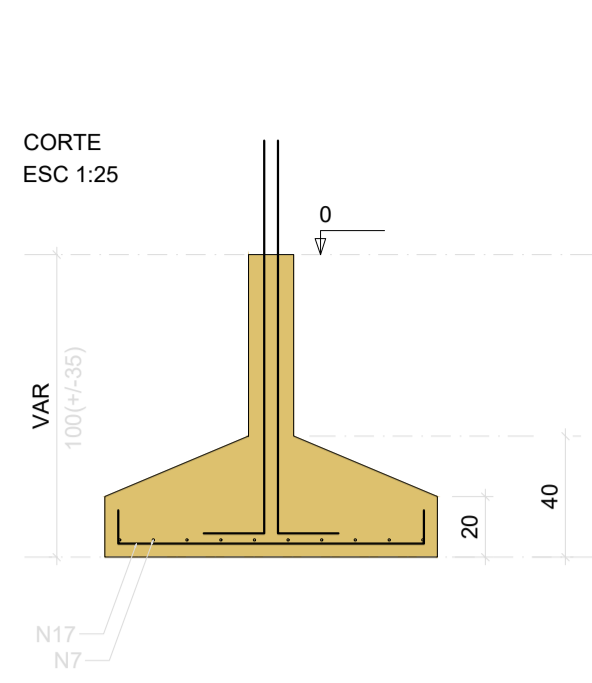
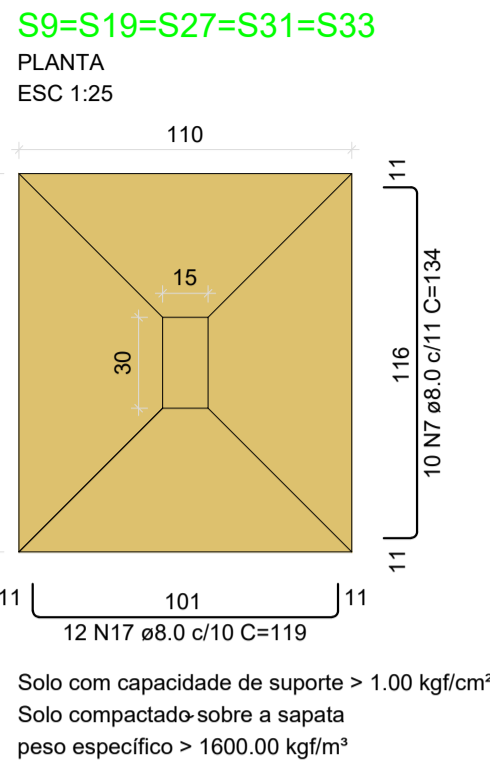
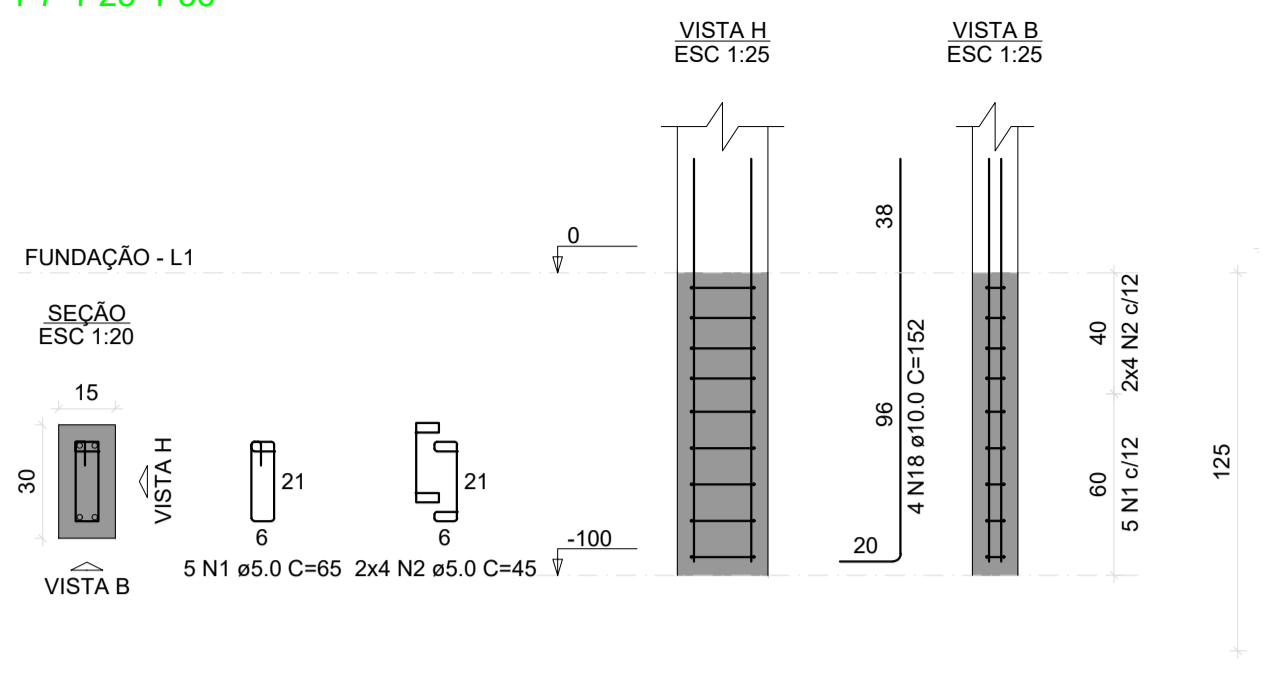
