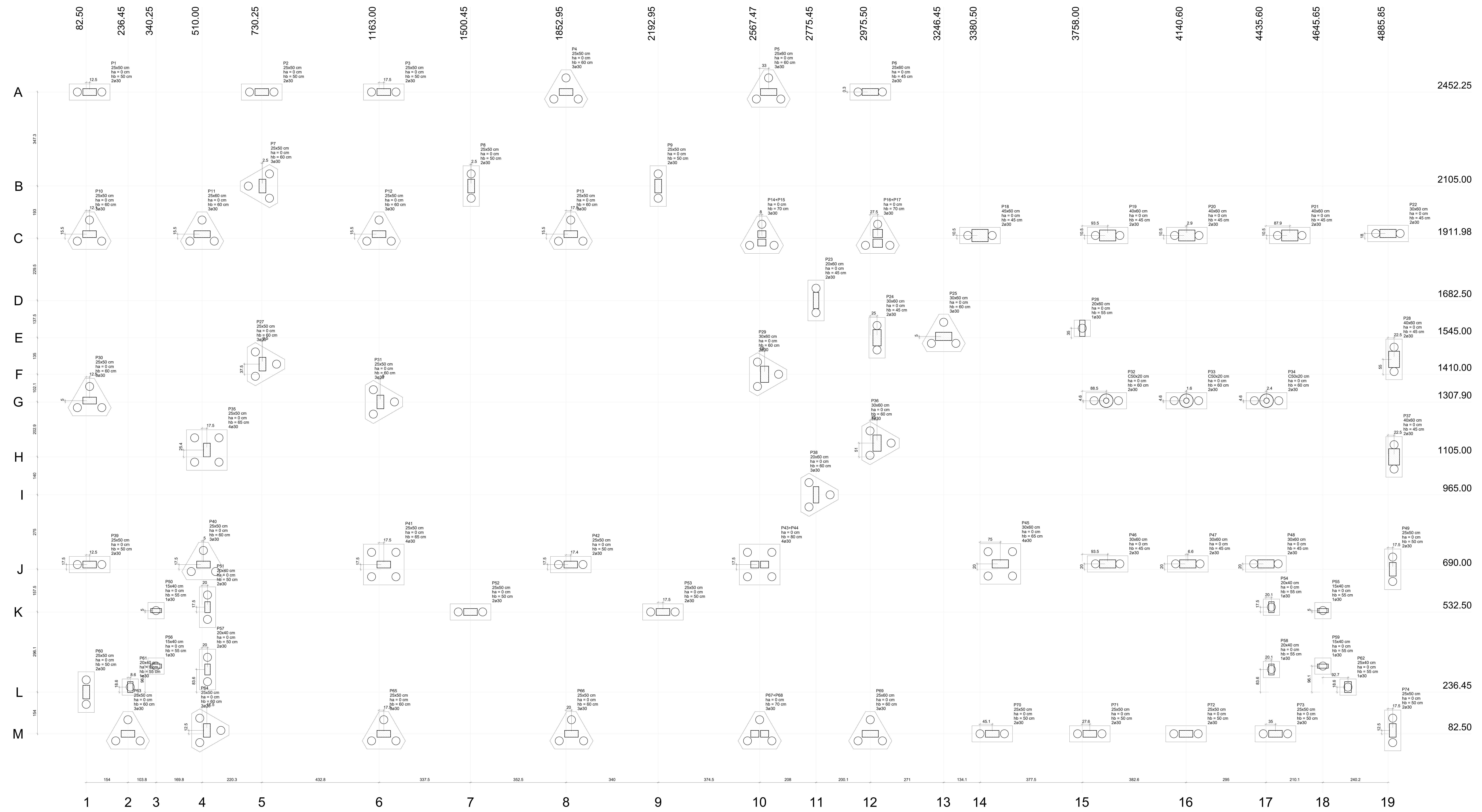
ASSUNTO:
PLANTA LOCAÇÃO

FOLHA:
01/47

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA



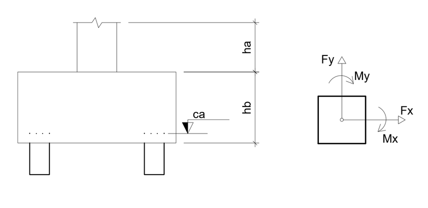
Planta de locação

escala 1:75

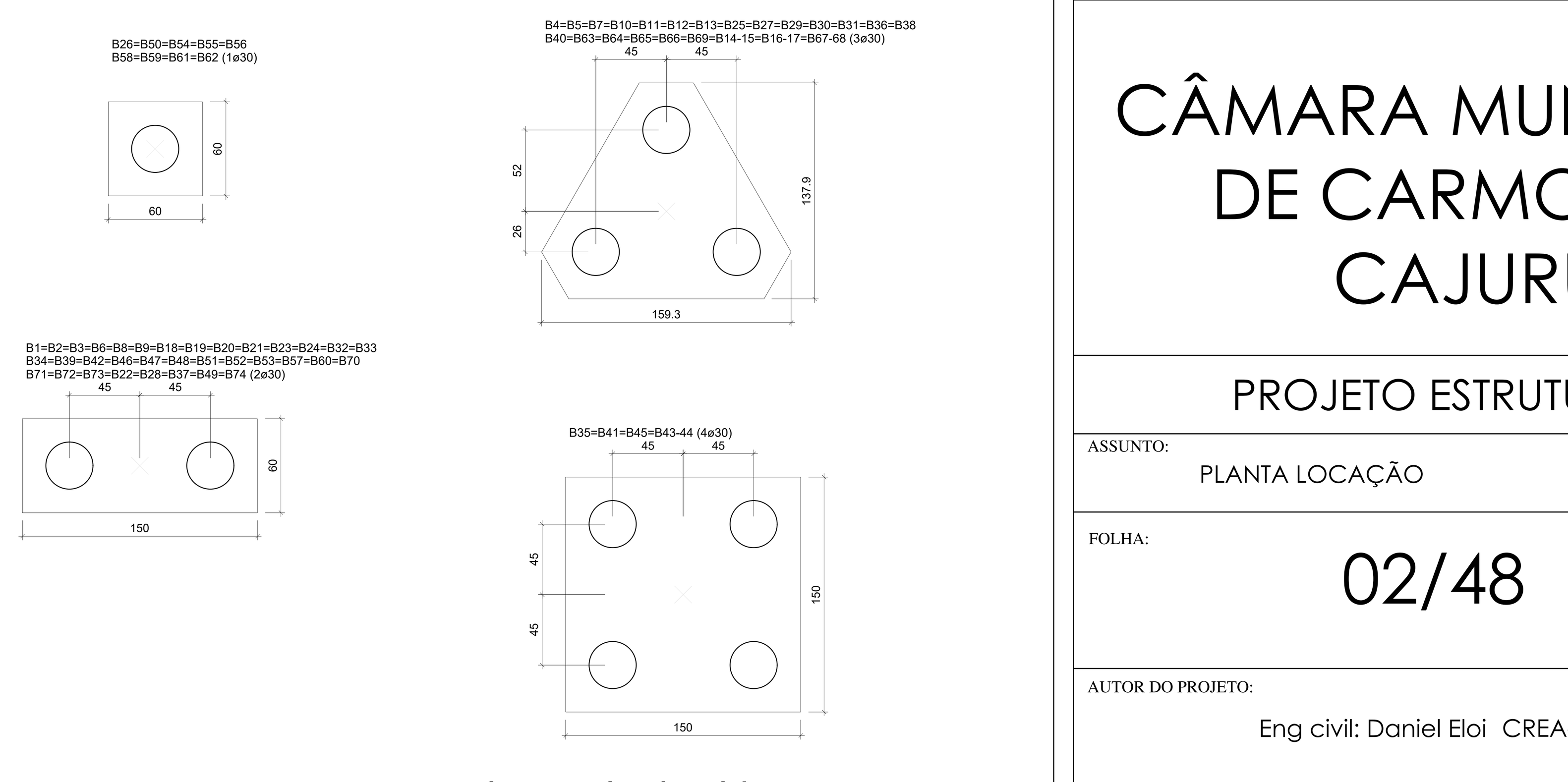
Nome	Seção (cm)	X (cm)	Y (cm)	Pilar: Carga Máx. (tf)	Carga Mín. (tf)	Mx (kgf.m)	My (kgf.m)	Fx (tf)	Fy (tf)	Fundação: Lado B (cm)	Lado H (cm)	h0 / ha (cm)	h1 / hb (cm)	Bloco: ne	de (cm)	ca (cm)	Base tub. (cm)
P1	25x50	95.00	2452.25	33.1	25.2	0	0	1.0	1.5	150	60	0	50	2	30	120	
P2	25x50	730.25	2452.25	37.2	21.9	0	0	1.2	1.6	150	60	0	50	2	30	120	
P3	25x50	1180.45	2452.25	40.4	29.6	0	0	1.3	1.5	150	60	0	50	2	30	120	
P4	25x50	1852.95	2452.25	50.4	34.8	0	0	0.7	1.6	159	138	0	60	3	30	110	
P5	25x60	2600.49	2452.25	53.3	38.1	0	0	2.0	1.6	159	138	0	60	3	30	110	
P6	25x60	2975.50	2452.50	29.9	19.3	0	0	0.5	2.3	150	60	0	45	2	30	125	
P7	25x50	732.75	2105.00	58.6	46.7	0	0	1.3	3.2	159	138	0	60	3	30	110	
P8	25x50	1502.95	2105.00	39.6	30.7	0	0	0.5	1.5	150	60	0	50	2	30	120	
P9	25x50	2192.95	2105.00	44.0	33.9	0	0	2.4	1.6	150	60	0	50	2	30	120	
P10	25x50	94.59	1927.50	55.0	44.9	0	0	0.5	1.6	159	138	0	60	3	30	110	
P11	25x60	510.00	1927.50	47.0	38.7	0	0	1.5	2.6	159	138	0	60	3	30	110	
P12	25x50	1163.00	1927.50	62.8	53.2	0	0	0.7	2.0	159	138	0	60	3	30	110	
P13	25x50	1870.40	1927.50	44.4	33.3	0	0	0.7	2.0	159	138	0	60	3	30	110	
P18	45x60	3380.50	1922.50	24.5	20.4	0	0	1.2	1.3	150	60	0	45	2	30	125	
P19	40x60	3851.45	1922.50	32.4	22.3	0	0	1.8	0.8	150	60	0	45	2	30	125	
P20	40x60	4143.50	1922.50	28.3	19.7	0	0	1.8	1.1	150	60	0	45	2	30	125	
P21	40x60	4523.50	1922.50	28.2	21.5	0	0	1.5	1.0	150	60	0	45	2	30	125	
P22	30x60	4885.85	1930.00	25.1	11.3	0	0	0.5	1.9	150	60	0	45	2	30	-30	
P23	20x60	2775.45	1682.50	32.6	18.9	0	0	0.6	3.9	150	60	0	45	2	30	125	
P24	30x60	3000.50	1545.00	34.1	24.6	0	0	0.6	4.6	150	60	0	45	2	30	125	
P25	30x60	3246.45	1550.00	52.4	32.7	0	0	1.6	0.2	159	138	0	60	3	30	110	
P26	20x60	3758.00	1580.00	6.2	3.5	0	0	1.0	1.2	60	60	0	55	1	30	115	
P27	25x50	732.75	1447.52	51.6	41.7	0	0	0.2	1.1	159	138	0	60	3	30	110	
P28	40x60	4908.35	1465.00	34.4	18.5	0	0	0.2	3.8	150	60	0	45	2	30	-30	
P29	30x60	2585.50	1410.00	51.4	37.1	0	0	1.2	4.3	159	138	0	60	3	30	110	
P30	25x50	95.00	1312.90	58.3	49.3	0	0	0.9	1.5	159	138	0	60	3	30	110	
P31	25x50	1167.95	1307.90	49.3	42.8	0	0	1.1	0.8	159	138	0	60	3	30	110	
P32	C50x20	3846.45	1312.50	42.1	22.9	0	0	2.9	1.6	150	60	0	60	2	30	110	
P33	C50x20	4142.20	1312.50	30.8	20.0	0	0	3.4	0.9	150	60	0	60	2	30	110	
P34	C50x20	4437.95	1312.50	40.9	23.2	0	0	1.8	1.1	150	60	0	60	2	30	110	
P35	25x50	527.50	1130.40	69.7	57.5	0	0	0.8	2.4	150	150	0	65	4	30	105	
P36	30x60	3000.52	1155.95	60.1	35.2	0	0	0.3	2.4	159	138	0	60	3	30	110	
P37	40x60	4908.35	1105.00	30.5	18.5	0	0	0.2	4.0	150	60	0	45	2	30	-30	
P38	20x60	2775.45	965.00	53.2	33.8	0	0	1.0	2.4	159	138	0	60	3	30	110	
P39	25x50	95.00	707.50	43.4	33.5	0	0	0.6	2.8	150	60	0	50	2	30	120	
P40	25x50	515.00	707.50	48.0	30.0	0	0	0.8	3.6	159	138	0	60	3	30	110	
P41	25x50	1180.45	707.50	68.8	57.4	0	0	0.9	1.8	150	150	0	65	4	30	105	
P42	25x50	1870.35	707.50	38.5	29.3	0	0	1.4	2.4	150	60	0	50	2	30	120	
P45	30x60	3455.50	710.00	70.8	51.4	0	0	1.3	1.9	150	150	0	65	4	30	105	
P46	30x60	3851.45	710.00	40.2	29.0	0	0	2.2	0.8	150	60	0	45	2	30	125	
P47	30x60	4147.20	710.00	33.9	26.4	0	0	2.0	0.4	150	60	0	45	2	30	125	
P48	30x60	4435.60	710.00	39.7	10.2	0	0	1.0	1.3	150	60	0	45	2	30	125	
P49	25x50	4903.35	690.00	36.8	28.4	0	0	0.3	3.9	150	60	0	50	2	30	-35	
P50	15x40	340.25	537.50	16.3	6.3	0	0	0.6	0.6	60	60	0	55	1	30	115	
P51	20x40	530.00	550.00	17.9	10.4	0	0	0.4	4.1	150	60	0	50	2	30	120	
P52	25x50	1500.45	532.50	42.2	34.4	0	0	0.8	1.2	150	60	0	50	2	30	120	
P53	25x50	2210.45	532.50	38.5	30.8	0	0	0.9	0.2	150	60	0	50	2	30	120	
P54	20x40	4455.65	550.00	20.2	4.5	0	0	0.4	3.6	60	60	0	55	1	30	115	
P55	15x40	4645.65	537.50	17.6	7.3	0	0	0.8	0.7	60	60	0	55	1	30	115	
P56	15x40	340.25	332.50	8.9	4.4	0	0	0.3	0.6	60	60	0	55	1	30	115	
P57	20x40	530.00	320.00	20.8	6.7	0	0	0.4	4.1	150	60	0	50	2	30	120	
P58	20x40	4455.65	320.00	17.9	12.0	0	0	0.5	2.3	60	60	0	55	1	30	115	
P59	15x40	4645.65	332.50	9.2	4.8	0	0	0.3	0.8	60	60	0	55	1	30	115	
P60	25x50	82.50	236.45	23.5	11.0	0	0	1.8	2.4	150	60	0	50	2	30	120	
P61	20x40	245.00	255.00	15.6	11.3	0	0	0.4	0.4	60	60	0	55	1	30	115	
P62	25x40	4738.35	255.00	19.7	13.4	0	0	0.6	1.0	60	60	0	55	1	30	115	
P63	25x50	236.45	82.50	26.1	-1.5	0	0	1.9	1.3	159	138	0	60	3	30	110	
P64	25x50	527.50	95.00	47.6	19.8	0	0	1.2	0.3	159	138	0	60	3	30	110	
P65	25x50	1180.45	82.50	62.1	48.3	0	0	0.7	0.9	159	138	0	60	3	30	80	
P66	25x50	1872.95	82.50	61.7	48.2	0	0	0.5	1.0	159	138	0	60	3	30	60	
P69	25x60	2975.52	82.50	54.8	41.9	0	0	0.6	0.4	159	138	0	60	3	30	20	
P70	25x50	3425.60	82.50	40.1	30.9	0	0	0.4	0.3	150	60	0	50	2	30	15	
P71	25x50	3785.60	82.50	34.6	27.9	0	0	0.4	0.2	150	60	0	50	2	30	0	
P72	25x50	4140.60	82.50	33.7	26.5	0	0	0.3	0.3	150	60	0	50	2	30	-10	
P73	25x50	4470.60	82.50	30.7	17.2	0	0	0.5	0.2	150	60	0	50	2	30	-20	
P74	25x50	4903.35	95.00	30.9	19.3	0	0	0.4	1.5	150	60	0	50	2	30	-35	
P14+P15		2575.49	1911.98	59.4	43.3	0	0	0.6	3.4	159	138	0	70	3	30	100	
P16+P17		3003.00	1911.98	54.9	34.5	0	0	0.7	5.9	159	138	0	70	3	30	100	
P43+P44		2567.47	707.50	75.0	59.8	0	0	3.9	1.4	150	150	0	80	4	30	90	
P67+P68		2567.47	82.50	57.1	43.5	0	0	1.0	0.6	159	138	0	70	3	30	20	

Locação no eixo X: Coordenadas (cm)	Nome
82.50	P60
94.59	P10
95.00	P1, P30, P39
236.45	P63
245.00	P61
340.25	P50, P56
510.00	P11
515.00	P40
527.50	P35, P64
530.00	P51, P57
730.25	P2
732.75	P7, P27
1163.00	P12
1167.95	P31
1180.45	P3, P41, P65
1500.45	P52
1502.95	P8
1852.95	P4
1870.35	P42
1870.40	P13
1872.95	P66
2192.95	P9
2210.45	P53
2567.47	P43+P44, P67+P68
2575.49	P14+P15
2585.50	P29
2600.49	P5
2775.45	P23, P38
2975.50	P6
2975.52	P69
3000.50	P24
3000.52	P36
3003.00	P16+P17
3246.45	P25
3380.50	P18
3425.60	P70
3455.50	P45
3758.00	P26
3785.60	P71
3846.45	P32
3851.45	P19, P46
4140.60	P72
4142.20	P33
4143.50	P20
4147.20	P47
4435.60	P48
4437.95	P34
4455.65	P54, P58
4470.60	P73
4523.50	P21
4645.65	P55, P59
4738.35	P62
4885.85	P22
4903.35	P49, P74
4908.35	P28, P37

Locação no eixo Y: Coordenadas (cm)	Nome
2452.50	P6
2452.25	P1, P2, P3, P4, P5
2105.00	P7, P8, P9
1930.00	P22
1927.50	P10, P11, P12, P13
1922.50	P18, P19, P20, P21
1911.98	P14+P15, P16+P17
1682.50	P23
1580.00	P26
1550.00	P25
1545.00	P24
1465.00	P28
1447.52	P27
1410.00	P29
1312.90	P30
1312.50	P32, P33, P34
1307.90	P31
1155.95	P36
1130.40	P35
1105.00	P37
965.00	P38
710.00	P45, P46, P47, P48
707.50	P39, P40, P41, P42, P43+P44
690.00	P49
550.00	P51, P54
537.50	P50, P55
532.50	P52, P53
332.50	P56, P59
320.00	P57, P58
255.00	P61, P62
236.45	P60
95.00	P64, P74
82.50	P63, P65, P66, P67+P68, P69, P70, P71, P72, P73



Estacas: Simbologia	de (cm)	Profundidade (m)	Quantidade
○	30	10	162



Legenda dos blocos

escala 1:25

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: PLANTA LOCAÇÃO

FOLHA: 02/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

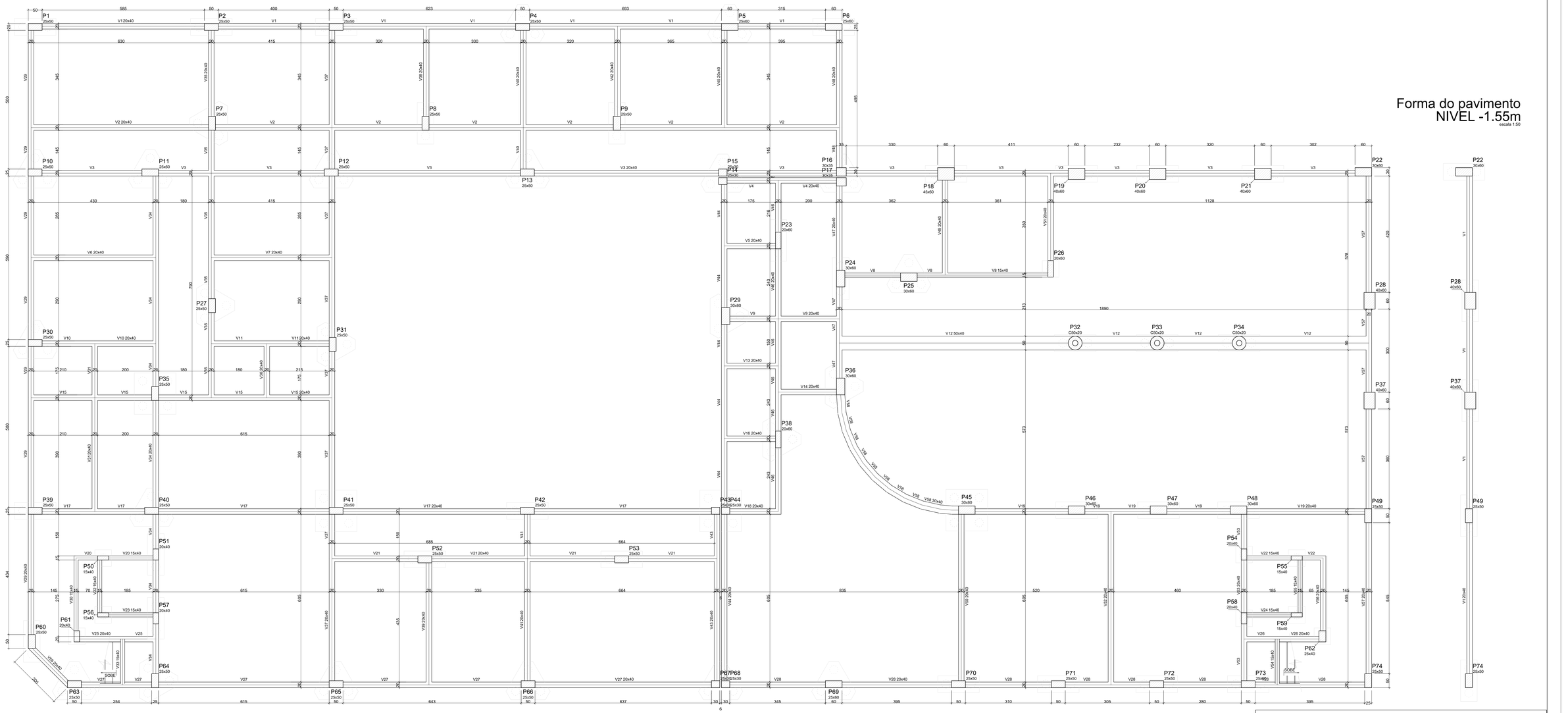
DATA: 07/2022

ESCALA: INDICADA

PLOT		
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
OUTRO	C.O.	0,13

A0

1181x841mm



Forma do pavimento
NIVEL -1.55m
escala 1:50



Forma do pavimento FUNDAÇÃO
escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x40	0	155
V2	20x40	0	155
V3	20x40	0	155
V4	20x40	0	155
V5	20x40	0	155
V6	20x40	0	155
V7	20x40	0	155
V8	15x40	0	155
V9	20x40	0	155
V10	20x40	0	155
V11	20x40	0	155
V12	50x40	0	155
V13	20x40	0	155
V14	20x40	0	155
V15	20x40	0	155
V16	20x40	0	155
V17	20x40	0	155
V18	20x40	0	155
V19	20x40	0	155
V20	15x40	0	155
V21	20x40	0	155
V22	15x40	0	155
V23	15x40	0	155
V24	15x40	0	155
V25	20x40	0	155
V26	20x40	0	155
V27	20x40	0	155
V28	20x40	0	155
V29	20x40	0	155
V30	15x40	0	155
V31	20x40	0	155
V32	15x40	0	155
V33	15x40	0	155
V34	20x40	0	155
V35	20x40	0	155
V36	20x40	0	155
V37	20x40	0	155
V38	20x40	0	155
V39	20x40	0	155
V40	20x40	0	155
V41	20x40	0	155
V42	20x40	0	155
V43	20x40	0	155
V44	20x40	0	155
V45	20x40	0	155
V46	20x40	0	155
V47	20x40	0	155
V48	20x40	0	155
V49	20x40	0	155
V50	20x40	0	155
V51	20x40	0	155
V52	20x40	0	155
V53	20x40	0	155
V54	15x40	0	155
V55	15x40	0	155
V56	20x40	0	155
V57	20x40	0	155
V58	30x40	0	155
V59	20x40	0	155

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	25 x 50	0	155
P2	25 x 50	0	155
P3	25 x 50	0	155
P4	25 x 50	0	155
P5	25 x 60	0	155
P6	25 x 60	0	155
P7	25 x 50	0	155
P8	25 x 50	0	155
P9	25 x 50	0	155
P10	25 x 50	0	155
P11	25 x 60	0	155
P12	25 x 50	0	155
P13	25 x 50	0	155
P14	25 x 30	0	155
P15	25 x 30	0	155
P16	30 x 35	0	155
P17	30 x 35	0	155
P18	45 x 60	0	155
P19	40 x 60	0	155
P20	40 x 60	0	155
P21	40 x 60	0	155
P22	30 x 60	-80	75
P23	20 x 60	0	155
P24	30 x 60	0	155
P25	30 x 60	0	155
P26	20 x 60	0	155
P27	25 x 50	0	155
P28	40 x 60	-80	75
P29	30 x 60	0	155
P30	25 x 50	0	155
P31	25 x 50	0	155
P32	Circ 50 x 20	0	155
P33	Circ 50 x 20	0	155
P34	Circ 50 x 20	0	155
P35	25 x 50	0	155
P36	30 x 60	0	155
P37	40 x 60	-80	75
P38	20 x 60	0	155
P39	25 x 50	0	155
P40	25 x 50	0	155
P41	25 x 50	0	155
P42	25 x 50	0	155
P43	25 x 30	0	155
P44	25 x 30	0	155
P45	30 x 60	0	155
P46	30 x 60	0	155
P47	30 x 60	0	155
P48	30 x 60	0	155
P49	25 x 50	0	155
P50	15 x 40	0	155
P51	20 x 40	0	155
P52	25 x 50	0	155
P53	25 x 50	0	155
P54	20 x 40	0	155
P55	15 x 40	0	155
P56	15 x 40	0	155
P57	20 x 40	0	155
P58	20 x 40	0	155
P59	15 x 40	0	155
P60	25 x 50	0	155
P61	20 x 40	0	155
P62	25 x 40	0	155
P63	25 x 50	-30	125
P64	25 x 50	0	155
P65	25 x 50	-30	125
P66	25 x 50	-50	105
P67	25 x 30	-80	75
P68	25 x 30	-80	75
P69	25 x 60	-90	65
P70	25 x 50	-105	50
P71	25 x 50	-120	35
P72	25 x 50	-130	25
P73	25 x 50	-140	15
P74	25 x 50	0	155

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x40	0	0

Características dos materiais

fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P22	30 x 60	0	0
P28	40 x 60	0	0
P37	40 x 60	0	0
P49	25 x 50	0	0
P74	25 x 50	0	0

Legenda dos Pilares
- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

Características dos materiais

fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Legenda dos Pilares
- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PLANTA FORMA FUNDAÇÃO E NIVEL -1.55m

FOLHA:
03/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

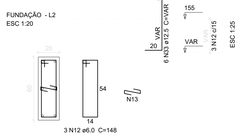
DATA:
07/2022

ESCALA:
INDICADA

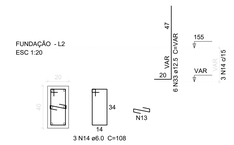
PLOT	
COR	PEN
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
OUTRO	0,0;0,13

A0
1181x841mm

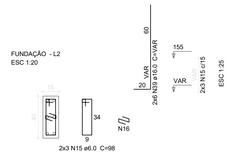
P26



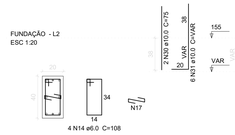
P54



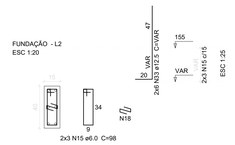
P50=P55



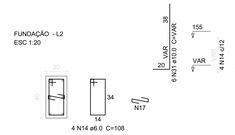
P58



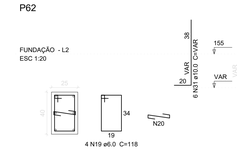
P56=P59



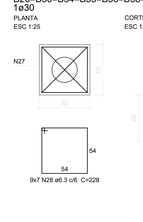
P61

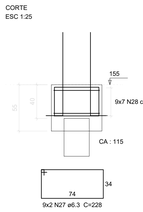


P62



B26=B50=B54=B55=B56=B58=B59=B61=B62
1ø30





Relação do aço

FUNDAÇÃO : B9, B12, B32, B45, B48, B54, B14-15, B16-17, B43-44, B67-68

NIVEL -1.55cm: B26, B49

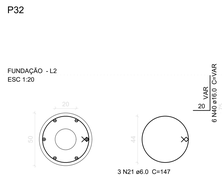
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	26	189	4914
	2	5.0	91	166	15106
	3	5.0	170	408	69360
	4	5.0	36	199	7164
	5	5.0	126	176	22176
	6	5.0	80	213	17040
	7	5.0	21	196	4116
	8	5.0	20	588	11760
	9	5.0	32	153	4896
	10	5.0	32	154	4928
	11	5.0	229	VAR	VAR
	12	5.0	252	VAR	VAR
	13	5.0	115	468	53820
	14	5.0	184	VAR	VAR
	15	5.0	181	VAR	VAR
	16	6.0	22	168	3696
	17	6.0	22	40	880
	18	6.0	10	188	1880
	19	6.0	2	71	142
	20	6.0	8	51	408
	21	6.0	98	138	13524
	22	6.0	69	35	2415
	23	6.0	88	36	3168
	24	6.0	8	148	1184
	25	6.0	8	30	240
	26	6.0	16	108	1728
	27	6.0	12	98	1176
	28	6.0	6	25	150
	29	6.0	8	31	248
	30	6.0	6	26	156
	31	6.0	4	118	472
	32	6.0	9	147	1323
	33	6.0	7	40	280
	34	6.0	2	198	396
	35	6.0	2	56	112
	36	6.0	6	52	312
	37	6.0	10	50	500
	38	6.0	7	42	294
	39	6.0	11	158	1738
	40	6.0	27	35	945
	41	6.0	5	30	150
	42	6.0	6	37	222
	43	6.0	24	98	2352
	44	6.0	8	118	944
CA50	45	6.3	165	154	25410
	46	6.3	18	228	4104
	47	6.3	63	228	14364
	48	10.0	48	VAR	VAR
	49	10.0	2	75	150
	50	10.0	18	VAR	VAR
	51	10.0	90	186	16740
	52	10.0	48	VAR	VAR
	53	10.0	540	204	110160
	54	10.0	54	224	12096
	55	10.0	18	VAR	VAR
	56	12.5	54	VAR	VAR
	57	12.5	15	185	2775
	58	12.5	54	VAR	VAR
	59	12.5	106	195	20670
	60	12.5	24	VAR	VAR
	61	12.5	62	VAR	VAR
	62	12.5	18	215	3870
	63	12.5	16	VAR	VAR
	64	12.5	30	VAR	VAR
	65	12.5	2	94	188
	66	12.5	26	VAR	VAR
	67	12.5	6	VAR	VAR
	68	12.5	15	223	3345
	69	16.0	12	VAR	VAR
	70	16.0	6	VAR	VAR
	71	16.0	8	VAR	VAR
	72	16.0	32	VAR	VAR
	73	16.0	26	VAR	VAR
	74	16.0	28	VAR	VAR
	75	16.0	12	VAR	VAR
	76	16.0	2	121	242
	77	16.0	8	VAR	VAR
	78	20.0	6	151	906
	79	20.0	20	VAR	VAR
	80	20.0	18	VAR	VAR

Resumo do aço

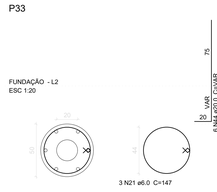
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	438.8	118.1
	10.0	1547	1049.1
	12.5	629.7	667.2
	16.0	153.6	266.6
	20.0	57.3	155.4
CA60	5.0	3722.2	631.1
	6.0	410.4	100.2
PESO TOTAL			
CA50	2256.5		
CA60	731.3		

Vol. de concreto total (C-25) = 45.87 m³
Área de forma total = 210.63 m²

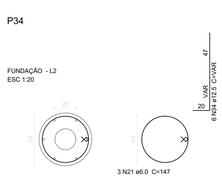
P32



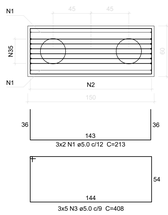
P33

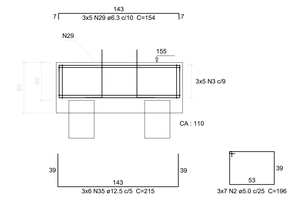


P34

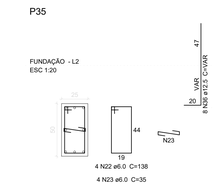


B32=B33=B34
2ø30

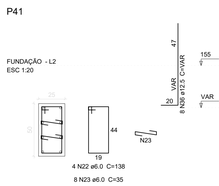




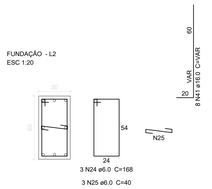
P35



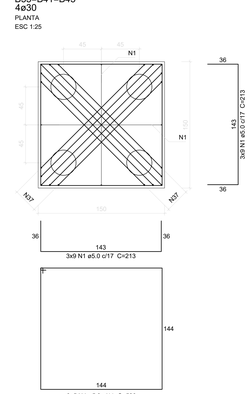
P41

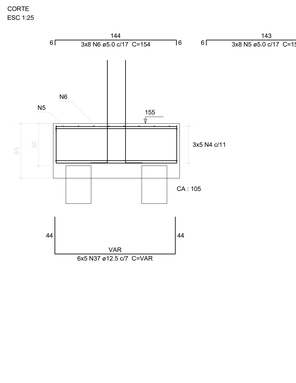


P45

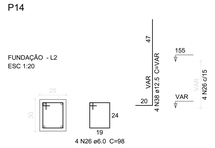


B35=B41=B45
4ø30

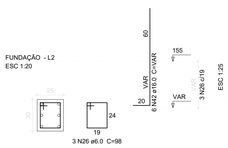




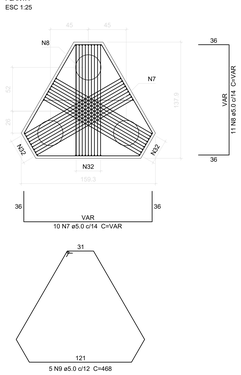
P14

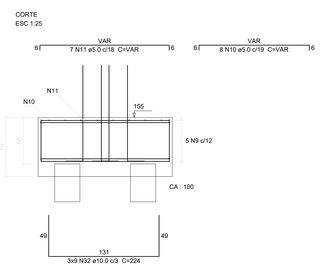


P15

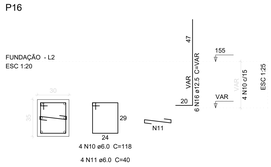


B14-15
3ø30

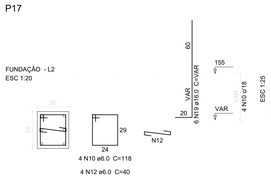




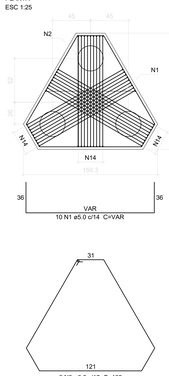
P16

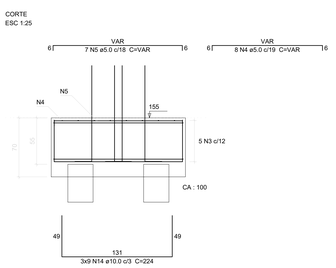


P17



B16-17
3ø30





CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: BLOCOS 01/03

FOLHA: 04/48

AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

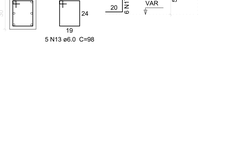
ESCALA: INDICADA

	PLOT	
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
0/90	C	0,0,13

A0
1181x841mm

P43

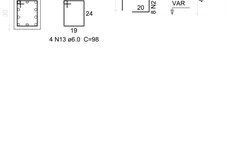
FUNDAÇÃO - L2
ESC 1:20



5 N13 ø6.0 C=98

P44

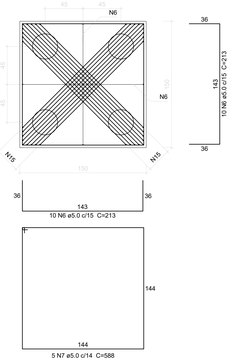
FUNDAÇÃO - L2
ESC 1:20



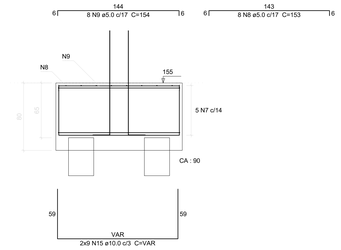
4 N13 ø6.0 C=98

B43-44
4ø30

PLANTA
ESC 1:25

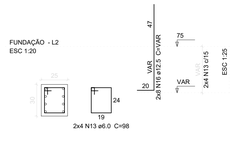


CORTE
ESC 1:25



P67=P68

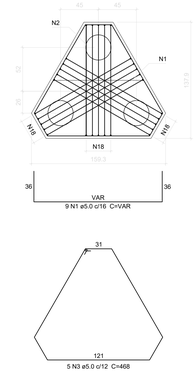
FUNDAÇÃO - L2
ESC 1:20



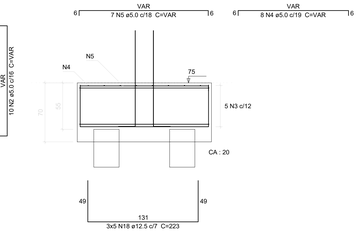
2x4 N13 ø6.0 C=98

B67-68
3ø30

PLANTA
ESC 1:25

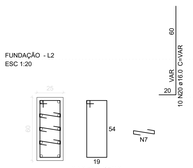


CORTE
ESC 1:25



P11

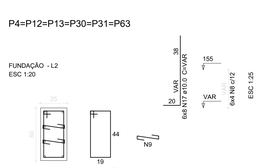
FUNDAÇÃO - L2
ESC 1:20



3 N6 ø6.0 C=158
9 N7 ø6.0 C=35

P4=P12=P13=P30=P31=P63

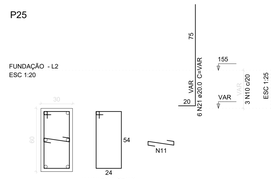
FUNDAÇÃO - L2
ESC 1:20



6x4 N8 ø6.0 C=138
6x8 N9 ø6.0 C=36

P25

FUNDAÇÃO - L2
ESC 1:20



3 N10 ø6.0 C=168
3 N11 ø6.0 C=42

P29

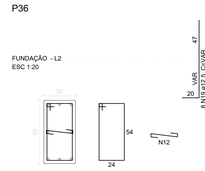
FUNDAÇÃO - L2
ESC 1:20



3 N10 ø6.0 C=168
3 N12 ø6.0 C=40

P36

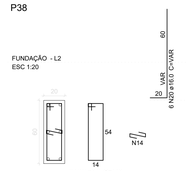
FUNDAÇÃO - L2
ESC 1:20



3 N10 ø6.0 C=168
3 N12 ø6.0 C=40

P38

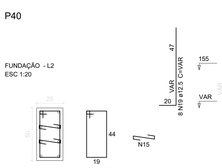
FUNDAÇÃO - L2
ESC 1:20



3 N13 ø6.0 C=148
3 N14 ø6.0 C=30

P40

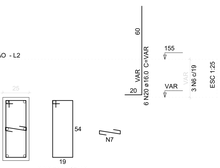
FUNDAÇÃO - L2
ESC 1:20



3 N8 ø6.0 C=138
6 N15 ø6.0 C=35

P5

FUNDAÇÃO - L2
ESC 1:20



3 N6 ø6.0 C=158
3 N7 ø6.0 C=35

P64

FUNDAÇÃO - L2
ESC 1:20

3 N8 ø6.0 C=138
3 N7 ø6.0 C=35

P65

FUNDAÇÃO - L2
ESC 1:20



3 N8 ø6.0 C=138
6 N15 ø6.0 C=35

P66

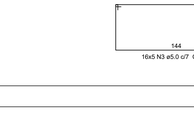
FUNDAÇÃO - L2
ESC 1:20



3 N8 ø6.0 C=138
6 N15 ø6.0 C=35

P69

FUNDAÇÃO - L2
ESC 1:20



3 N6 ø6.0 C=158
6 N16 ø6.0 C=37

P7=P10=P27

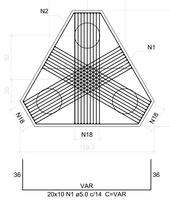
FUNDAÇÃO - L2
ESC 1:20



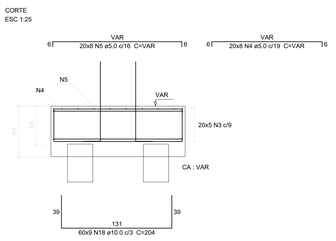
3x3 N8 ø6.0 C=138
3x3 N15 ø6.0 C=35

B4=B5=B7=B10=B11=B12=B13=B25=B27=B29 =B30=B31=B36=B38=B40=B63=B64=B65=B66 =B69
3ø30

PLANTA
ESC 1:25

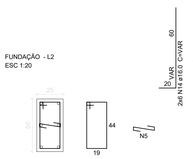


CORTE
ESC 1:25



P1=P39

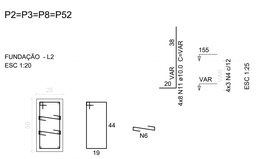
FUNDAÇÃO - L2
ESC 1:20



2x2 N4 ø6.0 C=138
2x2 N5 ø6.0 C=35

P2=P3=P8=P52

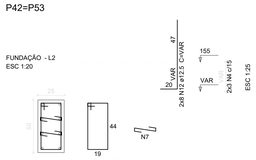
FUNDAÇÃO - L2
ESC 1:20



4x3 N4 ø6.0 C=138
4x6 N6 ø6.0 C=36

P42=P53

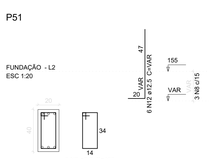
FUNDAÇÃO - L2
ESC 1:20



2x3 N4 ø6.0 C=138
2x6 N7 ø6.0 C=35

P51

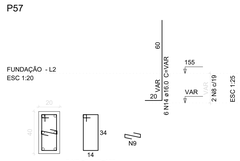
FUNDAÇÃO - L2
ESC 1:20



3 N8 ø6.0 C=108

P57

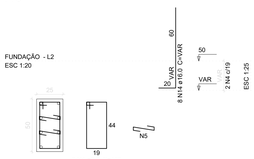
FUNDAÇÃO - L2
ESC 1:20



2 N8 ø6.0 C=108
2 N9 ø6.0 C=30

P70

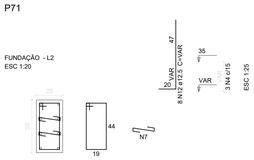
FUNDAÇÃO - L2
ESC 1:20



2 N4 ø6.0 C=138
4 N5 ø6.0 C=35

P71

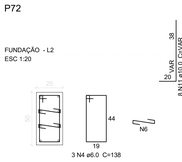
FUNDAÇÃO - L2
ESC 1:20



3 N4 ø6.0 C=138
6 N7 ø6.0 C=35

P72

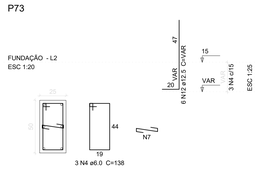
FUNDAÇÃO - L2
ESC 1:20



3 N4 ø6.0 C=138
6 N6 ø6.0 C=36

P73

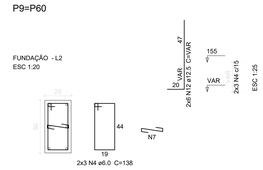
FUNDAÇÃO - L2
ESC 1:20



3 N4 ø6.0 C=138
3 N7 ø6.0 C=35

P9=P60

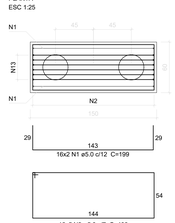
FUNDAÇÃO - L2
ESC 1:20



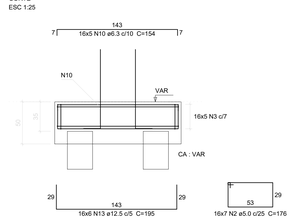
2x3 N4 ø6.0 C=138
2x3 N7 ø6.0 C=35

B1=B2=B3=B8=B9=B39=B42=B51=B52=B53=B57 =B60=B70=B71=B72=B73
2ø30

PLANTA
ESC 1:25



CORTE
ESC 1:25



	PLOT
COR	PENA
1	0,7
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/RGB	0,0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
BLOCOS 02/03

FOLHA:
05/48

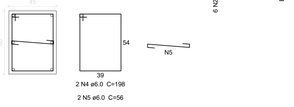
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

P18

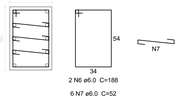
FUNDAÇÃO - L2
ESC 1:20



2 N4 ø6.0 C=198
2 N5 ø6.0 C=56

P19

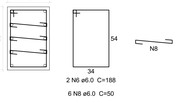
FUNDAÇÃO - L2
ESC 1:20



2 N6 ø6.0 C=188
6 N7 ø6.0 C=52

P20

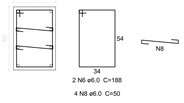
FUNDAÇÃO - L2
ESC 1:20



2 N6 ø6.0 C=188
6 N8 ø6.0 C=50

P21

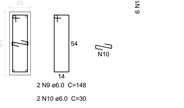
FUNDAÇÃO - L2
ESC 1:20



2 N6 ø6.0 C=188
4 N8 ø6.0 C=50

P23

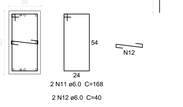
FUNDAÇÃO - L2
ESC 1:20



2 N9 ø6.0 C=148
2 N10 ø6.0 C=30

P24

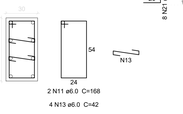
FUNDAÇÃO - L2
ESC 1:20



2 N11 ø6.0 C=168
2 N12 ø6.0 C=40

P46

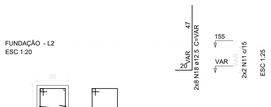
FUNDAÇÃO - L2
ESC 1:20



2 N11 ø6.0 C=168
4 N13 ø6.0 C=42

P47=P48

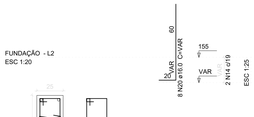
FUNDAÇÃO - L2
ESC 1:20



2x2 N11 ø6.0 C=168
2x4 N12 ø6.0 C=40

P6

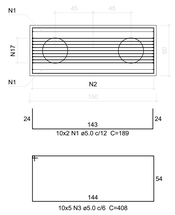
FUNDAÇÃO - L2
ESC 1:20



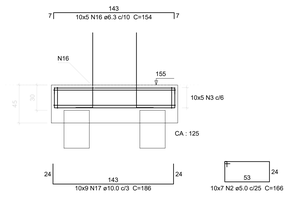
2 N14 ø6.0 C=158
4 N15 ø6.0 C=35

B6=B18=B19=B20=B21=B23=B24=B46=B47=B48
2ø30

PLANTA
ESC 1:25



CORTE
ESC 1:25



P22

NIVEL -1.55CM - L1
ESC 1:20

2 N6 ø6.0 C=168
2 N7 ø6.0 C=40

P28

NIVEL -1.55CM - L1
ESC 1:20

2 N8 ø6.0 C=188
2 N9 ø6.0 C=71
4 N10 ø6.0 C=51

P37

NIVEL -1.55CM - L1
ESC 1:20

2 N8 ø6.0 C=188
4 N10 ø6.0 C=51

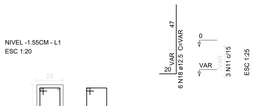
B22=B28=B37
2ø30

PLANTA
ESC 1:25

CORTE
ESC 1:25

P49

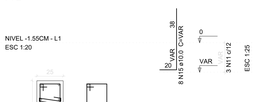
NIVEL -1.55CM - L1
ESC 1:20



3 N11 ø6.0 C=138
3 N12 ø6.0 C=35

P74

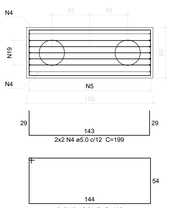
NIVEL -1.55CM - L1
ESC 1:20



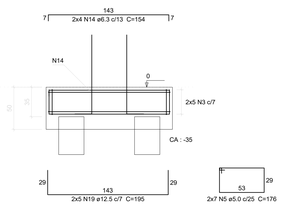
3 N11 ø6.0 C=138
6 N13 ø6.0 C=36

B49=B74
2ø30

PLANTA
ESC 1:25



CORTE
ESC 1:25



	PLOT	
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
0/90	C.0	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
BLOCOS 03/03

