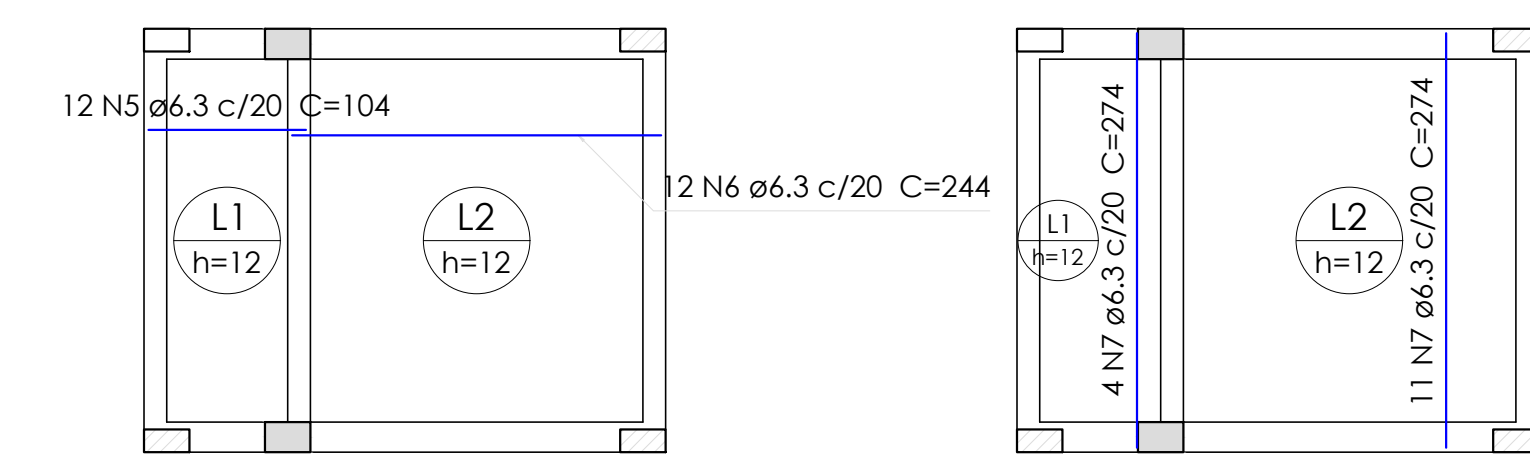
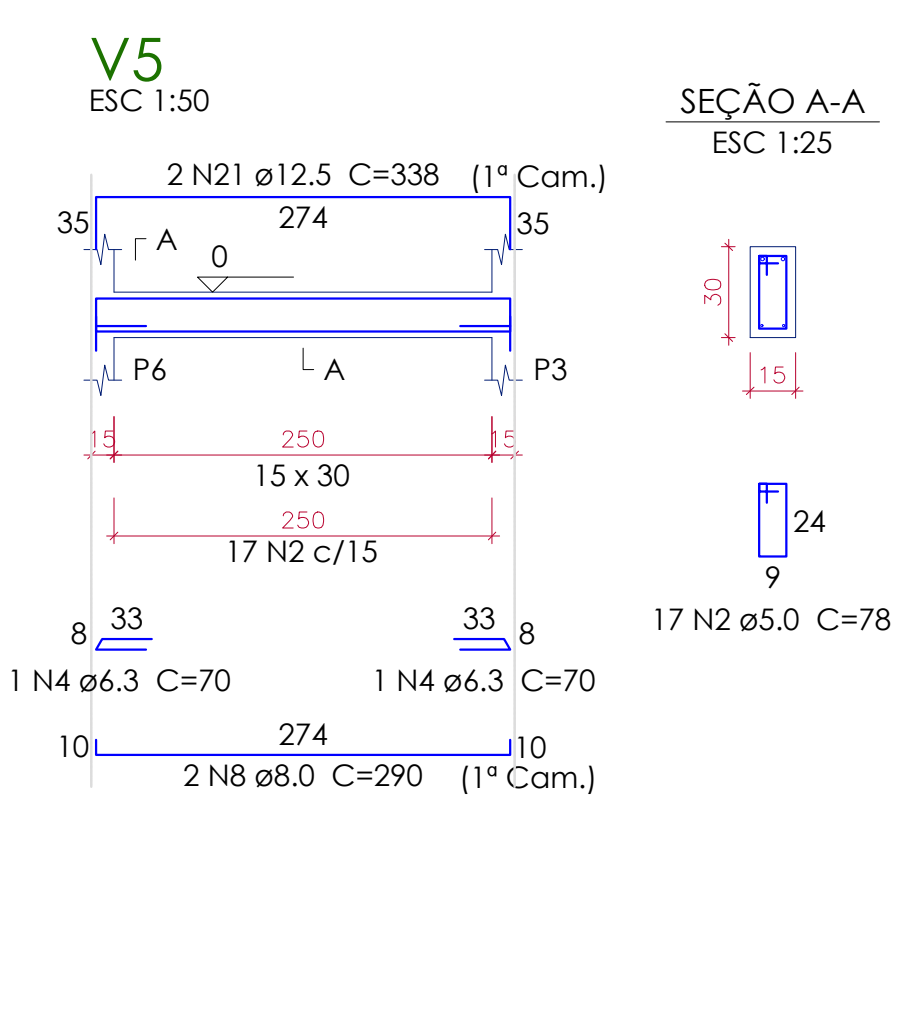
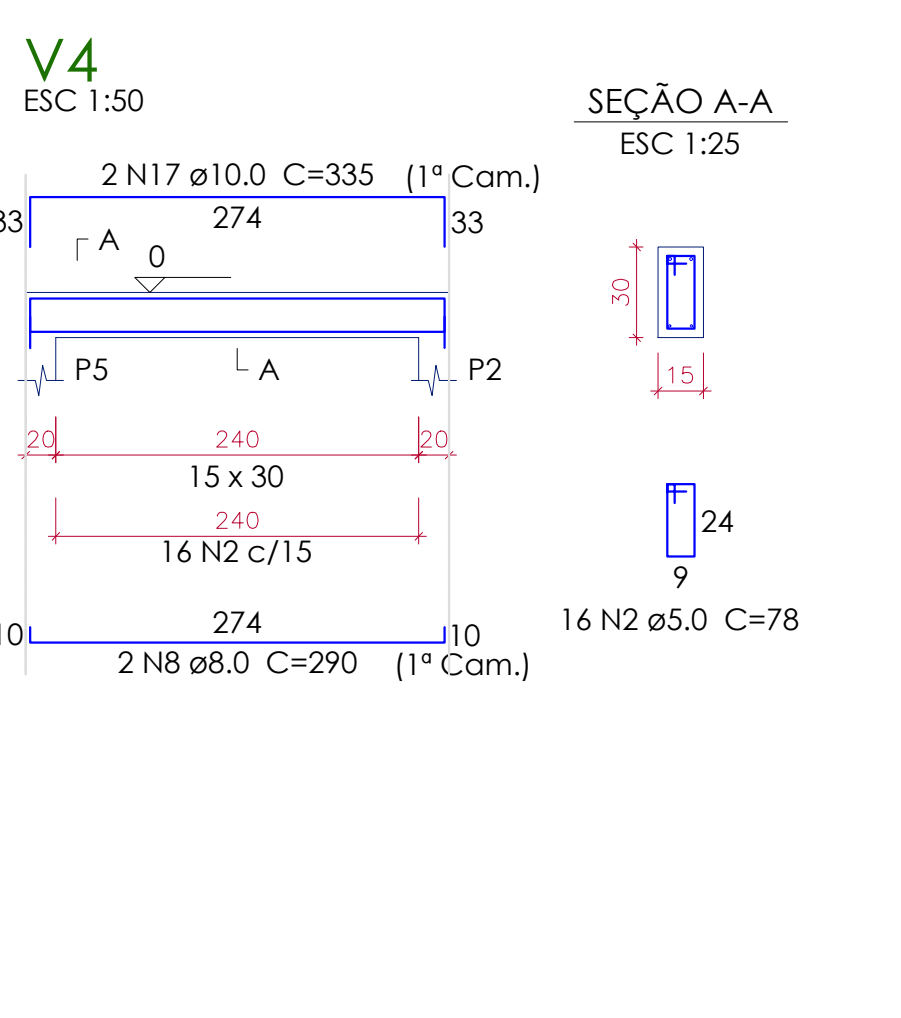
