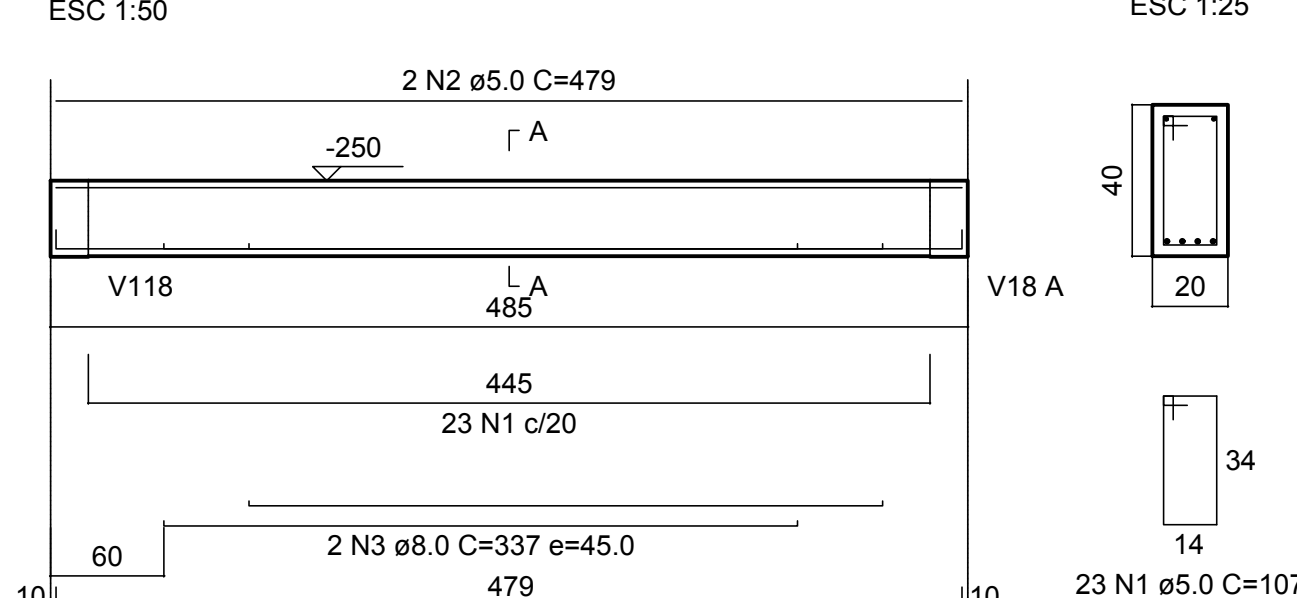
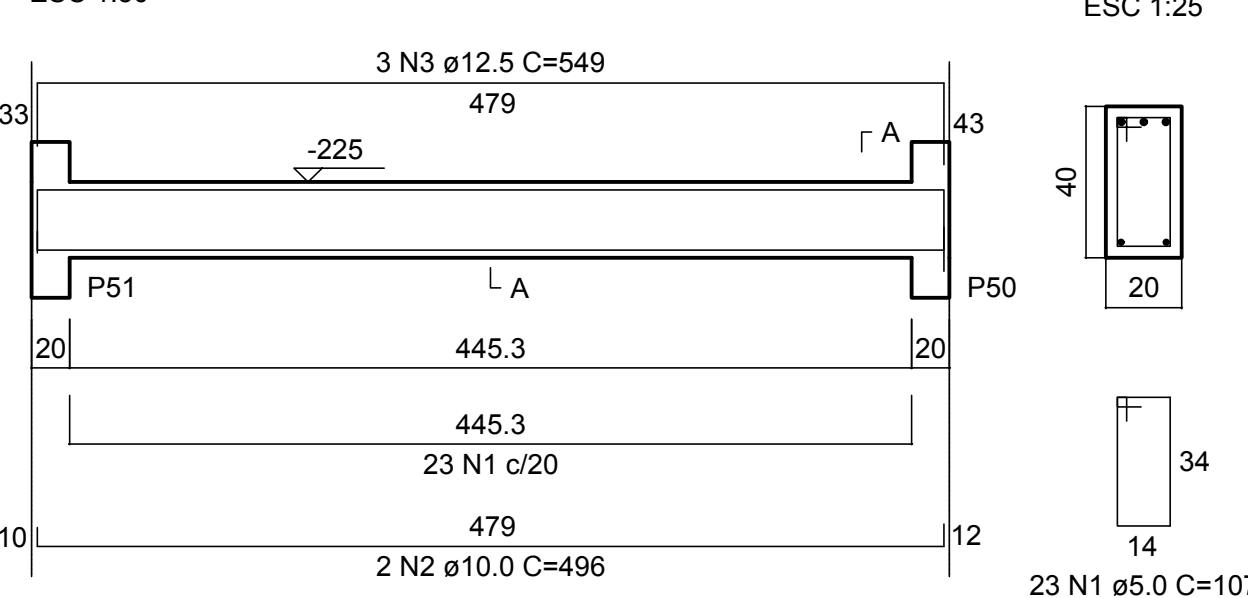
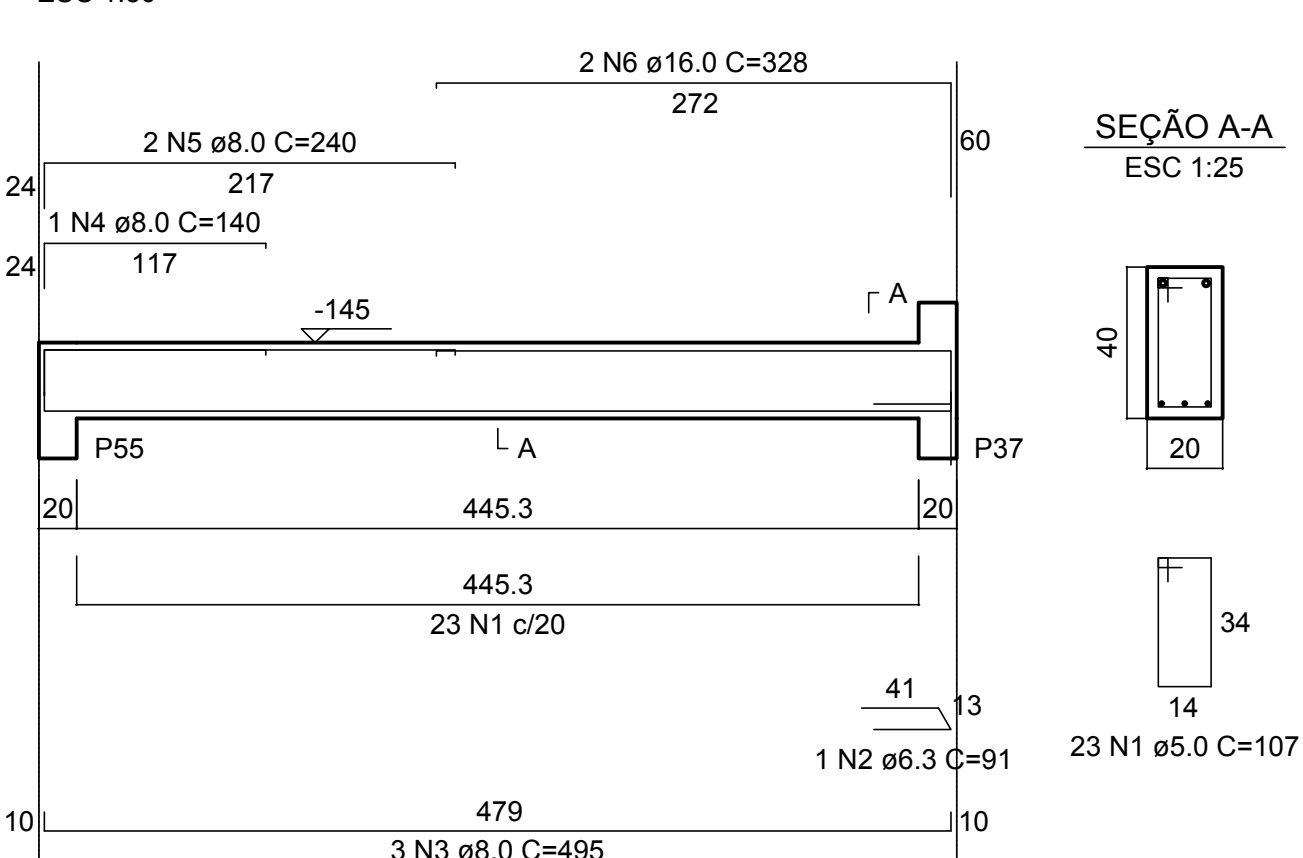
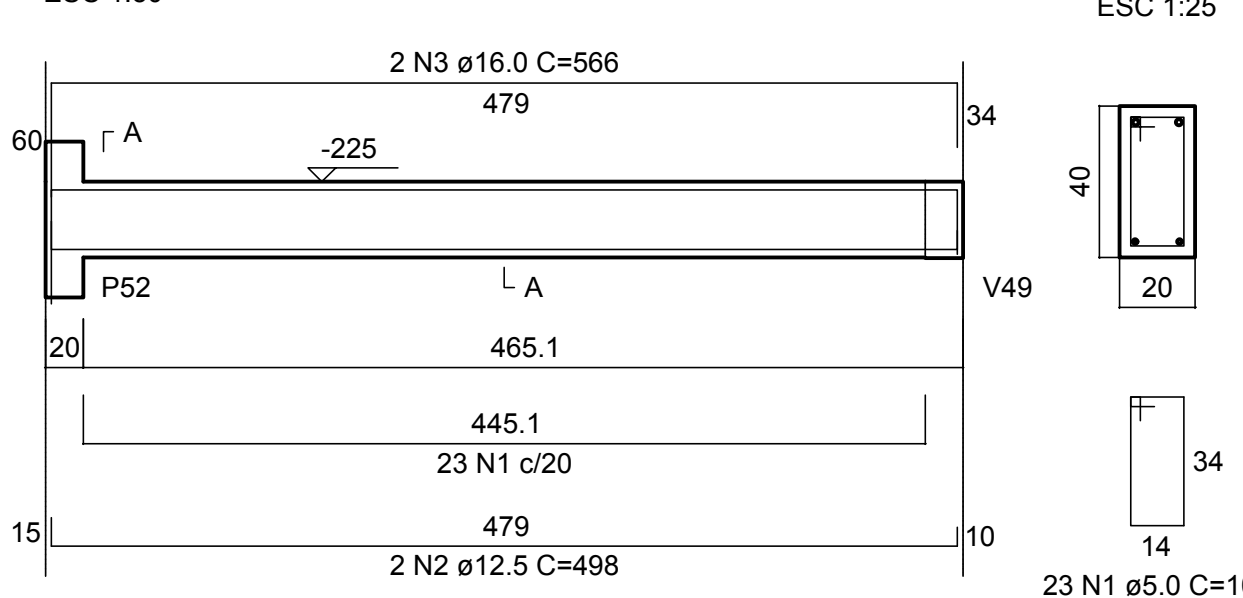
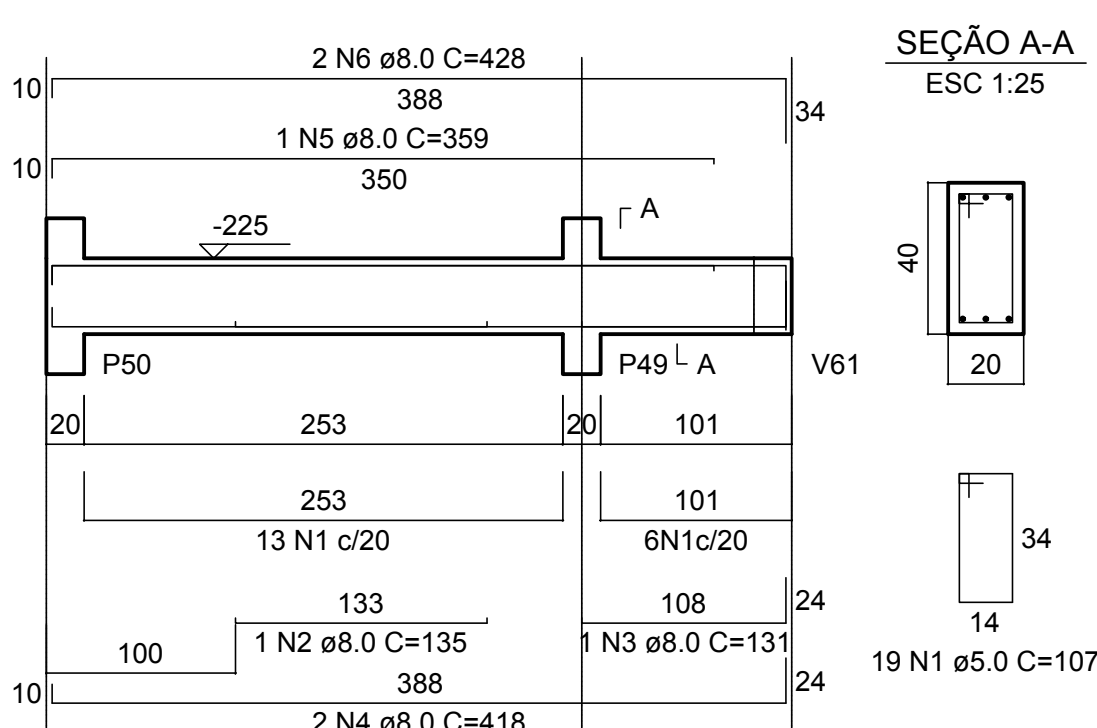
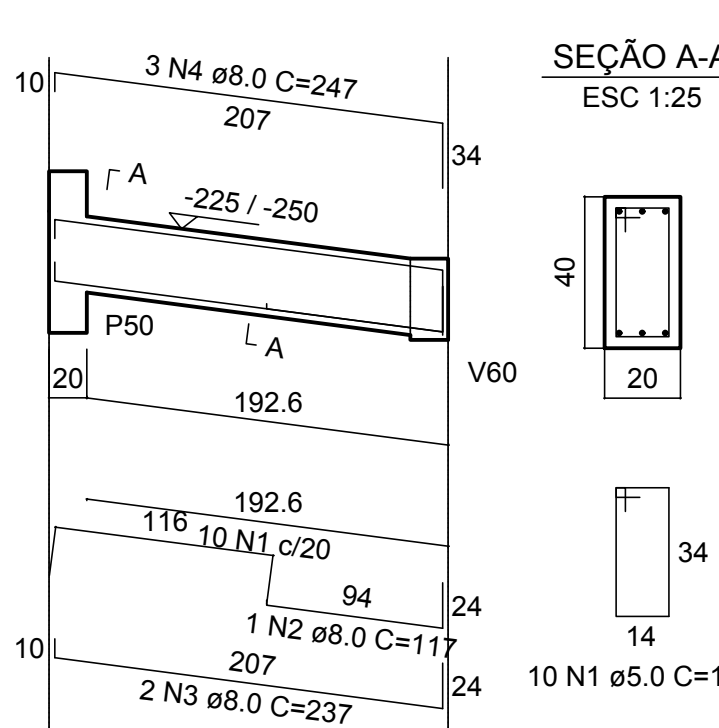
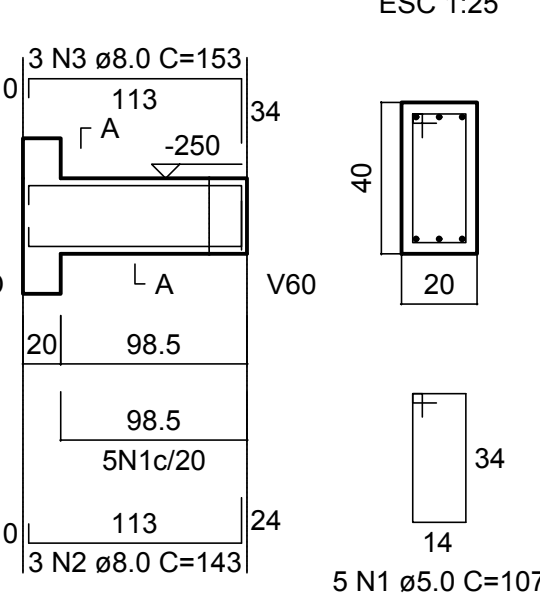
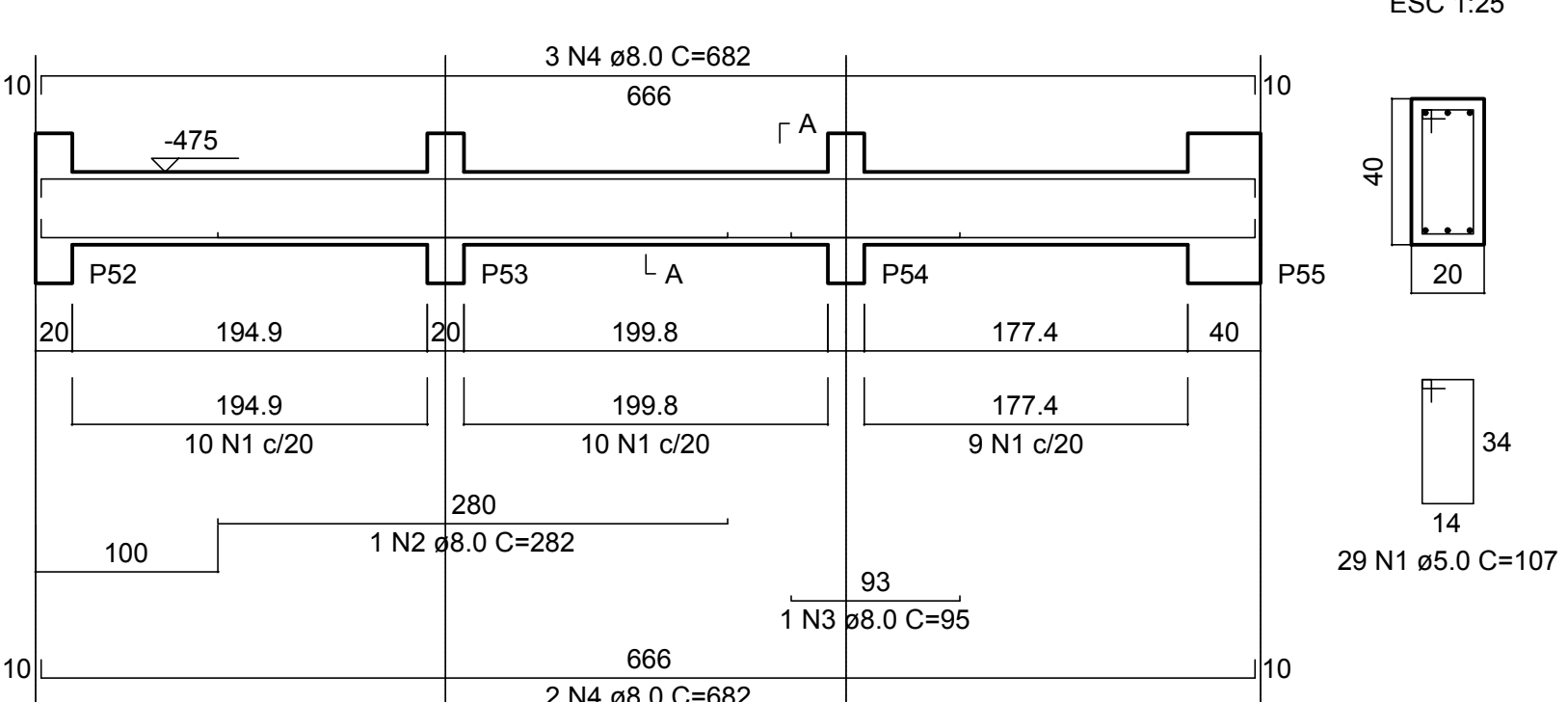
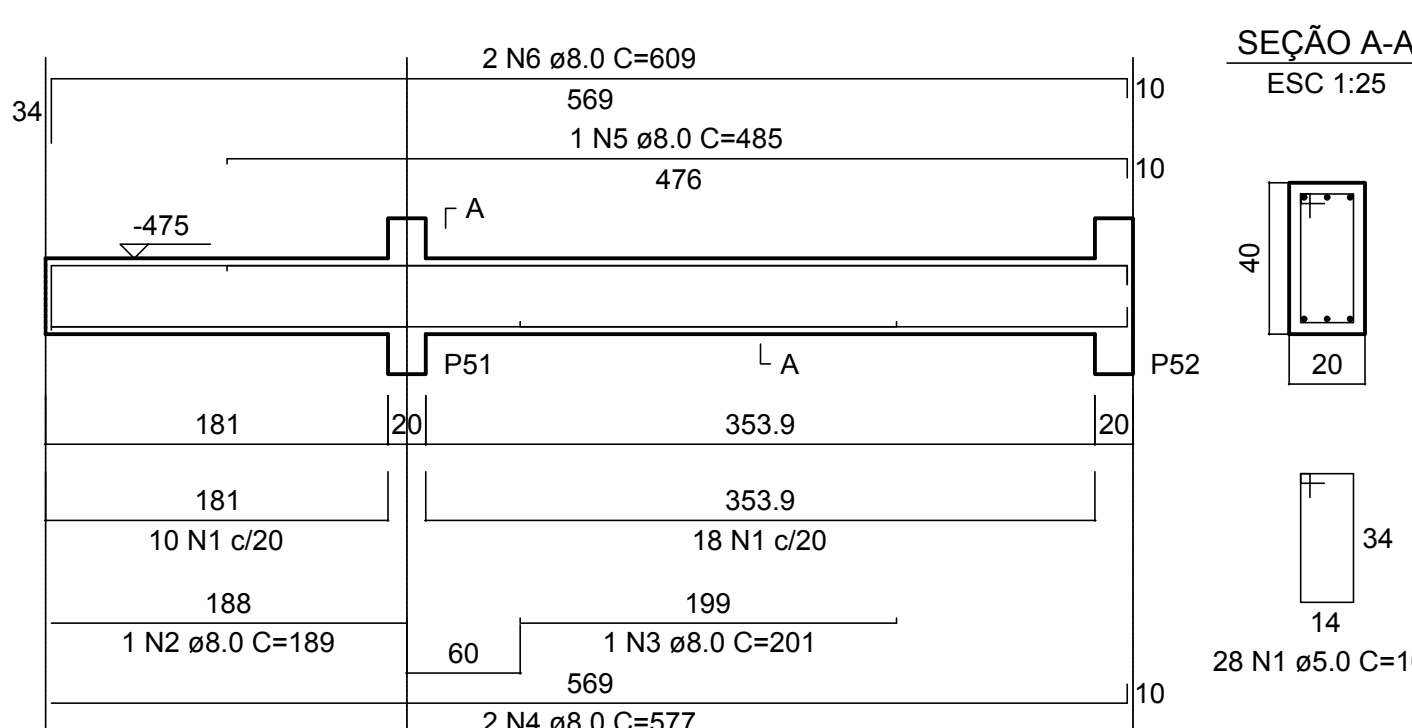


VIGAS COM CASO DE BARRAS FLUTUANTES:

V23, V31

Elemento	Pos	Diam. ϕ	Q (Dob)	Ret(Dob)	Comp (cm)	Total (C-A)	(A-K ₀)	(A-K ₀ -G)
V 16-47 21	1	ø8	4	10	550	100	14.0	5.5
	2	ø8	2	370	370	370	3.7	1.5
