

ANEXO 17 - 08



TRIBUNAL DE JUSTIÇA DO ESTADO DO PIAUÍ
SUPERINTENDÊNCIA DE ENGENHARIA E ARQUITETURA

PROJETOS COMPLEMENTARES EXECUTIVOS
ESTRUTURAL

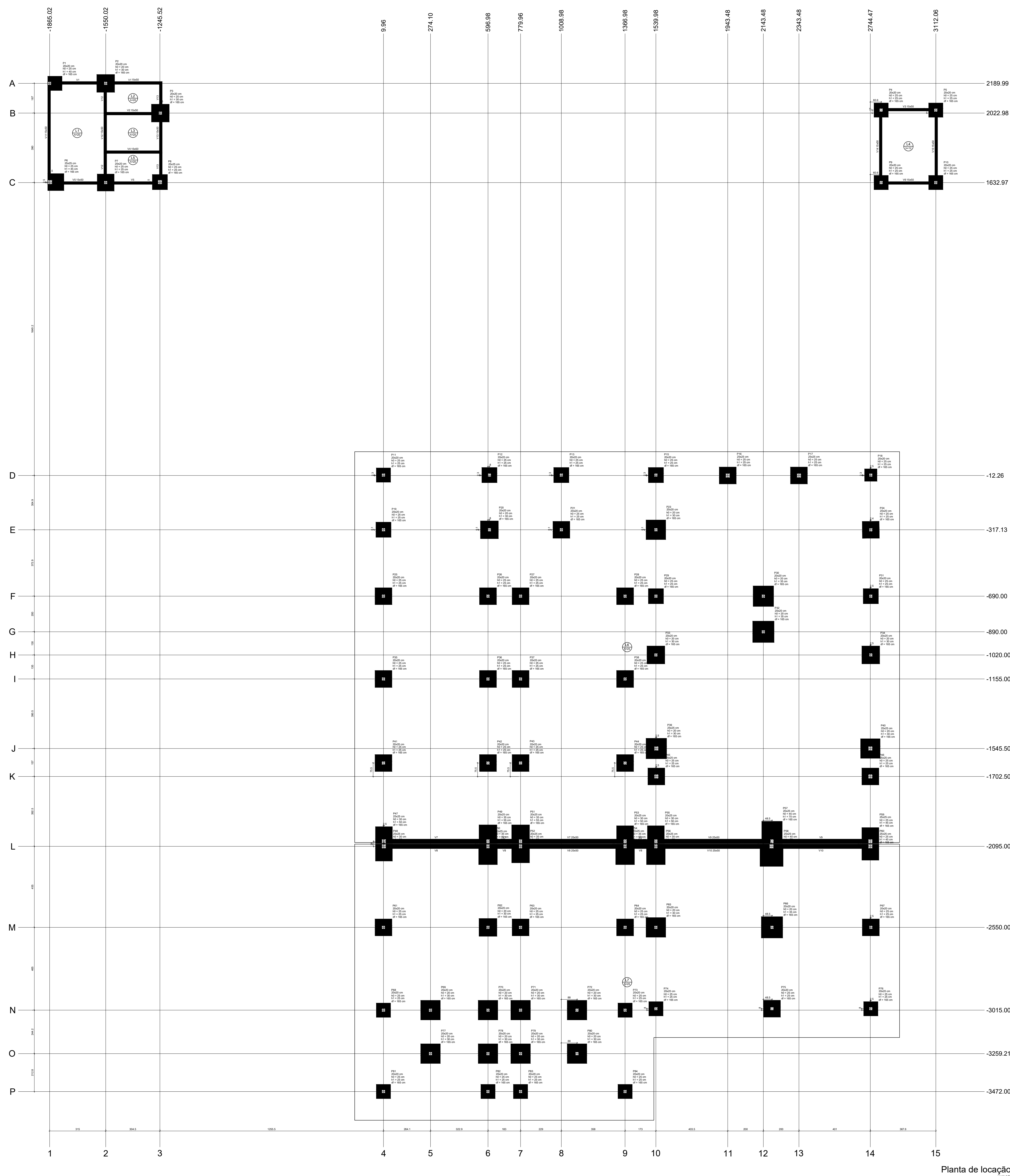
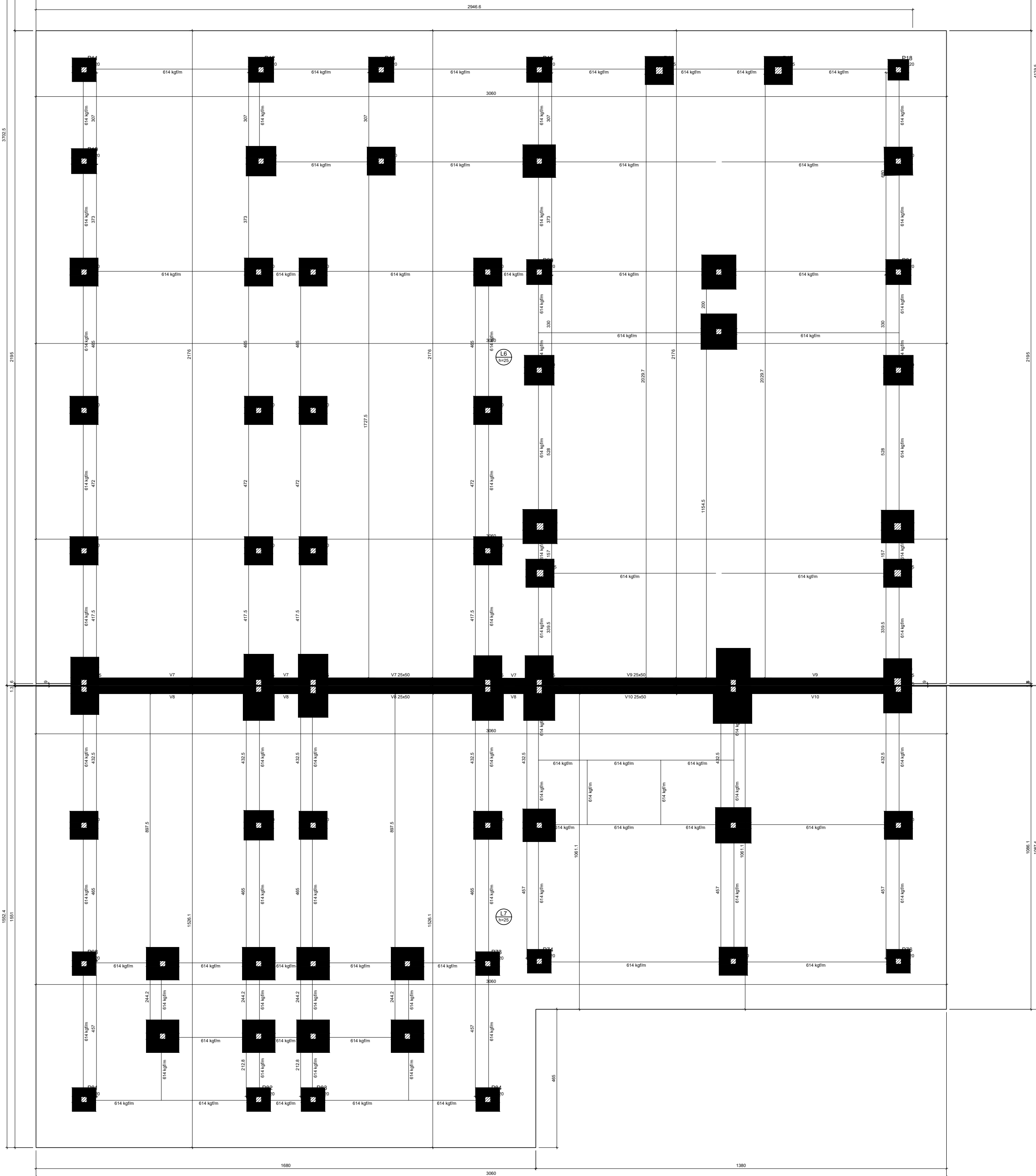
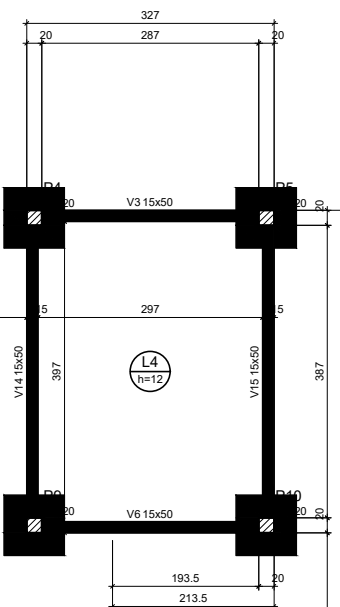
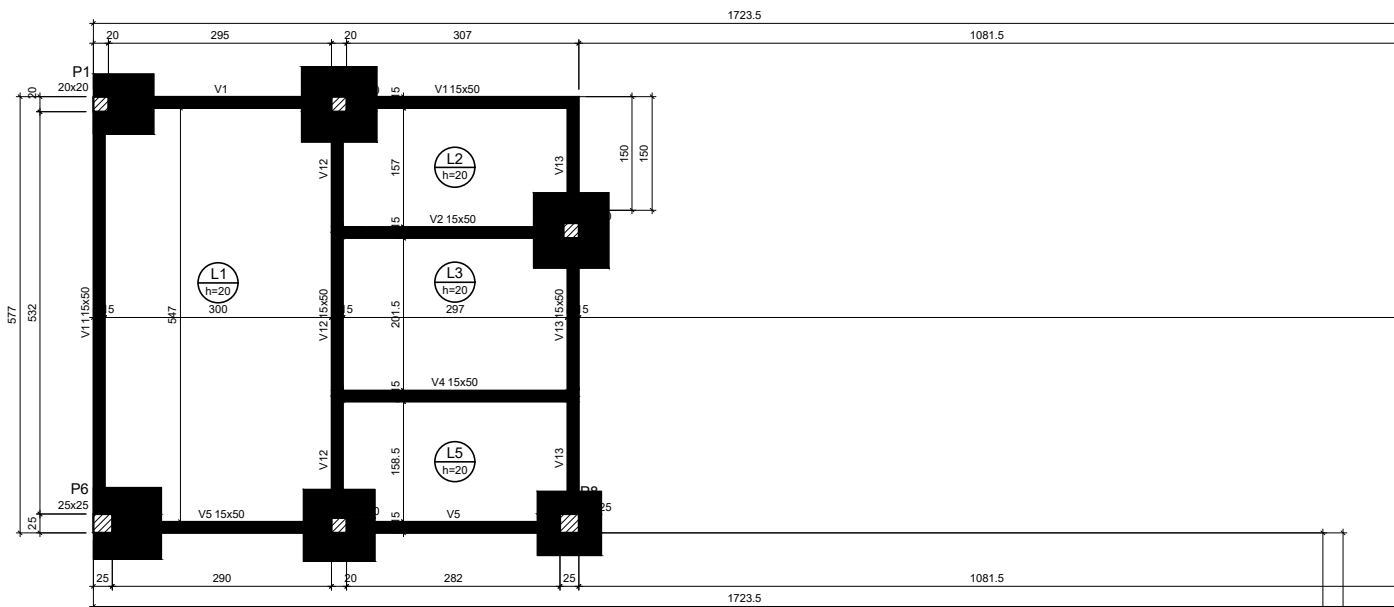


Tabela de Cargas		Tabela de Cargas	
Item	Valor	Item	Valor
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4	1,5	19	1,5
5	1,5	20	1,5
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12	1,5	27	1,5
13	1,5	28	1,5
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15	1,5	30	1,5
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18	1,5	33	1,5
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20	1,5	35	1,5
21	1,5	36	1,5
22	1,5	37	1,5
23	1,5	38	1,5
24	1,5	39	1,5
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110	1,5	125	1,5
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112	1,5	127	1,5
113	1,5	128	1,5
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338	1,5	353	1,5
339	1,5	354	1,5
340	1,5	355	1,5
341	1,5	356	1,5
342	1,		



Forma do pavimento Térreo (Nível 0)

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x50	0	0
V2	15x50	0	0
V3	15x50	0	0
V4	15x50	0	0
V5	15x50	0	0
V6	15x50	0	0
V7	25x50	0	0
V8	25x50	0	0
V9	25x50	0	0
V10	25x50	0	0
V11	15x50	0	0
V12	15x50	0	0
V13	15x50	0	0
V14	15x50	0	0
V15	15x50	0	0

Lajes								
Dados					Sobrecarga (kgf/m²)			
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional	Acidental	Localizada
L1	Maciça	20	0	0	500	154	250	-
L2	Maciça	20	0	0	500	154	250	-
L3	Maciça	20	0	0	500	154	250	-
L4	Maciça	12	0	0	300	154	250	-
L5	Maciça	20	0	0	500	154	250	-
L6	Maciça	25	0	0	625	154	250	sim
L7	Maciça	25	0	0	625	154	250	sim

Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm²)
Vigas	250	241500
Pilares	250	241500
Radier	300	283384
Sapatas	250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x20	0	0
P2	20x20	0	0
P3	20x20	0	0
P4	20x20	0	0
P5	20x20	0	0
P6	25x25	0	0
P7	20x20	0	0
P8	25x25	0	0
P9	20x20	0	0
P10	20x20	0	0
P11	20x20	0	0
P12	20x20	0	0
P13	20x20	0	0
P15	20x20	0	0
P16	25x25	0	0
P17	25x25	0	0
P18	20x20	0	0
P19	20x20	0	0
P20	20x20	0	0
P21	20x20	0	0
P23	20x20	0	0
P24	20x20	0	0
P25	20x20	0	0
P26	20x20	0	0
P27	20x20	0	0
P28	20x20	0	0
P29	20x20	0	0
P30	20x20	0	0
P31	20x20	0	0
P32	20x20	0	0
P33	20x20	0	0
P34	20x20	0	0
P35	20x20	0	0
P36	20x20	0	0
P37	20x20	0	0
P38	20x20	0	0
P39	25x25	0	0
P40	25x25	0	0
P41	20x20	0	0
P42	20x20	0	0
P43	20x20	0	0
P44	20x20	0	0
P45	25x25	0	0
P46	25x25	0	0
P47	25x25	0	0
P48	25x25	0	0
P49	20x25	0	0
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P57	20x25	0	0
P58	25x25	0	0
P59	25x25	0	0
P60	25x25	0	0
P61	20x20	0	0
P62	20x20	0	0
P63	20x20	0	0
P64	20x20	0	0
P65	20x20	0	0
P66	20x20	0	0
P67	20x20	0	0
P68	20x20	0	0
P69	20x20	0	0
P70	20x20	0	0
P71	20x20	0	0
P72	20x20	0	0
P73	20x20	0	0
P74	20x20	0	0
P75	20x20	0	0
P76	20x20	0	0
P77	20x20	0	0
P78	20x20	0	0
P79	20x20	0	0
P80	20x20	0	0
P81	20x20	0	0
P82	20x20	0	0
P83	20x20	0	0
P84	20x20	0	0

Legenda dos pilares	
	Pilar que passa
	Pilar com mudança de seção

Legenda das vigas e paredes	
	Viga

AB PROJETOS E CONSULTORIA LTDA

Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra

CONSTRUÇÃO DO FORUM DE PIO IX

Endereço

Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Pto IX - Piauí

Coordenador do projeto

Planta Forma do Nível Térreo

Responsável Técnico

Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD

Jean Carlos

Data

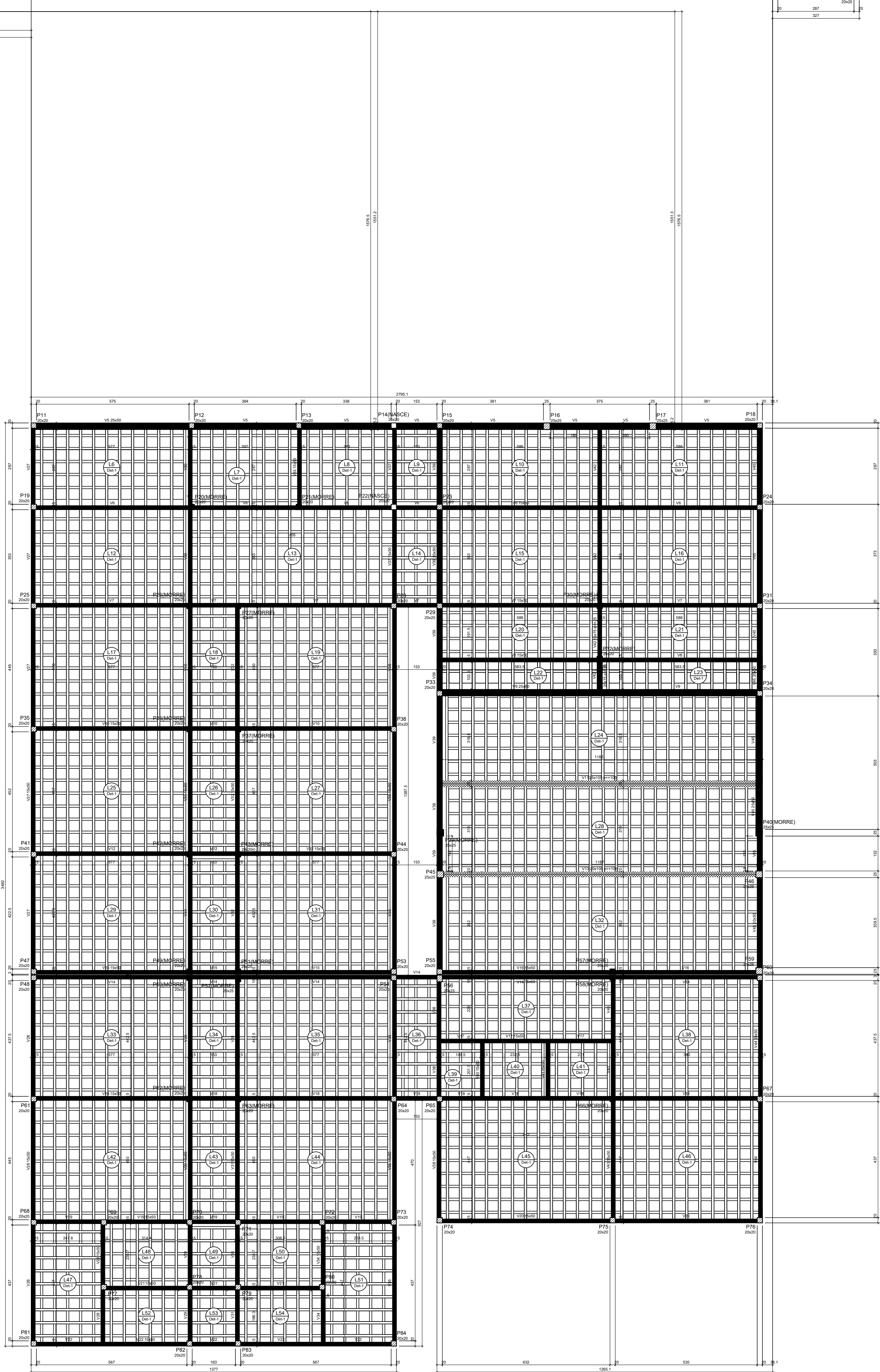
Julho/2022

Escala

1/50

Revisão

2/27








version 1.00

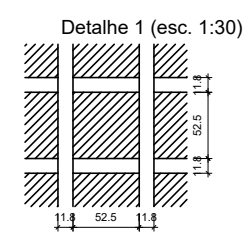
Year	Tax	Data		Less		Subtotals	
		Altra	Exempt	Non	Prop	Admstr	Landfill
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1.2	1.2	1.2	0	250	160	160	160
1.3	1.3	1.2	0	250	160	160	160
1.4	1.4	1.2	0	250	160	160	160
1.5	1.5	1.2	0	250	160	160	160
1.6	1.6	1.2	0	250	160	160	160
1.7	1.7	1.2	0	250	160	160	160
1.8	1.8	1.2	0	250	160	160	160
1.9	1.9	1.2	0	250	160	160	160
2.0	2.0	1.2	0	250	160	160	160
2.1	2.1	1.2	0	250	160	160	160
2.2	2.2	1.2	0	250	160	160	160
2.3	2.3	1.2	0	250	160	160	160
2.4	2.4	1.2	0	250	160	160	160
2.5	2.5	1.2	0	250	160	160	160
2.6	2.6	1.2	0	250	160	160	160
2.7	2.7	1.2	0	250	160	160	160
2.8	2.8	1.2	0	250	160	160	160
2.9	2.9	1.2	0	250	160	160	160
3.0	3.0	1.2	0	250	160	160	160
3.1	3.1	1.2	0	250	160	160	160
3.2	3.2	1.2	0	250	160	160	160
3.3	3.3	1.2	0	250	160	160	160
3.4	3.4	1.2	0	250	160	160	160
3.5	3.5	1.2	0	250	160	160	160
3.6	3.6	1.2	0	250	160	160	160
3.7	3.7	1.2	0	250	160	160	160
3.8	3.8	1.2	0	250	160	160	160
3.9	3.9	1.2	0	250	160	160	160
4.0	4.0	1.2	0	250	160	160	160
4.1	4.1	1.2	0	250	160	160	160
4.2	4.2	1.2	0	250	160	160	160
4.3	4.3	1.2	0	250	160	160	160
4.4	4.4	1.2	0	250	160	160	160
4.5	4.5	1.2	0	250	160	160	160
4.6	4.6	1.2	0	250	160	160	160
4.7	4.7	1.2	0	250	160	160	160
4.8	4.8	1.2	0	250	160	160	160
4.9	4.9	1.2	0	250	160	160	160
5.0	5.0	1.2	0	250	160	160	160
5.1	5.1	1.2	0	250	160	160	160
5.2	5.2	1.2	0	250	160	160	160
5.3	5.3	1.2	0	250	160	160	160
5.4	5.4	1.2	0	250	160	160	160
5.5	5.5	1.2	0	250	160	160	160
5.6	5.6	1.2	0	250	160	160	160
5.7	5.7	1.2	0	250	160	160	160
5.8	5.8	1.2	0	250	160	160	160
5.9	5.9						

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	241500

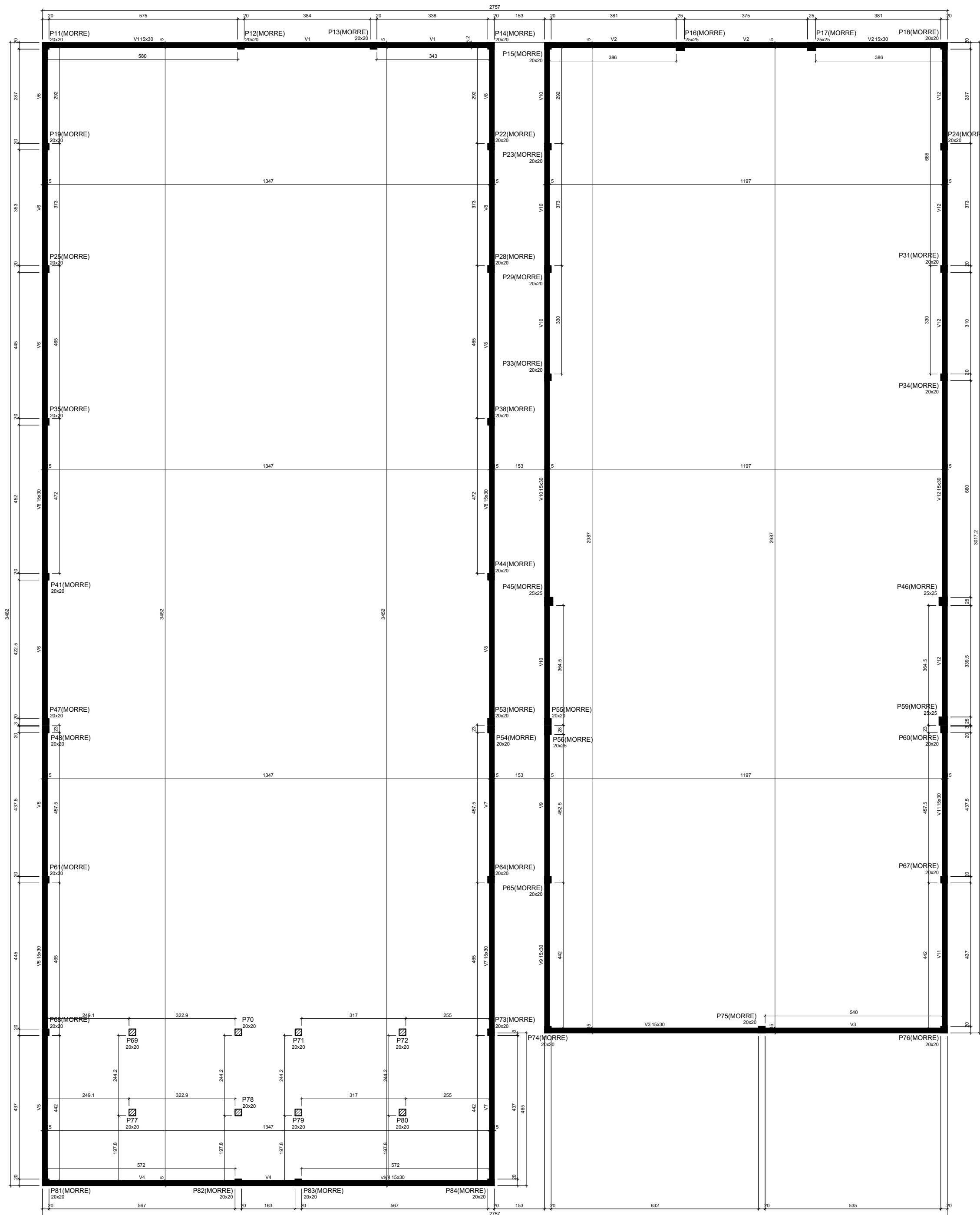
Dimensão máxima do agregado = 10

Source	Sample	Example	Level
P1	20x20	0	215
P2	20x20	0	215
P3	20x20	0	215
P4	20x20	0	215
P5	25x25	0	215
P6	25x25	0	215
P7	25x25	0	215
P8	25x25	0	215
P9	25x25	0	215
P10	20x20	0	215
P11	20x20	0	215
P12	20x20	0	215
P13	20x20	0	215
P14	20x20	0	215
P15	20x20	0	215
P16	25x25	0	215
P17	25x25	0	215
P18	20x20	0	215
P19	20x20	0	215
P20	20x20	0	215
P21	20x20	0	215
P22	20x20	0	215
P23	20x20	0	215
P24	20x20	0	215
P25	20x20	0	215
P26	20x20	0	215
P27	20x20	0	215
P28	20x20	0	215
P29	20x20	0	215
P30	20x20	0	215
P31	20x20	0	215
P32	20x20	0	215
P33	20x20	0	215
P34	20x20	0	215
P35	20x20	0	215
P36	20x20	0	215
P37	20x20	0	215
P38	20x20	0	215
P39	20x20	0	215
P40	20x20	0	215
P41	20x20	0	215
P42	20x20	0	215
P43	20x20	0	215
P44	20x20	0	215
P45	20x20	0	215
P46	20x20	0	215
P47	20x20	0	215
P48	20x20	0	215
P49	20x20	0	215
P50	20x20	0	215
P51	20x20	0	215
P52	20x20	0	215
P53	20x20	0	215
P54	20x20	0	215
P55	20x20	0	215
P56	20x20	0	215
P57	20x20	0	215
P58	20x20	0	215
P59	20x20	0	215
P60	20x20	0	215
P61	20x20	0	215
P62	20x20	0	215
P63	20x20	0	215
P64	20x20	0	215
P65	20x20	0	215
P66	20x20	0	215
P67	20x20	0	215
P68	20x20	0	215
P69	20x20	0	215
P70	20x20	0	215
P71	20x20	0	215
P72	20x20	0	215
P73	20x20	0	215
P74	20x20	0	215
P75	20x20	0	215
P76	20x20	0	215
P77	20x20	0	215
P78	20x20	0	215
P79	20x20	0	215
P80	20x20	0	215
P81	20x20	0	215
P82	20x20	0	215
P83	20x20	0	215
P84	20x20	0	215
P85	20x20	0	215
P86	20x20	0	215
P87	20x20	0	215
P88	20x20	0	215
P89	20x20	0	215
P90	20x20	0	215
P91	20x20	0	215
P92	20x20	0	215
P93	20x20	0	215
P94	20x20	0	215
P95	20x20	0	215
P96	20x20	0	215
P97	20x20	0	215
P98	20x20	0	215
P99	20x20	0	215
P100	20x20	0	215

Legenda dos pilares		Legenda das vigas e paredes	
	Pilar que existe		Viga
	Pilar que passa		Viga cheia ou invertida
	Pilar que nasce		



Blocos de enchimento						
Detalhe	Tipo	Nome	Dimensões (cm)			Quantidade
			lx	ax	by	
1	EPD Retangular	100x100x40	8	40	40	300



Forma do pavimento Platibanda (Nível 430)

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	430
V2	15x30	0	430
V3	15x30	0	430
V4	15x30	0	430
V5	15x30	0	430
V6	15x30	0	430
V7	15x30	0	430
V8	15x30	0	430
V9	15x30	0	430
V10	15x30	0	430
V11	15x30	0	430
V12	15x30	0	430

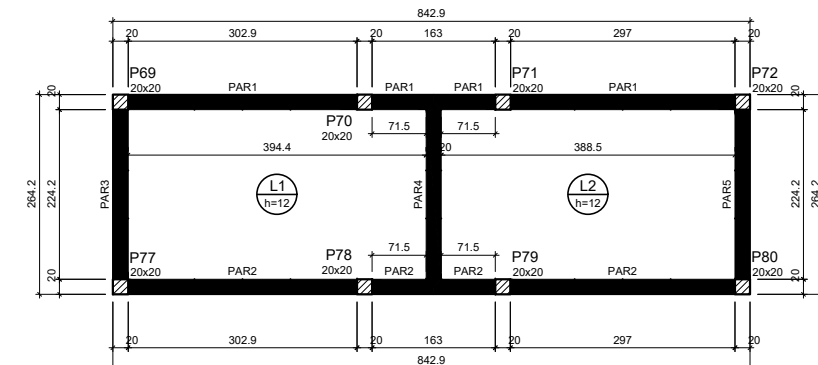
Características dos materiais		
fck	Ecs	
250	(kgf/cm²)	
250	241500	

Dimensão máxima do agregado = 19 mm

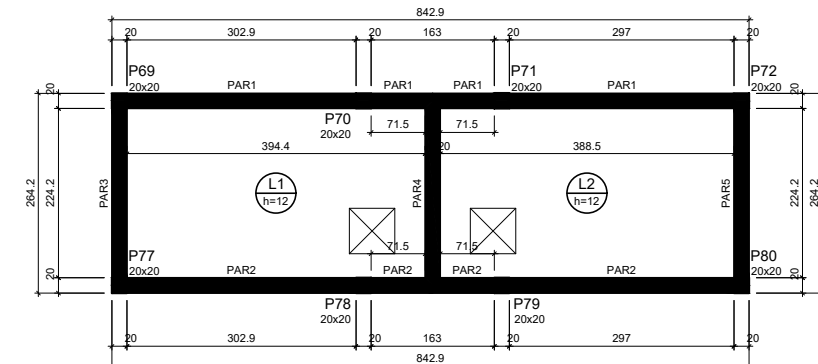
Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P11	20x20	0	430
P12	20x20	0	430
P13	20x20	0	430
P14	20x20	0	430
P15	20x20	0	430
P16	25x25	0	430
P17	25x25	0	430
P18	20x20	0	430
P19	20x20	0	430
P22	20x20	0	430
P23	20x20	0	430
P24	20x20	0	430
P25	20x20	0	430
P28	20x20	0	430
P29	20x20	0	430
P31	20x20	0	430
P33	20x20	0	430
P34	20x20	0	430
P35	20x20	0	430
P38	20x20	0	430
P41	20x20	0	430
P44	20x20	0	430
P45	25x25	0	430
P46	25x25	0	430
P47	20x20	0	430
P48	20x20	0	430
P53	20x20	0	430
P54	20x20	0	430
P55	20x20	0	430
P56	20x25	0	430
P59	25x25	0	430
P60	20x20	0	430
P61	20x20	0	430
P64	20x20	0	430
P65	20x20	0	430
P67	20x20	0	430
P68	20x20	0	430
P69	20x20	0	430
P70	20x20	0	430
P71	20x20	0	430
P72	20x20	0	430
P73	20x20	0	430
P74	20x20	0	430
P75	20x20	0	430
P76	20x20	0	430
P77	20x20	0	430
P78	20x20	0	430
P79	20x20	0	430
P80	20x20	0	430
P81	20x20	0	430
P82	20x20	0	430
P83	20x20	0	430
P84	20x20	0	430

Legenda dos pilares	
	Pilar que morre
	Pilar que passa

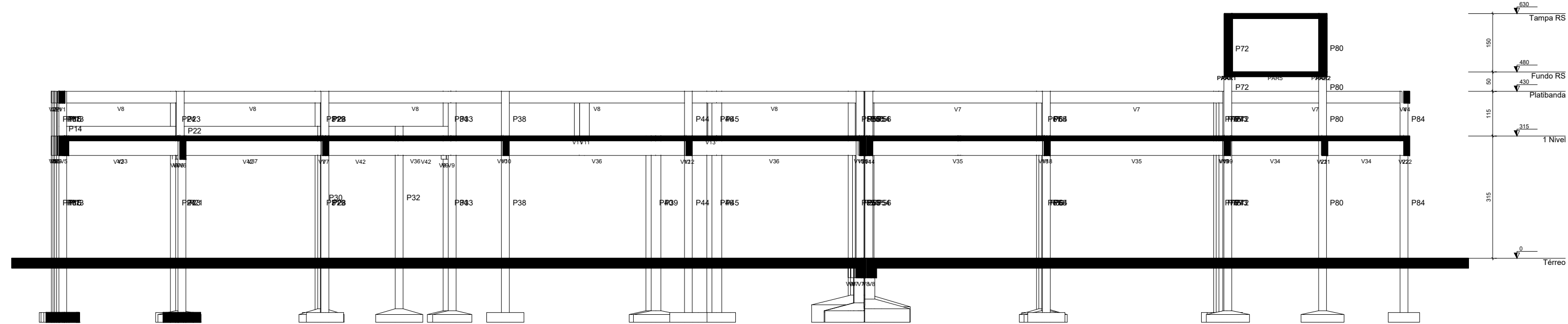
Legenda das vigas e paredes	
	Viga



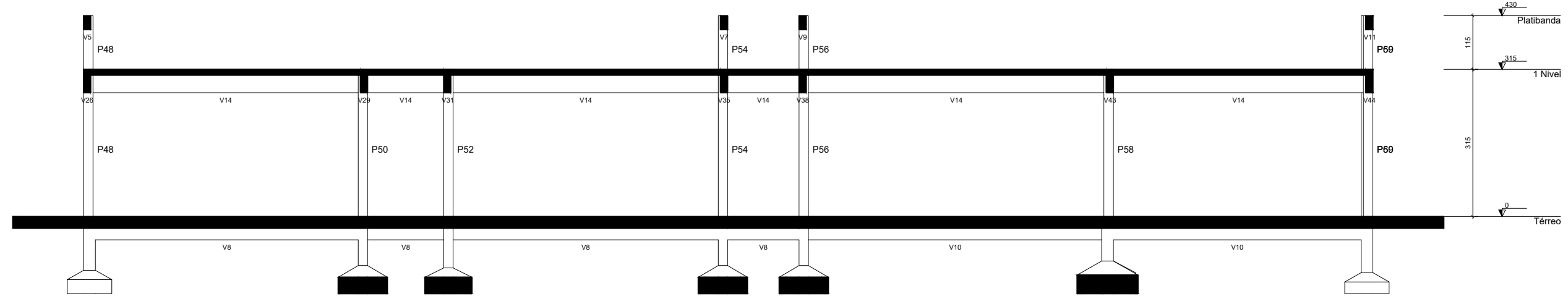
Forma do pavimento Fundo RS (Nível 480)