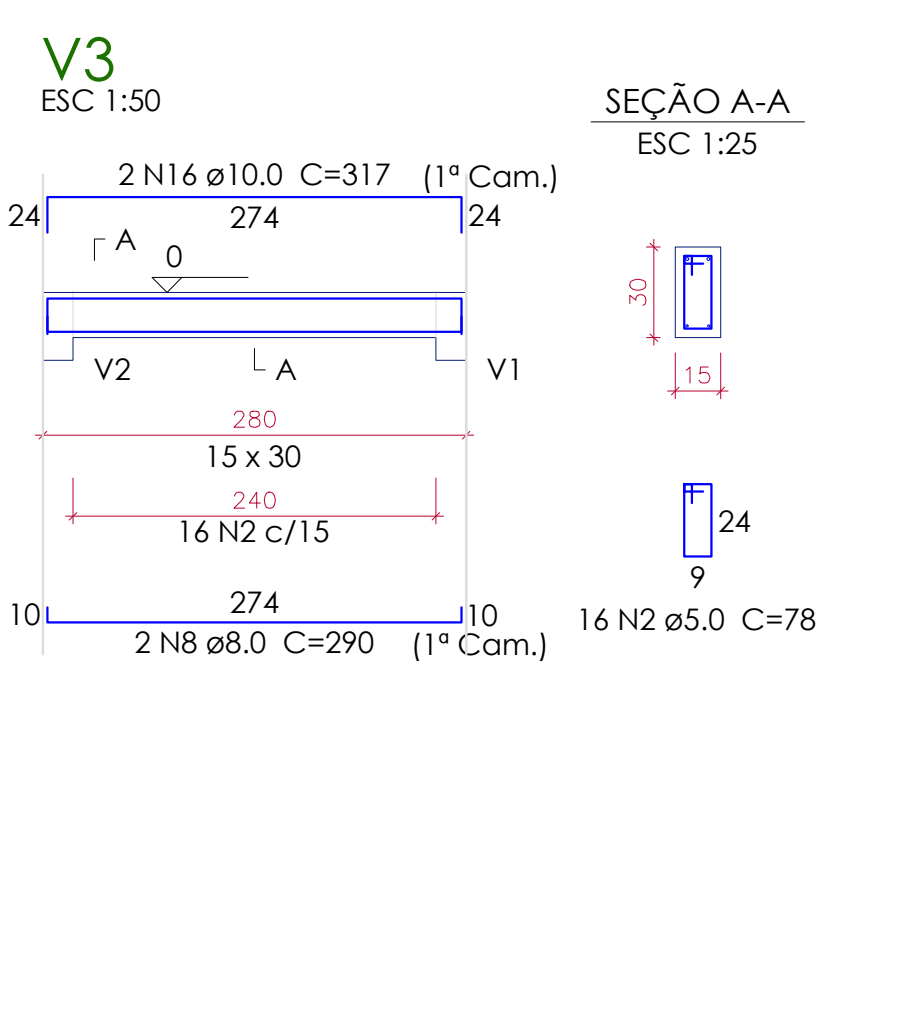
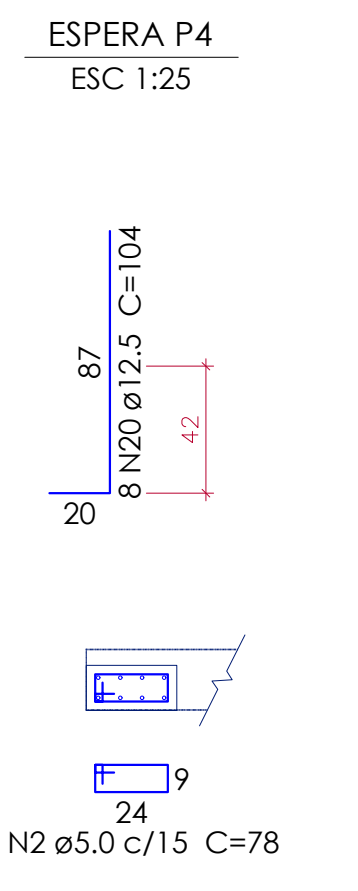
