

Relação do aço

V14	V15	V16
V17	V18	V19
V20	V21	V22
V23	V24	V25
V26	V27	V28
V29	V30	

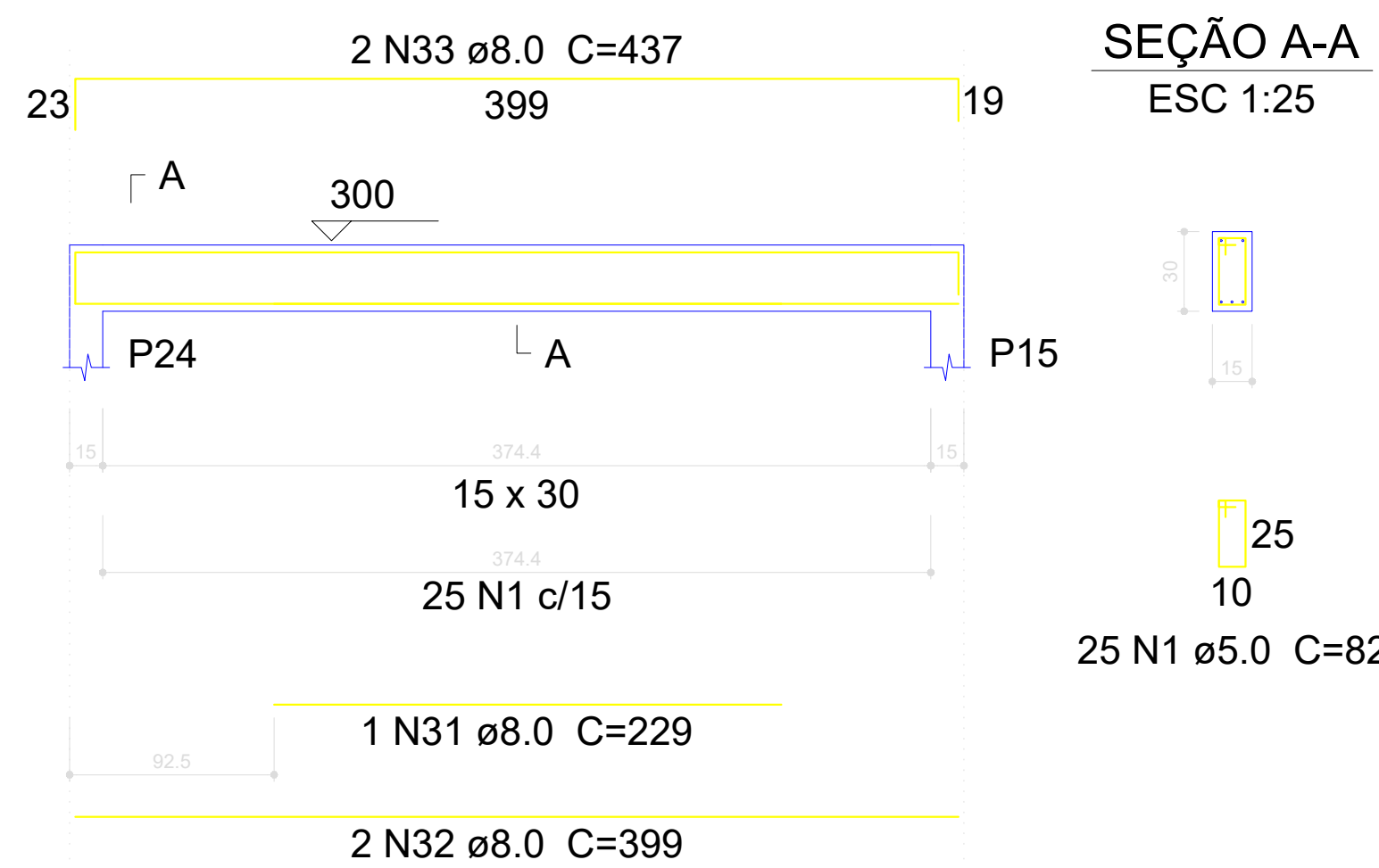
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	813	82	66666
	2	5.0	2	245	490
	3	5.0	2	240	480
	4	5.0	39	92	3588
CA50	5	8.0	4	641	2564
	6	8.0	3	205	615
	7	8.0	4	657	2628
	8	8.0	2	210	420
	9	8.0	2	620	1240
	10	8.0	1	165	165
	11	8.0	2	652	1304
	12	8.0	2	828	1656
	13	8.0	2	926	1852
	14	8.0	2	1198	2396
	15	8.0	2	619	1238
	16	8.0	2	623	1246
	17	8.0	1	170	170
	18	8.0	2	655	1310
	19	8.0	1	479	479
	20	8.0	4	823	3292
	21	8.0	2	854	1708
	22	8.0	2	260	520
	23	8.0	2	496	992
	24	8.0	1	123	123
	25	8.0	2	163	326
	26	8.0	2	209	418
	27	8.0	2	233	466
	28	8.0	2	846	1692
	29	8.0	3	488	1464
	30	8.0	2	135	270
	31	8.0	1	229	229
	32	8.0	2	399	798
	33	8.0	2	437	874
	34	8.0	2	400	800
	35	8.0	1	130	130
	36	8.0	2	447	894
	37	8.0	2	781	1562
	38	8.0	2	505	1010
	39	8.0	2	804	1608
	40	8.0	1	235	235
	41	8.0	2	415	830
	42	8.0	1	82	82
	43	8.0	2	448	896
	44	8.0	1	376	376
	45	8.0	2	765	1530
	46	8.0	2	248	496
	47	8.0	2	420	840
	48	8.0	1	92	92
	49	8.0	1	84	84
	50	8.0	2	458	916
	51	8.0	2	447	894
	52	8.0	2	563	1126
	53	8.0	1	96	96
	54	8.0	2	145	290
	55	8.0	2	595	1190
	56	10.0	2	215	430
	57	10.0	2	235	470
	58	10.0	4	225	900
	59	10.0	1	190	190
	60	10.0	2	1198	2396
	61	10.0	2	698	1396
	62	10.0	1	619	619
	63	10.0	1	200	200
	64	10.0	2	245	490
	65	10.0	2	1198	2396
	66	10.0	2	746	1492
	67	10.0	2	804	1608
	68	10.0	2	415	830
	69	10.0	1	163	163
	70	10.0	2	465	930
	71	10.0	1	195	195
	72	10.0	1	233	233
	73	10.0	1	258	258
	74	10.0	2	460	920

