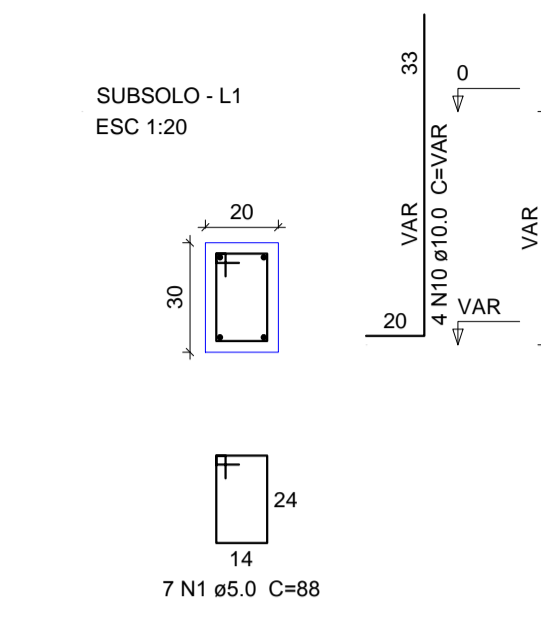
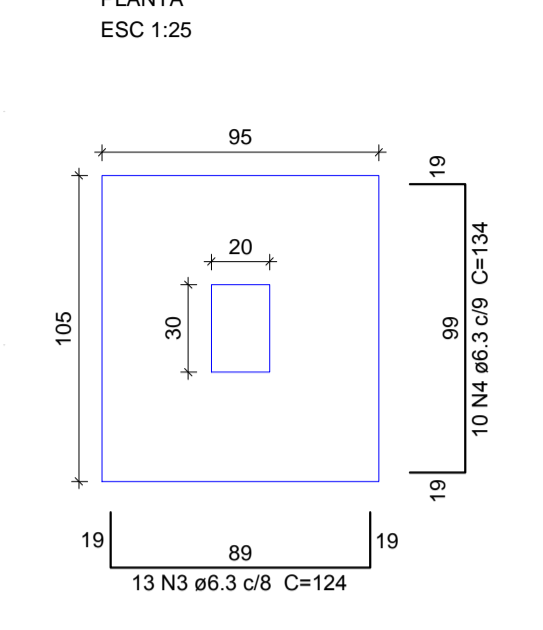


P21



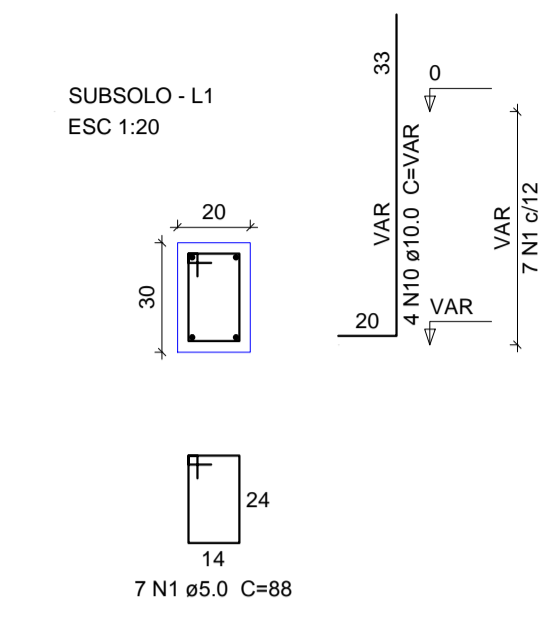
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S21