FOLHA:
06/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

Relação do aço

FUNDAÇÃO : V1 V2 V3 V4 V5 V6 V7 V8 V9 V10 V11 V12 V13 V14 V15 V16 V17 V18

NIVEL -1.55cm: V1

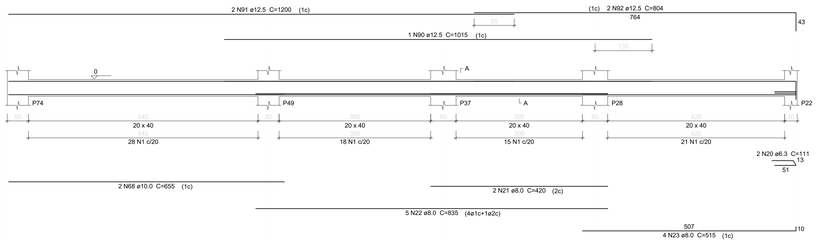
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	915	108	98820
	2	5.0	4	245	980
	3	5.0	2	263	526
	4	5.0	2	298	596
	5	5.0	2	450	900
	6	5.0	2	520	1040
	7	5.0	2	248	496
	8	5.0	2	277	554
	9	5.0	2	300	600
	10	5.0	2	464	928
	11	5.0	2	449	898
	12	5.0	33	98	3234
	13	5.0	4	578	2312
	14	5.0	222	138	30636
	15	5.0	2	209	418
	16	5.0	2	133	266
	17	5.0	2	425	850
	18	5.0	2	260	520
	19	5.0	2	299	598
CA50	20	6.3	2	111	222
	21	8.0	2	420	840
	22	8.0	5	835	4175
	23	8.0	4	515	2060
	24	8.0	1	258	258
	25	8.0	1	233	233
	26	8.0	2	1150	2300
	27	8.0	1	330	330
	28	8.0	2	365	730
	29	8.0	1	397	397
	30	8.0	1	278	278
	31	8.0	2	1075	2150
	32	8.0	1	327	327
	33	8.0	2	677	1354
	34	8.0	1	315	315
	35	8.0	1	228	228
	36	8.0	2	1148	2296
	37	8.0	1	328	328
	38	8.0	1	346	346
	39	8.0	2	1081	2162
	40	8.0	2	167	334
	41	8.0	3	1092	3276
	42	8.0	2	799	1598
	43	8.0	1	138	138
	44	8.0	4	462	1848
	45	8.0	3	454	1362
	46	8.0	9	217	1953
	47	8.0	1	110	110
	48	8.0	2	249	498
	49	8.0	1	305	305
	50	8.0	2	449	898
	51	8.0	2	777	1554
	52	8.0	1	230	230
	53	8.0	2	472	944
	54	8.0	1	137	137
	55	8.0	2	197	394
	56	8.0	3	486	1458
	57	8.0	1	223	223
	58	8.0	3	209	627
	59	8.0	1	150	150
	60	8.0	2	252	504
	61	8.0	3	104	312
	62	8.0	2	143	286
	63	8.0	2	267	534
	64	8.0	1	205	205
	65	8.0	1	320	320
	66	8.0	1	325	325
	67	8.0	2	660	1320
	68	10.0	2	655	1310
	69	10.0	2	1092	2184
	70	10.0	1	233	233
	71	10.0	2	643	1286
	72	10.0	1	263	263
	73	10.0	2	1187	2374
	74	10.0	1	348	348
	75	10.0	2	657	1314
	76	10.0	2	464	928
	77	10.0	1	240	240
	78	10.0	2	818	1636
	79	10.0	2	429	858
	80	10.0	1	152	152
	81	10.0	2	512	1024
	82	10.0	4	1191	4764
	83	10.0	4	818	3272
	84	10.0	1	132	132
	85	10.0	2	285	570
	86	10.0	1	243	243
	87	10.0	2	452	904
	88	10.0	1	334	334
	89	10.0	2	686	1372
	90	12.5	1	1015	1015
	91	12.5	12	1200	14400
	92	12.5	2	804	1608
	93	12.5	2	227	454
	94	12.5	2	195	390
	95	12.5	2	870	1740
	96	12.5	1	300	300
	97	12.5	4	450	1800
	98	12.5	1	260	260
	99	12.5	2	637	1274
	100	12.5	1	423	423
	101	12.5	2	810	1620
	102	12.5	1	235	235
	103	12.5	2	265	530
	104	12.5	1	325	325
	105	12.5	2	874	1748
	106	12.5	1	225	225
	107	12.5	4	652	2608
	108	12.5	1	190	190
	109	12.5	2	435	870
	110	12.5	2	210	420
	111	12.5	4	455	1820
	112	12.5	2	322	644
	113	12.5	1	143	143
	114	12.5	2	460	920
	115	12.5	4	266	1064
	116	12.5	2	645	1290
	117	12.5	1	310	310
	118	12.5	1	133	133
	119	12.5	2	198	396
	120	12.5	1	118	118
	121	12.5	2	251	502
	122	16.0	1	320	320
	123	16.0	2	490	980

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	2.3	0.6
	8.0	429.5	186.4
	10.0	257.5	174.6
	12.5	397.8	421.5
	16.0	13	22.6
CA60	5.0	1451.8	246.1
PESO TOTAL			
CA50	805.6		
CA60	246.1		

Vol. de concreto total (C-25) = 20.37 m³
Área de forma total = 233.06 m²

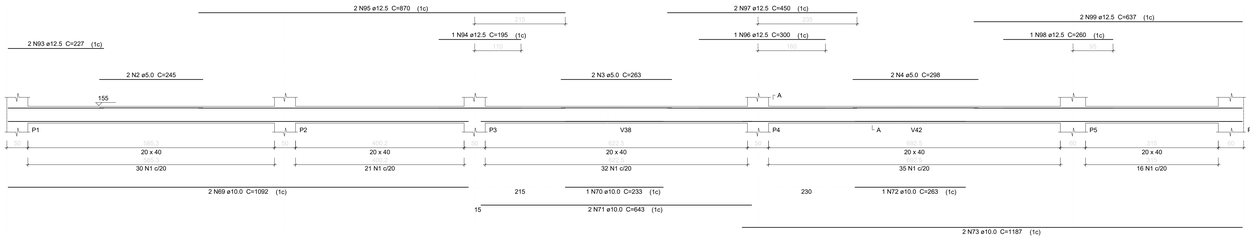
V1
Nível -1.55
ESC 1:50



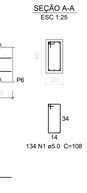
SEÇÃO A-A
ESC 1:25



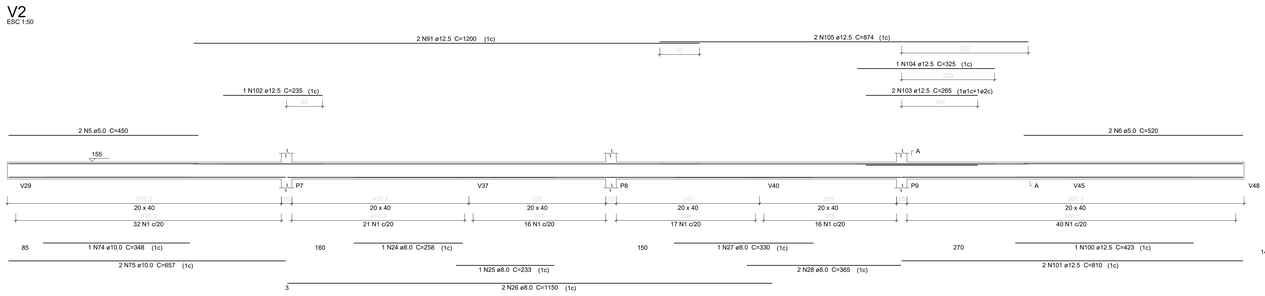
V1
ESC 1:50



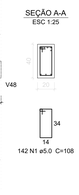
SEÇÃO A-A
ESC 1:25



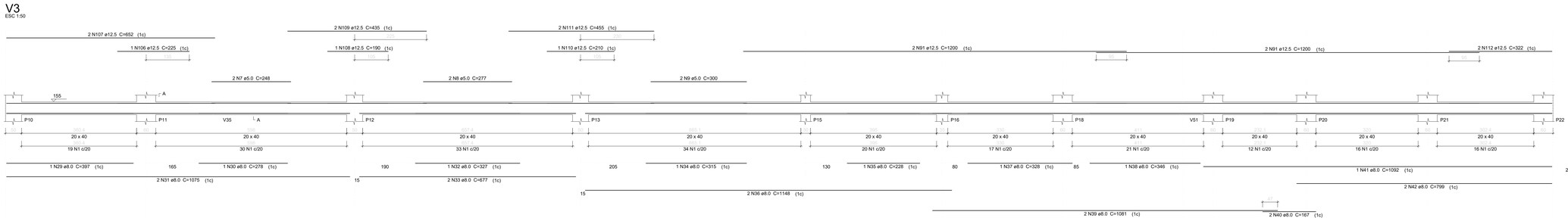
V2
ESC 1:50



SEÇÃO A-A
ESC 1:25



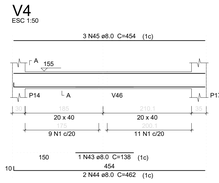
V3
ESC 1:50



SEÇÃO A-A
ESC 1:25



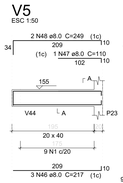
V4
ESC 1:50



SEÇÃO A-A
ESC 1:25



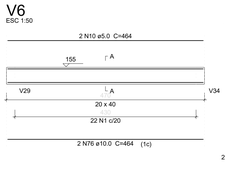
V5
ESC 1:50



SEÇÃO A-A
ESC 1:25



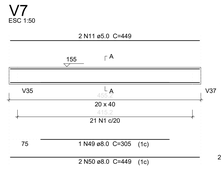
V6
ESC 1:50



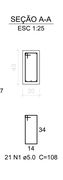
SEÇÃO A-A
ESC 1:25



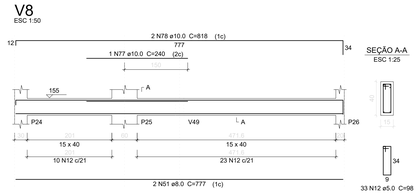
V7
ESC 1:50



SEÇÃO A-A
ESC 1:25

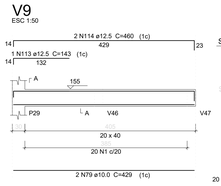


V8
ESC 1:50



SEÇÃO A-A
ESC 1:25

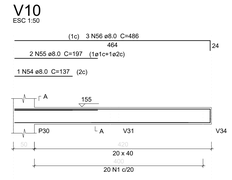
V9
ESC 1:50



SEÇÃO A-A
ESC 1:25



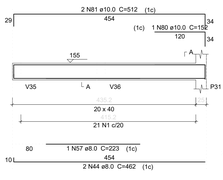
V10
ESC 1:50



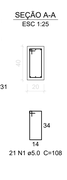
SEÇÃO A-A
ESC 1:25



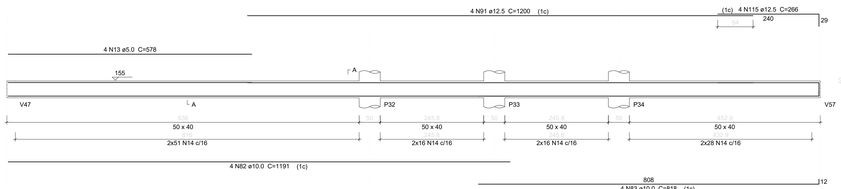
V11
ESC 1:50



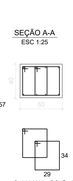
SEÇÃO A-A
ESC 1:25



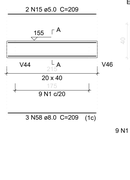
V12
ESC 1:50



SEÇÃO A-A
ESC 1:25



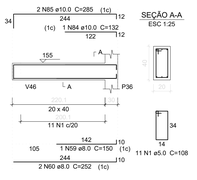
V13
ESC 1:50



SEÇÃO A-A
ESC 1:25

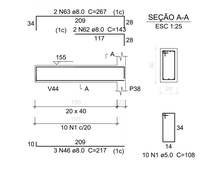


V14
ESC 1:50



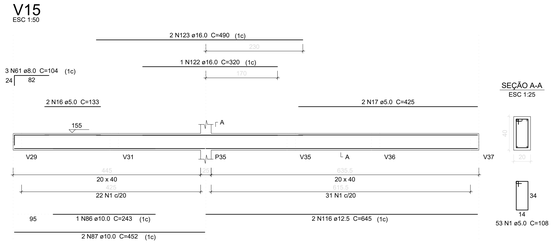
SEÇÃO A-A
ESC 1:25

V16
ESC 1:50



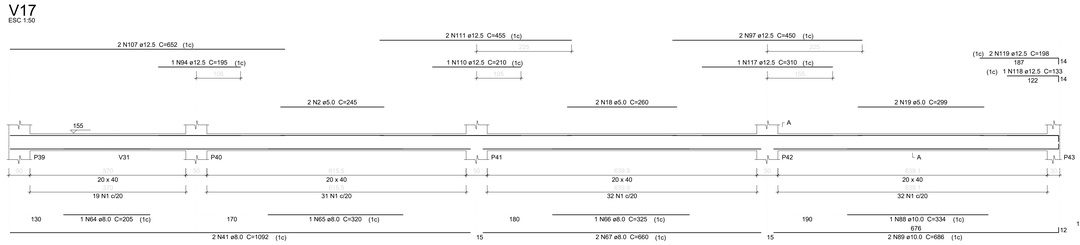
SEÇÃO A-A
ESC 1:25

V15
ESC 1:50

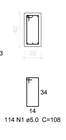


SEÇÃO A-A
ESC 1:25

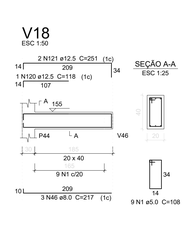
V17
ESC 1:50



SEÇÃO A-A
ESC 1:25



V18
ESC 1:50



SEÇÃO A-A
ESC 1:25

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
OUTRO	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS BALDRAME 01/03

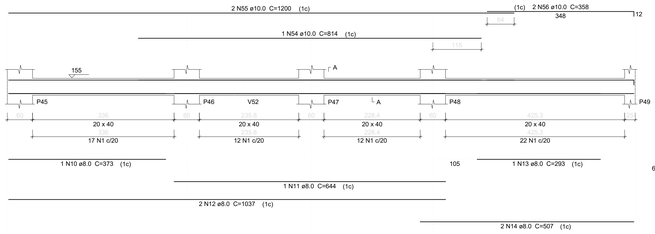
FOLHA:
07/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

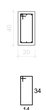
DATA:
07/2022

ESCALA:
INDICADA

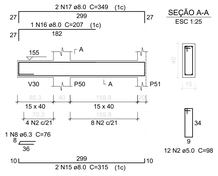
V19
ESC 1:50



SEÇÃO A-A
ESC 1:25

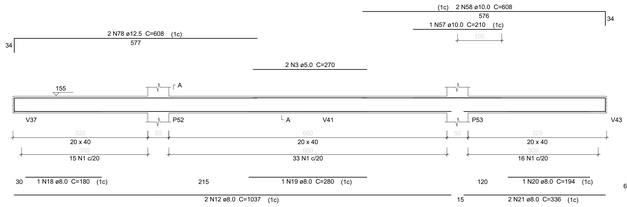


V20
ESC 1:50



SEÇÃO A-A
ESC 1:25

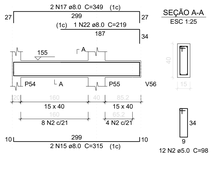
V21
ESC 1:50



SEÇÃO A-A
ESC 1:25

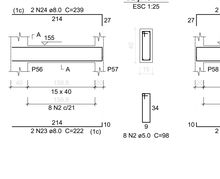


V22
ESC 1:50



SEÇÃO A-A
ESC 1:25

V23
ESC 1:50



SEÇÃO A-A
ESC 1:25

V24
ESC 1:50

SEÇÃO A-A
ESC 1:25

Relação do aço

V19	V20		V21
V22	V23		V24
V25	V26		V27
V28	V29		V30
V31	V32		V33
V34			

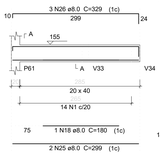
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	589	108	63612
	2	5.0	71	98	6958
	3	5.0	2	270	540
	4	5.0	2	268	536
	5	5.0	2	253	506
	6	5.0	2	282	564
	7	5.0	2	245	490
CA50	8	6.3	3	76	228
	9	6.3	3	151	453
	10	8.0	1	373	373
	11	8.0	1	644	644
	12	8.0	4	1037	4148
	13	8.0	1	293	293
	14	8.0	2	507	1014
	15	8.0	6	315	1890
	16	8.0	1	207	207
	17	8.0	4	349	1396
	18	8.0	2	180	360
	19	8.0	1	280	280
	20	8.0	1	194	194
	21	8.0	2	336	672
	22	8.0	1	219	219
	23	8.0	4	222	888
	24	8.0	4	239	956
	25	8.0	2	299	598
	26	8.0	6	329	1974
	27	8.0	1	183	183
	28	8.0	1	268	268
	29	8.0	1	303	303
	30	8.0	2	951	1902
	31	8.0	1	307	307
	32	8.0	2	674	1348
	33	8.0	1	340	340
	34	8.0	1	300	300
	35	8.0	2	890	1780
	36	8.0	1	420	420
	37	8.0	2	240	480
	38	8.0	1	390	390
	39	8.0	2	1105	2210
	40	8.0	1	278	278
	41	8.0	2	472	944
	42	8.0	2	312	624
	43	8.0	1	275	275
	44	8.0	1	140	140
	45	8.0	2	619	1238
	46	8.0	3	99	297
	47	8.0	1	294	294
	48	8.0	2	339	678
	49	8.0	2	230	460
	50	8.0	1	115	115
	51	8.0	2	262	524
	52	8.0	2	200	400
	53	8.0	2	234	468
	54	10.0	1	814	814
	55	10.0	2	1200	2400
	56	10.0	2	358	716
	57	10.0	1	210	210
	58	10.0	2	608	1216
	59	10.0	1	238	238
	60	10.0	2	663	1326
	61	10.0	1	132	132
	62	10.0	2	212	424
	63	10.0	1	215	215
	64	10.0	2	1199	2398
	65	10.0	2	1107	2214
	66	10.0	2	230	460
	67	10.0	1	541	541
	68	10.0	1	320	320
	69	10.0	2	1106	2212
	70	10.0	1	315	315
	71	10.0	2	1156	2312
	72	10.0	1	117	117
	73	10.0	2	324	648
	74	10.0	4	337	1348
	75	10.0	3	521	1563
	76	10.0	2	412	824
	77	10.0	2	854	1708
	78	12.5	2	608	1216
	79	12.5	2	508	1016
	80	12.5	1	285	285
	81	12.5	2	440	880
	82	12.5	1	295	295
	83	12.5	2	455	910
	84	12.5	4	306	1224
	85	16.0	1	225	225
	86	16.0	1	330	330
	87	16.0	1	265	265
	88	16.0	4	1196	4784
	89	16.0	2	1064	2128
	90	16.0	2	287	574
	91	16.0	2	278	556
	92	16.0	1	231	231
	93	16.0	1	300	300
	94	16.0	1	1090	1090
	95	16.0	1	229	229
	96	16.0	1	257	257
	97	16.0	1	261	261
	98	16.0	2	849	1698

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	6.9	1.8
	8.0	330.8	143.5
	10.0	246.8	167.3
	12.5	58.3	61.7
	16.0	129.3	224.5
CA60	5.0	732.1	124.1
PESO TOTAL			
CA50	598.9		
CA60	124.1		

Vol. de concreto total (C-25) = 11.43 m³
Área de forma total = 146.38 m²

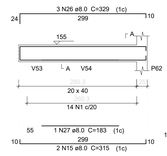
V25
ESC 1:50



SEÇÃO A-A
ESC 1:25



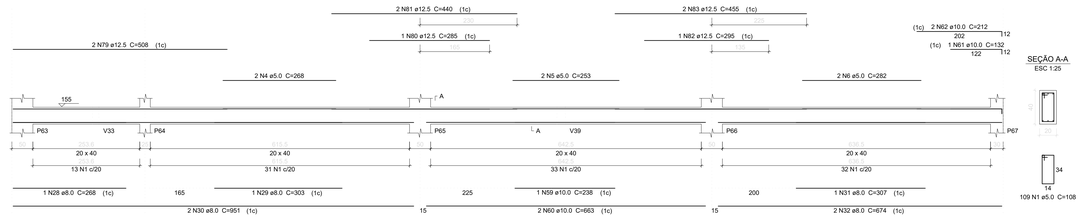
V26
ESC 1:50



SEÇÃO A-A
ESC 1:25

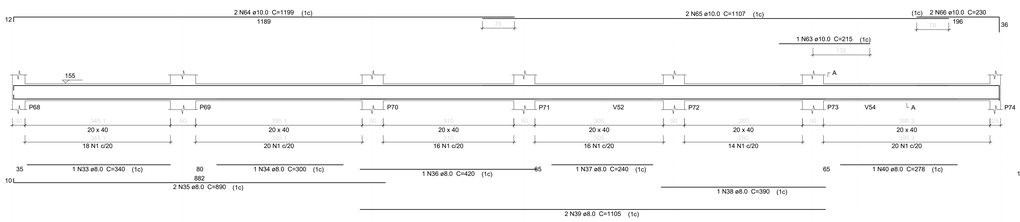


V27
ESC 1:50



SEÇÃO A-A
ESC 1:25

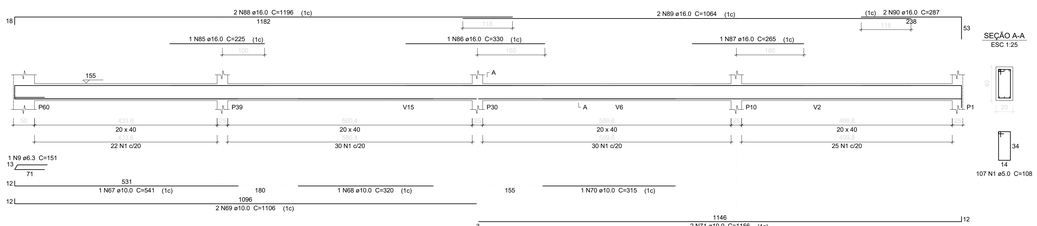
V28
ESC 1:50



SEÇÃO A-A
ESC 1:25

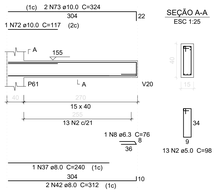


V29
ESC 1:50



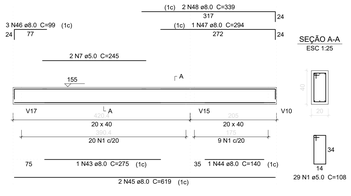
SEÇÃO A-A
ESC 1:25

V30
ESC 1:50



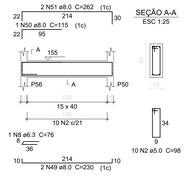
SEÇÃO A-A
ESC 1:25

V31
ESC 1:50



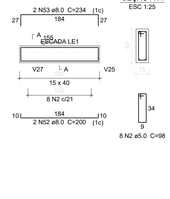
SEÇÃO A-A
ESC 1:25

V32
ESC 1:50



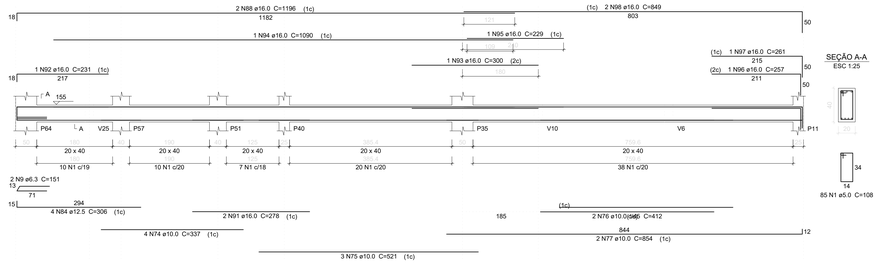
SEÇÃO A-A
ESC 1:25

V33
ESC 1:50



SEÇÃO A-A
ESC 1:25

V34
ESC 1:50



SEÇÃO A-A
ESC 1:25

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS BALDRAME 02/03

FOLHA:
08/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

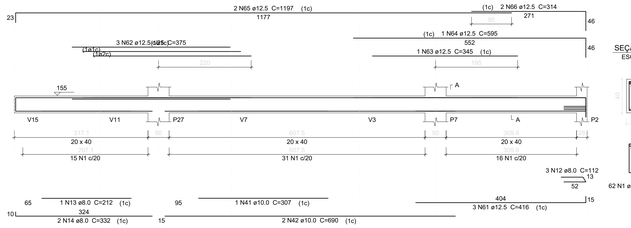
DATA:
07/2022

ESCALA:
INDICADA

	P.O.I	
COR	P.E.N	
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2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,4
7	7	0,25
8	7	0,1
9	7	0,13
OUTRO	C.O	0,13

A0
1181x841mm

V35
ESC 1:50

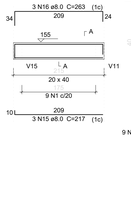


SEÇÃO A-A
ESC 1:25



62 N1 ø5.0 C=108

V36
ESC 1:50

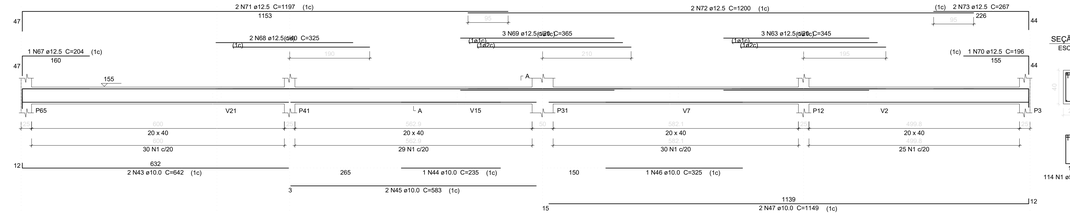


SEÇÃO A-A
ESC 1:25



9 N1 ø5.0 C=108

V37
ESC 1:50

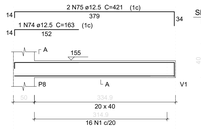


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ESC 1:25



114 N1 ø5.0 C=108

V38
ESC 1:50

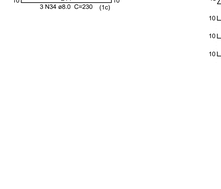


SEÇÃO A-A
ESC 1:25



16 N1 ø5.0 C=108

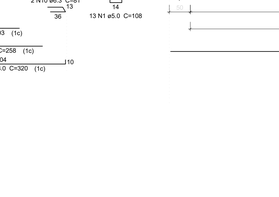
V39
ESC 1:50



SEÇÃO A-A
ESC 1:25

22 N1 ø5.0 C=108

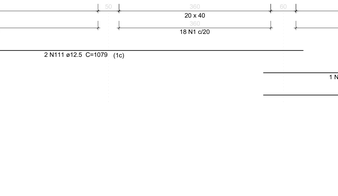
V40
ESC 1:50



SEÇÃO A-A
ESC 1:25

25 N1 ø5.0 C=108

V41
ESC 1:50

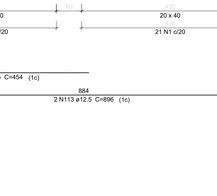


SEÇÃO A-A
ESC 1:25



30 N1 ø5.0 C=108

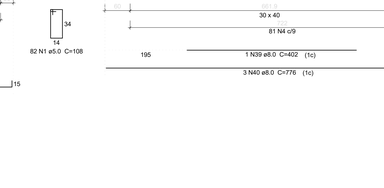
V42
ESC 1:50



SEÇÃO A-A
ESC 1:25

16 N1 ø5.0 C=108

V43
ESC 1:50



SEÇÃO A-A
ESC 1:25

30 N1 ø5.0 C=108

V44
ESC 1:50

SEÇÃO A-A
ESC 1:25

86 N1 ø5.0 C=108

V45
ESC 1:50

SEÇÃO A-A
ESC 1:25

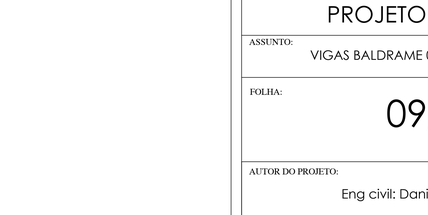
18 N1 ø5.0 C=108

V46
ESC 1:50

SEÇÃO A-A
ESC 1:25

53 N1 ø5.0 C=108

V47
ESC 1:50



SEÇÃO A-A
ESC 1:25

33 N1 ø5.0 C=108

V48
ESC 1:50

SEÇÃO A-A
ESC 1:25

25 N1 ø5.0 C=108

V49
ESC 1:50

SEÇÃO A-A
ESC 1:25

17 N1 ø5.0 C=108

V50
ESC 1:50

SEÇÃO A-A
ESC 1:25

30 N1 ø5.0 C=108

V51
ESC 1:50

SEÇÃO A-A
ESC 1:25

16 N1 ø5.0 C=108

V52
ESC 1:50

SEÇÃO A-A
ESC 1:25

31 N1 ø5.0 C=108

V53
ESC 1:50

SEÇÃO A-A
ESC 1:25

31 N1 ø5.0 C=108

V54
ESC 1:50

SEÇÃO A-A
ESC 1:25

V55
ESC 1:50

SEÇÃO A-A
ESC 1:25

10 N3 ø5.0 C=98

V56
ESC 1:50

SEÇÃO A-A
ESC 1:25

13 N1 ø5.0 C=108

V57
ESC 1:50

SEÇÃO A-A
ESC 1:25

82 N1 ø5.0 C=108

V58
ESC 1:50

SEÇÃO A-A
ESC 1:25

81 N4 ø5.0 C=128

V59
ESC 1:50

SEÇÃO A-A
ESC 1:25

10 N1 ø5.0 C=108

Relação do aço

V35	V36	V37
V38	V39	V40
V41	V42	V43
V44	V45	V46
V47	V48	V49
V50	V51	V52
V53	V54	V55
V56	V57	V58
V59		

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	769	108	83052
	2	5.0	2	639	1278
	3	5.0	18	98	1764
	4	5.0	81	128	10368
CA50	5	6.3	1	101	101
	6	6.3	1	171	171
	7	6.3	3	111	333
	8	6.3	1	76	76
	9	6.3	2	131	262
	10	6.3	2	81	162
	11	6.3	8	776	6208
	12	8.0	3	112	336
	13	8.0	1	212	212
	14	8.0	2	332	664
	15	8.0	3	217	651
	16	8.0	3	263	789
	17	8.0	1	322	322
	18	8.0	6	379	2274
	19	8.0	1	298	298
	20	8.0	2	469	938
	21	8.0	3	560	1680
	22	8.0	1	275	275
	23	8.0	1	380	380
	24	8.0	2	632	1264
	25	8.0	1	328	328
	26	8.0	3	730	2190
	27	8.0	4	534	2136
	28	8.0	1	183	183
	29	8.0	1	415	415
	30	8.0	2	639	1278
	31	8.0	3	122	366
	32	8.0	2	200	400
	33	8.0	2	234	468
	34	8.0	3	230	690
	35	8.0	3	258	774
	36	8.0	1	203	203
	37	8.0	1	258	258
	38	8.0	2	320	640
	39	8.0	1	402	402
	40	8.0	3	776	2328
	41	10.0	1	307	307
	42	10.0	2	690	1380
	43	10.0	2	642	1284
	44	10.0	1	235	235
	45	10.0	2	583	1166
	46	10.0	1	325	325
	47	10.0	2	1149	2298
	48	10.0	2	176	352
	49	10.0	2	536	1072
	50	10.0	2	654	1308
	51	10.0	2	663	1326
	52	10.0	1	151	151
	53	10.0	1	141	141
	54	10.0	2	710	1420
	55	10.0	2	1042	2084
	56	10.0	1	333	333
	57	10.0	2	563	1126
	58	10.0	2	399	798
	59	10.0	2	379	758
	60	10.0	4	116	464
	61	12.5	3	416	1248
	62	12.5	3	375	1125
	63	12.5	4	345	1380
	64	12.5	1	595	595
	65	12.5	2	1197	2394
	66	12.5	2	314	628
	67	12.5	3	204	612
	68	12.5	2	325	650
	69	12.5	3	365	1095
	70	12.5	2	196	392
	71	12.5	2	1197	2394
	72	12.5	2	1200	2400
	73	12.5	2	267	534
	74	12.5	1	163	163
	75	12.5	2	421	842
	76	12.5	2	219	438
	77	12.5	2	624	1248
	78	12.5	1	186	186
	79	12.5	1	231	231
	80	12.5	2	729	1458
	81	12.5	1	132	132
	82	12.5	3	285	855
	83	12.5	2	370	740
	84	12.5	1	167	167
	85	12.5	2	1197	2394
	86	12.5	2	800	1600
	87	12.5	1	264	264
	88	12.5	2	454	908
	89	12.5	2	271	542
	90	12.5	1	340	340
	91	12.5	2	1108	2216
	92	12.5	2	246	492
	93	12.5	3	801	2403
	94	12.5	1	125	125
	95	12.5	2	409	818
	96	12.5	2	661	1322
	97	12.5	1	150	150
	98	12.5	1	158	158
	99	12.5	2	690	1380
	100	12.5	1	182	182
	101	12.5	2	410	820
	102	12.5	1	231	231
	103	12.5	1	461	461
	104	12.5	2	673	1346
	105	12.5	1	163	163
	106	12.5	1	313	313
	107	12.5	1	583	583
	108	12.5	2	723	1446
	109	12.5	1	173	173
	110	12.5	2	335	670
	111	12.5	2	1079	2158
	112	12.5	1	454	454
	113	12.5	2	896	1792
	114	12.5	1	207	207
	115	12.5	1	279	279
	116	12.5	1	291	291
	117	12.5	1	167	167
	118	12.5	1	277	277
	119	12.5	1	288	288
	120	12.5	2	776	1552
	121	12.5	3	238	714
	122	12.5	1	189	189
	123	12.5	3	295	885
	124	16.0	2	424	848
	125	16.0	1	206	206
	126	16.0	2	645	1290
	127	16.0	1	320	320
	128	16.0	1	305	305
	129	16.0	2	1196	2392
	130	16.0	2	854	1708
	131	20.0	2	838	1676

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	73.2	19.7
	8.0	231.5	100.4
	10.0	183.3	124.3
	12.5	526.6	558
	16.0	70.7	122.7
	20.0	16.8	45.5
CA60	5.0	964.7	163.5
PESO TOTAL			
CA50	970.6		
CA60	163.5		

Vol. de concreto total (C-25) = 14.76 m³
Área da forma total = 182.25 m²

COR	PLOT PENA
1	7 0,7
2	7 0,7
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/IRC	0 0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS BALDRAME 03/03

FOLHA:
09/48

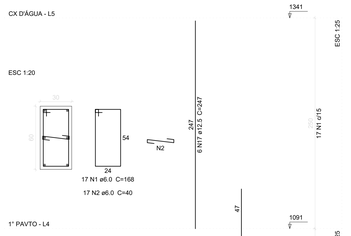
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

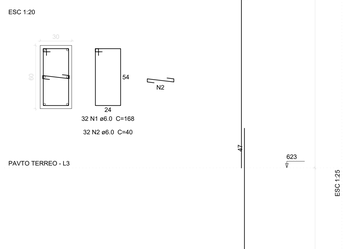
P22

CX D'ÁGUA - L5



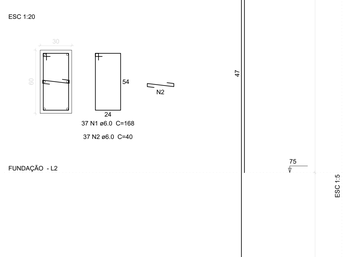
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1° PAVTO - L4



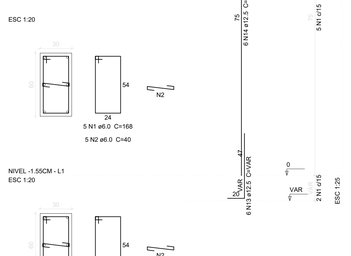
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PAVTO TERREO - L3

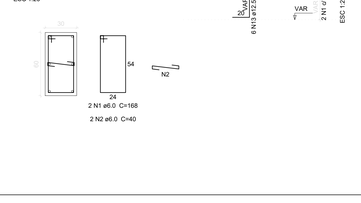


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FUNDAÇÃO - L2

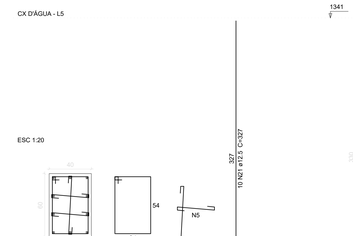


NIVEL -1.55CM - L1
ESC 1:20



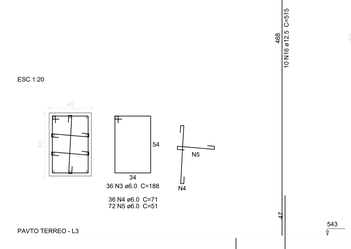
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CX D'ÁGUA - L5



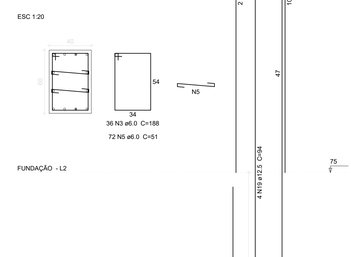
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1° PAVTO - L4



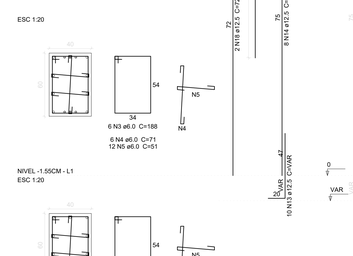
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PAVTO TERREO - L3

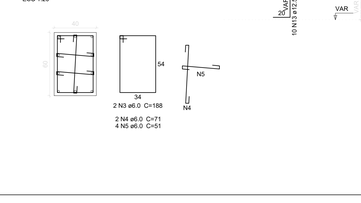


ESC 1:20

FUNDAÇÃO - L2

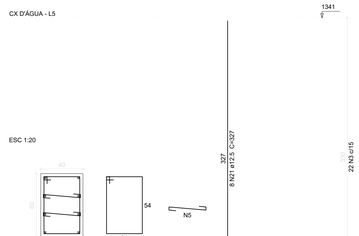


NIVEL -1.55CM - L1
ESC 1:20



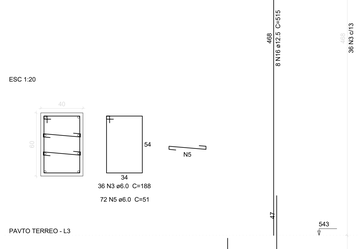
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CX D'ÁGUA - L5



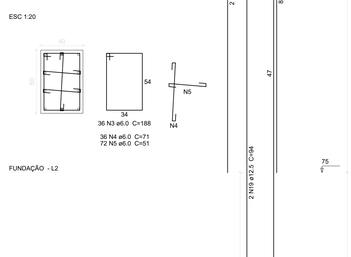
ESC 1:20

1° PAVTO - L4



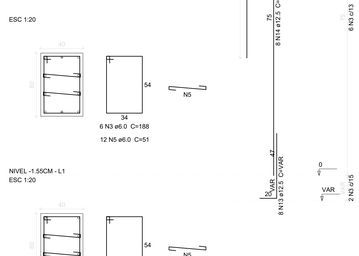
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PAVTO TERREO - L3

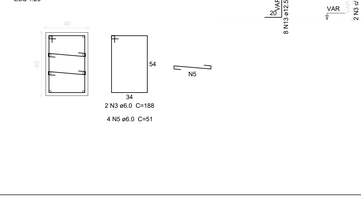


ESC 1:20

FUNDAÇÃO - L2

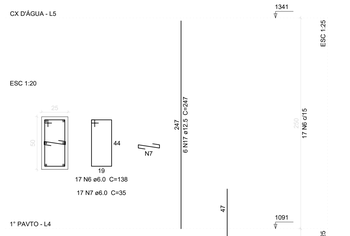


NIVEL -1.55CM - L1
ESC 1:20



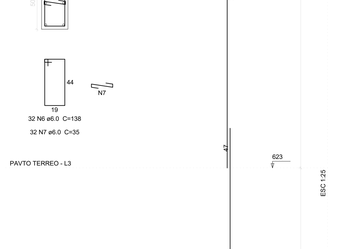
P49

CX D'ÁGUA - L5



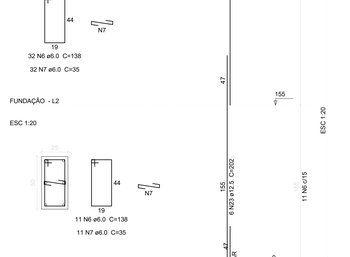
ESC 1:20

1° PAVTO - L4



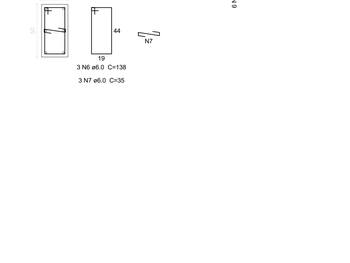
ESC 1:20

PAVTO TERREO - L3



ESC 1:20

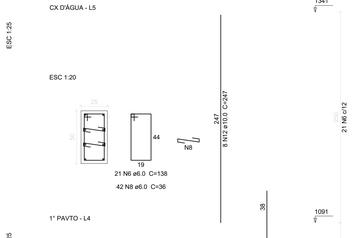
FUNDAÇÃO - L2



NIVEL -1.55CM - L1
ESC 1:20

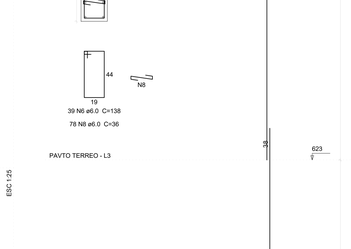
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CX D'ÁGUA - L5



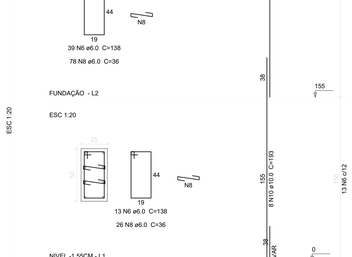
ESC 1:20

1° PAVTO - L4



ESC 1:20

PAVTO TERREO - L3



Relação do aço

P22 P28 P37 P49 P74

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	93	168	15624
	2	6.0	93	40	3720
	3	6.0	204	168	36352
	4	6.0	102	71	7242
	5	6.0	408	51	20808
	6	6.0	210	138	28980
	7	6.0	95	35	3325
	8	6.0	230	36	8280
CA50	9	10.0	8	VAR	VAR
	10	10.0	8	193	1544
	11	10.0	16	506	8096
	12	10.0	8	247	1976
	13	12.5	24	VAR	VAR
	14	12.5	22	122	2684
	15	12.5	6	595	3570
	16	12.5	54	515	27810
	17	12.5	12	247	2964
	18	12.5	2	72	144
	19	12.5	6	94	564
	20	12.5	4	465	1860
	21	12.5	18	327	5886
	22	12.5	6	VAR	VAR
	23	12.5	6	202	1212

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	123.5	83.7
	12.5	495.5	525
CA60	6.0	1263.4	308.4
PESO TOTAL			
CA50	608.7		
CA60	308.4		

Vol. de concreto total (C-25) = 12.49 m³
Área de forma total = 120.8 m²

	PLOT
COR	PEN
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
OURO	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 01/15

FOLHA:
10/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

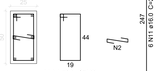
DATA:
07/2022

ESCALA:
INDICADA

P1

CX D'ÁGUA - L5

ESC 1:20



14 N1 ø6.0 C=138

14 N2 ø6.0 C=35

1° PAVTO - L4



ESC 1:20

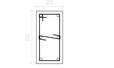


25 N1 ø6.0 C=138

25 N2 ø6.0 C=35

PAVTO TERREO - L3

ESC 1:20

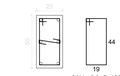


25 N1 ø6.0 C=138

25 N2 ø6.0 C=35

FUNDAÇÃO - L2

ESC 1:20



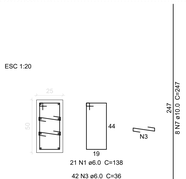
2 N1 ø6.0 C=138

2 N2 ø6.0 C=35

P2

CX D'ÁGUA - L5

ESC 1:20



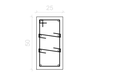
21 N1 ø6.0 C=138

42 N3 ø6.0 C=36

1° PAVTO - L4



ESC 1:20

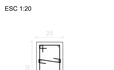


39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

PAVTO TERREO - L3

ESC 1:20



39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

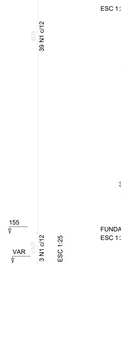
FUNDAÇÃO - L2

ESC 1:20



3 N1 ø6.0 C=138

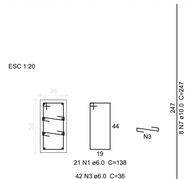
6 N3 ø6.0 C=36



P3

CX D'ÁGUA - L5

ESC 1:20



21 N1 ø6.0 C=138

42 N3 ø6.0 C=36

1° PAVTO - L4



ESC 1:20

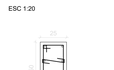


39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

PAVTO TERREO - L3

ESC 1:20



39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

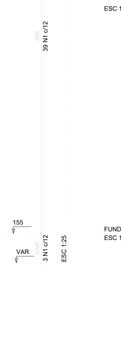
FUNDAÇÃO - L2

ESC 1:20



3 N1 ø6.0 C=138

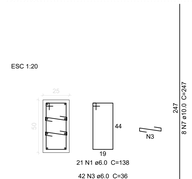
6 N3 ø6.0 C=36



P4

CX D'ÁGUA - L5

ESC 1:20



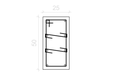
21 N1 ø6.0 C=138

42 N3 ø6.0 C=36

1° PAVTO - L4



ESC 1:20



39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

PAVTO TERREO - L3

ESC 1:20



39 N1 ø6.0 C=138

78 N3 ø6.0 C=36

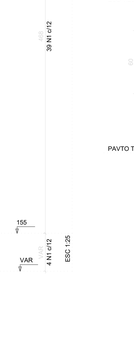
FUNDAÇÃO - L2

ESC 1:20



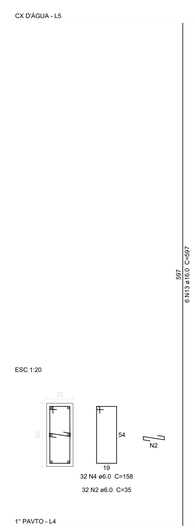
4 N1 ø6.0 C=138

8 N3 ø6.0 C=36



P5

CX D'ÁGUA - L5



32 N4 ø6.0 C=158

32 N2 ø6.0 C=35

1° PAVTO - L4



ESC 1:20

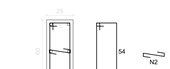


25 N4 ø6.0 C=158

25 N2 ø6.0 C=35

PAVTO TERREO - L3

ESC 1:20

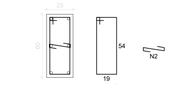


25 N4 ø6.0 C=158

25 N2 ø6.0 C=35

FUNDAÇÃO - L2

ESC 1:20



3 N4 ø6.0 C=158

3 N2 ø6.0 C=35



Relação do aço

P1 P2 P3
P4 P5

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	373	138	51474
	2	6.0	151	35	5285
	3	6.0	614	36	22104
	4	6.0	85	158	13430
CA50	5	10.0	16	VAR	VAR
	6	10.0	48	506	24288
	7	10.0	24	247	5928
	8	10.0	8	VAR	VAR
	9	16.0	6	VAR	VAR
	10	16.0	24	528	12672
	11	16.0	6	247	1482
	12	16.0	6	VAR	VAR
	13	16.0	6	597	3582

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	324.8	220.3
	16.0	191.3	332.1
CA60	6.0	923	225.3

PESO TOTAL

CA50	552.4
CA60	225.3

Vol. de concreto total (C-25) = 8.49 m³
Área de forma total = 100.29 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 02/15

FOLHA:
11/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

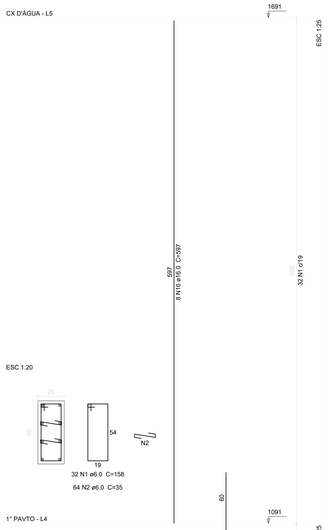
ESCALA:
INDICADA

COR	PLOT PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,30
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
DIRETO	0,13