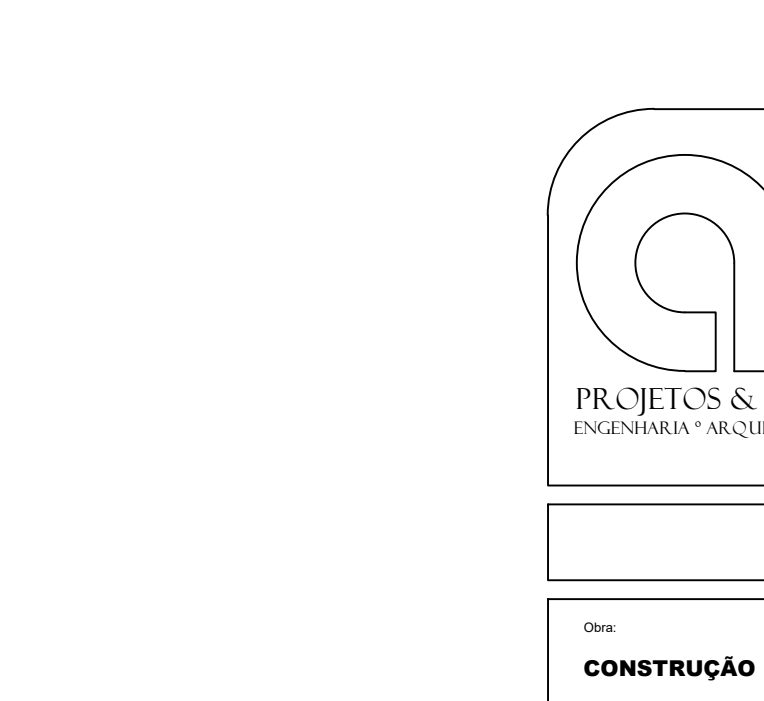
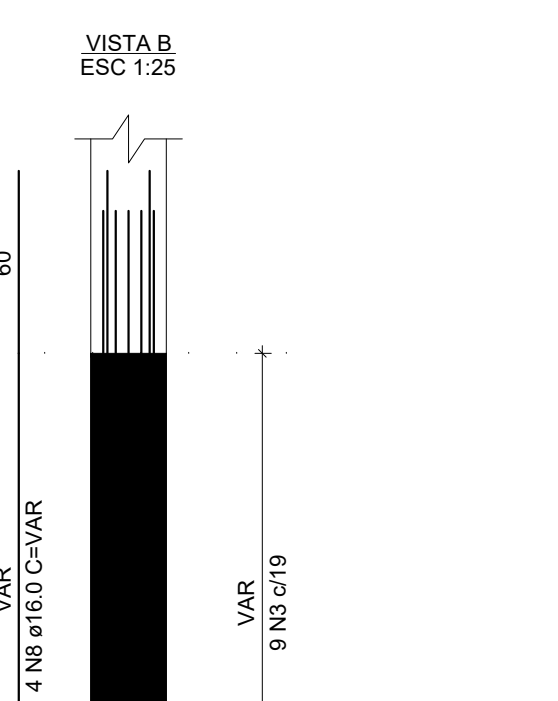
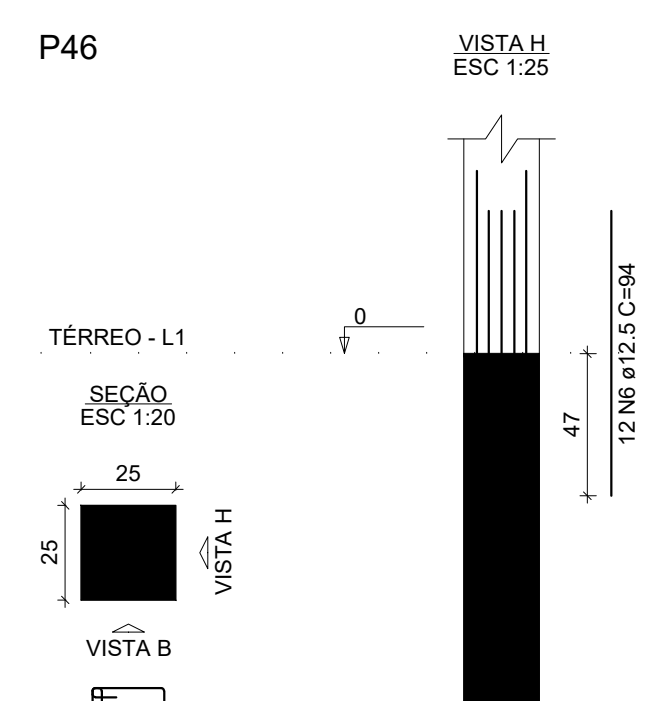
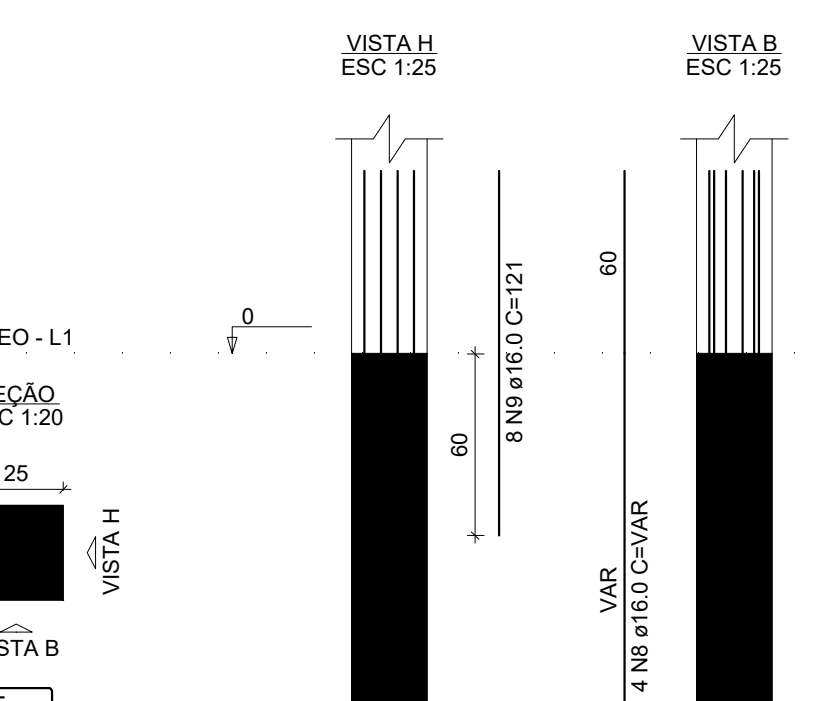
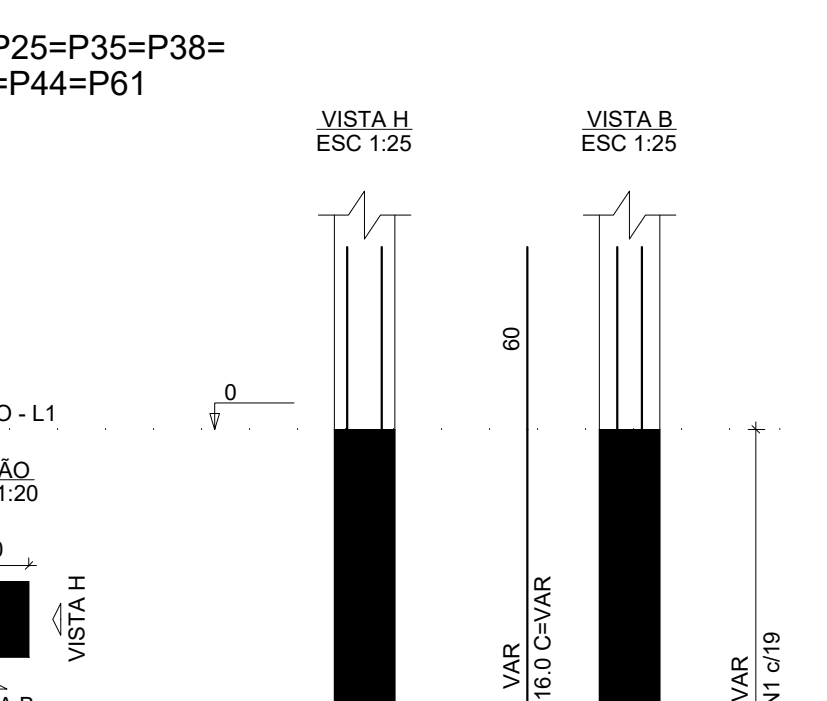
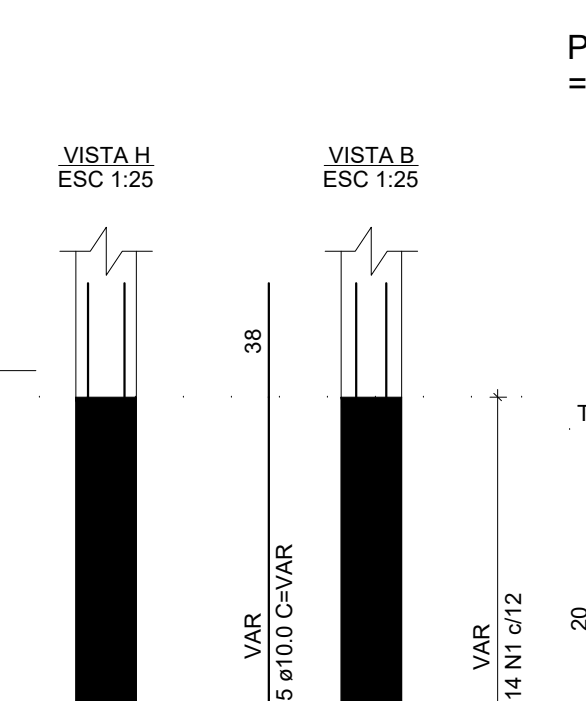
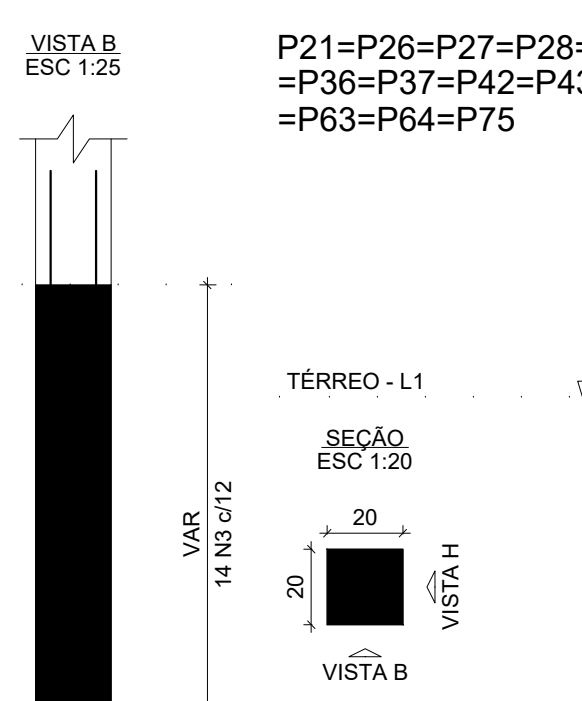
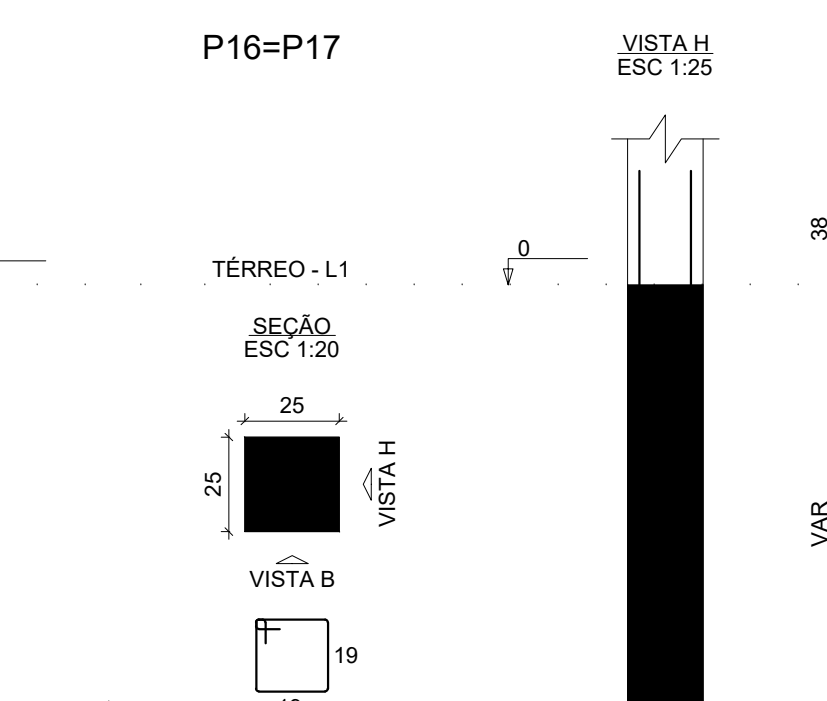
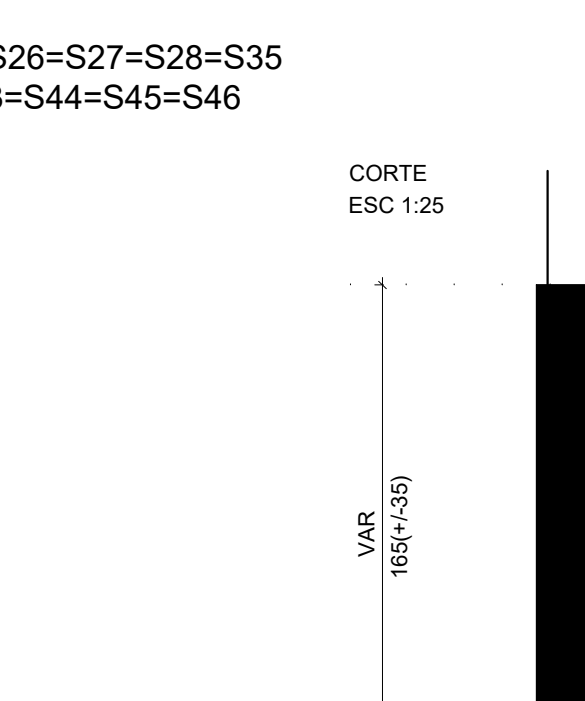
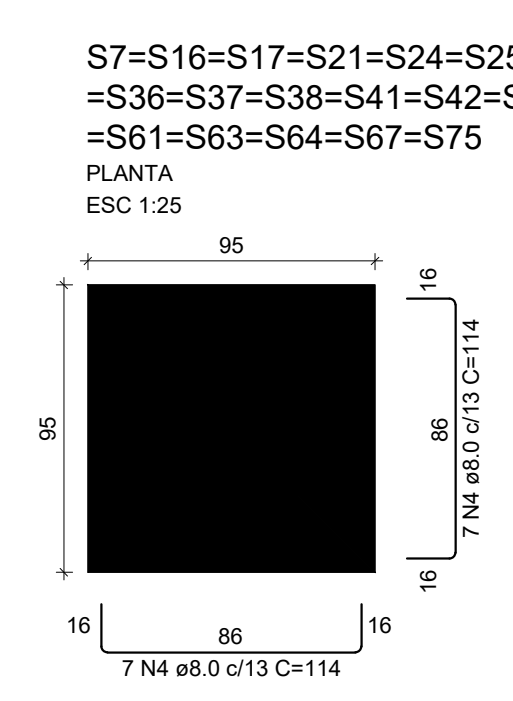
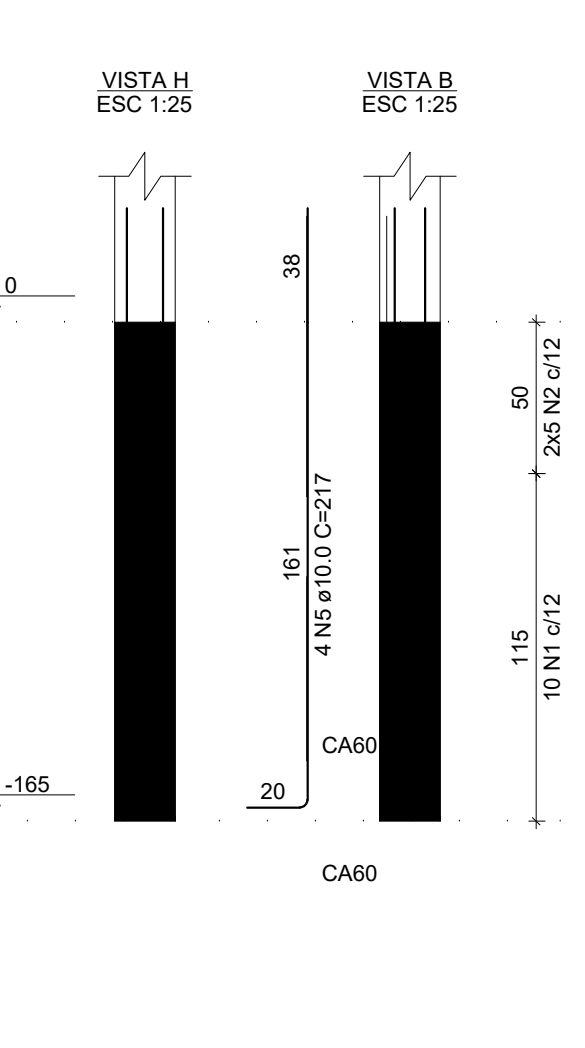
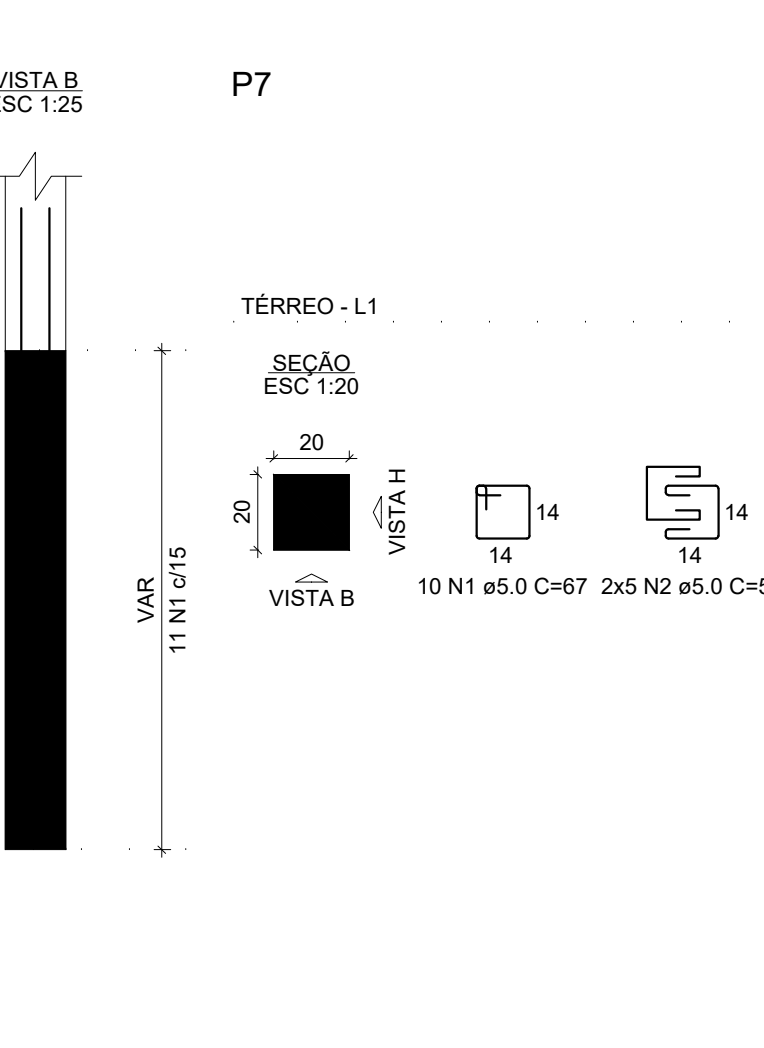
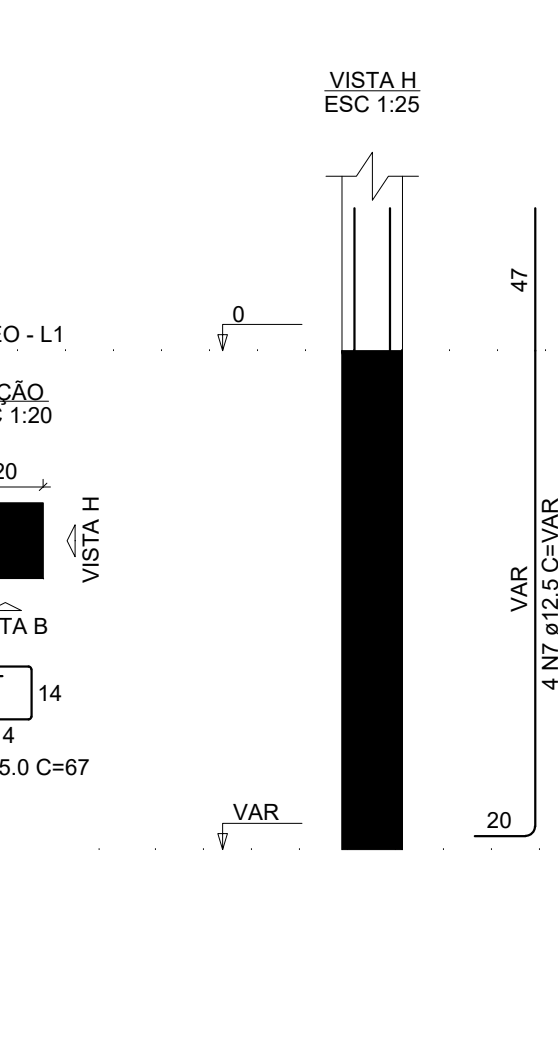
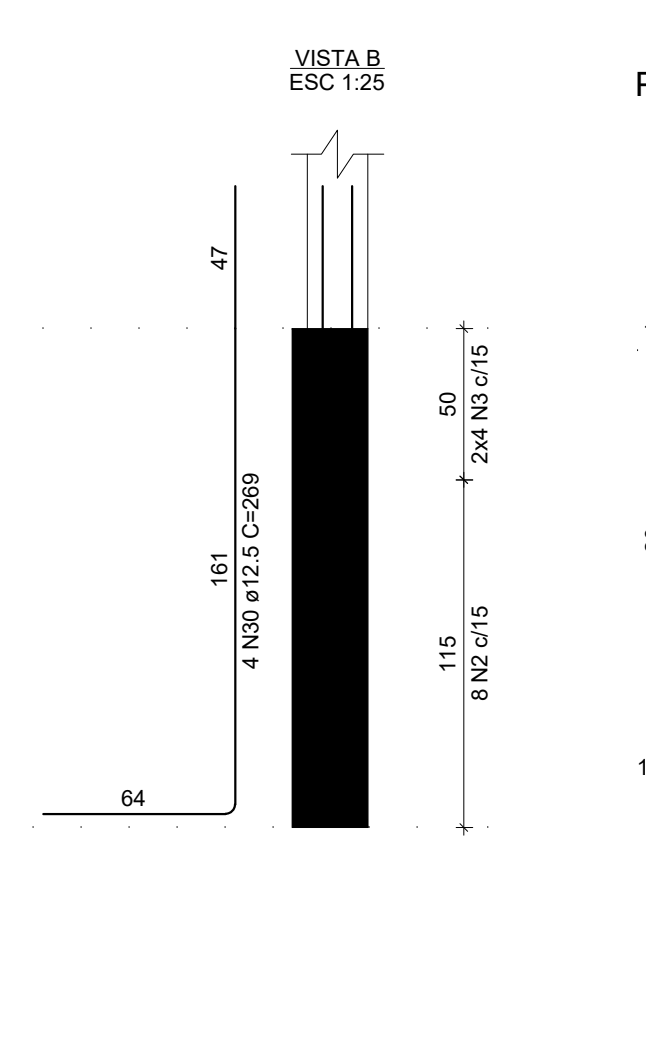
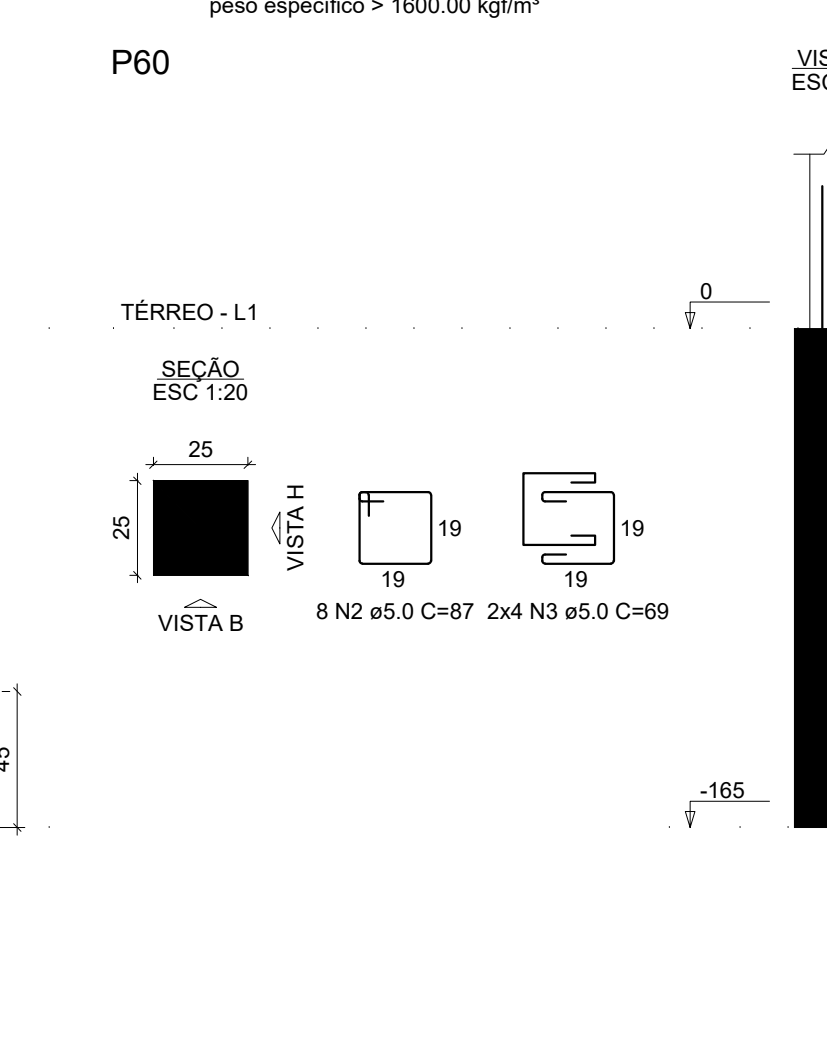
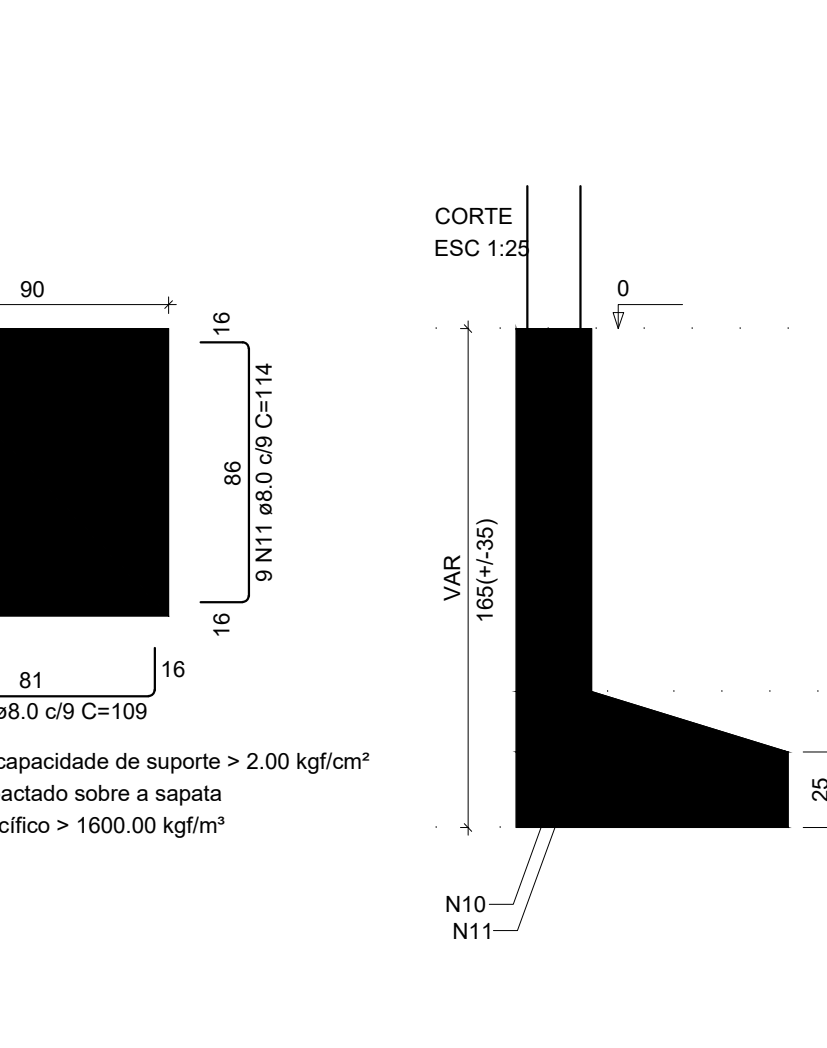
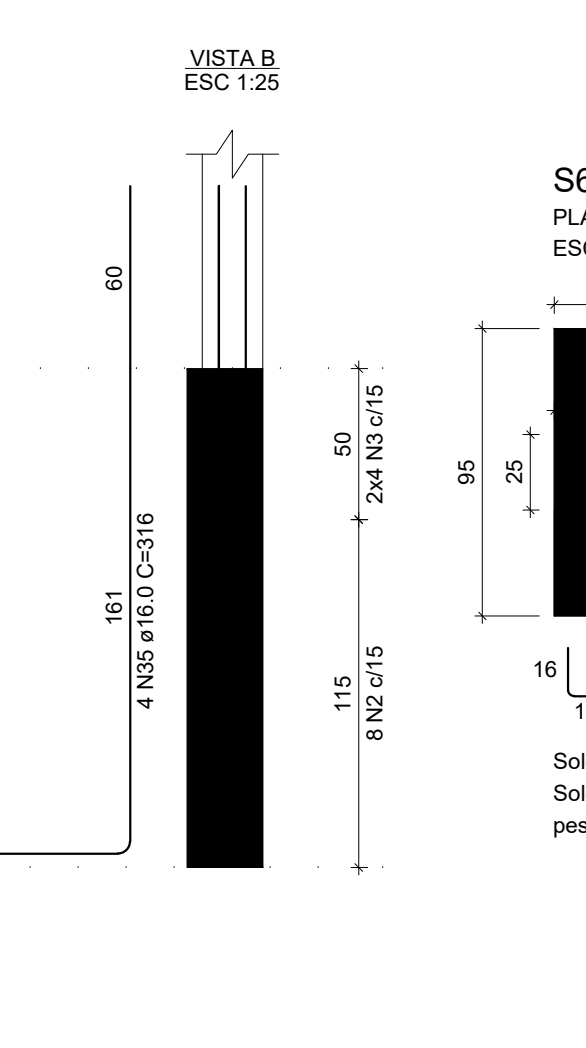
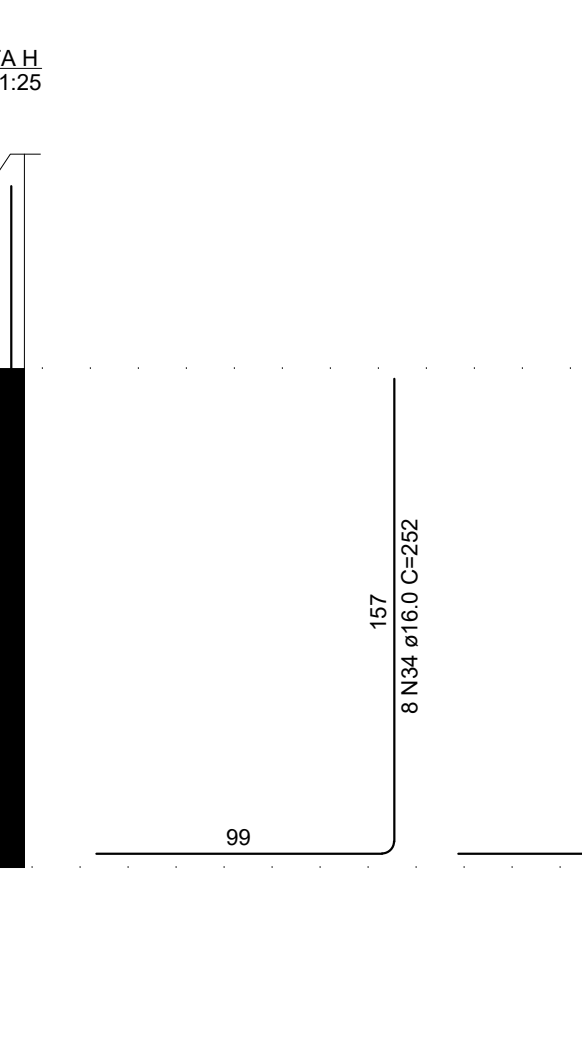
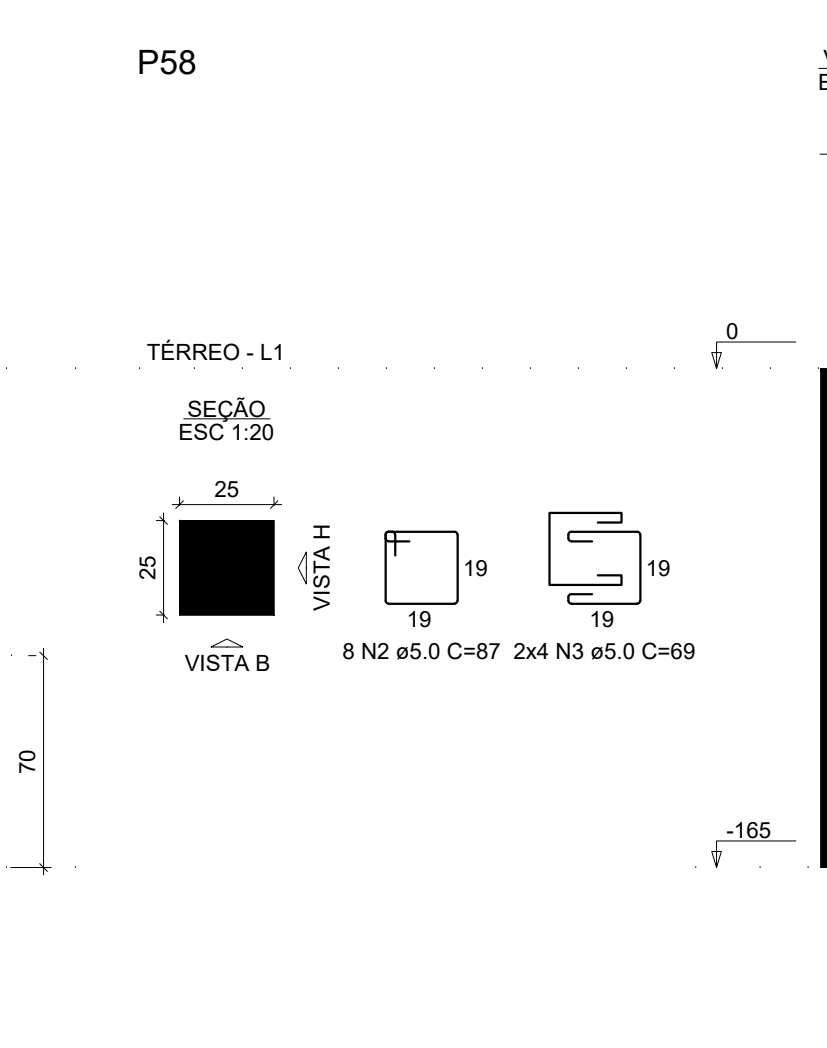
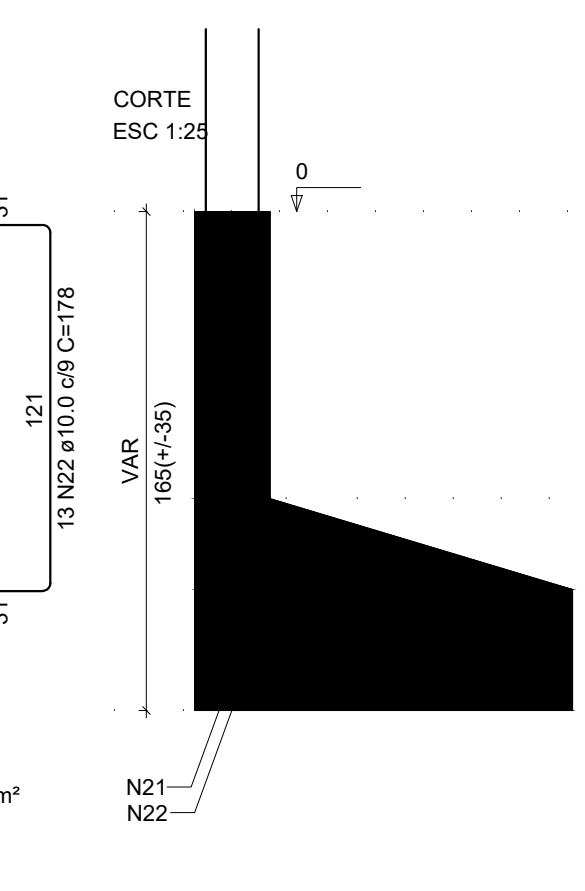
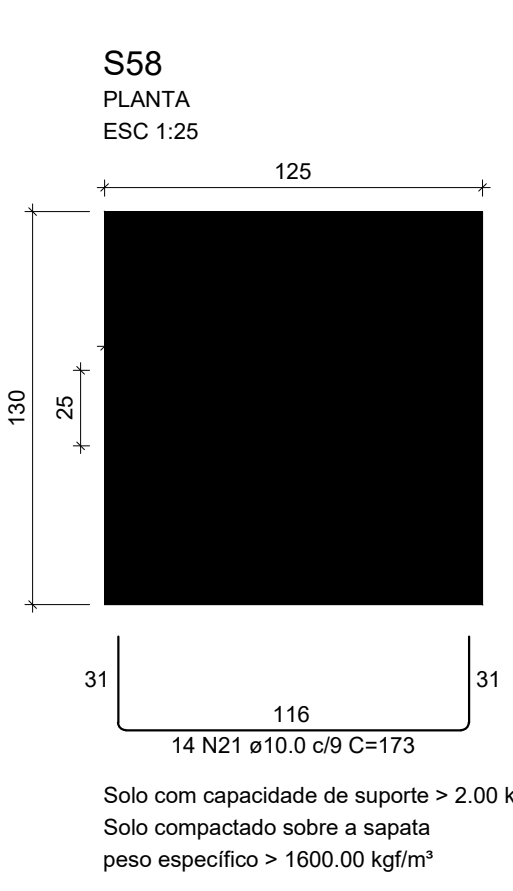
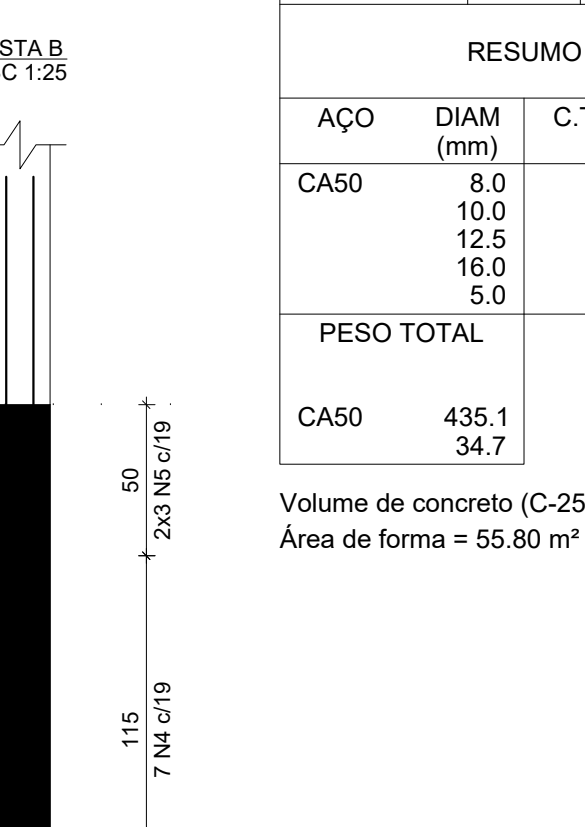
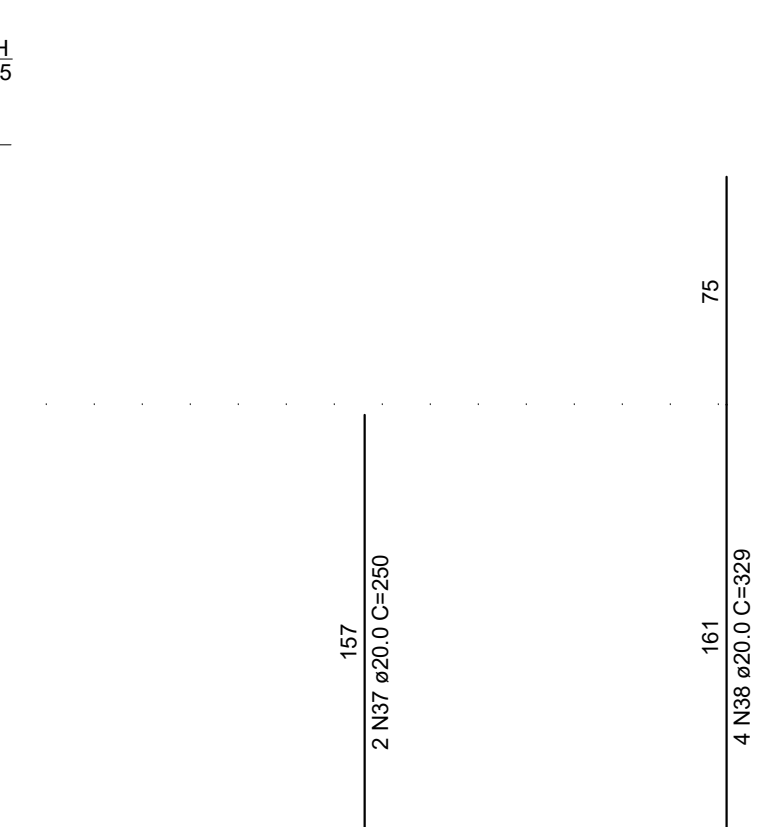
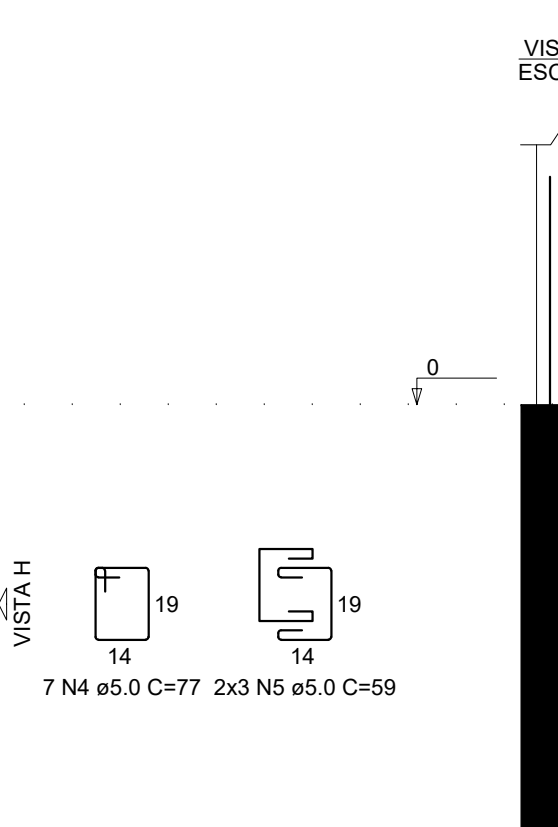
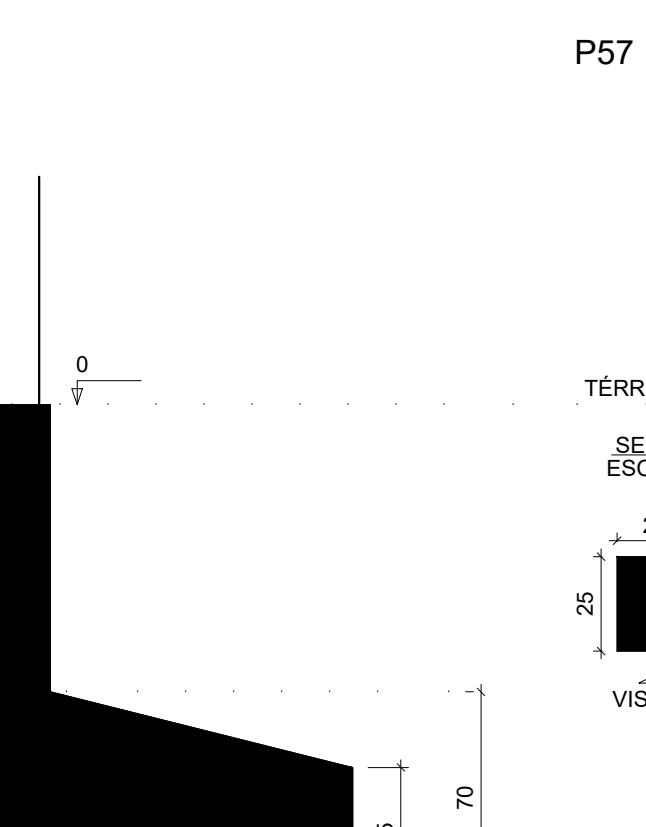
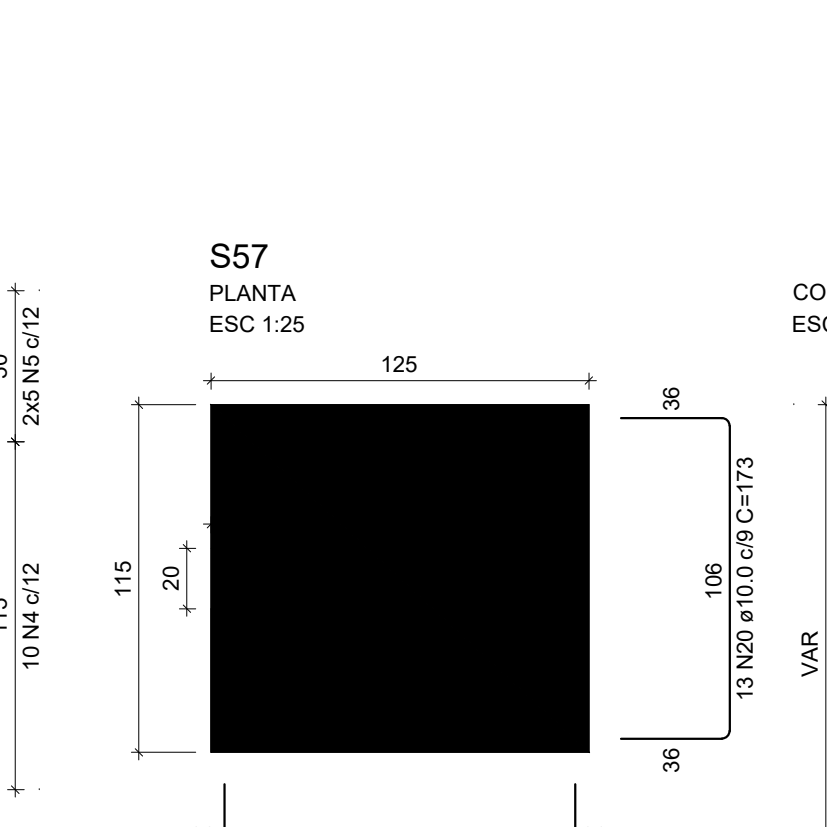
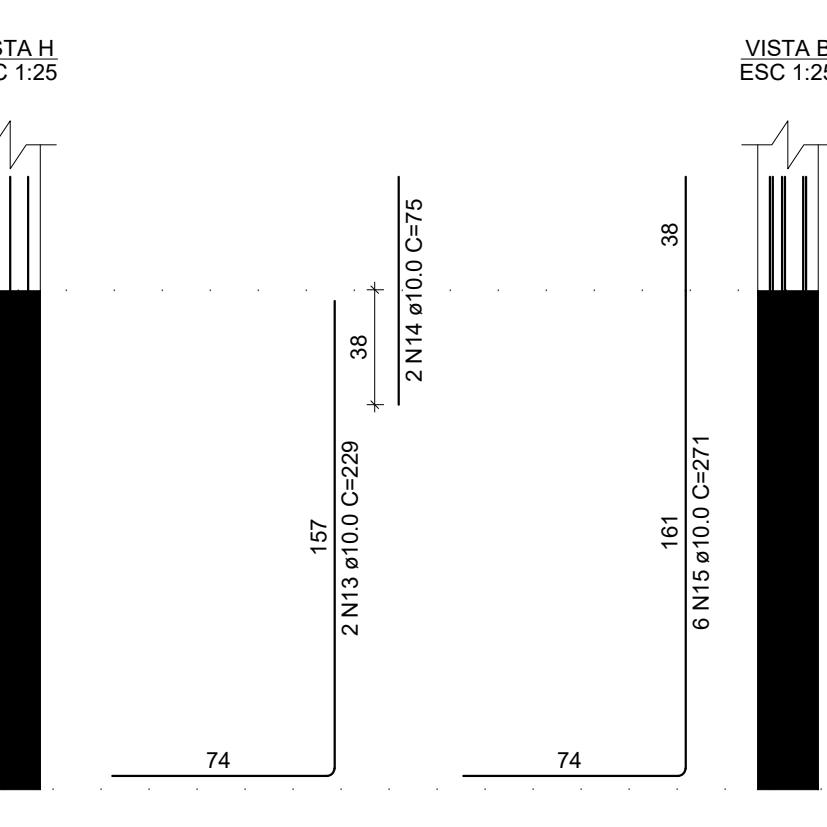
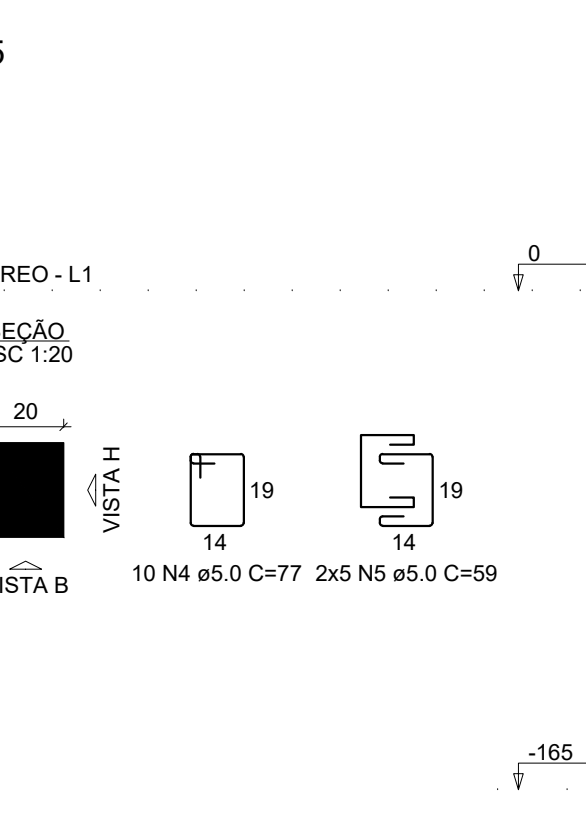
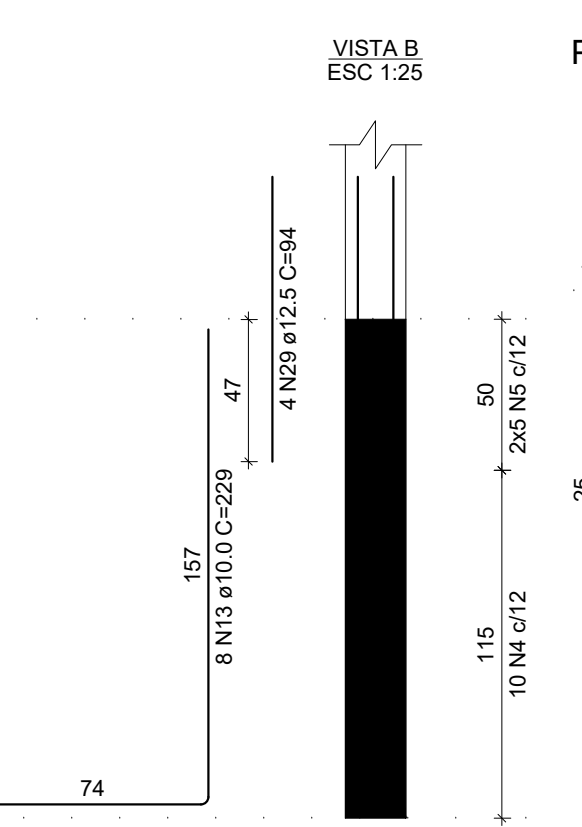
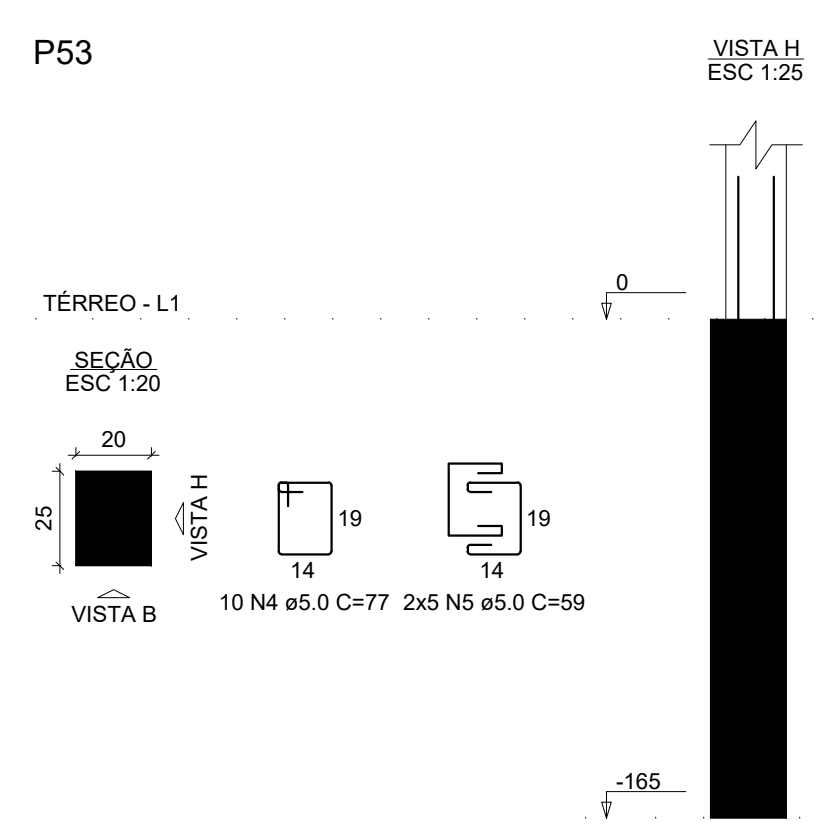
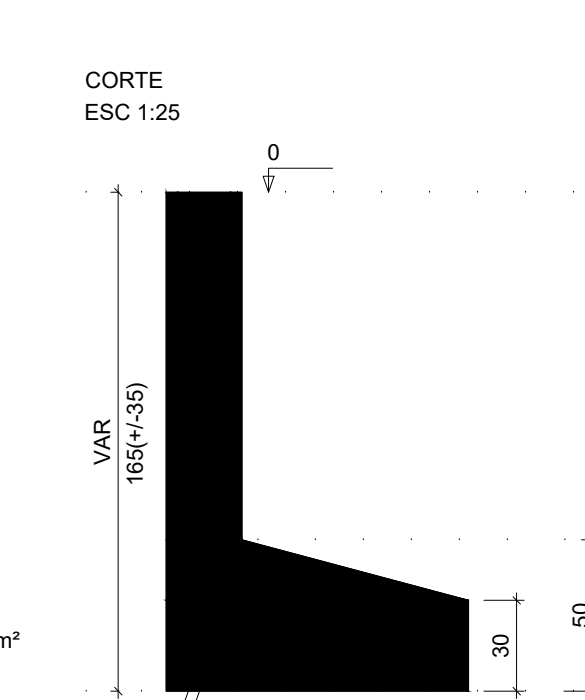
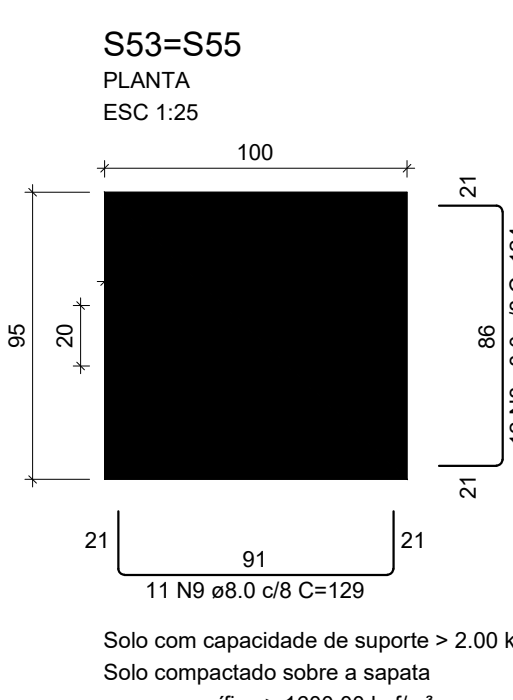
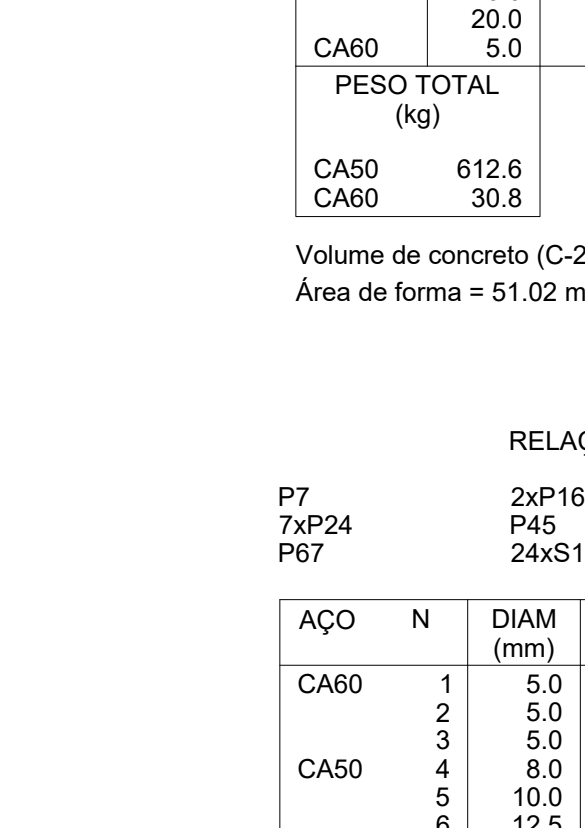
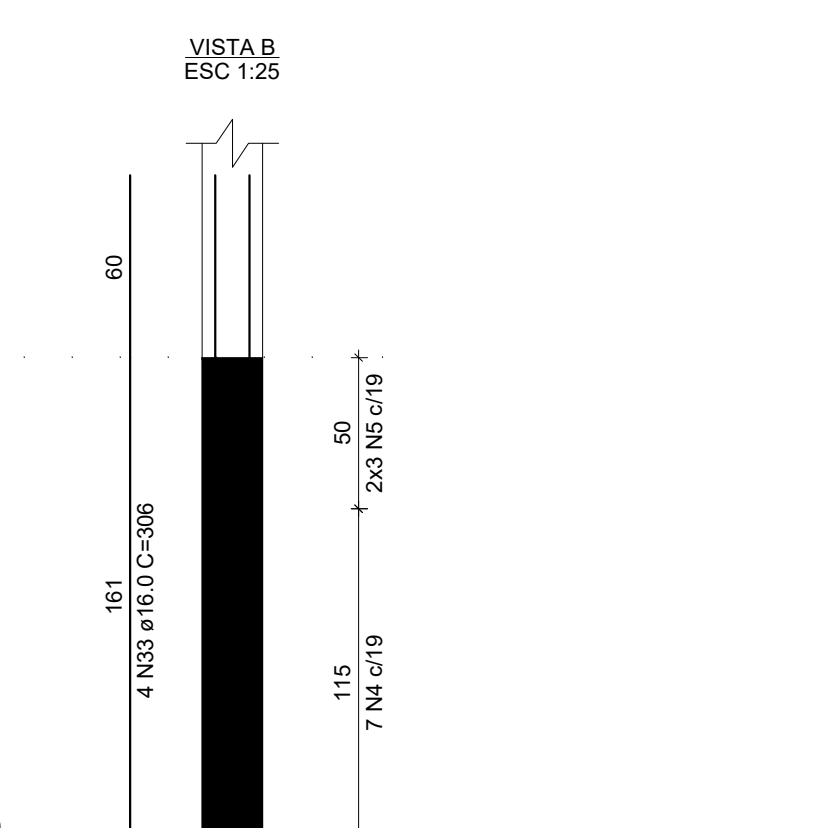
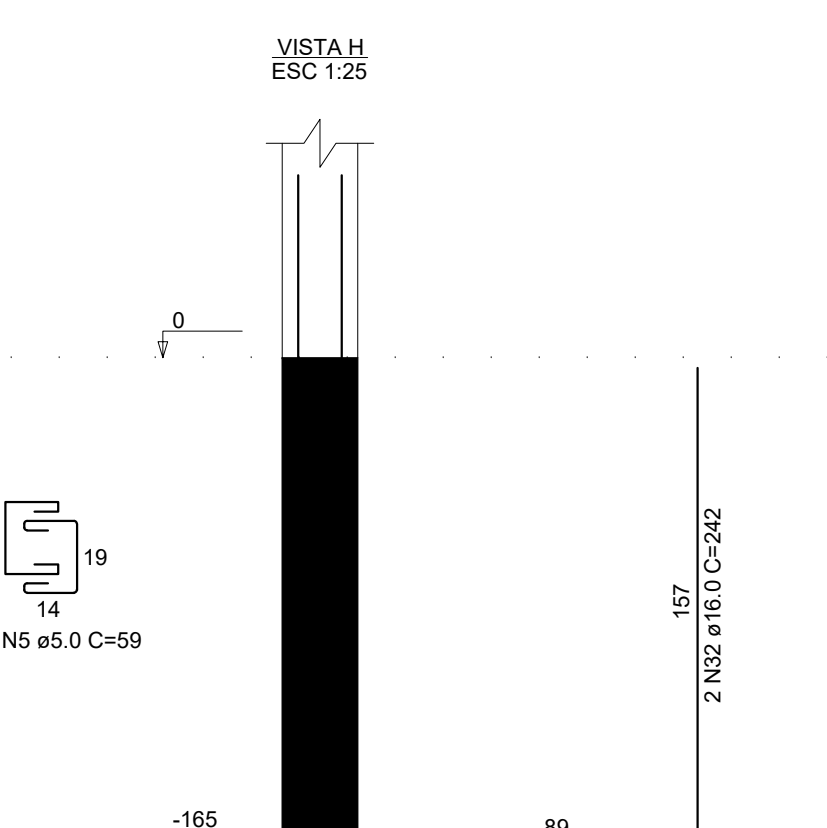
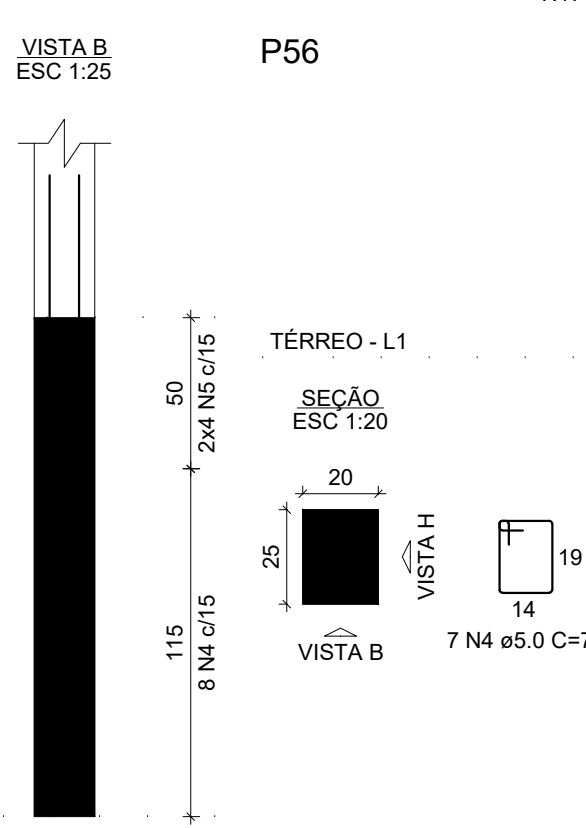
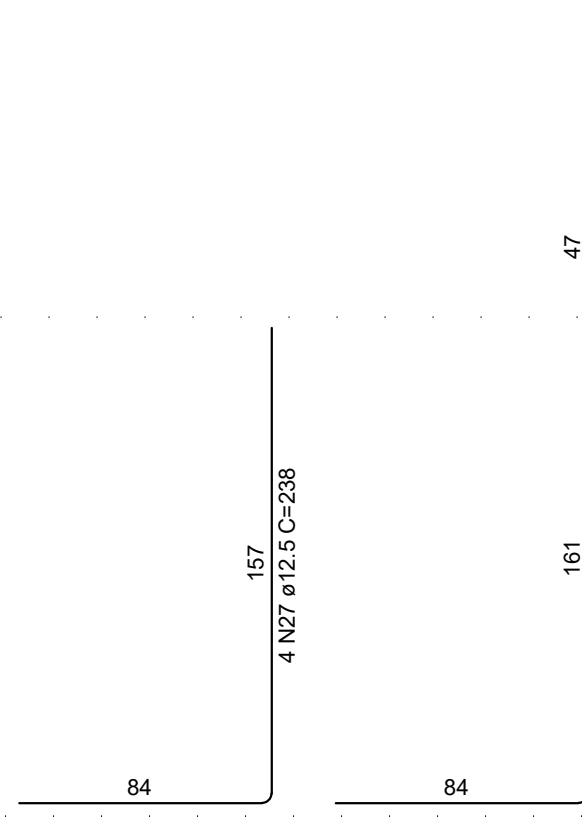
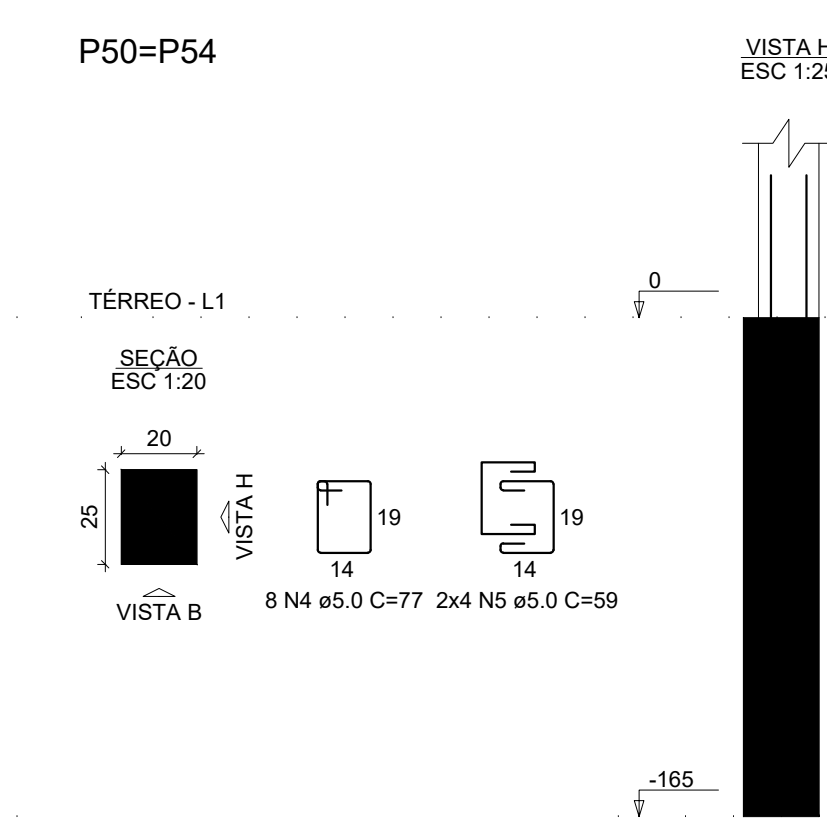
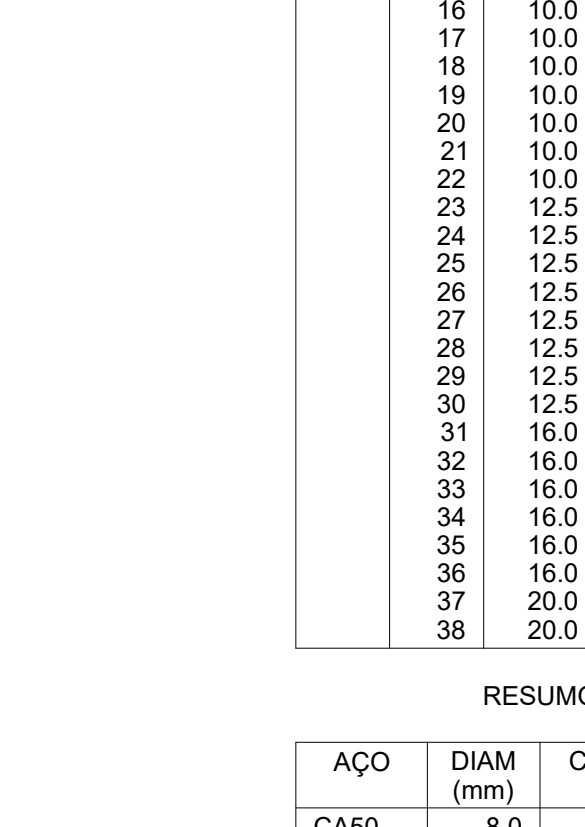
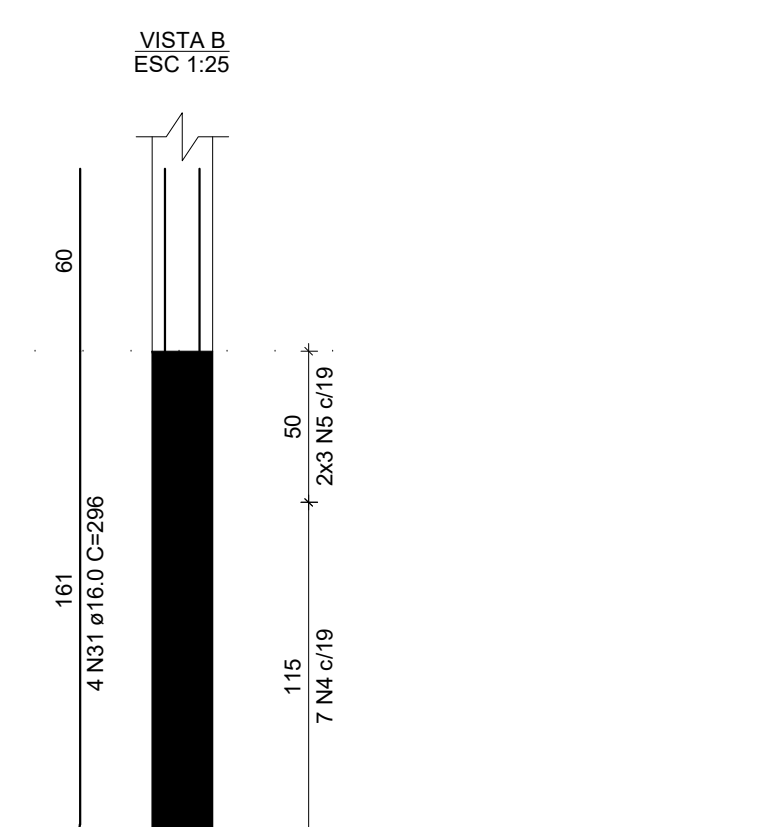
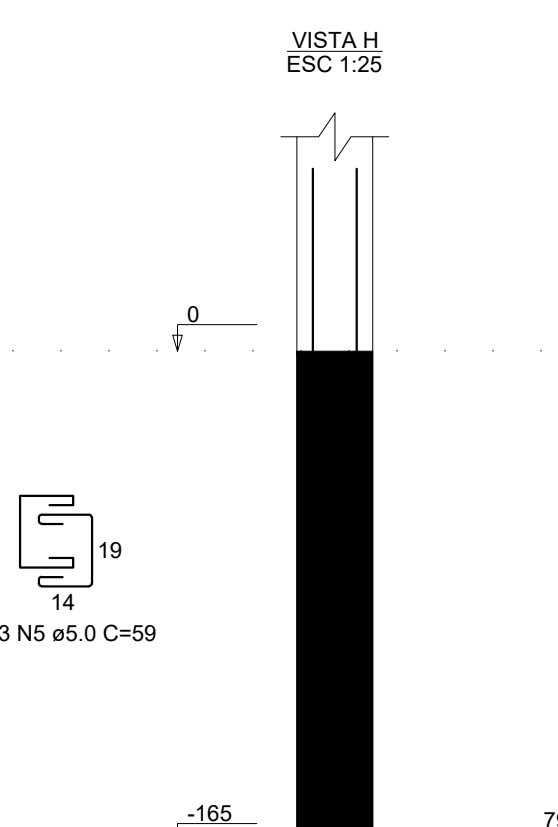
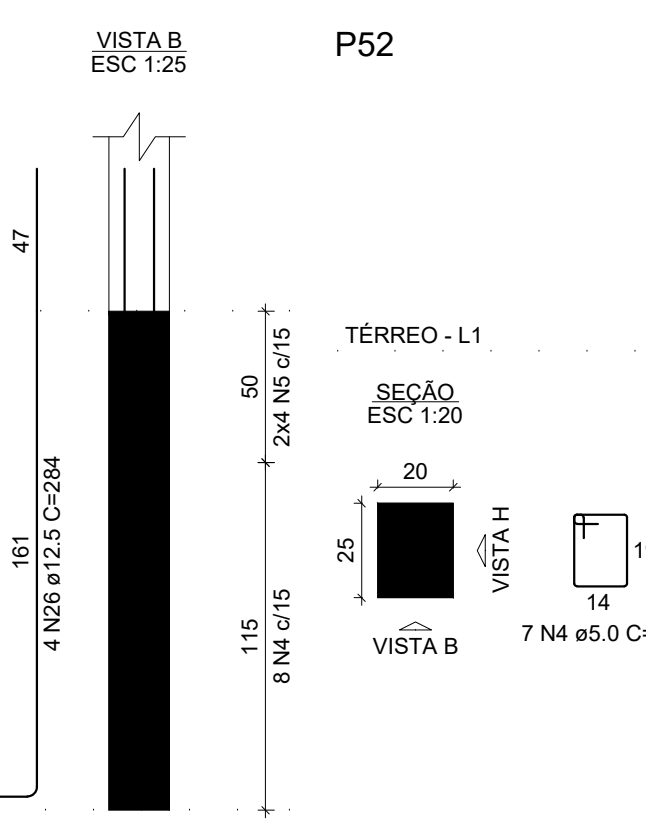
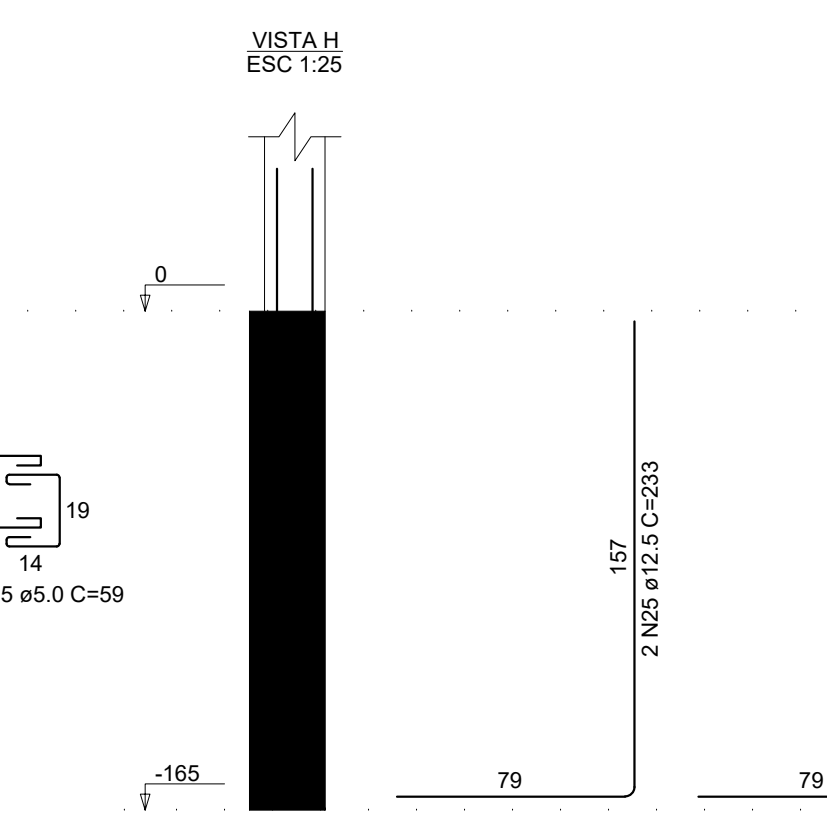
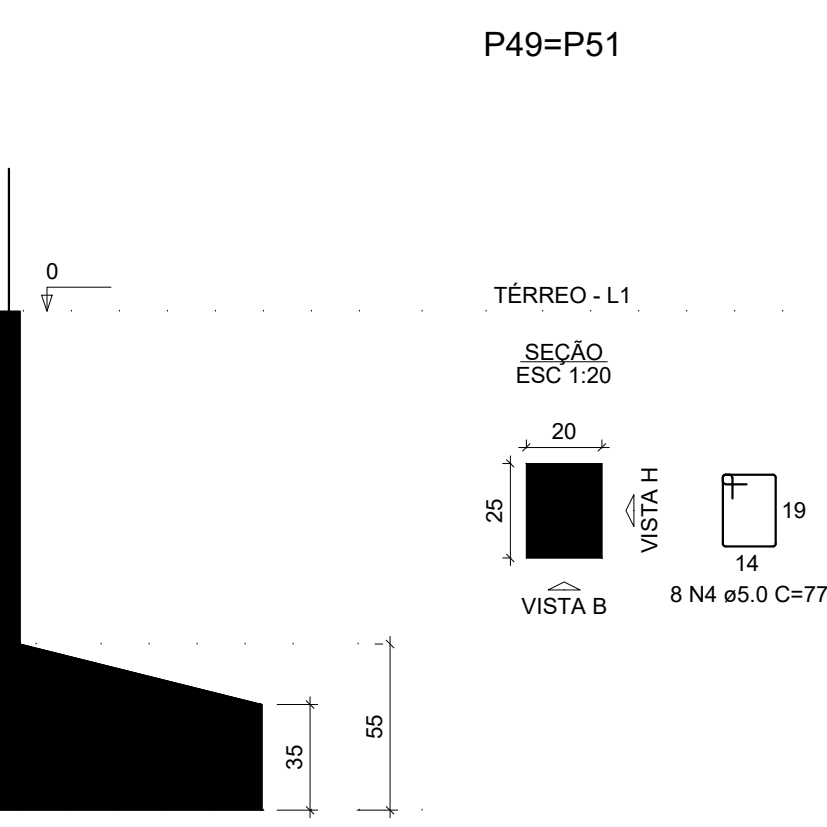
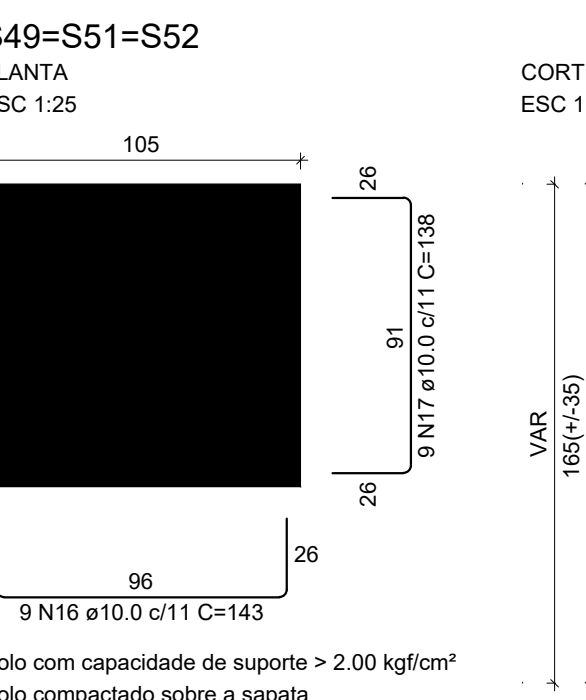
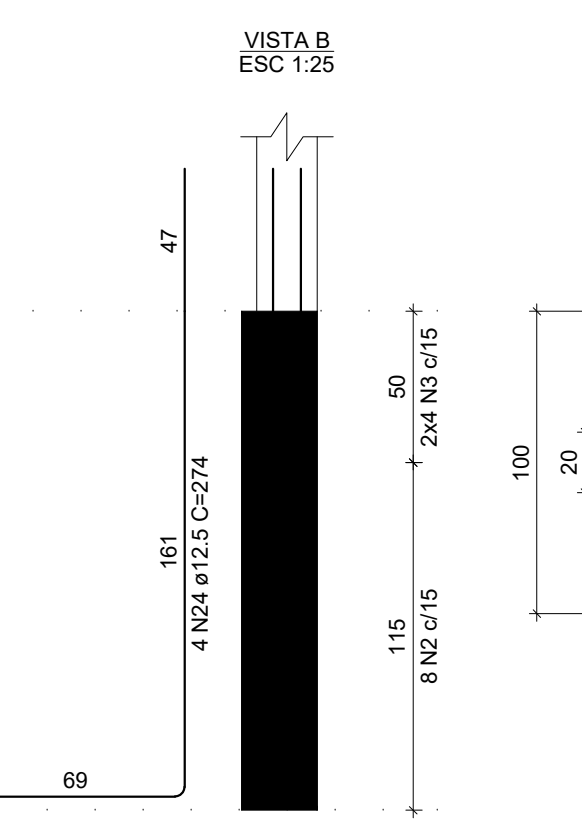
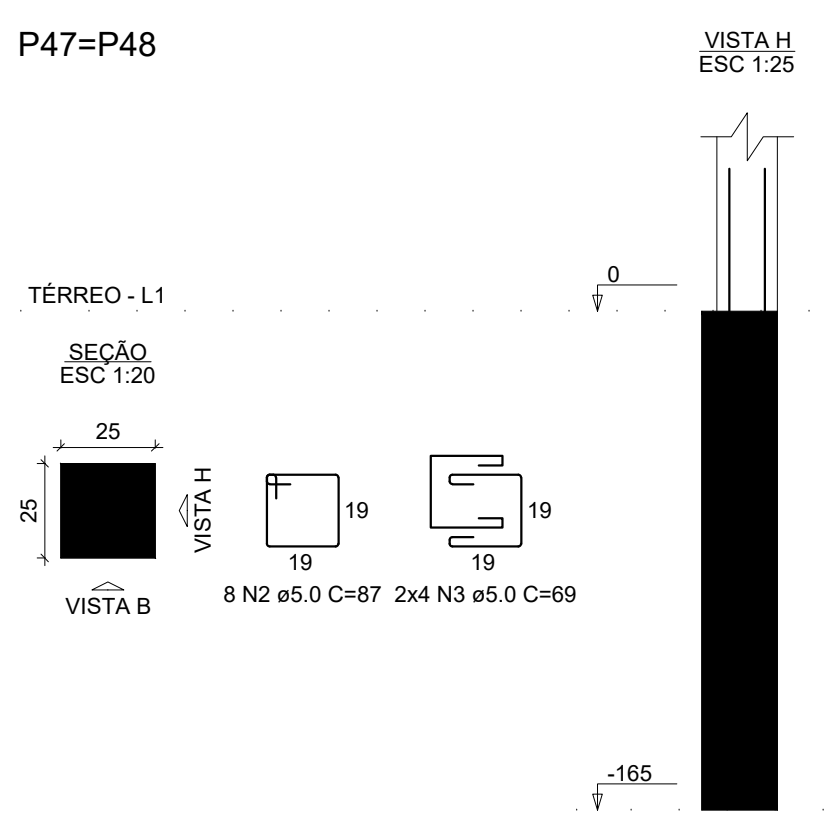
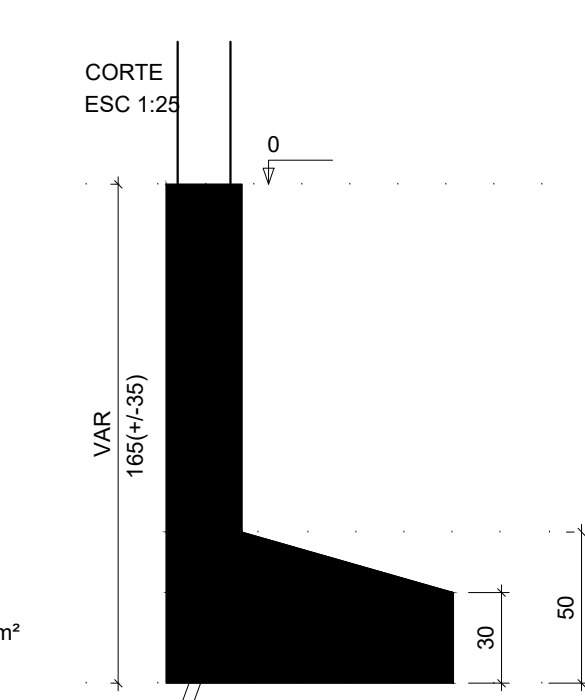
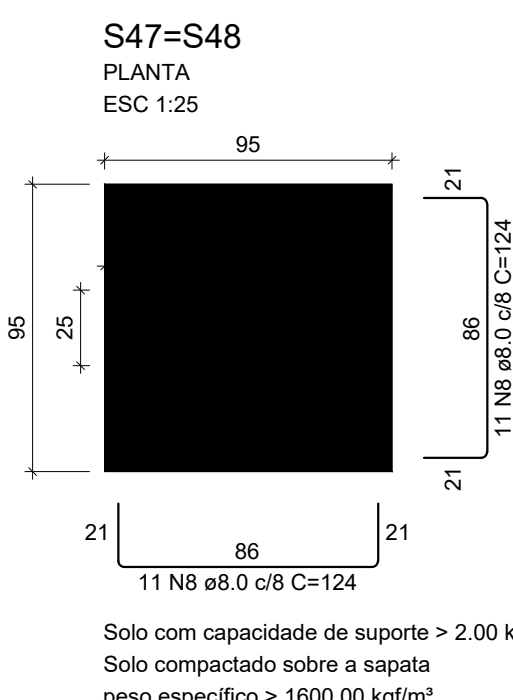
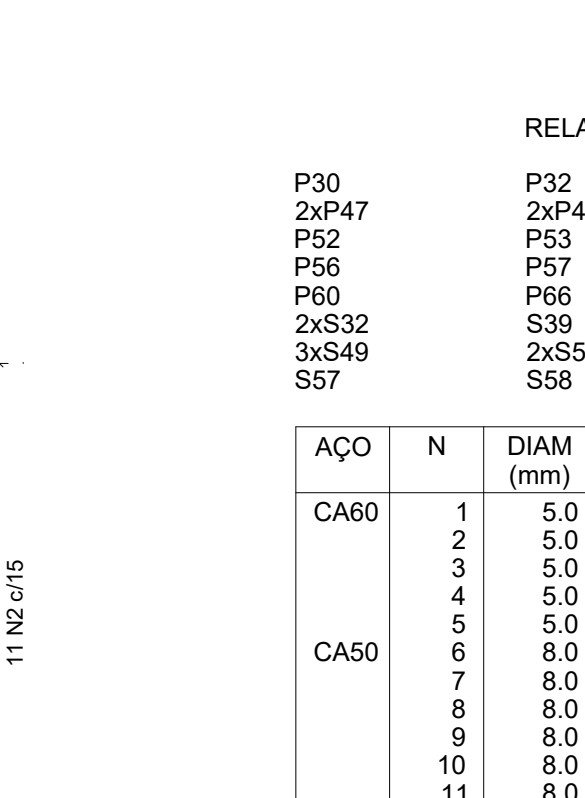
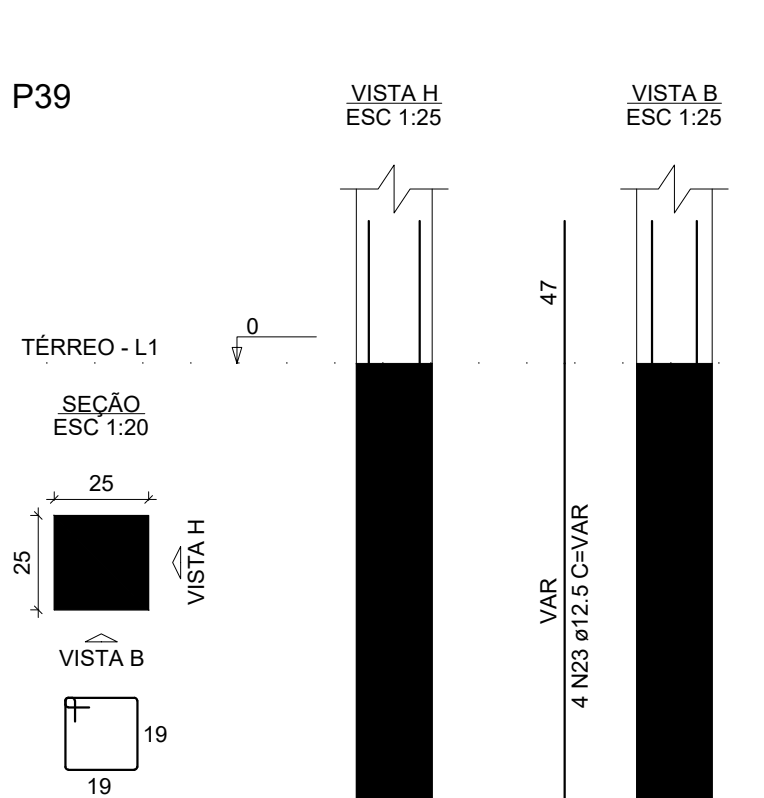
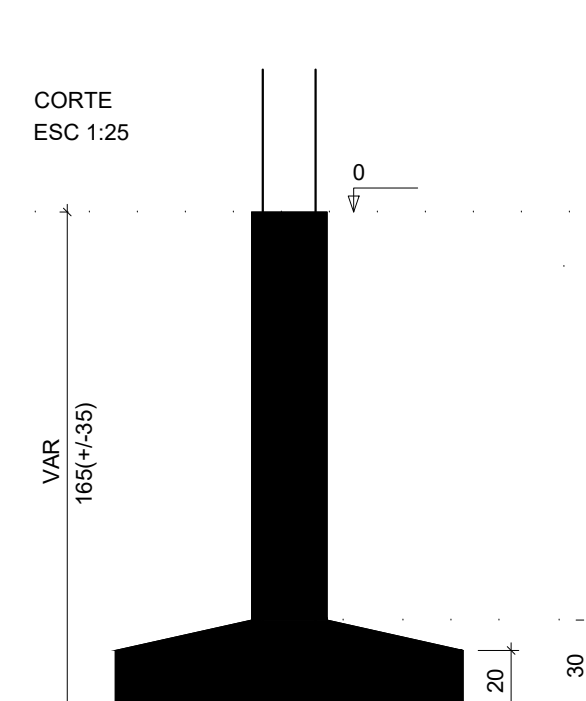
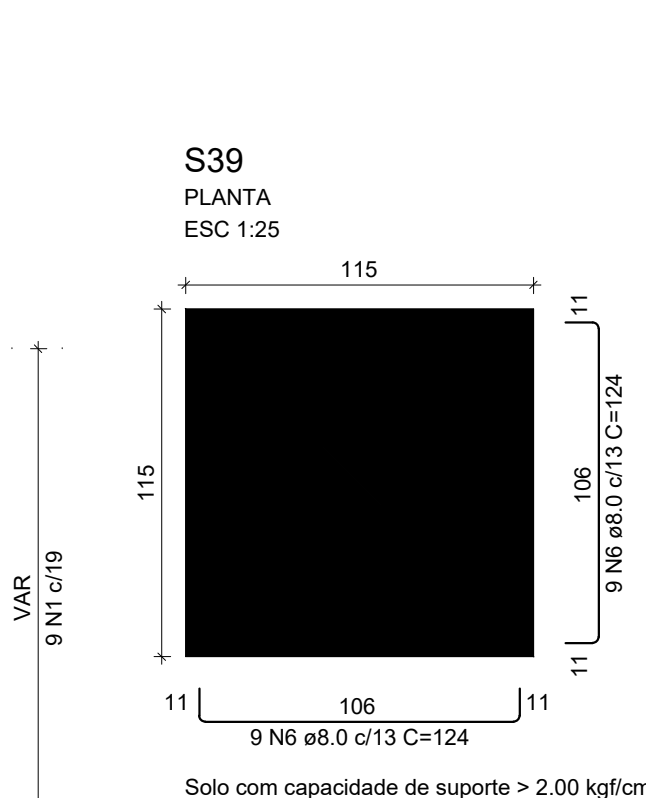
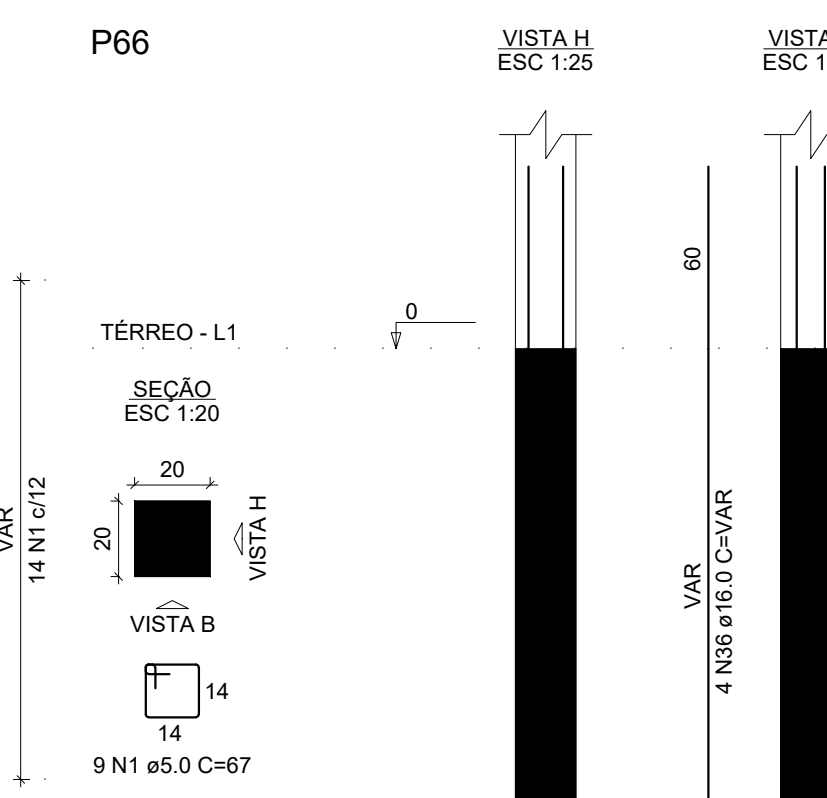
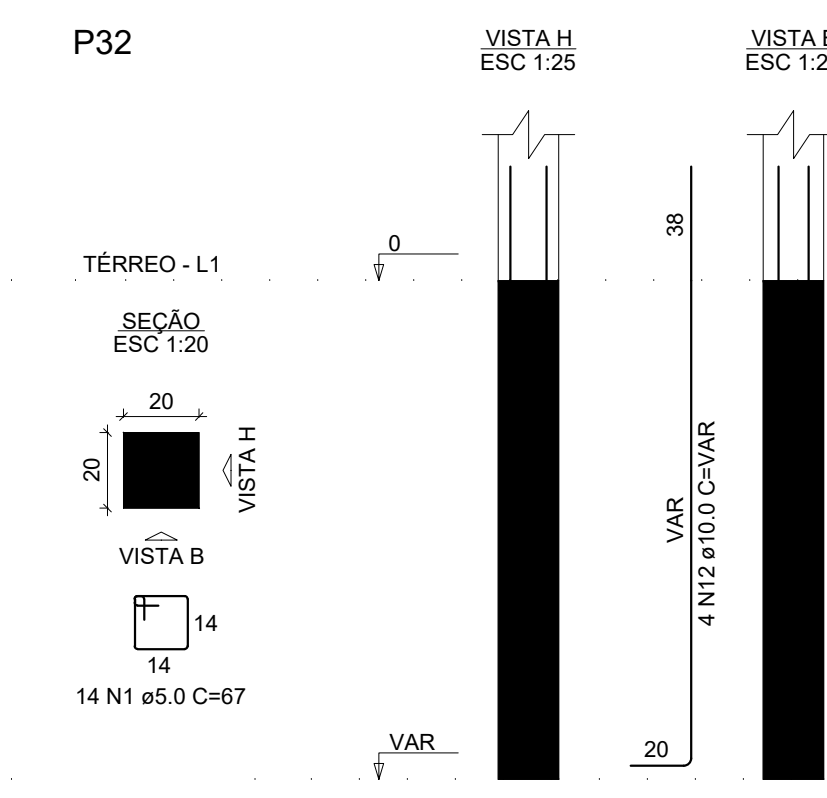
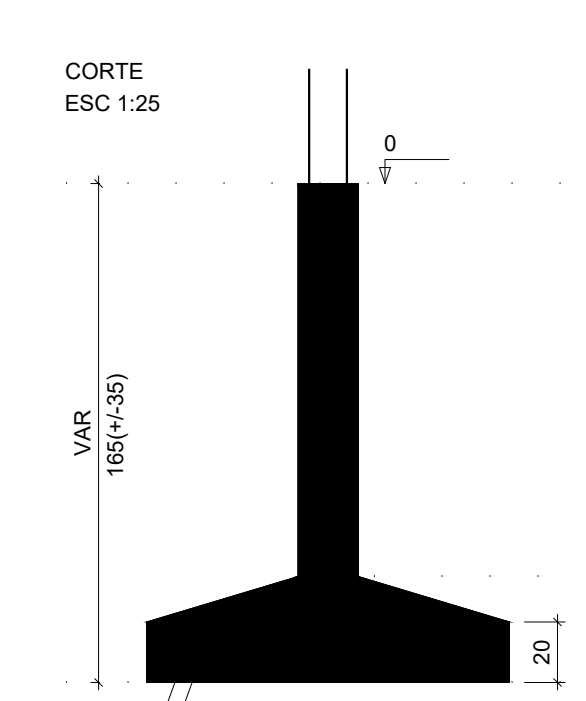
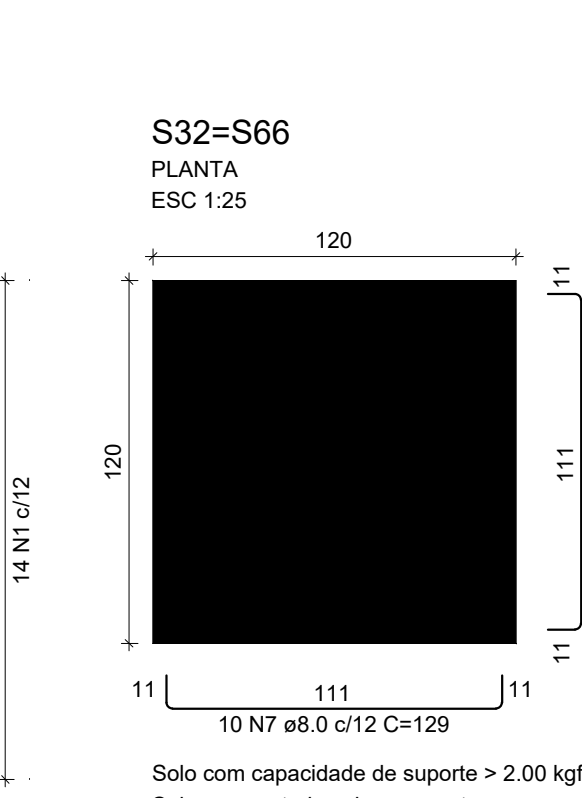
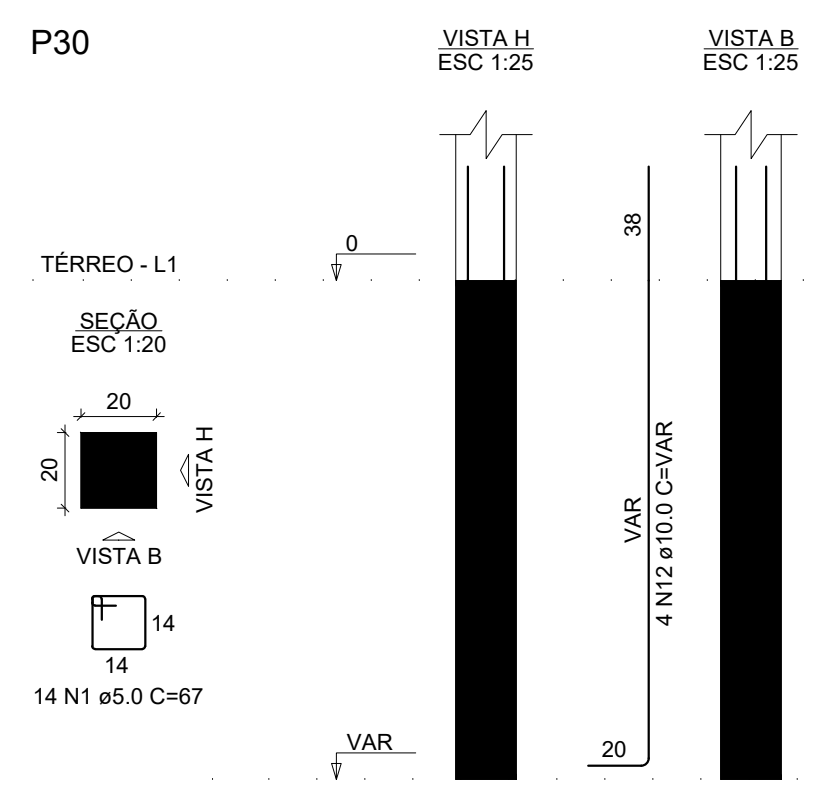
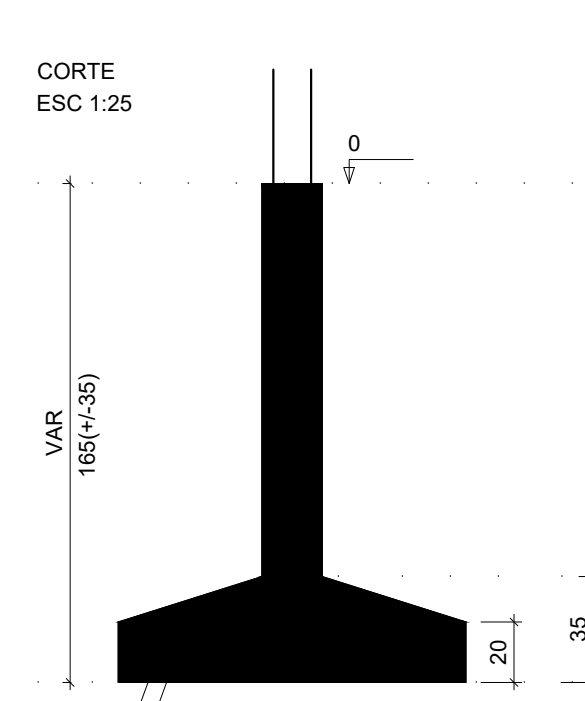
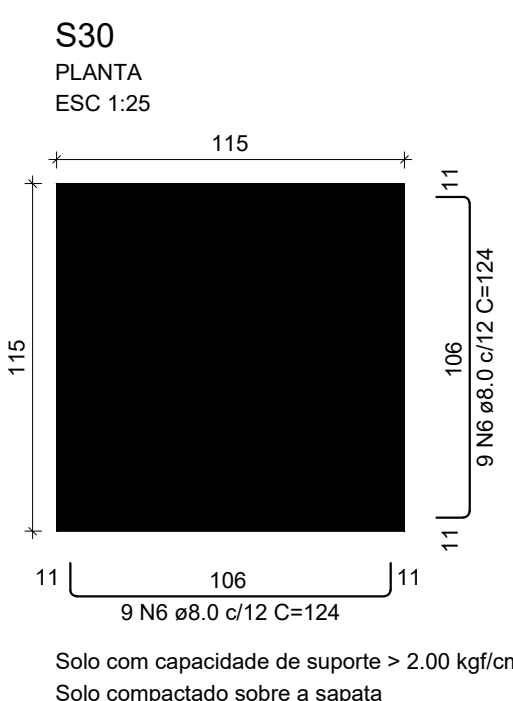
Forma do pavimento Tampa RS (Nível 630)



