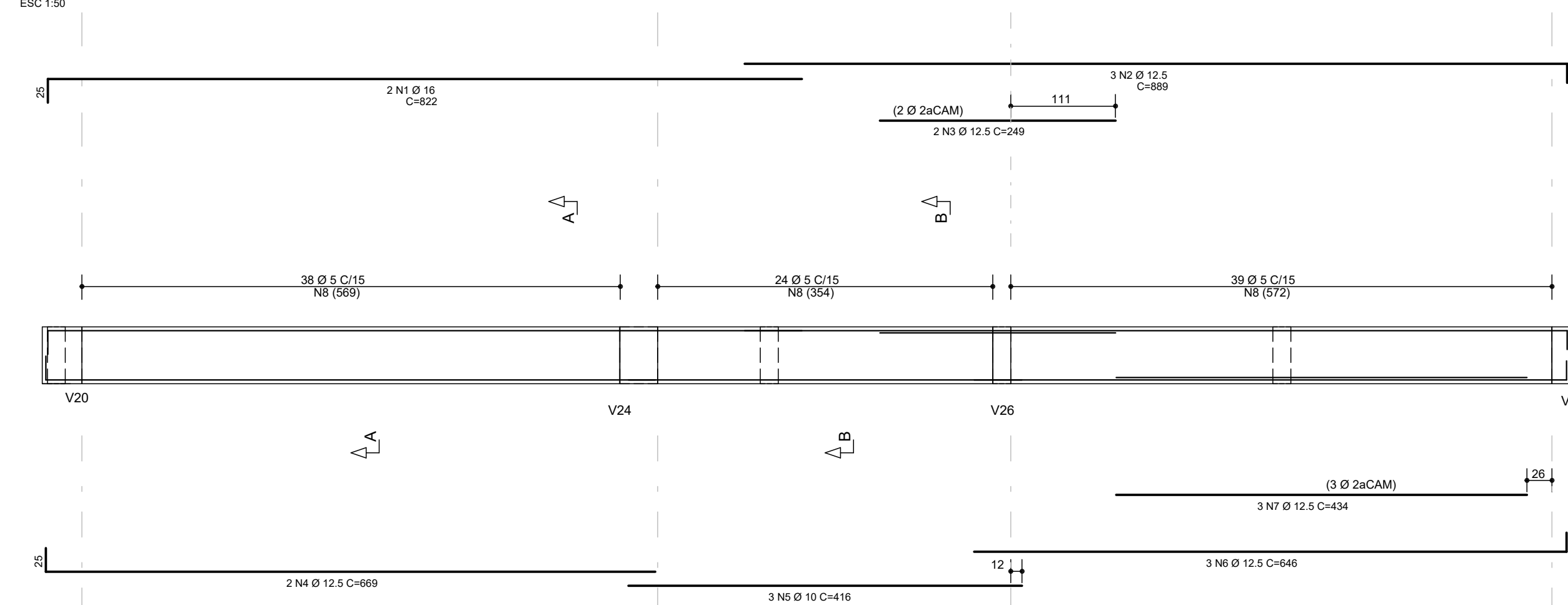
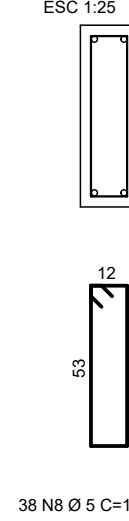


