

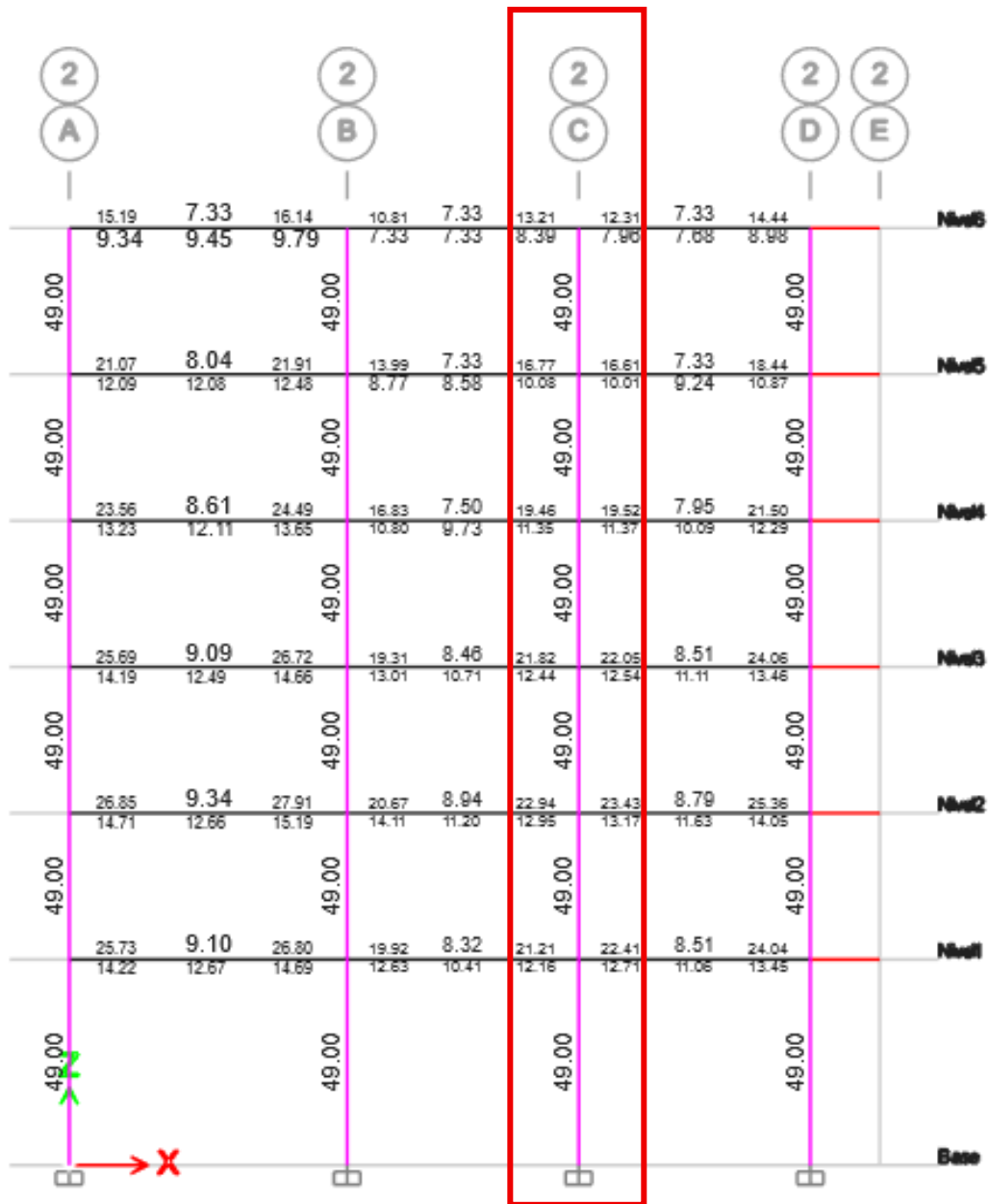
**Universidad de San Carlos de Guatemala
Centro Universitario de Occidente
División de Ciencias de la Ingeniería
Curso: Diseño Asistido por Computadora
Ing. Francisco Dionisio Simón Andrés**