A0
1181x841mm

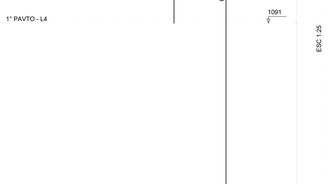
P6

CX D'ÁGUA - L5

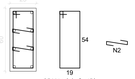


ESC 1:20

1° PAVTO - L4

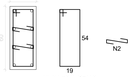


ESC 1:20

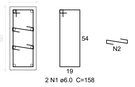


PAVTO TERREO - L3

ESC 1:20

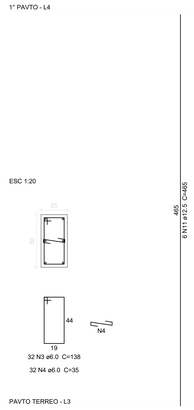


FUNDAÇÃO - L2
ESC 1:20



P7

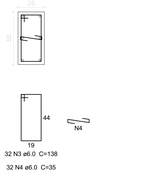
1° PAVTO - L4



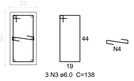
ESC 1:20

PAVTO TERREO - L3

ESC 1:20

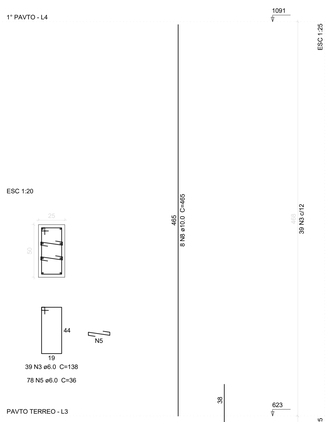


FUNDAÇÃO - L2
ESC 1:20



P8

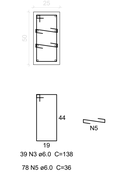
1° PAVTO - L4



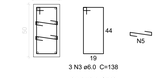
ESC 1:20

PAVTO TERREO - L3

ESC 1:20

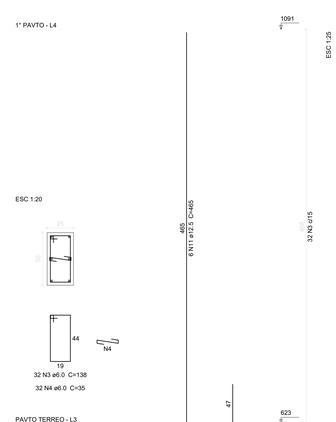


FUNDAÇÃO - L2
ESC 1:20



P9

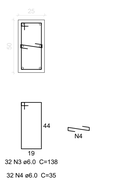
1° PAVTO - L4



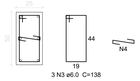
ESC 1:20

PAVTO TERREO - L3

ESC 1:20

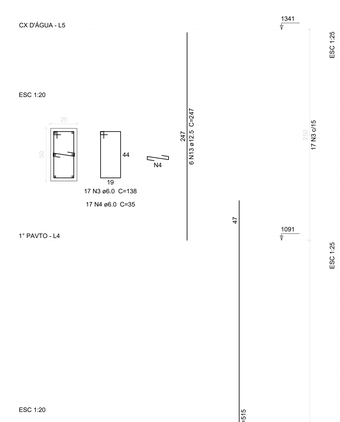


FUNDAÇÃO - L2
ESC 1:20



P10

CX D'ÁGUA - L5



ESC 1:20

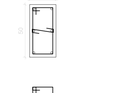
1° PAVTO - L4

ESC 1:20

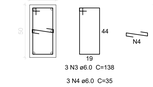


PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20



Relação do aço

P6 P7 P8 P9 P10

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	84	158	13272
	2	6.0	168	35	5880
	3	6.0	299	138	41262
	4	6.0	218	35	7630
	5	6.0	162	36	5832
CA50	6	10.0	8	VAR	VAR
	7	10.0	8	506	4048
	8	10.0	8	465	3720
	9	12.5	12	VAR	VAR
	10	12.5	24	515	12360
	11	12.5	12	465	5580
	12	12.5	6	VAR	VAR
	13	12.5	6	247	1482
	14	16.0	8	VAR	VAR
	15	16.0	16	528	8448
	16	16.0	8	597	4776

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	85	57.6
	12.5	213.3	226
	16.0	140.8	244.3
CA60	6.0	738.8	180.4
PESO TOTAL			
CA50	527.9		
CA60	180.4		

Vol. de concreto total (C-25) = 7.54 m³
Área de forma total = 88.93 m²

	PLOT
COR	PEN
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,7
9	0,13
OURO	0,0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 03/15

FOLHA:
12/48

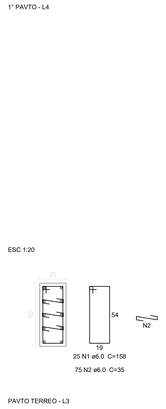
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

P11

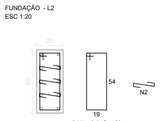
1° PAVTO - L4



ESC 1:20

PAVTO TERREO - L3

ESC 1:20

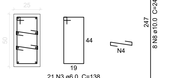


FUNDAÇÃO - L2
ESC 1:20

P12

CX D'ÁGUA - L5

ESC 1:20



1° PAVTO - L4



ESC 1:20

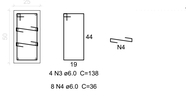


PAVTO TERREO - L3

ESC 1:20



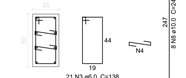
FUNDAÇÃO - L2
ESC 1:20



P13

CX D'ÁGUA - L5

ESC 1:20



1° PAVTO - L4

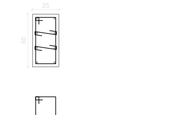


ESC 1:20

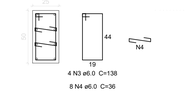


PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

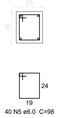


P14

CX D'ÁGUA - L5



ESC 1:20



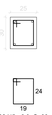
1° PAVTO - L4

ESC 1:20



PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20



P15

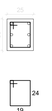
CX D'ÁGUA - L5



ESC 1:20

1° PAVTO - L4

ESC 1:20



PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20



Relação do aço

P11
P12
P13
P14
P15

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	53	158	8374
	2	6.0	159	35	5565
	3	6.0	206	138	28428
	4	6.0	412	36	14832
	5	6.0	193	98	18914
CA50	6	10.0	16	VAR	VAR
	7	10.0	32	506	16192
	8	10.0	16	247	3952
	9	12.5	4	VAR	VAR
	10	12.5	8	515	4120
	11	12.5	4	597	2388
	12	16.0	10	VAR	VAR
	13	16.0	22	528	11616
	14	16.0	10	465	4650
	15	16.0	6	VAR	VAR
	16	16.0	6	597	3582

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	217.6	147.6
	12.5	69.9	74
	16.0	218.5	379.2
CA60	6.0	761.2	185.8
PESO TOTAL			
CA50	600.8		
CA60	185.8		

Vol. de concreto total (C-25) = 6.94 m³
Área de forma total = 88.61 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 04/15

FOLHA:
13/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

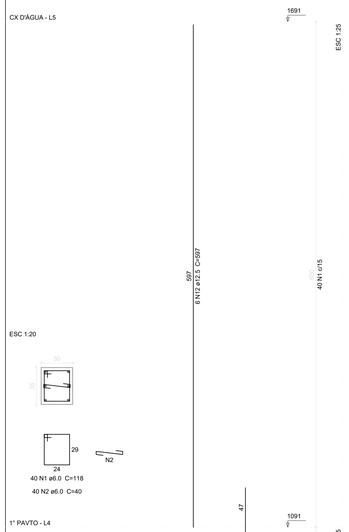
	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,30
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13

0,09/0,0 0,13

A0
1181x841mm

P16

CX D'ÁGUA - L5

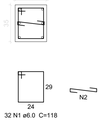


ESC 1:20

40 N1 ø6.0 C=118
40 N2 ø6.0 C=40

1° PAVTO - L4

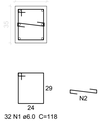
ESC 1:20



32 N1 ø6.0 C=118
32 N2 ø6.0 C=40

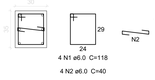
PAVTO TERREO - L3

ESC 1:20



32 N1 ø6.0 C=118
32 N2 ø6.0 C=40

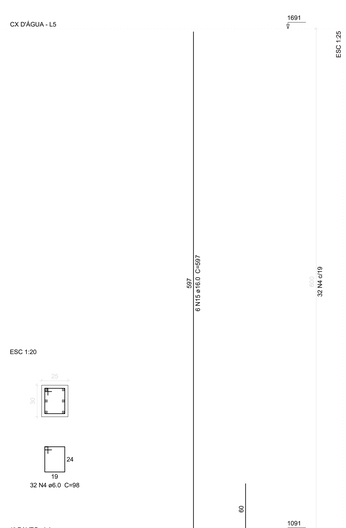
FUNDAÇÃO - L2
ESC 1:20



4 N1 ø6.0 C=118
4 N2 ø6.0 C=40

P17

CX D'ÁGUA - L5

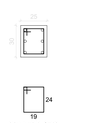


ESC 1:20

32 N4 ø6.0 C=98

1° PAVTO - L4

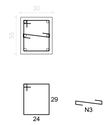
ESC 1:20



25 N4 ø6.0 C=98

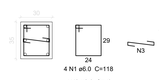
PAVTO TERREO - L3

ESC 1:20



26 N1 ø6.0 C=118
26 N3 ø6.0 C=40

FUNDAÇÃO - L2
ESC 1:20

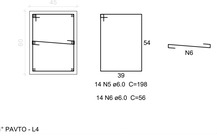


4 N1 ø6.0 C=118
4 N3 ø6.0 C=40

P18

CX D'ÁGUA - L5

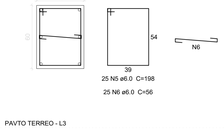
ESC 1:20



14 N5 ø6.0 C=198
14 N6 ø6.0 C=56

1° PAVTO - L4

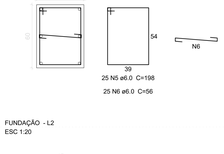
ESC 1:20



25 N5 ø6.0 C=198
25 N6 ø6.0 C=56

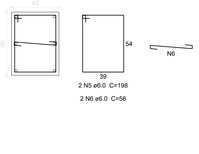
PAVTO TERREO - L3

ESC 1:20

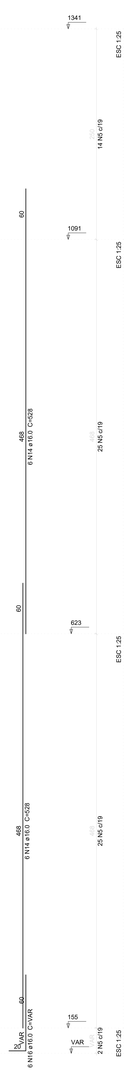


25 N5 ø6.0 C=198
25 N6 ø6.0 C=56

FUNDAÇÃO - L2
ESC 1:20



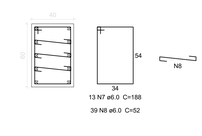
2 N5 ø6.0 C=198
2 N6 ø6.0 C=56



P19

CX D'ÁGUA - L5

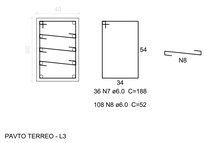
ESC 1:20



13 N7 ø6.0 C=188
39 N8 ø6.0 C=52

1° PAVTO - L4

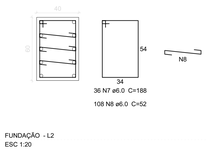
ESC 1:20



36 N7 ø6.0 C=188
108 N8 ø6.0 C=52

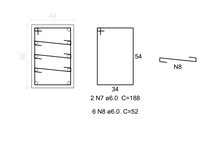
PAVTO TERREO - L3

ESC 1:20

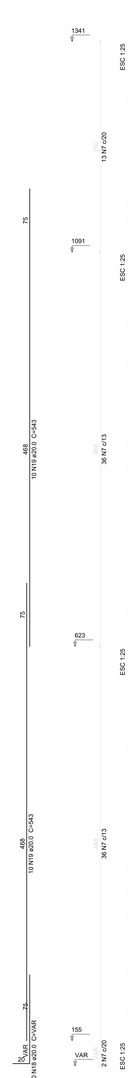


36 N7 ø6.0 C=188
108 N8 ø6.0 C=52

FUNDAÇÃO - L2
ESC 1:20



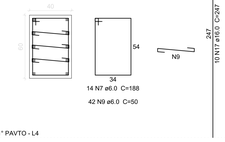
2 N7 ø6.0 C=188
6 N8 ø6.0 C=52



P20

CX D'ÁGUA - L5

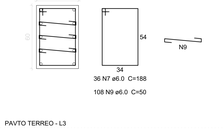
ESC 1:20



14 N7 ø6.0 C=188
42 N9 ø6.0 C=50

1° PAVTO - L4

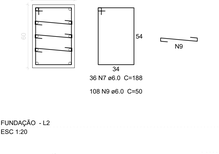
ESC 1:20



36 N7 ø6.0 C=188
108 N9 ø6.0 C=50

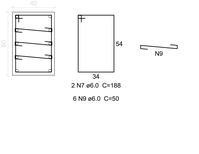
PAVTO TERREO - L3

ESC 1:20

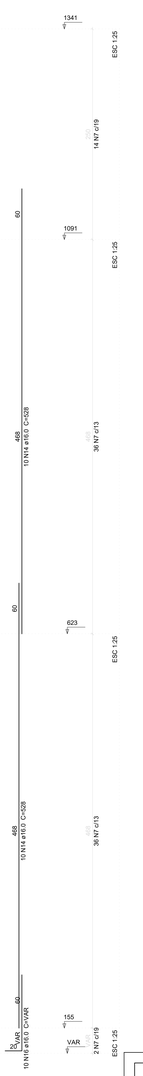


36 N7 ø6.0 C=188
108 N9 ø6.0 C=50

FUNDAÇÃO - L2
ESC 1:20



2 N7 ø6.0 C=188
6 N9 ø6.0 C=50



Relação do aço

P16 P17 P18
P19 P20

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	138	118	16284
	2	6.0	108	40	4320
	3	6.0	30	40	1200
	4	6.0	57	98	5586
	5	6.0	66	198	13068
	6	6.0	66	56	3696
	7	6.0	175	188	32900
	8	6.0	261	52	13572
	9	6.0	264	50	13200
CA50	10	12.5	6	VAR	VAR
	11	12.5	12	515	6180
	12	12.5	6	597	3582
	13	16.0	6	VAR	VAR
	14	16.0	44	528	23232
	15	16.0	6	597	3582
	16	16.0	16	VAR	VAR
	17	16.0	16	247	3952
	18	20.0	10	VAR	VAR
	19	20.0	20	543	10860
	20	20.0	10	247	2470

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	104.8	111
	16.0	332.5	577.2
	20.0	145.2	393.9
CA60	6.0	1038.3	253.5

PESO TOTAL

CA50	1082.1
CA60	253.5

Vol. de concreto total (C-25) = 12.14 m³
Área de forma total = 113.41 m²

	PLOT
COR	PEN
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
demais	0 0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 05/15

FOLHA:
14/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

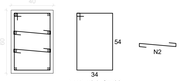
DATA:
07/2022

ESCALA:
INDICADA

P21

CX D'ÁGUA - L5

ESC 1:20



14 N1 ø6.0 C=188
28 N2 ø6.0 C=50

1° PAVTO - L4

ESC 1:20

36 N1 ø6.0 C=188
72 N2 ø6.0 C=50

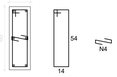
PAVTO TERREO - L3

1341
0
ESC 1:25
14 N1 c/19
257
1091
0
ESC 1:25
39 N1 c/13
468
6 N10 ø12.5 C=465
60
468
8 N18 ø16.0 C=528
60
623
0
ESC 1:25
3 N7 ø12.5 C=547
8 N17 ø6.0 C=247

P23

1° PAVTO - L4

ESC 1:20



32 N3 ø6.0 C=148
32 N4 ø6.0 C=30

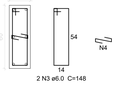
PAVTO TERREO - L3

1091
0
ESC 1:25
32 N3 c/15
468
6 N9 ø12.5 C=515
47
468
6 N10 ø12.5 C=465
623
0
ESC 1:25
32 N3 c/15

ESC 1:20

32 N3 ø6.0 C=148
32 N4 ø6.0 C=30

FUNDAÇÃO - L2
ESC 1:20



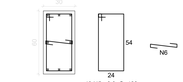
2 N3 ø6.0 C=148
2 N4 ø6.0 C=30

468
6 N10 ø16.0 C=528
60
155
0
VAR
6 N13 ø16.0 C=VAR
455
36 N1 c/13
155
0
VAR
2 N1 c/19
ESC 1:25

P24

CX D'ÁGUA - L5

ESC 1:20

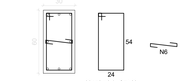


40 N5 ø6.0 C=168
40 N6 ø6.0 C=40

1° PAVTO - L4

1691
0
ESC 1:25
40 N5 c/15
468
6 N9 ø12.5 C=515
47
468
6 N12 ø12.5 C=597
623
0
ESC 1:25
40 N5 c/15

ESC 1:20

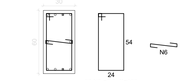


32 N5 ø6.0 C=168
32 N6 ø6.0 C=40

PAVTO TERREO - L3

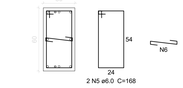
1091
0
ESC 1:25
32 N5 c/15
468
6 N9 ø12.5 C=515
47
468
6 N12 ø12.5 C=597
623
0
ESC 1:25
32 N5 c/15

ESC 1:20



32 N5 ø6.0 C=168
32 N6 ø6.0 C=40

FUNDAÇÃO - L2
ESC 1:20



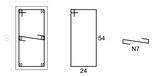
2 N5 ø6.0 C=168
2 N6 ø6.0 C=40

465
2 N10 ø12.5 C=465
468
8 N9 ø12.5 C=515
47
2 N1 ø12.5 C=94
47
VAR
8 N8 ø12.5 C=VAR
155
0
VAR
2 N5 c/15
ESC 1:25

P25

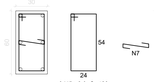
PAVTO TERREO - L3

ESC 1:20



26 N5 ø6.0 C=168
26 N7 ø6.0 C=42

FUNDAÇÃO - L2
ESC 1:20



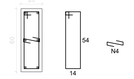
3 N5 ø6.0 C=168
3 N7 ø6.0 C=42

623
0
ESC 1:25
26 N5 c/18
465
6 N19 ø20.0 C=465
75
20
VAR
6 N15 ø20.0 C=VAR
155
0
VAR
3 N5 c/20
ESC 1:25

P26

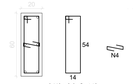
PAVTO TERREO - L3

ESC 1:20



24 N3 ø6.0 C=148
24 N4 ø6.0 C=30

FUNDAÇÃO - L2
ESC 1:20



3 N3 ø6.0 C=148
3 N4 ø6.0 C=30

515
0
ESC 1:25
24 N3 c/15
465
6 N14 ø12.5 C=507
47
20
VAR
6 N13 ø12.5 C=VAR
155
0
VAR
3 N3 c/15
ESC 1:25

Relação do aço

P21
P25

P23
P26

P24

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	88	188	16544
	2	6.0	176	50	8800
	3	6.0	93	148	13764
	4	6.0	93	30	2790
	5	6.0	135	168	22680
	6	6.0	106	40	4240
	7	6.0	29	42	1218
CA50	8	12.5	14	VAR	VAR
	9	12.5	22	515	11330
	10	12.5	8	465	3720
	11	12.5	2	94	188
	12	12.5	8	597	4776
	13	12.5	6	VAR	VAR
	14	12.5	6	357	2142
	15	16.0	8	VAR	VAR
	16	16.0	16	528	8448
	17	16.0	8	247	1976
	18	20.0	6	VAR	VAR
	19	20.0	6	465	2790

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	241	255.3
	16.0	112.8	195.7
	20.0	36	97.5
CA60	6.0	700.4	171
PESO TOTAL			
CA50	548.5		
CA60	171		

Vol. de concreto total (C-25) = 8.3 m³
Área de forma total = 83.6 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 06/15

FOLHA:
15/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

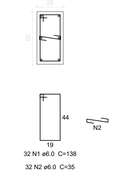
ESCALA:
INDICADA

COR	PLOT PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/80	C 0,0 0,13

A0
1181x841mm

P27

1° PAVTO - L4

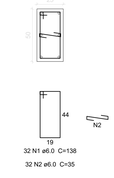


32 N1 ø6.0 C=138

32 N2 ø6.0 C=35

ESC 1:20

PAVTO TERREO - L3

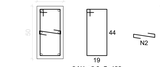


32 N1 ø6.0 C=138

32 N2 ø6.0 C=35

ESC 1:20

FUNDAÇÃO - L2
ESC 1:20



3 N1 ø6.0 C=138

3 N2 ø6.0 C=35

P29

CX D'ÁGUA - L5

ESC 1:20

1° PAVTO - L4

ESC 1:20

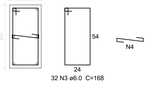


40 N3 ø6.0 C=168

40 N4 ø6.0 C=40

PAVTO TERREO - L3

ESC 1:20

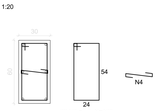


32 N3 ø6.0 C=168

32 N4 ø6.0 C=40

PAVTO TERREO - L3

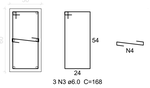
ESC 1:20



32 N3 ø6.0 C=168

32 N4 ø6.0 C=40

FUNDAÇÃO - L2
ESC 1:20



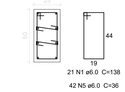
3 N3 ø6.0 C=168

3 N4 ø6.0 C=40

P30

CX D'ÁGUA - L5

ESC 1:20



21 N1 ø6.0 C=138

42 N5 ø6.0 C=36

1° PAVTO - L4

ESC 1:20



39 N1 ø6.0 C=138

78 N5 ø6.0 C=36

PAVTO TERREO - L3

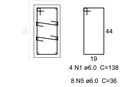
ESC 1:20



39 N1 ø6.0 C=138

78 N5 ø6.0 C=36

FUNDAÇÃO - L2
ESC 1:20



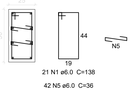
4 N1 ø6.0 C=138

8 N5 ø6.0 C=36

P31

CX D'ÁGUA - L5

ESC 1:20



21 N1 ø6.0 C=138

42 N5 ø6.0 C=36

1° PAVTO - L4

ESC 1:20



39 N1 ø6.0 C=138

78 N5 ø6.0 C=36

PAVTO TERREO - L3

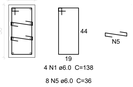
ESC 1:20



39 N1 ø6.0 C=138

78 N5 ø6.0 C=36

FUNDAÇÃO - L2
ESC 1:20



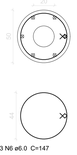
4 N1 ø6.0 C=138

8 N5 ø6.0 C=36

P32

PAVTO TERREO - L3

ESC 1:20



23 N6 ø6.0 C=147

FUNDAÇÃO - L2
ESC 1:20

3 N6 ø6.0 C=147

Relação do aço

P27 P29 P30 P31 P32

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	273	138	37674
	2	6.0	67	35	2345
	3	6.0	107	168	17976
	4	6.0	107	40	4280
	5	6.0	412	36	14832
	6	6.0	26	147	3822
CA50	7	10.0	16	VAR	VAR
	8	10.0	32	506	16192
	9	10.0	16	247	3952
	10	12.5	12	VAR	VAR
	11	12.5	18	515	9270
	12	12.5	6	465	2790
	13	12.5	6	597	3582
	14	16.0	6	VAR	VAR
	15	20.0	6	151	906
	16	20.0	6	411	2466

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	217.6	147.6
	12.5	169.5	179.6
	16.0	3.5	6
	20.0	33.8	91.5
CA60	6.0	809.3	197.6

PESO TOTAL

CA50	424.7
CA60	197.6

Vol. de concreto total (C-25) = 7.91 m³
Área de forma total = 87.31 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: PILARES EM PRUMADA 07/15

FOLHA: 16/48

AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

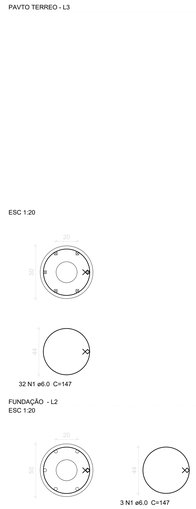
ESCALA: INDICADA

	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,00
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
DVRO	C.O. 0,13

A0
1181x841mm

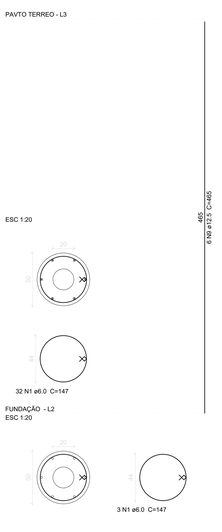
P33

PAVTO TERREO - L3



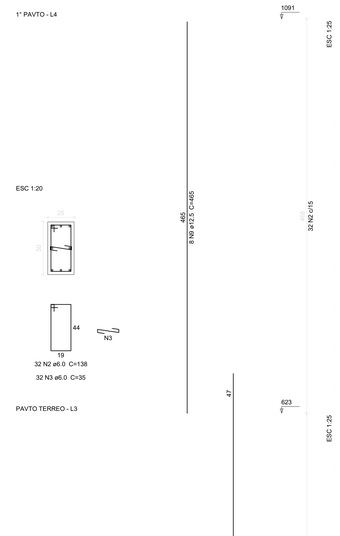
P34

PAVTO TERREO - L3



P35

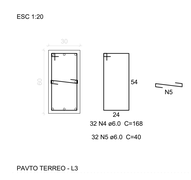
1° PAVTO - L4

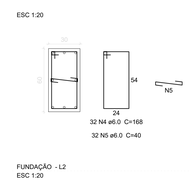


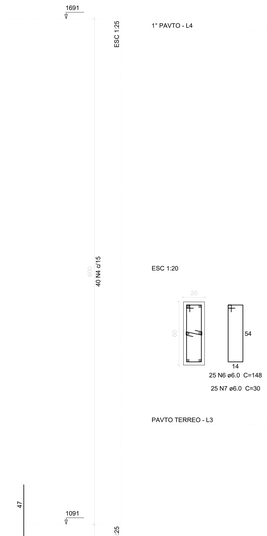
P36

CX D'ÁGUA - L5



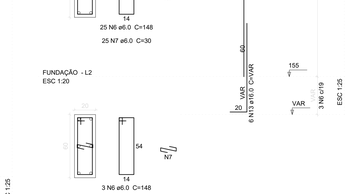






P38

1° PAVTO - L4



Relação do aço

P33 P34 P35 P36 P38

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	70	147	10290
	2	6.0	68	138	9384
	3	6.0	68	35	2380
	4	6.0	107	168	17976
	5	6.0	107	40	4280
	6	6.0	53	148	7844
	7	6.0	53	30	1590
CA50	8	12.5	14	VAR	VAR
	9	12.5	14	465	6510
	10	12.5	8	VAR	VAR
	11	12.5	24	515	12360
	12	12.5	8	597	4776
	13	16.0	6	VAR	VAR
	14	16.0	6	528	3168
	15	16.0	6	465	2790
	16	20.0	6	VAR	VAR
	17	20.0	6	465	2790

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	260.9	276.4
	16.0	66.9	116
	20.0	36	97.5
CA60	6.0	537.5	131.2

PESO TOTAL

CA50	489.9
CA60	131.2

Vol. de concreto total (C-25) = 6.95 m³
Área de forma total = 75.06 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 08/15

FOLHA:
17/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

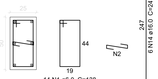
	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/90	C.O. 0,13

A0
1181x841mm

P39

CX D'ÁGUA - L5

ESC 1:20



14 N1 ø6.0 C=138

14 N2 ø6.0 C=35

6 N14 ø16.0 C=247

1° PAVTO - L4

ESC 1:20



25 N1 ø6.0 C=138

25 N2 ø6.0 C=35

6 N13 ø16.0 C=628

PAVTO TERREO - L3

ESC 1:20



25 N1 ø6.0 C=138

25 N2 ø6.0 C=35

6 N3 ø16.0 C=628

FUNDAÇÃO - L2

ESC 1:20



2 N1 ø6.0 C=138

2 N2 ø6.0 C=35

6 N12 ø16.0 C=VAR

1341

ESC 1:25

14 N1 c/19

1091

ESC 1:25

25 N1 c/19

623

ESC 1:25

60

60

155

VAR

20

VAR

2 N1 c/19

ESC 1:25

P40

1° PAVTO - L4

ESC 1:20



32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N7 ø12.5 C=468

PAVTO TERREO - L3

ESC 1:20



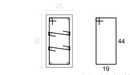
32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N6 ø12.5 C=468

FUNDAÇÃO - L2

ESC 1:20



3 N1 ø6.0 C=138

6 N3 ø6.0 C=35

6 N5 ø12.5 C=VAR

1091

ESC 1:25

32 N1 c/15

623

ESC 1:25

47

47

155

VAR

20

VAR

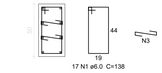
3 N1 c/15

ESC 1:25

P41

CX D'ÁGUA - L5

ESC 1:20



17 N1 ø6.0 C=138

34 N3 ø6.0 C=35

8 N9 ø12.5 C=247

1° PAVTO - L4

ESC 1:20



32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N8 ø12.5 C=515

PAVTO TERREO - L3

ESC 1:20



32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N8 ø12.5 C=515

FUNDAÇÃO - L2

ESC 1:20



4 N1 ø6.0 C=138

8 N3 ø6.0 C=35

8 N8 ø12.5 C=VAR

1341

ESC 1:25

17 N1 c/15

1091

ESC 1:25

32 N1 c/15

623

ESC 1:25

47

47

155

VAR

20

VAR

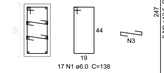
4 N1 c/15

ESC 1:25

P42

CX D'ÁGUA - L5

ESC 1:20



17 N1 ø6.0 C=138

34 N3 ø6.0 C=35

8 N9 ø12.5 C=247

1° PAVTO - L4

ESC 1:20



32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N8 ø12.5 C=515

PAVTO TERREO - L3

ESC 1:20



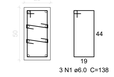
32 N1 ø6.0 C=138

64 N3 ø6.0 C=35

8 N8 ø12.5 C=515

FUNDAÇÃO - L2

ESC 1:20



3 N1 ø6.0 C=138

6 N3 ø6.0 C=35

8 N10 ø12.5 C=VAR

1341

ESC 1:25

17 N1 c/15

1091

ESC 1:25

32 N1 c/15

623

ESC 1:25

47

47

155

VAR

20

VAR

3 N1 c/15

ESC 1:25

P43

CX D'ÁGUA - L5

ESC 1:20



17 N4 ø6.0 C=98

6 N9 ø12.5 C=247

1° PAVTO - L4

ESC 1:20



32 N4 ø6.0 C=98

6 N8 ø12.5 C=515

PAVTO TERREO - L3

ESC 1:20



32 N4 ø6.0 C=98

5 N4 ø12.5 C=VAR

FUNDAÇÃO - L2

ESC 1:20



5 N4 ø6.0 C=98

6 N11 ø12.5 C=VAR

1341

ESC 1:25

17 N4 c/15

1091

ESC 1:25

32 N4 c/15

623

ESC 1:25

47

47

155

VAR

20

VAR

5 N4 c/15

ESC 1:25

Relação do aço

P39
P42
P40
P43
P41

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	302	138	41676
	2	6.0	66	35	2310
	3	6.0	472	35	16520
	4	6.0	86	98	8428
CA50	5	12.5	8	VAR	VAR
	6	12.5	52	515	26780
	7	12.5	8	465	3720
	8	12.5	8	VAR	VAR
	9	12.5	22	247	5434
	10	12.5	8	VAR	VAR
	11	12.5	6	VAR	VAR
	12	16.0	6	VAR	VAR
	13	16.0	12	528	6336
	14	16.0	6	247	1482

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	392.9	416.3
	16.0	84.9	147.3
CA60	6.0	689.4	168.3
PESO TOTAL			
CA50	563.6		
CA60	168.3		

Vol. de concreto total (C-25) = 6.76 m³

Área de forma total = 83.65 m²

COR	PLOT PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/90	C 0,0 0,13

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:

PILARES EM PRUMADA 09/15

FOLHA:

18/48

AUTOR DO PROJETO:

Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:

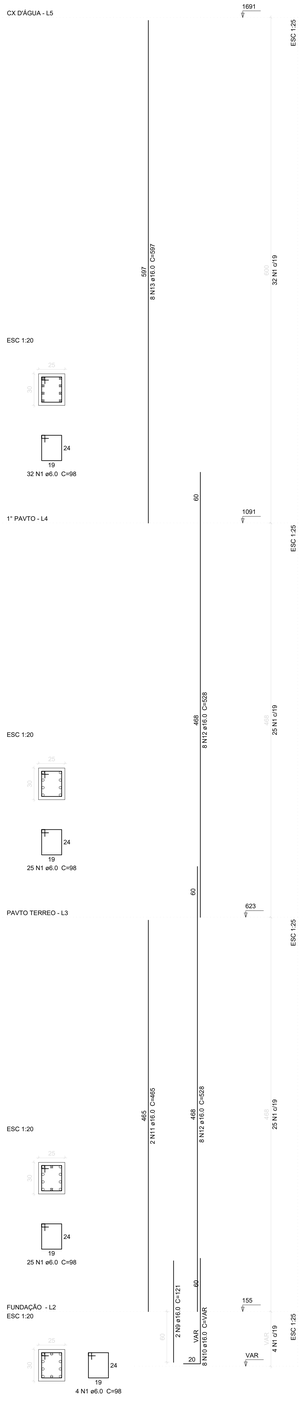
07/2022

ESCALA:

INDICADA

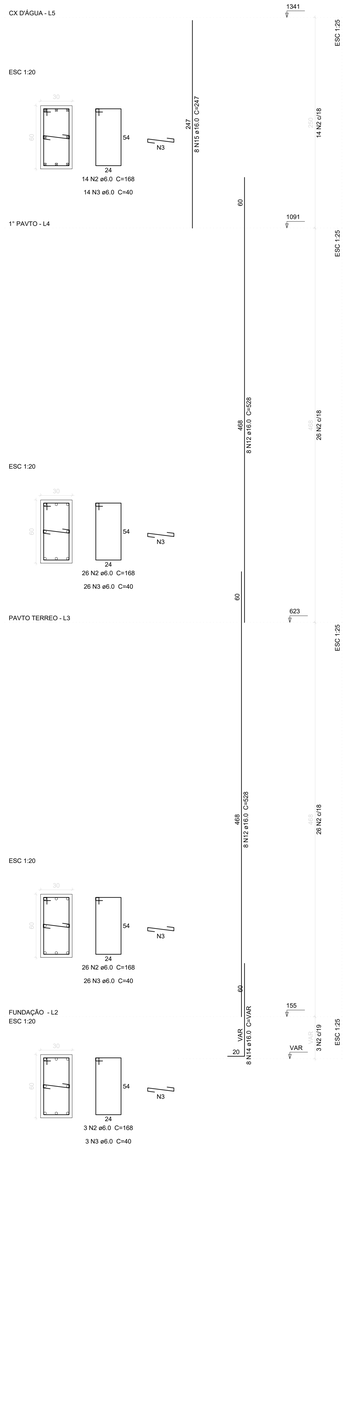
P44

CX D'ÁGUA - L5



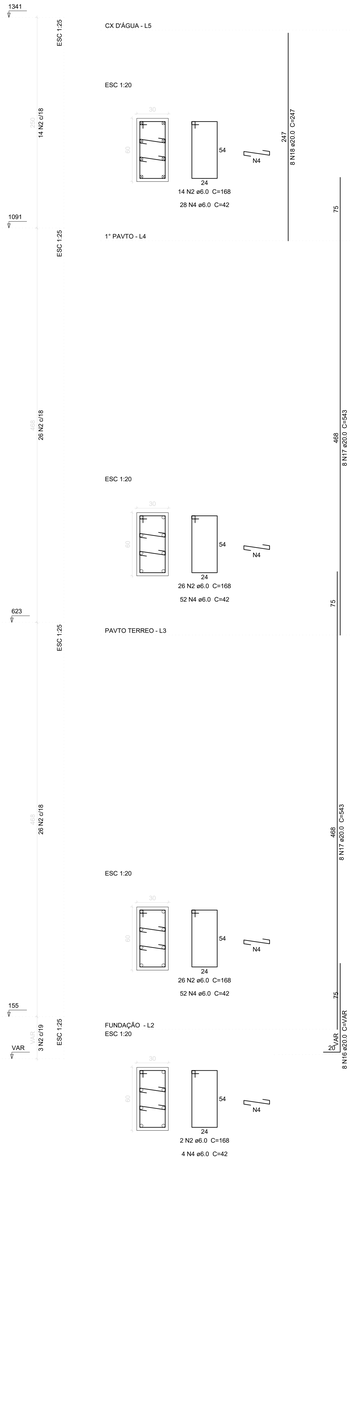
P45

CX D'ÁGUA - L5



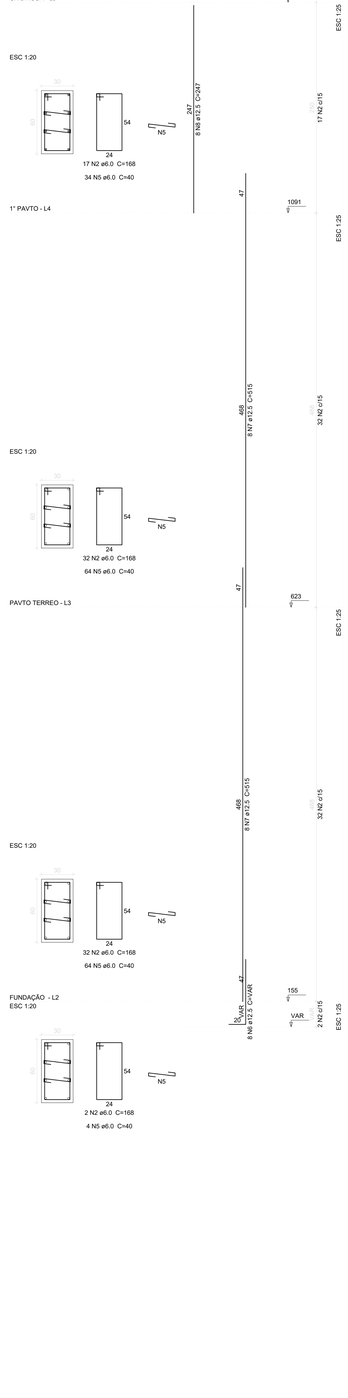
P46

CX D'ÁGUA - L5



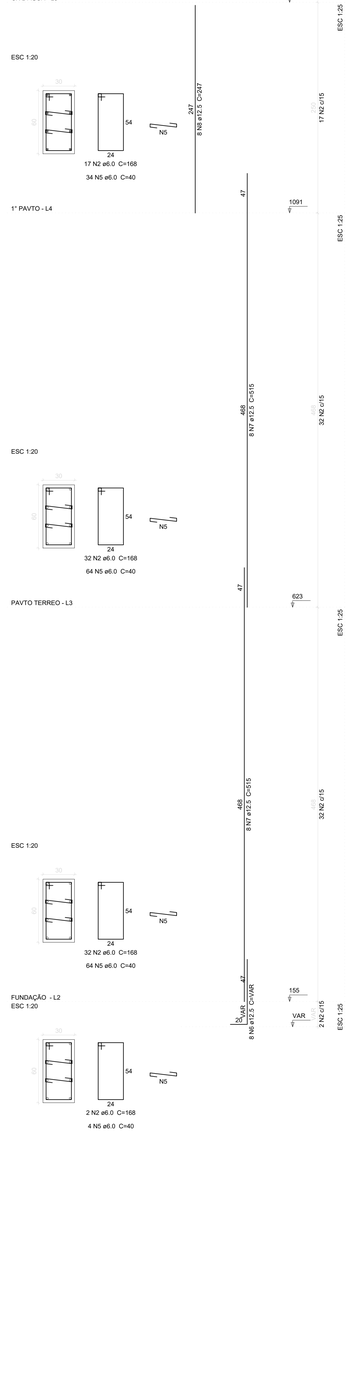
P47

CX D'ÁGUA - L5



P48

CX D'ÁGUA - L5



Relação do aço

P44
P47

P45
P48

P46

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	86	98	8428
	2	6.0	303	168	50904
	3	6.0	69	40	2760
	4	6.0	136	42	5712
	5	6.0	332	40	13280
CA50	6	12.5	16	VAR	VAR
	7	12.5	32	515	16480
	8	12.5	16	247	3952
	9	16.0	2	121	242
	10	16.0	8	VAR	VAR
	11	16.0	2	465	930
	12	16.0	32	528	16896
	13	16.0	8	597	4776
	14	16.0	8	VAR	VAR
	15	16.0	8	247	1976
	16	20.0	8	VAR	VAR
	17	20.0	16	543	8688
	18	20.0	8	247	1976

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	219.4	232.5
	16.0	269.6	468
	20.0	116.2	315.1
CA60	6.0	810.9	198
PESO TOTAL			
CA50	1015.6		
CA60	198		

Vol. de concreto total (C-25) = 9.99 m³
Área de forma total = 105.52 m²

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/90	0,0;0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 10/15

FOLHA:
19/48

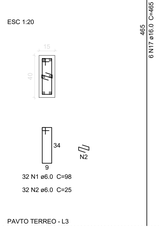
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

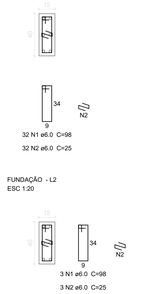
P50

1° PAVTO - L4



32 N1 ø6.0 C=98
32 N2 ø6.0 C=25

PAVTO TERREO - L3



FUNDAÇÃO - L2
ESC 1:20

3 N1 ø6.0 C=98
3 N2 ø6.0 C=25

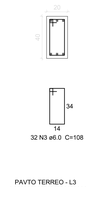
ESC 1:20



P51

1° PAVTO - L4

ESC 1:20



32 N3 ø6.0 C=108

PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

3 N3 ø6.0 C=108

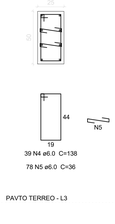
ESC 1:20



P52

1° PAVTO - L4

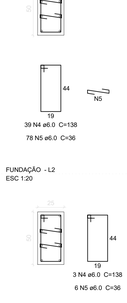
ESC 1:20



39 N4 ø6.0 C=138
78 N5 ø6.0 C=36

PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

3 N4 ø6.0 C=138
6 N5 ø6.0 C=36

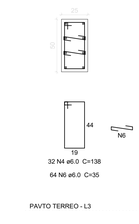
ESC 1:20



P53

1° PAVTO - L4

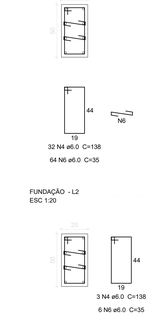
ESC 1:20



32 N4 ø6.0 C=138
64 N6 ø6.0 C=35

PAVTO TERREO - L3

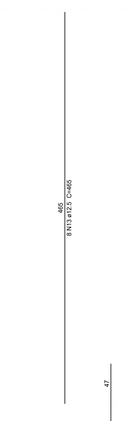
ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

3 N4 ø6.0 C=138
6 N6 ø6.0 C=35

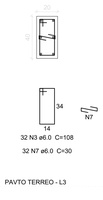
ESC 1:20



P54

1° PAVTO - L4

ESC 1:20



32 N3 ø6.0 C=108
32 N7 ø6.0 C=30

PAVTO TERREO - L3

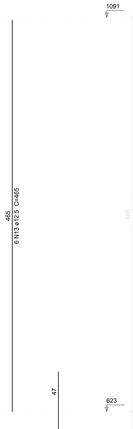
ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

3 N3 ø6.0 C=108
3 N7 ø6.0 C=30

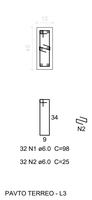
ESC 1:20



P55

1° PAVTO - L4

ESC 1:20



32 N1 ø6.0 C=98
32 N2 ø6.0 C=25

PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20

3 N1 ø6.0 C=98
3 N2 ø6.0 C=25

ESC 1:20



Relação do aço

P50 P51 P52
P53 P54 P55

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	134	98	13132
	2	6.0	134	25	3350
	3	6.0	134	108	14472
	4	6.0	148	138	20424
	5	6.0	162	36	5832
	6	6.0	134	35	4690
	7	6.0	67	30	2010
CA50	8	10.0	8	VAR	VAR
	9	10.0	8	506	4048
	10	10.0	8	465	3720
	11	12.5	14	VAR	VAR
	12	12.5	20	515	10300
	13	12.5	20	465	9300
	14	12.5	6	VAR	VAR
	15	16.0	12	VAR	VAR
	16	16.0	12	528	6336
	17	16.0	12	465	5580

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	85	57.6
	12.5	216.1	229
	16.0	133.1	231
CA60	6.0	639.1	156
PESO TOTAL			
CA50	517.7		
CA60	156		

Vol. de concreto total (C-25) = 5.16 m³
Área de forma total = 73.97 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 11/15

FOLHA:
20/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

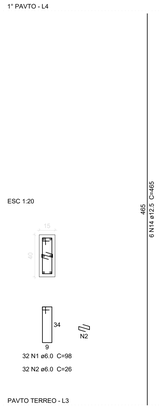
ESCALA:
INDICADA

	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
DIREÇÃO	0,0 0,13

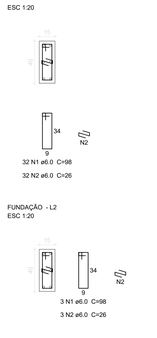
A0
1181x841mm

P56

1° PAVTO - L4



PAVTO TERREO - L3

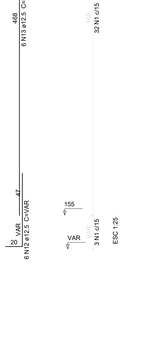


P57

1° PAVTO - L4

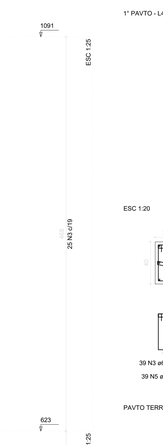


PAVTO TERREO - L3

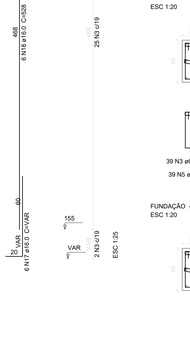


P58

1° PAVTO - L4

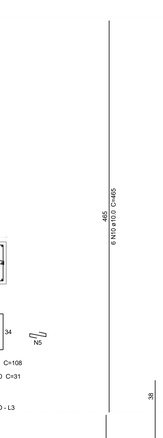


PAVTO TERREO - L3

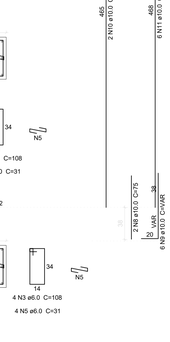


P59

1° PAVTO - L4

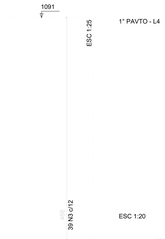


PAVTO TERREO - L3

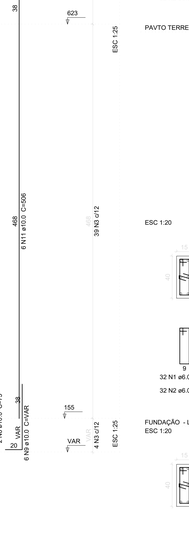


P60

CX.D'ÁGUA - L5

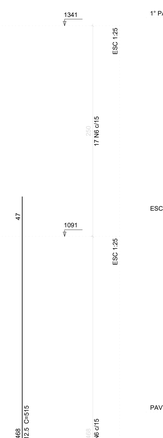


1° PAVTO - L4

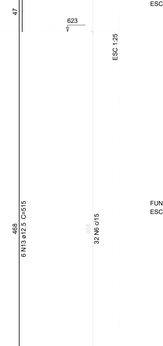


P61

1° PAVTO - L4



PAVTO TERREO - L3



Relação do aço

P56 P57 P58
P59 P60 P61

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	134	98	13132
	2	6.0	134	26	3484
	3	6.0	216	108	23328
	4	6.0	52	30	1560
	5	6.0	164	31	5084
	6	6.0	84	138	11592
	7	6.0	84	35	2940
CA50	8	10.0	2	75	150
	9	10.0	12	VAR	VAR
	10	10.0	14	465	6510
	11	10.0	12	506	6072
	12	12.5	12	VAR	VAR
	13	12.5	24	515	12360
	14	12.5	12	465	5580
	15	12.5	6	VAR	VAR
	16	12.5	6	247	1482
	17	16.0	6	VAR	VAR
	18	16.0	6	528	3168
	19	16.0	6	465	2790

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	138.9	94.2
	12.5	212.7	225.3
	16.0	66.3	115
CA60	6.0	611.2	149.2

PESO TOTAL

CA50	434.5
CA60	149.2

Vol. de concreto total (C-25) = 5.04 m³
Área de forma total = 74.86 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 12/15

FOLHA:
21/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

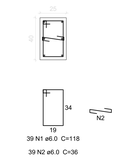
	PLOT
COR	PENA
1	7 0,7
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13