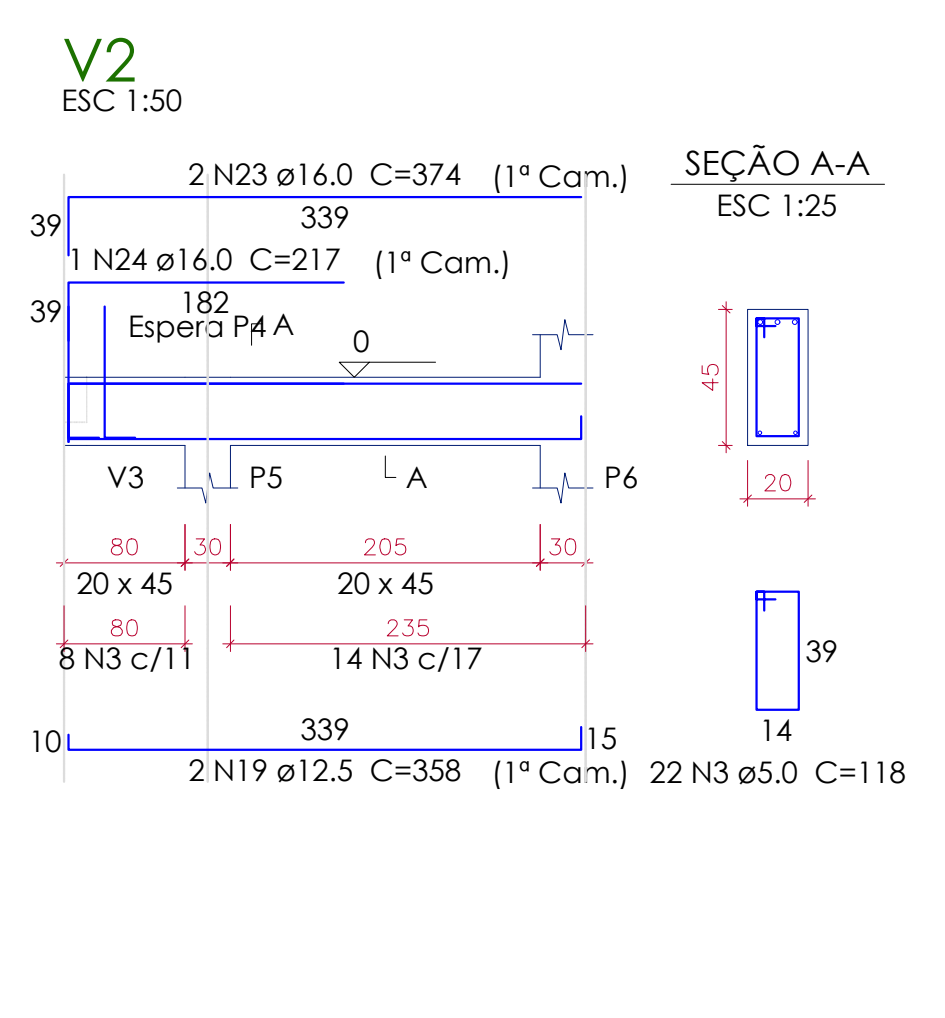
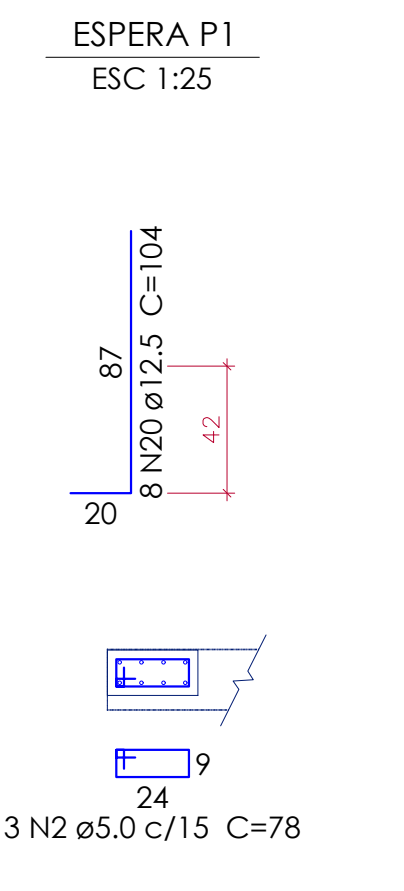
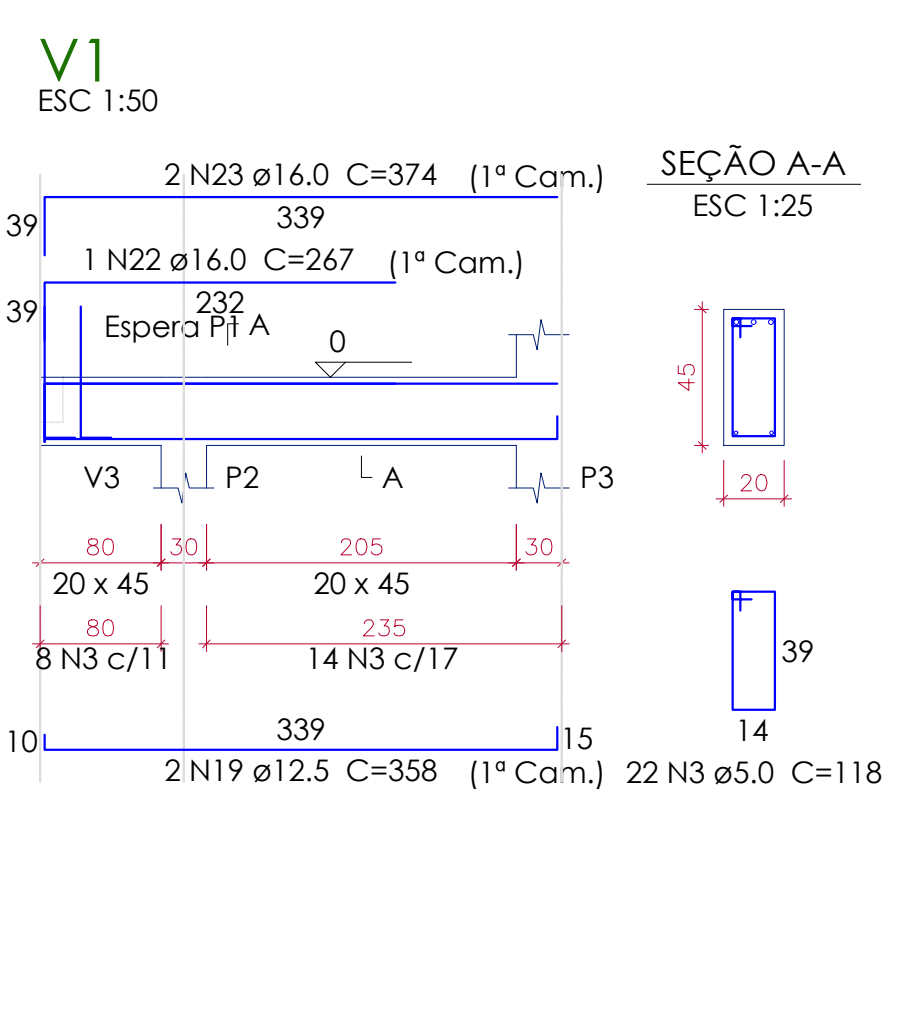