	3	ø8	2	550	100	570	14.0	4.5
	4	ø8	2	130	130	140	5.6	5.6
	5	ø5	29			110	33.90	5.0
Total=108							14.0	5.5
							28.0	1.0
V 19	14	ø12.5	2	15	413	443	886	3.4
	15	ø12.5	2	15	335	364	866	6.6
	16	ø12.5	2	10	413	10	886	3.4
Total=108							20.6	3.9
							3.3	3.3
V 20	18	ø8	2	10	241	261	522	2.0
	19	ø8	2	10	241	10	522	2.0
	20	ø8	12			100	1200	1.9
Total=108							4.4	2.1
V 23	21	ø16	2	9	586	624	1248	15.6
	22	ø16	1		399	399	399	6.1
	23	ø8	19		586	19	624	15.6
	24	ø10	2		151	14	165	3.0
	25	ø10	2	21	151	165	330	3.2
	26	ø12.5	2	15	140	140	280	1.4
	27	ø10	2	126	14	140	280	1.8
	28	ø10	2	113	12	113	226	1.6
	29	ø5	34			110	37.40	6.9
Total=108							48.8	5.5
V 28	53	ø10	2	588	12	600	1200	1.4
	54	ø12.5	2	535	550	1110	22.2	8.3
	55	ø12.5	2	340	340	340	3.4	6.7
	56	ø12.5	1	315	315	315	3.1	3.1
	57	ø12.5	1	145	112	257	50.0	4.9
	58	ø12.5	2	16	250	250	250	4.9
	59	ø12.5	1	225	225	225	2.2	1.1
	60	ø8	15	130	130	130	130	9.8
	61	ø5	57	120	10	130	390	9.8
	62	ø8	5	110	120	120	120	0.5
	63	ø5	57			110	6270	
Total=108							26.5	10.8
V 29	64	ø8	2	314	10	334	660	2.5
	65	ø8	1	314	314	314	12	1.2
	66	ø8	1	314	314	314	1200	3.9