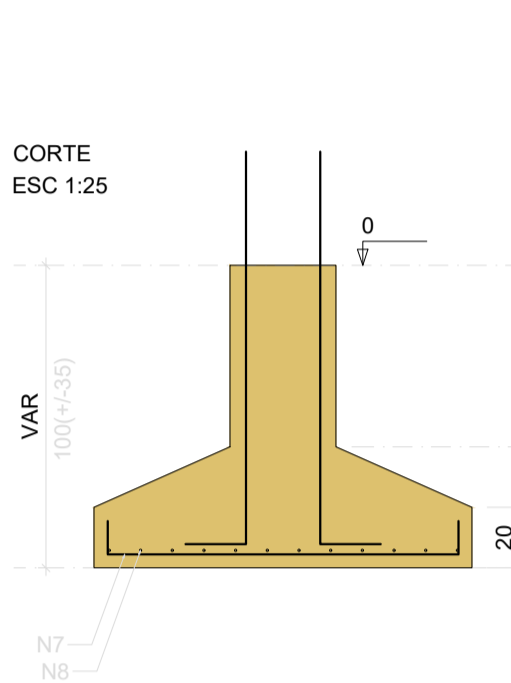
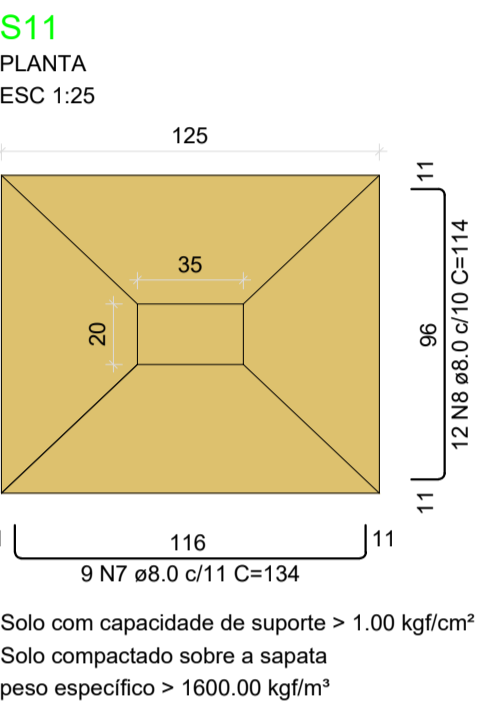
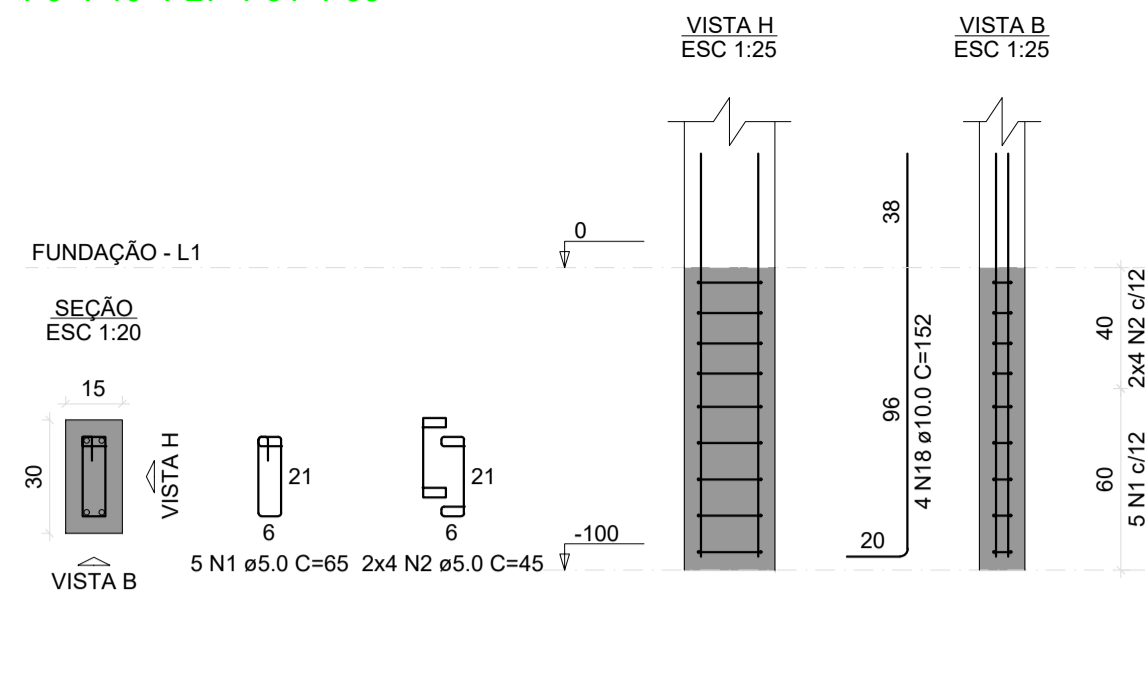


