

GRADO EN INGENIERÍA CIVIL  
**TRABAJO FIN DE GRADO**

***CONSTRUCCIÓN DE UNA PASARELA  
PEATONAL CON ASCENSOR ENTRE LA  
PLAZA DEL GAS Y EL PARQUE  
ETXEBARRIA EN BILBAO***

***DOCUMENTO 2 - PLANOS***

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**Director/Directora:** Larrauri Gil, Marcos Ignacio

**Curso:** 2020-2021

**Fecha:** 04/06/2021

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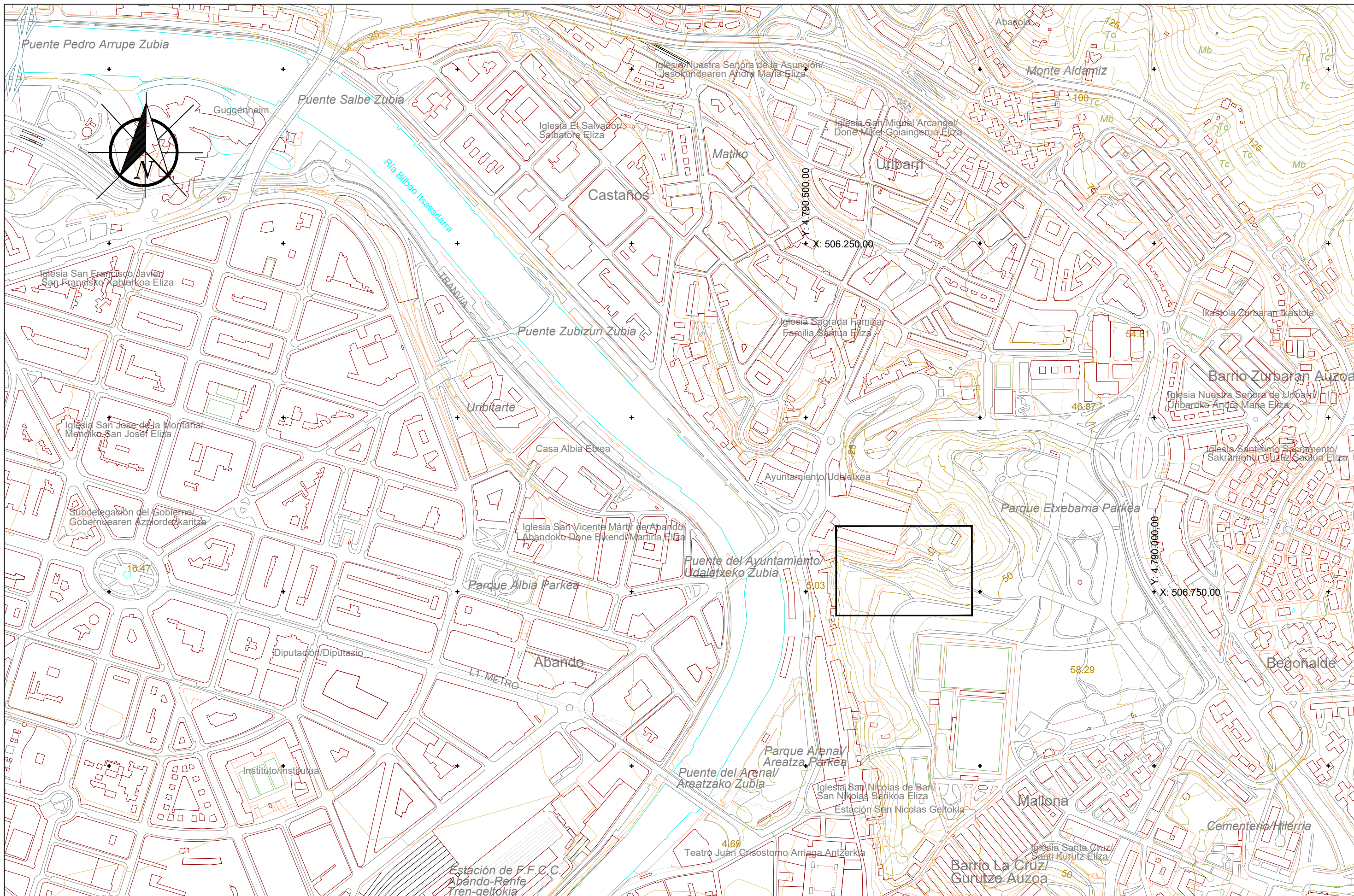
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**Rubén Eraña Martínez**

Ingeniero Civil

Bilbao, 4 de junio de 2021



**Bilboko Ingenieritza Eskola**  
**Escuela de Ingeniería de Bilbao**

Ingeniaritza Zibileko Gradua // Grado en Ingeniería Civil  
 Paseo Rafael Moreno "Pitxitxi", 2, 48013 Bilbo, Bizkaia



**Construcción de una pasarela peatonal  
 con ascensor entre la Plaza del Gas y el  
 Parque Etxebarria en Bilbao**

**AUTOR: RUBÉN ERAÑA MARTÍNEZ**

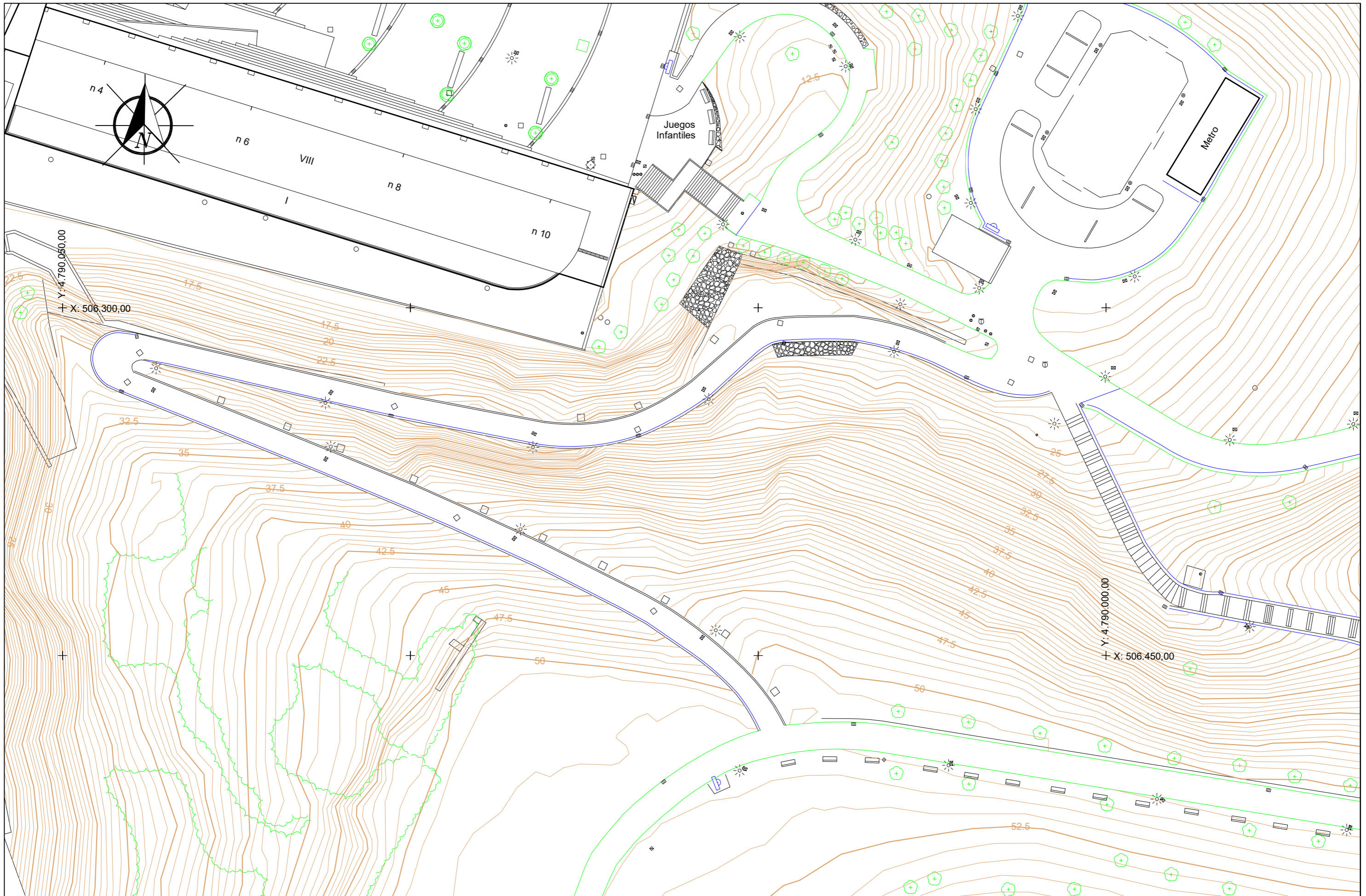
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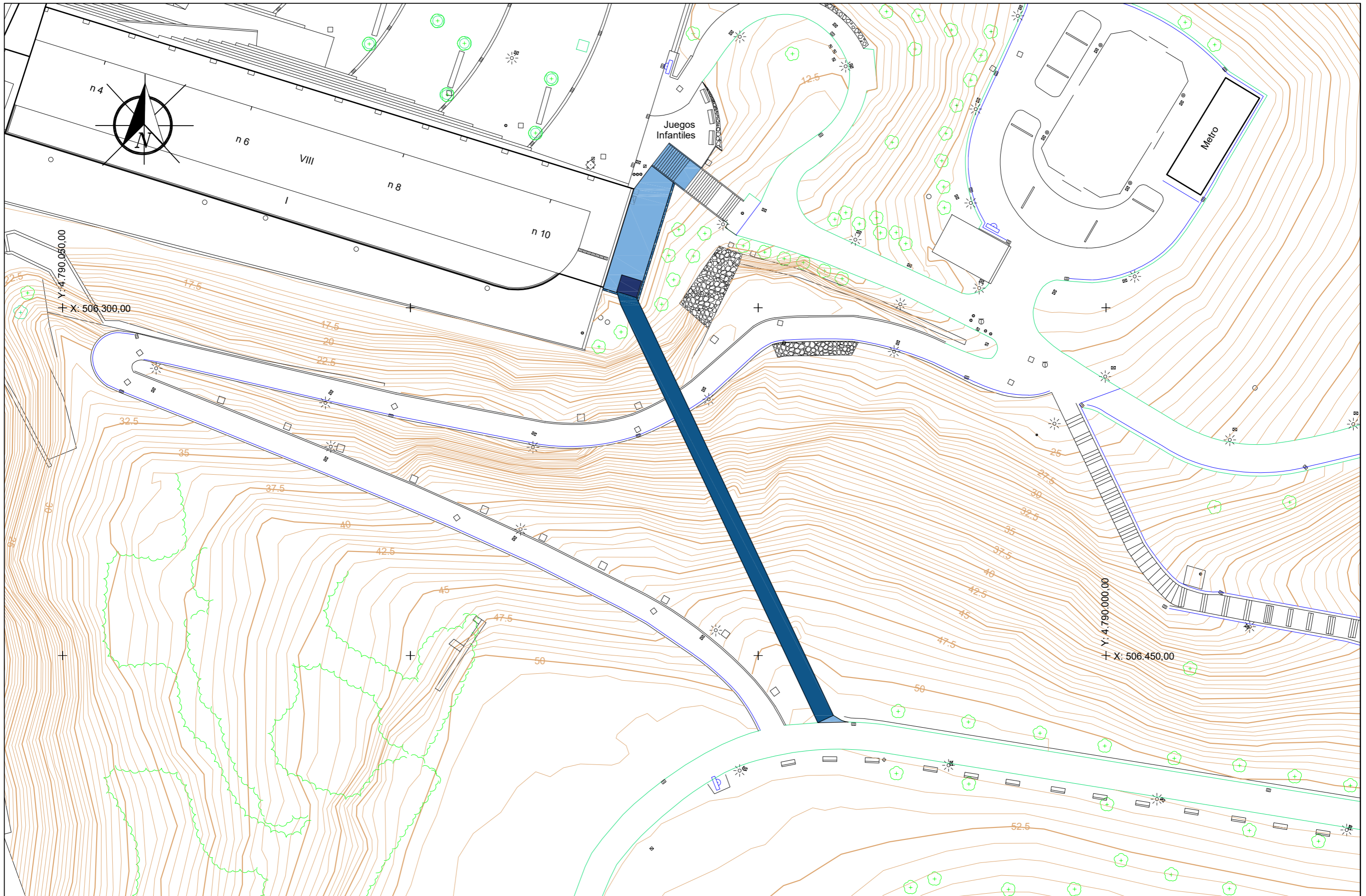
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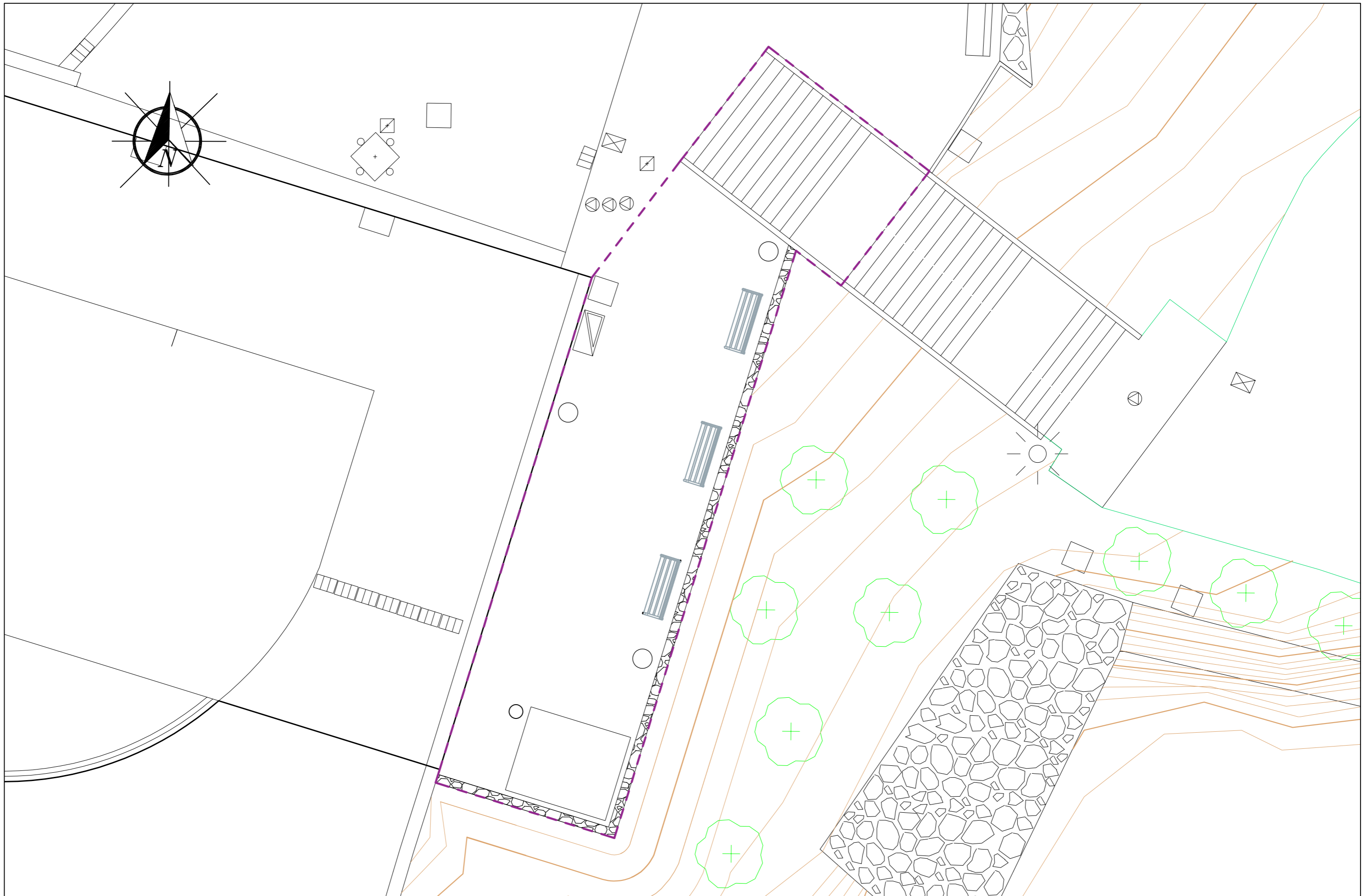
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**PLANO 1**

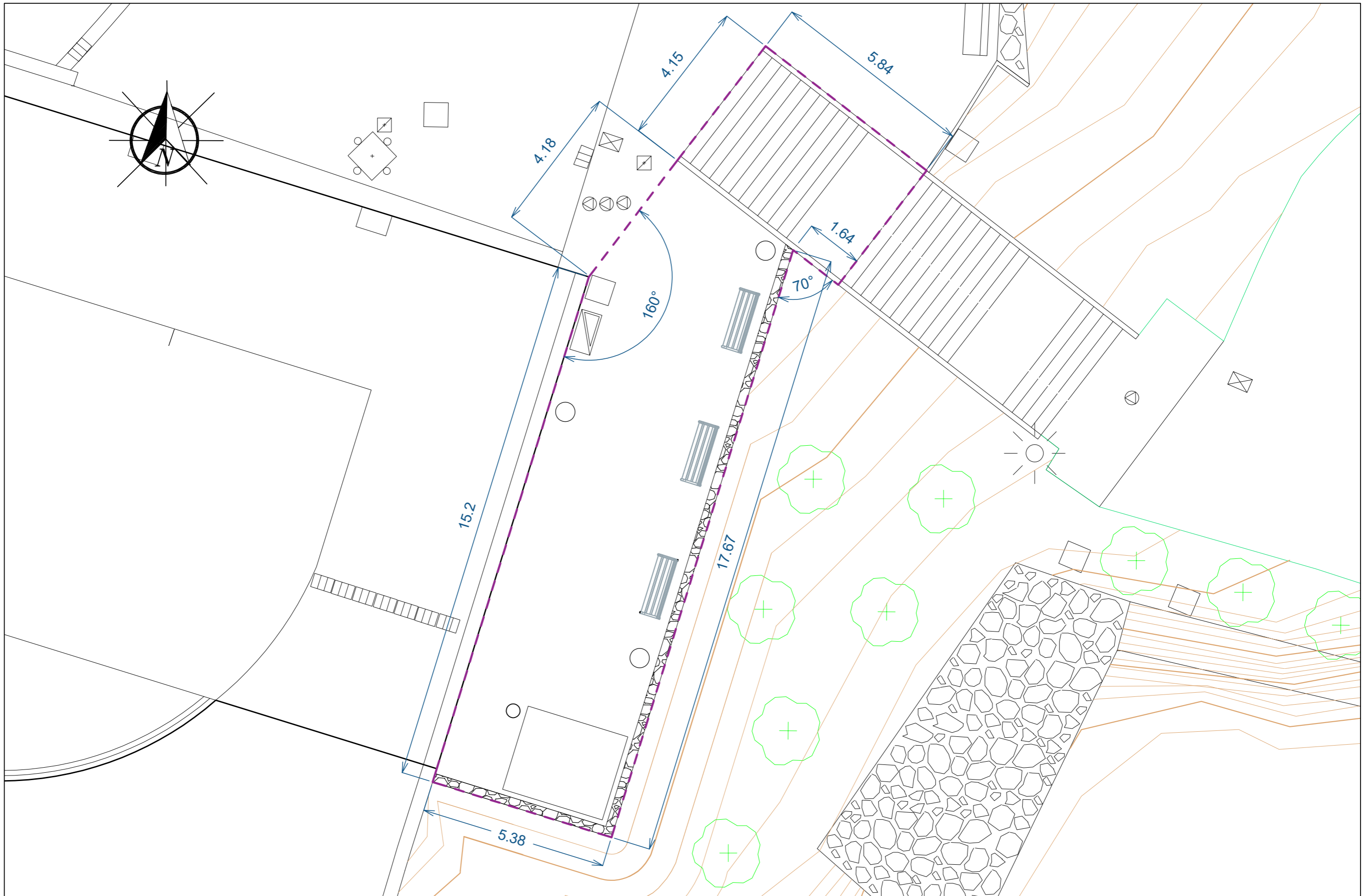
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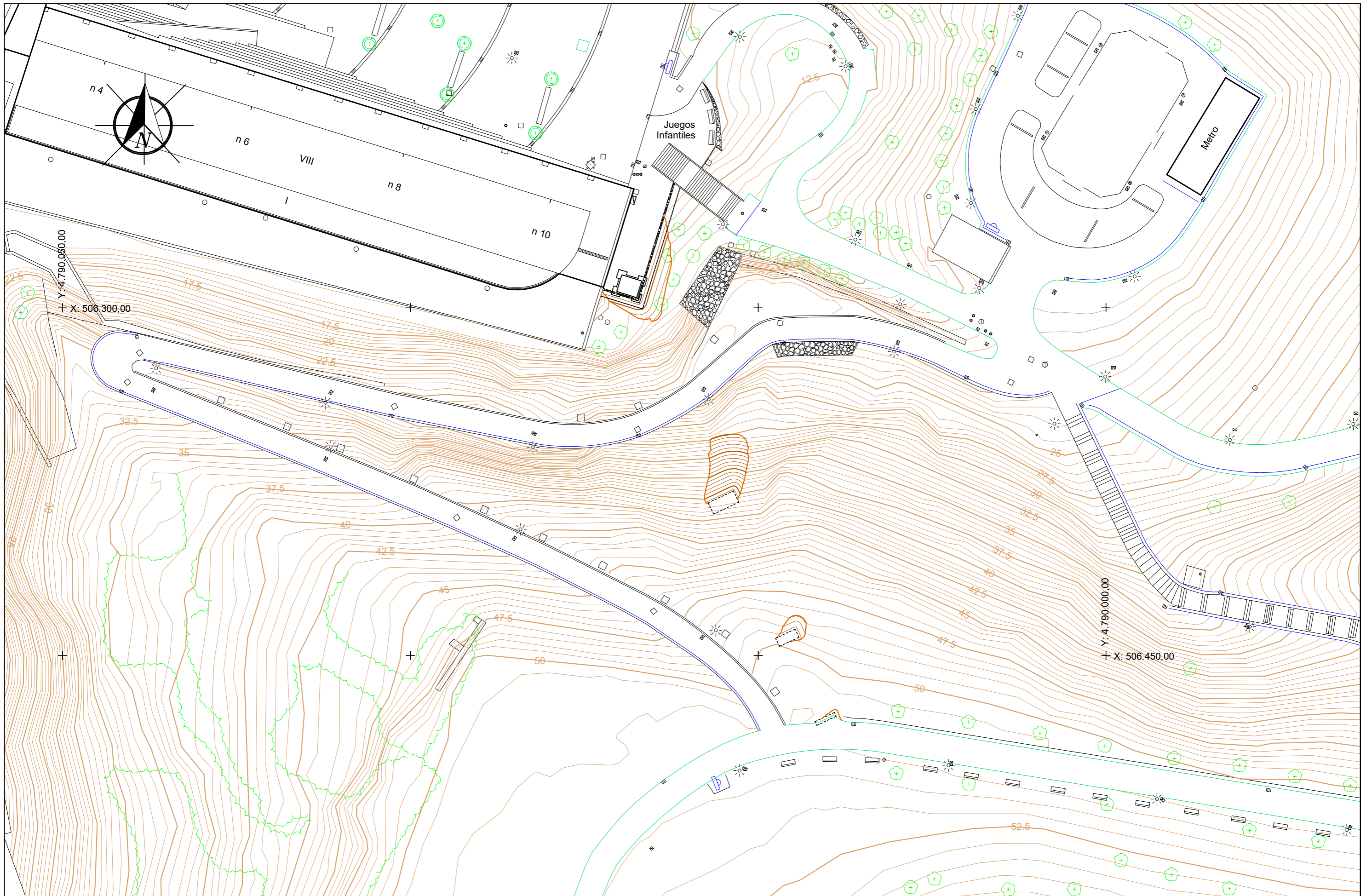