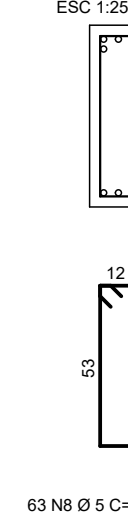
V1 19/60



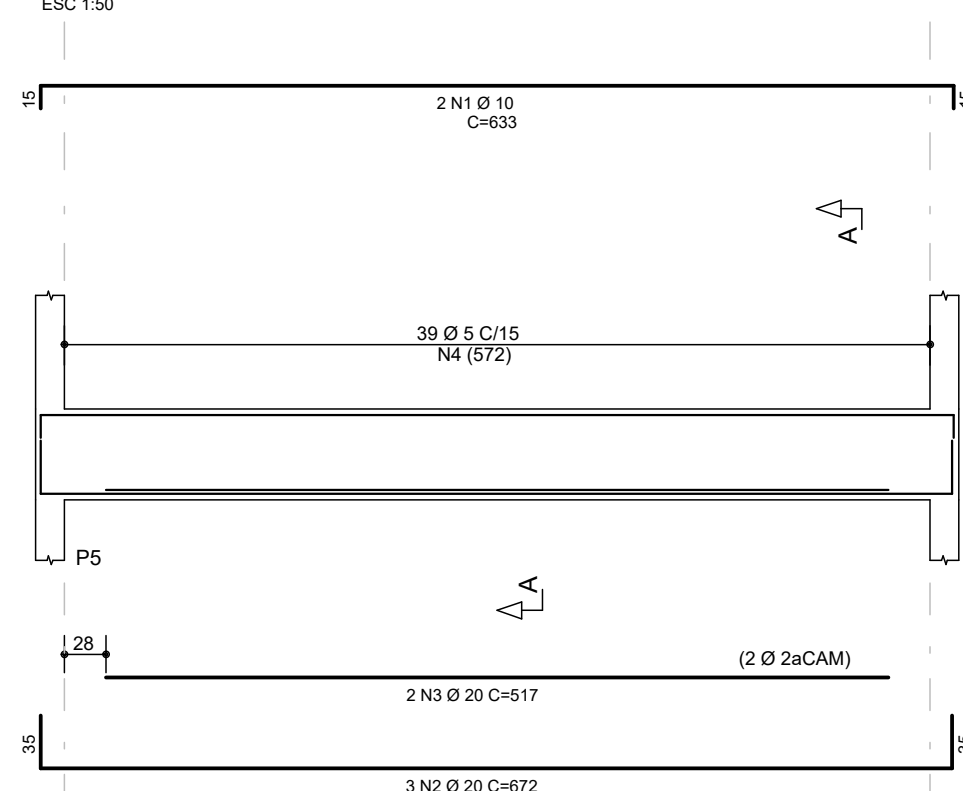
Corte A



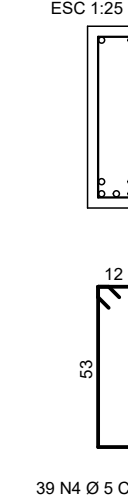
Corte B



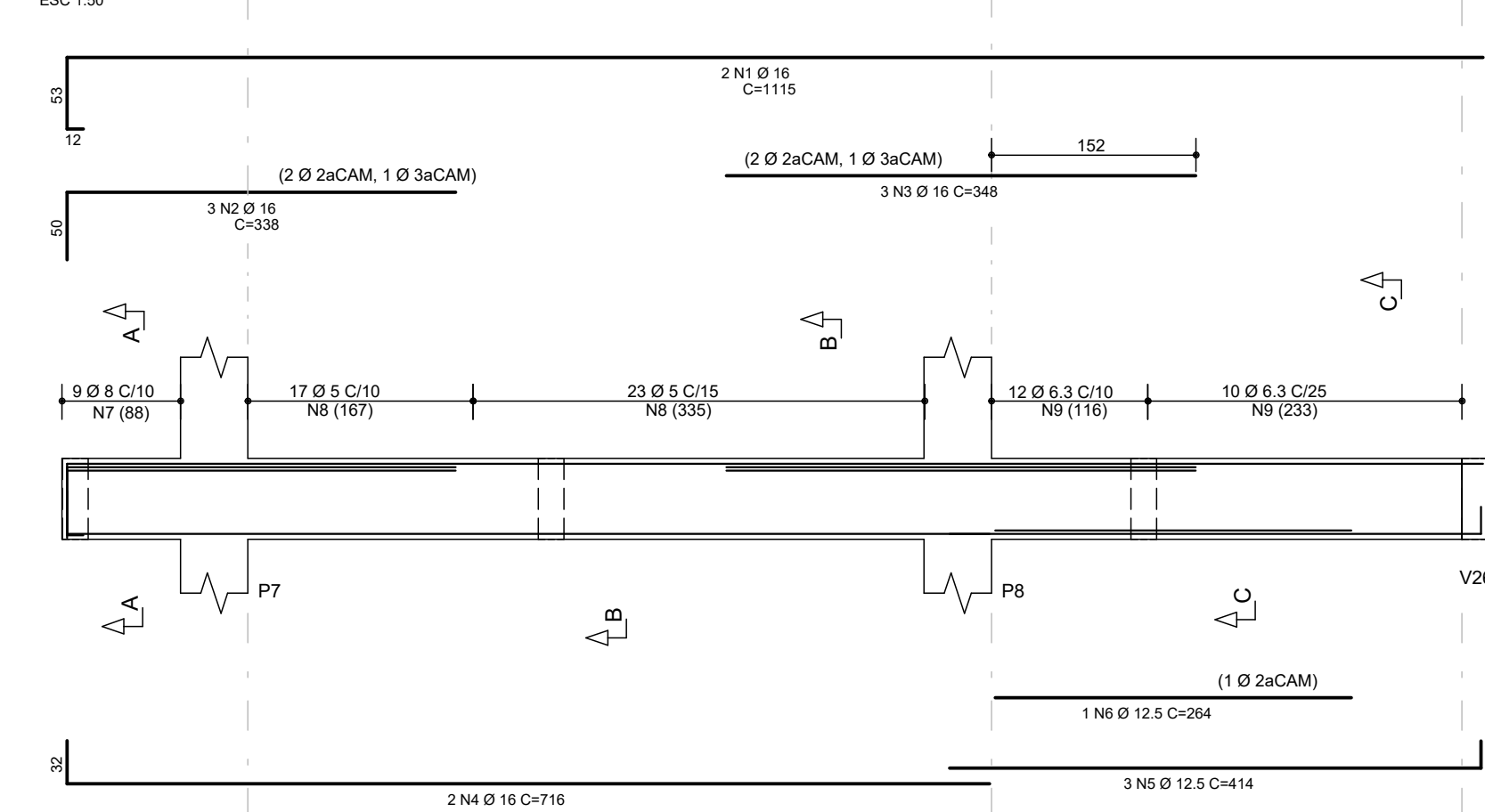
V2 19/60



Corte A



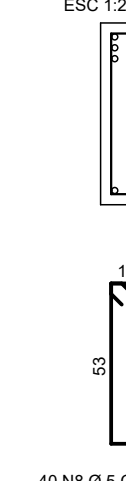
V3 19/60



Corte A



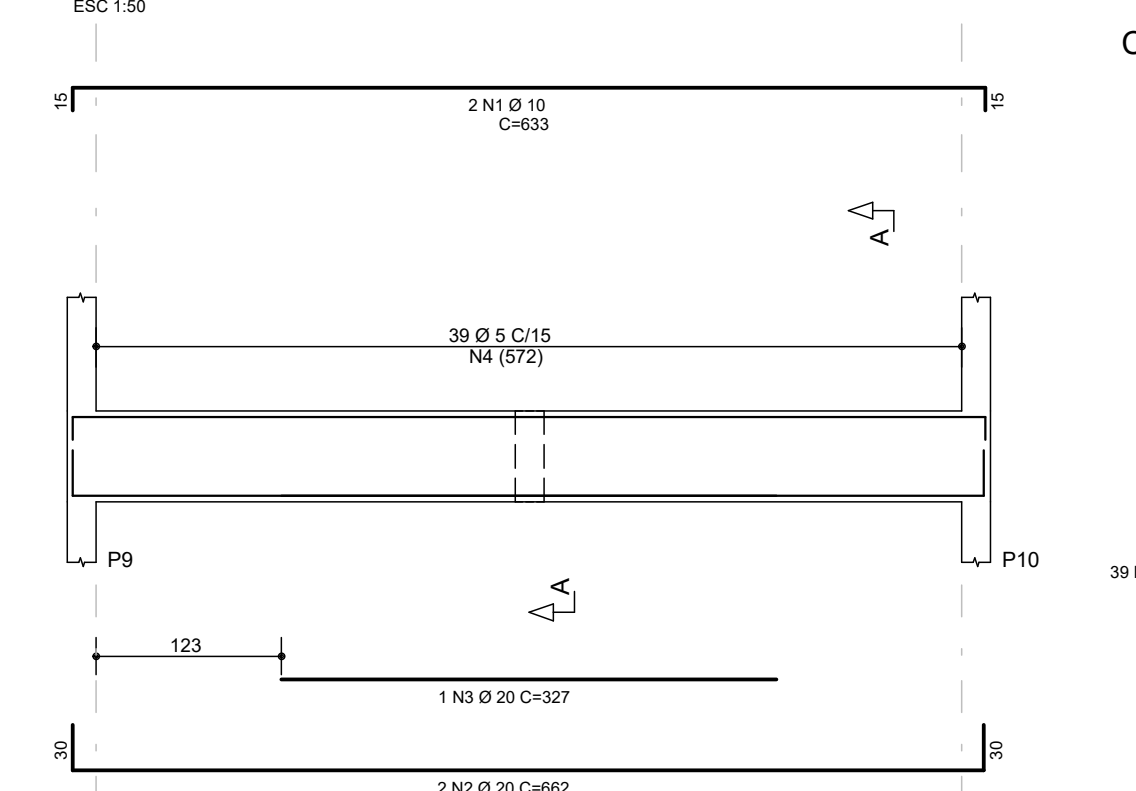
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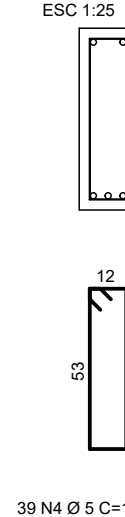
Corte C



