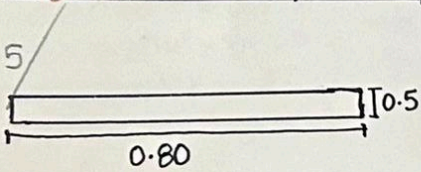
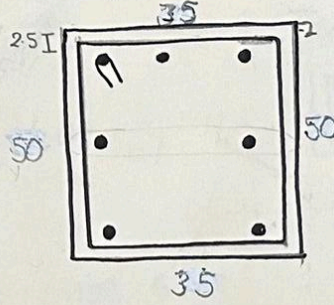


Plantilla de concreto pobre.
 $V = 20 \text{ m}^3$ $f'_c = 100 \text{ kg/cm}^2$

	Cantidad	Unidad.
Arena	0.138	M ³
Cemento	1.1	Bultos
Grava	0.158	M ³
Agua.		



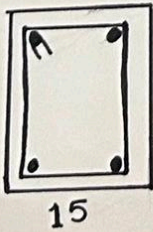
Contratrate de 35x50 cm
 $7\phi \#3$ E. #2.5 @ 15 cm.



VRS	M.L	kg/M	Peso	15%	total
3	35	0.56	19.6	2.94	22.5
2.5	60.9	0.38	23.14	3.47	26.6
	Total		= 49.1		
	Total de alambre de amarre		= 2.49		

Cadena de desplante de 15x20 cm
 $4\phi \#3$, E #2 @ 15 cm

VRS	ML	kg/M	Peso	15%	total
3	20	0.56	11.2	1.68	12.88
2	24.5	0.25	6.1	0.91	7.01



Total = 19.89
 Total de alambre = 0.99

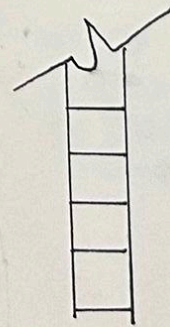
$f'_c = 200 \text{ kg/cm}^2$

	Cantidad	Unidad
Cemento	1.155	
Arena	0.083	
Grava	0.124	
Agua.		

Castillo de 15x20 cm.

VRS	M.L	kg/M	Peso	15%	total
3	20	0.56	11.2	1.68	12.88
2	24.5	0.25	6.1	0.91	7.01

Total = 19.89
 $f'_c = 200 \text{ kg/cm}^2$

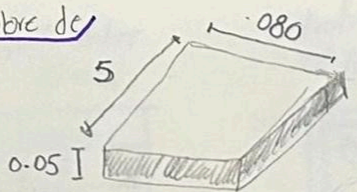


	Cantidad	Unidad.
Cemento		
Arena		
Grava.		

Jocabel Solis Morales

Plantilla concreto pobre de

$f'_c = 100 \text{ Kg/cm}^2$
 colado al 15
 Grava 8
 Arena 7



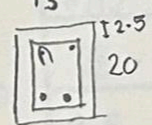
$0.05 \times 5 \times 0.80 = 0.2$
 $V = 20.2 \text{ m}^3$

$5 \times 8 = 40 \times 0.018 = 0.72$
 $5 \times 7 = 35 \times 0.018 = 0.63$
 $0.72 \times 0.20 \text{ m}^3 = 0.144$
 $0.63 \times 0.20 \text{ m}^3 = 0.126$
 $5 \times 0.20 \text{ m}^3 = 1$

más 70%
 $0.144 \times 1.70 = 0.158$ Grava
 $0.126 \times 1.70 = 0.138$ Arena
 $1 \times 1.10 = 1.1$ cemento

Cadena de despiante

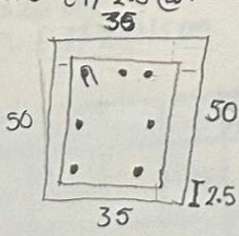
de $15 \times 20 \text{ cm}$
 $4 \phi \#3, 6 \#2 @ 15 \text{ cm}$



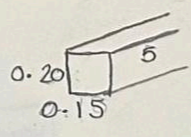
$2.54 \times 1/4 = 0.635$
 $0.635 \times 15 = 9.525 = 10$
 $10 + 15 + 10 + 15 + 20 = 70$
 $70 \times 35 \cdot 100 = 24.5$

Contratrabe de $35 \times 50 \text{ cm}$

acero
 $7 \phi \#3, 6 \#2.5 @ 15 \text{ cm}$



$2.54 \times 5/6 = 0.793$
 $0.793 \times 15 = 11.89 = 12$
 $30 + 45 + 30 + 45 + 24 = 174$
 $174 \times 35 \cdot 100 = 60.9$



15
 5
 45
 16
 31

concreto de cadena de despiante

$f'_c = 200 \text{ Kg/cm}^2$
 colado al 10 6/4

Grava 6 $7 \times 6 = 42 \times 0.018 = 0.756$
 Arena 4 $7 \times 4 = 28 \times 0.018 = 0.504$
 cemento 7
 $0.20 \times 0.15 \times 5 = 0.15 \text{ m}^3$
 $0.756 \times 0.15 \text{ m}^3 = 0.113$
 $0.504 \times 0.15 \text{ m}^3 = 0.0756$
 $7 \times 0.15 = 1.05$

más 10%
 $0.113 \times 1.10 = 0.124$
 $0.0756 \times 1.10 = 0.083$
 $1.05 \times 1.10 = 1.155$

30
 45
 75
 150
 24
 174
 $174 \times 35 \cdot 100$

Jocubed Sous Moraes.