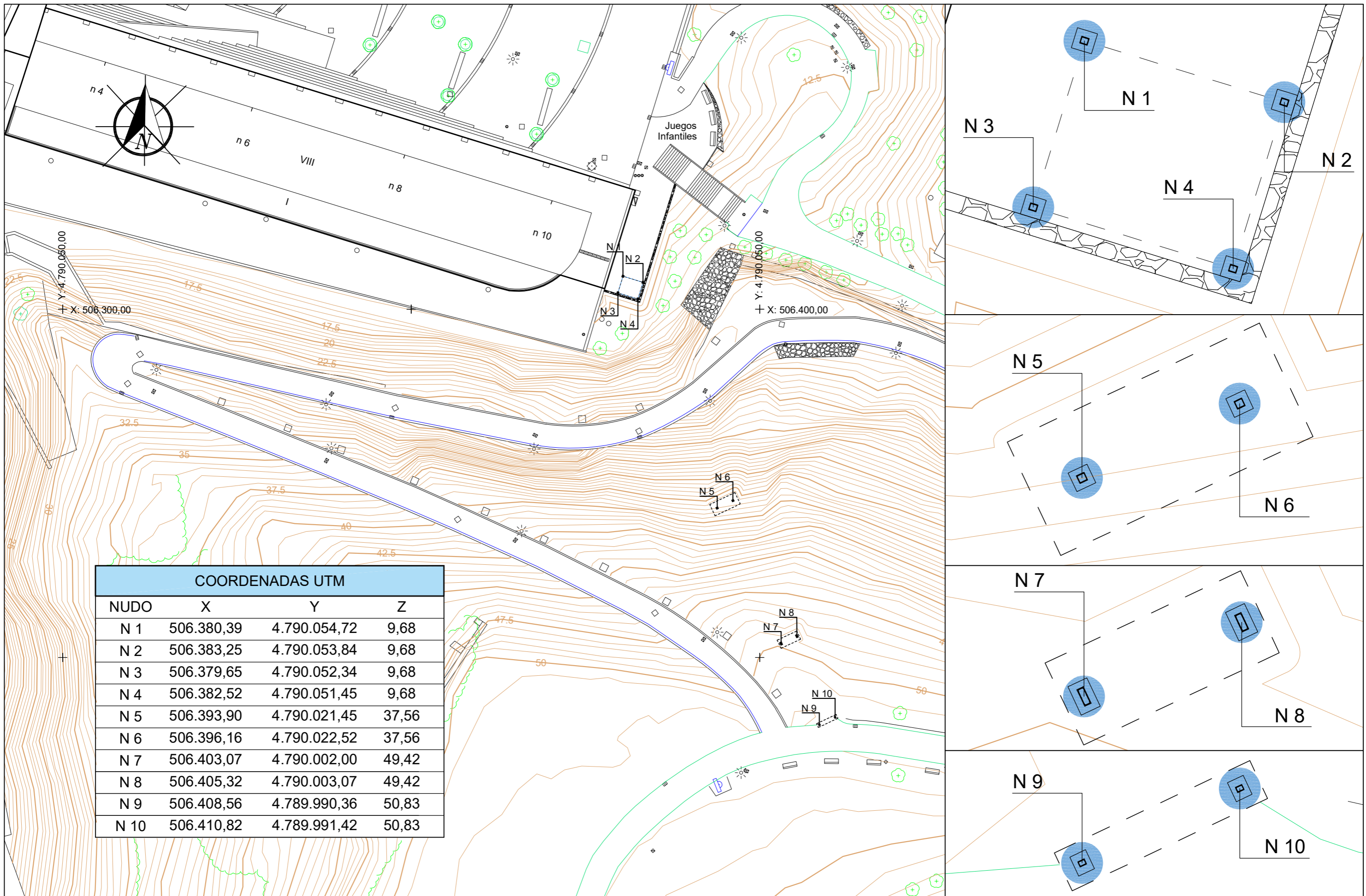


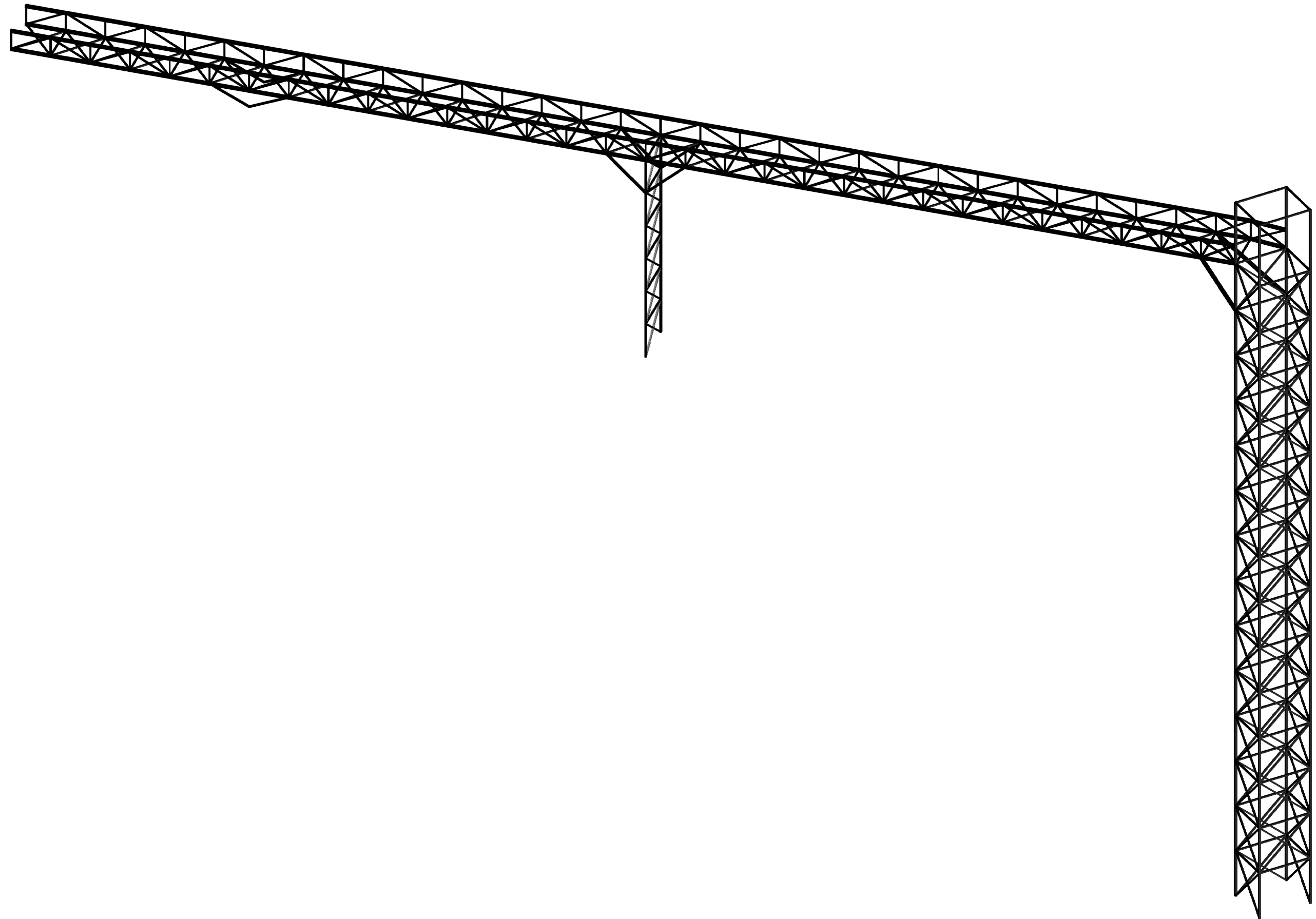


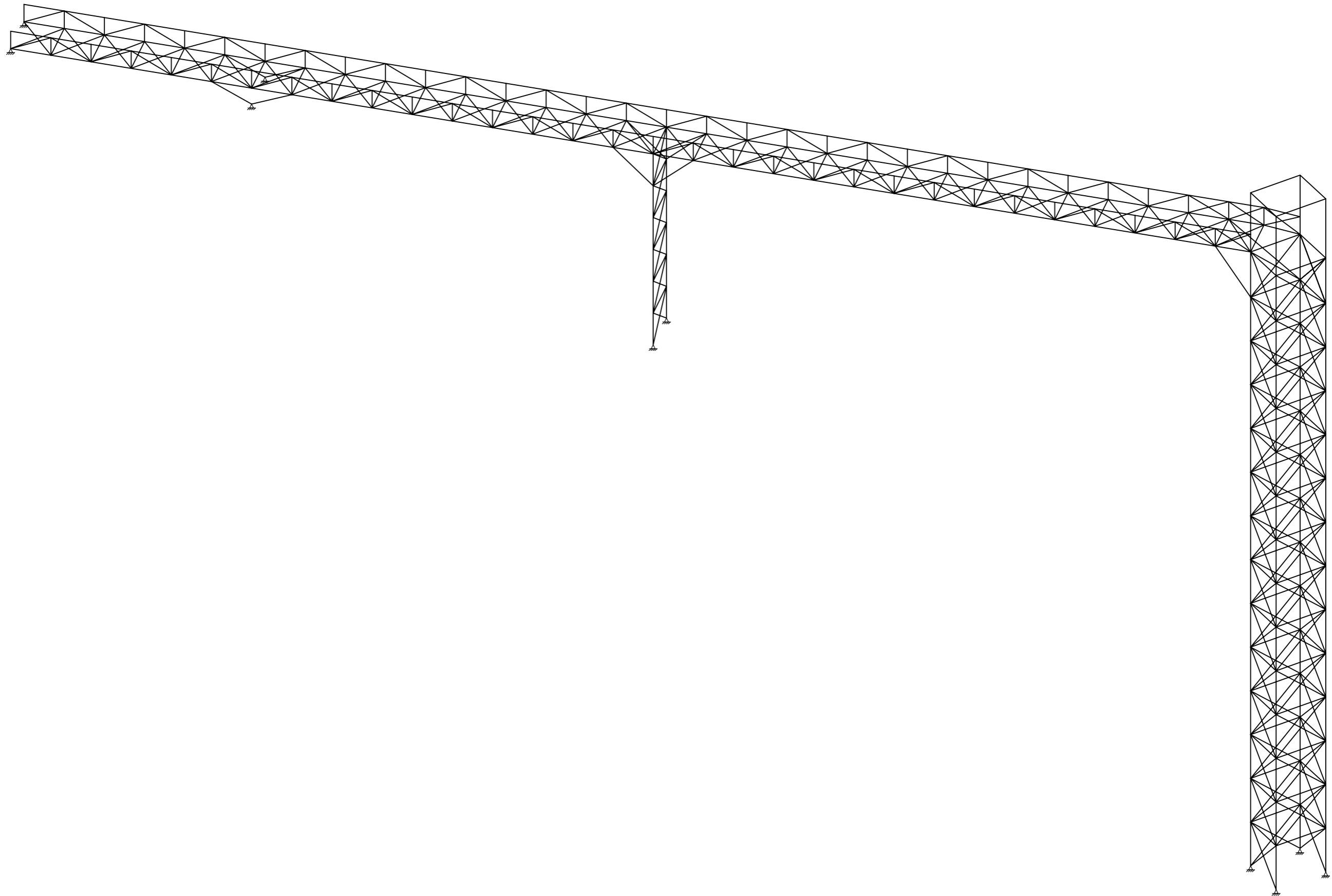


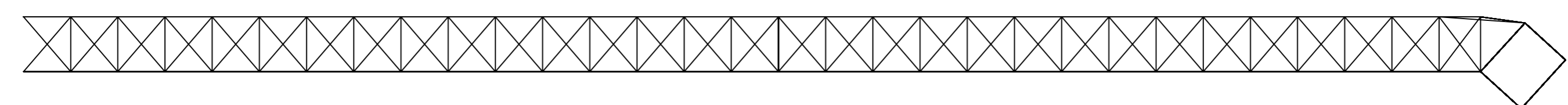
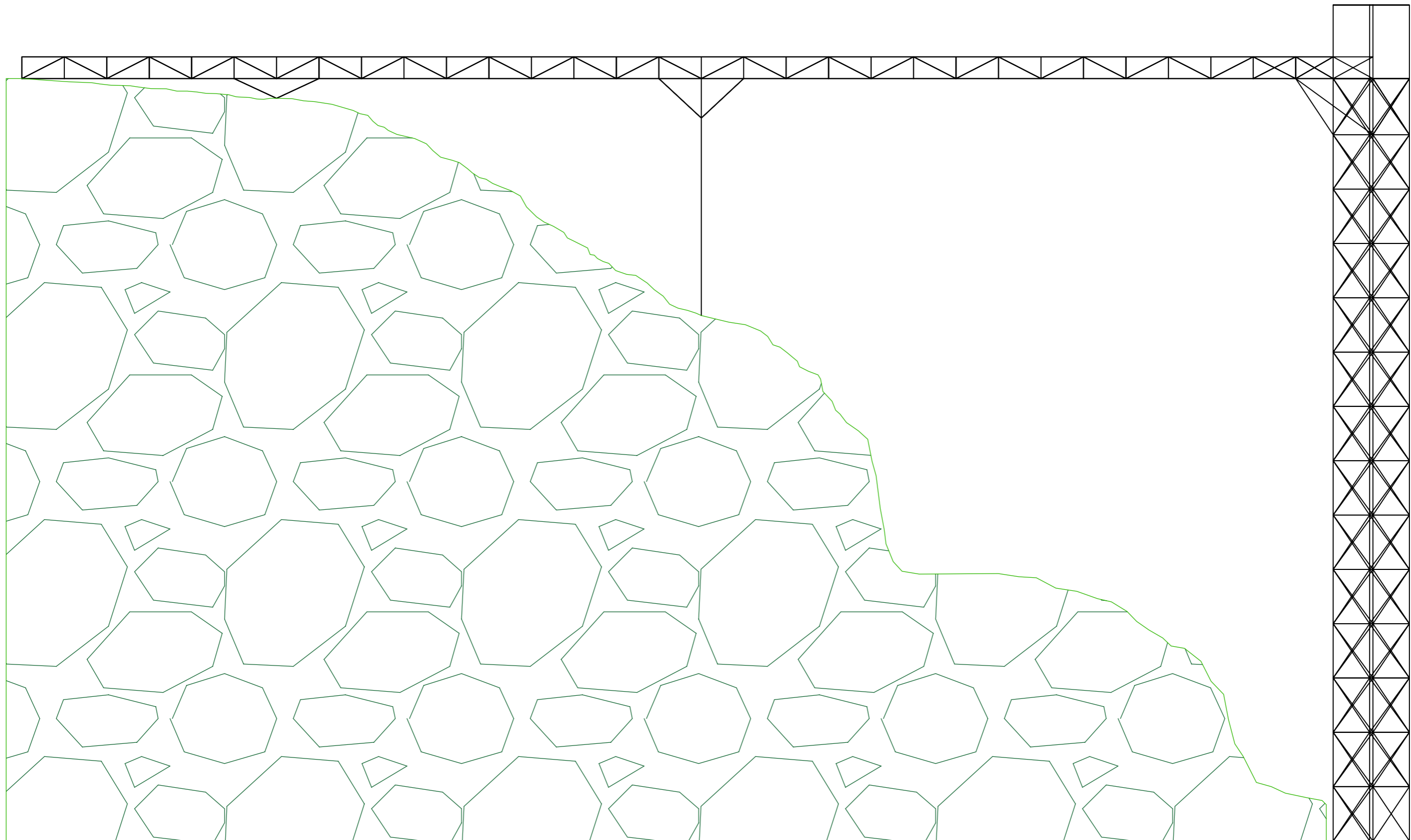




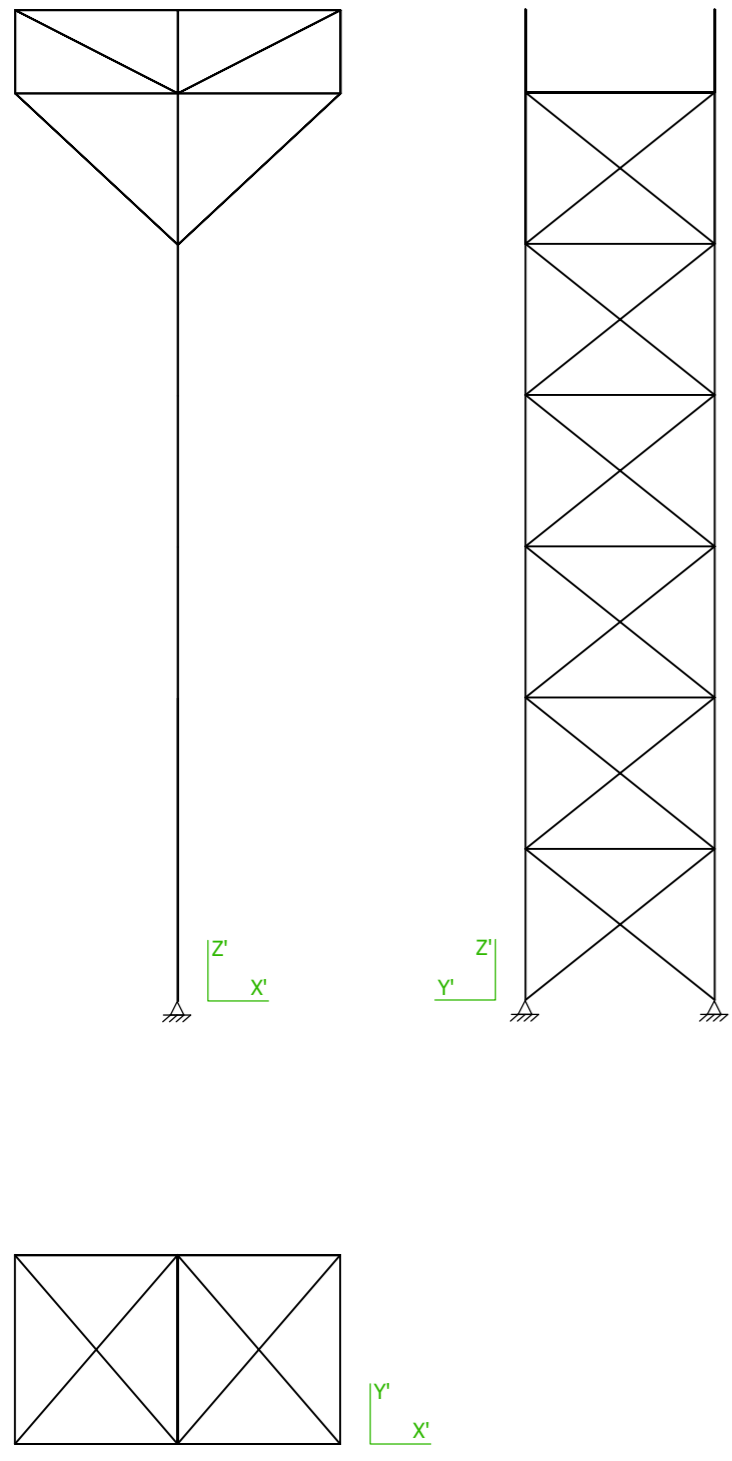




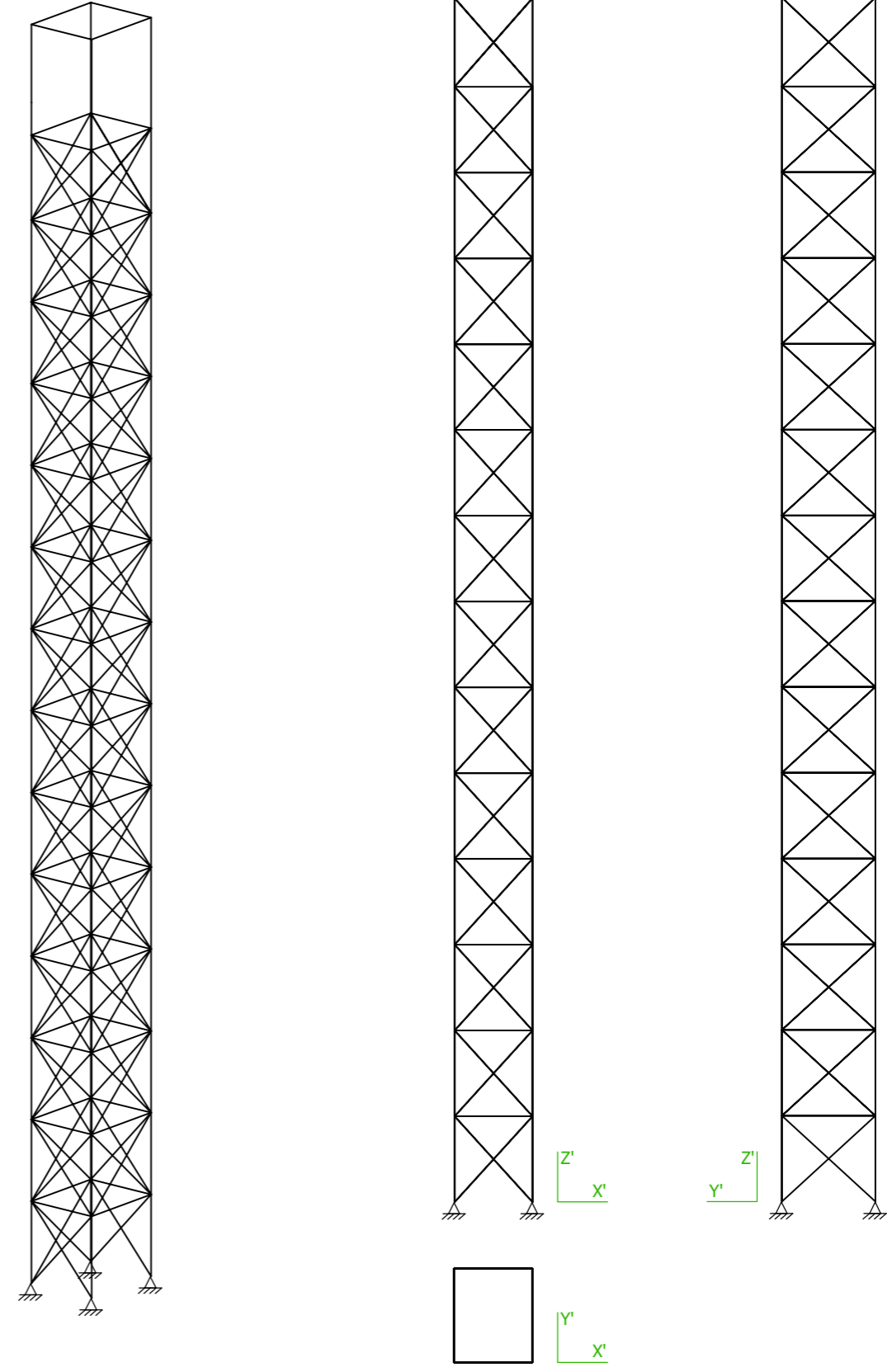


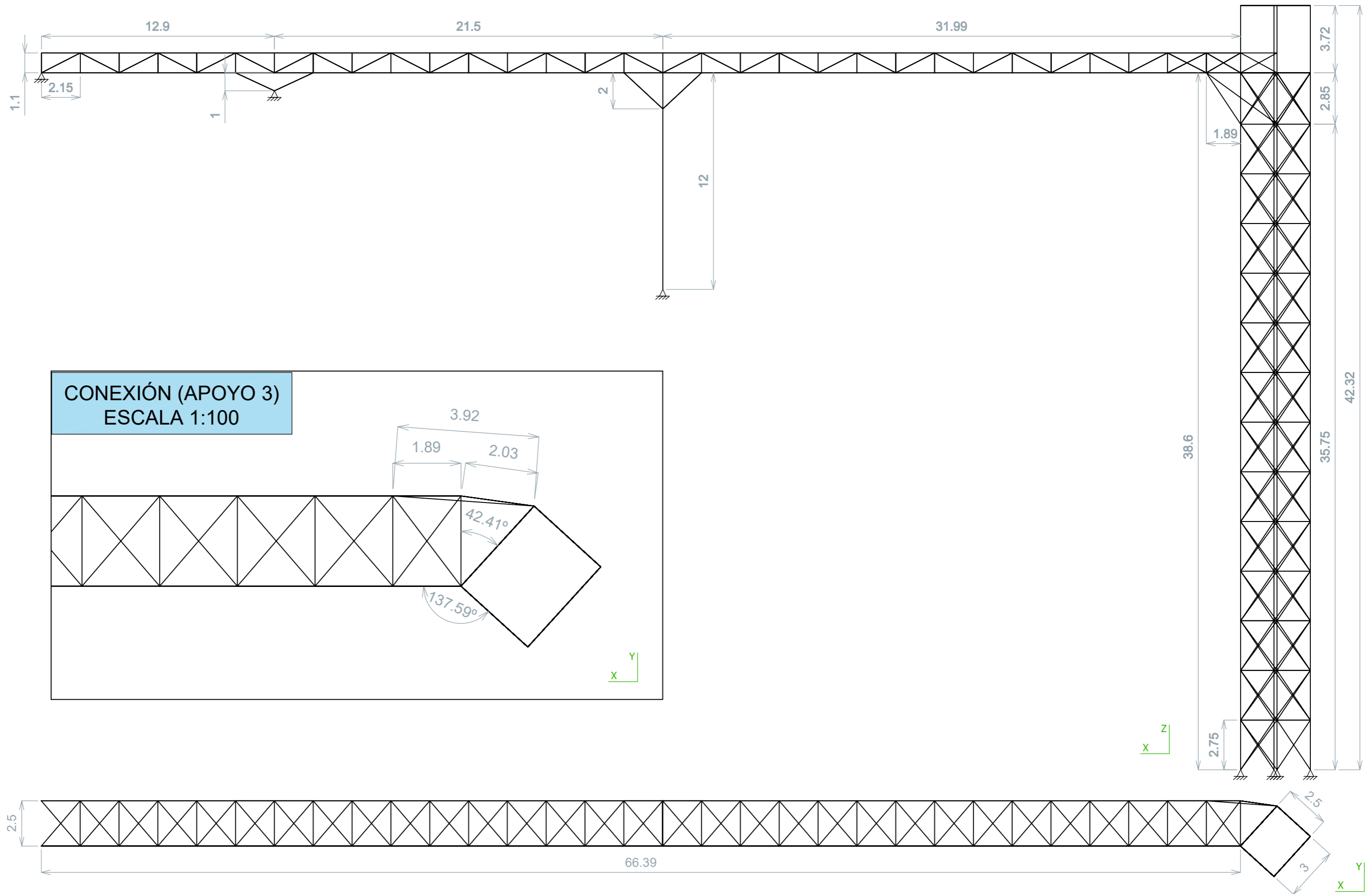


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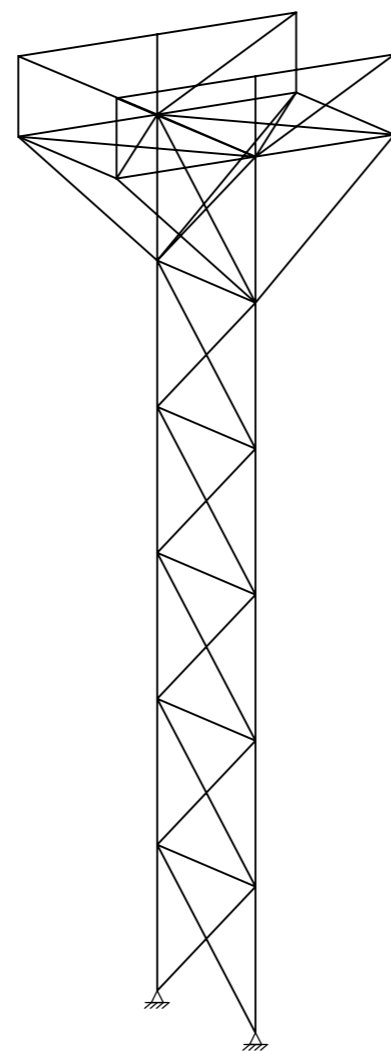
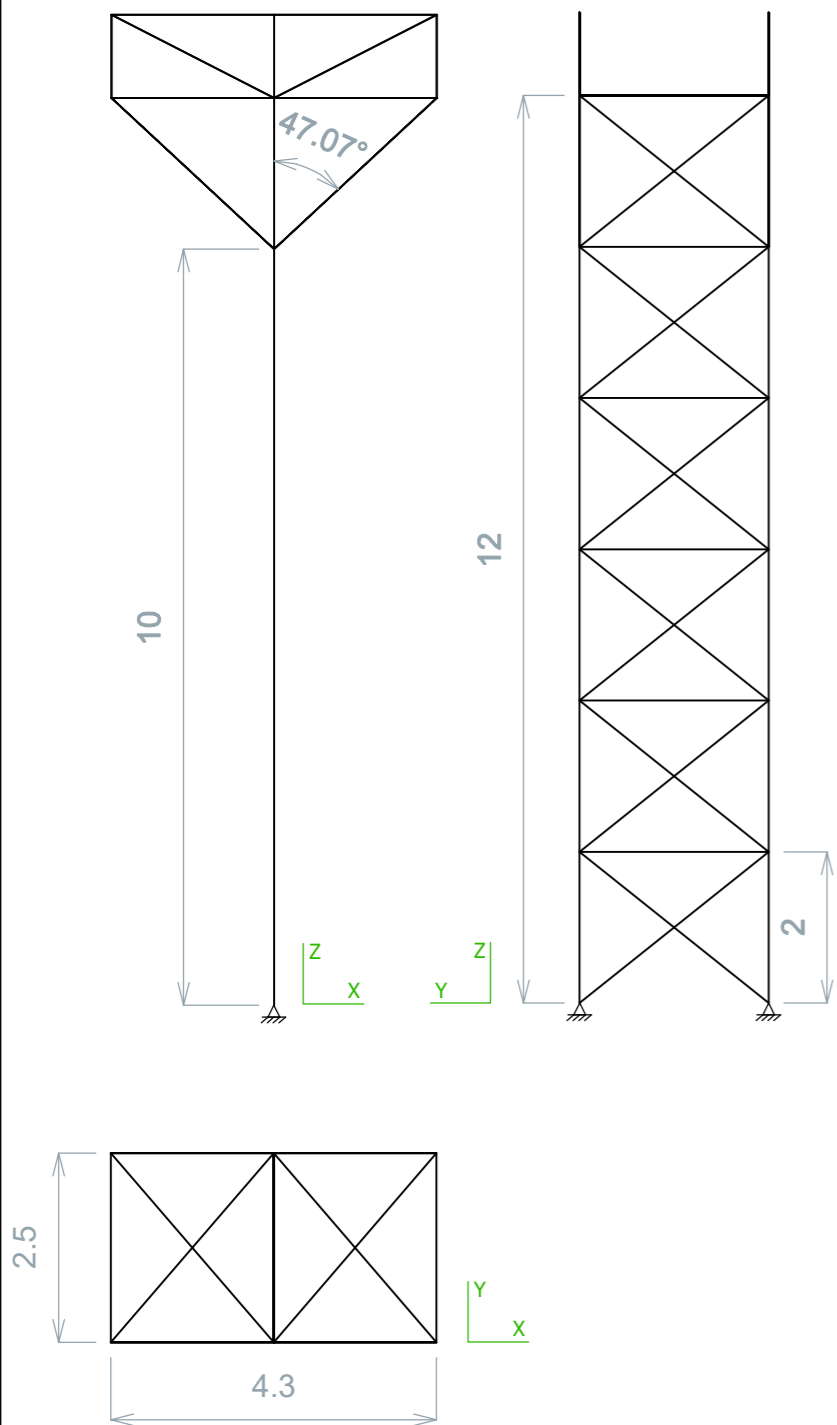
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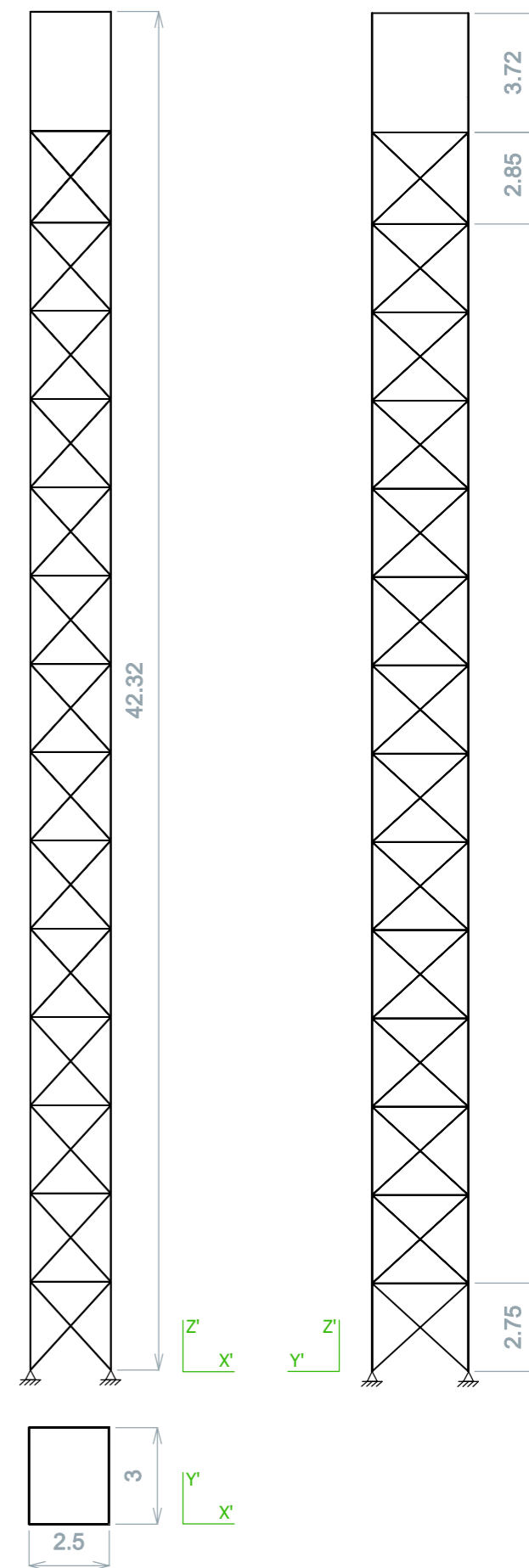
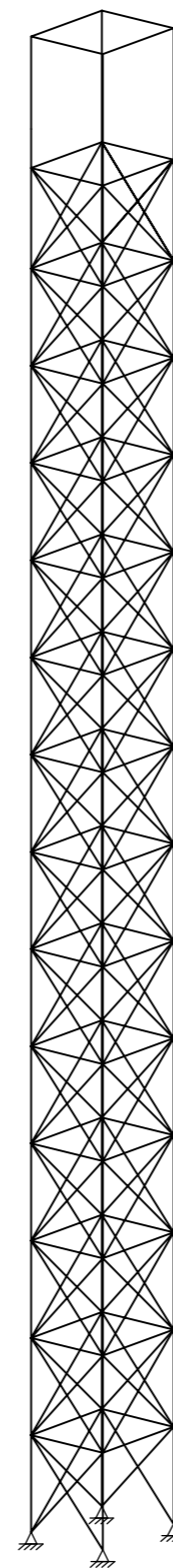


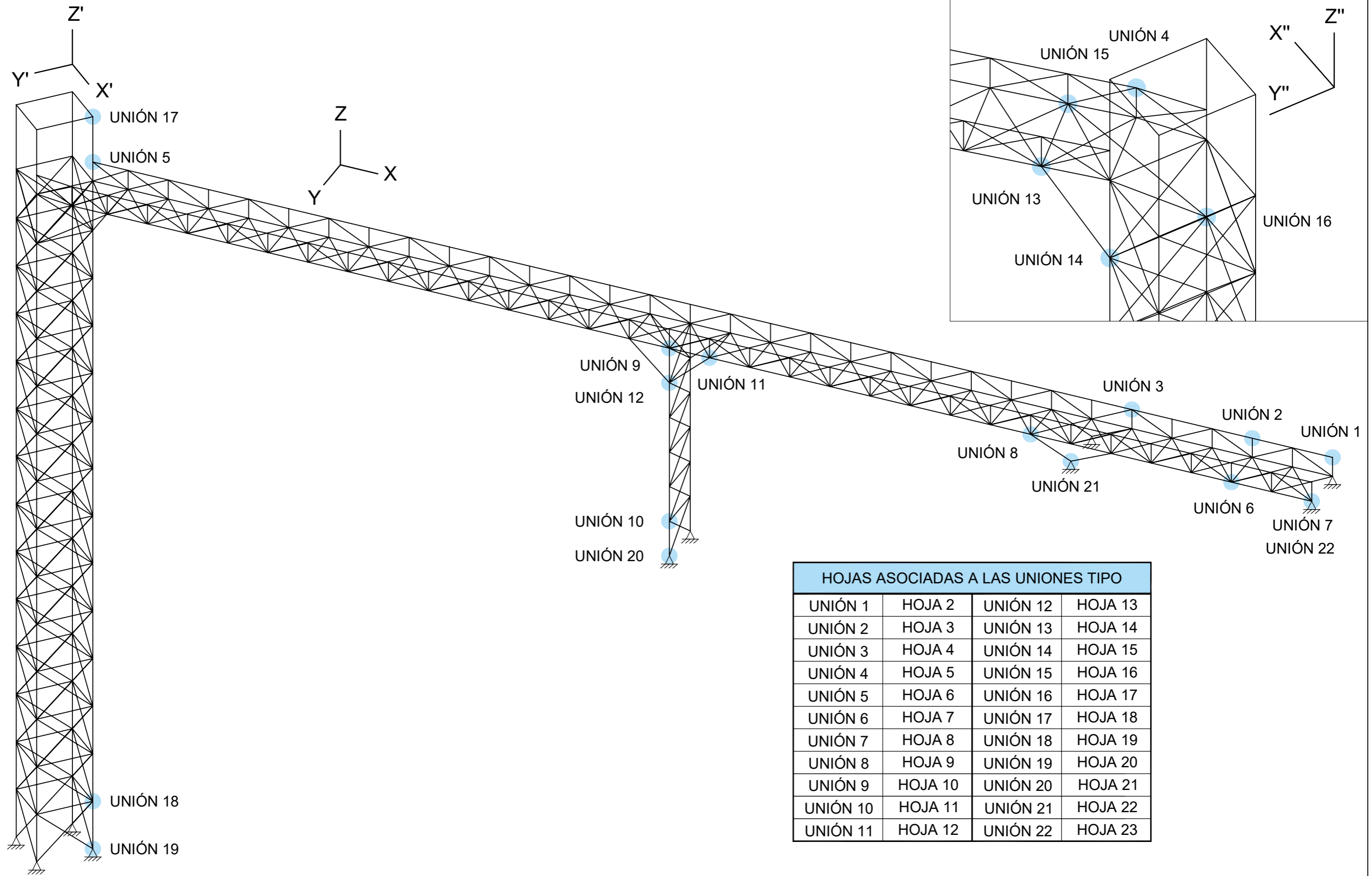


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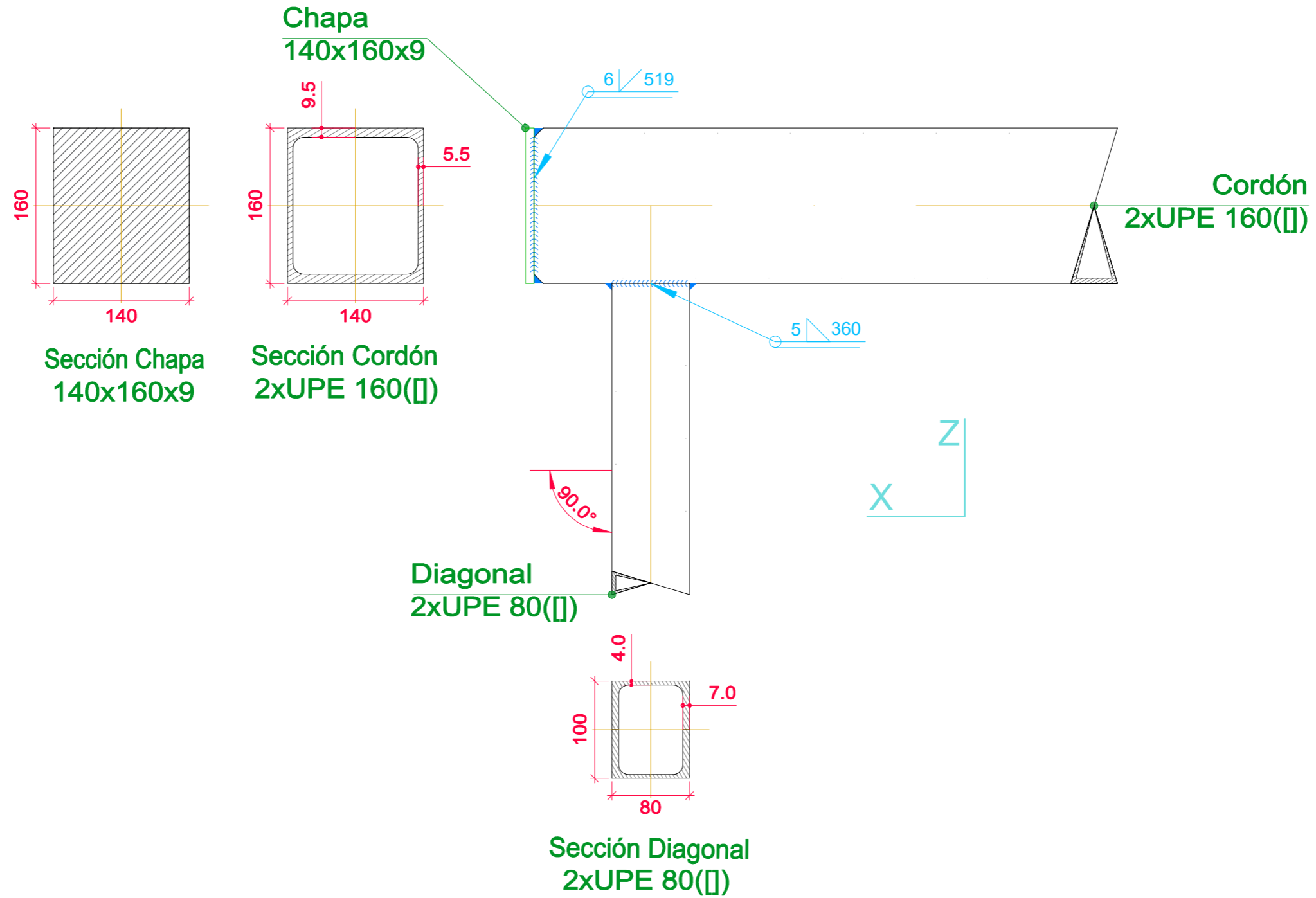
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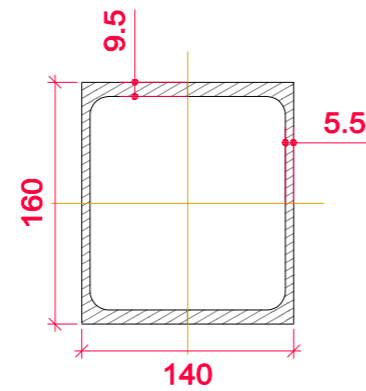


