



**PROCESSO LICITATÓRIO N.º 079/2022
TOMADA DE PREÇOS N.º 007/2022**

ANEXOS

ANEXO II

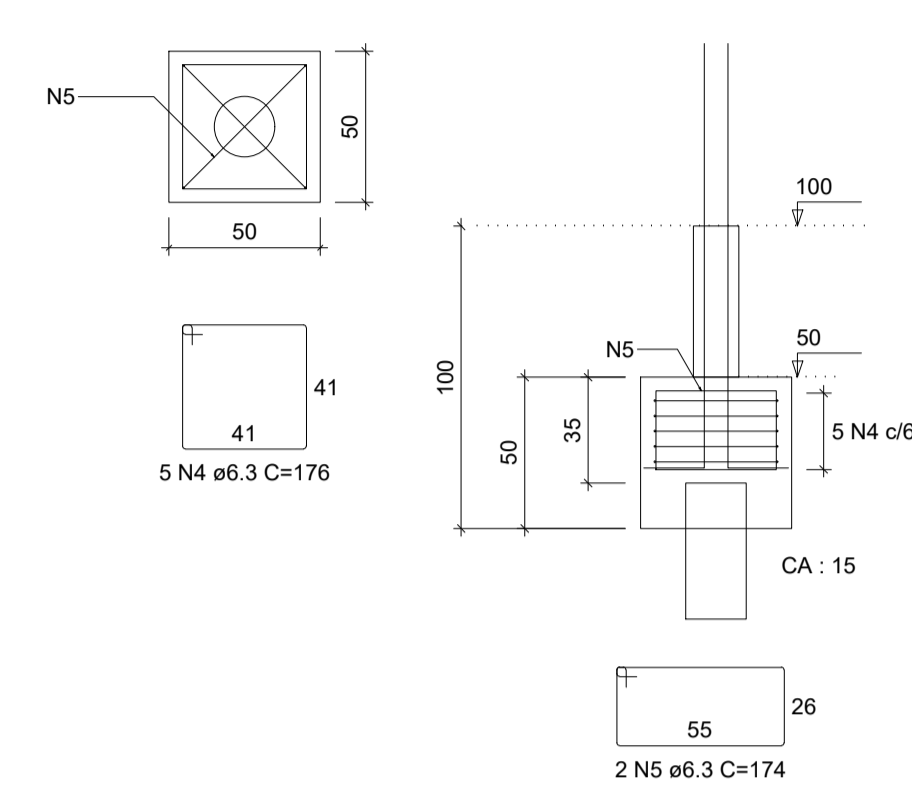
ANEXO II. Projetos – Parte II

- 20.2.1. Projeto Estrutural 01.
- 20.2.2. Projeto Estrutural 02.
- 20.2.3. Projeto Estrutural 03.
- 20.2.4. Projeto Estrutural 04.
- 20.2.5. Projeto Estrutural 05.
- 20.2.6. Projeto Estrutural 06.
- 20.2.7. Projeto Estrutural 07.
- 20.2.8. Projeto Estrutural 08.
- 20.2.9. Projeto Estrutural 09.

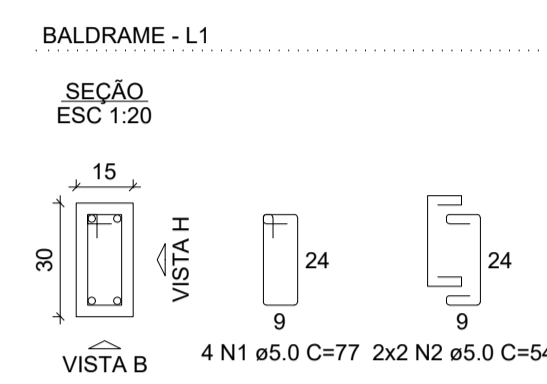
ATENÇÃO

ARQUIVO DISPONIBILIZADO EM PDF

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 =B13=B14=B15=B16=B17=B18=B19=B20=B21
 1x20
 PLANTA
 ESC 1:25



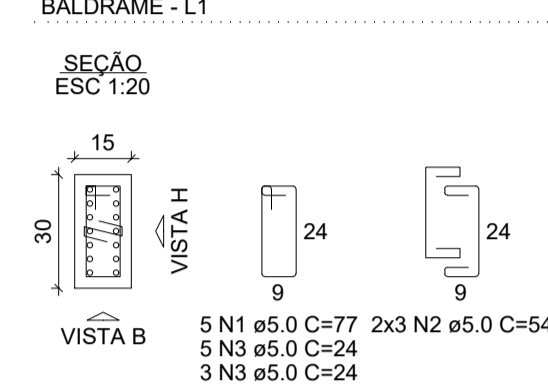
P1



VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

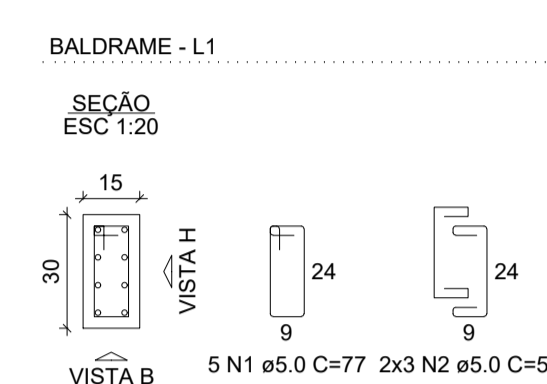
P16



VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

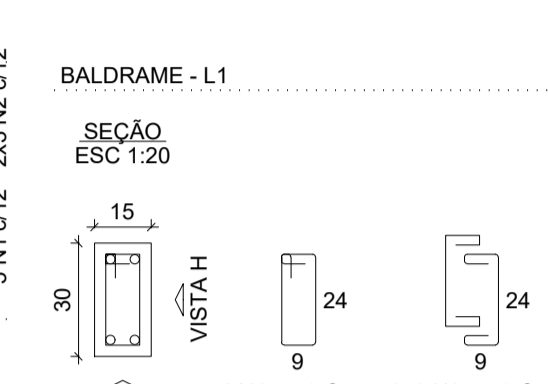
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VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

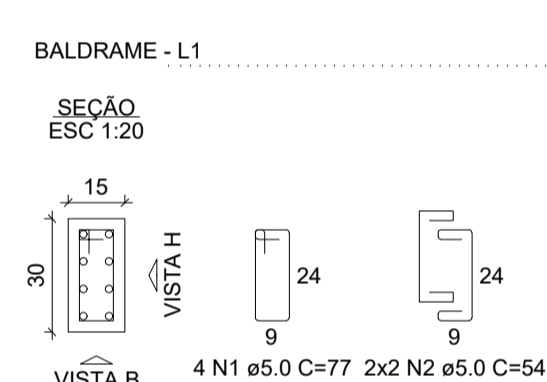
P17



VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

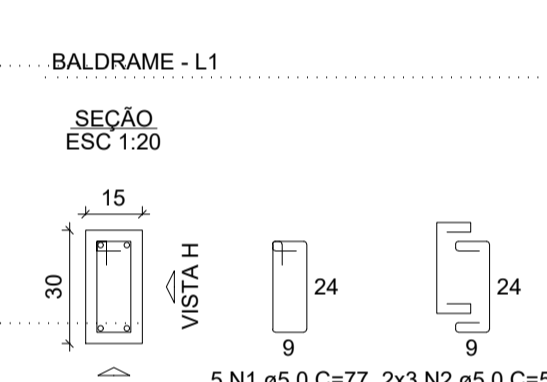
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VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

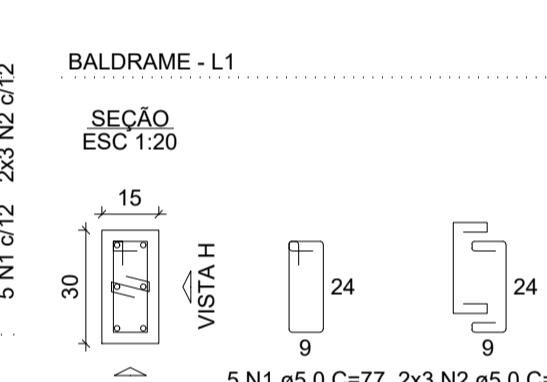
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VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

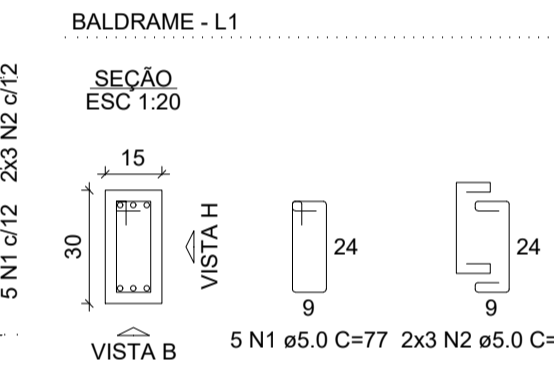
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VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

P7



VISTA H
 ESC 1:25

VISTA B
 ESC 1:25

RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	102	77	7854
	2	5.0	120	54	6480
	3	5.0	56	24	1344
	4	6.3	105	176	18480
CA50	5	6.3	42	174	7308
	6	10.0	112	137	15344
	7	12.5	12	145	1740
	8	16.0	4	157	628

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	257.9	69.4
	10.0	153.4	104.1
	12.5	17.4	18.4
	16.0	6.3	10.9
CA60	5.0	156.8	26.6
PESO TOTAL (kg)			
CA50		202.8	
CA60		26.6	

Volume de concreto (C-30) = 3.33 m³
 Área de forma = 37.07 m²



Corte X-X
 escala 1:100

Corte Y-Y
 escala 1:100

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

IPPUC
 INSTITUTO
 DE PESQUISA E PLANEJAMENTO
 URBANO DE CAÇADOR

Referência

BLOCOS
 CORTE ESQUEMÁTICO

FOLHA

02/09

Revisões

-

-

-

Data

30 novembro 2020

Responsável Técnico

Eng. civil Taise Teodoro CREA 071.664-1

Área

122,49m²

Escala

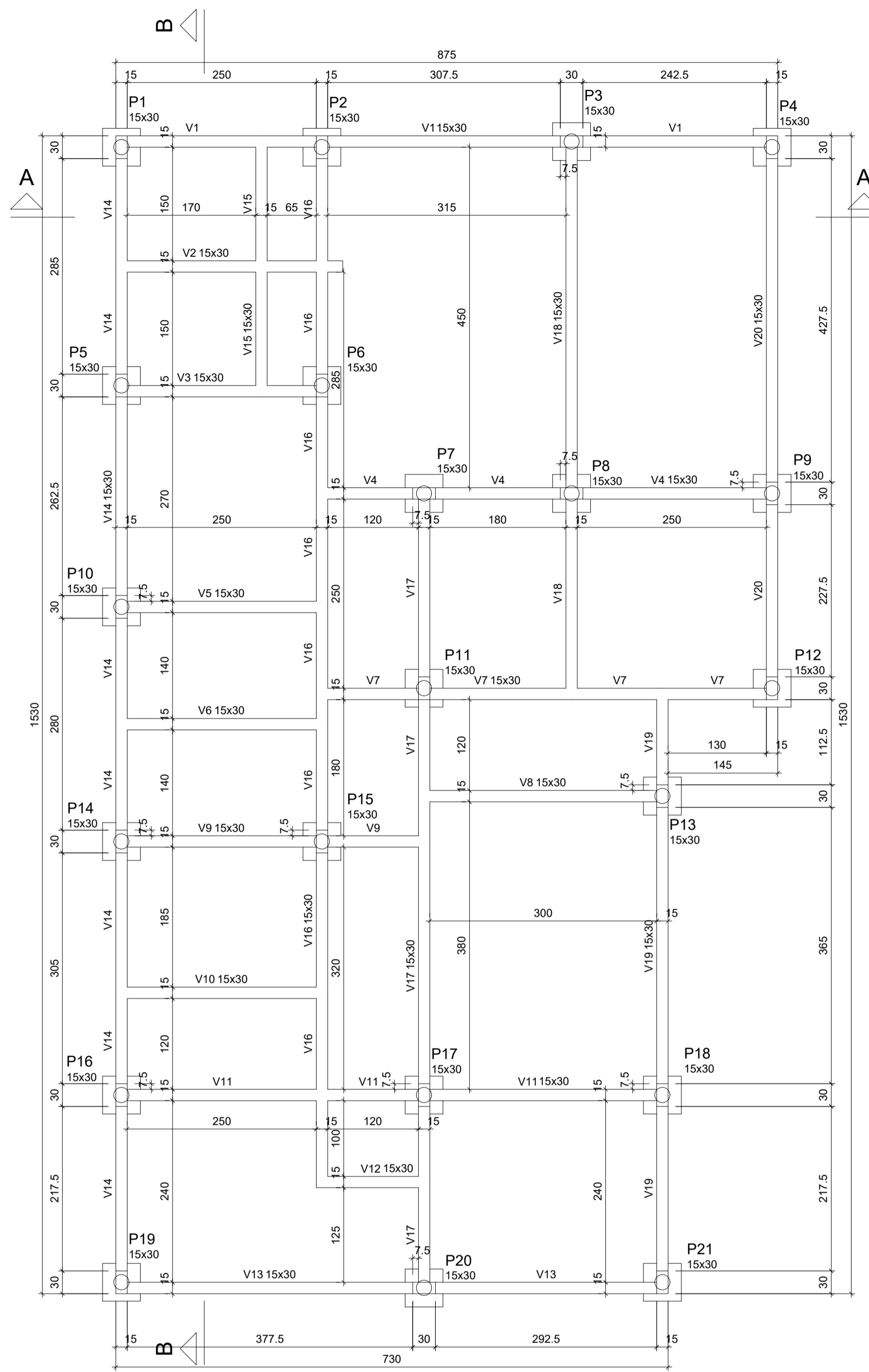
indicada

Desenho

Taise

Arquivo

D:\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL COMPLETO.dwg

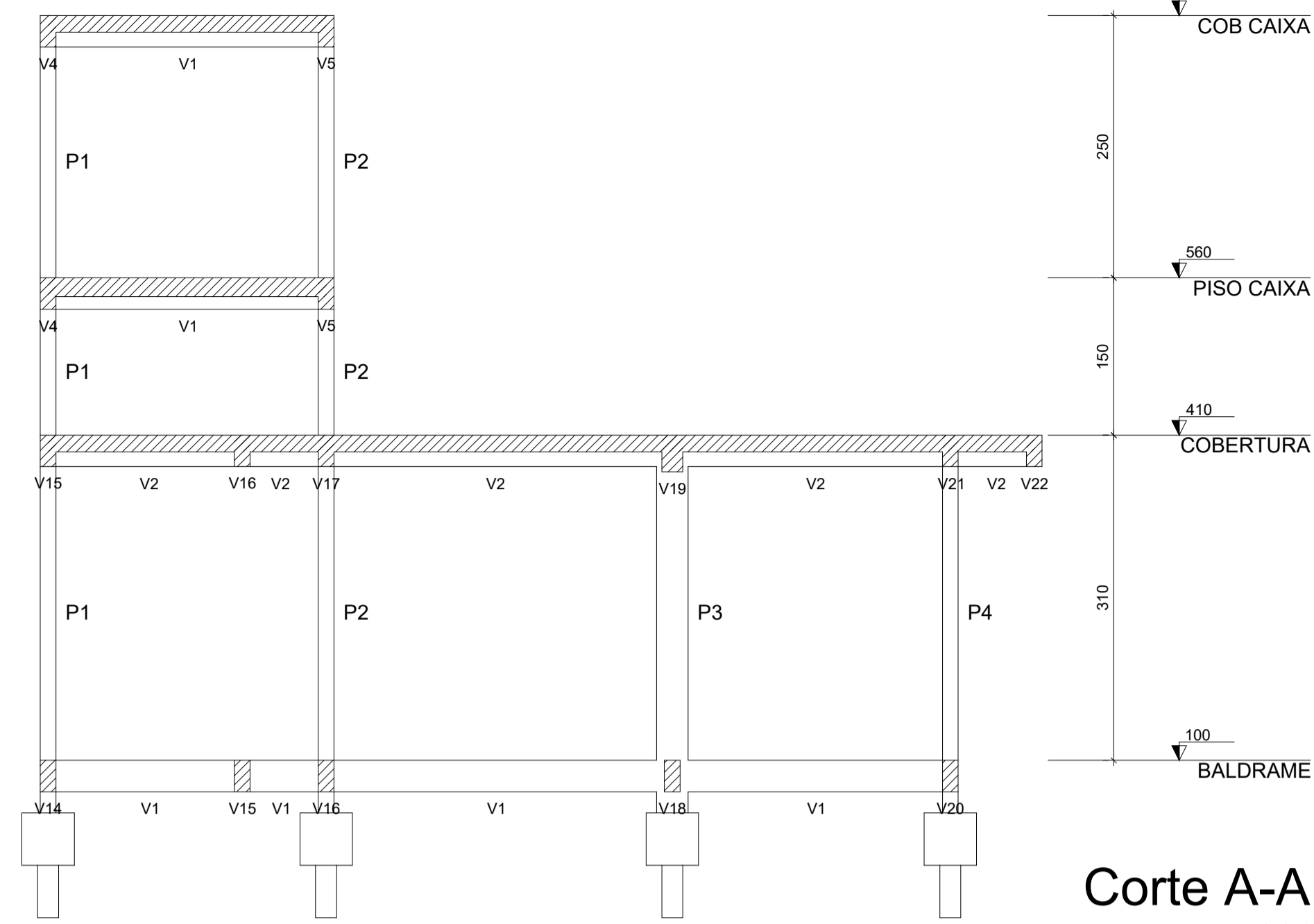
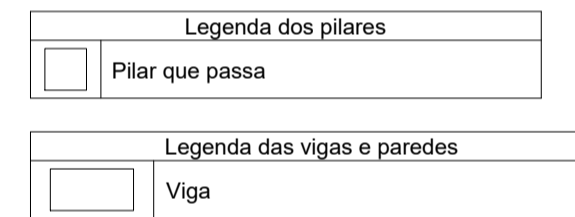


Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	100
V2	15x30	0	100
V3	15x30	0	100
V4	15x30	0	100
V5	15x30	0	100
V6	15x30	0	100
V7	15x30	0	100
V8	15x30	0	100
V9	15x30	0	100
V10	15x30	0	100
V11	15x30	0	100
V12	15x30	0	100
V13	15x30	0	100
V14	15x30	0	100
V15	15x30	0	100
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V18	15x30	0	100
V19	15x30	0	100
V20	15x30	0	100

