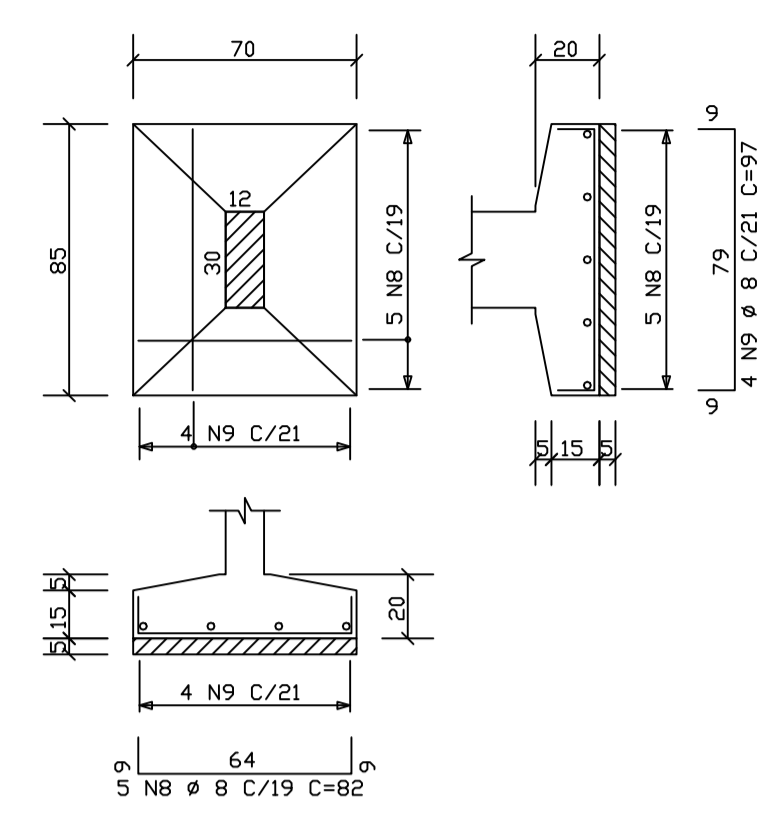


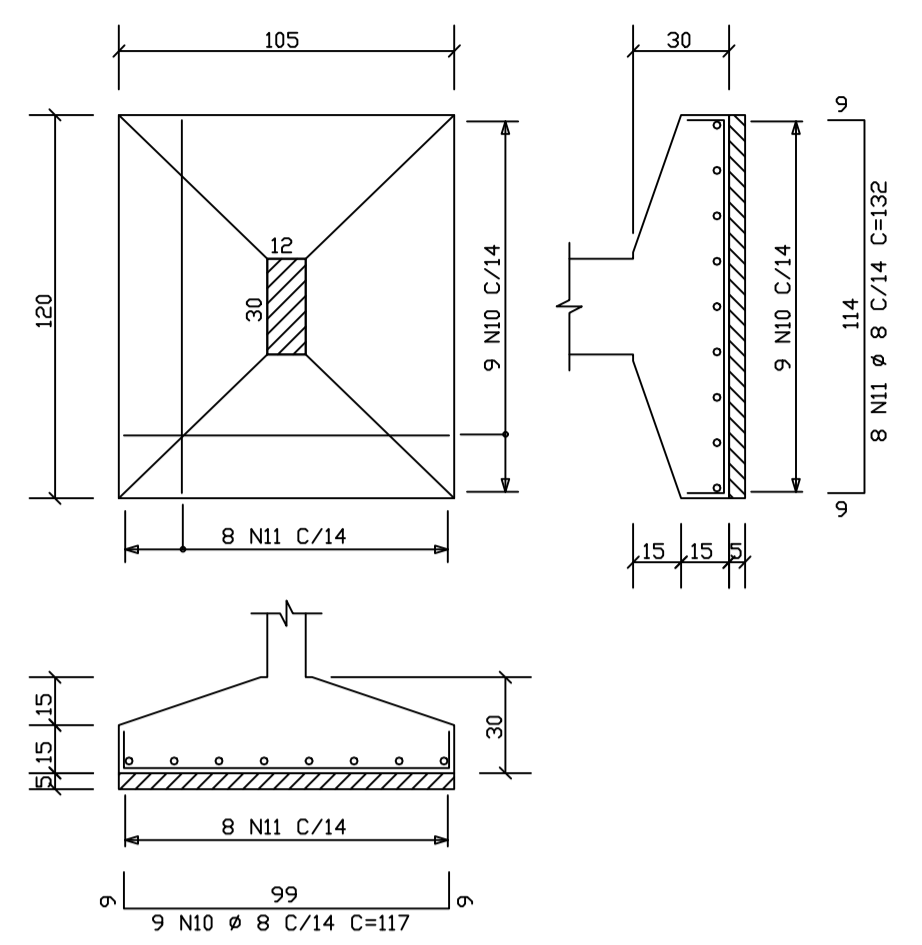
# SAPATAS

S1=S3 (2 X) (Esc 1:20)  