HOJAS ASOCIADAS A LAS UNIONES TIPO			
UNIÓN 1	HOJA 2	UNIÓN 12	HOJA 13
UNIÓN 2	HOJA 3	UNIÓN 13	HOJA 14
UNIÓN 3	HOJA 4	UNIÓN 14	HOJA 15
UNIÓN 4	HOJA 5	UNIÓN 15	HOJA 16
UNIÓN 5	HOJA 6	UNIÓN 16	HOJA 17
UNIÓN 6	HOJA 7	UNIÓN 17	HOJA 18
UNIÓN 7	HOJA 8	UNIÓN 18	HOJA 19
UNIÓN 8	HOJA 9	UNIÓN 19	HOJA 20
UNIÓN 9	HOJA 10	UNIÓN 20	HOJA 21
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UNIÓN 11	HOJA 12	UNIÓN 22	HOJA 23

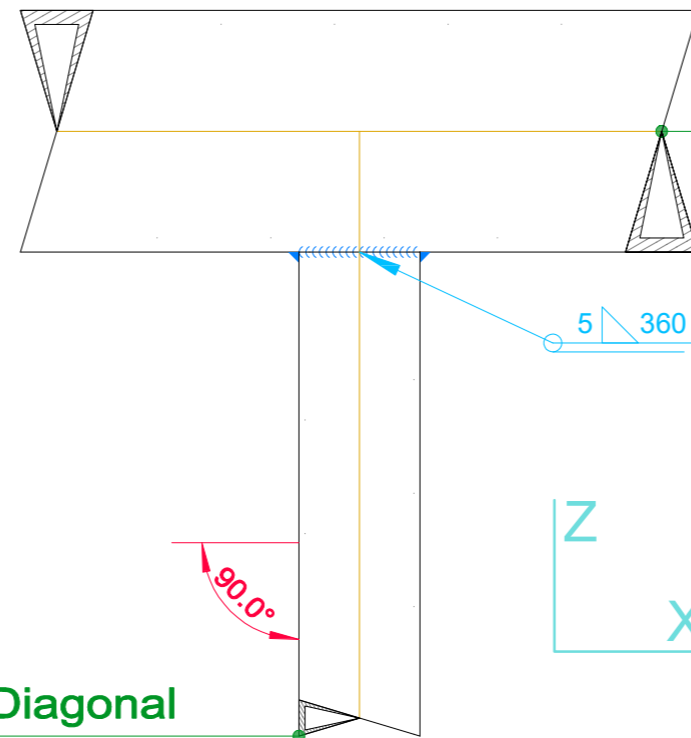
# Alzado



## Alzado

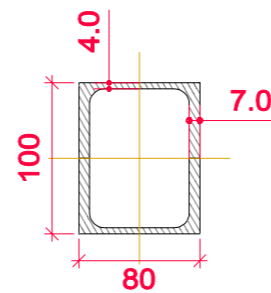


**Sección Cordón  
2xUPE 160(□)**



**Cordón  
2xUPE 160(□)**

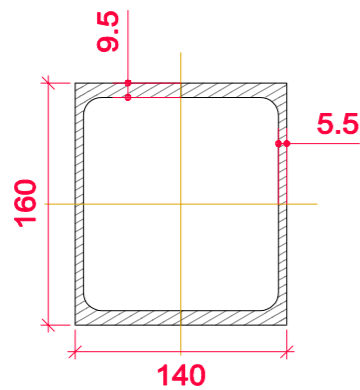
**Diagonal  
2xUPE 80(□)**



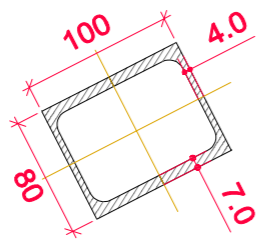
**Sección Diagonal  
2xUPE 80(□)**

# Alzado

Sección Cordón  
2xUPE 160(□)

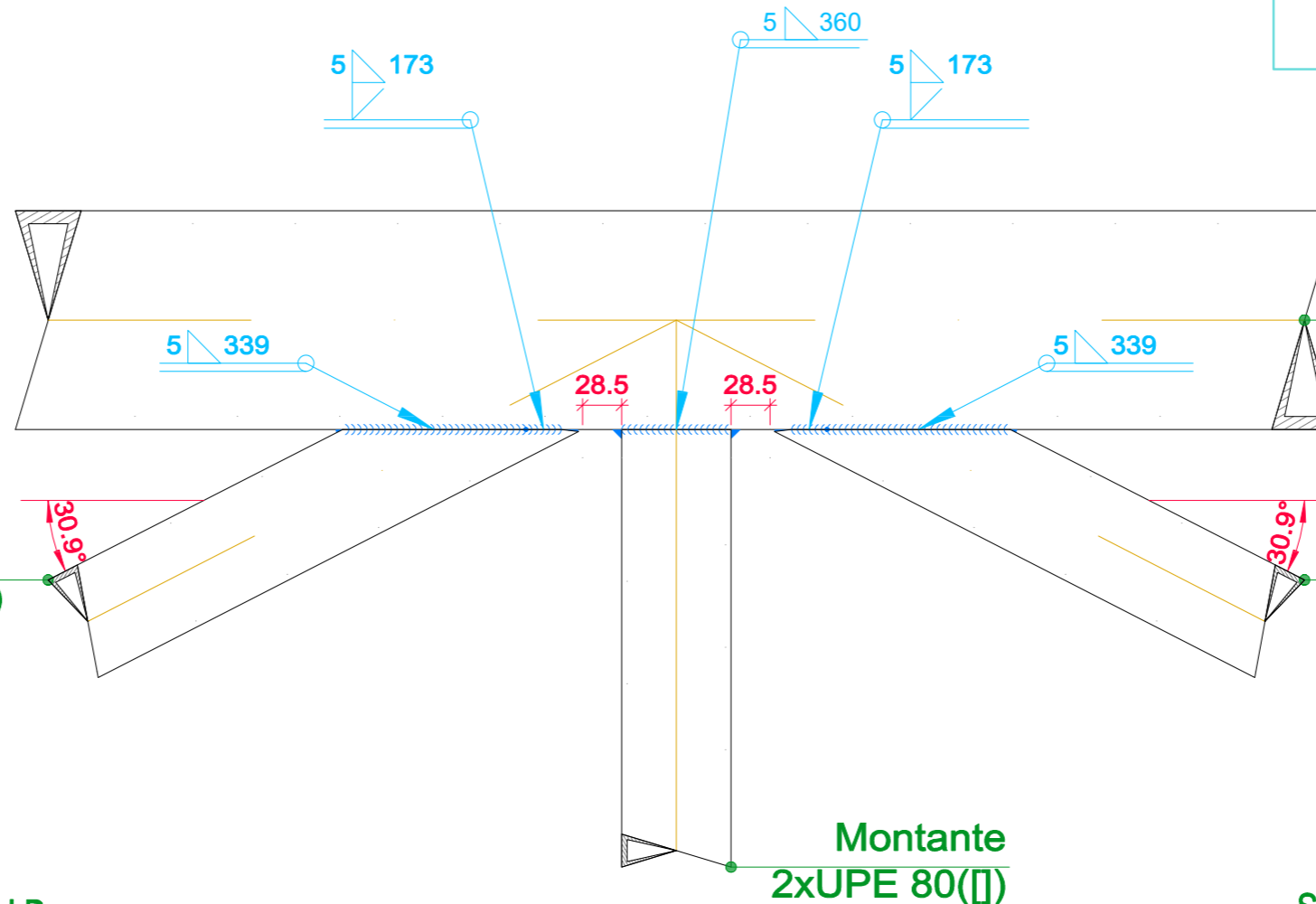


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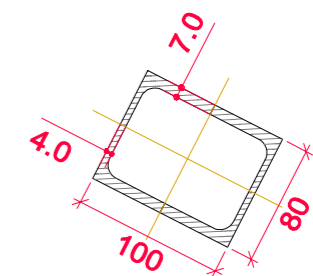


Sección Diagonal B  
2xUPE 80(□)

Cordón  
2xUPE 160(□)

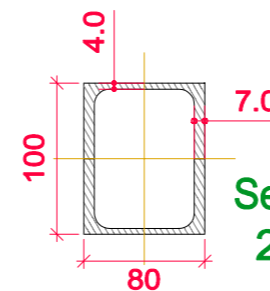


Diagonal A  
2xUPE 80(□)



Sección Diagonal A  
2xUPE 80(□)

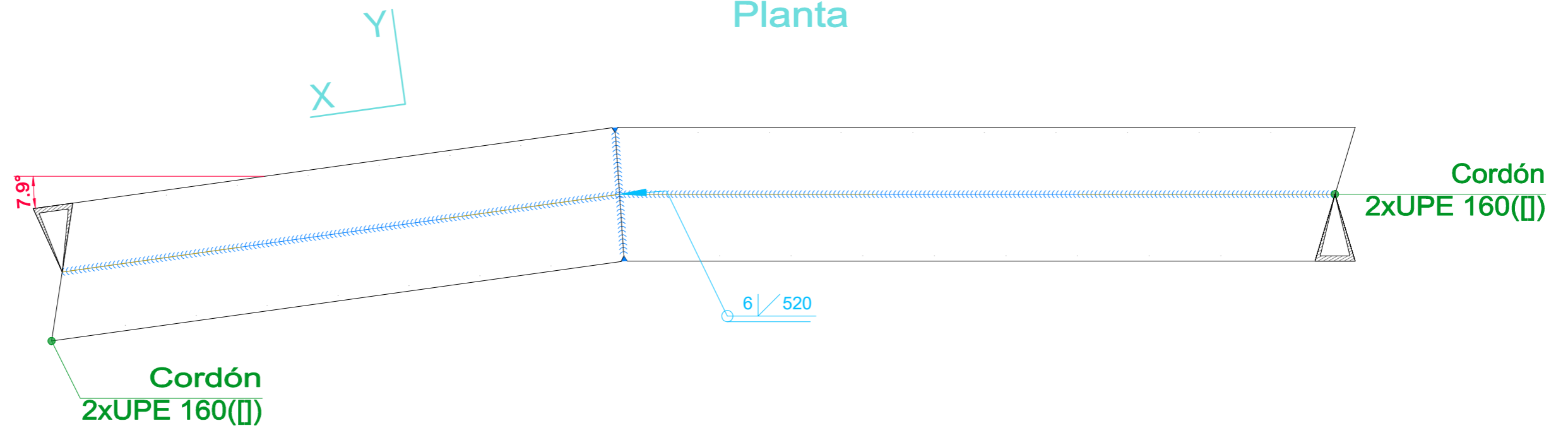
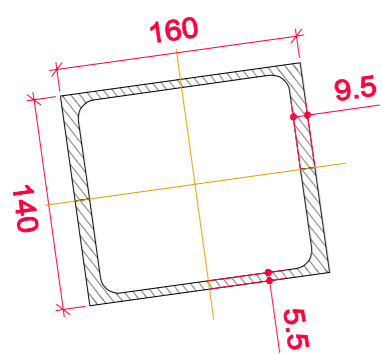
Montante  
2xUPE 80(□)



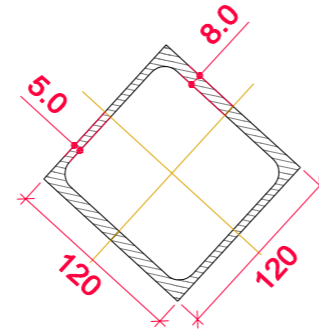
Sección Montante  
2xUPE 80(□)

# Planta

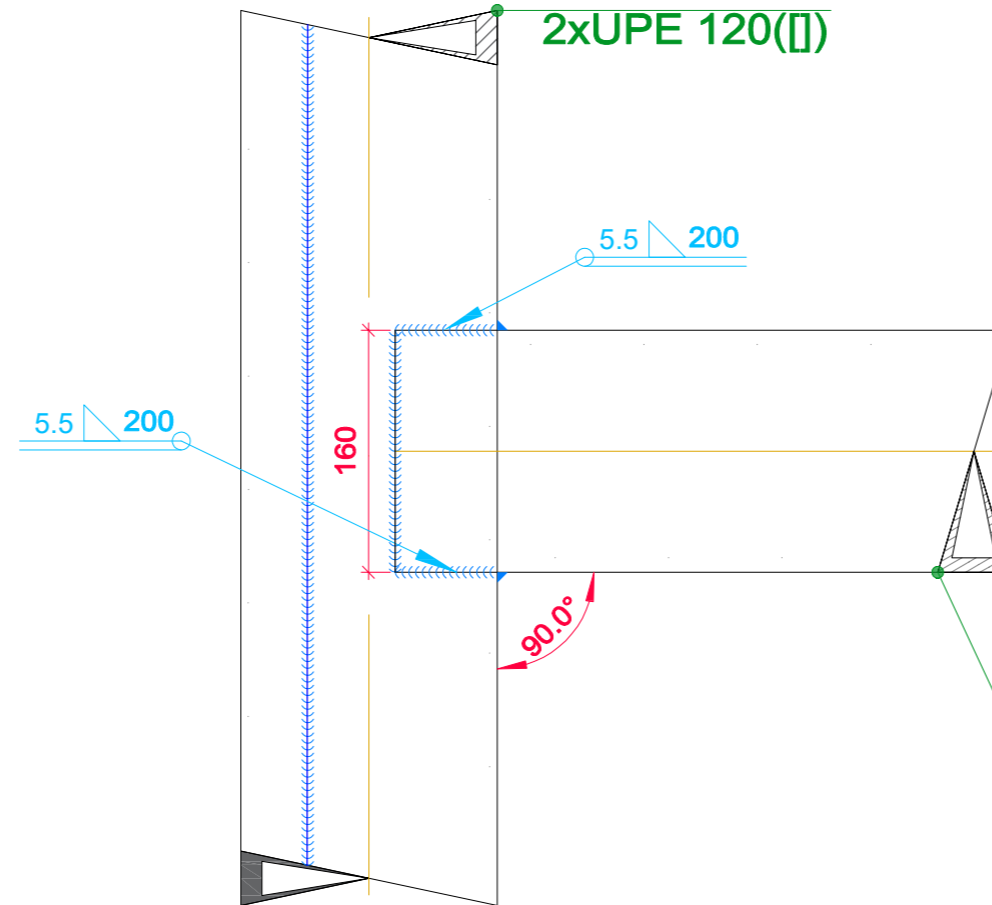
Sección Cordón  
2xUPE 160(□)



Sección Montante  
2xUPE 120(□)



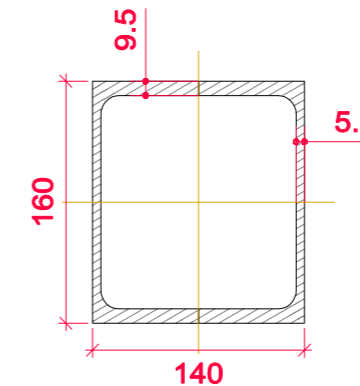
Montante  
2xUPE 120(□)



Alzado



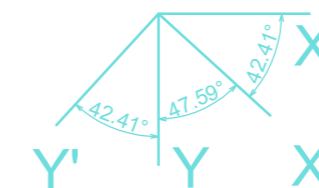
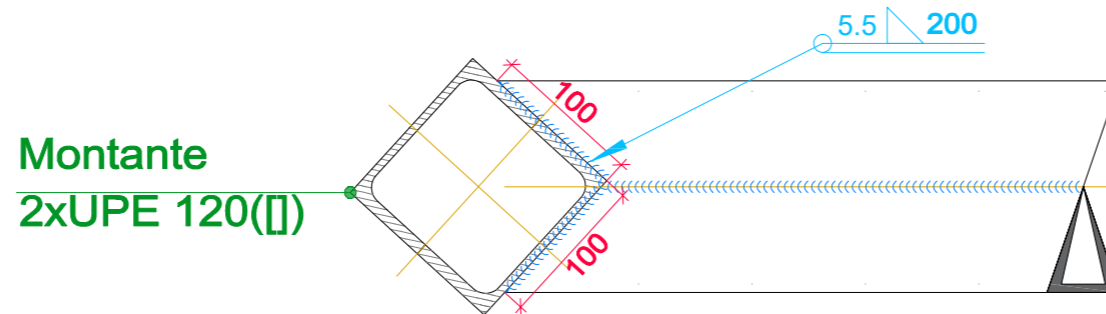
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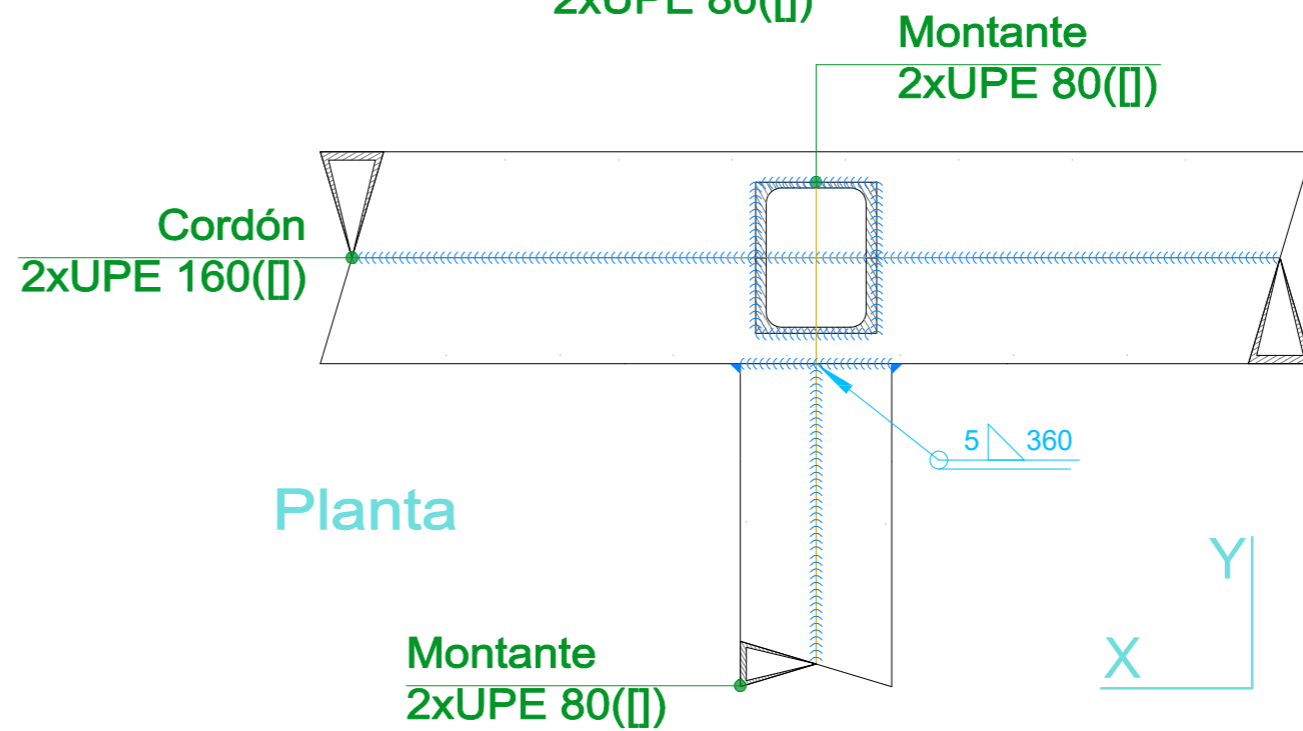
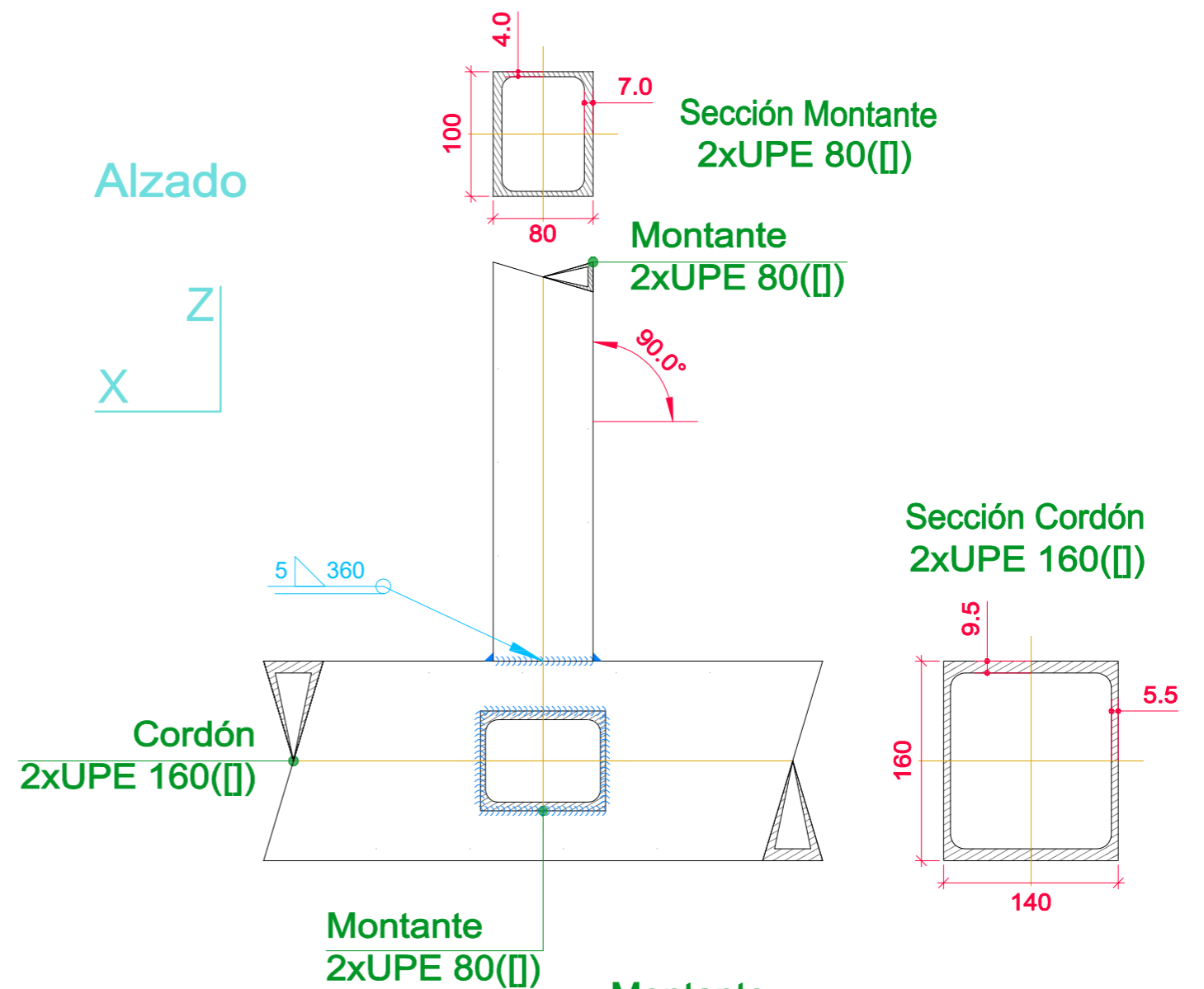
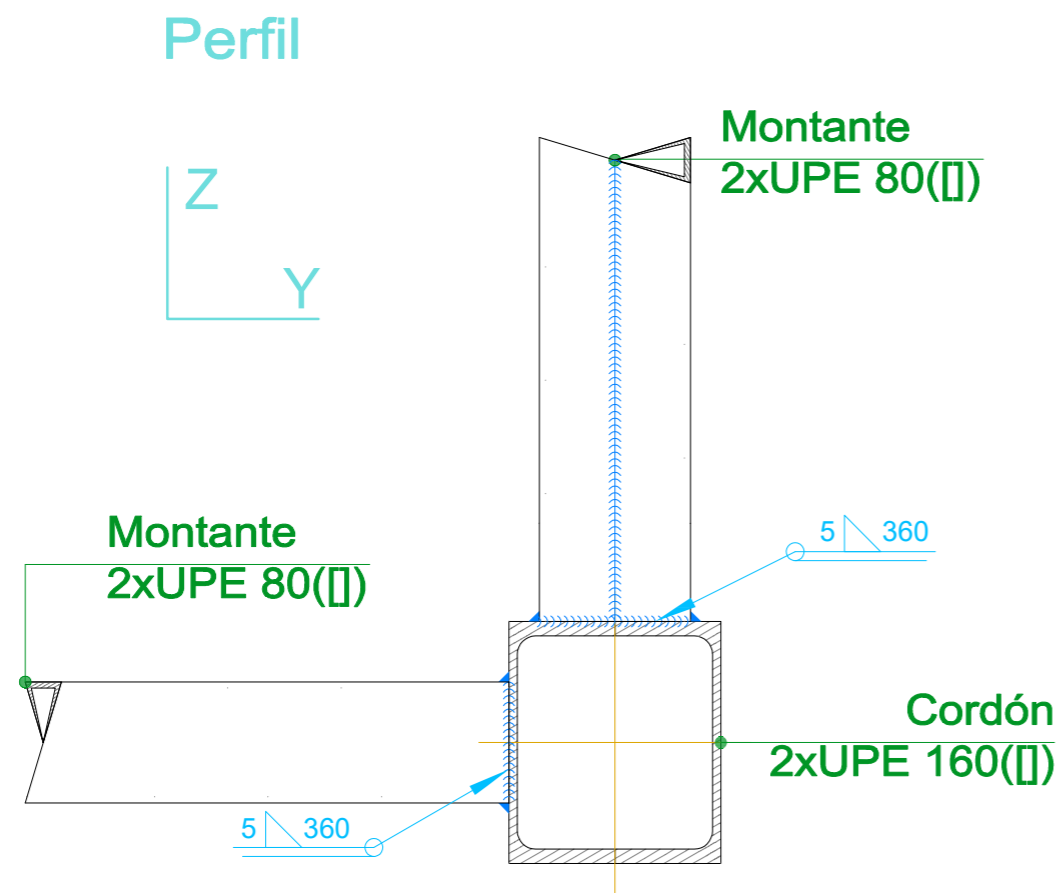
Cordón  
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Planta

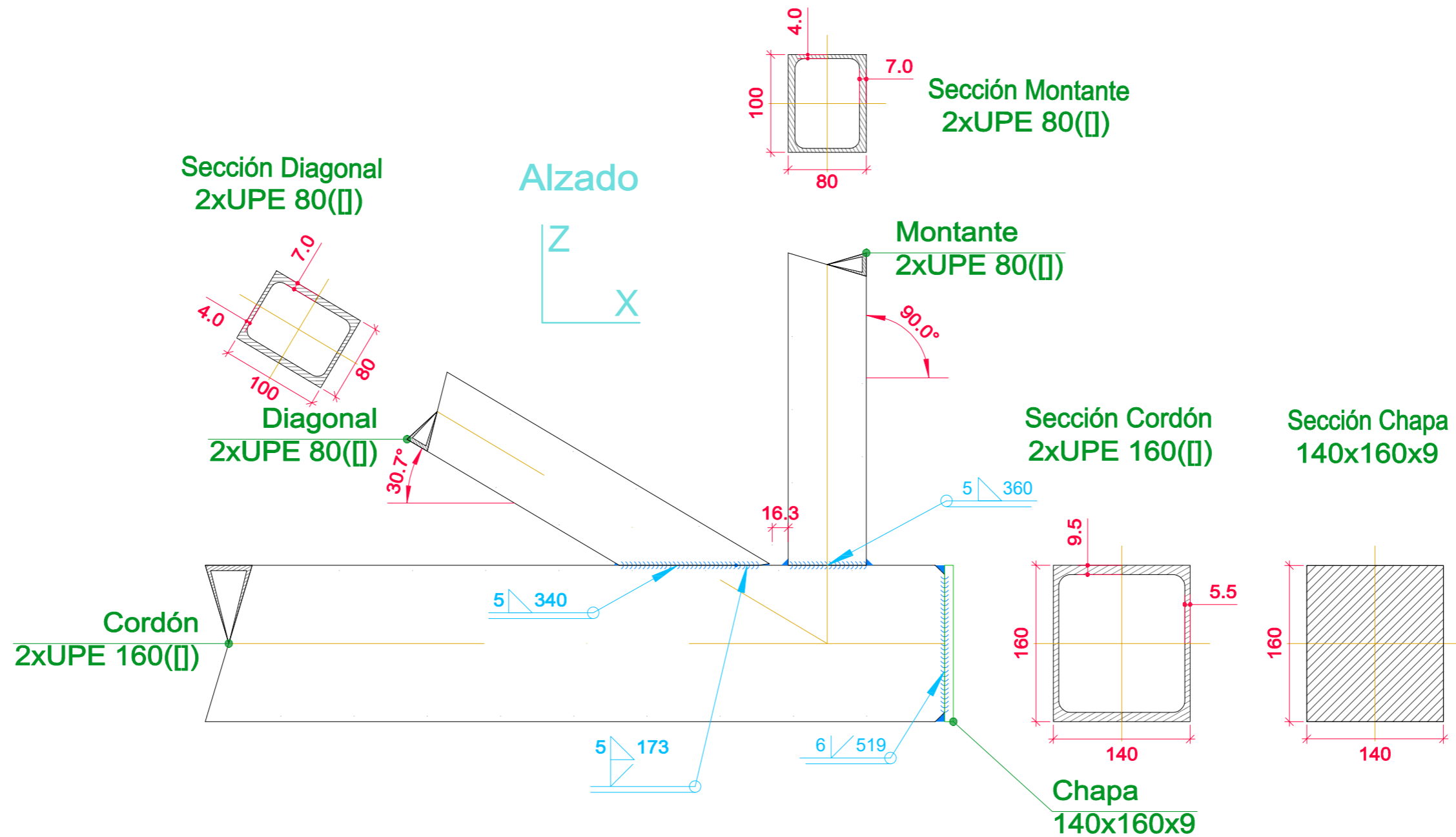
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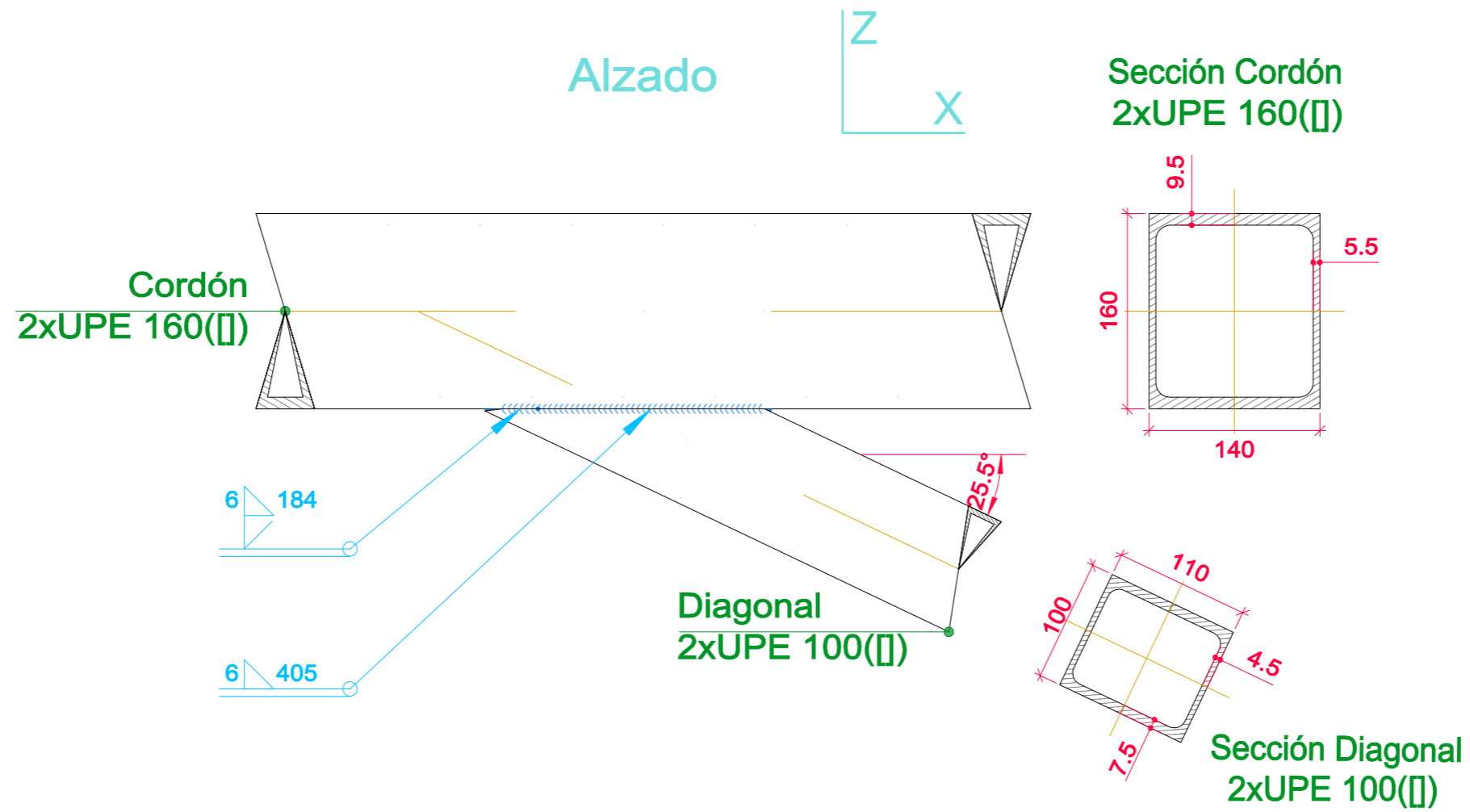


