



**Nombre de alumno: Enrique Fabian Jimenez Fonseca**

**Nombre del profesor: Pedro Alberto Garcia**

**Nombre del trabajo: Examen**

**Materia: Taller de Construcción**

**Grado: 5to**

**Grupo:**

Comitán de Domínguez Chiapas a 15 de octubre de 2020.

### Cerramiento

$$\begin{aligned} \text{Eje B, A} &= 9.20 \times 15 \times 20 = 0.276(2) = 0.552 \text{ m}^3 \\ \text{Eje 1, 3, 5 y 7} &= 2.4750 \times 15 \times 20 = 0.0765(4) = 0.297 \text{ m}^3 \\ \text{Eje 2 y 6} &= 2.875 \times 20 \times 15 = 0.08625 \text{ m}^3(2) = 0.1725 \\ \text{Eje C} &= 7.10 \times 20 \times 15 = 0.213 \text{ m}^3 \end{aligned}$$

$$\text{Cerramiento 1 y 2: } 1.2345 \text{ m}^3$$

### Cerramiento 3:

$$\begin{aligned} \text{Prozco 1: } & 2.4750 \times 30 \times 20 = 0.1485 \text{ m}^3 \\ \text{Prozco 2: } & 2.875 \times 30 \times 20 = 0.1725 \text{ m}^3 \\ \Sigma &= 0.321 \end{aligned}$$

### Concreto P.C 200

$$\begin{aligned} \text{losa = Cuadrante 1 y 4} &= 2.2750 \times 2.4750 \times 10 = \\ & 0.5630625(2) = 1.126125 \end{aligned}$$

$$\begin{aligned} \text{Cuadrante 2 y 3} &= 1.8750 \times 2.4750 \times 10 = 0.4640625(2) \\ & 0.928125 \end{aligned}$$

$$\begin{aligned} \text{Cuadrante 5 y 6} &= 2.8750 \times 3.25 \times 12 = 1.12125(2) = 2.2425 \\ \text{pedazo sobrolante de K-2} &= 0.0750 \times 15 \times 10 = 0.01125 \end{aligned}$$

$$\Sigma \text{ losa} = 4.297875 \text{ m}^3$$

total Concreto P.C 200

$$5.853375 \text{ m}^3 \times 1.05 = 6.14604375 \text{ m}^3$$

CR-2

Varilla no 3 eye B

$$\text{long} = 1.375 + 0.24 = 1.615 \text{ m} (20) = 3.23 \text{ m} (2 \text{ varillas}) = 6.46 \text{ m}$$

Varilla no 3 eye C

$$\text{long} = 1.15 + 0.24 = 1.39 \text{ m} (20) = 2.78 \text{ m} (2 \text{ varillas}) = 5.56 \text{ m}$$

$$\Sigma = 12.02 \text{ m}$$

CR-3

Varilla no 3 eye 4

$$\text{long} = 5.80 + 0.24 = 6.04 (60) = 36.24 \text{ m}$$

Varilla no 2 Castubas

$$\text{long} = 0.70 + 0.14 = 0.84 \text{ m} (20) = 1.68 \text{ m}$$

$$PFA = 5.80 / 0.10 + 1 = 39 \text{ PAs}$$

$$\text{total} = 1.68 \text{ m} (39) = 99.12 (1.03) = 102.0936 \text{ m}$$

$$PFA = 102.0936 \text{ m} / 12 \text{ m} = 8.5 \rightarrow 9 \text{ varillas} \quad \text{kg} = 102.0936 (8.5 \text{ varillas}) = 25.5234 \text{ kg}$$

CR-1

Varilla no 3 eye 1  $\rightarrow$  2.775 m eye 2  $\rightarrow$  3.175 m  
eye A  $\rightarrow$  9.20 m eye 3  $\rightarrow$  2.775 m eye 6  $\rightarrow$  3.175 m  
eye B  $\rightarrow$  9.20 m eye 5  $\rightarrow$  2.775 m  
eye C  $\rightarrow$  9.20 m eye 7  $\rightarrow$  2.775 m

$$\Sigma = 42.95 \text{ m}$$

$$PFA = 42.95 \text{ m} / 6 \text{ m} = 7.15 = 8 \text{ PAs}$$

2020

Parrella, Vozilla num 3 (Cuadrante 2 arriba)

long =  $9.05 + 0.12 + 1.2 + 0.24 = 10.61m$   
Pzas =  $2.625 / 0.25 + 1 = 11.5 \rightarrow 12$  pzas  
total =  $12 (10.61m) = 127.32m$  longitudinal

long =  $0.65 + 0.75 + 0.24 = 1.64m$   
Pzas =  $2.20 / 0.25 + 1 = 12.8 \rightarrow 13$  pzas  
total =  $1.64m (13) = 21.52m$  Bastones  
eye 13  
3,5

long =  $2.625 + 0.12 + 1.3 + 0.24 = 4.285m$   
Pzas =  $2.425 / 0.25 + 1 = 10.7 \rightarrow 11$  pzas  
total =  $4.285m (11) = 47.135m$  (2.10m) =  $91.27m$  eye 1-3  
y 5-7

long =  $1.1 + 0.24 = 1.34m$   
Pzas =  $2.625 / 0.25 + 1 = 11.5 \rightarrow 12$  pzas  
total =  $1.34 (12) = 16.08m$  (2.10m) =  $32.16$  bastones 1  
eye 1-3,  
5-7

long =  $1 + 0.24 = 1.24m$   
Pzas =  $2.625 / 0.25 + 1 = 11.5 \rightarrow 12$  pzas  
total =  $1.24m (12) = 14.88m$  bastones 2  
eye 4

$\Sigma = 298.15$

Estal. de Acero en Parrella laza  
Coordenada 1 = 359.35  
Coordenada 2 = 298.15  
657.5m

# Acero

Parrilla, varilla no. 3 Cuadrante 1

$$\text{long} = 6.95 + 0.16 + 1.80 + 0.24 = 9.15 \text{ m} \rightarrow \text{longitudinales}$$
$$\text{Pzas} = 3.025 / 0.25 + 1 = 13.4 \rightarrow 14 \text{ pzas} \rightarrow \text{eye 2, 6}$$
$$\text{total} = 9.15 \text{ m} (14) = 128.1 \text{ m}$$

$$\text{long} = 5.62 + 0.08 + 0.06 + 0.75 + 0.65 + 0.24 = 7.4 \text{ m} \rightarrow \text{Varilla trans}$$
$$\text{Pzas} = 4.20 / 0.25 + 1 = 17.8 \rightarrow 18 \text{ pzas} \rightarrow \text{eye 3, 5}$$
$$\text{total} = 7.43 (18) = 133.74 \text{ m}$$

$$\text{Bastones long} = 1.80 + 0.24 = 2.04 \text{ m} \rightarrow \text{baston}$$
$$\text{Pzas} = 6.025 / 0.25 + 1 = 13.4 \rightarrow 14 \text{ pzas} \rightarrow \text{eye 1}$$
$$\text{total} = 2.04 (14) = 28.56 \text{ m}$$

$$\text{long} = 3.05 + 0.16 + 1.5 + 0.24 = 4.95 \text{ m} \rightarrow \text{transversal}$$
$$\text{Pzas} = 1.375 / 0.25 + 1 = 6.5 \rightarrow 7 \text{ pzas} \rightarrow \text{eye 2, 3}$$
$$\text{total} = 4.95 (7) = 34.675 \text{ m} (2) = 68.95 \text{ m} \rightarrow \text{eye 5, 6}$$

$$\Sigma = 359.35 \text{ m}$$