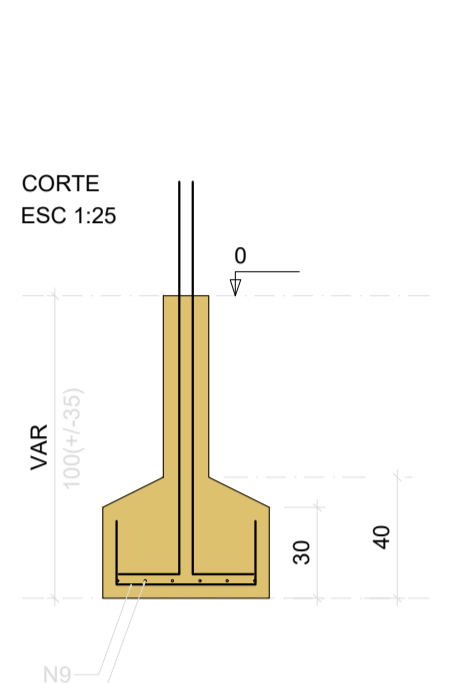
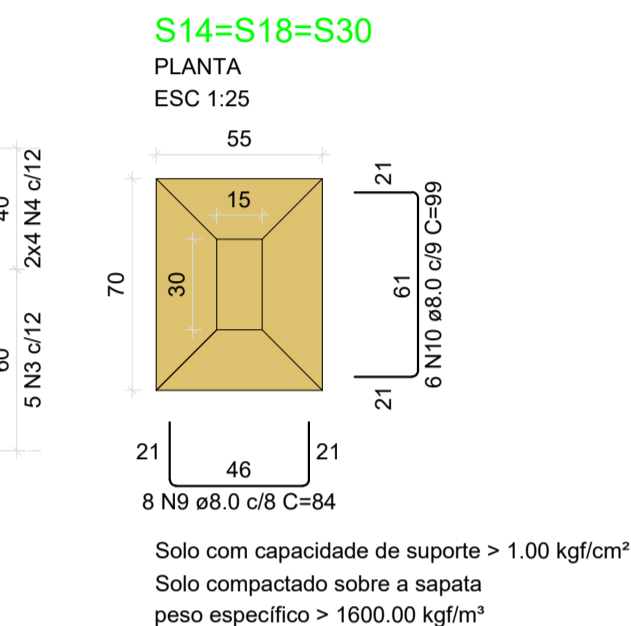
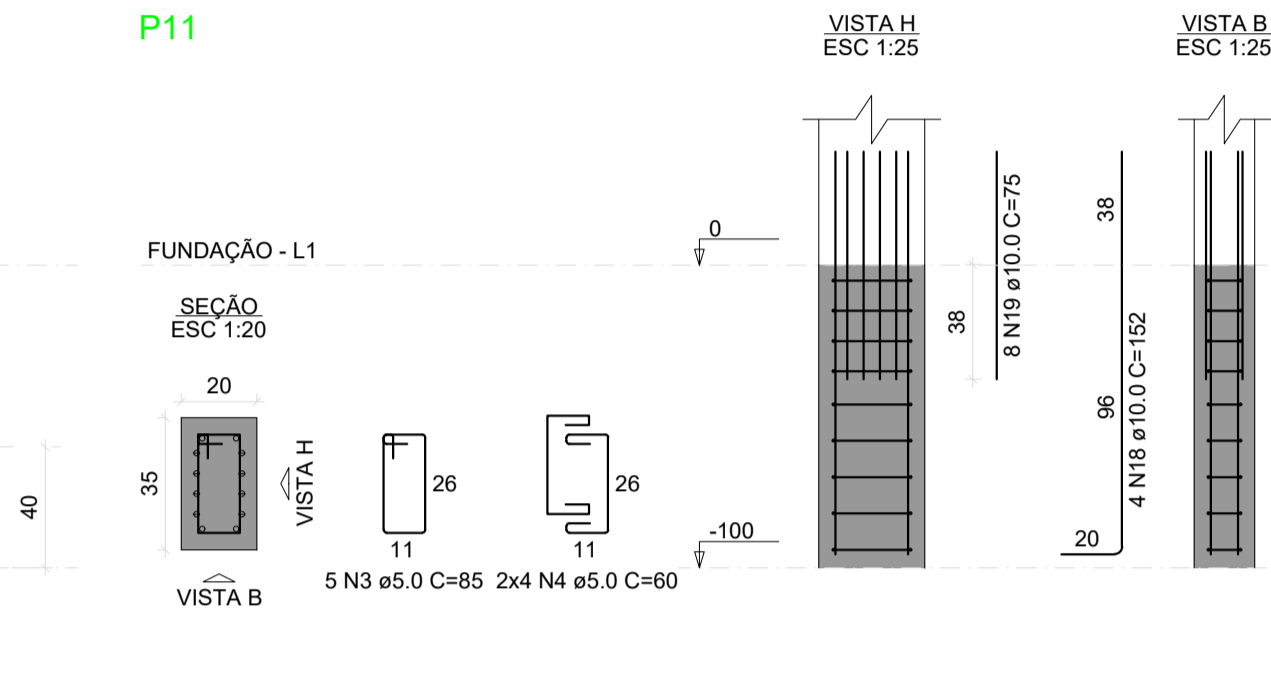
P7=P25=P36