Resumo do aço

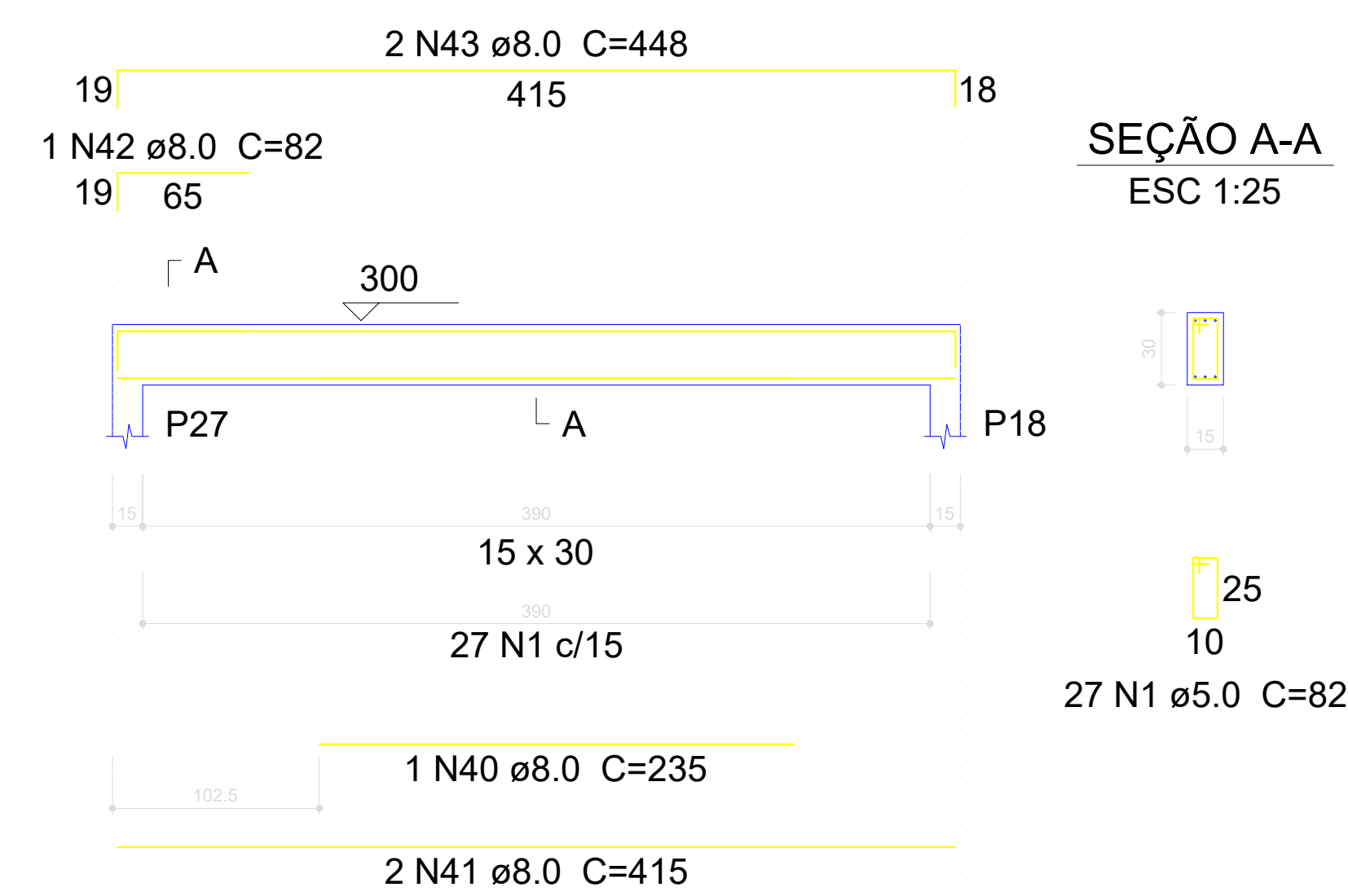
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	484.4	210.2
	10.0	161.2	109.3
CA60	5.0	712.3	120.8
<b>PESO TOTAL (kg)</b>			
CA50	319.5		
CA60	120.8		