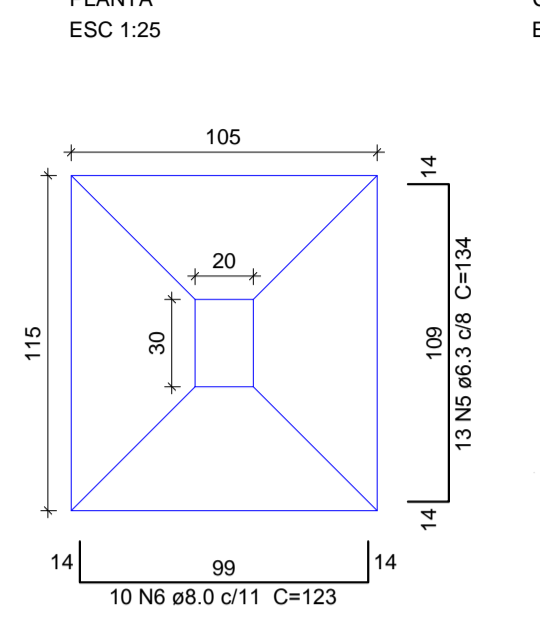
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P7=P17



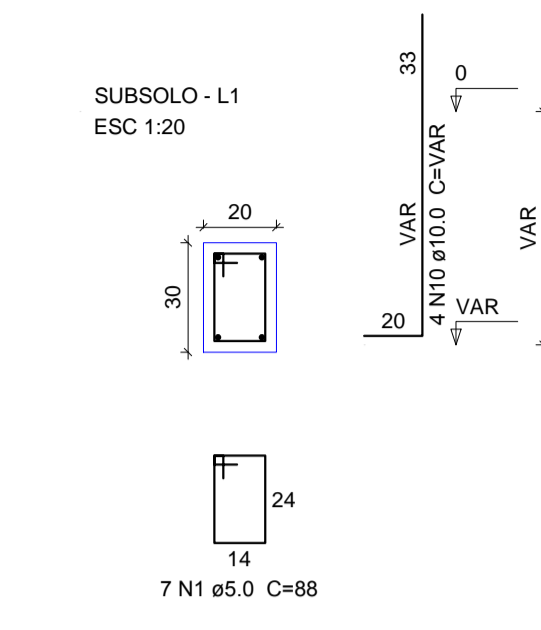
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S7=S17



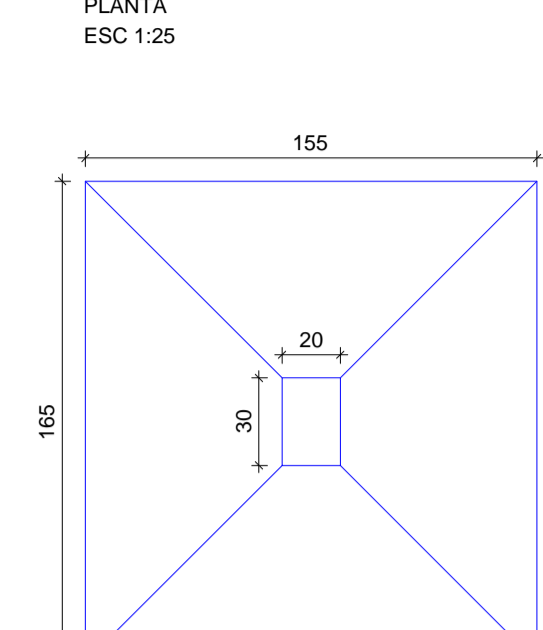
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P1=P2=P11=P29=P32



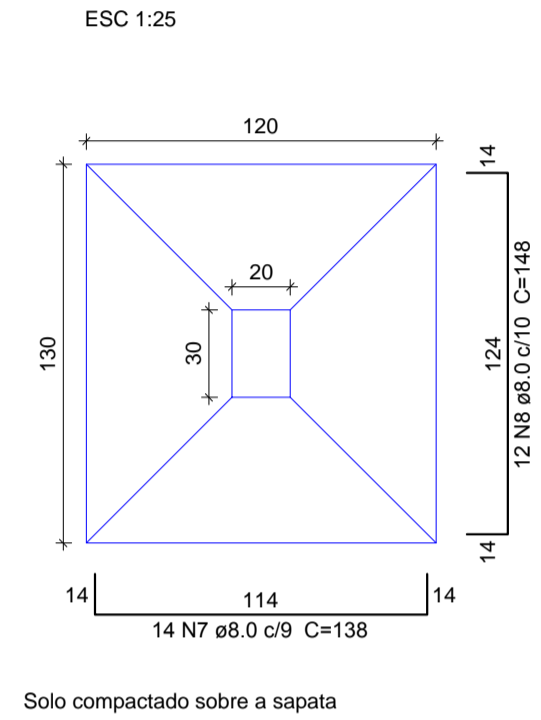
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S22=S26=S27=S35