Corte B-B



Corte A-A



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P30	24P47	2	37	67	2479
P32	24P49	2	43	87	3741
P39	24P50	2	69	2208	1521
P47	24P51	2	77	921	706
P48	24P52	2	70	4130	2890
P56	24P53	2	36	124	4464
P66	24P54	2	40	129	5160
P67	24P55	2	70	124	8632
P68	24P56	2	68	124	8432
P69	24P57	2	22	129	2838
P70	24P58	2	10	109	1090
P71	24P59	2	8	VAR	VAR
P72	24P60	2	10	229	2290
P73	24P61	2	2	75	150
P74	24P62	2	6	271	1626
P75	24P63	2	60	143	8580
P76	24P64	2	27	138	3726
P77	24P65	2	153	4131	6260
P78	24P66	2	12	183	2196
P79	24P67	2	13	173	2249
P80	24P68	2	14	173	2422
P81	24P69	2	13	178	2314
P82	24P70	2	4	VAR	VAR
P83	24P71	2	8	274	2192
P84	24P72	2	15	233	3495
P85	24P73	2	6	284	1704
P86	24P74	2	8	238	1904
P87	24P75	2	8	289	2312
P88	24P76	2	4	94	376
P89	24P77	2	4	306	1224
P90	24P78	2	4	296	1184
P91	24P79	2	2	242	484
P92	24P80	2	4	306	1224
P93	24P81	2	8	252	2016
P94	24P82	2	36	160	5760
P95	24P83	2	20	150	3000
P96	24P84	2	4	329	1316

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	230.1	99.9
CA50	10.0	314.2	213.1
CA50	12.5	119.6	126.8
CA50	16.0	71.2	123.5
CA50	20.0	16.2	49.3
CA50	5.0	181.8	30.8

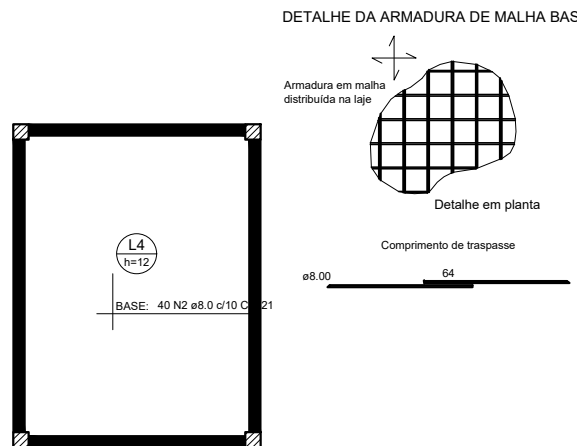
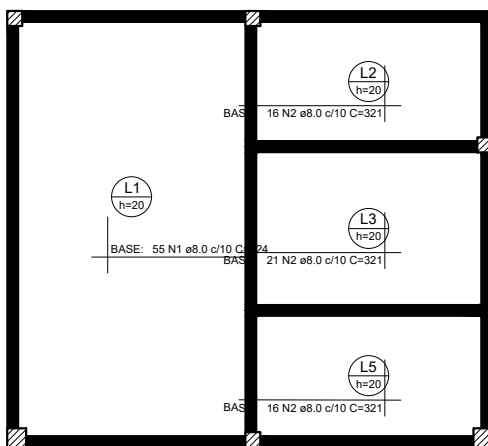
PESO TOTAL (kg): 612.6

Volume de concreto (C-25) = 8.80 m³

Área de forma = 51.02 m²

RELAÇÃO DO AÇO

P7	24P16	11xP21			
P7	P45	P46			
CA50	24x36				
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	238	67	15940
	2	5.0	10	54	540
	3	5.0	46	87	4002
	4	5.0	336	84	28304
	5	10.0	56	217	12152
	6	12.5	12	94	1128
	7	12.5	4	VAR	VAR
	8	16.0	8	121	968
	9	16.0	8	121	968
RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (cm)	PESO = 10% (kg)		
CA50	5.0	383	166.3		
	10.0	121.5	82.4		
	12.5	20.3	21.5		
	16.0	95	64.9		
	16.0	204.9	134.7		
PESO TOTAL					
CA50	435.1				



RELAÇÃO DO AÇO

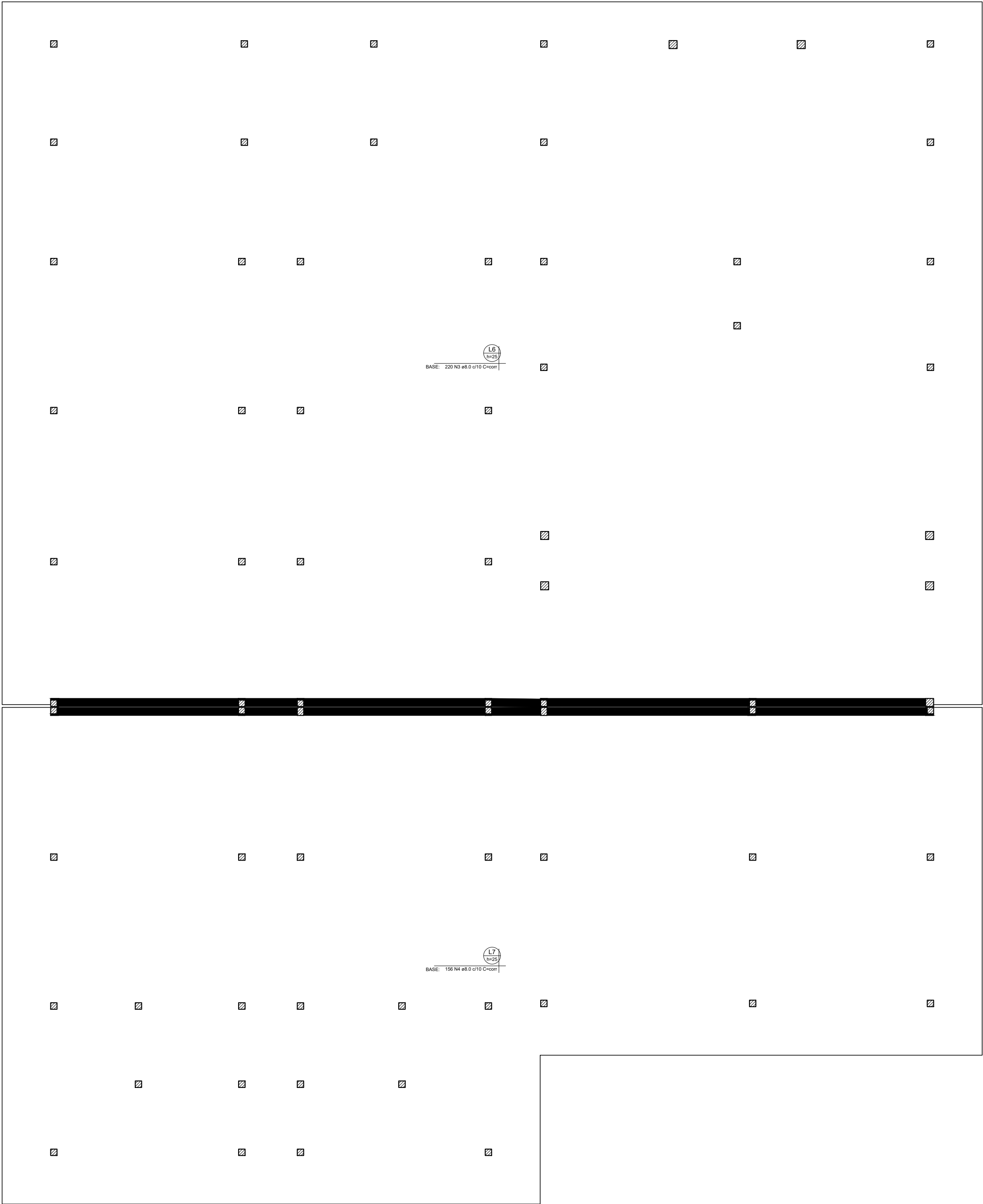
Negativos X

AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
CA50	1	8.0	55	324	17820
	2	8.0	93	321	28653
	3	8.0	220	corr	671220
	4	8.0	156	corr	411840

RESUMO DO AÇO

AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	8.0	11307.3	4907.9
PESO TOTAL (kg)			
CA50			4907.9

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²



Armação superior do radier do pavimento Térreo (Eixo X)



AB PROJETOS E CONSULTORIA LTDA

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CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra:

CONSTRUÇÃO DO FORUM DE PIO IX

Endereço:

Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí

Conteúdo da prancha:

Armação Superior do Radier Pavimento Térreo Eixo "X"

Responsável Técnico:

Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD:

Jean Carlos

Data:

Julho/2022

Escala:

1/50

Revisão:

1/27

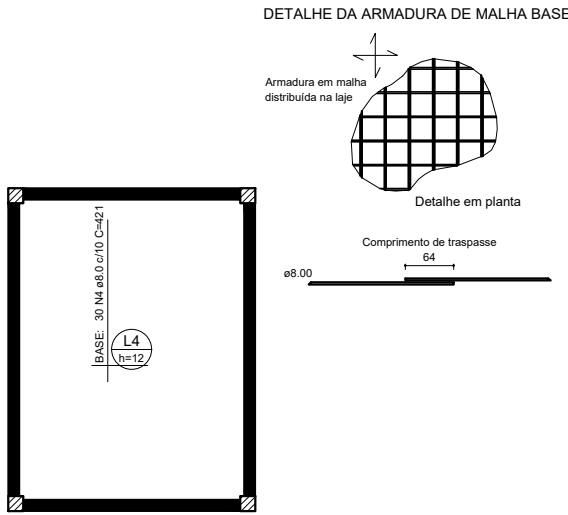
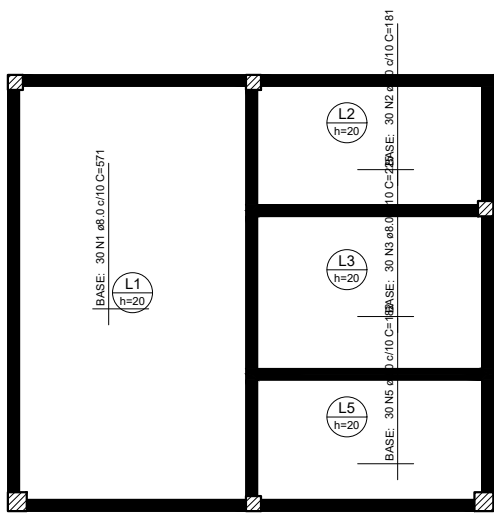
LAÇÃO DO AÇO

N	QUANT	C UNIT	C TOTAL
Y	(cm)	(cm)	(cm)
0	55	324	17820
0	69	321	22163
0	220	corr	671220
0	196	corr	411640

MO DO AÇO

C TOTAL	PESO + 10%
(m)	(kg)
11307.3	4907.9

C-30) = 0.00 m³
m²



RELAÇÃO DO AÇO

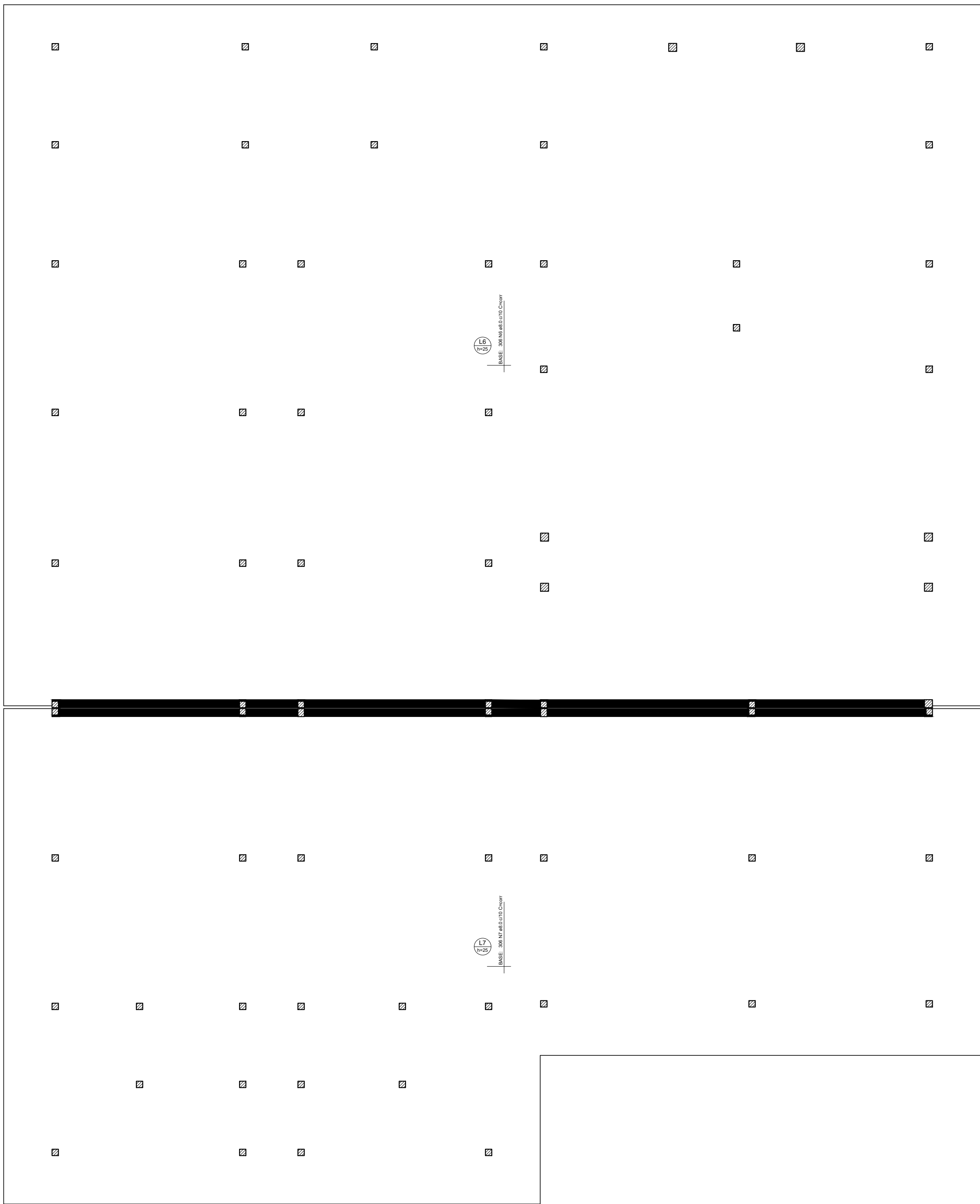
Negativos Y

AÇO	N	DIAM	QUANT	C UNIT	C TOTAL
		(mm)		(cm)	(cm)
CA50	1	8.0	30	571	17130
	2	8.0	30	181	5430
	3	8.0	30	225	6750
	4	8.0	30	421	12630
	5	8.0	30	182	5460
	6	8.0	306	corr	671364
	7	8.0	306	corr	408510

RESUMO DO AÇO

AÇO	DIAM	C TOTAL	PESO + 10%
	(mm)	(m)	(kg)
CA50	8.0	11272.7	4892.8
PESO TOTAL			
CA50			4892.8

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²



Armação superior do radier do pavimento Térreo (Eixo Y)



AB PROJETOS E CONSULTORIA LTDA

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CRC nº 202527-Z

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FÓRUM DE PIO IX**

Endereço: **Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Pio IX - Piauí**

Controlado pelo projeto: **Armação Superior do Radier Pavimento Térreo Eixo "Y"**

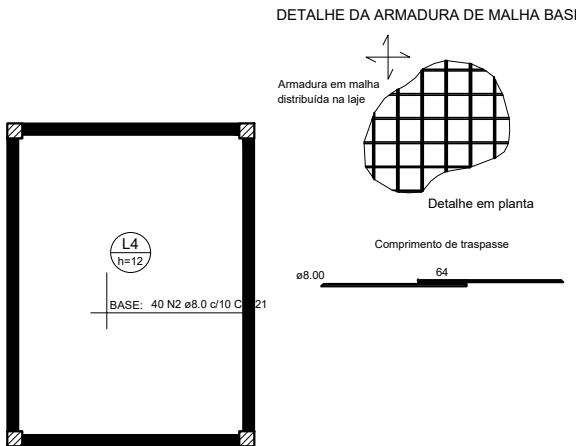
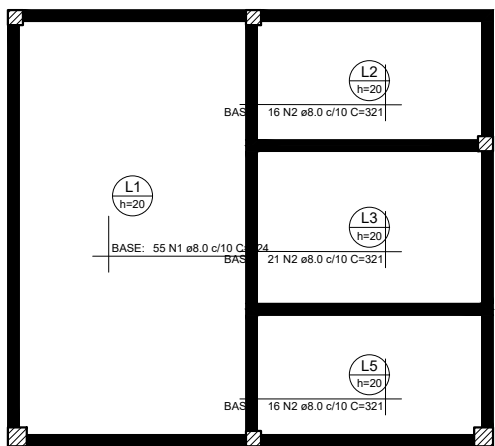
Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

Data: **Julho/2022**

Escala: **1/50**

Revisão: **8/27**



RELAÇÃO DO AÇO

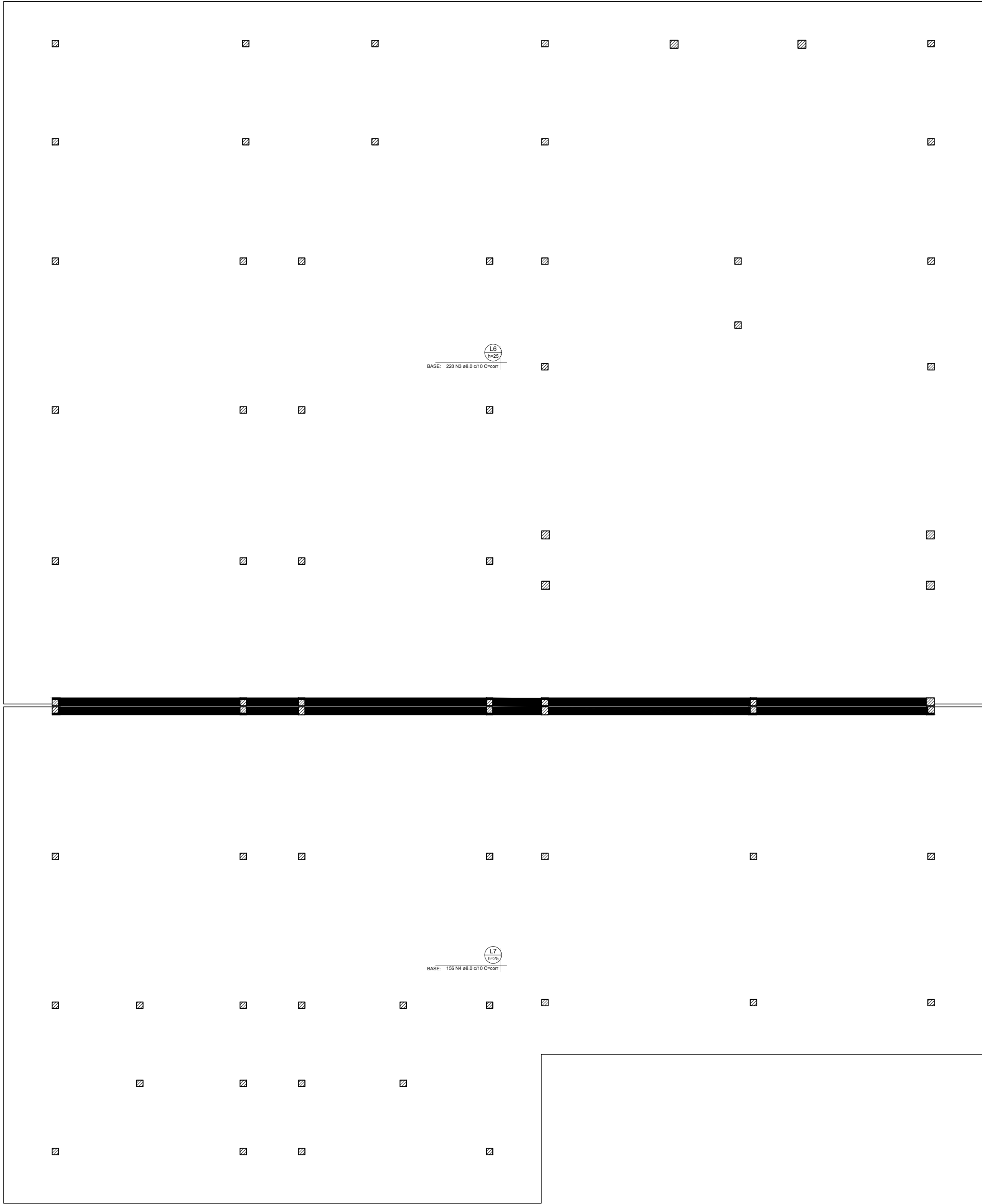
Negativos X

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	55	324	17820
	2	8.0	93	321	29853
	3	8.0	220	corr	671220
	4	8.0	156	corr	411840

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	11307.3	4907.9
PESO TOTAL (kg)			
CA50		4907.9	

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²



Armação superior do radier do pavimento Térreo (Eixo X)



AB PROJETOS E CONSULTORIA LTDA
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CRC nº 202527-Z

PROJETO ESTRUTURAL

Obra:
CONSTRUÇÃO DO FORUM DE PIO IX

Endereço:
Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Pto IX - Piauí

Conteúdo do projeto:
Armação Inferior do Radier Pavimento Térreo Eixo "X"

Responsável Técnico:
Verônica Scheren Castelo Branco - Crea/PI 19.373

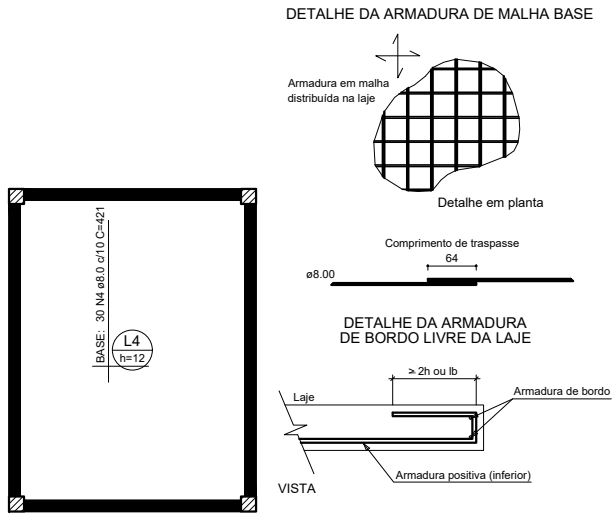
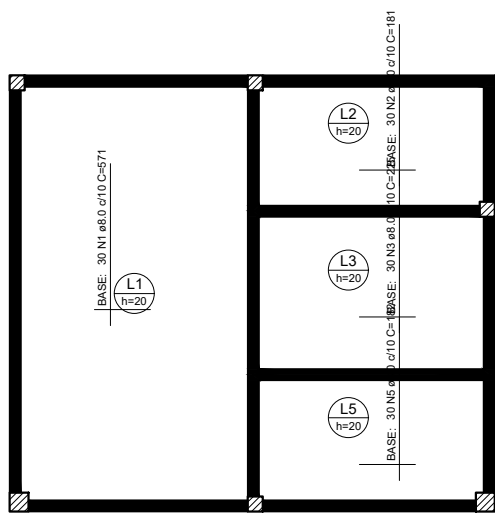
Op. de CAD:
Jean Carlos