Volume de concreto (C-30) = 6.14 m³  
 Área de forma = 101.15 m²

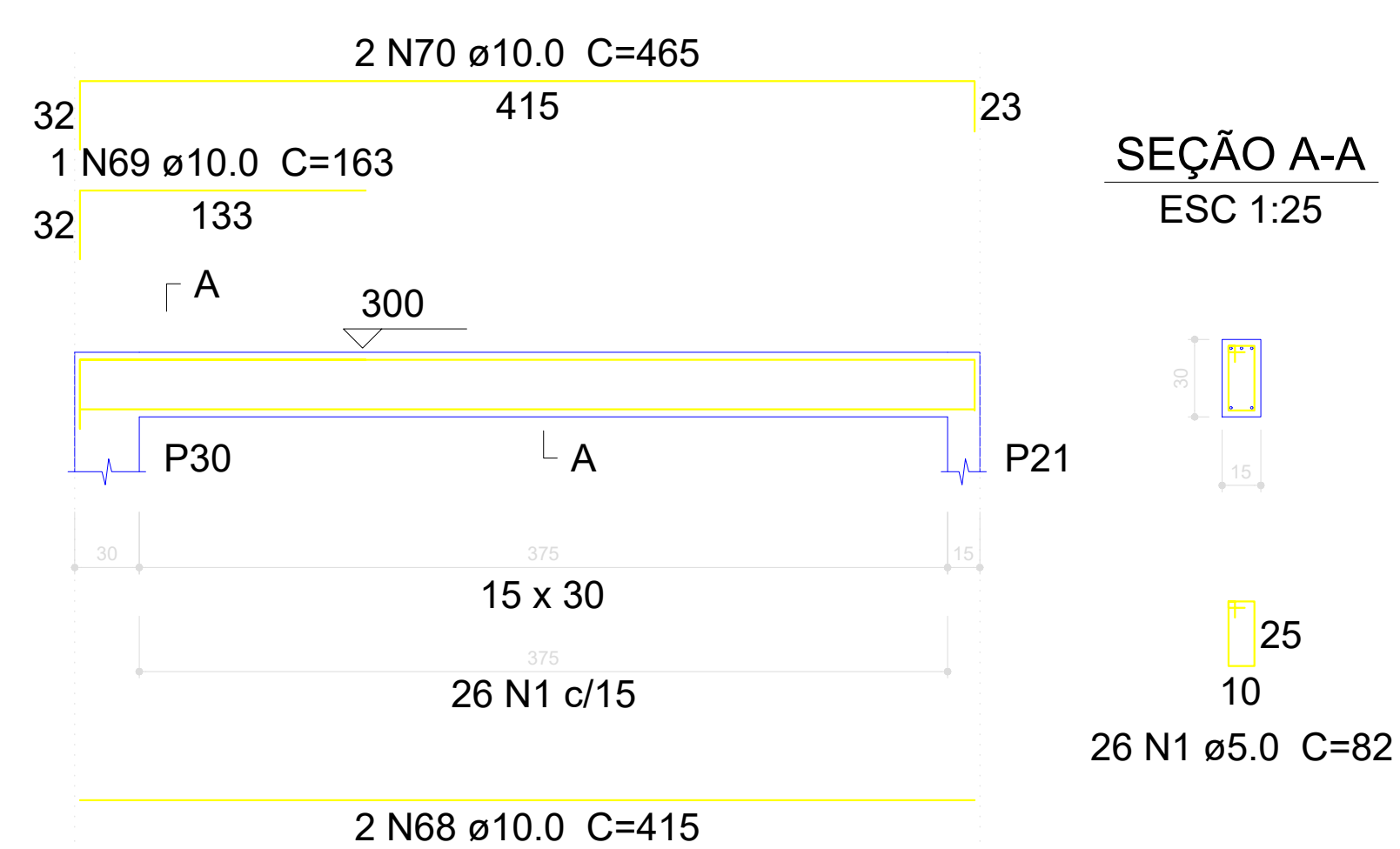
V21  
