4. ERANSKINA.- EGITURAK

ANEJO 4.- ESTRUCTURAS

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1. INTRODUCCIÓN Y OBJETO

En el presente Anejo se incluye la justificación estructura de la pasarela peatonal objeto del proyecto. Esta pasarela permite la conexión peatonal para la supresión del paso a nivel de Euba (Amorebieta) en el p.k. 25+387 de la línea de ferrocarril Bilbao – Donostia (País Vasco). Se incluye así mismo en el apéndice 2 la justificación de cálculo de la escollera de contención del itinerario peatonal.



Paso a nivel p.k. 25+387 de la línea de ferrocarril Bilbao - Donostial actual. (Fuente: Google Maps)

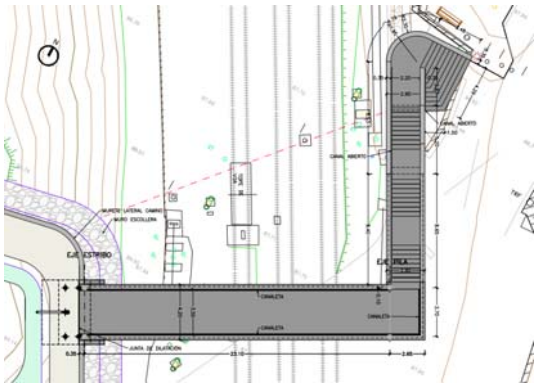


Infografías de la nueva pasarela. (Fuente: Google Maps)

2. DESCRIPCIÓN DE LA ESTRUCTURA

La pasarela arranca desde el camino de nueva construcción situado en el lado Oeste del paso a nivel actual de la línea de ferrocarril Bilbao – Donostia (en el p.k. 25+387) y desembarca en el lado Este de la misma.

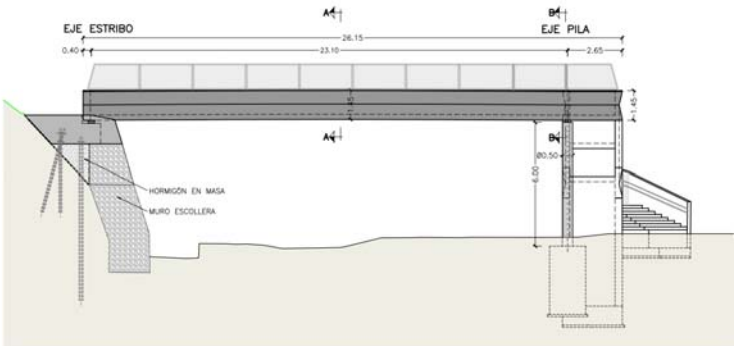
En planta, el tramo principal pasa perpendicular a la vía férrea y se extiende hasta completar el paso sobre la misma. En este punto se produce un quiebro a 90º desde el que se inicia la escalera que permite el desembarco en el lado Oeste. Además, la pasarela cuenta con un apoyo intermedio resuelto mediante una pila con dos fustes situada en el quiebro interior de la pasarela y con eje perpendicular a la misma.



Planta pasarela

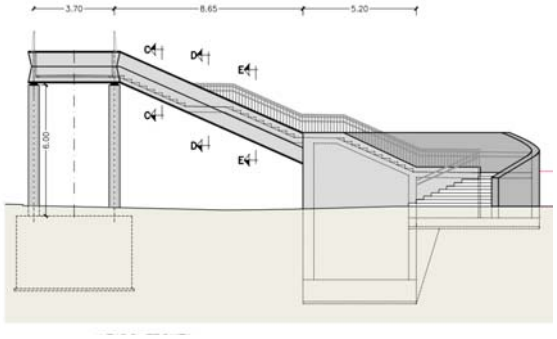
En alzado, la pasarela se ha resuelto de la siguiente manera:

- El tramo principal empieza y termina a la misma cota, dando sólo una ligera pendiente con un acuerdo circular con clave en centro vano, llegando a los ejes de pila y estribo con una pendiente del 0,75%.



Alzado pasarela

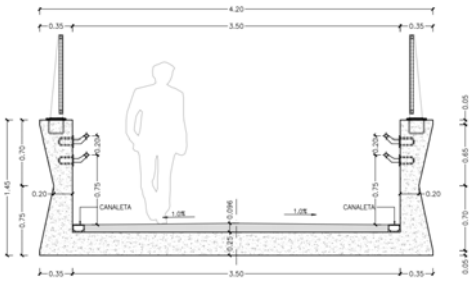
- En la escalera, las vigas tienen una pendiente constante, mientras que la losa sigue el alzado del peldañeado y sus correspondientes rellanos.



Alzado escaleras

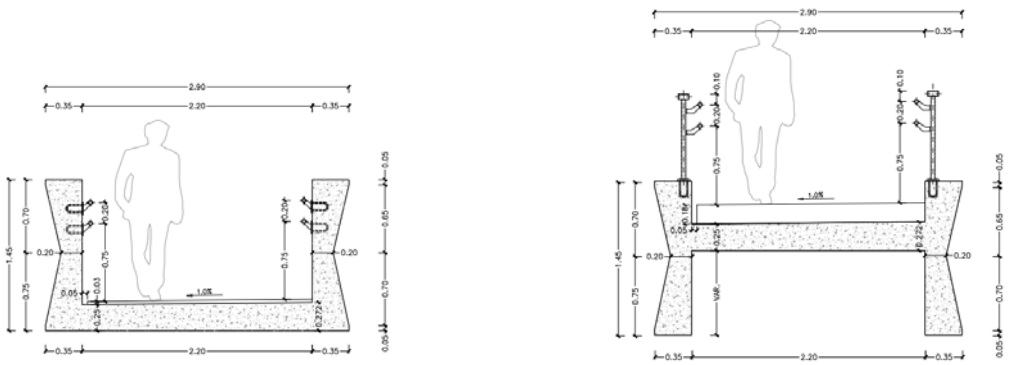
El tramo principal cuenta con una luz de 23.10 m desde eje de estribo 1 (Oeste) a eje de pila y la escalera es de 8.65 m de longitud desde el eje del fuste interior de la pila hasta el eje de estribo 2 (Este).

El tramo de pasarela, que cuenta con un ancho interior de 3,50 m, se ha proyectado con una sección en U de hormigón armado y canto constante e igual a 1,45 m, siendo las vigas laterales que conforman la sección de ancho variable (0,35 máx – 0,20 min). La losa inferior tiene un espesor de 0.25 m.



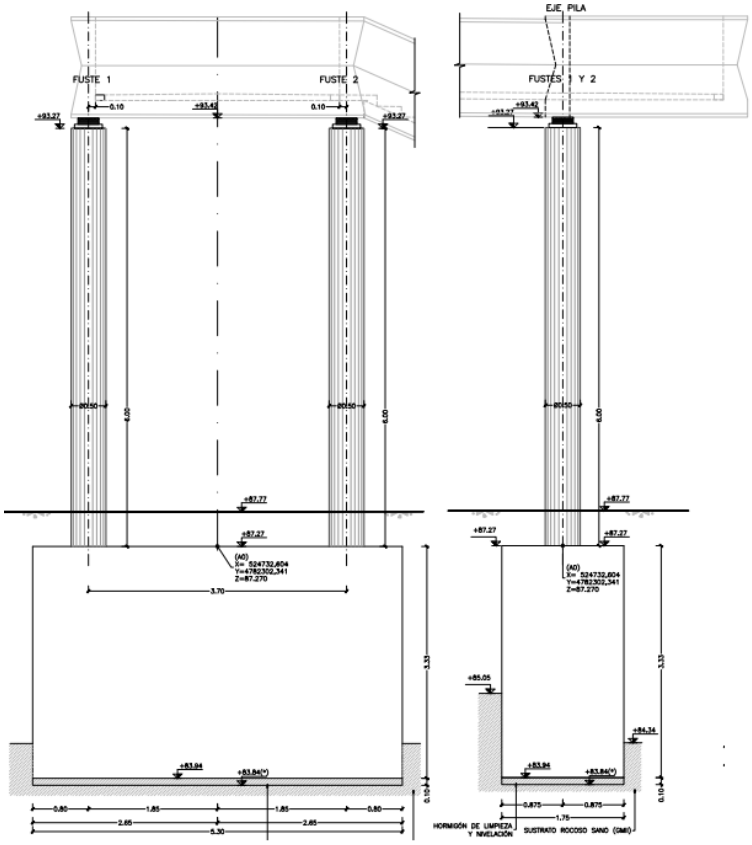
Sección tipo. Pasarela

En el tramo de escaleras, cuyo ancho interior se reduce a 2,20 m, las vigas laterales tienen la misma forma que en la pasarela, siendo la losa la que se adapta al peldañeado, situándose desde la cara inferior de las vigas a una altura variable en función del tramo de escalera en el que se encuentre. Además, se ha dotado a la losa de una pendiente transversal del 1,0% de tal forma que el espesor es variable entre 0,25 m y 0,272 m.

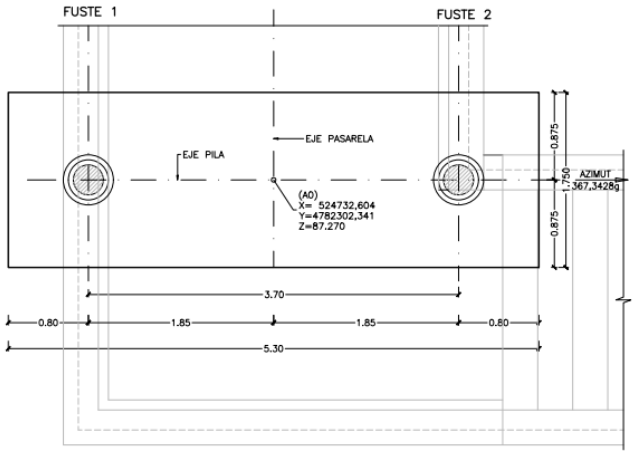


Secciones tipo. Escaleras

La pila, que cuenta con una altura de 6,00 m, tiene dos fustes de sección circular de diámetro igual a 500 mm. La unión entre pila y tablero se resuelve mediante un apoyo de 2 neoprenos (uno por viga) zunchado anclado-gofrado ϕ300x77(40). Respecto a la cimentación, siguiendo las recomendaciones geotécnicas, se ha ido a una zapata empotrada en el sustrato rocoso 0,50 m. La zapata cuenta con 3,33 m de canto, 1,75 m de ancho (perpendicular al eje de pila) y 5,3 m de longitud (paralelo al eje de pila).



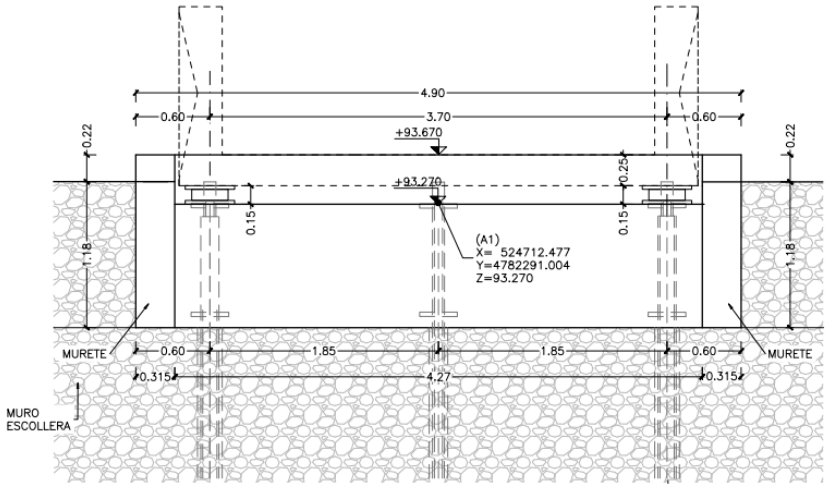
Alzado. Pila intermedia



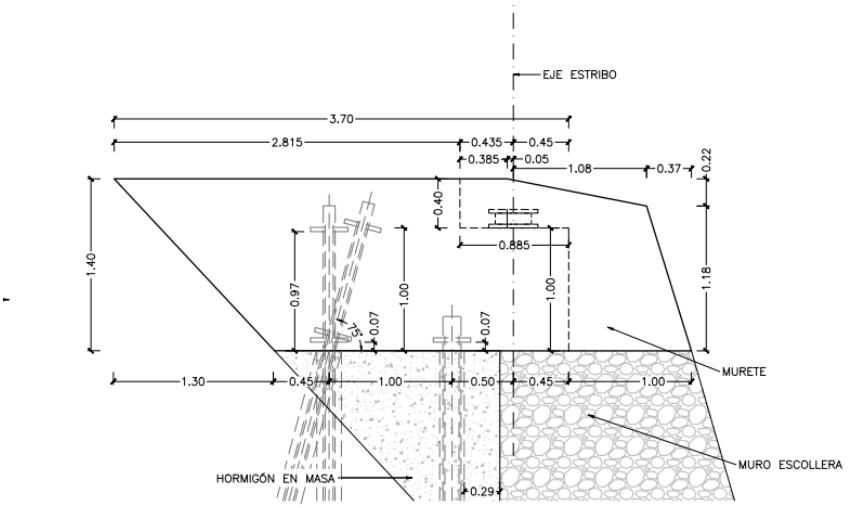
Planta. Pila intermedia

El Estribo 1 se resuelve mediante un encepado de micropilotes. La pasarela se apoya en el estribo mediante 2 neoprenos zunchado anclado-gofrado ⍉300x77(40). El encepado cuenta con unas dimensiones de 4,90 x 3,70 m en planta y un canto de 1,00 m en la zona de apoyos y 1,40 m en el resto. La configuración de los micropilotes es la siguiente:

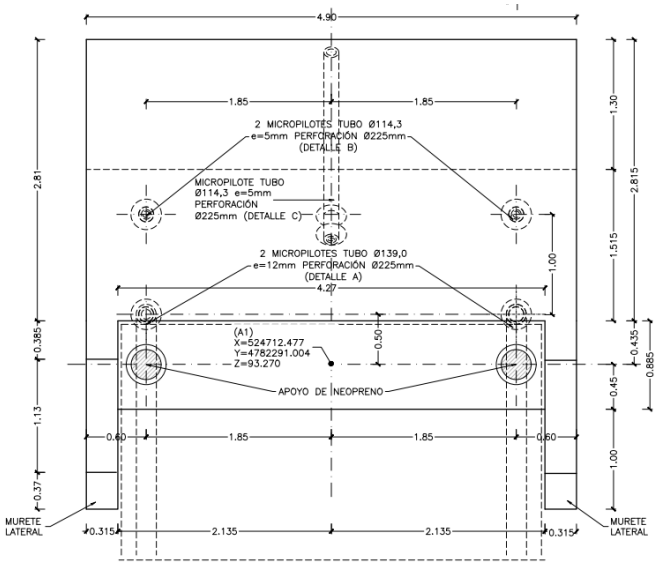
- Familia de micropilotes verticales dispuesta a 0,50 m del eje de apoyo y compuesta por dos micropilotes de armadura tubular Φ139mm y e=12 mm.
- Familia de micropilotes verticales dispuesta a 1,50 m del eje de apoyo y compuesta por dos micropilotes de armadura tubular Φ114,3 mm y e=5 mm.
- Familia de micropilotes inclinados (4V:1H) dispuesta a 1,50 m del eje de apoyo y compuesta por un micropilotes de armadura tubular Φ114,3 mm y e=5 mm.