Data:
Julho/2022

Escala:
1/50

Revisão:
9/27

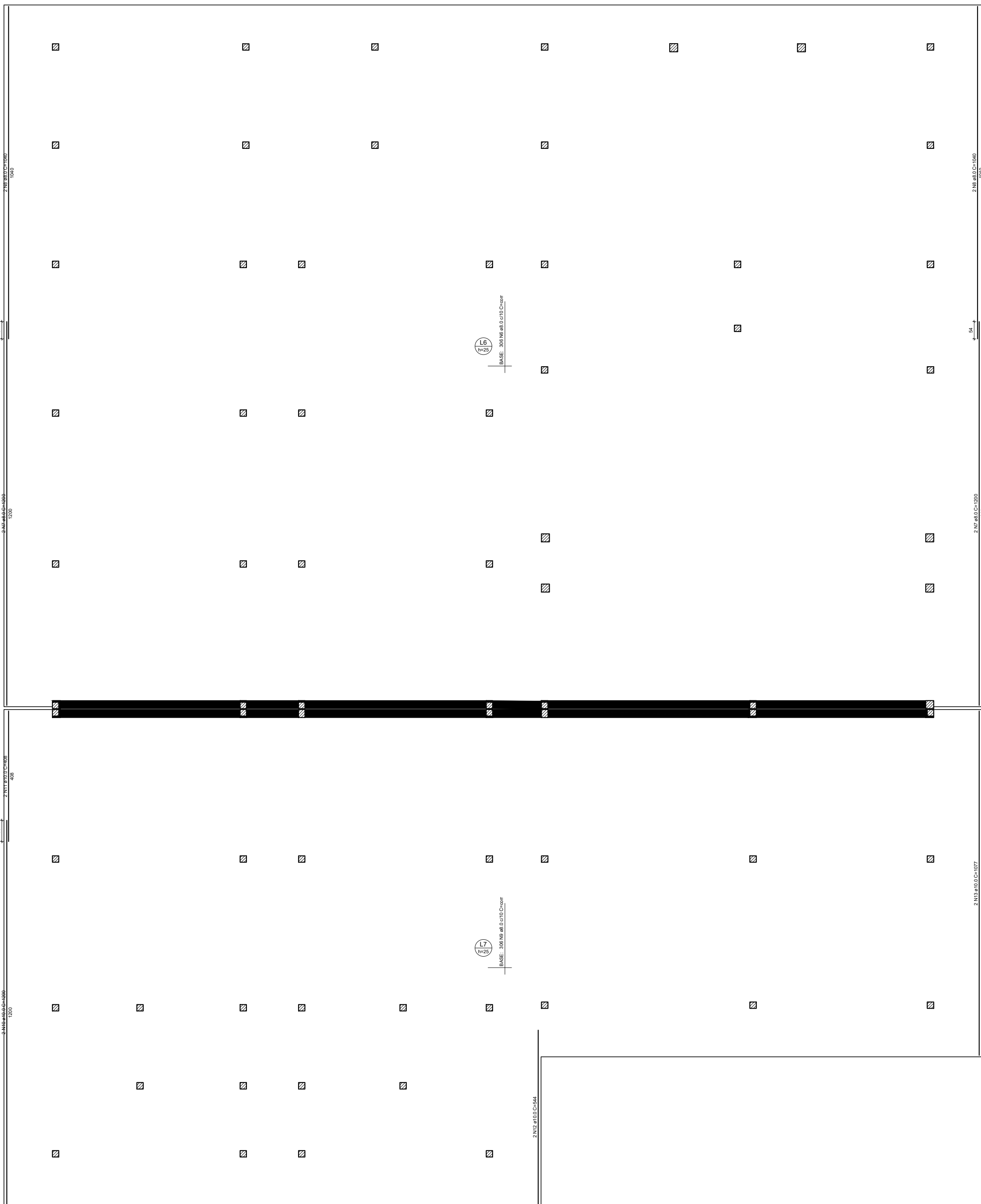
TOTAL
(cm)
17820
29853
671220
4890
1518
344
411840
4920
1074
450
972



RELAÇÃO DO AÇO					
Positivo Y					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CASO	1	8.0	30	271	17130
	2	8.0	30	181	6430
	3	8.0	30	225	6750
	4	8.0	30	421	12630
	5	8.0	30	182	5460
	6	8.0	306	com	671384
	7	8.0	4	1200	4800
	8	8.0	4	1045	4180
	9	8.0	306	com	408510
	10	10.0	2	1200	2400
	11	10.0	2	646	1292
	12	10.0	2	846	1692
	13	10.0	2	1077	2154

RESUMO DO AÇO			
AÇO	DIAM (mm)	C. TOTAL (m)	PESO + 10% (kg)
CASO	8.0	11362.3	4931.7
	10.0	64.6	43.8
PESO TOTAL (kg)			
CASO	4975.5		

Volume de concreto (C-30) = 0.90 m³
Área de forma = 0.00 m²



Armação inferior do radier do pavimento Térreo (Eixo Y)



AB PROJETOS E CONSULTORIA LTDA
Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
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CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra:
CONSTRUÇÃO DO FORUM DE PIO IX

Endereço:
Rua Isidro de Alencar Bezerra, Quadra E, Lote 01, Pto IX - Piauí

Coordenador do projeto:
Armação Inferior Radier do Pavimento Térreo Eixo "Y"

Responsável Técnico:
Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD:
Jean Carlos

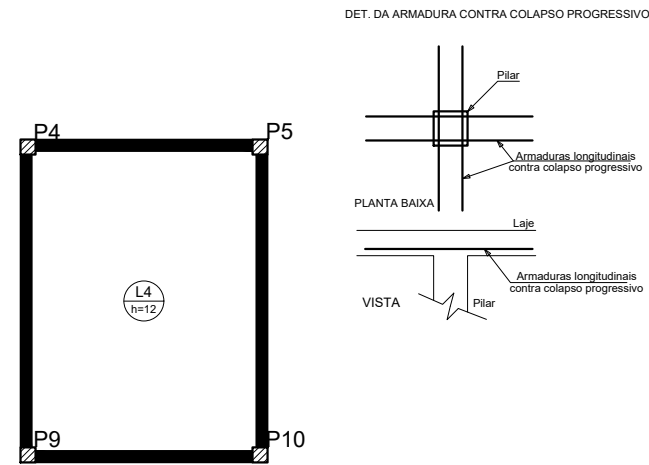
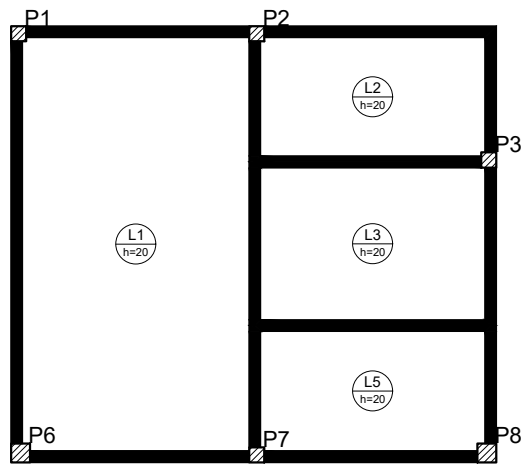
Data:
Julho/2022

Escala:
1/50

Revisão:



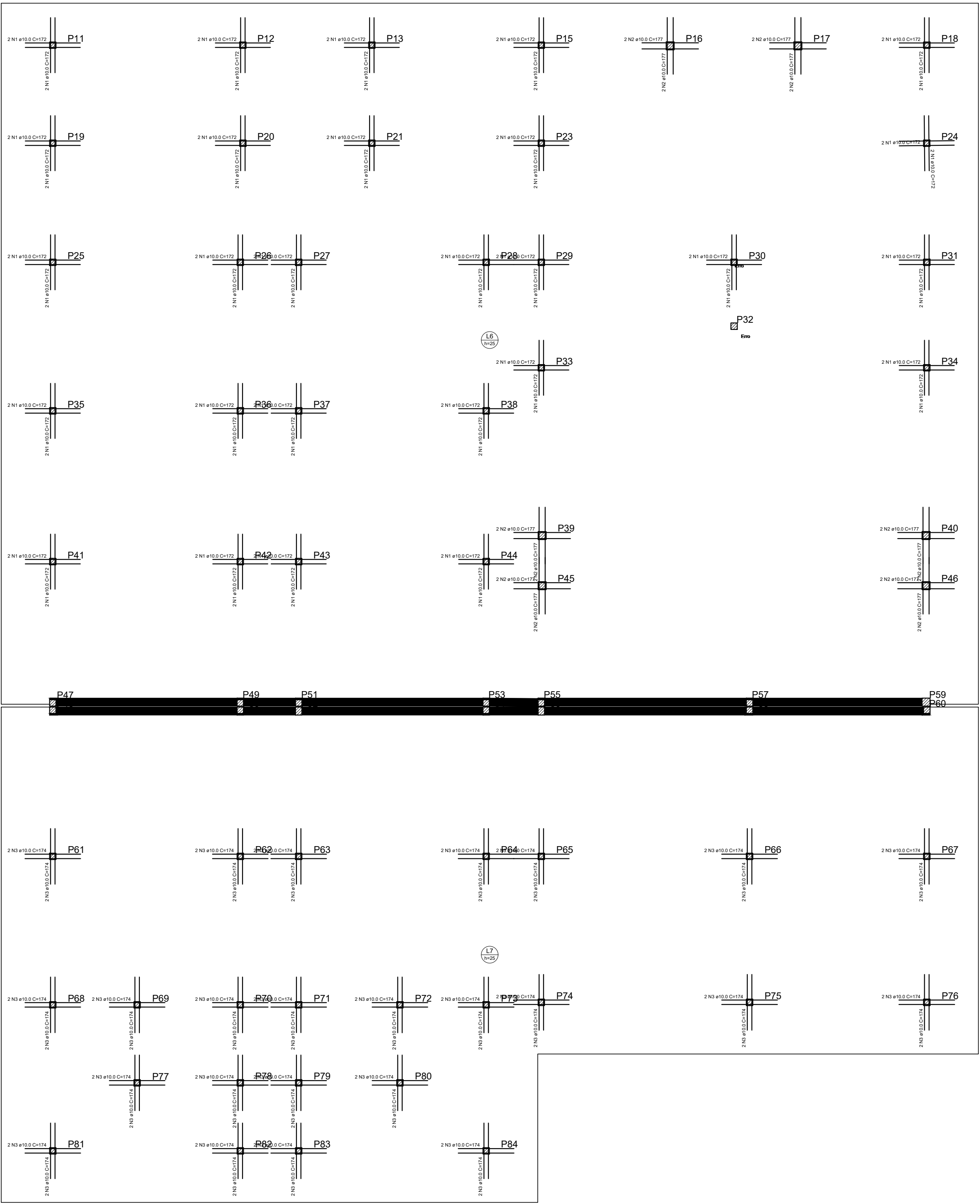
10/27



RELAÇÃO DO AÇO					
Punção					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	10.0	108	172	18576
	2	10.0	24	177	4248
	3	10.0	96	174	16704

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	395.3	268.1
PESO TOTAL (kg)			
CA50	268.1		

Volume de concreto (C-30) = 0.00 m³
Área de forma = 0.00 m²



Detalhamento de punção e cisalhamento do radier do pavimento Térreo (Nível 0)



AB PROJETOS E CONSULTORIA LTDA

Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
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CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra

CONSTRUÇÃO DO FORUM DE PIO IX

Endereço

Rua Izidro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí

Controlado por projeto

Detalhamento de Punção e Cisalhamento do Radier do Pavimento Térreo

Responsável Técnico

Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD

Jean Carlos

Data

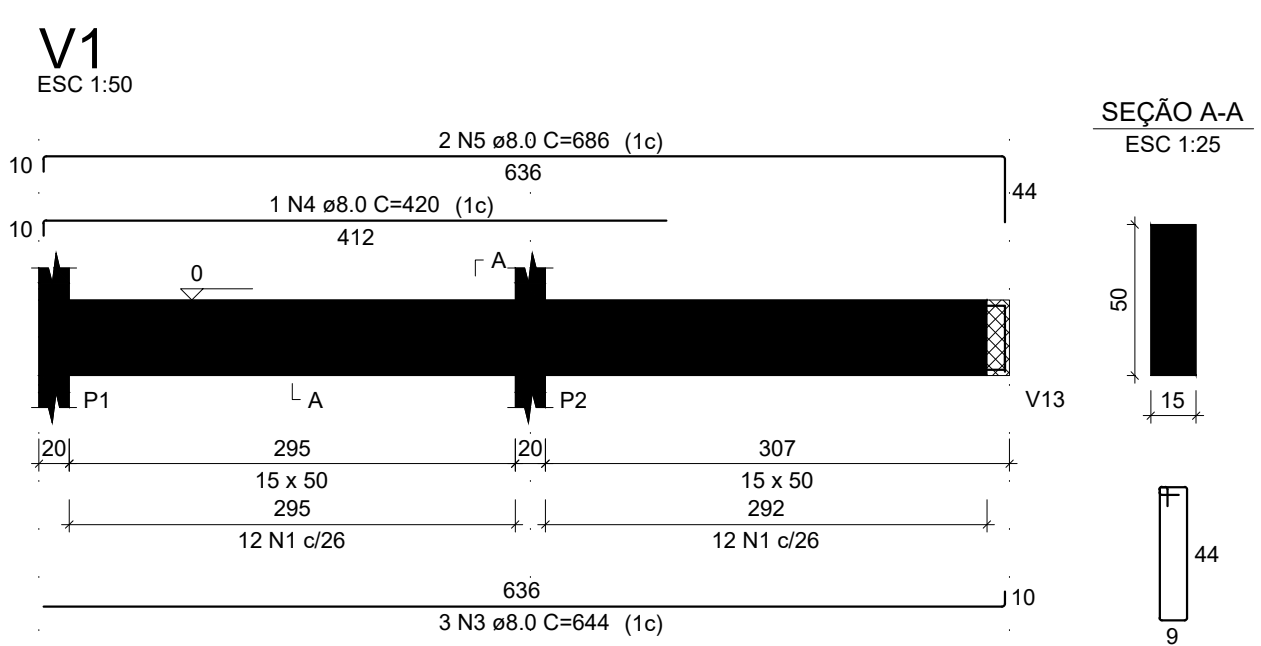
Julho/2022

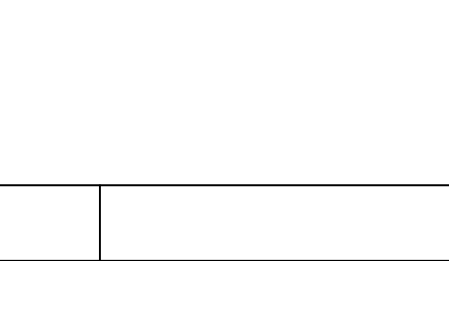
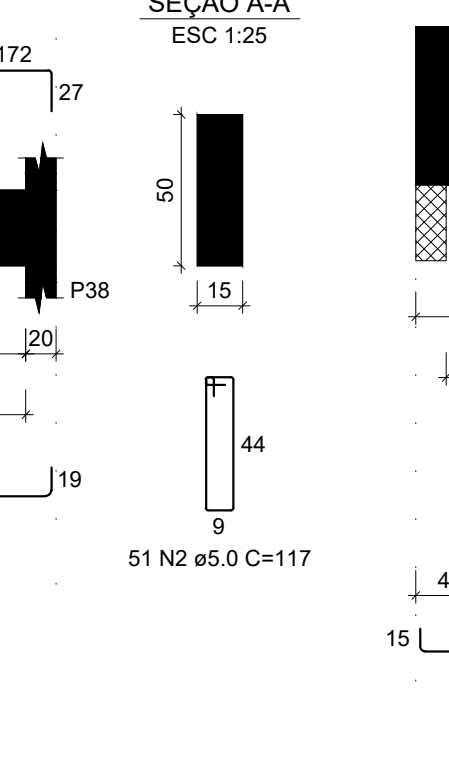
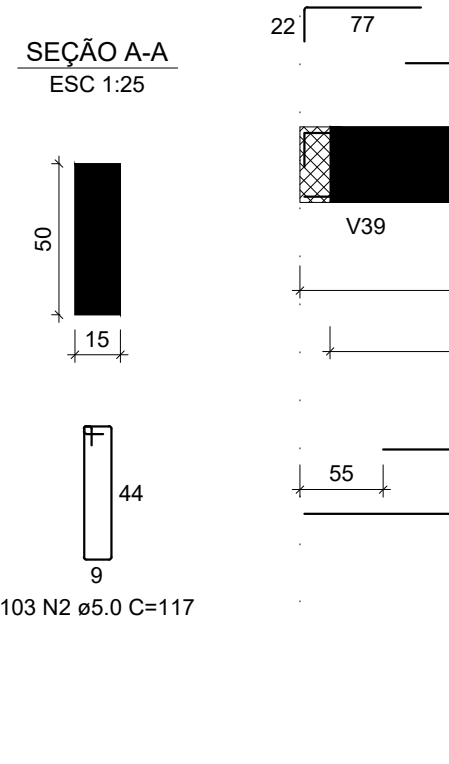
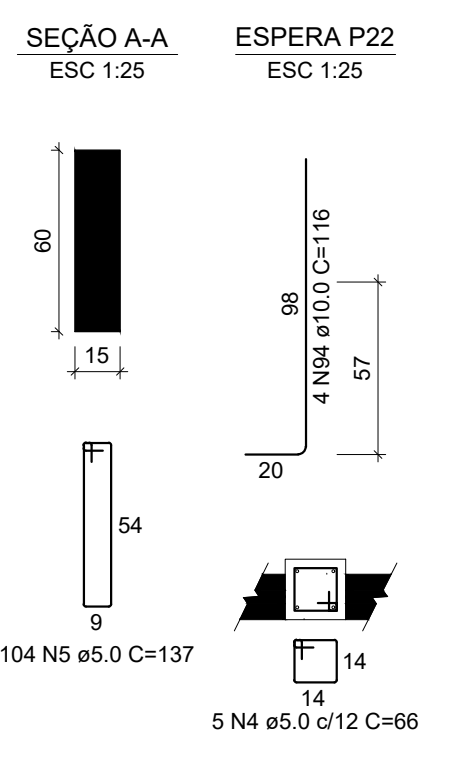
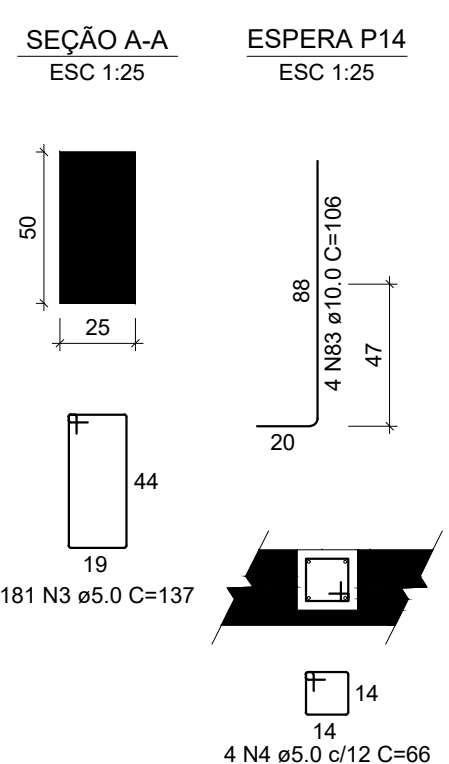
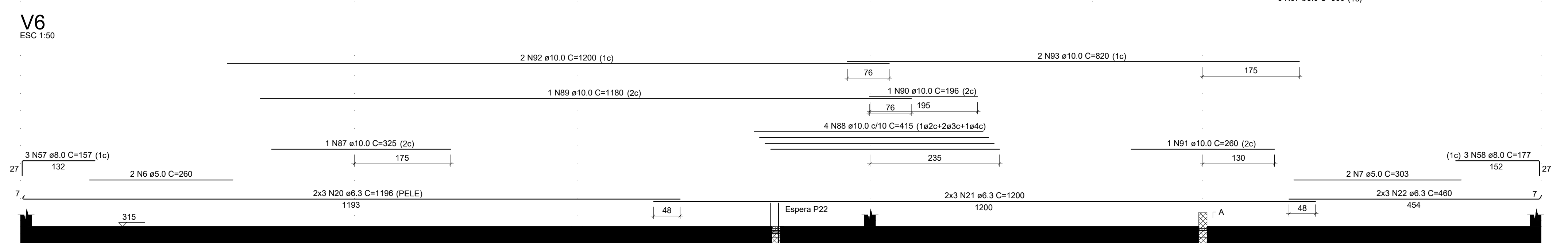
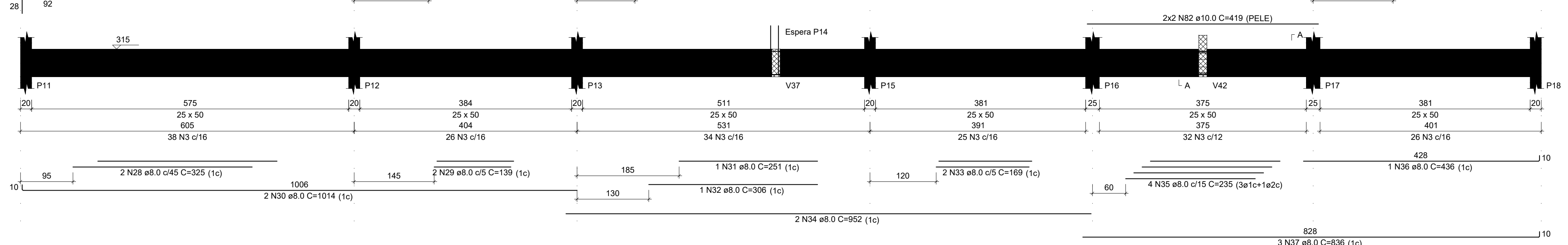
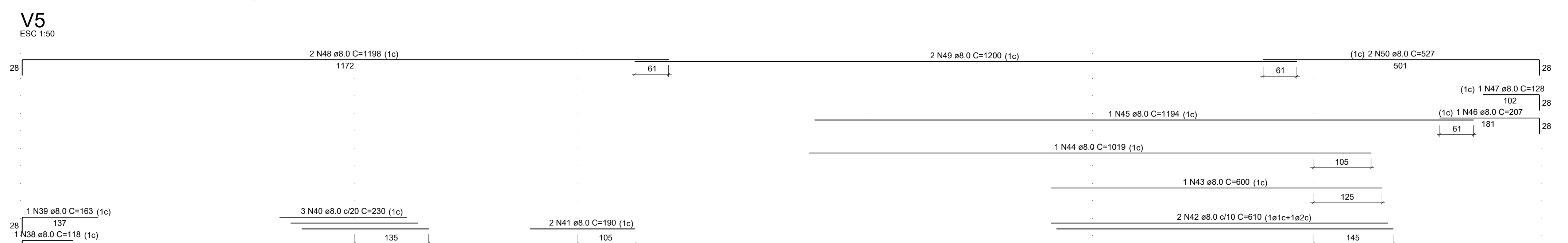
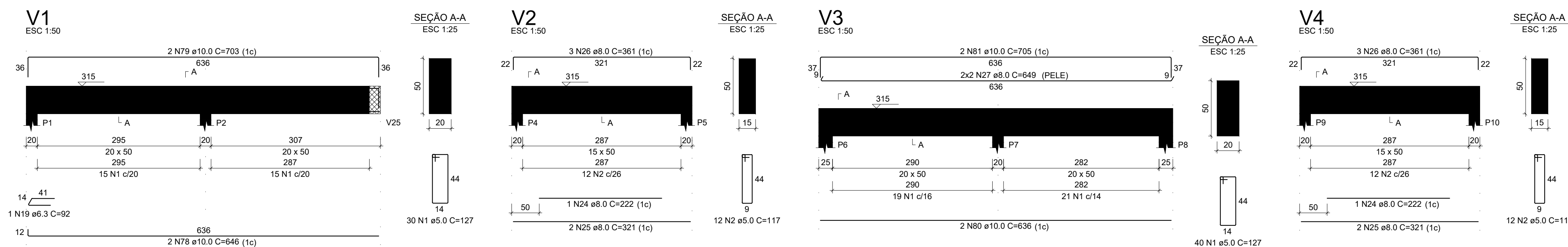
Escala

1/50

Revisão

11/27





RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C LINET (cm)	C TOTAL (cm)
CA50	1	3.0	127	137	6993
	2	5.0	276	117	32262
	3	5.0	161	137	24170
	4	5.0	9	86	584
	5	5.0	104	137	14244
	6	5.0	2	280	520
	7	5.0	2	303	606
	8	5.0	2	212	424
	9	5.0	2	172	344
	10	5.0	2	259	518
	11	5.0	76	137	10522
	12	5.0	2	354	708
	13	5.0	2	316	632
	14	5.0	2	309	618
	15	5.0	2	247	494
	16	5.0	8	237	1896
	17	5.0	74	247	18278
	18	5.0	2	680	1360
	19	5.0	3	139	417
	20	8.3	24	1196	28704
	21	8.3	6	1200	7200
	22	8.3	6	460	2760
	23	8.3	16	62	1032
	24	8.3	2	222	444
	25	8.3	4	321	1284
	26	8.3	6	361	2166
	27	8.3	3	139	417
	28	8.3	2	325	650
	29	8.3	2	1014	2028
	30	8.3	1	251	502
	31	8.3	1	251	502
	32	8.3	1	306	612
	33	8.3	1	169	338
	34	8.3	2	852	1704
	35	8.3	4	255	1020
	36	8.3	1	436	872
	37	8.3	1	836	1672
	38	8.3	1	118	236
	39	8.3	1	118	236
	40	8.3	3	230	690
	41	8.3	2	190	380
	42	8.3	2	610	1220
	43	8.3	1	600	1200
	44	8.3	1	1019	2038
	45	8.3	1	1194	2388
	46	8.3	1	207	414
	47	8.3	1	128	256
	48	8.3	2	1188	2376
	49	8.3	2	1200	2400
	50	8.3	2	527	1054
	51	8.3	2	404	808
	52	8.3	4	338	1352
	53	8.3	3	606	1212
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	55	8.3	3	618	1236
	56	8.3	3	621	1863
	57	8.3	3	177	531
	58	8.3	3	173	519
	59	8.3	4	402	1608
	60	8.3	2	843	1686
	61	8.3	2	843	1686
	62	8.3	2	843	1686
	63	8.3	2	843	1686
	64	8.3	4	384	1536
	65	8.3	4	419	1676
	66	8.3	3	165	495
	67	8.3	3	97	291
	68	8.3	4	359	1436
	69	8.3	3	92	276
	70	8.3	3	97	291
	71	8.3	6	1195	7170
	72	8.3	6	117	117
	73	8.3	8	399	3192
	74	8.3	8	399	3192
	75	8.3	3	171	513
	76	8.3	3	172	516
	77	8.3	6	172	1032
	78	10.0	2	646	1292
	79	10.0	2	703	1406
	80	10.0	2	638	1272
	81	10.0	2	705	1410
	82	10.0	4	419	1676
	83	10.0	4	106	424
	84	10.0	2	400	800
	85	10.0	2	612	1224
	86	10.0	2	531	1062
	87	10.0	1	1160	1160
	88	10.0	6	415	2490
	89	10.0	1	1160	1160
	90	10.0	1	186	372
	91	10.0	1	260	520
	92	10.0	2	1200	2400
	93	10.0	2	820	1640
	94	10.0	4	116	464
	95	10.0	2	330	660
	96	10.0	1	508	1016
	97	10.0	3	375	1875
	98	10.0	2	1112	2224
	99	10.0	2	195	390
	100	10.0	3	151	453
	101	10.0	2	270	540
	102	10.0	3	136	408
	103	10.0	2	463	926
	104	10.0	6	533	3198
	105	10.0	4	643	2572
	106	12.5	1	387	774
	107	12.5	2	609	1218
	108	12.5	1	310	620
	109	12.5	2	410	820
	110	12.5	7	820	6440
	111	12.5	4	1113	4452
	112	12.5	4	224	896
	113	16.0	2	673	1346
	114	16.0	8	615	4920
	115	16.0	2	232	464
	116	16.0	2	240	480

RESUMO DO AÇO

ACO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	8.3	402.3	108.3
	8.0	656.1	284.8
	10.0	333.9	226.5
	12.5	145.2	153.9
	16.0	121.1	125.2
CA80	5.0	1197.8	203
PESO TOTAL (kg)			898.8
CA50			898.8
CA80			203

Volume de concreto (C-25) = 17.19 m³
 Área de forma = 218.72 m²

AB PROJETOS E CONSULTORIA LTDA
 Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
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 abprojetoseconsultoria@gmail.com
 CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FORUM DE PIO IX**

Escopo: **Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Ploas**

Coordenação do projeto: **Armário Das Vigas Nível 1-1**

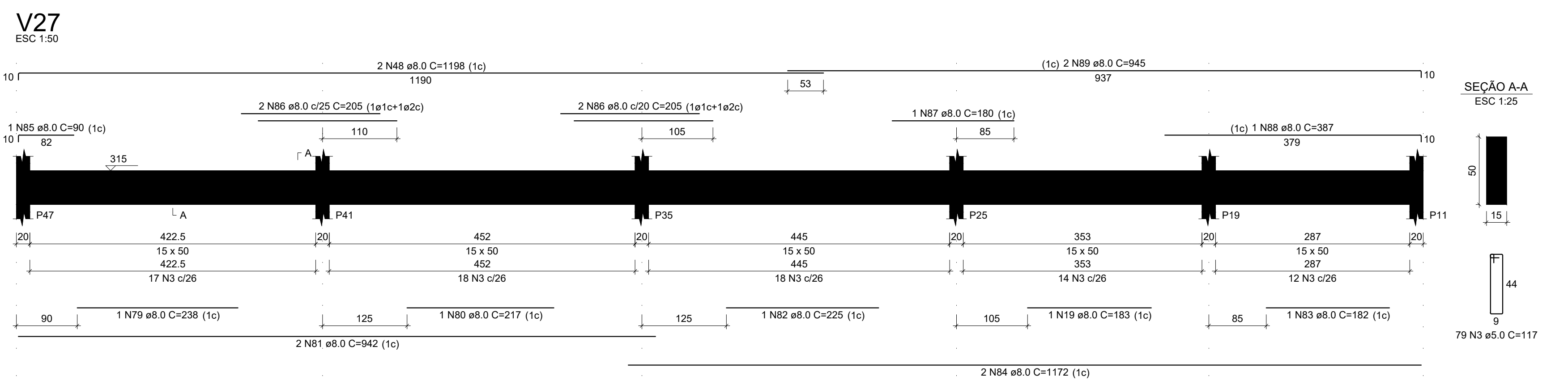
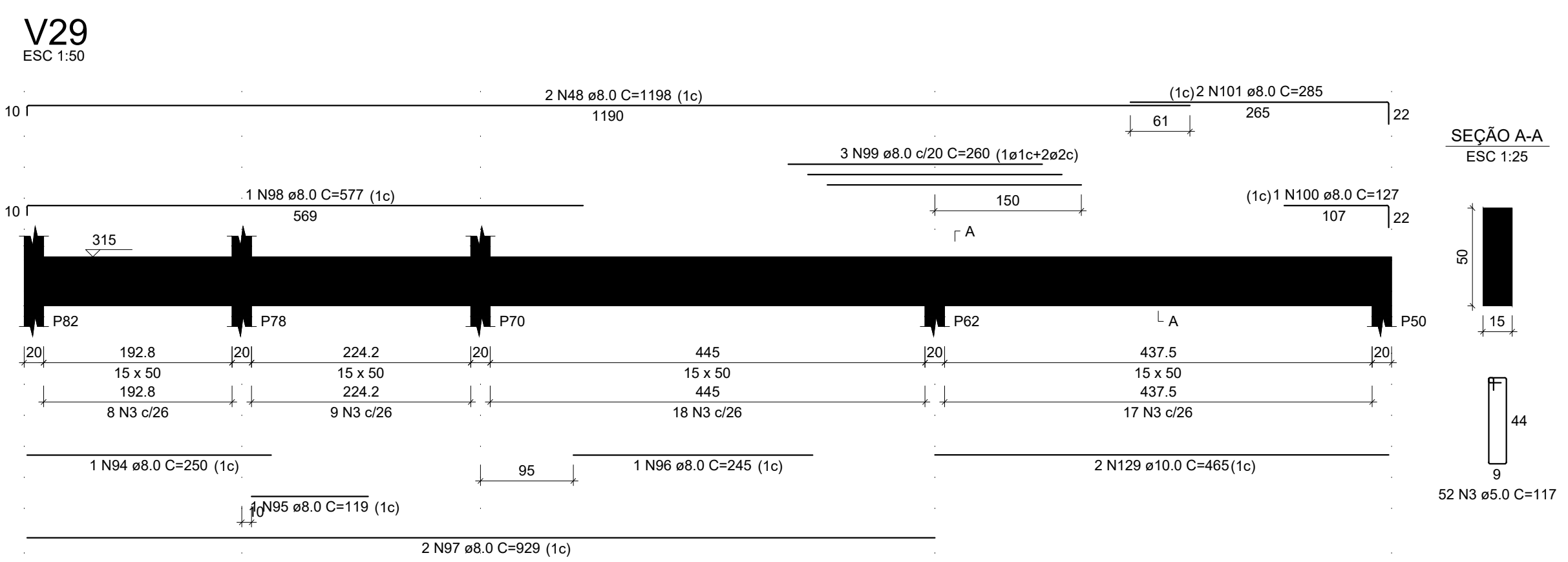
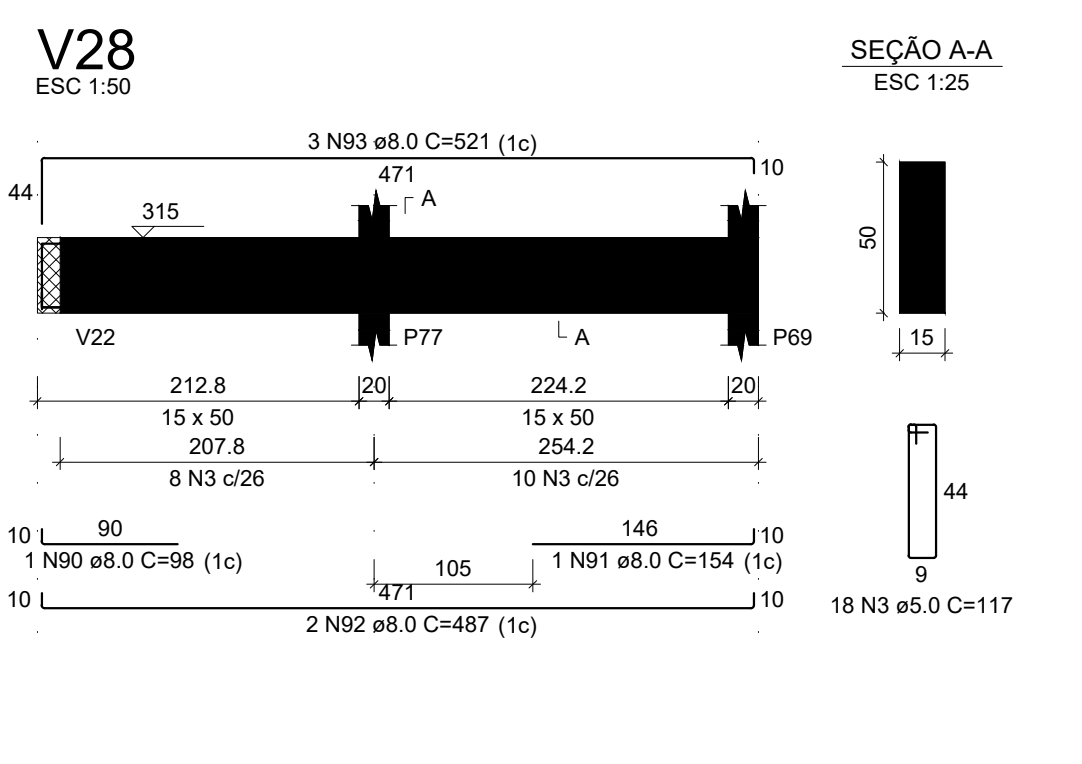
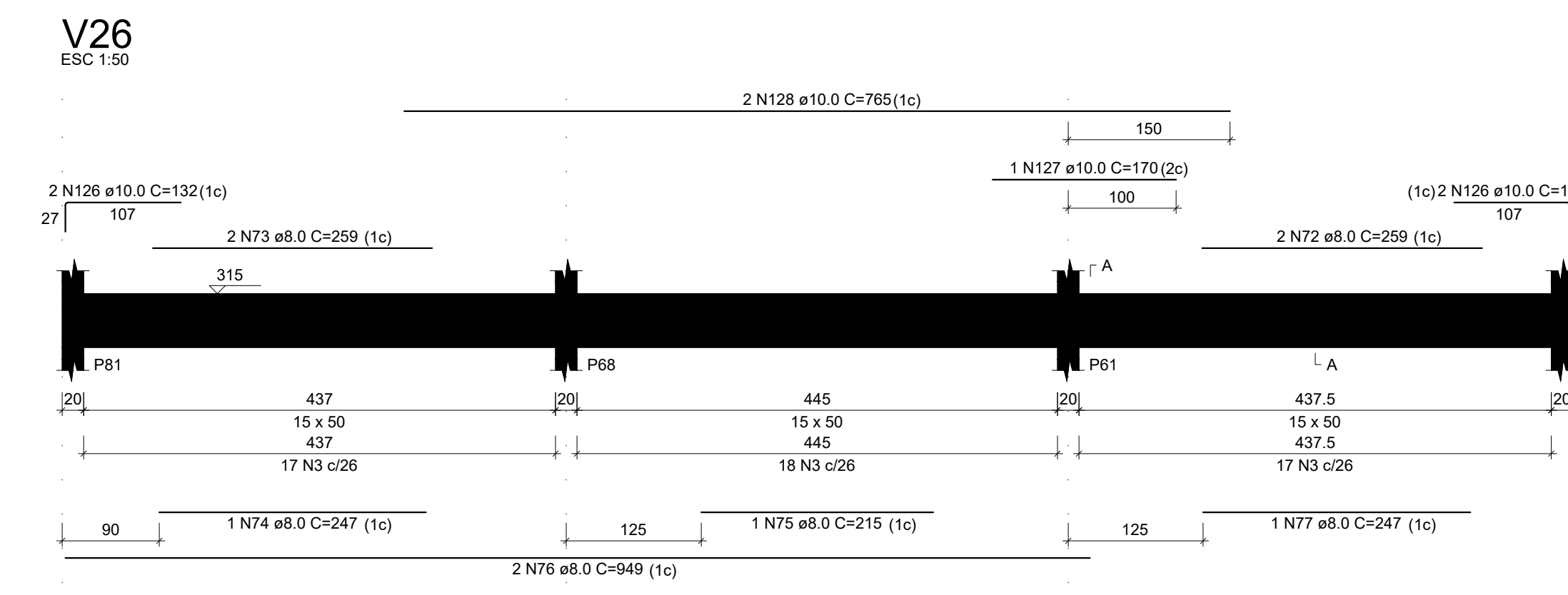
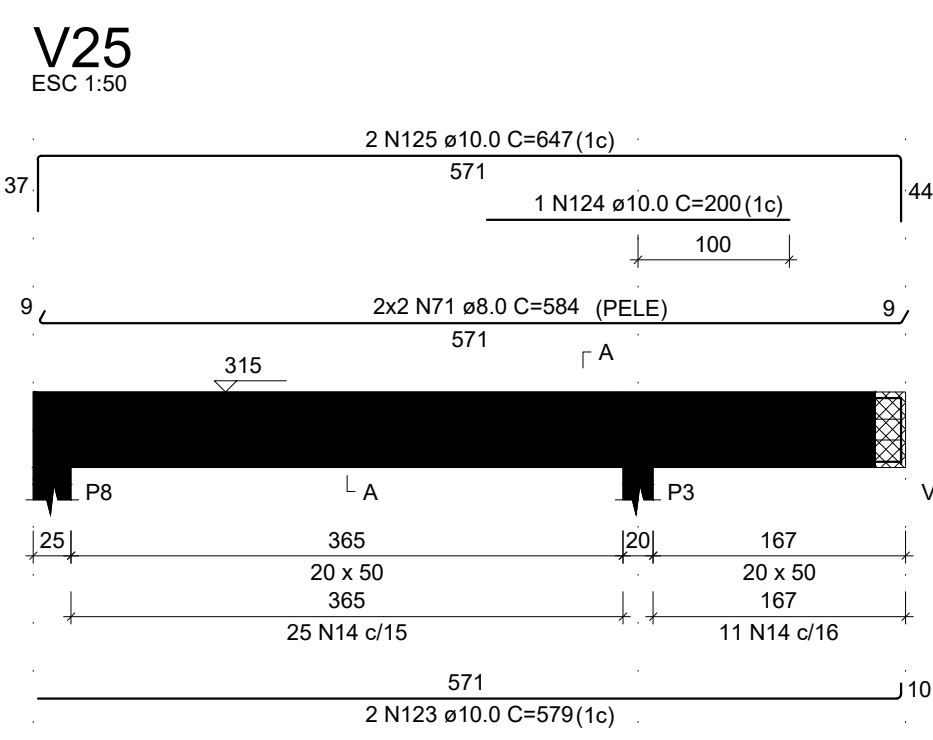
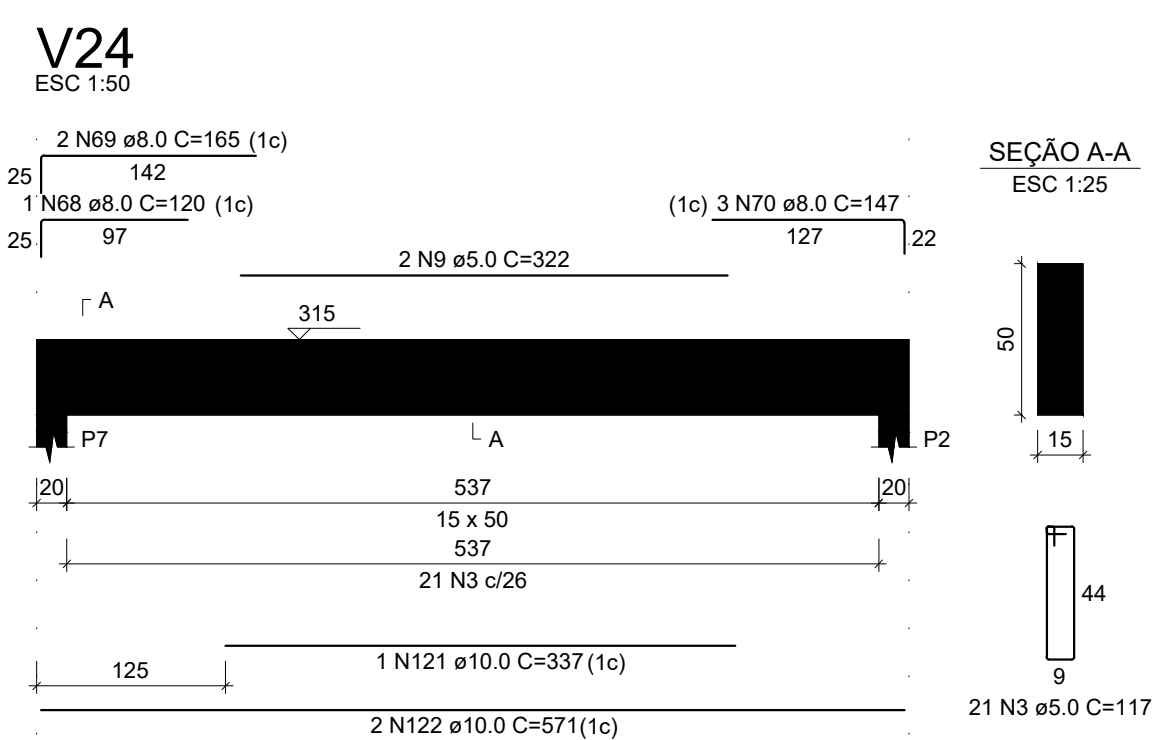
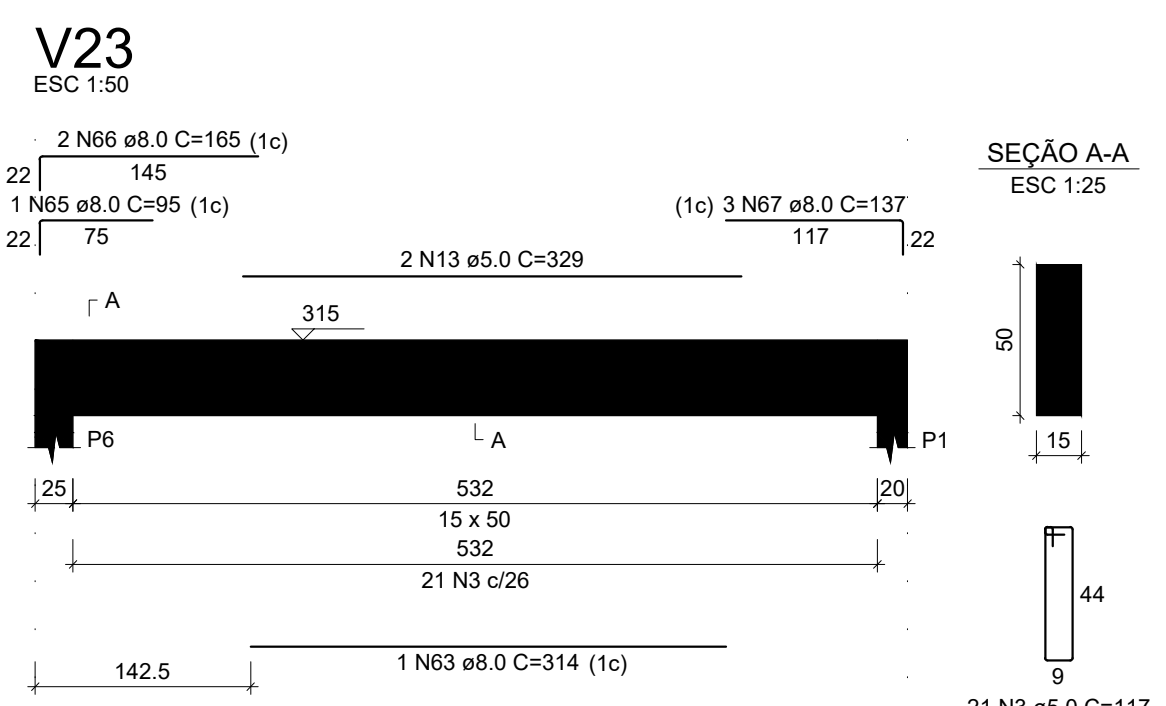
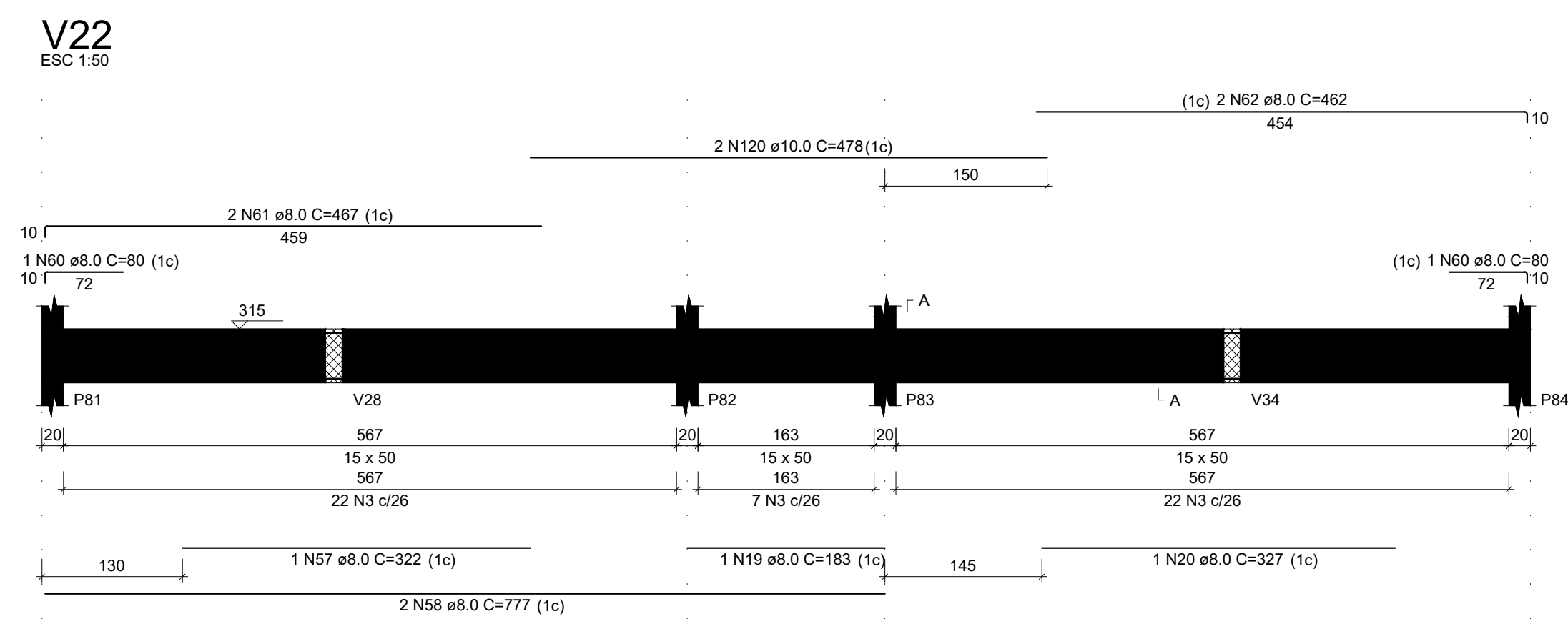
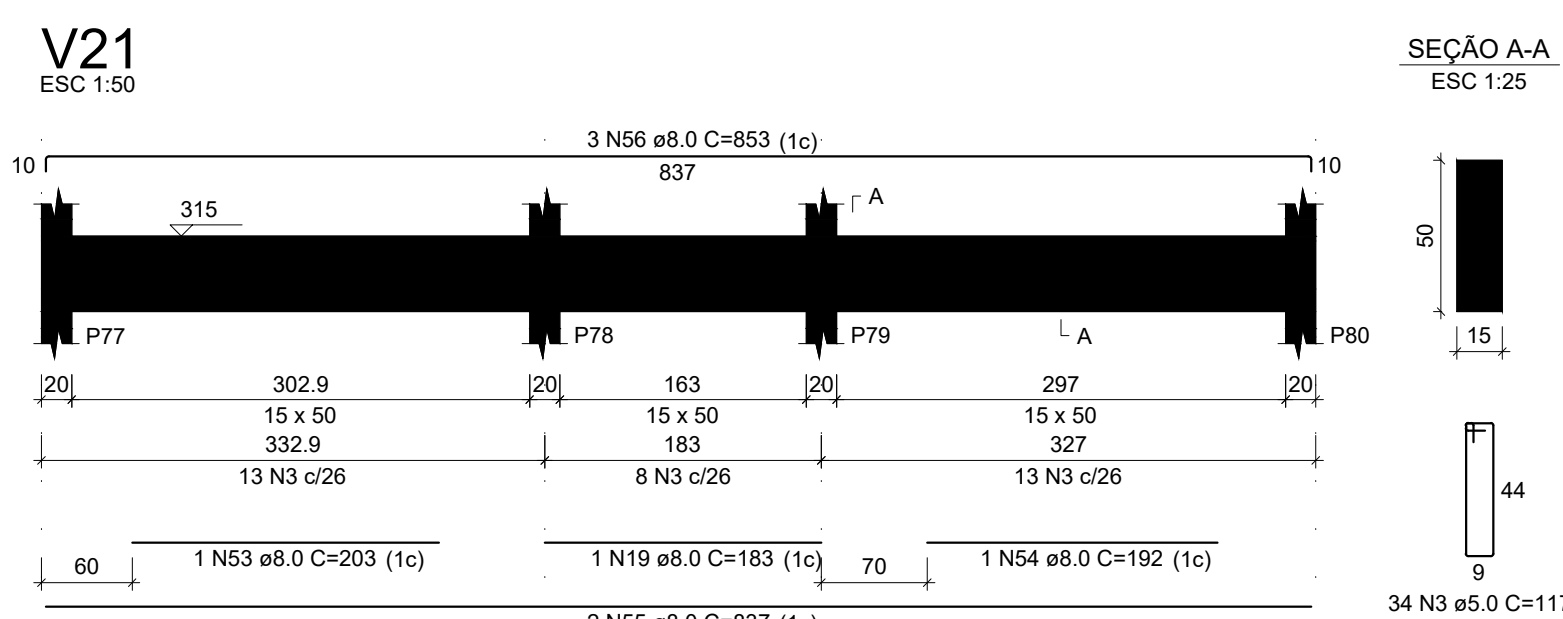
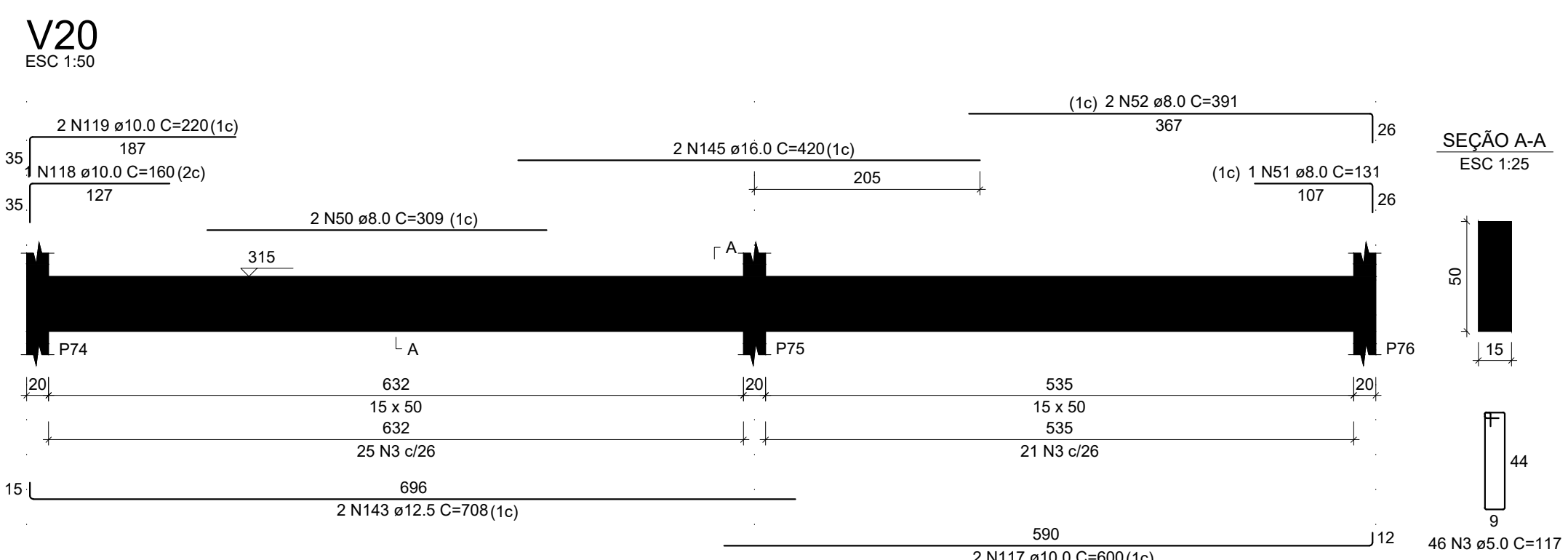
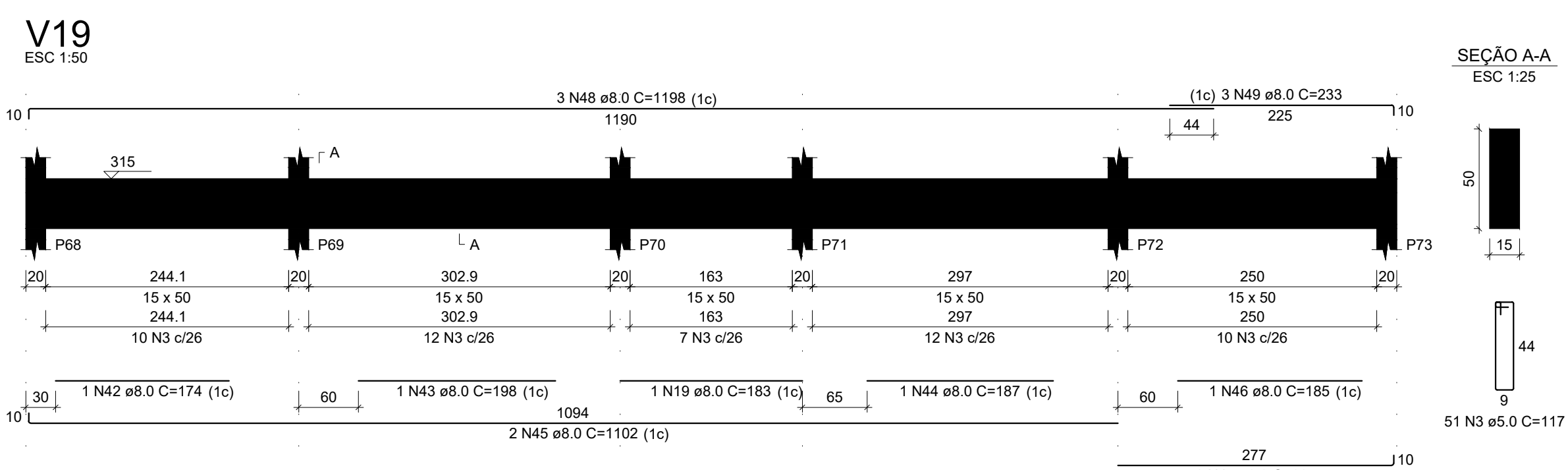
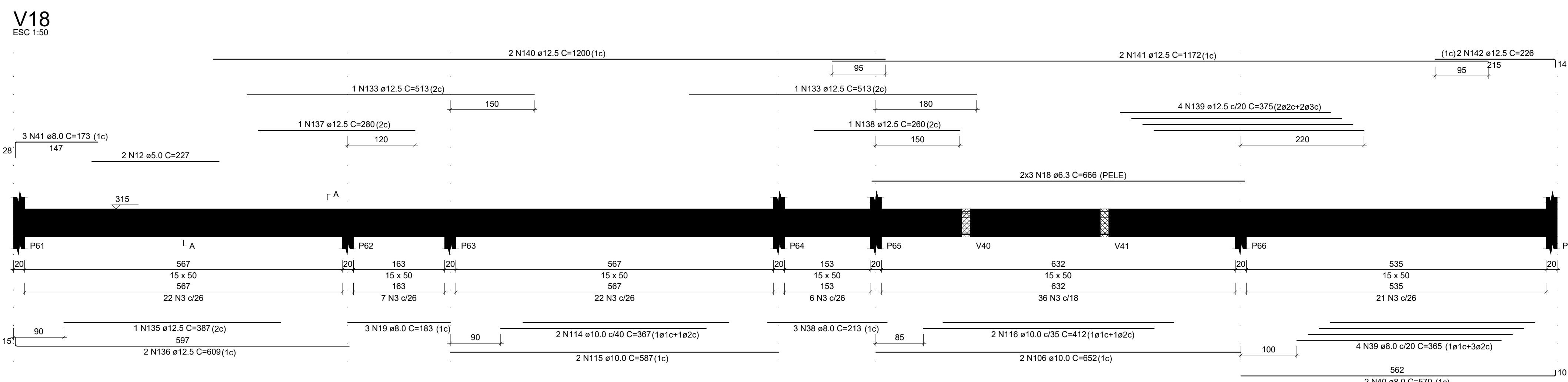
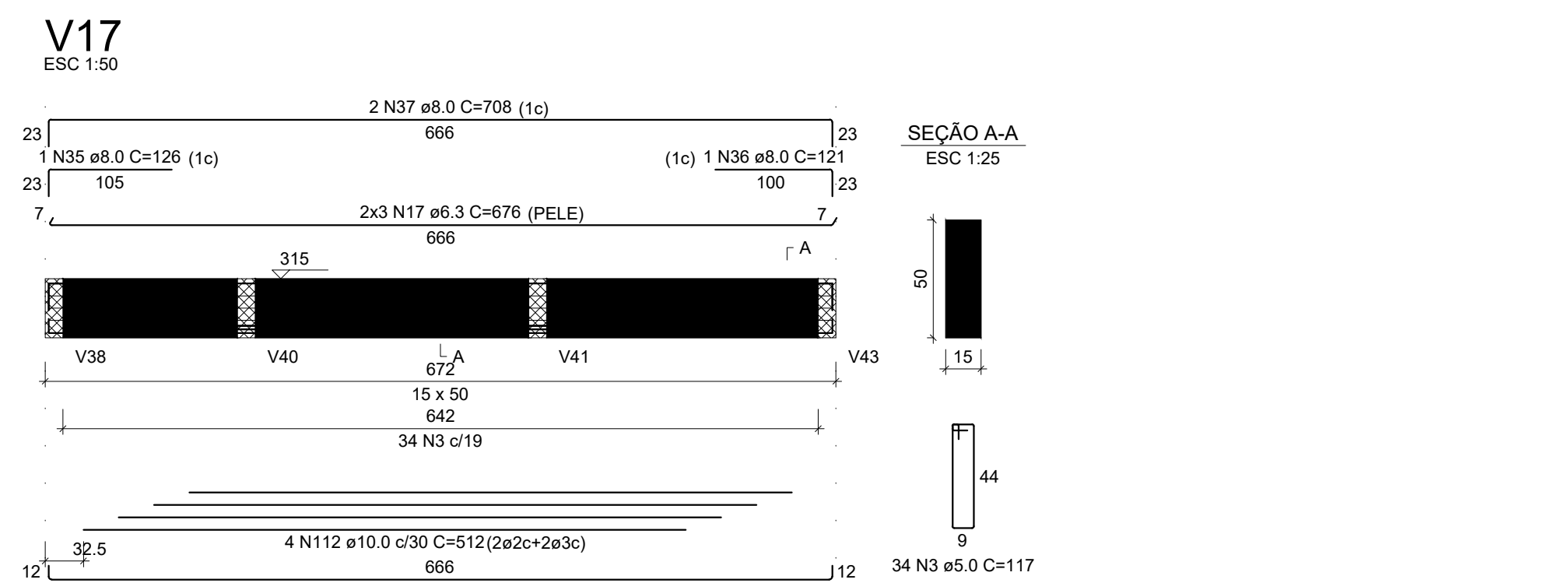
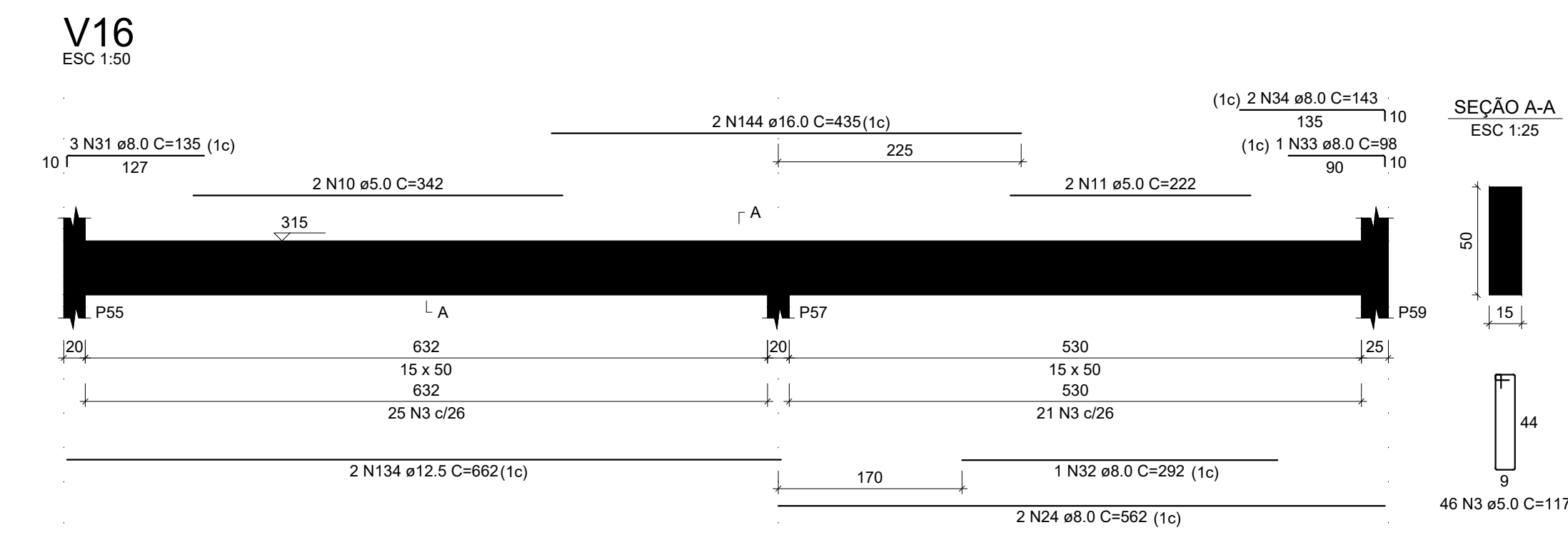
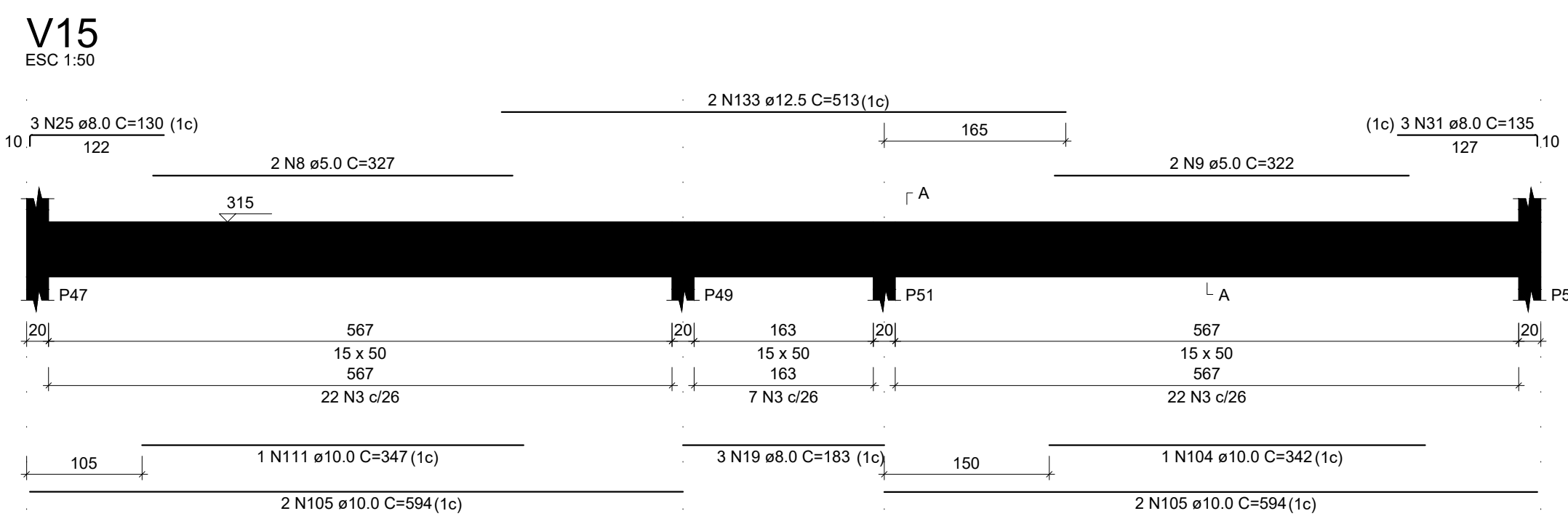
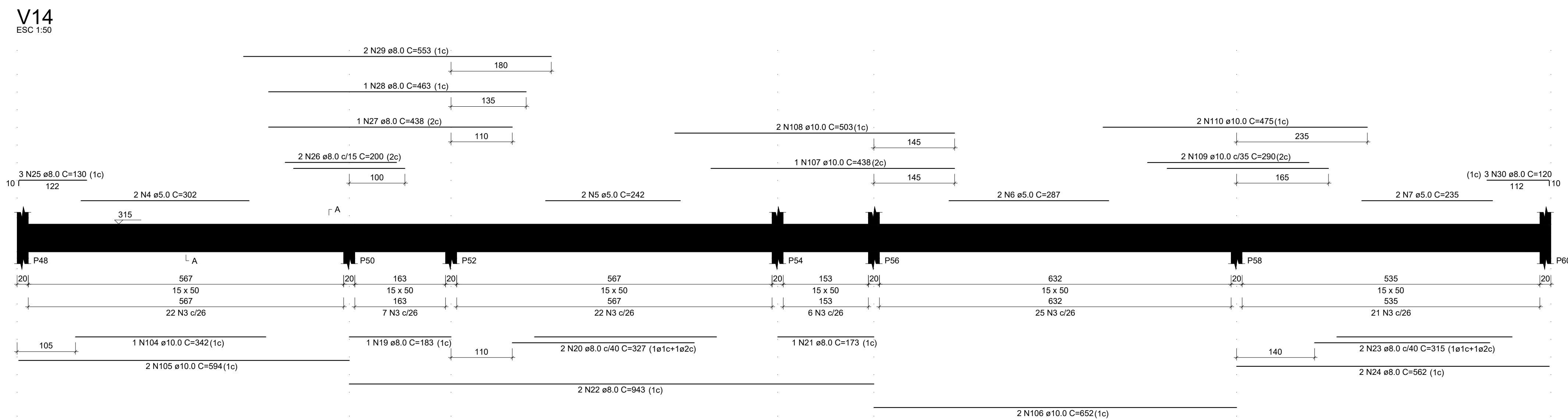
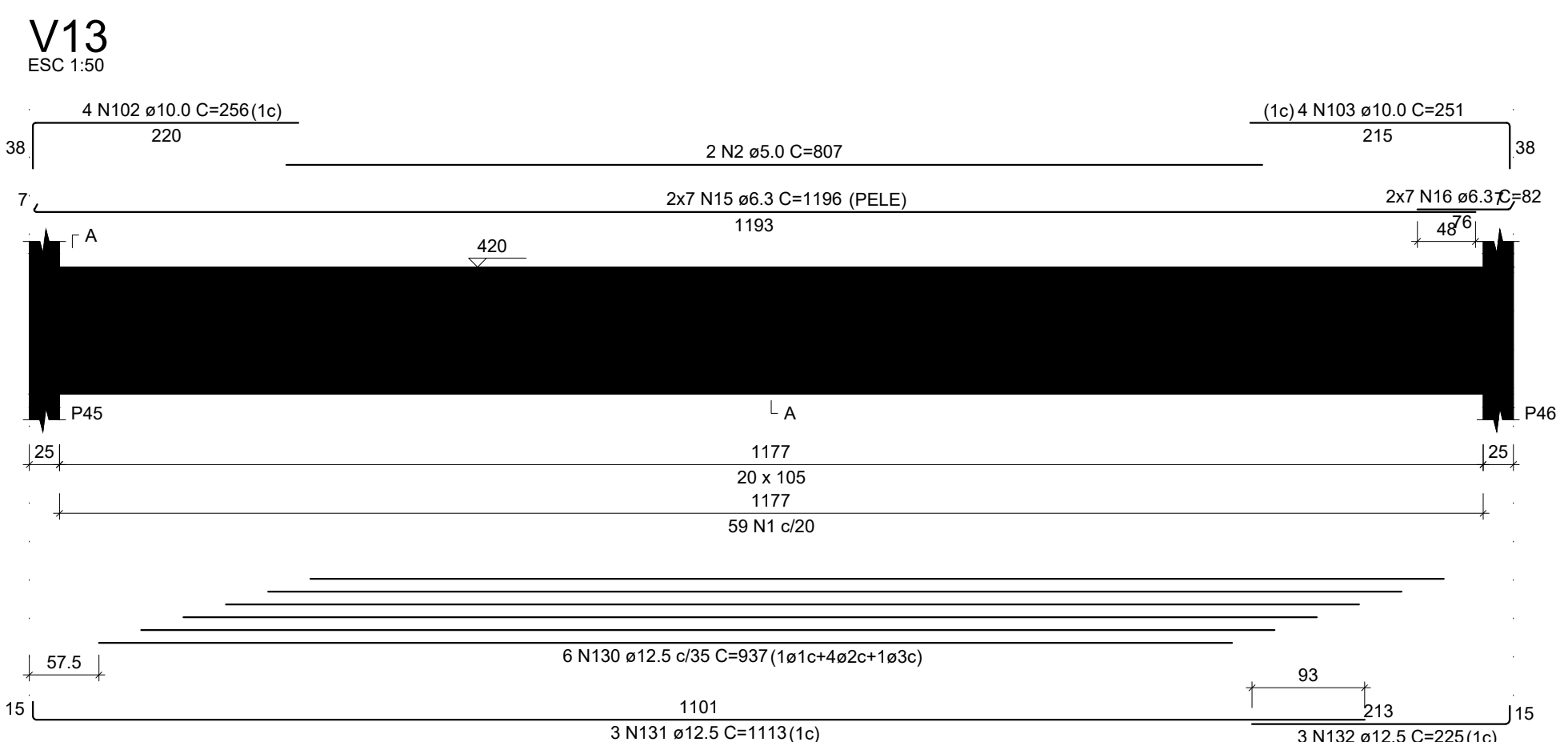
Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