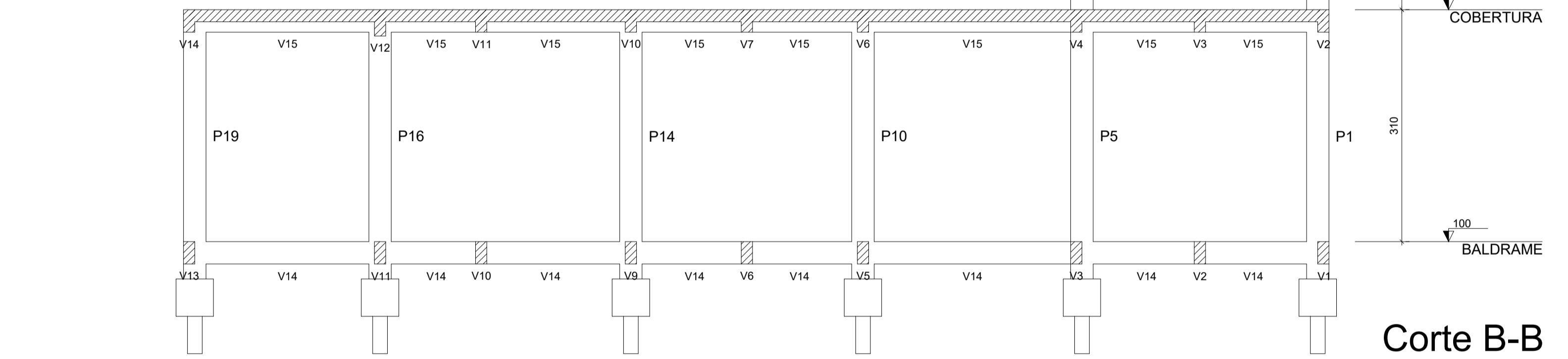
Características dos materiais		
fk	Ecs	
(kgf/cm²)	(kgf/cm²)	
250	241500	

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	100
P2	15x30	0	100
P3	15x30	0	100
P4	15x30	0	100
P5	15x30	0	100
P6	15x30	0	100
P7	15x30	0	100
P8	15x30	0	100
P9	15x30	0	100
P10	15x30	0	100
P11	15x30	0	100
P12	15x30	0	100
P13	15x30	0	100
P14	15x30	0	100
P15	15x30	0	100
P16	15x30	0	100
P17	15x30	0	100
P18	15x30	0	100
P19	15x30	0	100
P20	15x30	0	100
P21	15x30	0	100



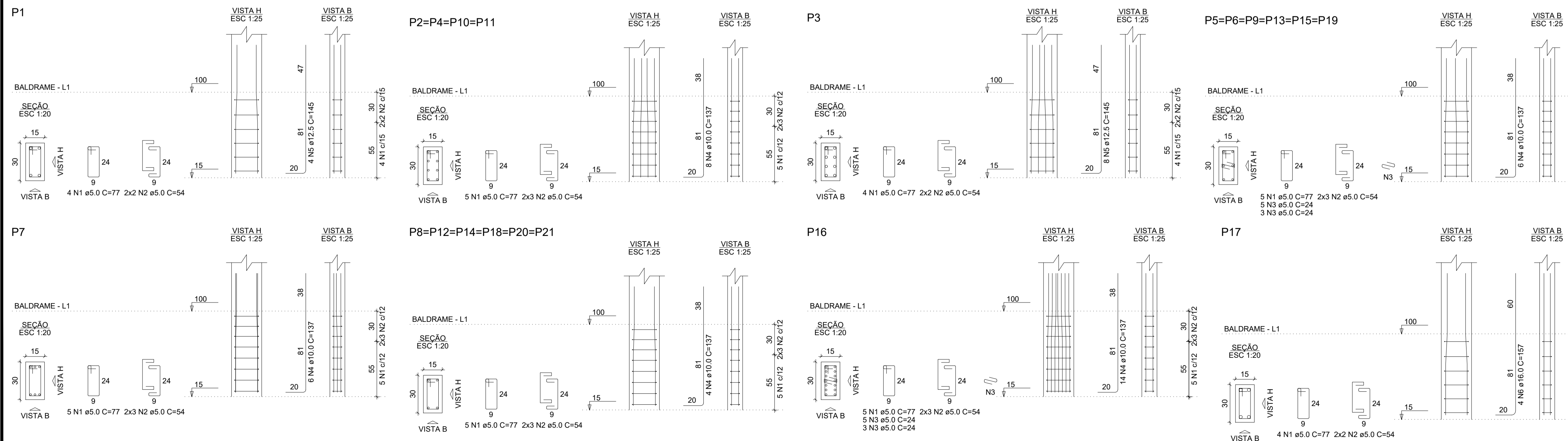
Corte A-A
escala 1:50



Corte B-B
escala 1:50

Forma do pavimento BALDRAME (Nível 100)

escala 1:50



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	102	77	7854
	2	5.0	120	54	6480
	3	5.0	56	24	1344
CA50	4	10.0	112	137	15344
	5	12.5	12	145	1740
	6	16.0	4	157	628

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	153.4	104.1
	12.5	17.4	18.4
	16.0	6.3	10.9
CA60	5.0	156.8	26.6
PESO TOTAL (kg)			
CA50			133.4
CA60			26.6

Volume de concreto (C-30) = 0.80 m³
Área de forma = 16.07 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

IPPUC
INSTITUTO DE PESQUISA E PLANEJAMENTO URBANO DE CAÇADOR

Referência

FORMA PVTO BALDRAME
CORTE AA - CORTE BB
PILAR PVTO BALDRAME

FOLHA

03/09

Revisões

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·

Data

30 novembro 2020

Responsável Técnico

Eng. civil Taise Teodozio CREA 071.664-1

Área

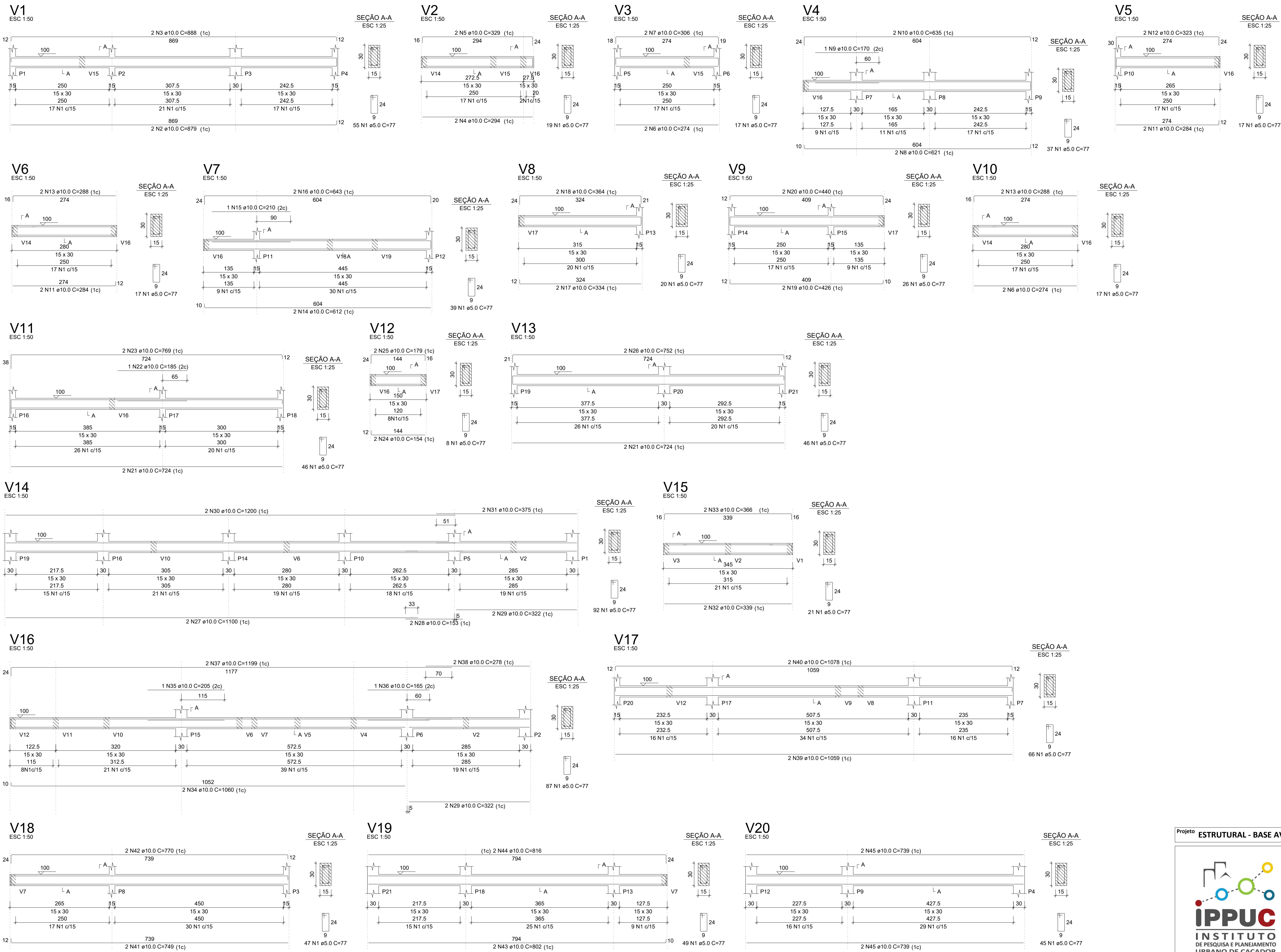
122,49m²

Escala

indicada

Desenho

Taise



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	771	77	59367
CA50	2	10.0	2	872	1758
	3	10.0	2	888	1776
	4	10.0	2	294	588
	5	10.0	2	329	658
	6	10.0	4	274	1096
	7	10.0	2	306	612
	8	10.0	2	621	1242
	9	10.0	1	170	170
	10	10.0	2	635	1270
	11	10.0	4	284	1136
	12	10.0	2	323	646
	13	10.0	4	288	1152
	14	10.0	2	612	1224
	15	10.0	1	210	210
	16	10.0	2	643	1286
	17	10.0	2	334	668
	18	10.0	2	364	728
	19	10.0	2	426	852
	20	10.0	2	440	880
	21	10.0	4	724	2896
	22	10.0	1	185	185
	23	10.0	2	769	1538
	24	10.0	2	154	308
	25	10.0	2	179	358
	26	10.0	2	752	1504
	27	10.0	2	1100	2200
	28	10.0	2	153	306
	29	10.0	2	322	644
	30	10.0	2	1200	2400
	31	10.0	2	375	750
	32	10.0	2	339	678
	33	10.0	2	366	732
	34	10.0	2	1060	2120
	35	10.0	1	205	205
	36	10.0	1	165	165
	37	10.0	2	1199	2398
	38	10.0	2	278	556
	39	10.0	2	1059	2118
	40	10.0	2	1078	2156
	41	10.0	2	749	1498
	42	10.0	2	770	1540
	43	10.0	2	802	1604
	44	10.0	2	816	1632
	45	10.0	4	739	2956

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	520.4	353
CA60	5.0	593.7	100.7
PESO TOTAL (kg)			353
CA50			353
CA60			100.7

Volume de concreto (C-30) = 5.62 m³
Área de forma = 93.68 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

IPPUC
INSTITUTO
DE PESQUISA E PLANEJAMENTO
URBANO DE CAÇADOR

Referência
VIGAS BALDRAME

FOLHA
04/09

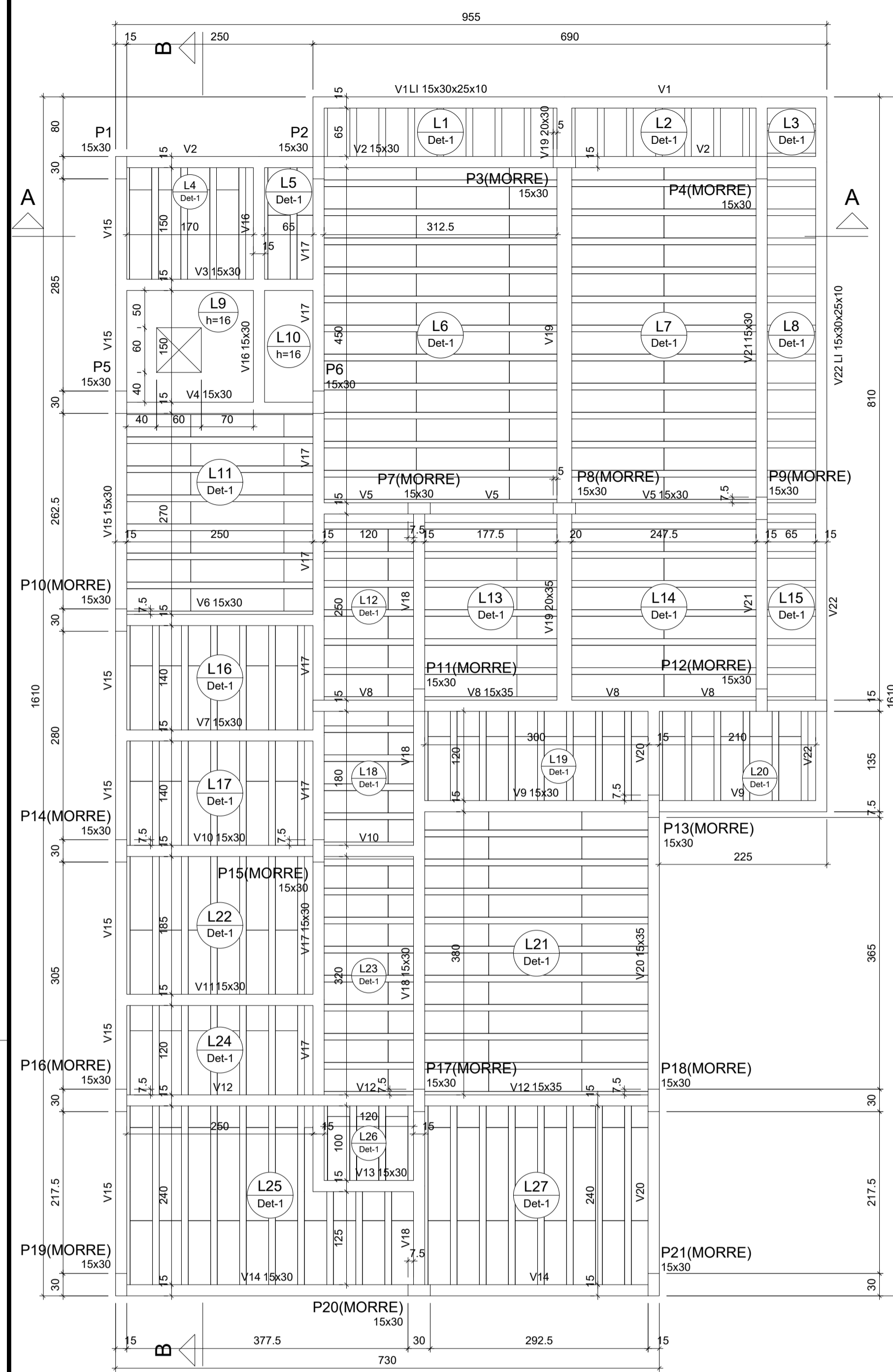
Revisões

-
-
-

Data
30 novembro 2020

Responsável Técnico
Eng. civil Taise Teodozio CREA 071.664-1

Área **122,49m²**
Escala **indicada**
Desenho **Taise**
Arquivo **D:\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL - COMPLETO.dwg**



Forma do pavimento COBERTURA (Nível 410) escala 1:50

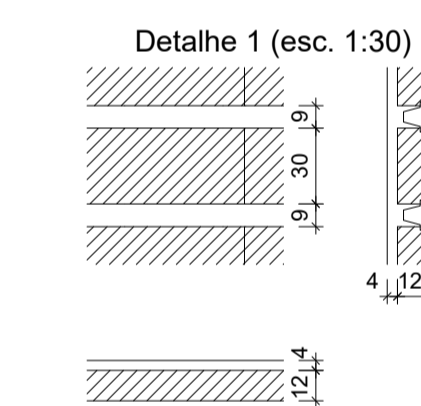
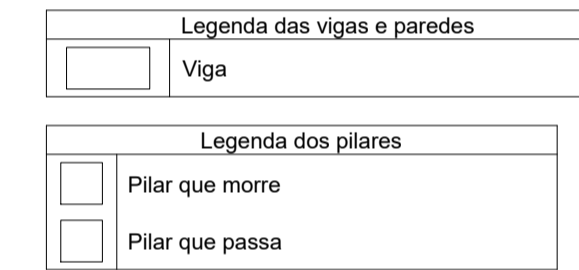
Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	LI 15x30x25x10	0	410
V2	15x30	0	410
V3	15x30	0	410
V4	15x30	0	410
V5	15x30	0	410
V6	15x30	0	410
V7	15x30	0	410
V8	15x35	0	410
V9	15x30	0	410
V10	15x30	0	410
V11	15x30	0	410
V12	15x35	0	410
V13	15x30	0	410
V14	15x30	0	410
V15	15x30	0	410
V16	15x30	0	410
V17	15x30	0	410
V18	15x30	0	410
V19	20x35	0	410
V20	15x35	0	410
V21	15x30	0	410
V22	LI 15x30x25x10	0	410

Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm) hb bx by	Quantidade
1	EPS Unidirecional	B12/30/125	12 30 125	312