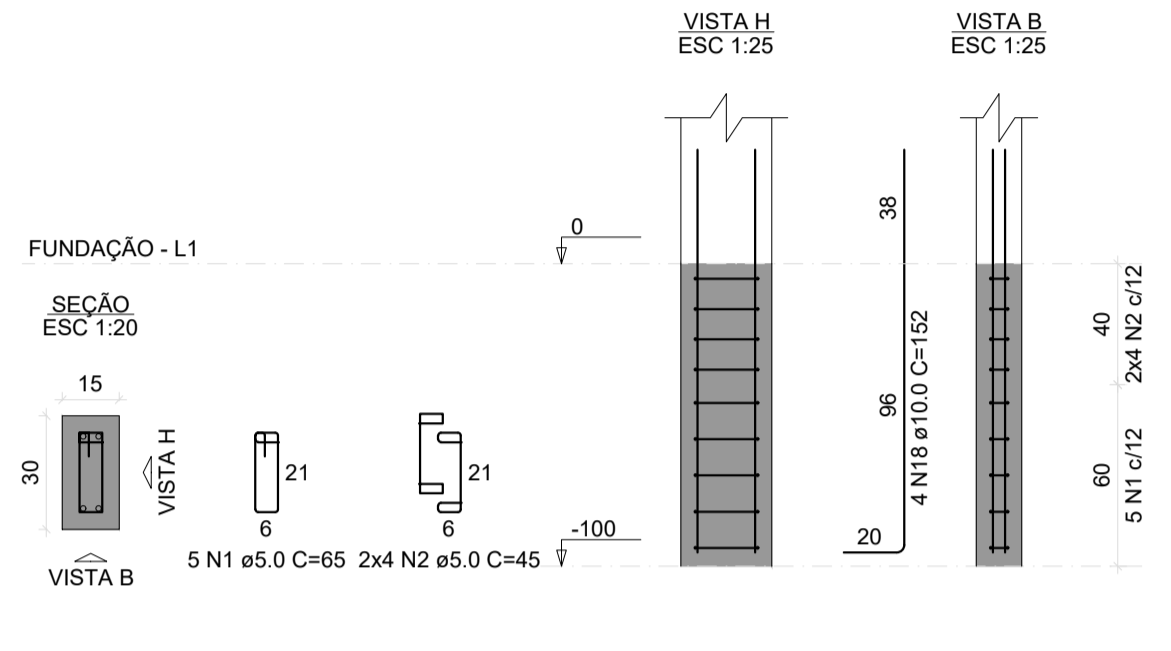
P9=P19=P27=P31=P33



P11



P14=P18=P30



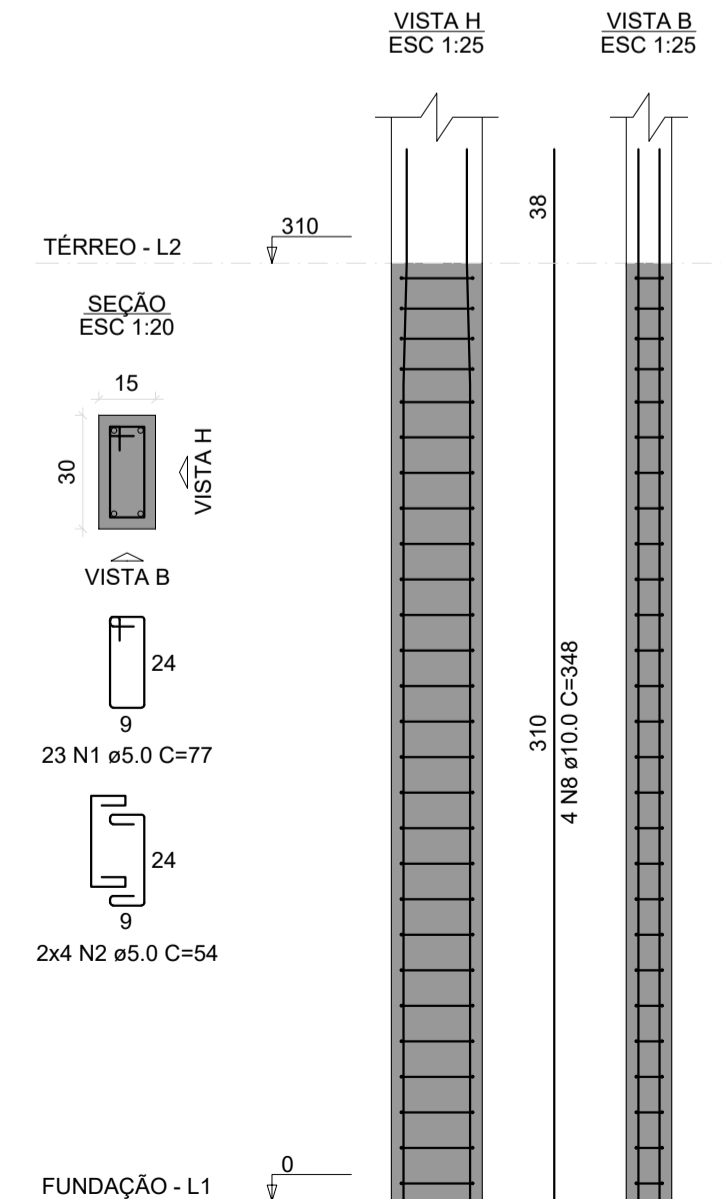
RELAÇÃO DO AÇO					
10xP5	4xP6	3xP7			
5xP9	P11	P12			
3xP14	P16	P17			
P21	S11	3xS14			
11xS15	S16	S21			
3xS25	5xS26	5xS31			

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	130	65	8450
	2	5.0	208	45	9360
	3	5.0	10	85	850
	4	5.0	16	60	960
CA50	5	5.0	10	75	750
	6	5.0	16	55	880
	7	8.0	59	134	7896
	8	8.0	111	114	12654
	9	8.0	24	84	2016
	10	8.0	18	99	1782
	11	8.0	110	99	10890
	12	8.0	32	114	3648
	13	8.0	42	99	4158
	14	8.0	8	84	672
	15	8.0	55	109	5995
	16	8.0	45	124	5580
	17	8.0	60	119	7140
	18	10.0	120	152	18240
	19	10.0	30	75	2250