ESC 1:30



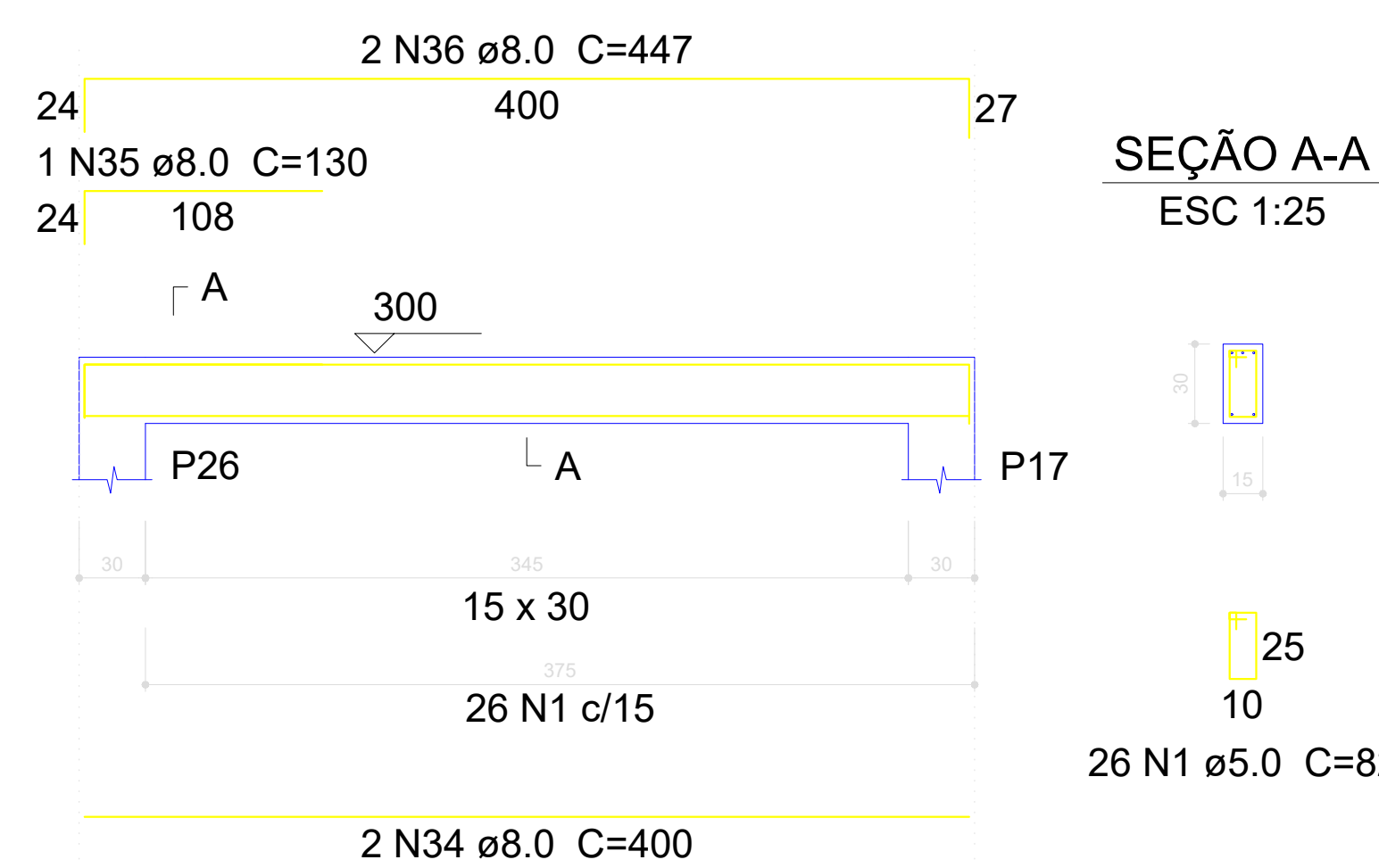
V24  
ESC 1:30



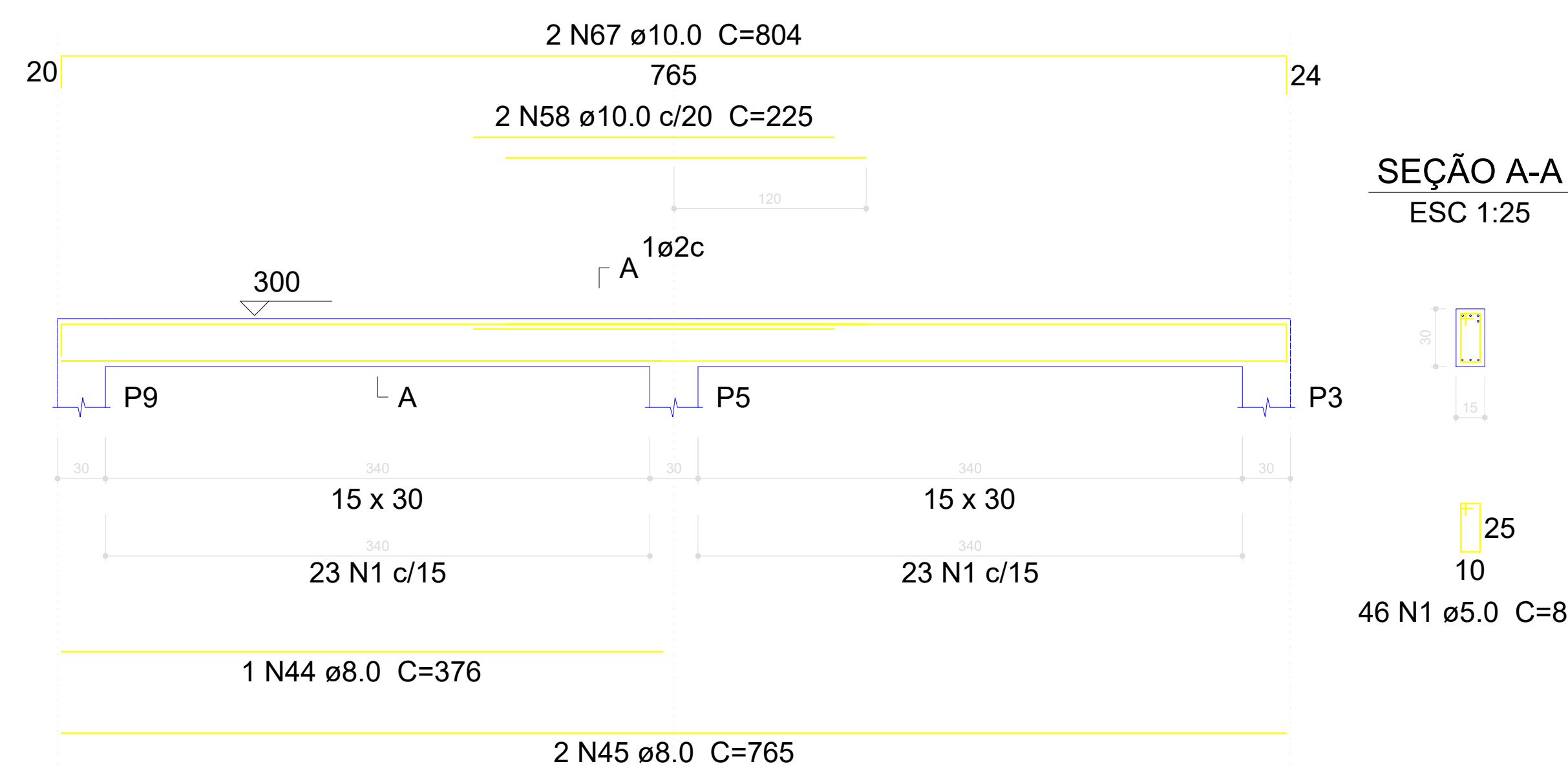