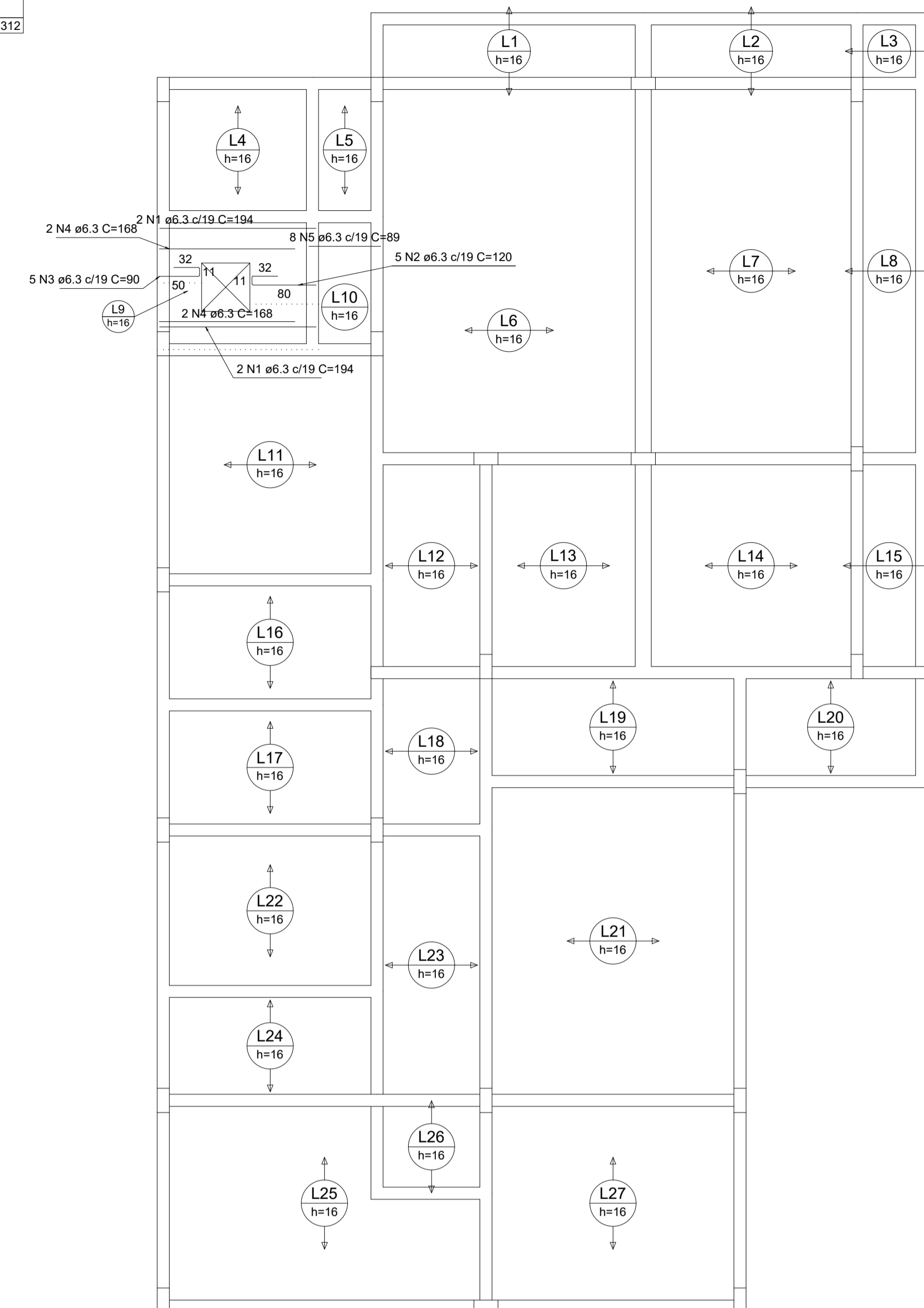
Lajes							
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Sobrecarga (kgf/m²)		
					Peso próprio (kgf/m²)	Adicional	Acidental
L1	Pré-moldada	16	0	410	171	182	50
L2	Pré-moldada	16	0	410	171	182	50
L3	Pré-moldada	16	0	410	171	182	50
L4	Pré-moldada	16	0	410	171	182	50
L5	Pré-moldada	16	0	410	171	182	50
L6	Pré-moldada	16	0	410	171	182	50
L7	Pré-moldada	16	0	410	171	182	50
L8	Pré-moldada	16	0	410	171	182	50
L9	Maciça	16	0	410	400	182	50
L10	Maciça	16	0	410	400	182	50
L11	Pré-moldada	16	0	410	171	182	50
L12	Pré-moldada	16	0	410	171	182	50
L13	Pré-moldada	16	0	410	171	182	50
L14	Pré-moldada	16	0	410	171	182	50
L15	Pré-moldada	16	0	410	171	182	50
L16	Pré-moldada	16	0	410	171	182	50
L17	Pré-moldada	16	0	410	171	182	50
L18	Pré-moldada	16	0	410	171	182	50
L19	Pré-moldada	16	0	410	171	182	50
L20	Pré-moldada	16	0	410	171	182	50
L21	Pré-moldada	16	0	410	171	182	50
L22	Pré-moldada	16	0	410	171	182	50
L23	Pré-moldada	16	0	410	171	182	50
L24	Pré-moldada	16	0	410	171	182	50
L25	Pré-moldada	16	0	410	171	182	50
L26	Pré-moldada	16	0	410	171	182	50
L27	Pré-moldada	16	0	410	171	182	50

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
25.0	241500

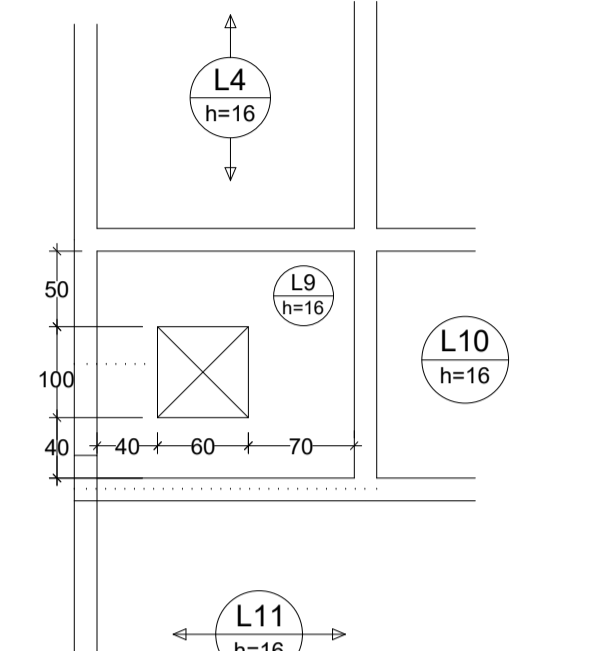
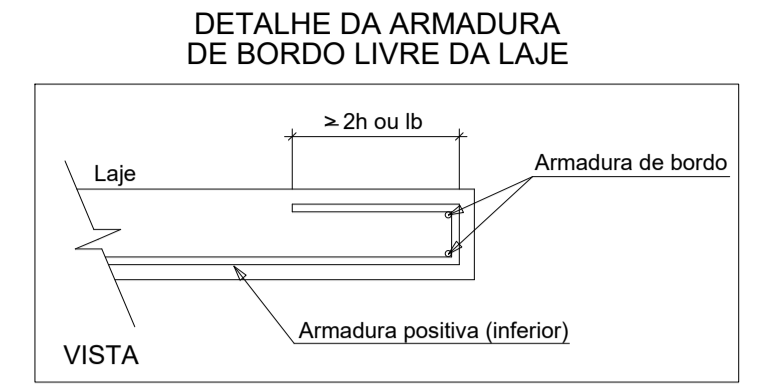
Dimensão máxima do agregado = 19 mm



Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	410
P2	15x30	0	410
P3	15x30	0	410
P4	15x30	0	410
P5	15x30	0	410
P6	15x30	0	410
P7	15x30	0	410
P8	15x30	0	410
P9	15x30	0	410
P10	15x30	0	410
P11	15x30	0	410
P12	15x30	0	410
P13	15x30	0	410
P14	15x30	0	410
P15	15x30	0	410
P16	15x30	0	410
P17	15x30	0	410
P18	15x30	0	410
P19	15x30	0	410
P20	15x30	0	410
P21	15x30	0	410



Armação positiva das lajes do pavimento COBERTURA (Eixo X) escala 1:50



FORMA - DETALHE FURO - LAJE 9

RELAÇÃO DO AÇO

Positivos X

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	4	194	776
	2	6.3	5	120	600
	3	6.3	5	90	450
	4	6.3	4	168	672
	5	6.3	8	89	712

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	32.1	8.6

PESO TOTAL (kg)
CA50 8.6

Volume de concreto (C-25) = 5.00 m³
Área de forma = 3.19 m²

RELAÇÃO DO AÇO

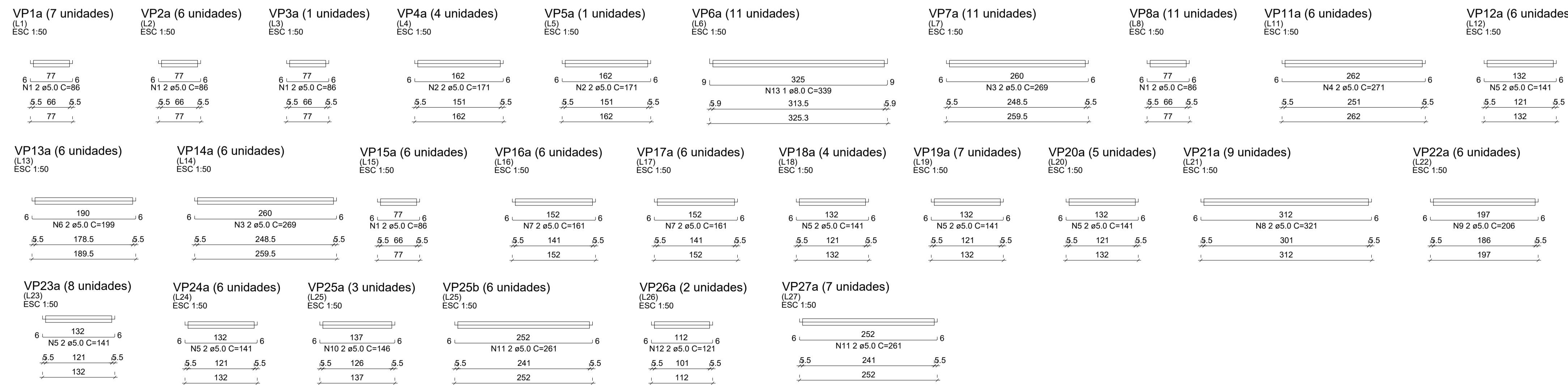
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	62	86	5332
	2	5.0	10	171	1710
	3	5.0	34	269	9146
	4	5.0	12	271	3252
	5	5.0	72	141	10152
	6	5.0	12	169	2388
	7	5.0	24	161	3864
	8	5.0	18	321	5778
	9	5.0	12	206	2472
	10	5.0	6	146	876
	11	5.0	26	261	6786
	12	5.0	4	121	484
CA50	13	8.0	11	339	3729

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.0	37.3	16.2
CA60	5.0	522.4	88.6

PESO TOTAL (kg)
CA50 16.2
CA60 88.6

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



Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

IPPUC
INSTITUTO DE PESQUISA E PLANEJAMENTO URBANO DE CAÇADOR

Responsável Técnico: Eng. civil Taise Teodoro CREA 071.664-1

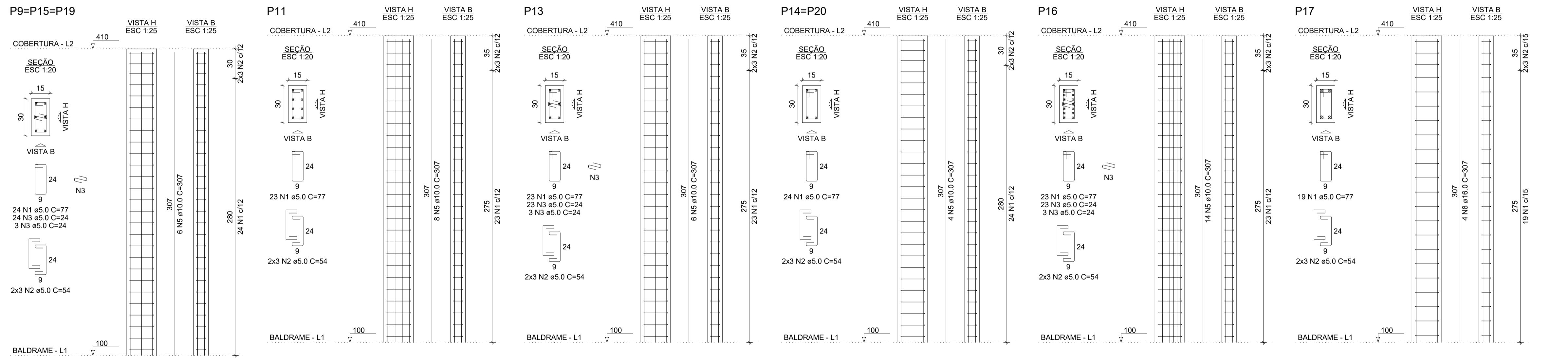
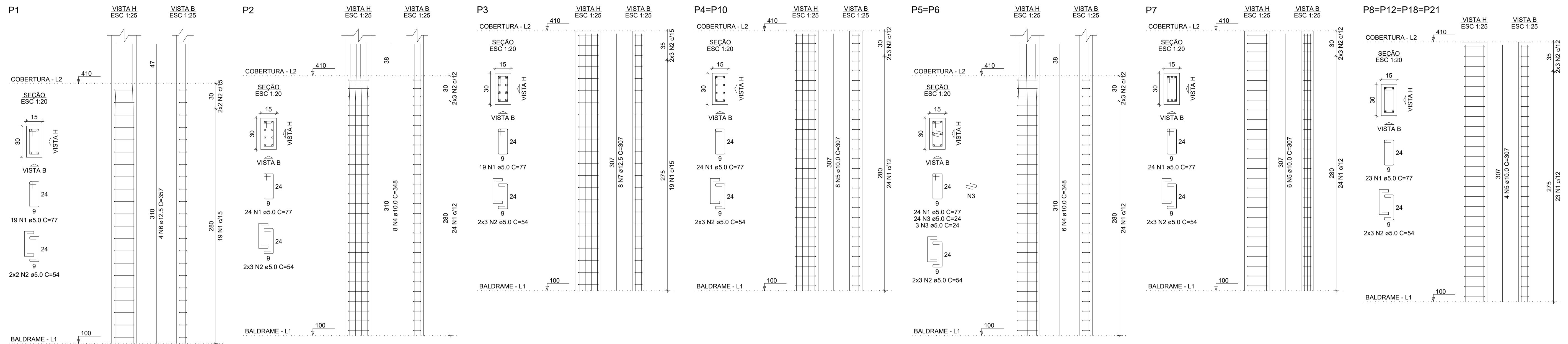
Referência: **FORMA PVTO COBERTURA**
ARMADURA LAJE COBERTURA
ARMADURA VIGOTAS LAJE COBERTURA

FOLHA: **05/09**

Data: **30 novembro 2020**

Área: **122,49m²**
Escala: **indicada**
Desenho: **Taise**

Arquivo: **01\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL - COMPLETO.dwg**



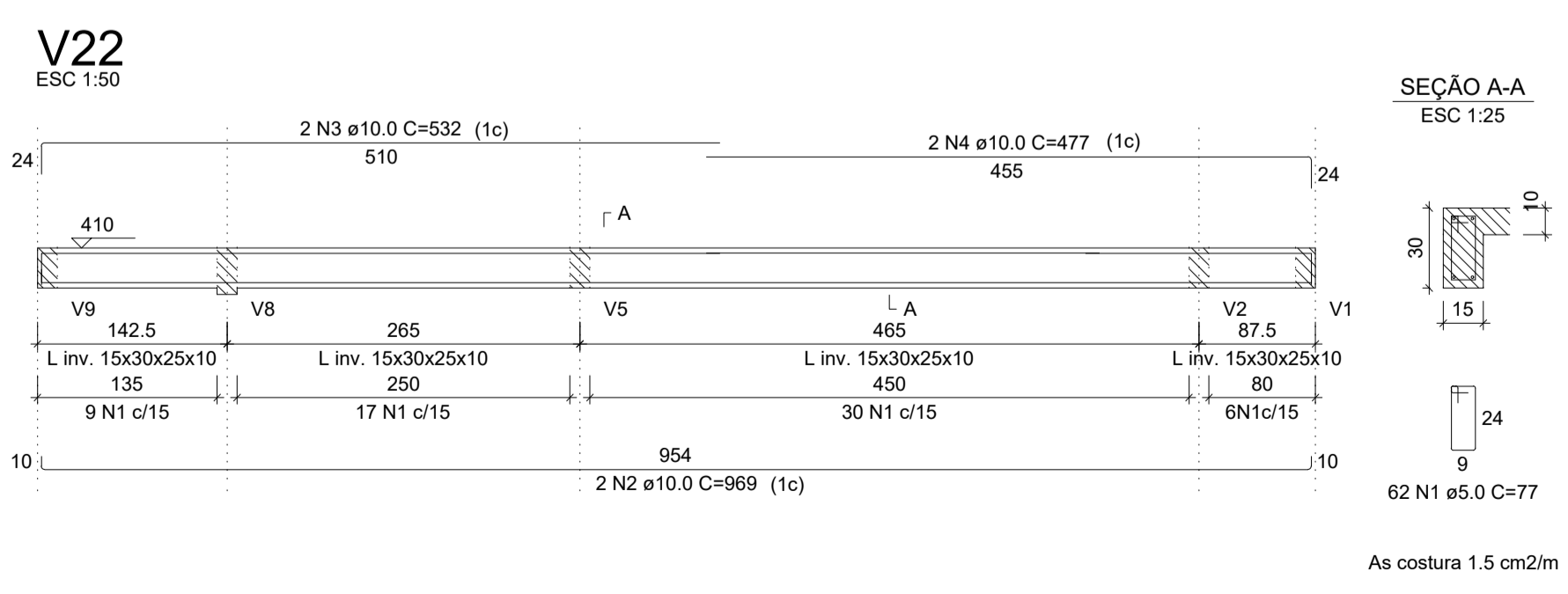
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	482	77	37114
	2	5.0	124	54	6696
	3	5.0	187	24	4488
CA50	4	10.0	20	348	6960
	5	10.0	92	307	28244
	6	12.5	4	357	1428
	7	12.5	8	307	2456
	8	16.0	4	307	1228

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	352	238.8
	12.5	38.8	41.2
	16.0	12.3	21.3
CA60	5.0	483	81.9
PESO TOTAL (kg)			
CA50		301.2	
CA60		81.9	

Volume de concreto (C-25) = 2.93 m³
Área de forma = 58.59 m²



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	62	77	4774
CA50	2	10.0	2	969	1938
	3	10.0	2	532	1064
	4	10.0	2	477	954

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	39.6	26.8
CA60	5.0	47.7	8.1
PESO TOTAL (kg)			
CA50		26.8	
CA60		8.1	

Volume de concreto (C-25) = 0.43 m³
Área de forma = 6.24 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