Data: **Julho/2022**

Escala: **1/50**

Revisão: **13/27**



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
CA50	1	5.0	59	237	13983
	2	5.0	2	807	1614
	3	5.0	773	117	90441
	4	5.0	2	302	604
	5	5.0	2	242	484
	6	5.0	2	287	574
	7	5.0	2	235	470
	8	5.0	2	327	654
	9	5.0	2	322	644
	10	5.0	2	342	684
	11	5.0	2	222	444
	12	5.0	2	227	454
	13	5.0	2	329	658
	14	5.0	36	127	4572
	15	6.3	14	1186	16744
	16	6.3	14	82	1148
	17	6.3	6	678	4068
	18	6.3	6	686	3696
	19	6.3	1	183	366
	20	8.0	3	327	981
	21	8.0	2	173	346
	22	8.0	2	943	1886
	23	8.0	2	315	630
	24	8.0	4	562	2248
	25	8.0	1	130	260
	26	8.0	2	200	400
	27	8.0	1	438	876
	28	8.0	1	463	926
	29	8.0	6	135	810
	30	8.0	3	120	360
	31	8.0	6	135	810
	32	8.0	1	292	584
	33	8.0	2	126	252
	34	8.0	2	143	286
	35	8.0	1	708	1416
	36	8.0	1	121	242
	37	8.0	3	365	1095
	38	8.0	3	213	639
	39	8.0	3	213	639
	40	8.0	2	570	1140
	41	8.0	3	173	519
	42	8.0	1	174	348
	43	8.0	1	188	376
	44	8.0	1	187	374
	45	8.0	2	1102	2204
	46	8.0	1	185	370
	47	8.0	2	285	570
	48	8.0	7	1198	8386
	49	8.0	3	233	699
	50	8.0	2	309	618
	51	8.0	1	131	262
	52	8.0	2	381	762
	53	8.0	1	203	406
	54	8.0	1	192	384
	55	8.0	2	322	644
	56	8.0	3	853	2559
	57	8.0	2	842	1684
	58	8.0	2	777	1554
	59	8.0	2	614	1228
	60	8.0	2	80	160
	61	8.0	2	467	934
	62	8.0	2	462	924
	63	8.0	1	314	628
	64	8.0	2	571	1142
	65	8.0	1	85	170
	66	8.0	2	165	330
	67	8.0	2	137	274
	68	8.0	1	120	240
	69	8.0	1	165	330
	70	8.0	3	147	441
	71	8.0	1	259	518
	72	8.0	2	259	518
	73	8.0	1	259	518
	74	8.0	1	247	494
	75	8.0	1	215	430
	76	8.0	2	949	1898
	77	8.0	1	247	494
	78	8.0	2	485	970
	79	8.0	1	238	476
	80	8.0	1	217	434
	81	8.0	1	225	450
	82	8.0	1	182	364
	83	8.0	1	182	364
	84	8.0	2	1172	2344
	85	8.0	1	90	180
	86	8.0	4	205	820
	87	8.0	2	180	360
	88	8.0	1	387	774
	89	8.0	1	384	768
	90	8.0	1	98	196
	91	8.0	1	154	308
	92	8.0	2	487	974
	93	8.0	3	521	1563
	94	8.0	1	250	500
	95	8.0	1	119	238
	96	8.0	2	245	490
	97	8.0	2	629	1258
	98	8.0	3	577	1731
	99	8.0	3	260	780
	100	8.0	2	127	254
	101	8.0	2	285	570
	102	10.0	4	256	1024
	103	10.0	4	251	1004
	104	10.0	2	342	684
	105	10.0	6	594	3564
	106	10.0	4	652	2608
	107	10.0	1	438	876
	108	10.0	2	503	1006
	109	10.0	2	590	1180
	110	10.0	2	475	950
	111	10.0	1	347	694
	112	10.0	4	512	2048
	113	10.0	3	585	2055
	114	10.0	2	387	774
	115	10.0	2	387	774
	116	10.0	2	412	824
	117	10.0	2	600	1200
	118	10.0	1	160	320
	119	10.0	1	220	440
	120	10.0	2	478	956
	121	10.0	1	337	674
	122	10.0	2	571	1142
	123	10.0	2	578	1156
	124	10.0	2	200	400
	125	10.0	2	647	1294
	126	10.0	4	132	528
	127	10.0	2	170	340
	128	10.0	2	765	1530
	129	10.0	2	465	930
	130	12.5	6	607	3642
	131	12.5	3	1113	3339
	132	12.5	3	225	675
	133	12.5	3	213	639
	134	12.5	2	662	1324
	135	12.5	1	387	774
	136	12.5	2	609	1218
	137	12.5	1	280	560
	138	12.5	4	375	1500
	139	12.5	2	200	400
	140	12.5	2	1000	2000
	141	12.5	2	1172	2344
	142	12.5	2	226	452
	143	12.5	2	708	1416
	144	16.0	2	435	870
	145	16.0	2	420	840

RESUMO DO AÇO

ACO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	6.3	289.4	69.8
	8.0	681.7	226.9
	10.0	280.9	197.3
	12.5	227.7	346.5
	16.0	77.1	28.2
CA60	5.0	1166.2	188.2
PESO TOTAL	(kg)		
CA50	839.3		
CA60	198.2		

Volume de concreto (C-25) = 17.24 m³
Área de forma = 286.56 m²

AB PROJETOS E CONSULTORIA LTDA

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abprojetosconsultoria@gmail.com
CNC nº 202527-2

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FORUM DE PIO IX**

Endereço: **Rua João de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí**

Coordenador do projeto: **Arminda Das Vigas Nível I-II**

Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

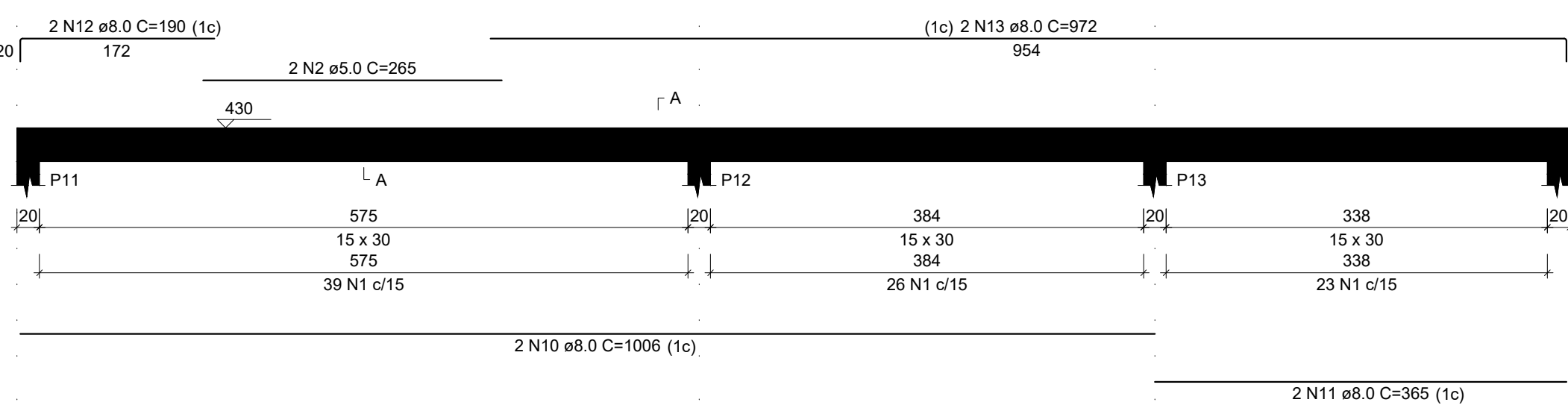
Data: **Julho/2022**

Escala: **1/50**

Revisão: **14/27**

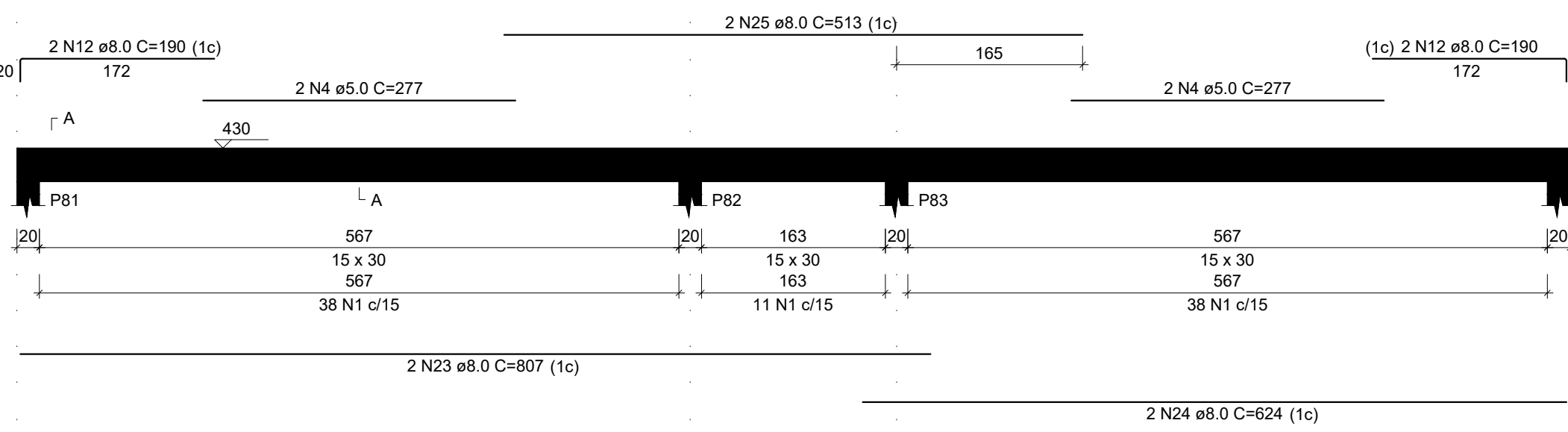
V1

ESC 1:50



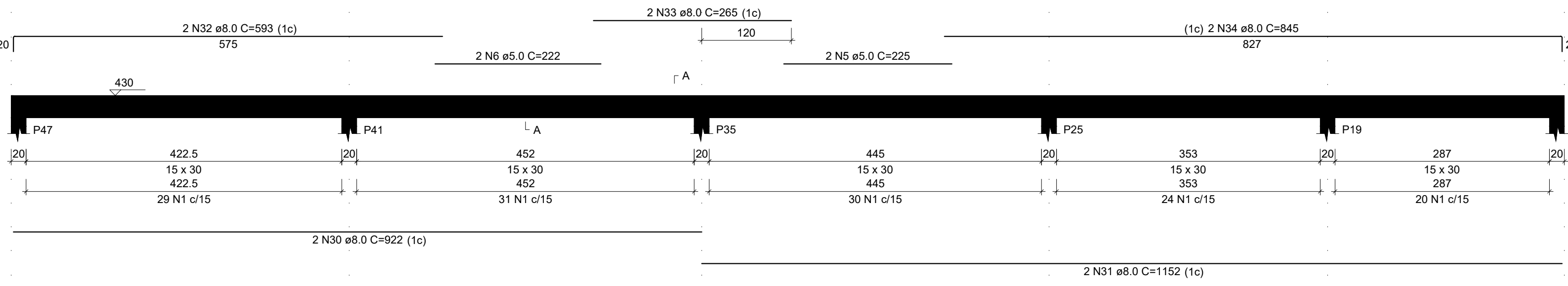
V4

ESC 1:50



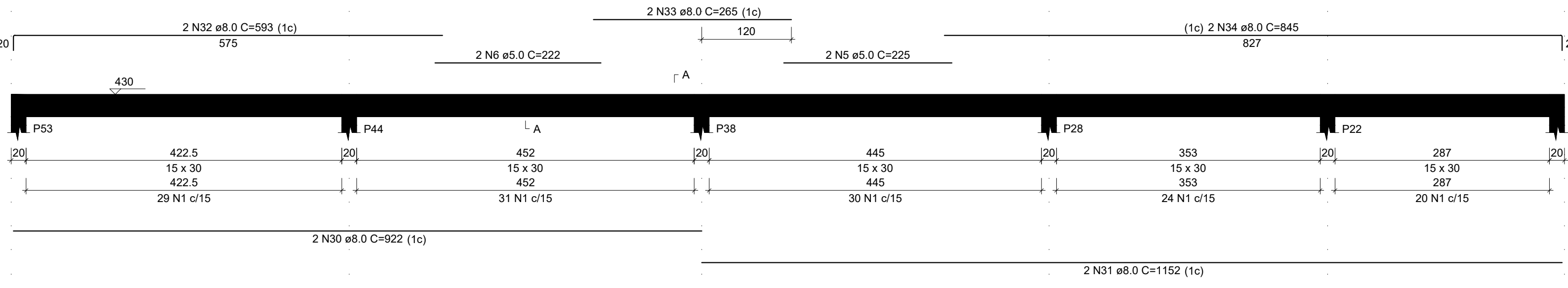
V6

ESC 1:50



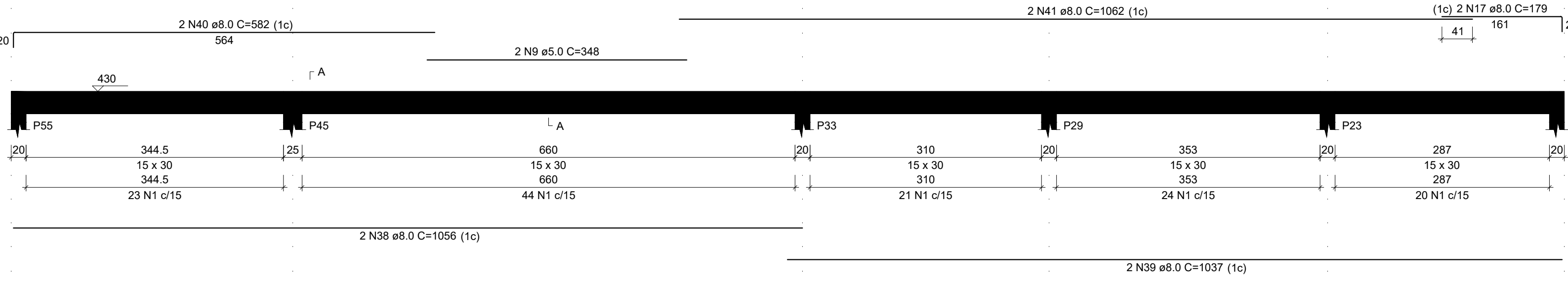
V8

ESC 1:50



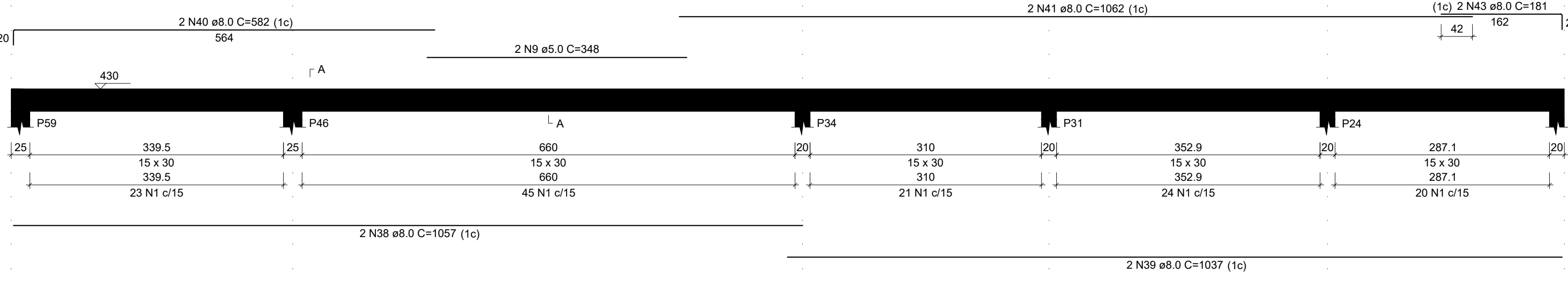
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ESC 1:50



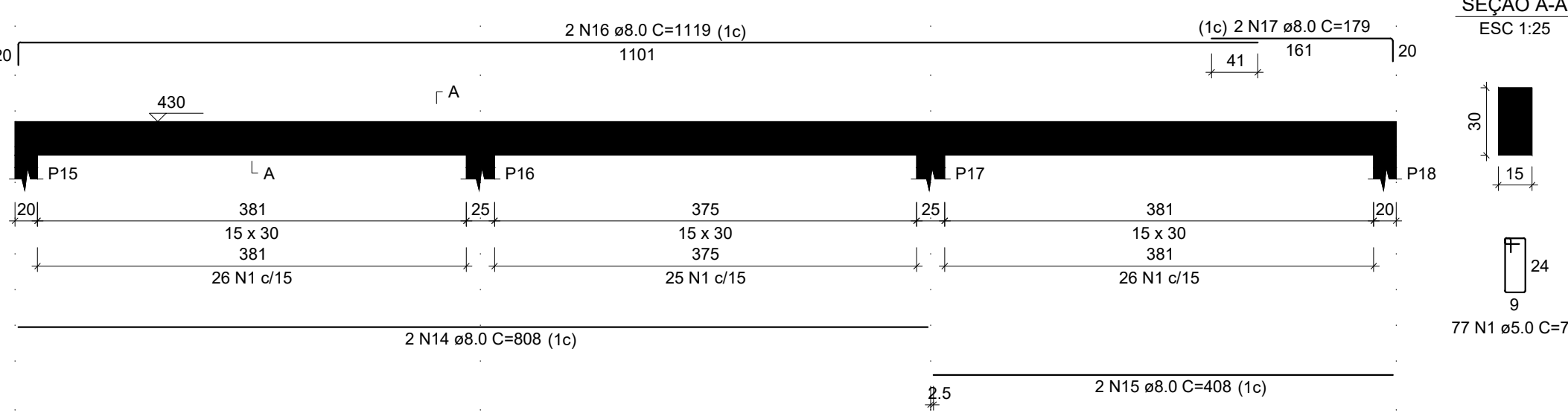
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ESC 1:50



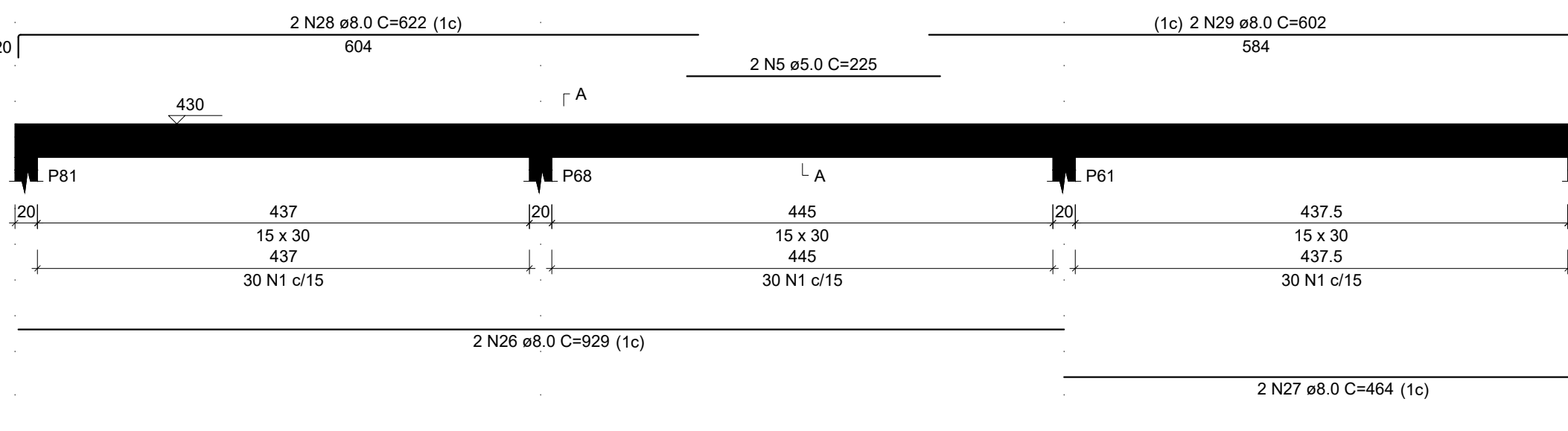
V2

ESC 1:50



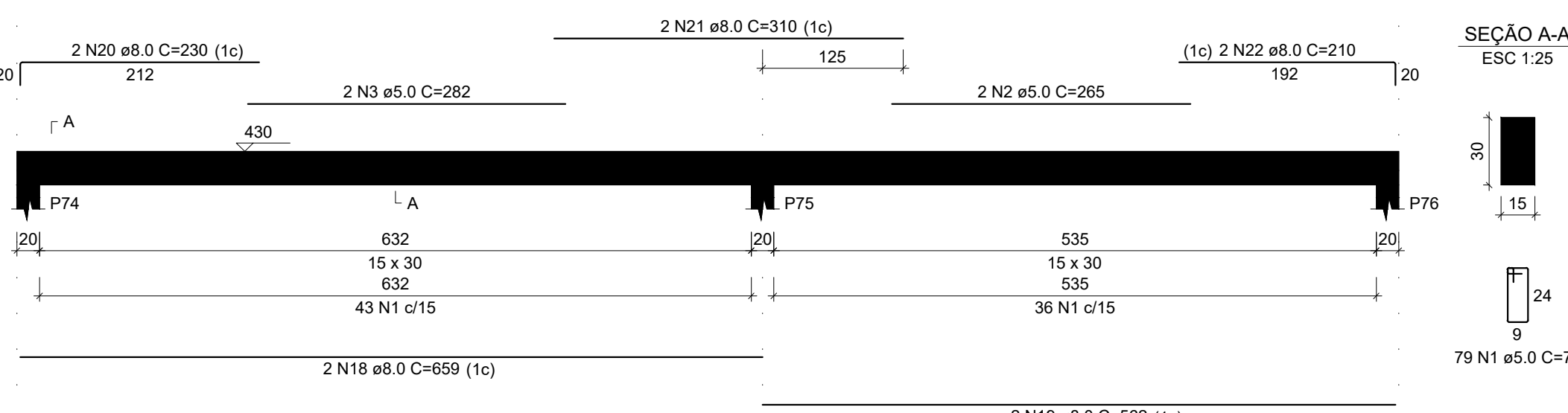
V5

ESC 1:50



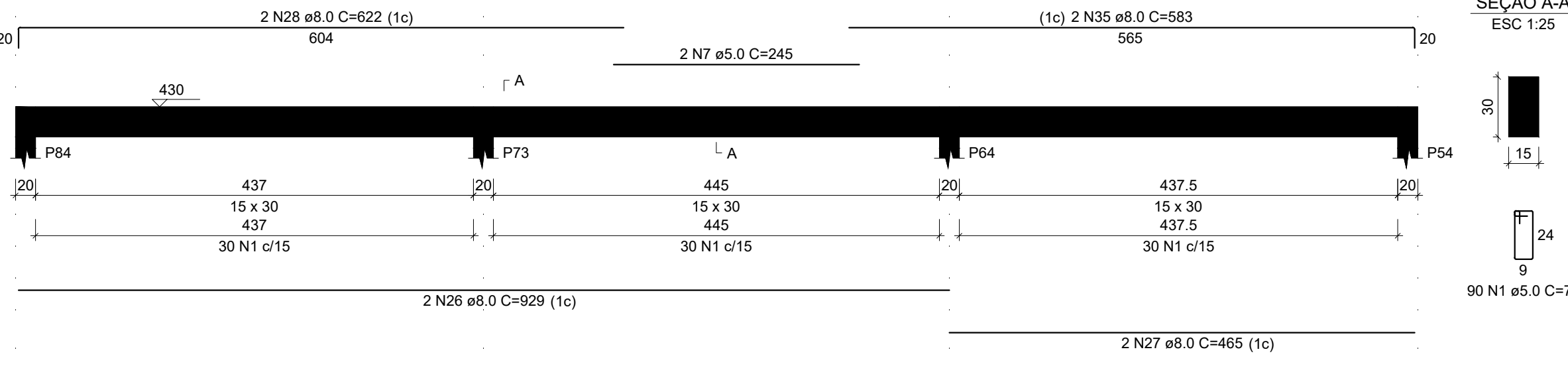
V3

ESC 1:50



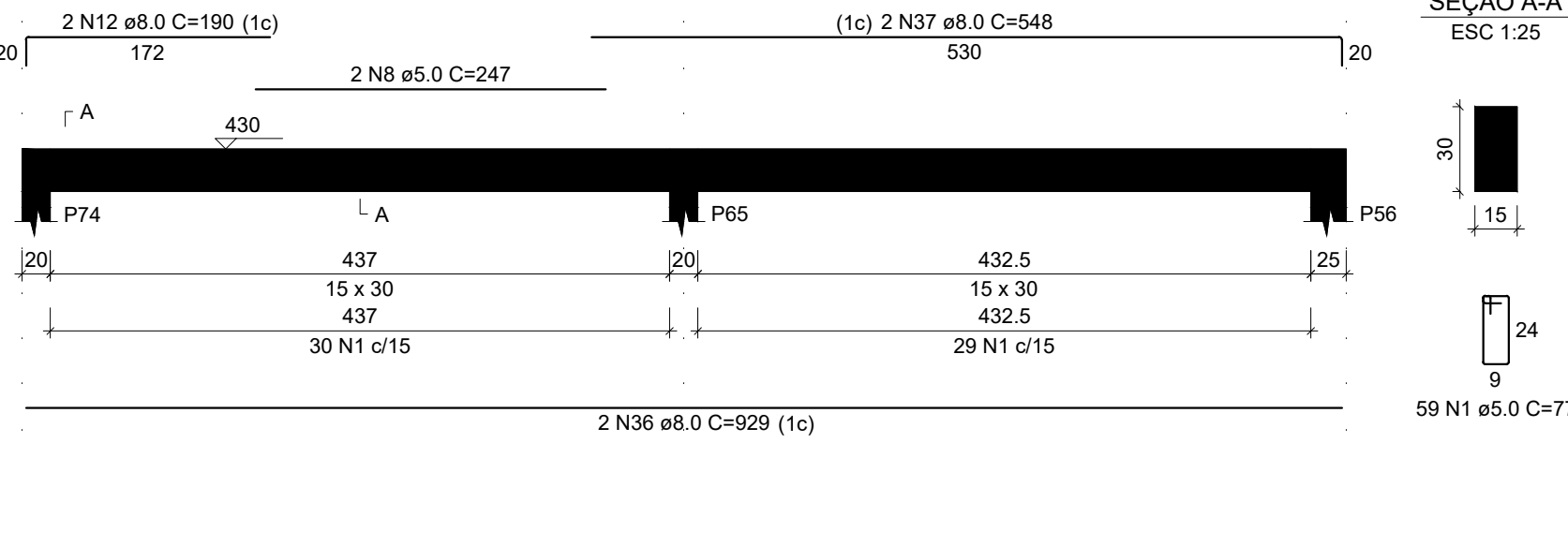
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ESC 1:50



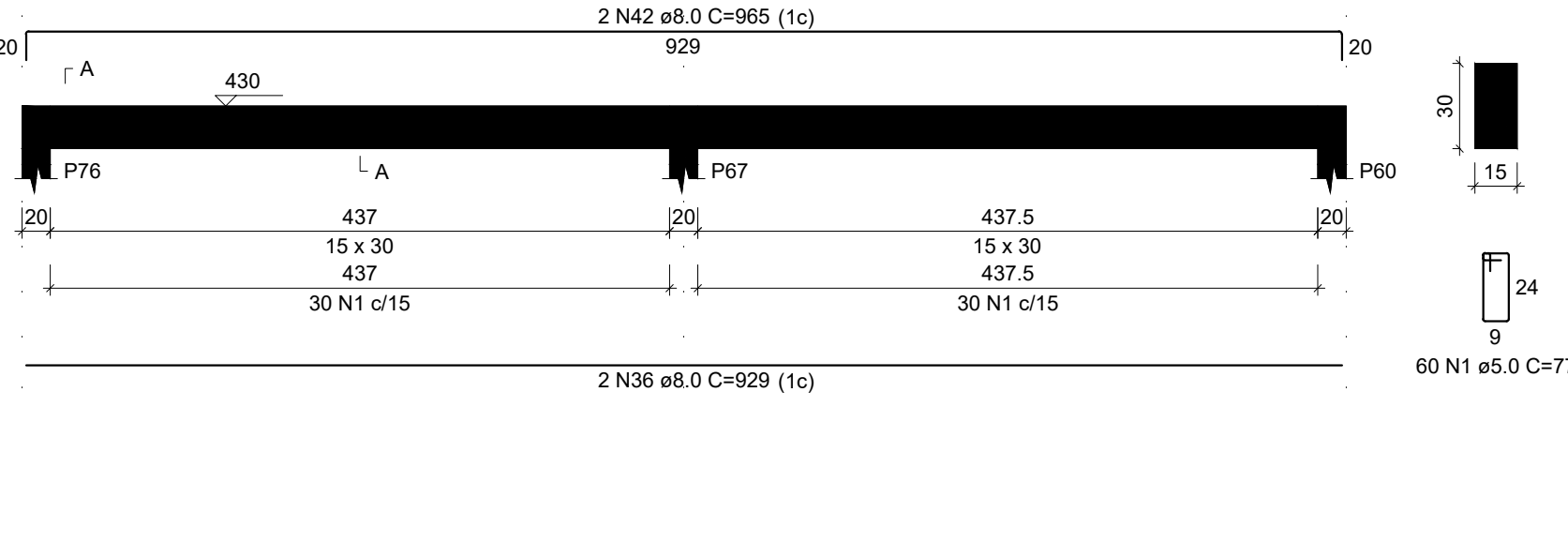
V9

ESC 1:50



V11

ESC 1:50



RELAÇÃO DO AÇO						
AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)	
CA50	1	5.0	1163	77	89551	
	2	5.0	2	282	564	
	3	5.0	2	277	554	
	4	5.0	4	277	1108	
	5	5.0	6	225	1350	
	6	5.0	4	222	888	
	7	5.0	2	245	490	
	8	5.0	2	247	494	
	9	5.0	2	246	492	
	10	8.0	2	1009	2018	
CA50	11	8.0	2	365	730	
	12	8.0	2	365	730	
	13	8.0	8	190	1520	
	14	8.0	2	972	1944	
	15	8.0	2	808	1616	
	16	8.0	2	1119	2238	
	17	8.0	2	1179	2358	
	18	8.0	2	659	1318	
	19	8.0	2	352	704	
	20	8.0	2	310	620	
	21	8.0	2	310	620	
	22	8.0	2	310	620	
	23	8.0	2	310	620	
	24	8.0	2	310	620	
	25	8.0	4	513	2052	
	26	8.0	4	509	2036	
	27	8.0	4	504	2016	
	28	8.0	4	622	2488	
CA50	29	8.0	4	602	2408	
	30	8.0	4	922	3688	
	31	8.0	4	1152	4608	
	32	8.0	4	593	2372	
	33	8.0	4	205	820	
	34	8.0	4	645	2580	
	35	8.0	2	583	1166	
	36	8.0	4	509	2036	
	37	8.0	2	546	1092	
	38	8.0	4	1056	4224	
CA50	39	8.0	4	1057	4228	
	40	8.0	4	582	2328	
	41	8.0	4	1002	4008	
	42	8.0	2	965	1930	
	43	8.0	2	181	362	

RESUMO DO AÇO			
AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	8.0	670.2	230.9
CA50	5.0	999	164.3
PESO TOTAL (kg)			
CA50	230.9		
CA50	164.3		
Volume de concreto (C-25) = 7.70 m³			
Área de forma = 136.46 m²			



AB PROJETOS E CONSULTORIA LTDA

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CMC nº 202527-Z

PROJETO ESTRUTURAL

Obr:	CONSTRUÇÃO DO FORUM DE PIO IX		
Coordenador do projeto:	Armação Das Vigas do Platibanda		
Responsável Técnico:	Verônica Scheren Castelo Branco - Crea/PI 19.373		
Op. de CAD:	Data:	Escala:	Revisão:
Jean Carlos	Julho/2022	1/50	

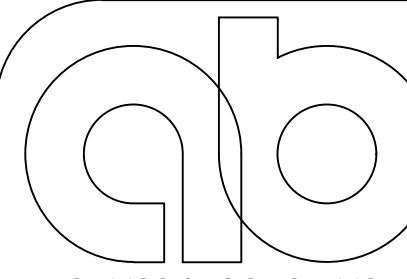
15/27



RELAÇÃO DO AÇO					
20xP1	2xP2	4xP6			
20xP11	21xP12	P16			
20xP17	P19	2xP20			
P23	P24	6xP25			
20xP50	20xP51	2xP53			
P45	P46	P52			
P55	P56	P74			
P76					
AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
CABO	1	5.0	1524	67	102108
	2	5.0	875	54	36504
	3	5.0	197	87	17139
	4	5.0	86	69	5834
CABO	5	5.0	46	77	3542
	6	5.0	29	59	1180
	7	10.0	148	312	46178
	8	10.0	108	353	38124
	9	10.0	8	337	2696
	10	10.0	8	75	600
	11	12.5	20	312	6240
	12	12.5	32	84	3068
	13	12.5	28	362	10136
	14	16.0	32	375	12000
	15	16.0	8	312	2496
	16	20.0	4	151	604

RESUMO DO AÇO				
AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)	
CABO	10.0	876	594.1	
	12.5	180.8	205.4	
	16.0	145	251.7	
CABO	5.0	1664.1	16.4	
PESO TOTAL (kg)			282.1	
CABO	1067.5			
CABO	282.1			

Volume de concreto (C-25) = 11.05 m³
Área de forma = 213.34 m²



AB PROJETOS E CONSULTORIA LTDA
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CNC nº 202527-Z

PROJETO ESTRUTURAL

Obra:
CONSTRUÇÃO DO FORUM DE PIO IX

Endereço:
Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Ploar

Coordenação do projeto:
Armadão dos Pilares Nível 1 - I

Responsável Técnico:
Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD:
Jean Carlos

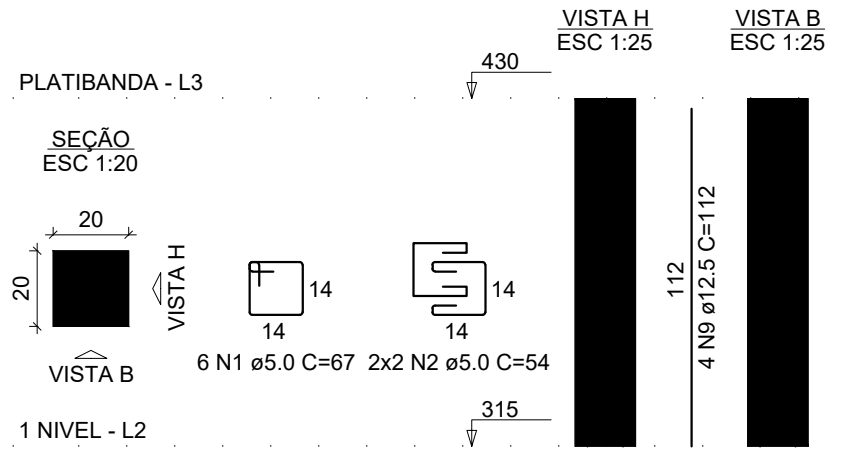
Data:
Julho/2022

Escala:
1/50

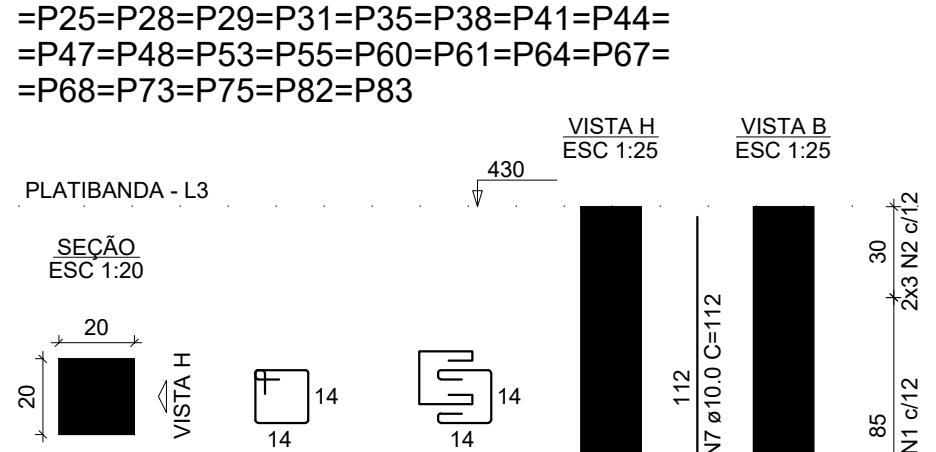
Revisão:

