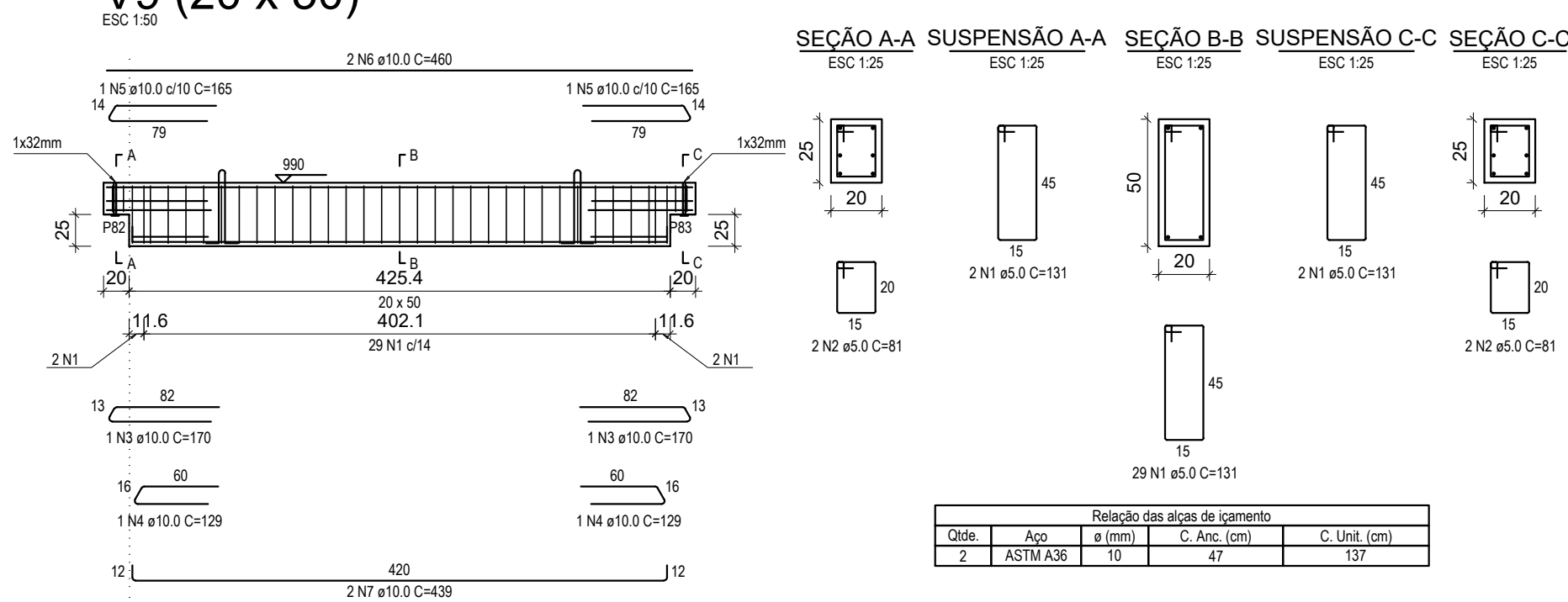
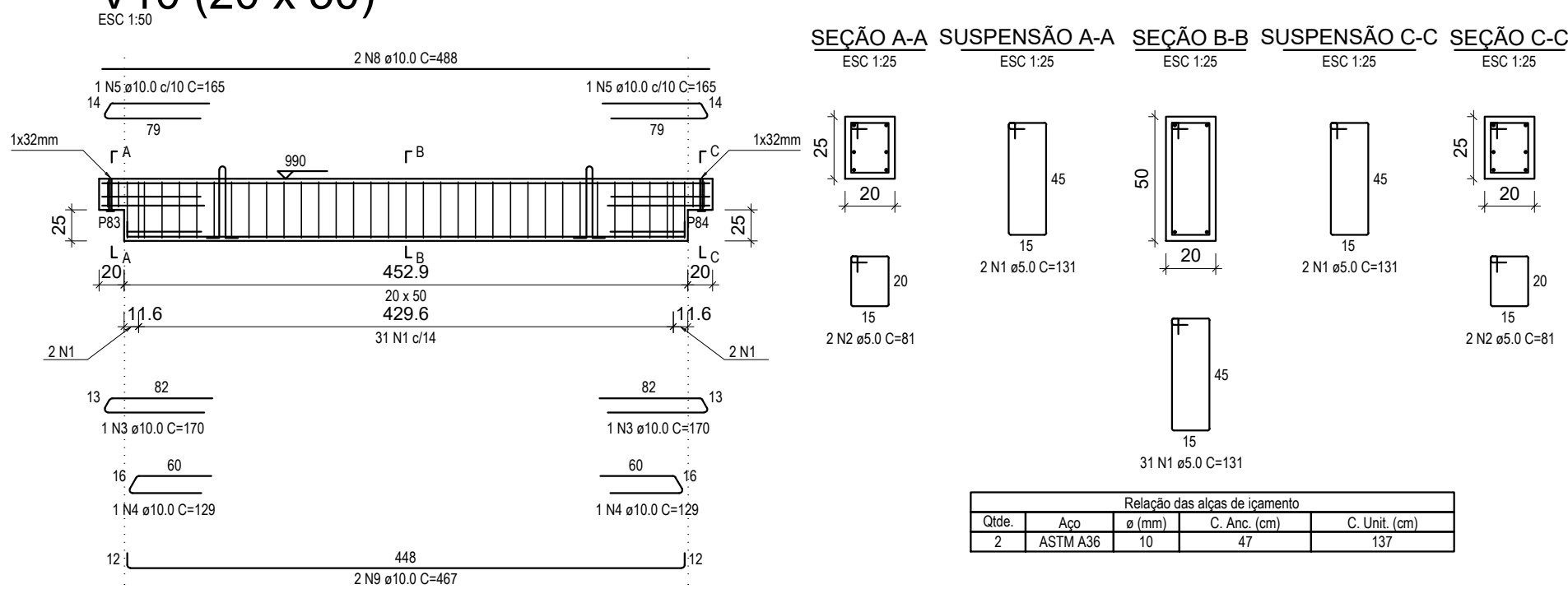


