

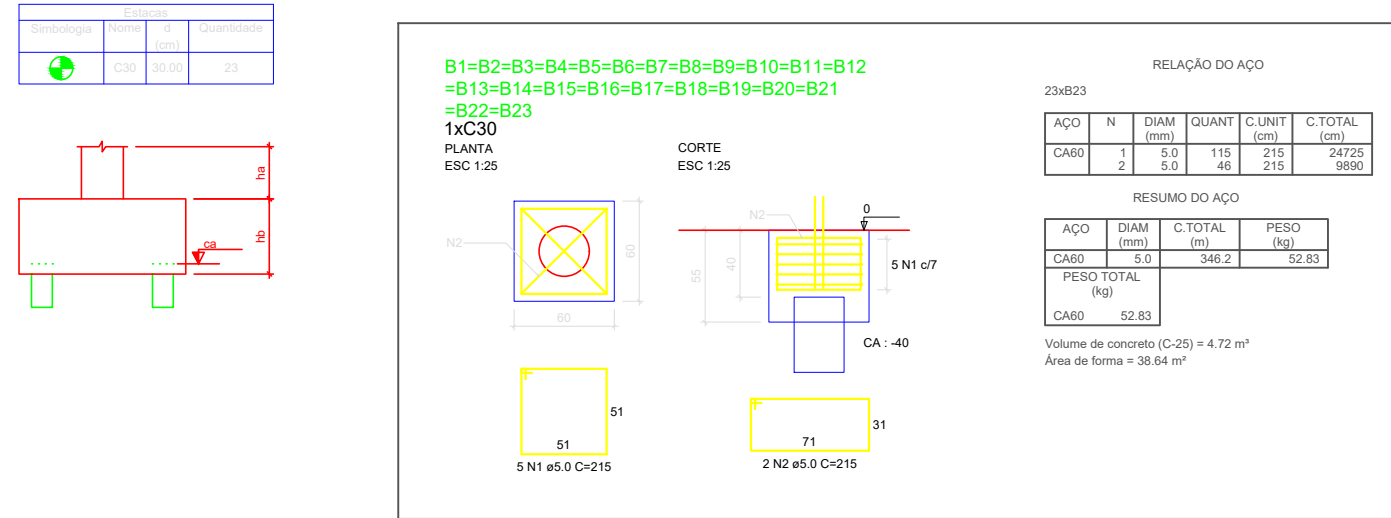
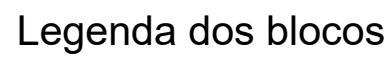


Este projeto tem a finalidade de complementar e ampliar a estrutura já existente no local.

Portanto em alguns pontos do projeto, nota-se a estrutura sem apoios, como é o caso das VIGAS do pavimento superior (V1, V8 e V21), esses trechos já possuem estrutura de concreto e alvenaria executadas, servindo de apoio para a execução das novas estruturas.

Os pilares P24, e P25, iniciam no pavimento superior, dando continuidade aos pilares existentes no local.

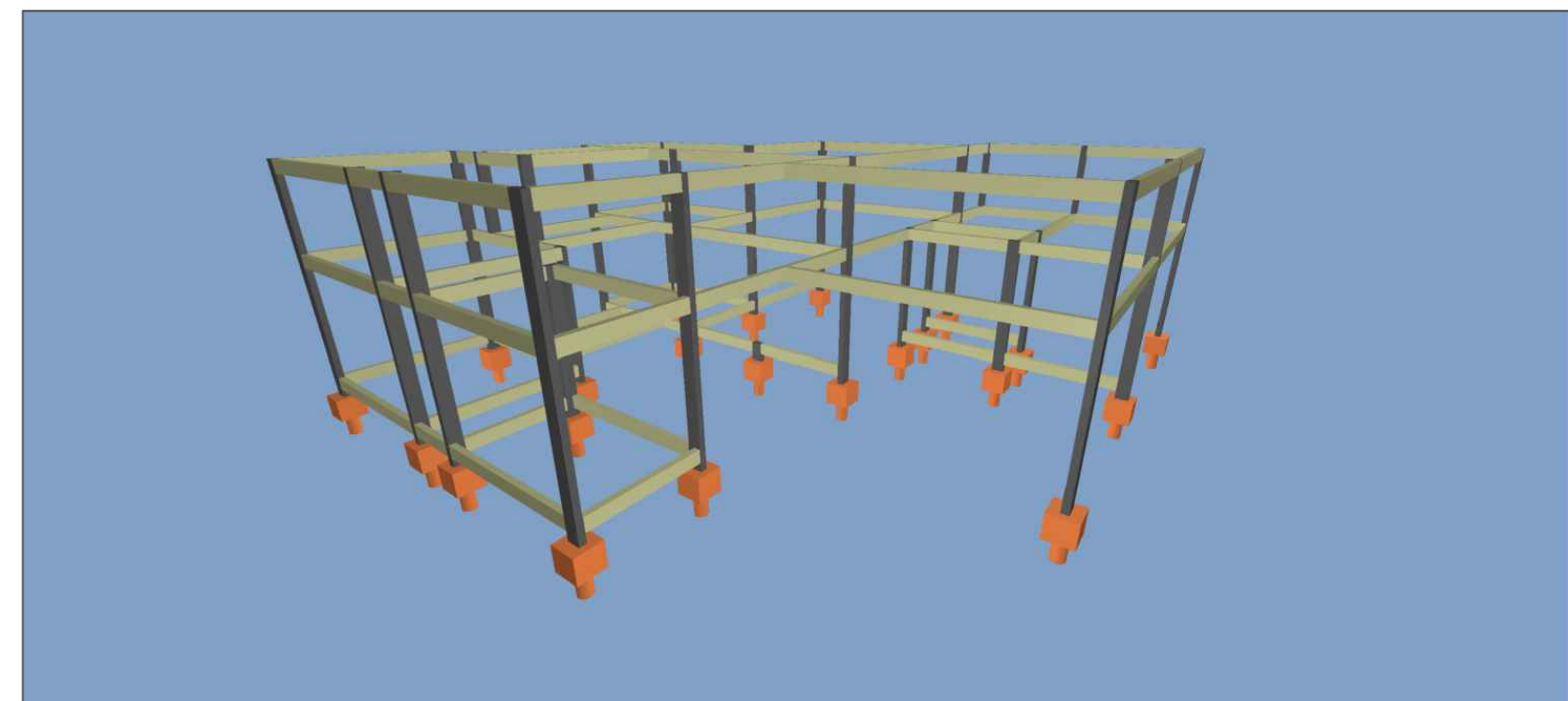
Demais detalhes podem ser verificados no relatório fotográfico do local.



E01 a E23



A taxa de resistência do solo utilizada no cálculo é de 2 kgf/cm² considerando o solo homogêneo. As estacas possuem 2,50 m de comprimento, para atender a essa resistência. Caso a taxa de resistência do solo do terreno onde será executada a obra seja inferior a esta, as fundações deverão ser recalculadas pela empresa contratada.



ESTRUTURAL

ETAPA - CRAS - Centro de Referência Assistência Social
RUA RVS-2 - RESIDENCIAL VALE DOS SONHOS, FIRMINÓPOLIS GOIÁS

FUNDO MUNICIPAL DE ASSIST. SOCIAL - FMAS
CNPJ: 14.387.430/0001-12

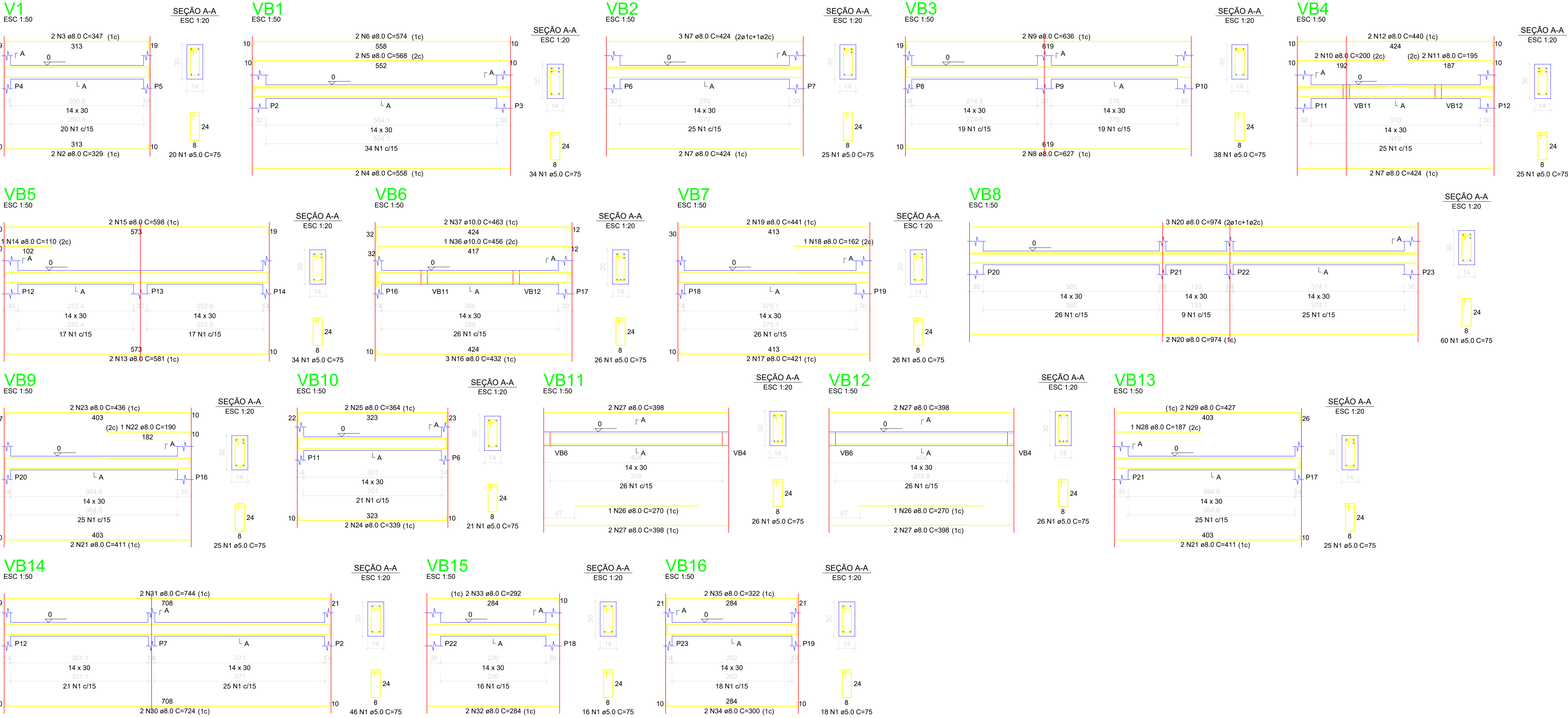
Eng. Civil Tício Alves de Menezes
CREA: 1016118465D-GO