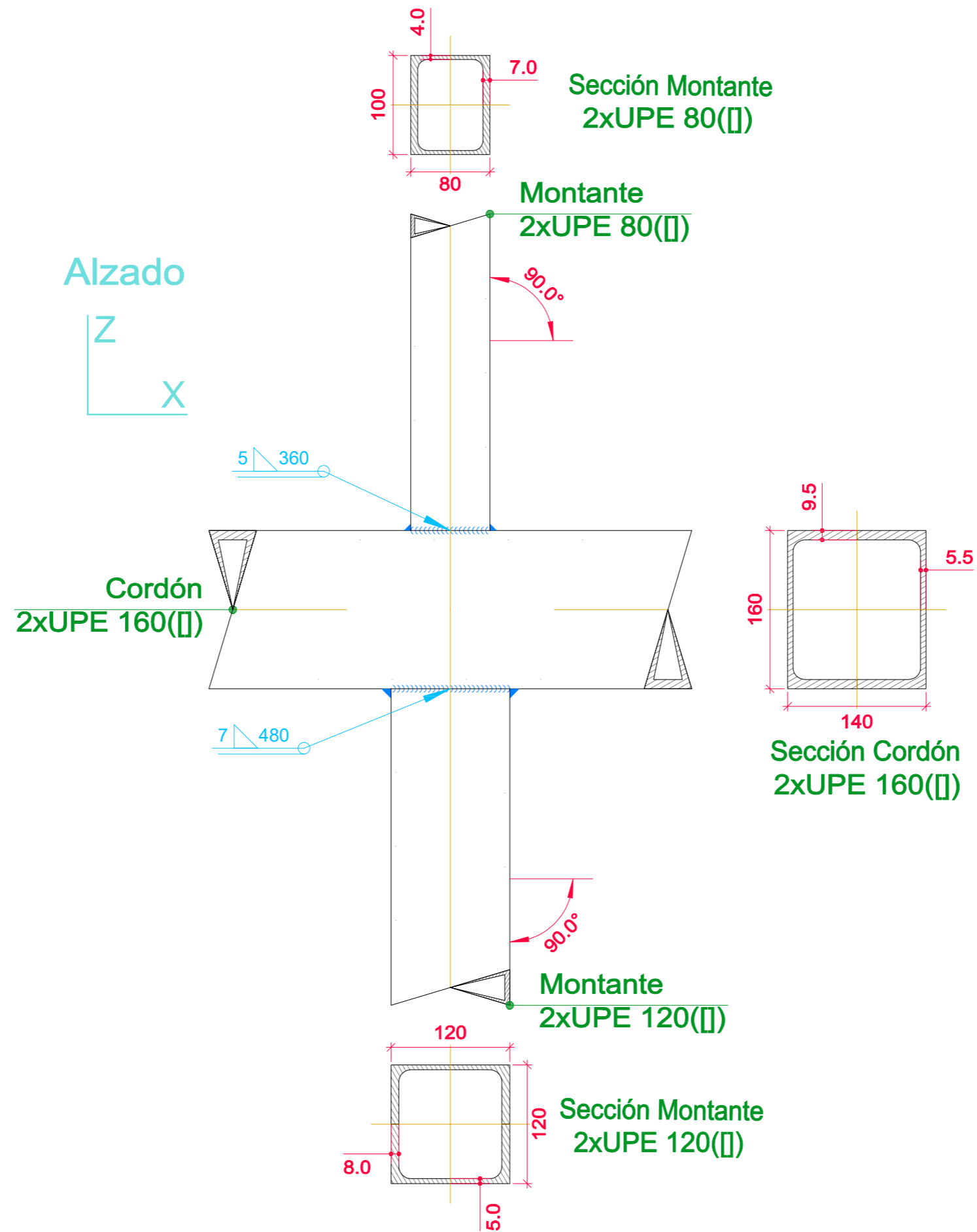
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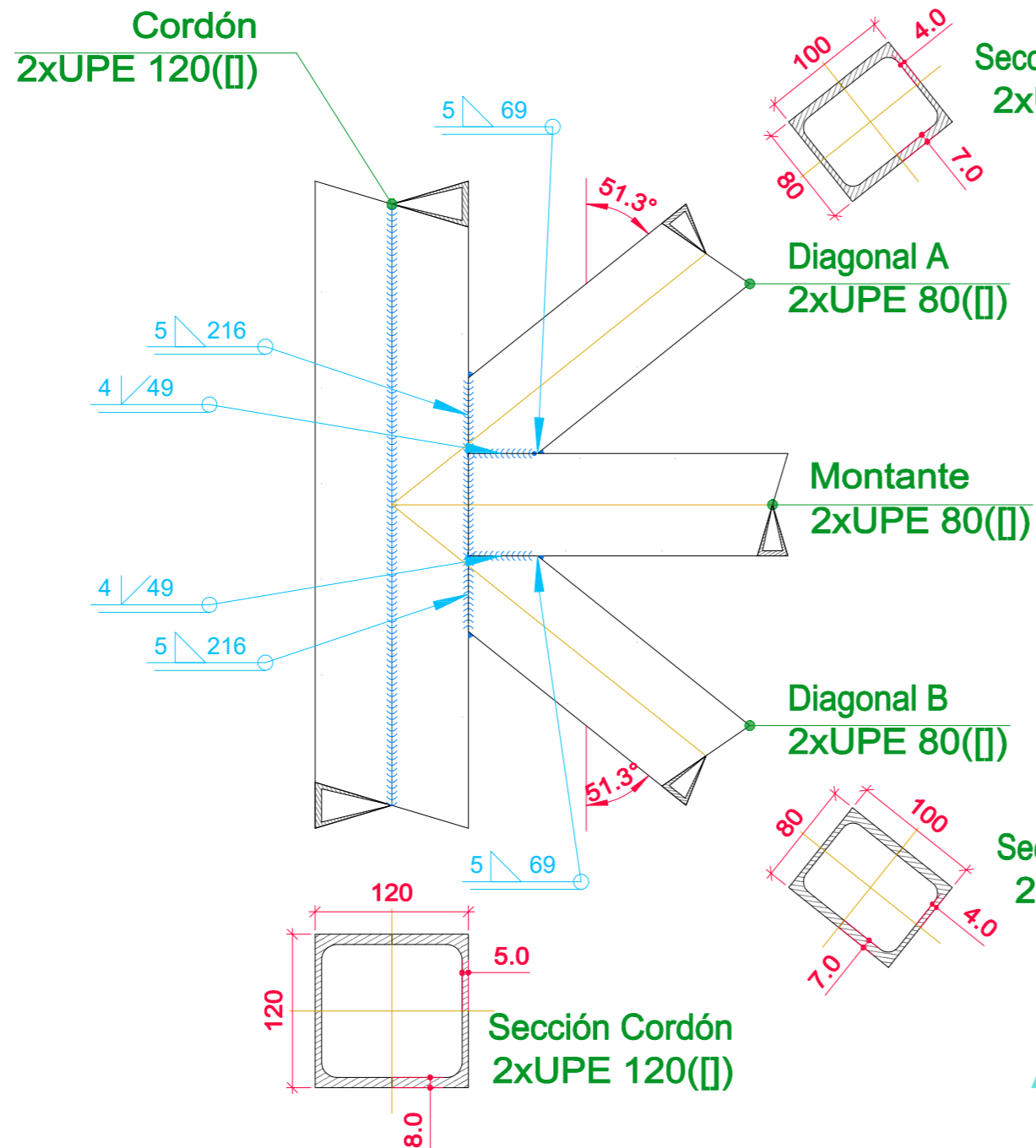




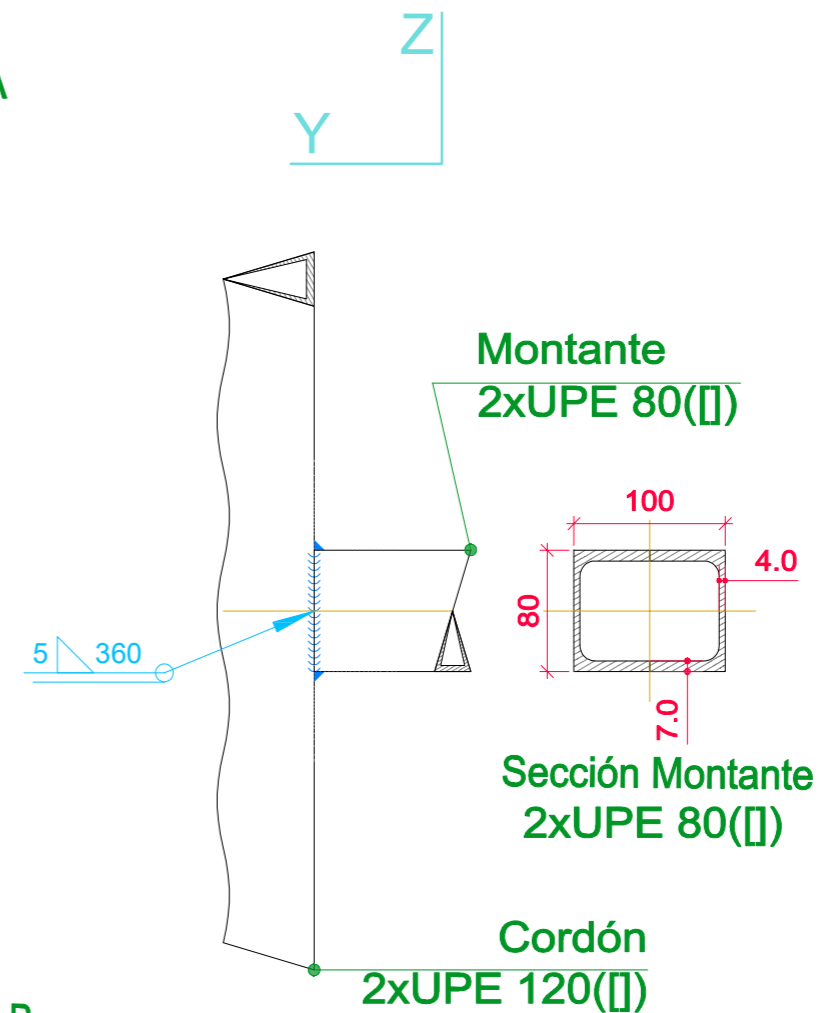




## Detalle de soldaduras: Diagonales a Cordón

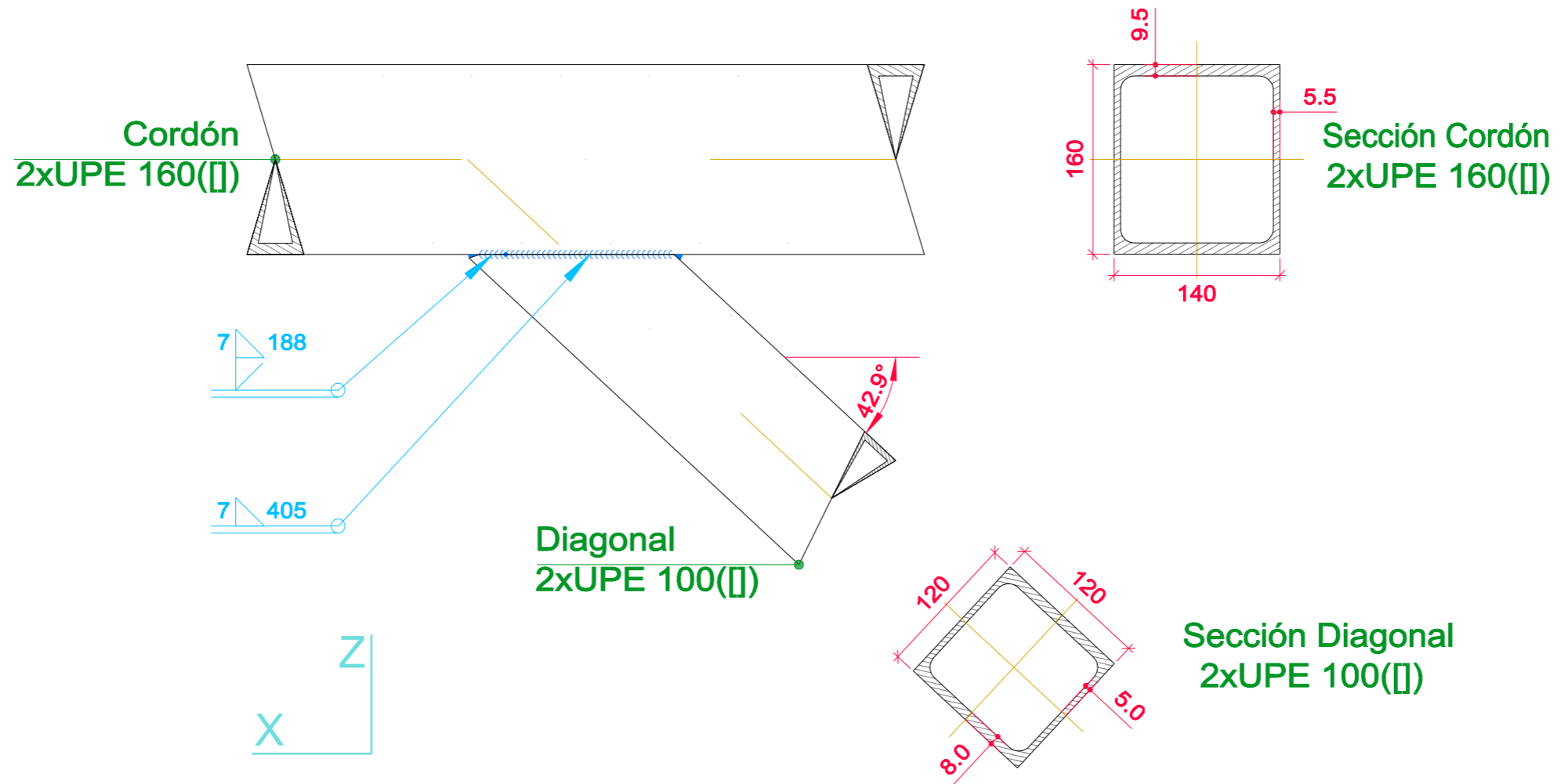


## Detalle de soldaduras: Montante a Cordón

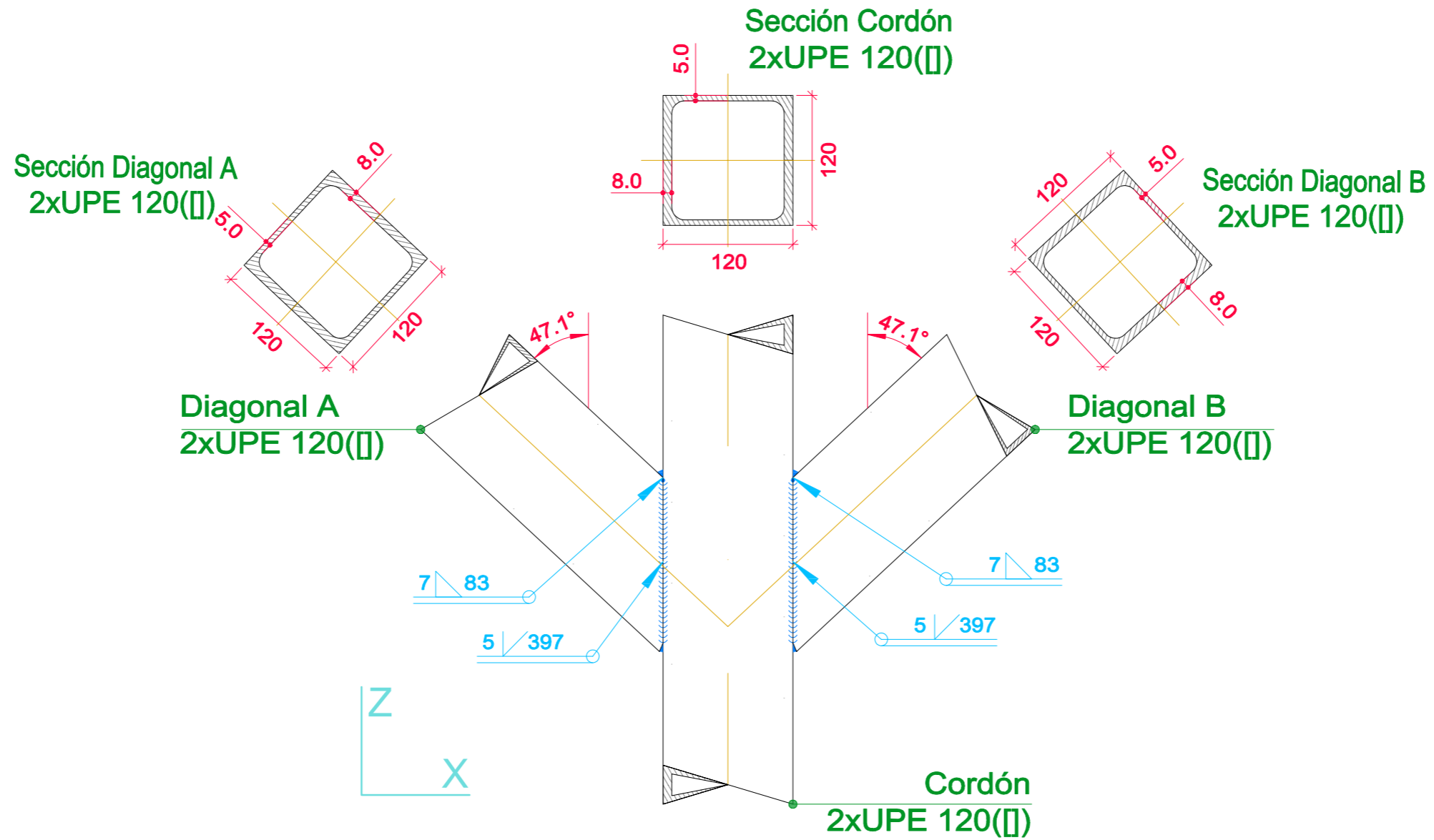


Alzado

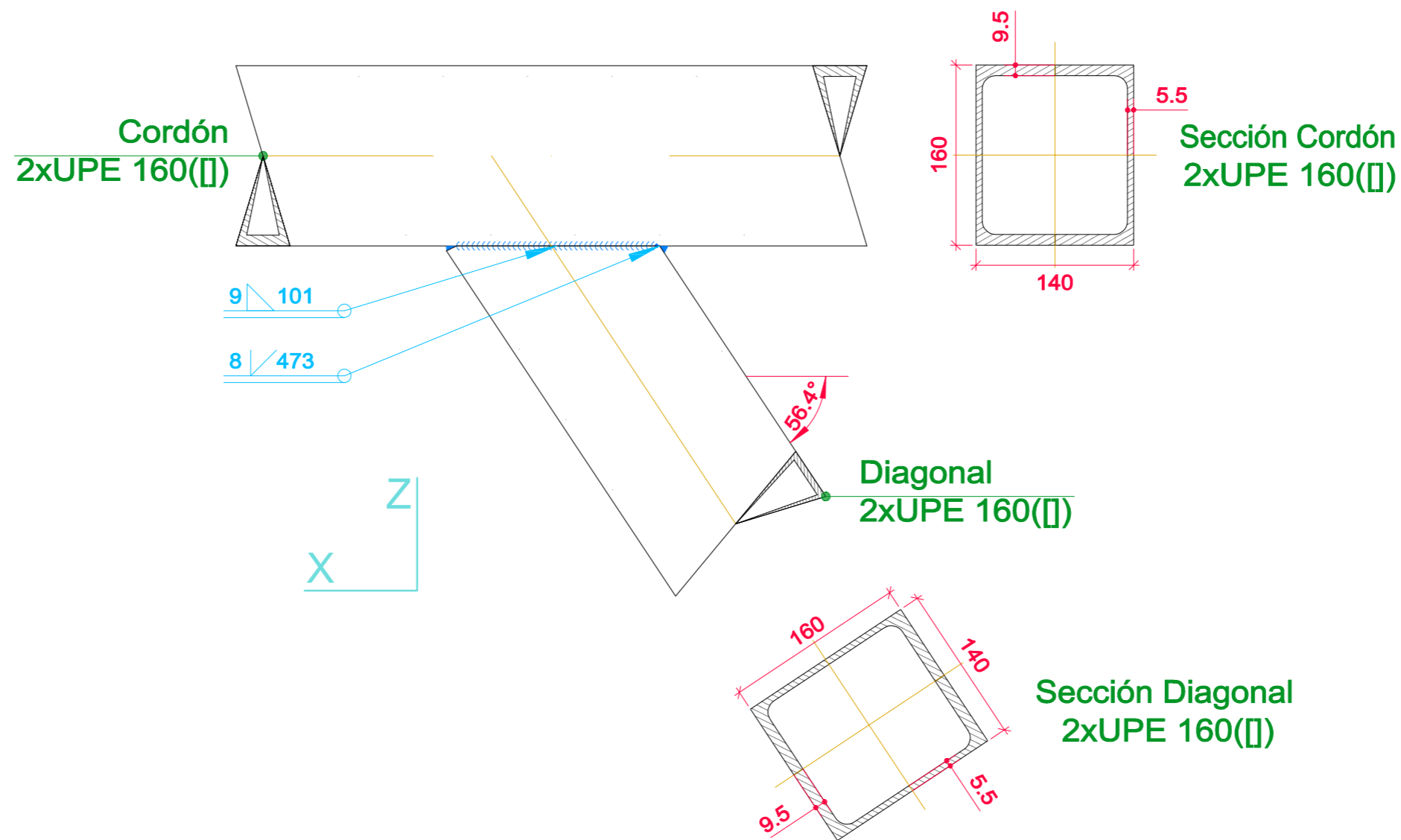
## Alzado



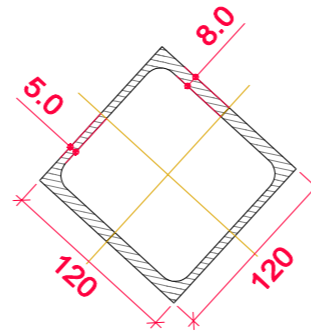
# Alzado



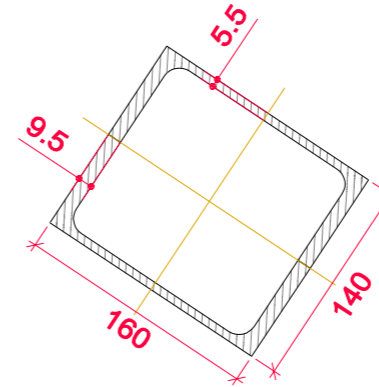
# Alzado



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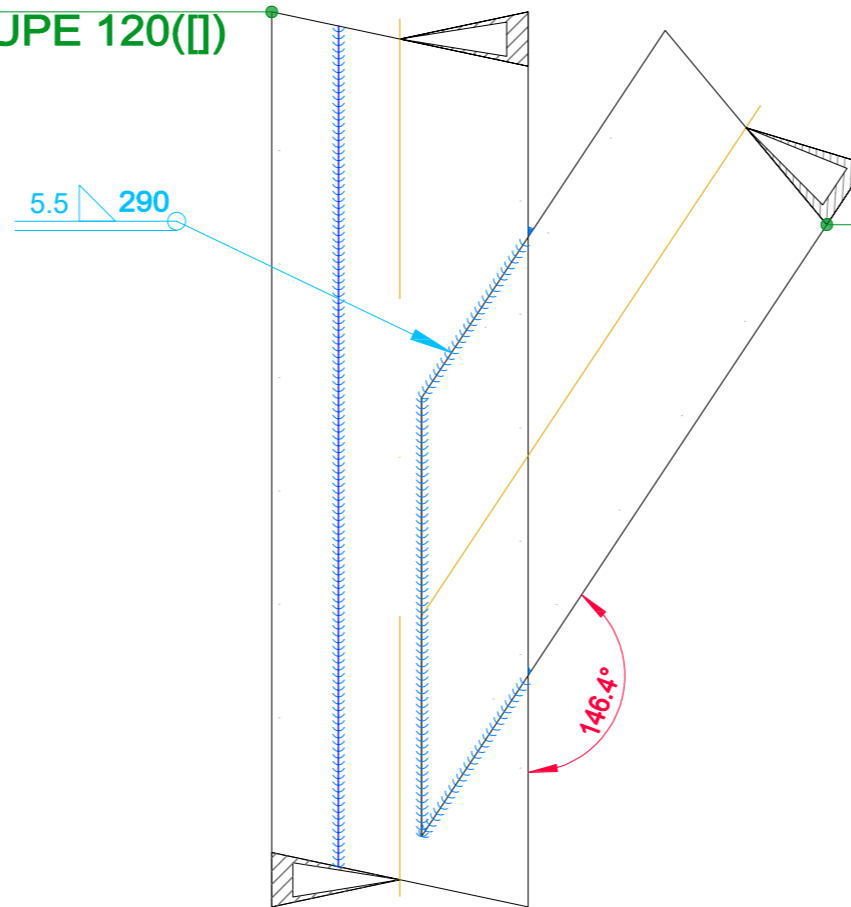
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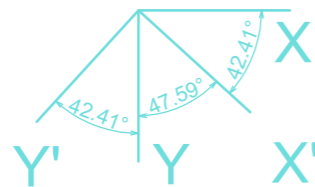
Montante  
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Cordón  
2xUPE 160(□)

Alzado

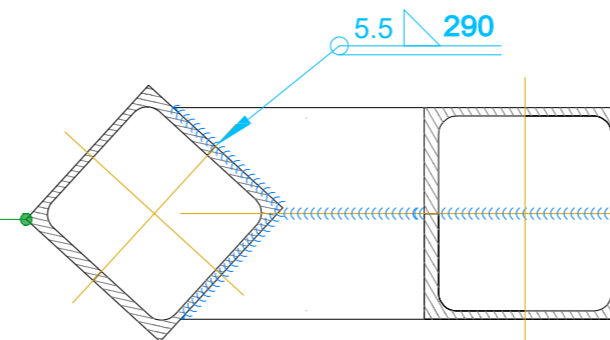


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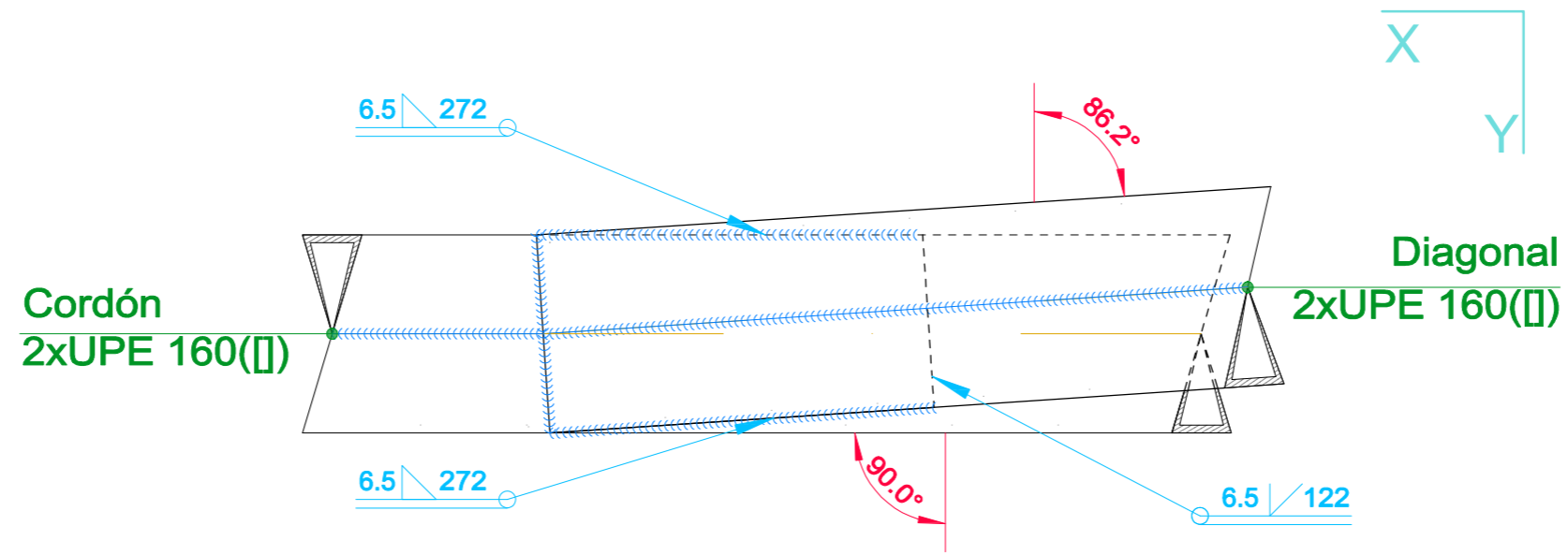
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Cordón  
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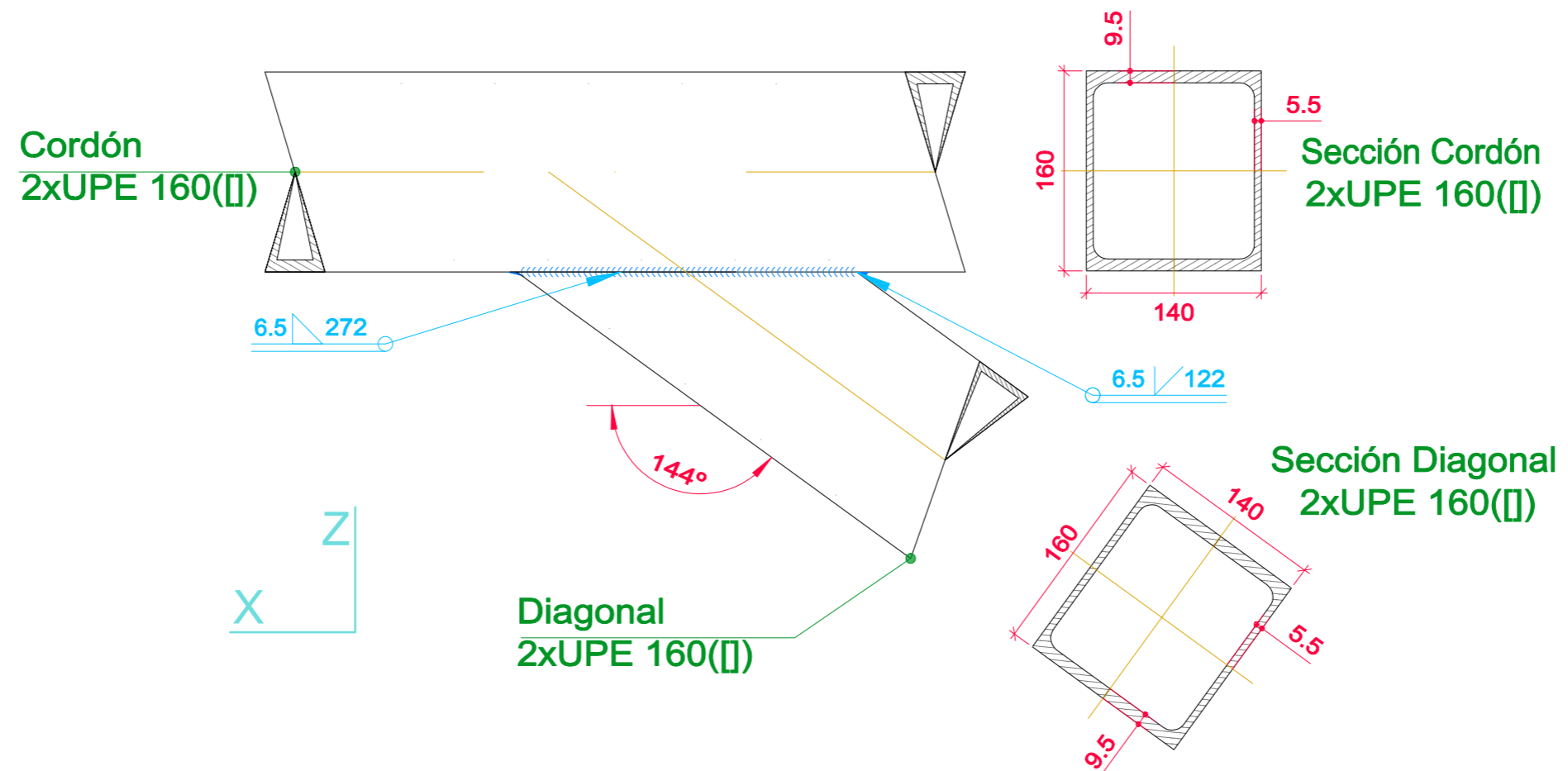