Referência
PILAR PAVIMENTO COBERTURA
VIGA PAVIMENTO COBERTURA 02/02

FOLHA
06/09

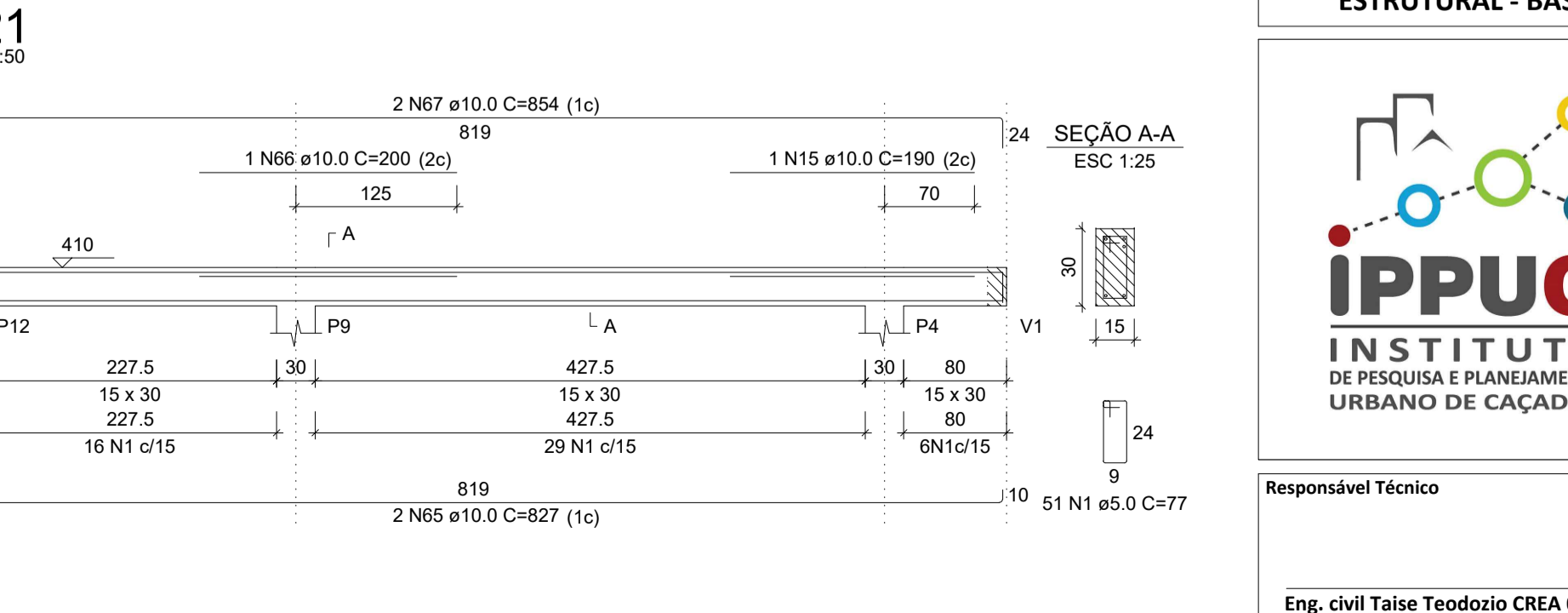
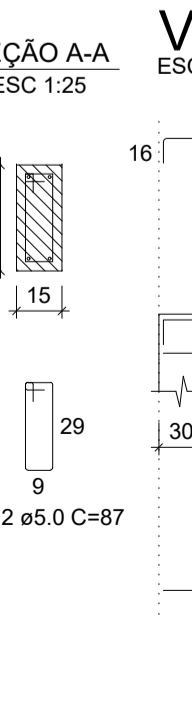
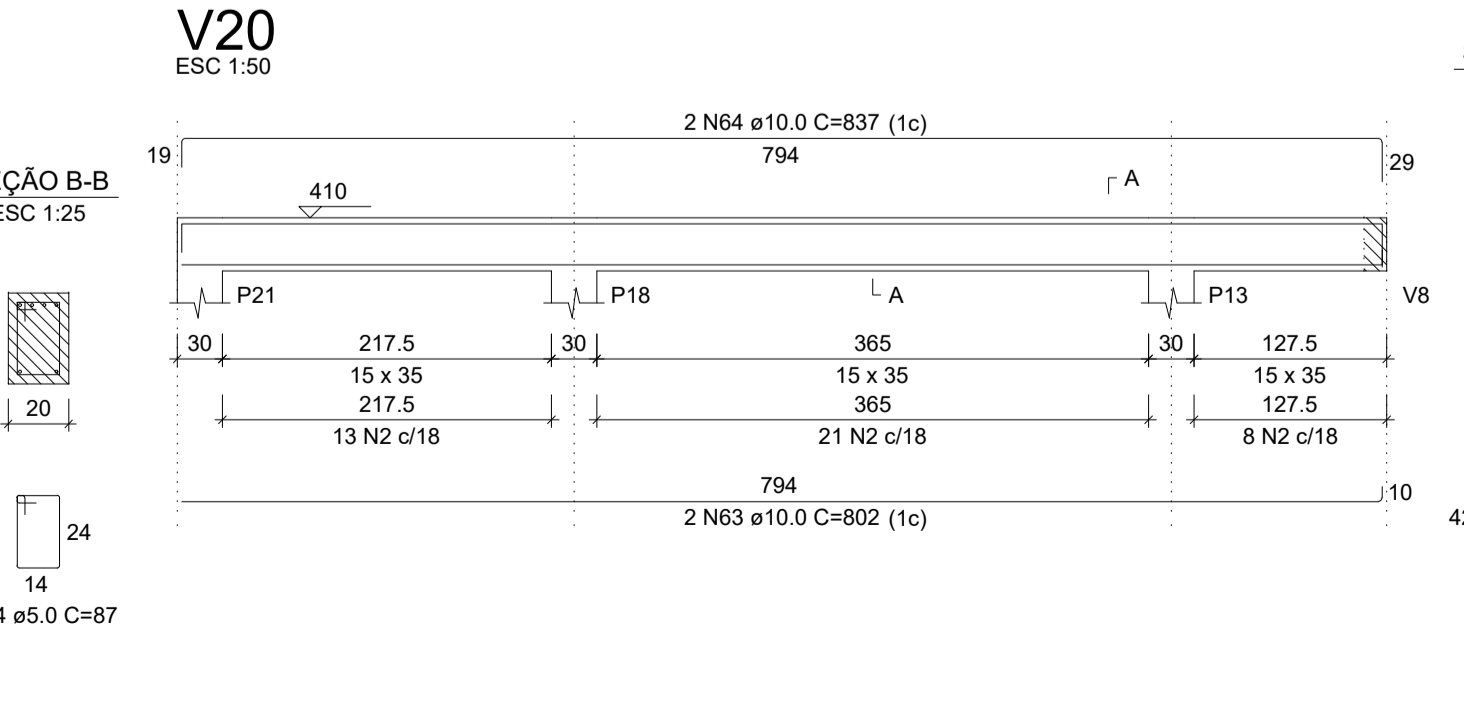
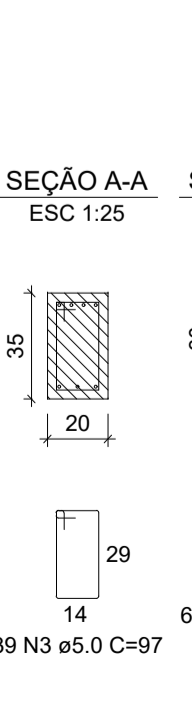
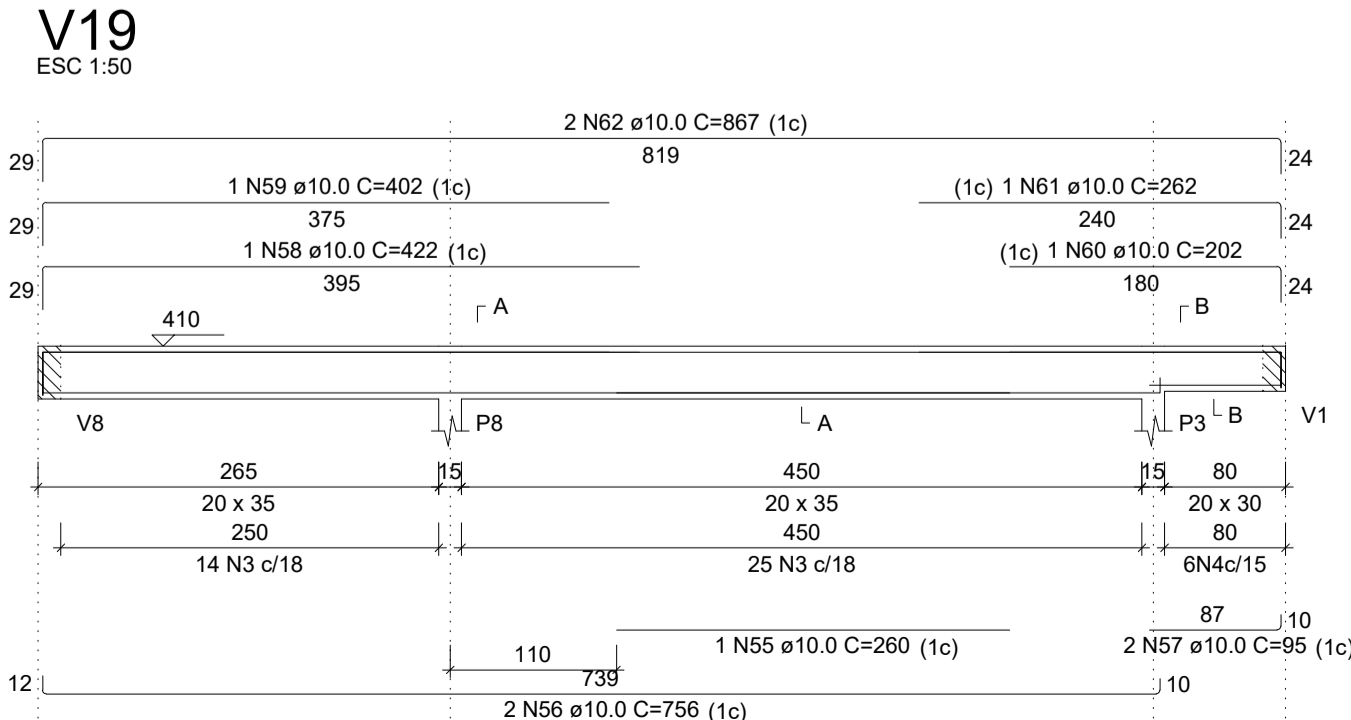
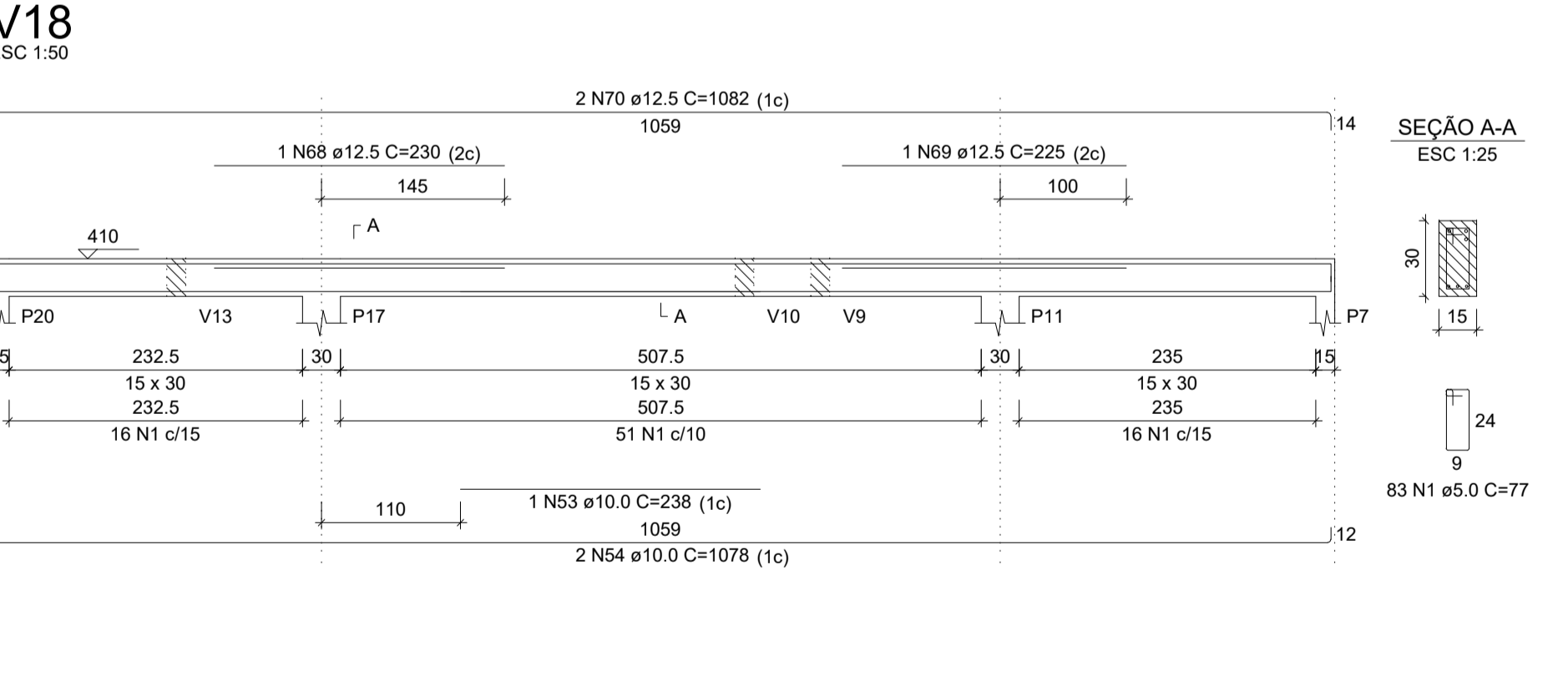
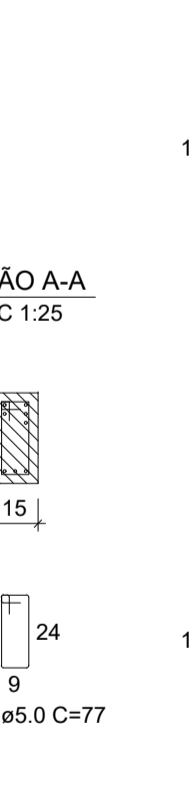
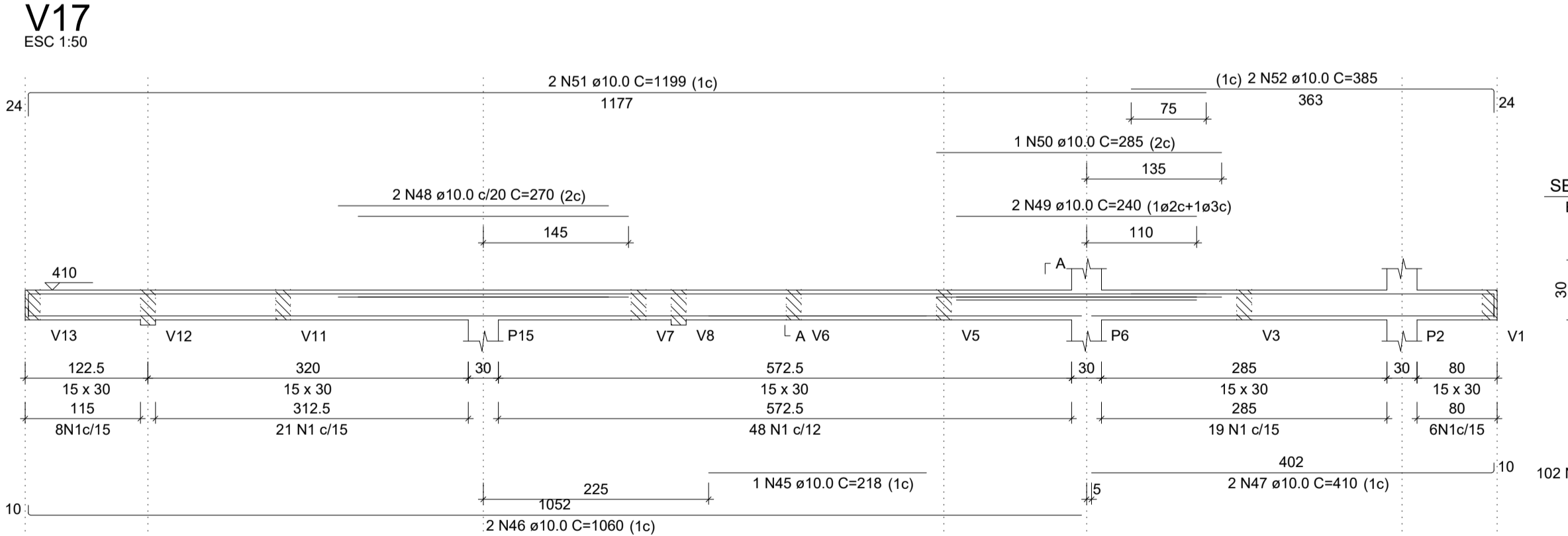
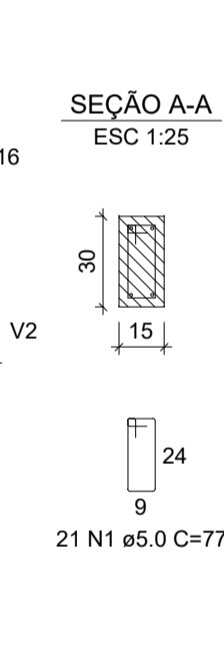
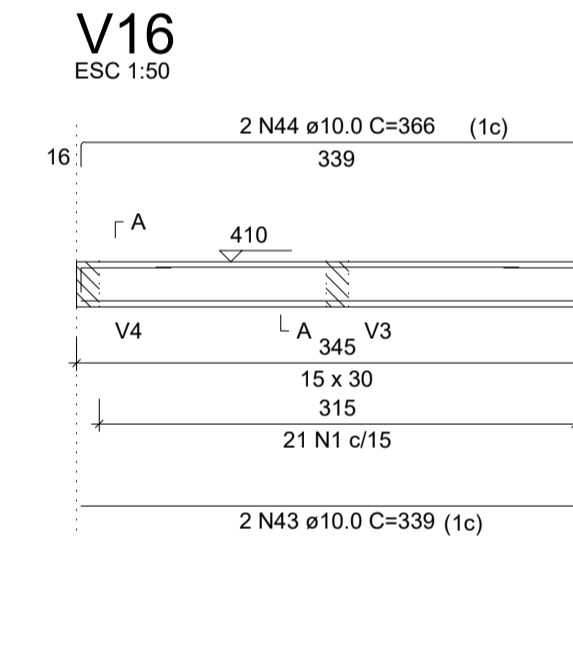
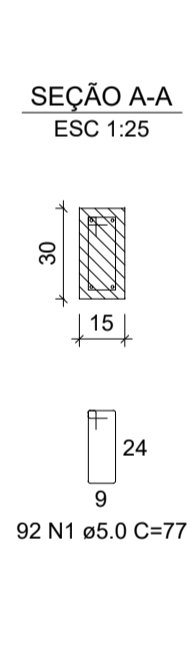
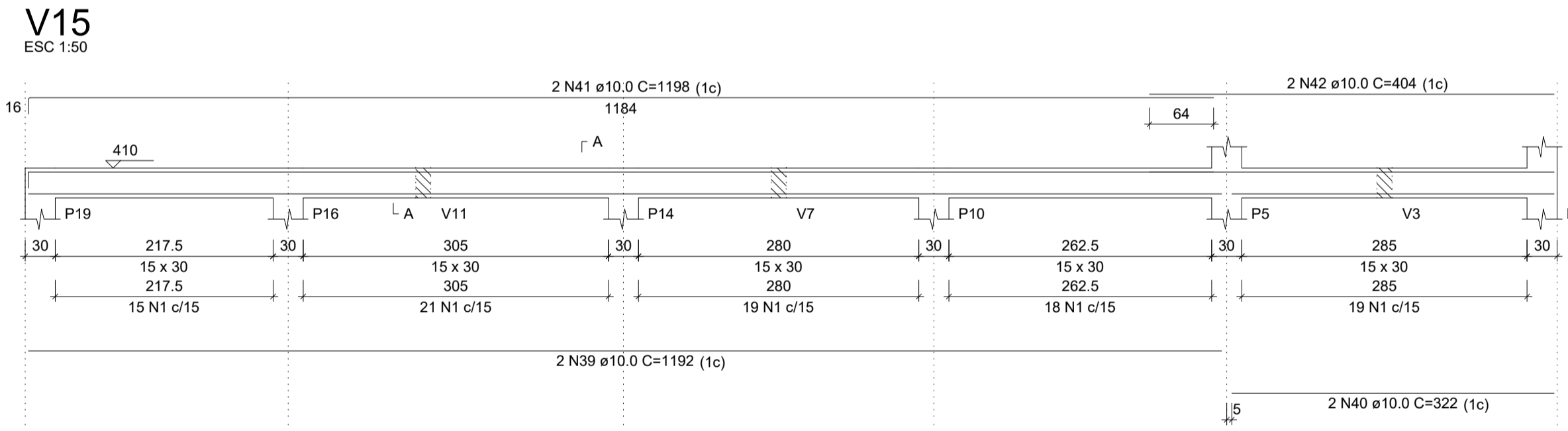
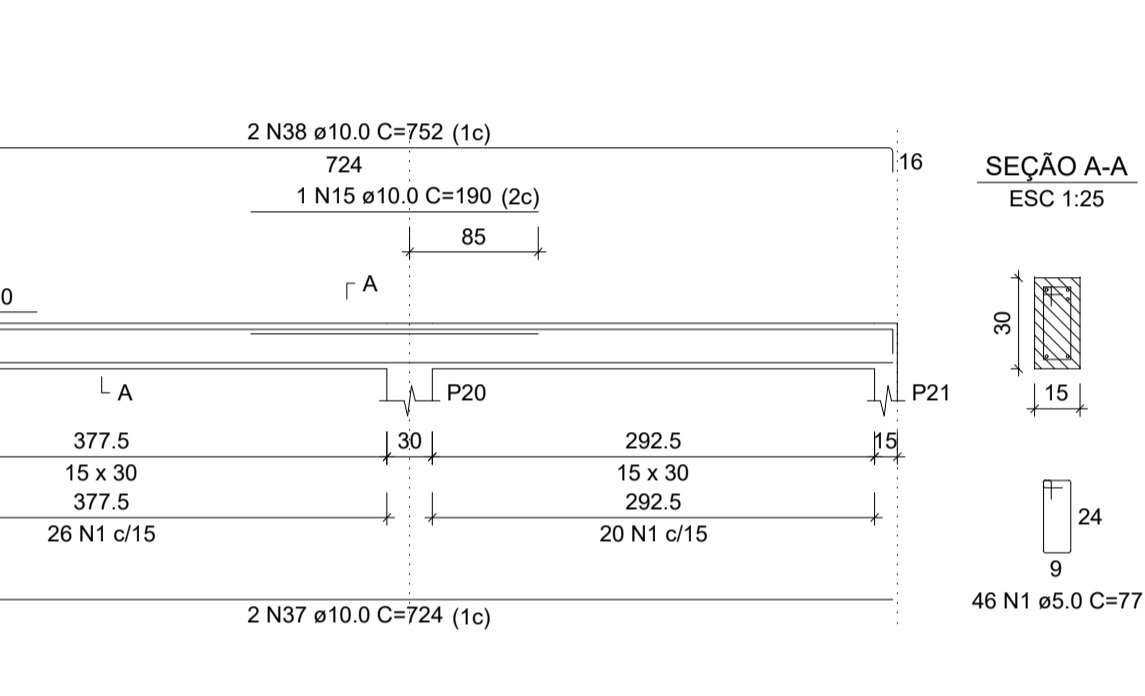
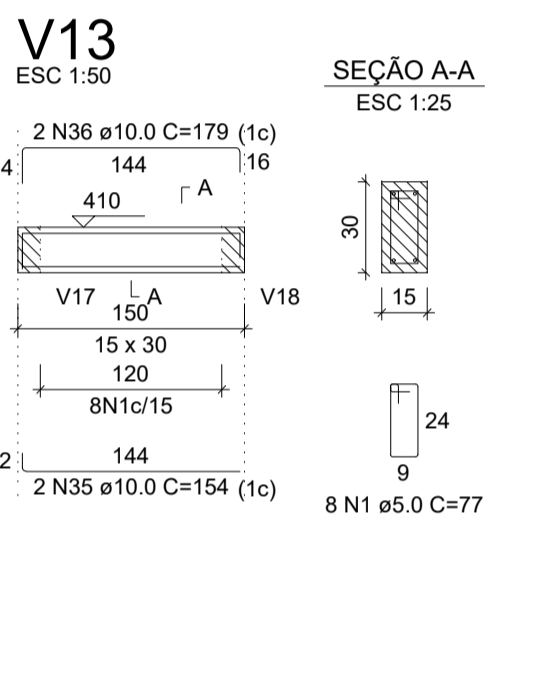
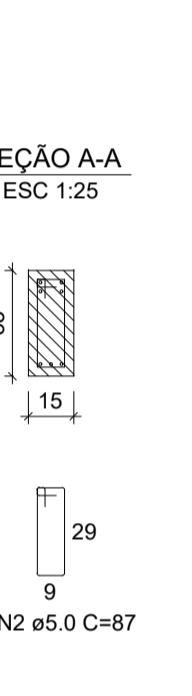
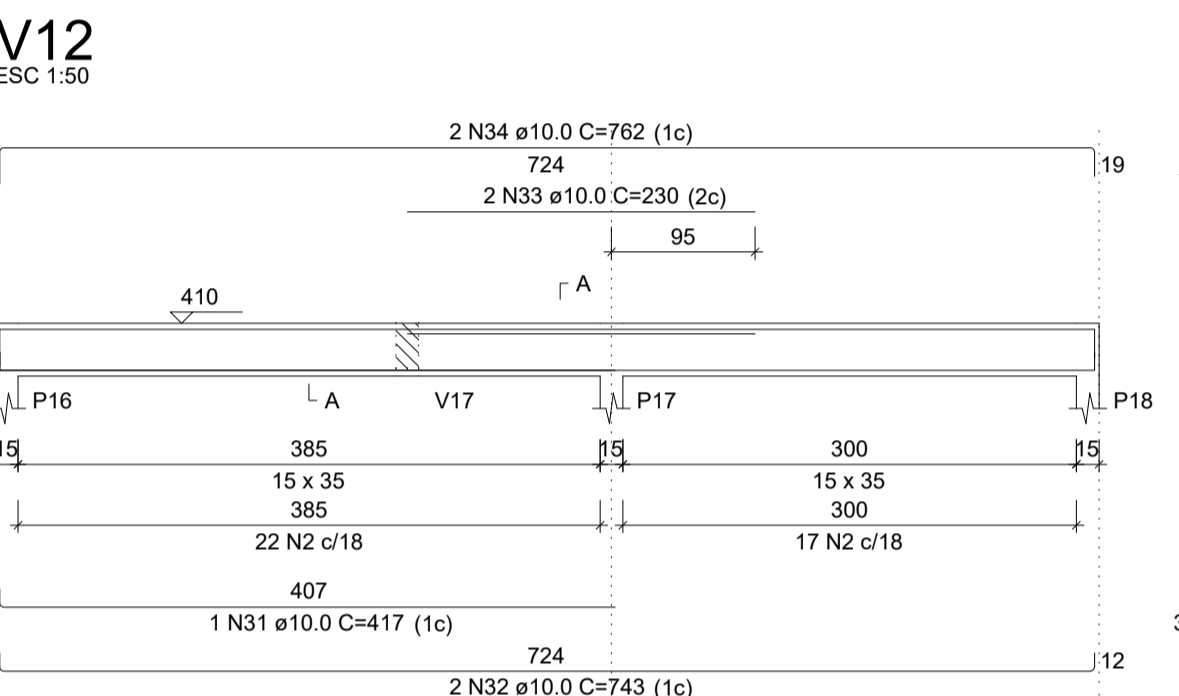
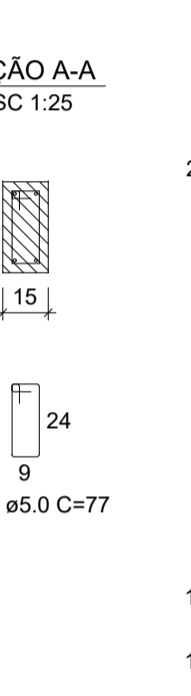
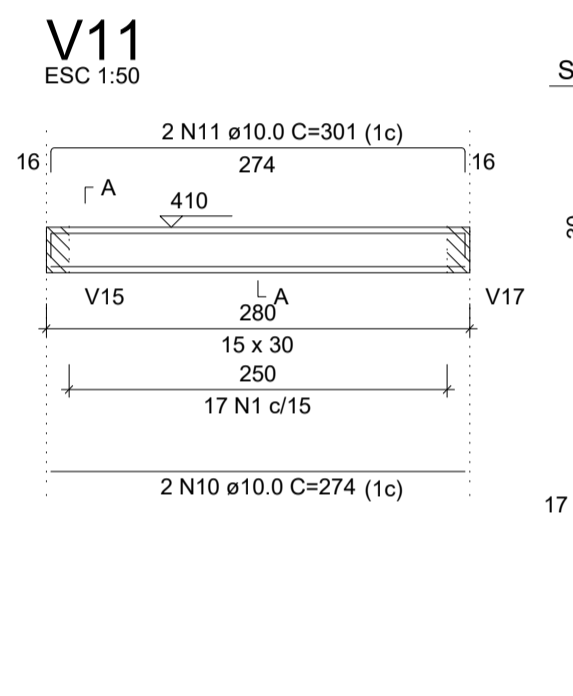