P1 P3

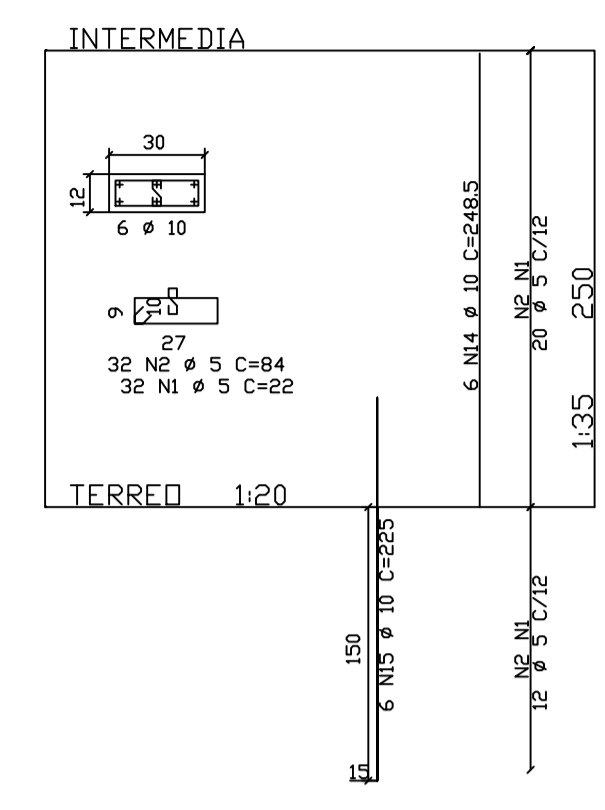


S2  
P2

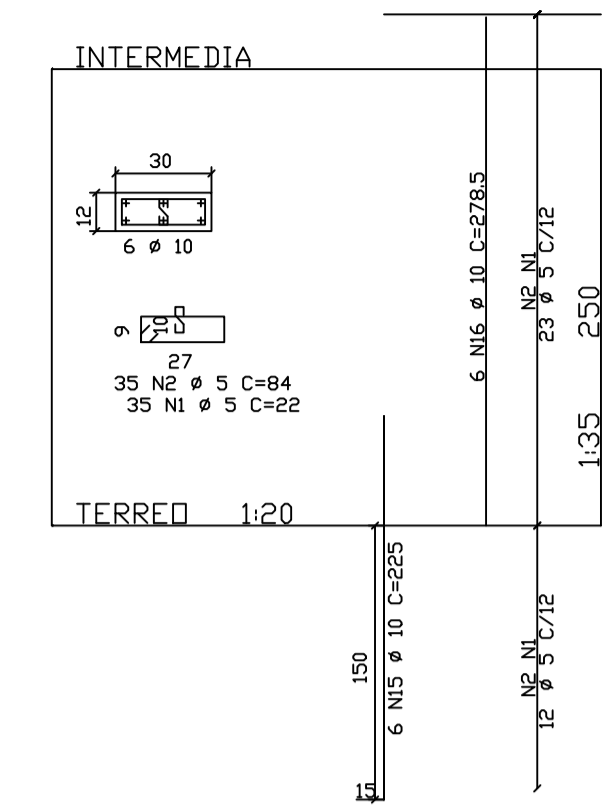
(1 X) (Esc 1:20)