**Relação do aço**

Positivos X	Positivos Y	2x2	V1	V4	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	18	88	1584
	2	5.0	69	78	5382
	3	5.0	44	118	5192
CA50	4	6.3	22	70	140
	5	6.3	12	104	1248
	6	6.3	12	244	2928
	7	6.3	15	274	4110
	8	8.0	6	290	1740
	9	10.0	8	VAR	VAR
	10	10.0	14	113	1582
	11	10.0	12	123	1476
	12	10.0	7	113	791
	13	10.0	6	123	738
	14	10.0	10	118	1180
	15	10.0	8	133	1064
	16	10.0	2	317	634
	17	10.0	2	335	670
	18	12.5	16	VAR	VAR
	19	12.5	4	358	1432
	20	12.5	16	104	1664
	21	12.5	2	338	676
	22	16.0	1	267	267
	23	16.0	4	374	1496
	24	16.0	1	217	217

**1 SAPATAS**  
ESCALA 1:50



**Resumo do aço**

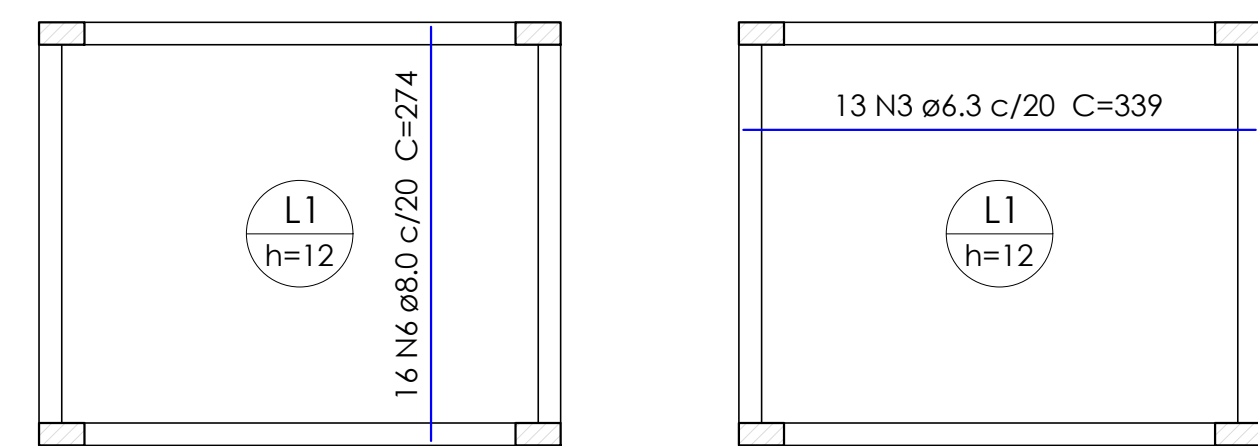
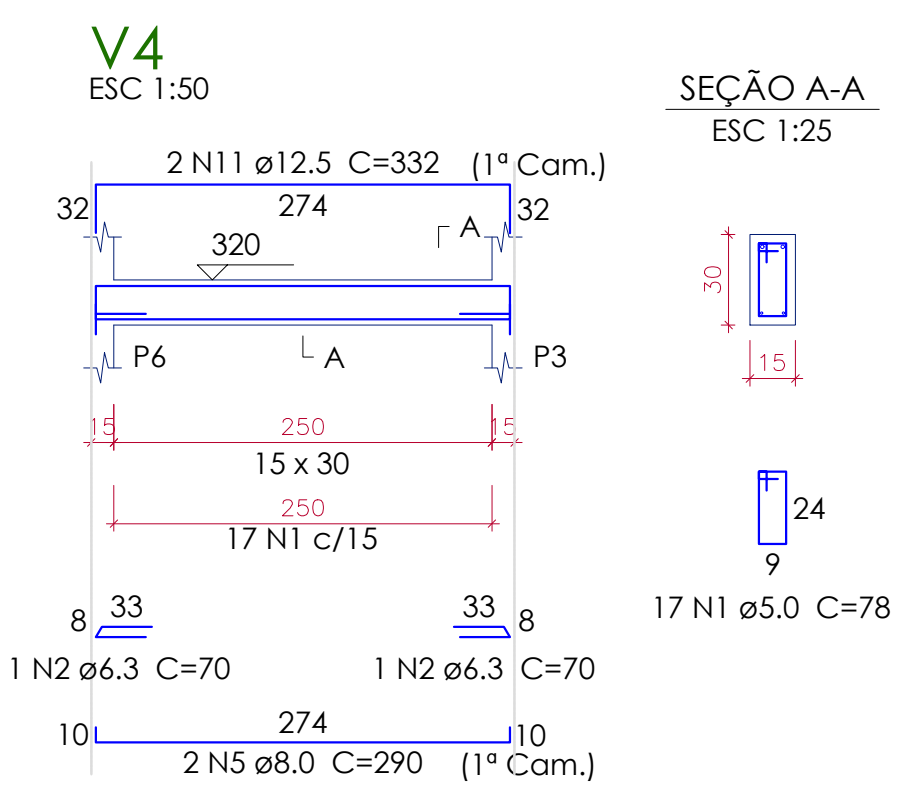
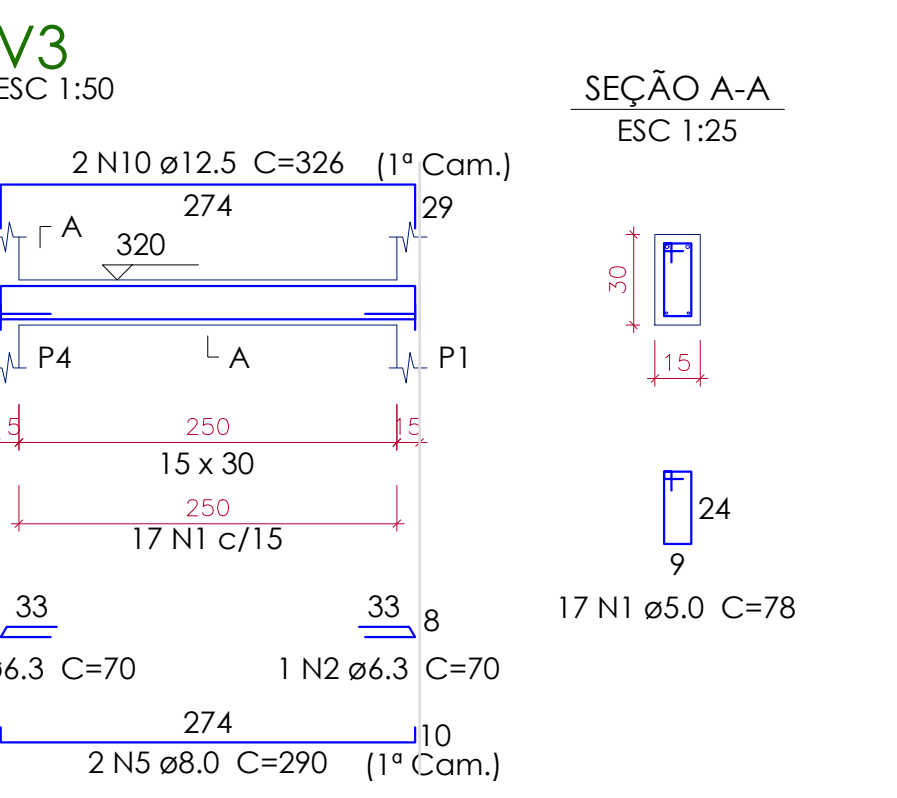
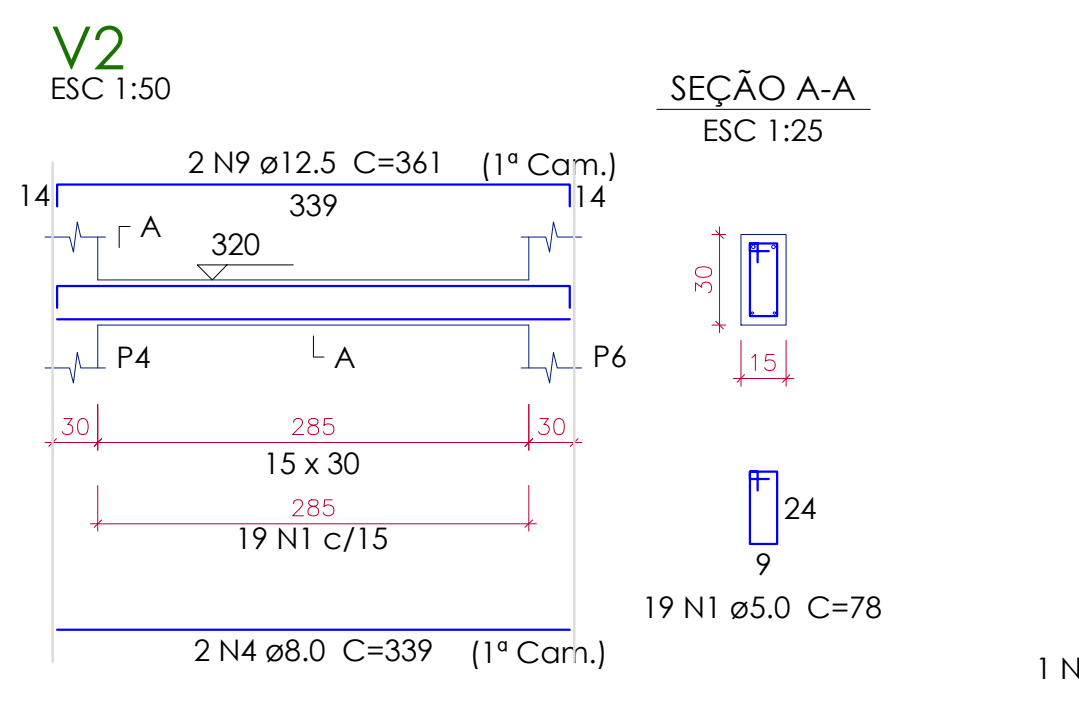
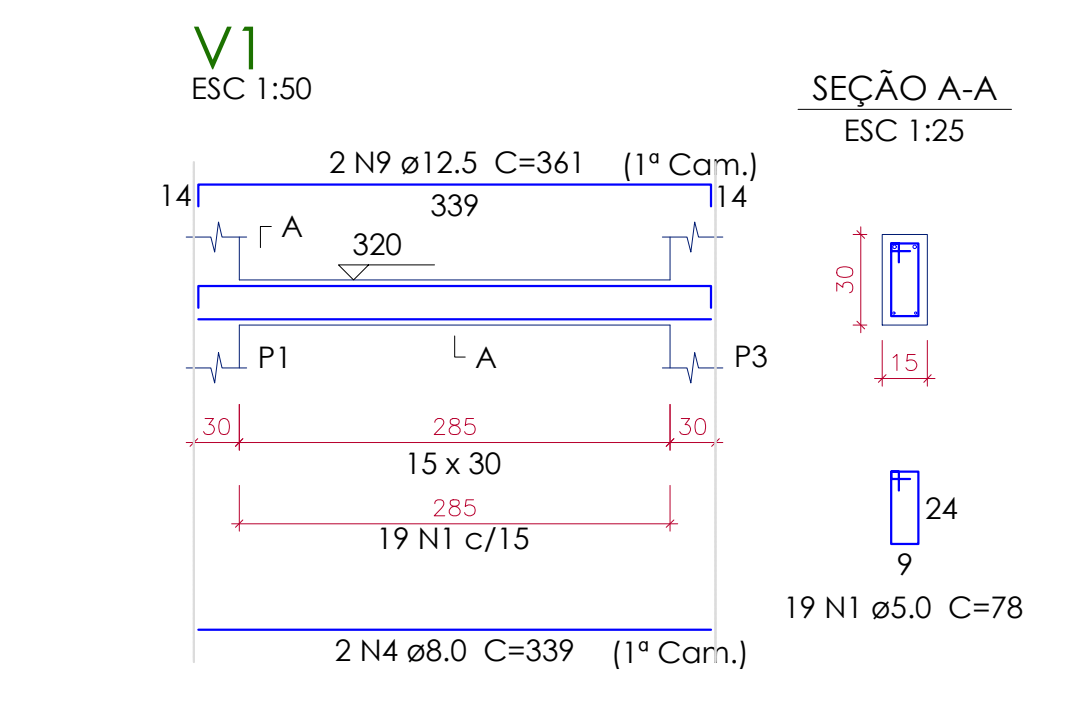
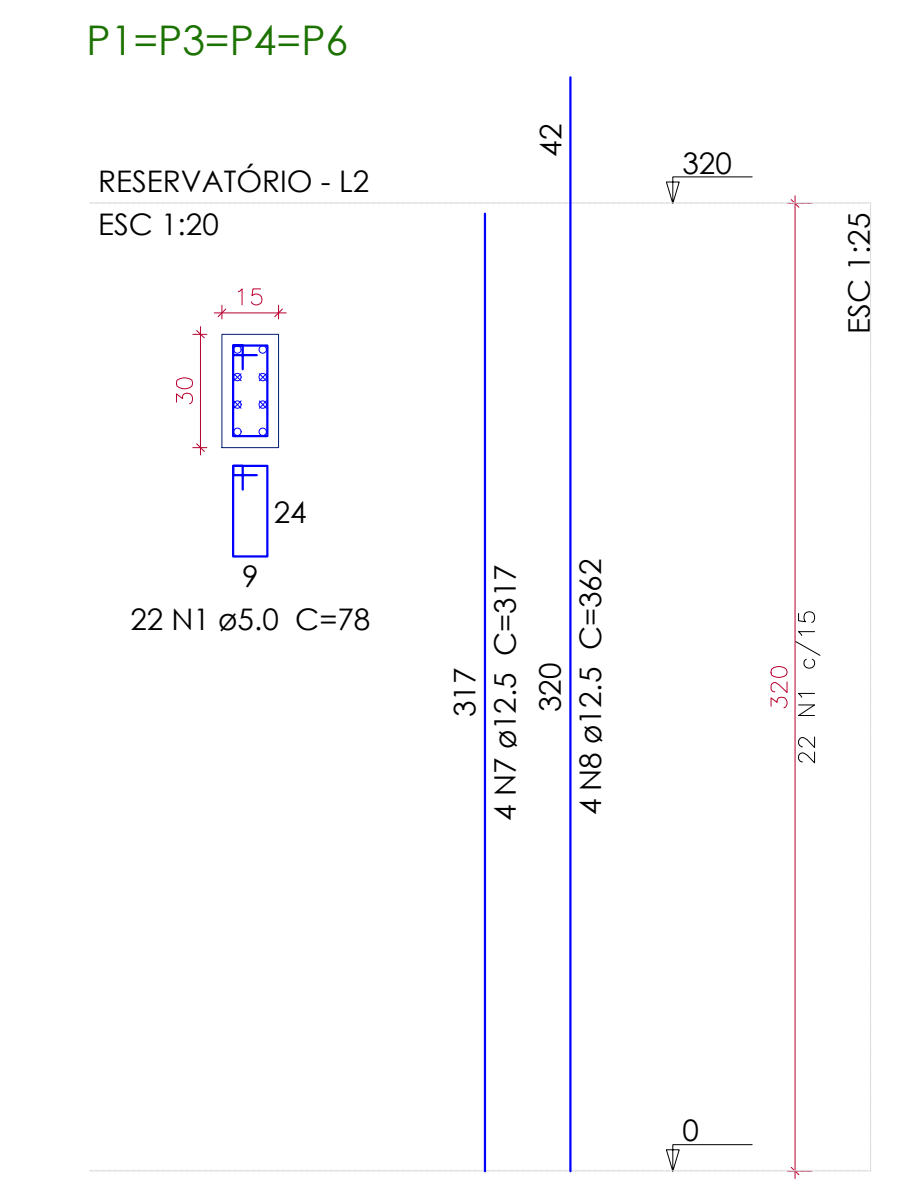
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	84.3	22.7
	8.0	17.4	7.6
	10.0	90.2	61.1
	12.5	62.6	66.3
	16.0	19.8	34.4
CA60	5.0	121.6	20.6

