

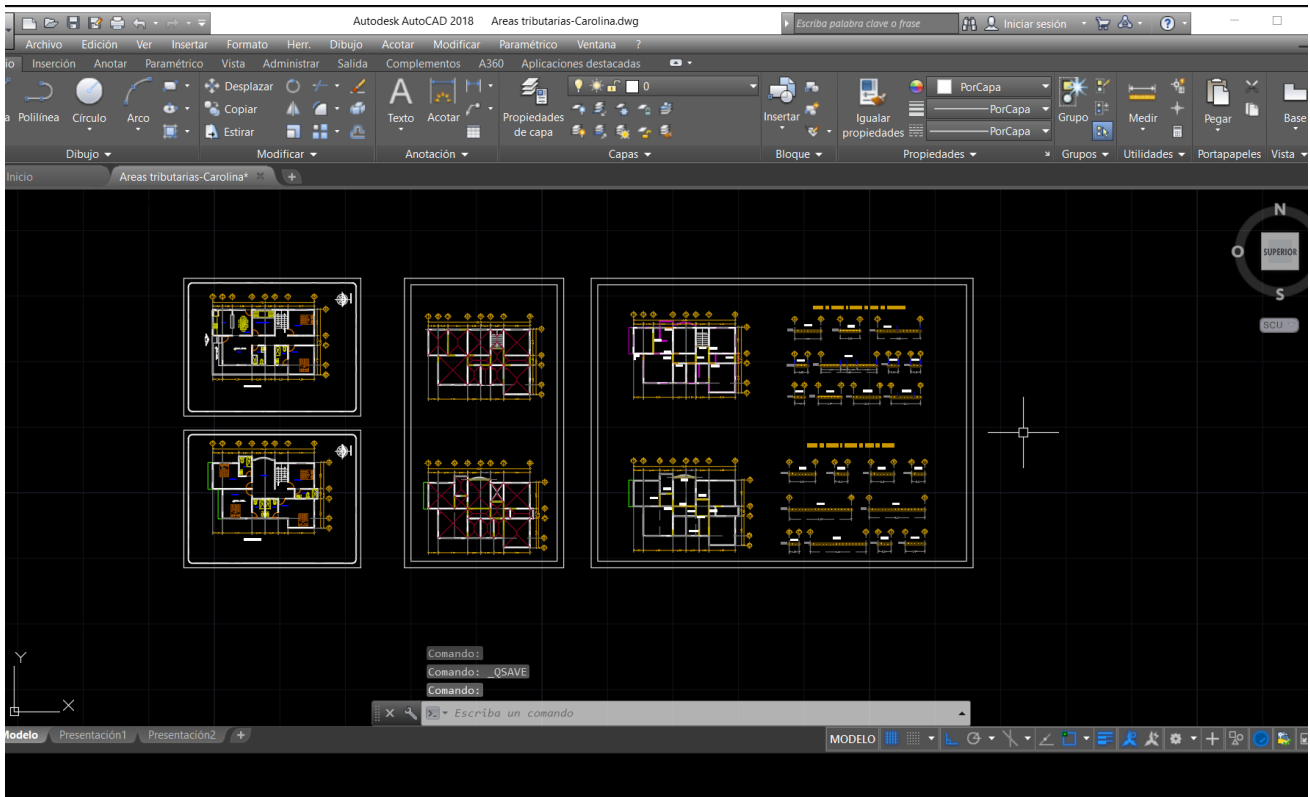


# MÉTODOS ENÉRGÉTICOS

Taller de construcción

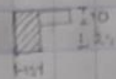
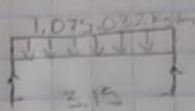
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Trabes  $10 \text{ esp.} = 580 \text{ kg/m}^2$

→ Trabe 1: (compuesta 2 tableros) = tablero 1 y 2



$$3.6375 \text{ m} (580 \text{ kg/m}^2) = \frac{2,109.75 \text{ kg/m}^2}{3.9250 \text{ m}} =$$

$$537.516 \text{ kg/m}$$

$$3.15 / 12 = 0.2625 = 0.26$$

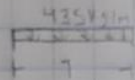
$$3.6375 (580 \text{ kg/m}^2) = \frac{2,109.75 \text{ kg/m}^2}{3.9250 \text{ m}}$$

$$\Sigma = 537.516 + 537.516 =$$

$$537.516 \text{ kg/m}$$

$$\underline{1,075.032 \text{ kg/m}}$$

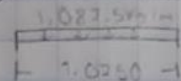
→ Momento 1 (tablero 2)



$$2.25 \text{ m} (580 \text{ kg/m}^2) = \frac{1,305 \text{ kg/m}^2}{3 \text{ m}} = \underline{435 \text{ kg/m}}$$

$$1/12 = 0.083 = 0.1,$$

→ Momento 2 (correcta con tablero 2 y 6)



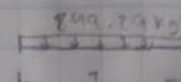
$$2.25 (580 \text{ kg/m}^2) = \frac{1,305 \text{ kg/m}^2}{3} = 435 \text{ kg/m}$$

$$1.0750 / 12 = 0.89 = 0.9$$

$$5.0625 \text{ m} (580 \text{ kg/m}^2) = \frac{2,936.25}{4.50} = 652.5 \text{ kg/m}$$

$$\Sigma = 435 \text{ kg/m} + 652.5 \text{ kg/m} = \underline{1,087.5 \text{ kg/m}}$$

