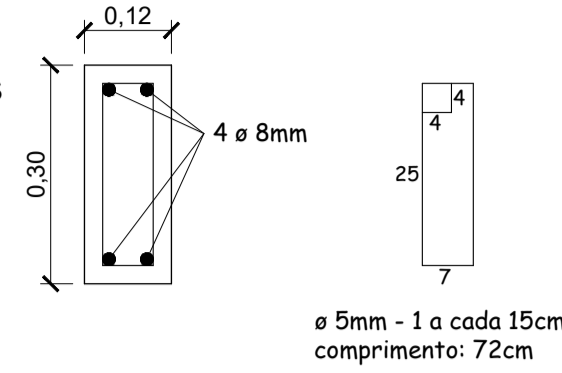


Viga Baldrame

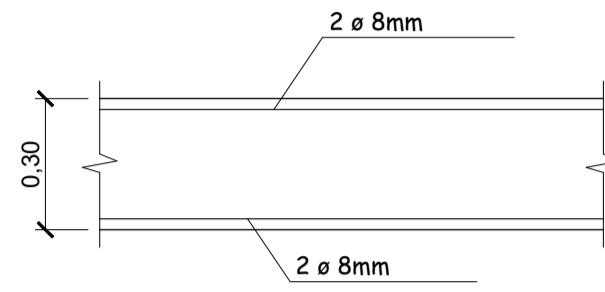
Aço
 $\varnothing 8\text{mm} \rightarrow 26,4 \times 4 = 105,6\text{m} = 8,8 \text{ barras}$
 $\varnothing 5\text{mm} \rightarrow 26,4 / 0,15 \times 0,72 = 126,72\text{m} = 10,6 \text{ barras}$



Escavação
 $26,40 \times 0,3 \times 0,2 = 1,58\text{m}^3$

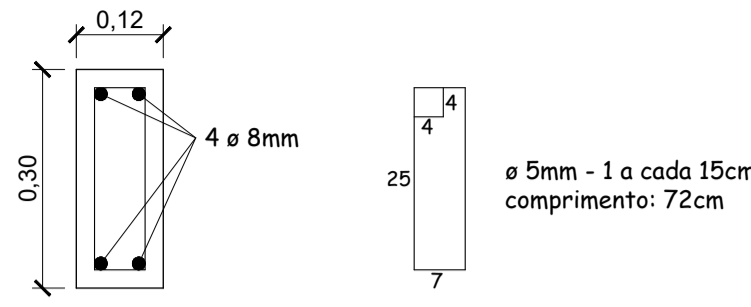
Fôrmas
 $26,40 \times 0,3 \times 2 = 15,84\text{m}^2$

Concreto
 $26,40 \times 0,3 \times 0,12 = 0,95\text{m}^3$



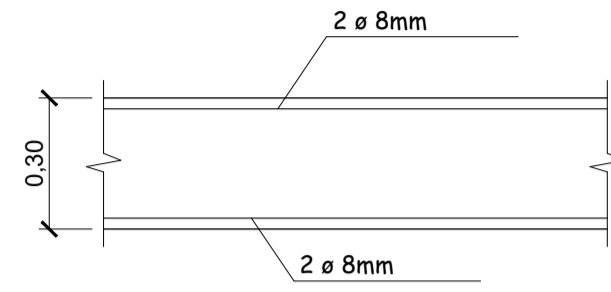
Viga Cobertura

Aço
 $\varnothing 8\text{mm} \rightarrow 20,54 \times 4 = 82,16\text{m} = 6,9 \text{ barras}$
 $\varnothing 5\text{mm} \rightarrow 20,54 / 0,15 \times 0,72 = 98,60\text{m} = 8,2 \text{ barras}$



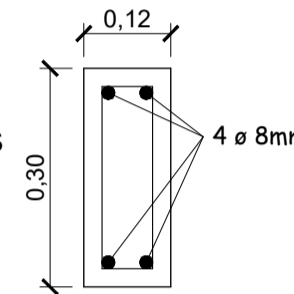
Fôrmas
 $20,54 \times 0,3 \times 2 = 12,35\text{m}^2$

