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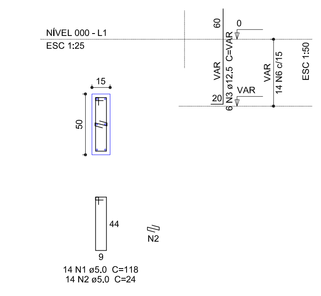
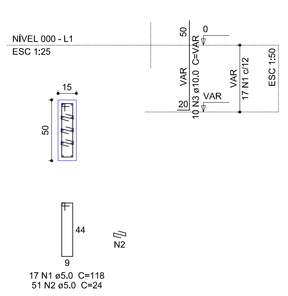
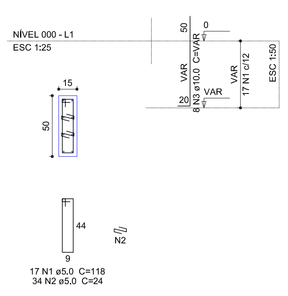


P2



P3



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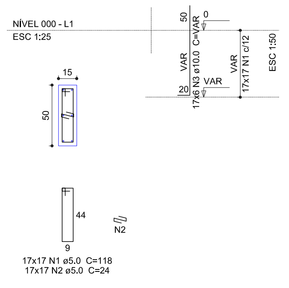

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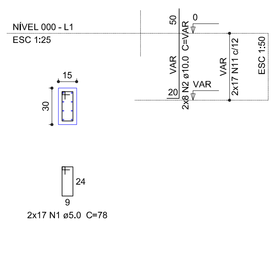

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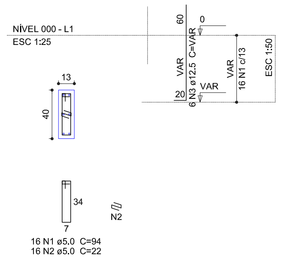

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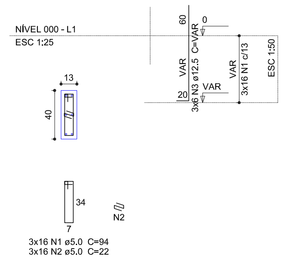

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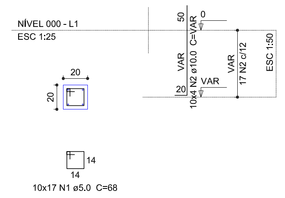

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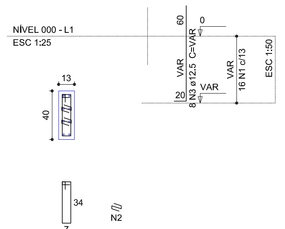

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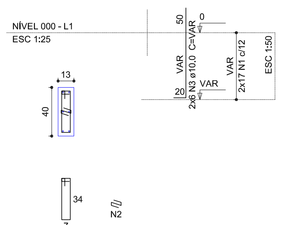

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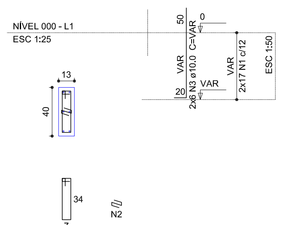

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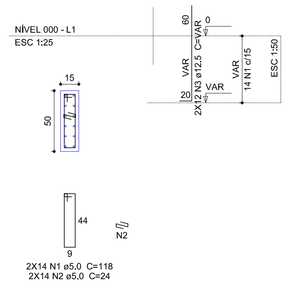

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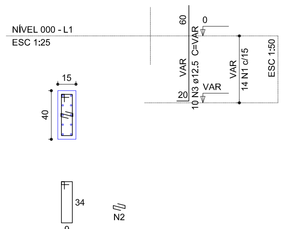

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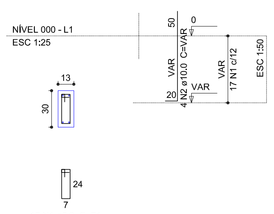

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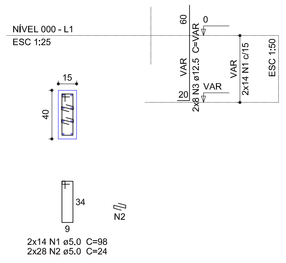

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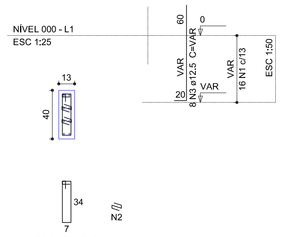