– CUARTO AVANCE DE PROYECTO –

Marlon Ivan Carreto Rivera 201230088

Diseño y Armado Columna, Eje 2 y C

Sección original sin cambiar **70X70 cm**
 Con Distribución de **8 Varillas #2**



Columna, Eje 2 y C

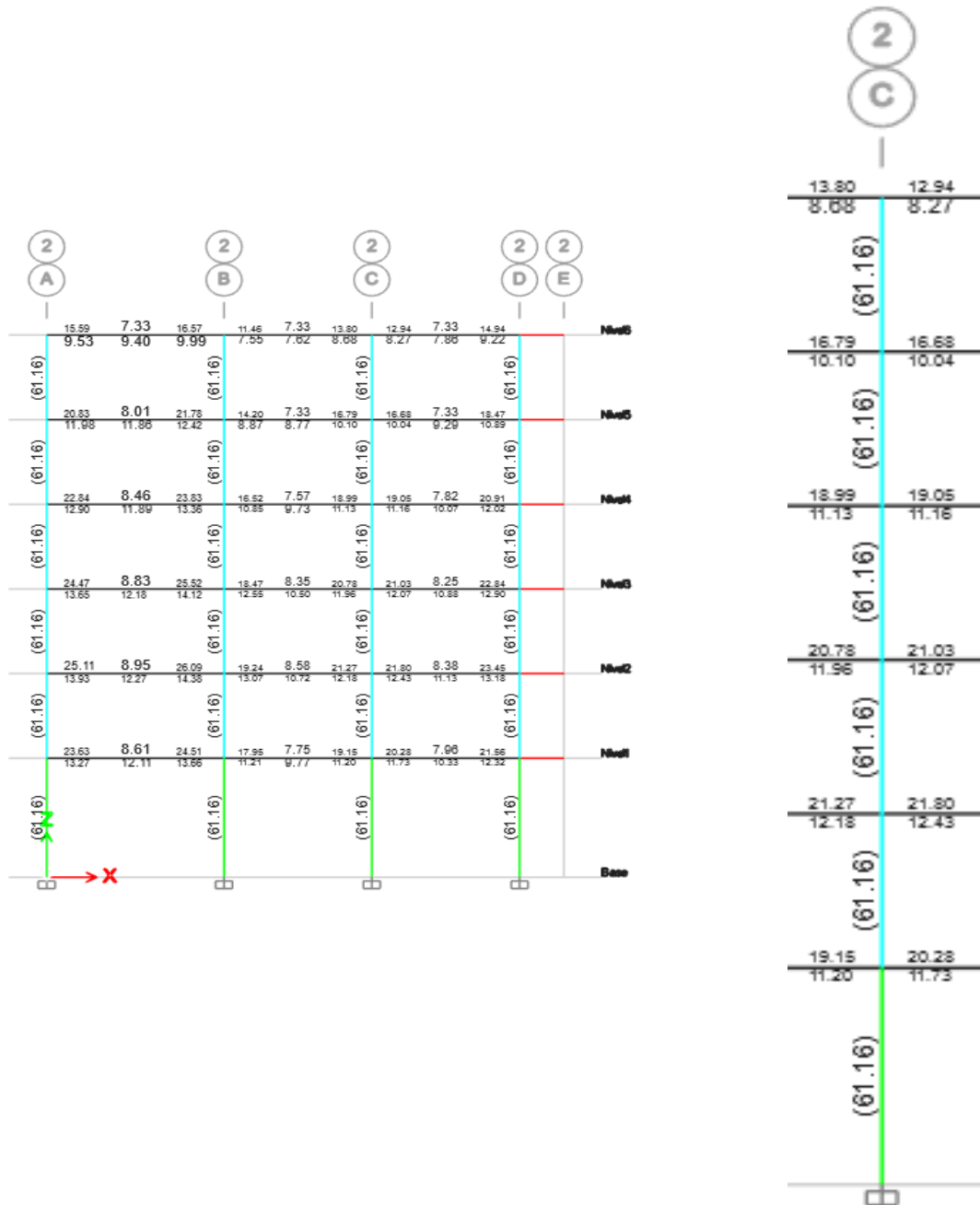
Sección Chequeada

Seccion Modificada

80X80 cm

Con distribución de Varilla

12 Varillas #8

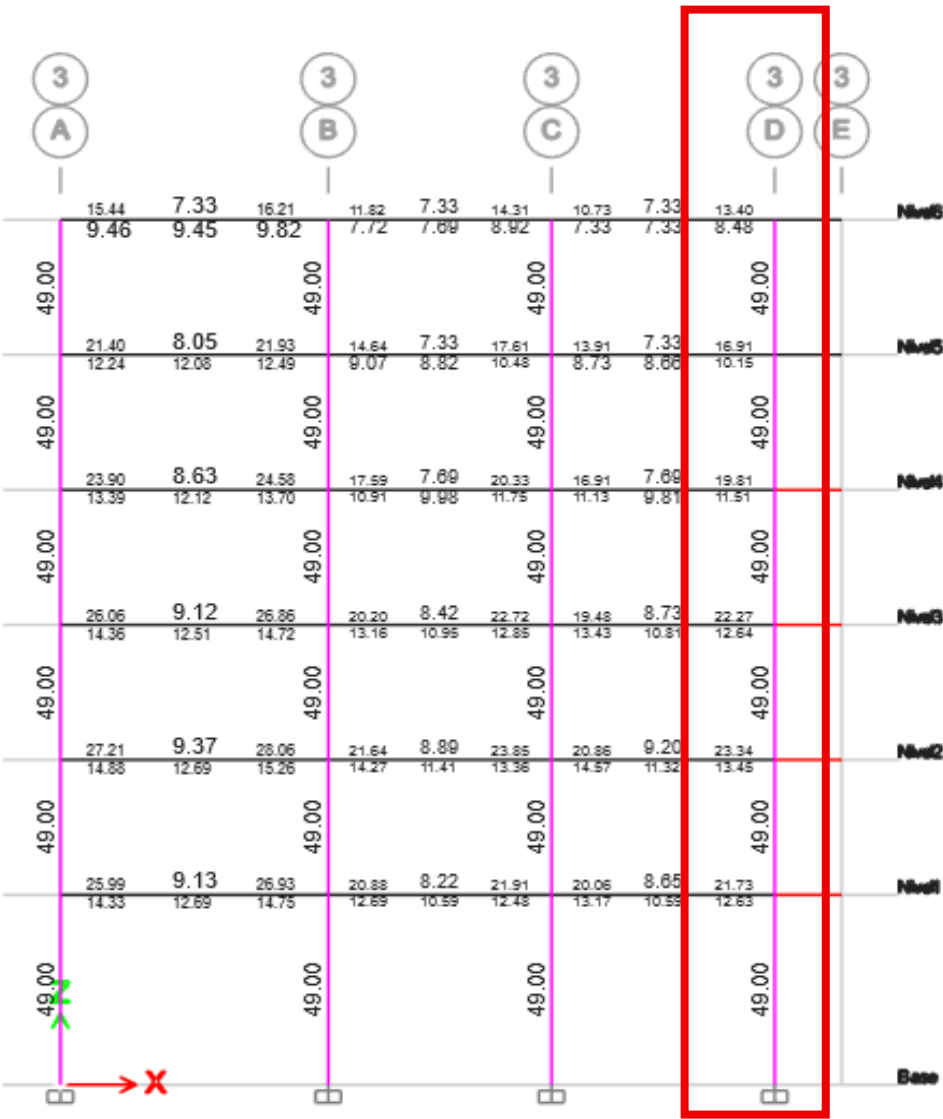


Columna, Eje 3 y D

Sección sin Chequear:

Sección original sin cambiar
Con Distribución de

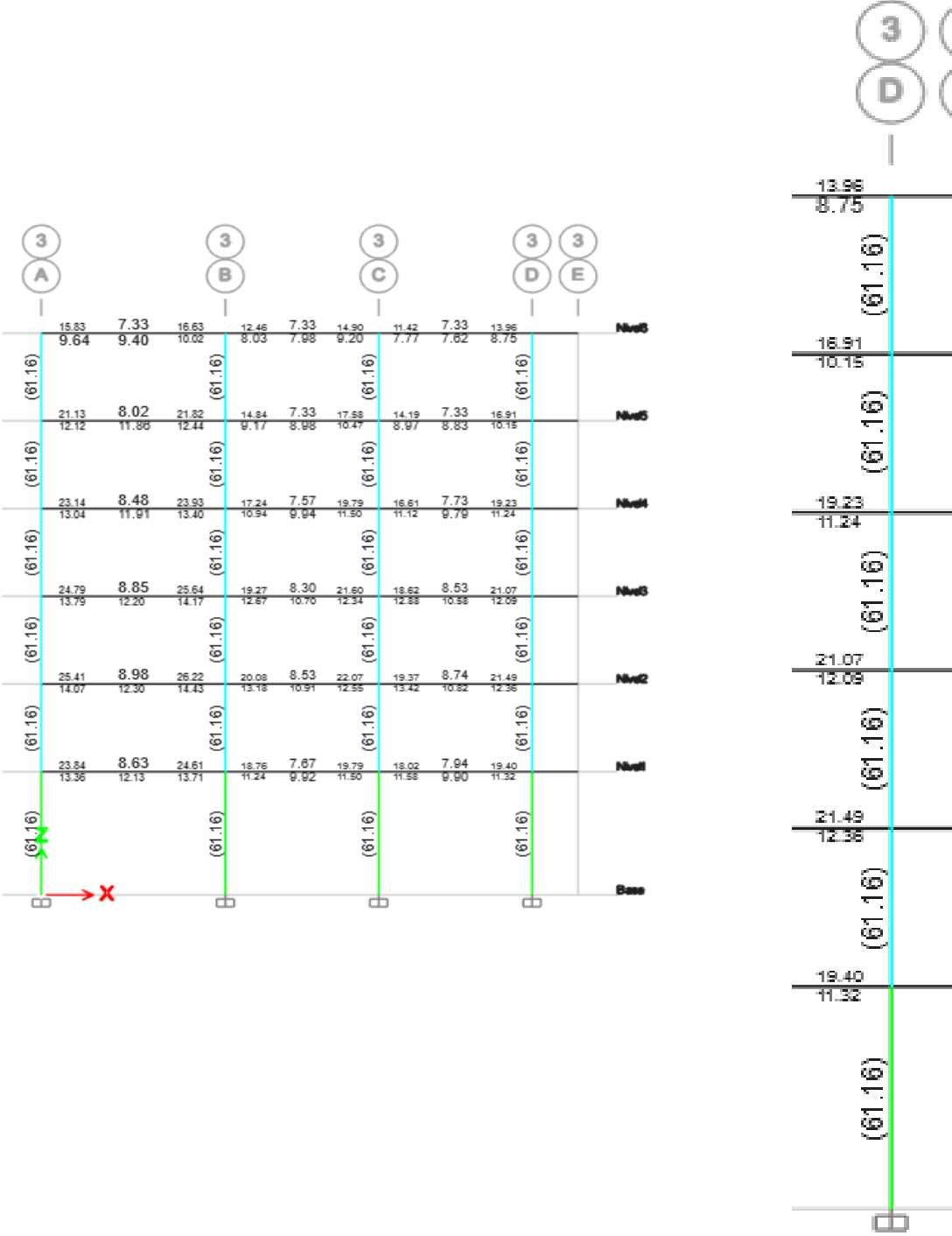
70X70 cm
8 Varillas #2



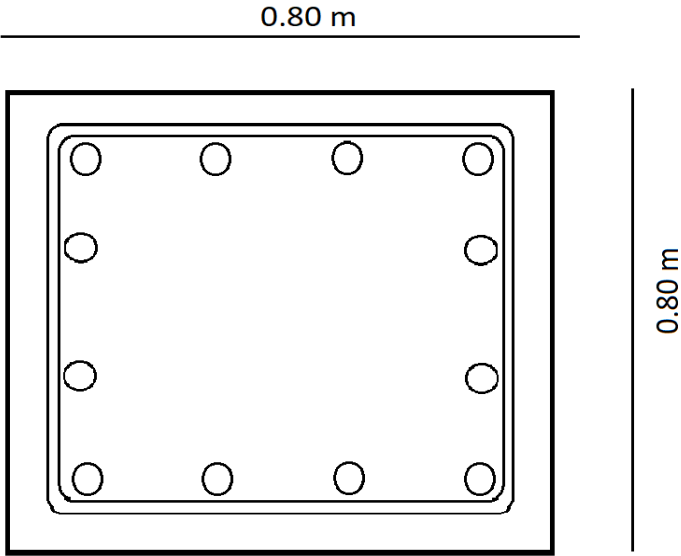
Columna, Eje 3 y D

Sección Chequeada

Seccion Modificada 80X80 cm
Con distribución de Varilla 12 Varillas #8



Plano detalles



12 VARILLAS #8

Cálculo de Longitudes y Separaciones para Confinamiento Estructural

Datos Columnas

Hx	80 cm
Hy	80 cm
Lu	4.5 m