Concreto
 $20,54 \times 0,3 \times 0,12 = 0,74\text{m}^3$



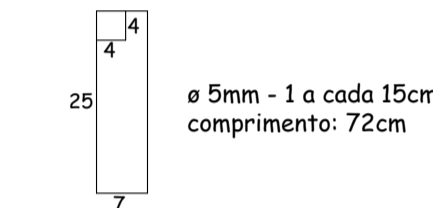
Pilares - P01=P02=P03=P04=P07=P08=P09

Aço
 $\varnothing 8\text{mm} \rightarrow (3,00+1,45) \times 4 \times 7 = 124,60\text{m} = 10,5 \text{ barras}$
 $\varnothing 5\text{mm} \rightarrow (3,00+1,45) \times 7 / 0,15 \times 0,72 = 149,50\text{m} = 12,5 \text{ barras}$



Fôrmas
 $3,00 \times (0,12+0,30) \times 2 \times 7 = 17,64\text{m}^2$

Concreto
 $3,00 \times 0,12 \times 0,30 \times 7 = 0,76\text{m}^3$



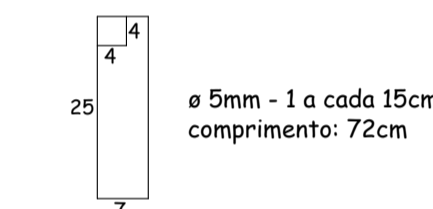
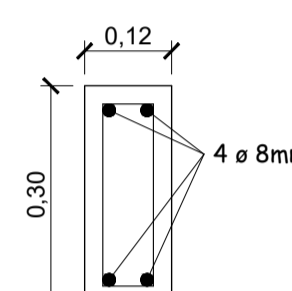
Arranque $\rightarrow 4 \varnothing 8\text{mm} \rightarrow 80 + 40$
espera + 25 dobra = 145cm

Pilares - P05=P06

Aço
 $\varnothing 8\text{mm} \rightarrow (1,10+1,45) \times 4 \times 2 = 20,40\text{m} = 1,7 \text{ barras}$
 $\varnothing 5\text{mm} \rightarrow (1,10+1,45) \times 2 / 0,15 \times 0,72 = 24,50\text{m} = 2,1 \text{ barras}$

Fôrmas
 $1,10 \times (0,12+0,30) \times 2 \times 2 = 1,85\text{m}^2$

Concreto
 $1,10 \times 0,12 \times 0,30 \times 2 = 0,08\text{m}^3$

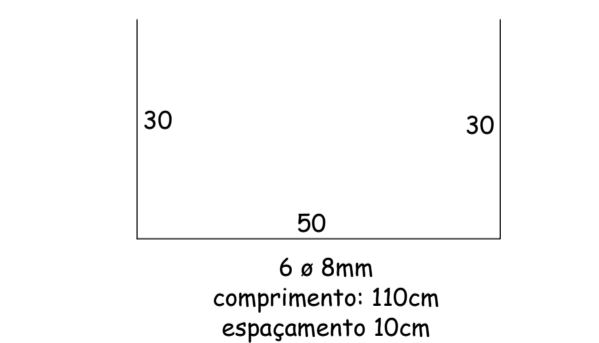
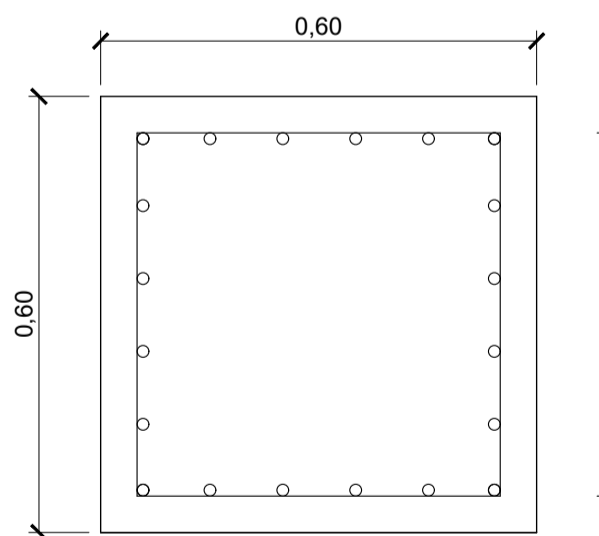
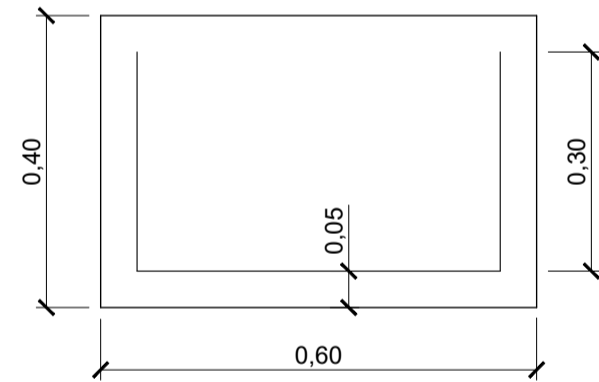