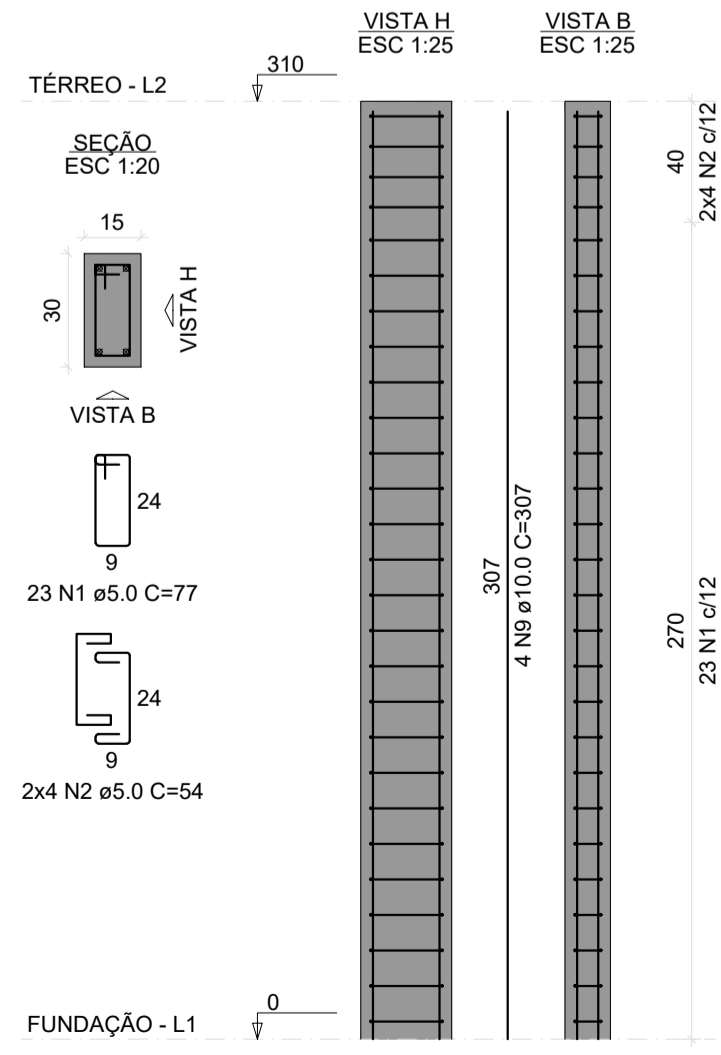
RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	624.4	271
CA60	10.0	204.9	139
PESO TOTAL (kg)		212.5	36
CA50	410		
CA60	36		