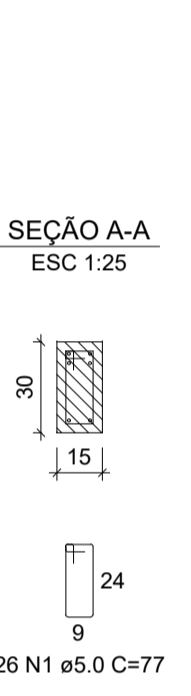
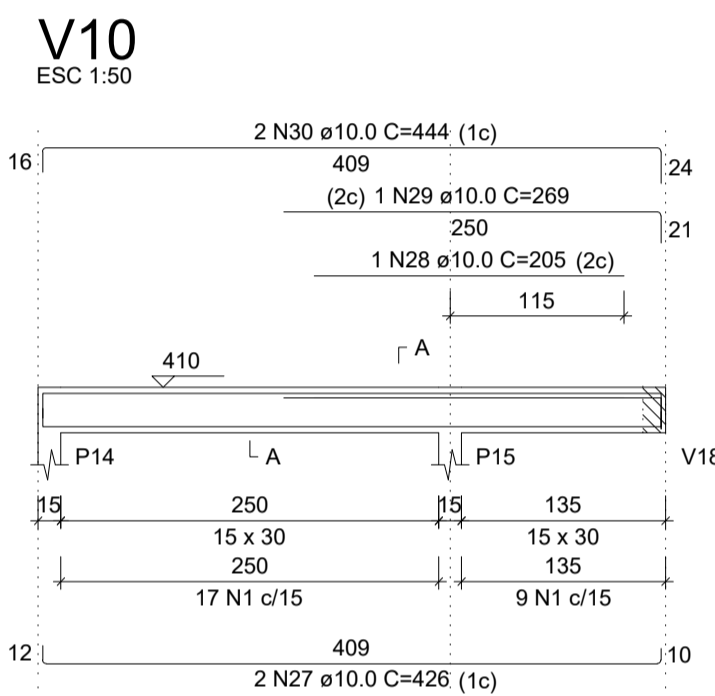
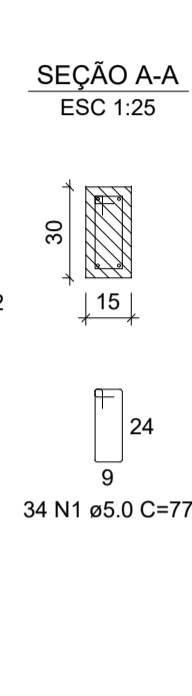
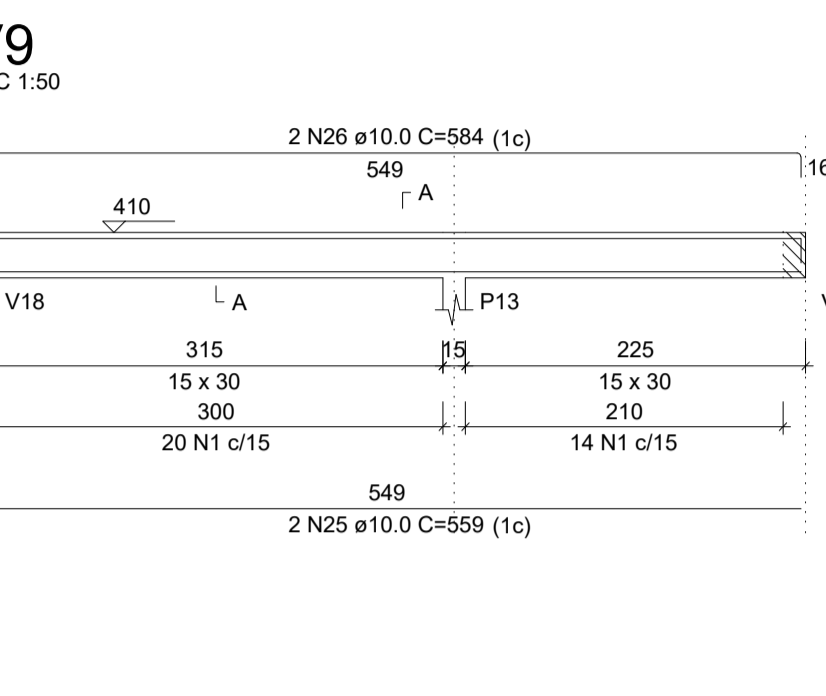
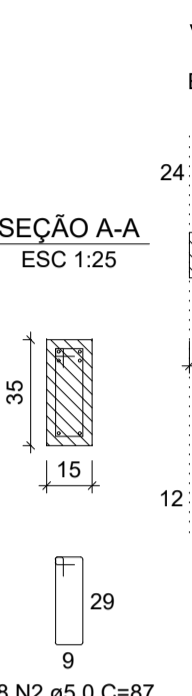
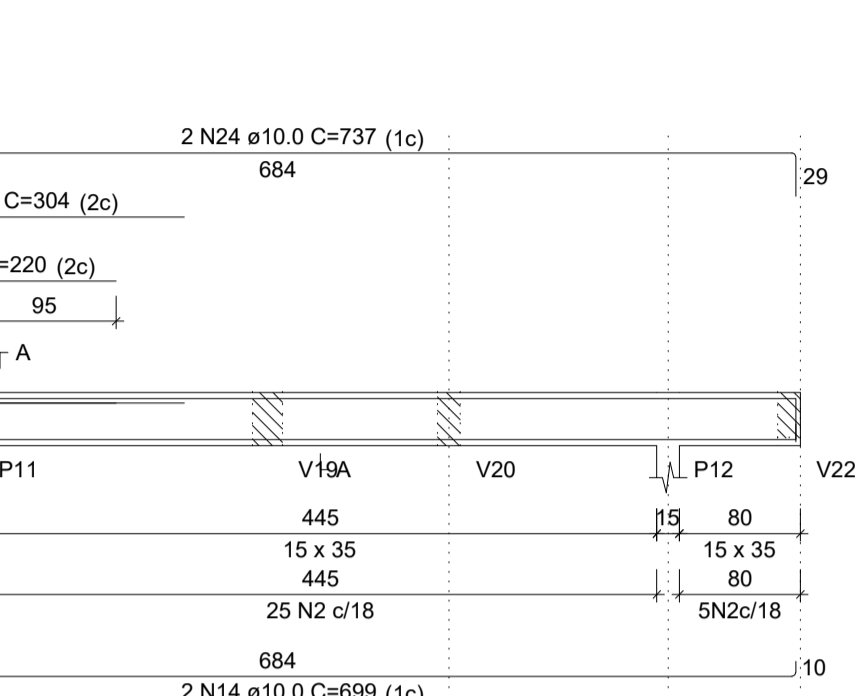
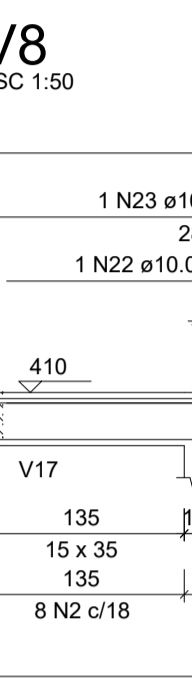
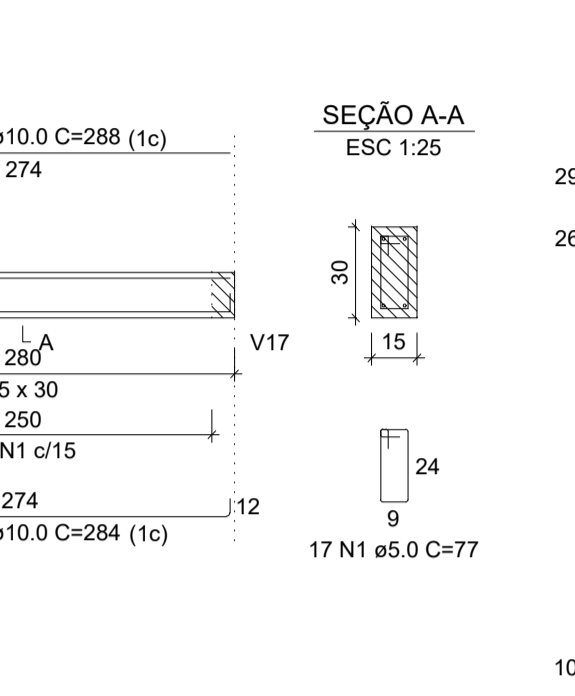
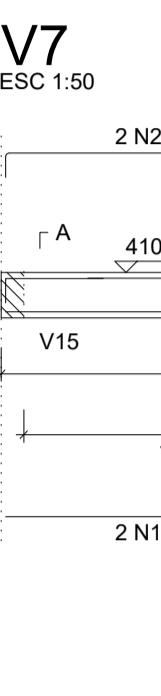
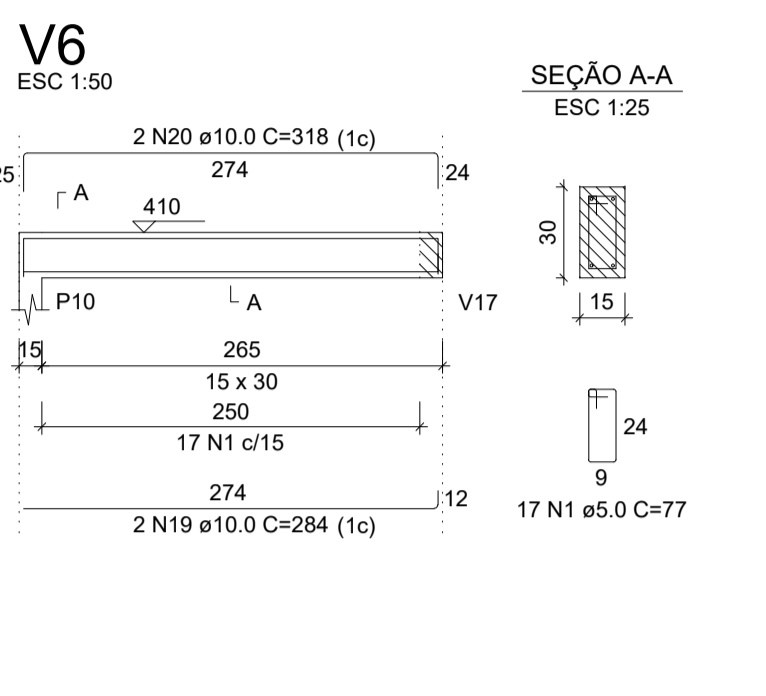
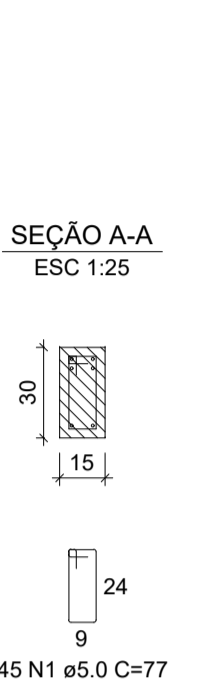
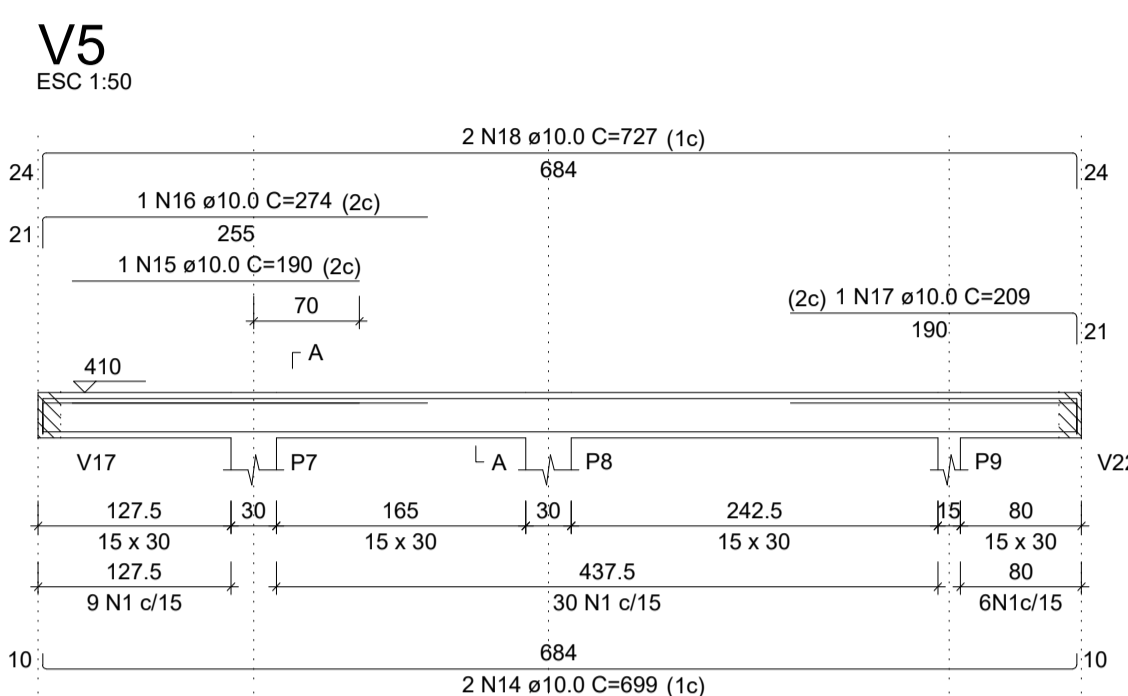
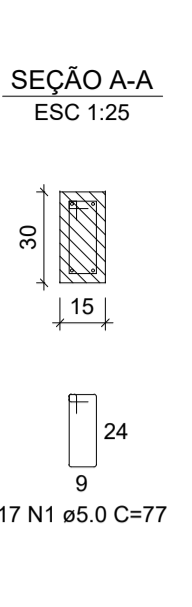
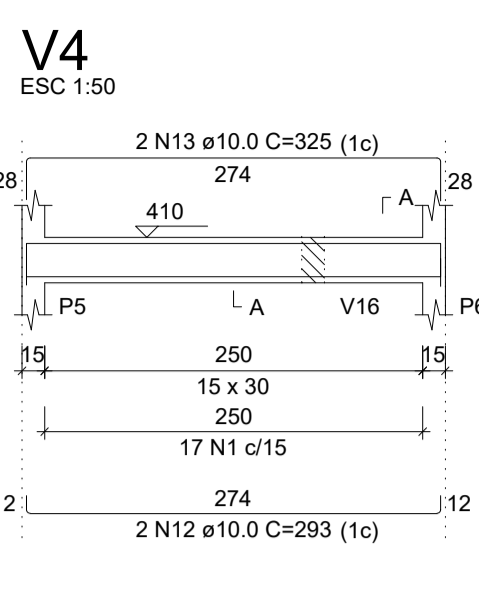
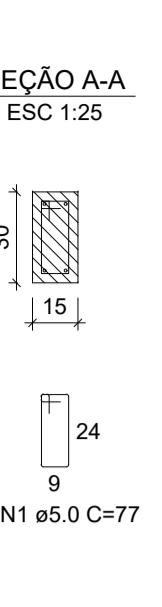
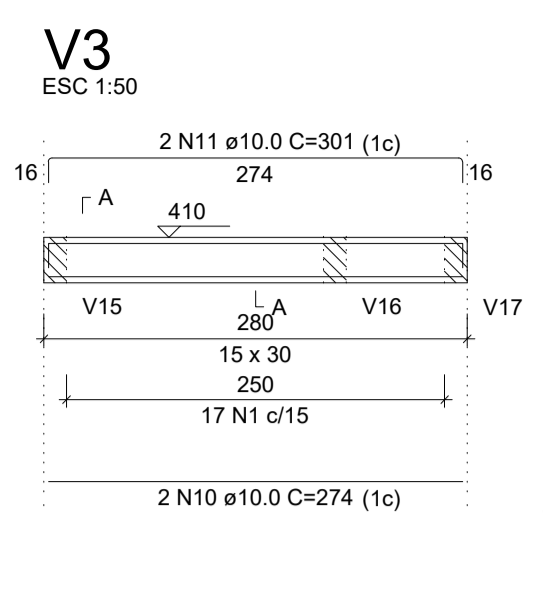
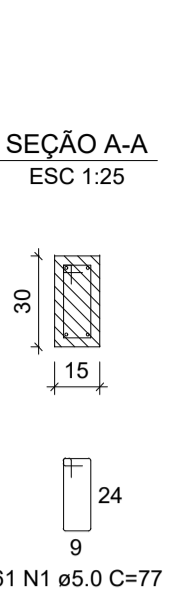
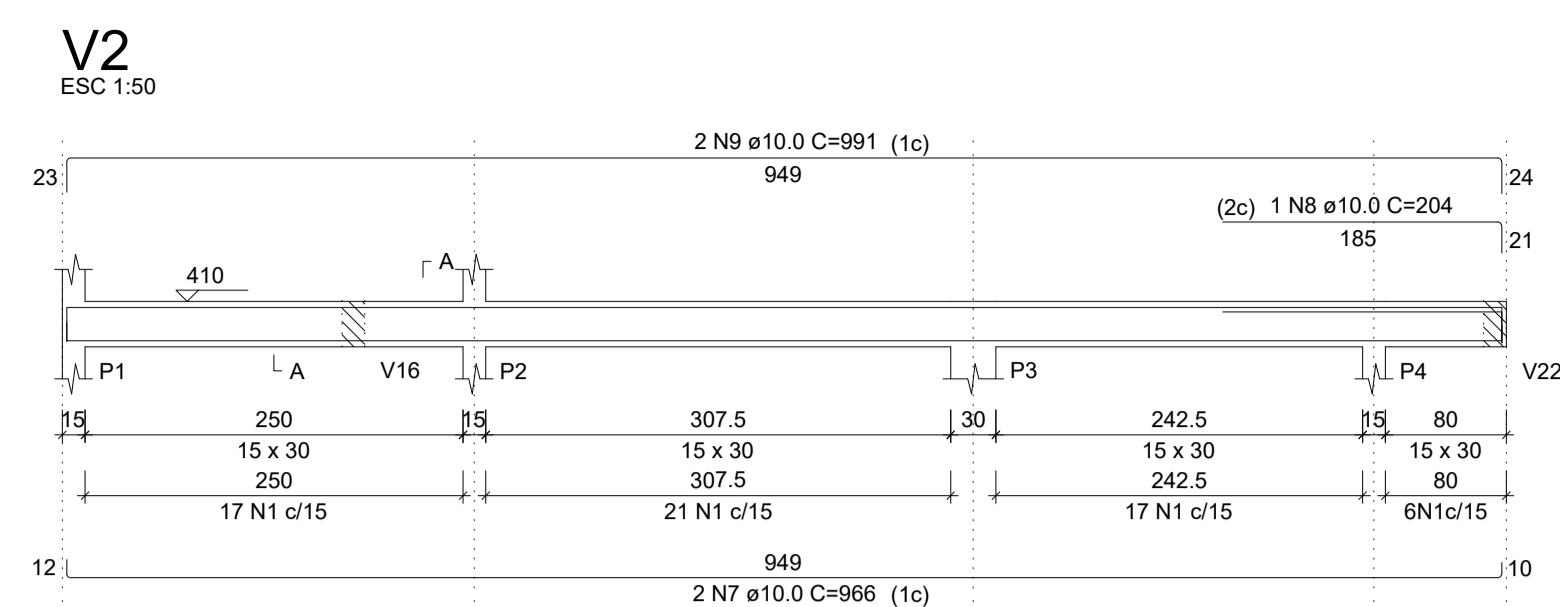
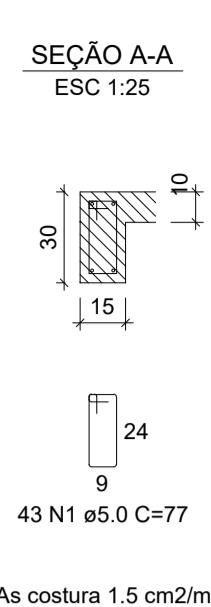
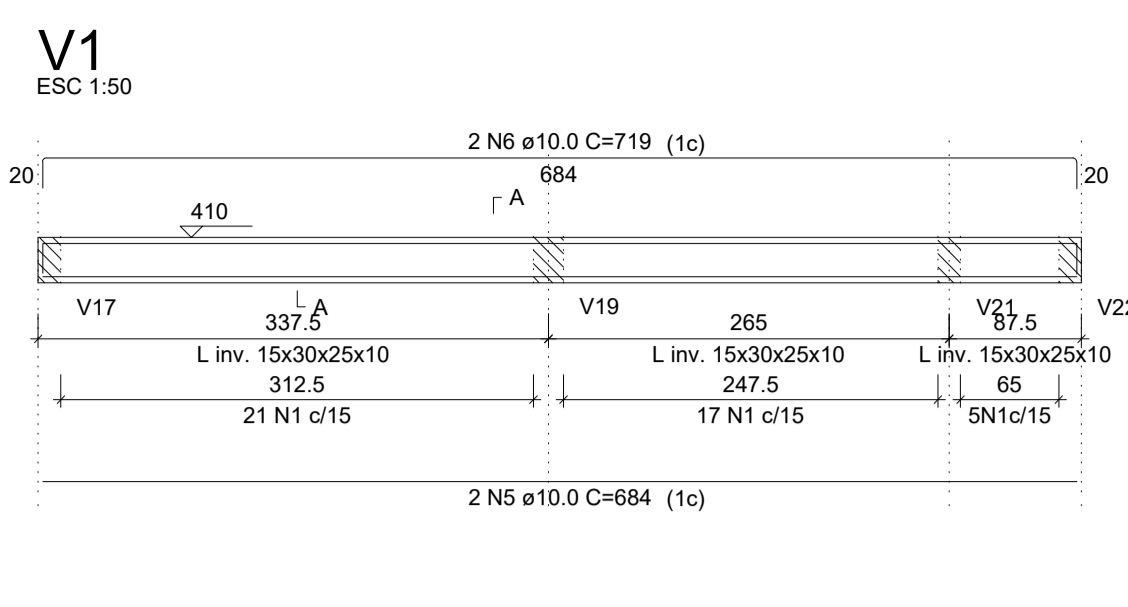
Revisões