PESO TOTAL (kg)  
CA50 192  
CA60 20.6

Volume de concreto (C-30) = 3.42 m<sup>3</sup>  
Área de forma = 28.71 m<sup>2</sup>

**3 LAJES PISO**  
ESCALA 1:50

**2 VIGAS PISO**  
ESCALA 1:50



**6 LAJES RESERVATÓRIO**  
ESCALA 1:50

**Relação do aço**

4xP1	Positivos X	Positivos Y			
V1	V2	V3			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	160	78	12480
CA50	2	6.3	4	70	280
	3	6.3	13	339	4407
	4	8.0	4	339	1356
	5	8.0	4	290	1160
	6	8.0	16	274	4384
	7	12.5	16	317	5072
	8	12.5	16	362	5792
	9	12.5	4	361	1444
	10	12.5	2	326	652
	11	12.5	2	332	664

**Resumo do aço**

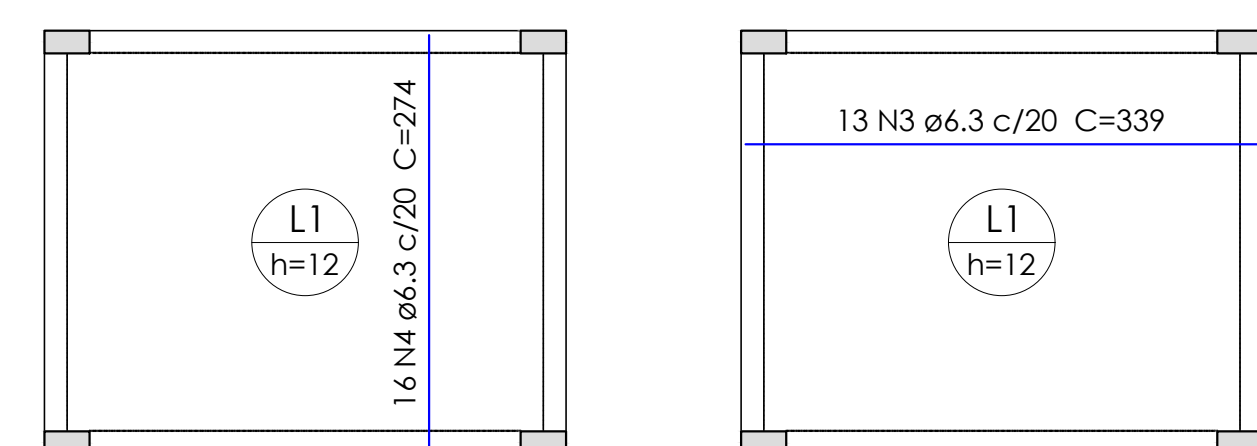
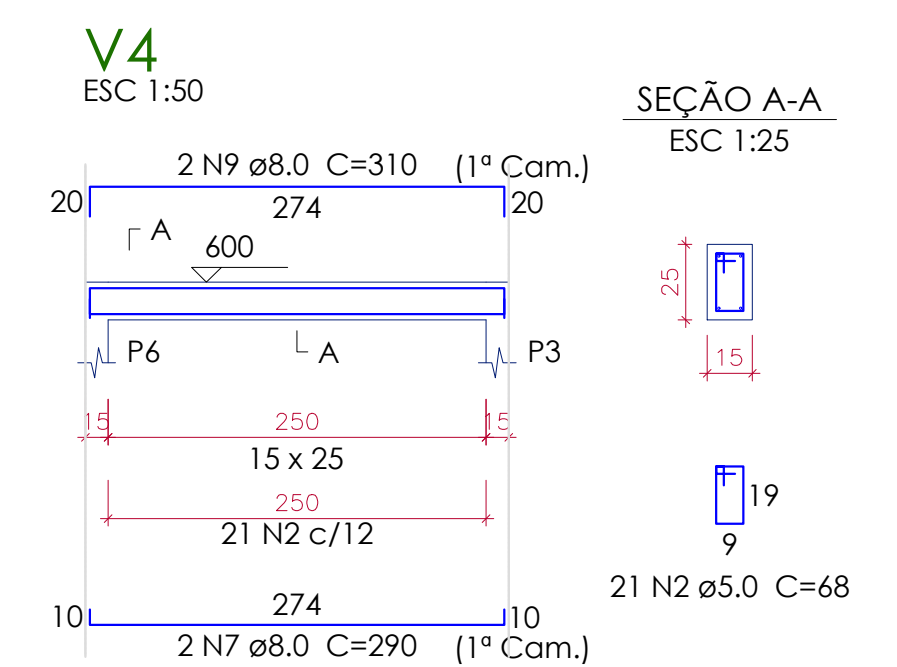
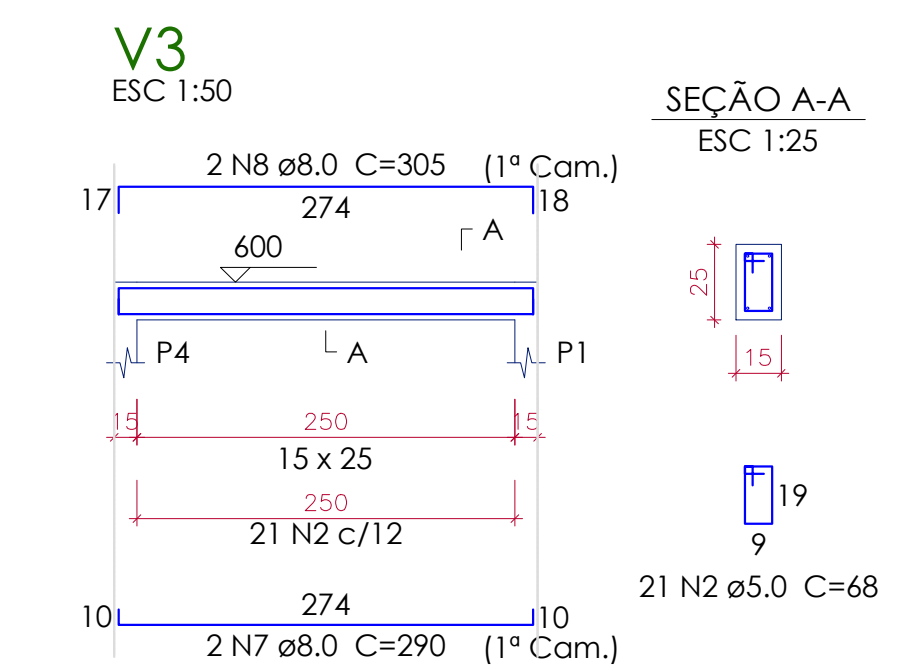
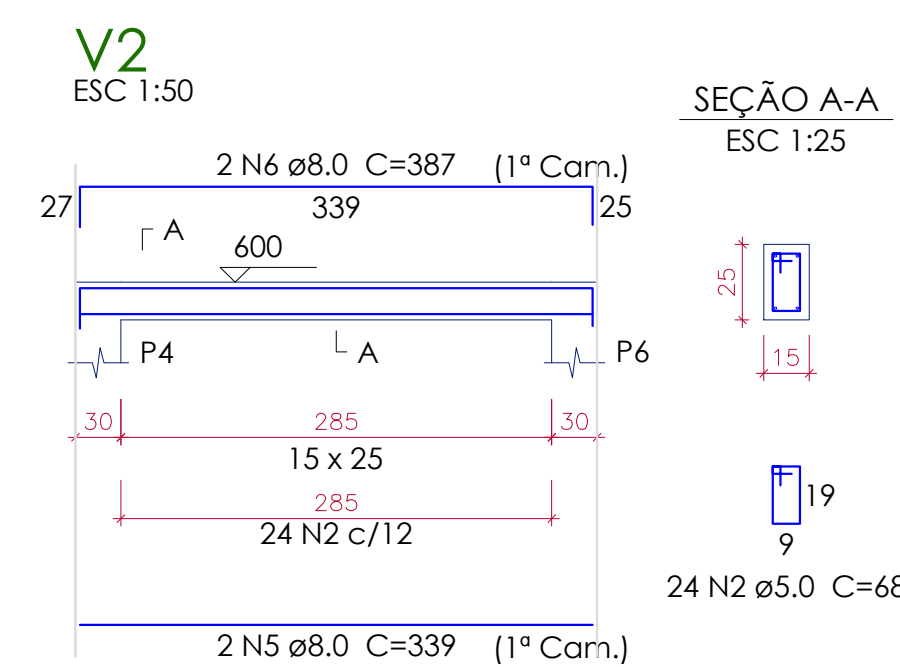
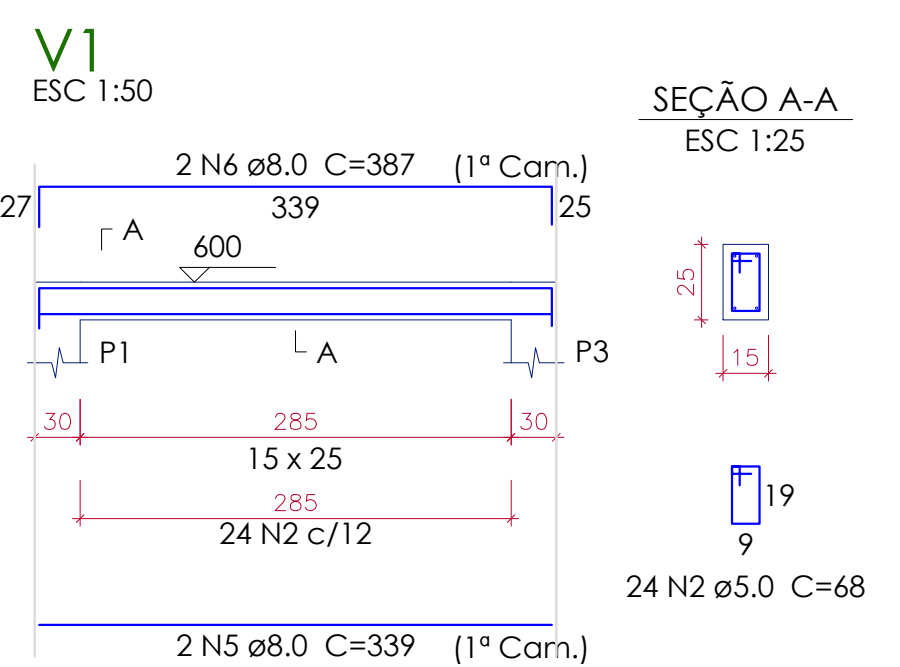
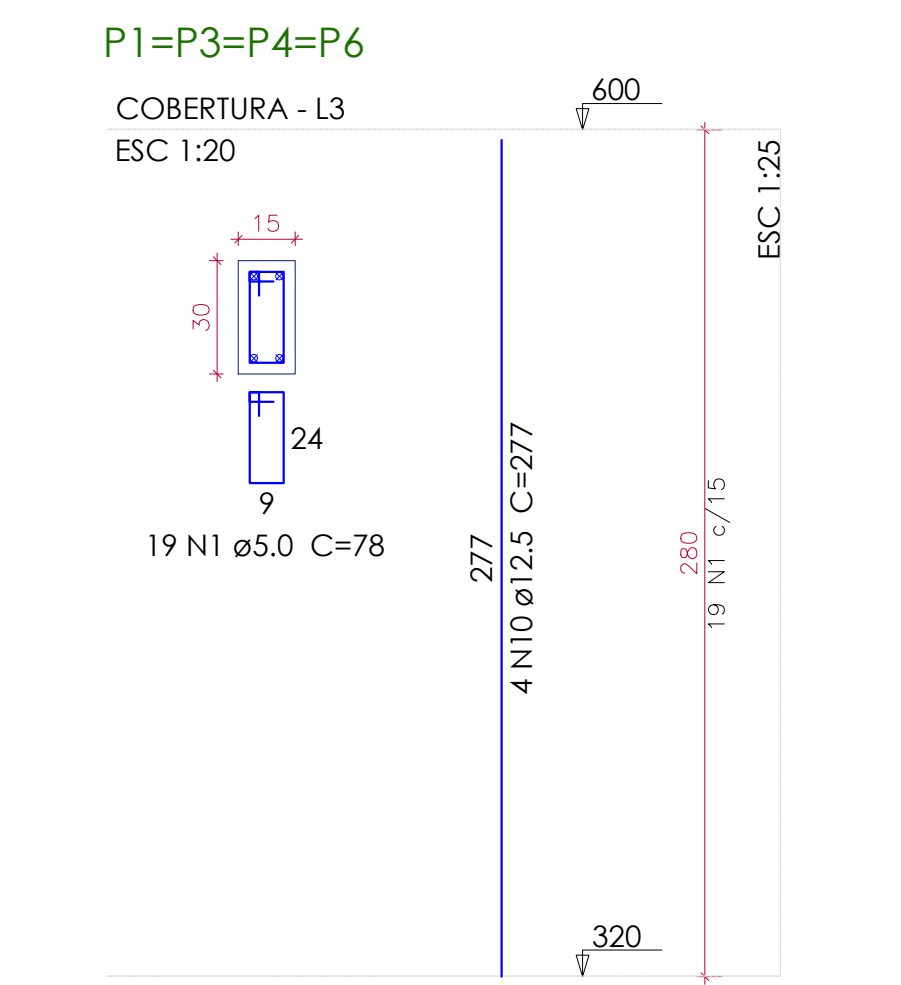
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	46.9	12.6
	8.0	69	29.9
	12.5	136.3	144.4
CA60	5.0	124.8	21.2