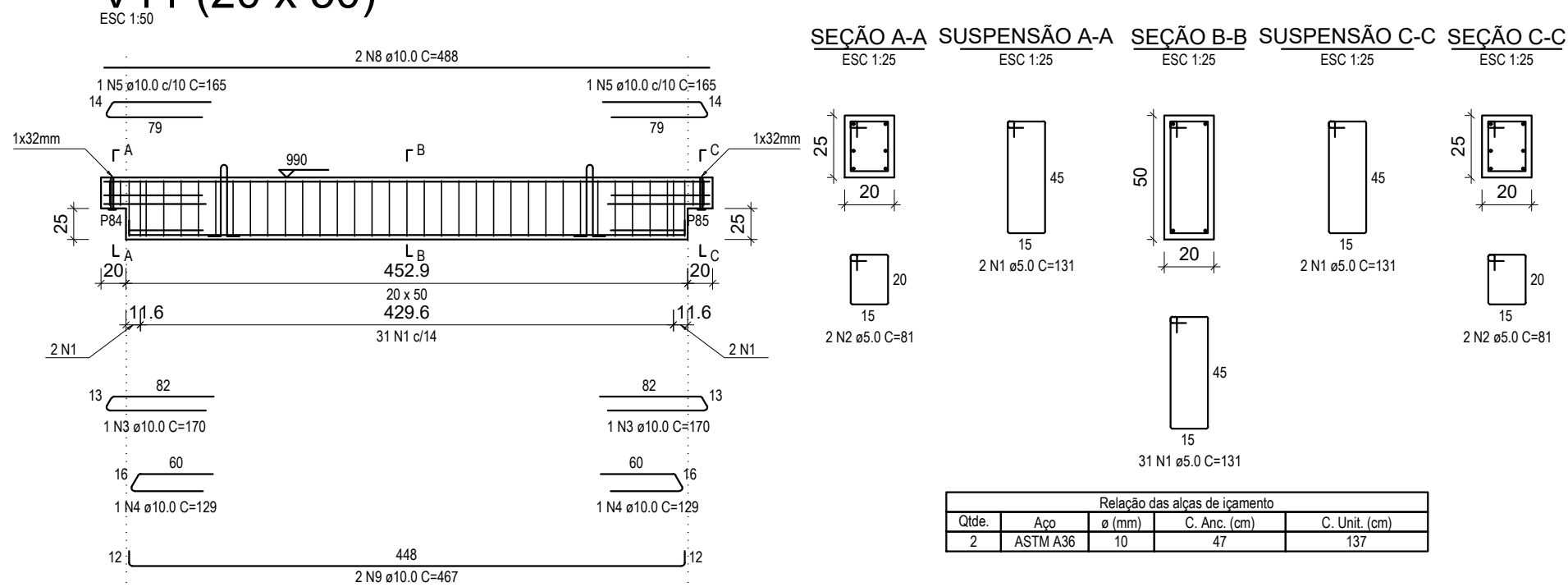
V9 (20 x 50)