P1=P3

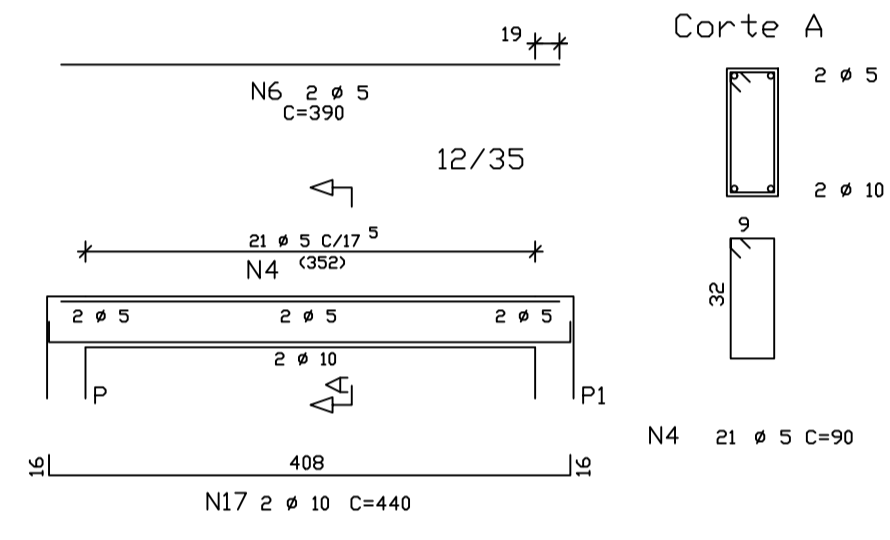


P2

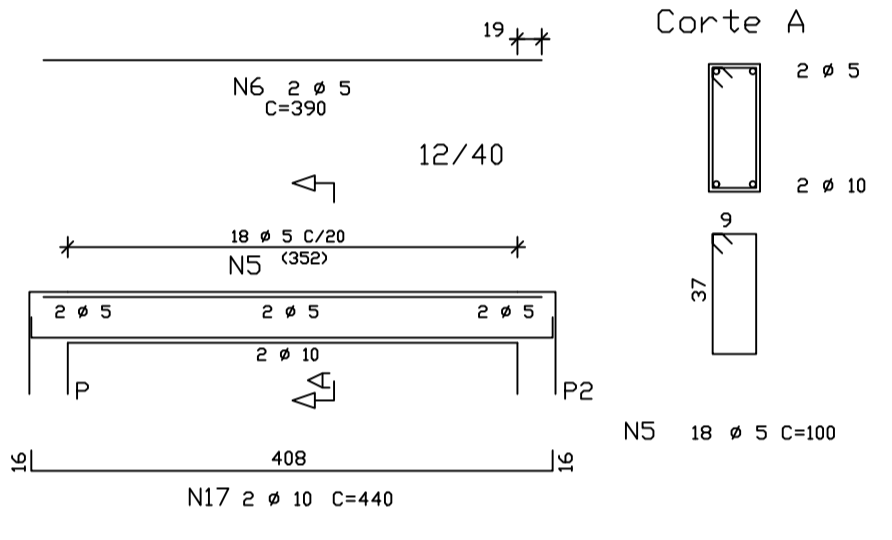


## VIGA BALDRAME

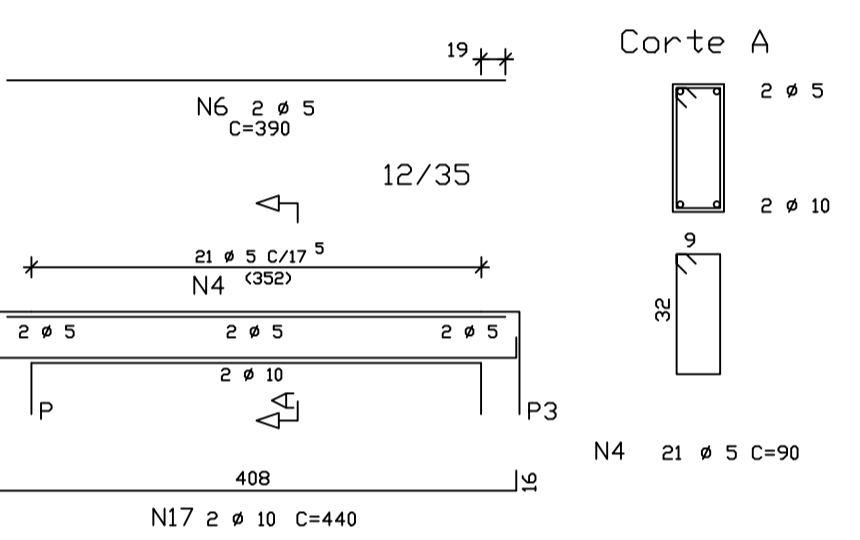
VB1



VB2



VB3



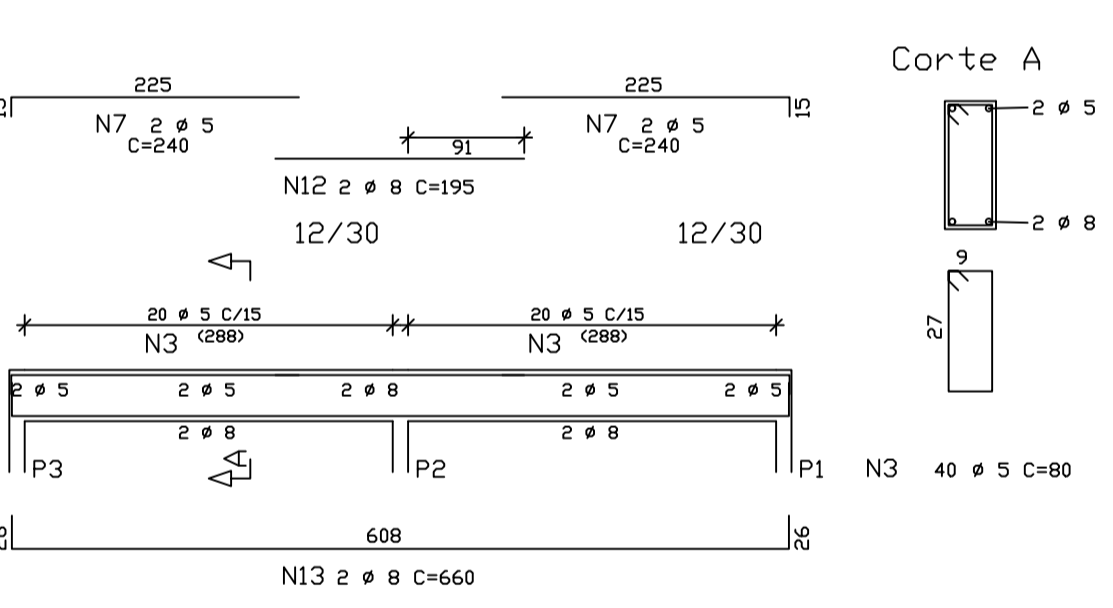
CONCRETO 25MPa

CONCRETO:	FORMA:
VB = 0,80M <sup>3</sup>	VB = 14,30M <sup>2</sup>
VS = 0,80M <sup>3</sup>	VS = 14,30M <sup>2</sup>
PILAR = 0,30M <sup>3</sup>	PILAR = 7,40M <sup>2</sup>
SAPATA = 0,80M <sup>3</sup>	SAPATA = 8,20M <sup>2</sup>