Longitud de Confinamiento l_o

$L/u =$	$4.5/6 =$	75 cm
h_x o $h_y =$		65 cm
450mm		45cm

Longitud de Confinamiento =	75 cm
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Separación de Area Confinada S_o

$8d_b =$	$8(0.95)$	7.6 7cm
200mm =		20cm
$h_x/2$ o $h_y/2$	$80/2$	40cm

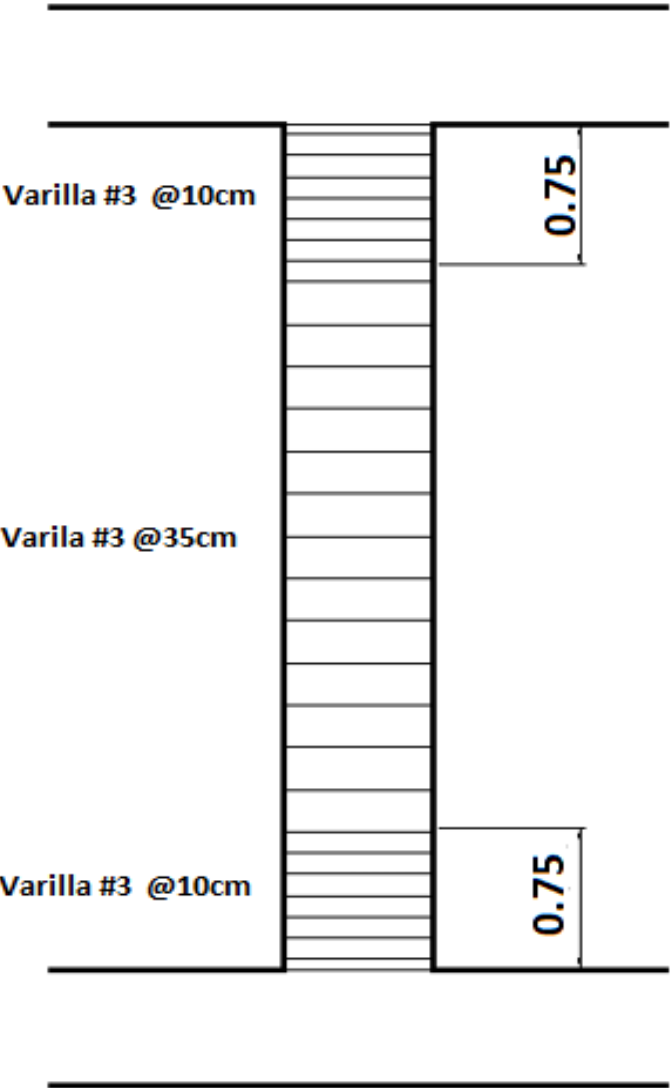
Separación Area Confinanda	10cm
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Separación de Area No Confinada S