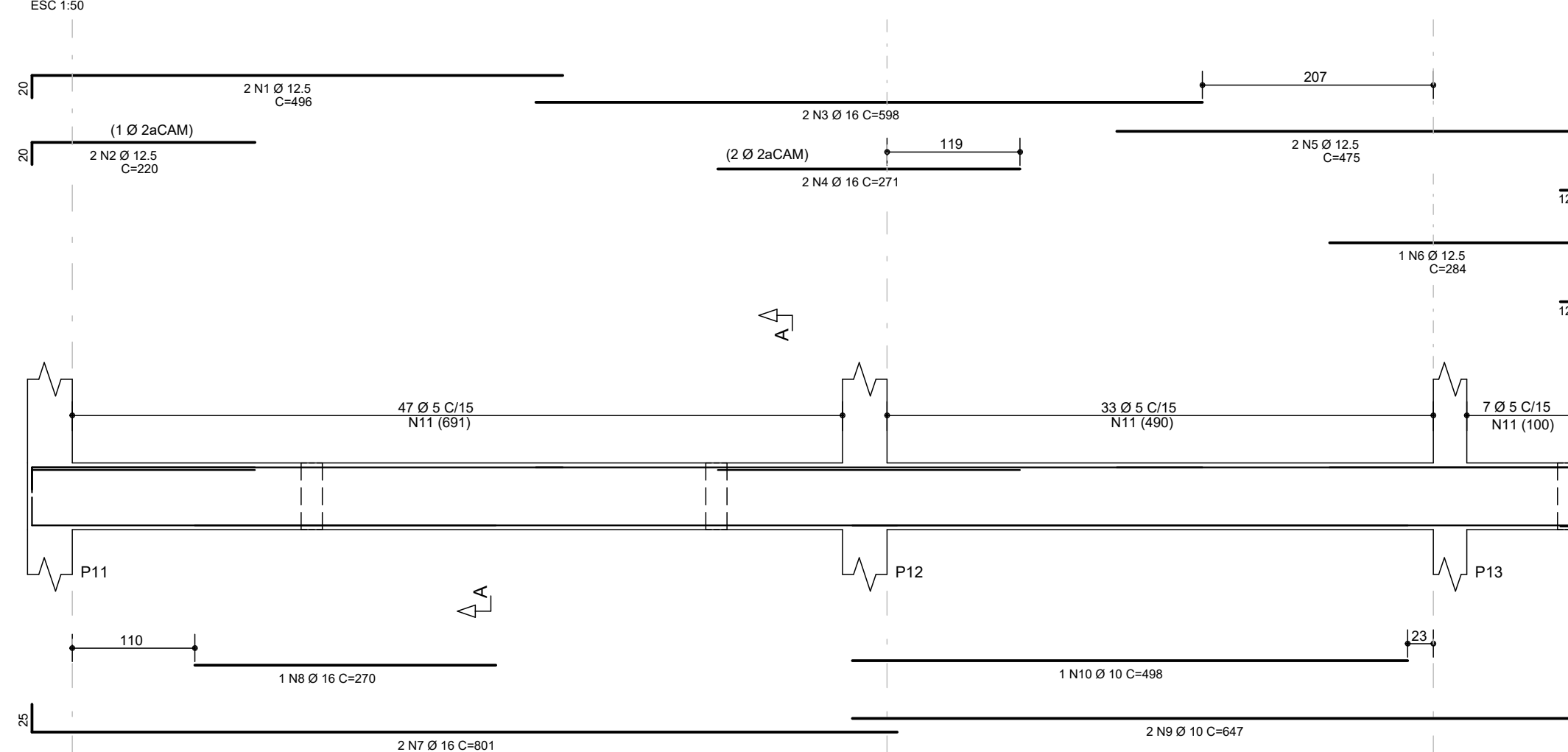
V4 19/60



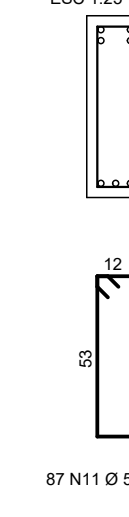
Corte A



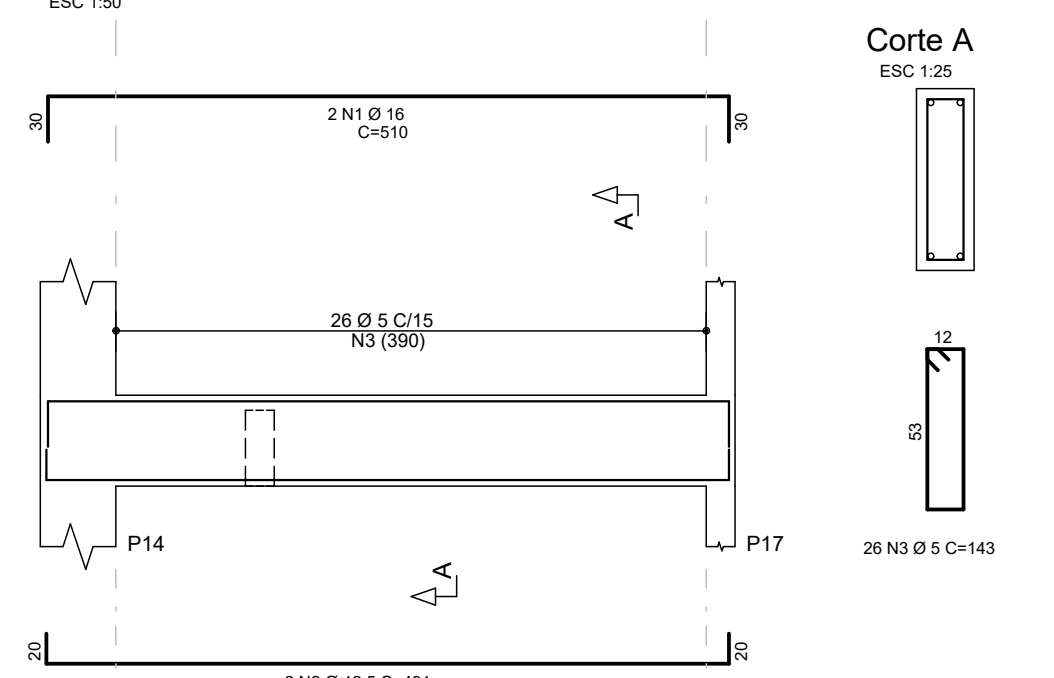
V5 19/60



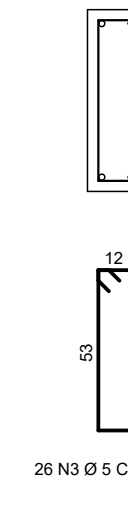
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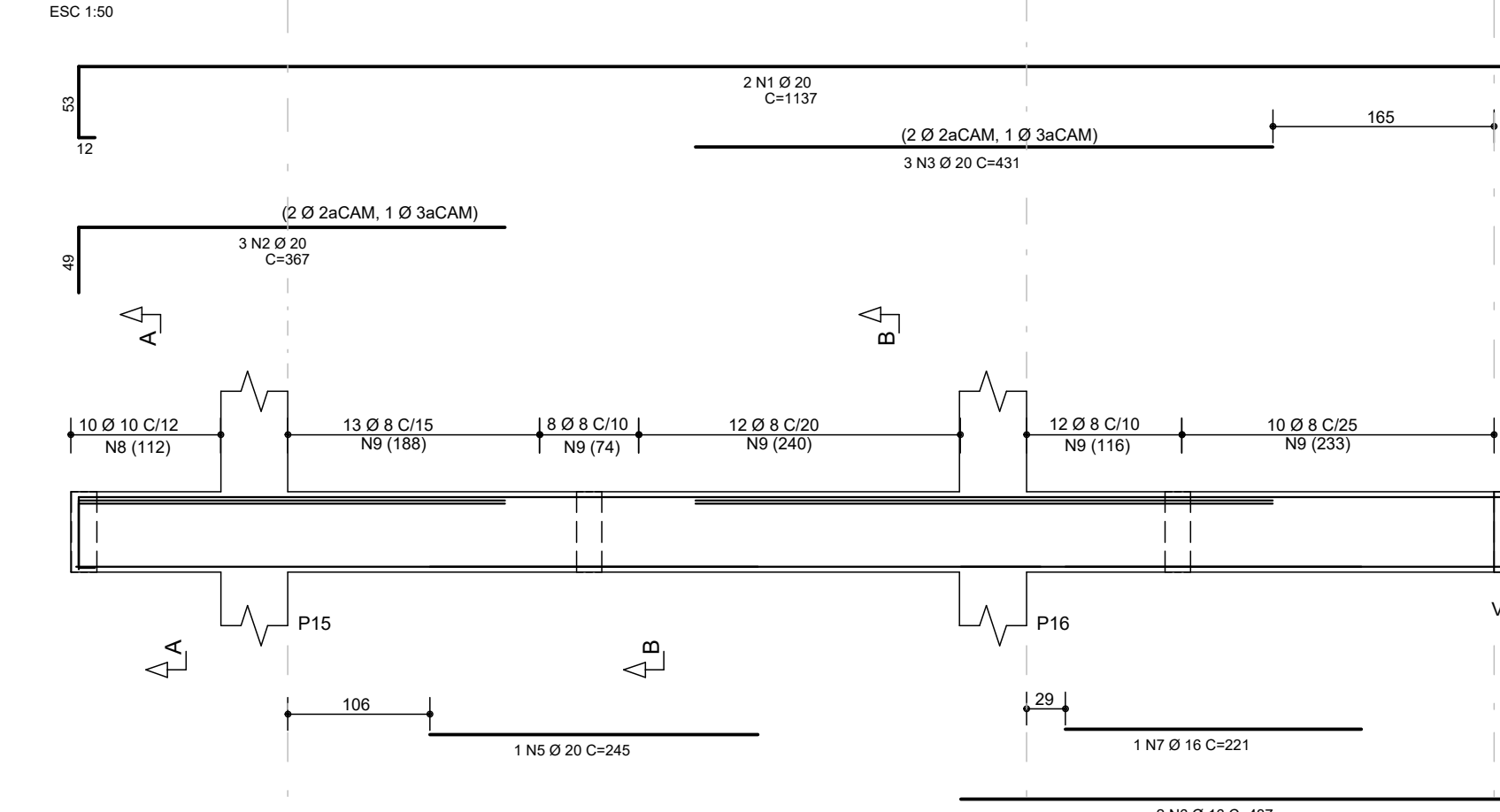