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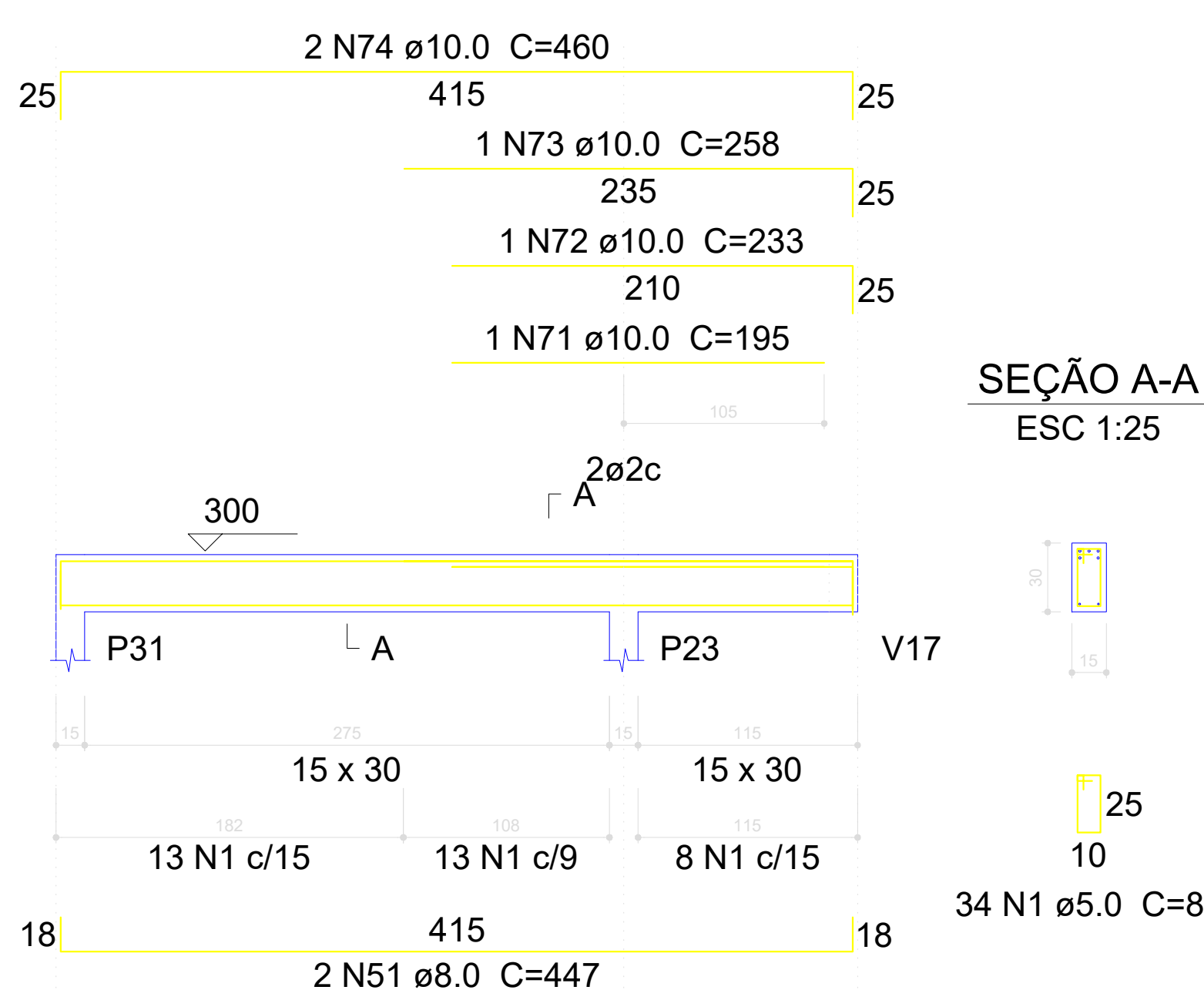
V22  
ESC 1:30