Alzado frontal. Estribo 1

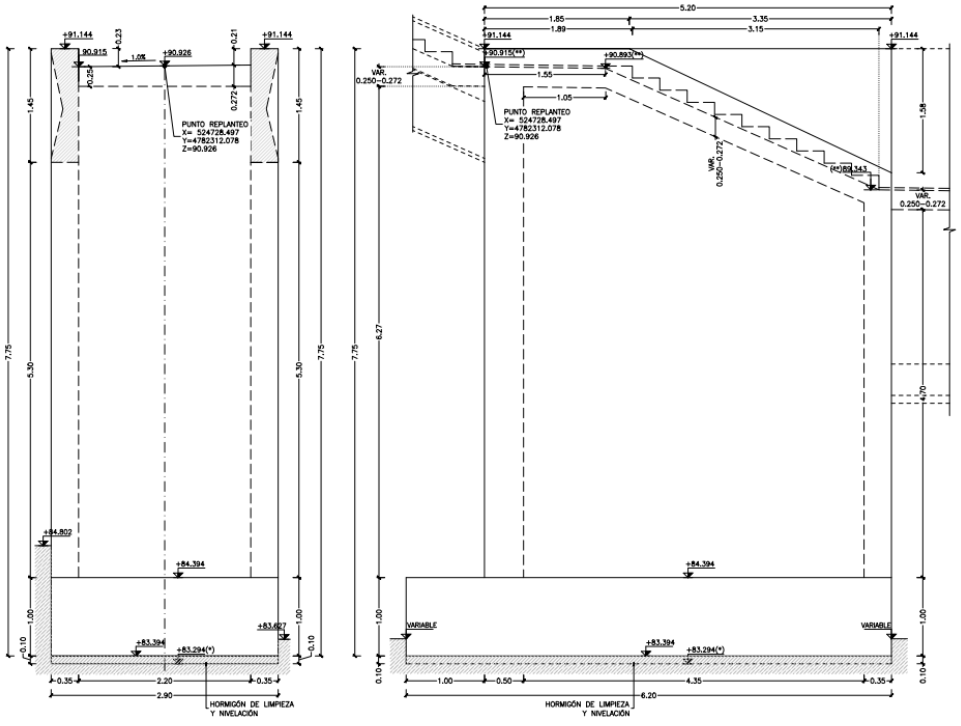


Alzado lateral. Estribo 1

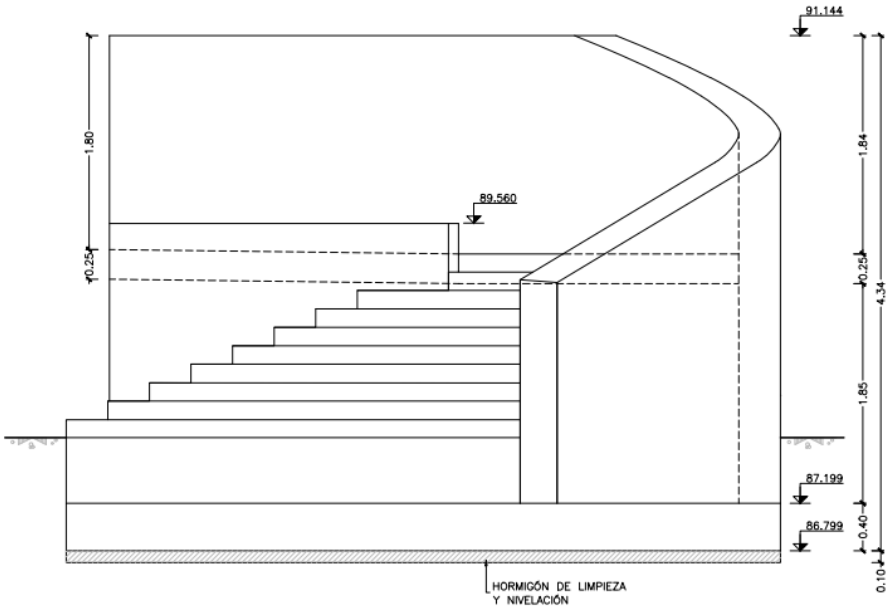


Planta. Estribo 1

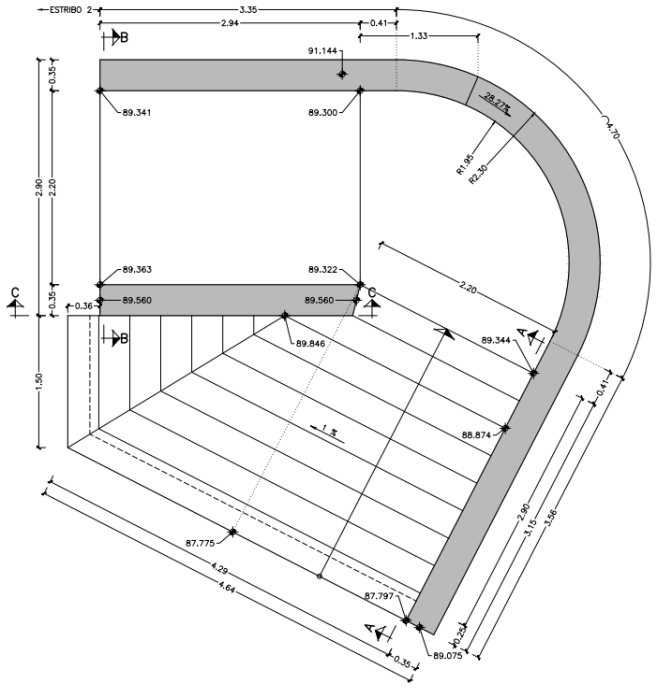
El estribo 2, en el que se empotra la pasarela (en su zona de escalera), se resuelve mediante sendos muros laterales de 0,35 m de espesor (siguiendo el espesor máximo de las vigas laterales) y una longitud en planta de 5,20 m y por muros frontales con espesores de 0,35 m y 0,50 m y una longitud de 2,90 m (ancho de escalera). La cimentación se ha resuelto mediante una zapata empotrada en el sustrato rocoso al menos 0,30 m en el lado Este. Las dimensiones de la misma son de 2,9 m x 6,20 m en planta y un canto de 1,00 m.



Alzado frontal y lateral. Estribo 2



Alzado frontal. Escalera de acceso



Planta. Escalera de acceso

3. BASES DE PROYECTO

3.1. Normativa y documentación considerada

Para la realización de este proyecto se ha tenido en cuenta la siguiente normativa:

- EHE-08: Instrucción de Hormigón Estructural. Ministerio de Fomento (2008)
- IAP-11. Instrucción de las acciones a considerar en el proyecto de puentes de carretera. Ministerio de Fomento (2011).
- Guía de cimentaciones para puentes de carretera. Ministerio de Fomento (2009).
- Guía para el proyecto y la ejecución de micropilotes en obras de carretera. Ministerio de Fomento (2005)
- EN-1337-1:2005. Apoyos estructurales. Parte 3: Apoyos elastoméricos.
- NCSP-07 Norma de construcción sismorresistente para puentes. Ministerio de Fomento (2008)
- UNE EN ISO 12994-5: Pinturas y barnices. Parte 5: Sistemas de pintura protectores.
- Orden C1C/561/2010. Ministerio de Vivivenda.
- Guía de aplicación de la normativa técnica vigente en materia de accesibilidad en la Comunidad Autónoma del País Vasco (2012).

4. ACCIONES

4.1. Valores característicos de las acciones

Con carácter general se han seguido los criterios especificados en la Instrucción sobre las acciones a considerar en el proyecto de puentes de carretera IAP – 11.

4.2. Acciones permanentes

Se refiere al peso de los elementos que constituyen la obra, y se supone que actúan en todo momento siendo constantes en magnitud y posición. Están formadas por el peso propio y la carga muerta.

- Peso propio:
  El peso propio de la estructura se calcula considerando para el hormigón un valor de específico de 25 kN/m^3.

- Carga Muerta:
  - Barreras: Se ha considerado por lado:
    - Para la barandilla: 0,50 kN/m
    - Para la valla antivandálica (sólo en pasarela): 0,75 kN/m

    De tal forma que finalmente, en la pasarela se ha considerado una carga de 2,50 kN/m y en la escalera de 1,00 kN/m.
  - Acabado y peldañeado: Se ha considerado una densidad de 24 kN/m^3 y un espesor de 0,09 m y 0,12 m en pasarela y escalera respectivamente.

4.3. Acciones debidas al terreno

En este apartado se consideran las acciones originadas por el terreno natural o de relleno, sobre los elementos de la pasarela en contacto con él, que en este caso corresponde al estribo situado en el lado Este.

El peso se determinará aplicando al volumen de terreno que gravita sobre la superficie del elemento horizontal. En el presente proyecto, se considera una densidad de 20,0 kN/m^3.

Para el cálculo de los empujes del terreno se ha empleado un ángulo de rozamiento interno de valor Φ = 30º y cohesión igual a 0,0.

4.4. Acciones variables

4.4.1. Sobrecarga de uso

Acorde a la IAP-11 para la determinación de los efectos estáticos de la sobrecarga de uso debida al tráfico de peatones, se ha de considerar la acción simultánea de las cargas siguientes:

- Una carga vertical uniformemente distribuida de 5,0 kN/m^2.
- Una fuerza horizontal longitudinal de valor igual al 10% del total de carga vertical uniformemente distribuida, actuando en el eje del tablero al nivel de la superficie del pavimento.

4.4.2. Viento

La obtención de la carga equivalente de viento se efectúa de acuerdo con la Instrucción sobre las acciones a considerar en puentes de carretera IAP-11, concretamente en su apartado 4.2.

El primer paso consiste en la obtención de la velocidad de básica del viento para u periodo de retorno de 50 años (Vb).

$$V_b = c_{dir}\, c_{season}\, V_{b,0}$$

Donde,

- c_{dir} : Factor de dirección, que a falta de estudios más precisos puede tomarse igual a 1,0
- c_{season} : Factor estacional, que a falta de estudios precisos puede tomarse igual a 1,0
- $V_{b,0}$: Velocidad básica fundamental del viento (m/s)

La ciudad de Vitoria se encuentra dentro de la “zona C” del mapa de isotacas, por lo que $V_{b,0}$ es igual a 29,0 m/s (figura 4.2-a en IAP-11). La velocidad básica del viento para un periodo de retorno T es:

$$V_b\,(T) = V_{b,0}\;\; c_{prob}$$

A falta de estudios específicos, se tomará un periodo de retorno de 100 años para situaciones persistentes (c_{prob} = 1,04).

Por tanto, para un periodo de retorno de 100 años, la velocidad básica del viento es:

$$V_b\,(100) = 29{,}0 \times 1{,}04 = 30{,}16 \text{ m/s}$$

La velocidad media del viento [$V_m(z)$] a una altura z sobre el terreno es:

$$V_m(z) = c_r(z)\, c_o\, V_b(100)$$

Donde,

- c_0 es el factor de topografía e igual a 1,0
- $c_r(z)$ es el factor de rugosidad e igual a $K_r \ln(z/z_0)$ para $z \geq z_{min}$

El entorno de la ubicación de la pasarela considerado para la obtención de estos valores es "Tipo II: zona rural con vegetación baja y obstáculos aislados" (tabla 4.2-b en IAP-11).

Los valores de k_r, z_0 y z_{min} para este tipo de entorno son 0,190; 0,05 m y 2 m, respectivamente.

La altura de aplicación de la acción del viento considerada es de 8,0 m.

Por lo que el empuje del viento es:

$$F_w = (1/2\ \rho\ v_b(100)^2)\, c_e(z)\, c_f\, A_{ref}$$

Donde,

- ρ: es la densidad del aire e igual a 1,25 kg/m^3.
- $v_b(100)$ es la velocidad básica del viento para un periodo de retorno de 100 años.
- c_f es el coeficiente de fuerza del elemento considerado:
  - Pasarela: $cf = 2{,}5 - 0{,}3\left(\frac{4{,}2}{1{,}45}\right) = 1{,}63$
  - Escalera: $cf = 2{,}5 - 0{,}3\left(\frac{2{,}9}{1{,}45}\right) = 1{,}90$
  - Valla antivandálica: $cf = 2{,}00$
    (La valla antivandálica asciende 1,30 m por encima de la cara superior de las vigas laterales de la pasarela, de tal forma que desde el pavimento se tiene una altura total protegida de 2,50 m).
- A_{ref} es el área de referencia.
- $c_e(z)$ coeficiente de exposición en función de z.
- $c_e(z) = k_r^2\, [c_0^2\, \mathrm{Ln}^2(z/z_0) + 7\, k_l\, c_0\, \mathrm{Ln}(z/z_0)] = 0{,}190^2\, [1^2 \times \mathrm{Ln}^2(8/0{,}05) + 7 \times 1 \times 1 \times \mathrm{Ln}(8/0{,}05)] = 2.21$
- k_l es el factor de turbulencia, que según la IAP-11 se tomará igual a 1,0.

De lo anterior, se define la presión básica del viento como:

$$f_{w,b} = F_w / (A_{ref}\, c_f) = (1/2 \cdot 1{,}25 \cdot 30{,}16^2) \cdot 2{,}21 \cdot 10^{-3} = 1{,}26\ \mathrm{kN/m^2}$$

Además, se tiene en cuenta el efecto del ocultamiento en el lado situado a sotavento.

- La relación de solidez λ, es igual a $A_n/A_{tot} = 1$ en el caso de la pasarela y la escalera. En el caso de la zona con valla antivandálica se ha tomado de 0,60.
- El espaciamiento relativo s_r es igual a s/h_p, y se define a continuación en cada uno de los casos:
  - Pasarela: $s/h_p = 3{,}50/1{,}20 = 2{,}91$
  - Escalera: $s/h_p = 2{,}20/1{,}20 = 1{,}83$
  - Valla antivandálica: $s/h_p = 3{,}50/1{,}40 = 2{,}50$

- Finalemente, el coeficiente de ocultamiento, obtenido de la tabla 4.2-c de la IAP-11, se toma en cada caso de:
    - 0,31 para la pasarela
    - 0,20 para la escalera
    - 0,25 para la valla antivandálica

A continuación, se muestra en una tabla la fuerza del viento total considerada en la pasarela y en la escalera, así como el punto de aplicación (considerando como z=0 la cara inferior de la sección)

		Pasarela		Escalera	
		Barlovento	Sotavento	Barlovento	Sotavento
Sección hormigón	h [m]	1,45	1,20	1,60	1,35
	cfx	1,63	1,63	1,90	1,90
	λ·η	1,00	0,31	1,00	0,20
Valla antivandálica	h [m]	1,40	1,40		
	cfx	2,00	2,00		
	λ·η	0,60	0,15		
	Frel=Fw/fw,b [kN/(kN/m2)]	3,90	1,00	3,0	0,5
	z [m]	**1,27**	**1,13**	**0,80**	**0,68**
	fw,b [kN/m2]	1,26	1,26	1,26	1,26
	Fw [kN]	**4,90**	**1,30**	**3,80**	**0,60**

Viento longitudinal sobre el tablero
Siguiendo la IAP-11, se ha considerado un 25 % del empuje transversal producido por el viento.

Viento vertical sobre el tablero
El coeficiente de fuerza definido para el empuje vertical es de ±0,9, por lo que fwz=1,26·0.9=1,13 kN/m^2.

Viento transversal sobre pilas
Acorde a la tabla 4.2-e de la IAP-11, para un terreno tipo II y v_b=29 m/s, el empuje sobre pilas se considera de 2,95 kN/m^2.

4.4.3.Acciones térmicas

Para evaluar los efectos de la variación de temperatura sobre el tablero es preciso establecer en qué rango de temperaturas se puede encontrar la estructura. A estos efectos, se consideran dos situaciones límites, la de frío o enfriamiento y la de calor o calentamiento. Como primer paso es obtener T_{max} y T_{min}.

- T_{max}: obtenida de la gráfica de isotermas de la temperatura máxima anual del aire es para el emplazamiento del puente de 46º C.
- T_{min}: obtenida de la tabla temperatura mínima anual del aire es de -7,0ºC.

Estos valores se corresponden con un T=50 años, por lo que para un T=100 años los valores serán:

- T_{max} (100) = 47,84 ºC
- T_{min} (100) = -7,77 º C

La componente uniforme de la temperatura del tablero, también denominada temperatura efectiva (temperatura media de la sección transversal), tiene un valor mínimo $T_{e,min}$ y un valor máximo $T_{e,max}$ que se determina a partir de la temperatura del aire, mediante las expresiones siguientes:

$$T_{e,max} = T_{max} + \Delta T_{e,max}$$
$$T_{e,min} = T_{min} + \Delta T_{e,min}$$

Que en el caso de tableros tipo 3 “tablero de hormigón” vale:

$$T_{e,max} = T_{max} + 2 = 49,84\ ºC$$
$$T_{e,min} = T_{min} + 8 = 0,23\ ºC$$

Y considerando una temperatura inicial de la estructura (T_0) igual a 15ºC, la variación térmica que experimenta el tablero será:

$$\Delta T_{N,dilatación} = T_{e,max} - T_0 = 49,84 - 15 = 34,84\ ºC$$
$$\Delta T_{N,contraccion} = T_0 - T_{e,min} = 15 - (0,23) = 14,77\ ºC$$

Se ha considerado un coeficiente global de dilatación lineal igual a $1,0 \cdot 10^{-5}\ ºC^{-1}$. Por lo que:

$$\varepsilon_{,dilatación} = 34,84\ 1,0 \cdot 10^{-5} = 0,35\ ‰$$
$$\varepsilon_{,contracción} = 14,77\ 1,0 \cdot 10^{-5} = 0,15\ ‰$$

Para el dimensionamiento de aparatos de apoyo y juntas de dilatación se consideran una variación uniforme de temperatura de:

$$\Delta T_{N,dilatación} = 34,84 + 15,0 = 49,84\ ºC$$
$$\Delta T_{N,contraccion} = 14,77 + 15,0 = 29,77\ ºC$$

El efecto de la diferencia vertical de temperatura se ha considerado mediante el empleo de una componente lineal equivalente de la diferencia de temperatura entre la cara superior e inferior de la sección transversal de valor:

Fibra superior más caliente: +15 ºC
Fibra superior más fría: -8 ºC

Resultando una deformación impuesta igual a:

Fibra superior más caliente: $\chi = 15/1,45\ 1,0 \cdot 10^{-5} = -1,03 \cdot 10^{-4}\ m^{-1}$
Fibra superior más fría $\chi = -8/1,45\ 1,0 \cdot 10^{-5} = +5,50 \cdot 10^{-5}\ m^{-1}$

4.5. Acciones accidentales (sismo)

La aceleración sísmica básica se define en la Norma de Construcción Sismorresistente: Puentes (NCSP-07). En el Anejo 1 de dicha norma se detalla por municipios los valores de la aceleración sísmica básica iguales o superiores a 0,04 g en los que es necesaria la consideración de las acciones

sísmicas en el cálculo. El municipio de Amorebieta no aparece en dicho Anejo por lo que no es necesaria su consideración.

5. VALORES REPRESENTATIVOS DE LAS ACCIONES

Con carácter general se han seguido los criterios especificados en la Instrucción sobre las acciones a considerar en puentes de carretera IAP-11.

Las acciones se definen, en su magnitud, por sus valores representativos.

Una misma acción puede tener un único o varios valores representativos, según se indica a continuación, en función del tipo de acción.

5.1. Acciones permanentes (G)

Para las acciones permanentes se considerará un único valor representativo, coincidente con el valor característico G_k.

5.2. Acciones permanentes de valor no constante (G*)

- Acciones del terreno: para el peso del terreno, que gravita sobre elementos de la estructura, se considerará un único valor representativo, coincidente con el valor característico. Para el empuje del terreno, se considerará el valor representativo expuesto previamente.
- Acciones reológicas: El valor característico se obtiene a partir de las deformaciones provocadas por la retracción y fluencia según se especifica en la EHE-08.

5.3. Acciones variables (Q)

Cada una de las acciones variables puede considerarse con los siguientes valores representativos:

- Valor característico Q_k: valor de la acción cuando actúa aisladamente, que ha sido ya definido.
- Valor de combinación $\Psi_0 Q_k$: valor de la acción cuando actúa en compañía de alguna otra acción variable, para tener en cuenta la pequeña probabilidad de que actúen simultáneamente los valores más desfavorables de varias acciones independientes.
- Valor frecuente $\Psi_1 Q_k$: valor de la acción que es sobrepasado durante un período de corta duración respecto a la vida útil del puente (5% del tiempo). Corresponde a un período de retorno de una semana.
- Valor cuasi-permanente $\Psi_2 Q_k$: valor de la acción que es sobrepasado durante una gran parte de la vida útil del puente (el 50% o más del tiempo), o bien el valor medio.

Los valores de los coeficientes Ψ son los siguientes:

Acción			ψ_0	ψ_1	ψ_2
Sobrecarga de uso	gr 1, Cargas verticales	Vehículos pesados	0,75	0,75	0
		Sobrecarga uniforme	0,4	0,4	0 / 0,2(1)
		Carga en aceras	0,4	0,4	0
	gr 2, Fuerzas horizontales		0	0	0
	gr 3, Peatones		0	0	0
	gr 4, Aglomeraciones		0	0	0
	Sobrecarga de uso en pasarelas		0,4	0,4	0
Viento	F_{wk}	En situación persistente	0,6	0,2	0
		En construcción	0,8	0	0
		En pasarelas	0,3	0,2	0
Acción térmica	T_k		0,6	0,6	0,5
Nieve	$Q_{Sn,k}$	En construcción	0,8	0	0
Acción del agua	W_k	Empuje hidrostático	1,0	1,0	1,0
		Empuje hidrodinámico	1,0	1,0	1,0
Sobrecargas de construcción	Q_c		1,0	0	1,0

(1) El factor de simultaneidad ψ_2 correspondiente a la sobrecarga uniforme se tomará igual a 0, salvo en el caso de la combinación de acciones en situación sísmica (*apartado 6.3.1.3*), para la cual se tomará igual a 0,2.