V6 19/60



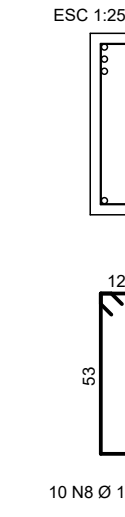
Corte A



V7 19/60



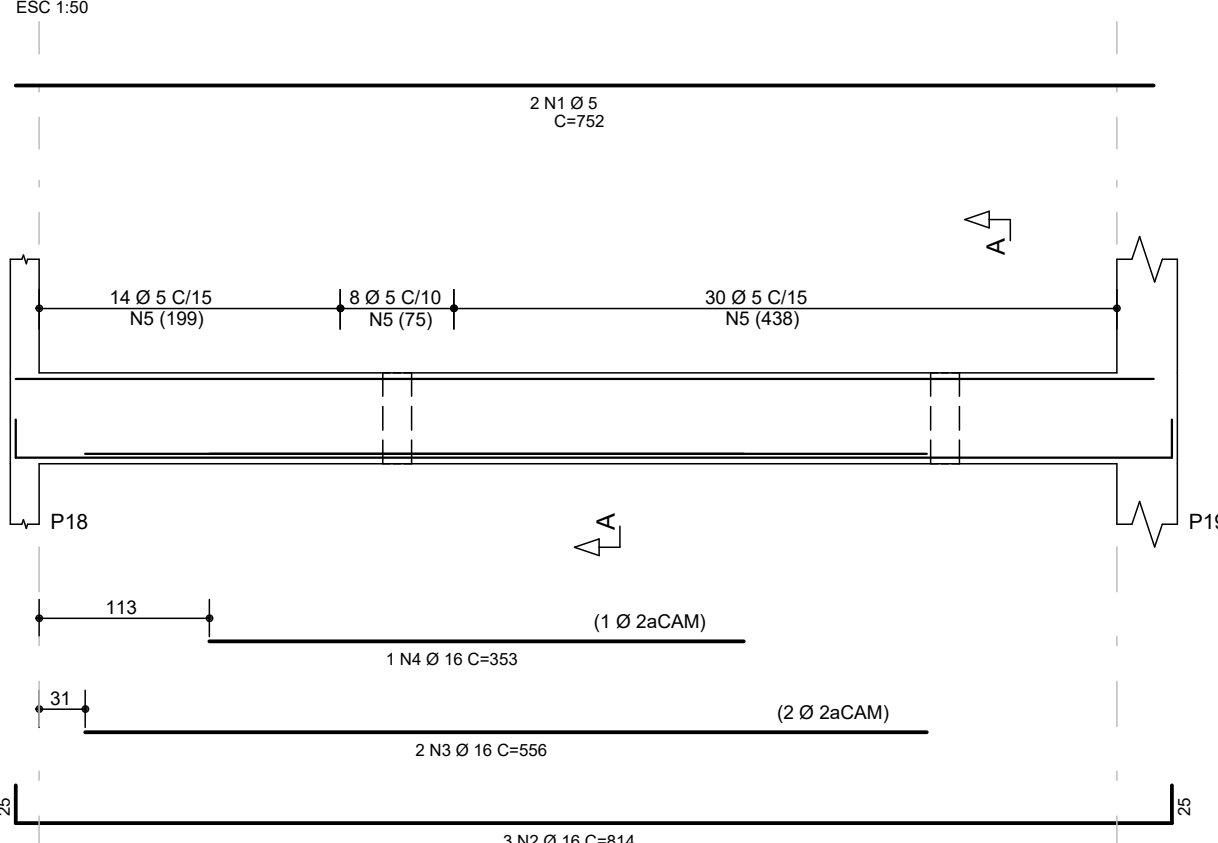
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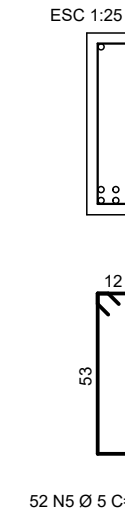
Corte B