01 Payments

FORMAS	00.00 m²
	ÁREA CONSTRUÇÃO

1/4

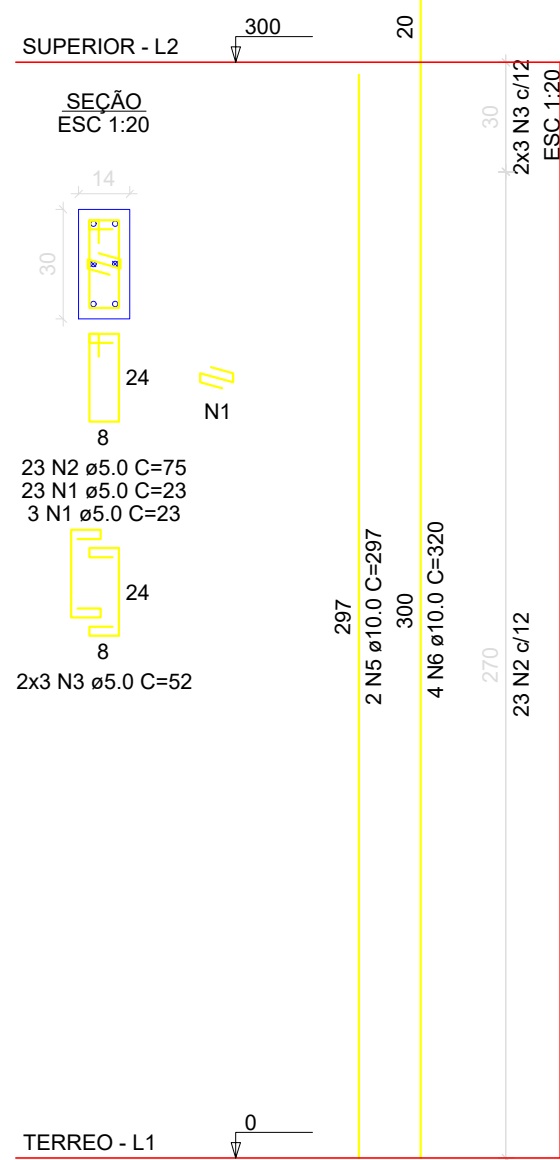
DATA: DEZEMBRO/2021



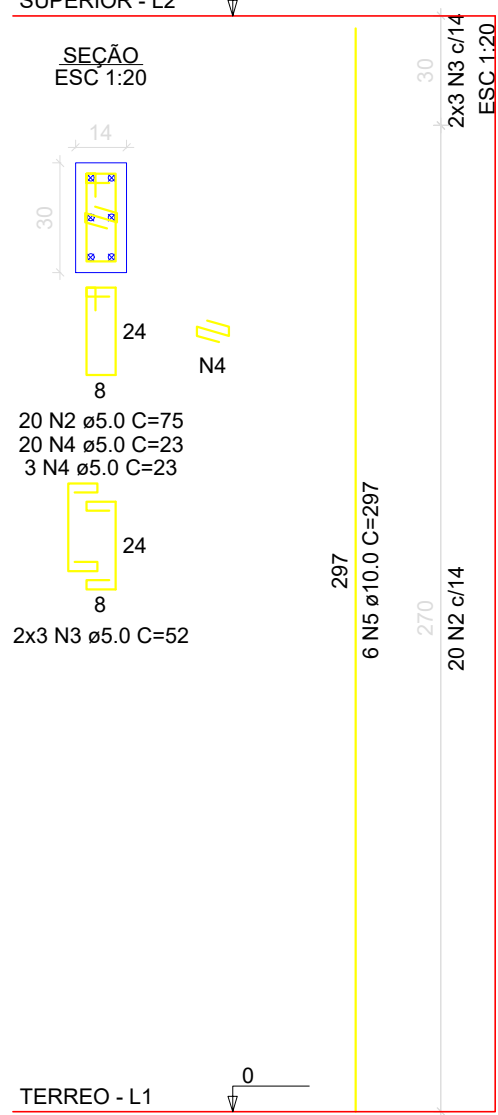
RELAÇÃO DO AÇO						
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)	
CA50	1	5.0	491	5.0	2455	36825
CA50	2	8.0	2	329	658	694
	3	8.0	2	347	694	1116
	4	8.0	2	558	1116	1136
	5	8.0	2	568	1136	1148
	6	8.0	2	574	1148	2568
	7	8.0	7	424	2968	1254
	8	8.0	2	627	1254	1272
	9	8.0	2	636	1272	400
	10	8.0	2	200	400	390
	11	8.0	2	195	390	880
	12	8.0	2	440	880	1162
	13	8.0	2	581	1162	110
	14	8.0	1	110	110	1196
	15	8.0	2	598	1196	1296
	16	8.0	3	432	1296	842
	17	8.0	2	421	842	162
	18	8.0	1	162	162	882
	19	8.0	2	441	882	4870
	20	8.0	5	974	4870	1644
	21	8.0	4	411	1644	190
	22	8.0	1	190	190	872
	23	8.0	2	436	872	678
	24	8.0	2	339	678	728
	25	8.0	2	364	728	540
	26	8.0	2	270	540	3184
	27	8.0	6	398	2388	187
	28	8.0	1	187	187	854
	29	8.0	2	427	854	1448
	30	8.0	2	724	1448	1488
	31	8.0	2	744	1488	568
	32	8.0	2	284	568	584
	33	8.0	2	292	584	600
	34	8.0	2	300	600	644
	35	8.0	2	322	644	1456
	36	10.0	1	456	1456	926
	37	10.0	2	463	926	

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	366.4	143.19
CA60	5.0	13.8	8.46
PESO TOTAL (kg)			151.65
CA50			151.65
CA60			56.16
Volume de concreto (C-25) = 3.37 m³			
Área de forma = 59.38 m²			

P1=P2=P3=P6=P7=P10
=P11=P12=P14=P15=P16
P=19=P20=P21=P22=P23



P04=P05=P08=P09=P17=P18



RELAÇÃO DO AÇO					
16xP6					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	416	23	9568
	2	5.0	488	75	36600
	3	5.0	132	52	6864
	4	5.0	138	23	3174
CA50	5	10.0	68	297	20156
	6	10.0	64	320	20480

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	10.0	406.8	248.31
CA60	5.0	562.1	85.77
PESO TOTAL (kg)			
CA50		248.31	
CA60		85.77	