16/27

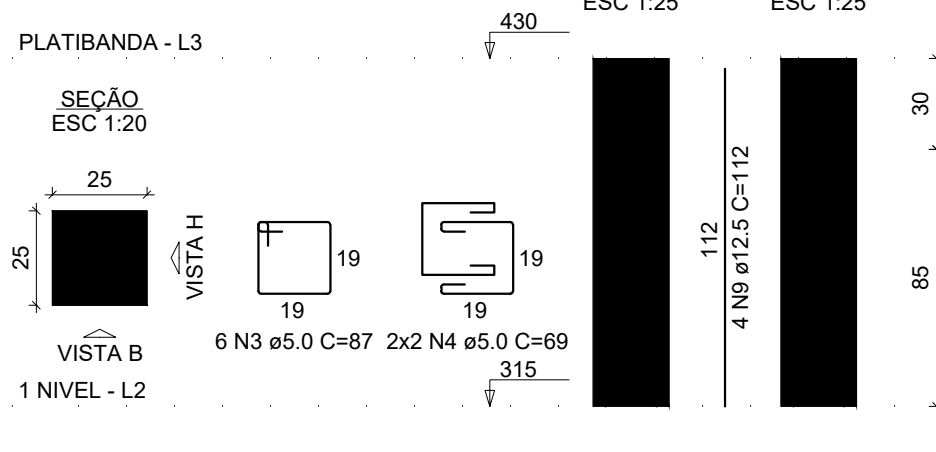
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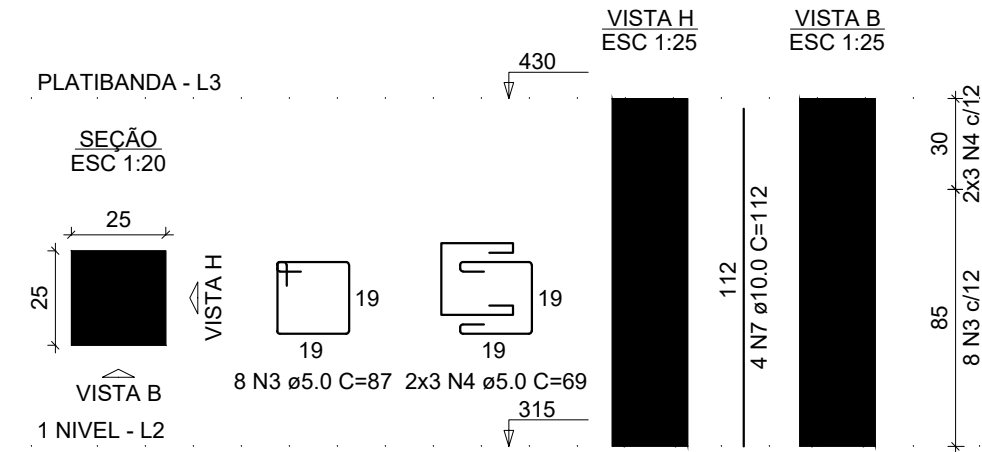
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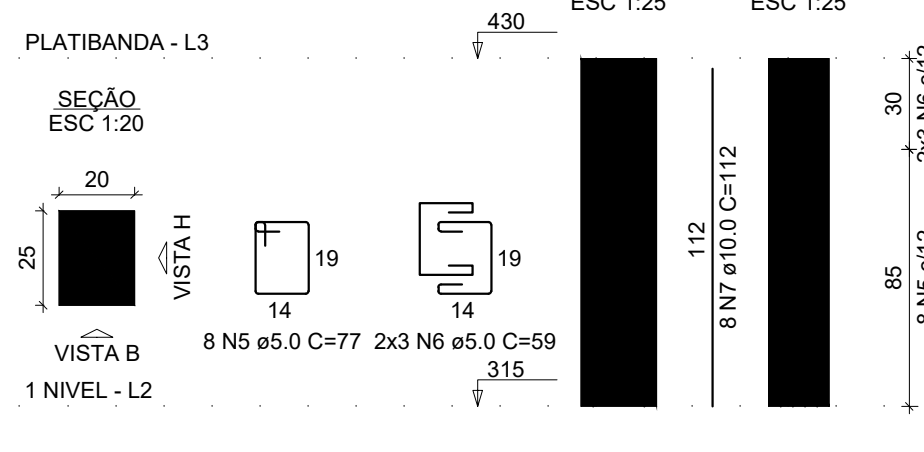
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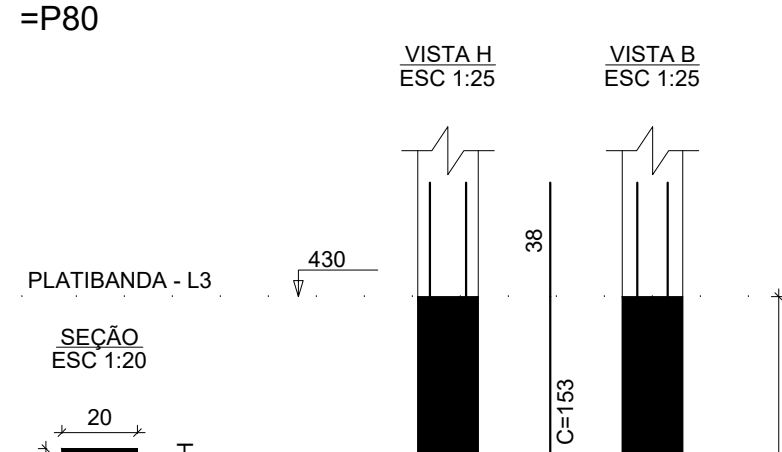
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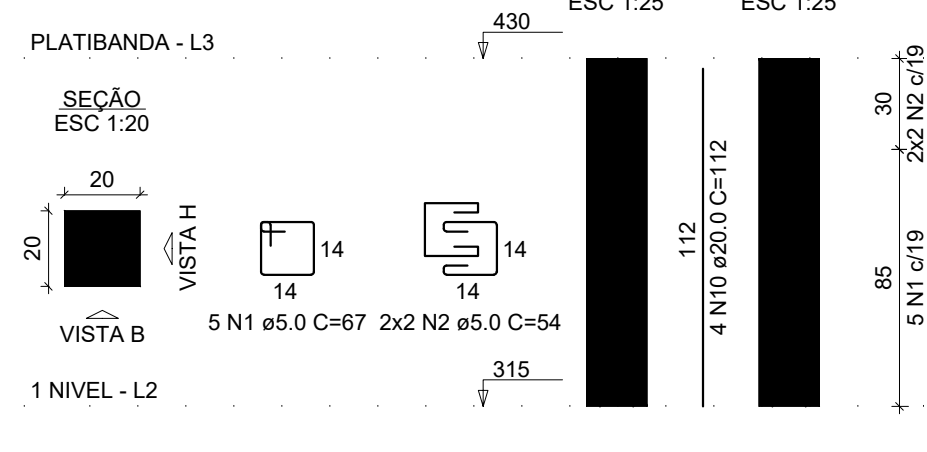
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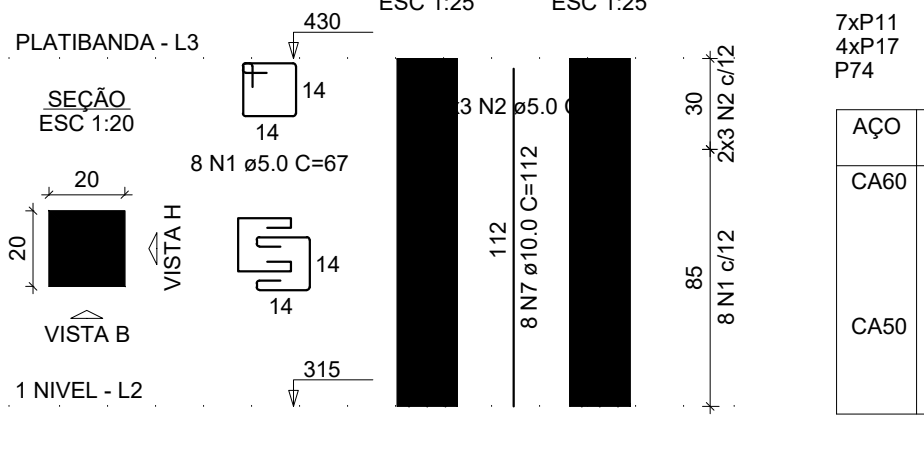
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P74



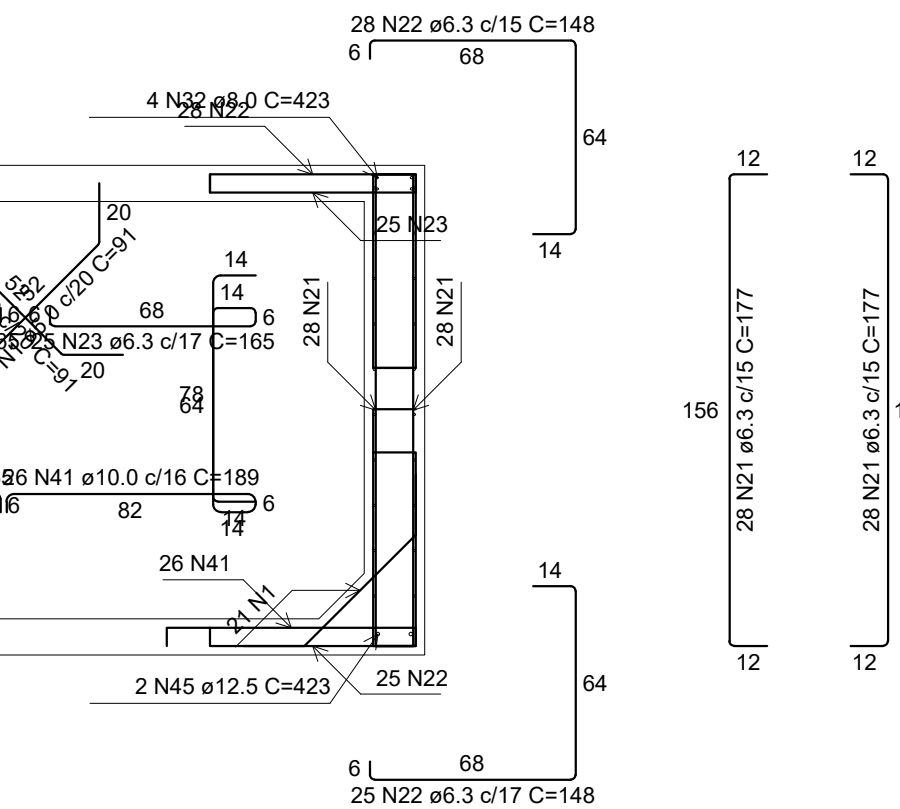
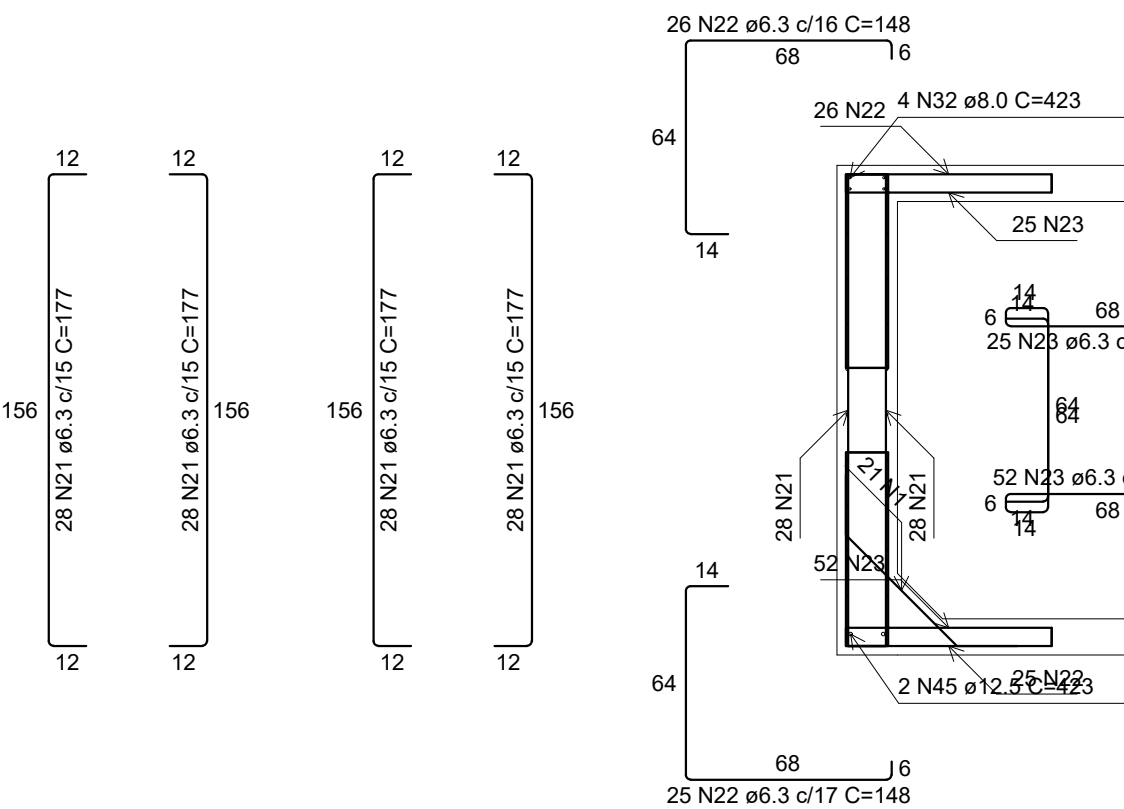
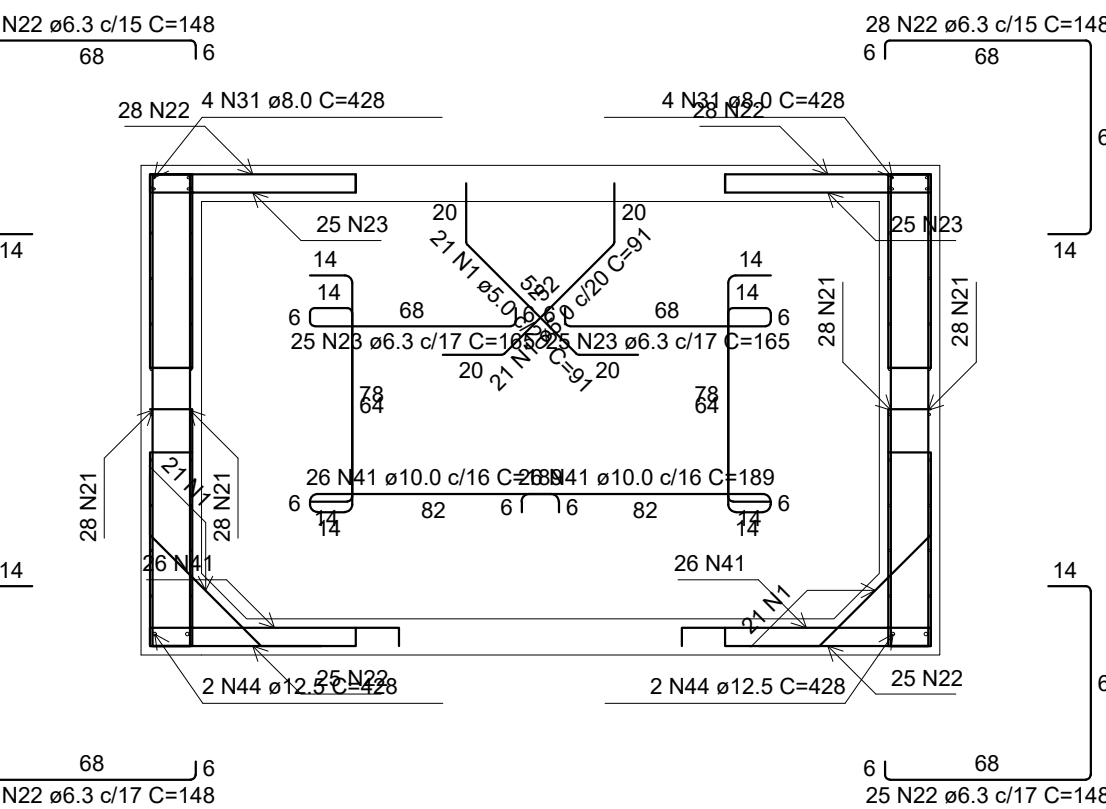
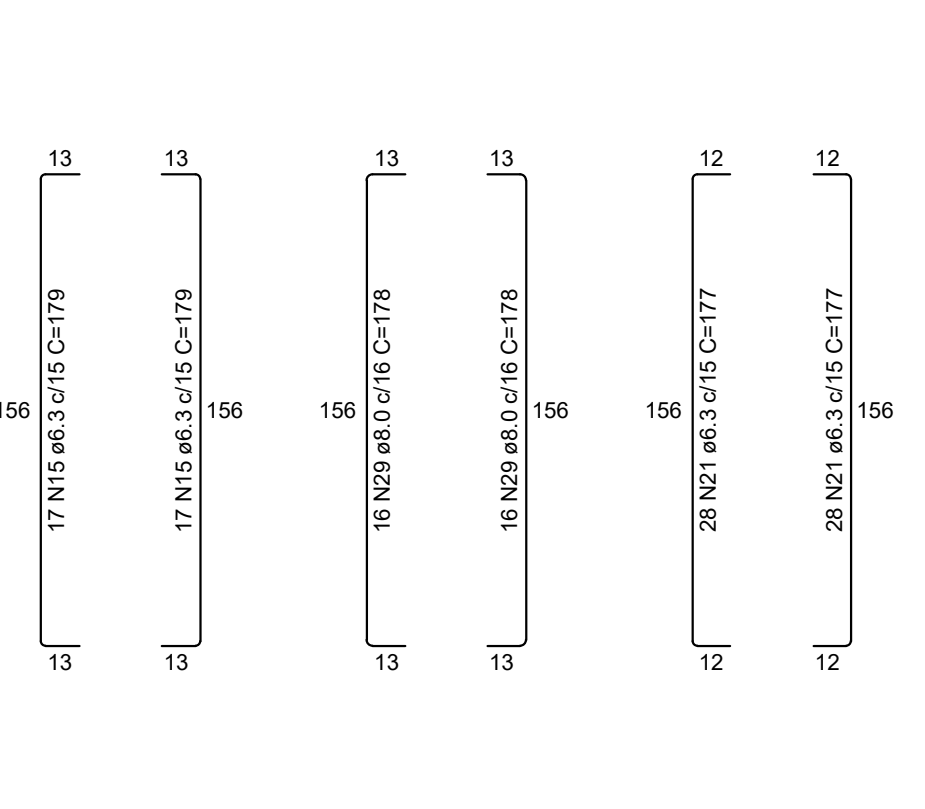
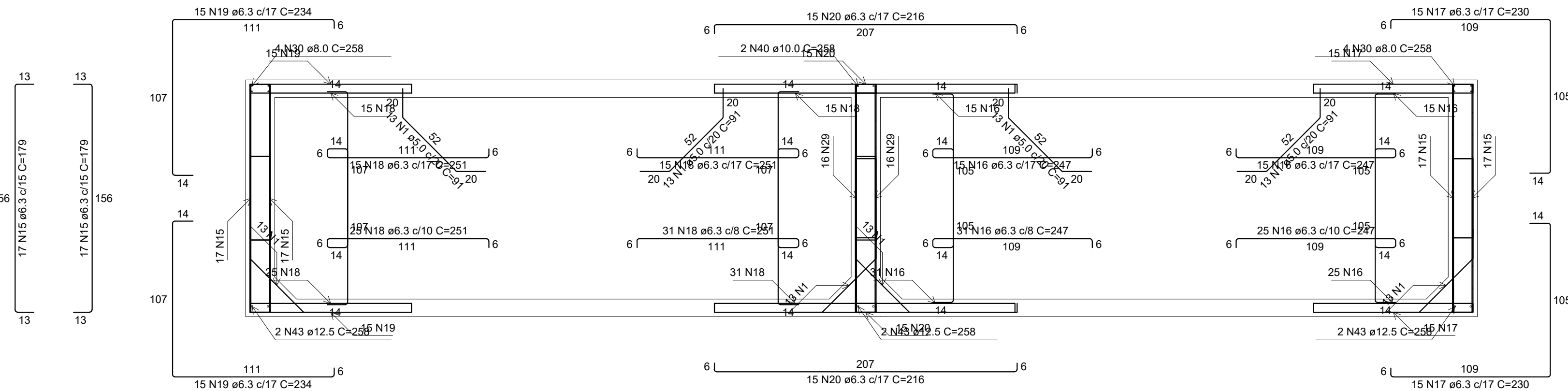
P76



RELAÇÃO DO AÇO					
ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	375	67	25125
CA60	2	5.0	218	64	11772
CA60	3	5.0	38	67	3306
CA60	4	5.0	8	69	1332
CA60	5	5.0	8	77	616
CA60	6	10.0	152	112	17024
CA60	7	10.0	32	153	4896
CA60	8	12.5	32	112	3584
CA60	9	20.0	4	112	448

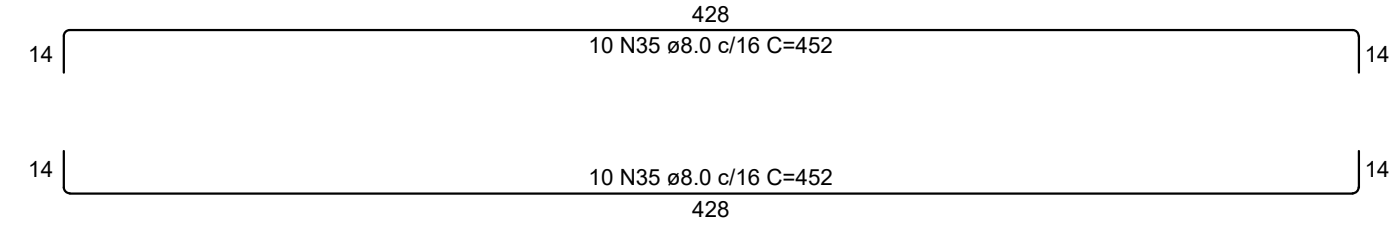
RESUMO DO AÇO			
ACO	DIAM (mm)	C.TOTAL (cm)	PESO + 10% (kg)
CA50	10.0	219.2	148.7
CA60	5.0	38.8	38
CA60	20.0	4.5	12.2
CA60	5.0	431.1	73.1

Volume de concreto (C-25) = 2.58 m³
Área de forma = 50.03 m²



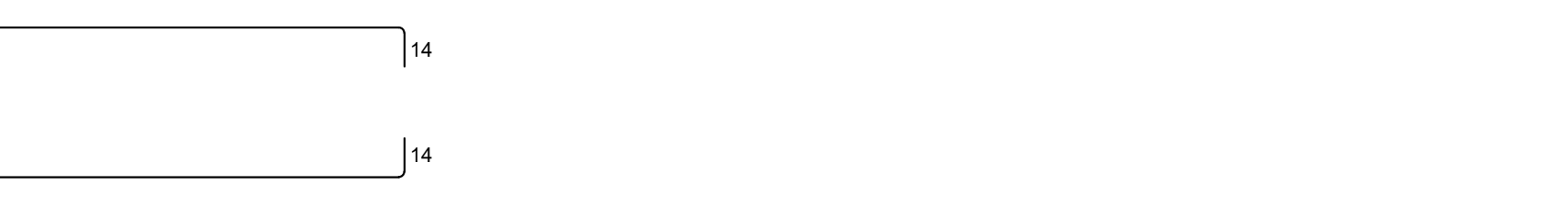
Corte A-A

escala 1:25



Corte B-B

escala 1:25



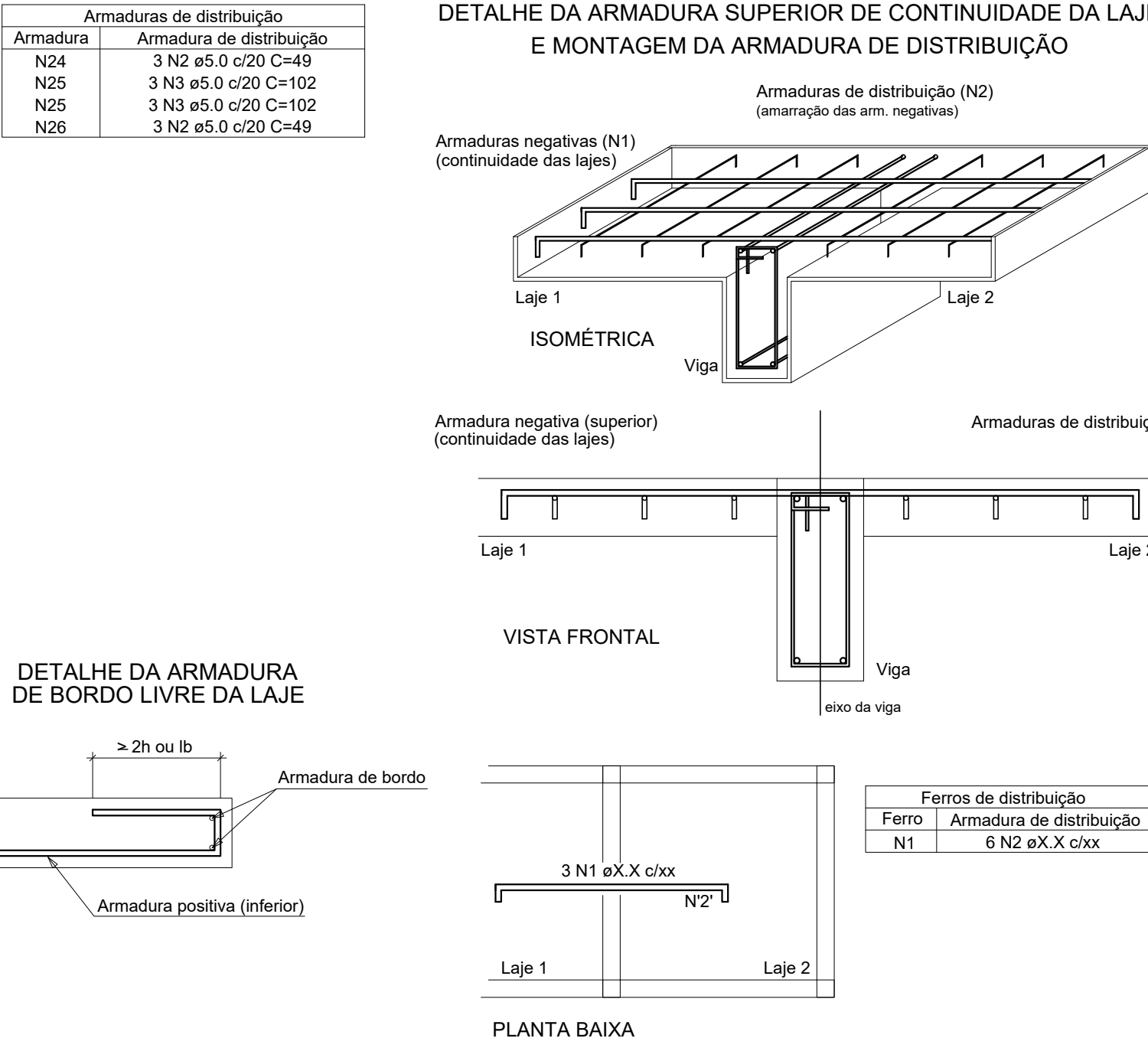
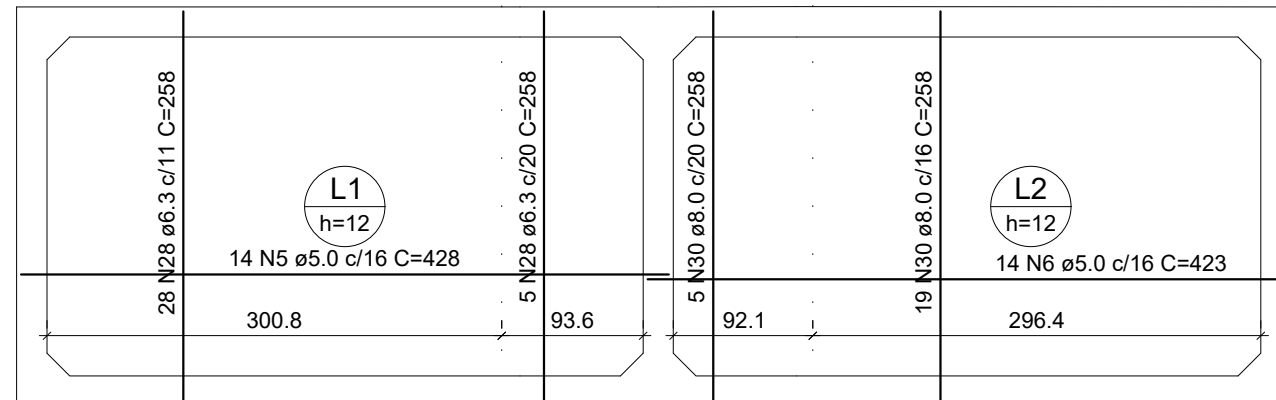
Corte C-C

escala 1:25



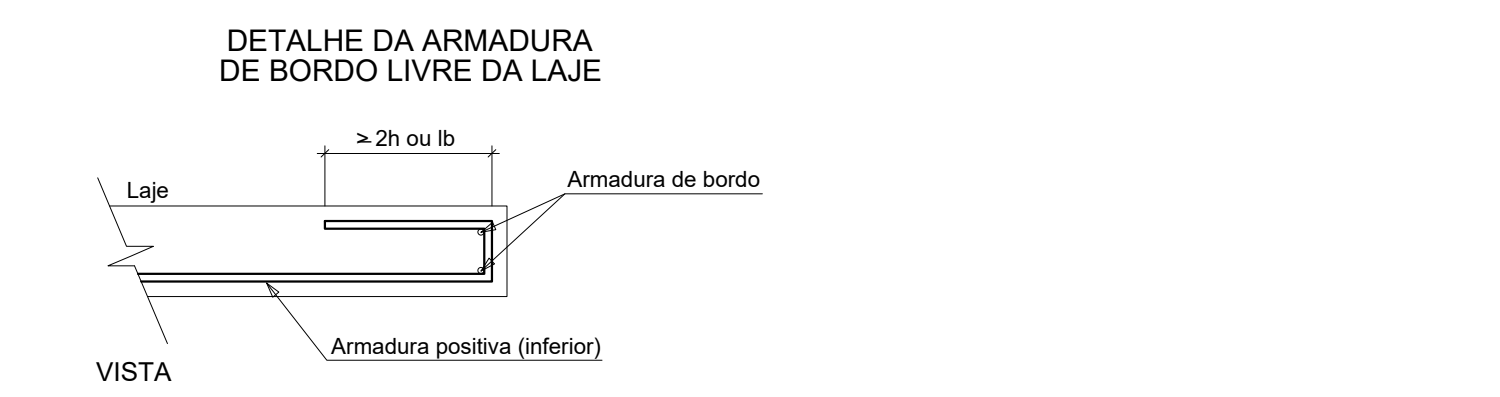
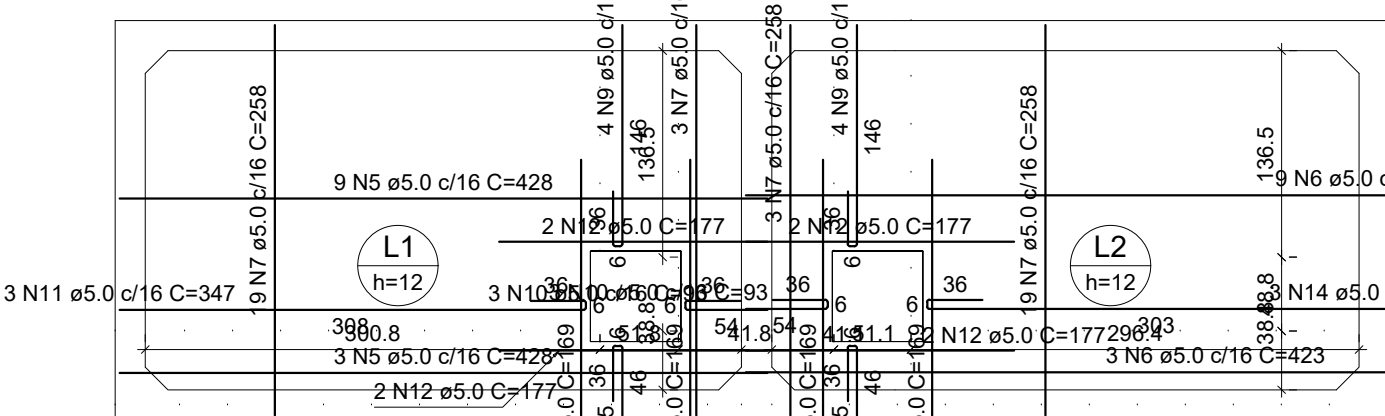
Armação negativa das lajes (480.0)

escala 1:50



Armação positiva das lajes (480.0)

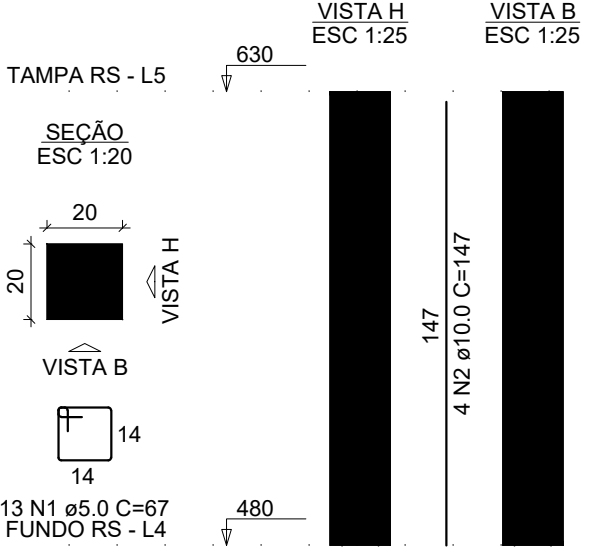
escala 1:50



Armação positiva das lajes (630.0)

escala 1:50

P69=P70=P71=P72=P77=
=P78=P79=P80



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	104	67	6988
CA60	2	10.0	32	147	4704

RESUMO DO AÇO

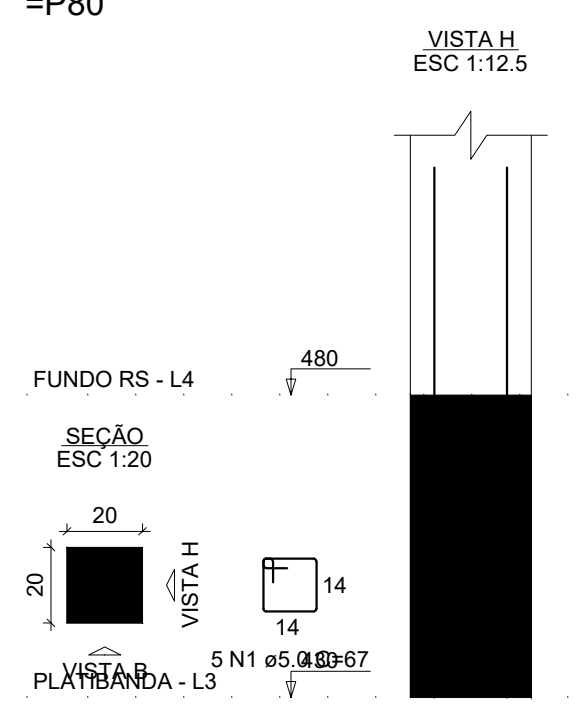
ACO	DIAM (mm)	C.TOTAL (cm)	PESO + 10% (kg)
CA50	10.0	47	31.9
CA60	5.0	69.7	11.8

PESO TOTAL (kg)

CA50	31.9
CA60	11.8

Volume de concreto (C-25) = 0.48 m³
Área de forma = 9.60 m²

P69=P70=P71=P72=P77=P78=P79=
=P80



RELATÓRIO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	40	67	2680
CA60	2	10.0	32	147	4704

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (cm)	PESO + 10% (kg)
CA50	10.0	28.2	18.1
CA60	5.0	28.8	4.5

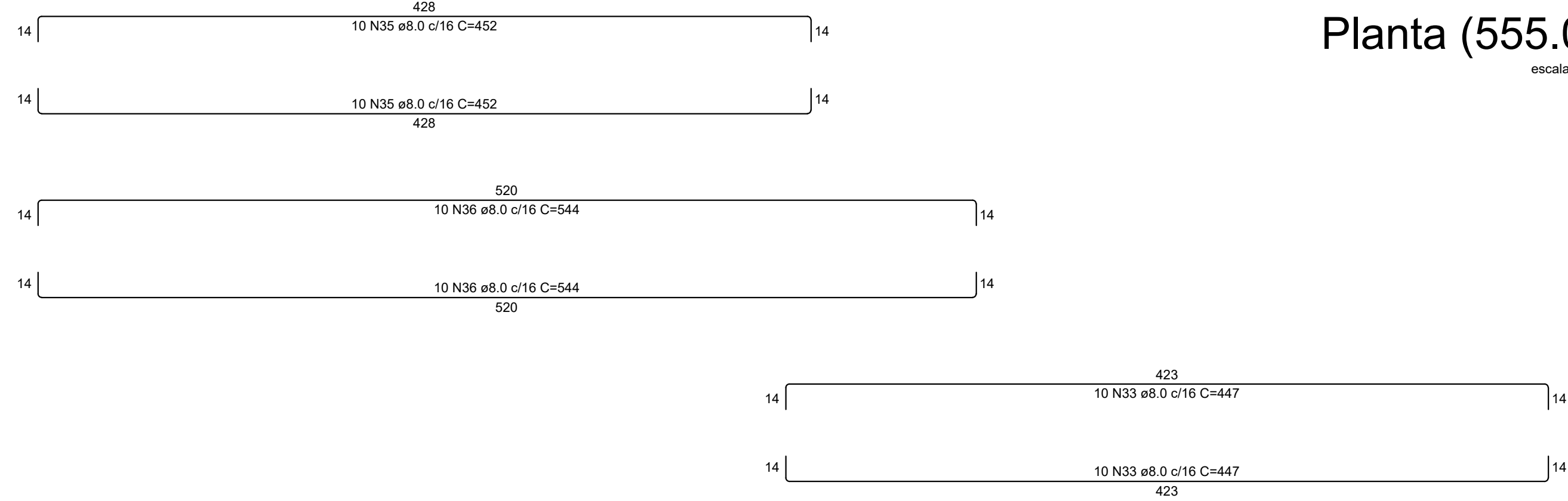
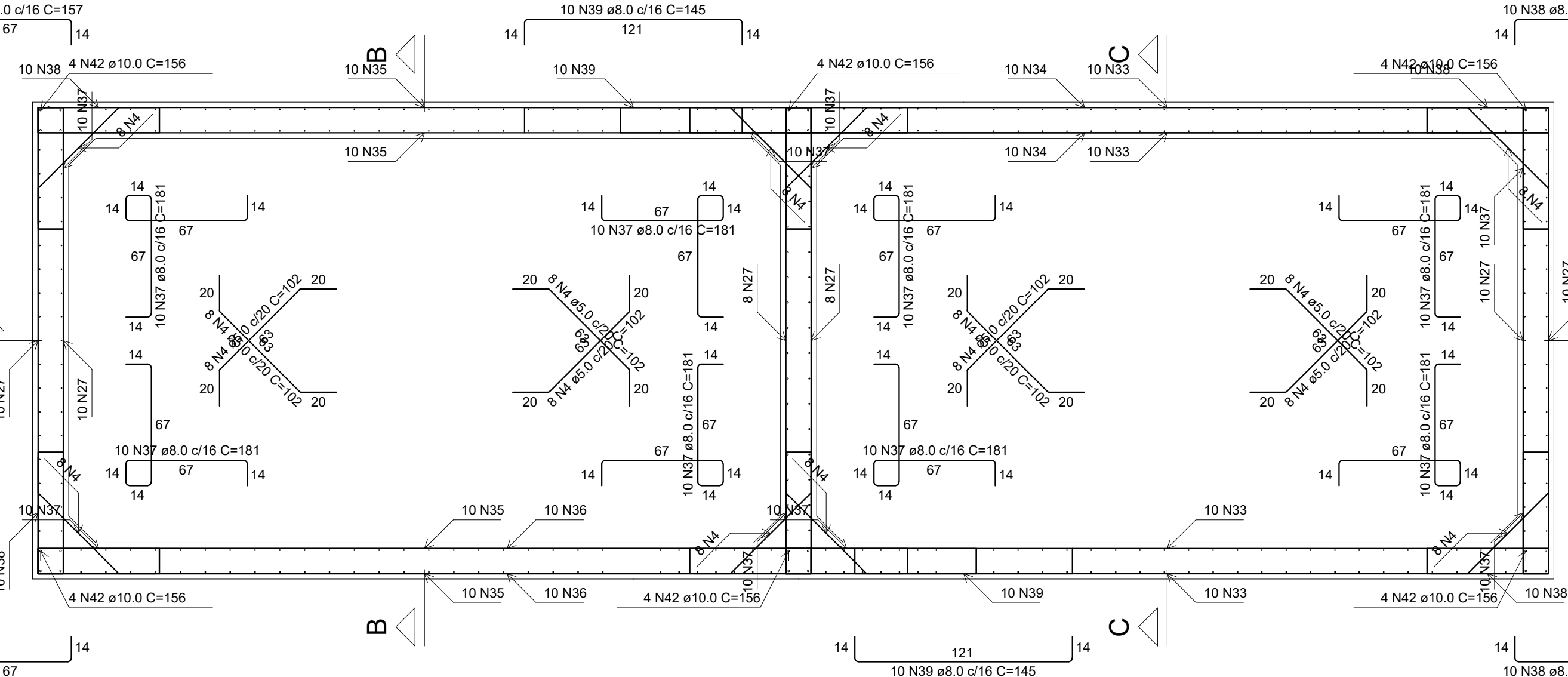
PESO TOTAL (kg)

CA50	18.1
CA60	4.5

Volume de concreto (C-25) = 0.16 m³
Área de forma = 3.20 m²

Planta (555.0)

escala 1:25



AB PROJETOS E CONSULTORIA LTDA

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abprojetosconsultoria@gmail.com
CNC nº 202527-Z

PROJETO ESTRUTURAL

Obra:	Edifício:
CONSTRUÇÃO DO FORUM DE PIO IX	Rua João de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí

Coordenador do projeto: Armador dos Pilares do Platibanda e do Reservatório

Responsável Técnico: Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD: Jean Carlos