Arranque $\rightarrow 4 \varnothing 8\text{mm} \rightarrow 80 + 40$
espera + 25 dobra = 145cm

Bloco de Fundação - B.01 (9X)

Aço
 $\varnothing 8\text{mm} \rightarrow 2 \times 6 \times 1,10 \times 9 = 118,8 \text{ m} = 9,9 \text{ barras}$

Concreto
 $0,60 \times 0,60 \times 0,40 \times 9 = 1,30\text{m}^3$

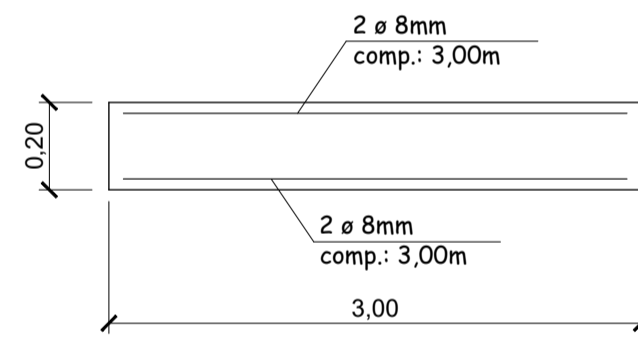
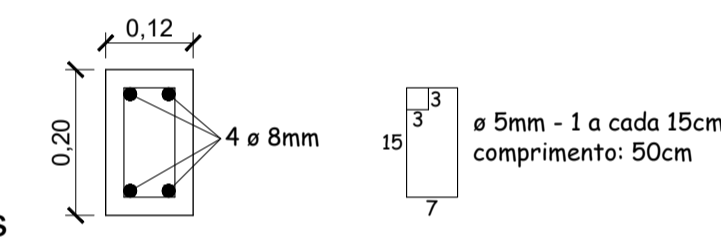


Vergas e Contra-Vergas

Aço
 $\varnothing 8\text{mm} \rightarrow 3,00 \times 4 \times 8 = 96,00\text{m} = 8 \text{ barras}$
 $\varnothing 5\text{mm} \rightarrow 3,00 / 0,15 \times 0,50 \times 8 = 80,00\text{m} = 6,7 \text{ barras}$