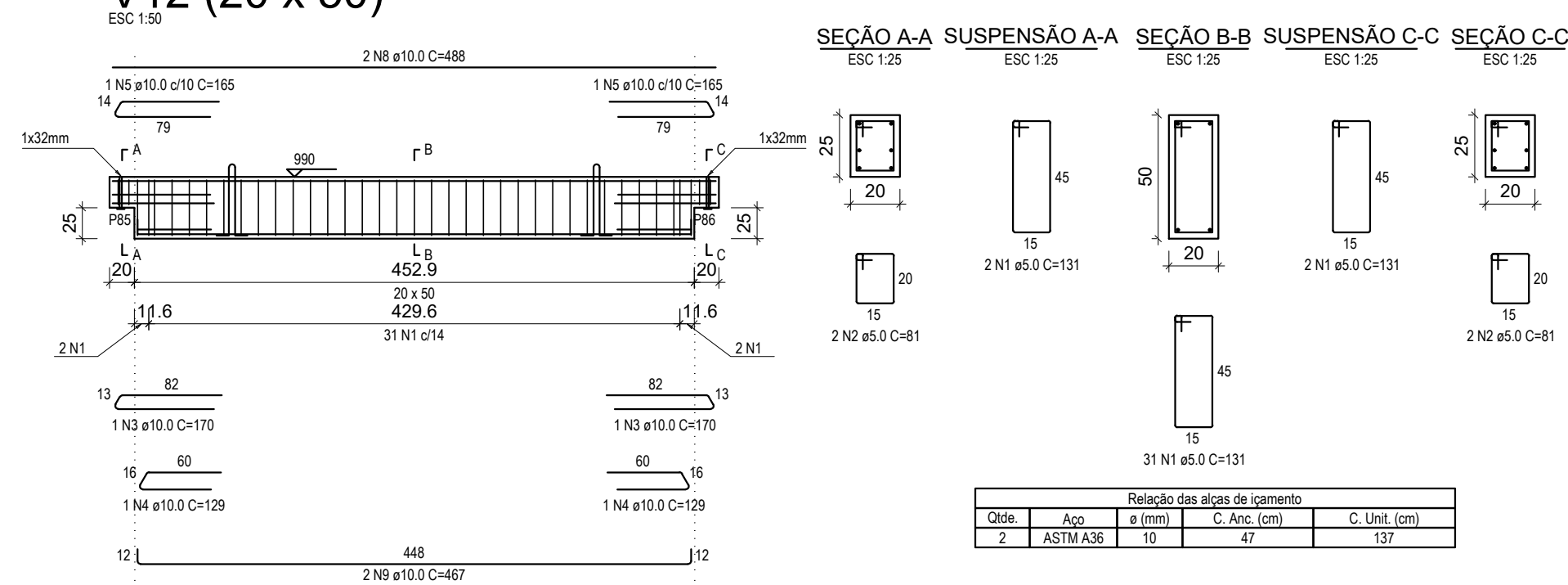
V10 (20 x 50)