→ Momento 3 (correcta con tablero 3 y 7)



$$3.0625 \text{ m} (580 \text{ kg/m}^2) = \frac{1,776.25}{3.50 \text{ m}} = 507.5 \text{ kg/m}$$

$$1/12 = 0.083 = 0.9$$

$$\Sigma = 507.5 \text{ kg/m} + 841.79 = \underline{849.29 \text{ kg/m}}$$

$$2.0625 \text{ m} (580 \text{ kg/m}^2) = \frac{1,196.25}{3.50} = 341.79 \text{ kg/m}$$

→ (continuando (Tabla 6))

$$\begin{array}{c} 652.5 \text{ kg/m} \\ \hline \uparrow \quad \uparrow \\ \hline \end{array}$$

$$5.0625 \text{ m}^2 (580 \text{ kg/m}^2) = \frac{2.936.25 \text{ kg/m}^2}{4.50 \text{ m}} = \underline{652.5 \text{ kg/m}}$$

$1/12 = 0.083 = 0.9$

LOSA DE ENTREPISO DE CASA HABITACIÓN:

TABLERO	PERIMETRO	ESPESOR	TIPO	ÁREA TRIBUTARIA	PESO	TOTAL
I	9.0926	0.09348588	Trapezio	3.6375	580	2109.75
I	7.2426	0.08260353	Triángulo	2.25	580	1305
II	9.0926	0.09348588	Trapezio	3.6375	580	2109.75
II	7.2426	0.08260353	Triángulo	2.25	580	1305
III	9.2997	0.09470412	Trapezio	3.8062	580	2207.596
III	8.4497	0.08970412	Triángulo	3.0625	580	1776.25
IV	6.5784	0.07869647	Trapezio	1.875	580	1087.5
IV	4.8284	0.06840235	Triángulo	1	580	580
V	9.6258	0.09662235	Trapezio	3.9986	580	2319.188
VI	10.864	0.10390588	Triángulo	5.0625	580	2936.25
VII	7.6213	0.08483118	Trapezio	2.0625	580	1196.25
VII	3.545	0.06085294	Triángulo	0.5456	580	316.448
VIII	5.9284	0.07487294	Trapezio	1.55	580	899
VIII	4.8284	0.06840235	Triángulo	1	580	580
IX	8.6213	0.09071353	Trapezio	2.4375	580	1413.75
IX	3.6213	0.06130176	Triángulo	0.5652	580	327.816
X	6.8284	0.08016706	Trapezio	2	580	1160
X	4.8284	0.06840235	Triángulo	1	580	580
XI	7.2107	0.08241588	Trapezio con triángulo	2.025	580	1174.5
XI	3.6213	0.06130176	Triángulo	0.5625	580	326.25
XII	6.8284	0.08016706	Trapezio	2	580	1160
XII	4.8284	0.06840235	Triángulo	1	580	580
XIII	10.5069	0.10180529	Trapezio	4.85	580	2813
XIII	9.6569	0.09680529	Triángulo	4	580	2320

LOSA DE AZOTEA DE CASA HABITACIÓN:

TABLERO	PERIMETRO	ESPESOR	TIPO	ÁREA TRIBUTARIA	PESO	TOTAL
I	9.6258	0.09662235	Trapezio	3.9986	610	2439.146
I	9.4758	0.09574	Triángulo	3.8514	610	2349.354
II	6.8284	0.08016706	Trapezio	2	610	1220
II	4.8284	0.06840235	Triángulo	1	610	610
III	4.7974	0.06822	Trapezio	0.9986	610	609.146
III	4.6474	0.06733765	Triángulo	0.9264	610	565.104
IV	10.2997	0.10058647	Trapezio	4.6813	610	2855.593
IV	8.4497	0.08970412	Triángulo	3.0625	610	1868.125
V	6.5784	0.07869647	Trapezio	1.875	610	1143.75
V	4.8284	0.06840235	Triángulo	1	610	610
VI	9.6258	0.09662235	Trapezio	3.9986	610	2439.146
VI	9.4758	0.09574	Triángulo	3.8514	610	2349.354
VII	10.864	0.10390588	Triángulo	5.0625	610	3088.125
VIII	7.6213	0.08483118	Trapezio	2.0625	610	1258.125
VIII	3.6213	0.06130176	Triángulo	0.5625	610	343.125
IX	5.9284	0.07487294	Trapezio	1.55	610	945.5
IX	4.8284	0.06840235	Triángulo	1	610	610
X	3.4142	0.06008353	Trapezio	0.5	610	305
X	2.4145	0.05420294	Triángulo	0.25	610	152.5
XI	7.6213	0.08483118	Trapezio	2.0625	610	1258.125
XI	3.6213	0.06130176	Triángulo	0.5625	610	343.125
XII	6.8284	0.08016706	Trapezio	2	610	1220
XII	4.8284	0.06840235	Triángulo	1	610	610
XIII	6.8284	0.08016706	Trapezio	2	610	1220
XIII	4.8284	0.06840235	Triángulo	1	610	610
XIV	6.6211	0.07894765	Trapezio	1.6872	610	1029.192
XIV	3.622	0.06130588	Triángulo	0.5628	610	343.308
XV	10.5045	0.10179118	Trapezio	4.8463	610	2956.243
XV	9.6586	0.09681529	Triángulo	4.0024	610	2441.464