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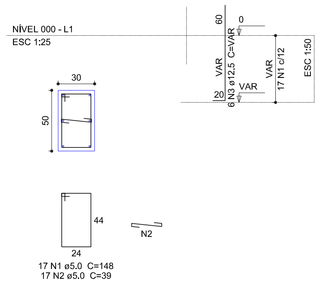

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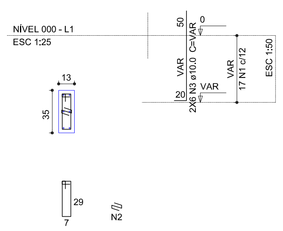

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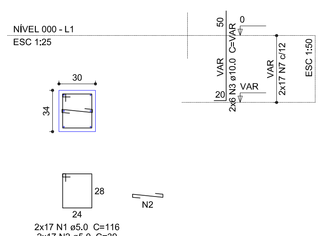

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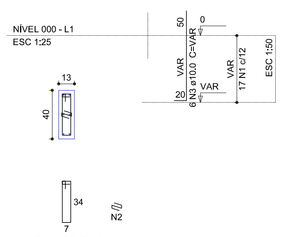

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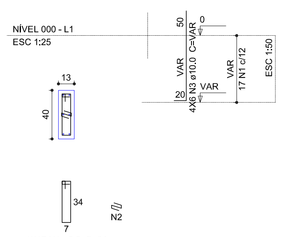

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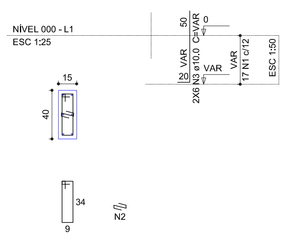

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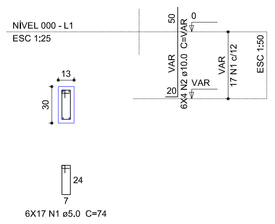

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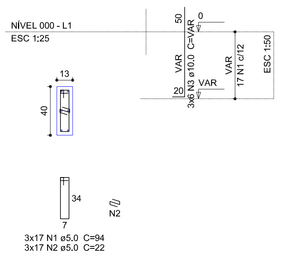

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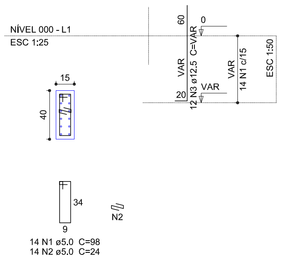

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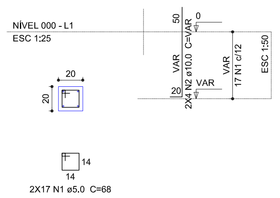

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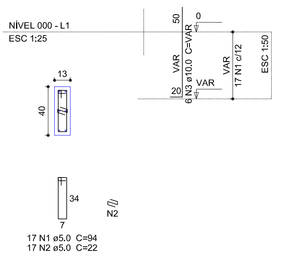

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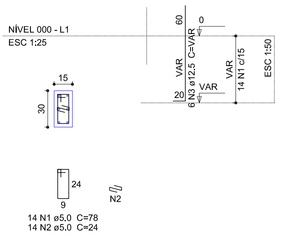

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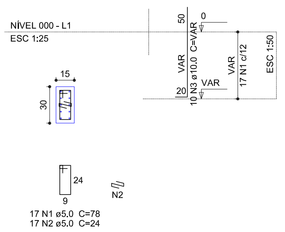

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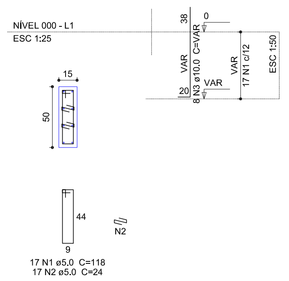
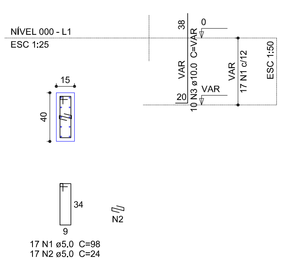
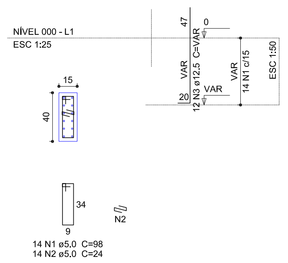