Volume de concreto (C-25) = 2.77 m³
Área de forma = 58.08 m²



ESTRUTURAL

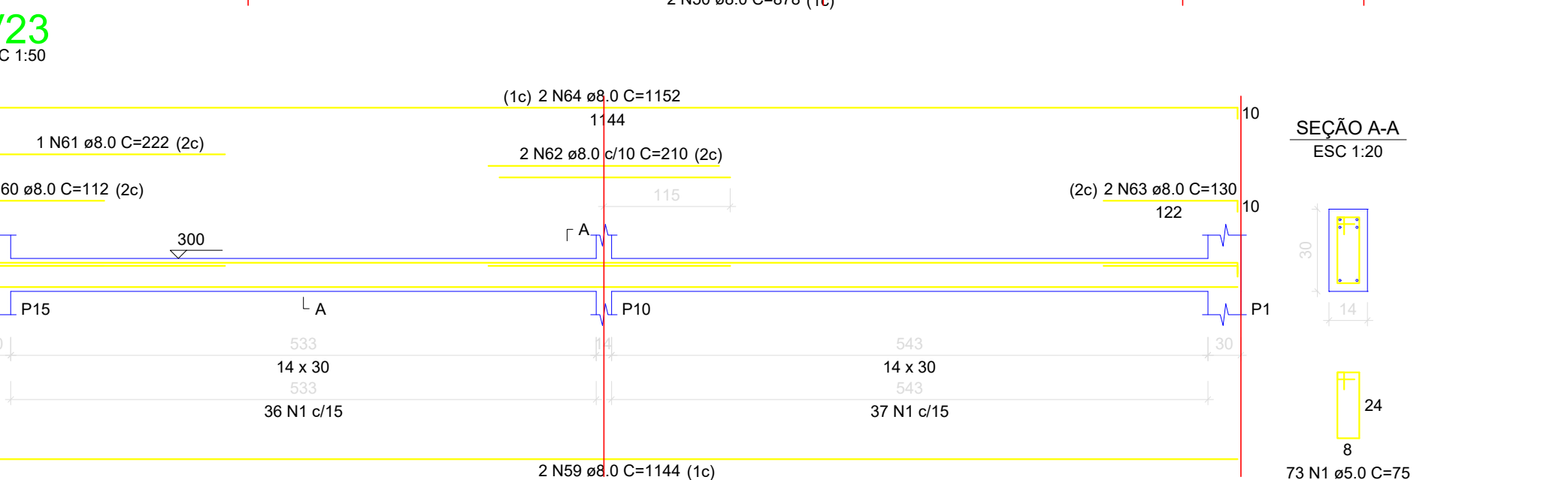
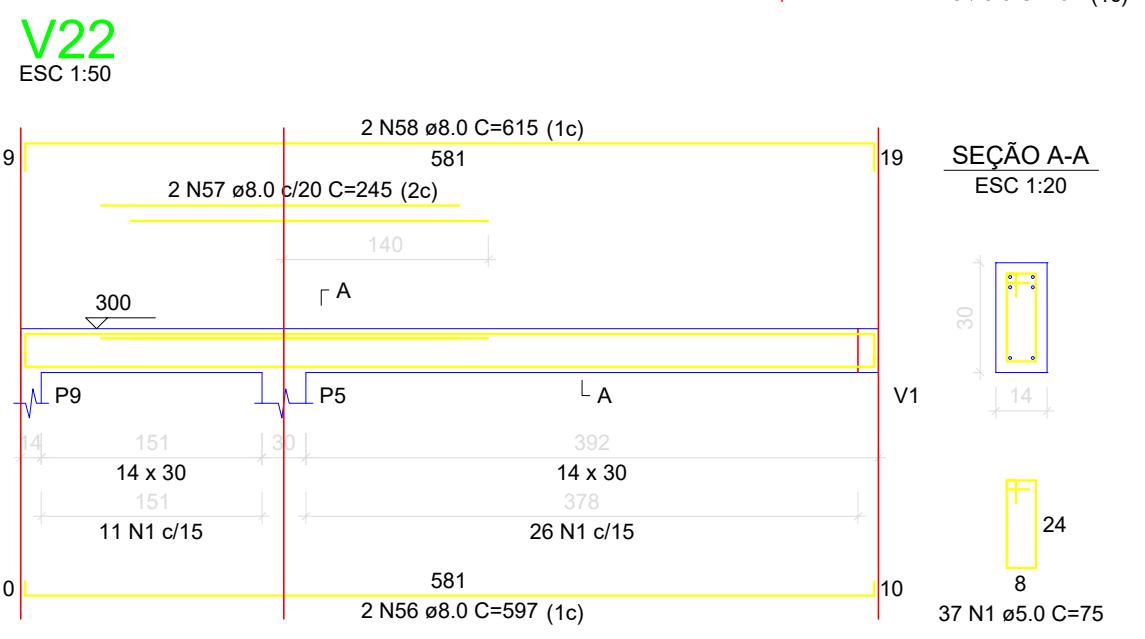
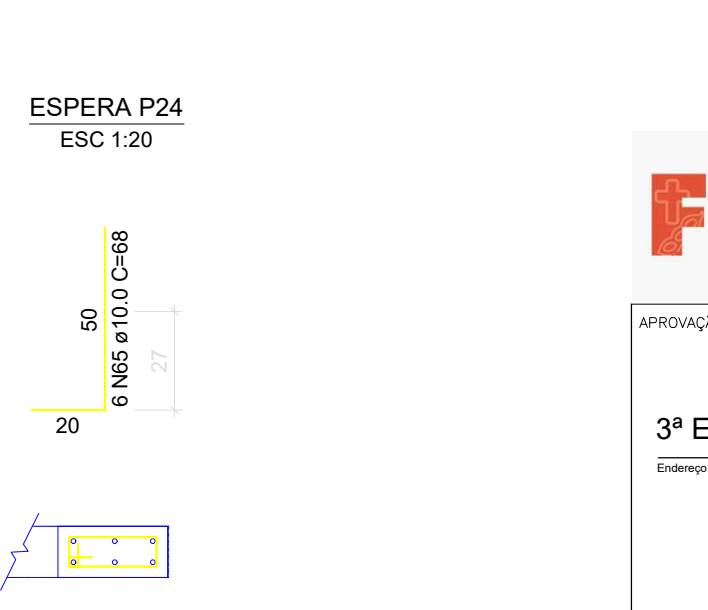
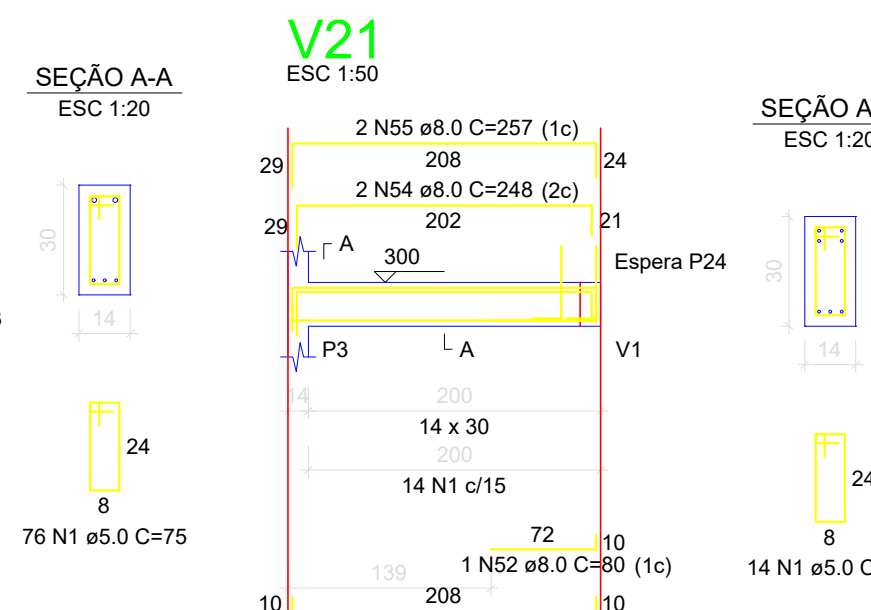
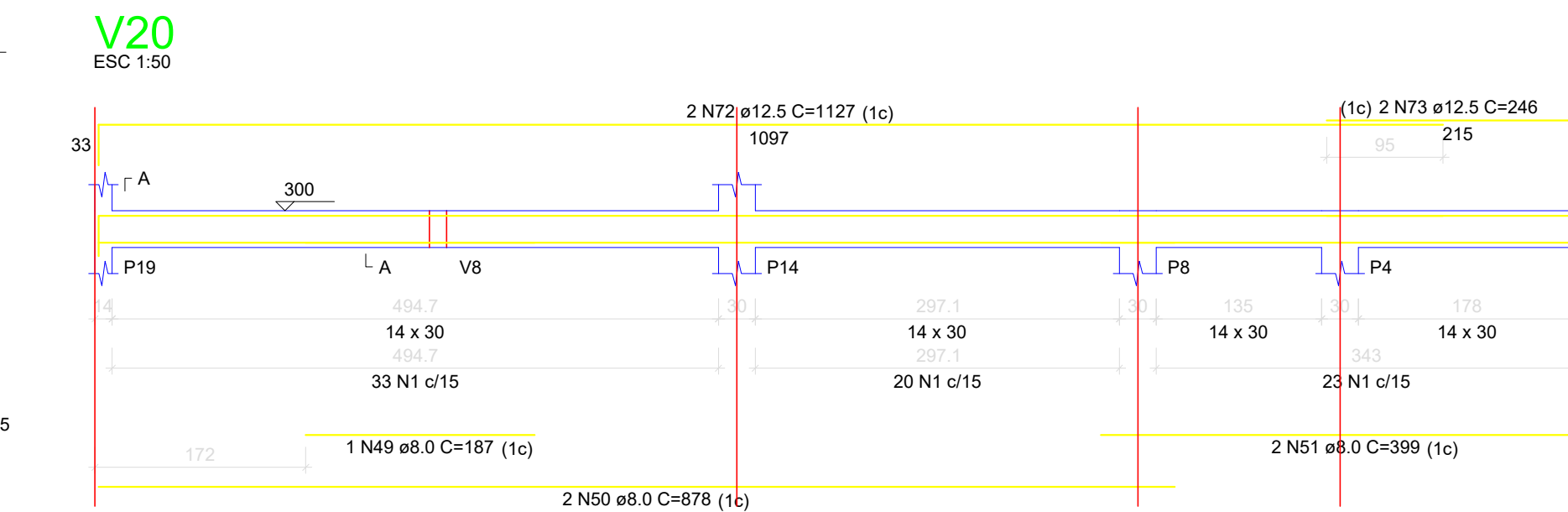
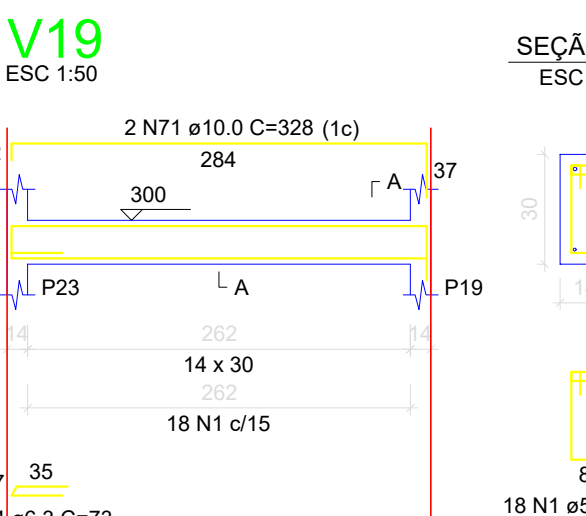
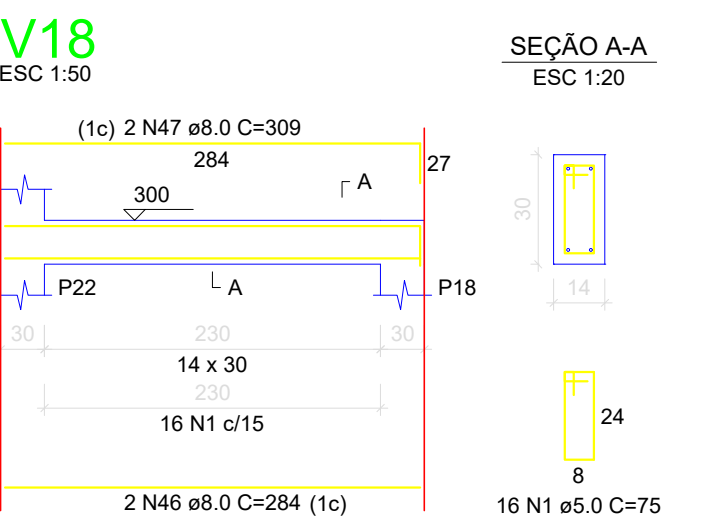