Factores de simultaneidad (tabla 6.1-a en IAP-11)

6. VALORES DE CÁLCULO DE LAS ACCIONES

Con carácter general se han seguido los criterios especificados en la Instrucción sobre las acciones a considerar en puentes de carretera IAP-11.

Los valores de cálculo de las diferentes acciones son los obtenidos aplicando el correspondiente coeficiente parcial de seguridad Y_F a los valores representativos de las acciones, definidos en el apartado anterior.

Los estados límites se clasifican en:

- Estados límites de servicio (ELS).
- Estados límites últimos (ELU).

6.1. Estado límite último

Los estados límites últimos que se consideran son los siguientes:

- ELU de pérdida de equilibrio, por falta de estabilidad de una parte o la totalidad de la estructura, considerada como un cuerpo rígido.
- ELU de rotura, por deformación plástica excesiva, inestabilidad local o pérdida de estabilidad de una parte o de la totalidad de la estructura.

Los coeficientes parciales de seguridad se muestran a continuación para las comprobaciones de equilibrio y las comprobaciones resistentes.

(para la comprobación del ELU de equilibrio)

Acción		Efecto	
		Estabilizador	Desestabilizador
Permanente (*G* y G*)	Peso propio	0,9(1)	1,1(1)
	Carga muerta	0,9(1)	1,1(1)
	Empuje del terreno	1,0	1,5
Variable (*Q*)	Sobrecarga de uso	0	1,35
	Sobrecarga de uso en terraplenes	0	1,5
	Acciones climáticas(2)	0	1,5
	Empuje hidrostático	0	1,5
	Empuje hidrodinámico	0	1,5
	Sobrecargas de construcción	0	1,35

(1) Los valores de 0,9 y 1,1 podrán sustituirse por 0,95 y 1,05 respectivamente, si se prevé la colocación de sistemas de control que permitan conocer, durante la ejecución de la obra, el valor de las fuerzas de desequilibrio y si se pueden adoptar las medidas correctoras necesarias para mantener este valor dentro de los límites que garanticen la seguridad de todos los elementos de la estructura afectados por esta acción. Los equipos y sistemas de control deberán ser definidos y valorados en los diferentes documentos del proyecto, de forma que sea preceptiva su instalación en la obra, incluyéndose una descripción detallada de las medidas correctoras que deberán adoptarse caso de ser necesarias.

(2) Por acciones climáticas se entiende la acción térmica, el viento y la nieve.

Coeficientes parciales para las acciones, para la comprobación ELU de equilibrio (tabla 6.2-a en IAP-11)

(para las comprobaciones resistentes)

Acción		Efecto	
		Favorable	Desfavorable
Permanente de valor constante (*G*)	Peso propio	1,0	1,35
	Carga muerta	1,0	1,35
Permanente de valor no constante (*G**)	Pretensado P_1	1,0	1,0 / 1,2(1) / 1,3(2)
	Pretensado P_2	1,0	1,35
	Otras presolicitaciones	1,0	1,0
	Reológicas	1,0	1,35
	Empuje del terreno	1,0	1,5
	Asientos	0	1,2 / 1,35(3)
	Rozamiento de apoyos deslizantes	1,0	1,35
Variable (*Q*)	Sobrecarga de uso	0	1,35
	Sobrecarga de uso en terraplenes	0	1,5
	Acciones climáticas	0	1,5
	Empuje hidrostático	0	1,5
	Empuje hidrodinámico	0	1,5
	Sobrecargas de construcción	0	1,35

(1) El coeficiente $\gamma_{G^*} = 1,2$ será de aplicación al pretensado P_1 en el caso de verificaciones locales tales como la transmisión de la fuerza de pretensado al hormigón en zonas de anclajes, cuando se toma como valor de la acción el que corresponde a la carga máxima (tensión de rotura) del elemento a tesar.

(2) El coeficiente $\gamma_{G^*} = 1,3$ se aplicará al pretensado P_1 en casos de inestabilidad (pandeo) cuando ésta pueda ser inducida por el axil debido a un pretensado exterior.

(3) El coeficiente $\gamma_{G^*} = 1,35$ corresponde a una evaluación de los efectos de los asientos mediante un cálculo elasto-plástico, mientras que el valor $\gamma_{G^*} = 1,2$ corresponde a un cálculo elástico de esfuerzos.

Coeficientes parciales para las acciones, para las comprobaciones resistentes (tabla 6.2-b en IAP-11)

6.2. Estado límite de servicio

Se consideran los siguientes estados límites de servicio:

- ELS de vibraciones inaceptables para los usuarios del puente o que puedan afectar a su funcionalidad o provocar daños en elementos no estructurales.
- ELS de deformaciones
- ELS de fisuración

Los coeficientes parciales de seguridad en servicio son los siguientes:

Acción		Efecto	
		Favorable	Desfavorable
Permanente de valor constante (G)	Peso propio	1,0	1,0
	Carga muerta	1,0	1,0
Permanente de valor no constante (G^*)	Pretensado P_1	0,9(1)	1,1(1)
	Pretensado P_2	1,0	1,0
	Otras presolicitaciones	1,0	1,0
	Reológicas	1,0	1,0
	Empuje del terreno	1,0	1,0
	Asientos	0	1,0
	Rozamiento de apoyos deslizantes	1,0	1,0
Variable (Q)	Sobrecarga de uso	0	1,0
	Sobrecarga de uso en terraplenes	0	1,0
	Acciones climáticas	0	1,0
	Empuje hidrostático	0	1,0
	Empuje hidrodinámico	0	1,0
	Sobrecargas de construcción	0	1,0

(1) Para la acción del pretensado se tomarán los coeficientes que indique la EHE-08 o normativa que la sustituya. En la tabla figuran los valores que la EHE-08 recoge para el caso de estructuras postesas. En el caso de estructuras pretesas, los coeficientes parciales son 0,95 y 1,05 para efecto favorable y desfavorable, respectivamente.

Coeficientes parciales para las acciones, para las comprobaciones en ELS (tabla 6.2-c en IAP-11)

7. COMBINACIÓN DE ACCIONES

Con carácter general se han seguido los criterios especificados en la Instrucción sobre las acciones a considerar en puentes de carretera IAP-11.

Las hipótesis de carga a considerar se formarán combinando los valores de cálculo de las acciones cuya actuación pueda ser simultánea, según los criterios generales que se indican a continuación.

7.1. Estado límite último

Las combinaciones de las distintas acciones consideradas en las situaciones persistentes y transitorias, se realizarán de acuerdo con el siguiente criterio:

$$\sum_{j\geq 1}\gamma_{G,j}\ G_{k,j} + \sum_{i\geq 1}\gamma_{G^*,j}\ G^{*}{}_{k,i} + \gamma_{Q,1}\ Q_{k,1} + \sum_{i>1}\gamma_{Q,i}\ Q_{k,i}\psi_{0,i}$$

Donde,

$G_{k,j}$ Valor representativo de cada acción permanente.

$G_{k,i}$ Valor representativo de cada acción permanente de valor no constante.

$Q_{k,i}$ Valor representativo (valor característico) de la acción variable dominante.

$\Psi_{0,i}\, Q_{k,i}$ Valores representativos (valores de combinación) de las acciones variables concomitantes con la acción variable dominante.

7.2. Estado límite de servicio

Las combinaciones de las distintas acciones consideradas en estas situaciones, se realizará de acuerdo con el siguiente criterio:

- Combinación característica (poco probable o rara):

$$\sum_{j\geq 1} G_{k,j} + \sum_{i\geq} \gamma_{G^*,i}\ G_{*k,i} + \gamma_{Q,1}\ Q_{k,1} + \sum_{i>1}\gamma_{Q,i}\ \psi_{0,i}\ Q_{Q,i}$$

- Combinación frecuente:

$$\sum_{j\geq 1} G_{k,j} + \sum_{i\geq 1} \gamma_{G^*,i}\ G_{*k,i} + \gamma_{Q,1}\ \psi_{1,1}\ Q_{k,1} + \sum_{i>1}\gamma_{Q,i}\ \psi_{2,i}\ Q_{k,i}$$

- Combinación cuasi-permanente:

$$\sum_{j\geq 1} G_{k,j} + \sum_{i\geq 1} \gamma_{G^*,i}\ G_{*k,i} + \sum_{i>1}\gamma_{Q,i}\ \psi_{2,i}\ Q_{k,i}$$

8. DURABILIDAD, MATERIALES Y CONDICIONES DE CIMENTACIÓN

8.1. Condiciones de durabilidad

La localidad de Euba tiene una precipitación media anual superior a 600 mm por lo que las clases generales de exposición relativas a la corrosión de las armaduras, siguiendo la tabla 8.2.2 de la EHE, se definen como:

- Elementos de hormigón armado exteriores: IIa
- Elementos de hormigón armado enterrado: IIa

8.2. Materiales

8.2.1.Hormigón

- Hormigón tablero HA-35/B/20/IIa

- Hormigón en fustes de pilas HA-30/B/20/IIa
- Hormigón en zapata de pila HA-25/B/20/IIa
- Hormigón en alzado y zapata de estribo Este HA-30/B/20/IIa
- Hormigón en encepado de estribo Oeste HA-30/B/20/IIa

8.2.2.Acero

- Acero pasivo B 500 S
- Acero en micropilotes S 355 J2+N

8.2.3.Coeficientes de minoración

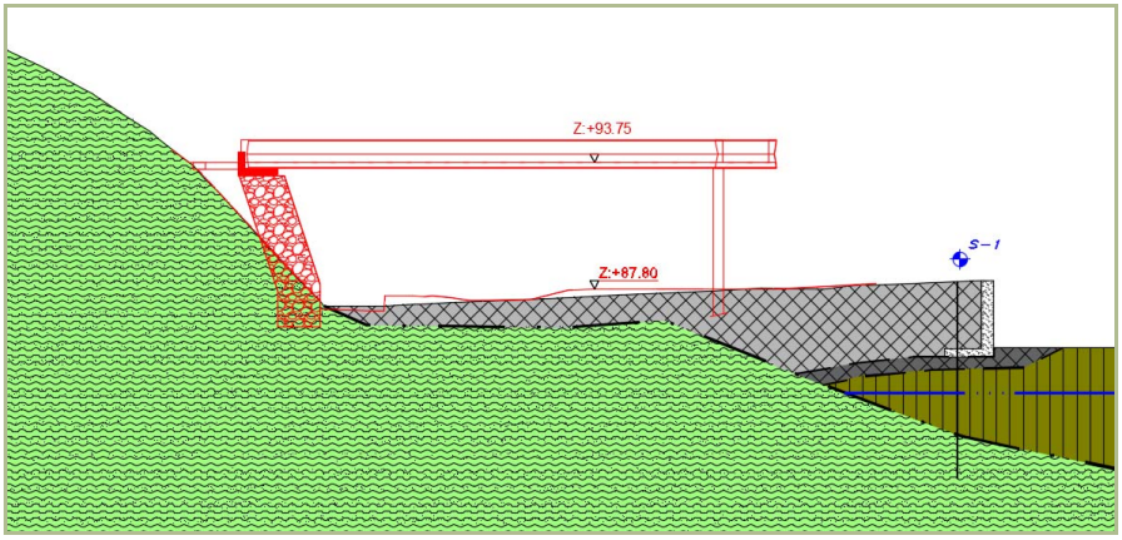
- Hormigón: 1,50
- Acero pasivo: 1,15
- Acero micropilotes: 1,10

8.3. Recubrimiento de las armaduras

De acuerdo con el artículo 37.2.4 de la EHE-08, los recubrimientos nominales mínimos de las armaduras deben ser de 25+5=30 mm en todos los casos.

8.4. Condiciones de cimentación

A continuación, se incluye el perfil geotécnico del terreno en la ubicación de la pasarela:



Acorde a las recomendaciones geotécnicas:

- En el estribo Este, se ha profundizado la cimentación hasta apoyar en roca sana, y considerando una tensión admisible es de 6,00 kg/cm^2.

- El estribo Oeste se ha resuelto mediante un encepado micropilotado. Para el cálculo de los micropilotes se ha considerado:

    - Resistencia a compresión simple del macizo rocoso: 319 kg/cm^2
    - Resistencia por fuste límite: 0,60 MPa (I.U.)

9. METODOLOGÍA Y MODELOS

9.1. Programas de cálculo empleados

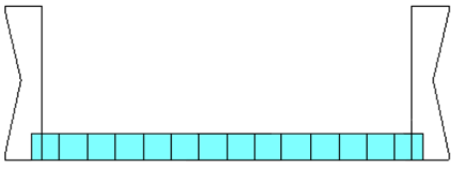
Los programas de cálculo empleados para el dimensionamiento de los diferentes elementos son los que se citan a continuación:

- SOFiSTiK 2018, programa de cálculo de elementos finitos que integra elementos tipo barra y tipo losa.
- STATIK – 7, programa de elementos finitos tipo barra desarrollado por CUBUS AG.
- FAGUS – 6, programa para el cálculo tensional de secciones desarrollado por CUBUS AG.
- CEDRUS – 7; programa de elementos finitos tipo laja y placa desarrollado por CUBUS AG.
- RIDO -4—; programa especializado en el cálculo de pantallas mediante un análisis elastoplástico.

9.2. Modelo general de cálculo

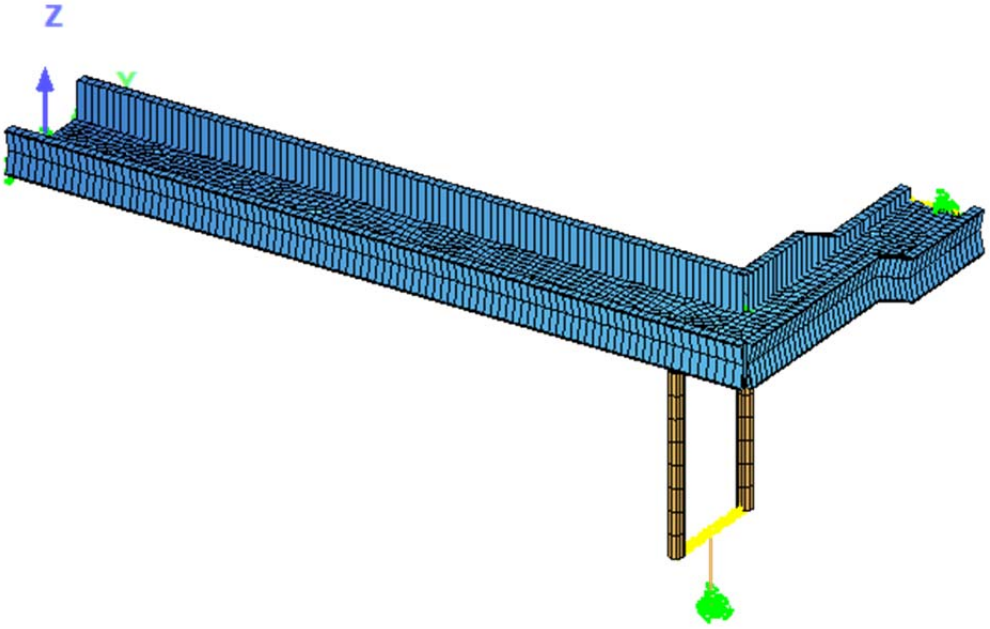
El análisis global de la pasarela se ha llevado a cabo mediante un modelo de elementos finitos tipo barra y losa tridimensional realizado mediante el programa de cálculo SOFISTIK.

En el modelo, para la sección en U se ha diferenciado por una parte las vigas laterales, modelizadas mediante elementos tipo barra, y por otra la losa inferior, modelizada con elementos tipo losa. Para la obtención de los esfuerzos los esfuerzos se han integrado para la sección completa.

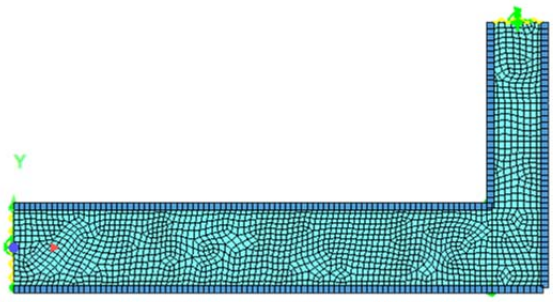


Modelo general - SFK – Sección tipo

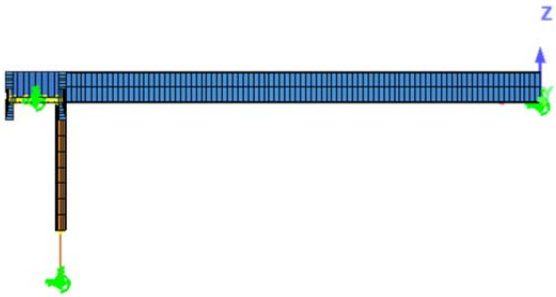
A continuación, se incluyen imágenes del modelo de cálculo:



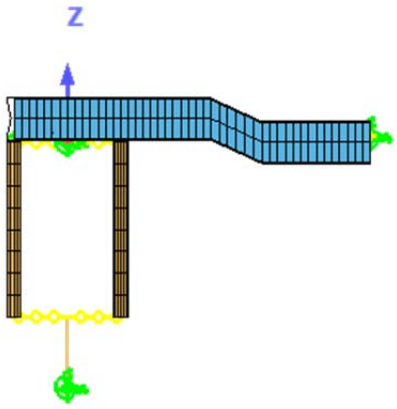
Modelo general - SFK - Representación tridimensional



Modelo general - SFK - Planta



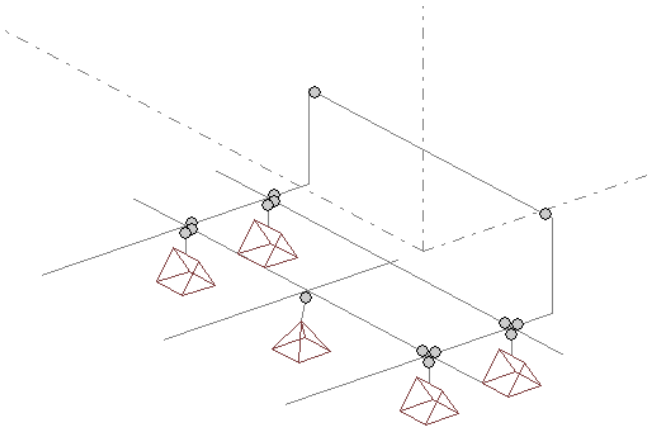
Modelo general - SFK – Alzado pasarela



Modelo general - SFK – Alzado escalera

9.3. Modelo estribo 1

El cálculo del macizo micropilotado se ha llevado a cabo con el programa STATIK-7, donde se ha modelizado el encepado con un emparrillado plano, tal y como se muestra en la siguiente figura.