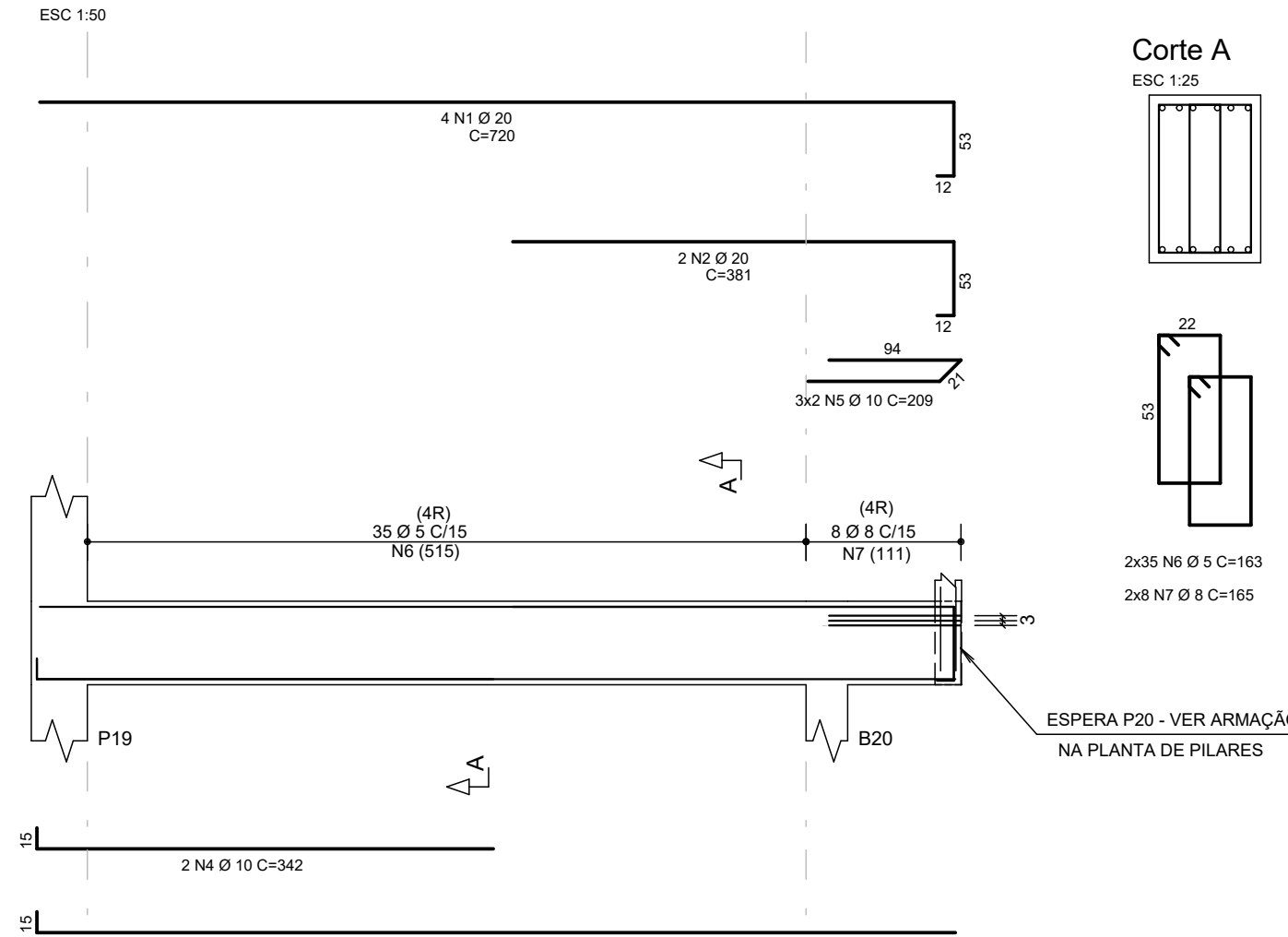
V8 19/60



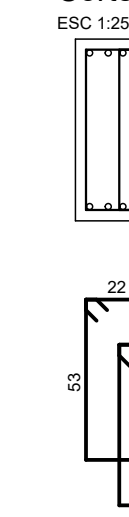
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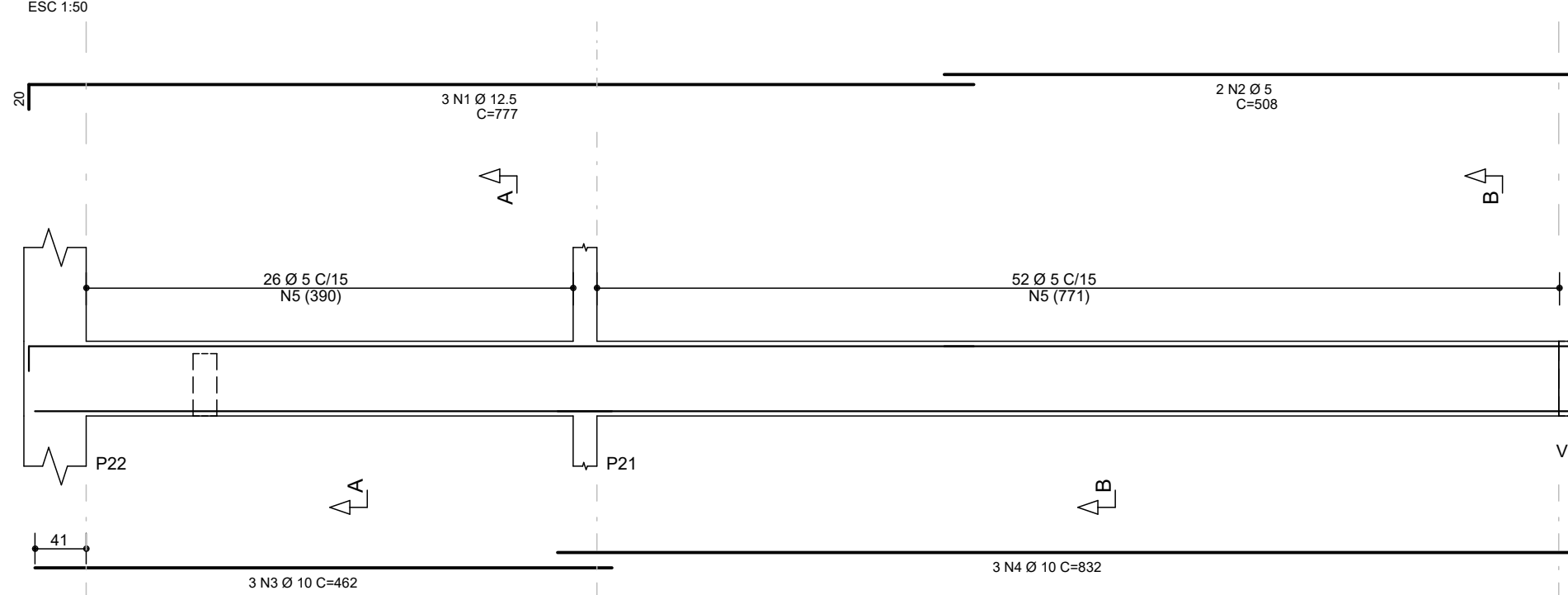
V9 40/60