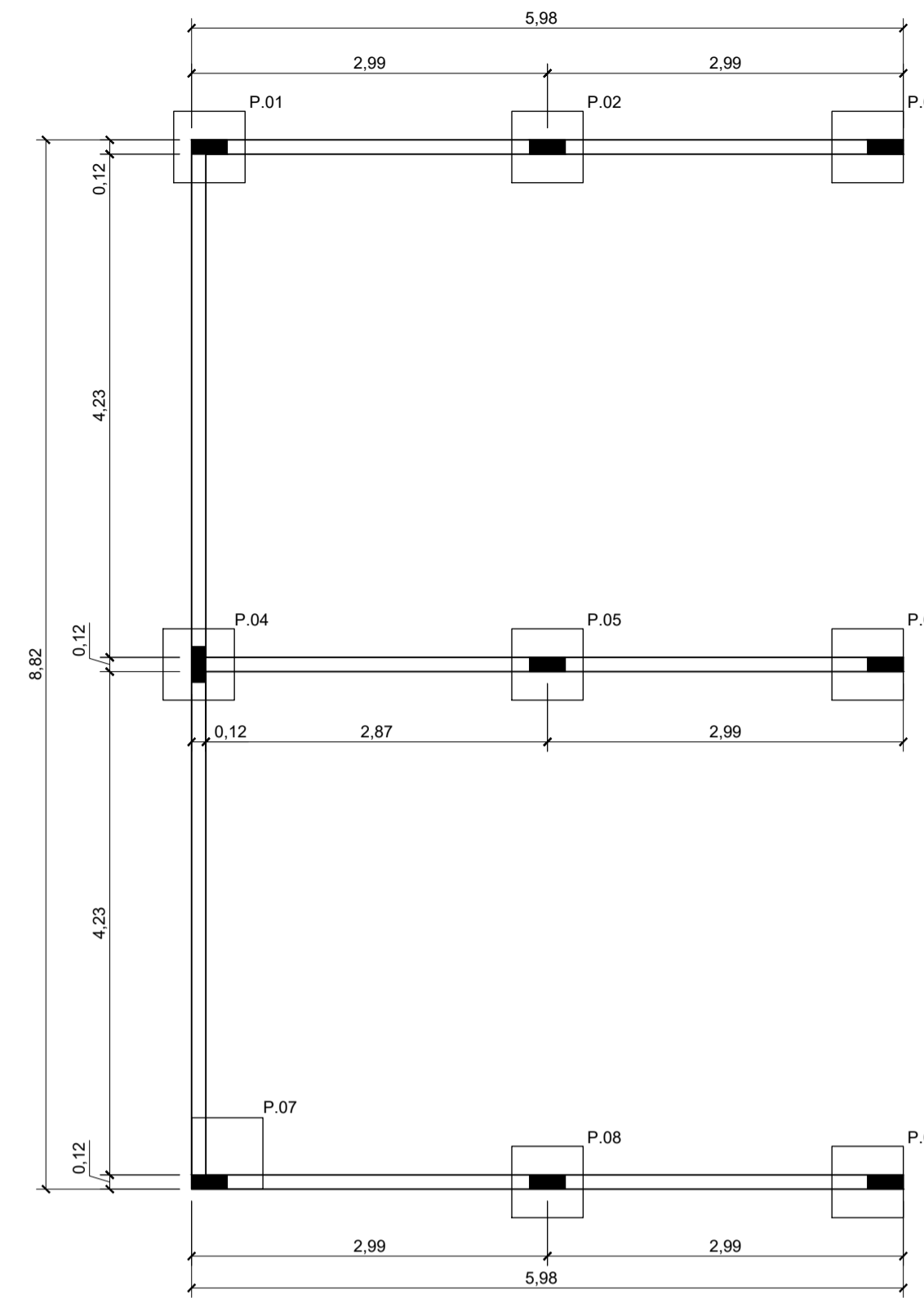
Fôrmas
 $3,00 \times 0,20 \times 2 \times 8 = 9,60\text{m}^2$