	67	ø5	16		110	1170		2.8
Total=108							8.5	3.1
V 30	68	ø6.3	4	44	9	334	660	1.0
	69	ø16	2	19	350	358	776	12.2
	70	ø9	2		350	370	740	2.9
	71	ø5	18			100	1800	2.8
Total=108							17.7	3.1
V 31	72	ø6.3	2	44	14	334	660	1.0
	73	ø12.5	2	600	15	615	1230	12.1
	74	ø10	2	540	110	650	2200	2.4



RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V18-L1	CA60	1	5,0	5	487	535
	CA50	2	8,0	3	143	429
	CA30	3	8,0	3	153	470
V18-A1.1	CA60	1	5,0	10	107	107
	CA30	2	8,0	1	117	117
	CA50	4	8,0	2	237	237
V18-B-L1	CA50	4	8,0	3	247	741
	CA60	1	5,0	19	107	2033
	CA50	2	8,0	2	135	269
	CA30	3	8,0	1	131	131
	CA50	4	8,0	2	418	836
V24-L0	CA50	3	8,0	3	359	1077
	CA60	6	8,0	2	428	856
	CA50	4	5,0	20	200	2000
	CA50	2	8,0	1	189	189
	CA50	3	8,0	1	201	201
V56-L0	CA50	4	8,0	2	577	1154
	CA50	5	5,0	1	485	485
	CA50	6	8,0	2	609	1218
	CA50	2	8,0	1	282	282
	CA50	4	8,0	3	35	95
V60-L1	CA50	4	8,0	5	682	3410
	CA60	1	5,0	23	107	2461
	CA50	2	5,0	2	479	958
	CA30	3	8,0	2	337	674
	CA50	4	8,0	2	495	990
V61-L1	CA50	1	5,0	23	107	2461
	CA50	2	12,5	2	498	996
	CA50	3	10,0	3	568	1704
V62-L1	CA50	1	5,0	23	107	2461
	CA50	2	6,3	1	91	91
	CA50	8	8,0	1	485	485