0,0/90/0,0/0,13

A0
1181x841mm

P62

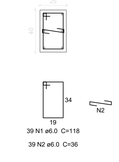
1° PAVTO - L4



39 N1 ø6.0 C=118

39 N2 ø6.0 C=36

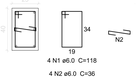
PAVTO TERREO - L3



39 N1 ø6.0 C=118

39 N2 ø6.0 C=36

FUNDAÇÃO - L2
ESC 1:20



4 N1 ø6.0 C=118

4 N2 ø6.0 C=36

1091

39 N1 c/12

ESC 1:25

465

6 N3 ø10.0 C=465

623

39 N1 c/12

ESC 1:25

38

468

6 N7 ø10.0 C=506

38

155

VAR

4 N1 c/12

ESC 1:25

38

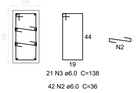
VAR

6 N3 ø10.0 C=VAR

P63

CX D'ÁGUA - L5

ESC 1:20



21 N3 ø6.0 C=138

42 N2 ø6.0 C=36

247

8 N10 ø10.0 C=247

1° PAVTO - L4

ESC 1:20



39 N3 ø6.0 C=138

78 N2 ø6.0 C=36

PAVTO TERREO - L3

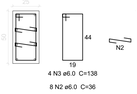
ESC 1:20



39 N3 ø6.0 C=138

78 N2 ø6.0 C=36

FUNDAÇÃO - L2
ESC 1:20



4 N3 ø6.0 C=138

8 N2 ø6.0 C=36

1341

21 N3 c/12

ESC 1:25

1091

39 N3 c/12

ESC 1:25

38

468

6 N7 ø10.0 C=506

38

155

VAR

4 N3 c/12

ESC 1:25

38

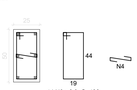
VAR

6 N9 ø10.0 C=VAR

P64

CX D'ÁGUA - L5

ESC 1:20



14 N3 ø6.0 C=138

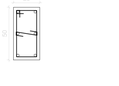
14 N4 ø6.0 C=35

247

6 N18 ø10.0 C=247

1° PAVTO - L4

ESC 1:20



25 N3 ø6.0 C=138

25 N4 ø6.0 C=35

PAVTO TERREO - L3

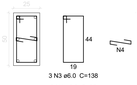
ESC 1:20



25 N3 ø6.0 C=138

25 N4 ø6.0 C=35

FUNDAÇÃO - L2
ESC 1:20



3 N3 ø6.0 C=138

3 N4 ø6.0 C=35

1341

14 N3 c/19

ESC 1:25

1091

25 N3 c/19

ESC 1:25

60

468

6 N17 ø16.0 C=528

60

155

VAR

3 N3 c/19

ESC 1:25

60

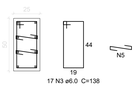
VAR

6 N18 ø16.0 C=VAR

P65

CX D'ÁGUA - L5

ESC 1:20



17 N3 ø6.0 C=138

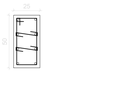
34 N5 ø6.0 C=35

247

8 N14 ø12.5 C=247

1° PAVTO - L4

ESC 1:20

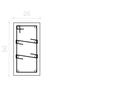


32 N3 ø6.0 C=138

64 N5 ø6.0 C=35

PAVTO TERREO - L3

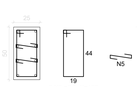
ESC 1:20



34 N3 ø6.0 C=138

68 N5 ø6.0 C=35

FUNDAÇÃO - L2
ESC 1:20



3 N3 ø6.0 C=138

6 N5 ø6.0 C=35

1341

17 N3 c/15

ESC 1:25

1091

32 N3 c/15

ESC 1:25

47

468

8 N13 ø12.5 C=515

47

125

VAR

3 N3 c/15

ESC 1:25

47

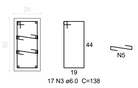
VAR

8 N11 ø12.5 C=VAR

P66

CX D'ÁGUA - L5

ESC 1:20



17 N3 ø6.0 C=138

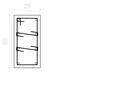
34 N5 ø6.0 C=35

247

8 N14 ø12.5 C=247

1° PAVTO - L4

ESC 1:20

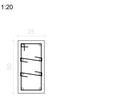


32 N3 ø6.0 C=138

64 N5 ø6.0 C=35

PAVTO TERREO - L3

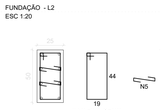
ESC 1:20



35 N3 ø6.0 C=138

70 N5 ø6.0 C=35

FUNDAÇÃO - L2
ESC 1:20



3 N3 ø6.0 C=138

6 N5 ø6.0 C=35

1341

17 N3 c/15

ESC 1:25

1091

32 N3 c/15

ESC 1:25

47

518

8 N15 ø12.5 C=568

47

105

VAR

3 N3 c/15

ESC 1:25

47

VAR

8 N11 ø12.5 C=VAR

Relação do aço

P62
P65

P63
P66

P64

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	82	118	9676
	2	6.0	288	36	10368
	3	6.0	343	138	47334
	4	6.0	67	35	2345
	5	6.0	346	35	12110
CA50	6	10.0	6	VAR	VAR
	7	10.0	22	506	11132
	8	10.0	6	465	2790
	9	10.0	8	VAR	VAR
	10	10.0	8	247	1976
	11	12.5	16	VAR	VAR
	12	12.5	8	545	4360
	13	12.5	16	515	8240
	14	12.5	16	247	3952
	15	12.5	8	565	4520
	16	16.0	6	VAR	VAR
	17	16.0	12	528	6336
	18	16.0	6	247	1482

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	172.9	117.2
	12.5	228.2	241.8
	16.0	85.5	148.3
CA60	6.0	818.4	199.8
PESO TOTAL			

CA50	507.3
CA60	199.8

Vol. de concreto total (C-25) = 7.23 m³
Área de forma total = 87.75 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 13/15

FOLHA:
22/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

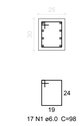
PLOT	
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
OUTRO	C 0,0 0,13

A0
1181x841mm

P67

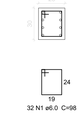
CX D'ÁGUA - L5

ESC 1:20

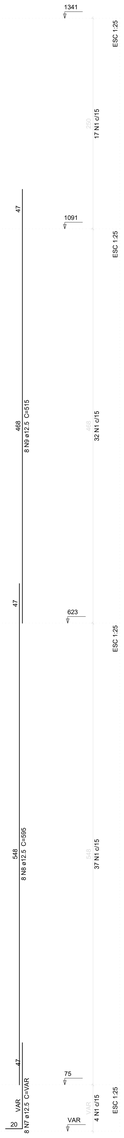


1° PAVTO - L4

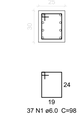
ESC 1:20



PAVTO TERREO - L3



ESC 1:20



FUNDAÇÃO - L2
ESC 1:20



P68

CX D'ÁGUA - L5



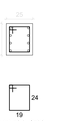
ESC 1:20

1° PAVTO - L4

ESC 1:20

PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20



P69

CX D'ÁGUA - L5



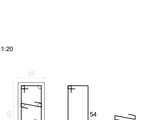
ESC 1:20

1° PAVTO - L4

ESC 1:20

PAVTO TERREO - L3

ESC 1:20



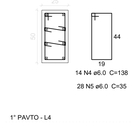
FUNDAÇÃO - L2
ESC 1:20



P70

CX D'ÁGUA - L5

ESC 1:20



1° PAVTO - L4

ESC 1:20

PAVTO TERREO - L3

ESC 1:20

FUNDAÇÃO - L2
ESC 1:20

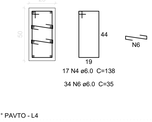


P71

CX D'ÁGUA - L5

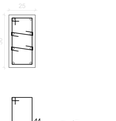


ESC 1:20



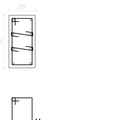
1° PAVTO - L4

ESC 1:20



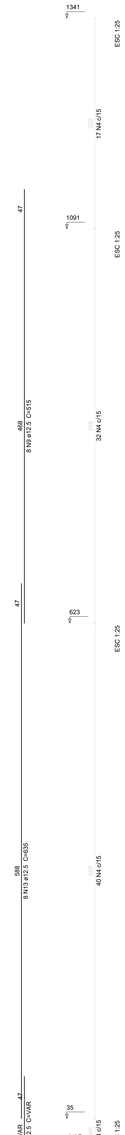
PAVTO TERREO - L3

ESC 1:20



FUNDAÇÃO - L2
ESC 1:20





Relação do aço

P67
P68
P69
P70
P71

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	203	98	19894
	2	6.0	85	158	13430
	3	6.0	170	37	6290
	4	6.0	164	138	22632
	5	6.0	144	35	5040
	6	6.0	184	35	6440
CA50	7	12.5	16	VAR	VAR
	8	12.5	16	595	9520
	9	12.5	24	515	12360
	10	12.5	16	247	3952
	11	12.5	8	597	4776
	12	12.5	8	VAR	VAR
	13	12.5	8	630	5080
	14	16.0	8	VAR	VAR
	15	16.0	8	633	5064
	16	16.0	8	528	4224
	17	16.0	8	247	1976
	18	20.0	8	VAR	VAR
	19	20.0	8	633	5064
	20	20.0	8	543	4344
	21	20.0	8	597	4776

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	12.5	383.9	406.7
	16.0	121.6	211
	20.0	152.6	413.9
CA60	6.0	737.3	180
PESO TOTAL			
CA50	1031.6		
CA60	180		

Vol. de concreto total (C-25) = 8.08 m³
Área de forma total = 101.32 m²

	P1	P2
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
QUINA	C.O	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 14/15

FOLHA:
23/48

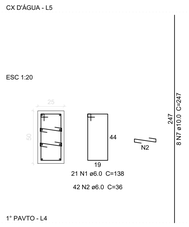
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

P72

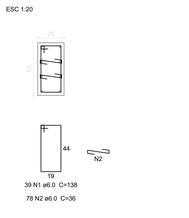
CX D'ÁGUA - L5



21 N1 ø6.0 C=138

42 N2 ø6.0 C=36

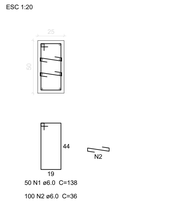
1° PAVTO - L4



39 N1 ø6.0 C=138

78 N2 ø6.0 C=36

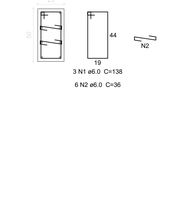
PAVTO TERREO - L3



50 N1 ø6.0 C=138

100 N2 ø6.0 C=36

FUNDAÇÃO - L2
ESC 1:20



3 N1 ø6.0 C=138

6 N2 ø6.0 C=36

1341

ESC 1:25

21 N1 c/12

1091

ESC 1:25

38

39 N1 c/12

38

623

ESC 1:25

38

3 N1 c/12

VAR

20

8 N8 ø10.0 C=VAR

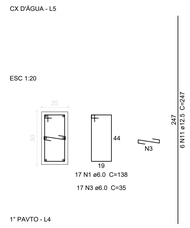
25

VAR

ESC 1:25

P73

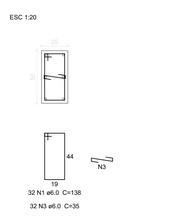
CX D'ÁGUA - L5



17 N1 ø6.0 C=138

17 N3 ø6.0 C=35

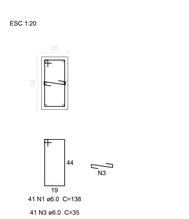
1° PAVTO - L4



32 N1 ø6.0 C=138

32 N3 ø6.0 C=35

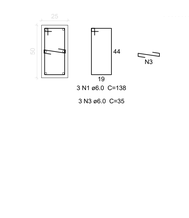
PAVTO TERREO - L3



41 N1 ø6.0 C=138

41 N3 ø6.0 C=35

FUNDAÇÃO - L2
ESC 1:20



3 N1 ø6.0 C=138

3 N3 ø6.0 C=35

1341

ESC 1:25

17 N1 c/15

1091

ESC 1:25

47

32 N1 c/15

47

623

ESC 1:25

47

3 N1 c/15

VAR

20

6 N8 ø12.5 C=VAR

15

VAR

ESC 1:25

Relação do aço

P72 P73

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	206	138	28428
	2	6.0	226	36	8136
	3	6.0	93	35	3255
CA50	4	10.0	8	VAR	VAR
	5	10.0	8	636	5088
	6	10.0	8	506	4048
	7	10.0	8	247	1976
	8	12.5	6	VAR	VAR
	9	12.5	6	655	3930
	10	12.5	6	515	3090
	11	12.5	6	247	1482

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	118.4	80.3
	12.5	91	96.4
CA60	6.0	398.2	97.2

PESO TOTAL

CA50	176.7
CA60	97.2

Vol. de concreto total (C-25) = 3.39 m³
Área de forma total = 40.68 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
PILARES EM PRUMADA 15/15

FOLHA:
24/48

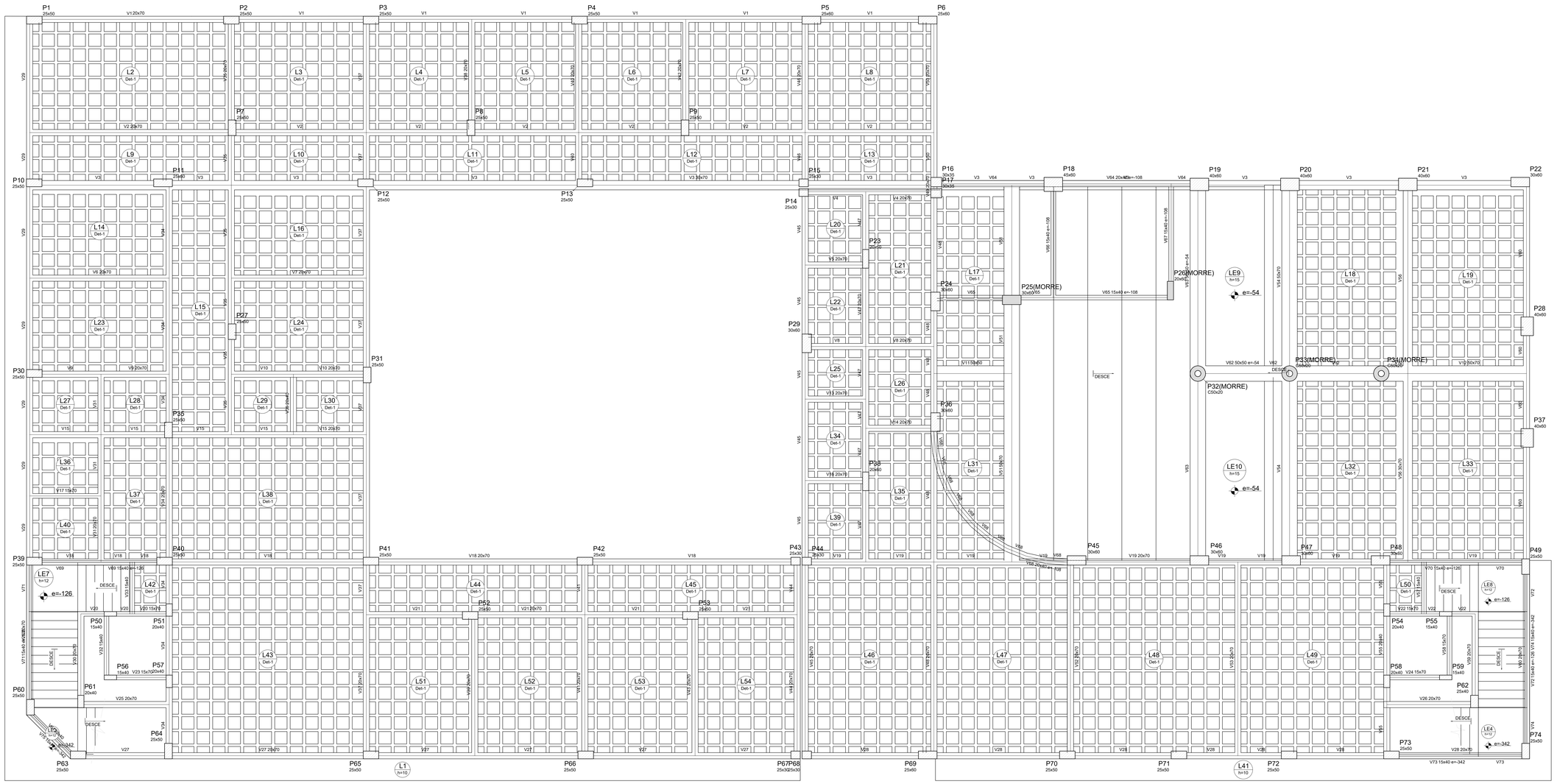
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/90	C.O. 0,13

A0
1181x841mm



Forma do pavimento PAVTO TERREO

escala 1:50

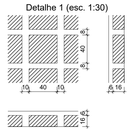
Blocos de enchimento							
Detalhe	Tipo	Nome	Dimensões(cm)			Quantidade
			h0	bt	ty	
1	EPS Painel	B16/40/40	16	40	40	3142

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Legenda dos Pilares

- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

Detalhe 1 (esc. 1:30)



Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x70	0	623
V2	20x70	0	623
V3	30x70	0	623
V4	20x70	0	623
V5	20x70	0	623
V6	20x70	0	623
V7	20x70	0	623
V8	20x70	0	623
V9	20x70	0	623
V10	20x70	0	623
V11	50x50	0	623
V12	50x70	0	623
V13	20x70	0	623
V14	20x70	0	623
V15	20x70	0	623
V16	20x70	0	623
V17	15x70	0	623
V18	20x70	0	623
V19	20x70	0	623
V20	15x70	0	623
V21	20x70	0	623
V22	15x70	0	623
V23	15x70	0	623
V24	15x70	0	623
V25	20x70	0	623
V26	20x70	0	623
V27	20x70	0	623
V28	20x70	0	623
V29	20x70	0	623
V30	20x70	0	623
V31	20x70	0	623
V32	15x40	0	623
V33	15x40	0	623
V34	20x70	0	623
V35	20x70	0	623
V36	20x40	0	623
V37	20x70	0	623
V38	20x70	0	623
V39	20x70	0	623
V40	20x70	0	623
V41	20x70	0	623
V42	20x70	0	623
V43	20x70	0	623
V44	20x70	0	623
V45	20x70	0	623
V46	20x70	0	623
V47	20x70	0	623
V48	20x70	0	623
V49	20x70	0	623
V50	20x70	0	623
V51	50x70	0	623
V52	20x70	0	623
V53	20x70	0	623
V54	50x70	0	623
V55	20x40	0	623
V56	30x70	0	623
V57	15x40	0	623
V58	15x70	0	623
V59	20x70	0	623
V60	20x70	0	623
V61	20x40	0	623
V62	50x50	-54	569
V63	50x50	-54	569
V64	20x40	-108	515
V65	15x40	-108	515
V66	15x40	-108	515
V67	15x40	-108	515
V68	20x40	-108	515
V69	15x40	-126	497
V70	15x40	-126	497
V71	15x40	-126	497
V72	15x40	-126	497
V73	15x40	-342	281
V74	15x40	-342	281
V75	15x40	-342	281

Lajes

Nome	Tipo	Dados				Sobrecarga (kN/m²)		
		Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kN/m²)	Adicional	Acidental	Localizada
L1	Maciça	10	0	623	2.50	1.81	1.50	-
L2	Nervurada	22	0	623	2.85	1.54	2.50	-
L3	Nervurada	22	0	623	2.85	1.54	2.50	-
L4	Nervurada	22	0	623	2.85	1.54	2.50	-
L5	Nervurada	22	0	623	2.85	1.54	2.50	-
L6	Nervurada	22	0	623	2.85	1.54	2.50	-
L7	Nervurada	22	0	623	2.85	1.54	2.50	-
L8	Nervurada	22	0	623	2.85	1.54	2.50	-
L9	Nervurada	22	0	623	2.85	1.54	2.50	-
L10	Nervurada	22	0	623	2.85	1.54	2.50	-
L11	Nervurada	22	0	623	2.85	1.54	2.50	-
L12	Nervurada	22	0	623	2.85	1.54	2.50	-
L13	Nervurada	22	0	623	2.85	1.54	2.50	-
L14	Nervurada	22	0	623	2.85	1.54	2.50	-
L15	Nervurada	22	0	623	2.85	1.54	2.50	-
L16	Nervurada	22	0	623	2.85	1.54	2.50	-
L17	Nervurada	22	0	623	2.85	1.54	4.00	-
L18	Nervurada	22	0	623	2.85	1.54	4.00	-
L19	Nervurada	22	0	623	2.85	1.54	4.00	-
L20	Nervurada	22	0	623	2.85	1.81	2.50	-
L21	Nervurada	22	0	623	2.85	1.54	2.50	-
L22	Nervurada	22	0	623	2.85	1.81	2.50	-
L23	Nervurada	22	0	623	2.85	1.54	2.50	-
L24	Nervurada	22	0	623	2.85	1.54	2.50	-
L25	Nervurada	22	0	623	2.85	1.81	2.50	-
L26	Nervurada	22	0	623	2.85	1.54	2.50	-
L27	Nervurada	22	0	623	2.85	1.54	2.50	-
L28	Nervurada	22	0	623	2.85	1.54	2.50	-
L29	Nervurada	22	0	623	2.85	1.54	2.50	-
L30	Nervurada	22	0	623	2.85	1.54	2.50	-
L31	Nervurada	22	0	623	2.85	1.54	4.00	-
L32	Nervurada	22	0	623	2.85	1.54	4.00	-
L33	Nervurada	22	0	623	2.85	1.54	4.00	-
L34	Nervurada	22	0	623	2.85	1.81	2.50	-
L35	Nervurada	22	0	623	2.85	1.54	2.50	-
L36	Nervurada	22	0	623	2.85	1.54	2.50	-
L37	Nervurada	22	0	623	2.85	1.54	2.50	-
L38	Nervurada	22	0	623	2.85	1.54	2.50	-
L39	Nervurada	22	0	623	2.85	1.81	2.50	-
L40	Nervurada	22	0	623	2.85	1.54	2.50	-
L41	Maciça	10	0	623	2.50	1.81	1.50	-
L42	Nervurada	22	0	623	2.85	1.54	2.50	-
L43	Nervurada	22	0	623	2.85	1.54	2.50	-
L44	Nervurada	22	0	623	2.85	1.54	2.50	-
L45	Nervurada	22	0	623	2.85	1.54	2.50	-
L46	Nervurada	22	0	623	2.85	1.54	2.50	-
L47	Nervurada	22	0	623	2.85	1.54	2.50	-
L48	Nervurada	22	0	623	2.85	1.54	2.50	-
L49	Nervurada	22	0	623	2.85	1.54	2.50	-
L50	Nervurada	22	0	623	2.85	1.54	2.50	-
L51	Nervurada	22	0	623	2.85	1.54	2.50	-
L52	Nervurada	22	0	623	2.85	1.54	2.50	-
L53	Nervurada	22	0	623	2.85	1.54	2.50	-
L54	Nervurada	22	0	623	2.85	1.54	2.50	-
LE1	Maciça	12	-342	281	6.02	1.65	3.00	-
LE2	Maciça	12	-342	281	6.02	1.65	3.00	-
LE3	Maciça	12	-342	281	3.00	1.65	3.00	-
LE4	Maciça	12	-342	281	3.00	1.65	3.00	-
LE5	Maciça	12	-126	497	5.96	1.65	3.00	-
LE6	Maciça	12	-126	497	5.96	1.65	3.00	-
LE7	Maciça	12	-126	497	3.00	1.65	3.00	-
LE8	Maciça	12	-126	497	3.00	1.65	3.00	-
LE9	Maciça	15	-54	569	3.75	1.65	4.00	-
LE10	Maciça	15	-54	569	3.75	1.65	4.00	-
LE11	Maciça	15	0	623	6.78	1.65	4.00	-
LE12	Maciça	15	0	623	4.89	1.65	5.00	-
LE13	Maciça	12	0	623	5.05	1.65	3.00	-
LE14	Maciça	12	0	623	5.05	1.65	3.00	-

Pilares

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	25 x 50	0	623
P2	25 x 50	0	623
P3	25 x 50	0	623
P4	25 x 50	0	623
P5	25 x 60	0	623
P6	25 x 60	0	623
P7	25 x 50	0	623
P8	25 x 50	0	623
P9	25 x 50	0	623
P10	25 x 50	0	623
P11	25 x 60	0	623
P12	25 x 50	0	623
P13	25 x 50	0	623
P14	25 x 30	0	623
P15	25 x 30	0	623
P16	30 x 35	0	623
P17	30 x 35	0	623
P18	45 x 60	0	623
P19	40 x 60	0	623
P20	40 x 60	0	623
P21	40 x 60	0	623
P22	30 x 60	0	623
P23	20 x 60	0	623
P24	30 x 60	0	623
P25	30 x 60	0	623
P26	20 x 60	-108	515
P27	25 x 50	0	623
P28	40 x 60	-80	543
P29	30 x 60	0	623
P30	25 x 50	0	623
P31	25 x 50	0	623
P32	Circ 50 x 20	-54	569
P33	Circ 50 x 20	0	623
P34	Circ 50 x 20	0	623
P35	25 x 50	0	623
P36	30 x 60	0	623
P37	40 x 60	-80	543
P38	20 x 60	0	623
P39	25 x 50	0	623
P40	25 x 50	0	623
P41	25 x 50	0	623
P42	25 x 50	0	623
P43	25 x 30	0	623
P44	25 x 30	0	623
P45	30 x 60	0	623
P46	30 x 60	0	623
P47	30 x 60	0	623
P48	30 x 60	0	623
P49	25 x 50	0	623
P50	15 x 40	0	623
P51	20 x 40	0	623
P52	25 x 50	0	623
P53	25 x 50	0	623
P54	20 x 40	0	623
P55	15 x 40	0	623
P56	15 x 40	0	623
P57	20 x 40	0	623
P58	20 x 40	0	623
P59	15 x 40	0	623
P60	25 x 50	0	623
P61	20 x 40	0	623
P62	25 x 40	0	623
P63	25 x 50	0	623
P64	25 x 50	0	623
P65	25 x 50	0	623
P66	25 x 50	0	623
P67	25 x 30	0	623
P68	25 x 30	0	623
P69	25 x 60	0	623
P70	25 x 50	0	623
P71	25 x 50	0	623
P72	25 x 50	0	623
P73	25 x 50	0	623
P74	25 x 50	0	623

	PLOT
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/90	0,13

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:

PLANTA FORMA PAVIMENTO TÉRREO

FOLHA:

25/48

AUTOR DO PROJETO:

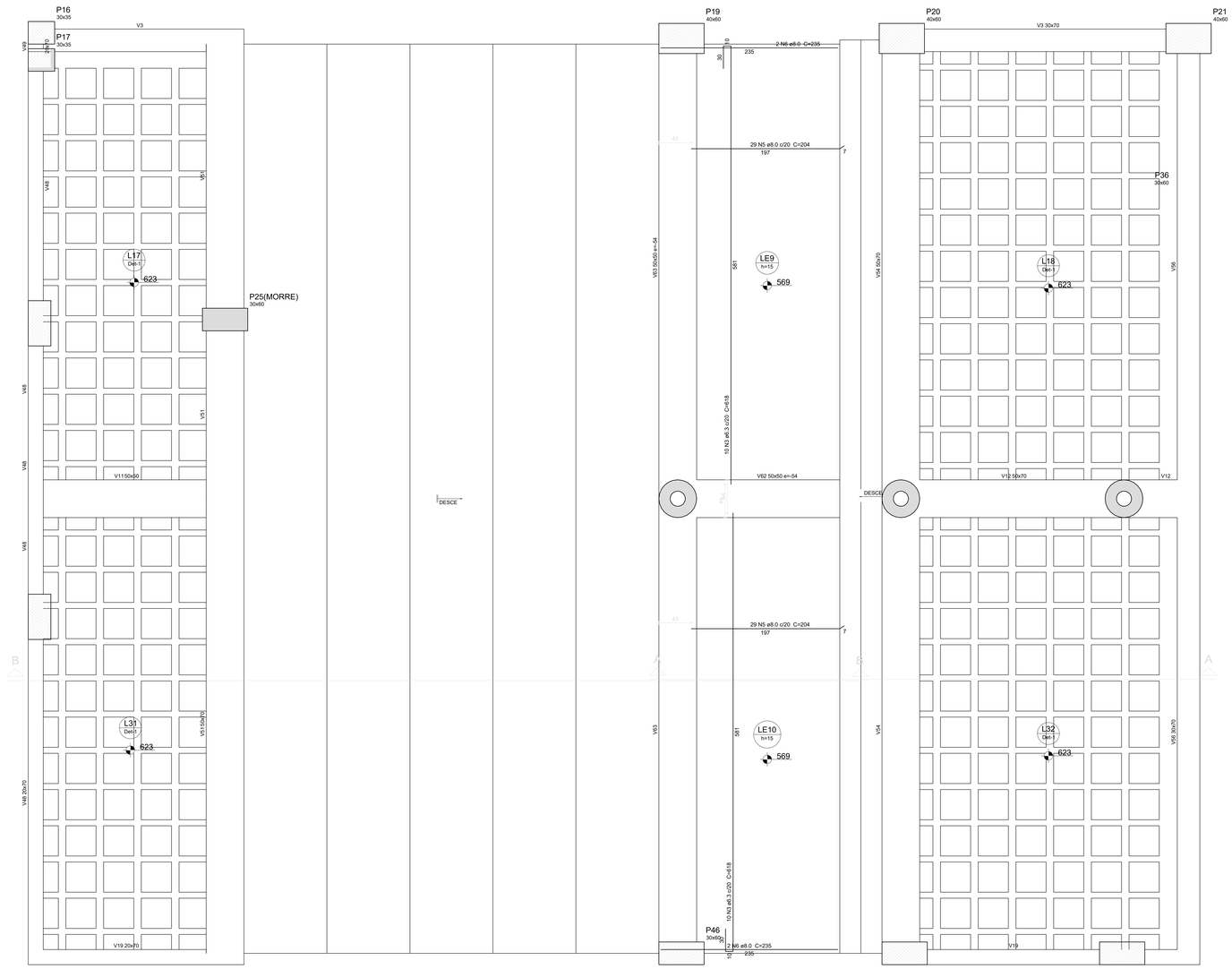
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:

07/2022

ESCALA:

INDICADA



Relação do aço

LE11

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	24	1221	29304
	2	5.0	60	1216	72960
CA50	3	6.3	20	618	12360
	4	6.3	93	1212	112716
	5	8.0	58	204	11832
	6	8.0	4	235	940
	7	10.0	111	416	46176
	8	10.0	111	461	51171
	9	10.0	71	1155	82005
	10	12.5	241	1066	256906

Resumo do aço

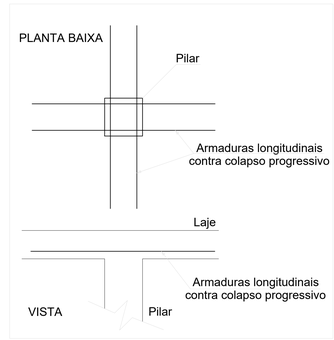
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1250.8	336.7
	8.0	127.8	55.4
	10.0	1793.6	1216.3
	12.5	2569.1	2722.4
CA60	5.0	1022.7	173.4

PESO TOTAL

CA50	4330.8
CA60	173.4

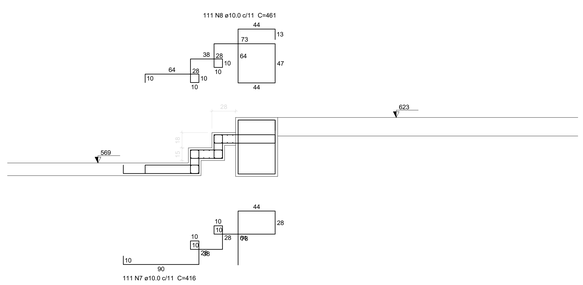
Vol. de concreto total (C-25) = 17.5 m³
Área de forma total = 135.07 m²

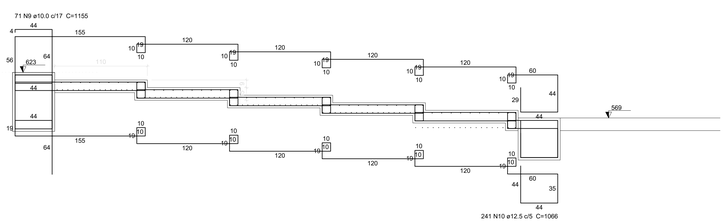
DET. DA ARMADURA CONTRA COLAPSO PROGRESSIVO



Armação positiva da escada E2

escala 1:25





Corte B-B (LE12)

escala 1:25



Corte A-A (LE11)

escala 1:25

	PLOT
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0,060	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

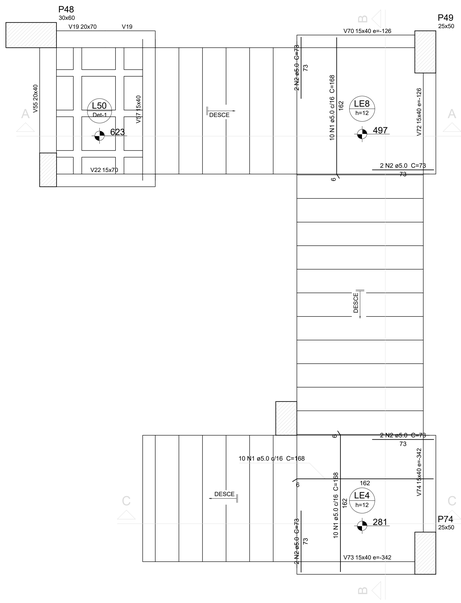
ASSUNTO: ESCADAS AUDITÓRIO

FOLHA: 26/48

AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

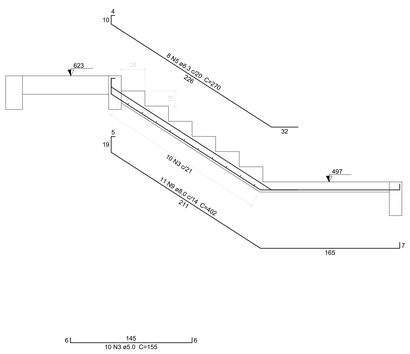
DATA: 07/2022

ESCALA: INDICADA



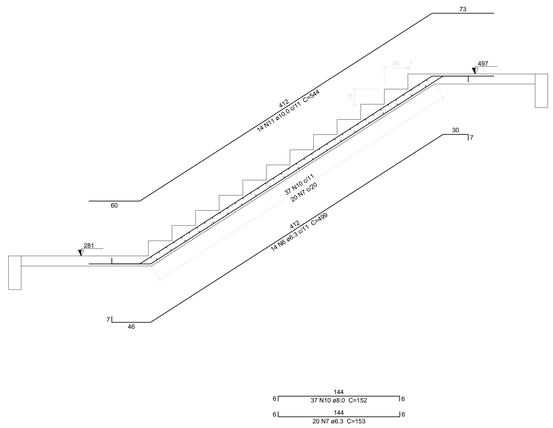
Armação positiva da escada E3

escala 1:25



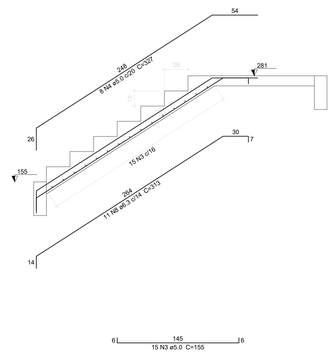
Corte A-A (LE14)

escala 1:25



Corte B-B (LE6)

escala 1:25



Corte C-C (LE2)

escala 1:25

Relação do aço

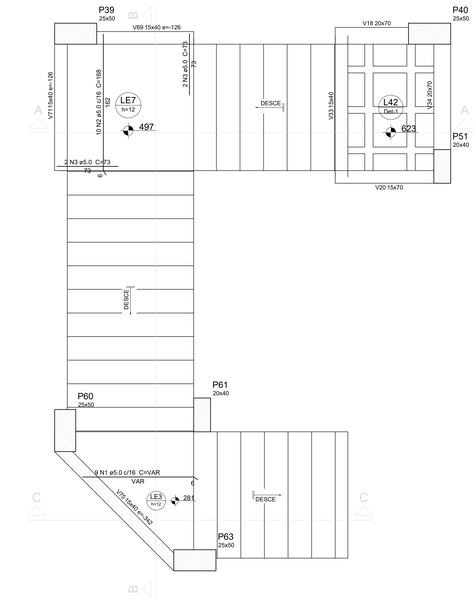
LE14

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	30	168	5040
	2	5.0	8	73	584
	3	5.0	25	155	3875
	4	5.0	8	327	2616
CA50	5	6.3	8	270	2160
	6	6.3	14	499	6986
	7	6.3	20	153	3060
	8	6.3	11	313	3443
	9	8.0	11	402	4422
	10	8.0	37	152	5624
	11	10.0	14	544	7616

Resumo do aço

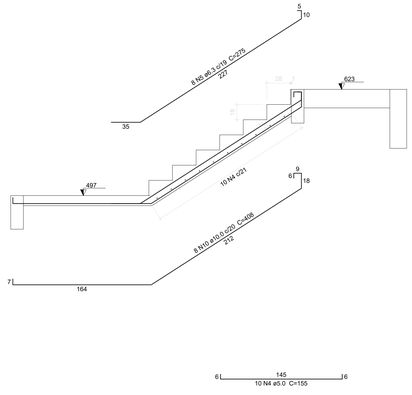
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	156.5	42.1
	8.0	100.5	43.6
	10.0	76.2	51.7
CA60	5.0	121.2	20.5
PESO TOTAL			
CA50	137.4		
CA60	20.5		

Vol. de concreto total (C-25) = 2.86 m³
Área de forma total = 28.64 m²



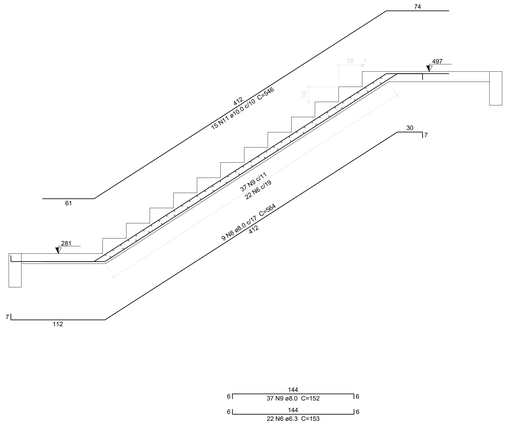
Armação positiva da escada E1

escala 1:25



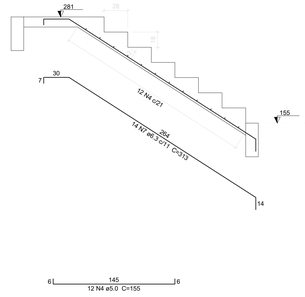
Corte A-A (LE13)

escala 1:25



Corte B-B (LE5)

escala 1:25



Corte C-C (LE1)

escala 1:25

Relação do aço

LE13

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	9	VAR	VAR
	2	5.0	10	168	1680
	3	5.0	4	73	292
	4	5.0	22	155	3410
CA50	5	6.3	8	275	2200
	6	6.3	22	153	3366
	7	6.3	14	313	4382
	8	8.0	9	564	5076
	9	8.0	37	152	5624
	10	10.0	8	408	3264
	11	10.0	15	546	8190

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	99.5	26.8
	8.0	107	46.4
	10.0	114.6	77.7
CA60	5.0	66.3	11.2
PESO TOTAL			
CA50	150.9		
CA60	11.2		

Vol. de concreto total (C-25) = 2.76 m³
Área de forma total = 27.73 m²

PLOT	
COR	PEN.
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
demais	0,0,13

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
ESCADAS

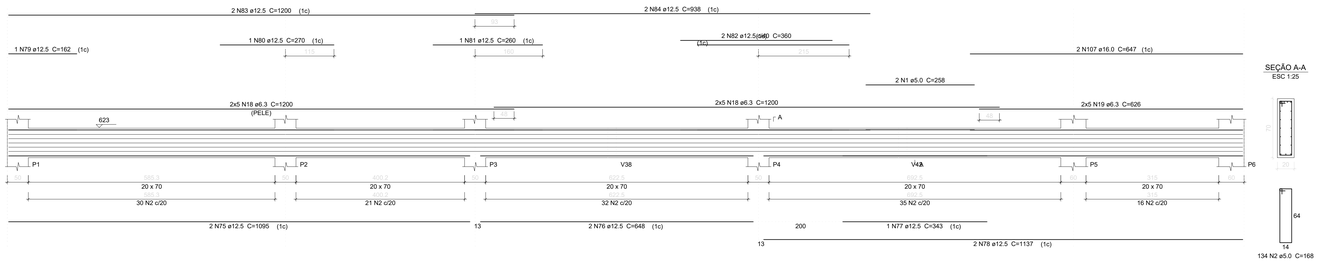
FOLHA:
27/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

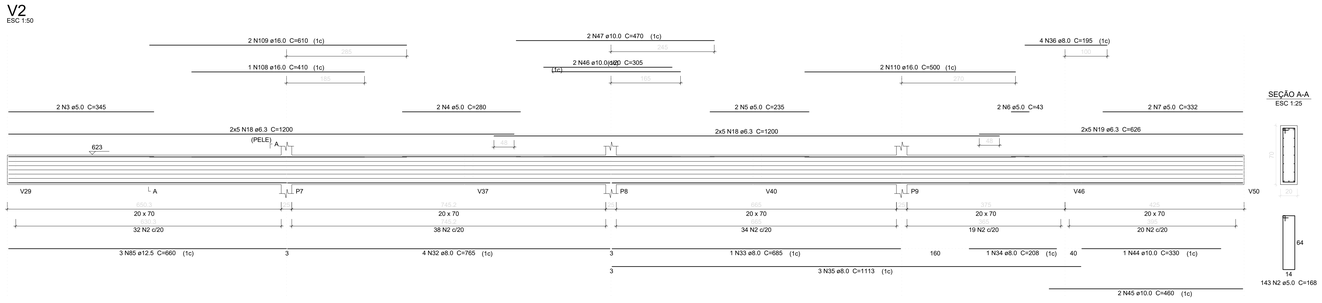
ESCALA:
INDICADA

V1
ESC 1:50



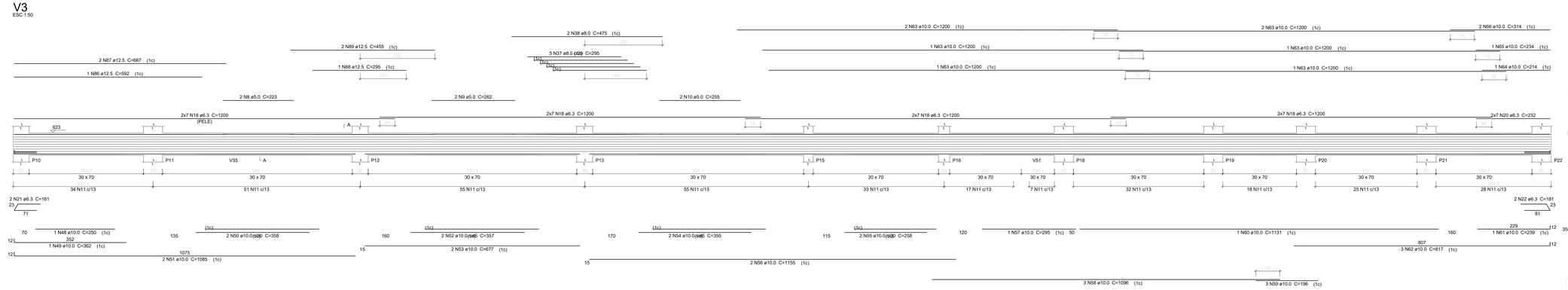
SEÇÃO A-A
ESC 1:25

V2
ESC 1:50

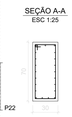


SEÇÃO A-A
ESC 1:25

V3
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

V1 V2 V3
V4 V5 V6
V7 V8 V9
V10 V11 V12
V13 V14 V15
V16 V17

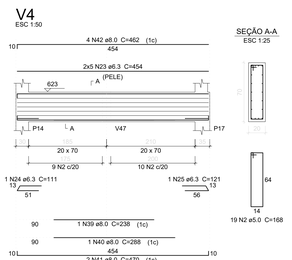
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	258	516
	2	5.0	496	168	83328
	3	5.0	2	345	690
	4	5.0	6	280	1680
	5	5.0	2	235	470
	6	5.0	2	43	86
	7	5.0	2	332	664
	8	5.0	2	223	446
	9	5.0	2	262	524
	10	5.0	2	255	510
	11	5.0	355	188	66740
	12	5.0	2	464	928
	13	5.0	2	449	898
	14	5.0	28	158	4424
	15	5.0	206	198	40788
	16	5.0	2	305	610
	17	5.0	9	158	1422
CA50	18	6.3	96	1200	115200
	19	6.3	20	626	12520
	20	6.3	14	232	3248
	21	6.3	2	161	322
	22	6.3	2	181	362
	23	6.3	20	454	9080
	24	6.3	1	111	111
	25	6.3	1	121	121
	26	6.3	30	209	6270
	27	6.3	20	464	9280
	28	6.3	10	449	4490
	29	6.3	10	429	4290
	30	6.3	18	244	4392
	31	6.3	10	1099	10990
	32	8.0	4	765	3060
	33	8.0	1	685	685
	34	8.0	1	208	208
	35	8.0	3	1113	3339
	36	8.0	4	195	780
	37	8.0	5	295	1475
	38	8.0	2	475	950
	39	8.0	1	238	238
	40	8.0	1	288	288
	41	8.0	2	470	940
	42	8.0	4	462	1848
	43	8.0	14	793	11102
	44	10.0	1	330	330
	45	10.0	2	460	920
	46	10.0	2	305	610
	47	10.0	2	470	940
	48	10.0	1	250	250
	49	10.0	1	362	362
	50	10.0	2	358	716
	51	10.0	2	1085	2170
	52	10.0	2	357	714
	53	10.0	2	677	1354
	54	10.0	2	355	710
	55	10.0	2	258	516
	56	10.0	2	1155	2310
	57	10.0	1	295	295
	58	10.0	3	1096	3288
	59	10.0	3	196	588
	60	10.0	1	1131	1131
	61	10.0	1	239	239
	62	10.0	3	817	2451
	63	10.0	8	1200	9600
	64	10.0	1	214	214
	65	10.0	1	234	234
	66	10.0	2	314	628
	67	10.0	1	260	260
	68	10.0	2	464	928
	69	10.0	4	247	988
	70	10.0	1	157	157
	71	10.0	2	219	438
	72	10.0	3	302	906
	73	10.0	2	263	526
	74	10.0	2	341	682
	75	12.5	2	1095	2190
	76	12.5	2	648	1296
	77	12.5	1	343	343
	78	12.5	2	1137	2274
	79	12.5	1	162	162
	80	12.5	1	270	270
	81	12.5	1	260	260
	82	12.5	2	360	720
	83	12.5	2	1200	2400
	84	12.5	2	938	1876
	85	12.5	3	660	1980
	86	12.5	1	592	592
	87	12.5	2	667	1334
	88	12.5	1	295	295
	89	12.5	2	455	910
	90	12.5	4	233	932
	91	12.5	4	283	1132
	92	12.5	1	370	370
	93	12.5	2	476	952
	94	12.5	1	350	350
	95	12.5	2	461	922
	96	12.5	2	429	858
	97	12.5	2	534	1068
	98	12.5	1	213	213
	99	12.5	2	536	1072
	100	12.5	2	466	932
	101	12.5	2	528	1056
	102	12.5	4	280	1120
	103	12.5	1	268	536
	104	12.5	2	318	636
	105	12.5	1	645	645
	106	12.5	3	1099	3297
	107	16.0	2	647	1294
	108	16.0	1	410	410
	109	16.0	2	610	1220
	110	16.0	2	500	1000
	111	16.0	4	808	3232
	112	16.0	4	613	2452
	113	16.0	2	460	920
	114	16.0	2	865	1730

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1806.8	486.3
	8.0	249.2	108.1
	10.0	354.6	240.5
	12.5	330	349.6
	16.0	122.6	212.8
CA60	5.0	2047.3	347.1
PESO TOTAL			
CA50	1397.4		
CA60	347.1		

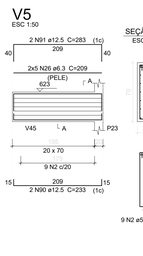
Vol. de concreto total (C-25) = 28.82 m³
Área de forma total = 275.68 m²

V4
ESC 1:50



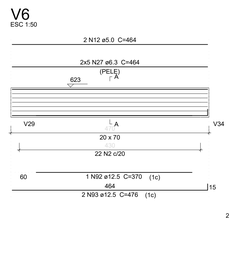
SEÇÃO A-A
ESC 1:25

V5
ESC 1:50

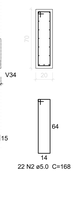


SEÇÃO A-A
ESC 1:25

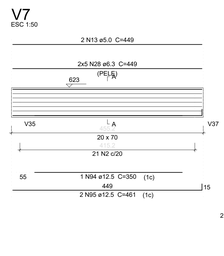
V6
ESC 1:50



SEÇÃO A-A
ESC 1:25



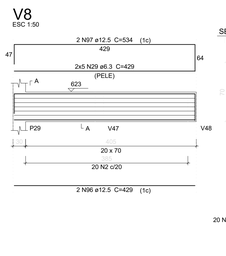
V7
ESC 1:50



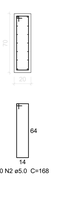
SEÇÃO A-A
ESC 1:25



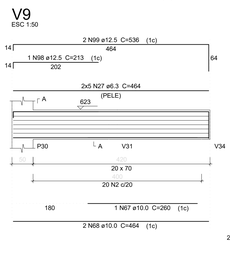
V8
ESC 1:50



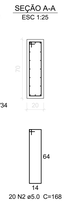
SEÇÃO A-A
ESC 1:25



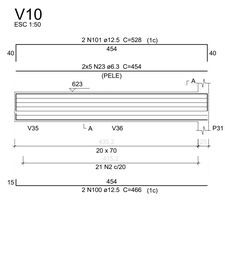
V9
ESC 1:50



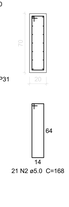
SEÇÃO A-A
ESC 1:25



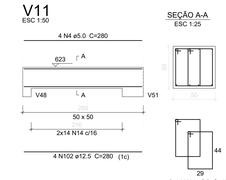
V10
ESC 1:50



SEÇÃO A-A
ESC 1:25

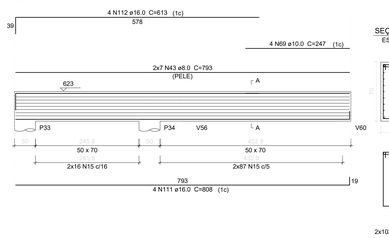


V11
ESC 1:50

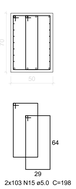


SEÇÃO A-A
ESC 1:25

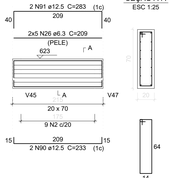
V12
ESC 1:50



SEÇÃO A-A
ESC 1:25

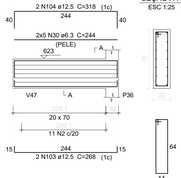


V13
ESC 1:50



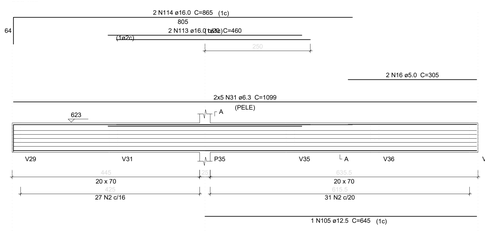
SEÇÃO A-A
ESC 1:25

V14
ESC 1:50



SEÇÃO A-A
ESC 1:25

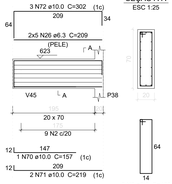
V15
ESC 1:50



SEÇÃO A-A
ESC 1:25

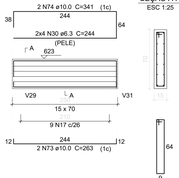


V16
ESC 1:50



SEÇÃO A-A
ESC 1:25

V17
ESC 1:50



SEÇÃO A-A
ESC 1:25

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO TÉRREO 01/04

FOLHA:
28/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

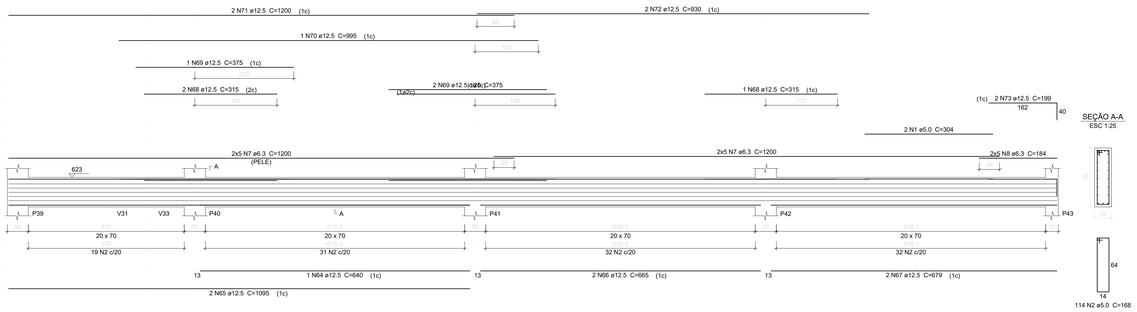
DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PEN
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,8
7	0,25
8	0,1
9	0,13
QUINA	0,13