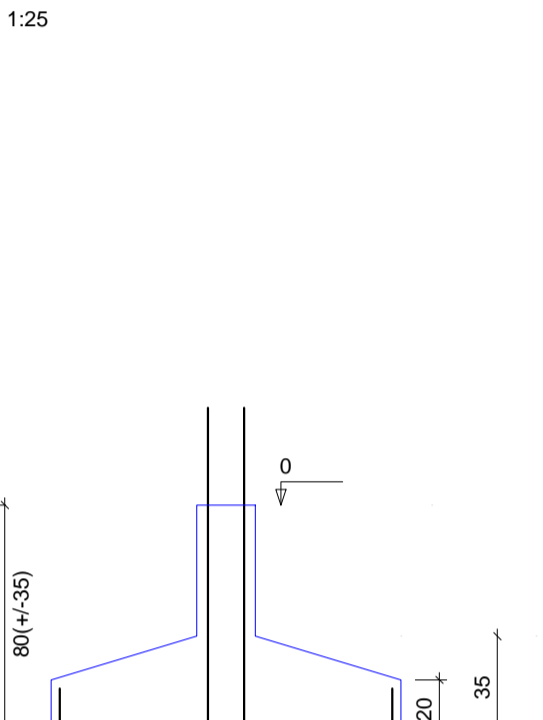
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S1=S2=S11=S29=S32



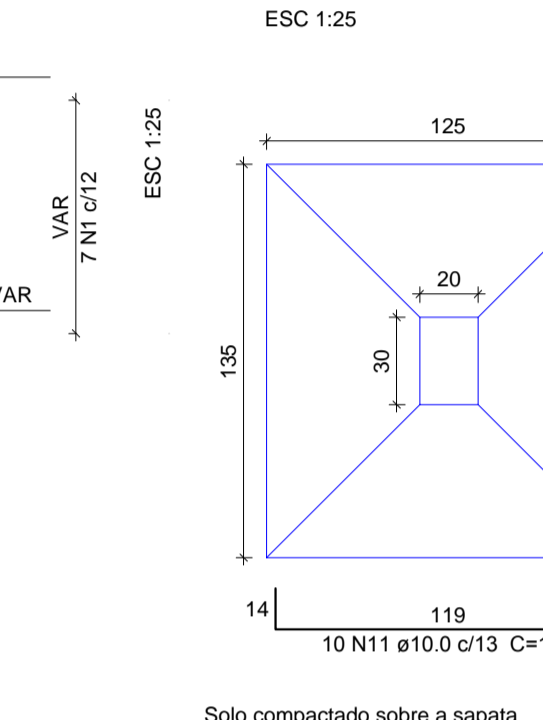
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P33



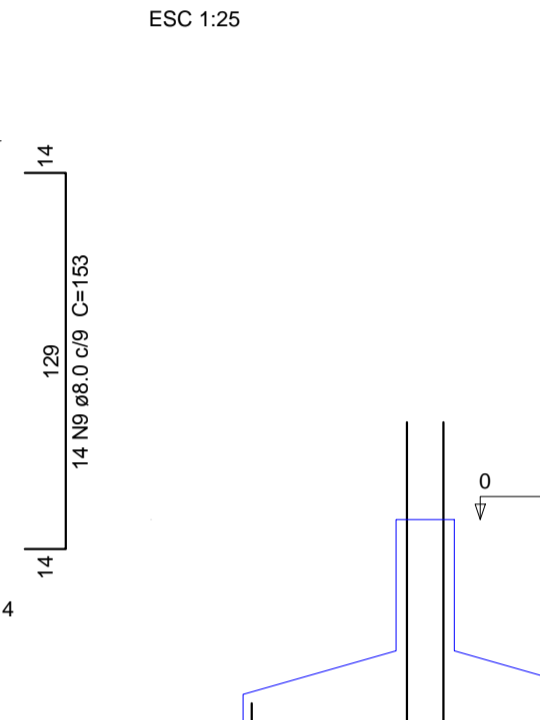
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S33