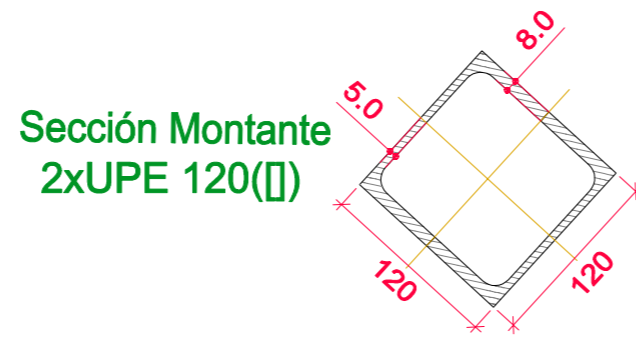


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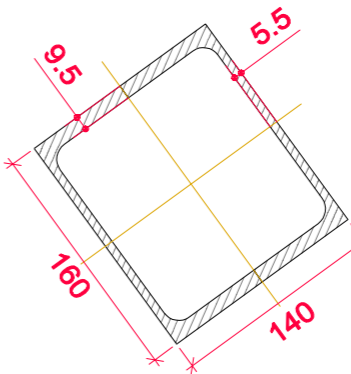


## Alzado



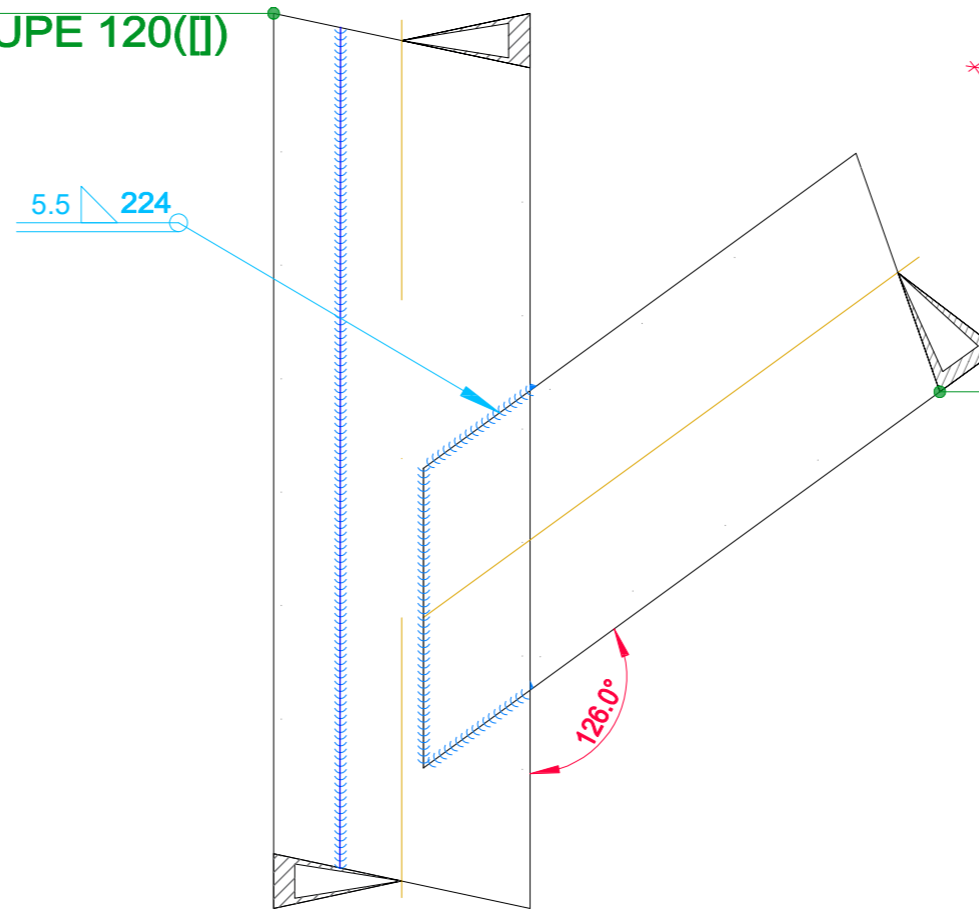


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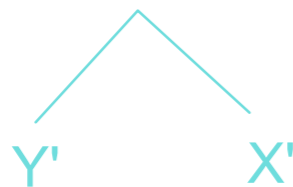


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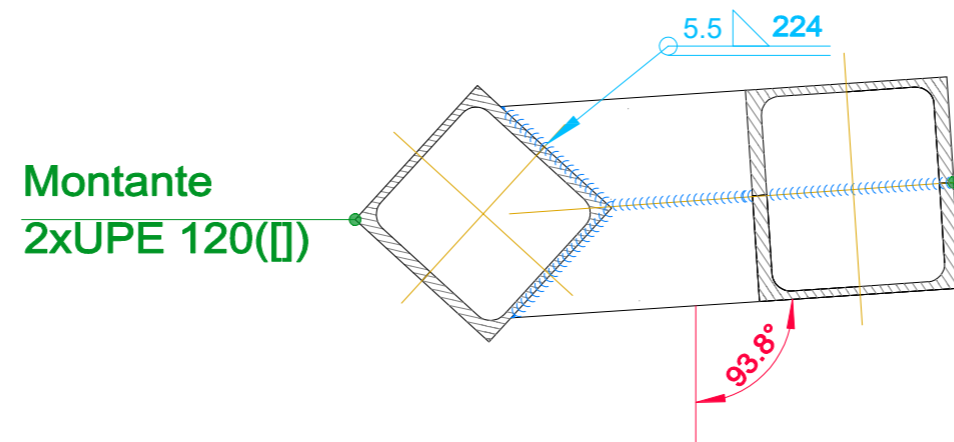
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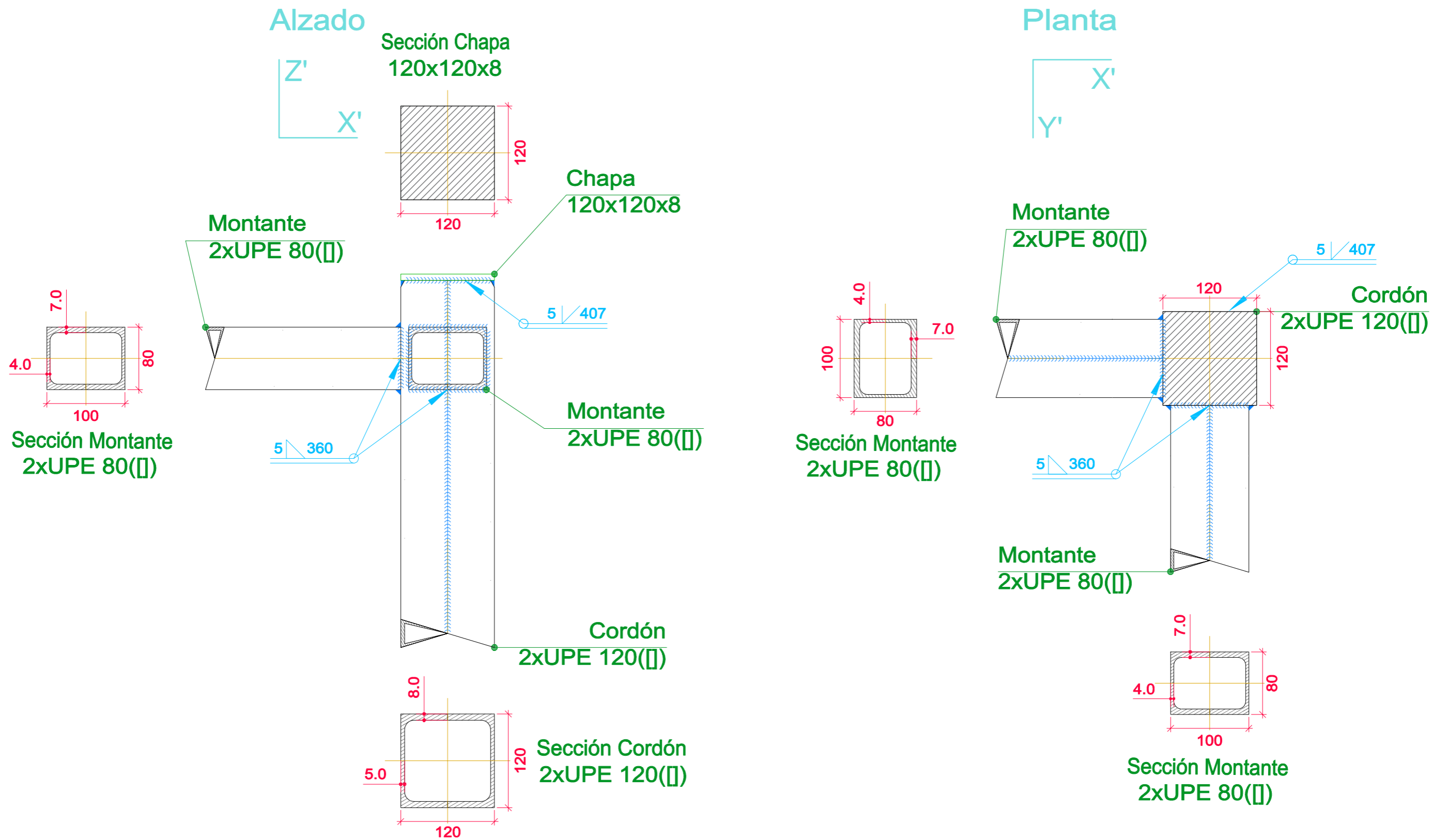
Planta



Montante  
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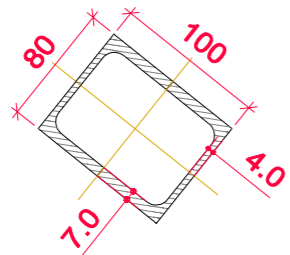
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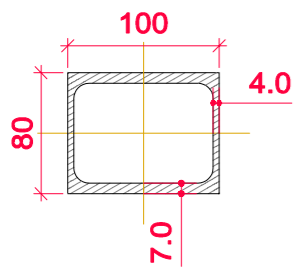
# Alzado



Sección Diagonal A  
2xUPE 80(□)



Diagonal A  
2xUPE 80(□)

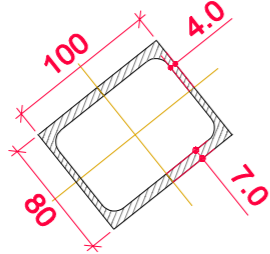


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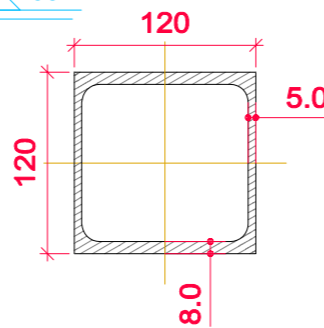
Sección Montante  
2xUPE 80(□)

Diagonal B  
2xUPE 80(□)

Sección Diagonal B  
2xUPE 80(□)



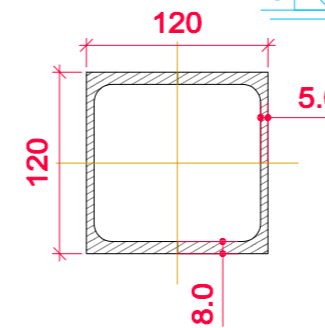
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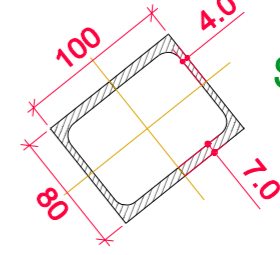
Cordón  
2xUPE 120(□)

Cordón  
2xUPE 120(□)

Sección Cordón  
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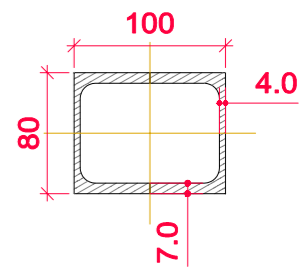


Sección Diagonal A  
2xUPE 80(□)



Diagonal A  
2xUPE 80(□)

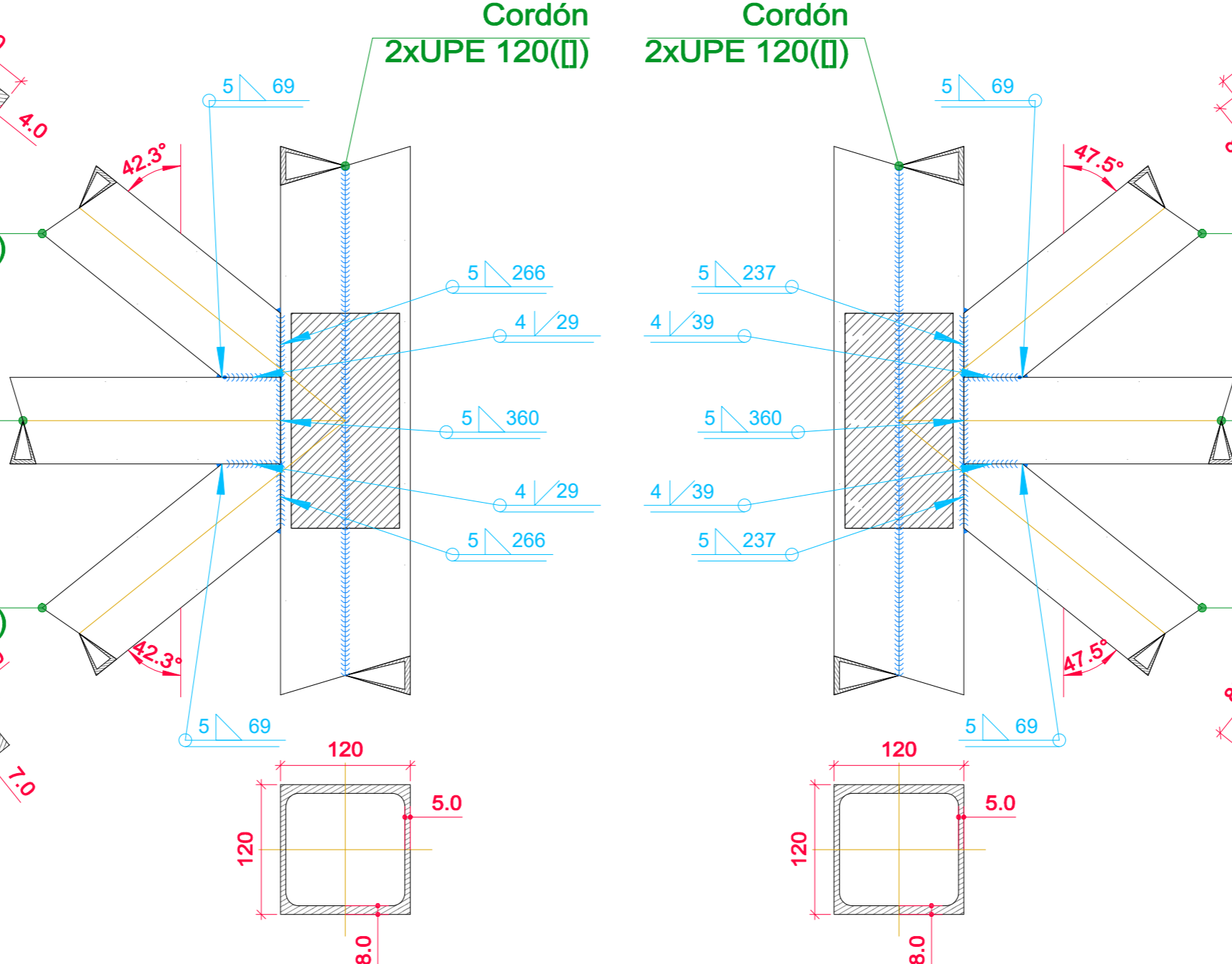
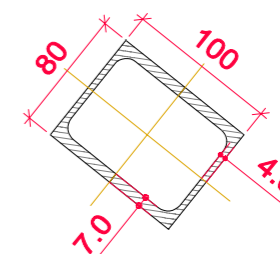
Montante  
2xUPE 80(□)



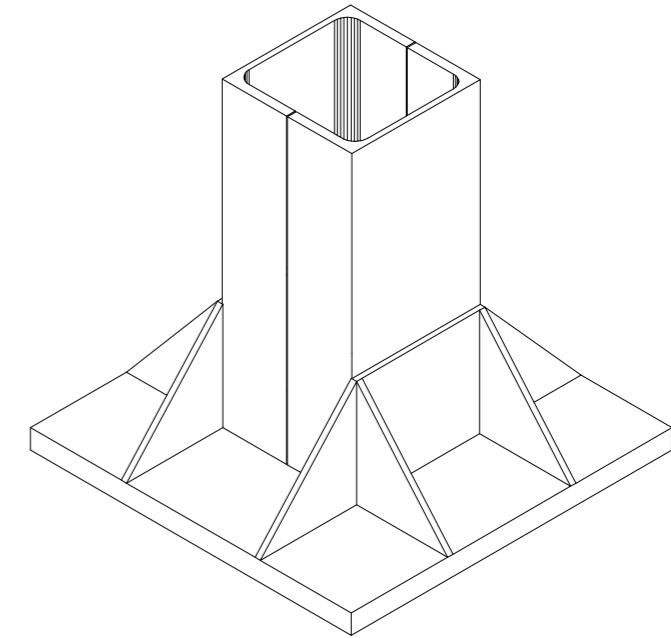
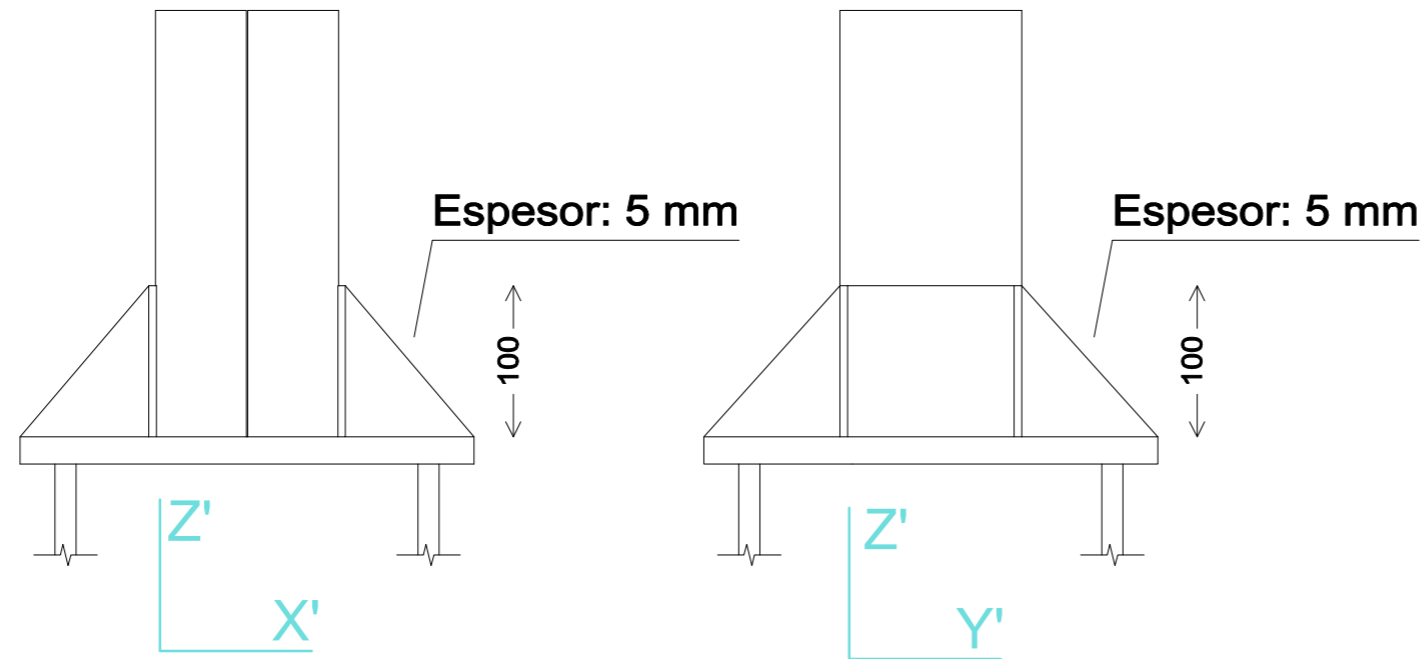
Sección Montante  
2xUPE 80(□)

Diagonal B  
2xUPE 80(□)

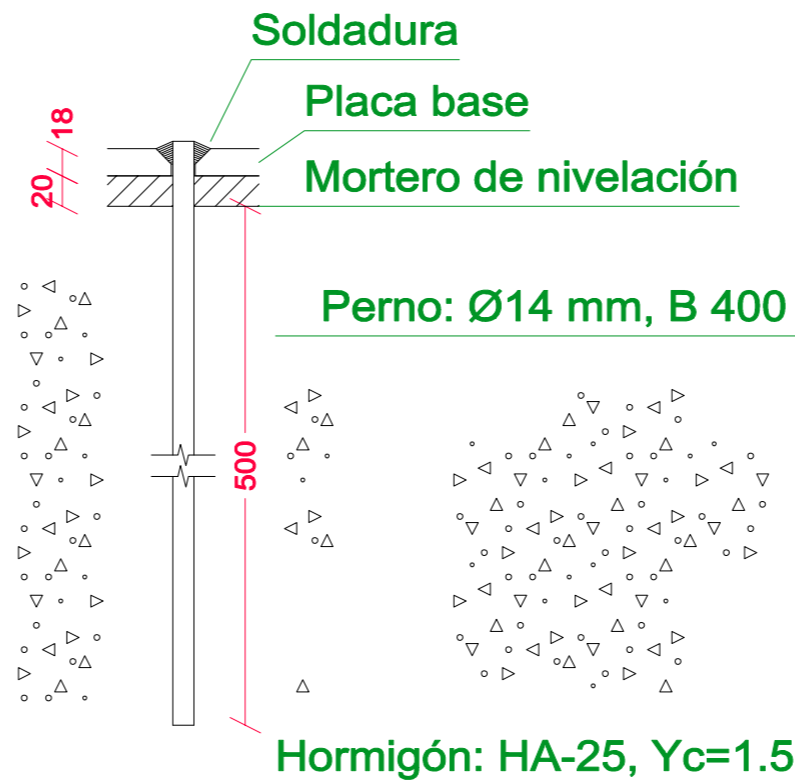
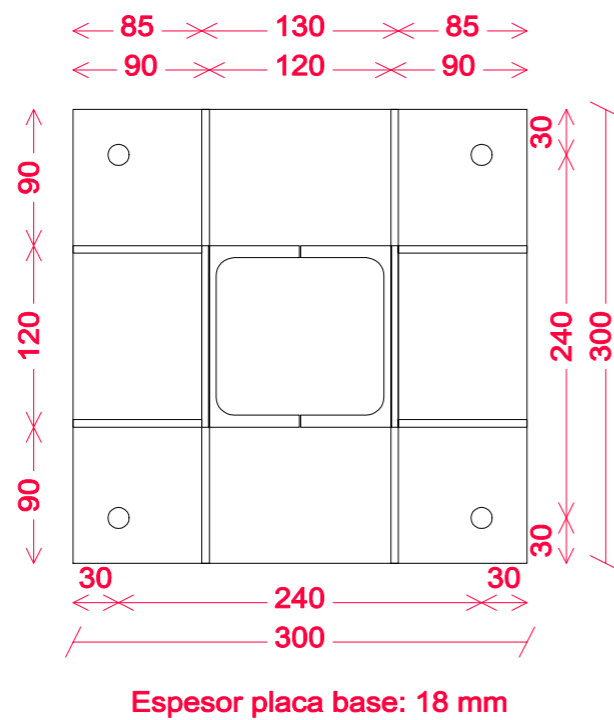
Sección Diagonal B  
2xUPE 80(□)



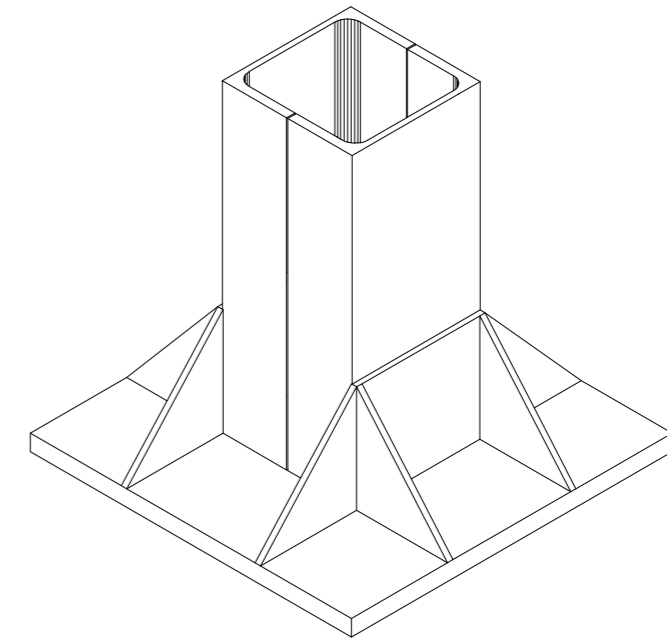
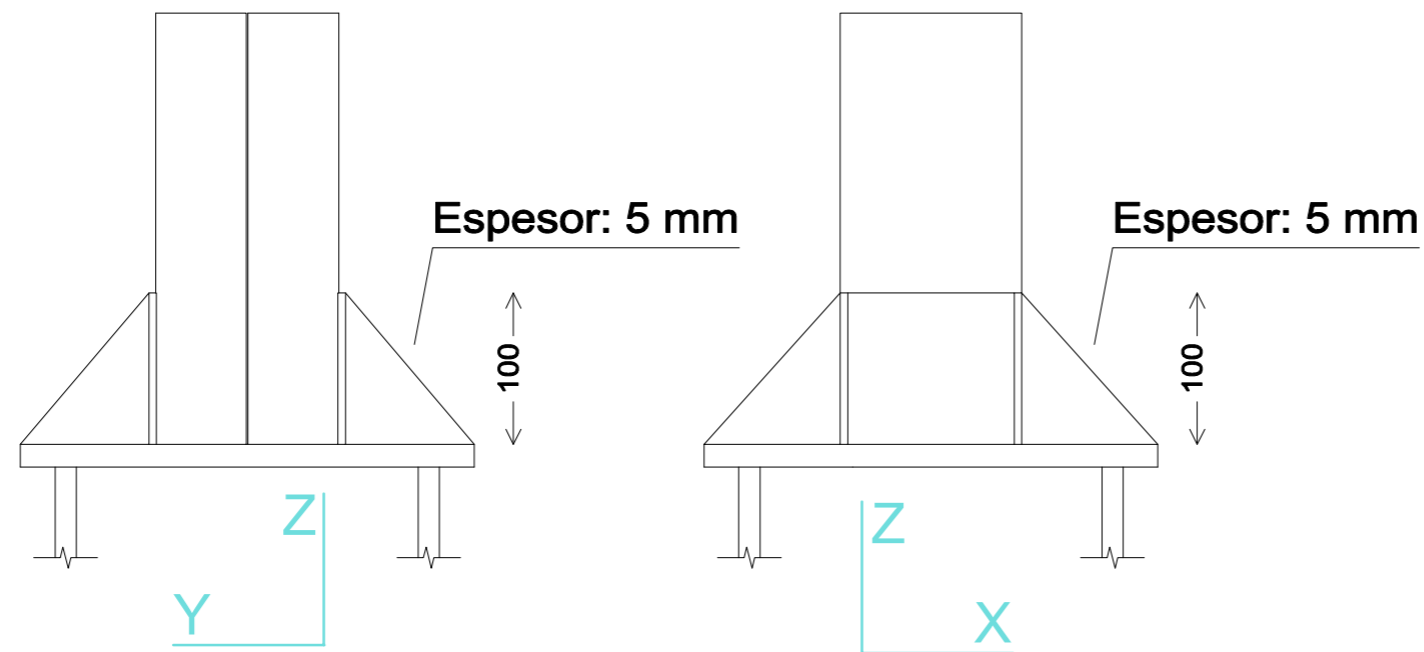
Dimensiones Placa = 300x300x18 mm ( S275)  
 Pernos = 4Ø14 mm, B 400 S, Ys = 1.15