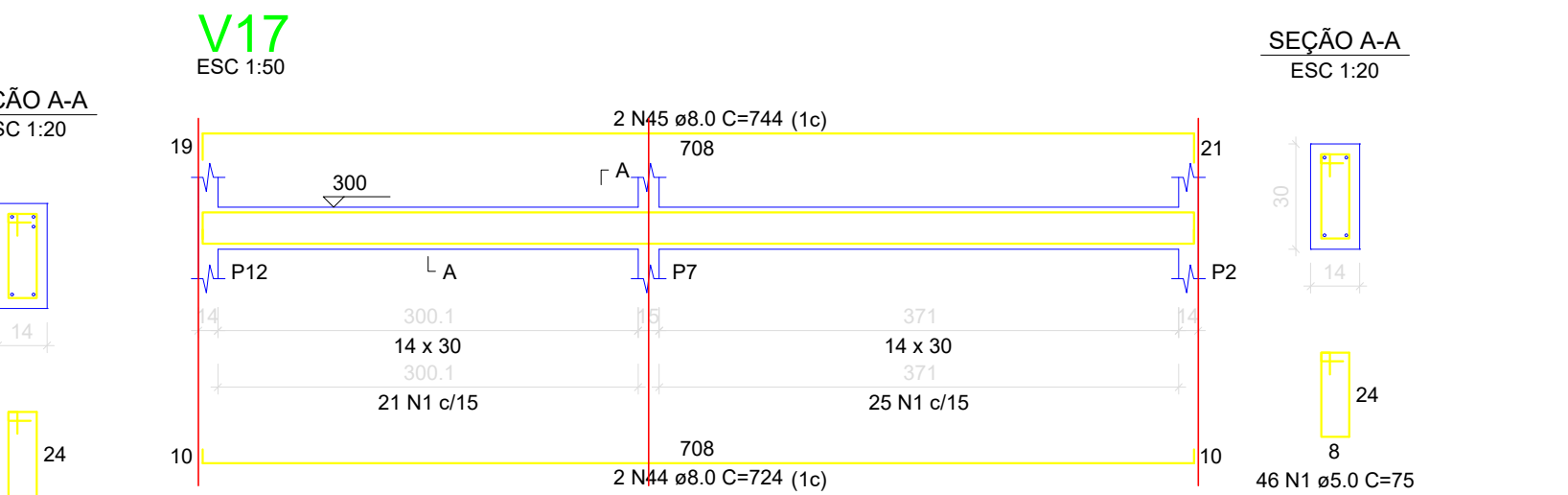
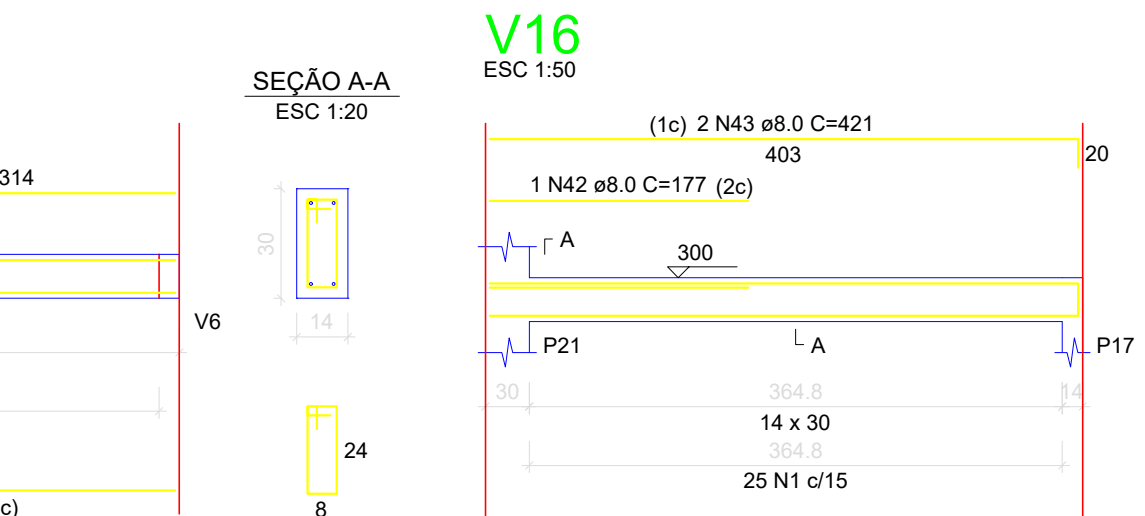
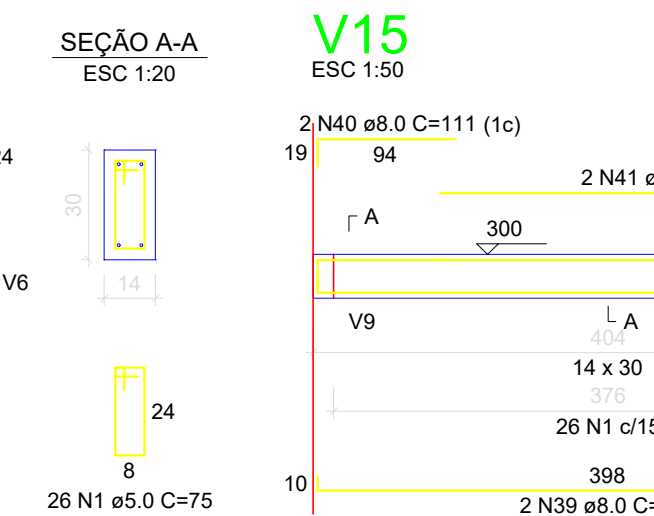
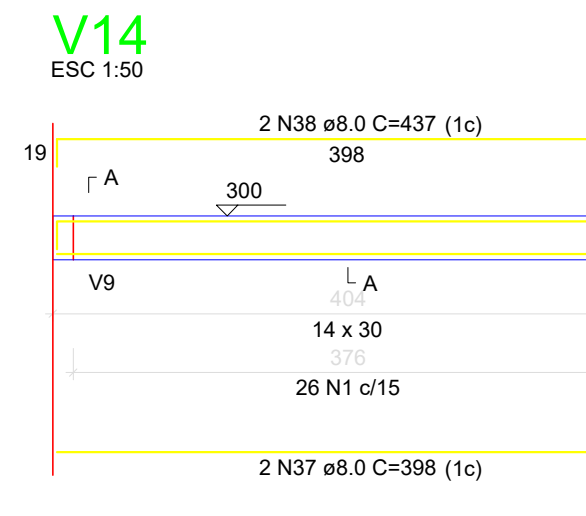
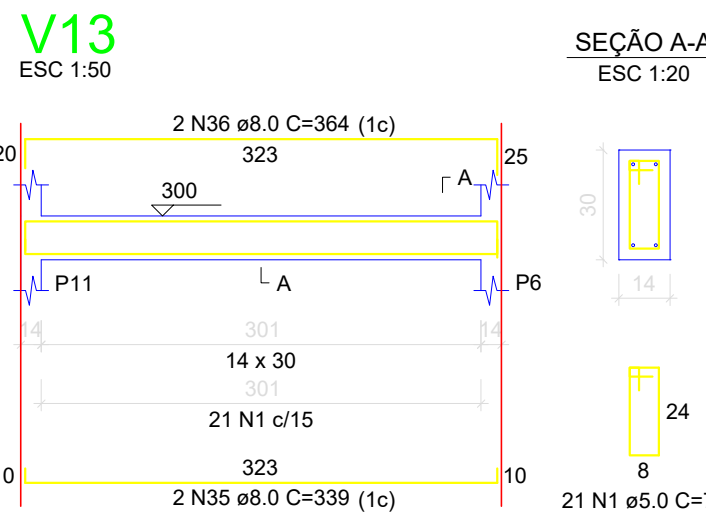
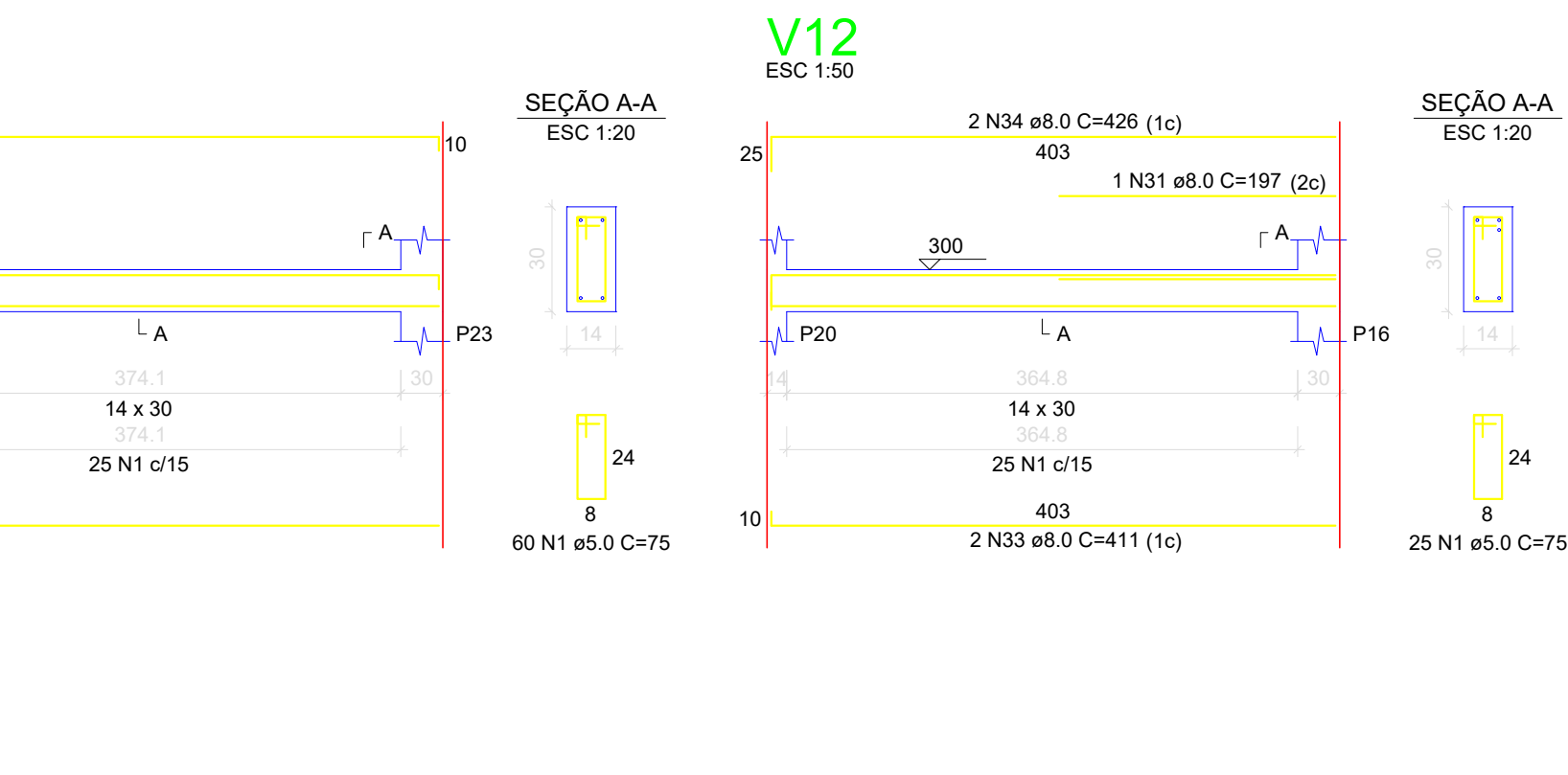
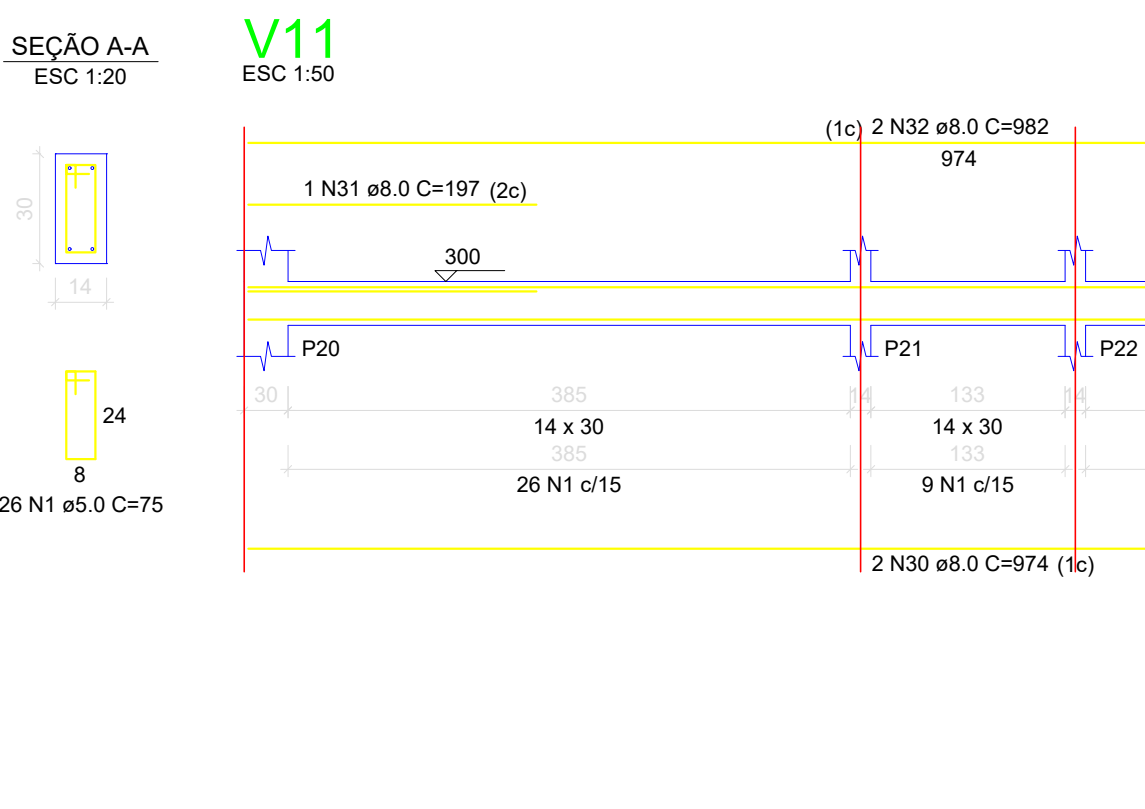
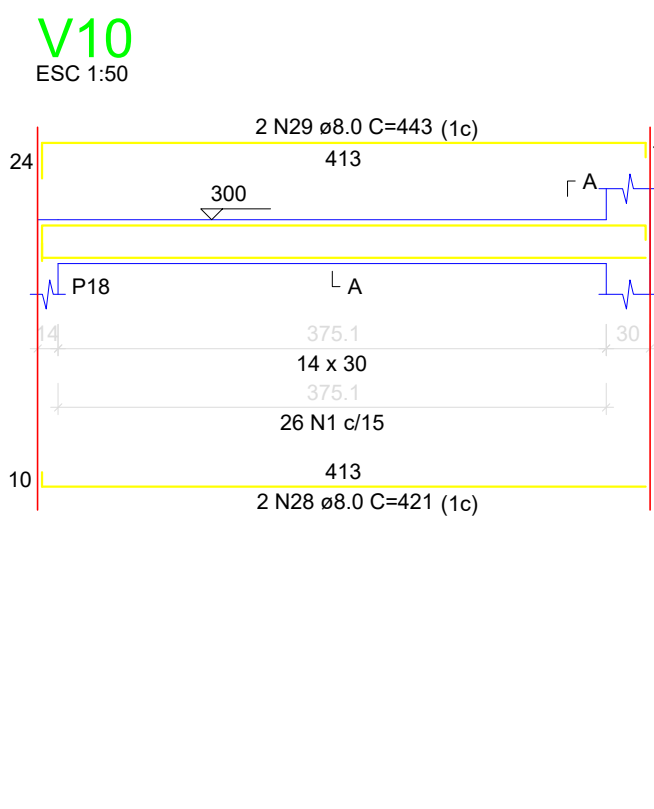
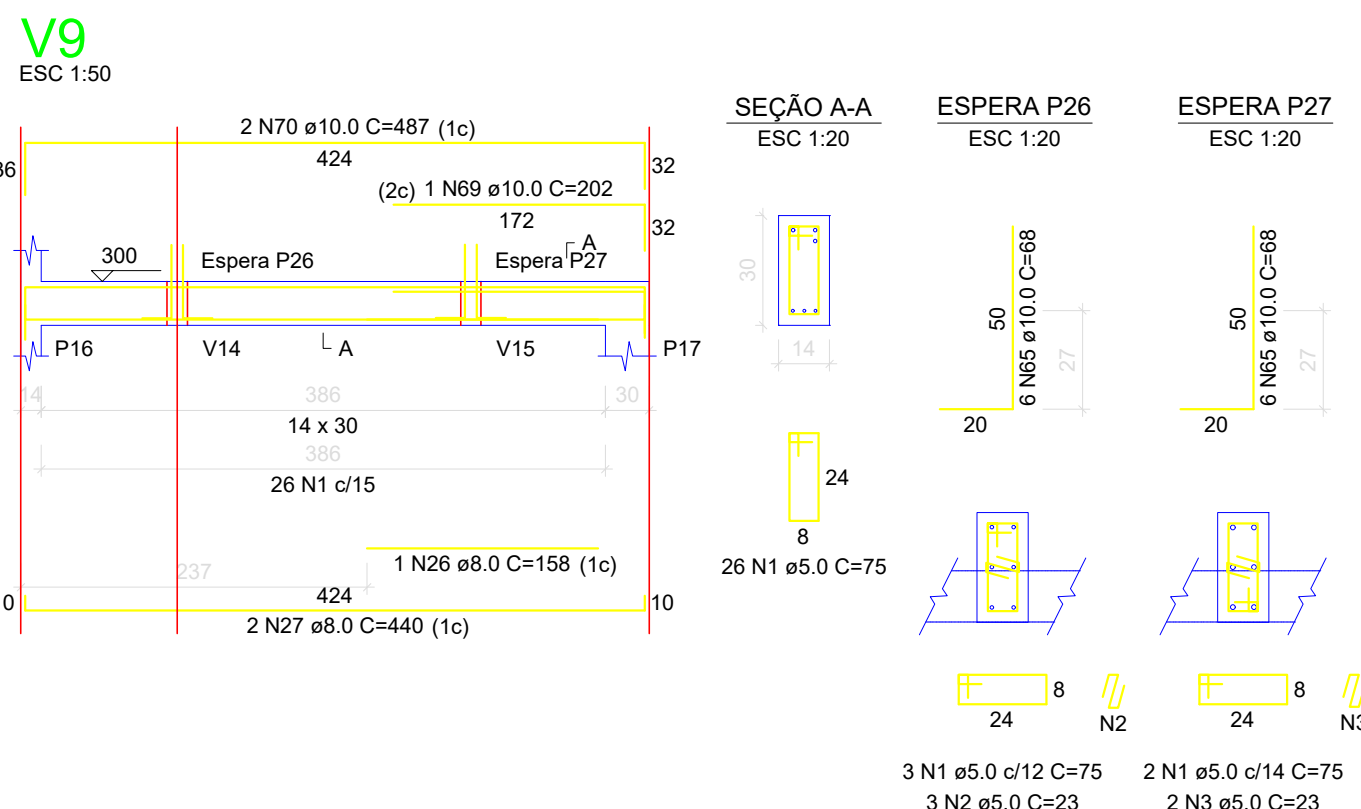