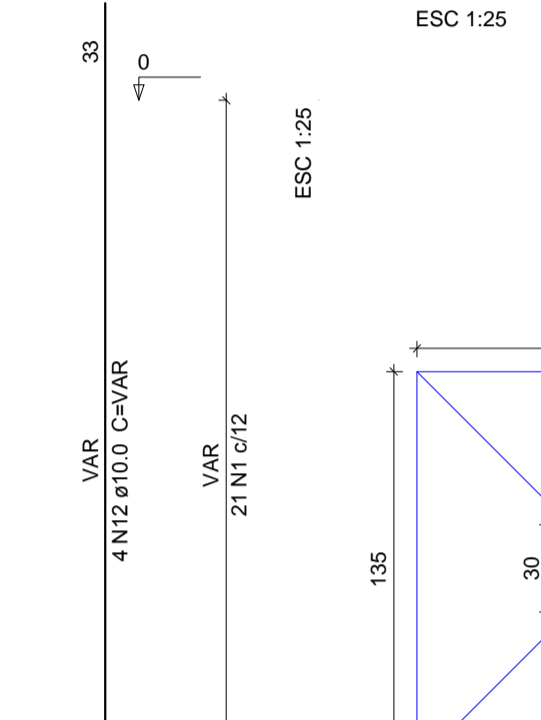
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P30



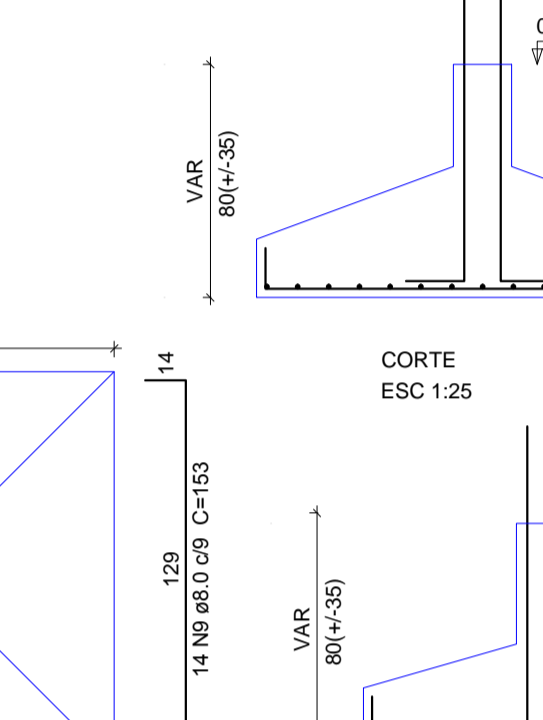
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S30



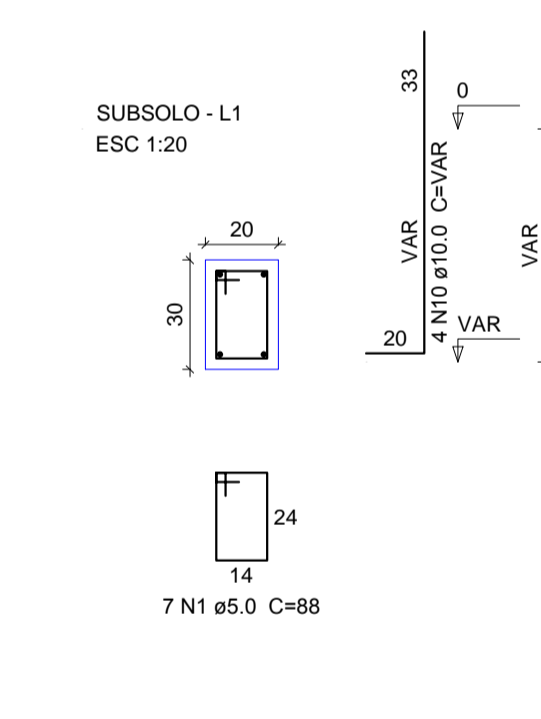
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P8