P76



P77



RELAÇÃO DO AÇO - ARMAÇAS

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P1x1	CA60	1	5,0	14	118	1652
	CA50	2	5,0	51	24	1224
P2x1	CA60	1	5,0	17	118	2006
	CA50	2	5,0	51	24	1224
P3x1	CA60	1	5,0	17	118	2006
	CA50	2	5,0	34	24	816
P4=P5=P8=P9=P16=P17=P24=P26=P27=P44=P46=P52=P57=P59=P66=P71=P74	CA60	1	5,0	17x17	118	34102
	CA50	2	5,0	289	24	6936
P6=P7x1	CA60	1	5,0	2x17	78	2652
P10x1	CA60	1	5,0	16	94	1504
	CA50	2	5,0	16	22	352
P11=P29=P61x1	CA60	1	5,0	3x16	94	4512
	CA50	2	5,0	48	22	1056
P12=P13=P20=P21=P30=P31=P40=P41=P55=P56x1	CA60	1	5,0	10x17	68	11560
P14x1	CA60	1	5,0	16	94	1504
	CA50	2	5,0	32	22	704
P15=P65x1	CA60	1	5,0	2x17	94	3196
	CA50	2	5,0	2x17	22	748
P18=P19x1	CA60	1	5,0	2x17	94	3196
	CA50	2	5,0	2x17	22	748
P22=P78x1	CA60	1	5,0	2X14	118	3304
	CA50	2	5,0	2X14	24	672
P23x1	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336
P25x1	CA60	1	5,0	17	74	1258
P28=P38x1	CA60	1	5,0	2x14	98	2744
	CA50	2	5,0	2x28	24	1344
P32x1	CA60	1	5,0	16	94	1504
	CA50	2	5,0	32	22	704
P33x1	CA60	1	5,0	17	148	2516
	CA50	2	5,0	17	39	663
P34=P36x1	CA60	1	5,0	2X17	84	2856
	CA50	2	5,0	2X17	22	748
P35=P37x1	CA60	1	5,0	2x17	116	3944
	CA50	2	5,0	2x17	39	1326
P39x1	CA60	1	5,0	17	94	1598
	CA50	2	5,0	17	22	374
P42=P47=P50=P51x1	CA60	1	5,0	4X17	94	6392
	CA50	2	5,0	4X17	22	1496
P43=P45x1	CA60	1	5,0	2X17	98	3332
	CA50	2	5,0	2X17	24	816
P48=P49=P67=P68=P69=P70x1	CA60	1	5,0	6X17	74	7548
P53=P54=P60x1	CA60	1	5,0	3x17	94	4794
	CA50	2	5,0	3x17	22	1122
P58x1	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336
P62=P63x1	CA60	1	5,0	2X17	68	2312
P64x1	CA60	1	5,0	17	94	1598
	CA50	2	5,0	17	22	374
P72x1	CA60	1	5,0	14	78	1092
	CA50	2	5,0	14	24	336
P73x1	CA60	1	5,0	17	78	1326
	CA50	2	5,0	17	24	408
P75x1	CA60	1	5,0	17	118	2006
	CA50	2	5,0	17	24	408
P76x1	CA60	1	5,0	17	98	1666
	CA50	2	5,0	17	24	408
P77x1	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336
PEÇAS IDÊNTICAS						
P2x2	CA60	1	5,0	17	118	2006
	CA50	2	5,0	51	24	1224
P3x2	CA60	1	5,0	17	118	2006
	CA50	2	5,0	34	24	816
P4=P5=P8=P9=P16=P17=P24=P26=P27=P44=P46=P52=P57=P59=P66=P71=P74x2	CA60	1	5,0	17x17	118	34102
	CA50	2	5,0	289	24	6936
P6=P7x2	CA60	1	5,0	2x17	78	2652
P10x2	CA60	1	5,0	16	94	1504
	CA50	2	5,0	16	22	352
P11=P29=P61x2	CA60	1	5,0	3x16	94	4512
	CA50	2	5,0	48	22	1056
P12=P13=P20=P21=P30=P31=P40=P41=P55=P56x2	CA60	1	5,0	10x17	68	11560
P14x2	CA60	1	5,0	16	94	1504
	CA50	2	5,0	32	22	704
P15=P65x2	CA60	1	5,0	2x17	94	3196
	CA50	2	5,0	2x17	22	748
P18=P19x2	CA60	1	5,0	2x17	94	3196
	CA50	2	5,0	2x17	22	748
P22=P78x2	CA60	1	5,0	2X14	118	3304
	CA50	2	5,0	2X14	24	672
P23x2	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336
P25x2	CA60	1	5,0	17	74	1258
P28=P38x2	CA60	1	5,0	2x14	98	2744
	CA50	2	5,0	2x28	24	1344
P32x2	CA60	1	5,0	16	94	1504
	CA50	2	5,0	32	22	704
P33x2	CA60	1	5,0	17	148	2516
	CA50	2	5,0	17	39	663
P34=P36x2	CA60	1	5,0	2X17	84	2856
	CA50	2	5,0	2X17	22	748
P35=P37x2	CA60	1	5,0	2x17	116	3944
	CA50	2	5,0	2x17	39	1326
P39x2	CA60	1	5,0	17	94	1598
	CA50	2	5,0	17	22	374
P42=P47=P50=P51x2	CA60	1	5,0	4X17	94	6392
	CA50	2	5,0	4X17	22	1496
P43=P45x2	CA60	1	5,0	2X17	98	3332
	CA50	2	5,0	2X17	24	816
P48=P49=P67=P68=P69=P70x2	CA60	1	5,0	6X17	74	7548
P53=P54=P60x2	CA60	1	5,0	3x17	94	4794
	CA50	2	5,0	3x17	22	1122
P58x2	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336
P62=P63x2	CA60	1	5,0	2X17	68	2312
P64x2	CA60	1	5,0	17	94	1598
	CA50	2	5,0	17	22	374
P72x2	CA60	1	5,0	14	78	1092
	CA50	2	5,0	14	24	336
P73x2	CA60	1	5,0	17	78	1326
	CA50	2	5,0	17	24	408
P75x2	CA60	1	5,0	17	118	2006
	CA50	2	5,0	17	24	408
P76x2	CA60	1	5,0	17	98	1666
	CA50	2	5,0	17	24	408
P77x2	CA60	1	5,0	14	98	1372
	CA50	2	5,0	14	24	336