Data
30 novembro 2020

Responsável Técnico
Eng. civil Taise Teodozio CREA 071.664-1

Área 122,49m²
Escala indicada
Desenho Taise

Arquivo D:\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL - COMPLETO.dwg



AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	697	77	53689
CA60	2	5.0	119	87	10353
CA60	3	5.0	39	97	3783
CA60	4	5.0	6	87	522
CA60	5	10.0	2	684	1368
CA60	6	10.0	2	719	1438
CA60	7	10.0	2	966	1932
CA60	8	10.0	1	204	204
CA60	9	10.0	2	991	1982
CA60	10	10.0	4	274	1096
CA60	11	10.0	4	301	1204
CA60	12	10.0	2	293	586
CA60	13	10.0	2	325	650
CA60	14	10.0	4	699	2796
CA60	15	10.0	1	727	1454
CA60	16	10.0	1	274	274
CA60	17	10.0	1	209	209
CA60	18	10.0	1	727	1454
CA60	19	10.0	4	284	1136
CA60	20	10.0	2	318	636
CA60	21	10.0	2	288	576
CA60	22	10.0	2	220	440
CA60	23	10.0	1	304	304
CA60	24	10.0	2	737	1474
CA60	25	10.0	2	359	718
CA60	26	10.0	2	584	1168
CA60	27	10.0	2	426	852
CA60	28	10.0	1	205	205
CA60	29	10.0	1	299	299
CA60	30	10.0	2	444	888
CA60	31	10.0	1	417	417
CA60	32	10.0	2	743	1486
CA60	33	10.0	2	230	460
CA60	34	10.0	2	762	1524
CA60	35	10.0	2	154	308
CA60	36	10.0	2	179	358
CA60	37	10.0	2	724	1448
CA60	38	10.0	2	752	1504
CA60	39	10.0	2	1192	2384
CA60	40	10.0	2	322	644
CA60	41	10.0	2	1198	2396
CA60	42	10.0	2	404	808
CA60	43	10.0	2	339	678
CA60	44	10.0	2	366	732
CA60	45	10.0	1	218	218
CA60	46	10.0	2	1060	2120
CA60	47	10.0	2	410	820
CA60	48	10.0	2	270	540
CA60	49	10.0	2	240	480
CA60	50	10.0	1	285	285
CA60	51	10.0	2	1199	2398
CA60	52	10.0	2	385	770
CA60	53	10.0	1	238	238
CA60	54	10.0	2	1078	2156
CA60	55	10.0	1	260	260
CA60	56	10.0	2	756	1512
CA60	57	10.0	2	95	190
CA60	58	10.0	1	422	422
CA60	59	10.0	1	402	402
CA60	60	10.0	1	202	202
CA60	61	10.0	1	262	262
CA60	62	10.0	2	867	1734
CA60	63	10.0	2	802	1604
CA60	64	10.0	2	837	1674
CA60	65	10.0	2	827	1654
CA60	66	10.0	1	200	200
CA60	67	10.0	2	854	1708
CA60	68	12.5	1	230	230
CA60	69	12.5	1	225	225
CA60	70	12.5	2	1082	2164

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	616.1	417.8
CA60	12.5	26.2	27.8
CA60	5.0	683.3	115.8
PESO TOTAL (kg)			
CA50	445.6		
CA60	115.8		

Volume de concreto (C-25) = 6.60 m³
Área de forma = 106.67 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELO**

IPPUC
INSTITUTO DE PESQUISA E PLANEJAMENTO URBANO DE CAÇADOR

Responsible Técnico: Eng. civil Taise Teodozio CREA 071.664-1

Referência: VIGAS PVTO COBERTURA

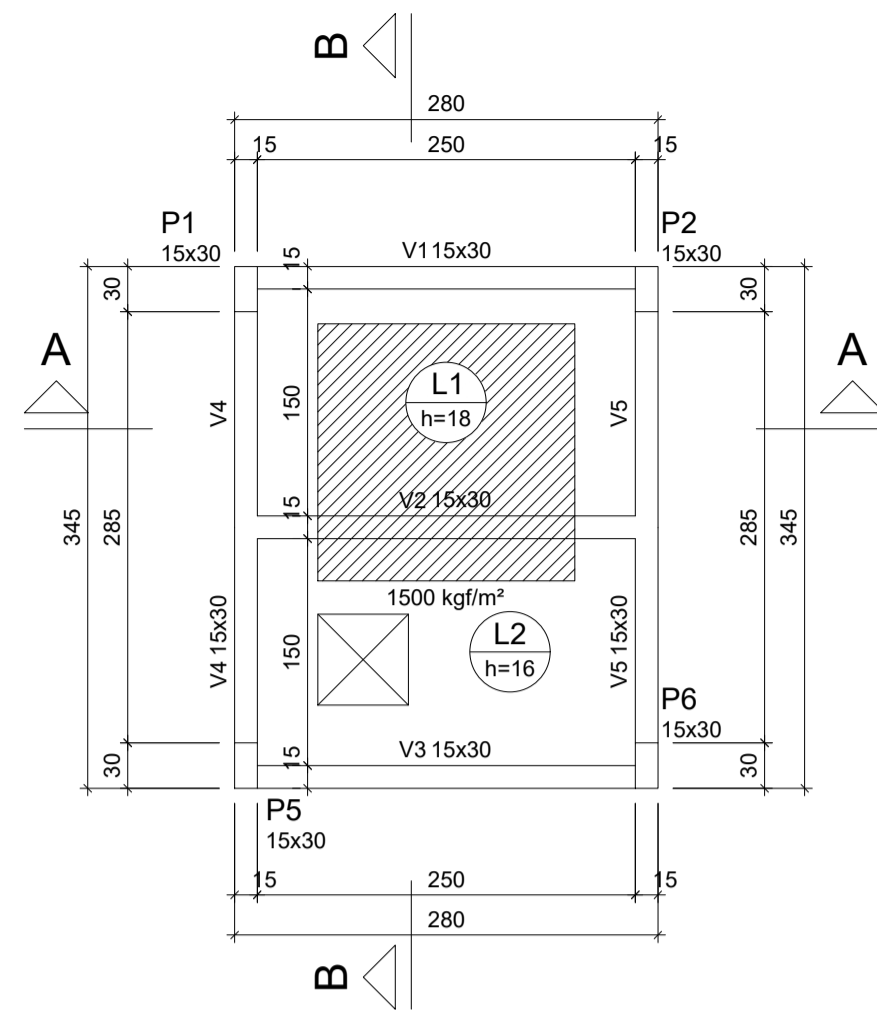
Revisões:

Área: 122,49m²
Escala: Indiciada
Desenho: Taise

FOLHA: 07/09

Data: 30 novembro 2020

Arquivo: IPPUC-BaseAvançada-BaseAvançadaEstrutural-BaseAvançadaEstrutural-Completo-04.dwg