Concreto
 $3,00 \times 0,2 \times 0,12 \times 8 = 0,58\text{m}^3$

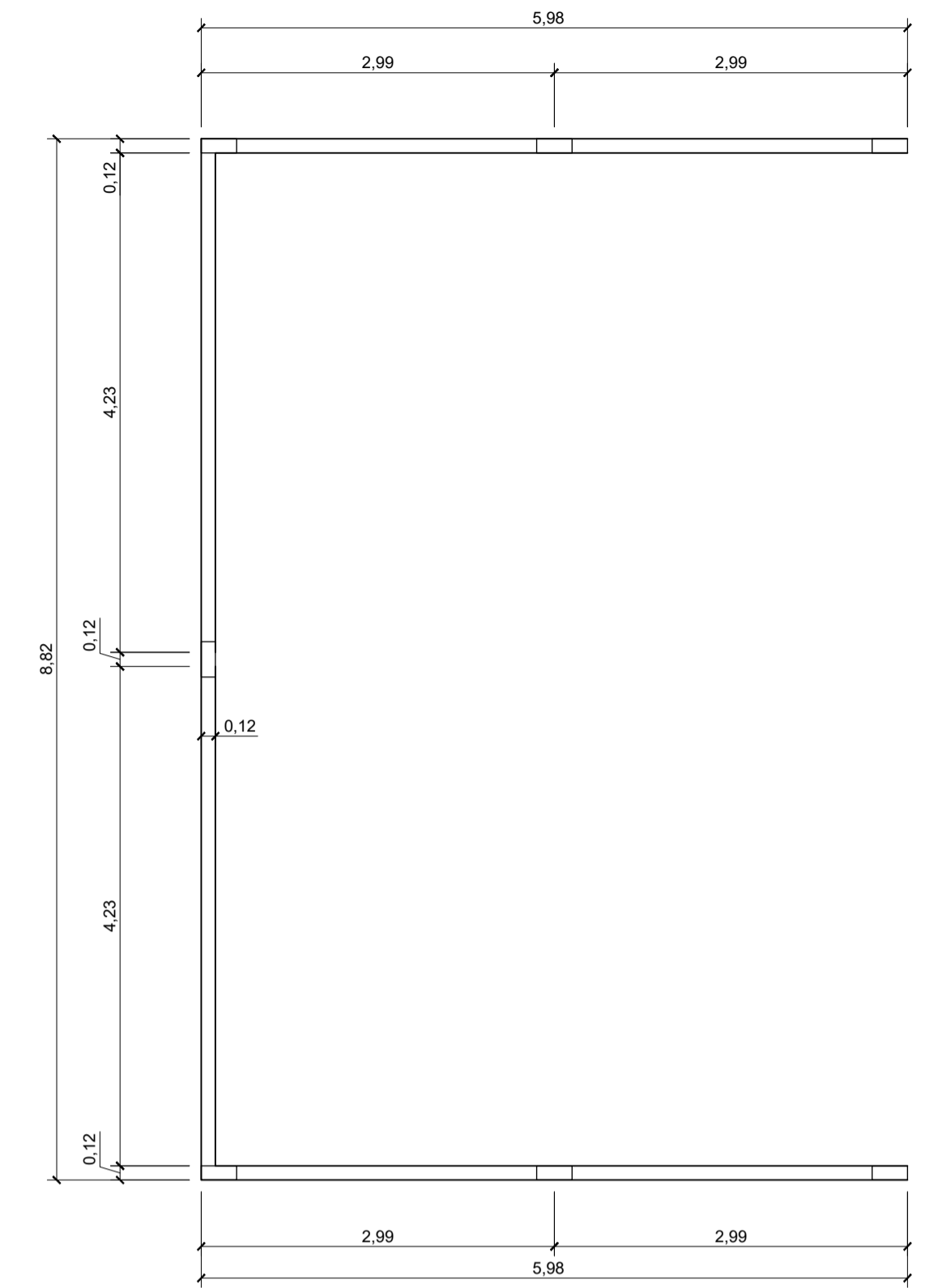


6 $\varnothing 8\text{mm}$
comprimento: 110cm
espaçamento 10cm

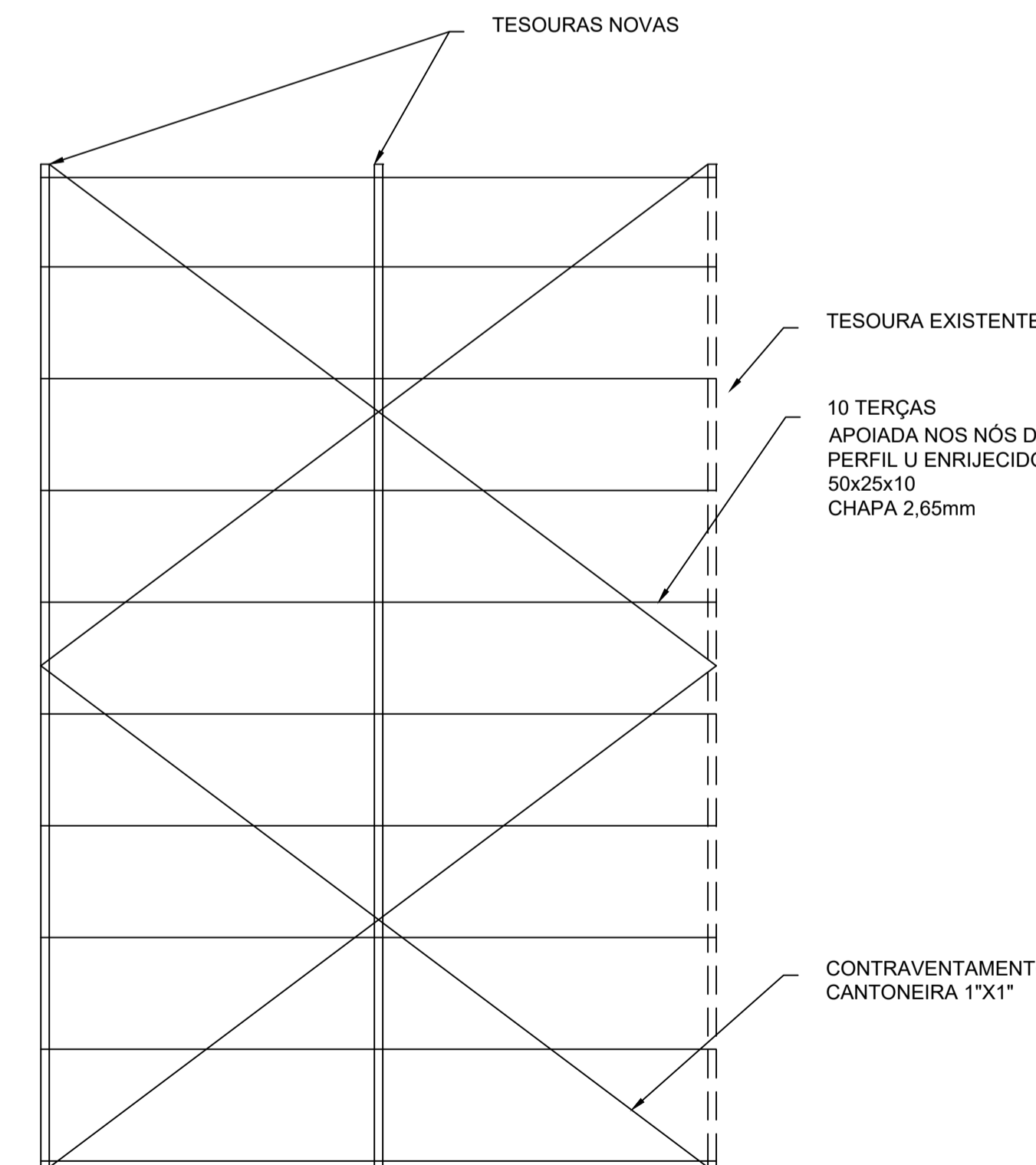
DESCRIÇÃO	FÔRMAS	AÇO		CONCRETO
		5 mm	8 mm	
VIGA BALDRAME	15,84 m ²	10,6 barras	8,8 barras	0,95 m ³
VIGA COBERTURA	12,35 m ²	8,2 barras	6,9 barras	0,74 m ³
VERGAS E CONTRA-VERGAS	9,60 m ²	6,7 barras	8 barras	0,58 m ³
PILAR P1=P2=P3=P4=P7=P8=P9	17,64 m ²	12,5 barras	10,5 barras	0,76 m ³
PILAR P5=P6	1,85 m ²	2,1 barras	1,7 barras	0,08 m ³
BLOCOS FUND. B1(9X)	-----	-----	10 barras	1,30 m ³
TOTAL	57,28 m ²	41 barras	46 barras	4,5 m ³