$74/2:$	$74/2$	37cm
600mm		60cm

Separación Area sin confinar	35cm
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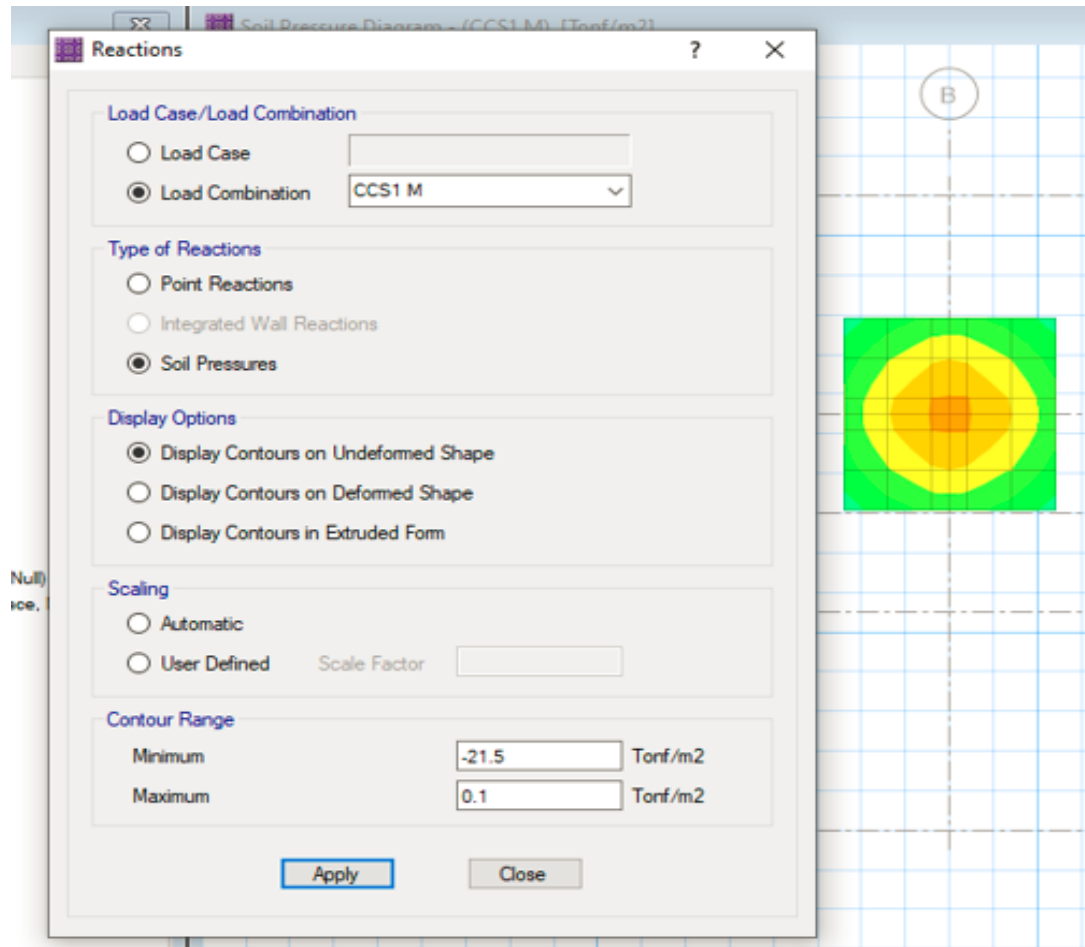
Plano detalles