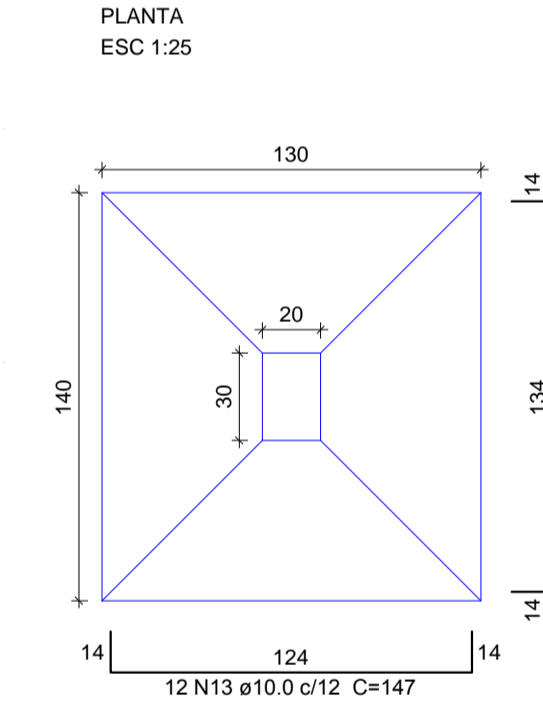
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P3=P6=P9=P24=P31



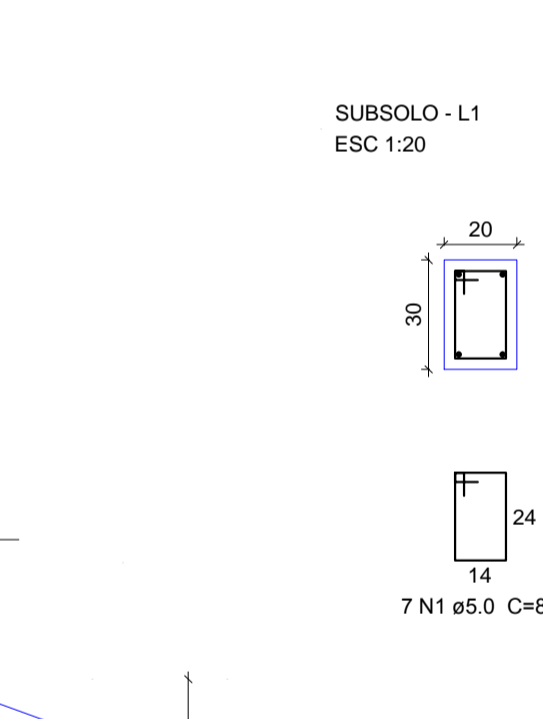
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S3=S6=S9=S24=S31



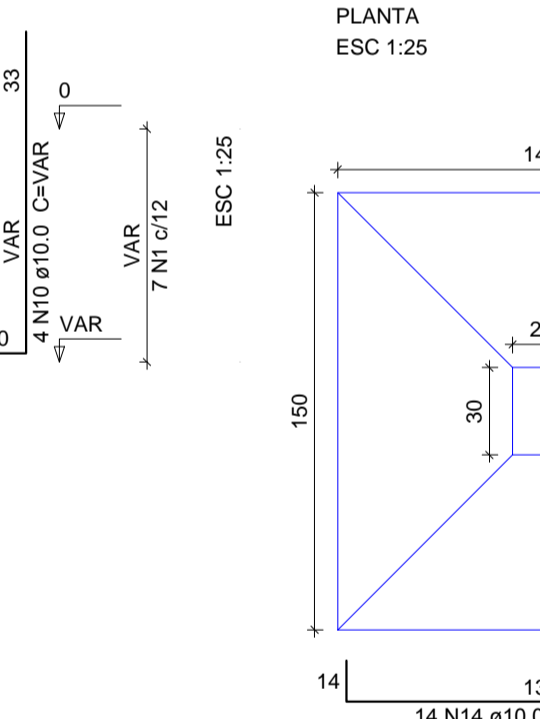
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P10=P12=P13=P14=P15=P16=P25=P36