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (cm)	PESO (~10%) (kg)
CA60	5,0	189,0	50,0
CA50	12,5	1944,0	1944,0
PESO TOTAL (kg)			2044,0
CA60	0,154 kg/m		
CA50	0,963 kg/m		

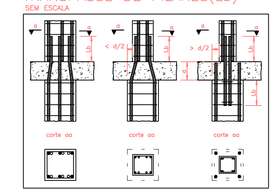
Volume de concreto (C) = 12,00 m³
Área da forma = 100,01 m²

NOTAS

1 – COTAS E DIMENSÕES EM CENTIMETROS
2 – ACO CA-50 (fyk = 500 MPa) E CA-60 (fyk = 600 MPa)
3 – COBRIMENTO DAS ARMADURAS (CA-50A): XXcm

TRANSPASSE DE PILARES(Lb)

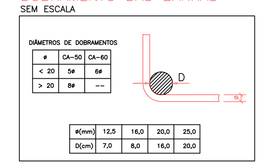
SEM ESCALA



BITOLA (ø)	TRANSPASSE (Lb)
12,5	50
16	60
20	80
25	100

DOBRAMENTO DAS BARRAS

SEM ESCALA



DIÂMETROS DE DOBRAMENTOS

ø	CA-50	CA-60
< 20	5ø	6ø
> 20	8ø	--

ø(mm)	12,5	16,0	20,0	25,0
D(cm)	7,0	8,0	10,0	25,0

EVANDRO GERALDO DO CARMO MEDEIROS:73043974620

Assinado de forma digital por EVANDRO GERALDO DO CARMO MEDEIROS:73043974620
Dados: 2025.02.17 16:08:59 -03'00'

FNDE Fundo Nacional de Desenvolvimento da Educação

Ministério da Educação

PROJETO PADRÃO - FNDE

PROPRIETÁRIO: : PREFEITURA MUNICIPAL

ENDEREÇO: DISTRITO AGUAS CLARAS

MUNICÍPIO – UF: AGUIA BRANCA – ES

PROPRIETÁRIO PREFEITURA MUNICIPAL DE ÁGUIA BRANCA CNPJ: 31.796.584/0001-87

RESP. TÉCNICO ENG. CIVIL EVANDRO GERALDO DO CARMO CREA/MG 071548/D

AUTOR DO PROJETO ENG. CIVIL EVANDRO GERALDO DO CARMO CREA/MG 071548/D

DLFO

CREA

RA

OBSERVAÇÕES:

PROGRAMA PROINFÂNCIA - PROJETO TIPO 2

PROJETO DE ESTRUTURA

COORDENAÇÃO
CGEST - Coordenação Geral de Infraestrutura Educacional

DESCRIÇÃO-1
DESCRIÇÃO-2
DESCRIÇÃO-3

PE-AR

FORMATO DESENHO

REVISÃO

ESCALA: ESCALA

DATA EMISSÃO 17.02.2025

PRANCHA 02/02

FORMATO A0