AÇO	N	Ø	Q	UNIT. CM	C.TOTAL CM
CA-60	1	5.0	99	22	2178
CA-60	2	5.0	99	84	8316
CA-60	3	5.0	80	80	6400
CA-60	4	5.0	102	90	9180
CA-60	5	5.0	18	100	1800
CA-60	6	5.0	12	390	4680
CA-60	7	5.0	8	240	1920
CA-50	8	8.0	16	82	1312
CA-50	9	8.0	8	97	776
CA-50	10	8.0	9	117	1053
CA-50	11	8.0	8	132	1056
CA-50	12	8.0	2	195	390
CA-50	13	8.0	4	660	2640
CA-50	14	10.0	12	248,5	2982
CA-50	15	10.0	18	225	4050
CA-50	16	10.0	6	278,5	1671
CA-50	17	10.0	12	440	5280
CA-50	18	10.0	2	250	500
CA-50	19	10.0	1	255	651
CA-50	20	10.0	2	200	400

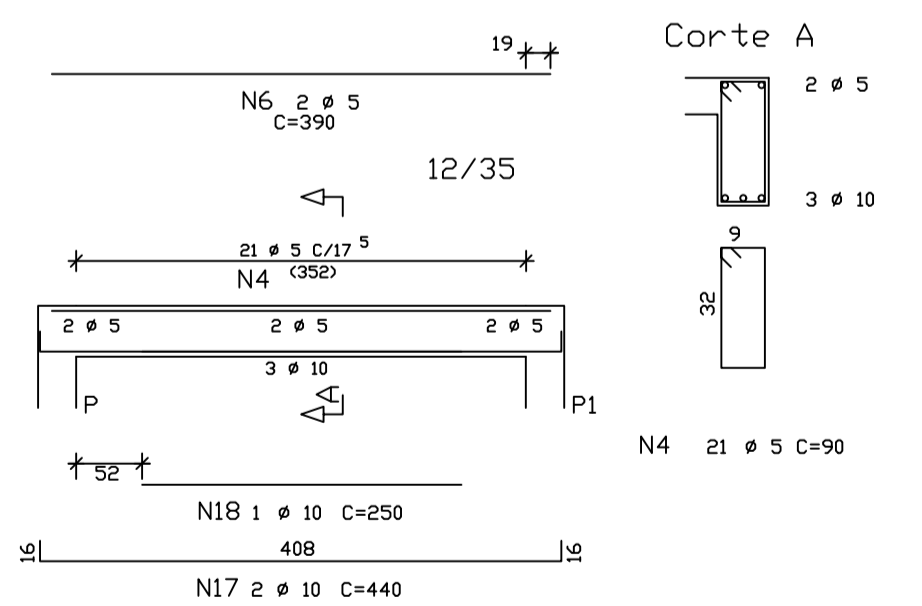
AÇO	Ø	Comp.	Peso (kg)	+10%
CA-60	5.0	328,6	53	58
CA-50	8.0	72,3	29	32
	10.0	151,4	94	104
peso=194,0				