	CA50	4	8,0	1	140	140
	CA50	5	8,0	2	240	480
V63-L1	CA50	3	10,0	3	568	1704
	CA50	1	5,0	23	107	2461
	CA50	4	10,0	2	498	996
	CA30	3	12,5	3	549	1647

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	0.9	0.2
	8.0	153.4	66.6
	10.0	9.9	6.7
	12.5	26.4	28
	16.0	17.9	31
CA60	5.0	205.4	34.8

PESO TOTAL (kg)	
CA50	132.6
CA60	34.8

Volume de concreto (C-25) = 3.13 m³
 Área de forma = 39.11 m²

Resumo Aço	Comp. total	Peso+10%	Total
FIXAÇÃO DAS ARMADURAS DE 2ª CAMADA	(m)	(kg)	
CA-50-A Ø20	3.0	8.1	8.1
Total			8.1

AVALIAÇÃO DA QUALIDADE DA ESTRUTURA			
RECEBIMENTO PROVISÓRIO		ACEITAÇÃO DEFINITIVA	
AVALIADOR/CREA:		PRANCHA REVISADA	
BRUNO SILVEIRA MARTINS – 148751/D		RT DO PROJETO ORIGINAL:	
		KÊNIO ÁVILA FERNANDES	
		AVALIADOR	
		BRUNO SILVEIRA MARTINS – 148751/D	
REVISÃO	DESCRIÇÃO		DATA
00	EMIÇÃO INICIAL		15/09/17
01	REVISÃO MP		06/06/18
02	NADA A REVISAR		
03	NADA A REVISAR		
04	REVISÃO MUROS EM BLOCO		03/07/18
05	NADA A REVISAR		
06	NADA A REVISAR		
07	LICIT RESIDUAL: SOMENTE NUMERAÇÃO SEM REVISÃO PROJETO		05/05/21
REVISÕES			
<p align="center">MINISTÉRIO PÚBLICO DO ESTADO DE MINAS GERAIS SEDE DAS PROMOTORIAS DE JUSTIÇA DE PATOS DE MINAS</p>			
ENDEREÇO:		ÁREA TERRENO:	
AVENIDA ANGRA DOS REIS, S/N – BAIRRO COPACABANA		10.293,06m²	
PATOS DE MINAS – MG		ÁREA CONSTRUÍDA:	
		2.860,04m²	
PROPRIETÁRIO:		CNP.J:	
		20.971.057/0001-45	
PROCURADORIA GERAL DE JUSTIÇA DO ESTADO DE MINAS GERAIS			
PROJETO DE ESTRUTURA DE CONCRETO ARMADO			
EMPRESA:		CNP.J:	
PRIMEIRA ENGENHARIA LTDA		14.920.928/0001-07	
RESPONSÁVEIS TÉCNICOS:		CREA:	
KÊNIO ÁVILA FERNANDES		MG-70.918/D	
CONTEÚDO:		DATA:	
DETALHAMENTO DE VIGAS – SUBSOLO		15/09/17	
		FOLHA:	
		ESCALA:	
		INDICADA	
		39/64	