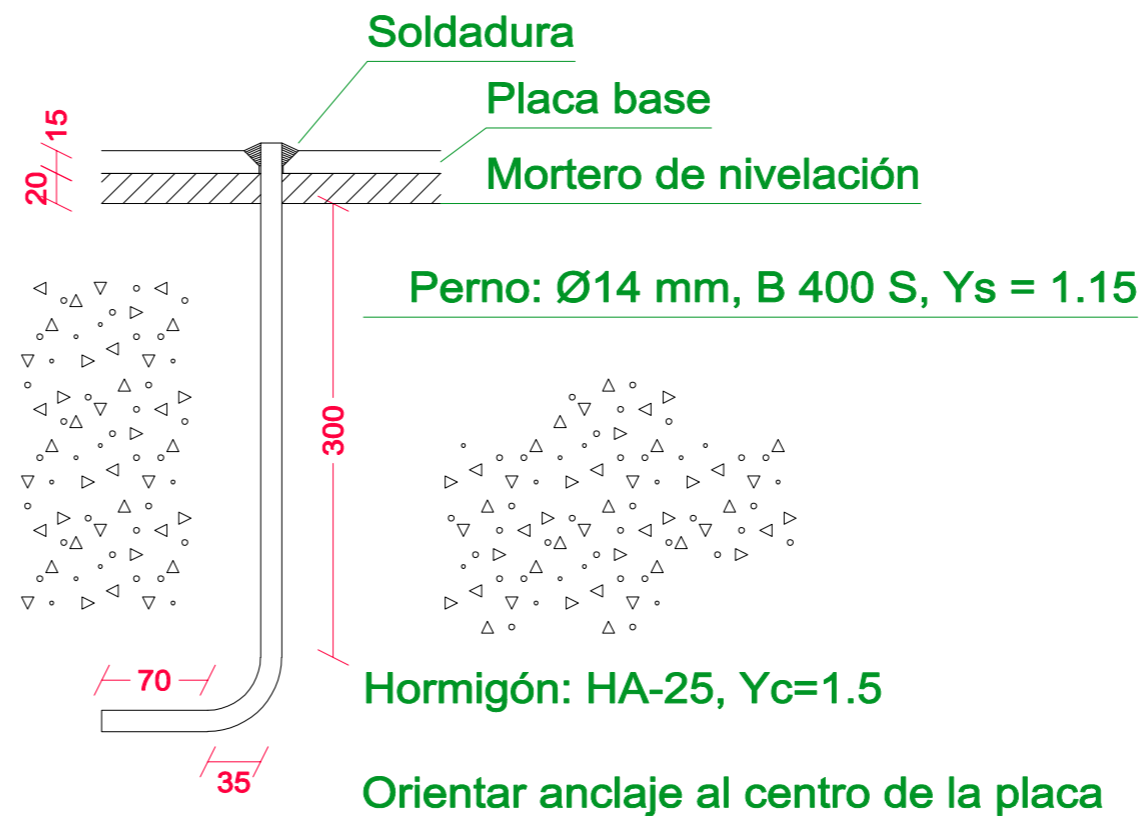
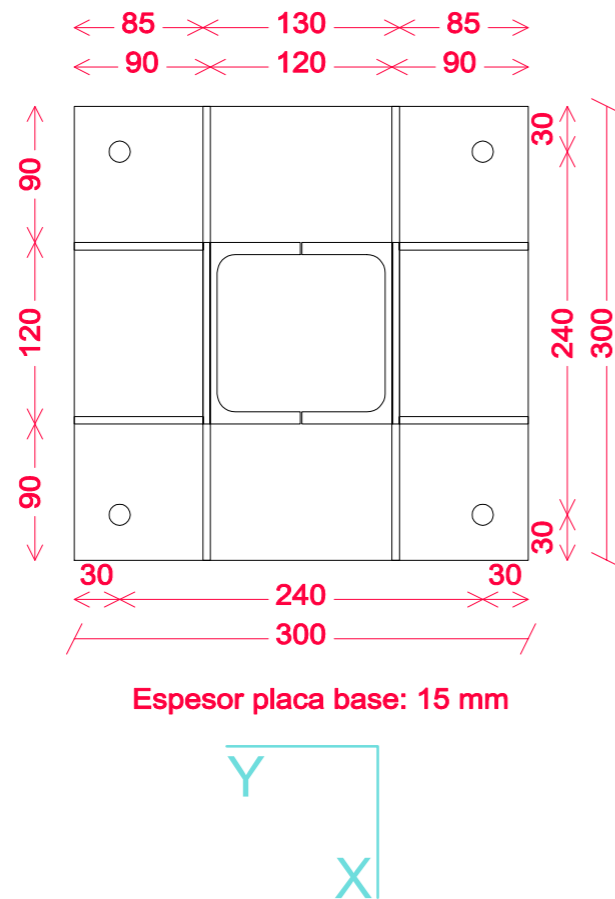
### Detalle Anclaje Perno



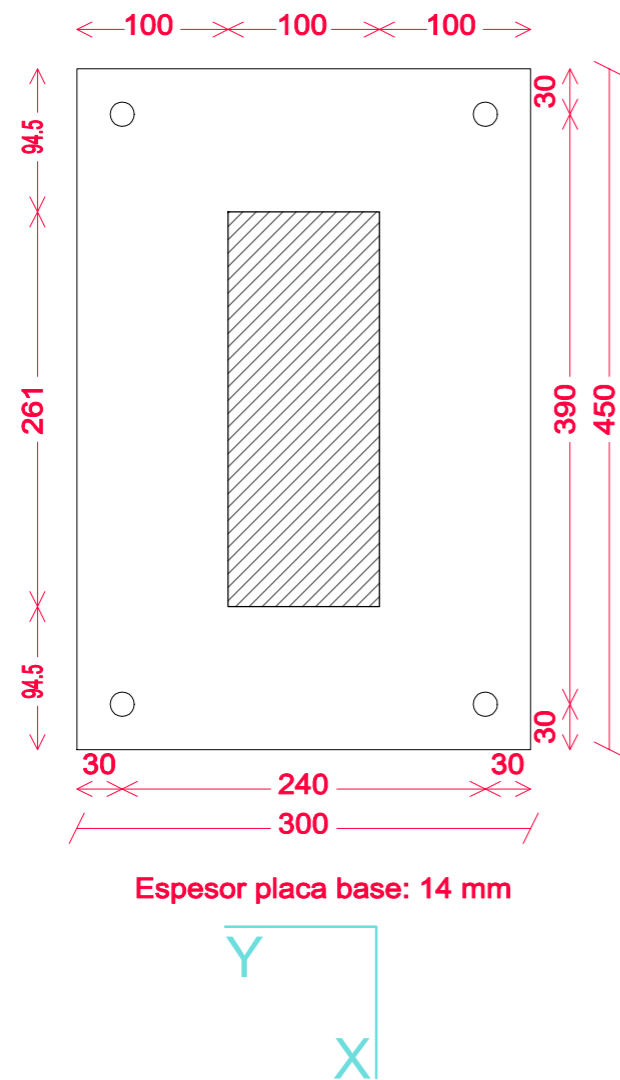
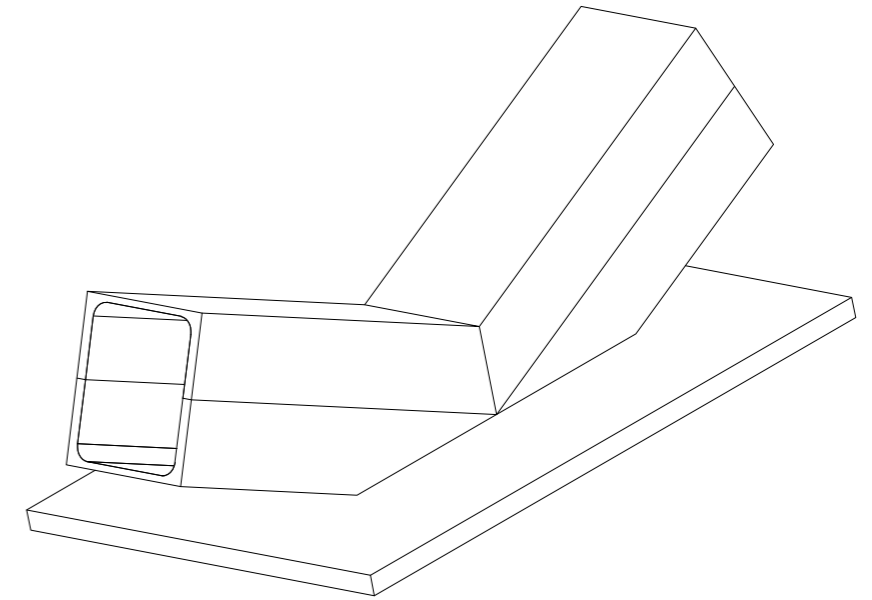
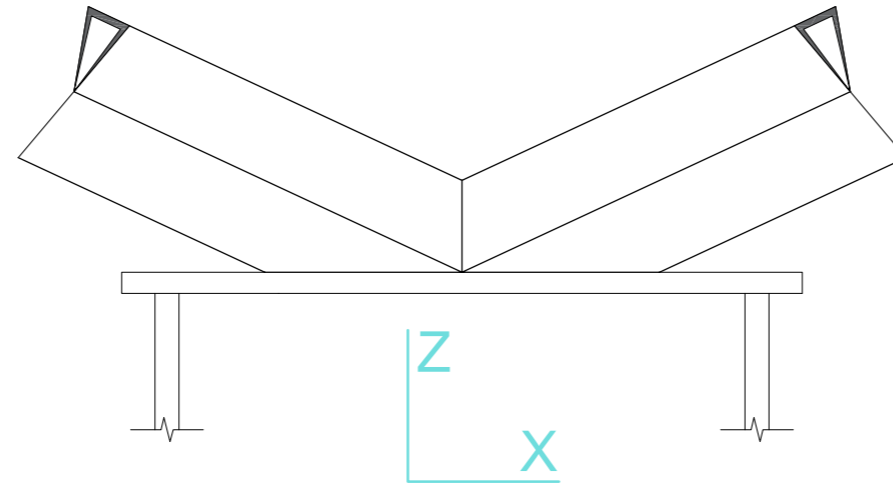
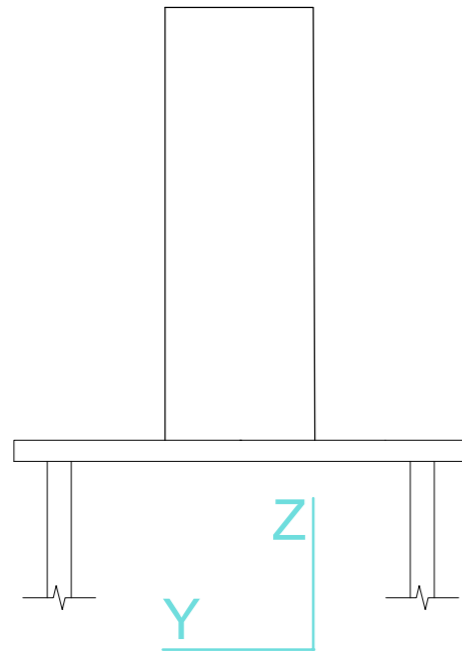
Dimensiones Placa = 300x300x15 mm ( S275)  
 Pernos = 4Ø14 mm, B 400 S, Ys = 1.15



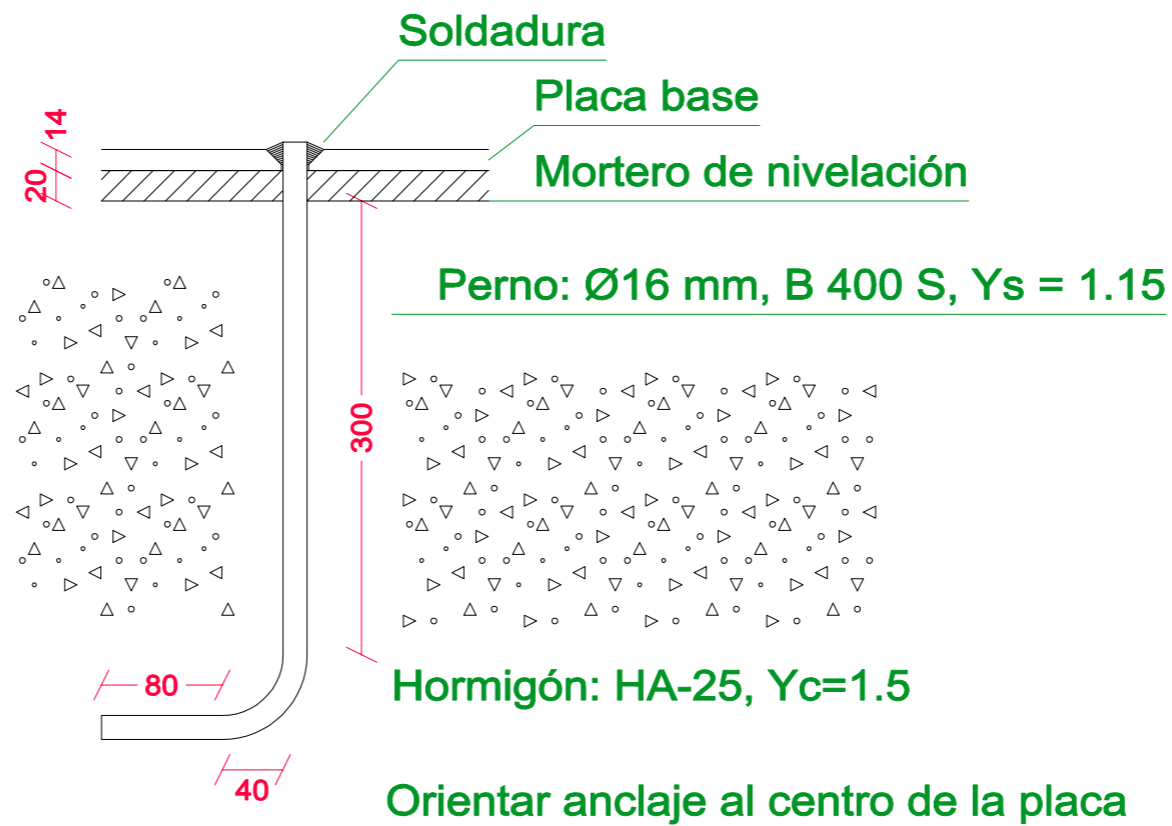
### Detalle Anclaje Perno



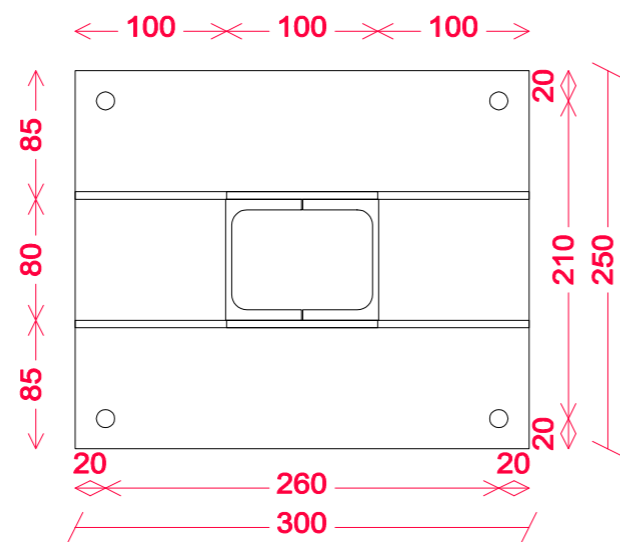
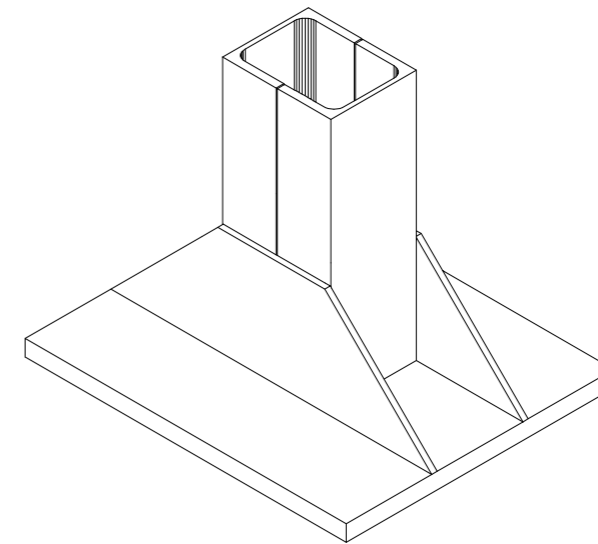
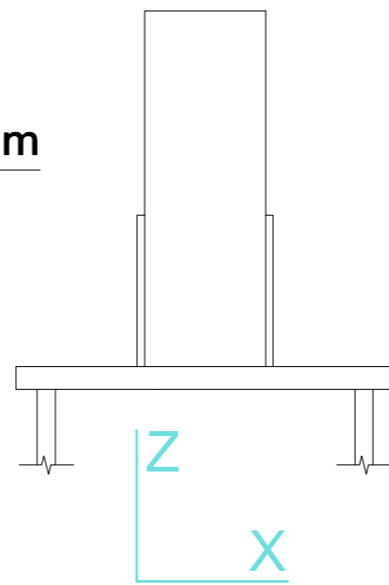
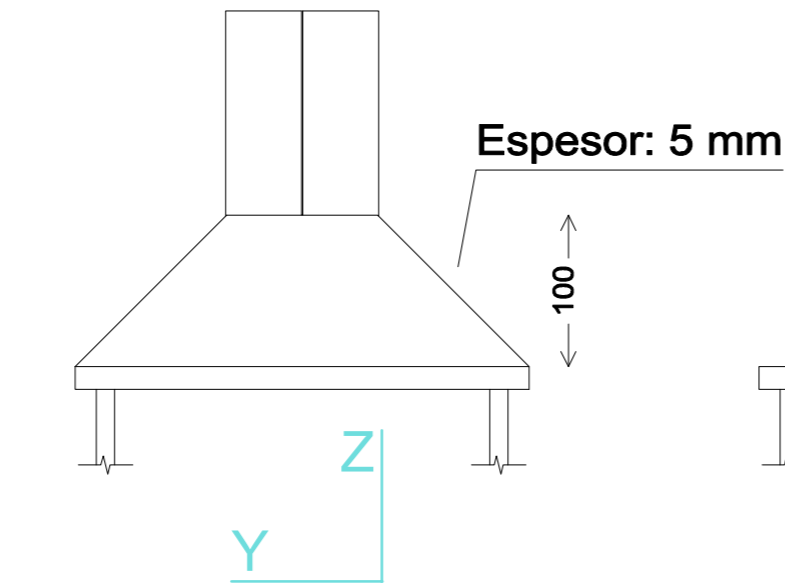
Dimensiones Placa = 300x450x14 mm ( S275)  
 Pernos = 4Ø16 mm, B 400 S, Ys = 1.15



### Detalle Anclaje Perno



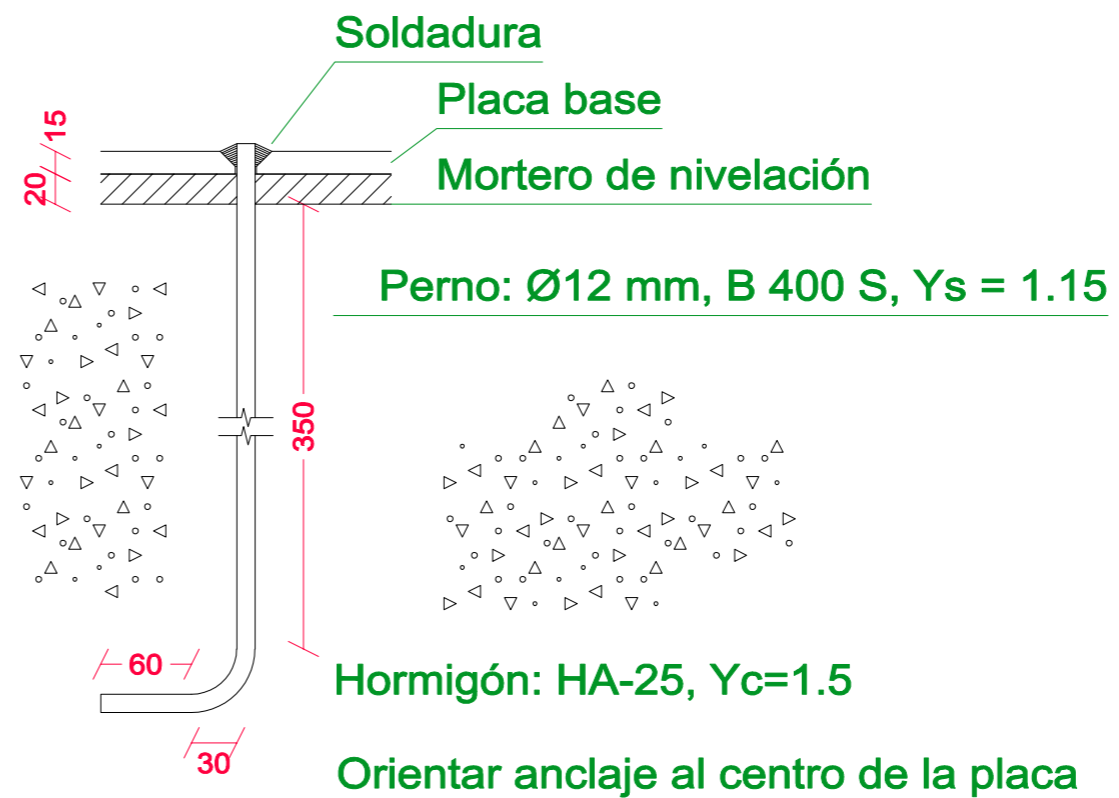
Dimensiones Placa = 300x250x15 mm ( S275)  
 Pernos = 4Ø12 mm, B 400 S, Ys = 1.15



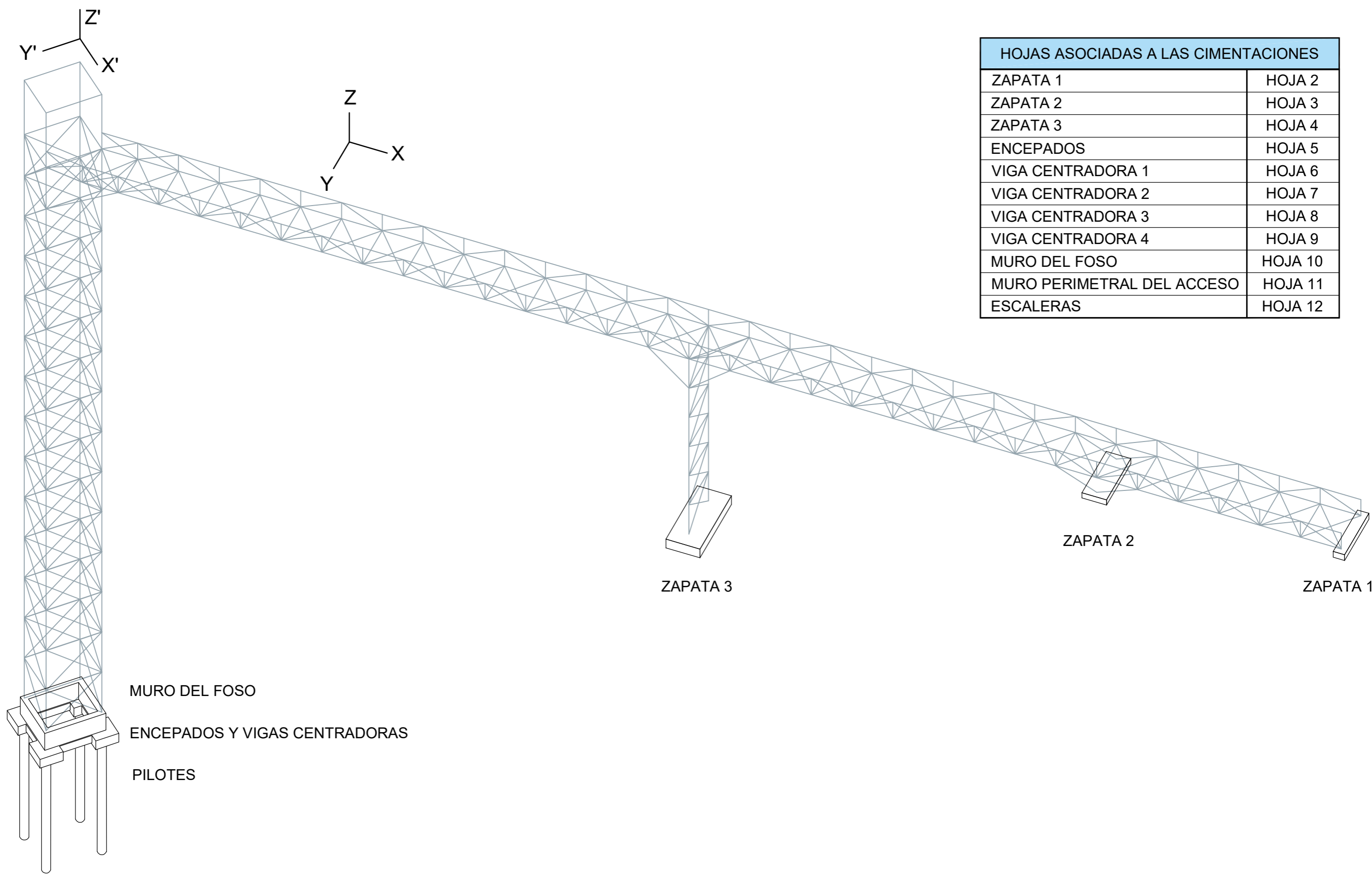
Espeor placa base: 15 mm



### Detalle Anclaje Perno







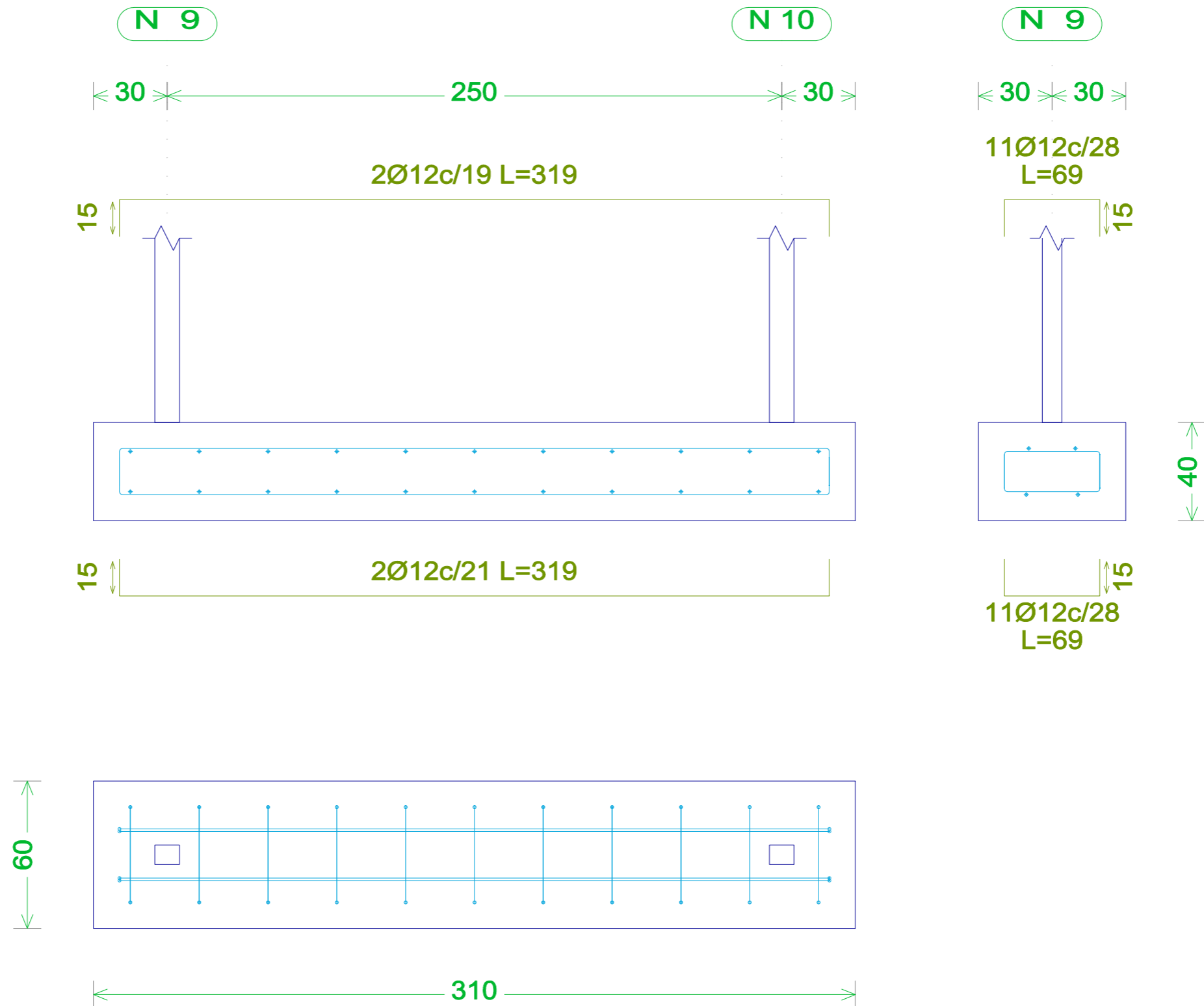
HOJAS ASOCIADAS A LAS CIMENTACIONES	
ZAPATA 1	HOJA 2
ZAPATA 2	HOJA 3
ZAPATA 3	HOJA 4
ENCEPADOS	HOJA 5
VIGA CENTRADORA 1	HOJA 6
VIGA CENTRADORA 2	HOJA 7
VIGA CENTRADORA 3	HOJA 8
VIGA CENTRADORA 4	HOJA 9
MURO DEL FOSO	HOJA 10
MURO PERIMETRAL DEL ACCESO	HOJA 11
ESCALERAS	HOJA 12

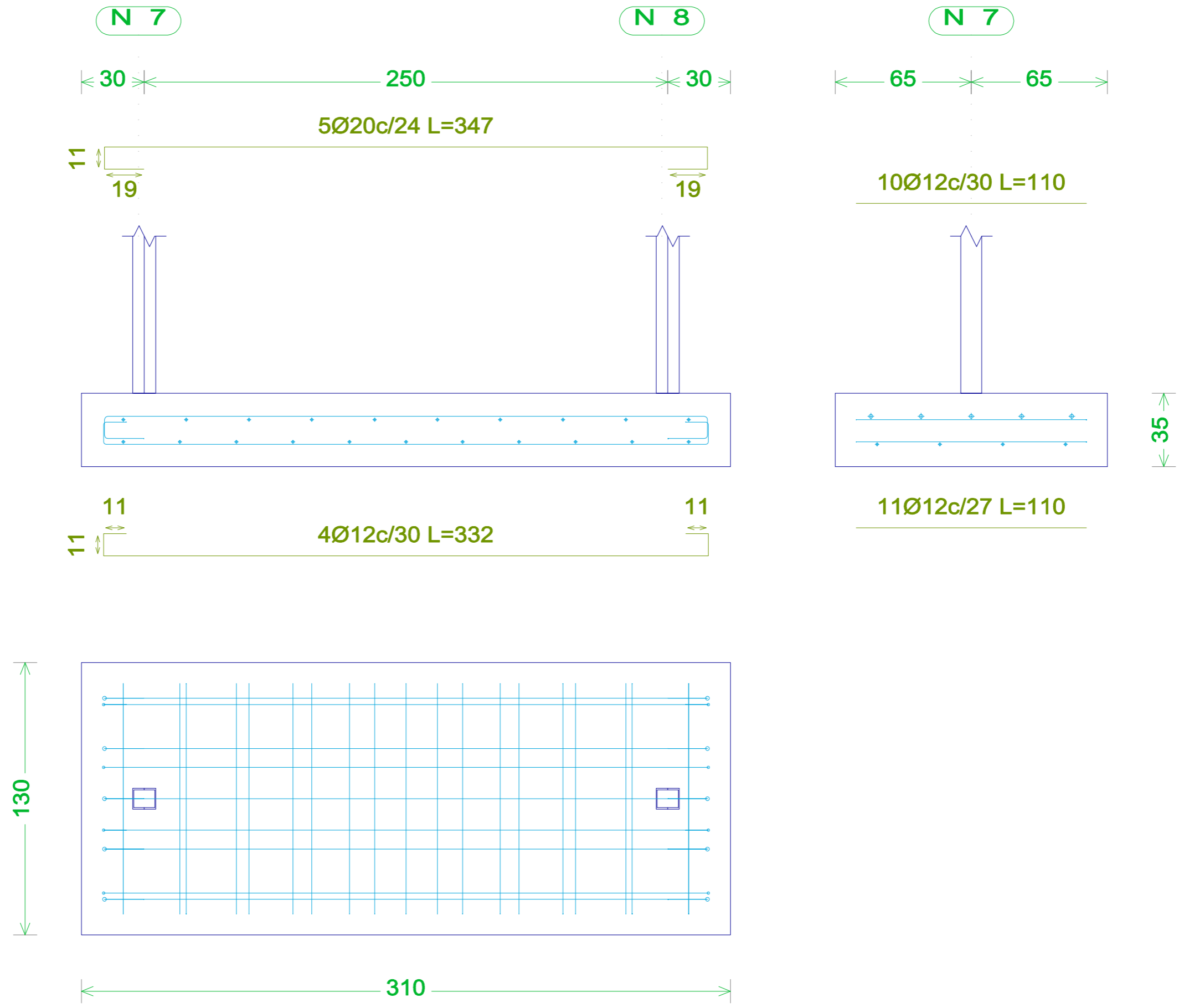
MURO DEL FOSO  
 ENCEPADOS Y VIGAS CENTRADORAS  
 PILOTES