Corte A



V10 19/60



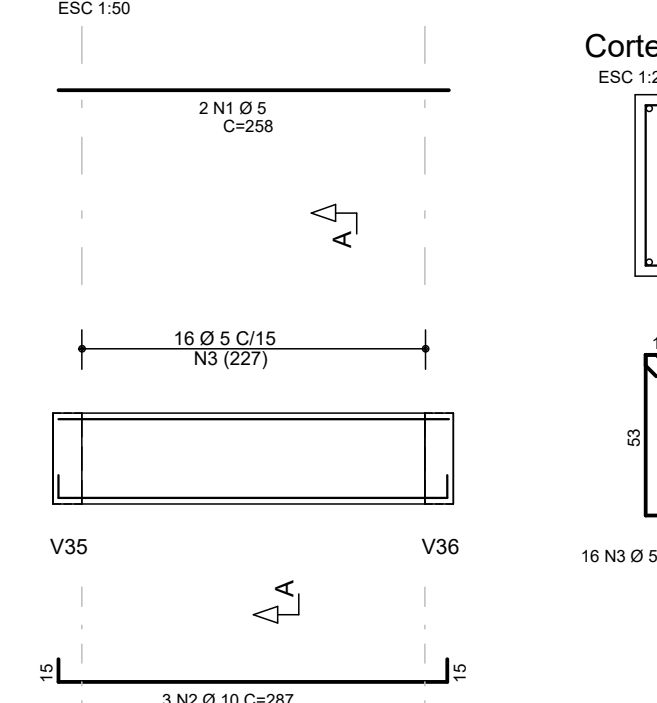
Corte A



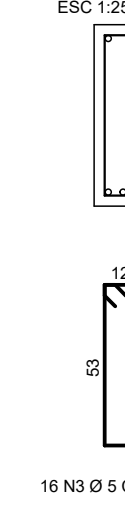
Corte B



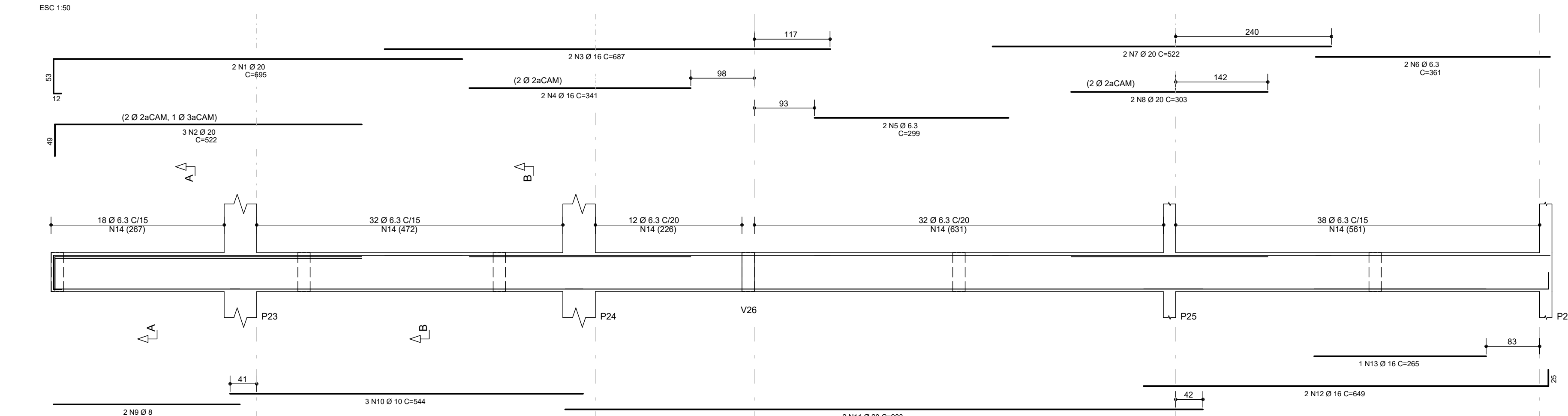
V11 19/60



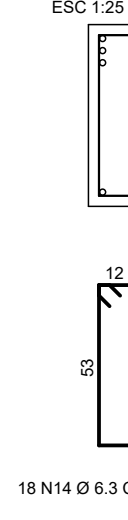
Corte A



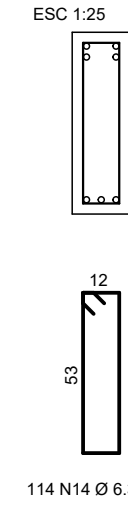
V12 19/60



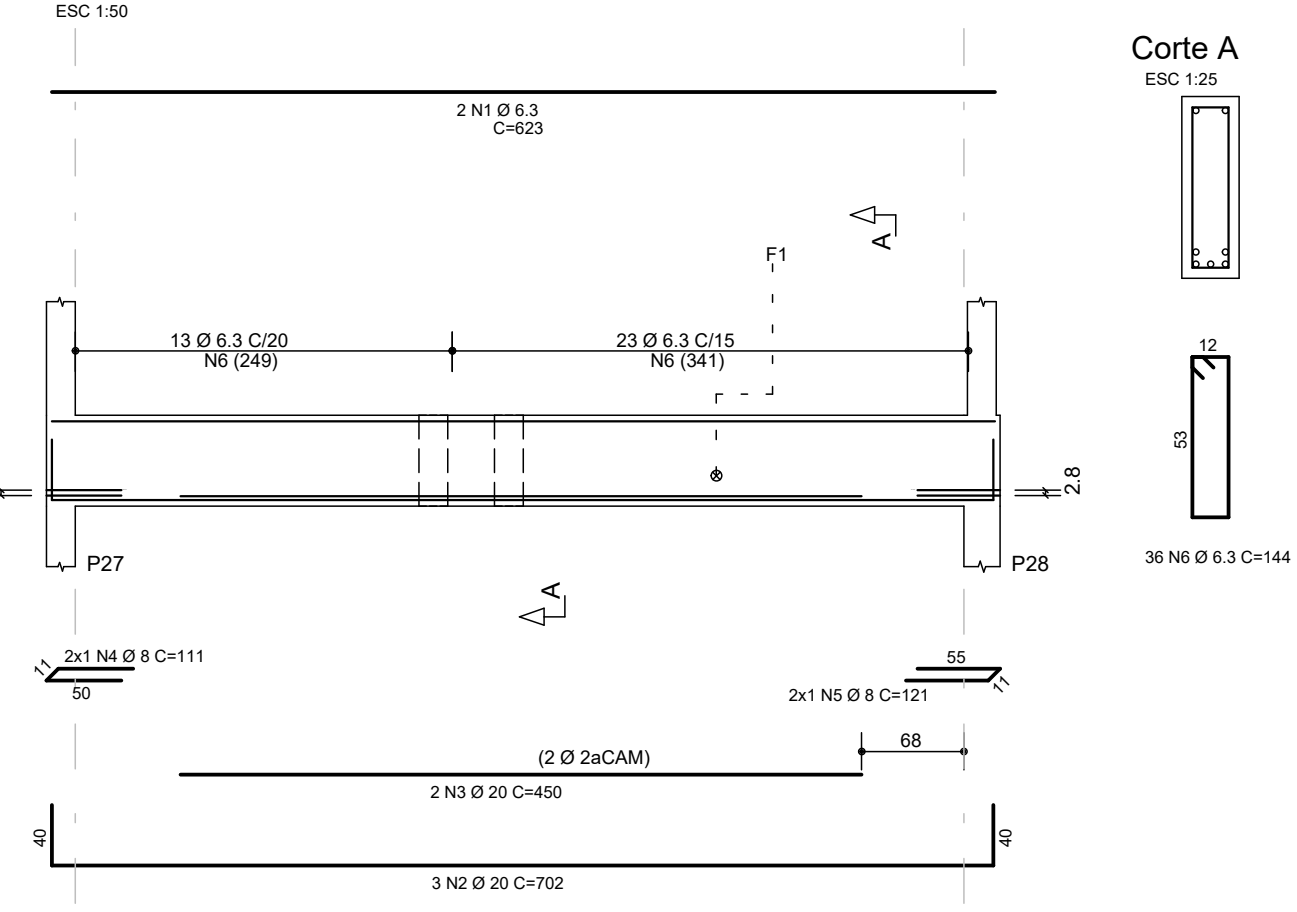
Corte A



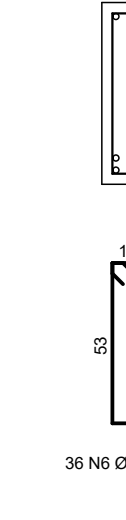
Corte B



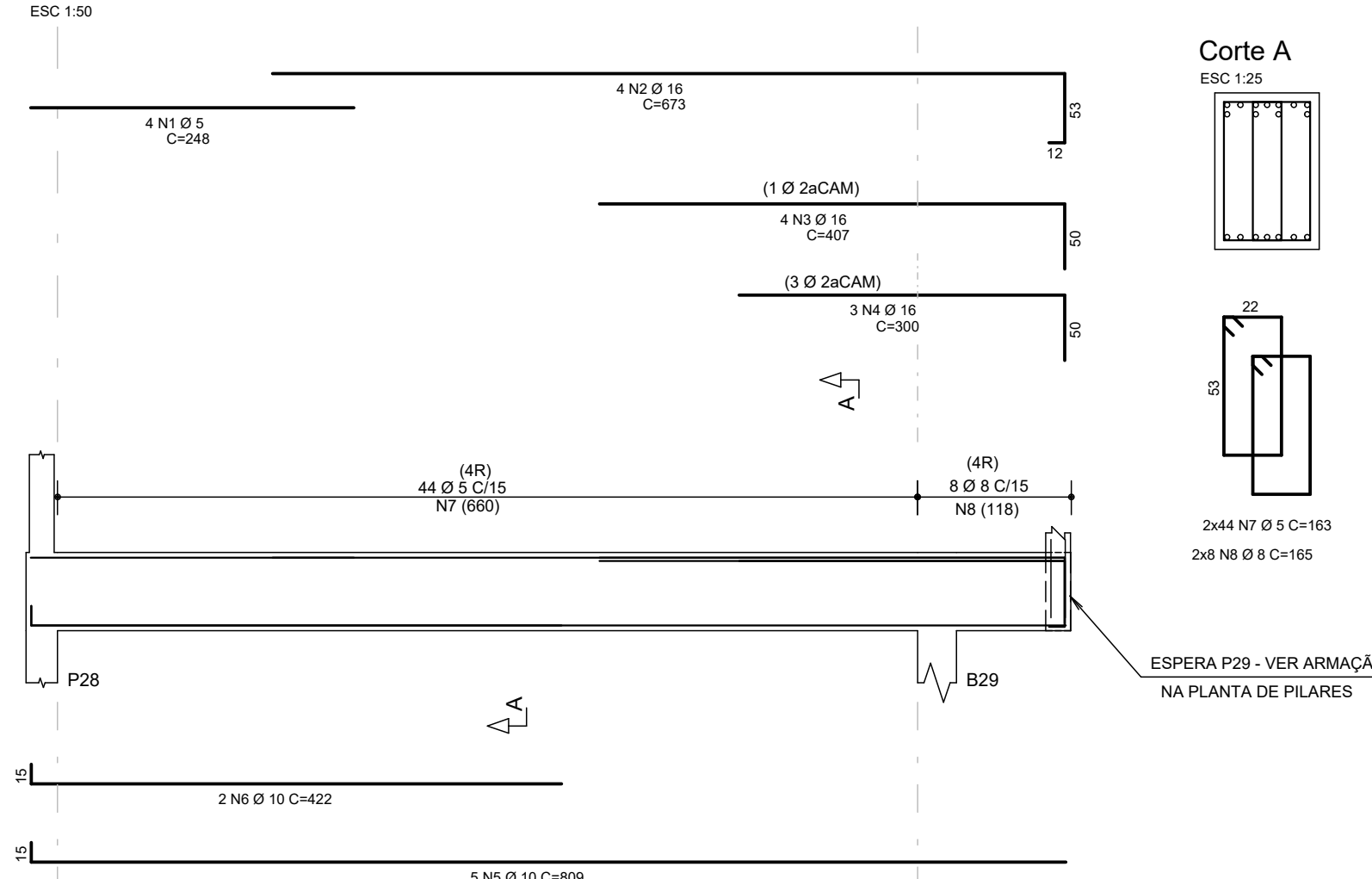
V13 19/60



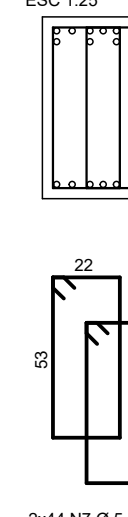
Corte A



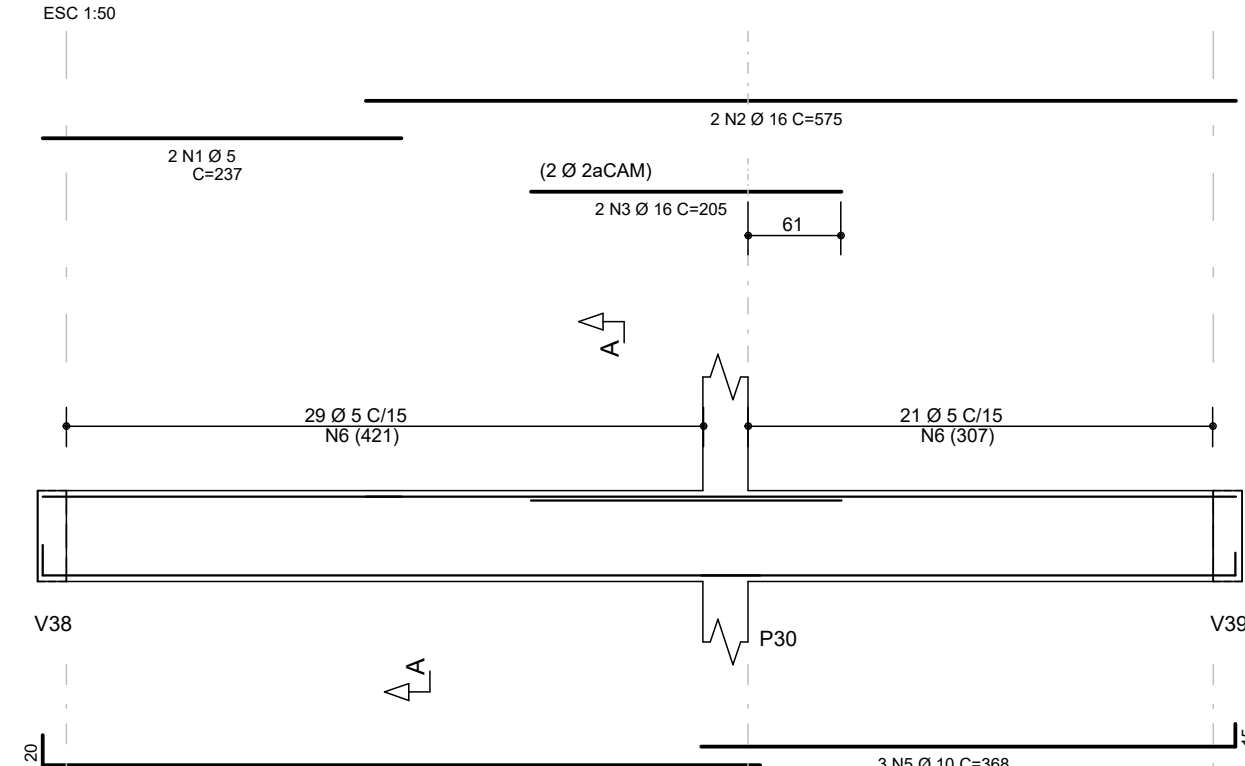
V14 40/60



Corte A



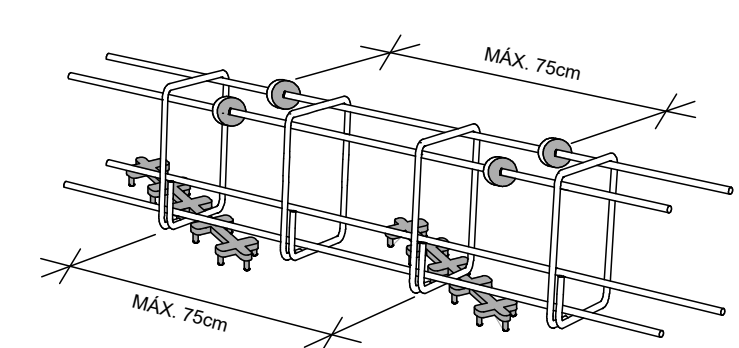
V15 19/60



Corte A



DET. POSICIONAMENTO DE ESPAÇADORES VIGAS SEM ESCALA



NOTAS:

- SERÃO COLOCADOS PELO MENOS TRÊS PLANOS DE ESPAÇADORES POR VÃO
- UTILIZAR PREFERENCIALMENTE ESPAÇADORES PLÁSTICOS
- CANTOS E ELEMENTOS ESPECIAIS EXIGEM ESTUDO PARTICULAR

	ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL
V1	50	1	16	2	822	1644
	50	2	12.5	3	889	2667
	50	3	12.5	2	249	498
	50	4	12.5	2	669	1338
	50	5	10	3	416	1248
	50	6	12.5	3	446	1338
V2	50	7	12.5	3	434	1302
	50	8	5	101	143	14443
	50	10	2	633	1266	
	50	20	3	872	2016	
	50	3	20	2	517	1034
	60	4	5	39	143	5577
V3	50	1	16	2	1115	2230
	50	2	16	3	348	1044
	50	3	16	2	716	1432
	50	5	12.5	3	414	1242
	50	6	12.5	1	264	264
	50	7	8	9	145	1305
V4	50	8	5	40	143	5720
	60	9	6.3	22	144	3168
	50	1	10	2	633	1266
	50	2	20	2	662	1324
	50	3	20	1	327	327