ZAPATAS

Chequeos

Zapatas , Eje 3 y B



Reactions

Load Case/Load Combination

☐ Load Case

☒ Load Combination CCS2 M+V+Vt

Type of Reactions

☐ Point Reactions

☐ Integrated Wall Reactions

☒ Soil Pressures

Display Options

☒ Display Contours on Undeformed Shape

☐ Display Contours on Deformed Shape

☐ Display Contours in Extruded Form

Scaling

☐ Automatic

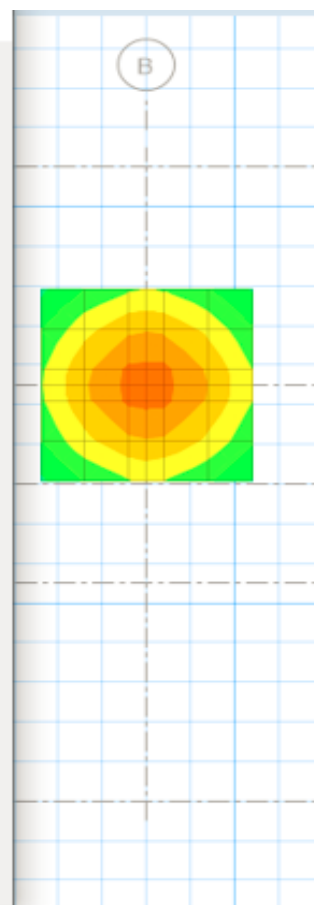
☐ User Defined Scale Factor

Contour Range

Minimum -21.5 Tonf/m2

Maximum 0.1 Tonf/m2

Apply Close



Reactions

Load Case/Load Combination

☐ Load Case

☒ Load Combination CCS3 1.15M+V+0.7Sx+0.21S

Type of Reactions

☐ Point Reactions

☐ Integrated Wall Reactions

☒ Soil Pressures

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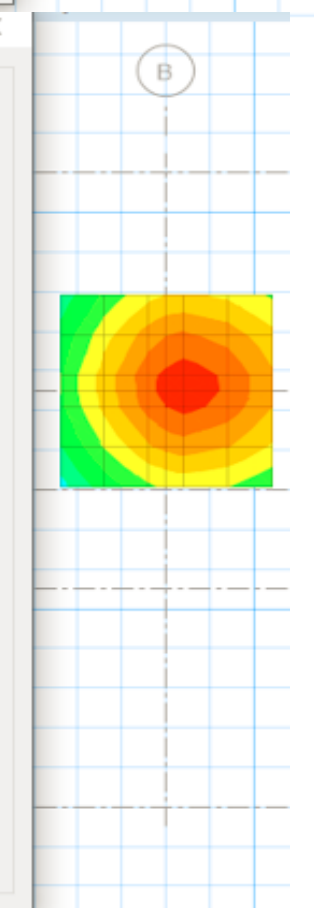
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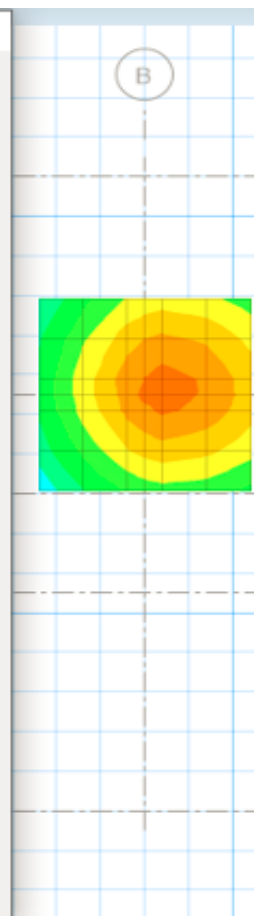
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Contour Range

Minimum Tonf/m²

Maximum Tonf/m²



Reactions ? X

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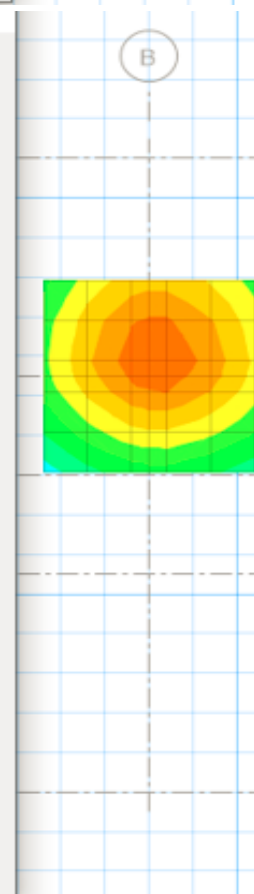
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Minimum Tonf/m²