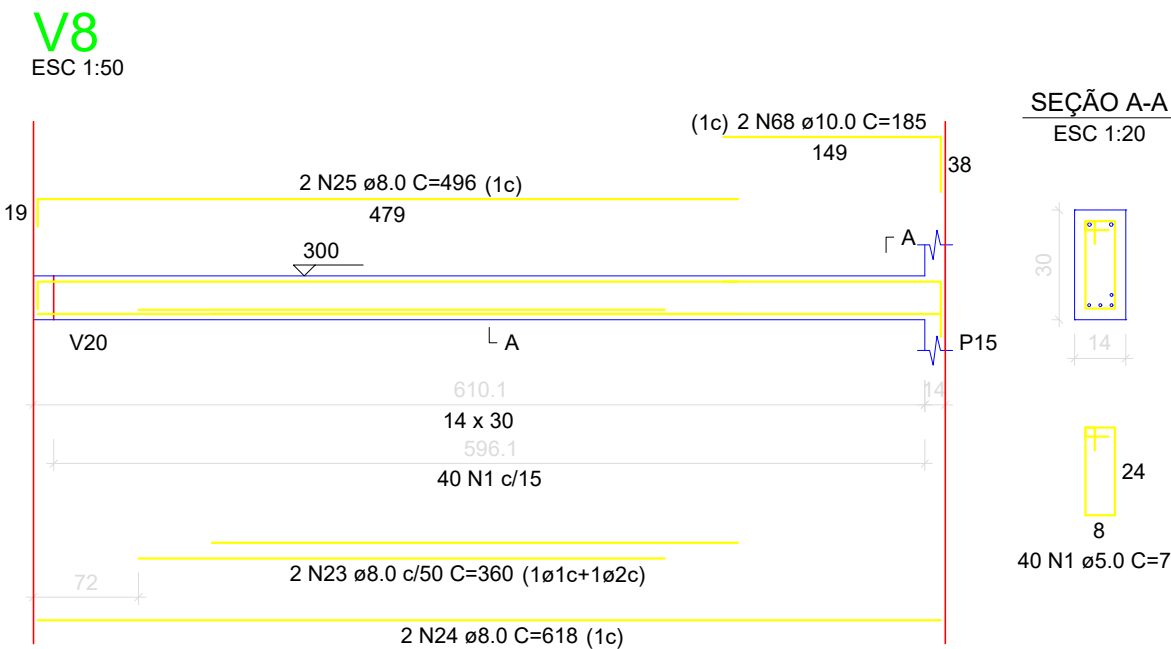
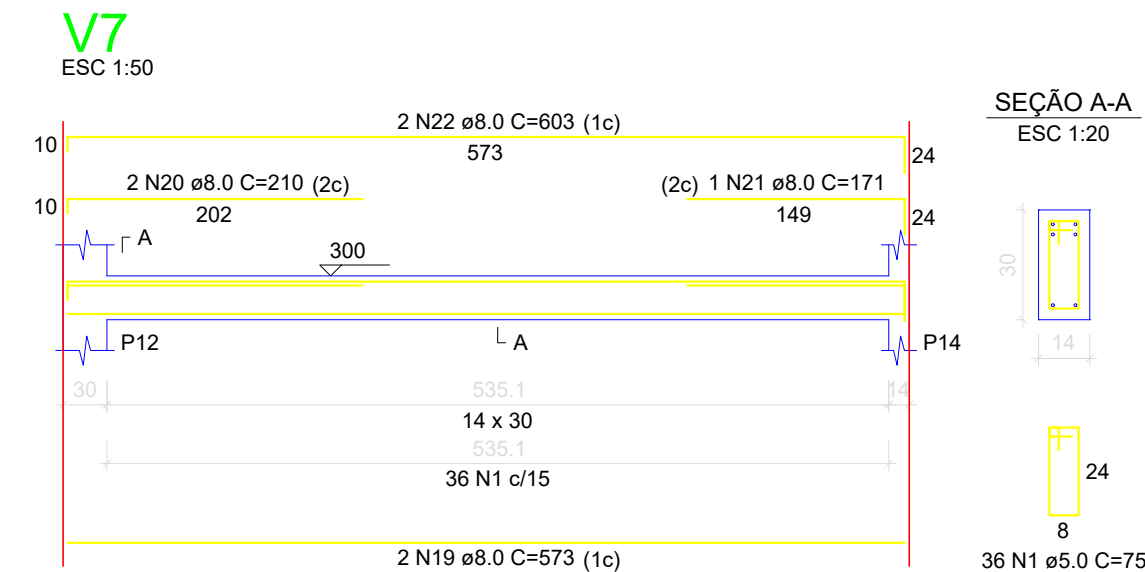
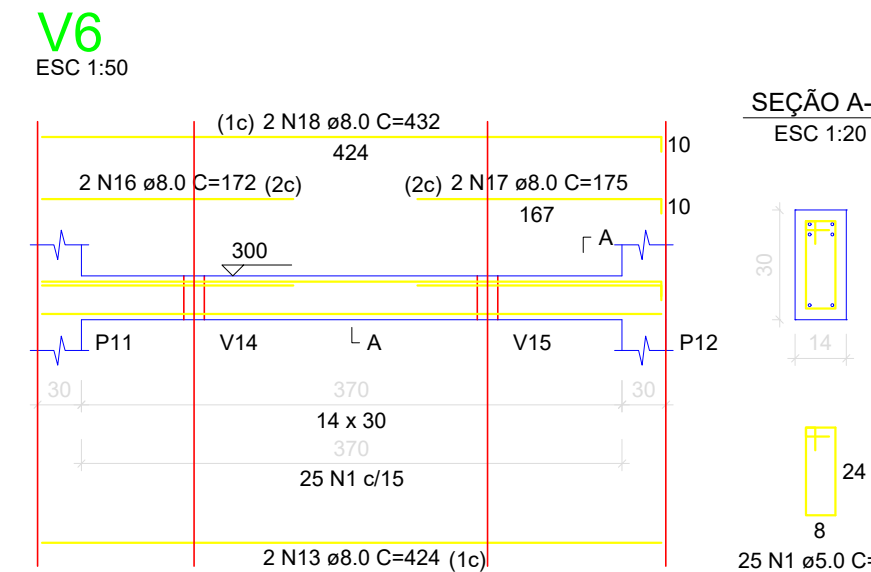
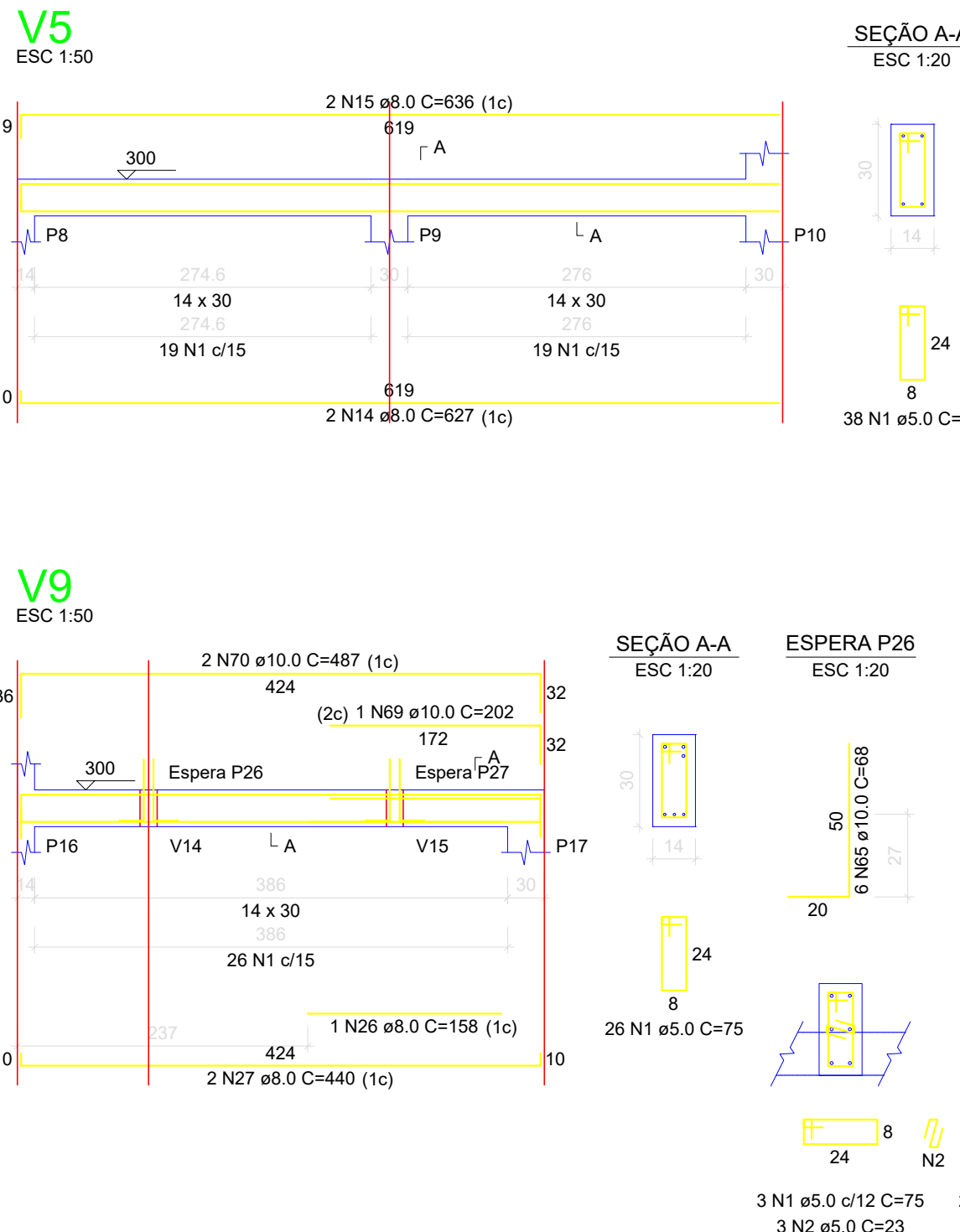
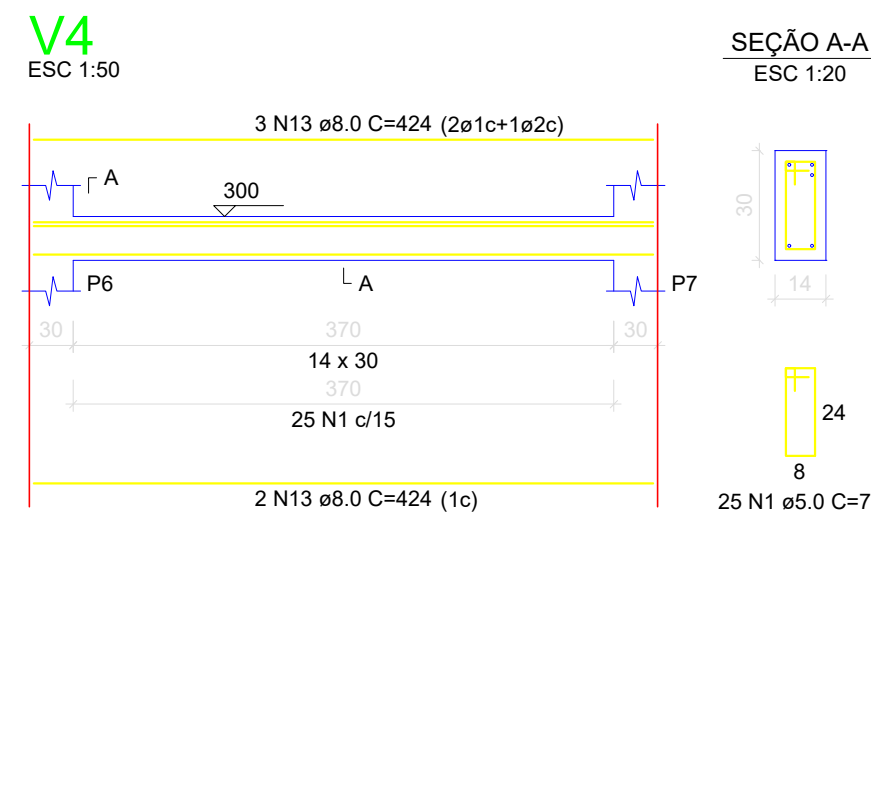
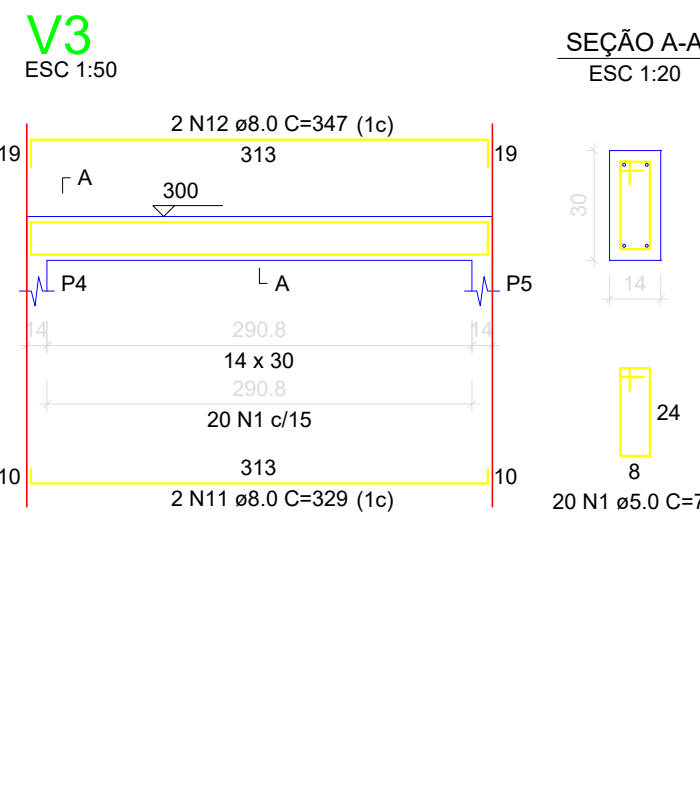
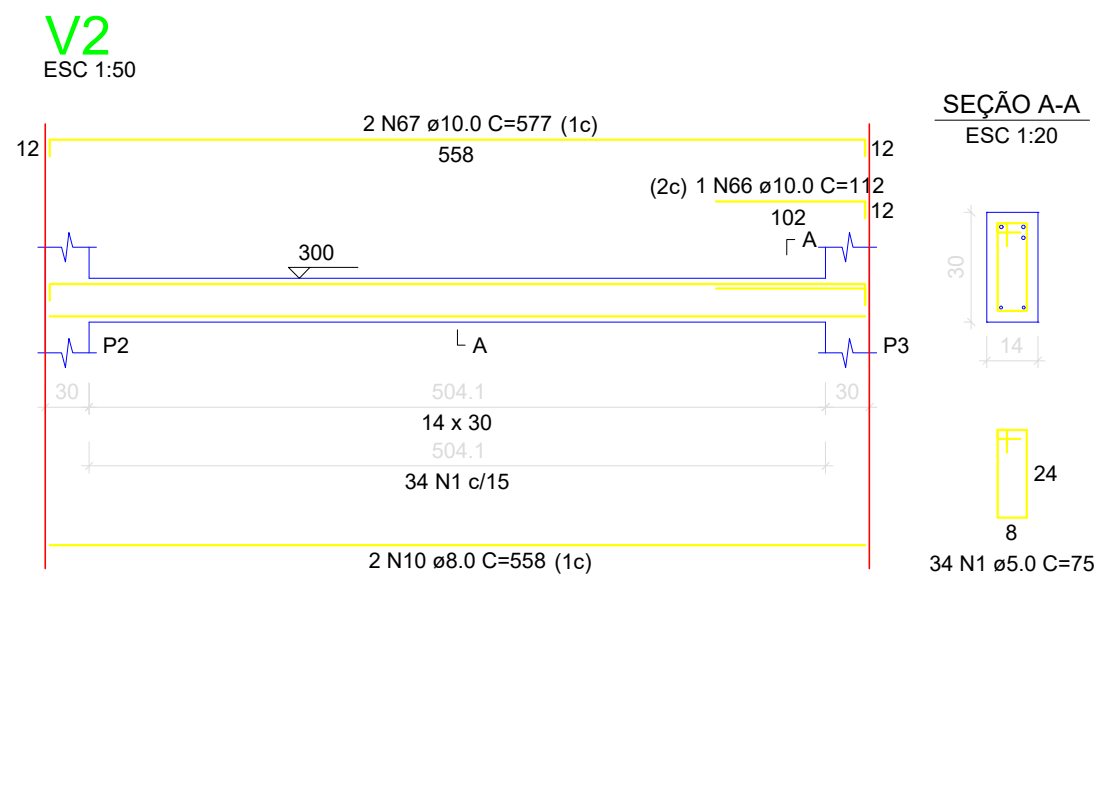
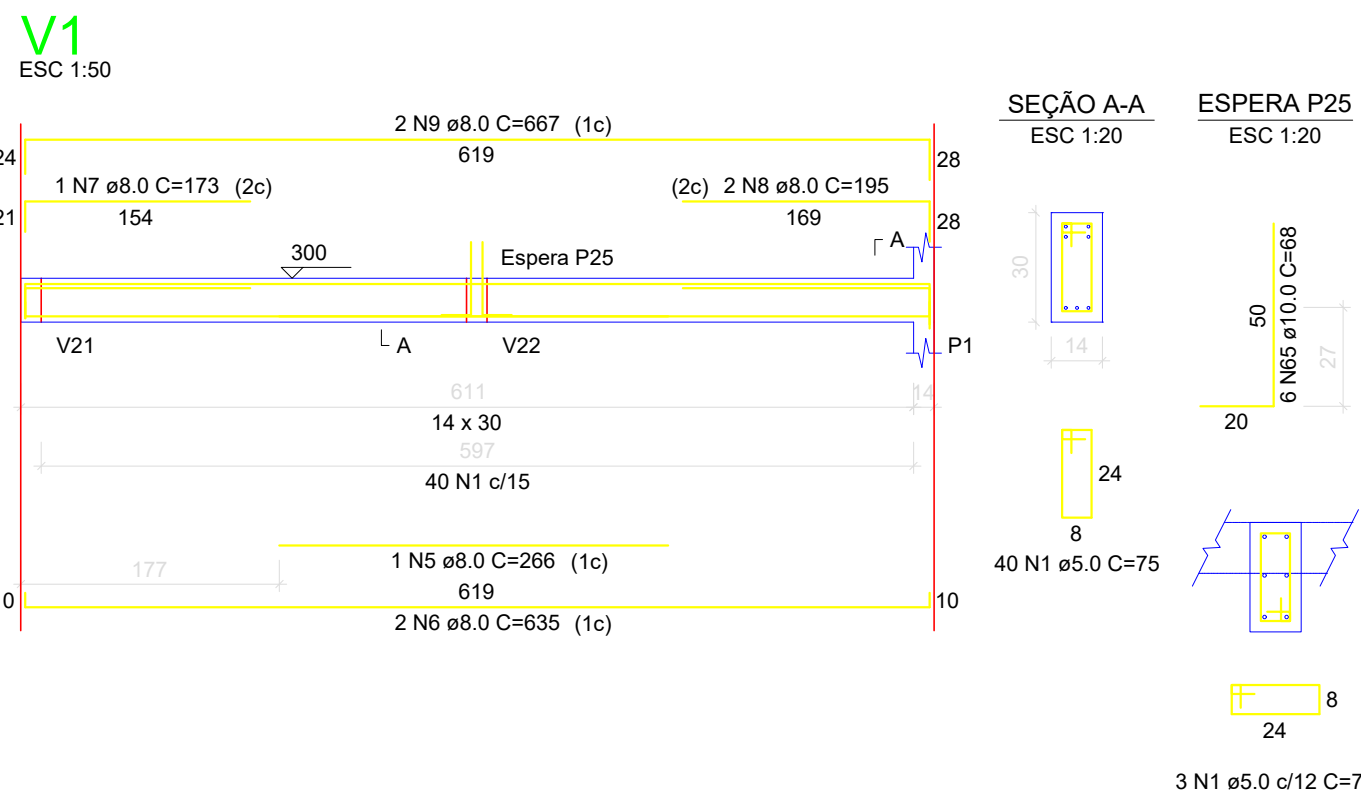
3ª ETAPA - CRAS - Centro de Referência Assistência Social