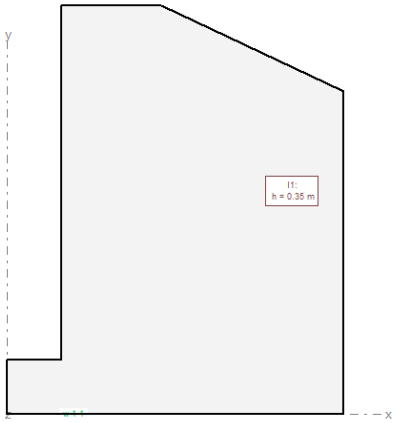


Modelo encepado Estribo 1 - STATIK – Alzado escalera

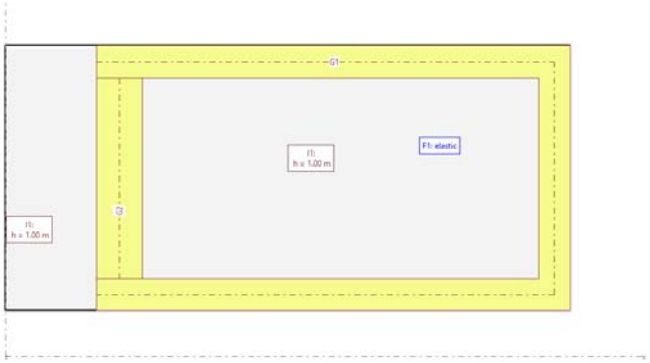
Sólo se ha considerado empotramiento en la base de los micropilotes para momentos de eje longitudinal, en el resto de casos, se han considerado biarticulados.

9.4. Modelo estribo 2

Para el dimensionamiento del estribo 2, se ha seguido un procedimiento simplificado, analizando por separado muros laterales, frontales y zapata mediante modelos de elementos finitos tipo placa y laja con el programa de cálculo CEDRUS 7 de la casa CUBUS A,G.



Modelo Estribo 2 - CEDRUS – Muros laterales



Modelo Estribo 2 - CEDRUS – Muros laterales

10. CÁLCULOS JUSTIFICATIVOS

10.1. Cálculos justificativos pasarela y escaleras

Los cálculos justificativos de la solución propuesta para pasarela y escaleras son conformes a la normativa vigente y se recogen en el apéndice nº1 del presente anejo.

10.2. Cálculos justificativos escollera hormigonada

Se adjuntan así mismo los cálculos justificativos de la escollera hormigonada del itinerario peatonal en el apéndice nº 2.

10.1.- Cálculos justificativos pasarela y escaleras

MODELO GENERAL

A continuación se incluye la definición del modelo general de cálculo.

El programa en el que será realizado ha sido FORJTIK 2018.

MODELO

UNIDADES, MATERIALES Y NORMATIVA

Default design code is EuroNorm EN 1992-1-1:2004 Concrete Structures (Espagna) V 2018
Structure and Tab.7.1N: AN (Buildings)
Snow load zone : 1

Materials

Mat	Classification
1	C 35/45 (EN 1992)
2	C 30/37 (EN 1992)
100	S 355 (EN 1993)

Mat 1 C 35/45 (EN 1992)

Young's modulus	E	34077	[N/mm2]	Safetyfactor		1.50	[-]
Poisson's ratio	μ	0.20	[-]	Strength	fc	35.00	[MPa]
Shear modulus	G	14199	[N/mm2]	Nominal strength	fck	35.00	[MPa]
Compression modulus	K	18932	[N/mm2]	Tensile strength	fctm	3.21	[MPa]
Nominal Weight	γ	25.0	[kN/m3]	Tensile strength	fctk,05	2.25	[MPa]
Mean density	ρ	2400.0	[kg/m3]	Tensile strength	fctk,95	4.17	[MPa]
Elongation coefficient	α	1.00E-05	[1/K]	Bond strength	fbd	3.37	[MPa]
				Service strength	fcm	43.00	[MPa]
				Fatigue strength	fcd,fat	17.06	[MPa]
				Tensile strength	fctd	1.50	[MPa]
				Tensile failure energy	Gf	0.14	[N/mm]

Mat 2 C 30/37 (EN 1992)

Young's modulus	E	32837	[N/mm2]	Safetyfactor		1.50	[-]
Poisson's ratio	μ	0.20	[-]	Strength	fc	30.00	[MPa]
Shear modulus	G	13682	[N/mm2]	Nominal strength	fck	30.00	[MPa]
Compression modulus	K	18243	[N/mm2]	Tensile strength	fctm	2.90	[MPa]
Nominal Weight	γ	25.0	[kN/m3]	Tensile strength	fctk,05	2.03	[MPa]
Mean density	ρ	2400.0	[kg/m3]	Tensile strength	fctk,95	3.77	[MPa]
Elongation coefficient	α	1.00E-05	[1/K]	Bond strength	fbd	3.04	[MPa]
				Service strength	fcm	38.00	[MPa]
				Fatigue strength	fcd,fat	14.96	[MPa]
				Tensile strength	fctd	1.35	[MPa]
				Tensile failure energy	Gf	0.14	[N/mm]

Mat100 S 355 (EN 1993)

Young's modulus	E	**********	[N/mm2]	Safetyfactor		1.00	[-]
Poisson's ratio	μ	0.30	[-]	Yield stress	fy	355.00	[MPa]
Shear modulus	G	**********	[N/mm2]	Compressive yield	fyc	355.00	[MPa]
Compression modulus	K	**********	[N/mm2]	Tensile strength	ft	490.00	[MPa]
Nominal Weight	γ	0.0	[kN/m3]	Compressive strength	fc	490.00	[MPa]
Mean density	ρ	7850.0	[kg/m3]	Ultimate strain		100.00	[o/oo]
Elongation coefficient	α	1.20E-05	[1/K]	relative bond coeff.		0.00	[-]
max. thickness	t-max	40.00	[mm]	EN 1992 bond coeff.	k1	0.00	[-]
				Hardening modulus	Eh	0.00	[MPa]
				Proportional limit	fp	355.00	[MPa]
				Dynamic allowance	σ-dyn	0.00	[MPa]

Summary of beam elements

Cross sections

SNo	TotLength [m]	Max.Length [m]	TotVolume [m3]	TotWeight [t]	Designation
	85.130	3.330	0.000	0.000	n. def.
Sum	85.130		0.000	0.000	

SNo section number

SOFiSTiK AG - www.sofistik.de

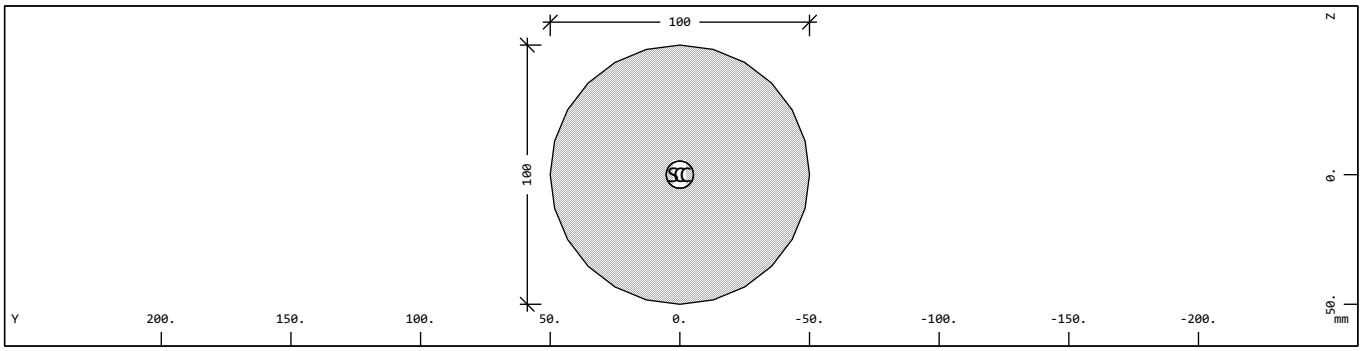
MODELO
SECCIONES

Default design code is EuroNorm EN 1992-1-1:2004 Concrete Structures (Espagna) V 2018
Structure and Tab.7.1N: AN (Buildings)
Snow load zone : 1

Materials

Mat	Classification
1	C 35/45 (EN 1992)
2	C 30/37 (EN 1992)
100	S 355 (EN 1993)

Cross section No. 1



Cross section No. 1

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1	100	7.8540E-03	6.734E-03	4.909E-06	0.0	0.0	**********	0.0	
		9.816E-06	6.734E-03	4.909E-06	0.0	0.0	**********	(BEAM)	

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

Design forces and moments

	N[kN]	Vy[kN]	Vz[kN]	Mt[kNm]	Mt2[kNm]	Mb[kNm2]	My[kNm]	Mz[kNm]	y[mm]	z[mm]	BUCK
C¹	2788.2	1531.31	1531.35	53.66	3.01	1.11	59.17	59.17	0.0	0.0	-, c, c
E²	2788.2	1073.45	1073.60	38.94	0.15	0.00	34.76	34.76	0.0	0.0	
D¹	2788.2	1531.31	1531.35	53.66	3.01	1.11	59.17	59.17	0.0	0.0	
F²	2788.2	1073.45	1073.60	38.94	0.15	0.00	34.76	34.76	0.0	0.0	

¹ C/D = plastic characteristic/design values (ultimate bearing capacity)
² E/F = elastic characteristic/design values (maximum strain reaches yield limit)

N[kN]	normal force	Mb[kNm2]	warping moment
Vy[kN],Vz[kN]	shear force	My[kNm],Mz[kNm]	bending moment
Mt[kNm]	primary torsional moment	y[mm],z[mm]	ordinate of plastic centre
Mt2[kNm]	secondary torsional moment	BUCK	buckling curve (LTB, y-y, z-z)

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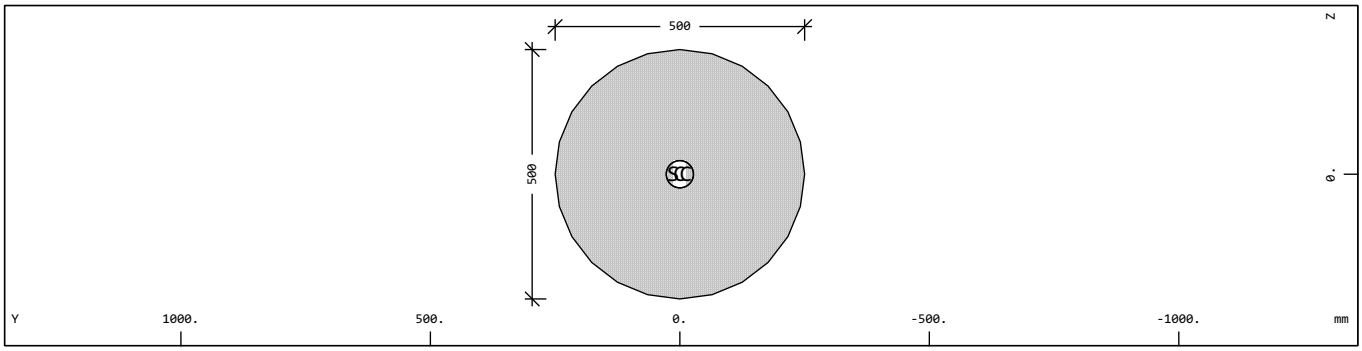
Cross section No. 20



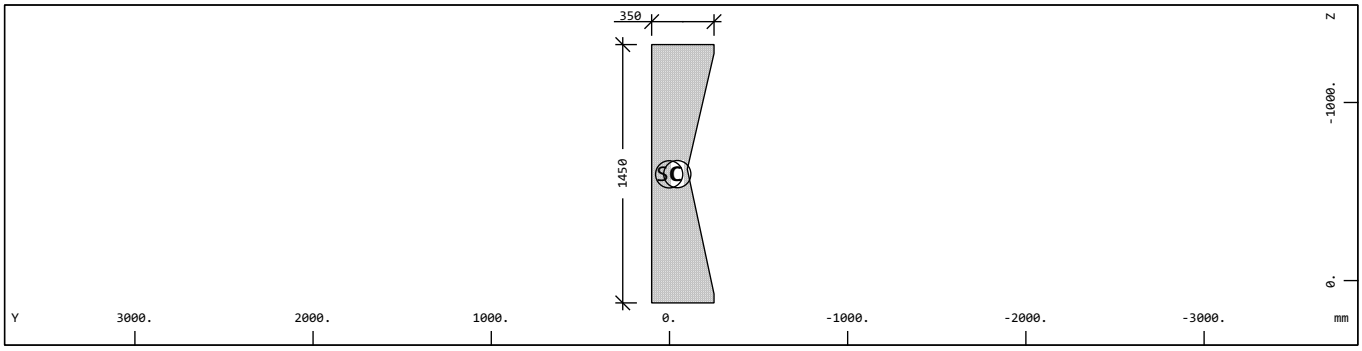
Cross section No. 20

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
20	2	1.9635E-01	1.684E-01	3.068E-03	0.0	0.0	32837	490.9	
		6.135E-03	1.684E-01	3.068E-03	0.0	0.0	13682	(BEAM)	

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

Cross section No. 1100



Cross section No.1100

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1100	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

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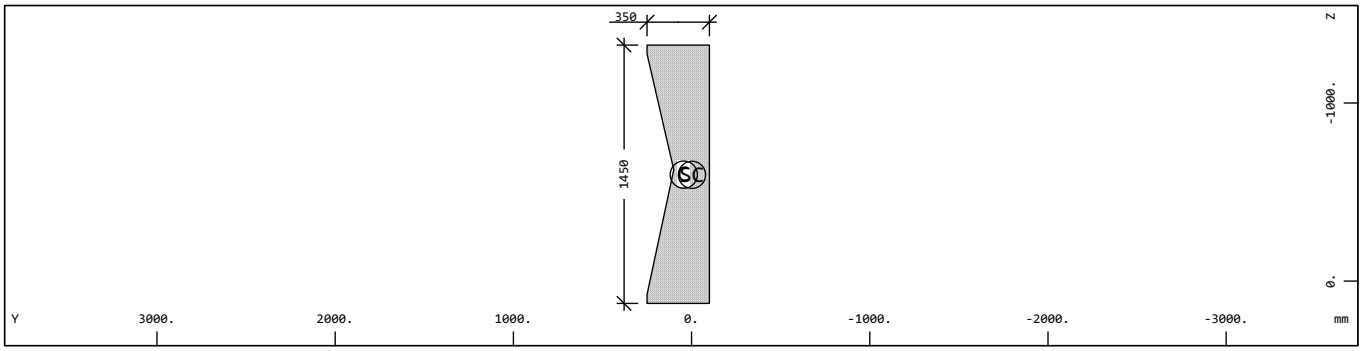
Cross section No. 1200



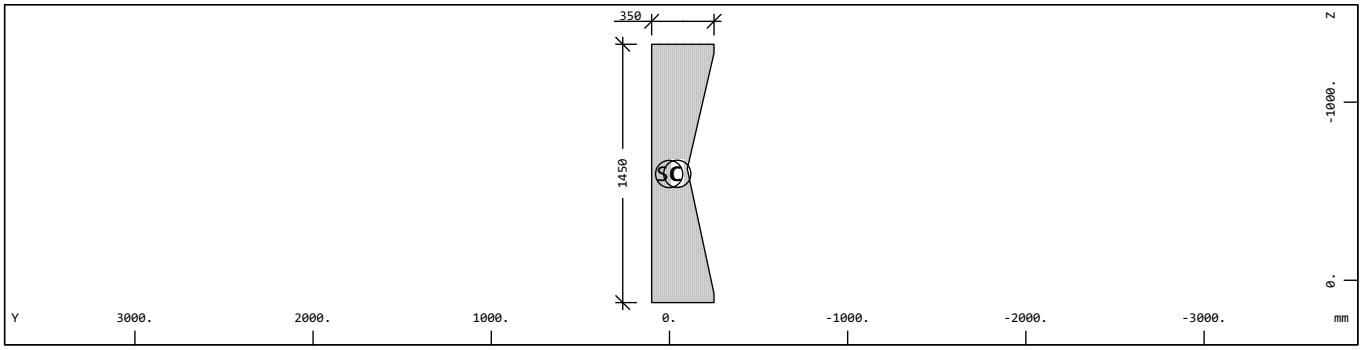
Cross section No.1200

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1200	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

Cross section No. 2110



Cross section No.2110

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
2110	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

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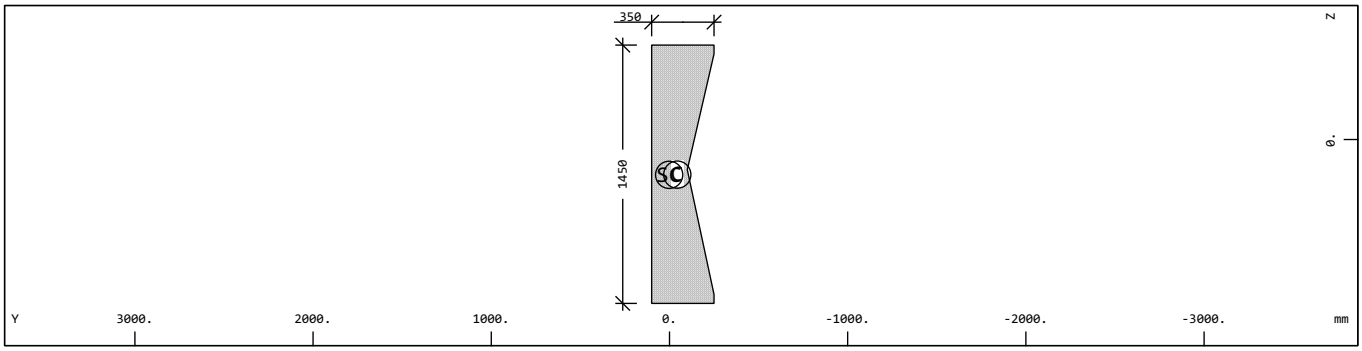
Cross section No. 2130