Maximum Tonf/m²



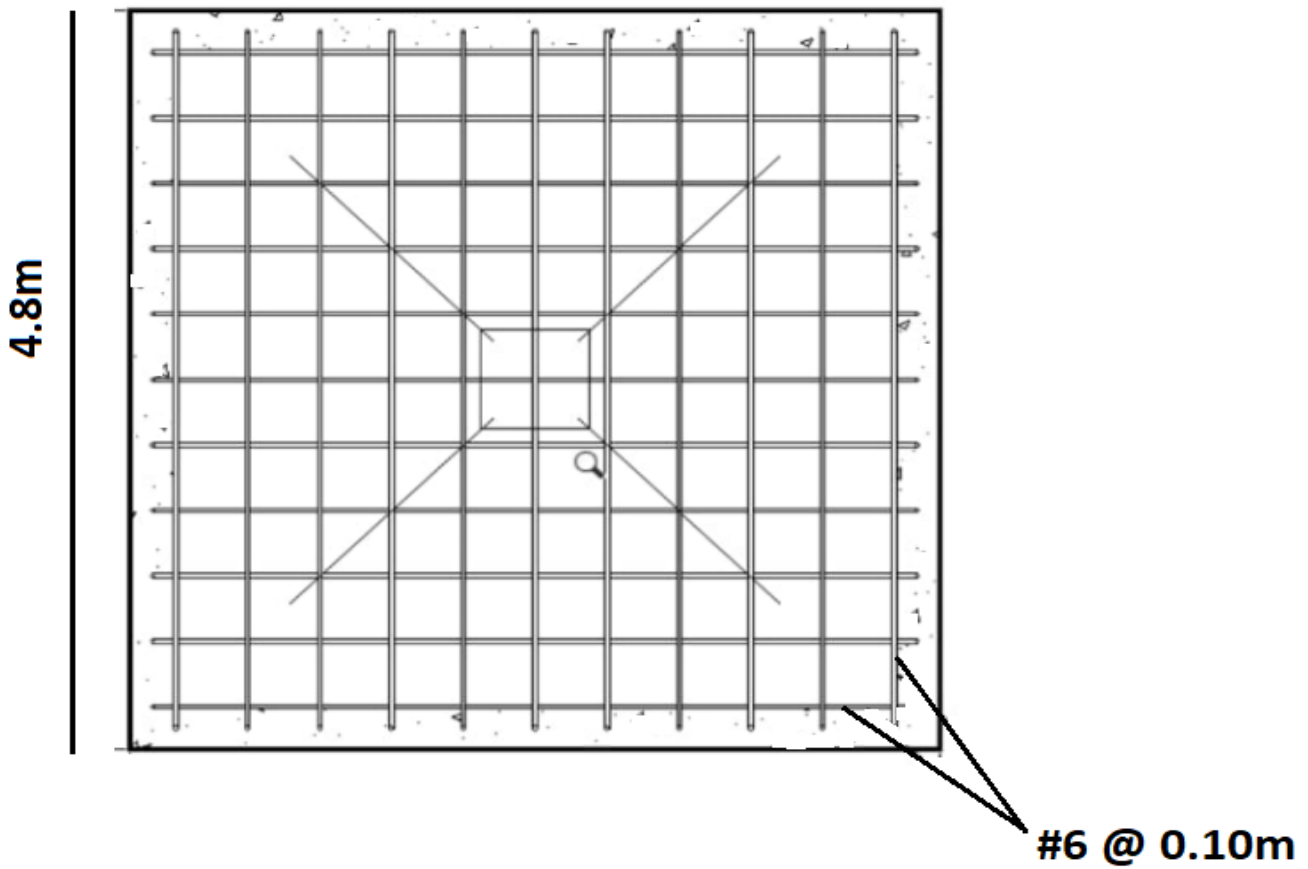
ZAPATAS

Diseño y Armado

Zapatas , Eje 3 y B

PLANTA

4.8m



ELEVACIÓN