Volume de concreto (C-25) = 9.85 m³
Área de forma = 52.58 m²

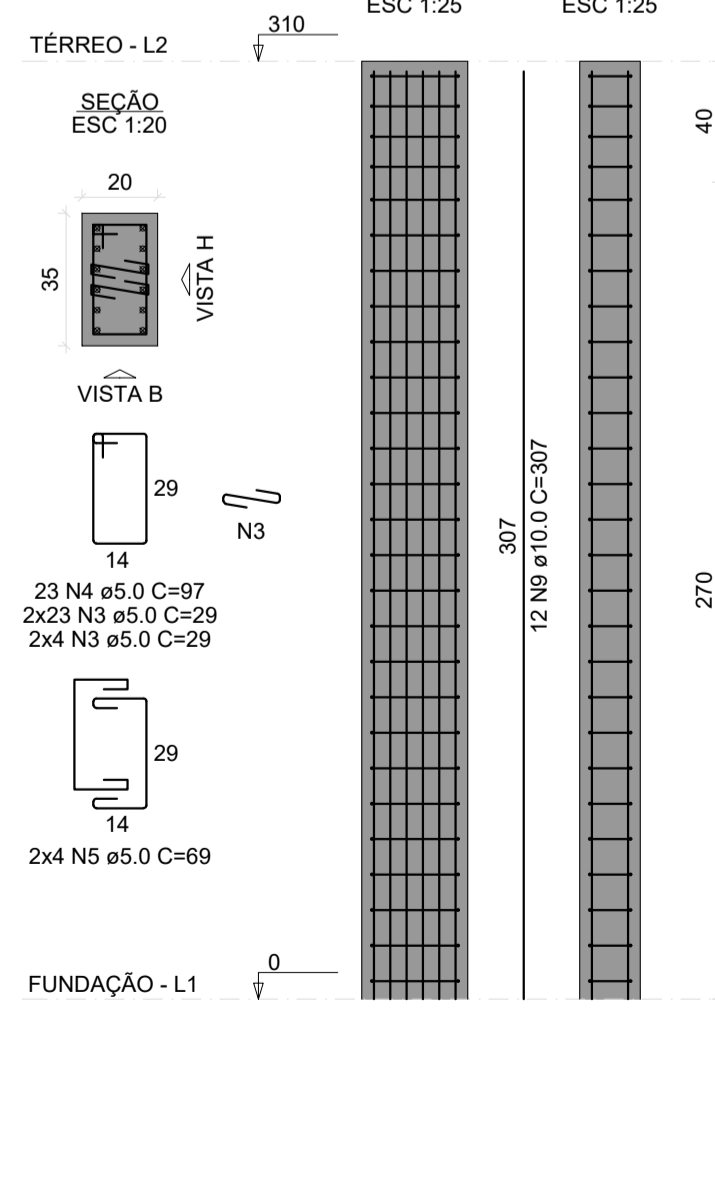
P5=P15=P22=P31



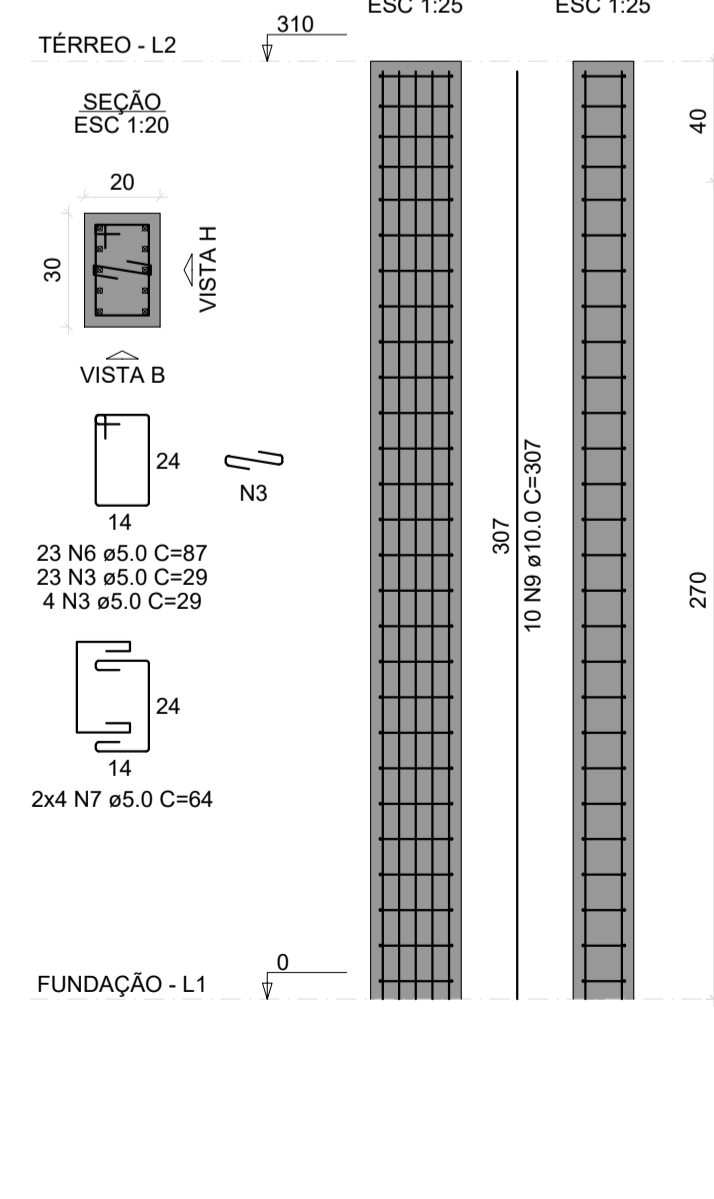
P6=P7=P8=P9=P10=P14=
=P18=P19=P20=P21=P23=
=P24=P25=P26=P27=P28=
=P30=P33=P34=P35=P36=
=P37