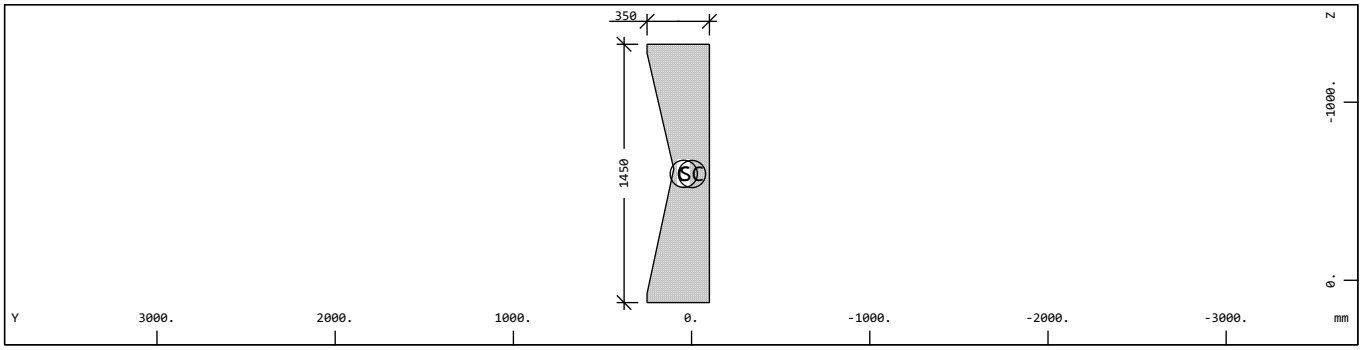
Cross section No.2130

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
2130	1	4.0625E-01	2.398E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.551E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

Cross section No. 2210



Cross section No.2210

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
2210	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

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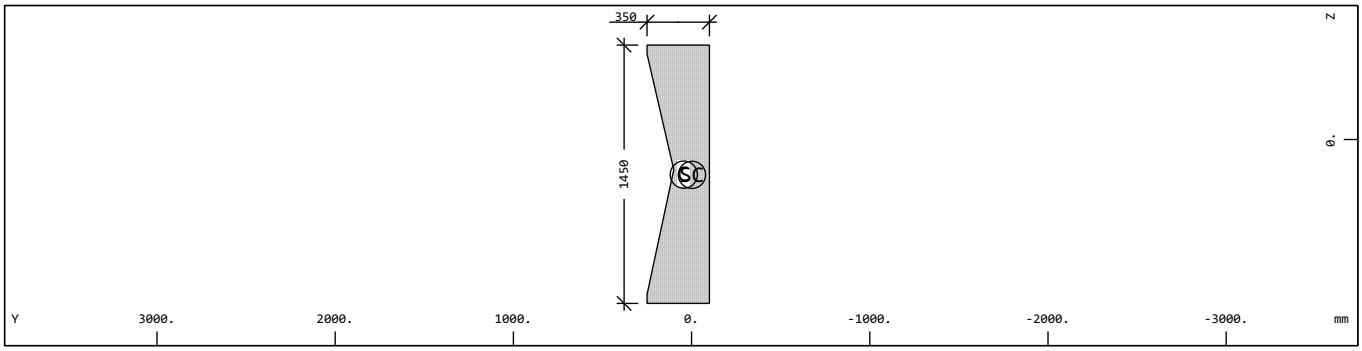
Cross section No. 2230



Cross section No.2230

Static properties of cross section

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
2230	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

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MODELO

Default design code is EuroNorm EN 1992-1-1:2004 Concrete Structures (Espagna) V 2018
Structure and Tab.7.1N: AN (Buildings)
Snow load zone : 1

Materials

Mat	Classification
1	C 35/45 (EN 1992)
2	C 30/37 (EN 1992)
100	S 355 (EN 1993)

Mat 1 C 35/45 (EN 1992)

Young's modulus	E	34077	[N/mm2]	Safetyfactor		1.50	[-]
Poisson's ratio	μ	0.20	[-]	Strength	fc	35.00	[MPa]
Shear modulus	G	14199	[N/mm2]	Nominal strength	fck	35.00	[MPa]
Compression modulus	K	18932	[N/mm2]	Tensile strength	fctm	3.21	[MPa]
Nominal Weight	γ	25.0	[kN/m3]	Tensile strength	fctk,05	2.25	[MPa]
Mean density	ρ	2400.0	[kg/m3]	Tensile strength	fctk,95	4.17	[MPa]
Elongation coefficient	α	1.00E-05	[1/K]	Bond strength	fbd	3.37	[MPa]
				Service strength	fcm	43.00	[MPa]
				Fatigue strength	fcd,fat	17.06	[MPa]
				Tensile strength	fctd	1.50	[MPa]
				Tensile failure energy	Gf	0.14	[N/mm]

Mat 2 C 30/37 (EN 1992)

Young's modulus	E	32837	[N/mm2]	Safetyfactor		1.50	[-]
Poisson's ratio	μ	0.20	[-]	Strength	fc	30.00	[MPa]
Shear modulus	G	13682	[N/mm2]	Nominal strength	fck	30.00	[MPa]
Compression modulus	K	18243	[N/mm2]	Tensile strength	fctm	2.90	[MPa]
Nominal Weight	γ	25.0	[kN/m3]	Tensile strength	fctk,05	2.03	[MPa]
Mean density	ρ	2400.0	[kg/m3]	Tensile strength	fctk,95	3.77	[MPa]
Elongation coefficient	α	1.00E-05	[1/K]	Bond strength	fbd	3.04	[MPa]
				Service strength	fcm	38.00	[MPa]
				Fatigue strength	fcd,fat	14.96	[MPa]
				Tensile strength	fctd	1.35	[MPa]
				Tensile failure energy	Gf	0.14	[N/mm]

Mat100 S 355 (EN 1993)

Young's modulus	E	**********	[N/mm2]	Safetyfactor		1.00	[-]
Poisson's ratio	μ	0.30	[-]	Yield stress	fy	355.00	[MPa]
Shear modulus	G	**********	[N/mm2]	Compressive yield	fyc	355.00	[MPa]
Compression modulus	K	**********	[N/mm2]	Tensile strength	ft	490.00	[MPa]
Nominal Weight	γ	0.0	[kN/m3]	Compressive strength	fc	490.00	[MPa]
Mean density	ρ	7850.0	[kg/m3]	Ultimate strain		100.00	[o/oo]
Elongation coefficient	α	1.20E-05	[1/K]	relative bond coeff.		0.00	[-]
max. thickness	t-max	40.00	[mm]	EN 1992 bond coeff.	k1	0.00	[-]
				Hardening modulus	Eh	0.00	[MPa]
				Proportional limit	fp	355.00	[MPa]
				Dynamic allowance	σ-dyn	0.00	[MPa]

Sectional Values

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1	100	7.8540E-03	6.734E-03	4.909E-06	0.0	0.0	**********	0.0	
		9.816E-06	6.734E-03	4.909E-06	0.0	0.0	**********	(BEAM)	
20	2	1.9635E-01	1.684E-01	3.068E-03	0.0	0.0	32837	490.9	
		6.135E-03	1.684E-01	3.068E-03	0.0	0.0	13682	(BEAM)	
1100	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08

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Sectional Values

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1200	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2110	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2130	1	4.0625E-01	2.398E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.551E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2210	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2230	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

Structural Elements

Structural Lines

Number	SPt-a	SPt-e	Ref	Type	SNo	Grp	Hinges-a	Hinges-e	Designation
133	123	133		CENT	1	10			
231	231	221		CENT	20	21			
232	232	222		CENT	20	22			
233	243	233		CENT	1	23			
333	333	303		CENT	1	30			
1110	1100	2110		BEAM	1100	111			
1210	1200	1220		BEAM	1200	121			
1220	1220	1230		BEAM	1200	122			
2110	2110	2120		BEAM	2110	211			
2120	2120	2130		BEAM	2110: 2130	212			
2130	2130	2100		BEAM	2130	213			
2200	1230	2210		BEAM	1200	220			
2210	2210	2220		BEAM	2210	221			
2220	2220	2230		BEAM	2210: 2230	222			
2230	2230	2200		BEAM	2230	223			

SPt-a,SPt-e	structural point start / end	SNo	section number
Ref	reference line, reference axis	Grp	primary group number
Type	element type		

Structural Areas

Number	Grp	Mat	MRf	t[mm]	Kind	locX	dX[-]	dY[-]	dZ[-]	dRot[°]	Designation
10	301	1		250.0		SURF					
21	302	1		250.0		SURF				0.750	
22	302	1		250.0		SURF				0.750	
23	302	1		250.0		SURF				0.750	
30	303	1		250.0		SURF					

Grp	primary group number	locX	direction of the local x axis
Mat	material number	dX[-],dY[-],dZ[-]	explicit components of the direction
MRf	reinforcement material number	dRot[°]	additional rotation about beam axis
t[mm]	thickness		

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Groups

Grp	number	Type	min-no	max-no	Designation
10	4	KINE	100001	100004	AP 1
	1	BEAM	100001	100001	
	2	SPRI	100001	100002	
	7	base	100000	199999	
13	6	SPRI	130001	130006	AP 1 CIMENT
20	4	KINE	200001	200004	AP 2
	2	SPRI	200001	200002	
	6	base	200000	209999	
21	8	BEAM	210001	210008	AP 2 PILA INTERIOR
22	8	BEAM	220001	220008	AP 2 PILA EXTERIOR
23	1	BEAM	230001	230001	AP 2 CIMENT
	6	SPRI	230001	230006	
	7	base	230000	299999	
30	2	KINE	300001	300002	AP 3
	1	BEAM	300001	300001	
	3	base	300000	1109999	
33	6	SPRI	330001	330006	AP 3 CIMENT
111	92	BEAM	1110001	1110092	PASARELA INT
121	92	BEAM	1210001	1210092	PASARELA EXT_1
122	8	BEAM	1220001	1220008	PASARELA EXT_0
211	12	BEAM	2110001	2110012	ESCALERA INT_1
212	6	BEAM	2120001	2120006	ESCALERA INT_2
213	14	BEAM	2130001	2130014	ESCALERA INT_3
220	14	BEAM	2200001	2200014	ESCALERA EXT_0
221	12	BEAM	2210001	2210012	ESCALERA EXT_1
222	6	BEAM	2220001	2220006	ESCALERA EXT_2
223	14	BEAM	2230001	2230014	ESCALERA EXT_3
301	1290	QUAD	3010001	3011290	LOSA PASARELA
302	271	QUAD	3020001	3020271	LOSA ESCALERA
303	126	QUAD	3030001	3030126	LOSA INTERSEC

Grp primary group number — Type element type
number number of elements within group — min-no,max-no minimum/maximum element number

Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
111	0.000	1.850	-0.125							
112	0.000	-1.850	-0.125							
121	0.000	1.850	-0.205							
122	0.000	-1.850	-0.205							
123	0.000	0.000	-0.205							
133	0.000	0.000	-0.255							
211	23.100	1.850	-0.125							
212	23.100	-1.850	-0.125							
221	23.100	1.850	-0.205							
222	23.100	-1.850	-0.205							
231	23.100	1.850	-6.255							
232	23.100	-1.850	-6.255							
233	23.100	0.000	-6.255							
243	23.100	0.000	-9.585							
303	24.300	10.500	0.000							
333	24.300	10.500	-0.050							
1100	0.000	1.850	0.000							
1200	0.000	-1.850	0.000							
1220	23.100	-1.850	0.000							
1230	25.500	-1.850	0.000							
2100	23.100	10.500	0.000							
2110	23.100	1.850	0.000							
2120	23.100	4.850	0.000							
2130	23.100	6.750	0.000							
2200	25.500	10.500	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2210	25.500	1.850	0.000							
2220	25.500	4.850	0.000							
2230	25.500	6.750	0.000							
2231	23.100	1.850	-5.499							
2232	23.100	1.850	-4.743							
2233	23.100	1.850	-3.986							
2234	23.100	1.850	-3.230							
2235	23.100	1.850	-2.474							
2236	23.100	1.850	-1.717							
2237	23.100	1.850	-0.961							
2238	23.100	-1.850	-5.499							
2239	23.100	-1.850	-4.743							
2240	23.100	-1.850	-3.986							
2241	23.100	-1.850	-3.230							
2242	23.100	-1.850	-2.474							
2243	23.100	-1.850	-1.717							
2244	23.100	-1.850	-0.961							
2245	0.251	1.850	0.000							
2246	0.502	1.850	0.000							
2247	0.753	1.850	0.000							
2248	1.004	1.850	0.000							
2249	1.255	1.850	0.000							
2250	1.507	1.850	0.000							
2251	1.758	1.850	0.000							
2252	2.009	1.850	0.000							
2253	2.260	1.850	0.000							
2254	2.511	1.850	0.000							
2255	2.762	1.850	0.000							
2256	3.013	1.850	0.000							
2257	3.264	1.850	0.000							
2258	3.515	1.850	0.000							
2259	3.766	1.850	0.000							
2260	4.017	1.850	0.000							
2261	4.268	1.850	0.000							
2262	4.520	1.850	0.000							
2263	4.771	1.850	0.000							
2264	5.022	1.850	0.000							
2265	5.273	1.850	0.000							
2266	5.524	1.850	0.000							
2267	5.775	1.850	0.000							
2268	6.026	1.850	0.000							
2269	6.277	1.850	0.000							
2270	6.528	1.850	0.000							
2271	6.779	1.850	0.000							
2272	7.030	1.850	0.000							
2273	7.282	1.850	0.000							
2274	7.533	1.850	0.000							
2275	7.784	1.850	0.000							
2276	8.035	1.850	0.000							
2277	8.286	1.850	0.000							
2278	8.537	1.850	0.000							
2279	8.788	1.850	0.000							
2280	9.039	1.850	0.000							
2281	9.290	1.850	0.000							
2282	9.541	1.850	0.000							
2283	9.792	1.850	0.000							
2284	10.043	1.850	0.000							
2285	10.295	1.850	0.000							
2286	10.546	1.850	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2287	10.797	1.850	0.000							
2288	11.048	1.850	0.000							
2289	11.299	1.850	0.000							
2290	11.550	1.850	0.000							
2291	11.801	1.850	0.000							
2292	12.052	1.850	0.000							
2293	12.303	1.850	0.000							
2294	12.554	1.850	0.000							
2295	12.805	1.850	0.000							
2296	13.057	1.850	0.000							
2297	13.308	1.850	0.000							
2298	13.559	1.850	0.000							
2299	13.810	1.850	0.000							
2300	14.061	1.850	0.000							
2301	14.312	1.850	0.000							
2302	14.563	1.850	0.000							
2303	14.814	1.850	0.000							
2304	15.065	1.850	0.000							
2305	15.316	1.850	0.000							
2306	15.567	1.850	0.000							
2307	15.818	1.850	0.000							
2308	16.070	1.850	0.000							
2309	16.321	1.850	0.000							
2310	16.572	1.850	0.000							
2311	16.823	1.850	0.000							
2312	17.074	1.850	0.000							
2313	17.325	1.850	0.000							
2314	17.576	1.850	0.000							
2315	17.827	1.850	0.000							
2316	18.078	1.850	0.000							
2317	18.329	1.850	0.000							
2318	18.580	1.850	0.000							
2319	18.832	1.850	0.000							
2320	19.083	1.850	0.000							
2321	19.334	1.850	0.000							
2322	19.585	1.850	0.000							
2323	19.836	1.850	0.000							
2324	20.087	1.850	0.000							
2325	20.338	1.850	0.000							
2326	20.589	1.850	0.000							
2327	20.840	1.850	0.000							
2328	21.091	1.850	0.000							
2329	21.343	1.850	0.000							
2330	21.593	1.850	0.000							
2331	21.894	1.850	0.000							
2332	22.096	1.850	0.000							
2333	22.347	1.850	0.000							
2334	22.598	1.850	0.000							
2335	22.849	1.850	0.000							
2336	0.251	-1.850	0.000							
2337	0.502	-1.850	0.000							
2338	0.753	-1.850	0.000							
2339	1.004	-1.850	0.000							
2340	1.255	-1.850	0.000							
2341	1.507	-1.850	0.000							
2342	1.758	-1.850	0.000							
2343	2.009	-1.850	0.000							
2344	2.260	-1.850	0.000							
2345	2.511	-1.850	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2346	2.769	-1.850	0.000							
2347	3.013	-1.850	0.000							
2348	3.264	-1.850	0.000							
2349	3.515	-1.850	0.000							
2350	3.733	-1.850	0.000							
2351	4.017	-1.850	0.000							
2352	4.301	-1.850	0.000							
2353	4.520	-1.850	0.000							
2354	4.771	-1.850	0.000							
2355	5.022	-1.850	0.000							
2356	5.273	-1.850	0.000							
2357	5.524	-1.850	0.000							
2358	5.775	-1.850	0.000							
2359	6.026	-1.850	0.000							
2360	6.277	-1.850	0.000							
2361	6.528	-1.850	0.000							
2362	6.779	-1.850	0.000							
2363	7.030	-1.850	0.000							
2364	7.282	-1.850	0.000							
2365	7.533	-1.850	0.000							
2366	7.784	-1.850	0.000							
2367	8.035	-1.850	0.000							
2368	8.286	-1.850	0.000							
2369	8.537	-1.850	0.000							
2370	8.788	-1.850	0.000							
2371	9.039	-1.850	0.000							
2372	9.290	-1.850	0.000							
2373	9.541	-1.850	0.000							
2374	9.792	-1.850	0.000							
2375	10.043	-1.850	0.000							
2376	10.295	-1.850	0.000							
2377	10.546	-1.850	0.000							
2378	10.797	-1.850	0.000							
2379	11.048	-1.850	0.000							
2380	11.299	-1.850	0.000							
2381	11.550	-1.850	0.000							
2382	11.801	-1.850	0.000							
2383	12.052	-1.850	0.000							
2384	12.303	-1.850	0.000							
2385	12.554	-1.850	0.000							
2386	12.805	-1.850	0.000							
2387	13.057	-1.850	0.000							
2388	13.308	-1.850	0.000							
2389	13.559	-1.850	0.000							
2390	13.810	-1.850	0.000							
2391	14.061	-1.850	0.000							
2392	14.312	-1.850	0.000							
2393	14.563	-1.850	0.000							
2394	14.814	-1.850	0.000							
2395	15.065	-1.850	0.000							
2396	15.316	-1.850	0.000							
2397	15.567	-1.850	0.000							
2398	15.818	-1.850	0.000							
2399	16.070	-1.850	0.000							
2400	16.321	-1.850	0.000							
2401	16.572	-1.850	0.000							
2402	16.823	-1.850	0.000							
2403	17.074	-1.850	0.000							
2404	17.325	-1.850	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2405	17.576	-1.850	0.000							
2406	17.827	-1.850	0.000							
2407	18.078	-1.850	0.000							
2408	18.329	-1.850	0.000							
2409	18.580	-1.850	0.000							
2410	18.832	-1.850	0.000							
2411	19.083	-1.850	0.000							
2412	19.334	-1.850	0.000							
2413	19.585	-1.850	0.000							
2414	19.836	-1.850	0.000							
2415	20.087	-1.850	0.000							
2416	20.338	-1.850	0.000							
2417	20.589	-1.850	0.000							
2418	20.840	-1.850	0.000							
2419	21.091	-1.850	0.000							
2420	21.342	-1.850	0.000							
2421	21.593	-1.850	0.000							
2422	21.845	-1.850	0.000							
2423	22.096	-1.850	0.000							
2424	22.347	-1.850	0.000							
2425	22.598	-1.850	0.000							
2426	22.849	-1.850	0.000							
2427	23.400	-1.850	0.000							
2428	23.700	-1.850	0.000							
2429	24.000	-1.850	0.000							
2430	24.300	-1.850	0.000							
2431	24.600	-1.850	0.000							
2432	24.900	-1.850	0.000							
2433	25.200	-1.850	0.000							
2434	23.100	2.100	0.000							
2435	23.100	2.350	0.000							
2436	23.100	2.600	0.000							
2437	23.100	2.850	0.000							
2438	23.100	3.100	0.000							
2439	23.100	3.350	0.000							
2440	23.100	3.601	0.000							
2441	23.100	3.850	0.000							
2442	23.100	4.100	0.000							
2443	23.100	4.350	0.000							
2444	23.100	4.600	0.000							
2445	23.100	5.167	0.000							
2446	23.100	5.483	0.000							
2447	23.100	5.800	0.000							
2448	23.100	6.117	0.000							
2449	23.100	6.433	0.000							
2450	23.100	7.018	0.000							
2451	23.100	7.286	0.000							
2452	23.100	7.554	0.000							
2453	23.100	7.821	0.000							
2454	23.100	8.021	0.000							
2455	23.100	8.357	0.000							
2456	23.100	8.625	0.000							
2457	23.100	8.893	0.000							
2458	23.100	9.161	0.000							
2459	23.100	9.429	0.000							
2460	23.100	9.696	0.000							
2461	23.100	9.964	0.000							
2462	23.100	10.232	0.000							
2463	25.500	-1.586	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2464	25.500	-1.321	0.000							
2465	25.500	-1.057	0.000							
2466	25.500	-0.793	0.000							
2467	25.500	-0.529	0.000							
2468	25.500	-0.264	0.000							
2469	25.500	0.000	0.000							
2470	25.500	0.264	0.000							
2471	25.500	0.529	0.000							
2472	25.500	0.793	0.000							
2473	25.500	1.057	0.000							
2474	25.500	1.321	0.000							
2475	25.500	1.586	0.000							
2476	25.500	2.100	0.000							
2477	25.500	2.350	0.000							
2478	25.500	2.600	0.000							
2479	25.500	2.850	0.000							
2480	25.500	3.100	0.000							
2481	25.500	3.350	0.000							
2482	25.500	3.600	0.000							
2483	25.500	3.850	0.000							
2484	25.500	4.100	0.000							
2485	25.500	4.350	0.000							
2486	25.500	4.600	0.000							
2487	25.500	5.167	0.000							
2488	25.500	5.483	0.000							
2489	25.500	5.800	0.000							
2490	25.500	6.117	0.000							
2491	25.500	6.433	0.000							
2492	25.500	7.018	0.000							
2493	25.500	7.286	0.000							
2494	25.500	7.554	0.000							
2495	25.500	7.821	0.000							
2496	25.500	8.089	0.000							
2497	25.500	8.357	0.000							
2498	25.500	8.625	0.000							
2499	25.500	8.893	0.000							
2500	25.500	9.161	0.000							
2501	25.500	9.429	0.000							
2502	25.500	9.696	0.000							
2503	25.500	9.964	0.000							
2504	25.500	10.232	0.000							
2505	0.000	1.586	0.000							
2506	0.000	1.321	0.000							
2507	0.000	1.057	0.000							
2508	0.000	0.793	0.000							
2509	0.000	0.529	0.000							
2510	0.000	0.264	0.000							
2511	0.000	0.000	0.000							
2512	0.000	-0.264	0.000							
2513	0.000	-0.529	0.000							
2514	0.000	-0.793	0.000							
2515	0.000	-1.057	0.000							
2516	0.000	-1.321	0.000							
2517	0.000	-1.586	0.000							
2518	23.100	-1.586	0.000							
2519	23.100	-1.321	0.000							
2520	23.100	-1.057	0.000							
2521	23.100	-0.793	0.000							
2522	23.100	-0.529	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2523	23.100	-0.264	0.000							
2524	23.100	0.000	0.000							
2525	23.100	0.264	0.000							
2526	23.100	0.514	0.000							
2527	23.100	0.793	0.000							
2528	23.100	1.065	0.000							
2529	23.100	1.321	0.000							
2530	23.100	1.586	0.000							
2531	25.200	1.850	0.000							
2532	24.900	1.850	0.000							
2533	24.600	1.850	0.000							
2534	24.300	1.850	0.000							
2535	24.000	1.850	0.000							
2536	23.700	1.850	0.000							
2537	23.400	1.850	0.000							
2538	25.200	4.850	0.000							
2539	24.900	4.850	0.000							
2540	24.600	4.850	0.000							
2541	24.300	4.850	0.000							
2542	24.000	4.850	0.000							
2543	23.700	4.850	0.000							
2544	23.400	4.850	0.000							
2545	25.200	6.750	0.000							
2546	24.900	6.750	0.000							
2547	24.600	6.750	0.000							
2548	24.300	6.750	0.000							
2549	24.000	6.750	0.000							
2550	23.700	6.750	0.000							
2551	23.400	6.750	0.000							
2552	25.300	10.500	0.000							
2553	25.101	10.500	0.000							
2554	24.914	10.500	0.000							
2555	24.702	10.500	0.000							
2556	24.501	10.500	0.000							
2557	23.999	10.500	0.000							
2558	23.699	10.500	0.000							
2559	23.399	10.500	0.000							
2560	0.514	1.348	0.000							
2561	1.030	1.340	0.000							
2562	1.545	1.309	0.000							
2563	2.048	1.293	0.000							
2564	2.571	1.217	0.000							
2565	2.916	0.943	0.000							
2566	3.442	1.076	0.000							
2567	3.933	0.830	0.000							
2568	4.378	0.855	0.000							
2569	4.827	0.884	0.000							
2570	5.321	0.794	0.000							
2571	5.921	0.771	0.000							
2572	6.329	0.422	0.000							
2573	6.839	0.576	0.000							
2574	7.400	0.477	0.000							
2575	7.858	0.538	0.000							
2576	8.405	0.476	0.000							
2577	8.833	0.340	0.000							
2578	9.273	0.215	0.000							
2579	9.859	0.212	0.000							
2580	10.404	0.216	0.000							
2581	10.921	0.177	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2582	11.391	-0.009	0.000							
2583	11.884	-0.081	0.000							
2584	12.391	-0.098	0.000							
2585	12.893	-0.120	0.000							
2586	13.364	-0.084	0.000							
2587	13.810	-0.346	0.000							
2588	14.303	-0.284	0.000							
2589	14.778	-0.389	0.000							
2590	15.290	-0.413	0.000							
2591	15.776	-0.518	0.000							
2592	16.283	-0.530	0.000							
2593	16.772	-0.646	0.000							
2594	17.301	-0.660	0.000							
2595	17.796	-0.651	0.000							
2596	18.266	-0.778	0.000							
2597	18.775	-0.823	0.000							
2598	19.314	-0.819	0.000							
2599	19.711	-1.164	0.000							
2600	20.113	-1.075	0.000							
2601	20.519	-1.102	0.000							
2602	21.048	-1.231	0.000							
2603	21.572	-1.260	0.000							
2604	22.083	-1.301	0.000							
2605	22.588	-1.340	0.000							
2606	0.541	0.993	0.000							
2607	0.480	0.587	0.000							
2608	0.968	0.811	0.000							
2609	0.547	0.203	0.000							
2610	1.604	0.777	0.000							
2611	1.189	0.306	0.000							
2612	1.006	-0.166	0.000							
2613	0.547	-0.396	0.000							
2614	2.187	0.799	0.000							
2615	1.920	0.381	0.000							
2616	1.610	-0.022	0.000							
2617	1.350	-0.460	0.000							
2618	0.934	-0.761	0.000							
2619	0.514	-0.937	0.000							
2620	2.703	0.621	0.000							
2621	2.413	0.229	0.000							
2622	2.138	-0.173	0.000							
2623	1.897	-0.570	0.000							
2624	1.594	-0.912	0.000							
2625	1.155	-1.264	0.000							
2626	0.594	-1.401	0.000							
2627	3.225	0.504	0.000							
2628	2.965	0.091	0.000							
2629	2.706	-0.315	0.000							
2630	2.447	-0.740	0.000							
2631	2.106	-1.218	0.000							
2632	1.610	-1.453	0.000							
2633	3.755	0.396	0.000							
2634	3.544	-0.063	0.000							
2635	3.300	-0.482	0.000							
2636	3.060	-0.893	0.000							
2637	2.815	-1.369	0.000							
2638	4.326	0.324	0.000							
2639	4.148	-0.209	0.000							
2640	3.973	-0.812	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2641	3.549	-1.339	0.000							
2642	4.806	0.447	0.000							
2643	4.775	0.010	0.000							
2644	4.708	-0.433	0.000							
2645	4.594	-0.839	0.000							
2646	4.405	-1.405	0.000							
2647	4.359	-0.570	0.000							
2648	5.235	0.306	0.000							
2649	5.225	-0.171	0.000							
2650	5.174	-0.684	0.000							
2651	5.019	-1.246	0.000							
2652	5.716	0.208	0.000							
2653	5.675	-0.313	0.000							
2654	5.650	-0.862	0.000							
2655	5.608	-1.368	0.000							
2656	6.192	-0.127	0.000							
2657	6.164	-0.770	0.000							
2658	6.111	-1.341	0.000							
2659	6.777	-0.073	0.000							
2660	6.694	-0.675	0.000							
2661	6.620	-1.280	0.000							
2662	7.312	-0.015	0.000							
2663	7.279	-0.603	0.000							
2664	7.128	-1.234	0.000							
2665	7.817	0.035	0.000							
2666	7.752	-0.385	0.000							
2667	7.681	-0.923	0.000							
2668	7.610	-1.383	0.000							
2669	8.267	-0.109	0.000							
2670	8.133	-0.681	0.000							
2671	8.190	-1.305	0.000							
2672	8.726	-0.040	0.000							
2673	8.693	-0.577	0.000							
2674	8.618	-1.009	0.000							
2675	8.601	-1.482	0.000							
2676	9.202	-0.497	0.000							
2677	9.041	-1.206	0.000							
2678	9.727	-0.448	0.000							
2679	9.630	-1.165	0.000							
2680	10.263	-0.391	0.000							
2681	10.203	-1.102	0.000							
2682	10.789	-0.357	0.000							
2683	10.696	-0.849	0.000							
2684	10.595	-1.430	0.000							
2685	11.255	-0.590	0.000							
2686	11.079	-1.245	0.000							
2687	11.766	-0.648	0.000							
2688	11.652	-1.263	0.000							
2689	12.295	-0.655	0.000							
2690	12.173	-1.252	0.000							
2691	12.815	-0.634	0.000							
2692	12.723	-1.217	0.000							
2693	13.321	-0.537	0.000							
2694	13.248	-1.002	0.000							
2695	13.148	-1.451	0.000							
2696	13.741	-0.880	0.000							
2697	13.646	-1.391	0.000							
2698	14.227	-0.806	0.000							
2699	14.146	-1.323	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2700	14.708	-1.107	0.000							
2701	15.241	-0.856	0.000							
2702	15.131	-1.429	0.000							
2703	15.682	-1.182	0.000							
2704	16.231	-0.955	0.000							
2705	16.123	-1.479	0.000							
2706	16.625	-1.268	0.000							
2707	17.261	-1.231	0.000							
2708	17.753	-1.037	0.000							
2709	17.642	-1.505	0.000							
2710	18.125	-1.336	0.000							
2711	18.695	-1.338	0.000							
2712	19.197	-1.324	0.000							
2713	20.110	-1.410	0.000							
2714	22.569	-0.973	0.000							
2715	22.630	-0.569	0.000							
2716	22.137	-0.770	0.000							
2717	22.571	-0.190	0.000							
2718	21.512	-0.792	0.000							
2719	21.929	-0.279	0.000							
2720	22.139	0.167	0.000							
2721	22.609	0.397	0.000							
2722	21.025	-0.695	0.000							
2723	21.455	-0.438	0.000							
2724	21.548	0.061	0.000							