PESO TOTAL (kg)  
CA50 186.9  
CA60 21.2

Volume de concreto (C-30) = 2.09 m<sup>3</sup>  
Área de forma = 28.81 m<sup>2</sup>

**4 PILARES RESERVATÓRIO**  
ESCALA 1:50

**5 VIGAS RESERVATÓRIO**  
ESCALA 1:50



**9 LAJES COBERTURA**  
ESCALA 1:50

**Relação do aço**

4xP1	Positivos X	Positivos Y			
V1	V2	V3			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	76	78	5928
	2	5.0	90	68	6120
CA50	3	6.3	13	339	4407
	4	6.3	16	274	4384
	5	8.0	4	339	1356
	6	8.0	4	387	1548
	7	8.0	4	290	1160
	8	8.0	2	305	610
	9	8.0	2	310	620
	10	12.5	16	277	4432

**Resumo do aço**

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	88	23.7
	8.0	53	23
	12.5	44.4	47
CA60	5.0	120.5	20.4

PESO TOTAL (kg)  
CA50 93.6  
CA60 20.4

Volume de concreto (C-30) = 1.92 m<sup>3</sup>  
Área de forma = 26.13 m<sup>2</sup>

**7 PILARES COBERTURA**  
ESCALA 1:50

**8 VIGAS COBERTURA**  
ESCALA 1:50

**INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA**  
CATARINENSE

CONTRATADA: INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA CATARINENSE  
CONTRATANTE: INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA CATARINENSE

UNIDADE: CAMPUS CAMBORIÓ  
RUA JOAQUIM GARCIA - SN CAMBORIÓ - SC

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RUA JOAQUIM GARCIA - SN CAMBORIÓ - SC

ENGENHEIRO: ENG. ALEXANDRE FERNANDES COIMBRA  
CREA-SC: 18625-4

NOME DO PROJETO: LABORATÓRIOS DE AGRONÔMIA  
TÍTULO DO DESENHO: SAPATAS, PILARES, VIGAS E LAJES

OBJETIVO DO PROJETO: EXECUTIVO  
AUTORIA DO DESENHO: ALEXANDRE FERNANDES COIMBRA  
CIDADE - UF: CAMBORIÓ - SC

TIPO DE PROJETO: ESTRUTURAL  
ÁREA DO PROJETO: [ ]  
REVISÃO Nº: 00  
ESCALA: INDICADA

FOLHA: 2  
REFERÊNCIA: EST. 2/2

DATA: 11/2022