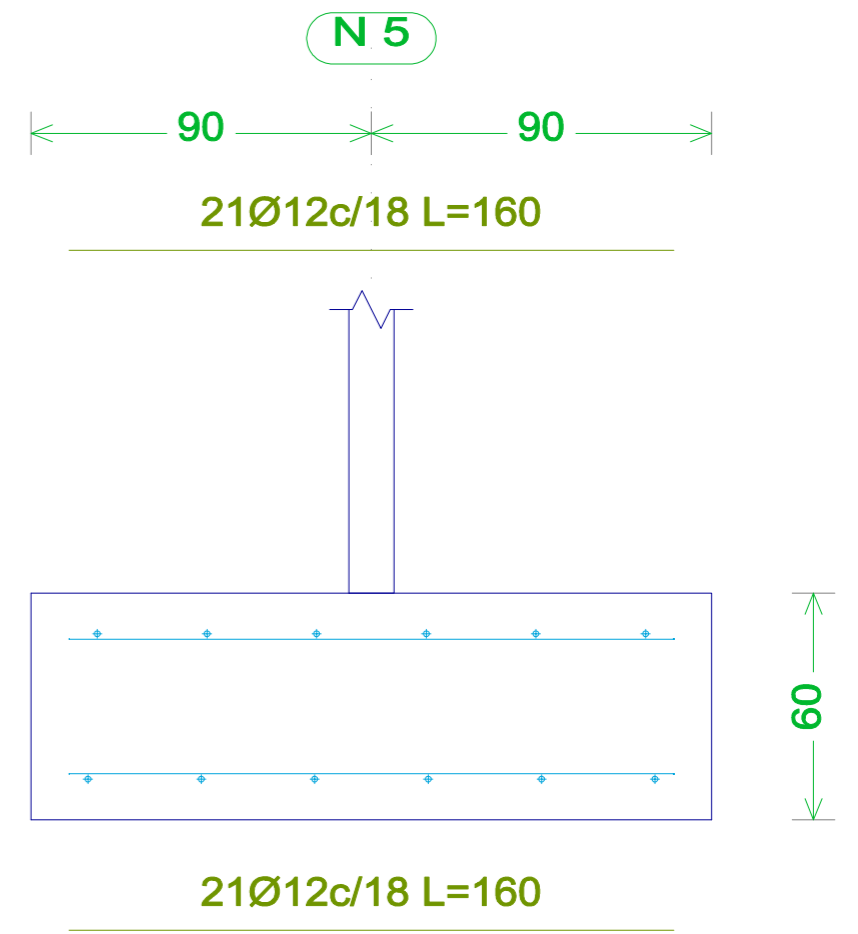
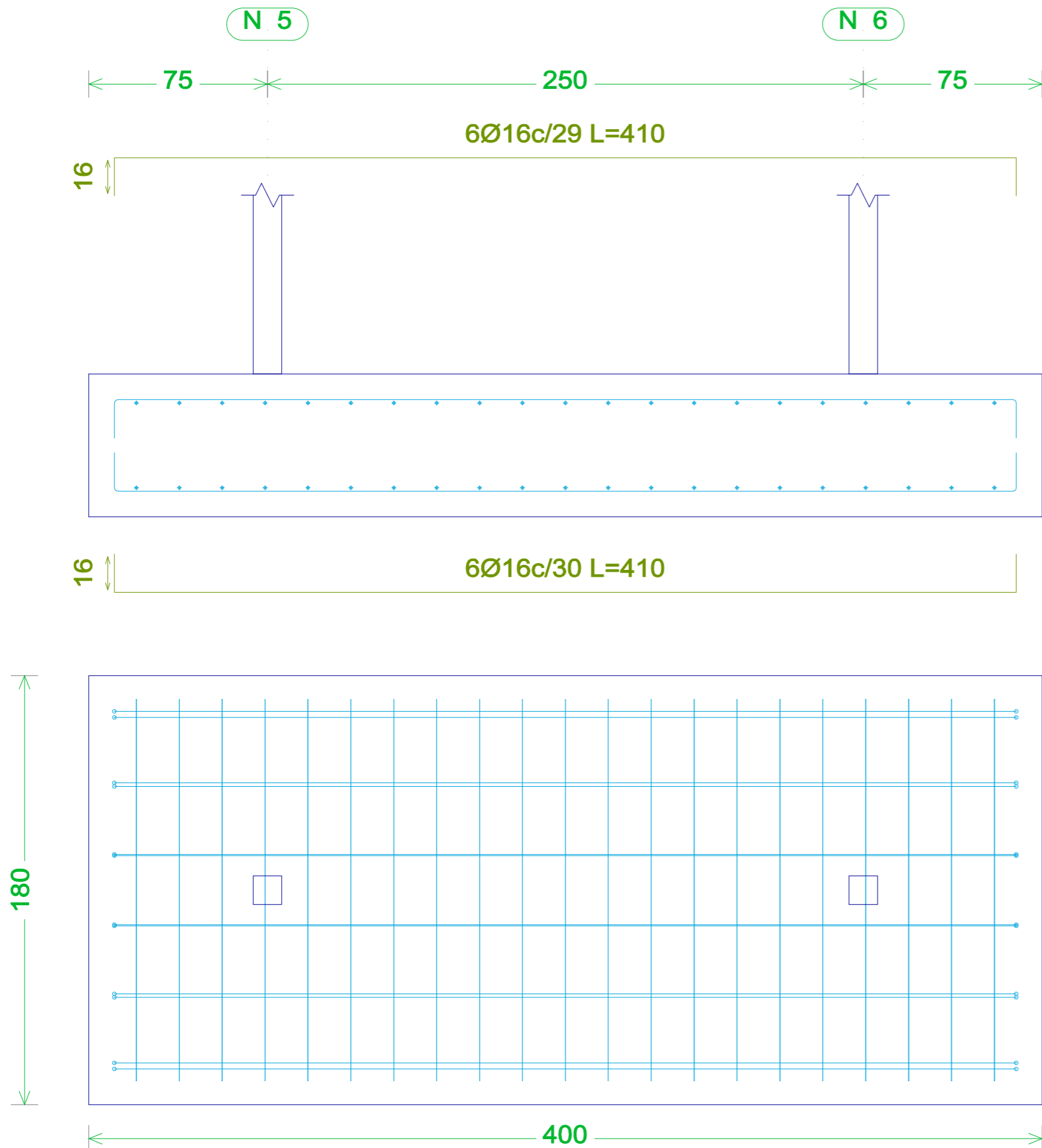
ZAPATA 3

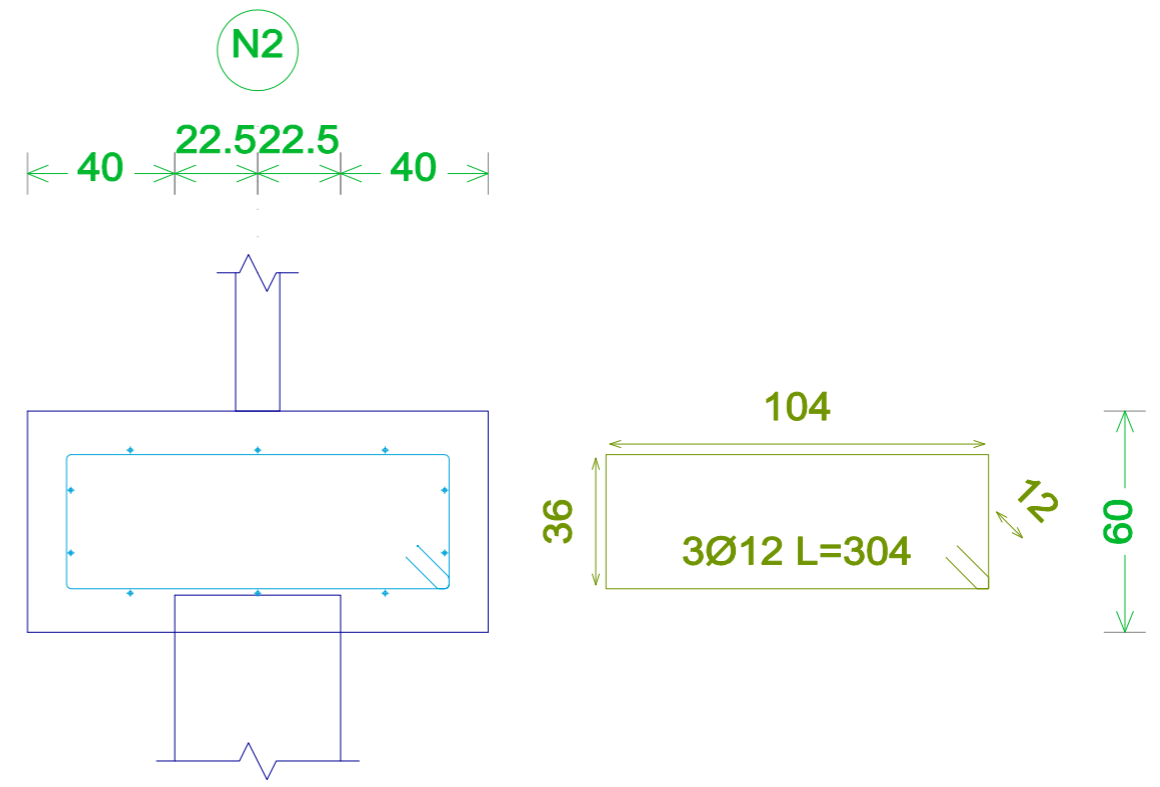
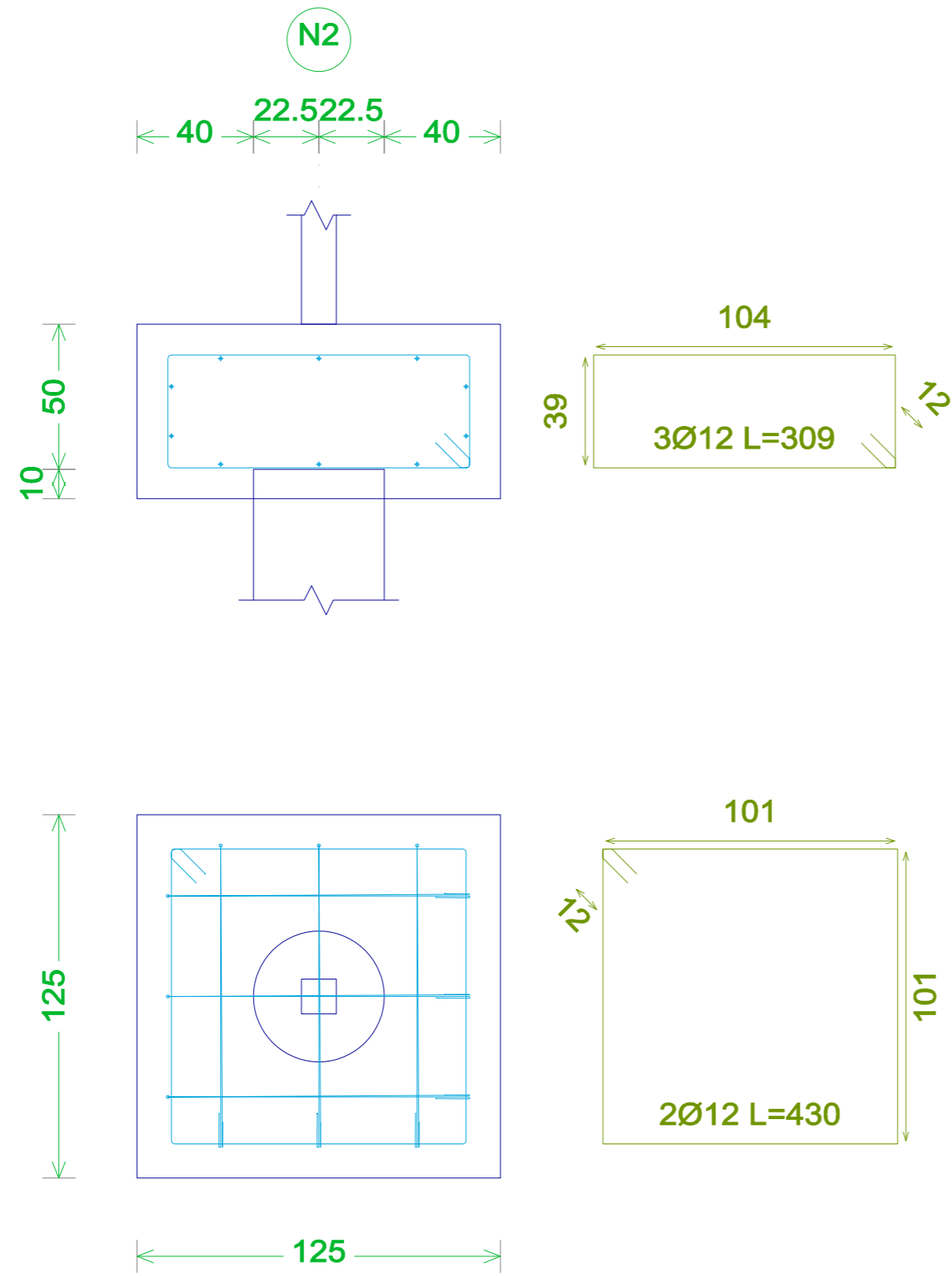
ZAPATA 2

ZAPATA 1









## PILOTES

Armado longitudinal: 6Ø16 mm, B 400 S,  $Y_s = 1.15$

Cercos: 39Ø16 mm c/20, B 400 S,  $Y_s = 1.15$

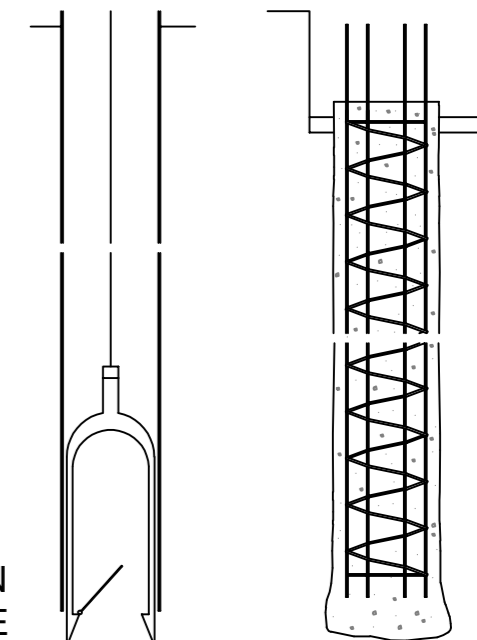
Hormigón: HA-25,  $Y_c=1.5$

Diámetro: 45 cm

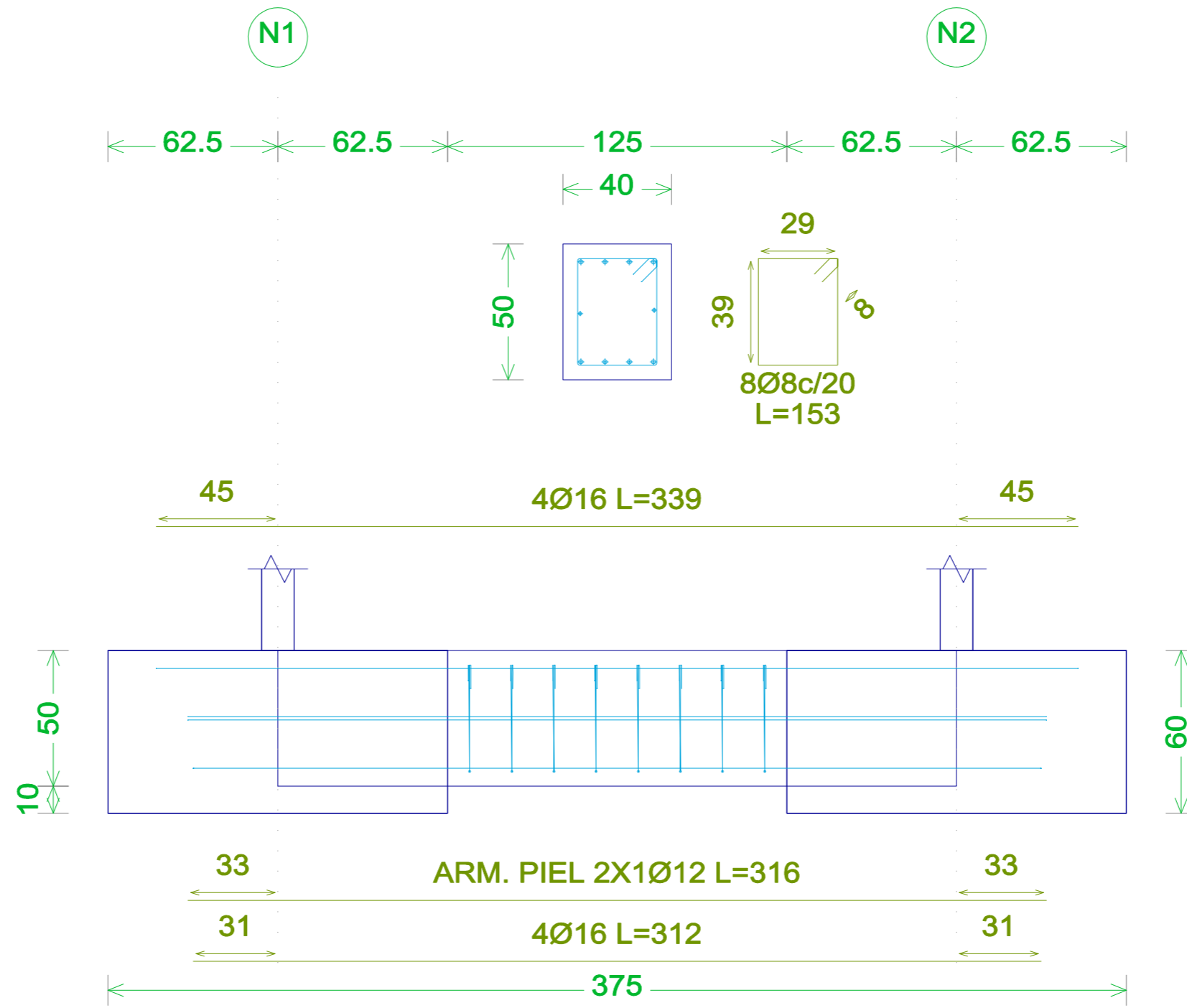
Longitud: 7,82 m

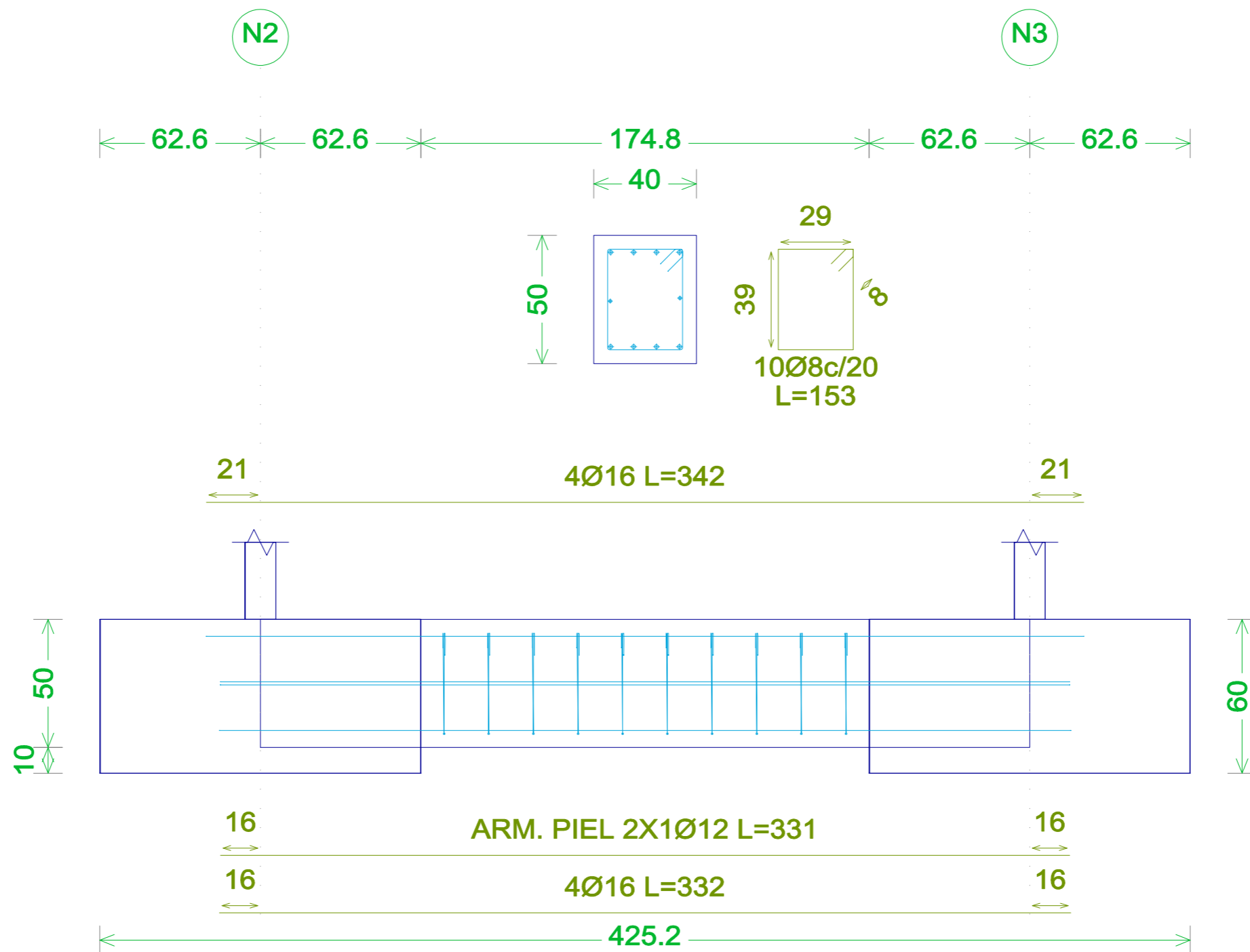
Entrega encepado: 10 cm

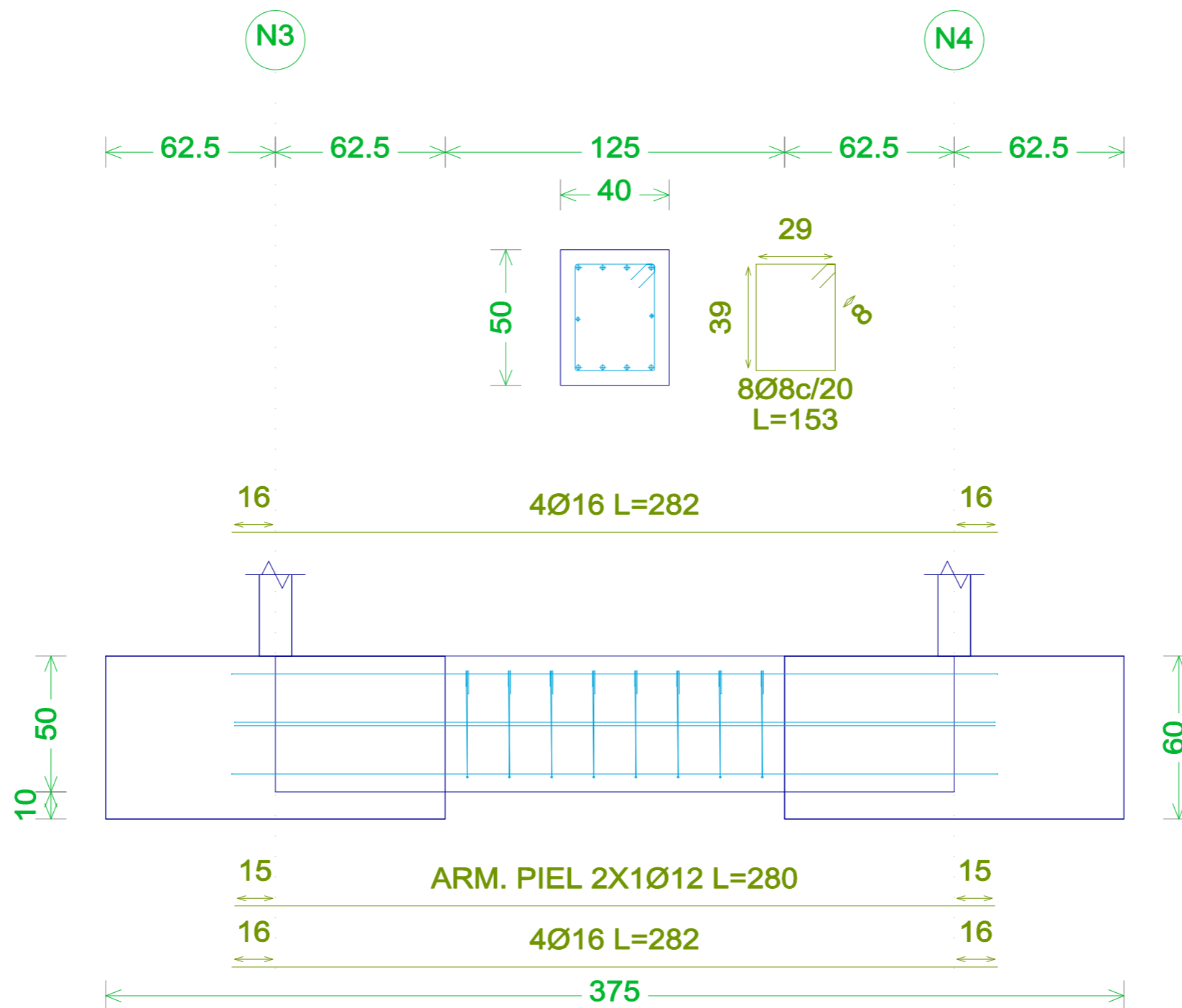
Entrega roca: 72 cm



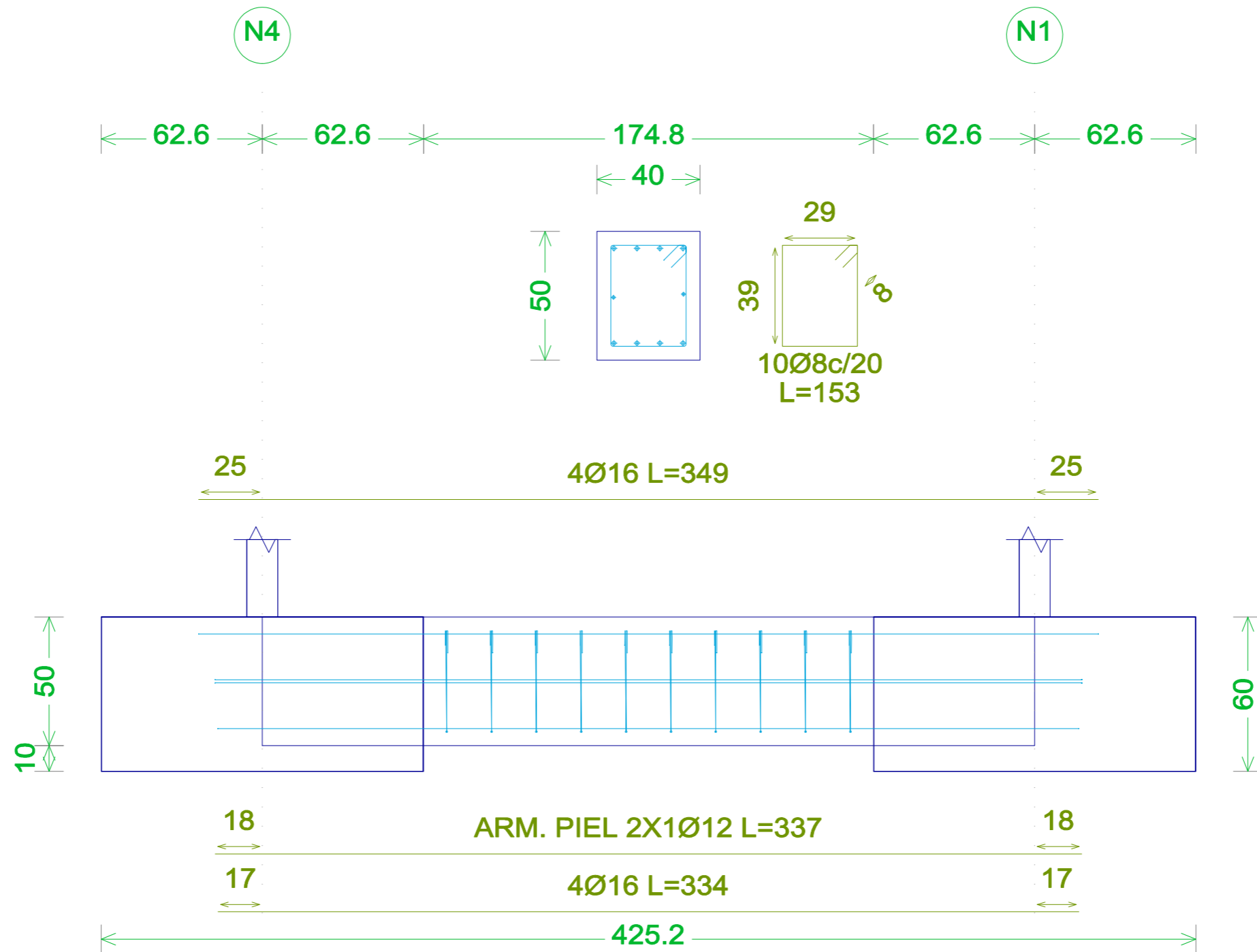
PILOTES DE EXTRACCIÓN CON ENTUBACIÓN RECUPERABLE

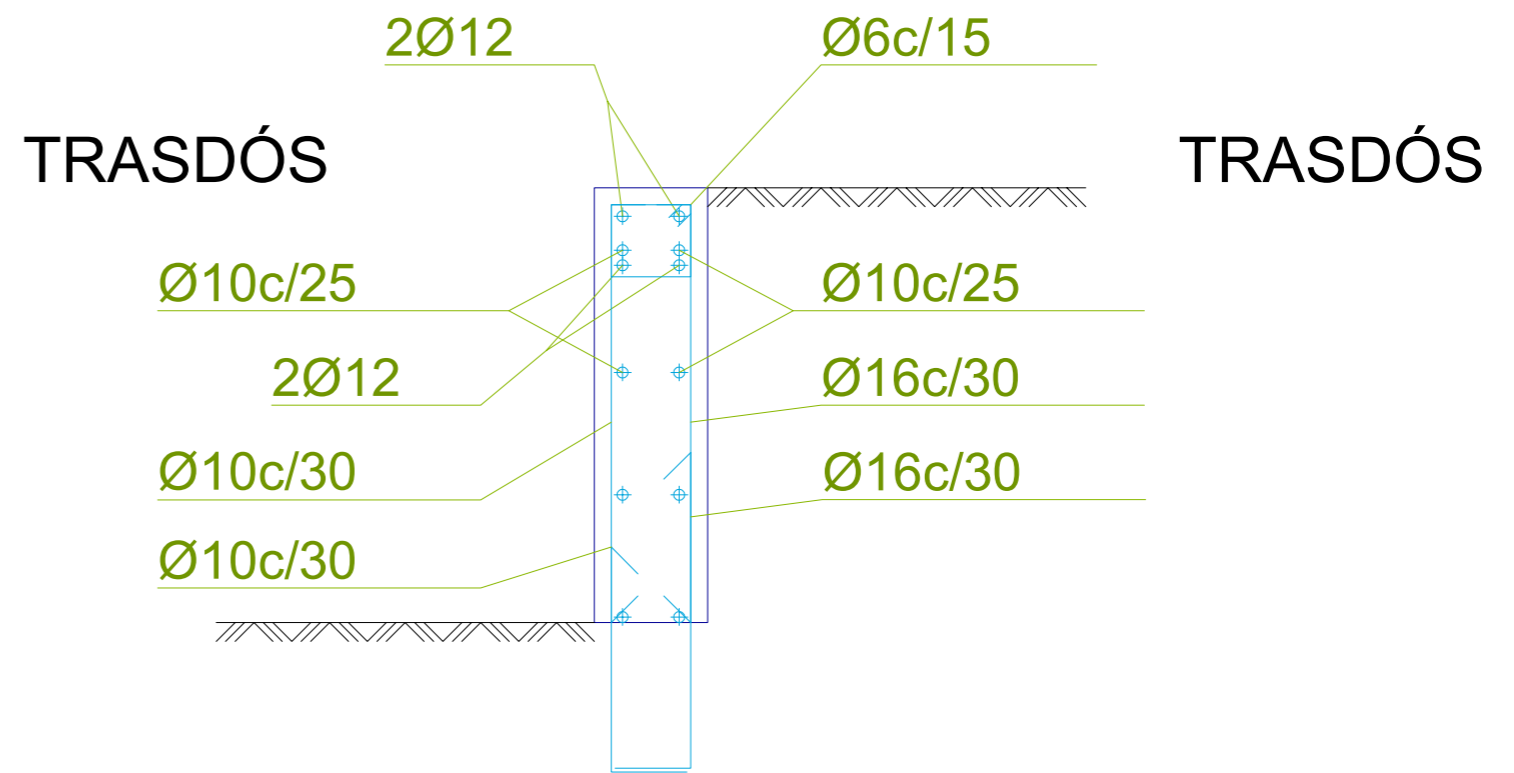
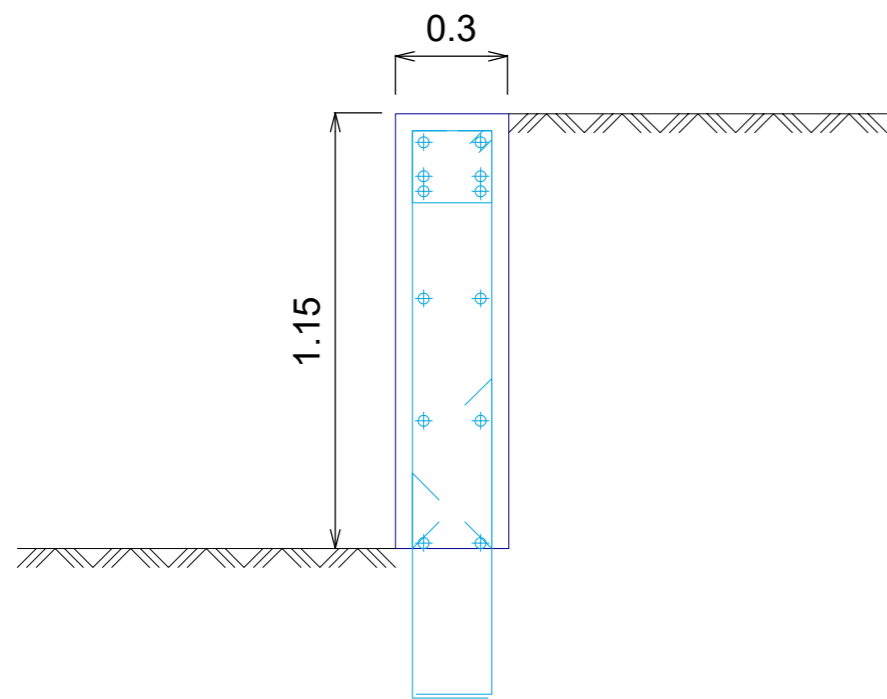