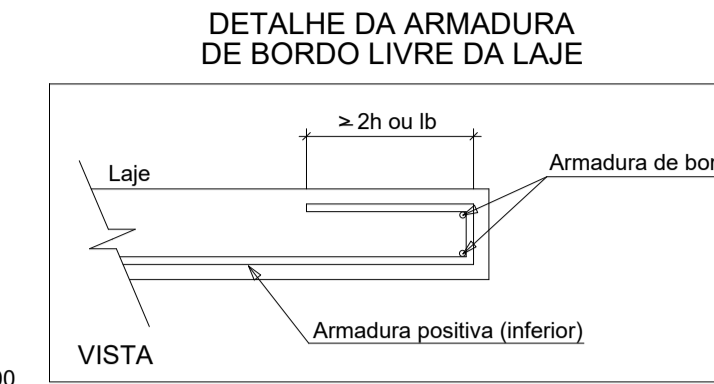
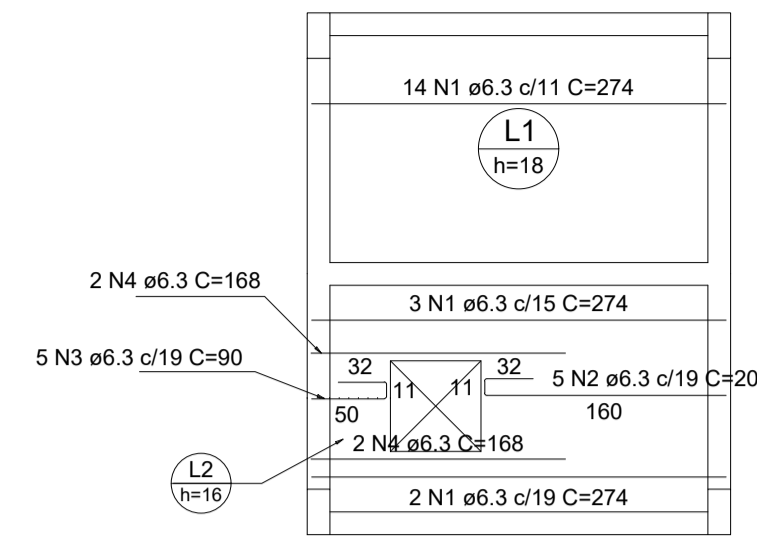
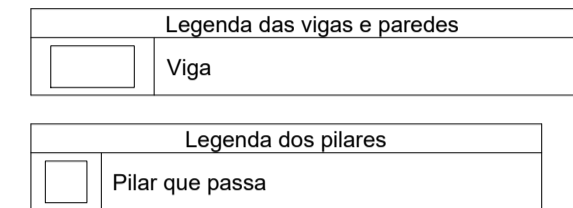
Forma do pavimento PISO CAIXA (Nível 560) escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	560
V2	15x30	0	560
V3	15x30	0	560
V4	15x30	0	560
V5	15x30	0	560

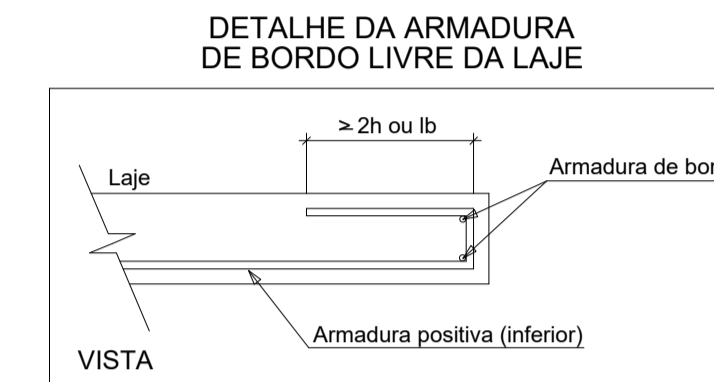
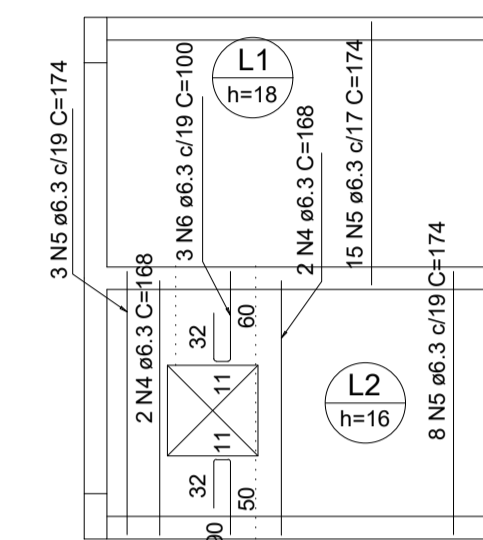
Lajes							
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Sobrecarga (kgf/m²)		
					Peso próprio (kgf/m²)	Adicional	Acidental Localizada
L1	Maciça	18	0	560	450	155	300
L2	Maciça	16	0	560	400	182	300

Características dos materiais		
fck (kgf/cm²)	Ecs (kgf/cm²)	Dimensão máxima do agregado = 19 mm
250	241500	

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	560
P2	15x30	0	560
P5	15x30	0	560
P6	15x30	0	560



Armação positiva das lajes do pavimento PISO CAIXA (Eixo X) escala 1:50



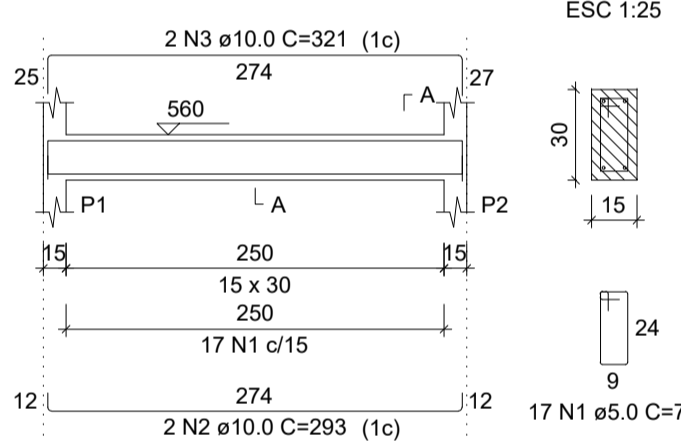
Armação positiva das lajes do pavimento PISO CAIXA (Eixo Y) escala 1:50

RELAÇÃO DO AÇO					
Positivos X			Positivos Y		
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	19	274	5206
	2	6.3	5	200	1000
	3	6.3	8	90	720
	4	6.3	8	168	1344
	5	6.3	26	174	4524
	6	6.3	3	100	300

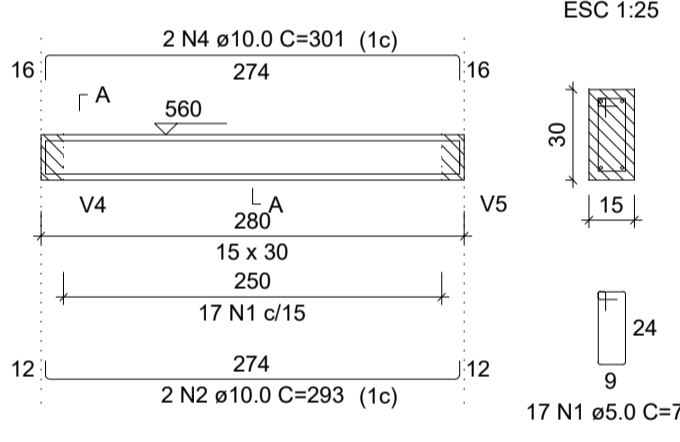
RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	130.9	35.2
PESO TOTAL (kg)			
CA50			35.2

Volume de concreto (C-25) = 1.22 m³
Área de forma = 7.18 m²

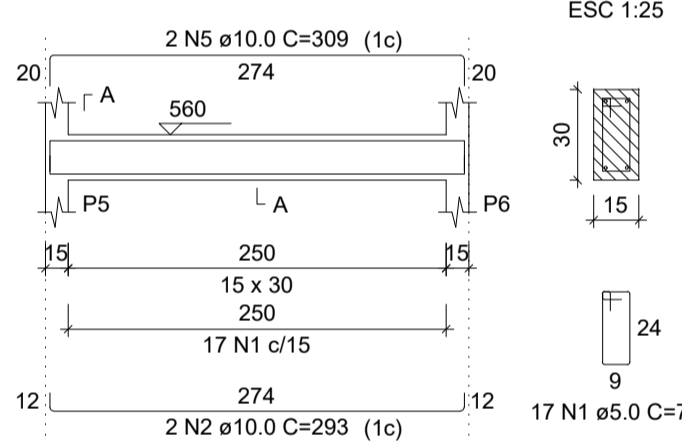
V1 ESC 1:50



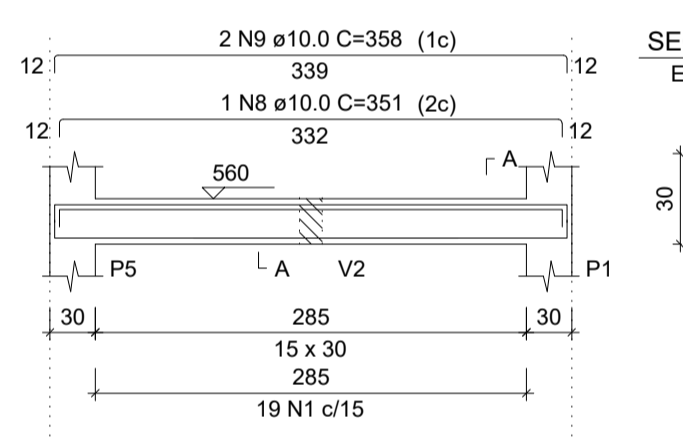
V2 ESC 1:50



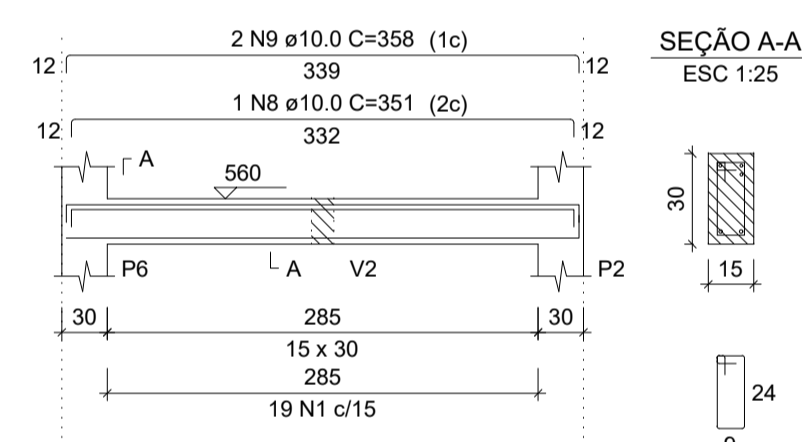
V3 ESC 1:50



V4 ESC 1:50



V5 ESC 1:50

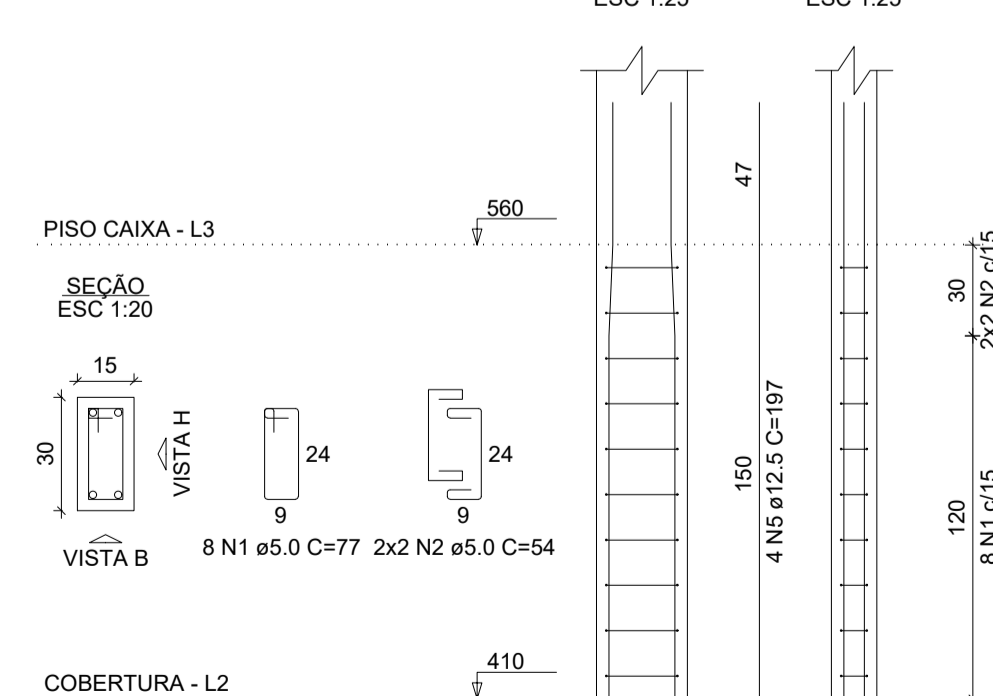


RELAÇÃO DO AÇO					
V1 V4		V2 V5		V3	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	89	77	6853
	2	10.0	6	293	1758
	3	10.0	2	321	642
	4	10.0	2	301	602
	5	10.0	2	309	618
	6	10.0	1	175	175
	7	10.0	2	358	716
	8	10.0	2	351	702
	9	10.0	4	358	1432
	10	12.5	2	351	702

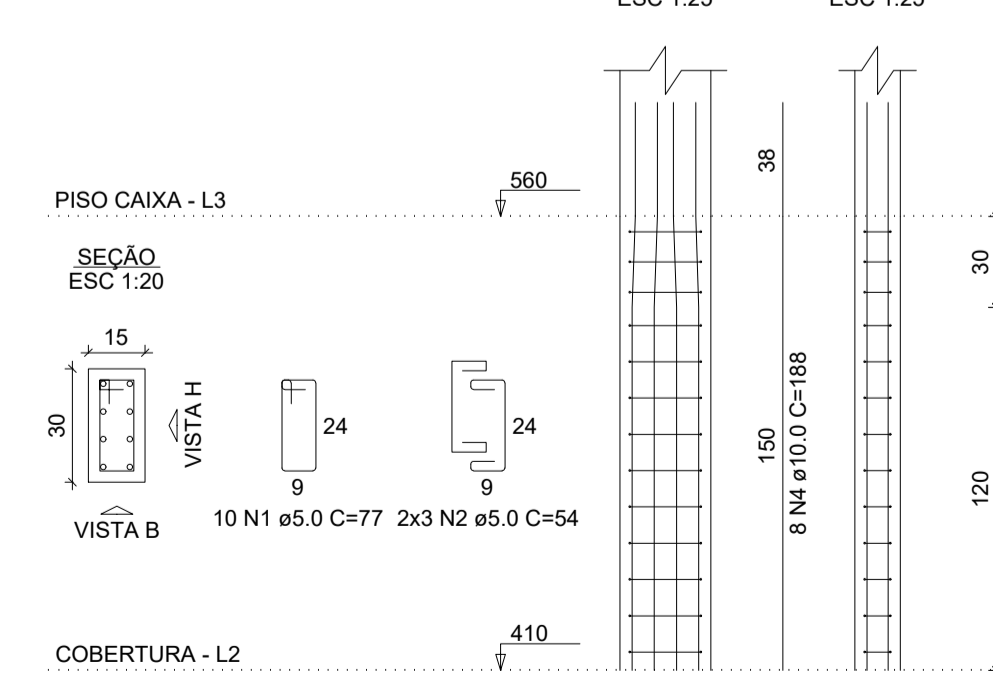
RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	66.5	45.1
CA60	5.0	68.5	11.6
PESO TOTAL (kg)			
CA50			52.5
CA60			11.6

Volume de concreto (C-25) = 0.69 m³
Área de forma = 11.48 m²

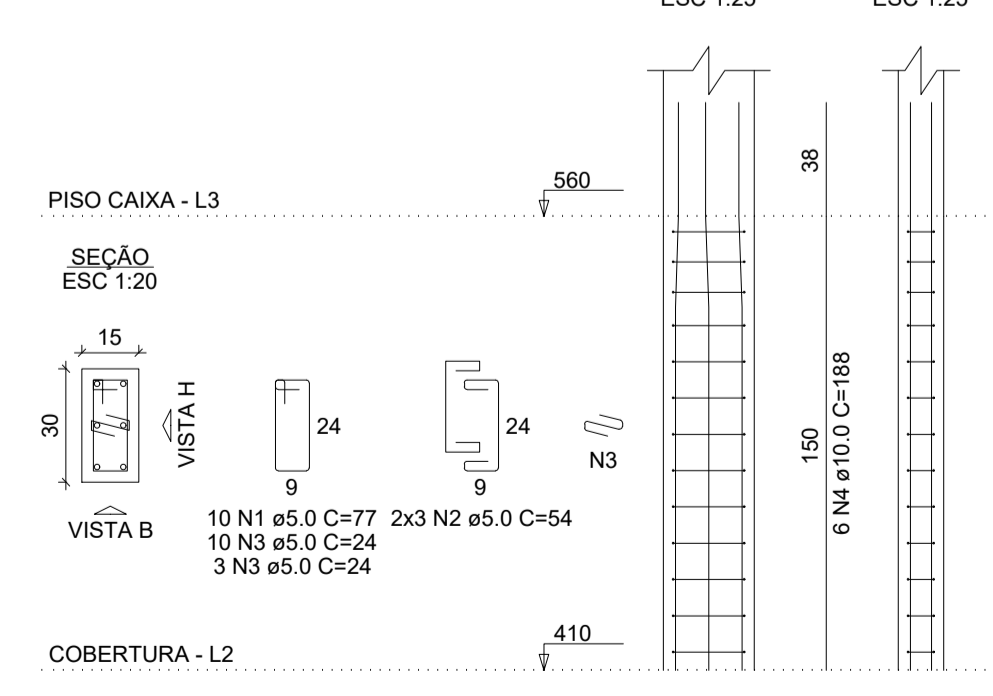
P1



P2



P5=P6



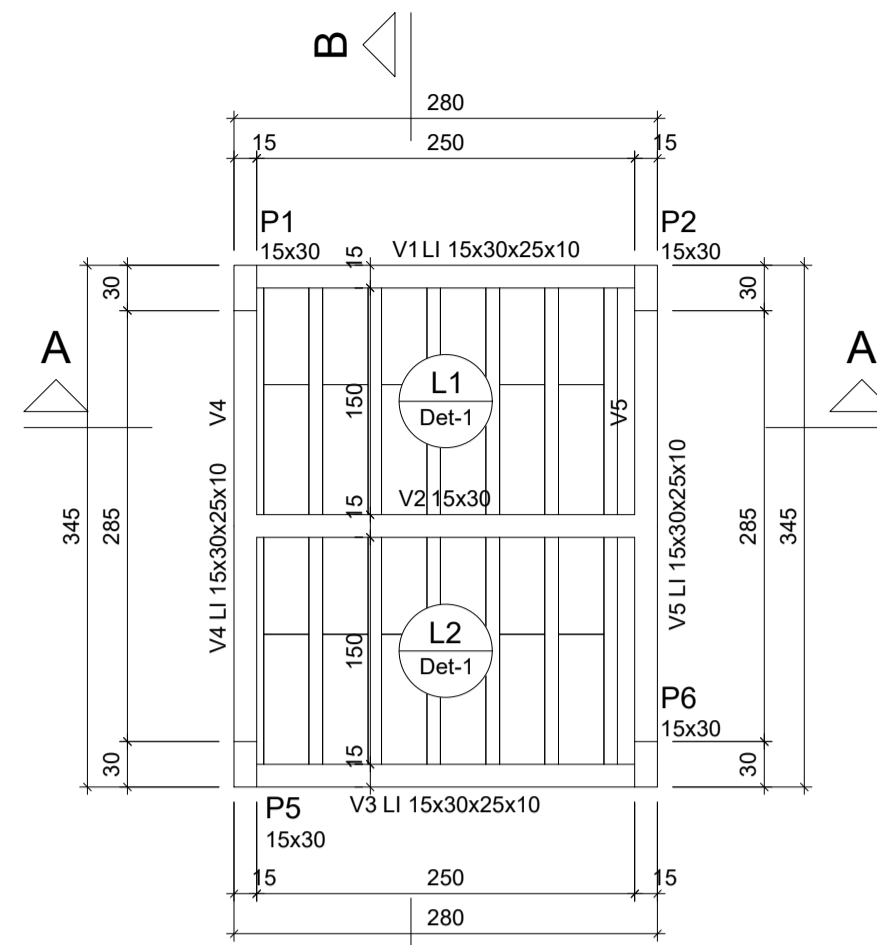
RELAÇÃO DO AÇO					
P1		P2		2xP5	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	38	77	2926
	2	5.0	22	54	1188
	3	5.0	26	24	624
	4	10.0	20	188	3760
	5	12.5	4	197	788