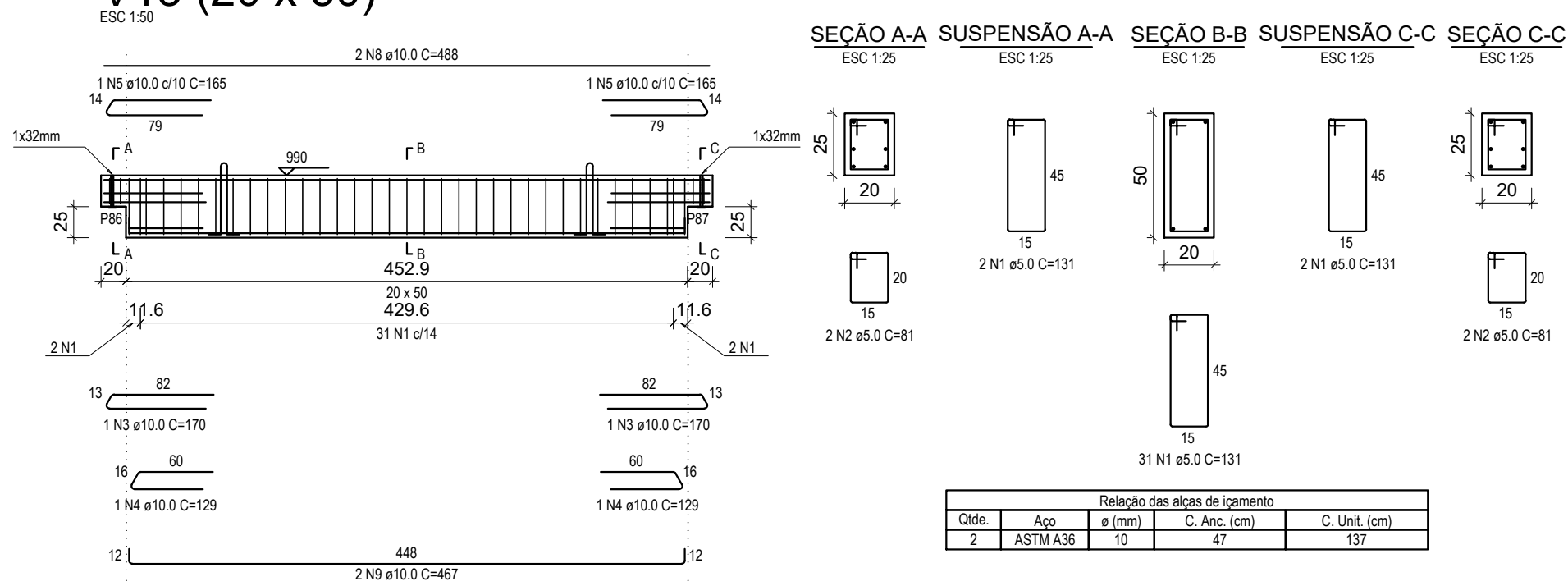
V11 (20 x 50)



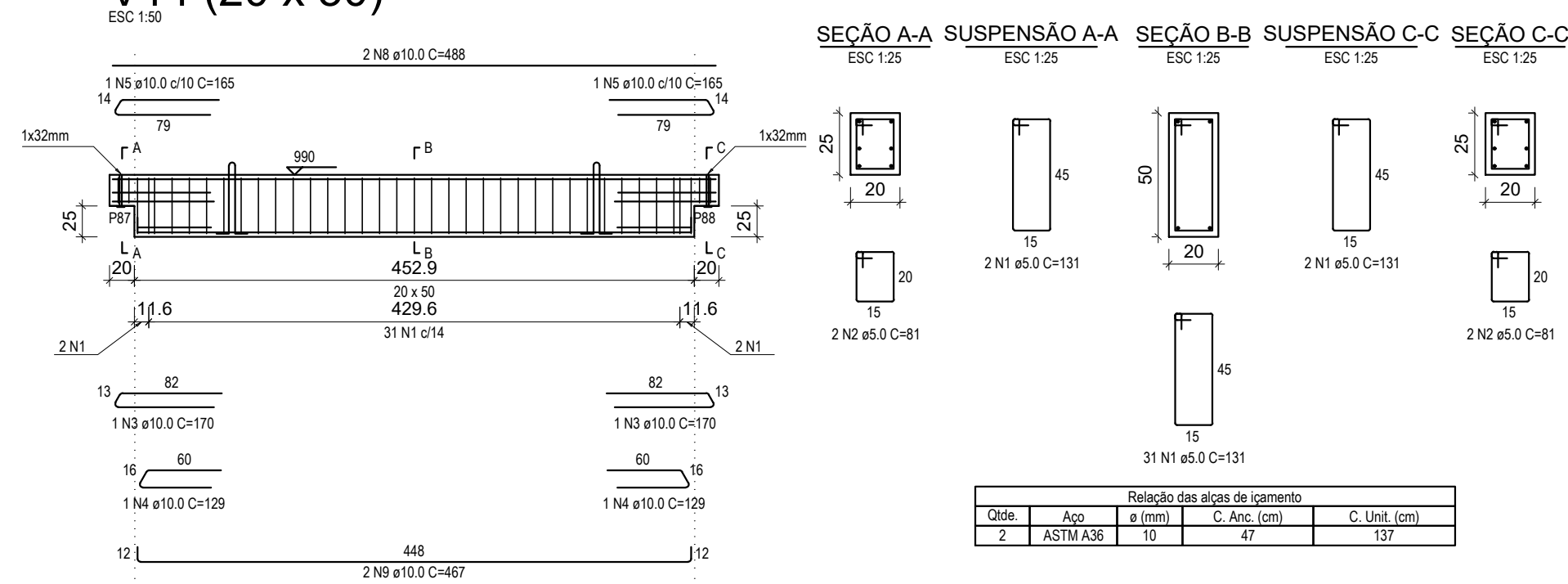
V12 (20 x 50)