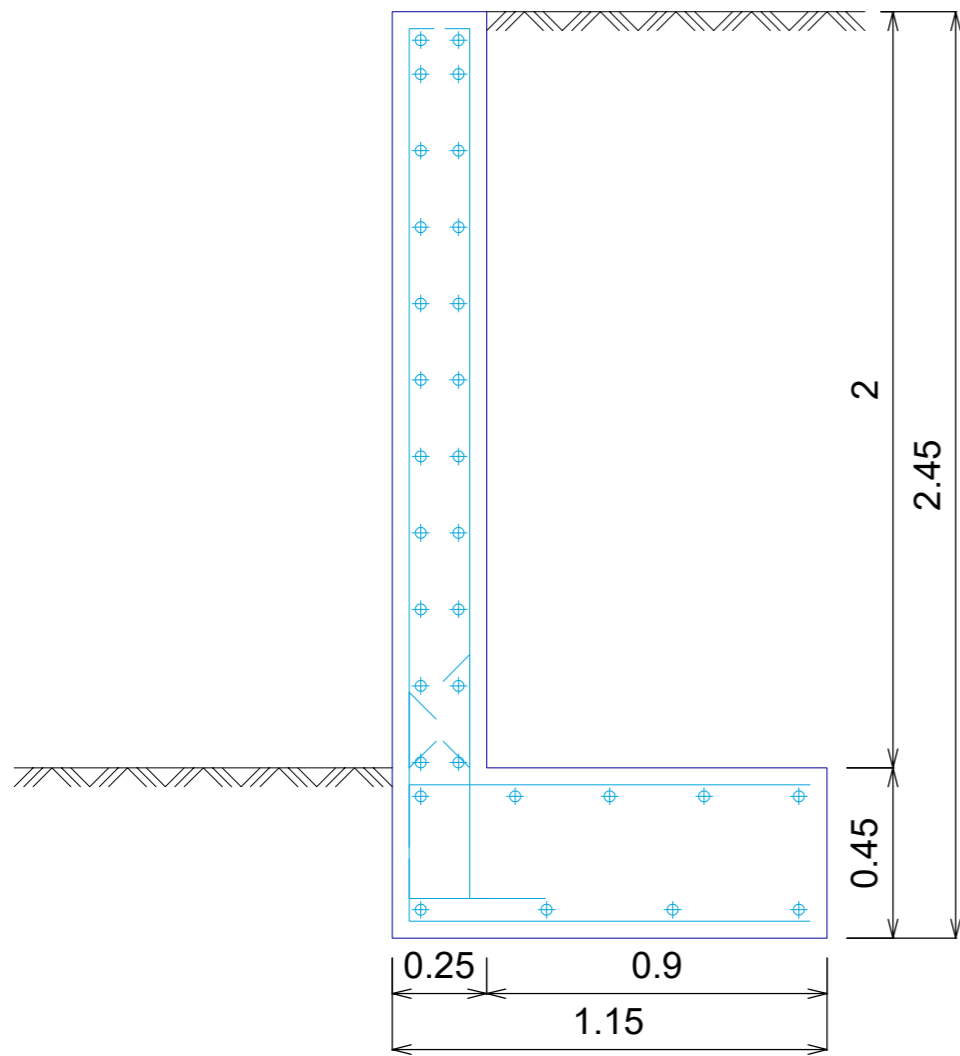






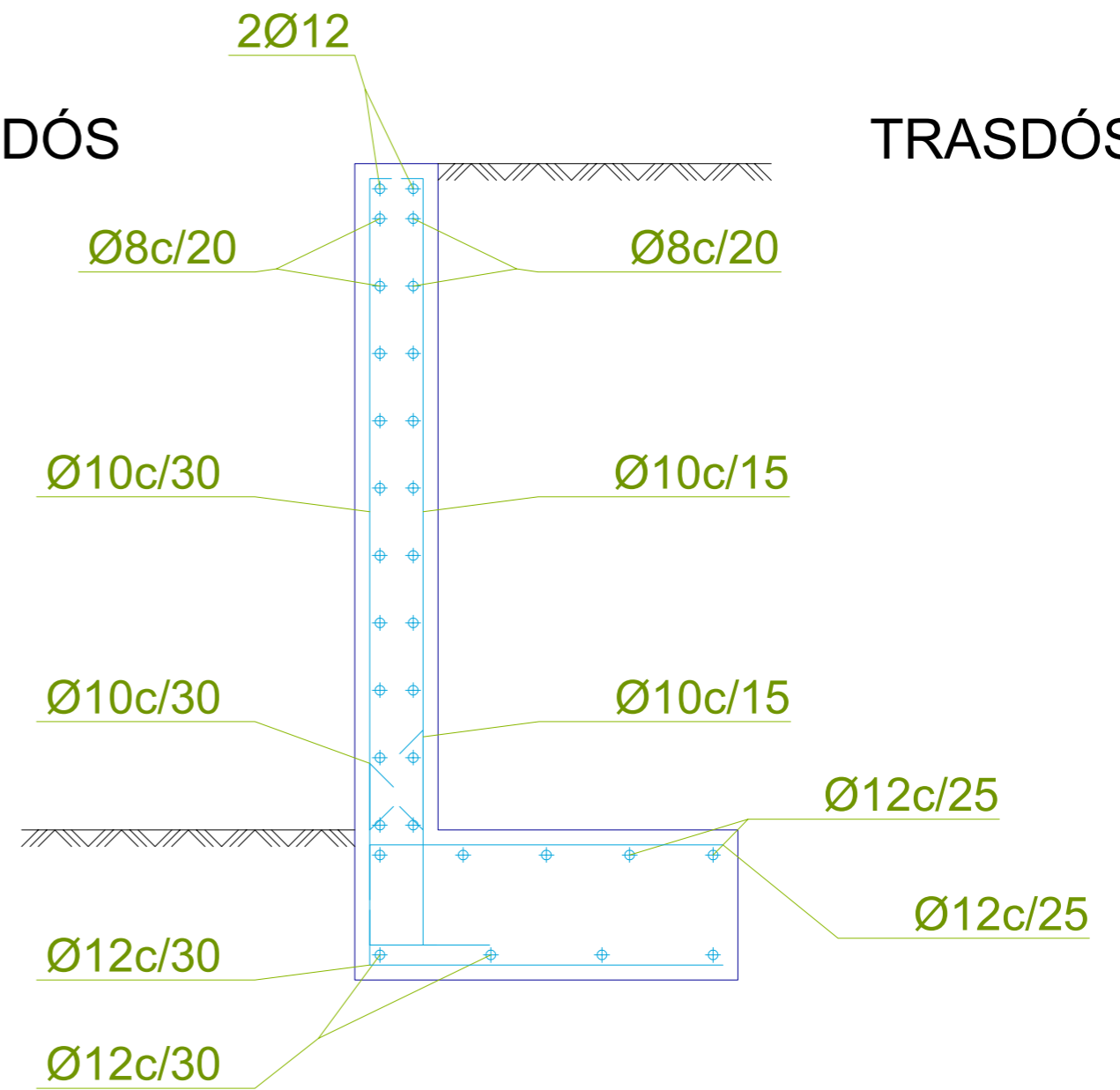


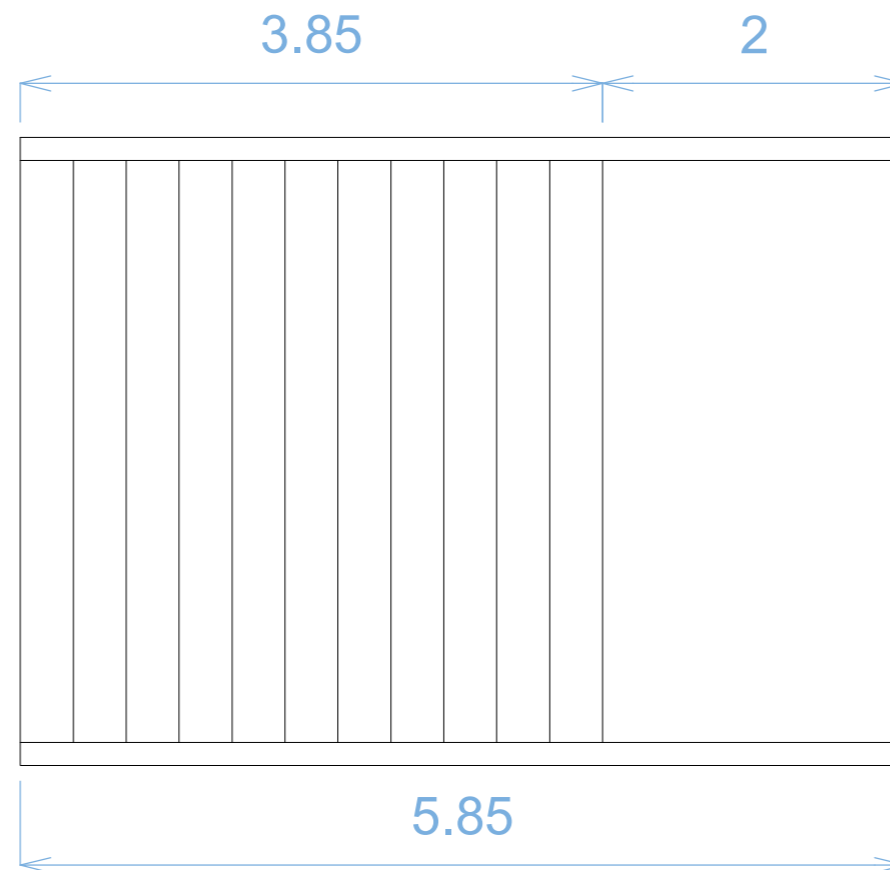
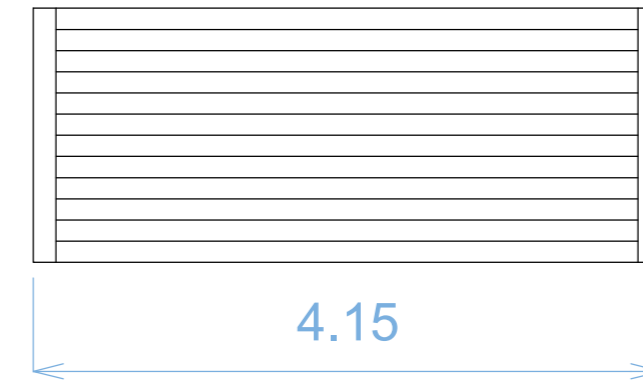
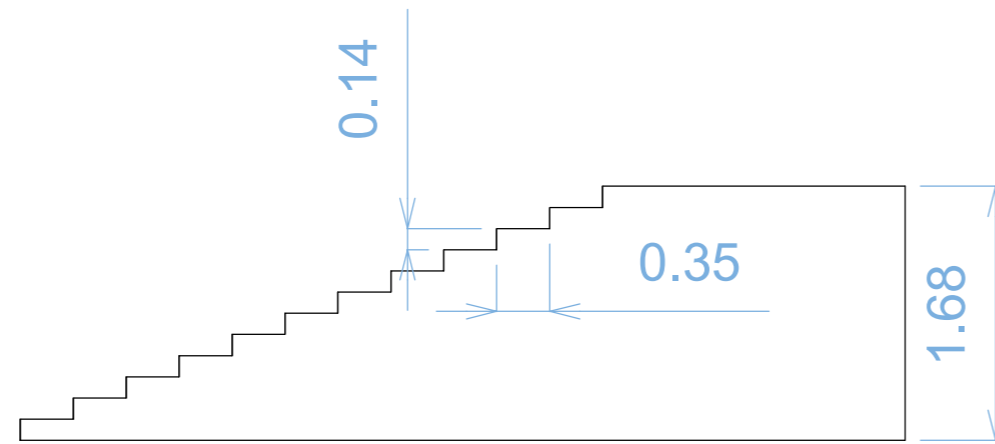


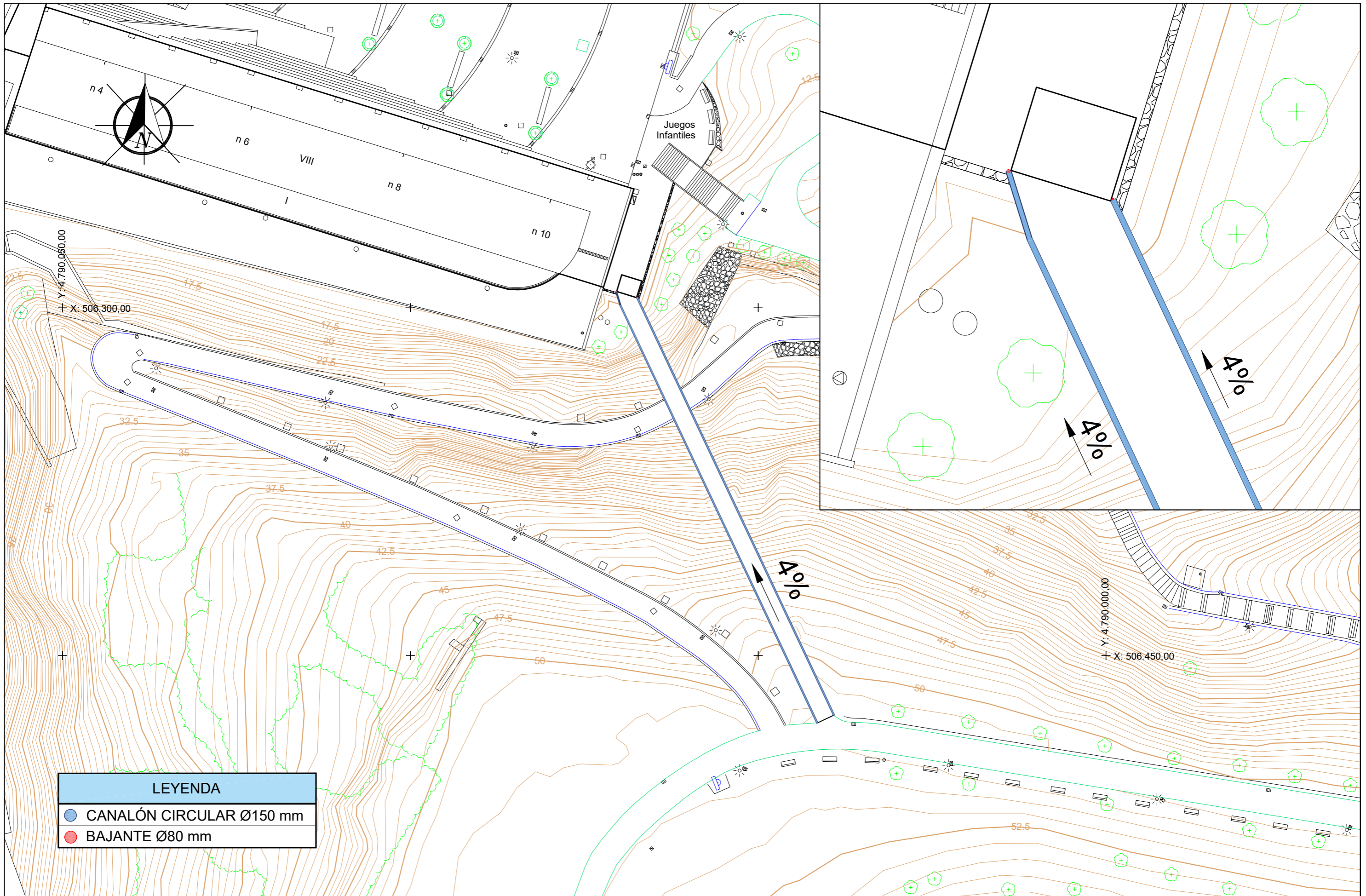




TRASDÓS

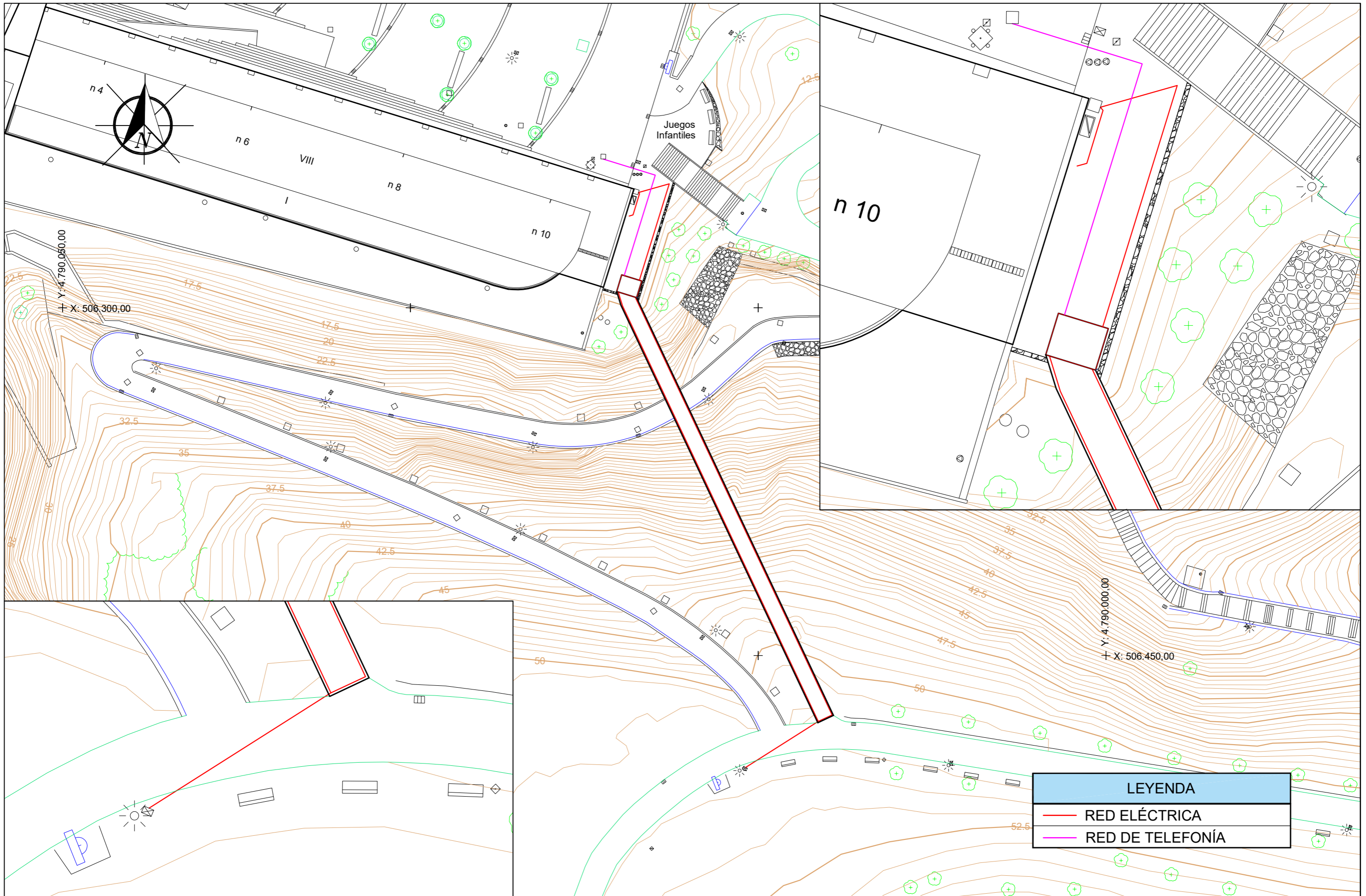
TRASDÓS

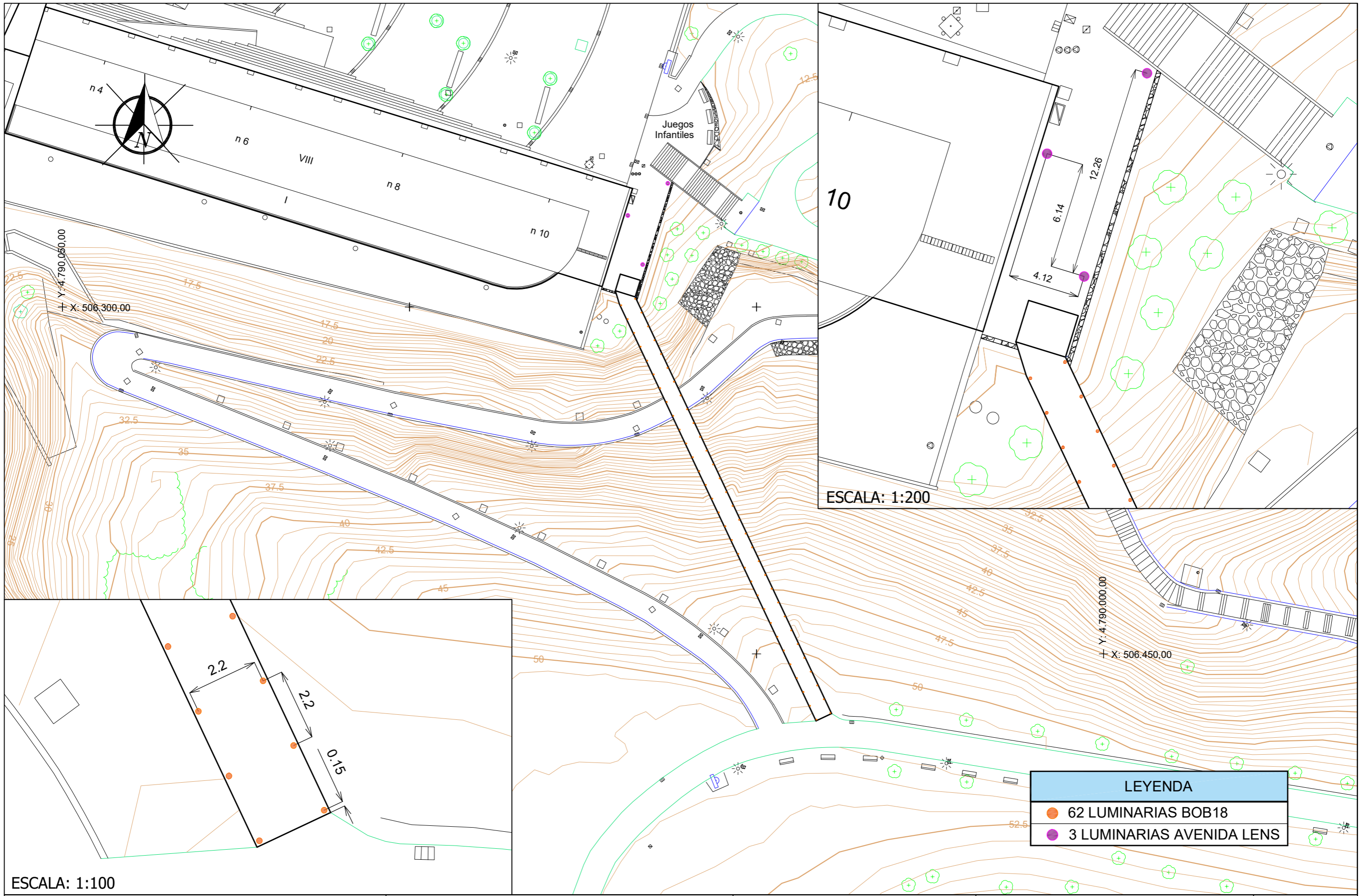






LEYENDA	
	CANALÓN CIRCULAR Ø150 mm
	BAJANTE Ø80 mm



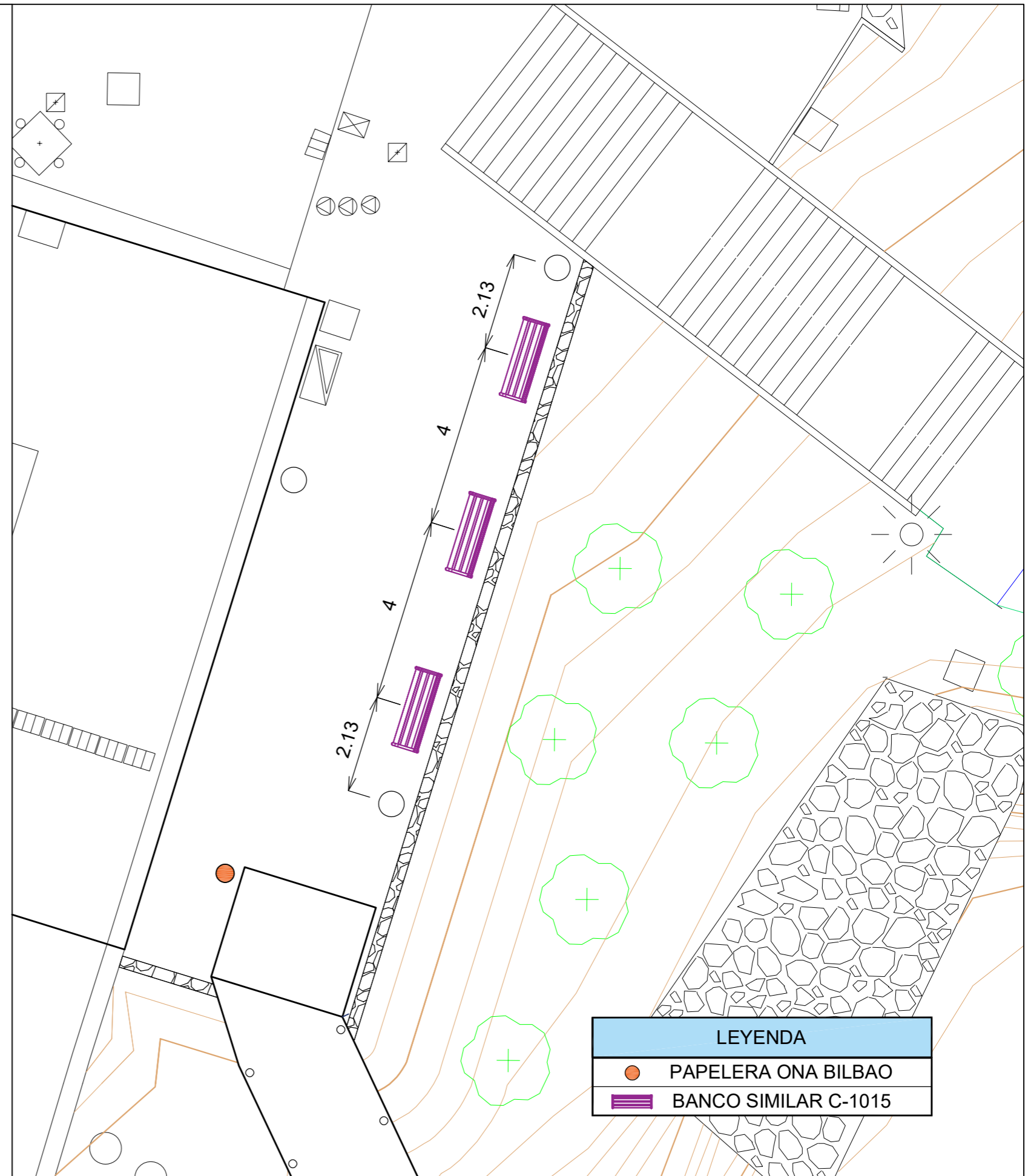
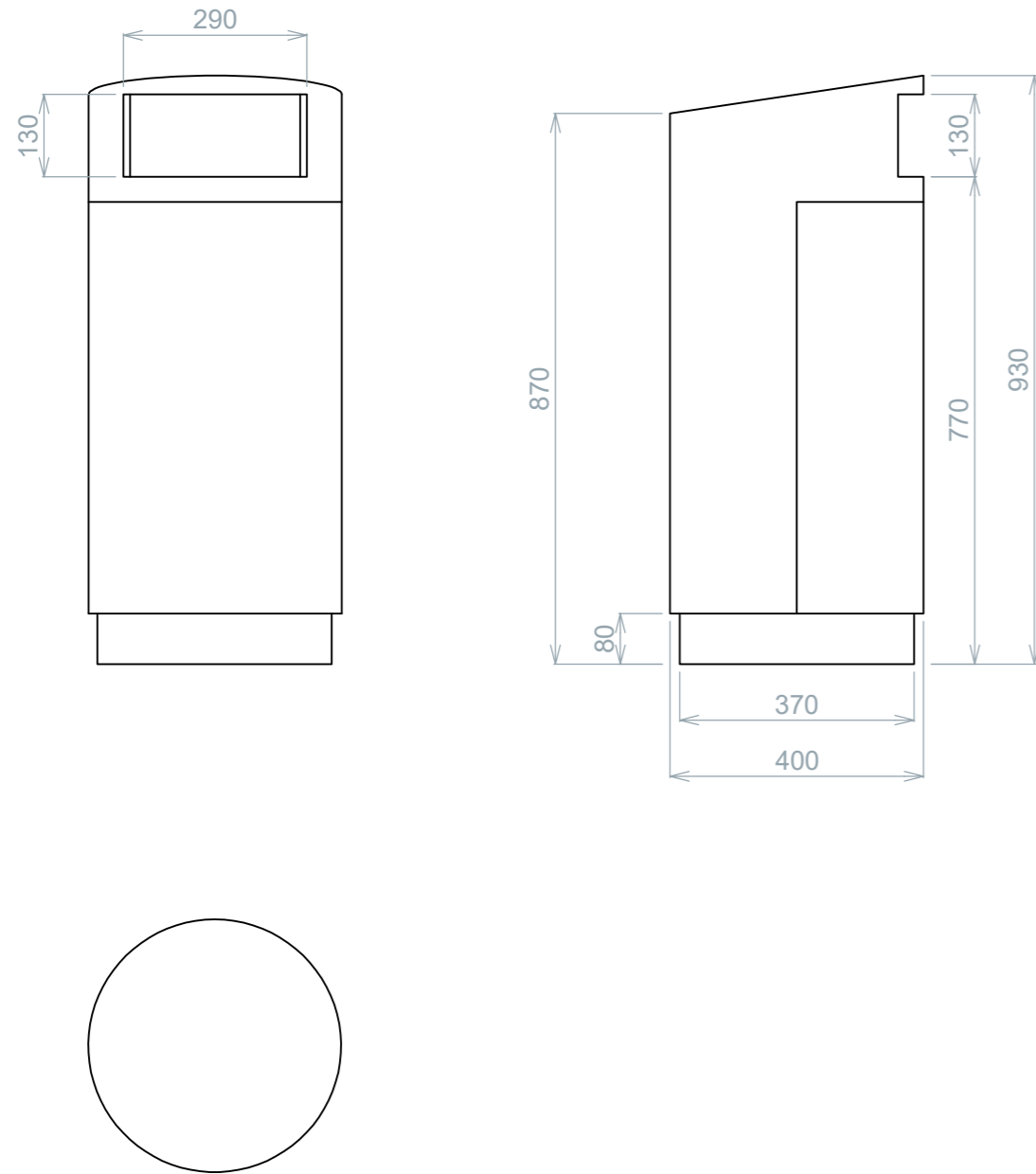


ESCALA: 1:200

ESCALA: 1:100

LEYENDA	
	62 LUMINARIAS BOB18
	3 LUMINARIAS AVENIDA LENS

# PAPELERA ONA BILBAO



LEYENDA	
	PAPELERA ONA BILBAO
	BANCO SIMILAR C-1015



# BANCO SIMILAR C-1015

Banco Similar con pata de fundición de hierro y 5 listones de madera de Guinea.