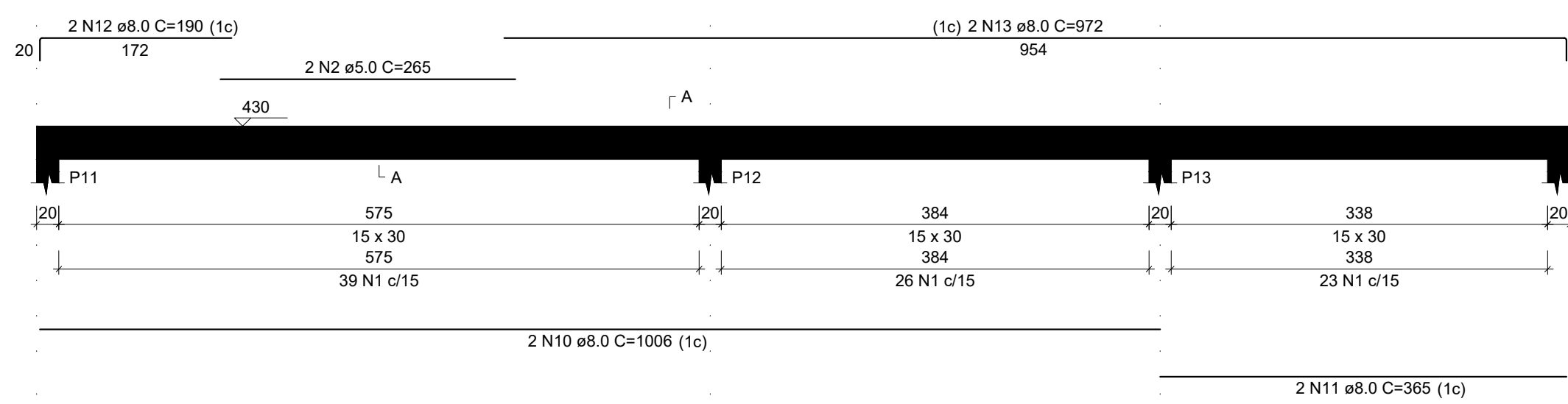
Data: Julho/2022

Escala: 1/50

Revisão: 17/27

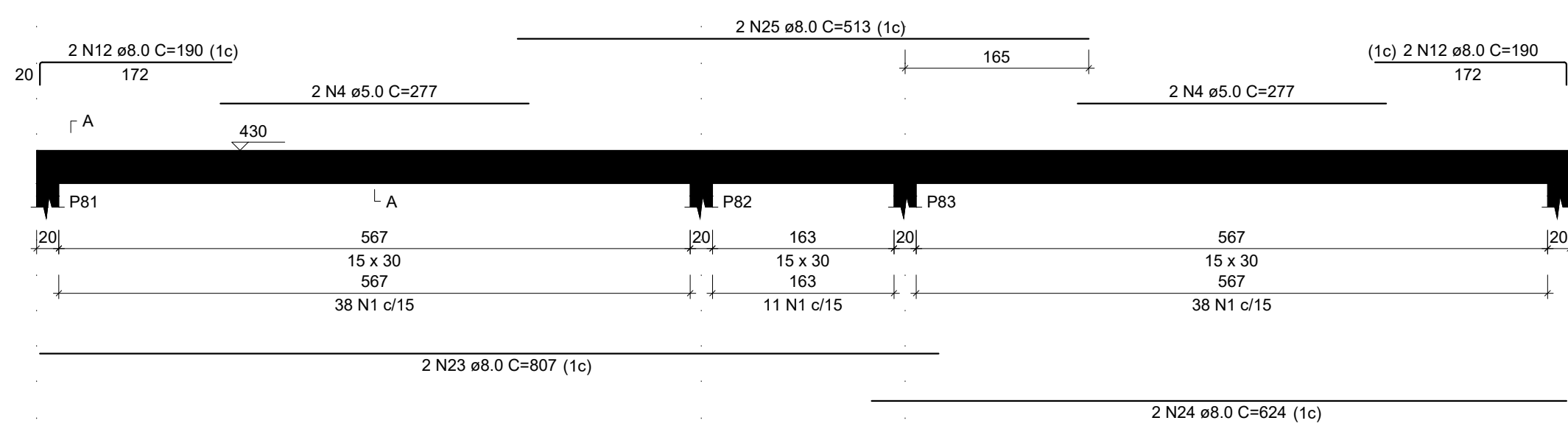
V1

ESC 1:50



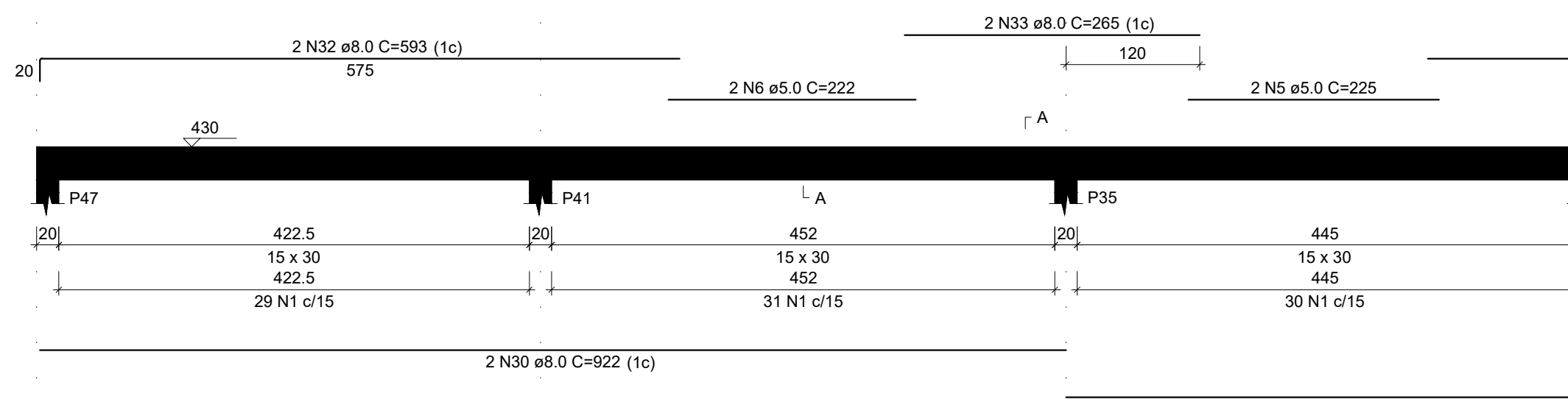
V4

ESC 1:50



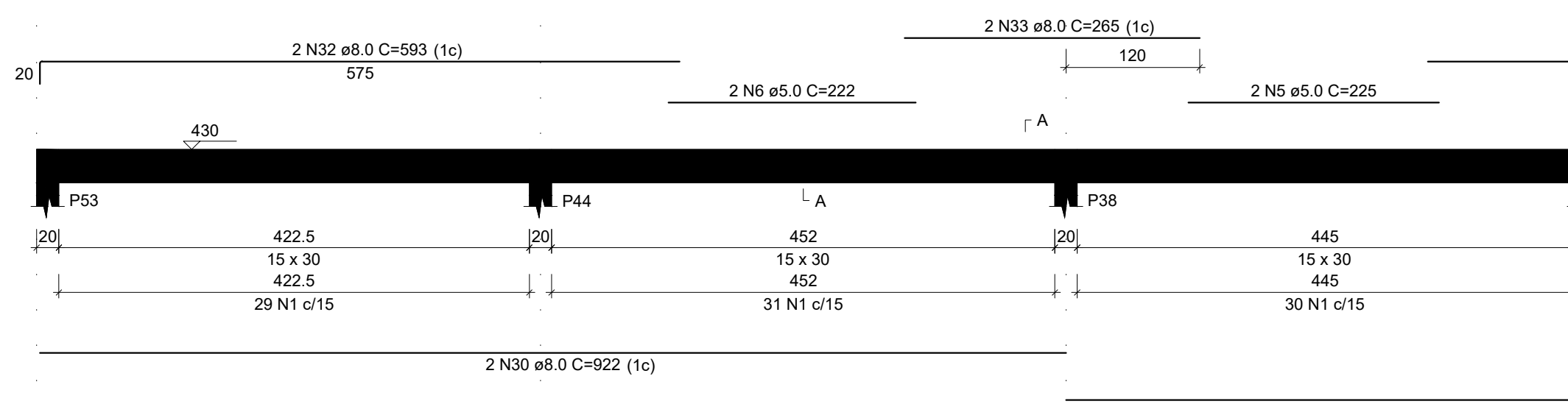
V6

ESC 1:50



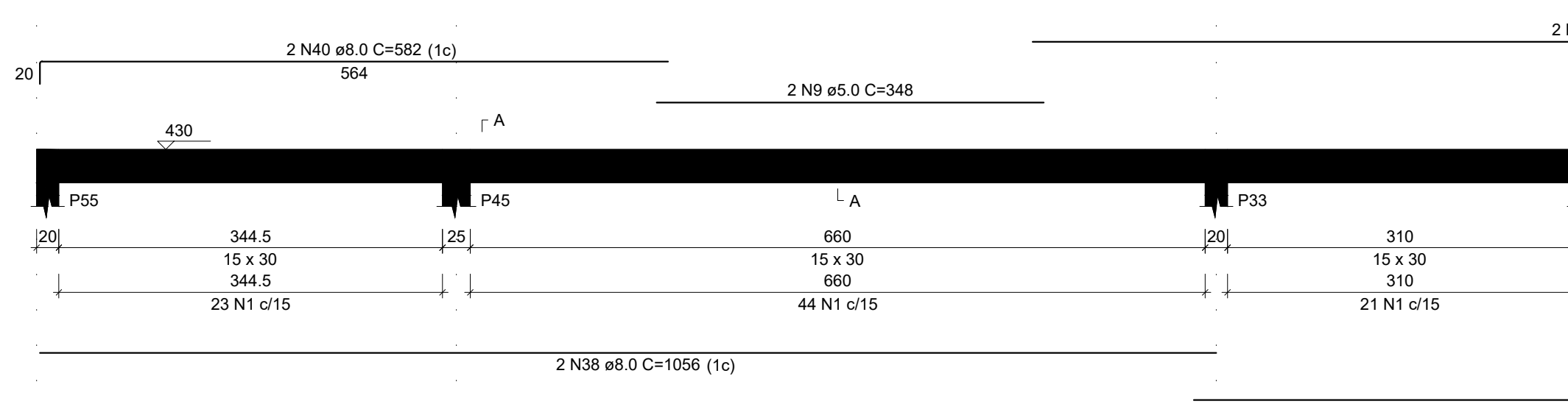
V8

ESC 1:50



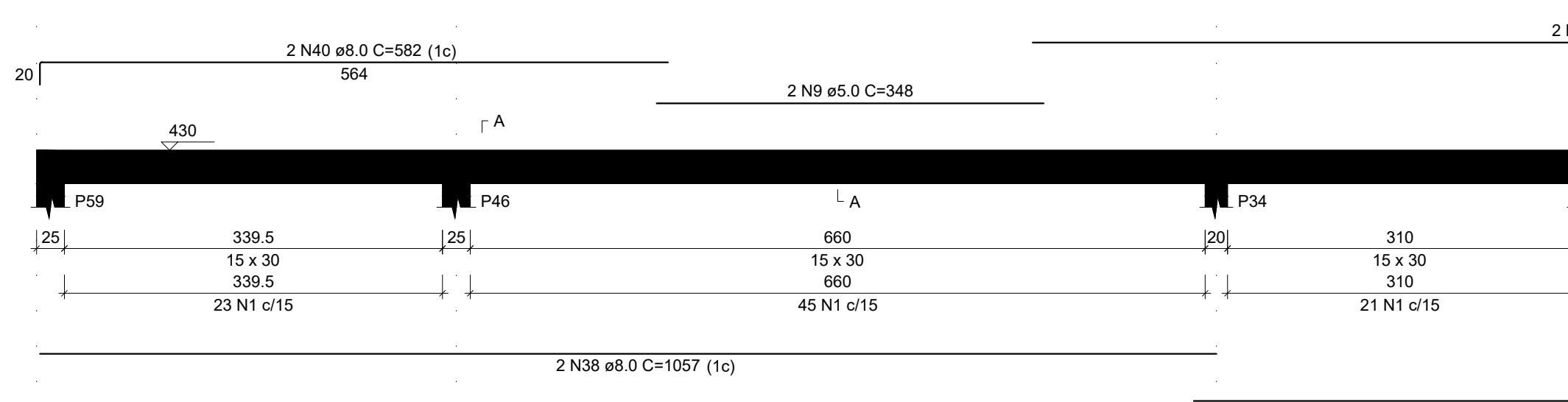
V10

ESC 1:50



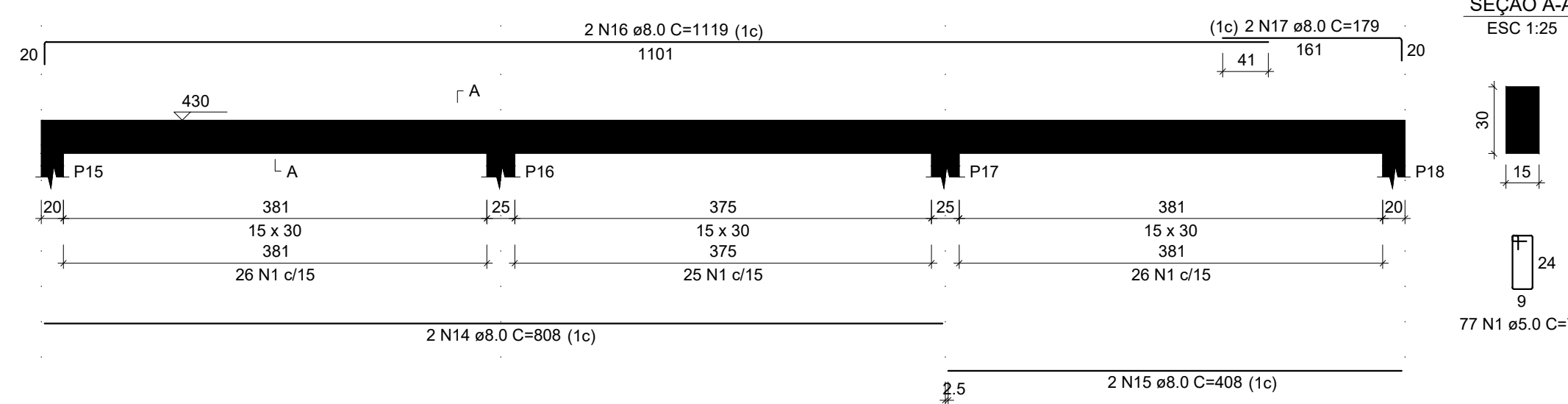
V12

ESC 1:50



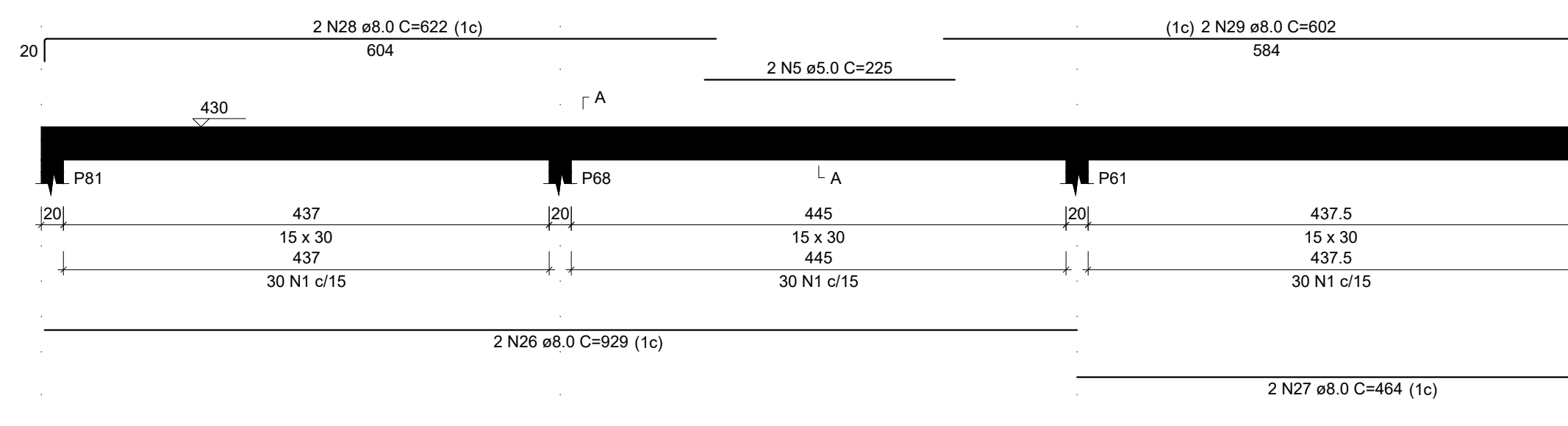
V2

ESC 1:50



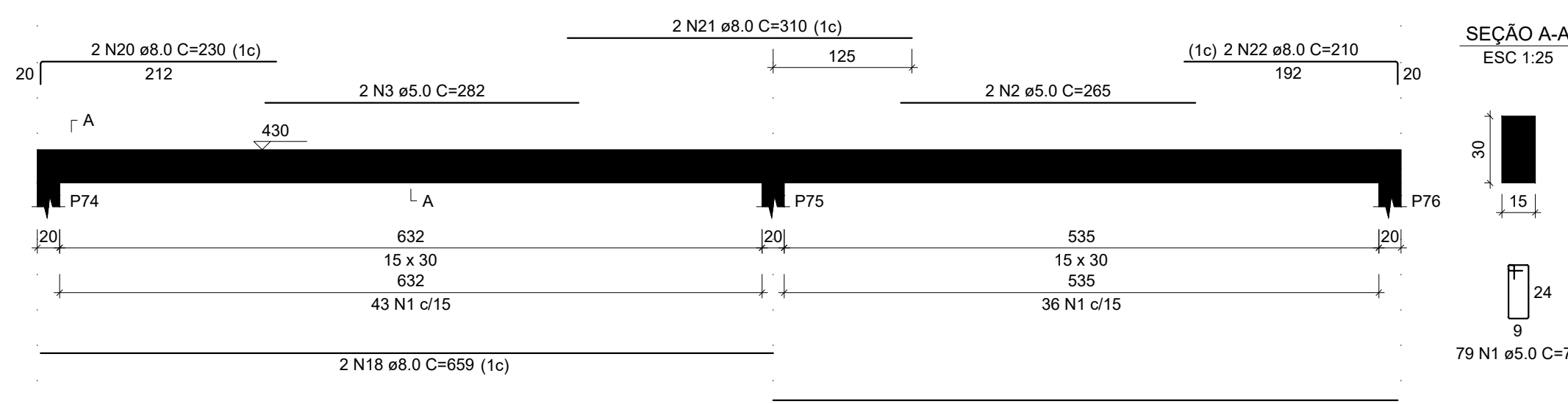
V5

ESC 1:50



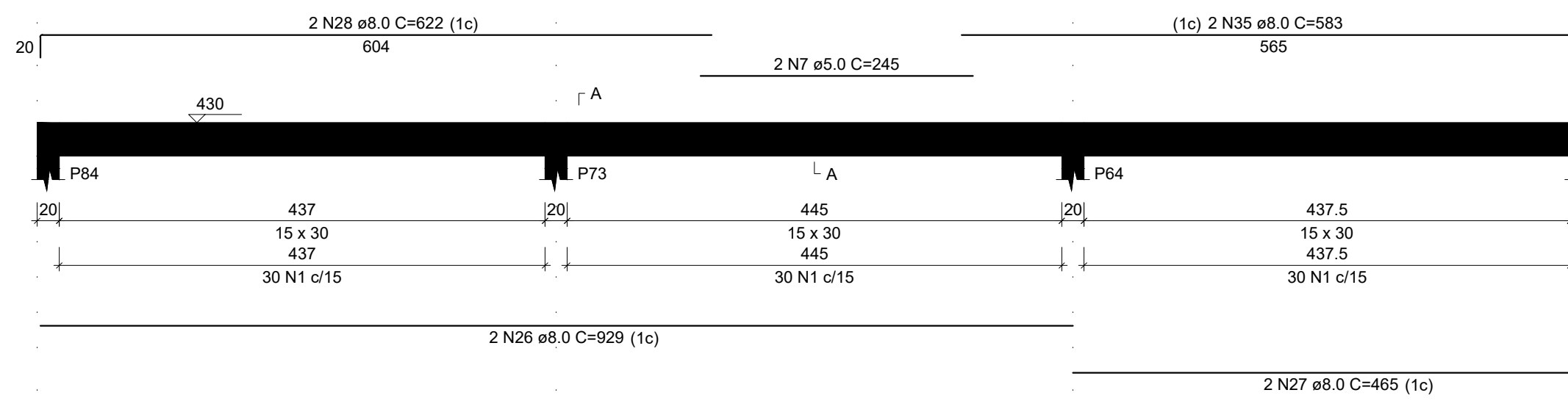
V3

ESC 1:50



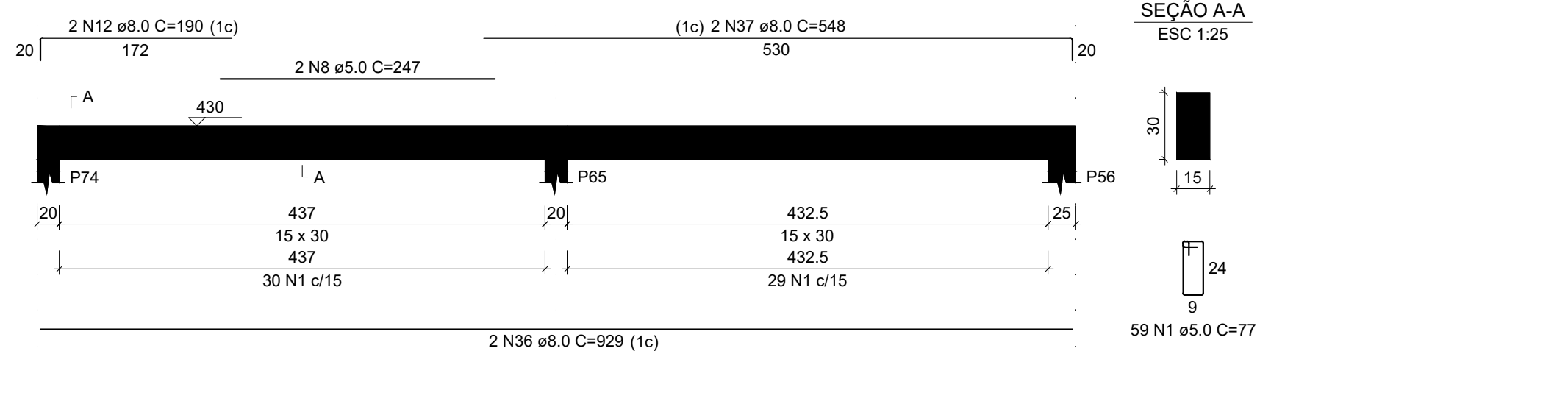
V7

ESC 1:50



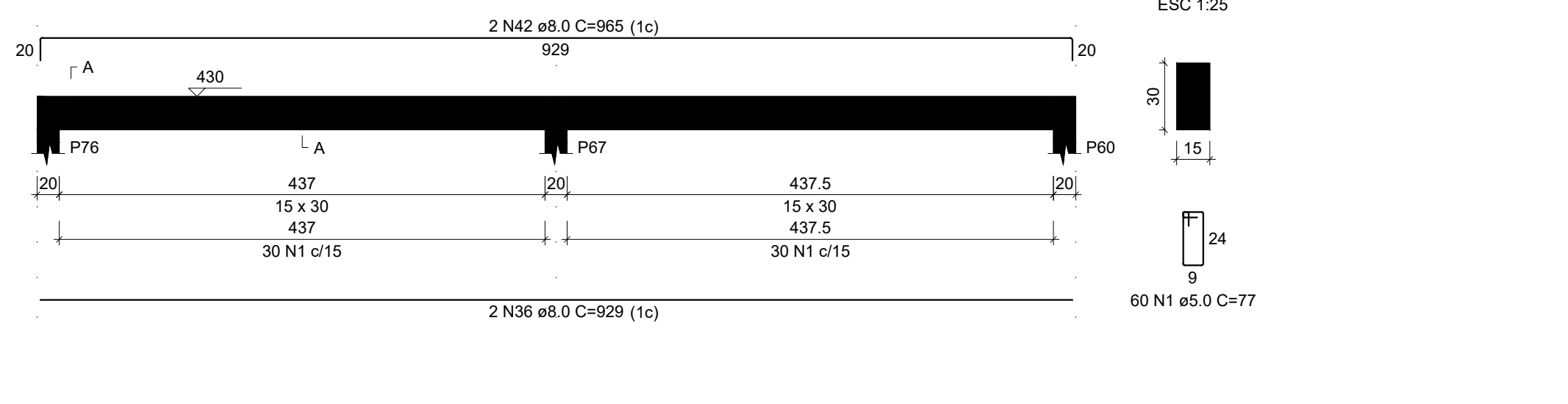
V9

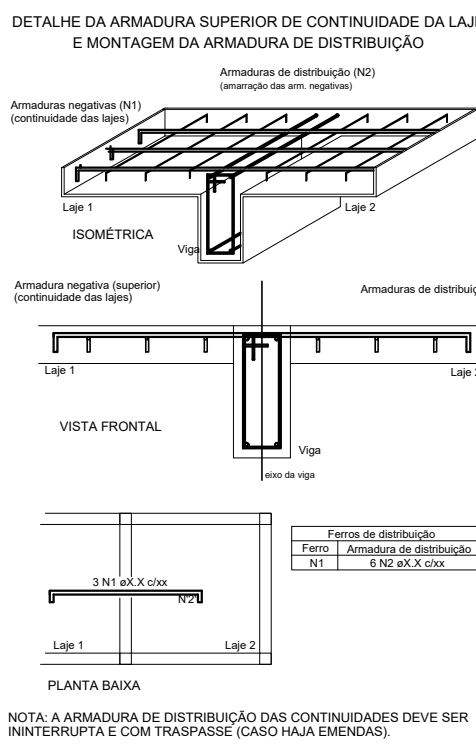
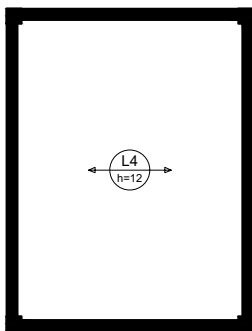
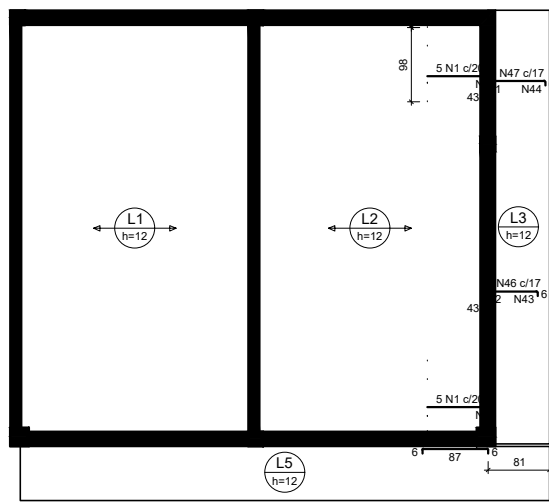
ESC 1:50



V11

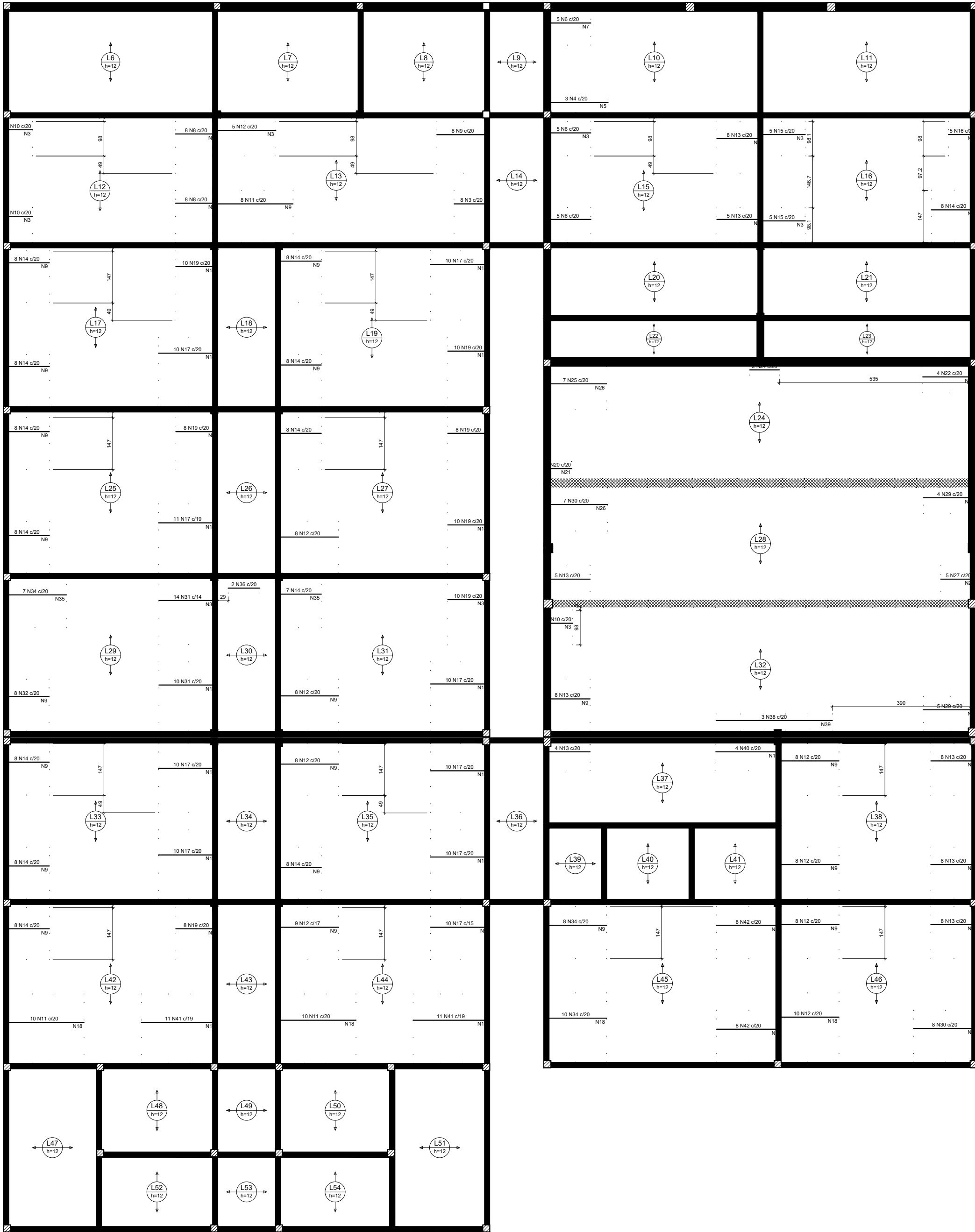
ESC 1:50





NOTA: A ARMADURA DE CONTINUIDADE DAS CONTIGUIDADES DEVE SER RECONSTRUÍDA COM TOLERÂNCIA DE 10% (MÁXIMO).

Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	5 N2 ø5.0 c/20 C=93
N1	5 N3 ø5.0 c/20 C=98
N4	9 N5 ø5.0 c/20 C=44
N6	7 N7 ø5.0 c/20 C=96
N8	6 N9 ø5.0 c/20 C=147
N10	4 N3 ø5.0 c/20 C=98
N8	6 N9 ø5.0 c/20 C=147
N10	4 N3 ø5.0 c/20 C=98
N11	12 N9 ø5.0 c/20 C=147
N12	9 N3 ø5.0 c/20 C=98
N13	7 N3 ø5.0 c/20 C=98
N13	7 N9 ø5.0 c/20 C=147
N6	7 N3 ø5.0 c/20 C=98
N14	7 N9 ø5.0 c/20 C=147
N15	7 N3 ø5.0 c/20 C=98
N16	4 N3 ø5.0 c/20 C=98
N15	7 N3 ø5.0 c/20 C=98
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N19	6 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N14	6 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N20	4 N21 ø5.0 c/20 C=48
N22	8 N23 ø5.0 c/20 C=75
N25	9 N26 ø5.0 c/20 C=124
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N19	6 N9 ø5.0 c/20 C=147
N14	7 N9 ø5.0 c/20 C=147
N19	6 N18 ø5.0 c/20 C=196
N27	5 N28 ø5.0 c/20 C=97
N30	8 N23 ø5.0 c/20 C=75
N31	9 N26 ø5.0 c/20 C=124
N32	7 N9 ø5.0 c/20 C=147
N31	9 N33 ø5.0 c/20 C=187
N34	9 N35 ø5.0 c/20 C=139
N17	9 N18 ø5.0 c/20 C=196
N12	9 N9 ø5.0 c/20 C=147
N19	6 N37 ø5.0 c/20 C=188
N14	7 N35 ø5.0 c/20 C=139
N13	7 N9 ø5.0 c/20 C=147
N29	8 N3 ø5.0 c/20 C=98
N38	17 N39 ø5.0 c/20 C=49
N10	4 N3 ø5.0 c/20 C=98
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N17	9 N18 ø5.0 c/20 C=196
N14	7 N9 ø5.0 c/20 C=147
N12	9 N9 ø5.0 c/20 C=147
N13	7 N9 ø5.0 c/20 C=147
N12	9 N9 ø5.0 c/20 C=147
N41	11 N18 ø5.0 c/20 C=196
N11	12 N18 ø5.0 c/20 C=196
N19	6 N9 ø5.0 c/20 C=147
N14	7 N9 ø5.0 c/20 C=147
N41	11 N18 ø5.0 c/20 C=196
N11	12 N18 ø5.0 c/20 C=196
N17	9 N9 ø5.0 c/20 C=147
N12	9 N9 ø5.0 c/20 C=147
N34	9 N18 ø5.0 c/20 C=196
N42	9 N9 ø5.0 c/20 C=147
N34	9 N9 ø5.0 c/20 C=147
N12	9 N18 ø5.0 c/20 C=196
N30	9 N9 ø5.0 c/20 C=147
N13	7 N9 ø5.0 c/20 C=147
N12	9 N9 ø5.0 c/20 C=147
N46	4 N43 ø5.0 c/20 C=390
N47	4 N44 ø5.0 c/20 C=167



Armação negativa das lajes do pavimento 1 Nível (Eixo "X")

RELAÇÃO DO AÇO					
ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA00	1	5.0	10	85	850
	2	5.0	5	85	425
	3	5.0	74	98	7252
	4	5.0	3	175	525
	5	5.0	9	48	396
	6	5.0	15	135	1575
	7	5.0	16	96	1536
	8	5.0	117	117	13683
	9	5.0	209	141	29469
	10	5.0	35	78	2730
	11	5.0	38	225	8550
	12	5.0	72	178	12816
	13	5.0	64	125	8000
	14	5.0	103	127	13081
	15	5.0	9	135	1215
	16	5.0	1	75	75
	17	5.0	81	160	12960
	18	5.0	163	196	31948
	19	5.0	64	116	7424
	20	5.0	3	75	225
	21	5.0	4	48	192
	22	5.0	46	151	6946
	23	5.0	16	75	1200
	24	5.0	2	84	168
	25	5.0	7	174	1218
	26	5.0	18	124	2232
	27	5.0	5	100	500
	28	5.0	5	97	485
	29	5.0	18	149	2682
	30	5.0	15	177	2655
	31	5.0	24	164	3936
	32	5.0	8	125	1000
	33	5.0	9	187	1683
	34	5.0	25	175	4375
	35	5.0	18	130	2340
	36	5.0	2	80	160
	37	5.0	8	188	1504
	38	5.0	3	329	987
	39	5.0	17	65	1105
	40	5.0	4	162	648
	41	5.0	22	214	4708
	42	5.0	16	180	2880
	43	5.0	4	385	1540
	44	5.0	4	187	748
	45	5.0	1	96	96
	46	5.0	13	115	1495
	47	5.0	10	127	1270

RESUMO DO AÇO				
ACO	DIAM (mm)	C.TOTAL (cm)	PESO • 10%	PESO • 10%
CA00	5.0	40.8	187.8	317.5
PESO TOTAL				317.5
CA00	11	317.5		
CA00	317.5			

Volume de concreto (C-20) = 0.00 m³
Área de forma = 0.00 m²



AB PROJETOS E CONSULTORIA LTDA

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abprojetoseconsultoria@gmail.com
CNC nº 202527-2

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FÓRUM DE PIO IX**

Endereço: **Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí**

Conteúdo do projeto: **Armação Negativa Pavimento 1 Eixo "X"**

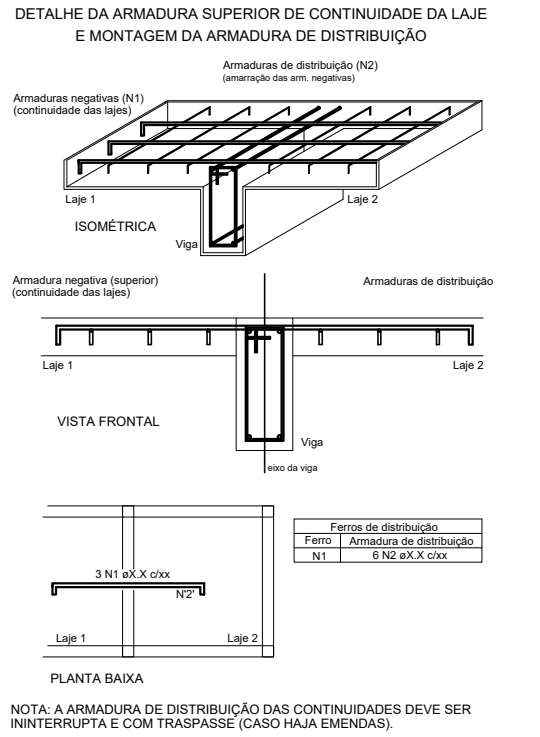
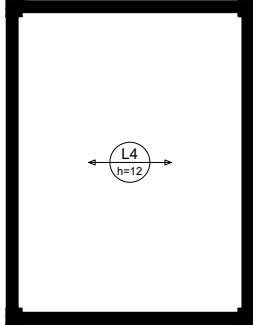
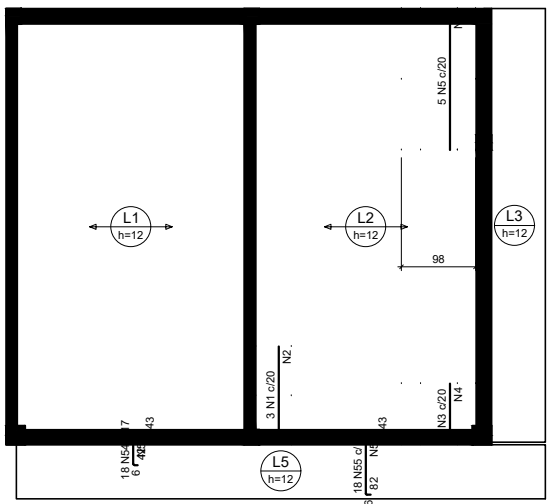
Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

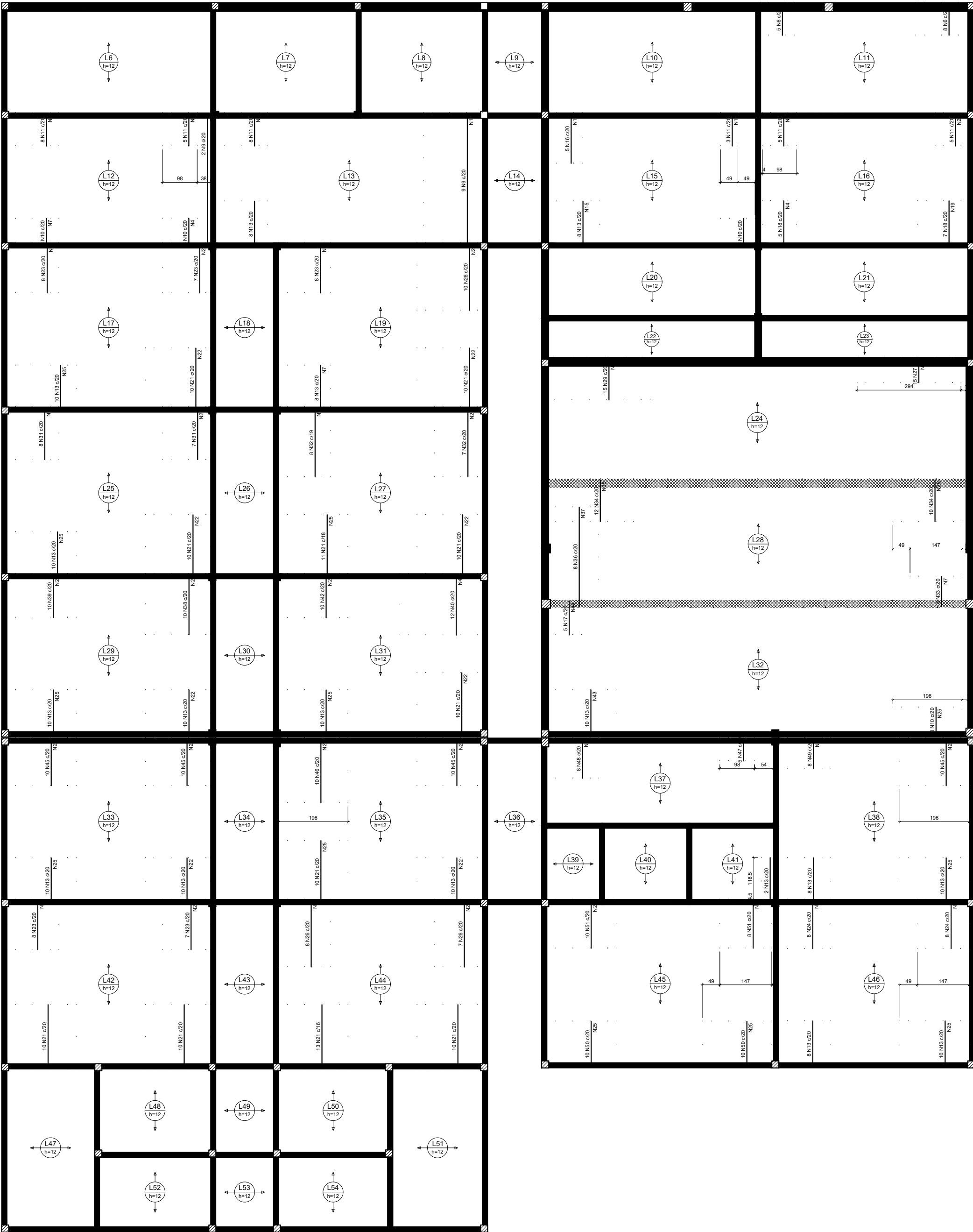
Data: **Julho/2022**

Escala: **1/50**

Revisão: **19/27**



Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	7 N2 ø5.0 c/20 C=47
N3	4 N4 ø5.0 c/20 C=98
N5	10 N4 ø5.0 c/20 C=98
N6	5 N7 ø5.0 c/20 C=147
N6	5 N8 ø5.0 c/20 C=96
N10	4 N4 ø5.0 c/20 C=98
N11	5 N4 ø5.0 c/20 C=98
N10	4 N7 ø5.0 c/20 C=147
N11	5 N7 ø5.0 c/20 C=147
N9	19 N12 ø5.0 c/20 C=167
N11	5 N7 ø5.0 c/20 C=147
N11	5 N14 ø5.0 c/20 C=49
N13	7 N15 ø5.0 c/20 C=145
N16	7 N17 ø5.0 c/20 C=96
N18	7 N19 ø5.0 c/20 C=141
N11	5 N20 ø5.0 c/20 C=92
N18	7 N4 ø5.0 c/20 C=98
N11	5 N4 ø5.0 c/20 C=98
N21	9 N22 ø5.0 c/20 C=185
N23	7 N24 ø5.0 c/20 C=136
N13	7 N25 ø5.0 c/20 C=196
N23	7 N7 ø5.0 c/20 C=147
N21	9 N22 ø5.0 c/20 C=185
N26	10 N22 ø5.0 c/20 C=185
N13	7 N7 ø5.0 c/20 C=147
N23	7 N7 ø5.0 c/20 C=147
N27	4 N28 ø5.0 c/20 C=284
N29	6 N30 ø5.0 c/20 C=287
N21	9 N22 ø5.0 c/20 C=185
N31	8 N24 ø5.0 c/20 C=136
N13	7 N25 ø5.0 c/20 C=196
N31	8 N7 ø5.0 c/20 C=147
N21	9 N22 ø5.0 c/20 C=185
N32	10 N24 ø5.0 c/20 C=136
N21	9 N25 ø5.0 c/20 C=196
N32	10 N7 ø5.0 c/20 C=147
N33	5 N7 ø5.0 c/20 C=147
N34	6 N25 ø5.0 c/20 C=196
N34	6 N35 ø5.0 c/20 C=240
N36	14 N37 ø5.0 c/20 C=142
N13	7 N22 ø5.0 c/20 C=185
N38	9 N22 ø5.0 c/20 C=185
N13	7 N25 ø5.0 c/20 C=196
N39	6 N25 ø5.0 c/20 C=196
N21	9 N22 ø5.0 c/20 C=185
N40	9 N41 ø5.0 c/20 C=234
N13	7 N25 ø5.0 c/20 C=196
N42	6 N25 ø5.0 c/20 C=196
N10	4 N25 ø5.0 c/20 C=196
N13	7 N43 ø5.0 c/20 C=191
N17	5 N44 ø5.0 c/20 C=93
N13	7 N22 ø5.0 c/20 C=185
N45	7 N22 ø5.0 c/20 C=185
N13	7 N25 ø5.0 c/20 C=196
N45	7 N25 ø5.0 c/20 C=196
N13	7 N22 ø5.0 c/20 C=185
N45	7 N22 ø5.0 c/20 C=185
N21	9 N25 ø5.0 c/20 C=196
N46	9 N25 ø5.0 c/20 C=196
N48	6 N7 ø5.0 c/20 C=147
N13	7 N25 ø5.0 c/20 C=196
N45	7 N25 ø5.0 c/20 C=196
N49	5 N7 ø5.0 c/20 C=147
N23	7 N24 ø5.0 c/20 C=136
N23	7 N7 ø5.0 c/20 C=147
N26	10 N24 ø5.0 c/20 C=136
N50	7 N25 ø5.0 c/20 C=196
N51	7 N7 ø5.0 c/20 C=147
N50	7 N25 ø5.0 c/20 C=196
N51	7 N25 ø5.0 c/20 C=196
N13	7 N25 ø5.0 c/20 C=196
N24	7 N7 ø5.0 c/20 C=147
N24	7 N7 ø5.0 c/20 C=147
N54	3 N52 ø5.0 c/20 C=309
N55	4 N53 ø5.0 c/20 C=307



Armação negativa das lajes do pavimento 1 Nivel (Eixo Y)

RELAÇÃO DO AÇO					
Negativa Y					
AÇO	N	DIAM (mm)	QUANT	CUMT (cm)	C.TOTAL (cm)
CASO	1	5.0	3	127	381
	2	5.0	7	57	329
	3	5.0	5	48	240
	4	5.0	35	98	8430
	5	5.0	6	94	620
	6	5.0	13	89	1157
	7	5.0	112	147	16464
	8	5.0	5	95	480
	9	5.0	11	377	4147
	10	5.0	28	81	2268
	11	5.0	34	91	3084
	12	5.0	19	167	3173
	13	5.0	152	130	19760
	14	5.0	7	89	245
	15	5.0	7	145	1015
	16	5.0	5	163	700
	17	5.0	12	85	1140
	18	5.0	12	151	1572
	19	5.0	7	141	987
	20	5.0	4	92	402
	21	5.0	114	179	20436
	22	5.0	99	195	19315
	23	5.0	38	139	5282
	24	5.0	136	136	1768
	25	5.0	133	196	26068
	26	5.0	25	188	4700
	27	5.0	15	69	1020
	28	5.0	4	294	1170
	29	5.0	6	166	1750
	30	5.0	6	287	1722
	31	5.0	15	146	1950
	32	5.0	15	195	2925
	33	5.0	8	85	680
	34	5.0	22	118	2596
	35	5.0	6	240	1440
	36	5.0	8	281	2248
	37	5.0	14	142	1968
	38	5.0	10	170	1700
	39	5.0	10	121	1210
	40	5.0	12	171	2052
	41	5.0	8	234	1516
	42	5.0	10	122	1220
	43	5.0	7	191	1337
	44	5.0	5	93	465
	45	5.0	40	132	5280
	46	5.0	141	910	12840
	47	5.0	5	62	310
	48	5.0	8	111	888
	49	5.0	8	83	664
	50	5.0	20	129	2580
	51	5.0	18	135	2430
	52	5.0	3	309	927
	53	5.0	4	307	1228
	54	5.3	18	88	1584
	55	5.3	18	125	2304

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO ± 10% (kg)
CASO	6.3	38.9	10.5
CASO	5.0	1907.2	323.4
PESO TOTAL (kg)		10.5	
CASO		10.5	
CASO		323.4	

Volume de concreto (C-25) = 0.00 m³
Área da forma = 0.00 m²



AB PROJETOS E CONSULTORIA LTDA

Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FORUM DE PIO IX**

Endereço: **Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí**

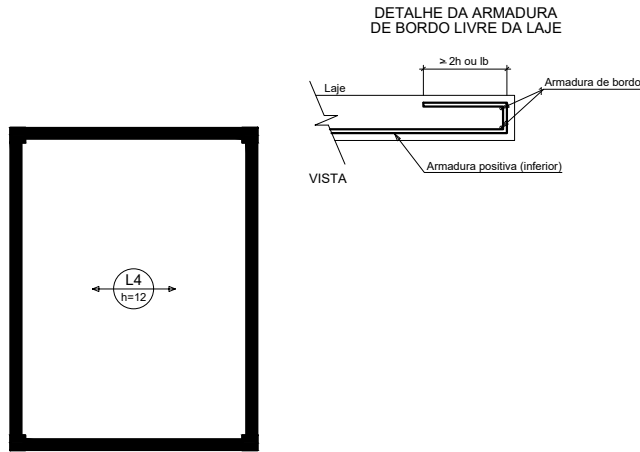
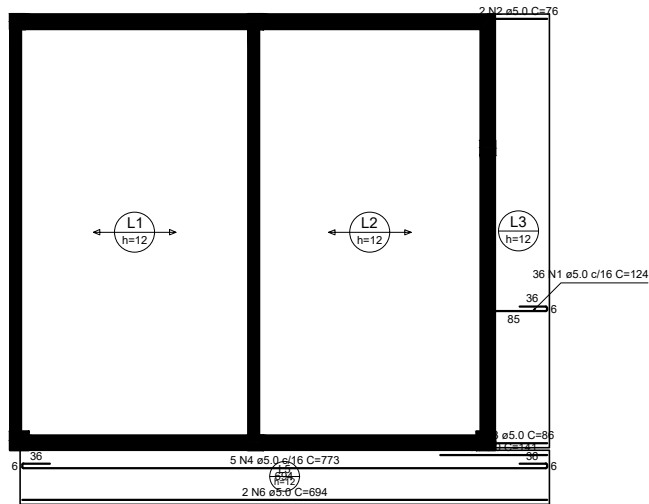
Controlador do projeto: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Responsável Técnico: **Jean Carlos**

Data: **Julho/2022**

Escala: **1/50**

Revisão: **20/27**



RELAÇÃO DO AÇO

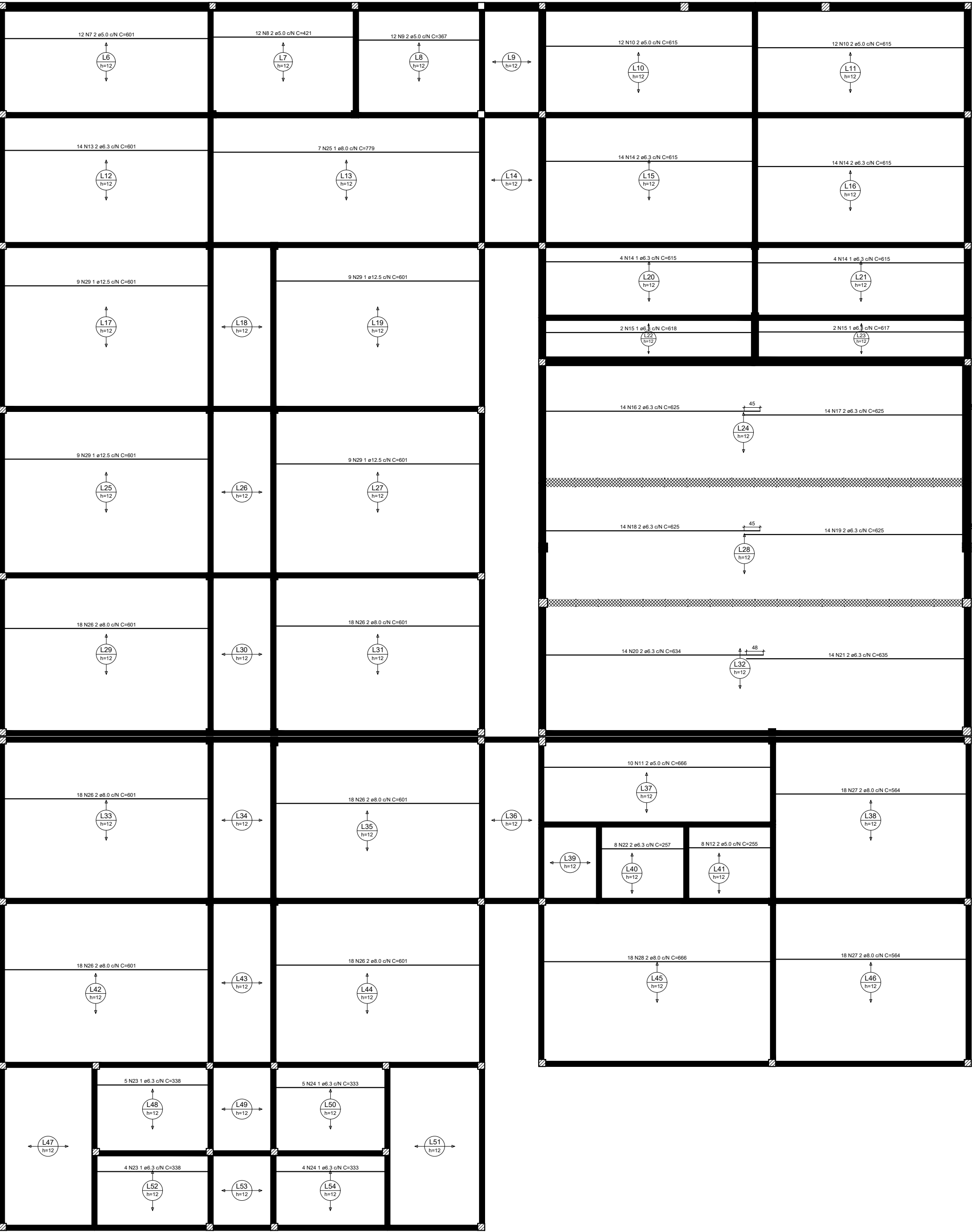
Positivos X

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	2	5.0	36	124	4464
	3	5.0	2	76	152
	4	5.0	2	86	172
	5	5.0	5	773	3865
	6	5.0	2	141	282
	7	5.0	2	694	1388
	8	5.0	12	601	7212
	9	5.0	12	421	5052
	10	5.0	12	367	4404
	11	5.0	24	615	14760
CA50	12	5.0	10	666	6660
	13	5.0	8	255	2040
	14	6.3	14	601	8414
	15	6.3	36	615	22140
	16	6.3	4	618	2472
	17	6.3	14	625	8750
	18	6.3	14	625	8750
	19	6.3	14	625	8750
	20	6.3	14	634	8876
	21	6.3	14	635	8890
	22	6.3	8	257	2056
	23	6.3	9	338	3042
	24	6.3	9	333	2997
	25	8.0	7	779	5453
	26	8.0	108	601	64908
	27	8.0	36	564	20304
	28	8.0	18	666	11988
	29	12.5	36	601	21636

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	938.9	252.7
CA50	8.0	1026.5	445.6
CA50	12.5	216.4	229.3
CA60	5.0	504.5	85.5
PESO TOTAL (kg)			
CA50	927.5		
CA60	85.5		

Volume de concreto (C-25) = 49.58 m³
Área de forma = 11.17 m²



Armação positiva das lajes do pavimento 1 nível (Eixo X)



AB PROJETOS E CONSULTORIA LTDA
Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FORUM DE PIO IX**

Endereço: **Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Pto IX - Piauí**

Coordenação do projeto: **Armação Positiva Pavimento 1 Eixo "x"**

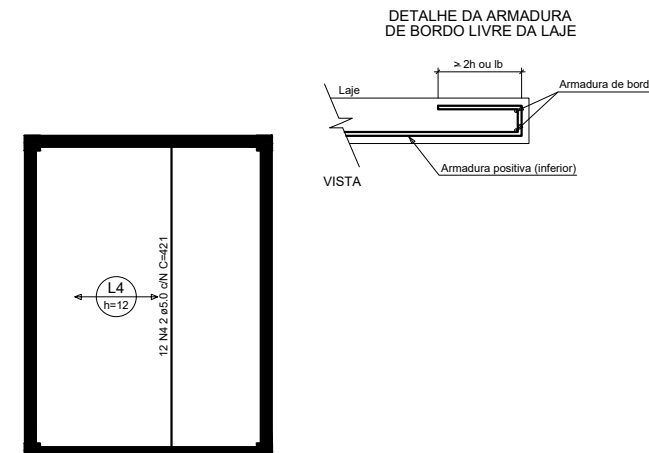
Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

Data: **Julho/2022**

Escala: **1/50**

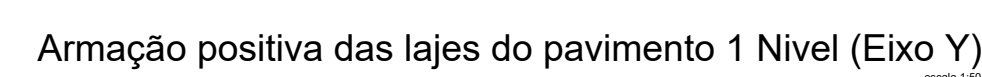
Revisão: **21/27**



RELAÇÃO DO AÇO					
Postivos Y					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (kg)	C.TOTAL (kg)
CA60	1	5,0	5	647	3235
	2	5,0	2	568	1136
	3	5,0	6	67	402
	4	5,0	12	121	1452
	5	5,0	38	145	5502
CA50	6	5,0	2	68	136
	7	5,0	2	86	172
	8	6,3	3	305	915
	11	6,3	3	VAR	VAR
	12	6,3	12	474	5688
	13	6,3	3	VAR	1443
	14	6,3	40	567	5484
	15	6,3	6	VAR	2802
	16	6,3	3	VAR	675
	17	6,3	33	471	15543
20	6,3	3	220	780	
21	8,0	6	571	3426	

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	370.5	99.7
	8.0	34.3	14.9
CA60	5.0	156.3	26.5

Volume de concreto (C-25) = 0.00 m³
Área de forma = 0.00 m²



5TGe - 200

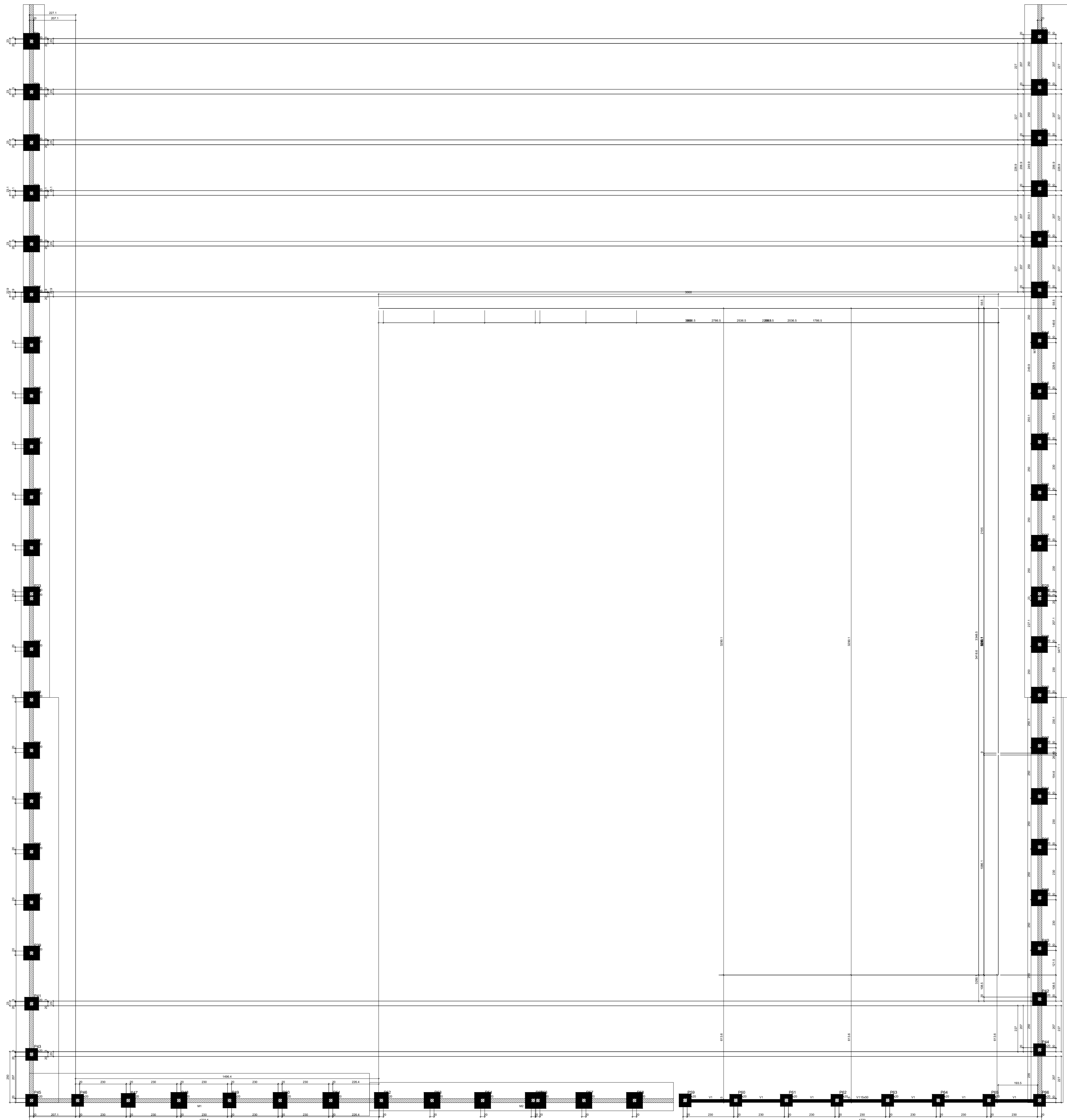
5TGe - 200

5TGe - 200

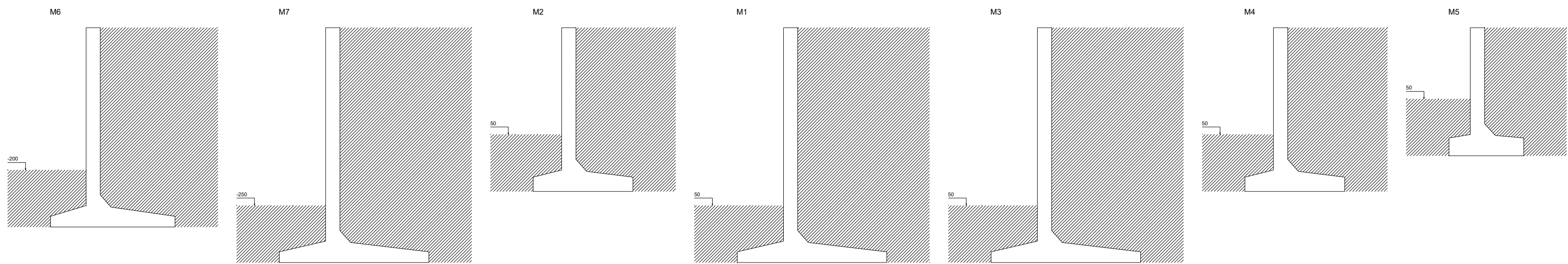
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<tr><td>V770D_01</td><td>V770D_02</td><td>V770D_03</td><td>V770D_04</td><td>V770D_05</td><td>V770D_06</td><td>V770D_07</td><td>V770D_08</td><td>V770D_09</td><td>V770D_10</td><td>V770D_11</td><td>V770D_12</td><td>V770D_13</td><td>V770D_14</td><td>V770D_15</td><td>V770D_16</td><td>V770D_17</td><td>V770D_18</td><td>V770D_19</td><td>V770D_20</td><td>V770D_21</td><td>V770D_22</td><td>V770D_23</td><td>V770D_24</td><td>V770D_25</td><td>V770D_26</td><td>V770D_27</td><td>V770D_28</td><td>V770D_29</td><td>V770D_30</td><td>V770D_31</td><td>V770D_32</td><td>V770D_33</td><td>V770D_34</td><td>V</td></tr></table>	V770D_01	V770D_02	V770D_03	V770D_04	V770D_05	V770D_06	V770D_07	V770D_08	V770D_09	V770D_10	V770D_11	V770D_12	V770D_13	V770D_14	V770D_15	V770D_16	V770D_17	V770D_18	V770D_19	V770D_20	V770D_21	V770D_22	V770D_23	V770D_24	V770D_25	V770D_26	V770D_27	V770D_28	V770D_29	V770D_30	V770D_31	V770D_32	V770D_33	V770D_34	V
V770A_01	V770A_02	V770A_03	V770A_04	V770A_05	V770A_06	V770A_07	V770A_08	V770A_09	V770A_10	V770A_11	V770A_12	V770A_13	V770A_14	V770A_15	V770A_16	V770A_17	V770A_18	V770A_19	V770A_20	V770A_21	V770A_22	V770A_23	V770A_24	V770A_25	V770A_26	V770A_27	V770A_28	V770A_29	V770A_30	V770A_31	V770A_32	V770A_33	V770A_34	V770A_35	V770A_36	V770A_37	V770A_38	V770A_39	V770A_40	V770A_41	V770A_42	V770A_43	V770A_44	V770A_45	V770A_46	V770A_47	V770A_48	V770A_49	V770A_50	V770A_51	V770A_52	V770A_53	V770A_54	V770A_55	V770A_56	V770A_57	V770A_58	V770A_59	V770A_60	V770A_61	V770A_62	V770A_63	V770A_64	V770A_65	V770A_66	V770A_67	V770A_68	V770A_69	V770A_70	V770A_71	V770A_72	V770A_73	V770A_74	V770A_75	V770A_76	V770A_77	V770A_78	V770A_79	V770A_80	V770A_81	V770A_82	V770A_83	V770A_84	V770A_85	V770A_86	V770A_87	V770A_88	V770A_89	V770A_90	V770A_91	V770A_92	V770A_93	V770A_94	V770A_95	V770A_96	V770A_97	V770A_98	V770A_99	V770A_100																																																																																																																																																																																																																																															
V770B_01	V770B_02	V770B_03	V770B_04	V770B_05	V770B_06	V770B_07	V770B_08	V770B_09	V770B_10	V770B_11	V770B_12	V770B_13	V770B_14	V770B_15	V770B_16	V770B_17	V770B_18	V770B_19	V770B_20	V770B_21	V770B_22	V770B_23	V770B_24	V770B_25	V770B_26	V770B_27	V770B_28	V770B_29	V770B_30	V770B_31	V770B_32	V770B_33	V770B_34	V770B_35	V770B_36	V770B_37	V770B_38	V770B_39	V770B_40	V770B_41	V770B_42	V770B_43	V770B_44	V770B_45	V770B_46	V770B_47	V770B_48	V770B_49	V770B_50	V770B_51	V770B_52	V770B_53	V770B_54	V770B_55	V770B_56	V770B_57	V770B_58	V770B_59	V770B_60	V770B_61	V770B_62	V770B_63	V770B_64	V770B_65	V770B_66	V770B_67	V770B_68	V770B_69	V770B_70	V770B_71	V770B_72	V770B_73	V770B_74	V770B_75	V770B_76	V770B_77	V770B_78	V770B_79	V770B_80	V770B_81	V770B_82	V770B_83	V770B_84	V770B_85	V770B_86	V770B_87	V770B_88	V770B_89	V770B_90	V770B_91	V770B_92	V770B_93	V770B_94	V770B_95	V770B_96	V770B_97	V770B_98	V770B_99	V770B_100																																																																																																																																																																																																																																															
V770C_01	V770C_02	V770C_03	V770C_04	V770C_05	V770C_06	V770C_07	V770C_08	V770C_09	V770C_10	V770C_11	V770C_12	V770C_13	V770C_14	V770C_15	V770C_16	V770C_17	V770C_18	V770C_19	V770C_20	V770C_21	V770C_22	V770C_23	V770C_24	V770C_25	V770C_26	V770C_27	V770C_28	V770C_29	V770C_30	V770C_31	V770C_32	V770C_33	V770C_34	V770C_35	V770C_36	V770C_37	V770C_38	V770C_39	V770C_40	V770C_41	V770C_42	V770C_43	V770C_44	V770C_45	V770C_46	V770C_47	V770C_48	V770C_49	V770C_50	V770C_51	V770C_52	V770C_53	V770C_54	V770C_55	V770C_56	V770C_57	V770C_58	V770C_59	V770C_60	V770C_61	V770C_62	V770C_63	V770C_64	V770C_65	V770C_66	V770C_67	V770C_68	V770C_69	V770C_70	V770C_71	V770C_72	V770C_73	V770C_74	V770C_75	V770C_76	V770C_77	V770C_78	V770C_79	V770C_80	V770C_81	V770C_82	V770C_83	V770C_84	V770C_85	V770C_86	V770C_87	V770C_88	V770C_89	V770C_90	V770C_91	V770C_92	V770C_93	V770C_94	V770C_95	V770C_96	V770C_97	V770C_98	V770C_99	V770C_100																																																																																																																																																																																																																																															
V770D_01	V770D_02	V770D_03	V770D_04	V770D_05	V770D_06	V770D_07	V770D_08	V770D_09	V770D_10	V770D_11	V770D_12	V770D_13	V770D_14	V770D_15	V770D_16	V770D_17	V770D_18	V770D_19	V770D_20	V770D_21	V770D_22	V770D_23	V770D_24	V770D_25	V770D_26	V770D_27	V770D_28	V770D_29	V770D_30	V770D_31	V770D_32	V770D_33	V770D_34	V																																																																																																																																																																																																																																																																																																																