	60	4	5	39	143	5577
V5	50	1	12.5	2	496	992
	50	2	12.5	2	220	440
	50	3	16	2	588	1196
	50	4	16	2	271	542
	50	5	12.5	2	476	950
	50	6	12.5	1	284	284
V6	50	7	16	1	801	1602
	50	8	16	1	270	270
	50	9	10	2	647	1294
	50	10	10	1	498	498
	50	11	5	87	143	12441
	50	1	16	2	510	1020
V7	50	2	12.5	3	461	962
	60	3	5	26	143	3718
	50	1	20	2	1137	2274
	50	2	20	3	387	1191
	50	3	16	2	631	1263
	50	4	20	2	720	1440
V8	50	5	10	3	245	245
	50	6	16	2	437	874
	50	7	16	1	221	221
	50	8	10	10	147	1470
	50	9	8	55	145	7975
	60	1	5	2	752	1504
V9	50	2	16	2	814	2442
	50	3	16	2	556	1112
	50	4	10	3	353	353
	60	5	5	52	143	7436
	50	1	20	4	720	2880
	50	2	20	2	381	762
V10	50	3	10	4	873	2692
	50	4	10	2	342	684
	50	5	10	6	288	1254
	60	6	5	70	163	11410
	50	7	5	16	165	2640
	50	1	12.5	3	598	1016
V11	50	3	10	3	462	1386
	50	4	10	3	832	2496
	60	5	5	78	143	11154
	60	1	5	2	258	516
	50	2	10	3	287	861
	60	3	5	16	143	2288
V12	50	1	20	2	685	1390
	50	2	20	3	522	1566
	50	3	16	2	687	1374
	50	4	16	2	341	682
	50	5	6.3	2	299	598
	50	6	6.3	2	361	722
V13	50	7	20	2	522	1044
	50	8	20	2	303	606
	50	9	8	2	287	574
	50	10	10	3	544	1632
	50	11	20	2	883	1966
	50	12	16	2	649	1298
V14	50	13	16	1	265	265
	50	14	6.3	132	144	19008
	50	1	6.3	2	623	1246
	50	2	20	3	702	2106
	50	3	20	2	450	900
	50	4	8	2	111	222
V15	50	5	8	2	121	242
	60	6	6.3	36	144	5184
	50	1	5	4	248	992
	50	2	16	4	873	2692
	50	3	16	4	407	1628
	50	4	16	3	300	900
V16	50	5	10	5	809	4045