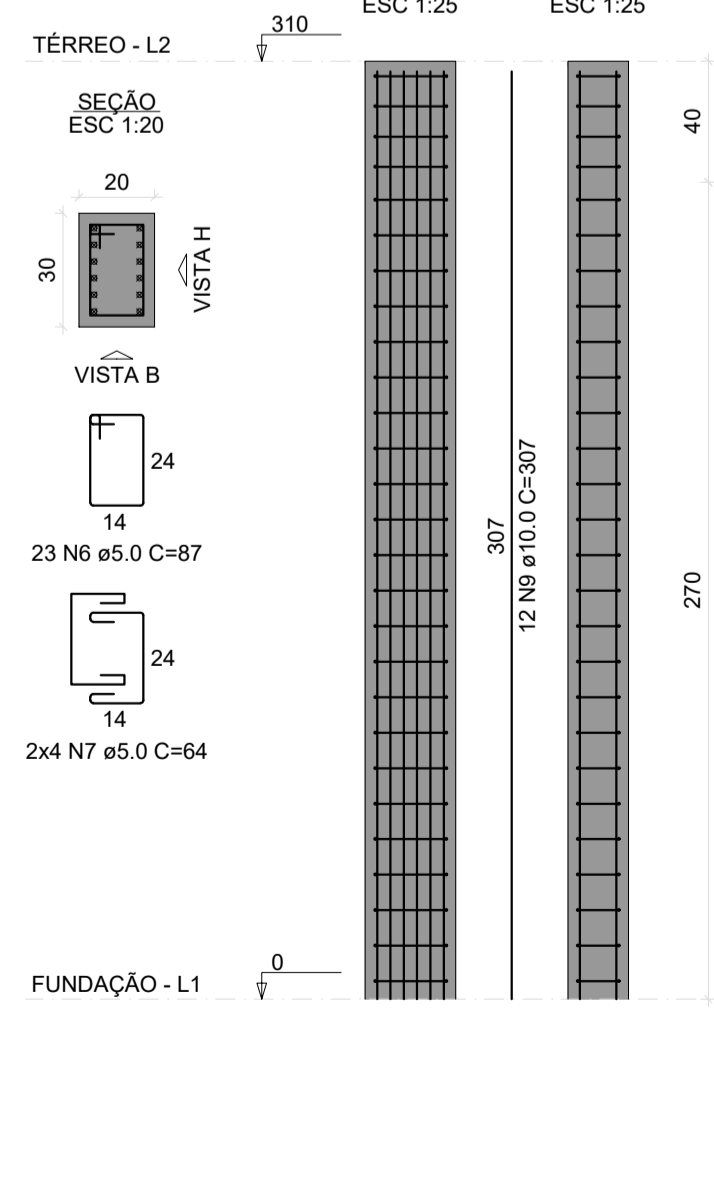
P11=P12



P16



P17



RELAÇÃO DO AÇO					
4xP5	22xP6	2xP11			
P16	P17				

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	598	77	46046
	2	5.0	208	54	11232
	3	5.0	135	29	3915
	4	5.0	46	97	4462
	5	5.0	16	69	1104
CA50	6	5.0	46	87	4002
	7	5.0	16	64	1024
	8	10.0	16	348	5568
	9	10.0	134	307	41138

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	467.1	316.8
CA60	5.0	717.9	121.7
PESO TOTAL (kg)			
CA50	316.8		
CA60	121.7		

Volume de concreto (C-25) = 4.43 m³
Área de forma = 85.56 m²

NOTAS	
a)	Resistência característica do concreto - Fck=25 MPa;
a1)	Relação água/cimento em massa: menor ou igual a 0.60
a2)	Cimento CP II - Z
a3)	Cons. mínimo de cimento (NBR12655:2006): maior ou igual a 280kg/m³
a4)	Módulo de elasticidade secante do concreto: Ecs=24GPa
a5)	Brita calcária - Dmax = 19mm (Brita 1)
b)	Agos: CA-50 e CA-60.
c)	Classe de agressividade ambiental II (moderada).
d)	Cargas de paredes sobre vigas (NBR 6120:2019):
d1)	parede 11.5+2cm+2cm: 1.7 kN/m²;
d2)	parede 14+2cm+2cm: 1.9 kN/m²;

R01	03/09/21	Primeira Revisão do Projeto
R00	23/07/21	Versão Inicial do Projeto
REV. Nº	DATA	DESCRIÇÃO

AUTORES DO PROJETO:	
EXCELÊNCIA ENGENHARIA E MEIO AMBIENTE LTDA EPP	Eng. Thaise L. P. Marques Neis
CNPJ: 00.564.373/0001-95	CREA: 131566/DF

INTERESSADO:	
DAE - DEPARTAMENTO DE ÁGUA E ESGOTO DE VÁRZEA GRANDE	
CNPJ: 02.555.079/0001-42	
EMPREENHIMENTO:	
ETA BOM SUCESSO	
ENDEREÇO:	
Rod MT 050, Jardim Botânico, Várzea Grande - MT	
Latitude: 15°42'37.08"S/ Longitude: 56° 8'12.10"O	
ASSUNTO:	
Projeto Estrutural da Casa de Química - ETA	
Detalhes das Sapatas - Fundação	

NOMENCLATURA:		FOLHA:
DATA:	ESCALA:	004/009
03/09/2021	INDICADA	