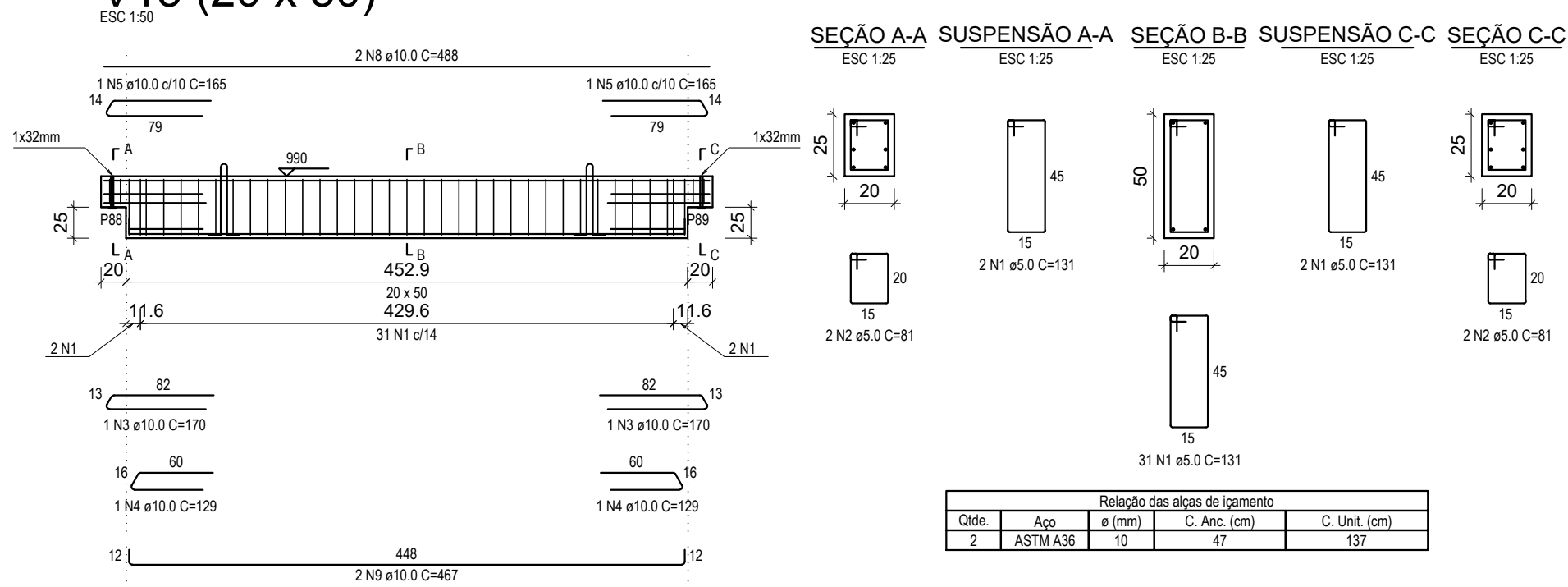
V13 (20 x 50)