A0
1181x841mm

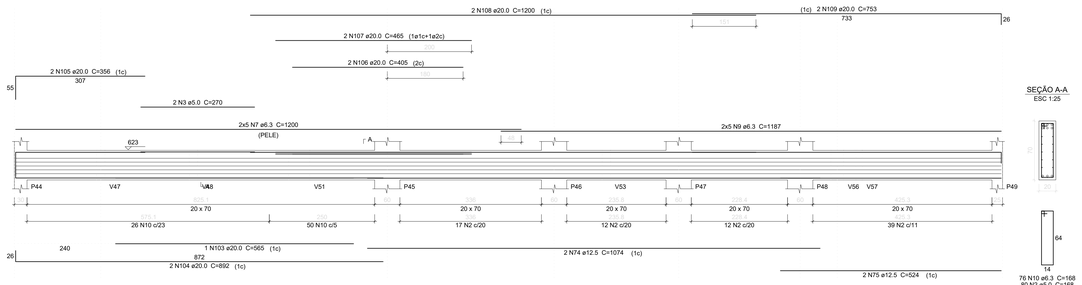
V18
ESC 1:50



SEÇÃO A-A
ESC 1:25

114 N2 ø5.0 C=168

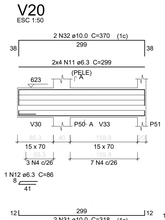
V19
ESC 1:50



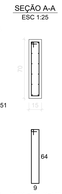
SEÇÃO A-A
ESC 1:25

76 N10 ø6.3 C=168
80 N2 ø5.0 C=168

V20
ESC 1:50

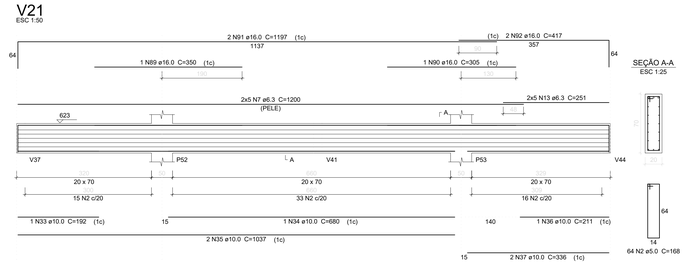


SEÇÃO A-A
ESC 1:25



10 N4 ø5.0 C=158

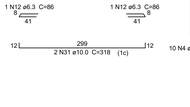
V21
ESC 1:50



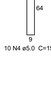
SEÇÃO A-A
ESC 1:25

64 N2 ø5.0 C=168

V22
ESC 1:50

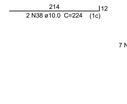


SEÇÃO A-A
ESC 1:25

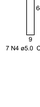


10 N4 ø5.0 C=158

V23
ESC 1:50

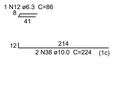


SEÇÃO A-A
ESC 1:25

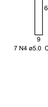


7 N4 ø5.0 C=158

V24
ESC 1:50

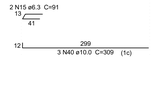


SEÇÃO A-A
ESC 1:25



7 N4 ø5.0 C=158

V25
ESC 1:50

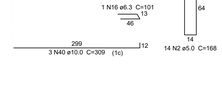


SEÇÃO A-A
ESC 1:25



14 N2 ø5.0 C=168

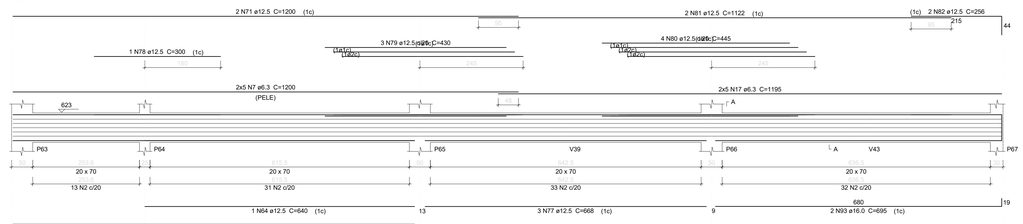
V26
ESC 1:50



SEÇÃO A-A
ESC 1:25

14 N2 ø5.0 C=168

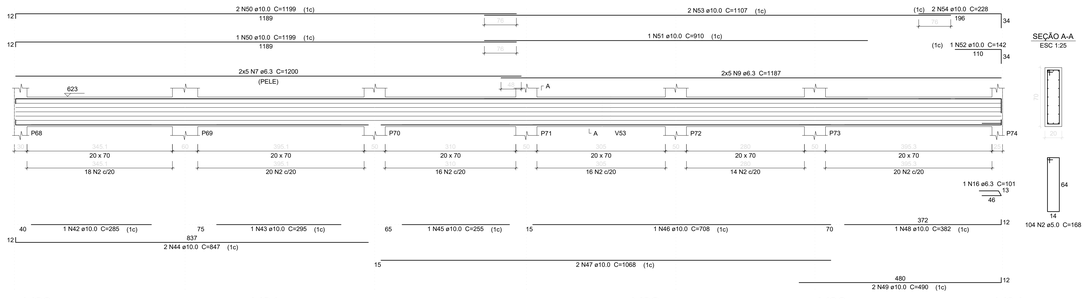
V27
ESC 1:50



SEÇÃO A-A
ESC 1:25

109 N2 ø5.0 C=168

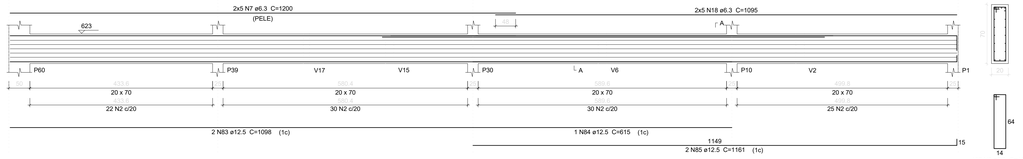
V28
ESC 1:50



SEÇÃO A-A
ESC 1:25

104 N2 ø5.0 C=168

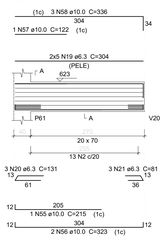
V29
ESC 1:50



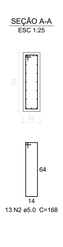
SEÇÃO A-A
ESC 1:25

107 N2 ø5.0 C=168

V30
ESC 1:50

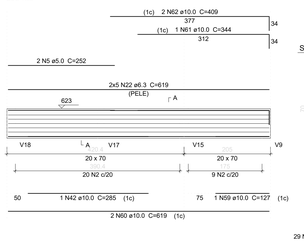


SEÇÃO A-A
ESC 1:25

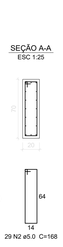


13 N2 ø5.0 C=168

V31
ESC 1:50

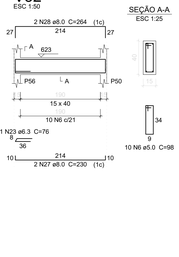


SEÇÃO A-A
ESC 1:25



29 N2 ø5.0 C=168

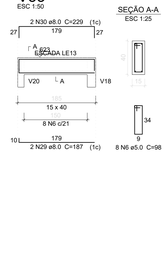
V32
ESC 1:50



SEÇÃO A-A
ESC 1:25

10 N6 ø5.0 C=98

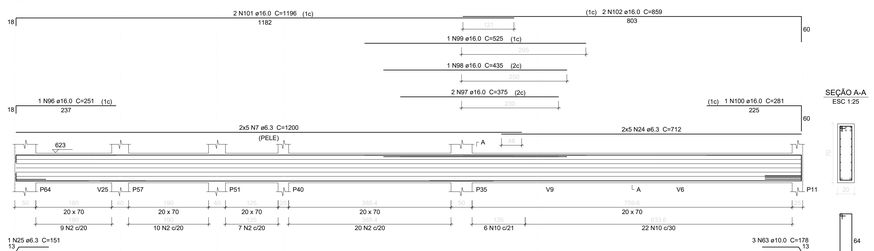
V33
ESC 1:50



SEÇÃO A-A
ESC 1:25

8 N6 ø5.0 C=98

V34
ESC 1:50



SEÇÃO A-A
ESC 1:25

46 N2 ø5.0 C=168
28 N10 ø6.3 C=168

Relação do aço

V18	V19	V20
V21	V22	V23
V24	V25	V26
V27	V28	V29
V30	V31	V32
V33	V34	

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	304	608
	2	5.0	694	168	116592
	3	5.0	2	270	540
	4	5.0	34	158	5372
	5	5.0	2	252	504
	6	5.0	18	98	1764
CA50	7	6.3	80	1200	96000
	8	6.3	10	184	1840
	9	6.3	20	1187	23740
	10	6.3	104	168	17472
	11	6.3	36	299	10764
	12	6.3	4	86	344
	13	6.3	10	251	2510
	14	6.3	16	214	3424
	15	6.3	2	91	182
	16	6.3	2	101	202
	17	6.3	10	1195	11950
	18	6.3	10	1095	10950
	19	6.3	10	304	3040
	20	6.3	3	131	393
	21	6.3	3	81	243
	22	6.3	10	619	6190
	23	6.3	1	76	76
	24	6.3	10	712	7120
	25	6.3	1	151	151
	26	8.0	4	335	1340
	27	8.0	2	230	460
	28	8.0	2	264	528
	29	8.0	2	187	374
	30	8.0	2	229	458
	31	10.0	4	318	1272
	32	10.0	4	370	1480
	33	10.0	1	192	192
	34	10.0	1	680	680
	35	10.0	2	1037	2074
	36	10.0	1	211	211
	37	10.0	2	336	672
	38	10.0	4	224	896
	39	10.0	4	259	1036
	40	10.0	6	309	1854
	41	10.0	3	362	1086
	42	10.0	2	285	570
	43	10.0	1	295	295
	44	10.0	2	847	1694
	45	10.0	1	255	255
	46	10.0	1	708	708
	47	10.0	2	1068	2136
	48	10.0	1	382	382
	49	10.0	2	490	980
	50	10.0	3	1199	3597
	51	10.0	1	910	910
	52	10.0	1	142	142
	53	10.0	2	1107	2214
	54	10.0	2	228	456
	55	10.0	1	215	215
	56	10.0	2	323	646
	57	10.0	1	122	122
	58	10.0	3	336	1008
	59	10.0	1	127	127
	60	10.0	2	619	1238
	61	10.0	1	344	344
	62	10.0	2	409	818
	63	10.0	3	178	534
	64	12.5	2	640	1280
	65	12.5	2	1095	2190
	66	12.5	2	665	1330
	67	12.5	2	679	1358
	68	12.5	3	315	945
	69	12.5	3	375	1125
	70	12.5	1	995	995
	71	12.5	7	1200	8400
	72	12.5	2	930	1860
	73	12.5	2	199	398
	74	12.5	2	1074	2148
	75	12.5	2	524	1048
	76	12.5	2	954	1908
	77	12.5	3	668	2004
	78	12.5	1	300	300
	79	12.5	3	430	1290
	80	12.5	4	445	1780
	81	12.5	2	1122	2244
	82	12.5	2	256	512
	83	12.5	2	1098	2196
	84	12.5	1	615	615
	85	12.5	2	1161	2322
	86	12.5	2	1050	2100
	87	12.5	3	1174	3522
	88	12.5	2	933	1866
	89	16.0	1	350	350
	90	16.0	1	305	305
	91	16.0	2	1197	2394
	92	16.0	2	417	834
	93	16.0	2	695	1390
	94	16.0	1	187	187
	95	16.0	2	322	644
	96	16.0	1	251	251
	97	16.0	2	375	750
	98	16.0	1	435	435
	99	16.0	1	525	525
	100	16.0	1	281	281
	101	16.0	2	1196	2392
	102	16.0	2	859	1718
	103	20.0	1	565	565
	104	20.0	2	892	1784
	105	20.0	2	356	712
	106	20.0	2	405	810
	107	20.0	2	465	930
	108	20.0	2	1200	2400
	109	20.0	2	753	1506
	110	20.0	2	902	1804

Resumo aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1966	529.2
	8.0	31.6	13.7
	10.0	308.5	209.2
	12.5	457.4	484.7
	16.0	124.6	216.3
	20.0	105.2	285.1
CA60	5.0	1253.8	212.6

PESO TOTAL

CA50	1738.1	Vol. de concreto total (C-25) = 24.61 m³
CA60	212.6	Área de forma total = 285.98 m²

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/90	C-0,0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO TÉRREO 02/04

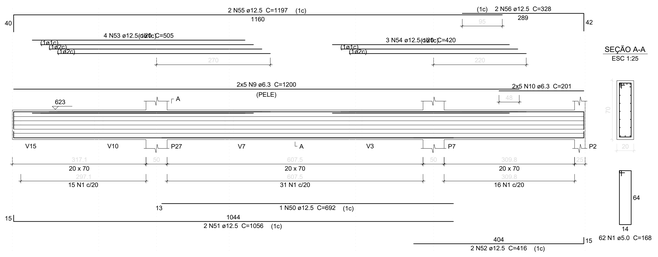
FOLHA:
29/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

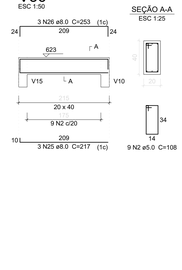
ESCALA:
INDICADA

V35
ESC 1:50



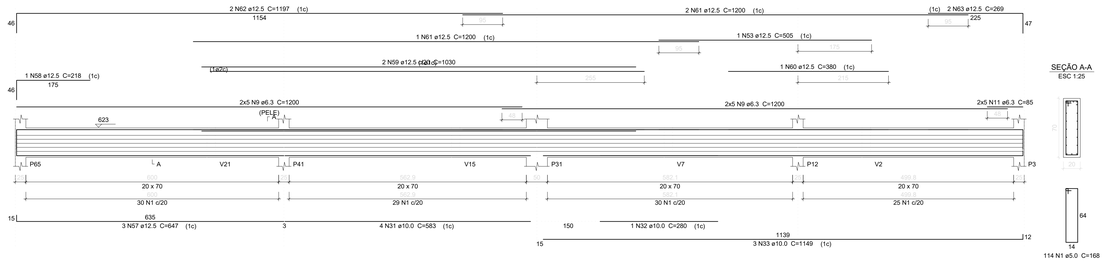
SEÇÃO A-A
ESC 1:25

V36
ESC 1:50



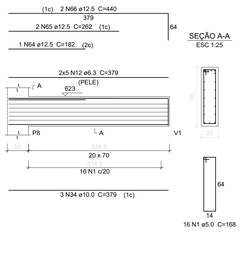
SEÇÃO A-A
ESC 1:25

V37
ESC 1:50



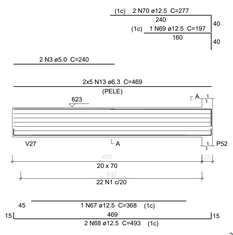
SEÇÃO A-A
ESC 1:25

V38
ESC 1:50

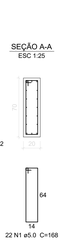


SEÇÃO A-A
ESC 1:25

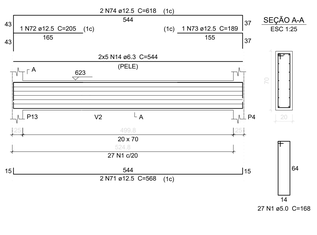
V39
ESC 1:50



SEÇÃO A-A
ESC 1:25

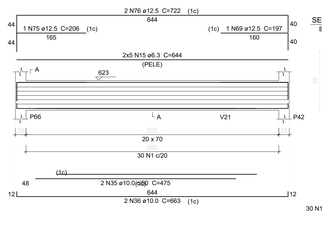


V40
ESC 1:50

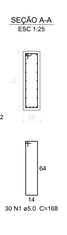


SEÇÃO A-A
ESC 1:25

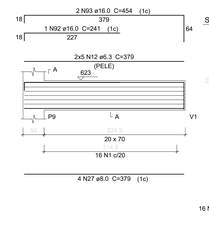
V41
ESC 1:50



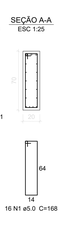
SEÇÃO A-A
ESC 1:25



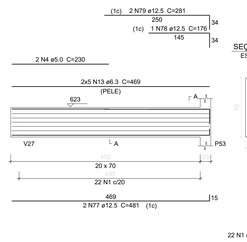
V42
ESC 1:50



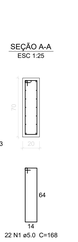
SEÇÃO A-A
ESC 1:25



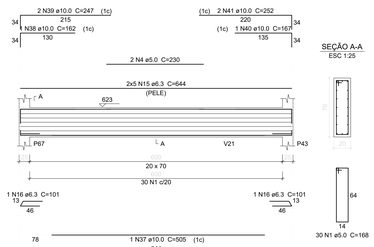
V43
ESC 1:50



SEÇÃO A-A
ESC 1:25

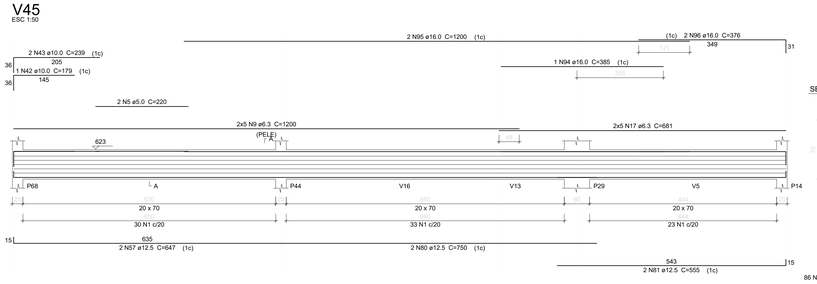


V44
ESC 1:50



SEÇÃO A-A
ESC 1:25

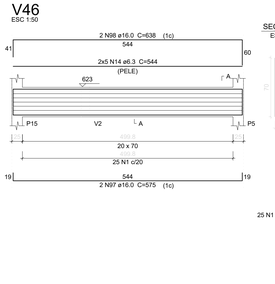
V45
ESC 1:50



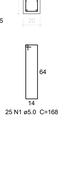
SEÇÃO A-A
ESC 1:25



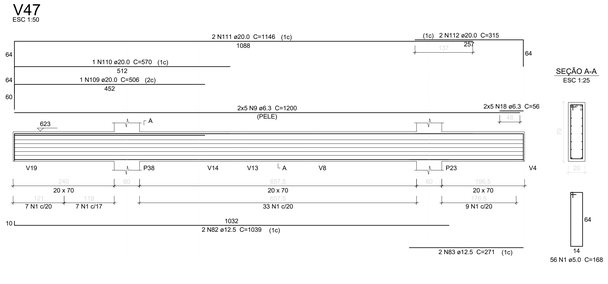
V46
ESC 1:50



SEÇÃO A-A
ESC 1:25

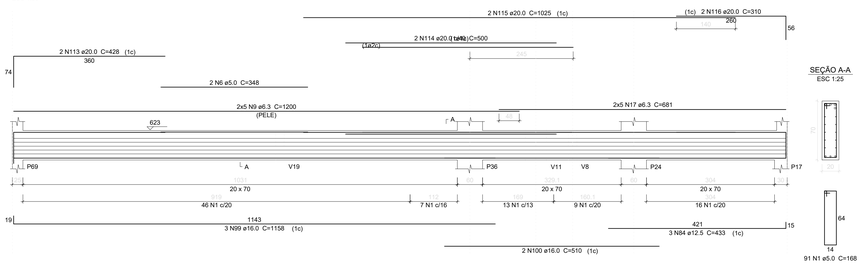


V47
ESC 1:50



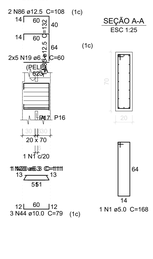
SEÇÃO A-A
ESC 1:25

V48
ESC 1:50



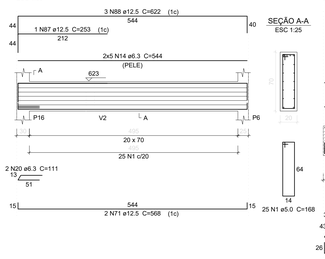
SEÇÃO A-A
ESC 1:25

V49
ESC 1:50



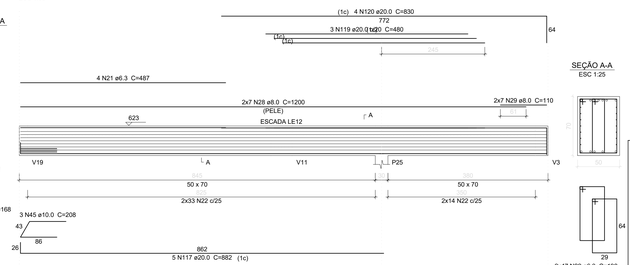
SEÇÃO A-A
ESC 1:25

V50
ESC 1:50



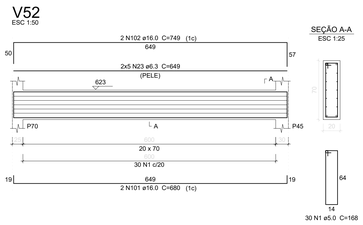
SEÇÃO A-A
ESC 1:25

V51
ESC 1:50



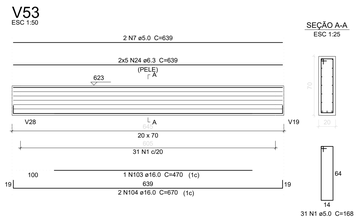
SEÇÃO A-A
ESC 1:25

V52
ESC 1:50



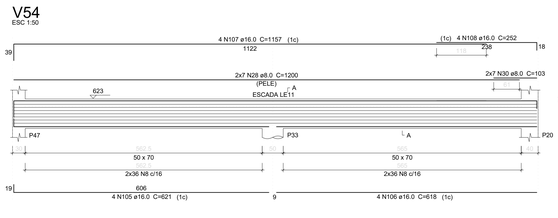
SEÇÃO A-A
ESC 1:25

V53
ESC 1:50

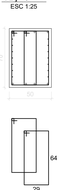


SEÇÃO A-A
ESC 1:25

V54
ESC 1:50



SEÇÃO A-A
ESC 1:25



V55
ESC 1:50

SEÇÃO A-A
ESC 1:25

SUSPENSÃO V26
ESC 1:25

Relação do aço

V35	V36	V37	
V38	V39	V40	
V41	V42	V43	
V44	V45	V46	
V47	V48	V49	
V50	V51	V52	
V53	V54	V55	

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	684	168	114912
	2	5.0	39	108	4212
	3	5.0	2	240	480
	4	5.0	4	230	920
	5	5.0	2	220	440
	6	5.0	2	348	696
	7	5.0	2	639	1278
	8	5.0	144	198	28512
CA50	9	6.3	60	1200	72000
	10	6.3	10	201	2010
	11	6.3	10	85	850
	12	6.3	20	379	7580
	13	6.3	20	469	9380
	14	6.3	30	544	16320
	15	6.3	20	644	12880
	16	6.3	2	101	202
	17	6.3	20	681	13620
	18	6.3	10	56	560
	19	6.3	10	60	600
	20	6.3	6	111	666
	21	6.3	4	487	1948
	22	6.3	94	198	18612
	23	6.3	10	649	6490
	24	6.3	10	639	6390
	25	8.0	3	217	651
	26	8.0	3	253	759
	27	8.0	4	379	1516
	28	8.0	28	1200	33600
	29	8.0	14	110	1540
	30	8.0	14	103	1442
	31	10.0	4	583	2332
	32	10.0	1	280	280
	33	10.0	3	1149	3447
	34	10.0	3	379	1137
	35	10.0	2	475	950
	36	10.0	4	663	2652
	37	10.0	1	505	505
	38	10.0	1	162	162
	39	10.0	2	247	494
	40	10.0	1	167	167
	41	10.0	2	252	504
	42	10.0	1	179	179
	43	10.0	2	239	478
	44	10.0	3	79	237
	45	10.0	3	208	624
	46	10.0	2	132	264
	47	10.0	1	220	220
	48	10.0	3	668	2004
	49	10.0	1	241	241
	50	12.5	1	692	692
	51	12.5	2	1056	2112
	52	12.5	2	416	832
	53	12.5	5	505	2525
	54	12.5	3	420	1260
	55	12.5	2	1197	2394
	56	12.5	2	328	656
	57	12.5	5	647	3235
	58	12.5	1	218	218
	59	12.5	2	1030	2060
	60	12.5	1	380	380
	61	12.5	3	1200	3600
	62	12.5	2	1197	2394
	63	12.5	2	269	538
	64	12.5	1	182	182
	65	12.5	2	262	524
	66	12.5	2	440	880
	67	12.5	1	368	368
	68	12.5	2	493	986
	69	12.5	2	197	394
	70	12.5	2	277	554
	71	12.5	4	568	2272
	72	12.5	1	205	205
	73	12.5	1	189	189
	74	12.5	2	618	1236
	75	12.5	1	206	206
	76	12.5	2	722	1444
	77	12.5	2	481	962
	78	12.5	1	176	176
	79	12.5	2	281	562
	80	12.5	2	750	1500
	81	12.5	2	555	1110
	82	12.5	2	1039	2078
	83	12.5	2	271	542
	84	12.5	3	433	1299
	85	12.5	1	132	132
	86	12.5	2	108	216
	87	12.5	1	253	253
	88	12.5	3	622	1866
	89	12.5	1	177	177
	90	12.5	1	585	585
	91	12.5	2	729	1458
	92	16.0	1	241	241
	93	16.0	2	454	908
	94	16.0	1	385	385
	95	16.0	2	1200	2400
	96	16.0	2	376	752
	97	16.0	2	575	1150
	98	16.0	2	638	1276
	99	16.0	3	1158	3474
	100	16.0	2	510	1020
	101	16.0	2	680	1360
	102	16.0	2	749	1498
	103	16.0	1	470	470
	104	16.0	2	670	1340
	105	16.0	4	621	2484
	106	16.0	4	618	2472
	107	16.0	4	1157	4628
	108	16.0	4	252	1008
	109	20.0	1	506	506
	110	20.0	1	570	570
	111	20.0	2	1146	2292
	112	20.0	2	315	630
	113	20.0	2	428	856
	114	20.0	2	500	1000
	115	20.0	2	1025	2050
	116	20.0	2	310	620
	117	20.0	5	882	4410
	118	20.0	4	397	1588
	119	20.0	3	480	1440
	120	20.0	4	830	3320

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1701.1	457.9
	8.0	395.1	171.5
	10.0	168.8	114.5
	12.5	452.6	479.5
	16.0	268.7	466.4
	20.0	192.9	523.1
CA60	5.0	1514.5	256.8
PESO TOTAL			
CA50	2212.9		
CA60	256.8		

Vol. de concreto total (C-25) = 30.01 m³
Área de forma total = 291.15 m²

PLOT	
COR	PENA
1	0,7
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/RGB	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO TÉRREO 03/04

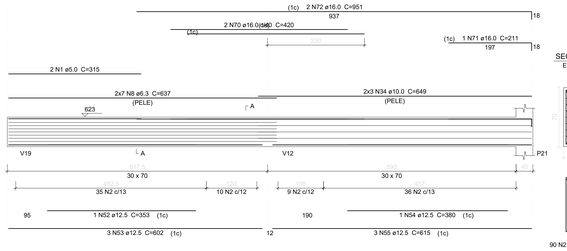
FOLHA:
30/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

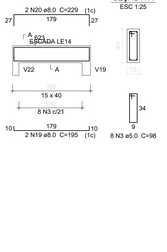
DATA:
07/2022

ESCALA:
INDICADA

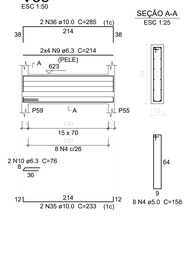
V56
ESC 1:50



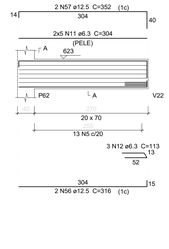
V57
ESC 1:50



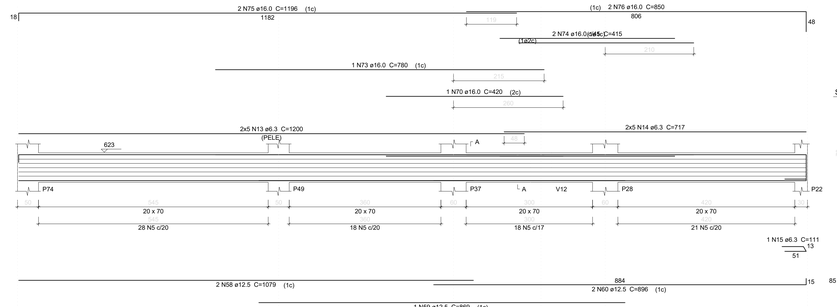
V58
ESC 1:50



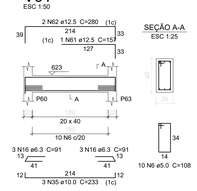
V59
ESC 1:50



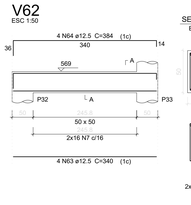
V60
ESC 1:50



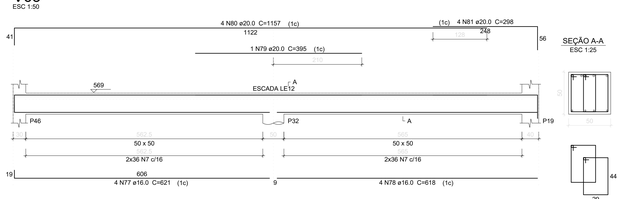
V61
ESC 1:50



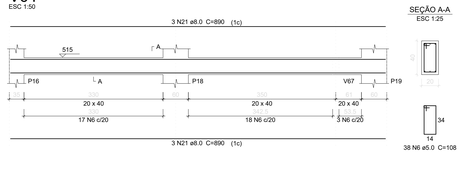
V62
ESC 1:50



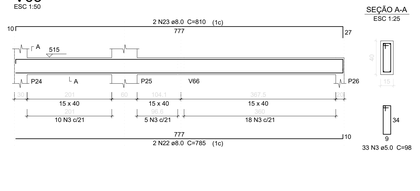
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ESC 1:50



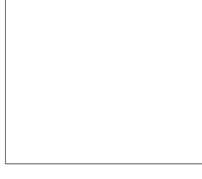
V64
ESC 1:50



V65
ESC 1:50



V66
ESC 1:50



V67
ESC 1:50

V68
ESC 1:50

V69
ESC 1:50

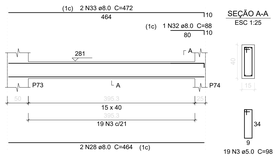
V70
ESC 1:50

V71
ESC 1:50

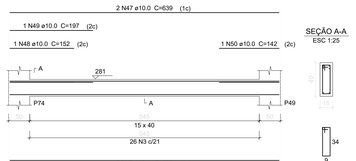
V72
ESC 1:50



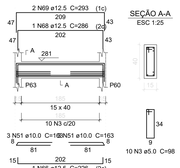
V73
ESC 1:50



V74
ESC 1:50



V75
ESC 1:50



Relação do aço

V56		V57		V58	
V59		V60		V61	
V62		V63		V64	
V65		V66		V67	
V68		V69		V70	
V71		V72		V73	
V74		V75			

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	315	630
	2	5.0	90	188	16920
	3	5.0	213	98	20874
	4	5.0	8	158	1264
	5	5.0	98	168	16464
	6	5.0	85	108	9180
	7	5.0	176	158	27808
CA50	8	6.3	14	637	8918
	9	6.3	8	214	1712
	10	6.3	2	76	152
	11	6.3	10	304	3040
	12	6.3	3	113	339
	13	6.3	10	1200	12000
	14	6.3	10	717	7170
	15	6.3	1	111	111
	16	6.3	6	91	546
	17	6.3	1	166	166
	18	6.3	1	96	96
	19	8.0	2	195	390
	20	8.0	2	229	458
	21	8.0	6	890	5340
	22	8.0	2	785	1570
	23	8.0	2	810	1620
	24	8.0	1	225	225
	25	8.0	2	387	774
	26	8.0	1	424	424
	27	8.0	5	783	3915
	28	8.0	6	464	2784
	29	8.0	2	504	1008
	30	8.0	1	132	132
	31	8.0	2	512	1024
	32	8.0	1	88	88
	33	8.0	2	472	944
	34	10.0	6	649	3894
	35	10.0	5	233	1165
	36	10.0	2	285	570
	37	10.0	2	389	778
	38	10.0	1	160	160
	39	10.0	2	421	842
	40	10.0	1	206	206
	41	10.0	2	439	878
	42	10.0	3	513	1539
	43	10.0	1	127	127
	44	10.0	1	212	212
	45	10.0	2	191	382
	46	10.0	2	534	1068
	47	10.0	6	639	3834
	48	10.0	1	152	152
	49	10.0	1	197	197
	50	10.0	1	142	142
	51	10.0	6	163	978
	52	12.5	1	353	353
	53	12.5	3	602	1806
	54	12.5	1	380	380
	55	12.5	3	615	1845
	56	12.5	2	316	632
	57	12.5	2	352	704
	58	12.5	2	1079	2158
	59	12.5	1	869	869
	60	12.5	2	896	1792
	61	12.5	1	157	157
	62	12.5	2	280	560
	63	12.5	4	340	1360
	64	12.5	4	384	1536
	65	12.5	2	650	1300
	66	12.5	1	226	226
	67	12.5	2	233	466
	68	12.5	1	286	286
	69	12.5	2	293	586
	70	16.0	3	420	1260
	71	16.0	1	211	211
	72	16.0	2	951	1902
	73	16.0	1	780	780
	74	16.0	2	415	830
	75	16.0	2	1196	2392
	76	16.0	2	850	1700
	77	16.0	4	621	2484
	78	16.0	4	618	2472
	79	20.0	1	395	395
	80	20.0	4	1157	4628
	81	20.0	4	298	1192

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	342.5	92.2
	8.0	207	89.8
	10.0	171.3	116.1
	12.5	170.2	180.3
	16.0	140.4	243.6
	20.0	62.2	168.6
CA60	5.0	931.4	157.9
PESO TOTAL			
CA50	890.7		
CA60	157.9		

Vol. de concreto total (C-25) = 14.54 m³
Área de forma total = 152.04 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO TÉRREO 04/04

FOLHA:
31/48

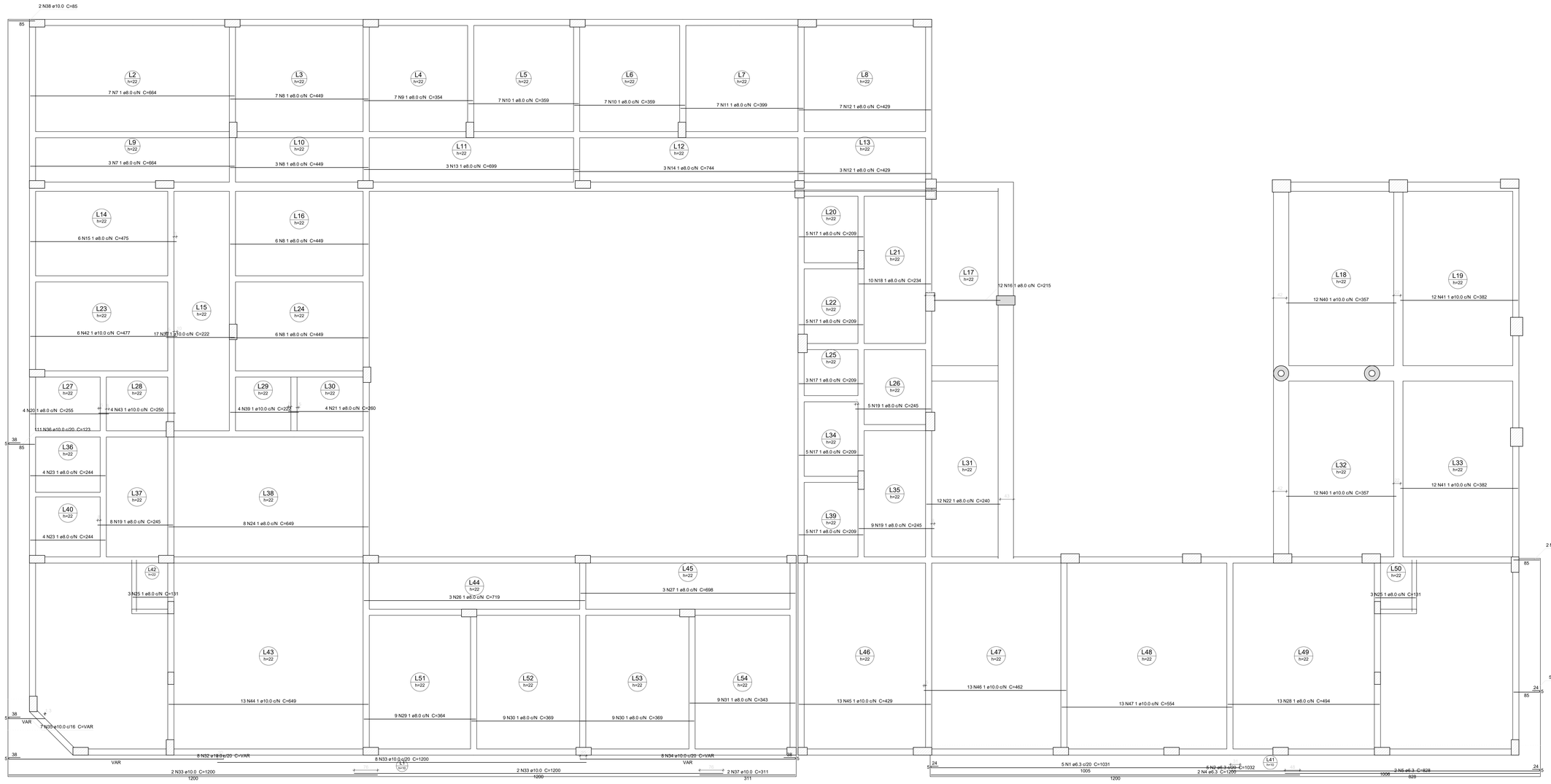
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

ESCALA: INDICADA

	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
OURO	C.O. 0,13

A0
1181x841mm



Relação do aço

Positivos X

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	5	1031	5155
	2	6.3	5	1032	5160
	3	6.3	56	111	6216
	4	6.3	2	1200	2400
	5	6.3	2	828	1656
	6	6.3	2	85	170
	7	8.0	10	664	6640
	8	8.0	22	449	9878
	9	8.0	7	354	2478
	10	8.0	14	359	5026
	11	8.0	7	399	2793
	12	8.0	10	429	4290
	13	8.0	3	699	2097
	14	8.0	3	744	2232
	15	8.0	6	475	2850
	16	8.0	12	215	2580
	17	8.0	23	209	4807
	18	8.0	10	234	2340
	19	8.0	22	245	5390
	20	8.0	4	255	1020
	21	8.0	4	260	1040
	22	8.0	12	240	2880
	23	8.0	8	244	1952
	24	8.0	8	649	5192
	25	8.0	6	131	786
	26	8.0	3	719	2157
	27	8.0	3	698	2094
	28	8.0	13	494	6422
	29	8.0	9	364	3276
	30	8.0	18	369	6642
	31	8.0	9	343	3087
	32	10.0	8	VAR	VAR
	33	10.0	12	1200	14400
	34	10.0	8	VAR	VAR
	35	10.0	7	VAR	VAR
	36	10.0	111	123	13653
	37	10.0	2	311	622
	38	10.0	2	85	170
	39	10.0	21	222	4662
	40	10.0	24	357	8568
	41	10.0	24	382	9168
	42	10.0	6	477	2862
	43	10.0	4	250	1000
	44	10.0	13	649	8437
	45	10.0	13	429	5577
	46	10.0	13	462	6006
	47	10.0	13	554	7202

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	207.6	55.9
	8.0	899.5	390.4
	10.0	952.2	645.7
PESO TOTAL			
CA50	1092		

Vol. de concreto total (C-25) = 76.45 m³
Área de forma total = 689.05 m²

Armação positiva das lajes do pavimento PAVTO TERREO (Eixo X)

escala 1:50

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
LAJES POSITIVAS (X) PAVIMENTO TÉRRO

FOLHA:
32/48

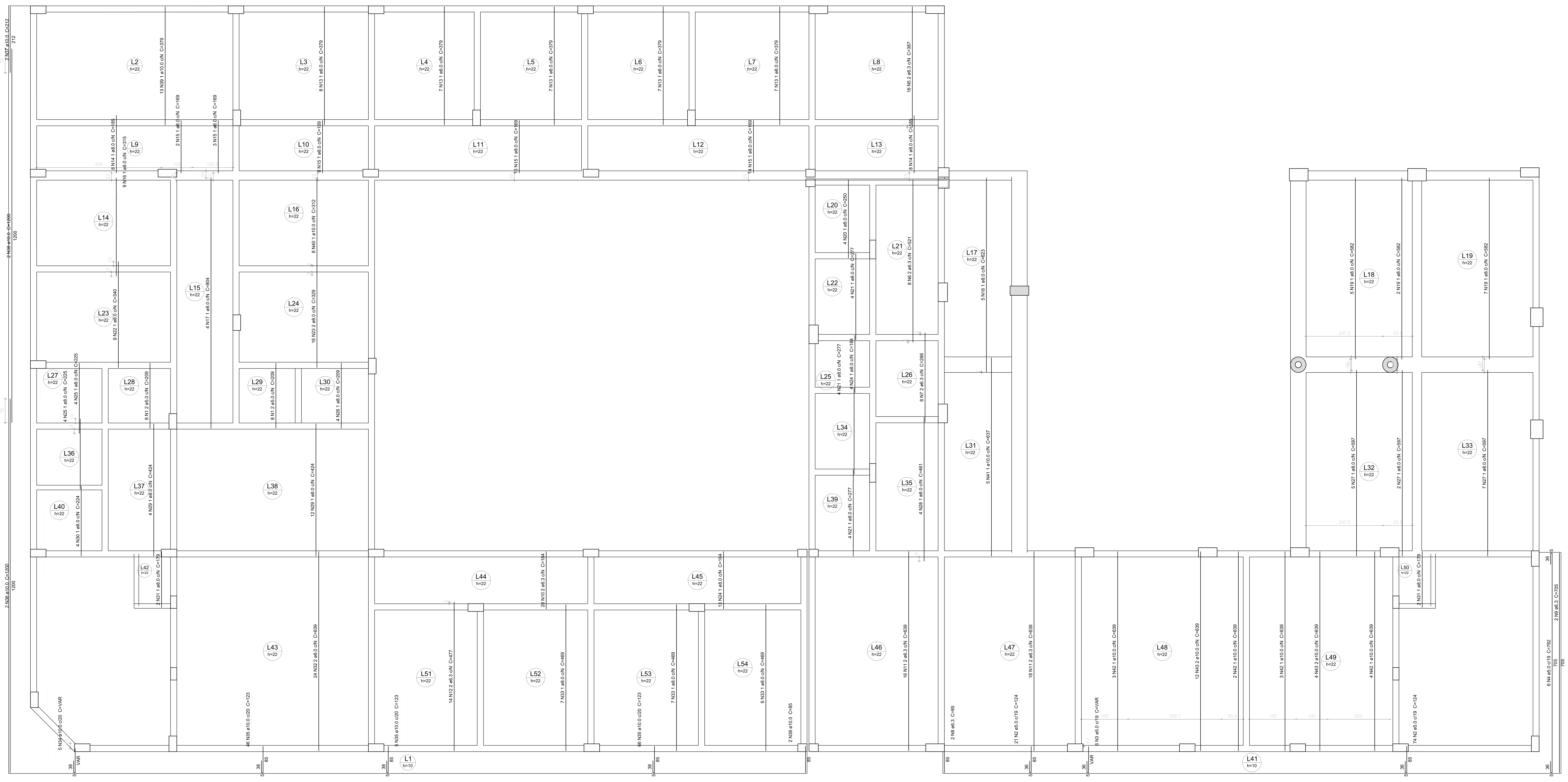
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PEN
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
OUTRO	0,0 0,13

A0
1181x841mm



Relação do aço

Positivos Y

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	16	209	3344
	2	5.0	95	124	11780
	3	5.0	6	VAR	VAR
	4	5.0	6	782	4692
CA50	5	6.3	16	387	6192
	6	6.3	8	521	4168
	7	6.3	8	286	2288
	8	6.3	2	85	170
	9	6.3	2	705	1410
	10	6.3	28	184	5152
	11	6.3	34	639	21726
	12	6.3	14	477	6678
	13	8.0	36	379	13644
	14	8.0	16	185	2960
	15	8.0	40	169	6760
	16	8.0	9	315	2835
	17	8.0	4	804	3216
	18	8.0	5	623	3115
	19	8.0	14	582	8148
	20	8.0	4	250	1000
	21	8.0	12	277	3324
	22	8.0	9	340	3060
	23	8.0	16	329	5264
	24	8.0	17	184	3128
	25	8.0	8	225	1800
	26	8.0	4	209	836
	27	8.0	14	597	8358
	28	8.0	4	461	1844
	29	8.0	16	424	6784
	30	8.0	4	224	896
	31	8.0	4	179	716
	32	8.0	24	639	15336
	33	8.0	20	469	9380
	34	10.0	5	VAR	VAR
	35	10.0	117	123	14391
	36	10.0	4	1200	4800
	37	10.0	2	212	424
	38	10.0	2	85	170
	39	10.0	13	379	4927
	40	10.0	8	312	2496
	41	10.0	5	637	3185
	42	10.0	12	639	7668
	43	10.0	16	639	10224

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	477.9	128.6
	8.0	1024.1	444.5
	10.0	488.6	331.4
CA60	5.0	205.6	34.8
PESO TOTAL			
CA50	904.5		
CA60	34.8		

Armação positiva das lajes do pavimento PAVTO TERREO (Eixo Y)

escala 1:50

PLOT		
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
OUTRO	C.O.	0,13

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

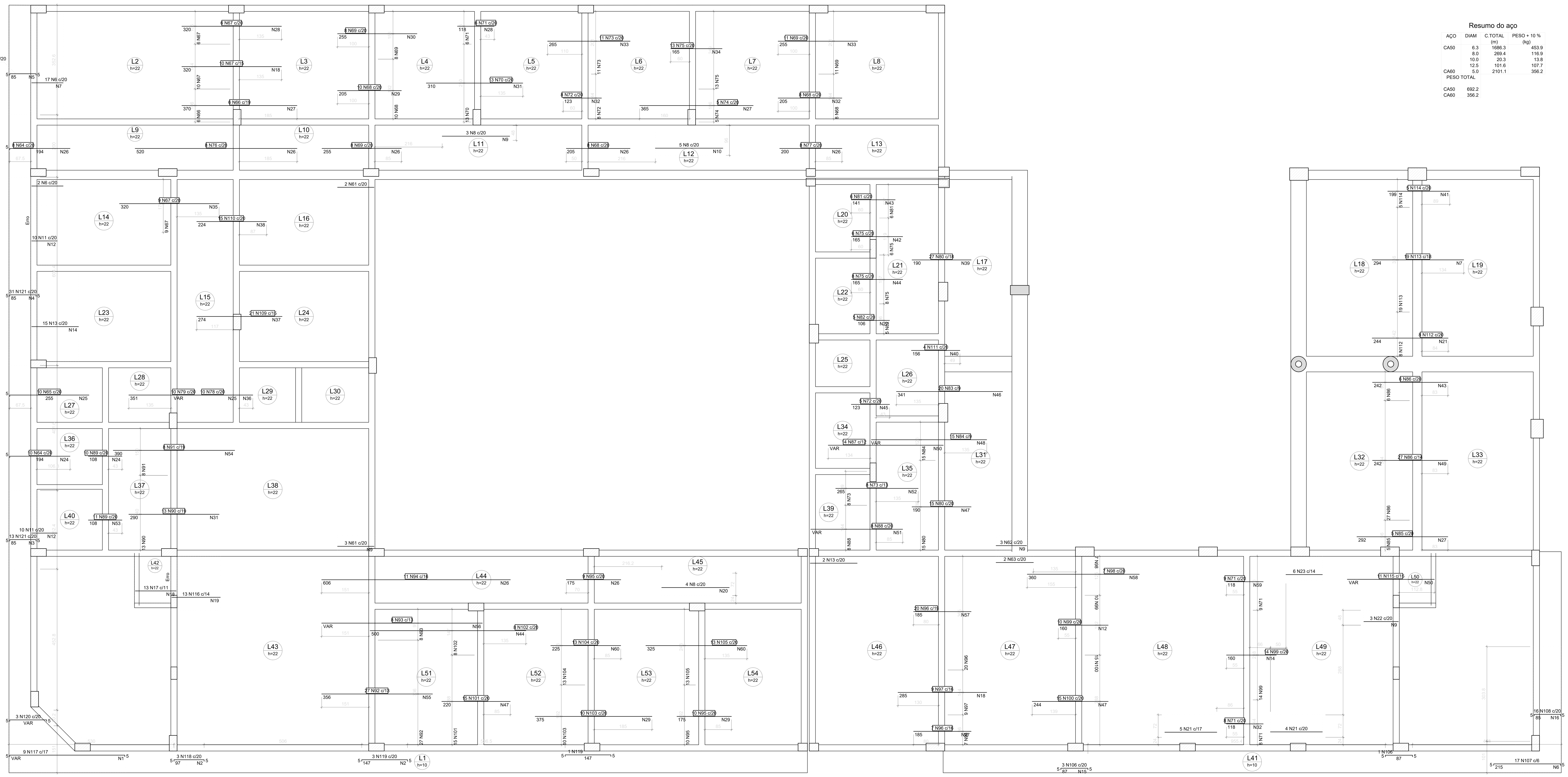
ASSUNTO:
LAJES POSITIVAS (Y) PAVIMENTO TÉRRO