	<h2 style="margin: 0;">AB PROJETOS E CONSULTORIA LTDA</h2>			
<p>Rua Dr. Moisés Pimentel Neto, nº 01, Oda. Sala 02 Bairro Campos CEP 64.053-510, Teresina - PI abprojetosconsultoria@gmail.com CMC nº 20257272</p>				
<h3 style="margin: 0;">PROJETO ESTRUTURAL</h3>				
Nome CONSTRUÇÃO DO FÓRUM DE PISO IX	Endereço Rua Izídio de Alencar Bezerra, Quadra E, Lote 01, Pão De Açúcar - Piauí			
Descrição do projeto: Planta de Vigotas Pré-Moldadas				
Responsável Técnico Verônica Scheren Castelo Branco - Crea/PI 19.373				
Op. de CAD: Jean Carlos	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Data: Julho/2022</td> <td style="width: 33%;">Escala: 1/50</td> <td style="width: 33%;">Revisão:</td> </tr> </table>	Data: Julho/2022	Escala: 1/50	Revisão:
Data: Julho/2022	Escala: 1/50	Revisão:		



Forma do pavimento Térreo (Nível 0)



Legenda dos muros

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x50	0	0

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x20	25	25
P2	20x20	25	25
P3	20x20	25	25
P4	20x20	25	25
P5	20x20	25	25
P6	20x20	25	25
P7	20x20	25	25
P8	20x20	25	25
P9	20x20	25	25
P10	20x20	25	25
P11	20x20	25	25
P12	20x20	25	25
P13	20x20	25	25
P14	20x20	25	25
P15	20x20	25	25
P16	20x20	25	25
P17	20x20	25	25
P18	20x20	25	25
P19	20x20	25	25
P20	20x20	25	25
P21	20x20	25	25
P22	20x20	25	25
P23	20x20	25	25
P24	20x20	25	25
P25	20x20	25	25
P26	20x20	25	25
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P29	20x20	25	25
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P31	20x20	25	25
P32	20x20	25	25
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P42	20x20	25	25
P43	20x20	25	25
P44	20x20	25	25
P45	20x20	25	25
P46	20x20	25	25
P47	20x20	25	25
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P55	20x20	25	25
P56	20x20	25	25
P57	20x20	25	25
P58	20x20	25	25
P59	20x20	25	25
P60	20x20	25	25
P61	20x20	25	25
P62	20x20	25	25
P63	20x20	25	25
P64	20x20	25	25
P65	20x20	25	25
P66	20x20	25	25

Legenda dos pilares	
	Pilar que passa

Legenda das vigas e paredes	
	Viga



AB PROJETOS E CONSULTORIA LTDA
Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra

CONSTRUÇÃO DO FORUM DE PIO IX

Endereço

Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Piauí

Coordenado do projeto

Planta de Forma Nível Térreo do Muro

Responsável Técnico

Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD

Jean Carlos

Data

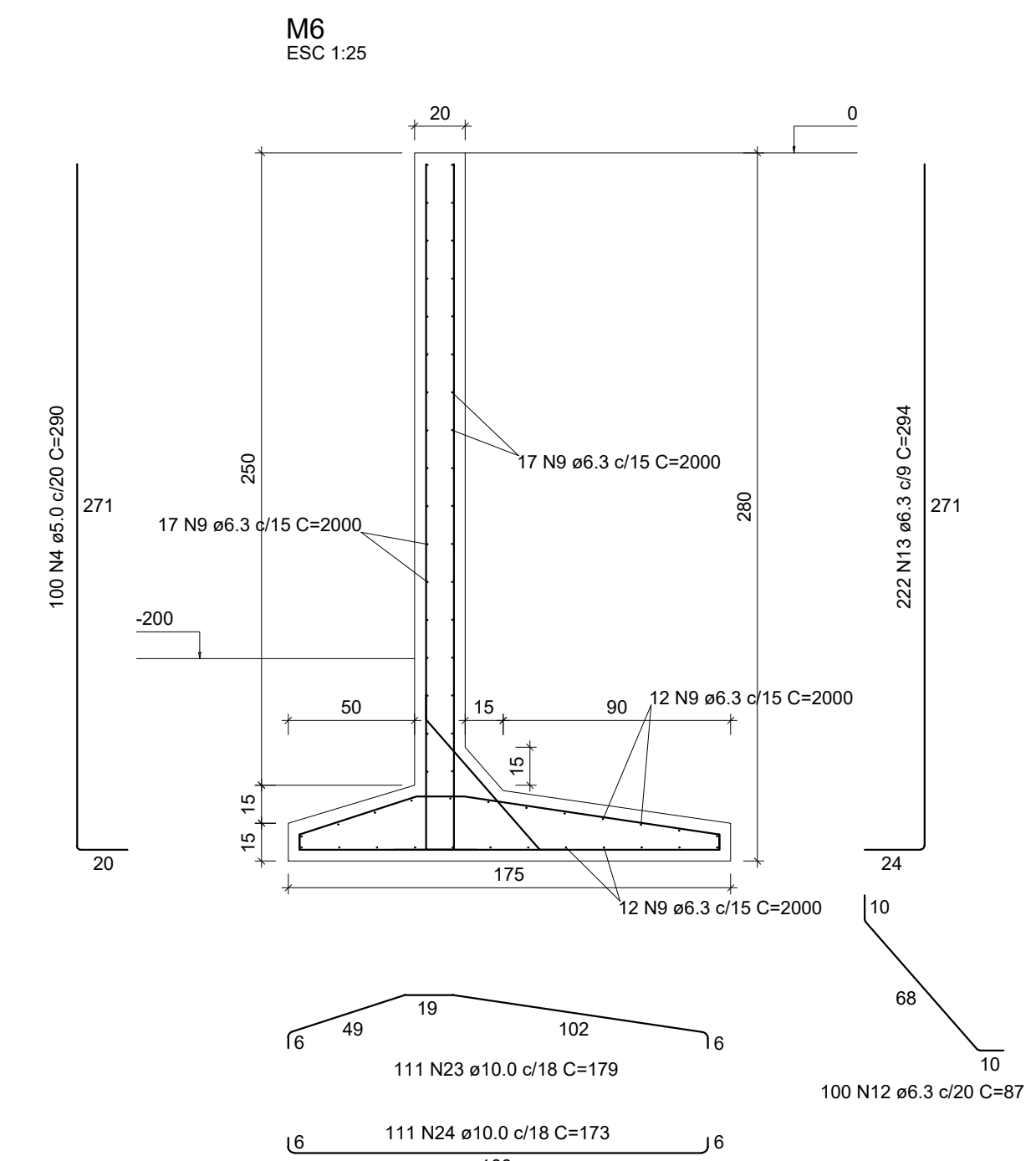
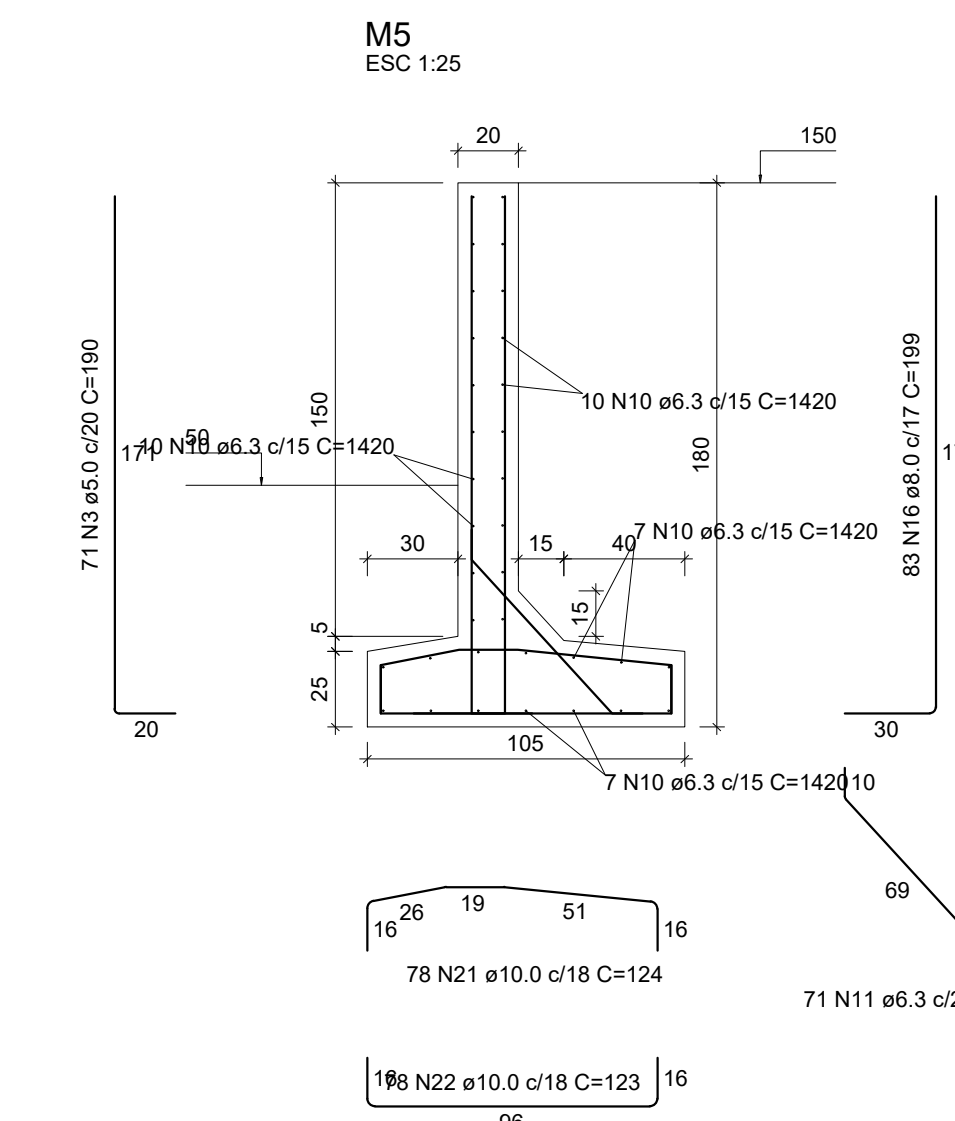
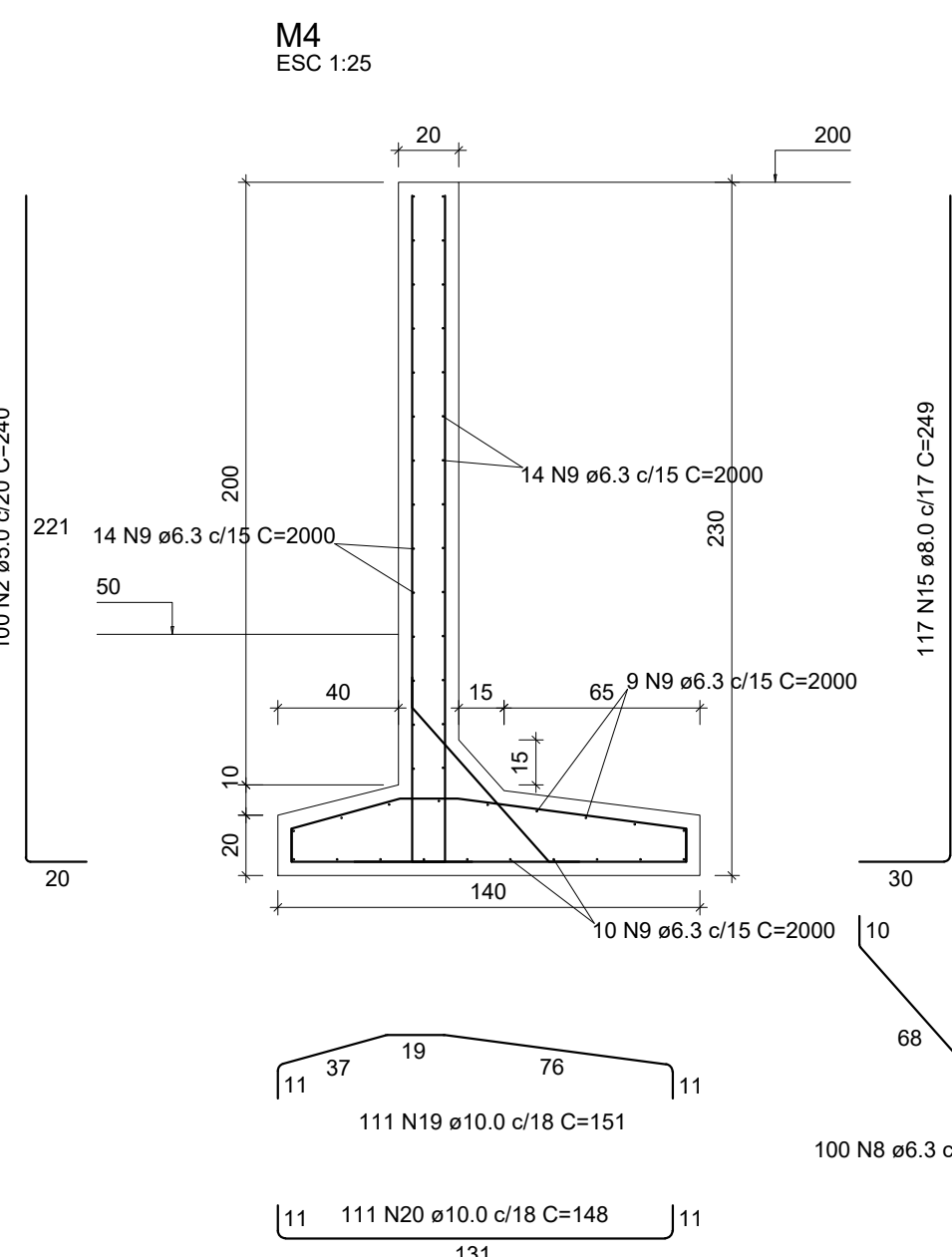
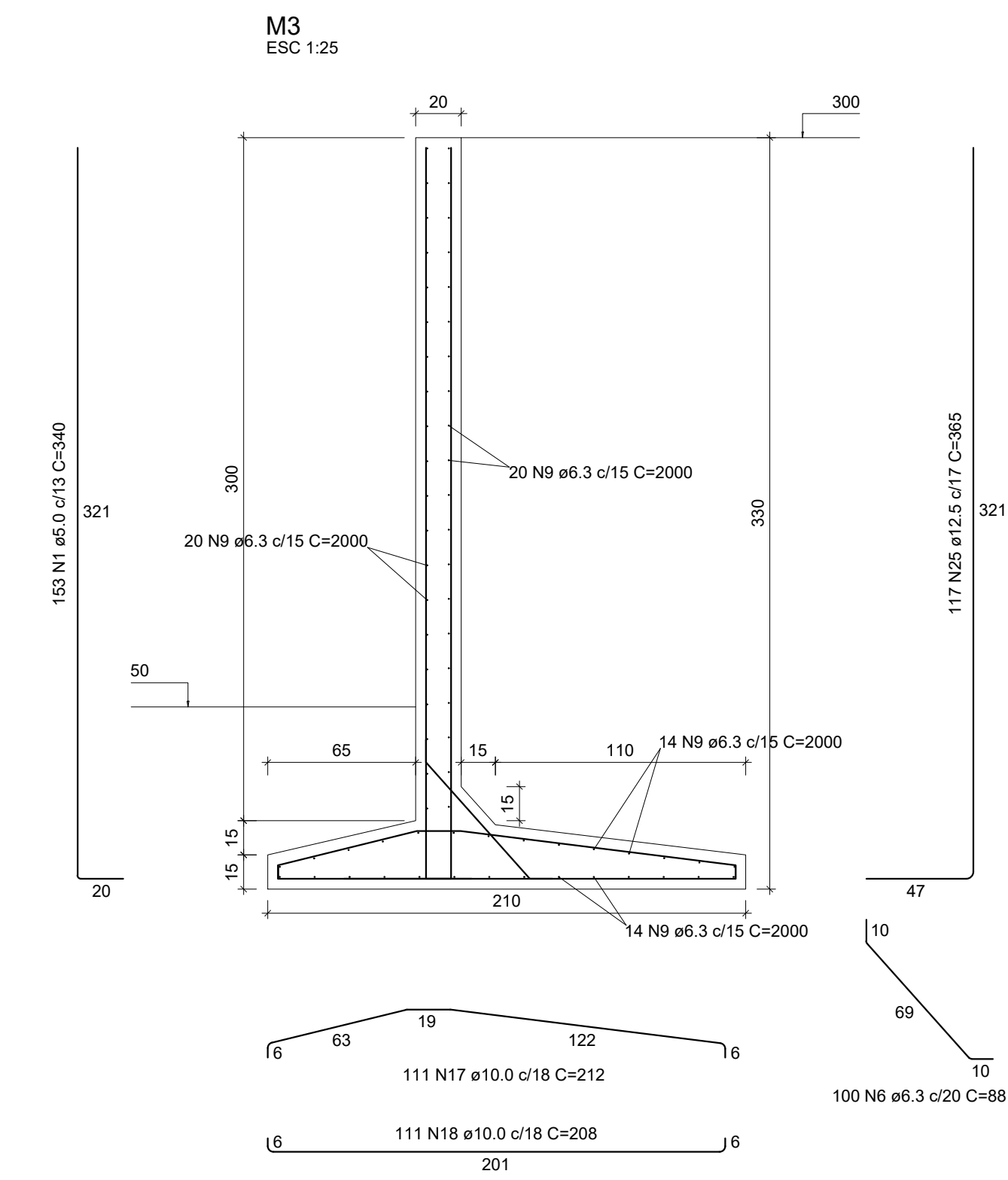
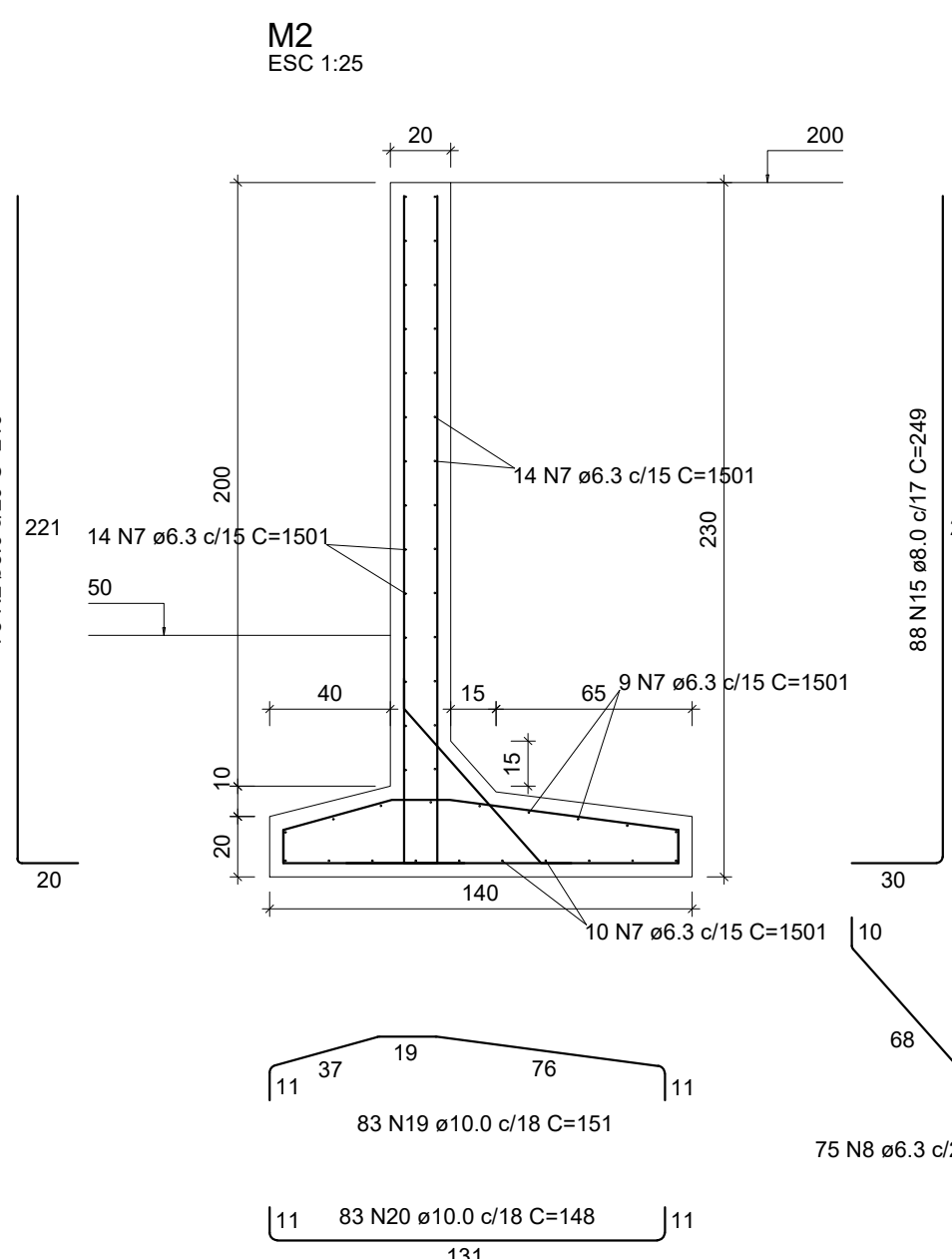
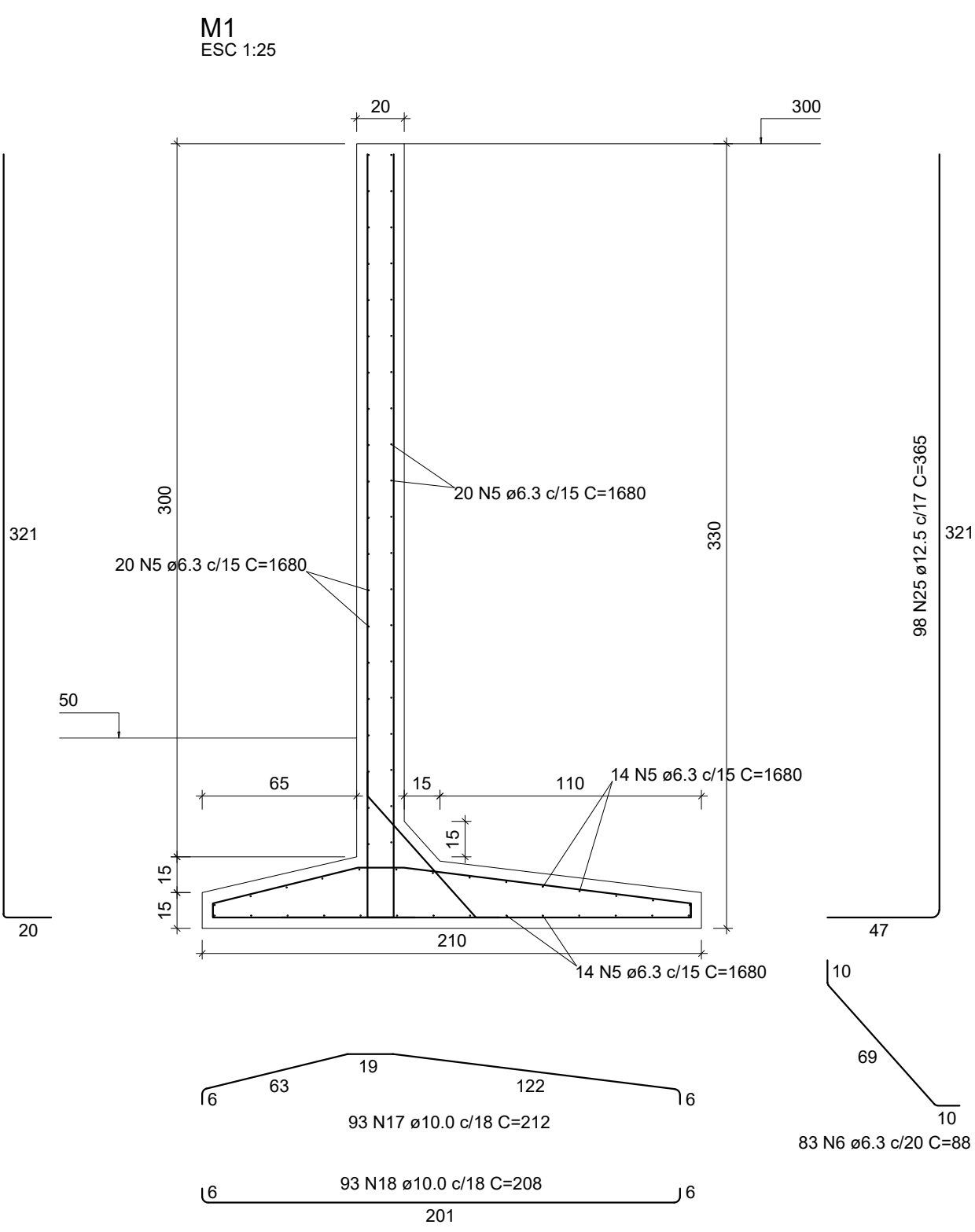
Julho/2022

Escala

1/50

Revisão

24/27



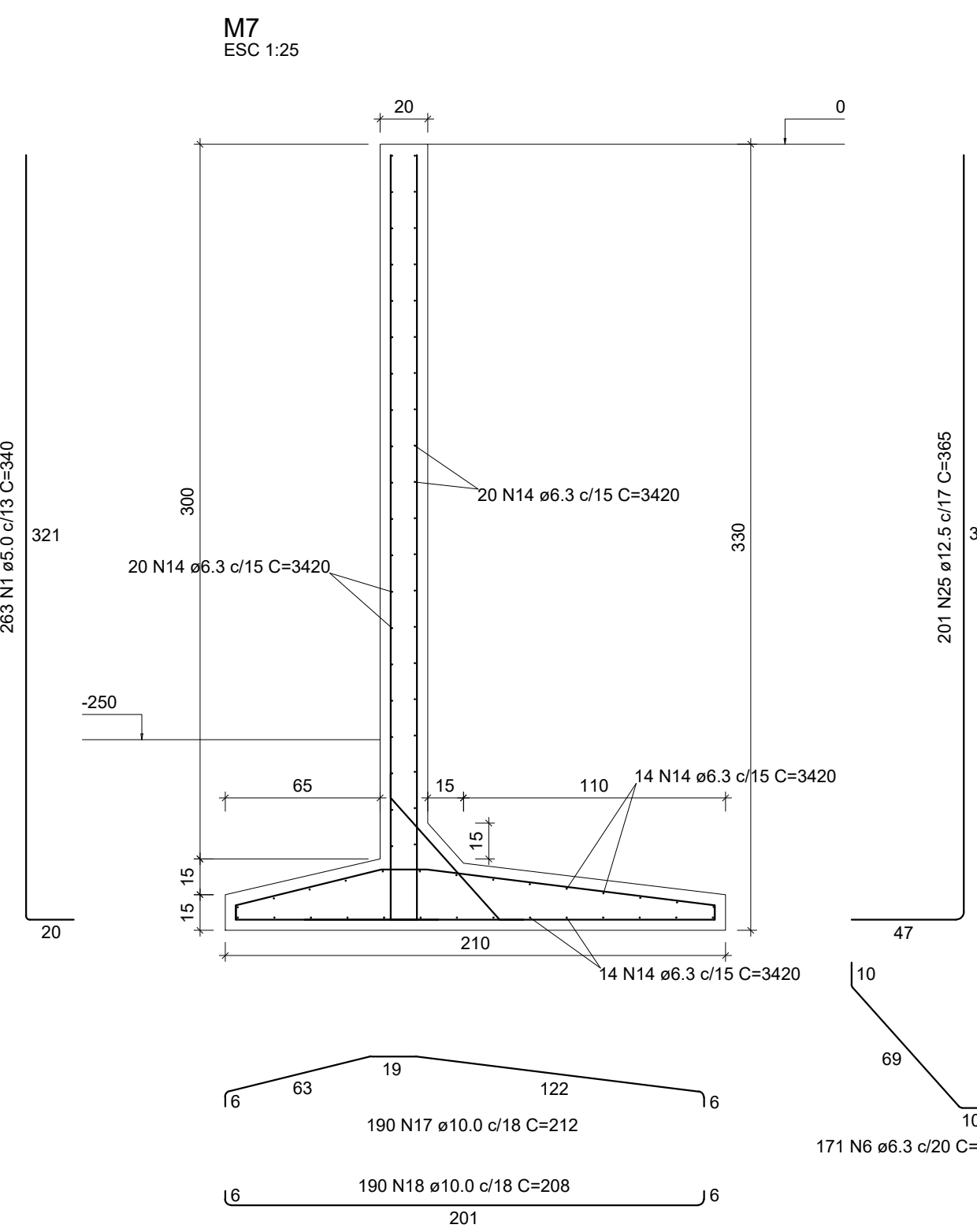
RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	545	340	185300
CA60	2	5.0	175	240	42000
CA60	3	5.0	71	190	13490
CA60	4	5.0	100	280	28000
CA50	5	6.3	68	1680	114240
CA50	6	6.3	354	88	31152
CA50	7	6.3	47	1501	70547
CA50	8	6.3	175	87	15225
CA50	9	6.3	173	2000	346000
CA50	10	6.3	94	1420	133580
CA50	11	6.3	71	88	6248
CA50	12	6.3	100	87	8700
CA50	13	6.3	222	294	65298
CA50	14	6.3	68	3420	232560
CA50	15	8.0	205	249	51045
CA50	16	8.0	83	159	13083
CA50	17	10.0	394	212	83528
CA50	18	10.0	384	258	99072
CA50	19	10.0	194	151	29294
CA50	20	10.0	194	148	28712
CA50	21	10.0	78	124	9672
CA50	22	10.0	78	153	11934
CA50	23	10.0	111	179	19869
CA50	24	10.0	111	173	19203
CA50	25	12.5	416	365	151840

RESUMO DO AÇO

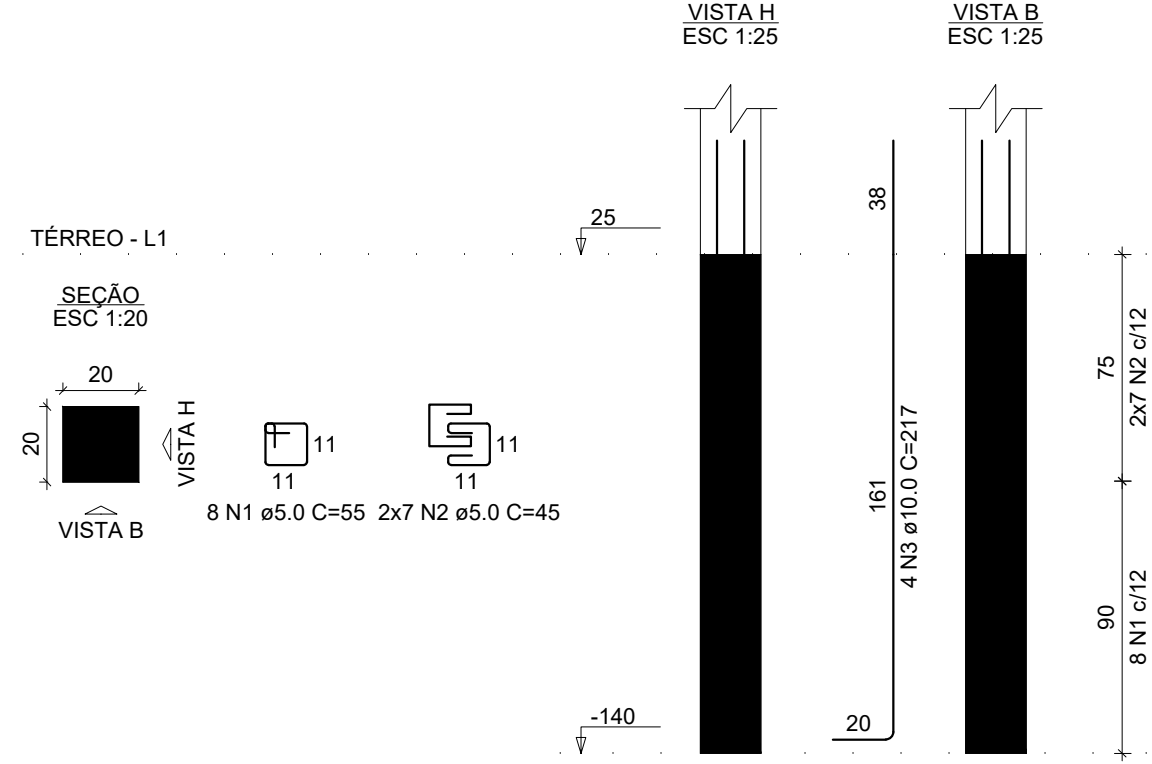
ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	9382.2	2525.4
CA50	8.0	875.6	293.2
CA50	10.0	2812.2	1911.3
CA50	12.5	1518.4	1609
CA50	5.0	2897.8	457.4
CA50		6339	
CA60		457.4	

Volume de concreto (C-25) = 132.00 m³
Área de forma = 1245.70 m²



P1=P2=P3=P4=P5=P6=
=P7=P8=P9=P10=P11=
=P12=P13=P14=P15=
=P16=P17=P18=P19=
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=P40=P41=P42=P43=
=P44=P45=P46=P47=
=P48=P49=P50=P51=
=P52=P53=P54=P55=
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P59=P60=P61=P62=P63=P64=P65=P66



RELAÇÃO DO AÇO

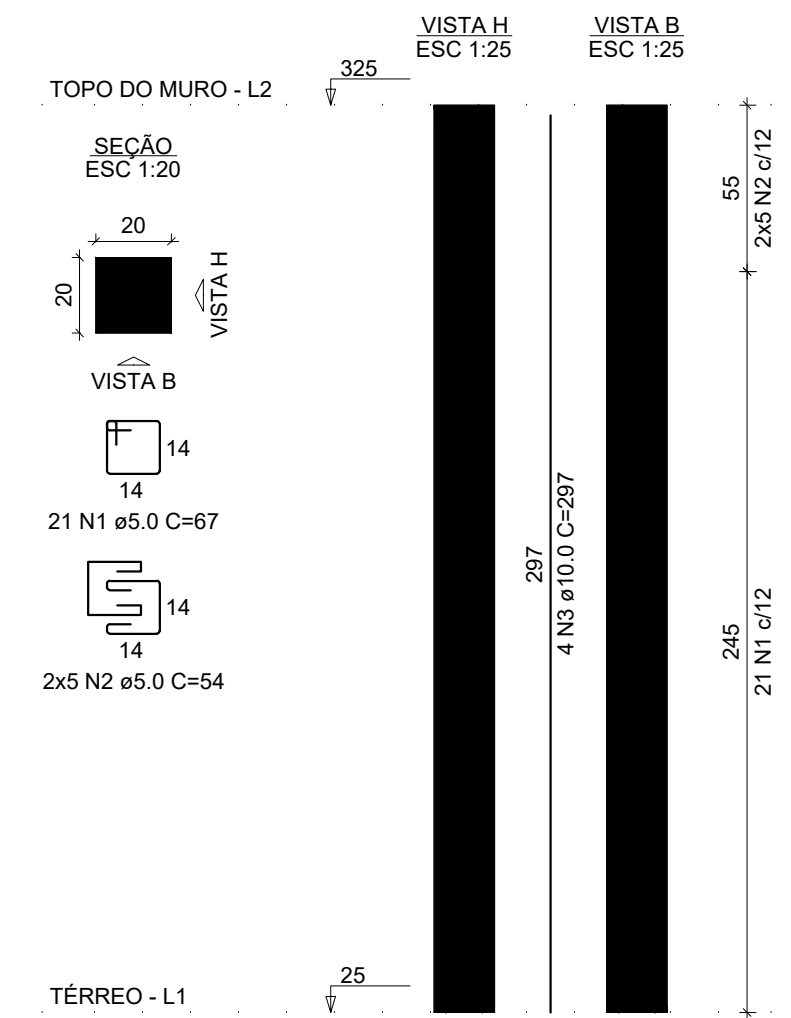
ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	876	55	48180
CA60	2	5.0	112	45	5040
CA50	3	10.0	264	VAR	VAR

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	572.9	388.5
CA60	5.0	532.2	90.2
CA50		388.5	
CA60		90.2	

Volume de concreto (C-25) = 3.70 m³
Área de forma = 67.12 m²

P1=P2=P3=P4=P5=P6=P7=
=P8=P9=P10=P11=P12=P13=
=P14=P15=P16=P17=P18=
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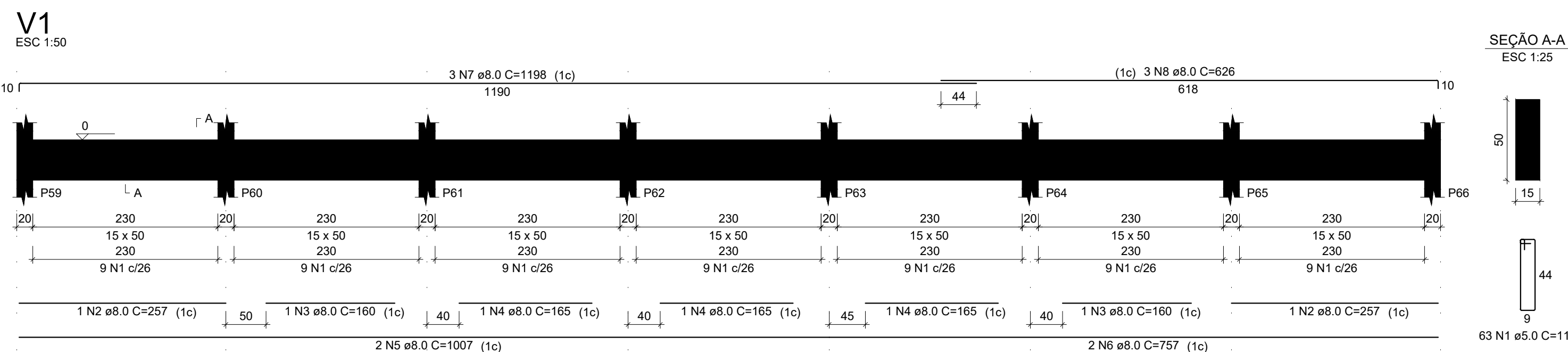
RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1386	67	92862
CA60	2	5.0	980	54	52960
CA50	3	10.0	284	297	78468

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	784.1	531.6
CA60	5.0	1386	217.9
CA50		531.6	
CA60		217.9	

Volume de concreto (C-25) = 7.92 m³
Área de forma = 158.40 m²



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	63	117	7371
CA60	2	8.0	2	207	414
CA60	3	8.0	2	160	320
CA60	4	8.0	3	105	495
CA60	5	8.0	2	1007	2014
CA60	6	8.0	2	797	1594
CA60	7	8.0	3	1198	3594
CA60	8	8.0	3	626	1878

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	193.3	44.8
CA60	5.0	73.7	12.5
CA50		44.8	
CA60		12.5	

Volume de concreto (C-25) = 1.21 m³
Área de forma = 20.36 m²

AB PROJETOS E CONSULTORIA LTDA

Rua Dr. Moisés Pimentel Neto, nº 01, Qd-A, Sala 02
Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CNC nº 202527-2

PROJETO ESTRUTURAL

Obra: **CONSTRUÇÃO DO FORUM DE PIO IX**

Endereço: **Rua Izidoro de Alencar Bezerra, Quadra E, Lote 01, Plo IX - Ploar**

Controlado pelo projeto: **Armção e Ferragens do Muro de Arrimo/Vigas e Pilares do Muro**

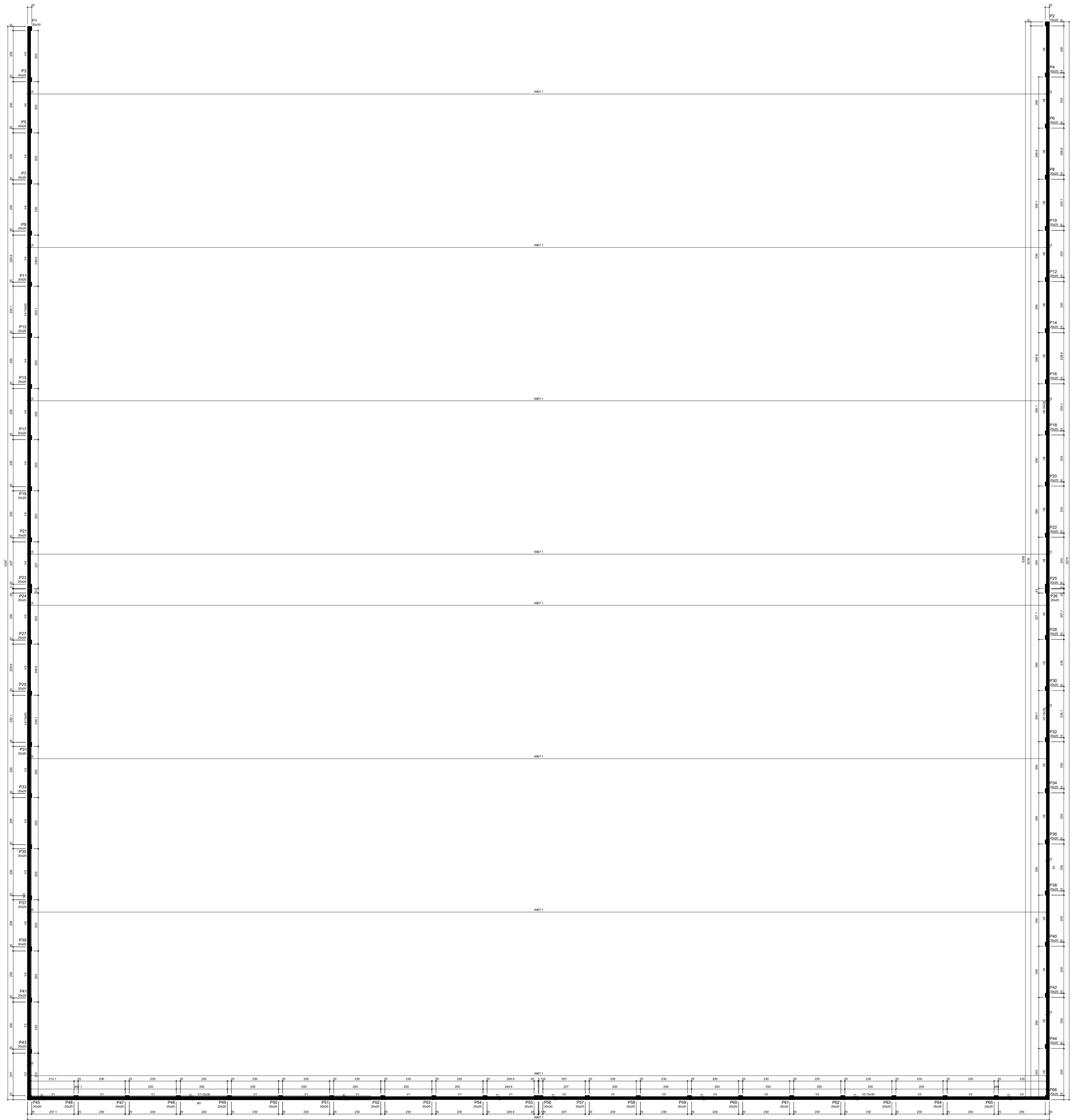
Responsável Técnico: **Verônica Scheren Castelo Branco - Crea/PI 19.373**

Op. de CAD: **Jean Carlos**

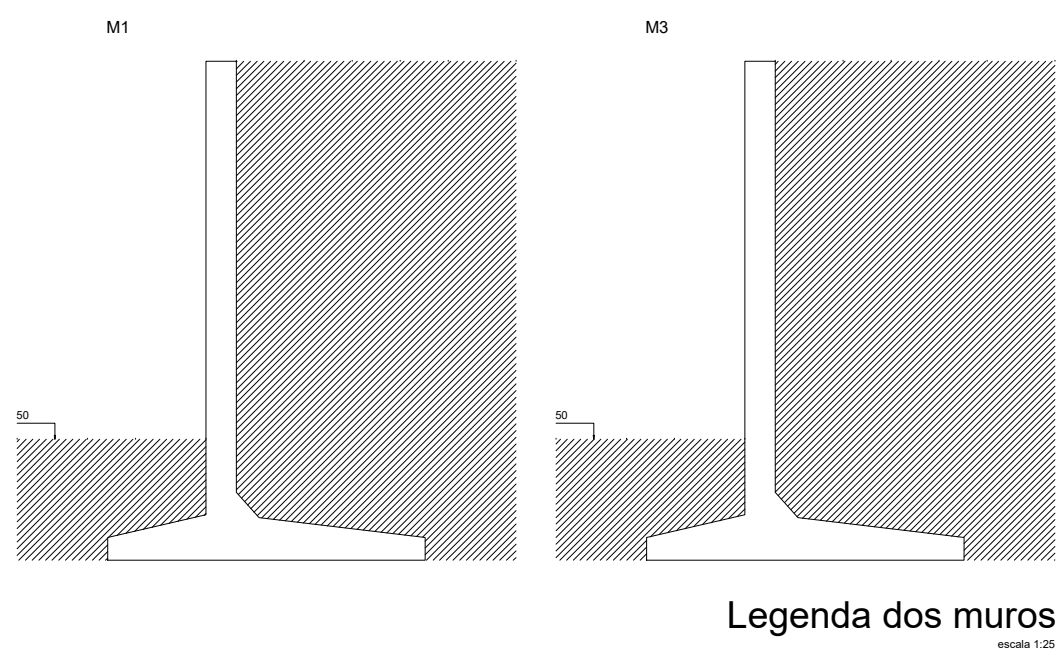
Data: **Julho/2022**

Escala: **1:50**

Revisão: **25/27**



Forma do pavimento Topo do muro (Nível 300)



Legenda dos muros

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	300
V2	15x30	0	300
V3	15x30	0	300
V4	15x30	0	300
V5	15x30	0	300
V6	15x30	0	300

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	20x20	25	325
P2	20x20	25	325
P3	20x20	25	325
P4	20x20	25	325
P5	20x20	25	325
P6	20x20	25	325
P7	20x20	25	325
P8	20x20	25	325
P9	20x20	25	325
P10	20x20	25	325
P11	20x20	25	325
P12	20x20	25	325
P13	20x20	25	325
P14	20x20	25	325
P15	20x20	25	325
P16	20x20	25	325
P17	20x20	25	325
P18	20x20	25	325
P19	20x20	25	325
P20	20x20	25	325
P21	20x20	25	325
P22	20x20	25	325
P23	20x20	25	325
P24	20x20	25	325
P25	20x20	25	325
P26	20x20	25	325
P27	20x20	25	325
P28	20x20	25	325
P29	20x20	25	325
P30	20x20	25	325
P31	20x20	25	325
P32	20x20	25	325
P33	20x20	25	325
P34	20x20	25	325
P35	20x20	25	325
P36	20x20	25	325
P37	20x20	25	325
P38	20x20	25	325
P39	20x20	25	325
P40	20x20	25	325
P41	20x20	25	325
P42	20x20	25	325
P43	20x20	25	325
P44	20x20	25	325
P45	20x20	25	325
P46	20x20	25	325
P47	20x20	25	325
P48	20x20	25	325
P49	20x20	25	325
P50	20x20	25	325
P51	20x20	25	325
P52	20x20	25	325
P53	20x20	25	325
P54	20x20	25	325
P55	20x20	25	325
P56	20x20	25	325
P57	20x20	25	325
P58	20x20	25	325
P59	20x20	25	325
P60	20x20	25	325
P61	20x20	25	325
P62	20x20	25	325
P63	20x20	25	325
P64	20x20	25	325
P65	20x20	25	325
P66	20x20	25	325

Legenda dos pilares	
	Pilar que morre

Legenda das vigas e paredes	
	Viga



AB PROJETOS E CONSULTORIA LTDA
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Bairro Campestre, CEP 64.053-510, Teresina - PI
abprojetoseconsultoria@gmail.com
CMC nº 202527-Z

PROJETO ESTRUTURAL

Obra

CONSTRUÇÃO DO FORUM DE PIO IX

Endereço

Rua Isidoro de Alencar Bezerra, Quadra E, Lote 01, Pio IX - Piauí

Conteúdo da proposta

Planta da Forma de Topo do Muro

Responsável Técnico

Verônica Scheren Castelo Branco - Crea/PI 19.373

Op. de CAD

Jean Carlos

Data

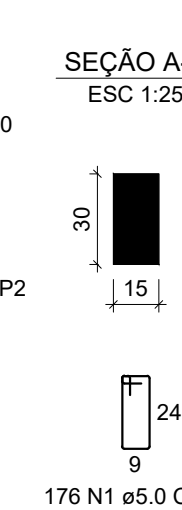
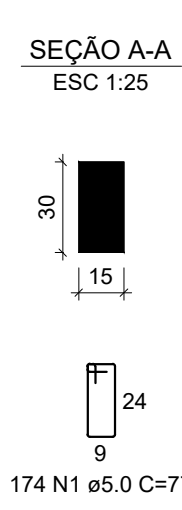
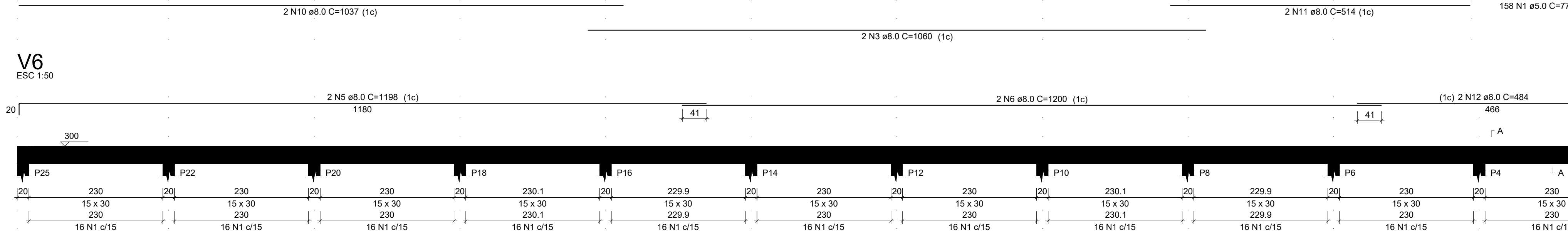
Julho/2022

Escala

1/50

Revisão

26/27



AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	982	77	75614
CA50	2	8.0	8	1014	8112
	3	8.0	12	1060	12720
	4	8.0	6	537	3222
	5	8.0	12	1198	14376
	6	8.0	12	1200	14400
	7	8.0	8	211	1688
	8	8.0	4	787	3148
	9	8.0	2	461	922
	10	8.0	4	1037	4148
	11	8.0	2	514	1028
	12	8.0	2	484	968

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	647.3	281
CA60	5.0	756.1	128.2
PESO TOTAL (kg)			
CA50	281		
CA60	128.2		

Área de forma = 116.29 m²