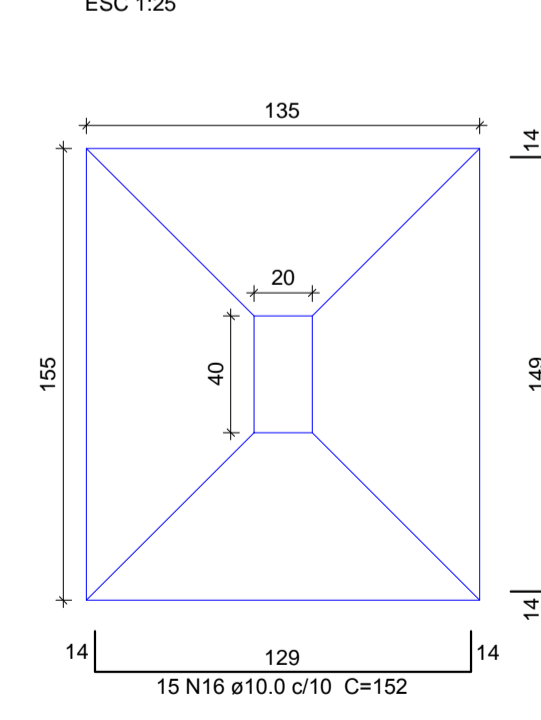
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S10=S12=S13=S14=S15=S16=S25=S36



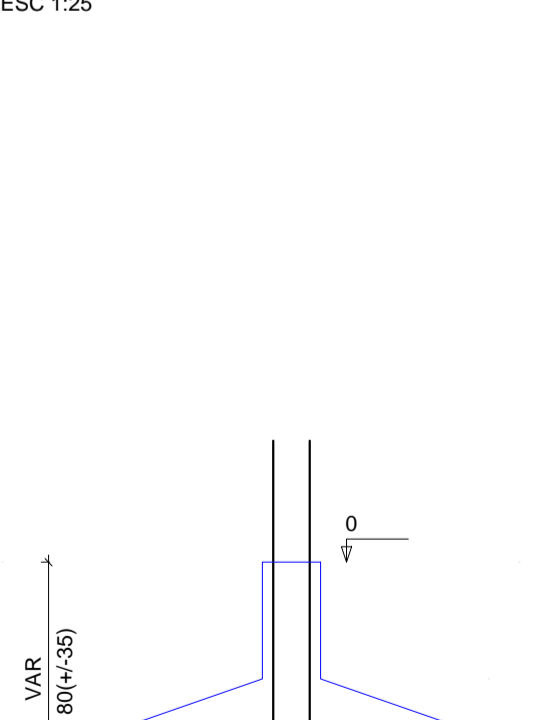
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S8



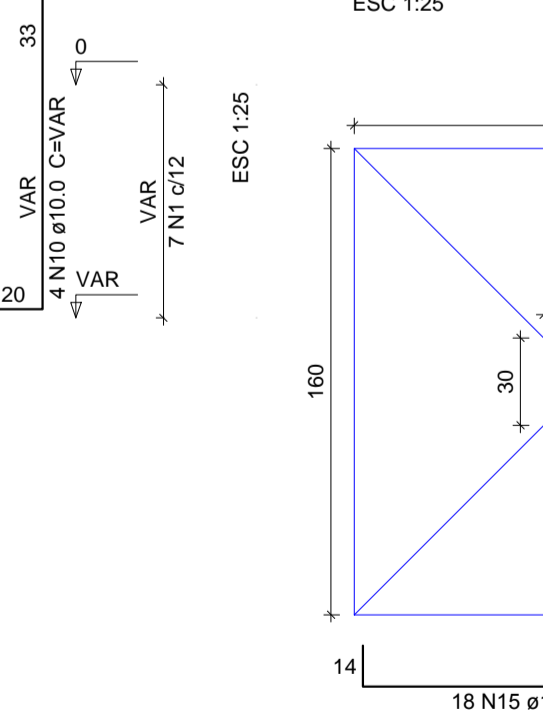
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P4=P5=P18=P19=P20=P23=P28