FOLHA:
33/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

ESCALA: INDICADA



Armação negativa das lajes do pavimento PAVTO TERREO (Eixo X)

escala 1:50

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1686.3	453.9
	8.0	269.4	116.9
	10.0	20.3	13.8
	12.5	101.6	107.7
CA60	5.0	2101.1	356.2
PESO TOTAL			
CA50	692.2		
CA60	356.2		

Relação do aço

Negativos X

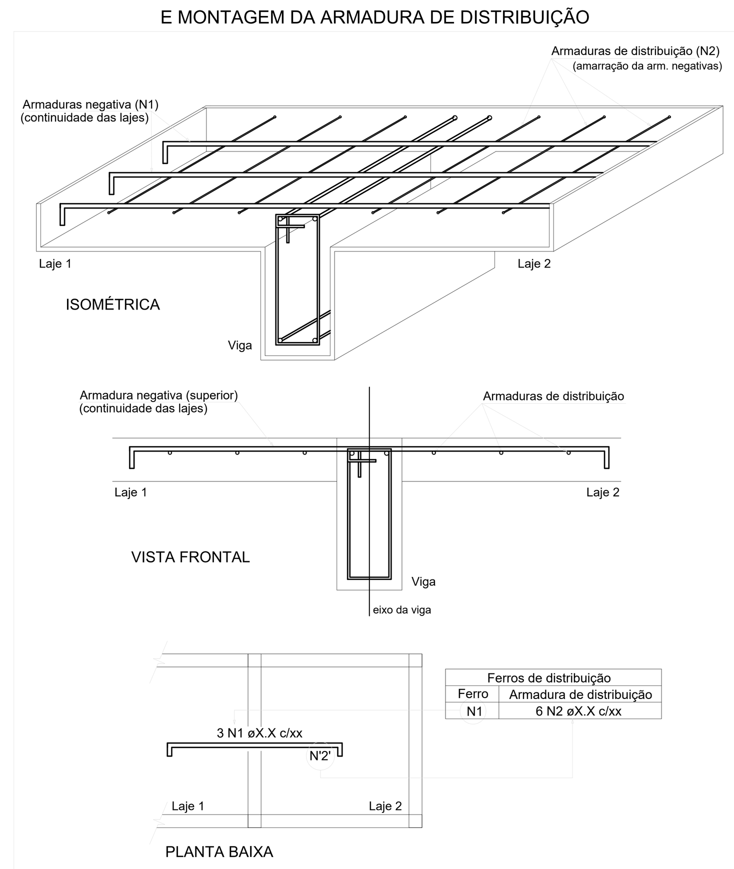
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	29	VAR	VAR
	2	5.0	16	45	720
	3	5.0	6	252	1512
	4	5.0	6	604	3624
	5	5.0	6	352	2112
	6	5.0	39	101	3939
	7	5.0	20	336	6720
	8	5.0	12	217	2604
	9	5.0	28	48	1344
	10	5.0	11	96	1056
	11	5.0	20	82	1640
	12	5.0	17	192	3264
	13	5.0	17	151	2567
	14	5.0	16	288	4608
	15	5.0	5	51	255
	16	5.0	5	304	1520
	17	5.0	13	131	1703
	18	5.0	38	144	5472
	19	5.0	10	173	1730
	20	5.0	11	72	792
	21	5.0	22	167	3674
	22	5.0	3	111	333
	23	5.0	6	117	702
	24	5.0	16	198	3168
	25	5.0	31	195	6045
	26	5.0	110	170	18700
	27	5.0	69	106	7314
	28	5.0	22	115	2530
	29	5.0	39	202	7878
	30	5.0	13	163	2119
	31	5.0	31	250	7750
	32	5.0	24	154	3696
	33	5.0	27	211	5697
	34	5.0	9	259	2331
	35	5.0	16	185	2960
	36	5.0	13	VAR	VAR
	37	5.0	14	310	4340
	38	5.0	12	300	3600
	39	5.0	10	494	4940
	40	5.0	8	87	696
	41	5.0	10	105	1050
	42	5.0	9	119	1071
	43	5.0	20	118	2360
	44	5.0	34	157	5338
	45	5.0	7	94	658
	46	5.0	17	177	3009
	47	5.0	34	298	10132
	48	5.0	19	VAR	VAR
	49	5.0	13	384	4992
	50	5.0	33	VAR	VAR
	51	5.0	15	VAR	VAR
	52	5.0	14	109	1526
	53	5.0	6	213	1278
	54	5.0	20	160	3200
	55	5.0	18	346	6228
	56	5.0	26	VAR	VAR
	57	5.0	10	375	3750
	58	5.0	18	135	2430
	59	5.0	6	183	1098
	60	5.0	29	253	7337
CA50	61	6.3	5	117	585
	62	6.3	3	98	294
	63	6.3	2	120	240
	64	6.3	18	198	3564
	65	6.3	10	259	2590
	66	6.3	6	370	2220
	67	6.3	25	320	8000
	68	6.3	26	205	5330
	69	6.3	27	255	6885
	70	6.3	13	310	4030
	71	6.3	23	118	2714
	72	6.3	13	123	1599
	73	6.3	19	265	5035
	74	6.3	5	365	1825
	75	6.3	27	165	4455
	76	6.3	8	520	4160
	77	6.3	8	200	1600
	78	6.3	10	VAR	VAR
	79	6.3	10	351	3510
	80	6.3	42	190	7980
	81	6.3	6	141	846
	82	6.3	5	106	530
	83	6.3	20	341	6820
	84	6.3	15	VAR	VAR
	85	6.3	5	292	1460
	86	6.3	33	242	7986
	87	6.3	14	VAR	VAR
	88	6.3	8	VAR	VAR
	89	6.3	21	108	2268
	90	6.3	13	290	3770
	91	6.3	8	390	3120
	92	6.3	27	356	9612
	93	6.3	8	VAR	VAR
	94	6.3	11	606	6666
	95	6.3	19	175	3325
	96	6.3	27	185	4995
	97	6.3	9	285	2565
	98	6.3	7	360	2520
	99	6.3	24	160	3840
	100	6.3	15	244	3660
	101	6.3	15	220	3300
	102	6.3	8	500	4000
	103	6.3	10	375	3750
	104	6.3	13	225	2925
	105	6.3	13	325	4225
	106	8.0	4	93	372
	107	8.0	17	221	3757
	108	8.0	16	91	1456
	109	8.0	21	274	5754
	110	8.0	15	224	3360
	111	8.0	4	156	624
	112	8.0	8	244	1952
	113	8.0	19	294	5586
	114	8.0	5	199	995
	115	8.0	11	VAR	VAR
	116	10.0	13	156	2028
	117	12.5	9	VAR	VAR
	118	12.5	3	101	303
	119	12.5	4	151	604
	120	12.5	3	VAR	VAR
	121	12.5	62	89	5518

Ferros de distribuição

Ferro	Armadura de distribuição
N117	29 N1 ø5.0 c/13 C=VAR
N118	6 N2 ø5.0 c/16 C=45
N119	10 N2 ø5.0 c/16 C=45
N121	6 N3 ø5.0 c/16 C=252
N121	6 N4 ø5.0 c/16 C=604
N121	6 N5 ø5.0 c/16 C=352
N6	5 N7 ø5.0 c/20 C=336
N8	11 N9 ø5.0 c/20 C=48
N8	11 N10 ø5.0 c/20 C=96
N11	5 N12 ø5.0 c/20 C=192
N13	8 N14 ø5.0 c/20 C=288
N62	5 N9 ø5.0 c/20 C=48
N61	6 N9 ø5.0 c/20 C=48
N11	4 N12 ø5.0 c/20 C=192
N106	5 N15 ø5.0 c/20 C=51
N107	20 N6 ø5.0 c/11 C=101
N108	5 N16 ø5.0 c/20 C=304
N17	7 N18 ø5.0 c/20 C=144
N116	10 N19 ø5.0 c/17 C=173
N8	11 N20 ø5.0 c/20 C=72
N22	6 N9 ø5.0 c/20 C=48
N64	10 N24 ø5.0 c/20 C=198
N65	13 N25 ø5.0 c/20 C=195
N64	10 N26 ø5.0 c/20 C=170
N66	19 N27 ø5.0 c/20 C=106
N67	16 N18 ø5.0 c/20 C=144
N67	16 N28 ø5.0 c/20 C=115
N68	11 N29 ø5.0 c/20 C=202
N69	13 N30 ø5.0 c/20 C=163
N70	16 N31 ø5.0 c/20 C=250
N71	6 N28 ø5.0 c/20 C=115
N72	7 N32 ø5.0 c/20 C=154
N73	14 N33 ø5.0 c/20 C=211
N74	19 N27 ø5.0 c/20 C=106
N75	9 N34 ø5.0 c/20 C=259
N68	11 N32 ø5.0 c/20 C=154
N69	13 N33 ø5.0 c/20 C=211
N76	26 N26 ø5.0 c/20 C=170
N69	13 N26 ø5.0 c/20 C=170
N68	11 N26 ø5.0 c/20 C=170
N77	10 N26 ø5.0 c/20 C=170
N67	16 N35 ø5.0 c/20 C=185
N78	13 N36 ø5.0 c/20 C=VAR

N109	14 N37 ø5.0 c/20 C=310
N110	12 N38 ø5.0 c/20 C=300
N79	18 N25 ø5.0 c/20 C=195
N80	10 N39 ø5.0 c/20 C=494
N111	8 N40 ø5.0 c/20 C=87
N112	13 N21 ø5.0 c/20 C=167
N113	15 N7 ø5.0 c/20 C=336
N114	10 N41 ø5.0 c/20 C=105
N75	9 N42 ø5.0 c/20 C=119
N81	7 N43 ø5.0 c/20 C=118
N82	6 N27 ø5.0 c/20 C=106
N75	9 N44 ø5.0 c/20 C=157
N72	7 N45 ø5.0 c/20 C=94
N83	17 N46 ø5.0 c/20 C=177
N80	10 N47 ø5.0 c/20 C=298
N84	19 N48 ø5.0 c/20 C=VAR
N85	15 N27 ø5.0 c/20 C=106
N86	13 N49 ø5.0 c/20 C=384
N86	13 N43 ø5.0 c/20 C=118
N87	19 N50 ø5.0 c/20 C=VAR
N88	15 N51 ø5.0 c/20 C=VAR
N73	14 N52 ø5.0 c/20 C=109
N89	6 N24 ø5.0 c/20 C=198
N89	6 N53 ø5.0 c/20 C=213
N90	15 N31 ø5.0 c/20 C=250
N91	20 N54 ø5.0 c/20 C=160
N92	18 N55 ø5.0 c/20 C=346
N93	26 N56 ø5.0 c/20 C=VAR
N94	31 N26 ø5.0 c/20 C=170
N95	9 N26 ø5.0 c/20 C=170
N96	10 N27 ø5.0 c/20 C=106
N97	15 N18 ø5.0 c/20 C=144
N96	10 N57 ø5.0 c/20 C=375
N98	18 N58 ø5.0 c/20 C=135
N99	8 N12 ø5.0 c/20 C=192
N100	13 N47 ø5.0 c/20 C=298
N71	6 N32 ø5.0 c/20 C=154
N99	8 N14 ø5.0 c/20 C=288
N71	6 N59 ø5.0 c/20 C=183
N115	14 N50 ø5.0 c/20 C=VAR
N101	11 N47 ø5.0 c/20 C=298
N102	25 N44 ø5.0 c/20 C=157
N103	19 N29 ø5.0 c/20 C=202
N104	12 N60 ø5.0 c/20 C=253
N95	9 N29 ø5.0 c/20 C=202
N105	17 N60 ø5.0 c/20 C=253

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 øX.X c/xx

PLOT		
COR	PENA	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
OUTRO	C.O.	0,13

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

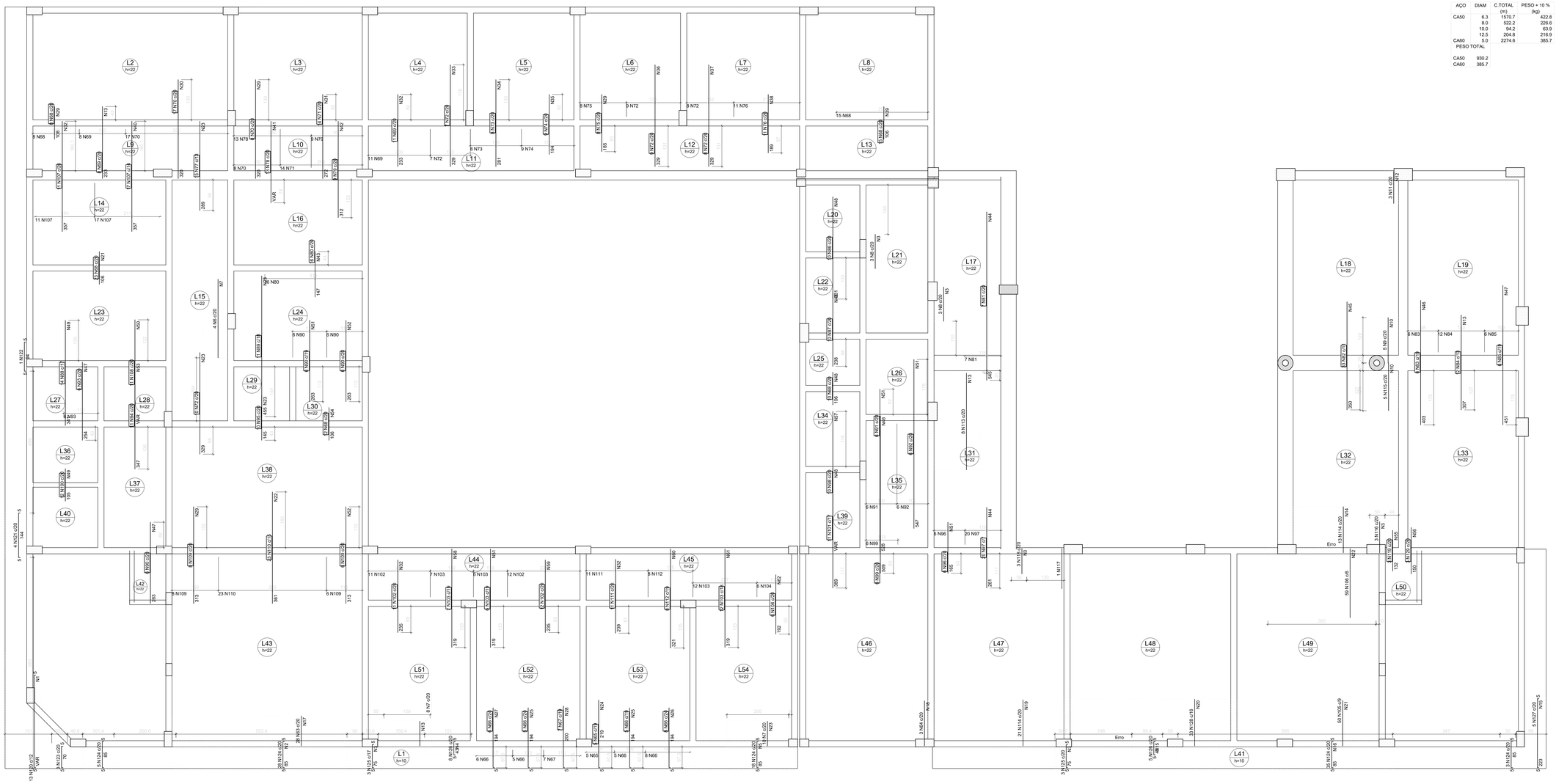
ASSUNTO:
LAJES NEGATIVAS (X) PAVIMENTO TÉRRO

FOLHA:
34/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

ESCALA: INDICADA



Armação negativa das lajes do pavimento PAVTO TERREO (Eixo Y)

escala 1:50

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1570.7	422.8
	8.0	522.2	226.6
	10.0	94.2	63.9
	12.5	204.8	216.9
CA60	5.0	2274.6	385.7
PESO TOTAL			
CA50	930.2		
CA60	385.7		

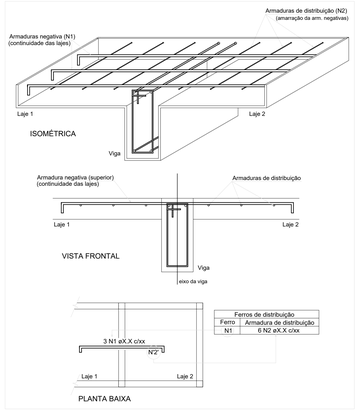
Relação do aço

Negativos Y

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	34	VAR	VAR
	2	5.0	6	553	3318
	3	5.0	33	50	1650
	4	5.0	3	151	453
	5	5.0	6	352	2112
	6	5.0	4	254	1016
	7	5.0	31	80	2480
	8	5.0	6	111	666
	9	5.0	5	147	735
	10	5.0	16	94	1504
	11	5.0	3	103	309
	12	5.0	6	44	264
	13	5.0	48	150	7200
	14	5.0	8	248	1984
	15	5.0	17	99	1683
	16	5.0	6	695	4170
	17	5.0	5	550	2750
	18	5.0	8	45	360
	19	5.0	8	420	3360
	20	5.0	13	520	6760
	21	5.0	15	450	6750
	22	5.0	39	350	13650
	23	5.0	67	200	13400
	24	5.0	11	101	1111
	25	5.0	20	100	2000
	26	5.0	10	155	1550
	27	5.0	10	127	1270
	28	5.0	10	128	1280
	29	5.0	48	160	7680
	30	5.0	16	340	5440
	31	5.0	14	275	3850
	32	5.0	54	210	11340
	33	5.0	17	130	2210
	34	5.0	14	165	2310
	35	5.0	10	180	1800
	36	5.0	17	185	3145
	37	5.0	17	162	2754
	38	5.0	10	223	2230
	39	5.0	6	305	1830
	40	5.0	18	240	4320
	41	5.0	14	VAR	VAR
	42	5.0	16	175	2800
	43	5.0	8	325	2600
	44	5.0	41	141	5781
	45	5.0	18	364	6552
	46	5.0	47	113	5311
	47	5.0	50	120	6000
	48	5.0	55	195	10725
	49	5.0	23	230	5290
	50	5.0	18	VAR	VAR
	51	5.0	94	110	10340
	52	5.0	30	125	3750
	53	5.0	18	220	3960
	54	5.0	6	235	1410
	55	5.0	7	68	476
	56	5.0	10	52	520
	57	5.0	23	VAR	VAR
	58	5.0	16	140	2240
	59	5.0	12	245	2940
	60	5.0	16	145	2320
	61	5.0	16	207	3312
	62	5.0	10	122	1220
CA50	63	6.3	28	97	2716
	64	6.3	3	146	438
	65	6.3	5	223	1115
	66	6.3	24	198	4752
	67	6.3	7	204	1428
	68	6.3	68	106	7208
	69	6.3	19	233	4427
	70	6.3	25	320	8000
	71	6.3	14	272	3808
	72	6.3	34	329	11186
	73	6.3	8	281	2248
	74	6.3	9	194	1746
	75	6.3	8	185	1480
	76	6.3	11	189	2079
	77	6.3	15	289	4335
	78	6.3	13	VAR	VAR
	79	6.3	9	312	2808
	80	6.3	16	147	2352
	81	6.3	7	545	3815
	82	6.3	33	350	11550
	83	6.3	6	403	2418
	84	6.3	12	307	3684
	85	6.3	6	451	2706
	86	6.3	10	331	3310
	87	6.3	10	238	2380
	88	6.3	14	341	4774
	89	6.3	11	455	5005
	90	6.3	18	263	4734
	91	6.3	6	528	3168
	92	6.3	6	547	3282
	93	6.3	6	254	1524
	94	6.3	11	347	3817
	95	6.3	10	145	1450
	96	6.3	6	165	990
	97	6.3	20	261	5220
	98	6.3	10	VAR	VAR
	99	6.3	6	509	3054
	100	6.3	12	105	1260
	101	6.3	11	389	4279
	102	6.3	23	235	5405
	103	6.3	25	319	7975
	104	6.3	6	192	1152
	105	8.0	50	147	7350
	106	8.0	59	224	13216
	107	8.0	28	357	9996
	108	8.0	11	VAR	VAR
	109	8.0	14	313	4382
	110	8.0	23	361	8303
	111	8.0	11	239	2629
	112	8.0	8	321	2568
	113	10.0	8	313	2504
	114	10.0	34	149	5066
	115	10.0	5	154	770
	116	10.0	3	102	306
	117	10.0	1	130	130
	118	10.0	3	82	246
	119	10.0	3	132	396
	120	12.5	13	VAR	VAR
	121	12.5	4	148	592
	122	12.5	1	98	98
	123	12.5	3	74	222
	124	12.5	89	89	7921
	125	12.5	6	79	474
	126	12.5	13	47	611
	127	12.5	5	227	1135
	128	12.5	33	152	5016
	129	12.5	3	150	450

	Ferros de distribuição
Ferro	Armadura de distribuição
N120	34 N1 ø5.0 c/5 C=VAR
N124	6 N2 ø5.0 c/16 C=553
N125	6 N3 ø5.0 c/13 C=50
N126	3 N4 ø5.0 c/16 C=151
N124	6 N5 ø5.0 c/16 C=352
N6	13 N7 ø5.0 c/20 C=80
N8	6 N3 ø5.0 c/20 C=50
N9	8 N10 ø5.0 c/20 C=94
N11	6 N12 ø5.0 c/20 C=44
N8	6 N3 ø5.0 c/20 C=50
N113	16 N13 ø5.0 c/20 C=150
N114	8 N14 ø5.0 c/20 C=248
N115	8 N10 ø5.0 c/20 C=94
N116	5 N3 ø5.0 c/20 C=50
N125	5 N3 ø5.0 c/16 C=50
N126	3 N15 ø5.0 c/16 C=99
N124	6 N16 ø5.0 c/16 C=695
N127	14 N15 ø5.0 c/16 C=99
N63	5 N17 ø5.0 c/20 C=550
N64	8 N18 ø5.0 c/20 C=45
N114	8 N19 ø5.0 c/20 C=420
N118	5 N3 ø5.0 c/20 C=50
N128	13 N20 ø5.0 c/12 C=520
N105	9 N21 ø5.0 c/17 C=450
N106	21 N22 ø5.0 c/11 C=350
N7	4 N13 ø5.0 c/20 C=150
N7	4 N23 ø5.0 c/20 C=200
N65	11 N24 ø5.0 c/20 C=101
N66	10 N25 ø5.0 c/20 C=100
N66	10 N26 ø5.0 c/20 C=155
N66	10 N27 ø5.0 c/20 C=127
N66	10 N25 ø5.0 c/20 C=100
N67	10 N28 ø5.0 c/20 C=128
N68	6 N29 ø5.0 c/20 C=160
N69	12 N13 ø5.0 c/20 C=150
N70	16 N30 ø5.0 c/20 C=340
N70	16 N29 ø5.0 c/20 C=160
N71	14 N31 ø5.0 c/20 C=275
N69	12 N32 ø5.0 c/20 C=210
N72	17 N33 ø5.0 c/20 C=130
N73	14 N34 ø5.0 c/20 C=165
N74	10 N35 ø5.0 c/20 C=180
N75	10 N29 ø5.0 c/20 C=160
N72	17 N36 ø5.0 c/20 C=185
N72	17 N37 ø5.0 c/20 C=162
N76	10 N38 ø5.0 c/20 C=223
N68	6 N39 ø5.0 c/20 C=305
N107	18 N32 ø5.0 c/20 C=210
N107	18 N40 ø5.0 c/20 C=240
N77	15 N23 ø5.0 c/20 C=200
N78	14 N41 ø5.0 c/20 C=VAR
N79	16 N42 ø5.0 c/20 C=175
N68	6 N21 ø5.0 c/20 C=450
N72	17 N23 ø5.0 c/20 C=200
N80	8 N43 ø5.0 c/20 C=325
N81	28 N44 ø5.0 c/20 C=141
N82	18 N45 ø5.0 c/20 C=364
N83	21 N46 ø5.0 c/20 C=113
N84	16 N13 ø5.0 c/20 C=150
N85	23 N47 ø5.0 c/20 C=120
N86	17 N48 ø5.0 c/20 C=195
N87	12 N48 ø5.0 c/20 C=195
N88	17 N49 ø5.0 c/20 C=230
N108	18 N50 ø5.0 c/20 C=VAR
N89	23 N23 ø5.0 c/20 C=200
N90	14 N51 ø5.0 c/20 C=110
N90	14 N52 ø5.0 c/20 C=125
N68	6 N48 ø5.0 c/20 C=195
N91	27 N51 ø5.0 c/20 C=110
N92	28 N51 ø5.0 c/20 C=110
N93	13 N47 ø5.0 c/20 C=120
N94	18 N53 ø5.0 c/20 C=220
N95	8 N23 ø5.0 c/20 C=200
N68	6 N54 ø5.0 c/20 C=235
N96	9 N51 ø5.0 c/20 C=110
N97	13 N44 ø5.0 c/20 C=141
N119	7 N55 ø5.0 c/20 C=68
N129	10 N56 ø5.0 c/16 C=52
N98	23 N57 ø5.0 c/20 C=VAR
N99	26 N46 ø5.0 c/20 C=113
N100	6 N49 ø5.0 c/20 C=230
N90	14 N47 ø5.0 c/20 C=120
N109	16 N29 ø5.0 c/20 C=160
N110	18 N22 ø5.0 c/20 C=350
N109	16 N52 ø5.0 c/20 C=125
N101	20 N48 ø5.0 c/20 C=195
N102	12 N32 ø5.0 c/20 C=210
N103	16 N58 ø5.0 c/20 C=140
N103	16 N51 ø5.0 c/20 C=110
N102	12 N59 ø5.0 c/20 C=245
N111	12 N32 ø5.0 c/20 C=210
N112	16 N60 ø5.0 c/20 C=145
N103	16 N61 ø5.0 c/20 C=207
N104	10 N62 ø5.0 c/20 C=122

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 eX.X c/xx

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
LAJES NEGATIVAS (Y) PAVIMENTO TÉRRO

FOLHA:
35/48

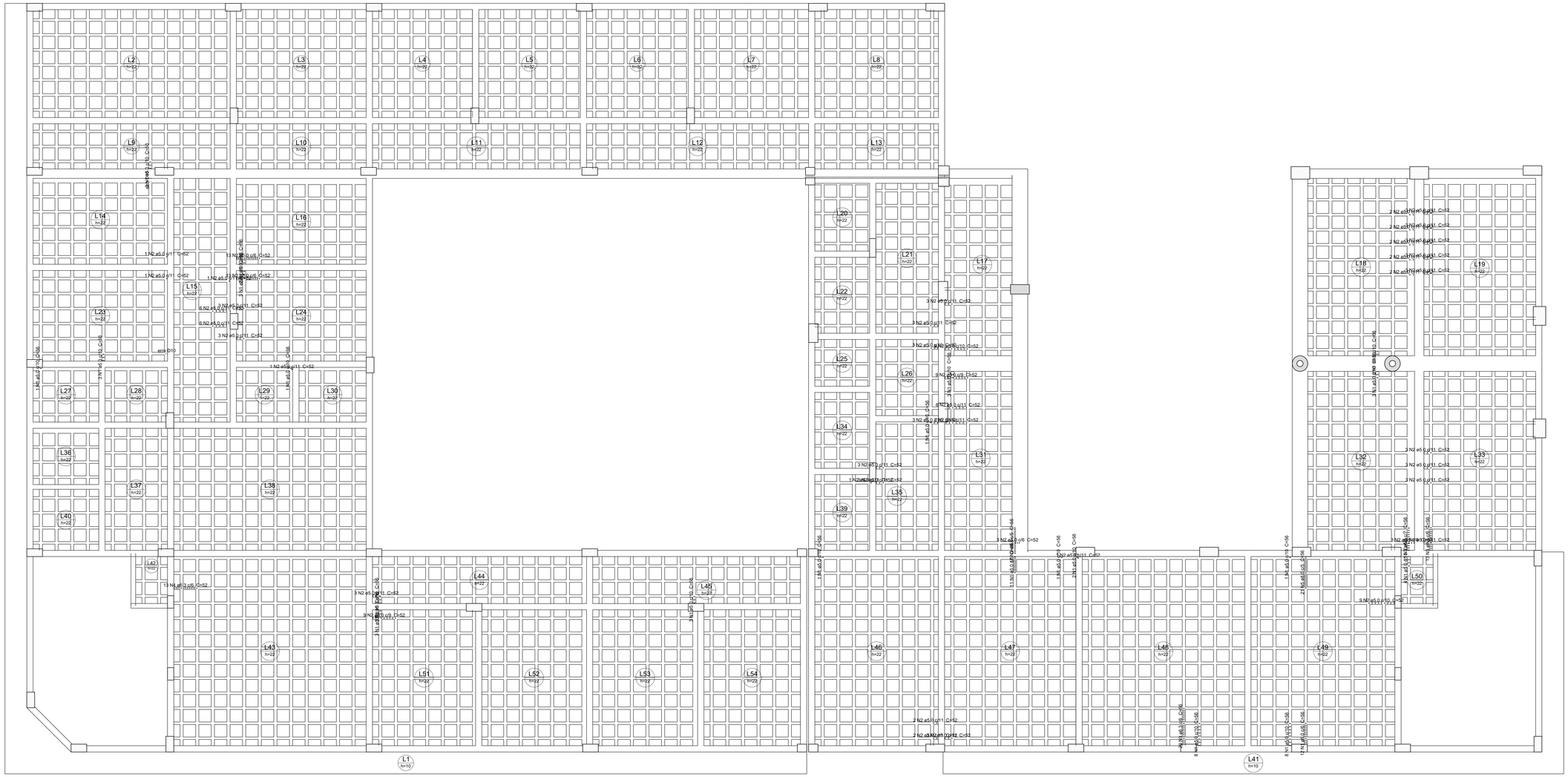
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/RGB	0,0,0,13

A0
1181x841mm



Detalhamento de punção e cisalhamento das lajes do pavimento PAVTO TERREO (Nível 623)

escala 1:50

Detalhe dos estribos (esc.1:30)

L9=L27=L45=L48=L50

L14=L15=L17=L19=L21=L26=L39=L43



L16=L18=L23=L24=L29=L31=L32=L33 =L35=L44=L46=L47=L49=L51



Relação do aço

Punção

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	79	56	4424
	2	5.0	169	52	8788
CA50	3	6.3	61	56	3416
	4	6.3	13	52	676
	5	8.0	21	56	1176

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	41	11
	8.0	11.8	5.1
CA60	5.0	132.2	22.4
PESO TOTAL			
CA50	16.1		
CA60	22.4		

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
DETALHAMENTO LAJES PAVIMENTO TÉRRO

FOLHA:
36/48

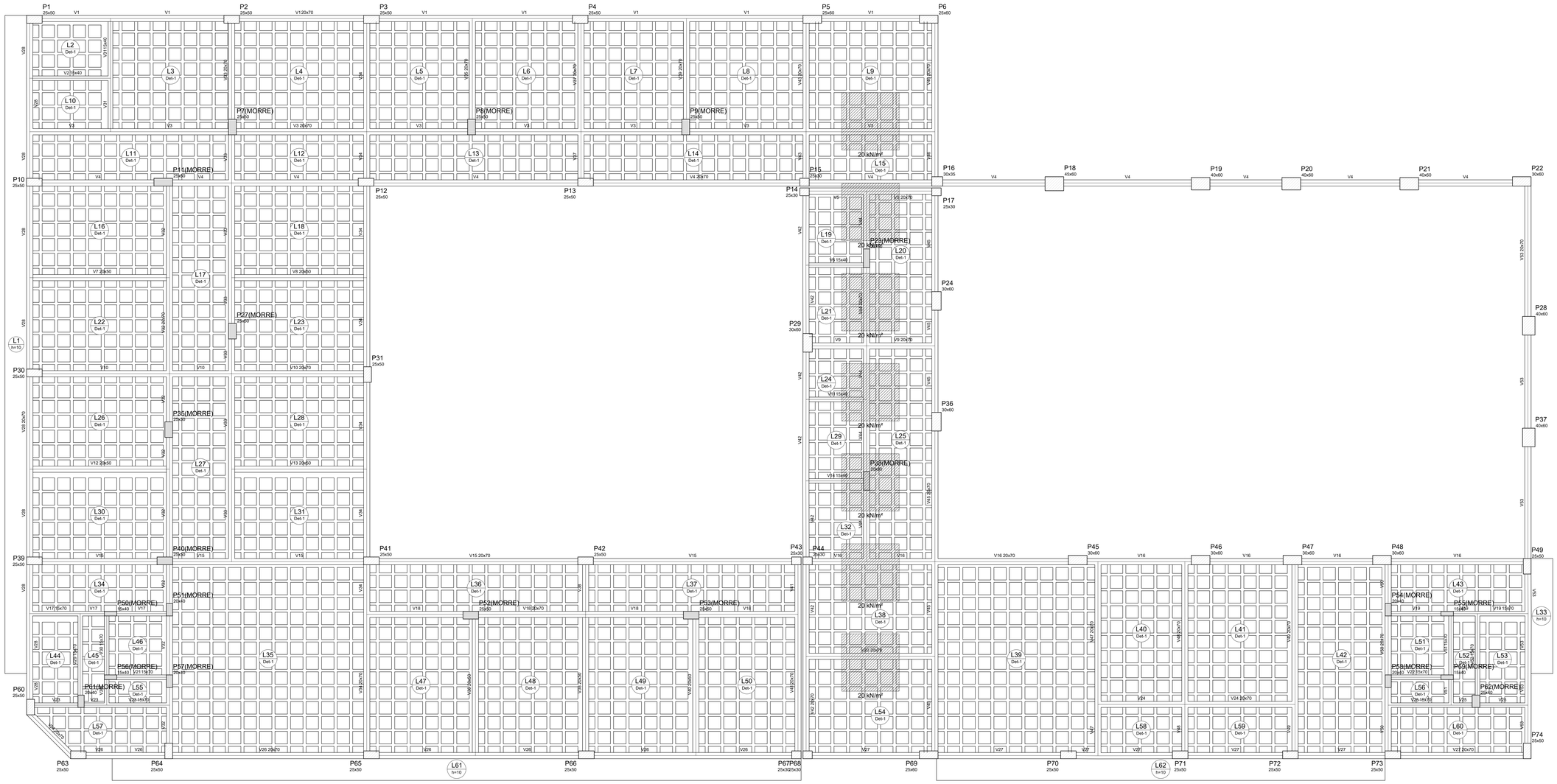
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
OURO	0,0,13

A0
1181x841mm

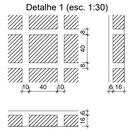


Forma do pavimento 1° PAVTO

escala 1:50

Legenda dos Pilares
- Pilar que morre
- Pilar que passa
- Pilar que nasce
- Pilar com mudança de seção

Detalhe 1 (esc. 1:30)



Pilares

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	25 x 50	0	1091
P2	25 x 50	0	1091
P3	25 x 50	0	1091
P4	25 x 50	0	1091
P5	25 x 60	0	1091
P6	25 x 60	0	1091
P7	25 x 50	0	1091
P8	25 x 50	0	1091
P9	25 x 50	0	1091
P10	25 x 50	0	1091
P11	25 x 60	0	1091
P12	25 x 50	0	1091
P13	25 x 50	0	1091
P14	25 x 30	0	1091
P15	25 x 30	0	1091
P16	30 x 35	0	1091
P17	25 x 30	0	1091
P18	45 x 60	0	1091
P19	40 x 60	0	1091
P20	40 x 60	0	1091
P21	40 x 60	0	1091
P22	30 x 60	0	1091
P23	20 x 60	0	1091
P24	30 x 60	0	1091
P27	25 x 50	0	1091
P28	40 x 60	-80	1011
P29	30 x 60	0	1091
P30	25 x 50	0	1091
P31	25 x 50	0	1091
P35	25 x 50	0	1091
P36	30 x 60	0	1091
P37	40 x 60	-80	1011
P38	20 x 60	0	1091
P39	25 x 50	0	1091
P40	25 x 50	0	1091
P41	25 x 50	0	1091
P42	25 x 50	0	1091
P43	25 x 30	0	1091
P44	25 x 30	0	1091
P45	30 x 60	0	1091
P46	30 x 60	0	1091
P47	30 x 60	0	1091
P48	30 x 60	0	1091
P49	25 x 50	0	1091
P50	15 x 40	0	1091
P51	20 x 40	0	1091
P52	25 x 50	0	1091
P53	25 x 50	0	1091
P54	20 x 40	0	1091
P55	15 x 40	0	1091
P56	15 x 40	0	1091
P57	20 x 40	0	1091
P58	20 x 40	0	1091
P59	15 x 40	0	1091
P60	25 x 50	0	1091
P61	20 x 40	0	1091
P62	25 x 40	0	1091
P63	25 x 50	0	1091
P64	25 x 50	0	1091
P65	25 x 50	0	1091
P66	25 x 50	0	1091
P67	25 x 30	0	1091
P68	25 x 30	0	1091
P69	25 x 60	0	1091
P70	25 x 50	0	1091
P71	25 x 50	0	1091
P72	25 x 50	0	1091
P73	25 x 50	0	1091
P74	25 x 50	0	1091

Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x70	0	1091
V2	15x40	0	1091
V3	20x70	0	1091
V4	20x70	0	1091
V5	20x70	0	1091
V6	15x40	0	1091
V7	20x50	0	1091
V8	20x50	0	1091
V9	20x70	0	1091
V10	20x70	0	1091
V11	15x40	0	1091
V12	20x50	0	1091
V13	20x50	0	1091
V14	15x40	0	1091
V15	20x70	0	1091
V16	20x70	0	1091
V17	15x70	0	1091
V18	20x70	0	1091
V19	15x70	0	1091
V20	20x70	0	1091
V21	15x70	0	1091
V22	15x70	0	1091
V23	15x70	0	1091
V24	20x70	0	1091
V25	15x70	0	1091
V26	20x70	0	1091
V27	20x70	0	1091
V28	20x70	0	1091
V29	15x70	0	1091
V30	15x70	0	1091
V31	15x40	0	1091
V32	20x70	0	1091
V33	20x70	0	1091
V34	20x70	0	1091
V35	20x70	0	1091
V36	20x50	0	1091
V37	20x70	0	1091
V38	20x50	0	1091
V39	20x70	0	1091
V40	20x50	0	1091
V41	20x70	0	1091
V42	20x70	0	1091
V43	20x70	0	1091
V44	20x70	0	1091
V45	20x70	0	1091
V46	20x70	0	1091
V47	20x70	0	1091
V48	20x70	0	1091
V49	20x70	0	1091
V50	20x70	0	1091
V51	15x70	0	1091
V52	15x70	0	1091
V53	20x70	0	1091
V54	20x70	0	1091

Lajes

Nome	Dados: Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kN/m²)	Sobrecarga (kN/m²): Adicional	Acidental	Localizada
L1	Maciça	10	0	1091	2.50	1.81	1.50	-
L2	Nervurada	22	0	1091	2.85	1.81	1.50	-
L3	Nervurada	22	0	1091	2.85	1.81	1.50	-
L4	Nervurada	22	0	1091	2.85	1.81	1.50	-
L5	Nervurada	22	0	1091	2.85	1.81	1.50	-
L6	Nervurada	22	0	1091	2.85	1.81	1.50	-
L7	Nervurada	22	0	1091	2.85	1.81	1.50	-
L8	Nervurada	22	0	1091	2.85	1.81	1.50	-
L9	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L10	Nervurada	22	0	1091	2.85	1.81	1.50	-
L11	Nervurada	22	0	1091	2.85	1.81	1.50	-
L12	Nervurada	22	0	1091	2.85	1.81	1.50	-
L13	Nervurada	22	0	1091	2.85	1.81	1.50	-
L14	Nervurada	22	0	1091	2.85	1.81	1.50	-
L15	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L16	Nervurada	22	0	1091	2.85	1.81	1.50	-
L17	Nervurada	22	0	1091	2.85	1.81	1.50	-
L18	Nervurada	22	0	1091	2.85	1.81	1.50	-
L19	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L20	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L21	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L22	Nervurada	22	0	1091	2.85	1.81	1.50	-
L23	Nervurada	22	0	1091	2.85	1.81	1.50	-
L24	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L25	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L26	Nervurada	22	0	1091	2.85	1.81	1.50	-
L27	Nervurada	22	0	1091	2.85	1.81	1.50	-
L28	Nervurada	22	0	1091	2.85	1.81	1.50	-
L29	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L30	Nervurada	22	0	1091	2.85	1.81	1.50	-
L31	Nervurada	22	0	1091	2.85	1.81	1.50	-
L32	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L33	Maciça	10	0	1091	2.50	1.81	1.50	-
L34	Nervurada	22	0	1091	2.85	1.81	1.50	-
L35	Nervurada	22	0	1091	2.85	1.81	1.50	-
L36	Nervurada	22	0	1091	2.85	1.81	1.50	-
L37	Nervurada	22	0	1091	2.85	1.81	1.50	-
L38	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L39	Nervurada	22	0	1091	2.85	1.81	1.50	-
L40	Nervurada	22	0	1091	2.85	1.81	1.50	-
L41	Nervurada	22	0	1091	2.85	1.81	1.50	-
L42	Nervurada	22	0	1091	2.85	1.81	1.50	-
L43	Nervurada	22	0	1091	2.85	1.81	1.50	-
L44	Nervurada	22	0	1091	2.85	1.81	1.50	-
L45	Nervurada	22	0	1091	2.85	1.81	1.50	-
L46	Nervurada	22	0	1091	2.85	1.81	1.50	-
L47	Nervurada	22	0	1091	2.85	1.81	1.50	-
L48	Nervurada	22	0	1091	2.85	1.81	1.50	-
L49	Nervurada	22	0	1091	2.85	1.81	1.50	-
L50	Nervurada	22	0	1091	2.85	1.81	1.50	-
L51	Nervurada	22	0	1091	2.85	1.81	1.50	-
L52	Nervurada	22	0	1091	2.85	1.81	1.50	-
L53	Nervurada	22	0	1091	2.85	1.81	1.50	-
L54	Nervurada	22	0	1091	2.85	1.54	2.50	sim
L55	Nervurada	22	0	1091	2.85	1.81	1.50	-
L56	Nervurada	22	0	1091	2.85	1.81	1.50	-
L57	Nervurada	22	0	1091	2.85	1.81	1.50	-
L58	Nervurada	22	0	1091	2.85	1.81	1.50	-
L59	Nervurada	22	0	1091	2.85	1.81	1.50	-
L60	Nervurada	22	0	1091	2.85	1.81	1.50	-
L61	Maciça	10	0	1091	2.50	1.81	1.50	-
L62	Maciça	10	0	1091	2.50	1.81	1.50	-

Características dos materiais

fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Blocos de enchimento

Detalhe	Tipo	Nome	Dimensões(cm): hb	bx	by	Quantidade
1	EPS Painel	B16/40/40	16	40	40	2907

	PI	PEN
COR		
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
BRB	C	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: FORMA 1º PAVIMENTO

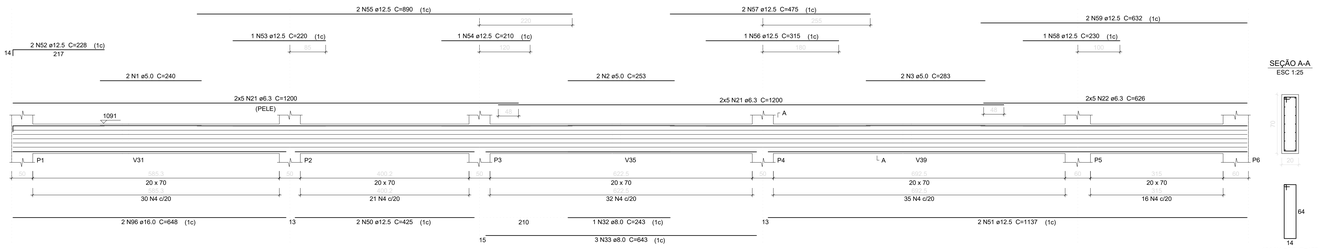
FOLHA: 37/48

AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

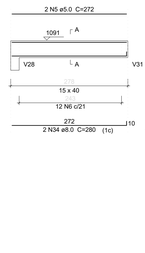
ESCALA: INDICADA

V1
ESC 1:50



SEÇÃO A-A
ESC 1:25

V2
ESC 1:50



SEÇÃO A-A
ESC 1:25



Relação do aço

V1		V2		V3	
V4		V5		V6	
V7		V8		V9	
V10		V11		V12	
V13		V14		V15	
V16		V17			

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	240	480
	2	5.0	2	253	506
	3	5.0	2	283	566
	4	5.0	763	168	128184
	5	5.0	4	272	1088
	6	5.0	40	98	3920
	7	5.0	2	370	740
	8	5.0	2	260	520
	9	5.0	2	280	560
	10	5.0	2	238	476
	11	5.0	2	257	514
	12	5.0	2	305	610
	13	5.0	4	464	1856
	14	5.0	86	128	11008
	15	5.0	4	449	1796
	16	5.0	2	217	434
	17	5.0	2	209	418
	18	5.0	2	309	618
	19	5.0	2	250	500
	20	5.0	16	158	2528
CA50	21	6.3	110	1200	132000
	22	6.3	20	626	12520
	23	6.3	10	232	2320
	24	6.3	10	449	4490
	25	6.3	2	111	222
	26	6.3	10	429	4290
	27	6.3	10	1104	11040
	28	6.3	10	184	1840
	29	6.3	10	1187	11870
	30	6.3	29	168	4872
	31	6.3	8	465	3720
	32	8.0	1	243	243
	33	8.0	3	643	1929
	34	8.0	2	280	560
	35	8.0	1	240	240
	36	8.0	1	405	405
	37	8.0	6	465	2790
	38	8.0	2	217	434
	39	8.0	2	266	532
	40	8.0	2	209	418
	41	8.0	2	218	436
	42	8.0	2	274	548
	43	10.0	1	370	370
	44	10.0	1	313	313
	45	10.0	2	1104	2208
	46	10.0	2	335	670
	47	10.0	2	459	918
	48	10.0	2	475	950
	49	10.0	2	562	1124
	50	12.5	2	425	850
	51	12.5	2	1137	2274
	52	12.5	2	228	456
	53	12.5	1	220	220
	54	12.5	1	210	210
	55	12.5	2	890	1780
	56	12.5	1	315	315
	57	12.5	2	475	950
	58	12.5	1	230	230
	59	12.5	2	632	1264
	60	12.5	3	660	1980
	61	12.5	2	770	1540
	62	12.5	2	1125	2250
	63	12.5	1	355	355
	64	12.5	2	481	962
	65	12.5	2	380	760
	66	12.5	2	610	1220
	67	12.5	2	265	530
	68	12.5	2	420	840
	69	12.5	1	310	310
	70	12.5	2	778	1556
	71	12.5	2	1078	2156
	72	12.5	2	682	1364
	73	12.5	4	1115	4460
	74	12.5	2	201	402
	75	12.5	2	816	1632
	76	12.5	2	667	1334
	77	12.5	1	260	260
	78	12.5	2	440	880
	79	12.5	1	240	240
	80	12.5	2	470	940
	81	12.5	4	1200	4800
	82	12.5	2	284	568
	83	12.5	2	476	952
	84	12.5	2	449	898
	85	12.5	2	441	882
	86	12.5	2	259	518
	87	12.5	1	137	137
	88	12.5	2	1141	2282
	89	12.5	2	464	928
	90	12.5	2	430	860
	91	12.5	2	665	1330
	92	12.5	2	679	1358
	93	12.5	2	194	388
	94	12.5	2	1074	2148
	95	12.5	2	536	1072
	96	16.0	2	648	1296
	97	16.0	2	647	1294
	98	16.0	2	290	580
	99	20.0	4	1200	4800
	100	20.0	2	991	1982
	101	20.0	1	430	430
	102	20.0	2	892	1784
	103	20.0	2	455	910
	104	20.0	2	818	1636

Resumo do aço

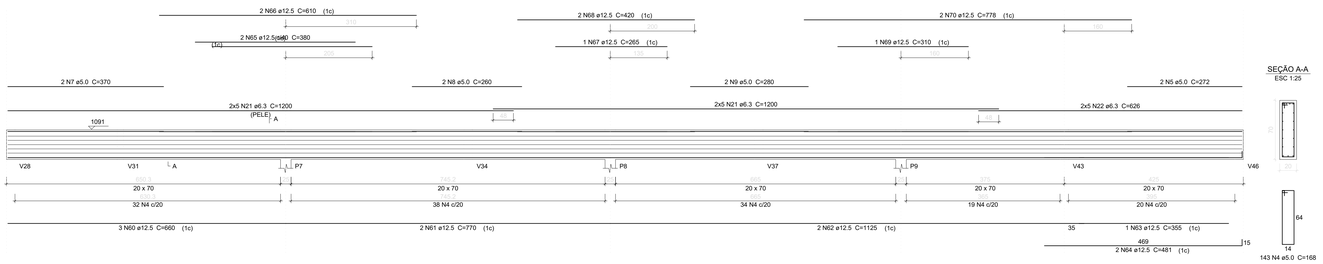
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1891.9	509.2
	8.0	85.4	37
	10.0	65.6	44.4
	12.5	536.5	568.4
	16.0	31.7	55
	20.0	115.5	313.1
CA60	5.0	1573.3	266.7