2725	21.851	0.464	0.000							
2726	22.255	0.724	0.000							
2727	22.589	1.163	0.000							
2728	3.015	1.429	0.000							
2729	3.970	1.308	0.000							
2730	4.433	1.356	0.000							
2731	4.924	1.350	0.000							
2732	5.428	1.327	0.000							
2733	5.955	1.356	0.000							
2734	6.485	1.410	0.000							
2735	6.426	0.962	0.000							
2736	7.018	1.222	0.000							
2737	7.489	1.446	0.000							
2738	7.419	0.905	0.000							
2739	7.888	1.147	0.000							
2740	8.449	1.199	0.000							
2741	8.975	1.281	0.000							
2742	8.950	0.722	0.000							
2743	9.507	1.324	0.000							
2744	9.457	0.792	0.000							
2745	10.041	1.392	0.000							
2746	10.017	0.819	0.000							
2747	10.598	1.324	0.000							
2748	10.619	0.765	0.000							
2749	11.136	1.268	0.000							
2750	11.171	0.683	0.000							
2751	11.658	1.228	0.000							
2752	11.730	0.530	0.000							
2753	12.205	1.150	0.000							
2754	12.303	0.477	0.000							
2755	12.646	1.406	0.000							
2756	12.734	0.911	0.000							
2757	12.816	0.390	0.000							
2758	13.157	1.380	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2759	13.200	0.872	0.000							
2760	13.288	0.372	0.000							
2761	13.664	1.433	0.000							
2762	13.661	0.990	0.000							
2763	13.699	0.559	0.000							
2764	13.760	0.117	0.000							
2765	14.141	1.365	0.000							
2766	14.134	0.816	0.000							
2767	14.213	0.232	0.000							
2768	14.674	1.269	0.000							
2769	14.672	0.699	0.000							
2770	14.721	0.167	0.000							
2771	15.119	1.468	0.000							
2772	15.164	1.037	0.000							
2773	15.184	0.571	0.000							
2774	15.235	0.074	0.000							
2775	15.607	1.428	0.000							
2776	15.643	0.973	0.000							
2777	15.680	0.494	0.000							
2778	15.725	0.000	0.000							
2779	16.106	1.396	0.000							
2780	16.139	0.927	0.000							
2781	16.176	0.442	0.000							
2782	16.226	-0.050	0.000							
2783	16.606	1.377	0.000							
2784	16.637	0.893	0.000							
2785	16.673	0.399	0.000							
2786	16.718	-0.107	0.000							
2787	17.105	1.362	0.000							
2788	17.135	0.866	0.000							
2789	17.169	0.361	0.000							
2790	17.223	-0.152	0.000							
2791	17.606	1.350	0.000							
2792	17.633	0.841	0.000							
2793	17.664	0.327	0.000							
2794	17.713	-0.181	0.000							
2795	18.107	1.335	0.000							
2796	18.131	0.812	0.000							
2797	18.160	0.286	0.000							
2798	18.207	-0.237	0.000							
2799	18.613	1.305	0.000							
2800	18.635	0.757	0.000							
2801	18.662	0.227	0.000							
2802	18.714	-0.303	0.000							
2803	19.153	1.234	0.000							
2804	19.149	0.660	0.000							
2805	19.176	0.142	0.000							
2806	19.189	-0.339	0.000							
2807	19.627	1.447	0.000							
2808	19.665	1.001	0.000							
2809	19.678	0.523	0.000							
2810	19.694	0.018	0.000							
2811	19.664	-0.465	0.000							
2812	20.141	1.396	0.000							
2813	20.191	0.906	0.000							
2814	20.222	0.382	0.000							
2815	20.194	-0.160	0.000							
2816	20.068	-0.689	0.000							
2817	20.694	1.328	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2818	20.745	0.797	0.000							
2819	20.807	0.176	0.000							
2820	21.135	-0.241	0.000							
2821	20.615	-0.446	0.000							
2822	21.330	1.265	0.000							
2823	21.308	0.577	0.000							
2824	22.057	1.414	0.000							
2825	22.187	1.066	0.000							
2826	21.852	0.974	0.000							
2827	8.596	0.211	0.000							
2828	8.977	0.074	0.000							
2829	9.080	0.471	0.000							
2830	8.687	0.608	0.000							
2831	19.942	-1.294	0.000							
2832	20.293	-1.280	0.000							
2833	20.294	-0.862	0.000							
2834	19.922	-0.907	0.000							
2835	4.049	-0.479	0.000							
2836	4.331	-0.821	0.000							
2837	4.651	-0.660	0.000							
2838	4.439	-0.314	0.000							
2839	21.950	1.191	0.000							
2840	22.056	0.842	0.000							
2841	22.414	0.913	0.000							
2842	22.305	1.280	0.000							
2843	3.494	1.484	0.000							
2844	3.019	1.614	0.000							
2845	3.199	1.281	0.000							
2846	3.263	1.542	0.000							
2847	3.735	1.211	0.000							
2848	3.980	1.566	0.000							
2849	3.731	1.513	0.000							
2850	19.441	-1.256	0.000							
2851	19.153	-1.575	0.000							
2852	19.643	-1.516	0.000							
2853	19.404	-1.539	0.000							
2854	20.103	-1.612	0.000							
2855	19.867	-1.564	0.000							
2856	20.697	-0.147	0.000							
2857	20.811	-0.582	0.000							
2858	21.044	-0.464	0.000							
2859	20.990	-0.059	0.000							
2860	20.873	-0.307	0.000							
2861	20.506	0.282	0.000							
2862	20.215	0.116	0.000							
2863	20.412	-0.298	0.000							
2864	20.466	-0.007	0.000							
2865	20.577	-0.752	0.000							
2866	20.796	-1.172	0.000							
2867	21.027	-0.959	0.000							
2868	20.795	-0.869	0.000							
2869	20.156	-0.430	0.000							
2870	20.367	-0.594	0.000							
2871	14.758	-0.709	0.000							
2872	14.550	-0.336	0.000							
2873	14.285	-0.534	0.000							
2874	14.452	-0.897	0.000							
2875	14.522	-0.627	0.000							
2876	15.025	-0.955	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2877	15.268	-0.655	0.000							
2878	15.037	-0.403	0.000							
2879	15.010	-0.686	0.000							
2880	13.568	-0.439	0.000							
2881	13.791	-0.105	0.000							
2882	13.563	0.014	0.000							
2883	13.348	-0.308	0.000							
2884	13.573	-0.212	0.000							
2885	13.284	-0.772	0.000							
2886	13.487	-0.945	0.000							
2887	13.783	-0.608	0.000							
2888	13.533	-0.689	0.000							
2889	7.879	-0.838	0.000							
2890	7.651	-1.134	0.000							
2891	7.882	-1.365	0.000							
2892	8.163	-1.002	0.000							
2893	7.905	-1.093	0.000							
2894	8.433	-1.131	0.000							
2895	8.643	-0.825	0.000							
2896	8.436	-0.640	0.000							
2897	8.407	-0.903	0.000							
2898	6.612	0.807	0.000							
2899	6.215	0.894	0.000							
2900	6.148	0.573	0.000							
2901	6.553	0.480	0.000							
2902	6.385	0.691	0.000							
2903	6.936	0.895	0.000							
2904	6.735	1.325	0.000							
2905	6.455	1.169	0.000							
2906	6.697	1.047	0.000							
2907	11.185	-0.917	0.000							
2908	11.023	-0.477	0.000							
2909	10.738	-0.621	0.000							
2910	10.862	-1.014	0.000							
2911	10.960	-0.764	0.000							
2912	10.490	-0.933	0.000							
2913	10.420	-1.291	0.000							
2914	10.802	-1.364	0.000							
2915	10.644	-1.152	0.000							
2916	22.845	-1.333	0.000							
2917	22.592	-1.590	0.000							
2918	22.847	-1.589	0.000							
2919	0.255	1.336	0.000							
2920	0.508	1.594	0.000							
2921	0.253	1.591	0.000							
2922	21.586	-1.544	0.000							
2923	21.312	-1.245	0.000							
2924	21.069	-1.533	0.000							
2925	21.328	-1.541	0.000							
2926	0.773	1.348	0.000							
2927	1.019	1.592	0.000							
2928	0.763	1.595	0.000							
2929	17.591	1.601	0.000							
2930	17.856	1.344	0.000							
2931	18.093	1.594	0.000							
2932	17.842	1.598	0.000							
2933	22.087	-1.571	0.000							
2934	22.335	-1.327	0.000							
2935	22.339	-1.583	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2936	17.090	1.607	0.000							
2937	17.355	1.356	0.000							
2938	17.341	1.604	0.000							
2939	18.359	1.324	0.000							
2940	18.599	1.578	0.000							
2941	18.345	1.588	0.000							
2942	16.589	1.614	0.000							
2943	16.855	1.369	0.000							
2944	16.840	1.610	0.000							
2945	21.833	-1.270	0.000							
2946	21.837	-1.556	0.000							
2947	1.286	1.323	0.000							
2948	1.525	1.577	0.000							
2949	1.272	1.585	0.000							
2950	9.240	1.306	0.000							
2951	9.524	1.589	0.000							
2952	9.006	1.567	0.000							
2953	9.265	1.578	0.000							
2954	16.089	1.624	0.000							
2955	16.356	1.386	0.000							
2956	16.339	1.618	0.000							
2957	17.619	1.096	0.000							
2958	17.882	0.828	0.000							
2959	18.119	1.075	0.000							
2960	17.869	1.086	0.000							
2961	1.801	1.296	0.000							
2962	2.030	1.561	0.000							
2963	1.778	1.570	0.000							
2964	9.354	-1.186	0.000							
2965	9.060	-1.544	0.000							
2966	9.586	-1.512	0.000							
2967	9.321	-1.522	0.000							
2968	14.058	-0.289	0.000							
2969	14.269	-0.019	0.000							
2970	13.976	0.198	0.000							
2971	14.024	-0.049	0.000							
2972	17.120	1.115	0.000							
2973	17.383	0.854	0.000							
2974	17.369	1.106	0.000							
2975	15.589	1.641	0.000							
2976	15.856	1.411	0.000							
2977	15.839	1.631	0.000							
2978	16.621	1.136	0.000							
2979	16.886	0.880	0.000							
2980	16.870	1.125	0.000							
2981	22.782	-0.898	0.000							
2982	22.575	-1.129	0.000							
2983	22.835	-1.099	0.000							
2984	18.382	0.789	0.000							
2985	18.623	1.032	0.000							
2986	18.371	1.056	0.000							
2987	19.598	1.647	0.000							
2988	19.876	1.433	0.000							
2989	20.116	1.625	0.000							
2990	19.857	1.641	0.000							
2991	17.150	0.614	0.000							
2992	17.416	0.344	0.000							
2993	17.647	0.585	0.000							
2994	17.399	0.599	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
2995	16.122	1.163	0.000							
2996	16.388	0.909	0.000							
2997	16.372	1.149	0.000							
2998	17.911	0.308	0.000							
2999	18.144	0.549	0.000							
3000	17.896	0.568	0.000							
3001	0.324	0.910	0.000							
3002	0.531	1.144	0.000							
3003	0.267	1.105	0.000							
3004	5.347	-1.332	0.000							
3005	5.040	-1.566	0.000							
3006	5.568	-1.613	0.000							
3007	5.306	-1.588	0.000							
3008	18.869	1.271	0.000							
3009	19.099	1.557	0.000							
3010	18.853	1.560	0.000							
3011	8.426	-1.412	0.000							
3012	8.096	-1.598	0.000							
3013	8.577	-1.643	0.000							
3014	8.338	-1.623	0.000							
3015	17.193	0.103	0.000							
3016	17.467	-0.166	0.000							
3017	17.683	0.072	0.000							
3018	17.438	0.088	0.000							
3019	5.067	0.840	0.000							
3020	5.371	1.054	0.000							
3021	5.174	1.336	0.000							
3022	4.869	1.116	0.000							
3023	5.120	1.084	0.000							
3024	16.654	0.648	0.000							
3025	16.920	0.379	0.000							
3026	16.902	0.630	0.000							
3027	15.086	1.658	0.000							
3028	15.357	1.456	0.000							
3029	15.338	1.654	0.000							
3030	0.563	-1.626	0.000							
3031	0.302	-1.375	0.000							
3032	0.280	-1.608	0.000							
3033	9.773	1.366	0.000							
3034	10.043	1.630	0.000							
3035	9.780	1.611	0.000							
3036	10.319	1.369	0.000							
3037	10.576	1.591	0.000							
3038	10.310	1.612	0.000							
3039	16.156	0.685	0.000							
3040	16.423	0.420	0.000							
3041	16.405	0.666	0.000							
3042	11.605	1.543	0.000							
3043	11.094	1.561	0.000							
3044	11.398	1.248	0.000							
3045	11.350	1.553	0.000							
3046	5.476	1.590	0.000							
3047	4.972	1.600	0.000							
3048	5.224	1.594	0.000							
3049	2.292	1.261	0.000							
3050	2.531	1.535	0.000							
3051	2.284	1.544	0.000							
3052	1.023	1.083	0.000							
3053	1.304	0.821	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3054	1.579	1.056	0.000							
3055	1.299	1.063	0.000							
3056	22.595	1.514	0.000							
3057	22.863	1.256	0.000							
3058	22.842	1.540	0.000							
3059	4.158	0.834	0.000							
3060	4.405	1.105	0.000							
3061	4.197	1.337	0.000							
3062	3.966	1.060	0.000							
3063	4.181	1.084	0.000							
3064	22.603	-0.404	0.000							
3065	22.267	-0.236	0.000							
3066	22.018	-0.530	0.000							
3067	22.420	-0.648	0.000							
3068	22.313	-0.455	0.000							
3069	4.697	-1.330	0.000							
3070	4.496	-1.624	0.000							
3071	4.759	-1.584	0.000							
3072	17.958	-0.206	0.000							
3073	18.179	0.025	0.000							
3074	17.931	0.050	0.000							
3075	10.869	1.295	0.000							
3076	10.835	1.574	0.000							
3077	4.674	1.358	0.000							
3078	4.473	1.603	0.000							
3079	4.722	1.603	0.000							
3080	11.386	-1.273	0.000							
3081	11.082	-1.577	0.000							
3082	11.601	-1.563	0.000							
3083	11.340	-1.564	0.000							
3084	0.258	-0.340	0.000							
3085	0.537	-0.084	0.000							
3086	0.271	0.219	0.000							
3087	0.269	-0.058	0.000							
3088	0.511	0.421	0.000							
3089	0.856	0.248	0.000							
3090	1.088	0.566	0.000							
3091	0.692	0.675	0.000							
3092	0.803	0.479	0.000							
3093	13.618	1.645	0.000							
3094	13.113	1.613	0.000							
3095	13.419	1.407	0.000							
3096	13.366	1.628	0.000							
3097	15.623	1.205	0.000							
3098	15.890	0.948	0.000							
3099	15.873	1.182	0.000							
3100	3.700	0.896	0.000							
3101	3.344	0.744	0.000							
3102	3.489	0.448	0.000							
3103	3.852	0.613	0.000							
3104	3.593	0.683	0.000							
3105	18.410	0.258	0.000							
3106	18.646	0.492	0.000							
3107	18.395	0.523	0.000							
3108	5.688	1.334	0.000							
3109	5.990	1.608	0.000							
3110	5.732	1.596	0.000							
3111	20.412	1.365	0.000							
3112	20.646	1.589	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3113	20.379	1.606	0.000							
3114	11.912	-1.261	0.000							
3115	12.113	-1.553	0.000							
3116	11.857	-1.558	0.000							
3117	15.661	0.735	0.000							
3118	15.927	0.466	0.000							
3119	15.908	0.709	0.000							
3120	18.684	-0.038	0.000							
3121	18.955	-0.323	0.000							
3122	19.182	-0.104	0.000							
3123	18.917	0.188	0.000							
3124	18.932	-0.067	0.000							
3125	1.424	-1.368	0.000							
3126	1.074	-1.572	0.000							
3127	1.570	-1.626	0.000							
3128	1.321	-1.600	0.000							
3129	21.329	-0.084	0.000							
3130	21.431	0.281	0.000							
3131	21.077	0.357	0.000							
3132	21.200	0.134	0.000							
3133	15.700	0.247	0.000							
3134	15.973	-0.026	0.000							
3135	16.198	0.196	0.000							
3136	15.949	0.221	0.000							
3137	16.472	-0.077	0.000							
3138	16.692	0.148	0.000							
3139	16.445	0.172	0.000							
3140	20.574	-1.498	0.000							
3141	20.813	-1.507	0.000							
3142	6.365	-1.313	0.000							
3143	6.071	-1.602	0.000							
3144	6.577	-1.570	0.000							
3145	6.324	-1.586	0.000							
3146	4.228	1.592	0.000							
3147	15.756	-0.257	0.000							
3148	16.031	-0.524	0.000							
3149	16.263	-0.286	0.000							
3150	16.006	-0.272	0.000							
3151	8.491	1.530	0.000							
3152	8.712	1.241	0.000							
3153	8.749	1.550	0.000							
3154	16.969	-0.133	0.000							
3155	16.943	0.124	0.000							
3156	22.875	0.321	0.000							
3157	22.585	0.092	0.000							
3158	22.840	-0.210	0.000							
3159	22.846	0.060	0.000							
3160	9.198	0.773	0.000							
3161	9.481	1.055	0.000							
3162	8.947	0.993	0.000							
3163	9.213	1.032	0.000							
3164	22.093	-1.038	0.000							
3165	21.796	-0.786	0.000							
3166	21.546	-1.010	0.000							
3167	21.822	-1.020	0.000							
3168	8.187	1.166	0.000							
3169	7.986	1.514	0.000							
3170	8.233	1.512	0.000							
3171	7.144	0.507	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3172	6.832	0.233	0.000							
3173	7.047	-0.044	0.000							
3174	7.362	0.230	0.000							
3175	7.094	0.235	0.000							
3176	8.110	0.518	0.000							
3177	8.408	0.846	0.000							
3178	7.886	0.818	0.000							
3179	8.149	0.830	0.000							
3180	12.031	-0.653	0.000							
3181	11.707	-0.958	0.000							
3182	12.233	-0.951	0.000							
3183	11.970	-0.955	0.000							
3184	10.569	-1.614	0.000							
3185	10.825	-1.602	0.000							
3186	18.430	-1.345	0.000							
3187	18.120	-1.611	0.000							
3188	18.640	-1.595	0.000							
3189	18.379	-1.598	0.000							
3190	9.898	-1.130	0.000							
3191	10.094	-1.494	0.000							
3192	9.848	-1.493	0.000							
3193	6.221	1.402	0.000							
3194	6.510	1.640	0.000							
3195	6.249	1.628	0.000							
3196	0.736	-0.874	0.000							
3197	0.568	-1.175	0.000							
3198	0.866	-1.351	0.000							
3199	1.044	-0.991	0.000							
3200	0.815	-1.104	0.000							
3201	2.469	-1.276	0.000							
3202	2.076	-1.539	0.000							
3203	2.617	-1.609	0.000							
3204	2.358	-1.553	0.000							
3205	14.599	1.576	0.000							
3206	14.890	1.399	0.000							
3207	14.838	1.615	0.000							
3208	21.253	-0.763	0.000							
3209	21.281	-0.996	0.000							
3210	18.953	-1.333	0.000							
3211	18.895	-1.589	0.000							
3212	19.386	1.375	0.000							
3213	19.344	1.600	0.000							
3214	14.113	-1.581	0.000							
3215	13.902	-1.356	0.000							
3216	13.604	-1.623	0.000							
3217	13.858	-1.604	0.000							
3218	9.583	0.209	0.000							
3219	9.252	-0.150	0.000							
3220	9.463	-0.472	0.000							
3221	9.788	-0.109	0.000							
3222	9.519	-0.122	0.000							
3223	4.030	0.359	0.000							
3224	3.654	0.164	0.000							
3225	3.847	-0.131	0.000							
3226	4.228	0.053	0.000							
3227	3.943	0.114	0.000							
3228	13.389	-1.432	0.000							
3229	13.093	-1.650	0.000							
3230	13.349	-1.642	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3231	15.169	0.810	0.000							
3232	15.433	0.527	0.000							
3233	15.398	1.003	0.000							
3234	15.415	0.768	0.000							
3235	12.435	-1.234	0.000							
3236	12.617	-1.547	0.000							
3237	12.371	-1.542	0.000							
3238	18.459	-0.272	0.000							
3239	18.432	-0.007	0.000							
3240	14.107	1.610	0.000							
3241	14.391	1.313	0.000							
3242	14.357	1.584	0.000							
3243	4.598	0.878	0.000							
3244	4.634	1.116	0.000							
3245	9.138	-0.843	0.000							
3246	9.675	-0.807	0.000							
3247	9.404	-0.832	0.000							
3248	2.831	1.333	0.000							
3249	2.771	1.579	0.000							