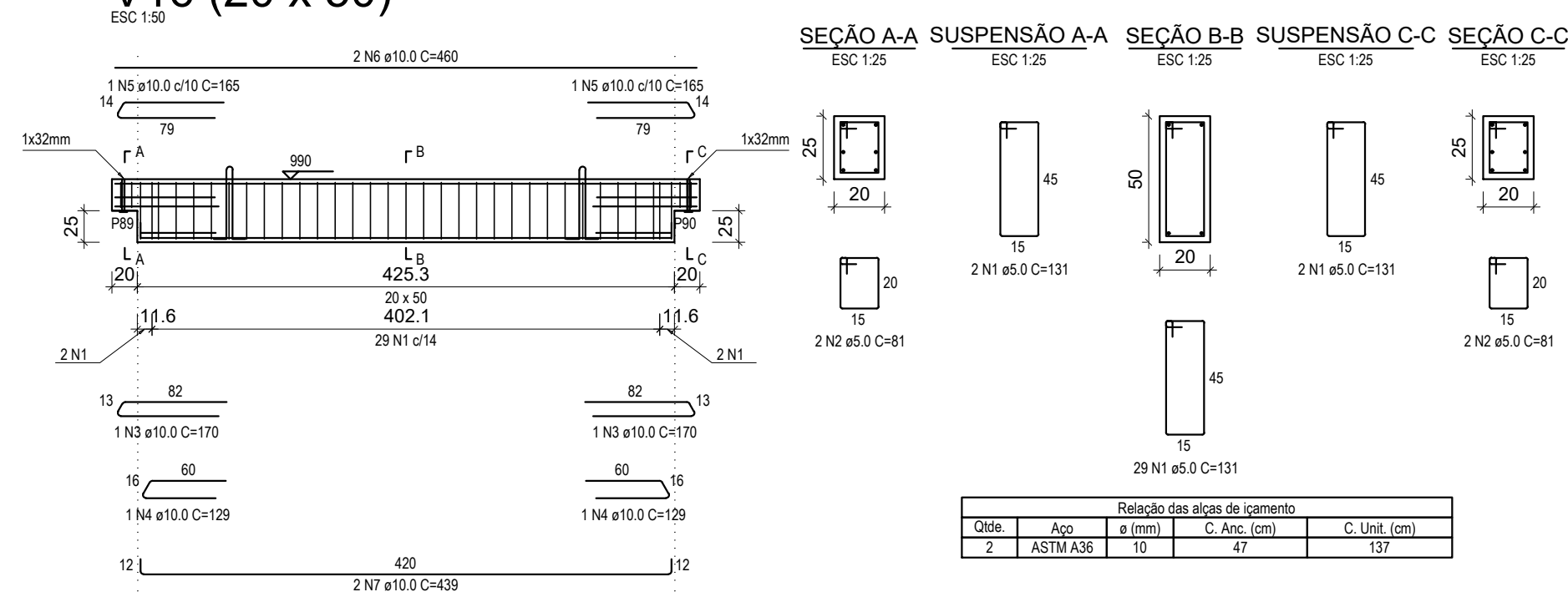
V14 (20 x 50)



V15 (20 x 50)



V16 (20 x 50)



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	276	131	36156
V9	2	5.0	32	81	2592
V12	3	10.0	16	170	2720
V15	4	10.0	16	129	2064
	5	10.0	16	165	2640
	6	10.0	4	460	1840
	7	10.0	4	439	1756
	8	10.0	12	488	5856
	9	10.0	12	467	5604

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	10.0	224.8	152.5
CA60	5.0	387.5	65.7

PESO TOTAL (kg)	
CA50	152.5
CA60	65.7

Volume de concreto (C-40) = 3.73 m³

PROJETO ESTRUTURAL

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CONSTRUÇÃO INSTITUCIONAL EM ALVENARIA - GINÁSIO ESCOLAR  
Rodovia Estadual - SC, 416 - São Roque  
Timbó - SC

Autor do Projeto: Anderson Halla  
Arquiteto e Urbanista - CAU nº 176063-7

Assinatura:

Proprietário: Fundo Municipal de Educação - FMDE de Timbó  
CNPJ: 32.257.384/0001-19

Assinatura:

Escala: Indicada Revisão: 00 Data: Maio 2020

Especificação: Prancha:

VIGAS TOPO V9-V16

E 40