	50	6	10	2	422	844
	50	7	5	88	163	14344
	50	8	5	16	165	2640
	60	1	5	2	237	474
	50	2	16	2	576	1150
V17	50	3	10	2	205	410
	50	4	12.5	2	496	992
	50	5	10	3	388	1164
	60	5	5	52	143	7436
	50	1	20	2	695	1390
	50	2	20	3	522	1566

RESUMO AÇO CA 50-60			
ÇO	BIT (mm)	CONPR (m)	PESO (kg)
50	5	1058	163
50	6.3	299	73
50	8	156	62
50	10	240	148
50	12.5	162	156
50	16	274	432
50	20	243	163
Peso Total 60 m			163 kg
Peso Total 50 m			1470 kg

COBRIMENTOS:

Garantir os seguintes cobrimentos:
Lajes Maciças: 3,0cm
Vigas: 3,5cm
Pilares (Sem contato com o solo): 3,5cm
Pilares (Em contato com o solo): 4,0cm
Blocos/Sapatas: 4,0cm

Características dos materiais

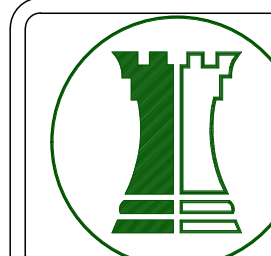
fck (kgf/cm²)	Ecs (kgf/cm²)
300	269918

Dimensão máxima do agregado = 19 mm

OBS: TODAS AS MEDIDAS DEVEM SER CONFERIDAS EM OBRA. CASO SEJA NECESSÁRIO ALGUMA ALTERAÇÃO, ENTRAR EM CONTATO COM O PROJETISTA RESPONSÁVEL.

2			
1			
0	26/08/2020	EMIÇÃO INICIAL	
REVISÃO	DATA	DESCRIÇÃO	

PROJETO ESTRUTURAL



ENGEPLANTI

PROJETOS E SUPERVISÃO

Rua Chelodora Nova, 110 - Centro - Fátima - SC

Estação Empresarial Horizonte Blue Center - 5º andar, sala 502

Fone: (48) 99125507 - Email: marcos@engeplanti.com.br

PROJETO: EEB DR. ARMANDO CALIL BULOS		RESPONSÁVEL TÉCNICO: GUILHERME SILVEIRA DE OLIVEIRA (CREA/SC 105591-0)	
PROJETO: ESTREITO, LAGUNA - SC		PROJETO: GUILHERME	
MUNICÍPIO DE LAGUNA		PROJETO: EST	