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	37.6	25.5
CA60	5.0	47.4	8.4
PESO TOTAL (kg)			
CA50		33.9	8
CA60			8

Volume de concreto (C-25) = 0.27 m³
Área de forma = 5.40 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

Referência	FOLHA
FORMA PVTO PISO CAIXA D'ÁGUA LAJE, PILAR E VIGAS PVTO PISO CAIXA D'ÁGUA	08/09
Revisões	Data
-	30 novembro 2020
-	
-	
Responsável Técnico	Área
Eng. civil Taise Teodoro CREA 071.664-1	122,49m²
	Escala
	indicada
	Desenho
	Taise
	Arquivo
	D:\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL COMPLETO.dwg



Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	LI 15x30x25x10	0	810
V2	15x30	0	810
V3	LI 15x30x25x10	0	810
V4	LI 15x30x25x10	0	810
V5	LI 15x30x25x10	0	810

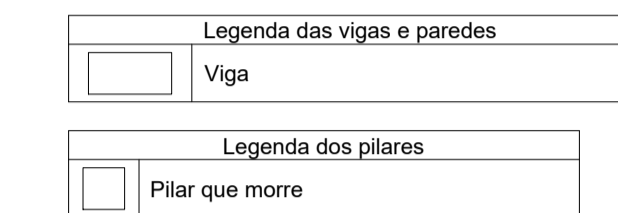
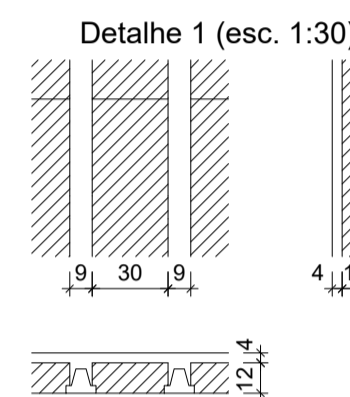
Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1	EPS Unidirecional	B12/30/125	hb 12 bx 30 by 125	24

Lajes						
Nome	Tipo	Dados			Sobrecarga (kgf/m²)	
		Altura (cm)	Elevação (cm)	Nível (cm)	Próprio	Adicional
L1	Pré-moldada	16	0	810	171	182
L2	Pré-moldada	16	0	810	171	182

Características dos materiais	
f _{ck} (kgf/cm²)	E _{ca} (kgf/cm²)
250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	810
P2	15x30	0	810
P5	15x30	0	810
P6	15x30	0	810



Armação positiva das lajes do pavimento COB CAIXA (Eixo Y)

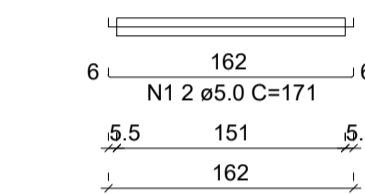
escala 1:50

Planta de vigotas pré-moldadas

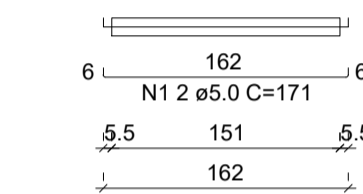
escala 1:50

RELAÇÃO DO AÇO
Volume de concreto (C-25) = 0.30 m³
Área de forma = 0.00 m²

VP1a (6 unidades)
(L1)
ESC 1:50



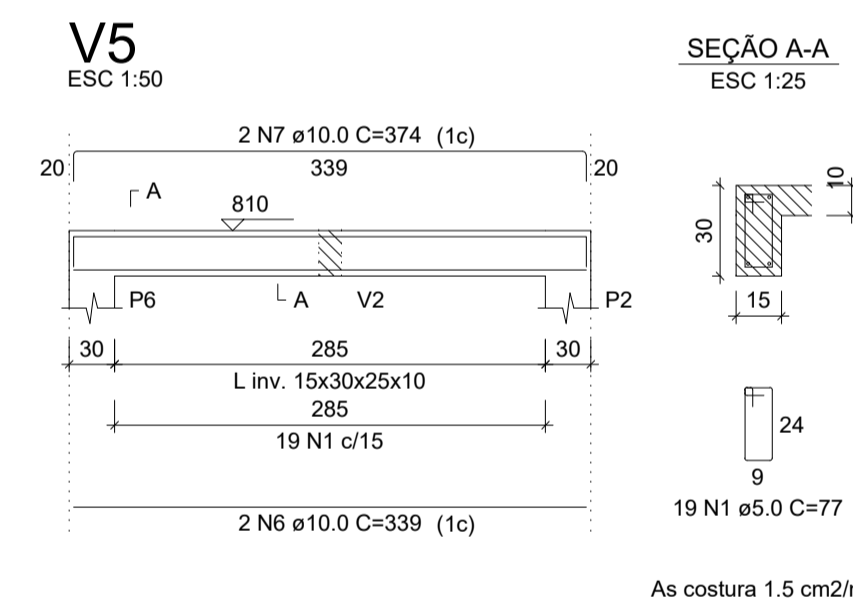
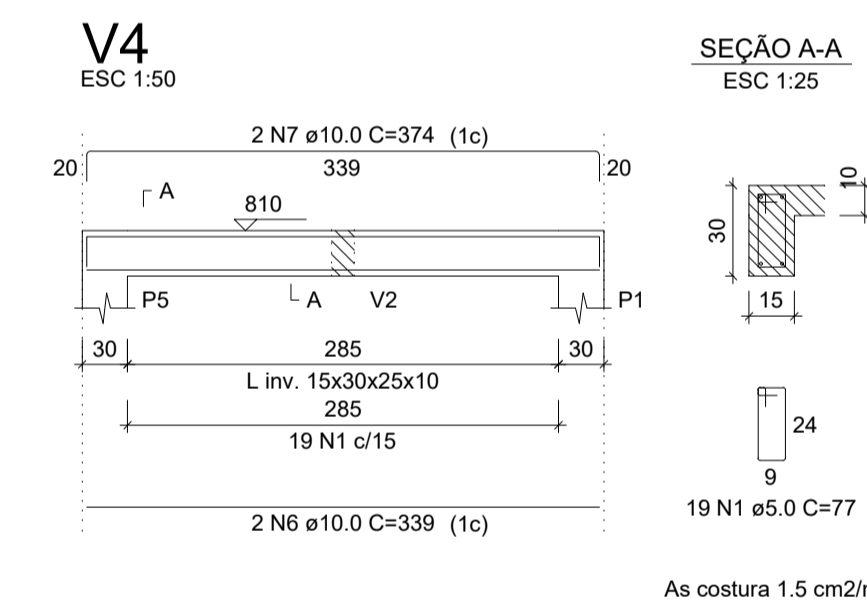
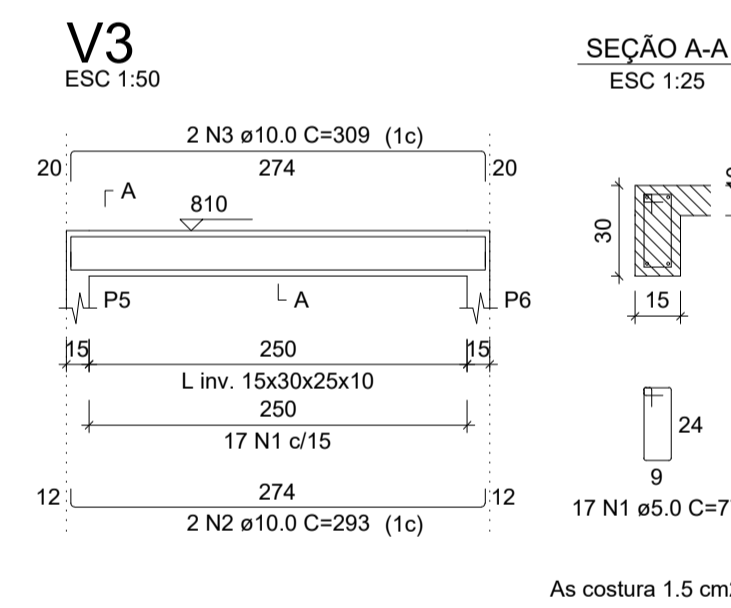
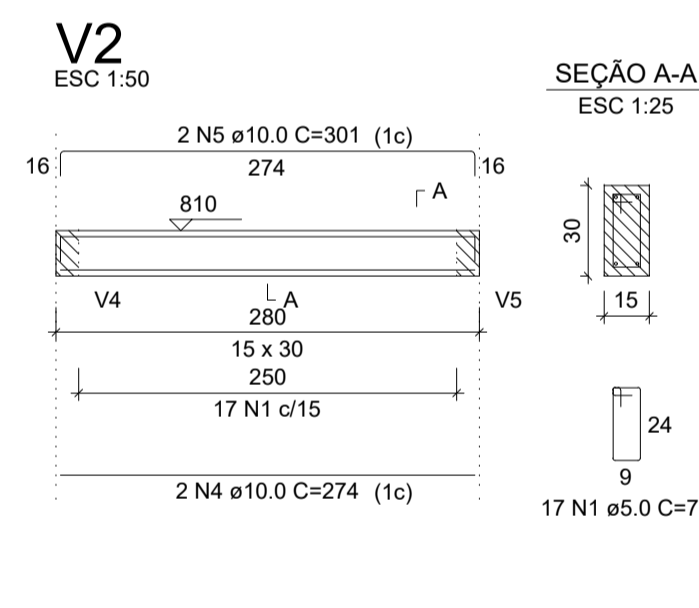
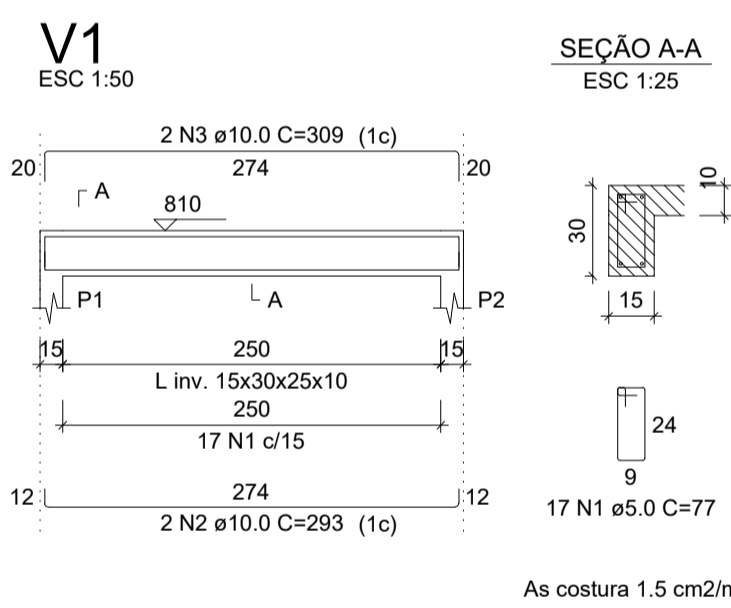
VP2a (6 unidades)
(L2)
ESC 1:50



RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	24	171	4104

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	5.0	41	7
PESO TOTAL (kg)			
CA60			7

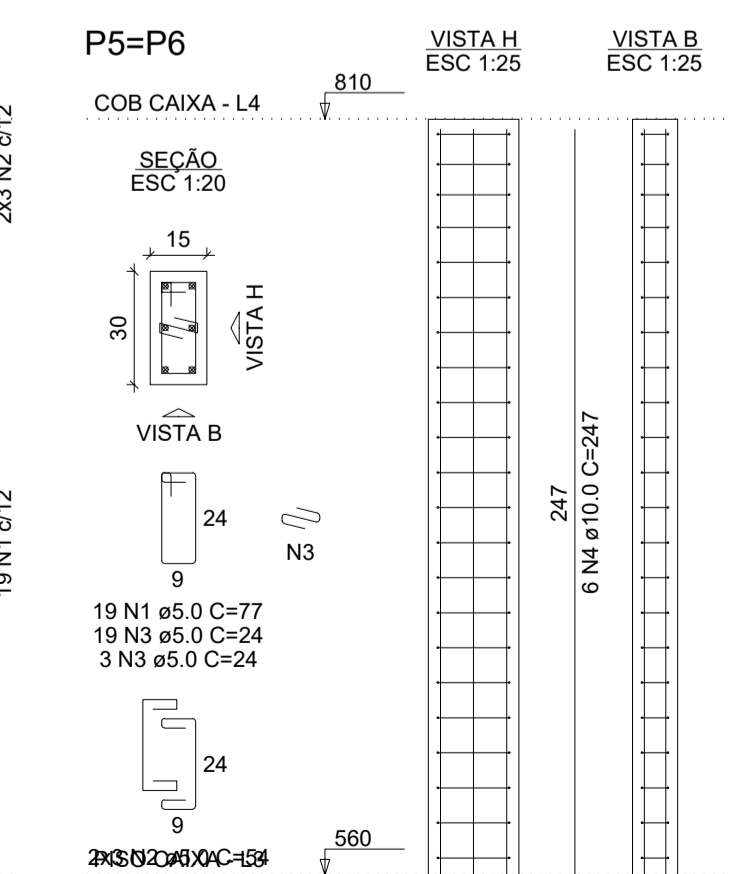
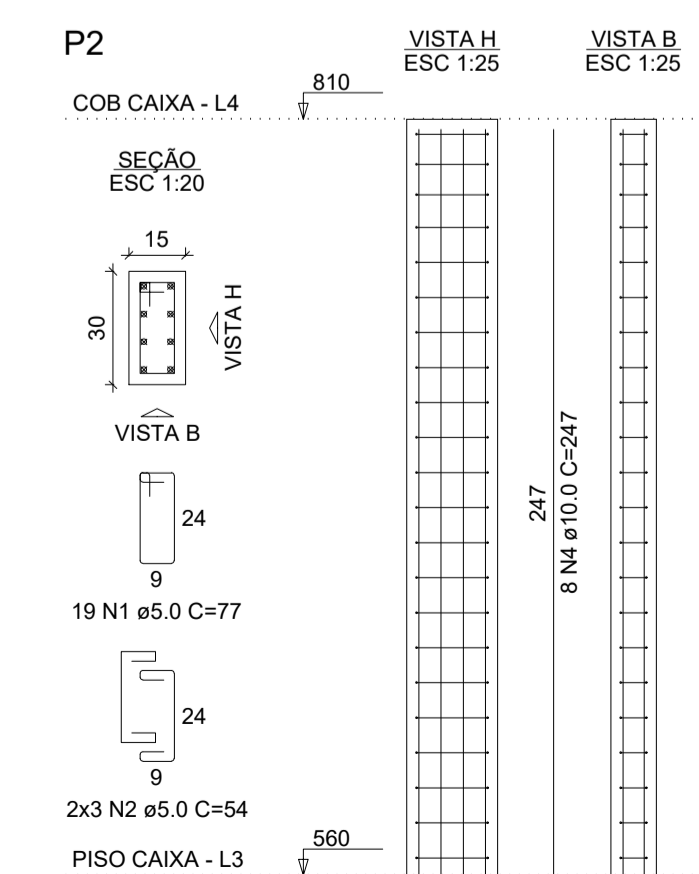
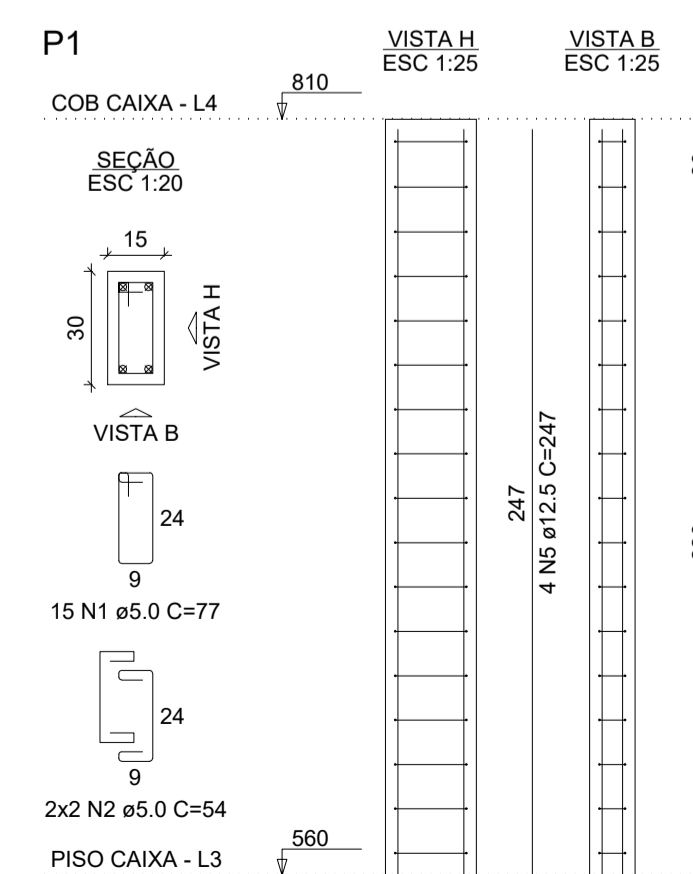
Volume de concreto (C-25) = 0.00 m³
Área de forma = 0.00 m²



RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	89	77	6853
CA50	2	10.0	4	293	1172
	3	10.0	4	309	1236
	4	10.0	2	274	548
	5	10.0	2	301	602
	6	10.0	4	339	1356
	7	10.0	4	374	1496

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	64.1	43.5
CA60	5.0	68.5	11.6
PESO TOTAL (kg)			
CA50			43.5
CA60			11.6

Volume de concreto (C-25) = 0.69 m³
Área de forma = 10.22 m²



RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	72	77	5544
	2	5.0	22	54	1188
	3	5.0	44	24	1056
CA50	4	10.0	20	247	4940
	5	12.5	4	247	988

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	49.4	33.5
	12.5	9.9	10.5
CA60	5.0	77.9	13.2
PESO TOTAL (kg)			
CA50			44
CA60			13.2

Volume de concreto (C-25) = 0.45 m³
Área de forma = 9.00 m²

Projeto **ESTRUTURAL - BASE AVANÇADA DO MARTELLO**

Referência
FORMA PVTO COBERTURA CAIXA D'ÁGUA
LAJE, PILAR E VIGAS PVTO COBERTURA CAIXA D'ÁGUA

Revisões

Responsável Técnico
Eng. civil Taise Teodozio CREA 071.664-1

Área 122,49m²
Escala indicada
Desenho Taise

Arquivo D:\IPPUC\BASE AVANÇADA\BASE AVANÇADA ESTRUTURAL\BASE AVANÇADA ESTRUTURAL COMPLETO.dwg

FOLHA
09/09
Data
30 novembro 2020