Endereço: RUA RVS-2 - RESIDENCIAL VALE DOS SONHOS, FIRMINÓPOLIS GOIÁS

Proprietário: FUNDO MUNICIPAL DE ASSIST. SOCIAL - FMAS
CNPJ: 14.387.430/0001-12

R\$ do projeto: Eng. Civil Tácio Alves de Menezes
CREA: 1016118465D-GO

LOGOMARCA		01 Pavimento			
ESTACAS VIGAS	CONTEÚDO	ÁREA DO TERREIRO ORIGINAL: 00,00 m²	FOLHA		
		ÁREA CONTRAÇÃO 206,06 m²	2/4		
		DESCRIÇÃO	DATA DEZEMBRO/2025		
		ARQUIVO	DESENHO		



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V1	1	5.0	783	75	58725
V4	2	5.0	3	23	69
V7	3	5.0	2	23	46
V10	4	6.3	1	73	73
V13	5	8.0	1	266	266
V16	6	8.0	2	635	1270
V19	7	8.0	1	173	173
V22	8	8.0	2	195	390
	9	8.0	2	667	1334
	10	8.0	2	558	1116
	11	8.0	2	329	658
	12	8.0	2	347	694
	13	8.0	2	424	848
	14	8.0	2	627	1254
	15	8.0	2	636	1272
	16	8.0	2	172	344
	17	8.0	2	175	350
	18	8.0	2	432	864
	19	8.0	2	573	1146
	20	8.0	2	360	720
	21	8.0	1	171	171
	22	8.0	2	603	1206
	23	8.0	2	360	720
	24	8.0	2	618	1236
	25	8.0	2	496	992
	26	8.0	2	158	316
	27	8.0	2	440	880
	28	8.0	2	421	842
	29	8.0	2	443	886
	30	8.0	2	974	1948
	31	8.0	2	197	394
	32	8.0	2	360	720
	33	8.0	4	411	1644
	34	8.0	2	426	852
	35	8.0	2	339	678
	36	8.0	2	364	728
	37	8.0	2	398	796
	38	8.0	2	437	874
	39	8.0	2	406	812
	40	8.0	2	111	222
	41	8.0	2	314	628
	42	8.0	2	177	354
	43	8.0	2	421	842
	44	8.0	2	724	1448
	45	8.0	2	744	1488
	46	8.0	2	284	568
	47	8.0	2	309	618
	48	8.0	2	292	584
	49	8.0	1	187	187
	50	8.0	2	878	1756
	51	8.0	2	399	798
	52	8.0	1	80	80
	53	8.0	2	224	448
	54	8.0	2	245	490
	55	8.0	2	257	514
	56	8.0	2	597	1194
	57	8.0	2	243	486
	58	8.0	2	615	1230
	59	8.0	2	1144	2288
	60	8.0	1	112	112
	61	8.0	1	222	222
	62	8.0	2	210	420
	63	8.0	2	130	260
	64	8.0	2	1152	2304
	65	10.0	24	68	1632
	66	10.0	1	112	112
	67	10.0	2	577	1154
	68	10.0	2	185	370
	69	10.0	1	202	202
	70	10.0	2	487	974
	71	10.0	2	328	656
	72	12.5	2	1127	2254
	73	12.5	2	246	492

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	6.3	0.7	0.18
	8.0	516.7	201.87
	10.0	51	31.14
	12.5	27.5	26.19
CA60	5.0	588.4	89.82
PESO TOTAL (kg)			
CA50	259.38		
CA60	89.82		
Volume de concreto (C-25) = 5.23 m³			
Área de forma = 92.11 m²			

PREFEITURA DE ADM 2021/24

FIRMINÓPOLIS

CIDADE QUE TEM HISTÓRIA

APROVAÇÃO:

ESTRUTURAL

3ª ETAPA - CRAS - Centro de Referência Assistência Social

Endereço: RUA RVS-2 - RESIDENCIAL VALE DOS SONHOS, FIRMINÓPOLIS GOIÁS

Proprietário: FUNDO MUNICIPAL DE ASSIST. SOCIAL - FIMAS

CNPJ: 14.387.430/0001-12

R\$ do projeto: Eng. Civil Tácio Alves de Menezes

CREA: 1016118465D-GO

LOGRADOURO: DEBENÇÃO DOS FATORES: 01 Pavimento

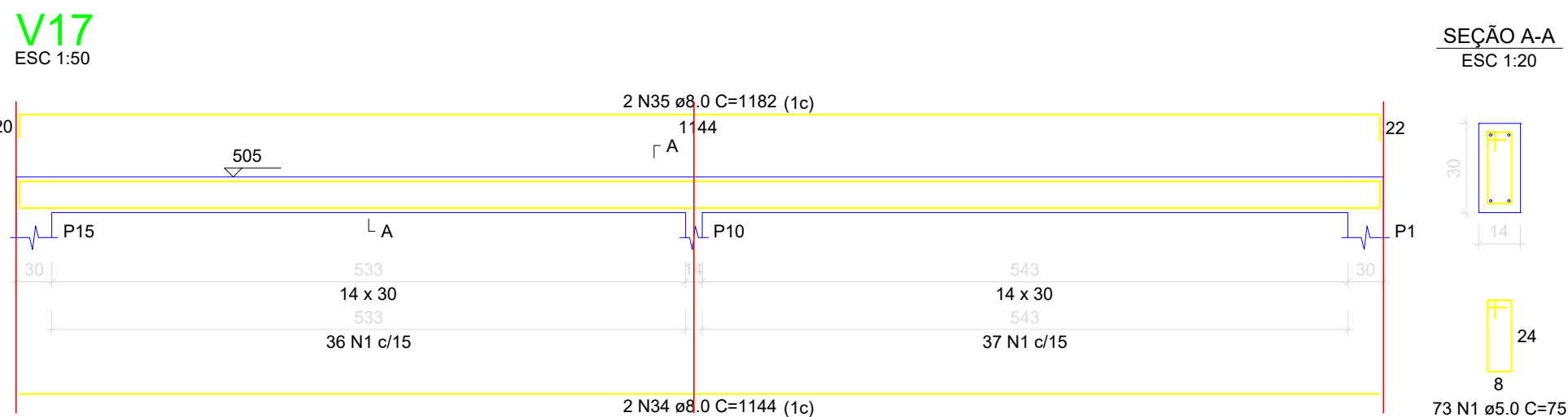
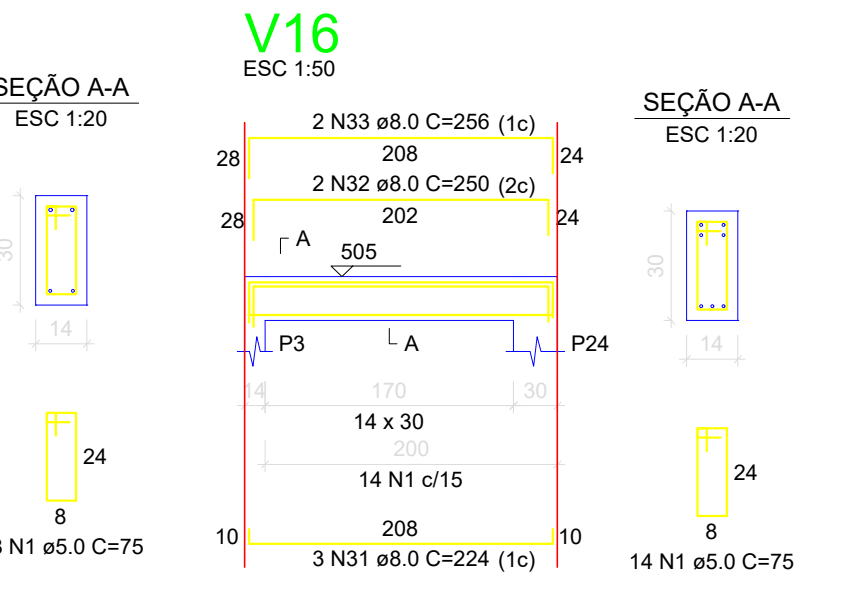
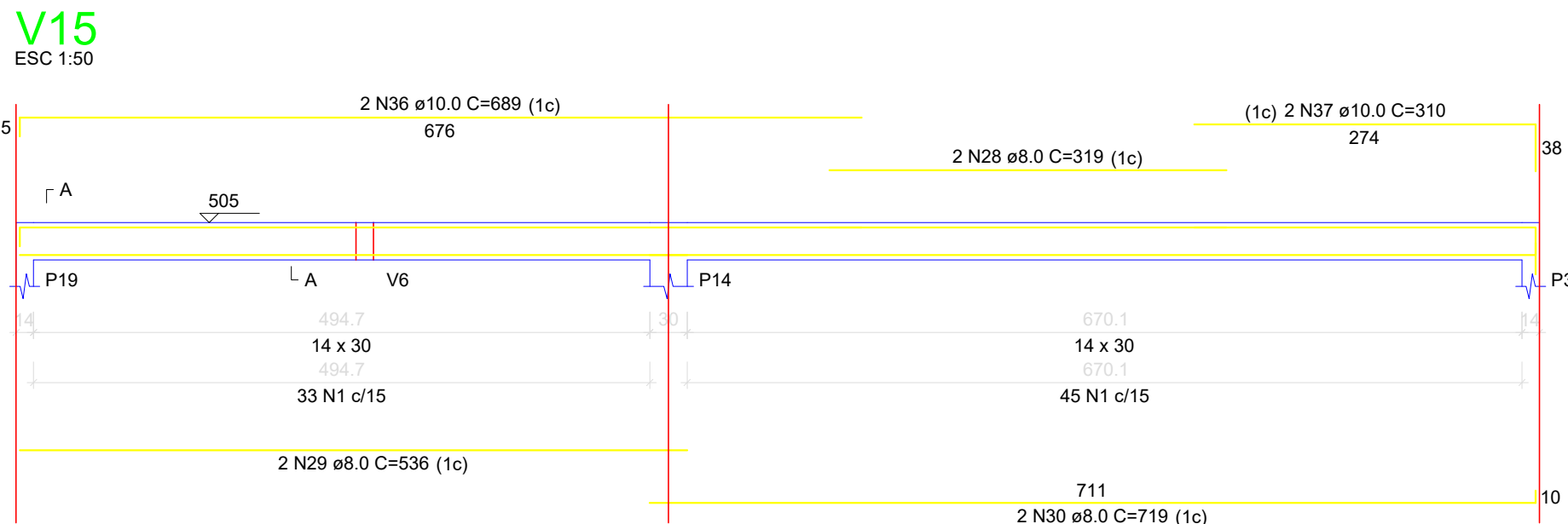
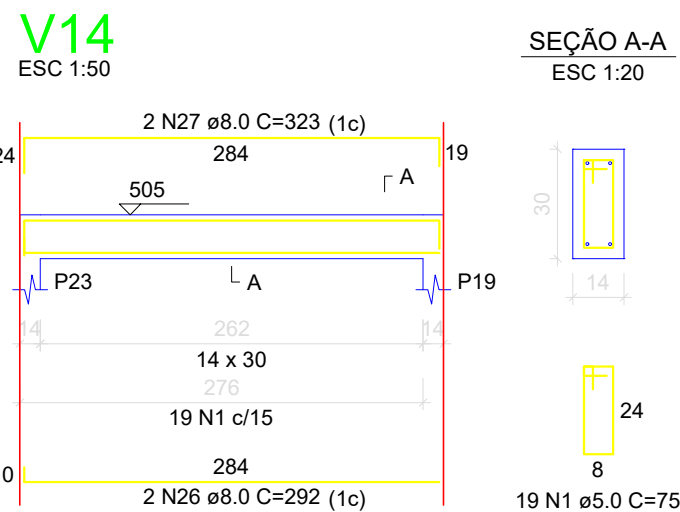
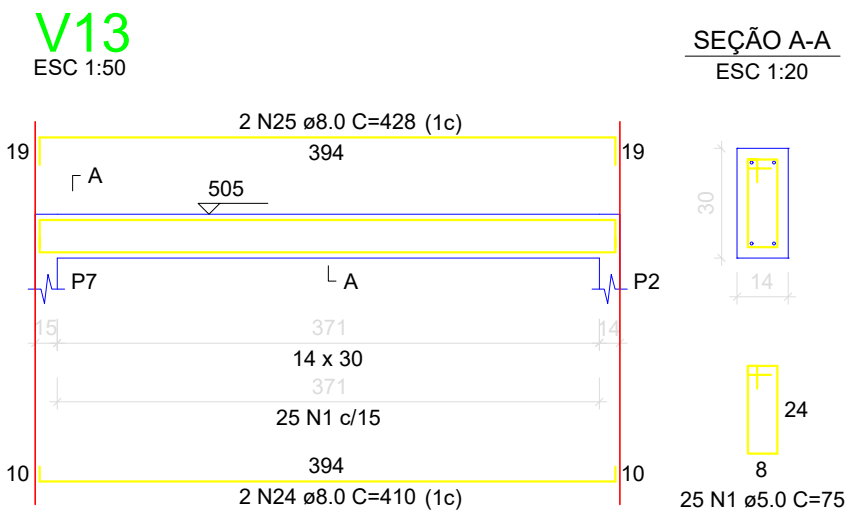
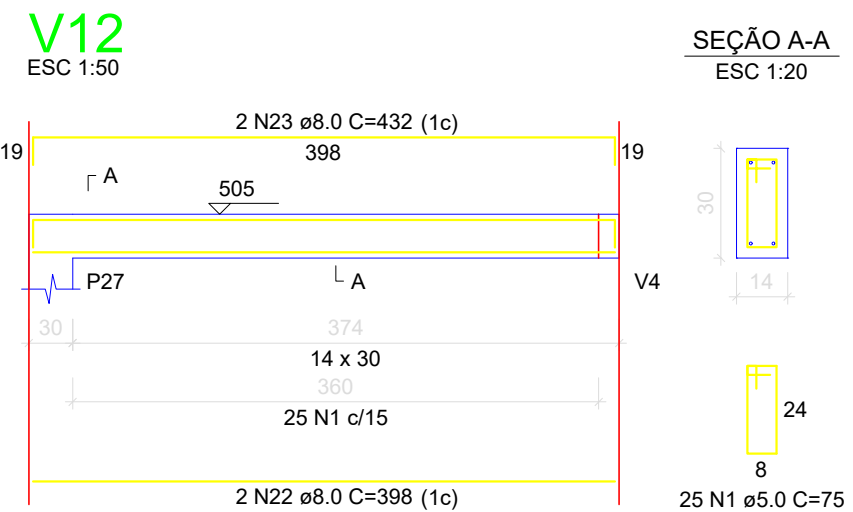
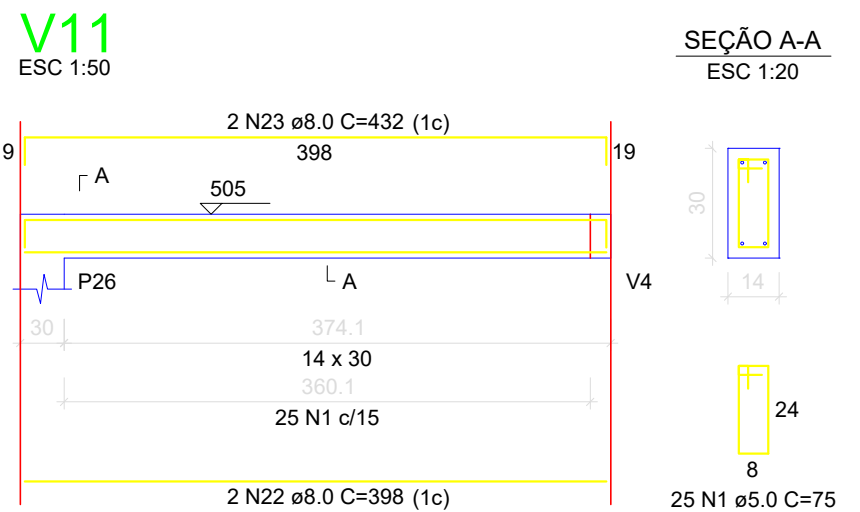
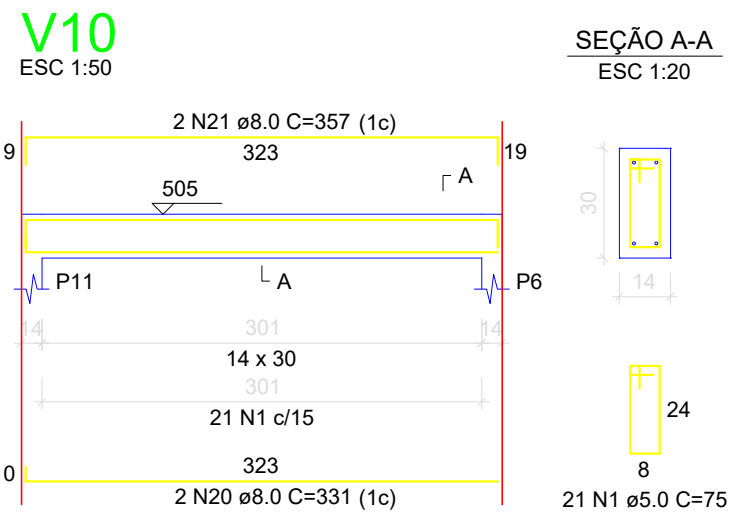
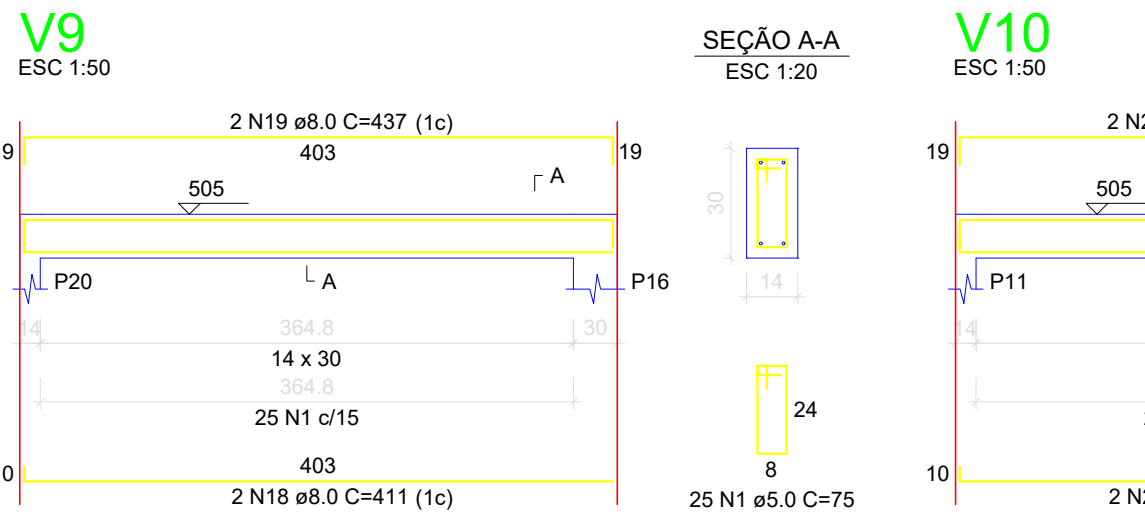
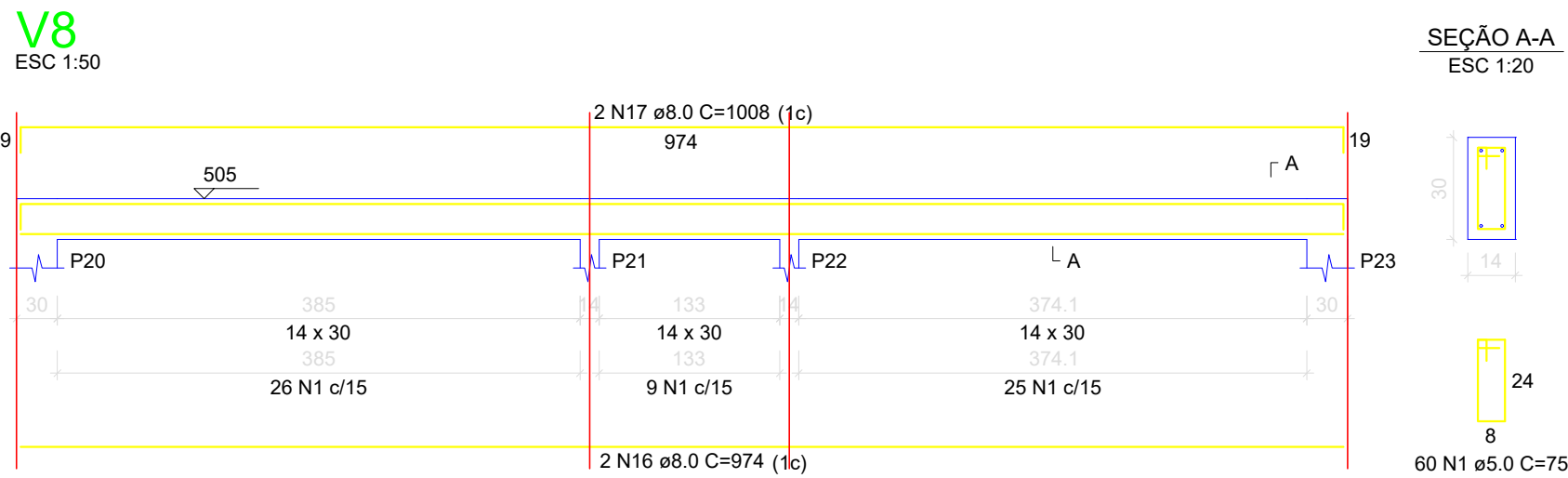
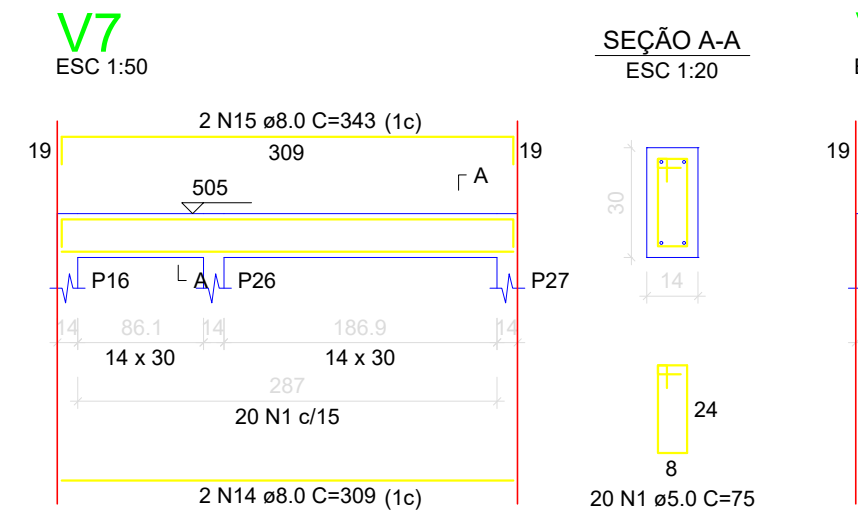
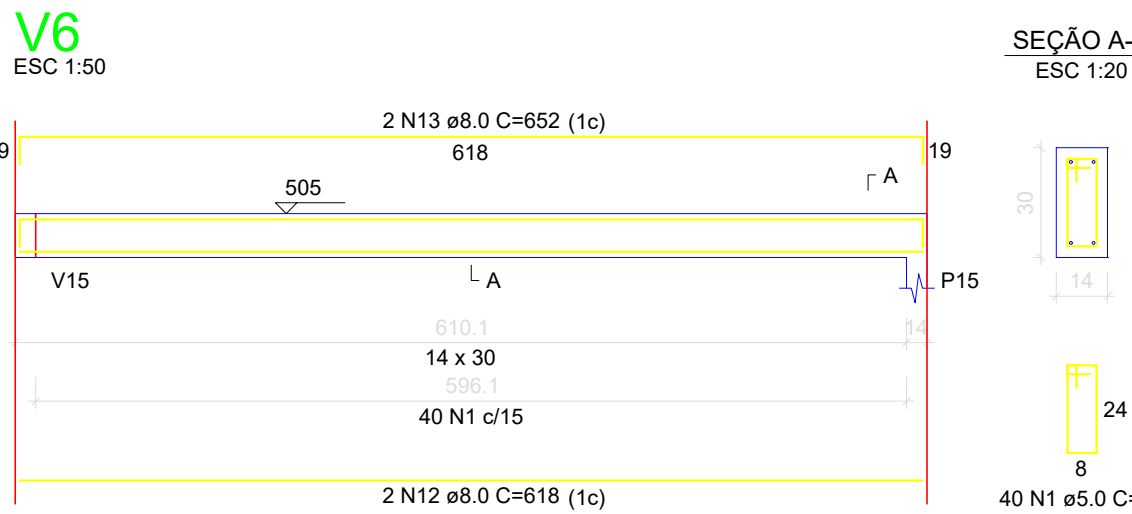
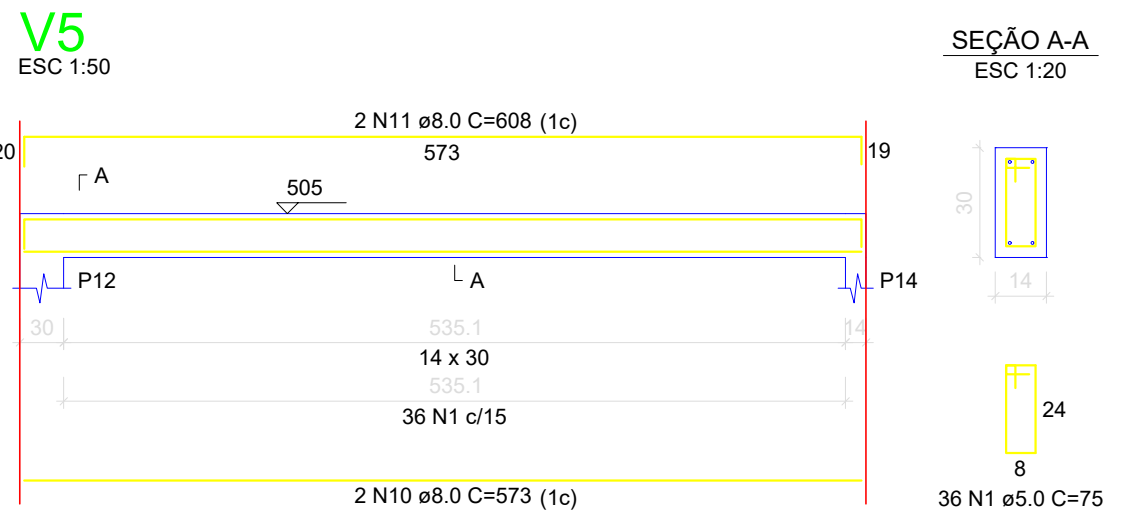
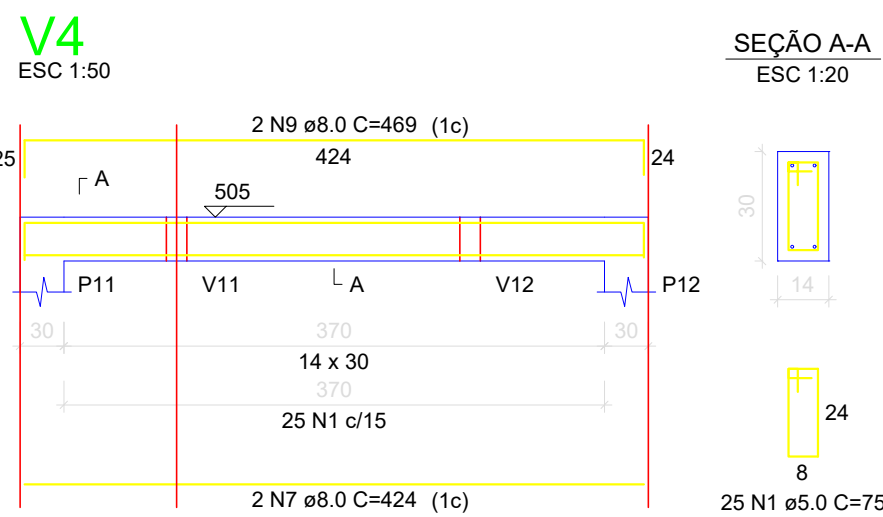
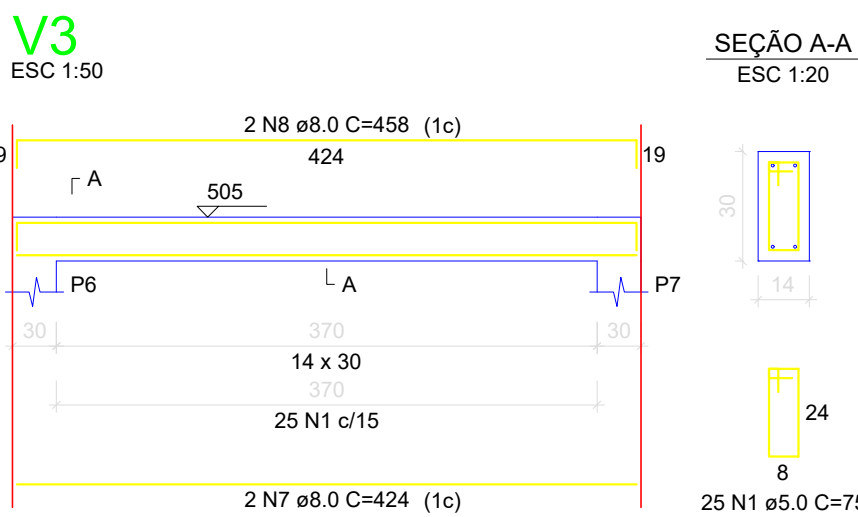
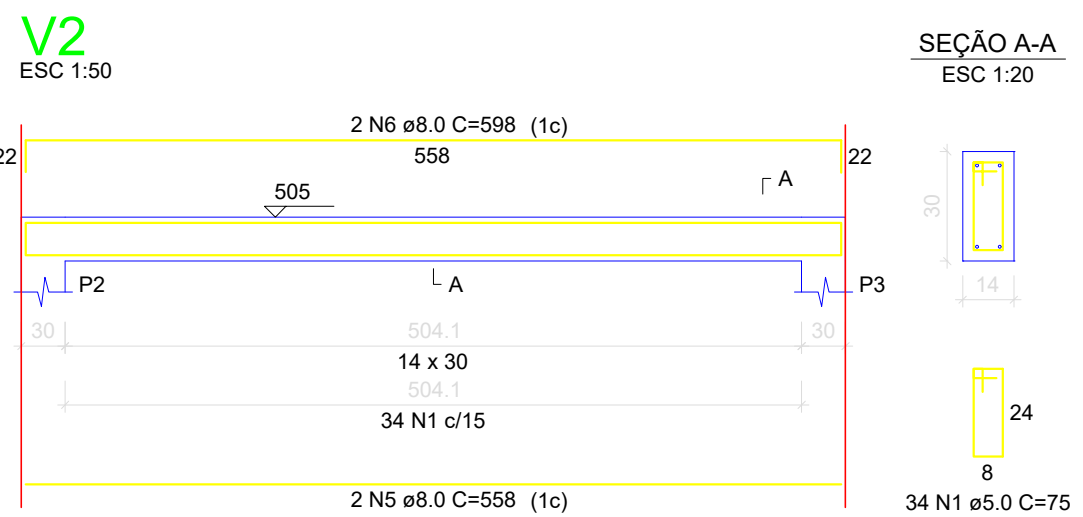
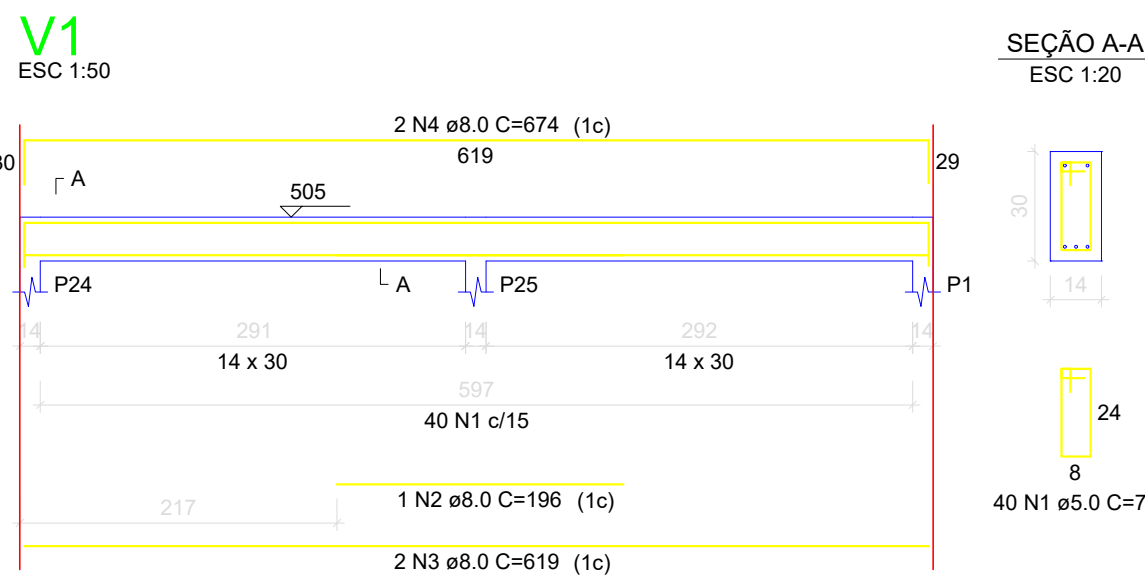
CONTEÚDO: VIGAS