PESO TOTAL

CA50	1527.3
CA60	266.7

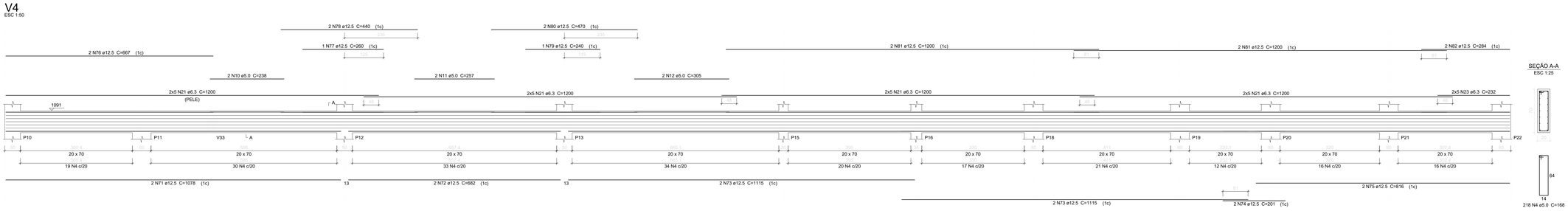
Vol. de concreto total (C-25) = 27.48 m³
Área de forma total = 319.2 m²

V3
ESC 1:50



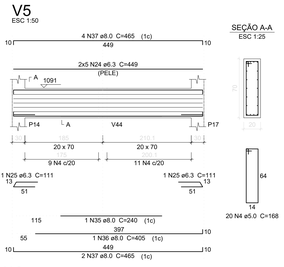
SEÇÃO A-A
ESC 1:25

V4
ESC 1:50



SEÇÃO A-A
ESC 1:25

V5
ESC 1:50



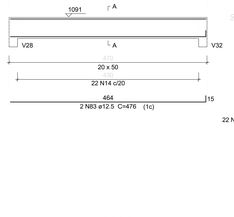
SEÇÃO A-A
ESC 1:25

V6
ESC 1:50

SEÇÃO A-A
ESC 1:25



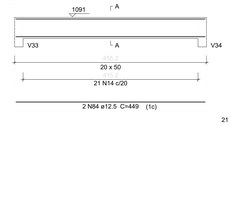
V7
ESC 1:50



SEÇÃO A-A
ESC 1:25



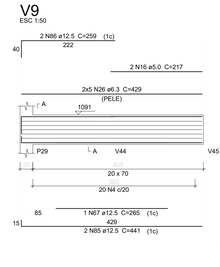
V8
ESC 1:50



SEÇÃO A-A
ESC 1:25



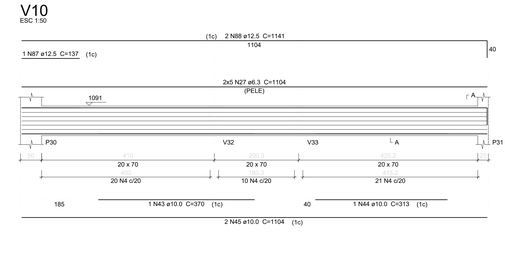
V9
ESC 1:50



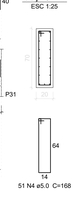
SEÇÃO A-A
ESC 1:25



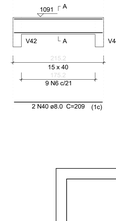
V10
ESC 1:50



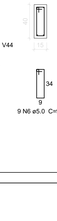
SEÇÃO A-A
ESC 1:25



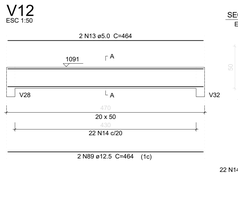
V11
ESC 1:50



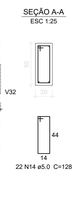
SEÇÃO A-A
ESC 1:25



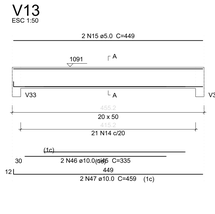
V12
ESC 1:50



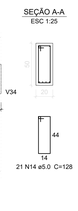
SEÇÃO A-A
ESC 1:25



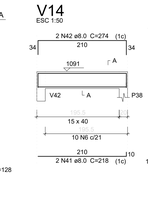
V13
ESC 1:50



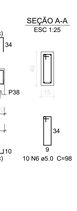
SEÇÃO A-A
ESC 1:25



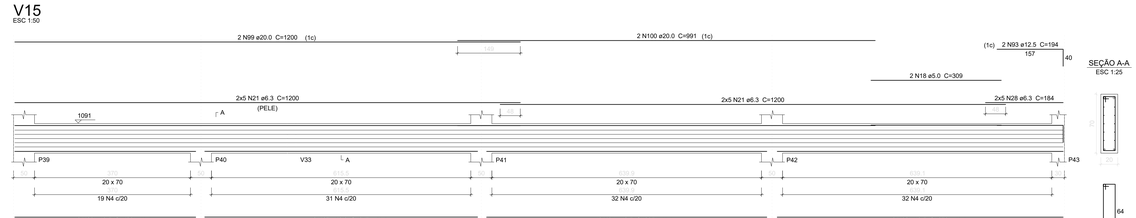
V14
ESC 1:50



SEÇÃO A-A
ESC 1:25

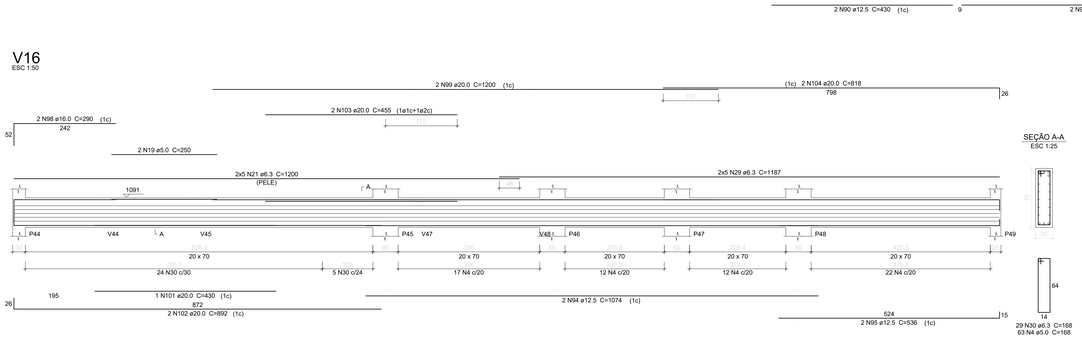


V15
ESC 1:50



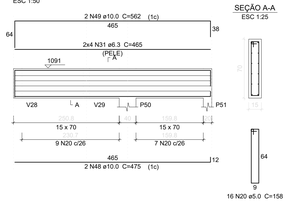
SEÇÃO A-A
ESC 1:25

V16
ESC 1:50



SEÇÃO A-A
ESC 1:25

V17
ESC 1:50



SEÇÃO A-A
ESC 1:25

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS 1º PAVIMENTO 01/03

FOLHA:
38/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

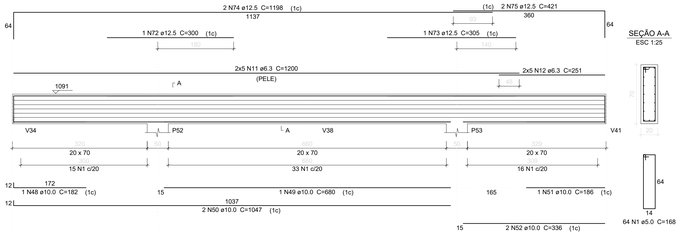
DATA:
07/2022

ESCALA:
INDICADA

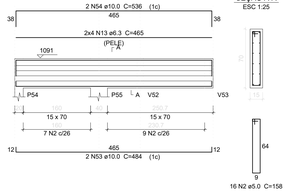
PLOT		
COR	PEN	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,1
9	7	0,13
QUIRO	C.O	0,13

A0
1181x841mm

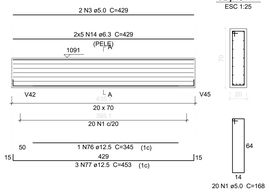
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ESC 1:50



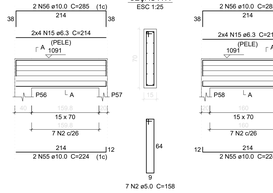
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ESC 1:50



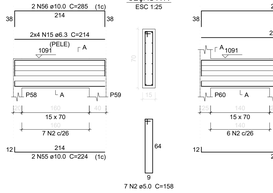
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ESC 1:50



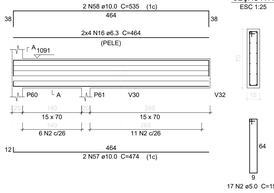
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ESC 1:50



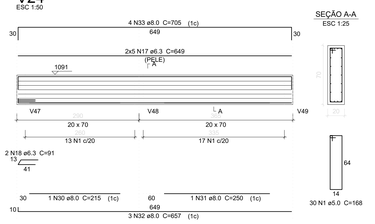
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ESC 1:50



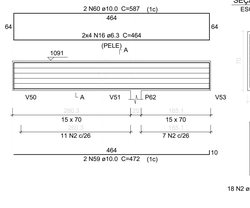
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ESC 1:50



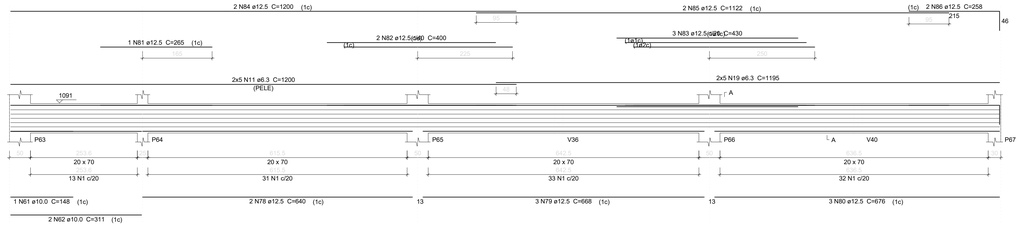
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ESC 1:50



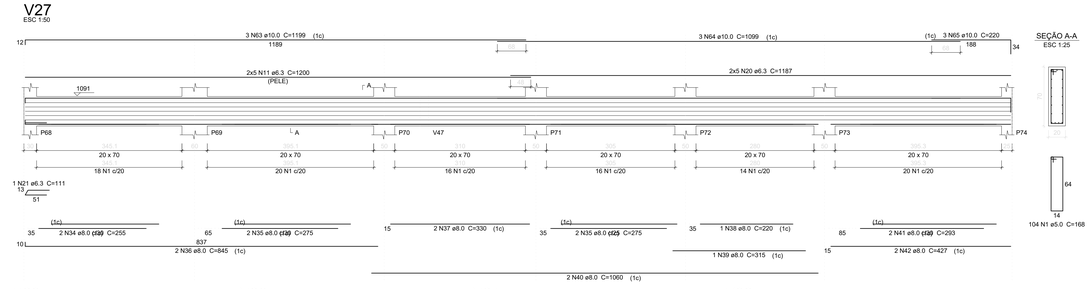
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ESC 1:50



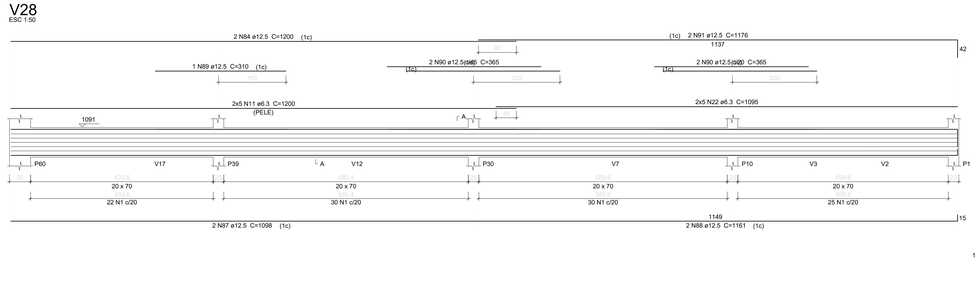
V26
ESC 1:50



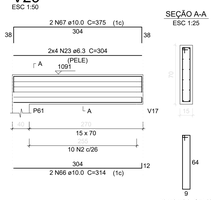
V27
ESC 1:50



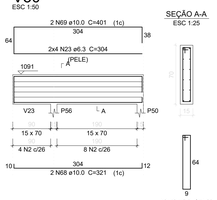
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ESC 1:50



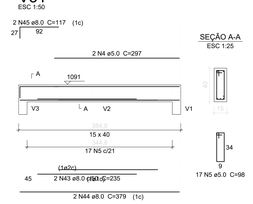
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ESC 1:50



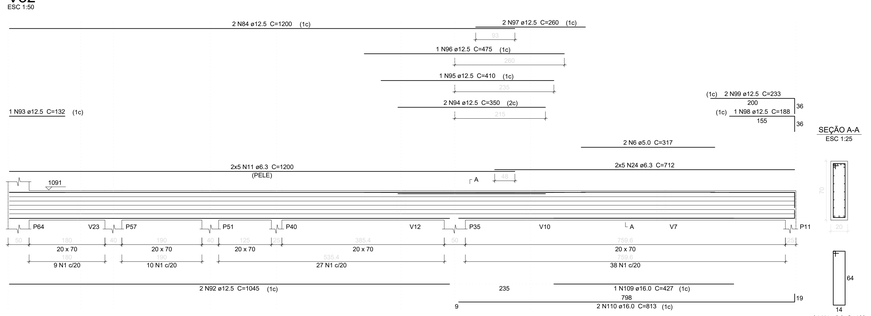
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ESC 1:50



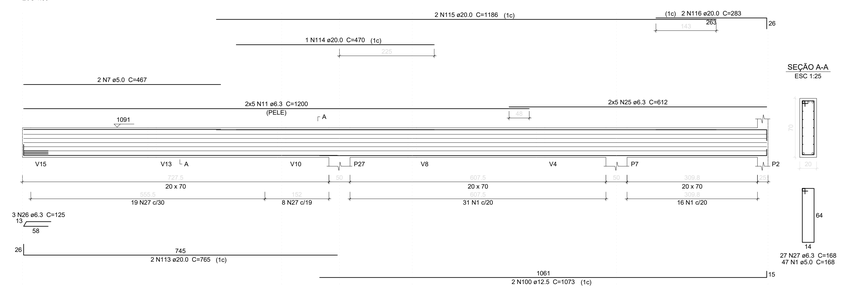
V31
ESC 1:50



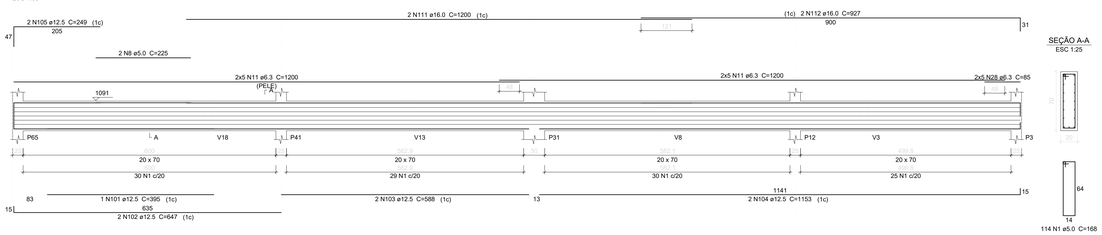
V32
ESC 1:50



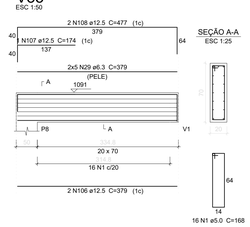
V33
ESC 1:50



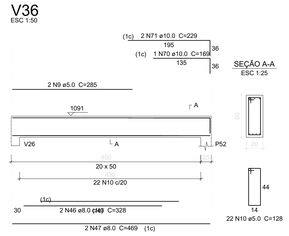
V34
ESC 1:50



V35
ESC 1:50



V36
ESC 1:50



Relação do aço

V18		V19		V20	
V21		V22		V23	
V24		V25		V26	
V27		V28		V29	
V30		V31		V32	
V33		V34		V35	
V36					

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	695	168	116760
	2	5.0	87	158	13746
	3	5.0	2	429	858
	4	5.0	2	297	594
	5	5.0	17	98	1666
	6	5.0	2	317	634
	7	5.0	2	467	934
	8	5.0	2	225	450
	9	5.0	2	285	570
	10	5.0	22	128	2816
CA50	11	6.3	80	1200	96000
	12	6.3	10	251	2510
	13	6.3	8	465	3720
	14	6.3	10	429	4290
	15	6.3	16	214	3424
	16	6.3	16	464	7424
	17	6.3	10	649	6490
	18	6.3	2	91	182
	19	6.3	10	1195	11950
	20	6.3	10	1187	11870
	21	6.3	1	111	111
	22	6.3	10	1095	10950
	23	6.3	16	304	4864
	24	6.3	10	712	7120
	25	6.3	10	612	6120
	26	6.3	3	125	375
	27	6.3	27	168	4536
	28	6.3	10	85	850
	29	6.3	10	379	3790
	30	8.0	1	215	215
	31	8.0	1	250	250
	32	8.0	3	657	1971
	33	8.0	4	705	2820
	34	8.0	2	255	510
	35	8.0	4	275	1100
	36	8.0	2	845	1690
	37	8.0	2	330	660
	38	8.0	1	220	220
	39	8.0	1	315	315
	40	8.0	2	1060	2120
	41	8.0	2	293	586
	42	8.0	2	427	854
	43	8.0	2	235	470
	44	8.0	2	379	758
	45	8.0	2	117	234
	46	8.0	2	328	656
	47	8.0	2	469	938
	48	10.0	1	182	182
	49	10.0	1	680	680
	50	10.0	2	1047	2094
	51	10.0	1	186	186
	52	10.0	2	336	672
	53	10.0	2	484	968
	54	10.0	2	536	1072
	55	10.0	4	224	896
	56	10.0	4	285	1140
	57	10.0	2	474	948
	58	10.0	2	535	1070
	59	10.0	2	472	944
	60	10.0	2	587	1174
	61	10.0	1	148	148
	62	10.0	2	311	622
	63	10.0	3	1199	3597
	64	10.0	3	1099	3297
	65	10.0	3	220	660
	66	10.0	2	314	628
	67	10.0	2	375	750
	68	10.0	2	321	642
	69	10.0	2	401	802
	70	10.0	1	169	169
	71	10.0	2	229	458
	72	12.5	1	300	300
	73	12.5	1	305	305
	74	12.5	2	1198	2396
	75	12.5	2	421	842
	76	12.5	1	345	345
	77	12.5	3	453	1359
	78	12.5	2	640	1280
	79	12.5	3	668	2004
	80	12.5	3	676	2028
	81	12.5	1	265	265
	82	12.5	2	400	800
	83	12.5	3	430	1290
	84	12.5	6	1200	7200
	85	12.5	2	1122	2244
	86	12.5	2	258	516
	87	12.5	2	1098	2196
	88	12.5	2	1161	2322
	89	12.5	1	310	310
	90	12.5	4	365	1460
	91	12.5	2	1176	2352
	92	12.5	2	1045	2090
	93	12.5	1	132	132
	94	12.5	2	350	700
	95	12.5	1	410	410
	96	12.5	1	475	475
	97	12.5	2	260	520
	98	12.5	1	188	188
	99	12.5	2	233	466
	100	12.5	2	1073	2146
	101	12.5	1	395	395
	102	12.5	2	647	1294
	103	12.5	2	588	1176
	104	12.5	2	1153	2306
	105	12.5	2	249	498
	106	12.5	2	379	758
	107	12.5	1	174	174
	108	12.5	2	477	954
	109	16.0	1	427	427
	110	16.0	2	813	1626
	111	16.0	2	1200	2400
	112	16.0	2	927	1854
	113	20.0	2	765	1530
	114	20.0	1	470	470
	115	20.0	2	1186	2372
	116	20.0	2	283	566

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1865.8	502.2
	8.0	163.7	71
	10.0	238	161.4
	12.5	465	492.7
	16.0	63.1	109.5
	20.0	49.4	134
CA60	5.0	1390.3	235.7
PESO TOTAL			
CA50	1470.8		
CA60	235.7		

Vol. de concreto total (C-25) = 25.52 m³
Área de forma total = 301.57 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS 1º PAVIMENTO 02/03

FOLHA:
39/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

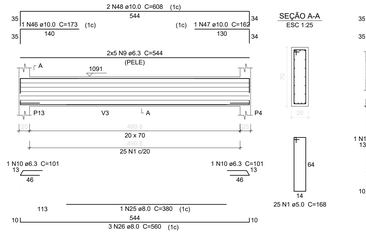
DATA:
07/2022

ESCALA:
INDICADA

	PISO	PENA
COR	7	0,1
1	7	0,2
2	7	0,25
3	7	0,35
4	7	0,4
5	7	0,6
6	7	0,25
7	7	0,1
8	7	0,13
9	C.0,0	0,13
0/RGB		

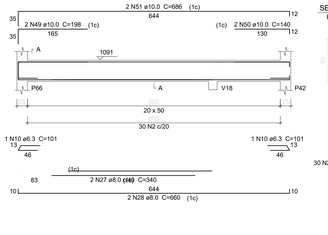
A0
1181x841mm

V37
ESC 1:50

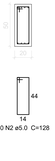


SEÇÃO A-A
ESC 1:25

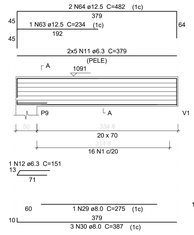
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ESC 1:50



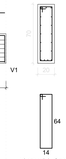
SEÇÃO A-A
ESC 1:25



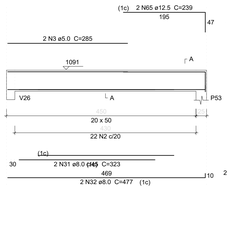
V39
ESC 1:50



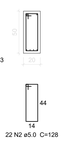
SEÇÃO A-A
ESC 1:25



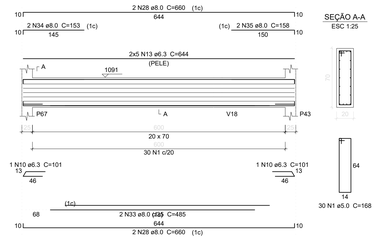
V40
ESC 1:50



SEÇÃO A-A
ESC 1:25

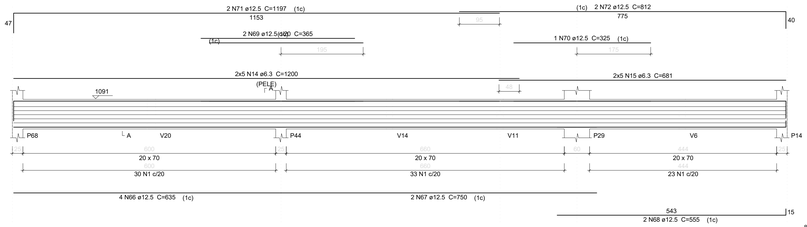


V41
ESC 1:50



SEÇÃO A-A
ESC 1:25

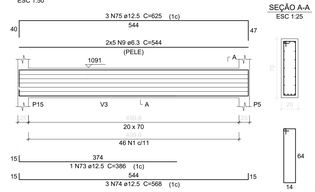
V42
ESC 1:50



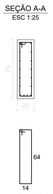
SEÇÃO A-A
ESC 1:25



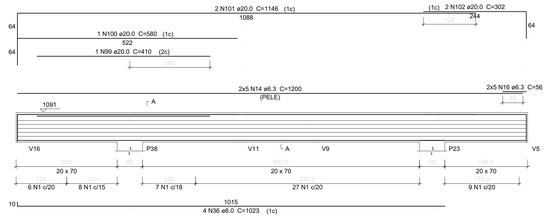
V43
ESC 1:50



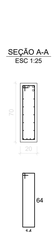
SEÇÃO A-A
ESC 1:25



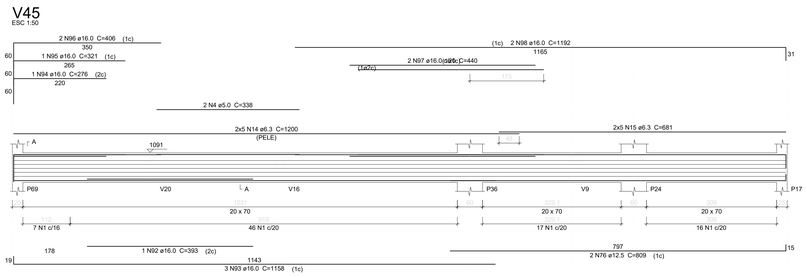
V44
ESC 1:50



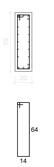
SEÇÃO A-A
ESC 1:25



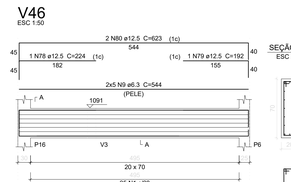
V45
ESC 1:50



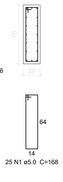
SEÇÃO A-A
ESC 1:25



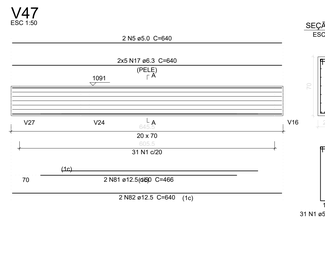
V46
ESC 1:50



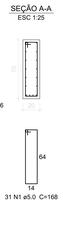
SEÇÃO A-A
ESC 1:25



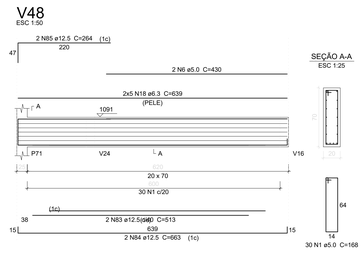
V47
ESC 1:50



SEÇÃO A-A
ESC 1:25

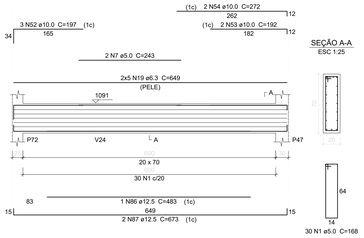


V48
ESC 1:50



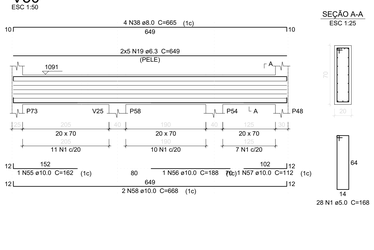
SEÇÃO A-A
ESC 1:25

V49
ESC 1:50



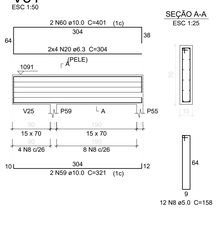
SEÇÃO A-A
ESC 1:25

V50
ESC 1:50



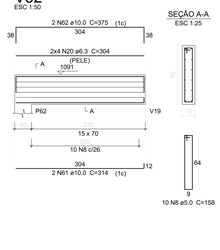
SEÇÃO A-A
ESC 1:25

V51
ESC 1:50



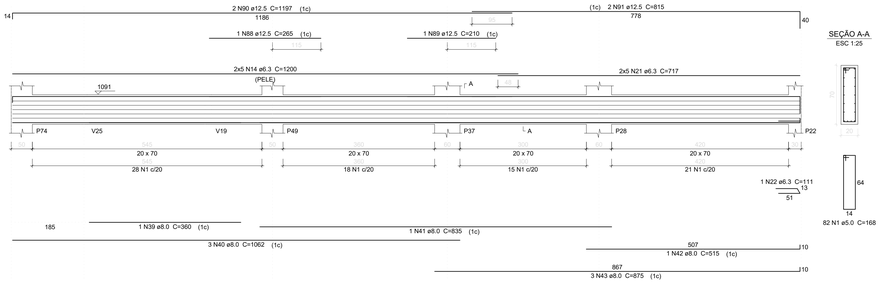
SEÇÃO A-A
ESC 1:25

V52
ESC 1:50



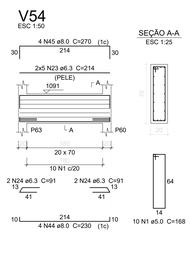
SEÇÃO A-A
ESC 1:25

V53
ESC 1:50



SEÇÃO A-A
ESC 1:25

V54
ESC 1:50



SEÇÃO A-A
ESC 1:25

Relação do aço

V37		V38		V39	
V40		V41		V42	
V43		V44		V45	
V46		V47		V48	
V49		V50		V51	
V52		V53		V54	

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	582	168	97776
	2	5.0	52	128	6656
	3	5.0	2	285	570
	4	5.0	2	338	676
	5	5.0	2	640	1280
	6	5.0	2	430	860
	7	5.0	2	243	486
	8	5.0	22	158	3476
CA50	9	6.3	30	544	16320
	10	6.3	6	101	606
	11	6.3	10	379	3790
	12	6.3	1	151	151
	13	6.3	10	644	6440
	14	6.3	40	1200	48000
	15	6.3	20	681	13620
	16	6.3	10	56	560
	17	6.3	10	640	6400
	18	6.3	10	639	6390
	19	6.3	20	649	12980
	20	6.3	16	304	4864
	21	6.3	10	717	7170
	22	6.3	1	111	111
	23	6.3	10	214	2140
	24	6.3	4	91	364
	25	8.0	1	380	380
	26	8.0	3	560	1680
	27	8.0	2	340	680
	28	8.0	6	660	3960
	29	8.0	1	275	275
	30	8.0	3	387	1161
	31	8.0	2	323	646
	32	8.0	2	477	954
	33	8.0	2	485	970
	34	8.0	2	153	306
	35	8.0	2	158	316
	36	8.0	4	1023	4092
	37	8.0	4	254	1016
	38	8.0	4	665	2660
	39	8.0	1	360	360
	40	8.0	3	1062	3186
	41	8.0	1	835	835
	42	8.0	1	515	515
	43	8.0	3	875	2625
	44	8.0	4	230	920
	45	8.0	4	270	1080
	46	10.0	1	173	173
	47	10.0	1	162	162
	48	10.0	2	608	1216
	49	10.0	2	198	396
	50	10.0	2	140	280
	51	10.0	2	686	1372
	52	10.0	3	197	591
	53	10.0	2	192	384
	54	10.0	2	272	544
	55	10.0	1	162	162
	56	10.0	1	188	188
	57	10.0	1	112	112
	58	10.0	2	668	1336
	59	10.0	2	321	642
	60	10.0	2	401	802
	61	10.0	2	314	628
	62	10.0	2	375	750
	63	12.5	1	234	234
	64	12.5	2	482	964
	65	12.5	2	239	478
	66	12.5	4	635	2540
	67	12.5	2	750	1500
	68	12.5	2	555	1110
	69	12.5	2	365	730
	70	12.5	1	325	325
	71	12.5	2	1197	2394
	72	12.5	2	812	1624
	73	12.5	1	386	386
	74	12.5	5	568	2840
	75	12.5	3	625	1875
	76	12.5	2	809	1618
	77	12.5	1	338	338
	78	12.5	1	224	224
	79	12.5	1	192	192
	80	12.5	2	623	1246
	81	12.5	2	466	932
	82	12.5	2	640	1280
	83	12.5	2	513	1026
	84	12.5	2	663	1326
	85	12.5	2	264	528
	86	12.5	1	483	483
	87	12.5	2	673	1346
	88	12.5	1	265	265
	89	12.5	1	210	210
	90	12.5	2	1197	2394
	91	12.5	2	815	1630
	92	16.0	1	393	393
	93	16.0	3	1158	3474
	94	16.0	1	276	276
	95	16.0	1	321	321
	96	16.0	2	406	812
	97	16.0	2	440	880
	98	16.0	2	1192	2384
	99	20.0	1	410	410
	100	20.0	1	580	580
	101	20.0	2	1146	2292
	102	20.0	2	302	604

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1299.1	349.7
	8.0	286.2	124.2
	10.0	97.4	66
	12.5	320.4	339.5
	16.0	85.4	148.3
	20.0	38.9	105.4
CA60	5.0	1117.8	189.5
PESO TOTAL			
CA50	1133.1		
CA60	189.5		

Vol. de concreto total (C-25) = 18.96 m³
Área de forma total = 219.46 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS 1º PAVIMENTO 03/03

FOLHA:
40/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

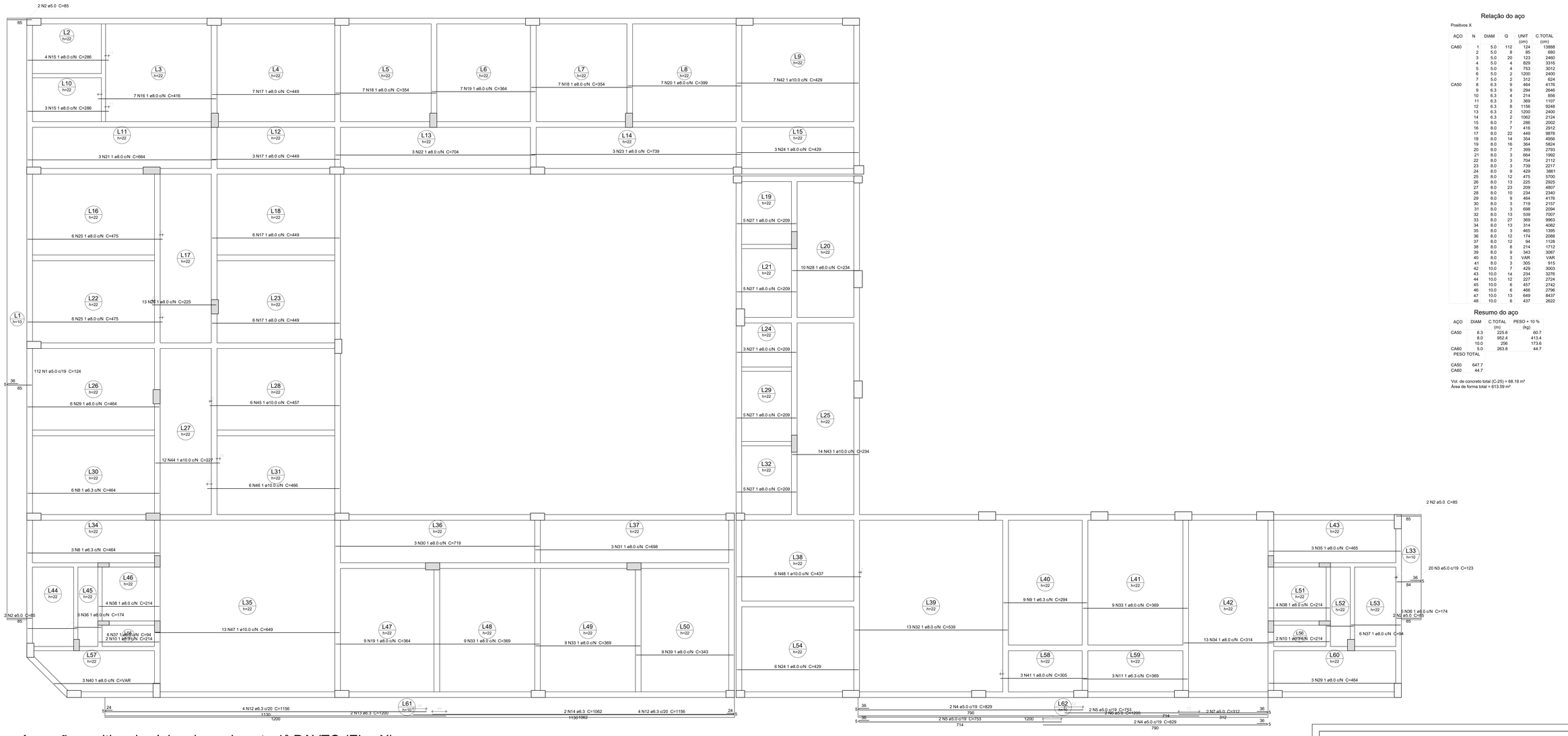
DATA:
07/2022

ESCALA:
INDICADA

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13

0,000 0,00 0,13

A0
1181x841mm



Armação positiva das lajes do pavimento 1° PAVTO (Eixo X)

escala 1:50

Relação do aço

Positivos X

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	112	124	13888
	2	5.0	8	85	680
	3	5.0	20	123	2460
	4	5.0	4	829	3316
	5	5.0	4	753	3012
	6	5.0	2	1200	2400
	7	5.0	2	312	624
CA50	8	6.3	9	464	4176
	9	6.3	9	294	2646
	10	6.3	4	214	856
	11	6.3	3	369	1107
	12	6.3	8	1156	9248
	13	6.3	2	1200	2400
	14	6.3	2	1062	2124
	15	8.0	7	286	2002
	16	8.0	7	416	2912
	17	8.0	22	449	9878
	18	8.0	14	354	4956
	19	8.0	16	364	5824
	20	8.0	7	399	2793
	21	8.0	3	664	1992
	22	8.0	3	704	2112
	23	8.0	3	739	2217
	24	8.0	9	429	3861
	25	8.0	12	475	5700
	26	8.0	13	225	2925
	27	8.0	23	209	4807
	28	8.0	10	234	2340
	29	8.0	9	464	4176
	30	8.0	3	719	2157
	31	8.0	3	698	2094
	32	8.0	13	539	7007
	33	8.0	27	369	9963
	34	8.0	13	314	4082
	35	8.0	3	465	1395
	36	8.0	12	174	2088
	37	8.0	12	94	1128
	38	8.0	8	214	1712
	39	8.0	9	343	3087
	40	8.0	3	VAR	VAR
	41	8.0	3	305	915
	42	10.0	7	429	3003
	43	10.0	14	234	3276
	44	10.0	12	227	2724
	45	10.0	6	457	2742
	46	10.0	6	466	2796
	47	10.0	13	649	8437
	48	10.0	6	437	2622

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	225.6	60.7
	8.0	952.4	413.4
	10.0	256	173.6
CA60	5.0	263.8	44.7

PESO TOTAL

CA50	647.7
CA60	44.7

Vol. de concreto total (C-25) = 68.19 m³
Área de forma total = 613.59 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
LAJES POSITIVAS (X) 1° PAVIMENTO

FOLHA:
41/48

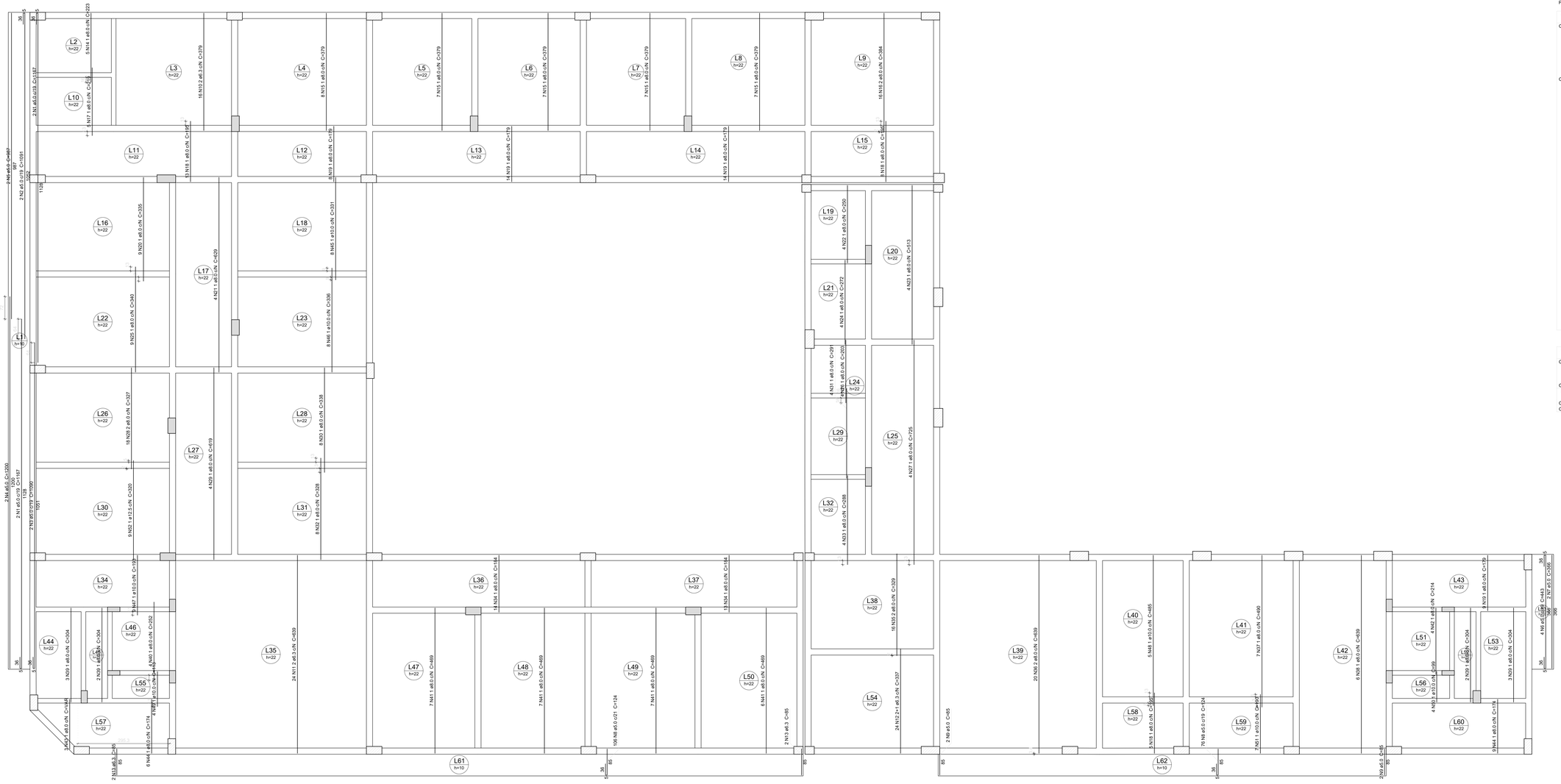
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PEN
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
OUTRO	0,0,13

A0
1181x841mm



Armação positiva das lajes do pavimento 1° PAVTO (Eixo Y)

escala 1:50

Relação do aço

Positivos Y

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	4	1167	4668
	2	5.0	2	1091	2182
	3	5.0	2	1090	2180
	4	5.0	2	1200	2400
	5	5.0	2	987	1974
	6	5.0	4	443	1772
	7	5.0	2	366	732
	8	5.0	182	124	22568
	9	5.0	4	85	340
CA50	10	6.3	16	379	6064
	11	6.3	24	639	15336
	12	6.3	24	337	8088
	13	6.3	4	85	340
	14	8.0	5	223	1115
	15	8.0	36	379	13644
	16	8.0	16	384	6144
	17	8.0	5	219	1095
	18	8.0	26	195	5070
	19	8.0	45	179	8055
	20	8.0	9	335	3015
	21	8.0	4	629	2516
	22	8.0	4	250	1000
	23	8.0	4	513	2052
	24	8.0	4	272	1088
	25	8.0	9	340	3060
	26	8.0	4	203	812
	27	8.0	4	725	2900
	28	8.0	18	327	5886
	29	8.0	4	619	2476
	30	8.0	8	338	2704
	31	8.0	4	291	1164
	32	8.0	8	328	2624
	33	8.0	4	288	1152
	34	8.0	27	184	4968
	35	8.0	16	329	5264
	36	8.0	20	639	12780
	37	8.0	7	490	3430
	38	8.0	6	639	3834
	39	8.0	10	304	3040
	40	8.0	4	252	1008
	41	8.0	27	469	12663
	42	8.0	4	214	856
	43	8.0	3	VAR	VAR
	44	8.0	15	174	2610
	45	10.0	8	331	2648
	46	10.0	8	336	2688
	47	10.0	9	193	1737
	48	10.0	5	485	2425
	49	10.0	4	113	452
	50	10.0	4	99	396
	51	10.0	7	190	1330
	52	12.5	9	320	2880

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	298.3	80.3
	8.0	1185.1	514.4
	10.0	116.8	79.2
	12.5	28.8	30.5
CA60	5.0	388.2	65.8
PESO TOTAL			
CA50	704.4		
CA60	65.8		

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: LAJES POSITIVAS (Y) 1° PAVIMENTO

FOLHA: 42/48

AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

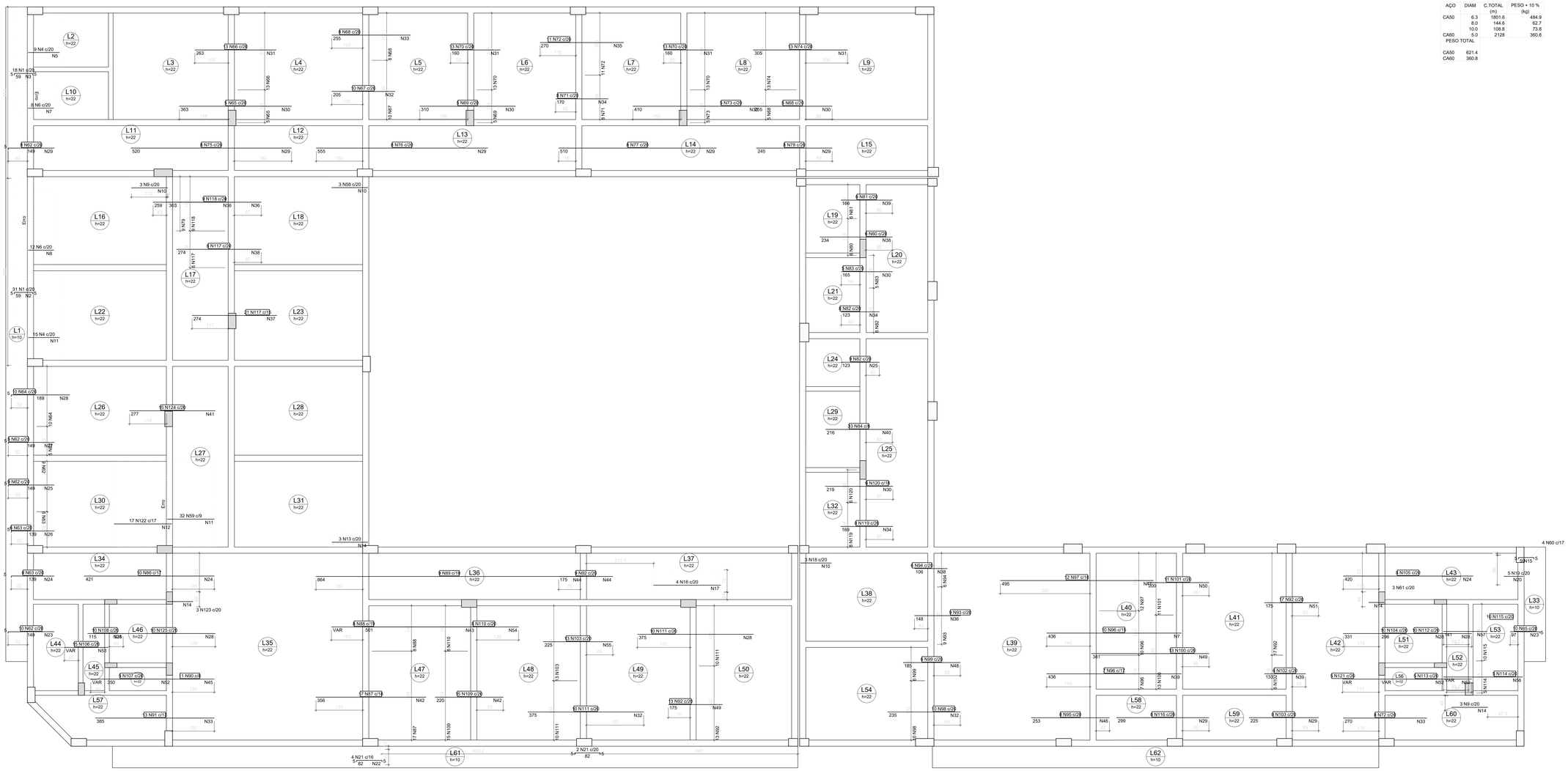
ESCALA: INDICADA

	PLOT
COR	PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13

DIMENSÕES EM: M

A0

1181x841mm



Armação negativa das lajes do pavimento 1° PAVTO (Eixo X)

escala 1:50

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1801.6	484.9
	8.0	144.6	62.7
	10.0	108.8	73.8
CA60	5.0	2128	360.8
PESO TOTAL			
CA50	621.4		
CA60	360.8		