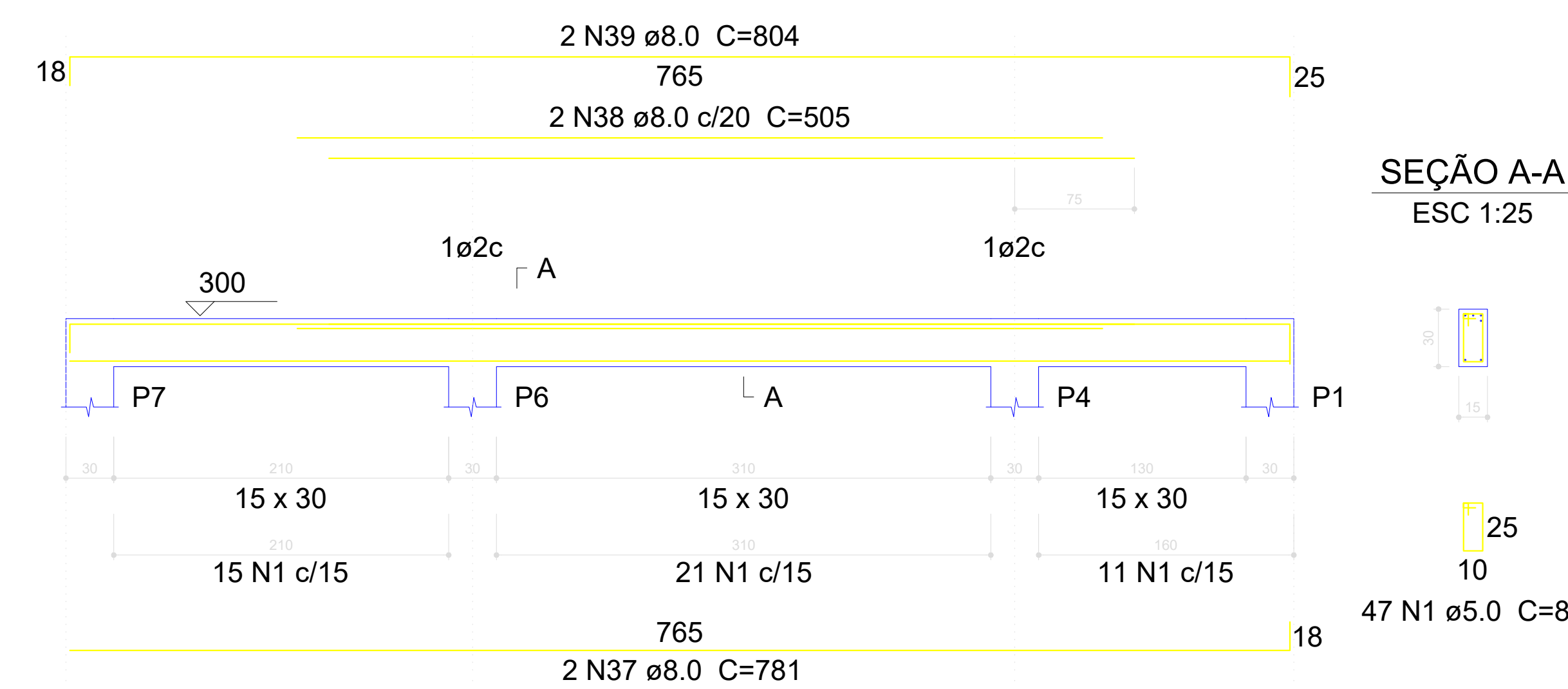
V25  
ESC 1:30



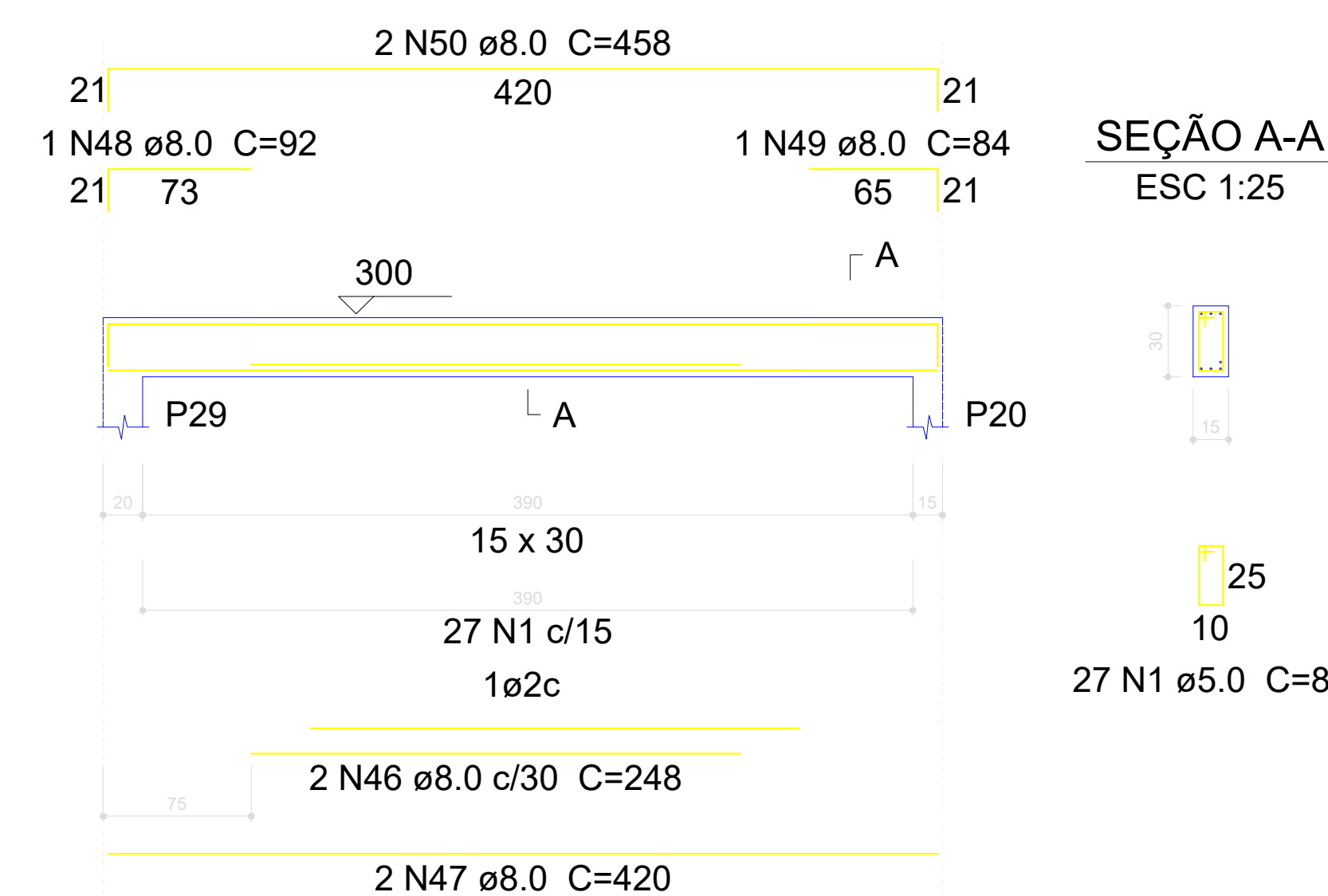
V29  
ESC 1:30



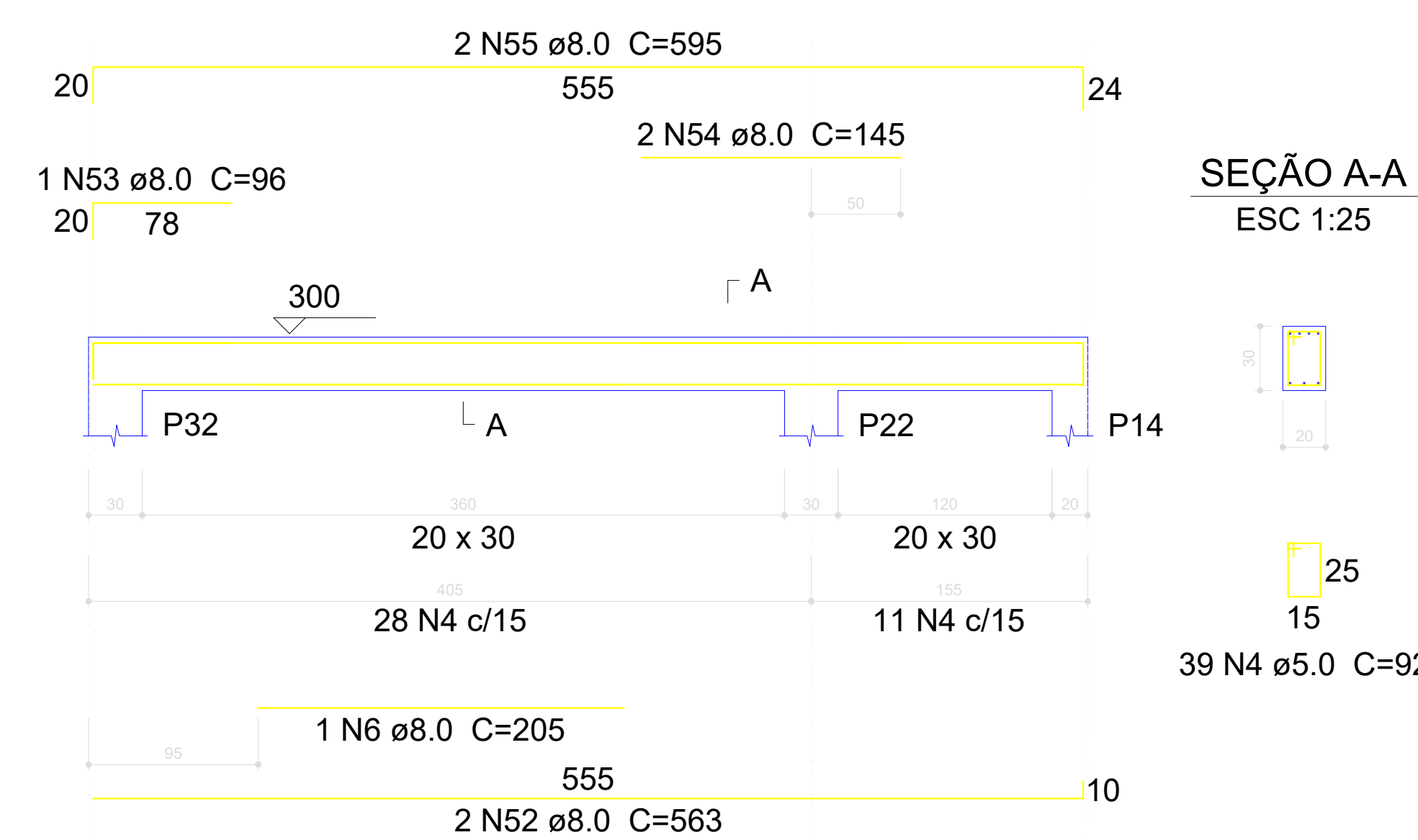
V23  
ESC 1:30



V27  
ESC 1:30




V30  
ESC 1:30



Dieferson Branger  
Eng. Civil CREA-SC 096024-8

Prefeitura Municipal de Bocaina do Sul  
Rua João Assink, 322, Centro



**CONSTRUTORA  
BRANGER**

ENDEREÇO: Estrada Geral de Campinas - Bairro Interior - Bocaina do Sul  
 DESCRIÇÃO: ESCOLA NUCLEADA MUNICIPAL JOÃO VALTER  
 PROPRIETÁRIO: Prefeitura Municipal de Bocaina do Sul

CATEGORIA: ESTRUTURAL  
 PROJETO: Reforma e Ampliação  
 REFERÊNCIA: DETALHAMENTO DAS VIGAS TETO

RESPONSÁVEL TÉCNICO: Dieferson Branger  
Eng. Civil CREA-SC 096024-8

DATA: 16/07/2020

FOLHA: **STR**  
**04/08**

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