ÁREA DO TERMO DE REFERÊNCIA: 00.00 m²

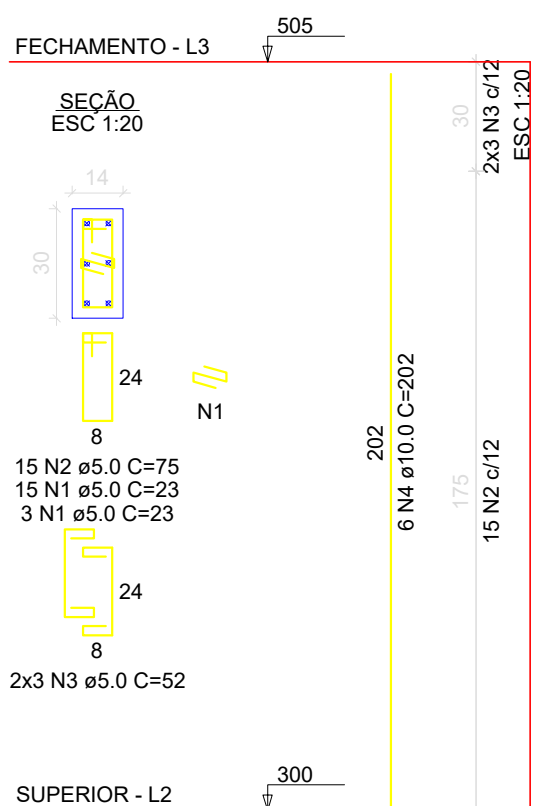
ÁREA CONSTRUTIVA: 206.06 m²

DATA: DEZEMBRO/2023

3/4



P1=P2=P3=P6=P7=P10=P11=P12=P14=P15
P16=P19=P20=P21=P22=P23=P24=P25=P26=P27



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	23	8280	
	2	5.0	300	75	22500
	3	5.0	120	52	6240
CA50	4	10.0	120	202	24240

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	10.0	242.4	147.96
CA60	5.0	370.2	56.52
PESO TOTAL (kg)			
CA50		147.96	
CA60		56.52	

Volume de concreto (C-25) = 1.72 m³
Área de forma = 36.08 m²

RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V1	1	5.0	585	75	43875
V2	2	8.0	1	196	196
V3	3	8.0	2	618	1236
V4	4	8.0	2	674	1348
V5	5	8.0	2	558	1116
V6	6	8.0	2	598	1196
V7	7	8.0	4	424	1696
V8	8	8.0	2	458	916
V9	9	8.0	2	469	938
V10	10	8.0	2	573	1146
V11	11	8.0	2	608	1216
V12	12	8.0	2	618	1236
V13	13	8.0	2	652	1304
V14	14	8.0	2	309	618
V15	15	8.0	2	343	686
	16	8.0	2	974	1948
	17	8.0	2	1008	2016
	18	8.0	2	411	822
	19	8.0	2	437	874
	20	8.0	2	331	662
	21	8.0	2	357	714
	22	8.0	4	388	1552
	23	8.0	4	432	1728
	24	8.0	2	410	820
	25	8.0	3	428	856
	26	8.0	2	292	584
	27	8.0	2	323	646
	28	8.0	2	319	638
	29	8.0	2	536	1072
	30	8.0	2	719	1438
	31	8.0	3	224	672
	32	8.0	2	250	500
	33	8.0	2	256	512
	34	8.0	2	1144	2288
	35	8.0	2	1182	2364
	36	10.0	2	689	1378
	37	10.0	2	310	620

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	8.0	376	146.88
CA60	10.0	20	12.24
	5.0	438.8	66.96

PESO TOTAL (kg)

CA50 158.12
CA60 66.96

Volume de concreto (C-25) = 3.94 m³

Área de forma = 69.34 m²

PREFEITURA DE ADM 2021/24

FIRMINÓPOLIS
CIDADE QUE TEM HISTÓRIA

APROVAÇÃO:

ESTRUTURAL

3ª ETAPA - CRAS - Centro de Referência Assistência Social

Endereço: RUA RVS-2 - RESIDENCIAL VALE DOS SONHOS, FIRMINÓPOLIS GOIÁS

Propriedade: FUNDO MUNICIPAL DE ASSIST. SOCIAL - FMAS
CNPJ: 14.387.430/0001-12

R\$ do projeto: Eng. Civil Tácio Alves de Menezes
CREA: 1016118465D-GO

LOGOMARCA: DESENOÇÃO DOS PAVILHÕES 01 Pavimento

CONTEÚDO: VIGAS PILARES

ÁREA DO TERRENO: 00.00 m²

ÁREA DE CONTRAÇÃO: 206.06 m²

FOLHA: 4/4

DATA: DEZEMBRO/2023