VB4

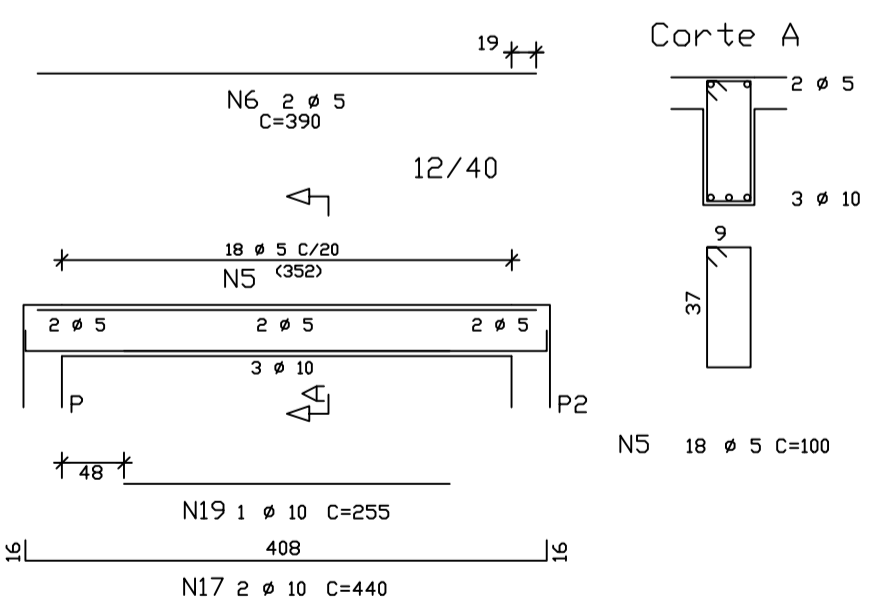


## VIGA SUPERIOR

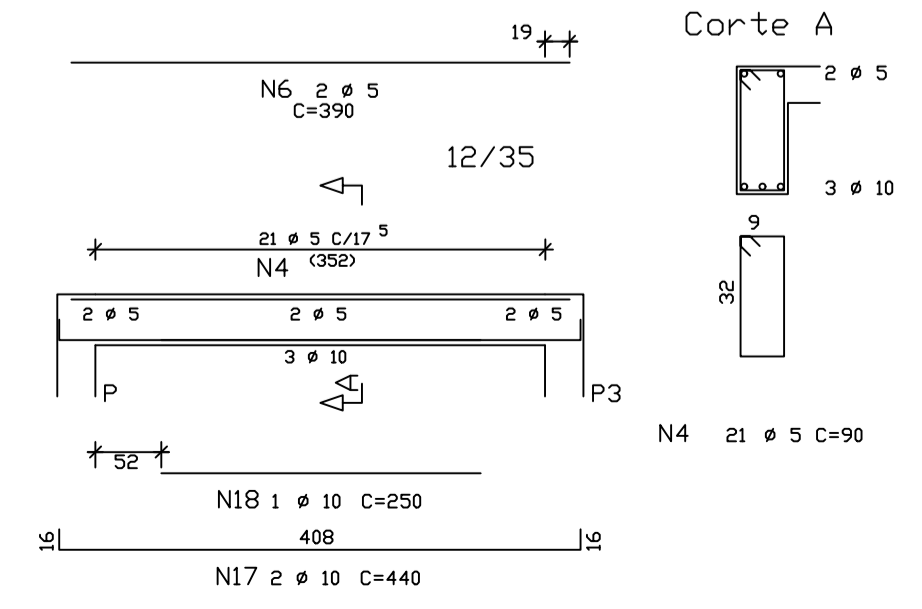
VS1



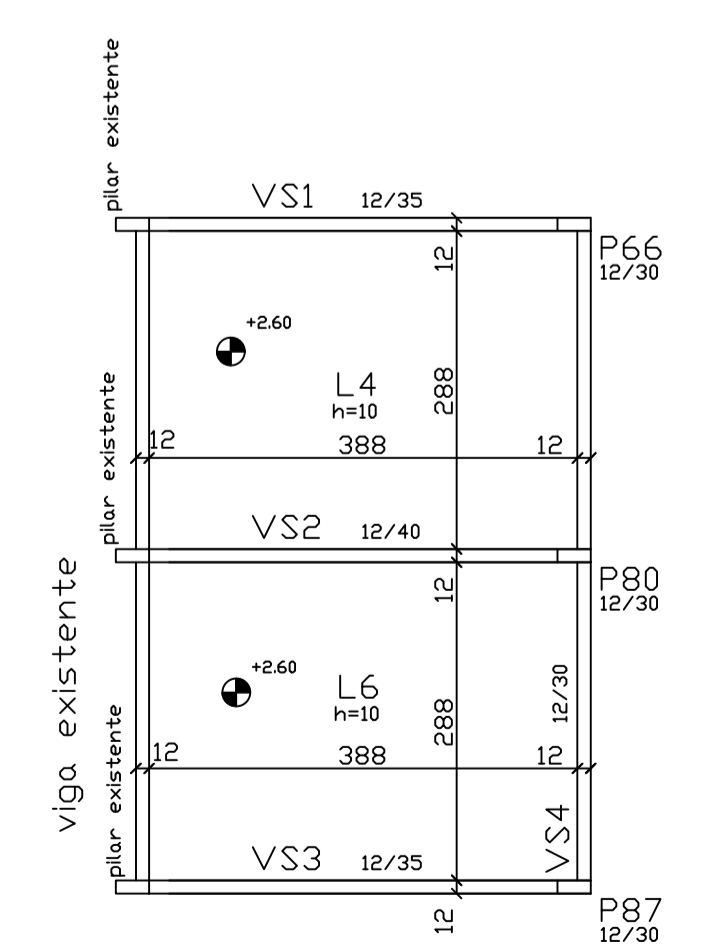
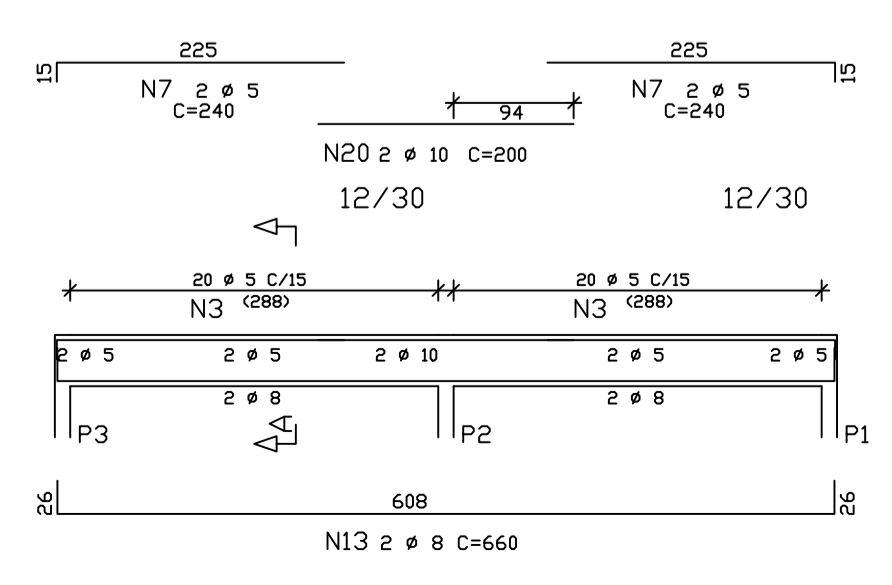
VS2



VS3



VS4





INSTITUTO FEDERAL  
MATO GROSSO  
TANGARÁ DA SERRA

OBRA	Reforma - Ampliação do Sanitário	
PROPRIETÁRIO	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DE MATO GROSSO	
LOCAL	Rua 28, 980 N Vila Horizonte Tangará da Serra/MT	
AUTOR DO PROJETO	Engenheiro Civil Dercídio Fava Marchezini CREA-MT 06279/D	
RESPONSÁVEL TÉCNICO		
Escola	Indicada	Assunto
		Estrutural - Sapatas, Pilares e Vigas
Data	09/11/2017	FOLHA Nº
		5/8