Relação do aço

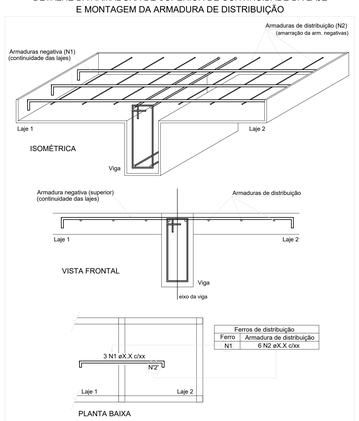
Negativos X

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	49	67	3283
	2	5.0	3	606	1818
	3	5.0	3	353	1059
	4	5.0	24	101	2424
	5	5.0	5	175	875
	6	5.0	20	82	1640
	7	5.0	27	144	3888
	8	5.0	5	240	1200
	9	5.0	6	117	702
	10	5.0	17	45	765
	11	5.0	13	288	3744
	12	5.0	10	278	2780
	13	5.0	3	116	348
	14	5.0	20	48	960
	15	5.0	3	53	159
	16	5.0	4	217	868
	17	5.0	11	72	792
	18	5.0	3	100	300
	19	5.0	5	62	310
	20	5.0	4	96	384
	21	5.0	6	90	540
	22	5.0	5	50	250
	23	5.0	13	193	2509
	24	5.0	49	168	8232
	25	5.0	15	173	2595
	26	5.0	7	125	875
	27	5.0	8	103	824
	28	5.0	84	205	17220
	29	5.0	128	165	21120
	30	5.0	89	106	9434
	31	5.0	46	259	11914
	32	5.0	42	202	8484
	33	5.0	47	163	7661
	34	5.0	25	154	3850
	35	5.0	14	211	2954
	36	5.0	37	186	6882
	37	5.0	14	310	4340
	38	5.0	32	119	3808
	39	5.0	38	120	4560
	40	5.0	11	263	2893
	41	5.0	14	308	4312
	42	5.0	29	298	8642
	43	5.0	24	VAR	VAR
	44	5.0	53	170	9010
	45	5.0	18	90	1620
	46	5.0	13	166	2158
	47	5.0	25	197	4925
	48	5.0	10	118	1180
	49	5.0	28	250	7000
	50	5.0	10	210	2100
	51	5.0	9	341	3069
	52	5.0	45	VAR	VAR
	53	5.0	7	VAR	VAR
	54	5.0	25	157	3925
	55	5.0	12	253	3036
	56	5.0	13	VAR	VAR
	57	5.0	7	192	1344
CA50	58	6.3	3	117	351
	59	6.3	32	152	4864
	60	6.3	4	57	228
	61	6.3	3	49	147
	62	6.3	32	153	4896
	63	6.3	14	143	2002
	64	6.3	10	193	1930
	65	6.3	5	363	1815
	66	6.3	13	263	3419
	67	6.3	10	205	2050
	68	6.3	13	255	3315
	69	6.3	5	310	1550
	70	6.3	26	160	4160
	71	6.3	8	170	1360
	72	6.3	19	270	5130
	73	6.3	5	410	2050
	74	6.3	13	305	3965
	75	6.3	8	520	4160
	76	6.3	8	555	4440
	77	6.3	8	510	4080
	78	6.3	8	245	1960
	79	6.3	9	259	2331
	80	6.3	6	234	1404
	81	6.3	6	166	996
	82	6.3	17	123	2091
	83	6.3	5	165	825
	84	6.3	33	216	7128
	85	6.3	10	101	1010
	86	6.3	10	421	4210
	87	6.3	17	358	6052
	88	6.3	8	VAR	VAR
	89	6.3	9	864	7776
	90	6.3	11	350	3850
	91	6.3	13	385	5005
	92	6.3	39	175	6825
	93	6.3	9	148	1332
	94	6.3	6	106	636
	95	6.3	8	253	2024
	96	6.3	17	436	7412
	97	6.3	12	495	5940
	98	6.3	10	235	2350
	99	6.3	6	185	1110
	100	6.3	13	381	4953
	101	6.3	11	200	2200
	102	6.3	6	133	798
	103	6.3	21	225	4725
	104	6.3	10	331	3310
	105	6.3	8	420	3360
	106	6.3	15	VAR	VAR
	107	6.3	5	VAR	VAR
	108	6.3	10	115	1150
	109	6.3	15	220	3300
	110	6.3	8	501	4008
	111	6.3	20	375	7500
	112	6.3	10	296	2960
	113	6.3	5	VAR	VAR
	114	6.3	5	VAR	VAR
	115	6.3	10	141	1410
	116	6.3	8	299	2392
	117	8.0	27	274	7398
	118	8.0	9	303	2727
	119	8.0	8	169	1352
	120	8.0	6	219	1314
	121	8.0	5	VAR	VAR
	122	10.0	17	186	3162
	123	10.0	3	83	249
	124	10.0	15	277	4155
	125	10.0	10	331	3310

Ferros de distribuição

Ferro	Armadura de distribuição
N1	3 N2 a5.0 c/20 C=606
N1	3 N3 a5.0 c/20 C=353
N4	5 N5 a5.0 c/20 C=175
N6	5 N7 a5.0 c/20 C=144
N6	5 N8 a5.0 c/20 C=240
N9	6 N10 a5.0 c/20 C=45
N58	6 N10 a5.0 c/20 C=45
N4	5 N11 a5.0 c/20 C=288
N59	8 N11 a5.0 c/20 C=288
N122	10 N12 a5.0 c/20 C=278
N13	6 N14 a5.0 c/20 C=48
N60	3 N15 a5.0 c/20 C=53
N123	5 N14 a5.0 c/20 C=48
N16	11 N17 a5.0 c/20 C=72
N18	5 N10 a5.0 c/20 C=45
N61	3 N14 a5.0 c/20 C=48
N19	4 N20 a5.0 c/20 C=96
N9	6 N14 a5.0 c/20 C=48
N21	5 N22 a5.0 c/20 C=50
N62	8 N23 a5.0 c/20 C=193
N63	7 N24 a5.0 c/20 C=168
N62	8 N25 a5.0 c/20 C=173
N63	7 N26 a5.0 c/20 C=125
N62	8 N27 a5.0 c/20 C=103
N64	10 N28 a5.0 c/20 C=205
N62	8 N29 a5.0 c/20 C=165
N65	19 N30 a5.0 c/20 C=106
N66	14 N31 a5.0 c/20 C=259
N67	11 N32 a5.0 c/20 C=202
N68	13 N33 a5.0 c/20 C=163
N69	16 N30 a5.0 c/20 C=106
N70	8 N31 a5.0 c/20 C=259
N71	9 N34 a5.0 c/20 C=154
N72	14 N35 a5.0 c/20 C=211
N73	21 N30 a5.0 c/20 C=106
N70	8 N31 a5.0 c/20 C=259
N68	13 N30 a5.0 c/20 C=106
N74	16 N31 a5.0 c/20 C=259
N75	26 N29 a5.0 c/20 C=165
N76	28 N29 a5.0 c/20 C=165
N77	26 N29 a5.0 c/20 C=165
N78	13 N29 a5.0 c/20 C=165
N79	13 N36 a5.0 c/20 C=186
N117	14 N37 a5.0 c/20 C=310
N117	14 N38 a5.0 c/20 C=119
N118	16 N36 a5.0 c/20 C=186
N80	12 N38 a5.0 c/20 C=119
N81	9 N39 a5.0 c/20 C=120
N82	7 N34 a5.0 c/20 C=154
N83	9 N30 a5.0 c/20 C=106
N82	7 N25 a5.0 c/20 C=173
N84	11 N40 a5.0 c/20 C=263
N119	9 N34 a5.0 c/20 C=154
N120	11 N30 a5.0 c/20 C=106
N124	14 N41 a5.0 c/20 C=308
N85	5 N23 a5.0 c/20 C=193
N86	21 N24 a5.0 c/20 C=168
N87	18 N42 a5.0 c/20 C=256
N88	24 N43 a5.0 c/20 C=VAR
N89	44 N44 a5.0 c/20 C=170
N125	17 N28 a5.0 c/20 C=205
N90	18 N45 a5.0 c/20 C=90
N91	20 N33 a5.0 c/20 C=163
N92	9 N44 a5.0 c/20 C=170
N93	8 N36 a5.0 c/20 C=186
N94	6 N38 a5.0 c/20 C=119
N95	13 N46 a5.0 c/20 C=166
N96	22 N39 a5.0 c/20 C=120
N96	22 N7 a5.0 c/20 C=144
N97	25 N47 a5.0 c/20 C=197
N98	12 N32 a5.0 c/20 C=202
N99	10 N48 a5.0 c/20 C=118
N100	19 N49 a5.0 c/20 C=250
N101	10 N50 a5.0 c/20 C=210
N102	7 N39 a5.0 c/20 C=120
N92	9 N51 a5.0 c/20 C=341
N103	12 N29 a5.0 c/20 C=165
N72	14 N33 a5.0 c/20 C=163
N121	17 N52 a5.0 c/20 C=VAR
N104	17 N28 a5.0 c/20 C=205
N105	21 N24 a5.0 c/20 C=168
N106	7 N53 a5.0 c/20 C=VAR
N107	13 N52 a5.0 c/20 C=VAR
N108	6 N28 a5.0 c/20 C=205
N109	11 N42 a5.0 c/20 C=298
N110	25 N54 a5.0 c/20 C=157
N111	19 N32 a5.0 c/20 C=202
N103	12 N55 a5.0 c/20 C=253
N92	9 N49 a5.0 c/20 C=250
N111	19 N28 a5.0 c/20 C=205
N112	15 N28 a5.0 c/20 C=205
N113	15 N52 a5.0 c/20 C=VAR
N114	13 N56 a5.0 c/20 C=VAR
N115	7 N57 a5.0 c/20 C=192
N116	15 N29 a5.0 c/20 C=165

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 aX.X c/xx

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
LAJES NEGATIVAS (X) 1° PAVIMENTO

FOLHA:
43/48

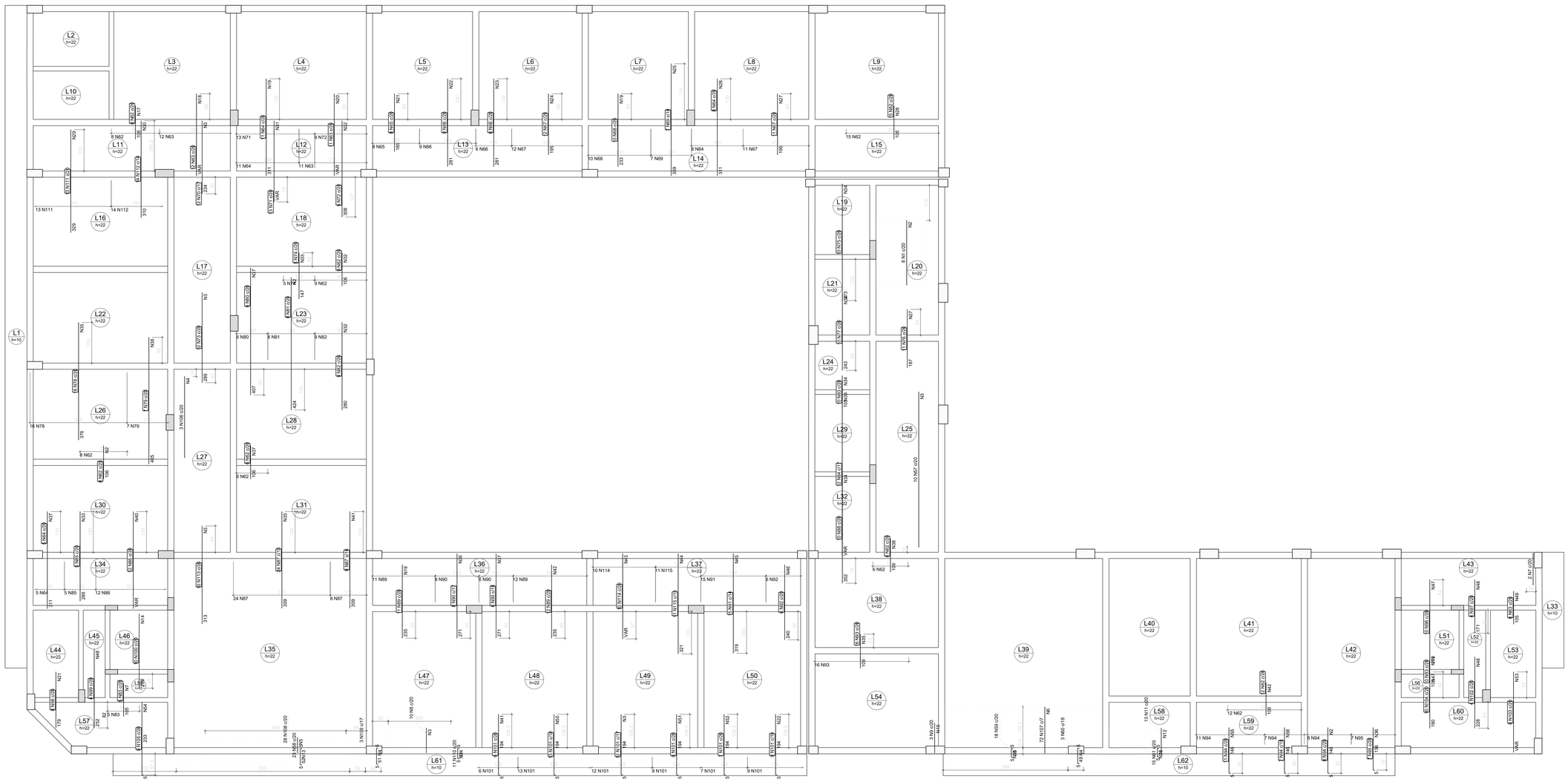
AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

COR	PLOT PENA
1	0,7
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/BRC	0,13

A0
1181x841mm



Armação negativa das lajes do pavimento 1° PAVTO (Eixo Y)

escala 1:50

Relação do aço

Negativos Y

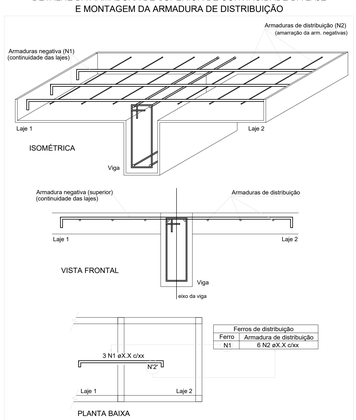
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	8	207	1656
	2	5.0	47	150	7050
	3	5.0	82	200	16400
	4	5.0	19	50	950
	5	5.0	3	450	1350
	6	5.0	12	500	6000
	7	5.0	8	102	816
	8	5.0	10	80	800
	9	5.0	3	95	285
	10	5.0	5	45	225
	11	5.0	13	79	1027
	12	5.0	4	250	1000
	13	5.0	3	555	1665
	14	5.0	20	202	4040
	15	5.0	2	349	698
	16	5.0	2	299	598
	17	5.0	6	154	924
	18	5.0	14	VAR	VAR
	19	5.0	40	210	8400
	20	5.0	14	VAR	VAR
	21	5.0	19	160	3040
	22	5.0	24	180	4320
	23	5.0	14	115	1610
	24	5.0	10	235	2350
	25	5.0	18	130	2340
	26	5.0	16	165	2640
	27	5.0	20	220	4400
	28	5.0	6	305	1830
	29	5.0	17	260	4420
	30	5.0	16	190	3040
	31	5.0	13	VAR	VAR
	32	5.0	36	175	6300
	33	5.0	23	100	2300
	34	5.0	56	195	10920
	35	5.0	41	310	12710
	36	5.0	42	140	5880
	37	5.0	57	110	6270
	38	5.0	6	113	678
	39	5.0	27	VAR	VAR
	40	5.0	16	VAR	VAR
	41	5.0	26	125	3250
	42	5.0	18	245	4410
	43	5.0	14	VAR	VAR
	44	5.0	16	145	2320
	45	5.0	16	208	3328
	46	5.0	12	122	1464
	47	5.0	23	203	4669
	48	5.0	34	85	2890
	49	5.0	6	163	978
	50	5.0	10	230	2300
	51	5.0	10	155	1550
	52	5.0	10	149	1490
	53	5.0	13	VAR	VAR
	54	5.0	12	185	2220
	55	5.0	8	228	1824
	56	5.0	8	127	1016
CA50	57	6.3	10	497	4970
	58	6.3	23	49	1127
	59	6.3	18	35	630
	60	6.3	3	56	168
	61	6.3	15	33	495
	62	6.3	64	106	6784
	63	6.3	23	VAR	VAR
	64	6.3	24	311	7464
	65	6.3	8	185	1480
	66	6.3	15	281	4215
	67	6.3	23	195	4485
	68	6.3	10	233	2330
	69	6.3	7	359	2513
	70	6.3	12	234	2808
	71	6.3	13	VAR	VAR
	72	6.3	9	308	2772
	73	6.3	10	289	2890
	74	6.3	5	147	735
	75	6.3	10	373	3730
	76	6.3	11	187	2057
	77	6.3	10	243	2430
	78	6.3	16	376	6016
	79	6.3	7	405	2835
	80	6.3	6	407	2442
	81	6.3	8	424	3392
	82	6.3	9	280	2520
	83	6.3	33	105	3465
	84	6.3	12	VAR	VAR
	85	6.3	5	286	1430
	86	6.3	12	VAR	VAR
	87	6.3	32	309	9888
	88	6.3	10	352	3520
	89	6.3	23	235	5405
	90	6.3	14	271	3794
	91	6.3	15	319	4785
	92	6.3	6	240	1440
	93	6.3	16	109	1744
	94	6.3	26	150	3900
	95	6.3	7	140	980
	96	6.3	10	273	2730
	97	6.3	4	171	684
	98	6.3	8	179	1432
	99	6.3	4	252	1008
	100	6.3	10	238	2380
	101	6.3	55	198	10890
	102	6.3	4	228	912
	103	6.3	8	VAR	VAR
	104	6.3	10	180	1800
	105	6.3	9	237	2133
	106	8.0	3	260	780
	107	8.0	72	148	10656
	108	8.0	28	58	1624
	109	8.0	3	57	171
	110	8.0	11	38	418
	111	8.0	13	329	4277
	112	8.0	14	310	4340
	113	8.0	10	313	3130
	114	8.0	10	VAR	VAR
	115	8.0	11	321	3531

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1572.1	423.2
	8.0	316.6	137.4
CA60	5.0	1866.8	316.5
PESO TOTAL			
CA50	560.6		
CA60	316.5		

Ferros de distribuição	
Ferro	Armadura de distribuição
N1	11 N2 ø5.0 c/20 C=150
N57	25 N3 ø5.0 c/20 C=200
N106	13 N4 ø5.0 c/20 C=50
N58	3 N5 ø5.0 c/20 C=450
N107	12 N6 ø5.0 c/13 C=500
N8	4 N3 ø5.0 c/20 C=200
N9	5 N10 ø5.0 c/20 C=45
N11	4 N12 ø5.0 c/20 C=250
N108	3 N13 ø5.0 c/20 C=555
N109	3 N4 ø5.0 c/20 C=50
N110	2 N14 ø5.0 c/20 C=202
N59	2 N15 ø5.0 c/20 C=349
N60	3 N4 ø5.0 c/20 C=50
N61	2 N16 ø5.0 c/20 C=299
N62	6 N17 ø5.0 c/20 C=154
N63	14 N18 ø5.0 c/20 C=VAR
N64	16 N19 ø5.0 c/20 C=210
N63	14 N20 ø5.0 c/20 C=VAR
N65	10 N21 ø5.0 c/20 C=160
N66	14 N22 ø5.0 c/20 C=180
N66	14 N23 ø5.0 c/20 C=115
N67	10 N24 ø5.0 c/20 C=235
N68	12 N19 ø5.0 c/20 C=210
N69	18 N25 ø5.0 c/20 C=130
N64	16 N26 ø5.0 c/20 C=165
N67	10 N27 ø5.0 c/20 C=220
N62	6 N28 ø5.0 c/20 C=305
N111	17 N29 ø5.0 c/20 C=260
N112	16 N30 ø5.0 c/20 C=190
N70	12 N3 ø5.0 c/20 C=200
N71	13 N31 ø5.0 c/20 C=VAR
N72	16 N32 ø5.0 c/20 C=175
N73	15 N3 ø5.0 c/20 C=200
N74	8 N33 ø5.0 c/20 C=100
N62	6 N32 ø5.0 c/20 C=175
N75	19 N34 ø5.0 c/20 C=195
N76	10 N27 ø5.0 c/20 C=220
N77	13 N34 ø5.0 c/20 C=195
N78	19 N35 ø5.0 c/20 C=310
N79	21 N36 ø5.0 c/20 C=140
N80	21 N37 ø5.0 c/20 C=110
N81	22 N2 ø5.0 c/20 C=150
N82	14 N32 ø5.0 c/20 C=175
N83	6 N34 ø5.0 c/20 C=195
N62	6 N38 ø5.0 c/20 C=113
N62	6 N2 ø5.0 c/20 C=150
N113	16 N3 ø5.0 c/20 C=200
N62	6 N37 ø5.0 c/20 C=110
N84	27 N39 ø5.0 c/20 C=VAR
N64	16 N37 ø5.0 c/20 C=110
N85	15 N33 ø5.0 c/20 C=100
N86	16 N40 ø5.0 c/20 C=VAR
N87	16 N35 ø5.0 c/20 C=310
N87	16 N41 ø5.0 c/20 C=125
N88	18 N34 ø5.0 c/20 C=195
N89	12 N19 ø5.0 c/20 C=210
N90	14 N36 ø5.0 c/20 C=140
N90	14 N37 ø5.0 c/20 C=110
N89	12 N42 ø5.0 c/20 C=245
N114	14 N43 ø5.0 c/20 C=VAR
N115	16 N44 ø5.0 c/20 C=145
N91	16 N45 ø5.0 c/20 C=208
N92	12 N46 ø5.0 c/20 C=122
N93	6 N35 ø5.0 c/20 C=310
N96	6 N42 ø5.0 c/20 C=245
N94	8 N2 ø5.0 c/20 C=150
N95	7 N36 ø5.0 c/20 C=140
N96	14 N47 ø5.0 c/20 C=203
N97	9 N48 ø5.0 c/20 C=85
N83	6 N49 ø5.0 c/20 C=163
N98	9 N21 ø5.0 c/20 C=160
N99	13 N48 ø5.0 c/20 C=85
N100	12 N14 ø5.0 c/20 C=202
N101	10 N41 ø5.0 c/20 C=125
N101	10 N50 ø5.0 c/20 C=230
N101	10 N3 ø5.0 c/20 C=200
N101	10 N51 ø5.0 c/20 C=155
N101	10 N52 ø5.0 c/20 C=149
N101	10 N22 ø5.0 c/20 C=180
N83	6 N14 ø5.0 c/20 C=202
N102	12 N48 ø5.0 c/20 C=85
N103	13 N53 ø5.0 c/20 C=VAR
N83	6 N7 ø5.0 c/20 C=102
N104	9 N47 ø5.0 c/20 C=203
N105	12 N54 ø5.0 c/20 C=185
N84	8 N55 ø5.0 c/20 C=228
N94	8 N56 ø5.0 c/20 C=127

DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Ferros de distribuição	
Ferro	Armadura de distribuição
N1	6 N2 ø/X.X c/xx

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,05
8	0,1
9	0,13

DIMENSÕES EM CM

A0

1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

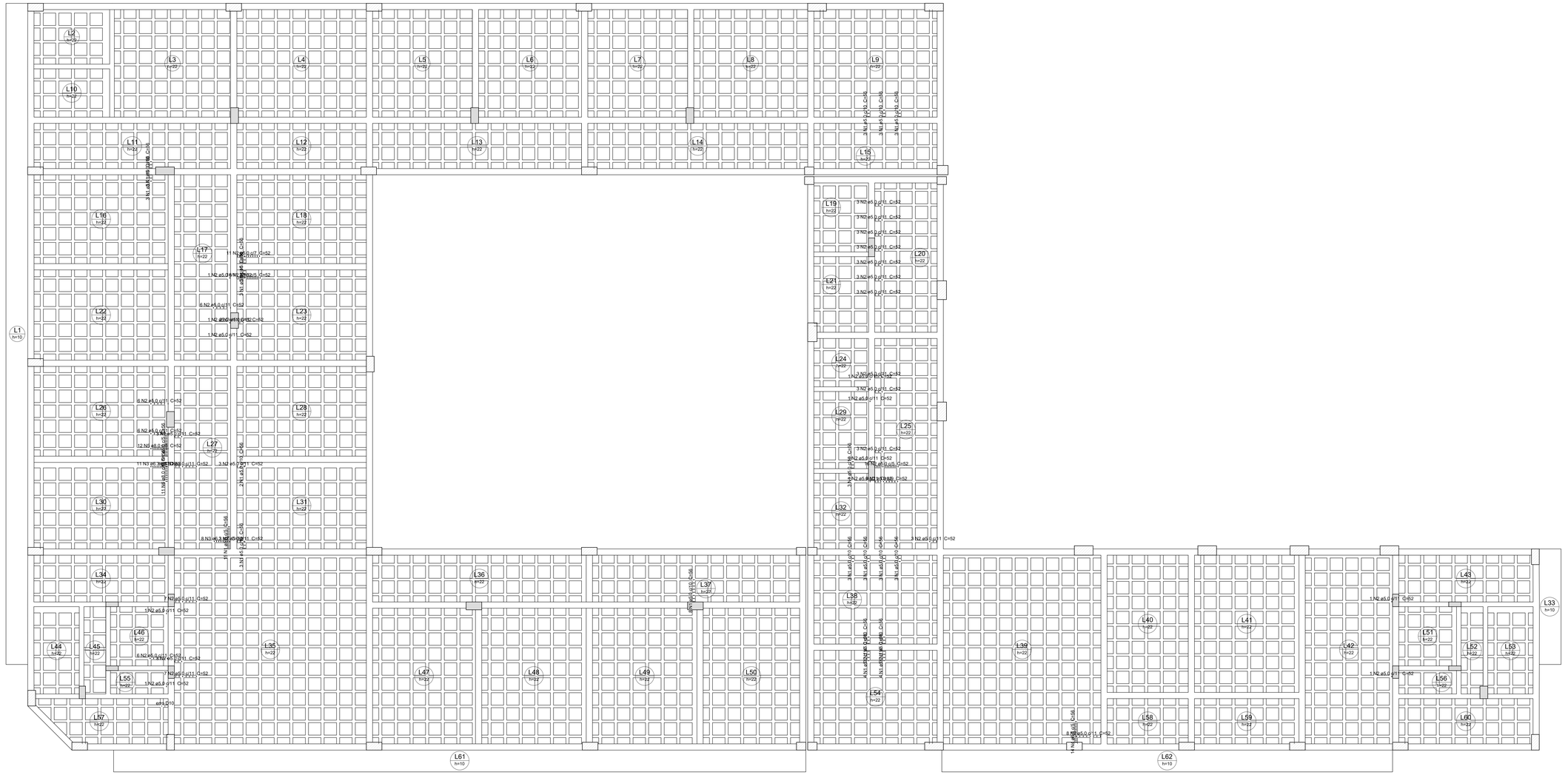
ASSUNTO:
LAJES NEGATIVAS (Y) 1º PAVIMENTO

FOLHA:
44/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA



Detalhamento de punção e cisalhamento das lajes do pavimento 1° PAVTO (Nível 1091)

escala 1:50

Detalhe dos estribos (esc.1:30)

L9=L11=L16=L37=L38=L54



L17=L20=L24=L25=L32=L35=L42=L46 =L55

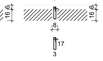


L18=L23=L26=L27=L29=L30=L31=L39

Direção X



Direção Y



Relação do aço

Punção

AÇO	N.	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	93	56	5208
	2	5.0	163	52	8476
CA50	3	6.3	19	52	988
	4	6.3	14	56	784
	5	8.0	12	52	624
	6	8.0	11	56	616

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	17.8	4.8
	8.0	12.4	5.4
CA60	5.0	136.9	23.2

PESO TOTAL

CA50	10.2
CA60	23.2

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO: DETALHAMENTOS LAJES 1° PAVIMENTO

FOLHA: 45/48

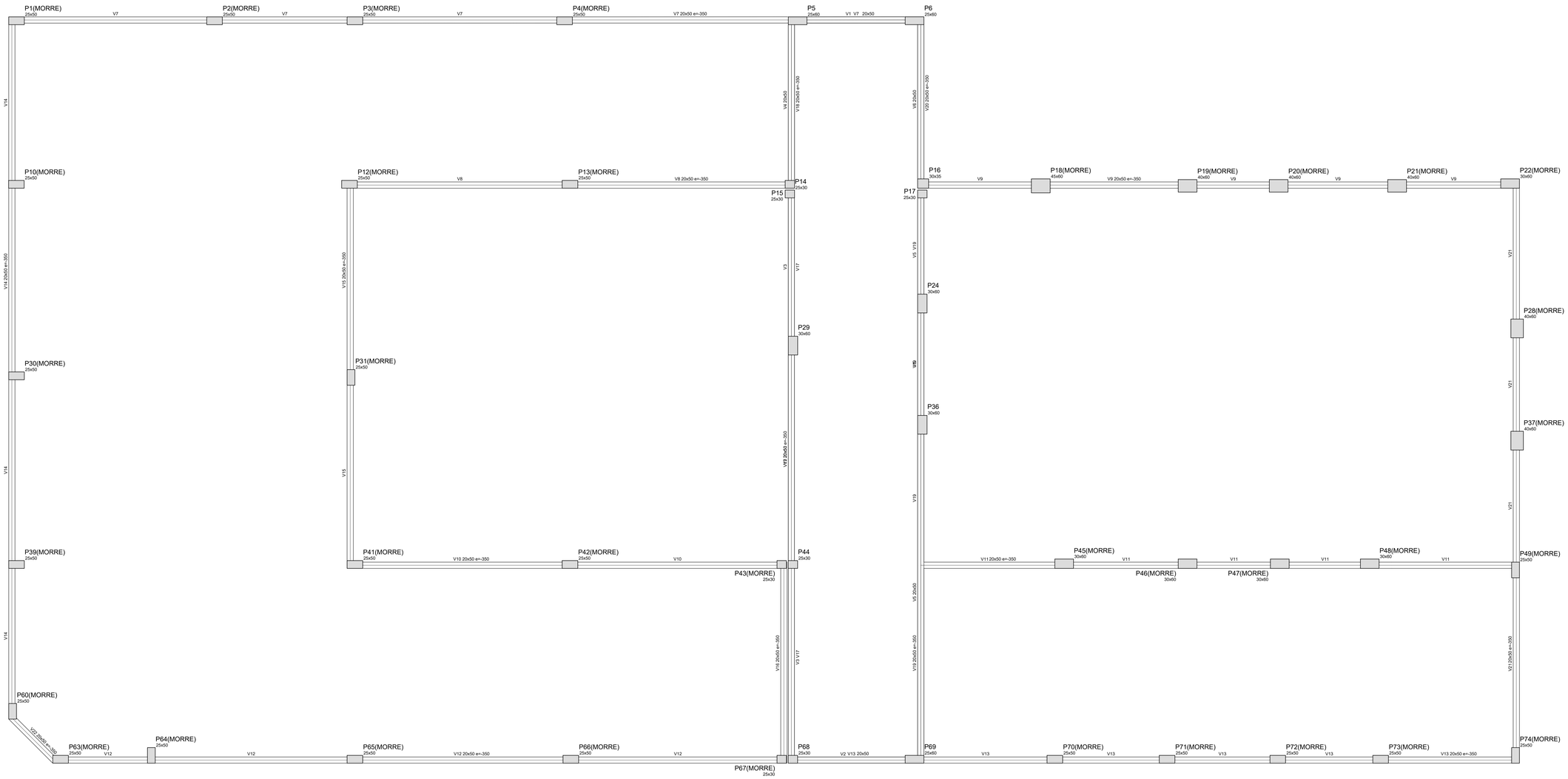
AUTOR DO PROJETO: Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA: 07/2022

ESCALA: INDICADA

COR	PLOT PENA
1	7 0,1
2	7 0,2
3	7 0,25
4	7 0,35
5	7 0,4
6	7 0,6
7	7 0,25
8	7 0,1
9	7 0,13
0/90	C 0,0 0,13

A0
1181x841mm



Forma do pavimento COBERTURA

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	20x50	0	1691
V2	20x50	0	1691
V3	20x50	0	1691
V4	20x50	0	1691
V5	20x50	0	1691
V6	20x50	0	1691
V7	20x50	-350	1341
V8	20x50	-350	1341
V9	20x50	-350	1341
V10	20x50	-350	1341
V11	20x50	-350	1341
V12	20x50	-350	1341
V13	20x50	-350	1341
V14	20x50	-350	1341
V15	20x50	-350	1341
V16	20x50	-350	1341
V17	20x50	-350	1341
V18	20x50	-350	1341
V19	20x50	-350	1341
V20	20x50	-350	1341
V21	20x50	-350	1341
V22	20x50	-350	1341

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	25 x 50	-350	1341
P2	25 x 50	-350	1341
P3	25 x 50	-350	1341
P4	25 x 50	-350	1341
P5	25 x 60	0	1691
P6	25 x 60	0	1691
P10	25 x 50	-350	1341
P12	25 x 50	-350	1341
P13	25 x 50	-350	1341
P14	25 x 30	0	1691
P15	25 x 30	0	1691
P16	30 x 35	0	1691
P17	25 x 30	0	1691
P18	45 x 60	-350	1341
P19	40 x 60	-350	1341
P20	40 x 60	-350	1341
P21	40 x 60	-350	1341
P22	30 x 60	-350	1341
P24	30 x 60	0	1691
P28	40 x 60	-350	1341
P29	30 x 60	0	1691
P30	25 x 50	-350	1341
P31	25 x 50	-350	1341
P36	30 x 60	0	1691
P37	40 x 60	-350	1341
P39	25 x 50	-350	1341
P41	25 x 50	-350	1341
P42	25 x 50	-350	1341
P43	25 x 30	-350	1341
P44	25 x 30	0	1691
P45	30 x 60	-350	1341
P46	30 x 60	-350	1341
P47	30 x 60	-350	1341
P48	30 x 60	-350	1341
P49	25 x 50	-350	1341
P60	25 x 50	-350	1341
P63	25 x 50	-350	1341
P64	25 x 50	-350	1341
P65	25 x 50	-350	1341
P66	25 x 50	-350	1341
P67	25 x 30	0	1691
P68	25 x 30	0	1691
P69	25 x 60	0	1691
P70	25 x 50	-350	1341
P71	25 x 50	-350	1341
P72	25 x 50	-350	1341
P73	25 x 50	-350	1341
P74	25 x 50	-350	1341

Legenda dos Pilares
Pilar que morre
Pilar que passa
Pilar que nasce
Pilar com mudança de seção

PLOT	
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
0/080	0,13

A0
1181x841mm

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
FORMA PAVIMENTO COBERTURA

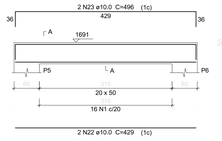
FOLHA:
46/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

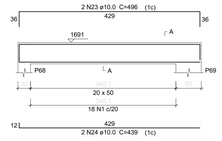
V1
ESC 1:50



SEÇÃO A-A
ESC 1:25



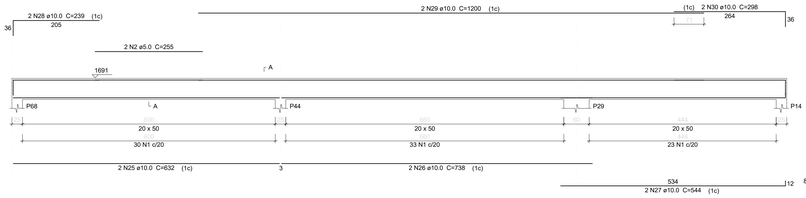
V2
ESC 1:50



SEÇÃO A-A
ESC 1:25

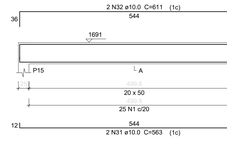


V3
ESC 1:50



SEÇÃO A-A
ESC 1:25

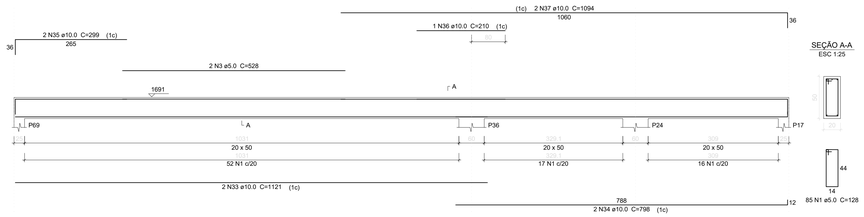
V4
ESC 1:50



SEÇÃO A-A
ESC 1:25

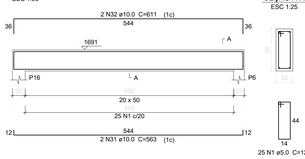


V5
ESC 1:50



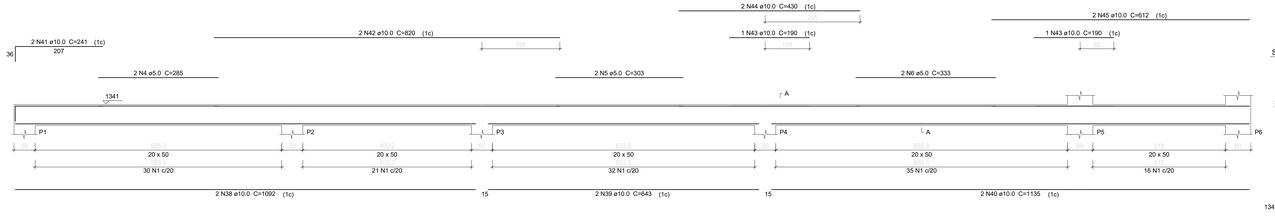
SEÇÃO A-A
ESC 1:25

V6
ESC 1:50



SEÇÃO A-A
ESC 1:25

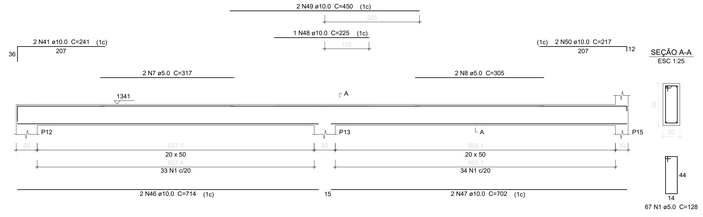
V7
ESC 1:50



SEÇÃO A-A
ESC 1:25

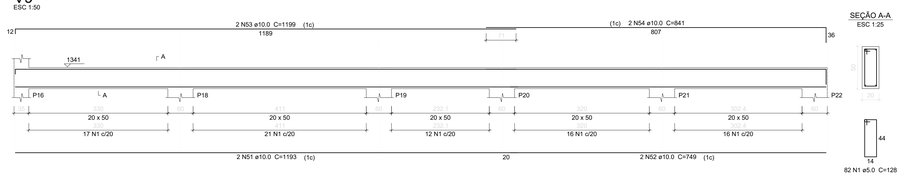


V8
ESC 1:50



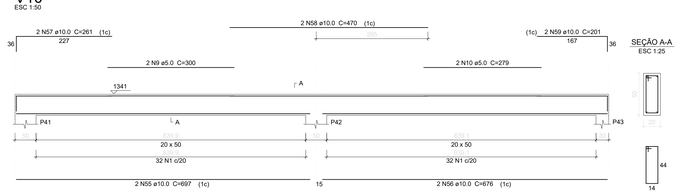
SEÇÃO A-A
ESC 1:25

V9
ESC 1:50



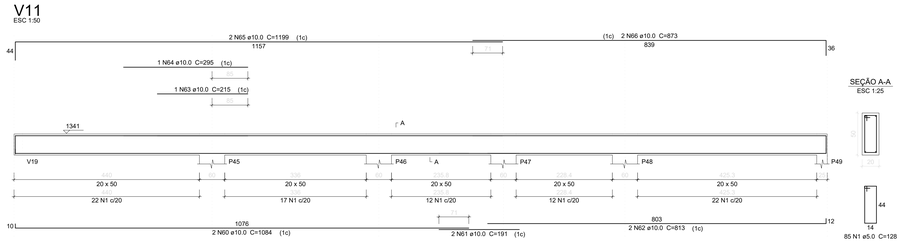
SEÇÃO A-A
ESC 1:25

V10
ESC 1:50



SEÇÃO A-A
ESC 1:25

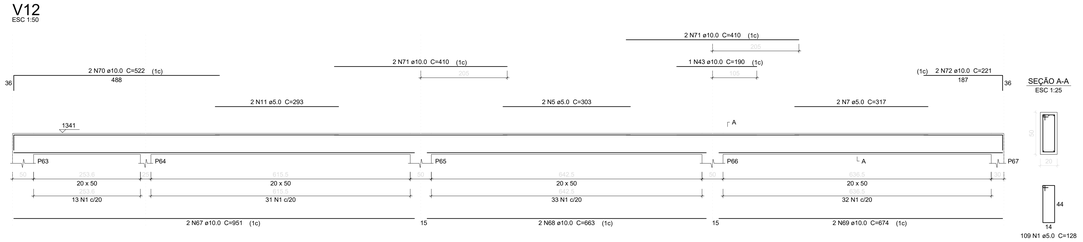
V11
ESC 1:50



SEÇÃO A-A
ESC 1:25

64 N1 ø5.0 C=128

V12
ESC 1:50



SEÇÃO A-A
ESC 1:25

Relação do aço

V1		V2		V3	
V4		V5		V6	
V7		V8		V9	
V10		V11		V12	
V13		V14		V15	
V16		V17		V18	
V19		V20		V21	
V22					

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1412	128	180736
	2	5.0	4	255	1020
	3	5.0	2	528	1056
	4	5.0	2	285	570
	5	5.0	4	303	1212
	6	5.0	2	333	666
	7	5.0	4	317	1268
	8	5.0	2	305	610
	9	5.0	2	300	600
	10	5.0	2	279	558
	11	5.0	2	293	586
	12	5.0	2	265	530
	13	5.0	2	240	480
	14	5.0	2	260	520
	15	5.0	2	295	590
	16	5.0	2	238	476
	17	5.0	2	508	1016
CA50	18	6.3	2	91	182
	19	8.0	6	158	948
	20	8.0	4	560	2240
	21	8.0	2	160	320
	22	10.0	2	429	858
	23	10.0	4	496	1984
	24	10.0	2	439	878
	25	10.0	4	632	2528
	26	10.0	4	738	2952
	27	10.0	4	544	2176
	28	10.0	2	239	478
	29	10.0	2	1200	2400
	30	10.0	2	298	596
	31	10.0	8	563	4504
	32	10.0	4	611	2444
	33	10.0	4	1121	4484
	34	10.0	4	798	3192
	35	10.0	2	299	598
	36	10.0	1	210	210
	37	10.0	2	1094	2188
	38	10.0	2	1092	2184
	39	10.0	2	643	1286
	40	10.0	2	1135	2270
	41	10.0	4	241	964
	42	10.0	2	820	1640
	43	10.0	4	190	760
	44	10.0	2	430	860
	45	10.0	2	612	1224
	46	10.0	2	714	1428
	47	10.0	2	702	1404
	48	10.0	2	225	450
	49	10.0	4	450	1800
	50	10.0	2	217	434
	51	10.0	2	1193	2386
	52	10.0	2	749	1498
	53	10.0	4	1199	4796
	54	10.0	2	841	1682
	55	10.0	2	697	1394
	56	10.0	2	676	1352
	57	10.0	2	261	522
	58	10.0	2	470	940
	59	10.0	2	201	402
	60	10.0	2	1084	2168
	61	10.0	2	191	382
	62	10.0	2	813	1626
	63	10.0	1	215	215
	64	10.0	1	295	295
	65	10.0	2	1199	2398
	66	10.0	2	873	1746
	67	10.0	2	951	1902
	68	10.0	2	663	1326
	69	10.0	2	674	1348
	70	10.0	2	522	1044
	71	10.0	4	410	1640
	72	10.0	2	221	442
	73	10.0	2	837	1674
	74	10.0	2	1015	2030
	75	10.0	2	427	854
	76	10.0	2	1102	2204
	77	10.0	2	225	450
	78	10.0	2	1096	2192
	79	10.0	2	1146	2292
	80	10.0	2	702	1404
	81	10.0	2	390	780
	82	10.0	2	743	1486
	83	10.0	2	595	1190
	84	10.0	2	614	1228
	85	10.0	4	199	796
	86	10.0	2	644	1288
	87	10.0	4	219	876
	88	10.0	1	115	115
	89	10.0	2	860	1720
	90	10.0	1	463	463
	91	10.0	2	1070	2140
	92	10.0	2	885	1770
	93	10.0	2	1198	2396
	94	10.0	2	810	1620
	95	10.0	2	233	466
	96	10.0	2	281	562
	97	12.5	2	777	1554
	98	12.5	1	146	146
	99	12.5	1	226	226
	100	12.5	2	326	652
	101	12.5	1	210	210
	102	12.5	1	300	300
	103	12.5	2	1066	2132

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	1.9	0.5
	8.0	35.1	15.2
	10.0	1126.8	764.1
	12.5	52.2	55.3
CA60	5.0	1925	326.4
PESO TOTAL			
CA50	835.2		
CA60	326.4		

Vol. de concreto total (C-25) = 31.02 m³
Área de forma total = 372.3 m²

CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO COBERTURA 01/02

FOLHA:
47/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

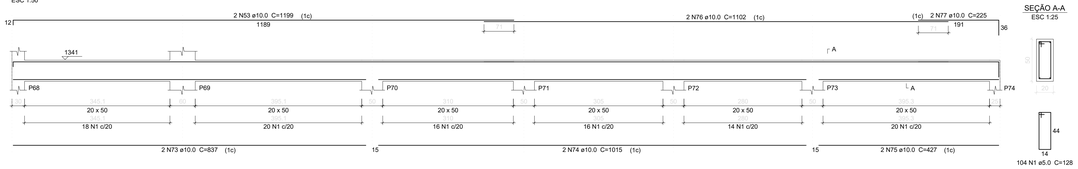
DATA:
07/2022

ESCALA:
INDICADA

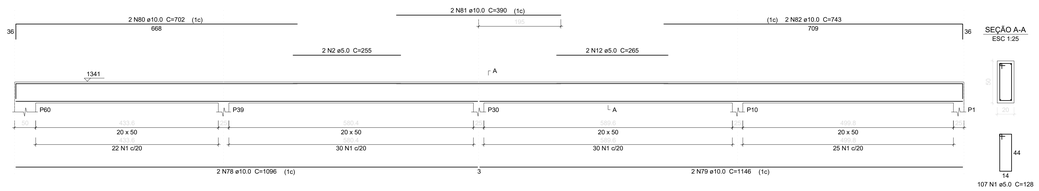
	PLOT	
COR	PEN	
1	7	0,1
2	7	0,2
3	7	0,25
4	7	0,35
5	7	0,4
6	7	0,6
7	7	0,25
8	7	0,7
9	7	0,13
QUÍRO	C.O	0,13

A0
1181x841mm

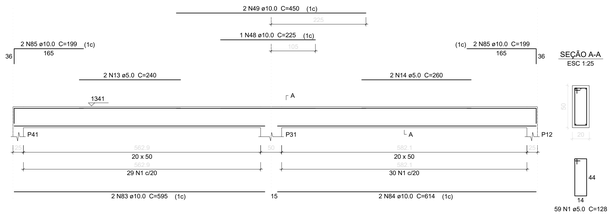
V13
ESC 1:50



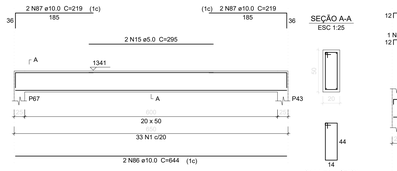
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ESC 1:50



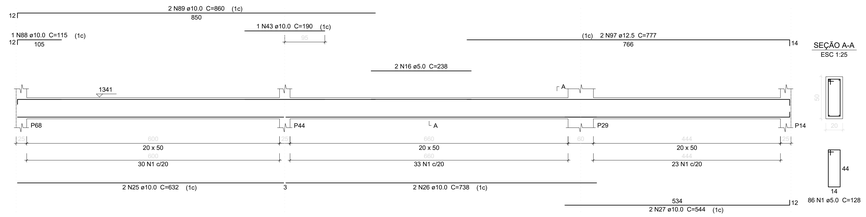
V15
ESC 1:50



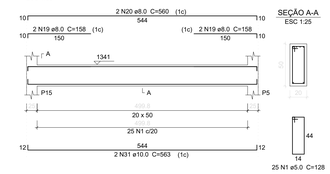
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ESC 1:50



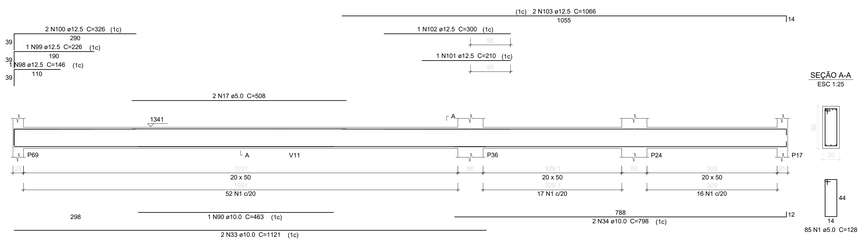
V17
ESC 1:50



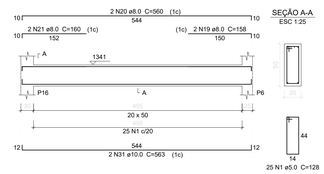
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ESC 1:50



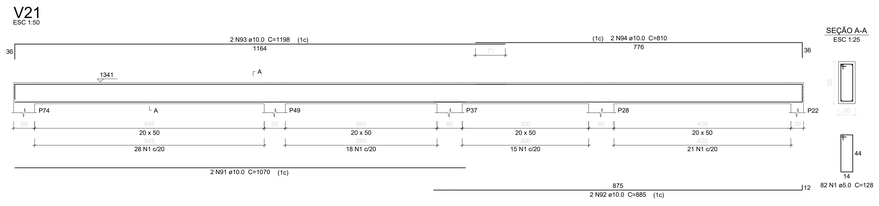
V19
ESC 1:50



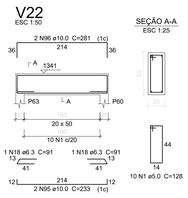
V20
ESC 1:50



V21
ESC 1:50



V22
ESC 1:50



CÂMARA MUNICIPAL DE CARMO DO CAJURU

PROJETO ESTRUTURAL

ASSUNTO:
VIGAS PAVIMENTO COBERTURA 02/02

FOLHA:
48/48

AUTOR DO PROJETO:
Eng civil: Daniel Eloi CREA-MG: 232103/D

DATA:
07/2022

ESCALA:
INDICADA

	PLOT
COR	PENA
1	0,1
2	0,2
3	0,25
4	0,35
5	0,4
6	0,6
7	0,25
8	0,1
9	0,13
DIVERSOS	0,13

A0
1181x841mm