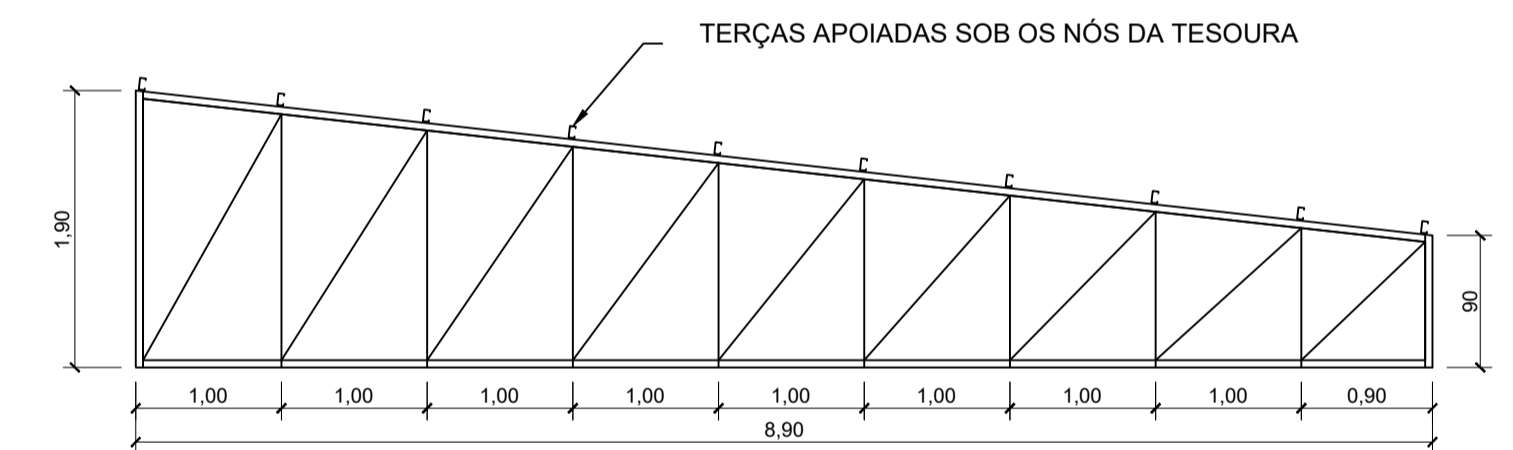
PLANTA DE FORMA BALDRAMES E LOCAÇÃO DAS SAPATAS E PILARES
Escala 1/50



PLANTA DE FORMA COBERTURA
Escala 1/50



COBERTURA - ESTRUTURA METÁLICA
LAYOUT E ESPECIFICAÇÕES DOS MATERIAIS
Escala 1/50



- MONTANTES E DIAGONAIS - PERFIL U 92x30 chapa 3mm
- BANZO INFERIOR E SUPERIOR - PERFIL U 100x40 chapa 3mm
- TERÇAS - PERFIL U ENRIJECIDO 50x25x10 chapa 2,65

TRELIÇA METÁLICA
ESPECIFICAÇÕES E MATERIAIS
Escala 1/50



Prefeitura Municipal de Bom Sucesso do Sul

Rua Cândido Merlo, nº 290 - CEP:85515-000
Fone (46) 3234-1135 - CNPJ: 80.874.100/0001-86

Projeto: AMPLIAÇÃO BANHEIROS FEMININOS DO CENTRO DE EVENTOS Lote: 03 Quadra: 51

Proprietário: Município de Bom Sucesso do Sul Área: 53,54m²

Especificações: Detalhes construtivos: Fundação, Vigas Baldrame, Pilares, Vigas de Cobertura, Vergas, Contravergas e Estruturas Metálicas Escala: INDICADA

Data: Setembro / 2022

Prancha: Est 01/01

Diogo Rossetto
Engenheiro Civil
Crea PR-109.070/D