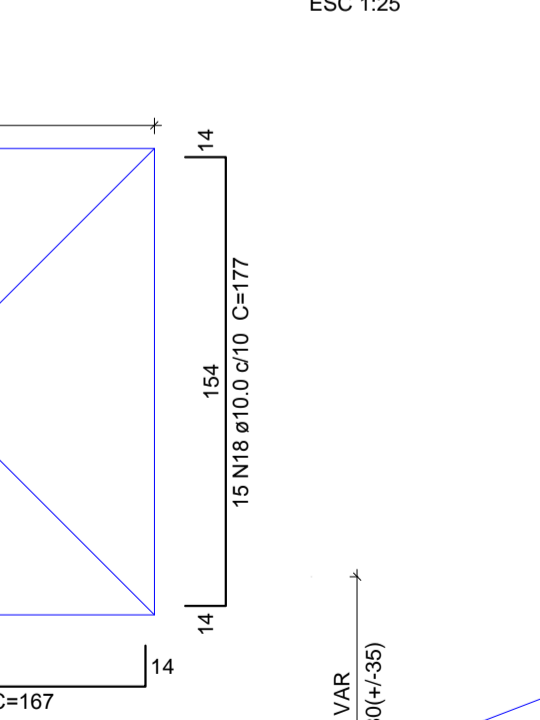
Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

S4=S5=S18=S19=S20=S23=S28



Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

P22=P26=P27=P35



Solo compactado sobre a sapata peso especifico > 1600.00 kgf/m³

Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	252	88	22176
	2	5.0	6	108	648
CA50	3	6.3	13	124	1612
	4	6.3	10	134	1340
	5	6.3	26	134	3484
	6	8.0	20	123	2460
	7	8.0	70	138	9660
	8	8.0	60	148	8880
	9	8.0	28	153	4284
	10	10.0	132	VAR	VAR
	11	10.0	20	142	2840
	12	10.0	4	VAR	VAR
	13	10.0	60	147	8820
	14	10.0	162	157	25434
	15	10.0	222	167	37074
	16	10.0	15	152	2280
	17	10.0	11	172	1892
	18	10.0	105	177	18585
	19	12.5	2	83	166
	20	12.5	4	VAR	VAR

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	64.4	17.3
	8.0	252.9	109.7
	10.0	1150.2	780
	12.5	7.1	7.5
CA60	5.0	228.3	38.7
PESO TOTAL (kg)			
CA50		914.6	
CA60		38.7	

Volume de concreto (C-30) = 1.8 m³  
Volume de concreto (C-25) = 16.62 m³  
Area de forma = 64.22 m²



BERARDI ENGENHARIA & CONSTRUÇÕES LTDA.  
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berardiengenharia@gmail.com (54)3313 9870 - (54) 9994 0837  
CNPJ: 13.425.382/0001-47

RESPONSÁVEL TÉCNICO: Engº Jean Berardi Mônico  
CONTRATANTE: Prefeitura Municipal de Jôia  
Cnpj: 09.650.121/0001-92

PROJETO: FERRAGEM SAPATAS SUB-SOLO  
CONTEÚDO DA PRANCHA: FERRAGEM SAPATAS SUB-SOLO  
ENDEREÇO DA OBRA: Rua Dr. Edmar Kruegel - Nº 188 - Centro - Jôia/RS  
PROJETISTA: Jean Berardi ESCALA: 1:50 DATA: Agosto de 2017 ÁREA DO PROJETO: 1.139,11 m²  
**E-03**

DIREITOS AUTORAIS RESERVADOS CONFORME ARTIGO 184 DO CÓDIGO PENAL. LEI 9610 DE 19/02/1998 E RESOLUÇÃO COMPEA 205/91