3250	15.208	0.322	0.000							
3251	15.481	0.033	0.000							
3252	15.455	0.282	0.000							
3253	3.515	-1.615	0.000							
3254	3.193	-1.360	0.000							
3255	2.947	-1.613	0.000							
3256	3.227	-1.595	0.000							
3257	11.503	-0.642	0.000							
3258	11.441	-0.956	0.000							
3259	22.107	1.624	0.000							
3260	22.348	1.556	0.000							
3261	11.637	-0.058	0.000							
3262	11.317	-0.298	0.000							
3263	11.836	-0.355	0.000							
3264	11.573	-0.338	0.000							
3265	19.163	0.399	0.000							
3266	18.889	0.715	0.000							
3267	18.903	0.449	0.000							
3268	5.475	0.259	0.000							
3269	5.790	0.474	0.000							
3270	5.594	0.786	0.000							
3271	5.268	0.546	0.000							
3272	5.534	0.521	0.000							
3273	7.008	1.559	0.000							
3274	6.764	1.591	0.000							
3275	7.077	-1.541	0.000							
3276	6.876	-1.242	0.000							
3277	6.829	-1.550	0.000							
3278	16.099	-1.645	0.000							
3279	15.947	-1.365	0.000							
3280	15.614	-1.551	0.000							
3281	15.854	-1.594	0.000							
3282	11.917	1.189	0.000							
3283	12.106	1.520	0.000							
3284	11.861	1.523	0.000							
3285	6.427	-0.721	0.000							
3286	6.138	-1.061	0.000							
3287	6.659	-0.978	0.000							
3288	6.397	-1.019	0.000							
3289	15.272	-0.165	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3290	14.979	0.119	0.000							
3291	14.761	-0.111	0.000							
3292	15.013	-0.140	0.000							
3293	19.137	0.932	0.000							
3294	18.880	0.990	0.000							
3295	15.146	1.259	0.000							
3296	15.379	1.234	0.000							
3297	21.714	0.237	0.000							
3298	21.708	-0.113	0.000							
3299	22.051	-0.032	0.000							
3300	22.021	0.280	0.000							
3301	21.867	0.085	0.000							
3302	8.792	-1.086	0.000							
3303	8.946	-0.533	0.000							
3304	8.890	-0.825	0.000							
3305	7.569	-1.622	0.000							
3306	7.366	-1.310	0.000							
3307	7.319	-1.580	0.000							
3308	16.943	-1.252	0.000							
3309	16.618	-1.578	0.000							
3310	17.142	-1.553	0.000							
3311	16.886	-1.552	0.000							
3312	2.995	-0.383	0.000							
3313	2.578	-0.525	0.000							
3314	2.756	-0.810	0.000							
3315	3.185	-0.680	0.000							
3316	2.877	-0.595	0.000							
3317	3.325	-1.075	0.000							
3318	3.755	-1.078	0.000							
3319	3.610	-0.614	0.000							
3320	3.478	-0.864	0.000							
3321	12.150	-0.084	0.000							
3322	12.365	-0.376	0.000							
3323	12.100	-0.366	0.000							
3324	17.851	-1.443	0.000							
3325	17.613	-1.657	0.000							
3326	17.864	-1.639	0.000							
3327	12.594	1.626	0.000							
3328	12.899	1.395	0.000							
3329	12.855	1.622	0.000							
3330	19.688	0.271	0.000							
3331	19.948	-0.058	0.000							
3332	19.948	0.457	0.000							
3333	19.951	0.199	0.000							
3334	21.490	1.532	0.000							
3335	21.611	1.095	0.000							
3336	21.831	1.588	0.000							
3337	21.712	1.365	0.000							
3338	10.131	0.217	0.000							
3339	9.995	-0.421	0.000							
3340	10.326	-0.078	0.000							
3341	10.058	-0.094	0.000							
3342	17.479	-1.389	0.000							
3343	17.374	-1.606	0.000							
3344	19.649	1.230	0.000							
3345	19.918	0.959	0.000							
3346	20.163	1.159	0.000							
3347	19.899	1.198	0.000							
3348	18.528	-0.811	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3349	18.231	-1.052	0.000							
3350	18.754	-1.085	0.000							
3351	18.485	-1.079	0.000							
3352	16.337	-1.403	0.000							
3353	16.357	-1.617	0.000							
3354	7.838	-1.607	0.000							
3355	16.751	-0.375	0.000							
3356	17.039	-0.663	0.000							
3357	17.271	-0.405	0.000							
3358	17.010	-0.396	0.000							
3359	3.419	-0.263	0.000							
3360	3.734	-0.376	0.000							
3361	12.928	-1.370	0.000							
3362	12.852	-1.597	0.000							
3363	9.732	0.806	0.000							
3364	10.039	1.119	0.000							
3365	9.759	1.090	0.000							
3366	15.102	-1.618	0.000							
3367	14.956	-1.307	0.000							
3368	14.621	-1.518	0.000							
3369	14.857	-1.564	0.000							
3370	19.667	0.769	0.000							
3371	20.210	0.648	0.000							
3372	19.936	0.708	0.000							
3373	5.865	-1.373	0.000							
3374	5.822	-1.615	0.000							
3375	12.418	1.315	0.000							
3376	12.345	1.571	0.000							
3377	19.041	-0.826	0.000							
3378	19.248	-1.077	0.000							
3379	19.007	-1.078	0.000							
3380	1.125	-0.615	0.000							
3381	1.389	-1.066	0.000							
3382	1.448	-0.719	0.000							
3383	1.250	-0.848	0.000							
3384	3.098	0.294	0.000							
3385	3.250	0.016	0.000							
3386	3.373	0.228	0.000							
3387	7.509	1.627	0.000							
3388	7.664	1.320	0.000							
3389	7.751	1.572	0.000							
3390	7.284	1.351	0.000							
3391	7.256	1.593	0.000							
3392	5.904	-0.833	0.000							
3393	5.637	-1.135	0.000							
3394	5.887	-1.106	0.000							
3395	17.557	-0.647	0.000							
3396	17.763	-0.415	0.000							
3397	17.517	-0.407	0.000							
3398	19.433	-0.391	0.000							
3399	19.693	-0.232	0.000							
3400	19.438	0.083	0.000							
3401	19.440	-0.163	0.000							
3402	21.646	-0.384	0.000							
3403	21.472	-0.596	0.000							
3404	21.741	-0.575	0.000							
3405	5.920	1.086	0.000							
3406	5.644	1.057	0.000							
3407	12.663	-0.114	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3408	12.557	-0.650	0.000							
3409	12.876	-0.379	0.000							
3410	12.619	-0.379	0.000							
3411	4.198	-1.576	0.000							
3412	4.209	-1.140	0.000							
3413	3.816	-1.558	0.000							
3414	3.990	-1.339	0.000							
3415	11.175	0.973	0.000							
3416	11.443	0.626	0.000							
3417	11.708	0.898	0.000							
3418	11.442	0.934	0.000							
3419	10.329	-1.555	0.000							
3420	18.762	-0.566	0.000							
3421	19.235	-0.573	0.000							
3422	19.004	-0.577	0.000							
3423	2.419	-0.243	0.000							
3424	2.010	-0.374	0.000							
3425	2.161	-0.656	0.000							
3426	2.292	-0.449	0.000							
3427	12.759	-0.907	0.000							
3428	12.496	-0.937	0.000							
3429	10.625	1.048	0.000							
3430	10.325	0.802	0.000							
3431	10.331	1.087	0.000							
3432	14.181	0.513	0.000							
3433	14.462	0.214	0.000							
3434	14.692	0.433	0.000							
3435	14.414	0.768	0.000							
3436	14.432	0.489	0.000							
3437	0.725	0.917	0.000							
3438	0.777	1.122	0.000							
3439	6.500	-0.106	0.000							
3440	6.188	-0.472	0.000							
3441	6.733	-0.374	0.000							
3442	6.459	-0.415	0.000							
3443	5.224	0.066	0.000							
3444	5.454	-0.260	0.000							
3445	5.685	-0.056	0.000							
3446	5.461	0.000	0.000							
3447	19.412	0.593	0.000							
3448	19.426	0.337	0.000							
3449	4.806	0.665	0.000							
3450	5.008	0.382	0.000							
3451	5.035	0.610	0.000							
3452	20.999	1.291	0.000							
3453	21.182	1.583	0.000							
3454	20.927	1.572	0.000							
3455	12.694	1.165	0.000							
3456	12.960	0.880	0.000							
3457	13.183	1.122	0.000							
3458	12.932	1.141	0.000							
3459	10.213	-0.724	0.000							
3460	9.946	-0.773	0.000							
3461	13.674	1.218	0.000							
3462	13.893	0.959	0.000							
3463	14.154	1.108	0.000							
3464	13.906	1.414	0.000							
3465	13.912	1.174	0.000							
3466	4.344	0.606	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3467	4.579	0.428	0.000							
3468	4.576	0.642	0.000							
3469	10.663	0.210	0.000							
3470	10.529	-0.350	0.000							
3471	10.846	-0.076	0.000							
3472	10.588	-0.066	0.000							
3473	20.470	0.851	0.000							
3474	20.727	1.063	0.000							
3475	20.443	1.110	0.000							
3476	14.399	-1.248	0.000							
3477	14.373	-1.538	0.000							
3478	18.245	-0.511	0.000							
3479	18.500	-0.542	0.000							
3480	19.879	-0.568	0.000							
3481	19.926	-0.319	0.000							
3482	11.160	0.090	0.000							
3483	11.534	0.258	0.000							
3484	11.057	0.432	0.000							
3485	11.308	0.353	0.000							
3486	1.478	-0.229	0.000							
3487	1.413	0.136	0.000							
3488	1.086	0.037	0.000							
3489	1.145	-0.285	0.000							
3490	1.284	-0.081	0.000							
3491	15.349	-1.332	0.000							
3492	15.363	-1.580	0.000							
3493	21.025	0.717	0.000							
3494	21.329	0.917	0.000							
3495	21.030	0.995	0.000							
3496	14.929	0.631	0.000							
3497	14.952	0.375	0.000							
3498	13.863	1.633	0.000							
3499	22.434	0.581	0.000							
3500	22.830	0.622	0.000							
3501	22.817	0.946	0.000							
3502	22.640	0.768	0.000							
3503	6.966	-0.629	0.000							
3504	7.277	-0.287	0.000							
3505	7.007	-0.335	0.000							
3506	15.417	-0.985	0.000							
3507	15.748	-0.816	0.000							
3508	15.542	-0.466	0.000							
3509	15.509	-0.738	0.000							
3510	14.659	0.971	0.000							
3511	14.405	1.040	0.000							
3512	13.146	-0.119	0.000							
3513	13.073	-0.597	0.000							
3514	13.115	-0.355	0.000							
3515	22.389	-0.888	0.000							
3516	22.334	-1.092	0.000							
3517	9.947	0.522	0.000							
3518	9.403	0.522	0.000							
3519	9.661	0.511	0.000							
3520	13.337	0.136	0.000							
3521	13.059	0.358	0.000							
3522	12.877	0.128	0.000							
3523	13.107	0.120	0.000							
3524	1.891	0.807	0.000							
3525	2.097	1.040	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3526	1.848	1.041	0.000							
3527	4.100	0.596	0.000							
3528	20.342	-1.555	0.000							
3529	1.753	-0.751	0.000							
3530	1.829	-1.050	0.000							
3531	2.294	-0.959	0.000							
3532	2.009	-0.860	0.000							
3533	10.910	0.727	0.000							
3534	10.903	1.009	0.000							
3535	0.267	-0.886	0.000							
3536	0.496	-0.688	0.000							
3537	0.259	-0.614	0.000							
3538	2.687	0.161	0.000							
3539	2.271	0.029	0.000							
3540	2.833	-0.109	0.000							
3541	2.551	-0.040	0.000							
3542	19.543	-0.954	0.000							
3543	19.535	-0.653	0.000							
3544	19.716	-0.778	0.000							
3545	22.338	0.267	0.000							
3546	22.073	0.573	0.000							
3547	22.222	0.433	0.000							
3548	16.264	-0.763	0.000							
3549	16.405	-1.087	0.000							
3550	16.736	-0.944	0.000							
3551	16.535	-0.587	0.000							
3552	16.498	-0.851	0.000							
3553	17.280	-0.928	0.000							
3554	16.999	-0.954	0.000							
3555	21.289	-0.357	0.000							
3556	21.250	-0.550	0.000							
3557	1.857	-0.111	0.000							
3558	1.633	-0.504	0.000							
3559	1.736	-0.310	0.000							
3560	5.411	-0.800	0.000							
3561	5.130	-0.962	0.000							
3562	5.378	-1.066	0.000							
3563	7.839	0.291	0.000							
3564	8.049	-0.024	0.000							
3565	8.305	0.165	0.000							
3566	8.082	0.241	0.000							
3567	17.784	-0.865	0.000							
3568	17.918	-1.163	0.000							
3569	18.038	-0.712	0.000							
3570	18.004	-0.955	0.000							
3571	0.286	-1.132	0.000							
3572	7.183	-0.923	0.000							
3573	6.924	-0.933	0.000							
3574	13.997	-0.817	0.000							
3575	14.035	-0.553	0.000							
3576	10.528	0.492	0.000							
3577	10.234	0.510	0.000							
3578	13.911	0.677	0.000							
3579	13.730	0.353	0.000							
3580	13.951	0.447	0.000							
3581	8.792	-1.374	0.000							
3582	8.820	-1.597	0.000							
3583	2.775	1.048	0.000							
3584	2.401	0.979	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3585	2.449	0.692	0.000							
3586	2.832	0.799	0.000							
3587	2.599	0.881	0.000							
3588	6.283	0.197	0.000							
3589	6.552	0.198	0.000							
3590	19.410	1.084	0.000							
3591	19.401	0.851	0.000							
3592	2.966	0.560	0.000							
3593	2.559	0.427	0.000							
3594	2.826	0.360	0.000							
3595	4.747	-0.201	0.000							
3596	4.552	0.150	0.000							
3597	4.491	-0.070	0.000							
3598	5.207	-0.427	0.000							
3599	5.669	-0.598	0.000							
3600	5.435	-0.526	0.000							
3601	0.285	0.668	0.000							
3602	0.250	0.463	0.000							
3603	0.805	-0.262	0.000							
3604	0.761	-0.584	0.000							
3605	0.950	-0.443	0.000							
3606	20.769	0.512	0.000							
3607	20.497	0.568	0.000							
3608	14.922	1.117	0.000							
3609	14.915	0.888	0.000							
3610	13.440	0.935	0.000							
3611	13.429	1.172	0.000							
3612	3.123	-0.184	0.000							
3613	7.416	0.710	0.000							
3614	7.243	1.020	0.000							
3615	7.173	0.781	0.000							
3616	12.566	0.428	0.000							
3617	12.373	0.182	0.000							
3618	12.624	0.154	0.000							
3619	13.499	0.454	0.000							
3620	13.674	0.780	0.000							
3621	13.241	0.609	0.000							
3622	13.464	0.693	0.000							
3623	12.241	0.794	0.000							
3624	12.035	0.519	0.000							
3625	11.973	0.850	0.000							
3626	1.751	0.177	0.000							
3627	1.751	0.544	0.000							
3628	1.426	0.538	0.000							
3629	1.577	0.357	0.000							
3630	12.769	0.651	0.000							
3631	13.007	0.618	0.000							
3632	7.631	0.506	0.000							
3633	7.574	0.030	0.000							
3634	7.604	0.265	0.000							
3635	11.861	0.212	0.000							
3636	12.103	0.211	0.000							
3637	22.820	-0.656	0.000							
3638	22.857	-0.455	0.000							
3639	13.692	-1.141	0.000							
3640	14.187	-1.055	0.000							
3641	13.947	-1.091	0.000							
3642	8.499	-0.108	0.000							
3643	8.231	-0.385	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3644	8.731	-0.306	0.000							
3645	8.474	-0.368	0.000							
3646	17.552	-1.103	0.000							
3647	17.534	-0.887	0.000							
3648	4.953	-0.560	0.000							
3649	4.996	-0.077	0.000							
3650	4.978	-0.316	0.000							
3651	4.781	-1.016	0.000							
3652	4.895	-0.810	0.000							
3653	5.950	0.071	0.000							
3654	6.036	0.327	0.000							
3655	2.925	-1.109	0.000							
3656	2.609	-1.040	0.000							
3657	0.826	-1.596	0.000							
3658	7.615	0.991	0.000							
3659	7.648	0.759	0.000							
3660	6.193	1.142	0.000							
3661	16.509	-0.331	0.000							
3662	2.143	0.293	0.000							
3663	2.001	0.093	0.000							
3664	7.549	-0.462	0.000							
3665	7.783	-0.188	0.000							
3666	7.536	-0.225	0.000							
3667	16.019	-1.043	0.000							
3668	16.002	-0.793	0.000							
3669	15.516	-0.213	0.000							
3670	4.793	0.236	0.000							
3671	5.003	0.153	0.000							
3672	2.060	0.569	0.000							
3673	2.299	0.497	0.000							
3674	13.199	-1.235	0.000							
3675	13.437	-1.194	0.000							
3676	11.082	-0.188	0.000							
3677	5.922	-0.283	0.000							
3678	5.925	-0.545	0.000							
3679	8.986	-0.221	0.000							
3680	7.919	-0.513	0.000							
3681	8.007	-0.285	0.000							
3682	12.997	-1.080	0.000							
3683	13.022	-0.848	0.000							
3684	1.822	-1.348	0.000							
3685	1.825	-1.584	0.000							
3686	12.482	0.988	0.000							
3687	12.508	0.723	0.000							
3688	8.677	0.916	0.000							
3689	15.190	-1.145	0.000							
3690	7.508	-0.788	0.000							
3691	7.417	-1.032	0.000							
3692	10.482	-0.655	0.000							
3693	3.148	0.977	0.000							
3694	3.092	0.773	0.000							
3695	21.593	0.544	0.000							
3696	21.820	0.725	0.000							
3697	21.588	0.816	0.000							
3698	18.004	-0.461	0.000							
3699	13.535	0.235	0.000							
3700	14.511	-0.060	0.000							
3701	7.450	1.171	0.000							
3702	10.792	0.466	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3703	7.712	-0.649	0.000							
3704	16.174	-1.226	0.000							
3705	1.621	-1.204	0.000							
3706	21.496	-0.232	0.000							
3707	17.699	-1.276	0.000							
3708	3.000	1.156	0.000							
3709	8.610	-1.252	0.000							
3710	0.819	-0.011	0.000							
3711	22.313	0.022	0.000							
3712	4.501	-1.078	0.000							
3713	22.612	-0.773	0.000							
3714	0.496	0.793	0.000							
3715	1.283	0.646	0.000							
3716	2.268	1.083	0.000							
3717	1.899	0.647	0.000							
3718	0.661	-0.710	0.000							
3719	1.599	-0.651	0.000							
3720	2.776	-1.682	0.000							
3721	3.161	-1.193	0.000							
3722	3.702	-1.675	0.000							
3723	4.629	0.275	0.000							
3724	4.319	-1.690	0.000							
3725	5.862	-0.089	0.000							
3726	8.467	0.100	0.000							
3727	13.029	-1.228	0.000							
3728	14.360	-1.065	0.000							
3729	19.414	-1.092	0.000							
3730	22.936	0.497	0.000							
3731	22.925	1.080	0.000							
3732	3.790	1.054	0.000							
3733	9.223	0.576	0.000							
3734	11.679	0.155	0.000							
3735	12.520	1.156	0.000							
3736	13.838	0.810	0.000							
3737	14.974	1.259	0.000							
3738	19.467	1.231	0.000							
3739	19.402	-0.545	0.000							
3740	20.965	0.519	0.000							
3741	21.581	0.357	0.000							
3742	21.341	1.647	0.000							
3743	21.923	1.695	0.000							
3744	21.979	0.705	0.000							
3745	24.904	2.434	0.000							
3746	24.903	2.952	0.000							
3747	24.890	3.467	0.000							
3748	24.851	3.927	0.000							
3749	24.886	4.359	0.000							
3750	24.309	2.353	0.000							
3751	24.332	2.856	0.000							
3752	24.321	3.339	0.000							
3753	24.274	3.815	0.000							
3754	24.272	4.328	0.000							
3755	23.705	2.441	0.000							
3756	23.753	3.039	0.000							
3757	23.651	3.634	0.000							
3758	23.690	4.236	0.000							
3759	24.895	4.600	0.000							
3760	25.196	4.356	0.000							
3761	25.199	4.600	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3762	24.284	4.587	0.000							
3763	24.576	4.352	0.000							
3764	24.588	4.596	0.000							
3765	25.200	2.405	0.000							
3766	24.904	2.148	0.000							
3767	25.198	2.130	0.000							
3768	23.701	2.149	0.000							
3769	23.403	2.411	0.000							
3770	23.403	2.131	0.000							
3771	24.864	4.145	0.000							
3772	25.173	3.900	0.000							
3773	25.184	4.126	0.000							
3774	23.396	4.278	0.000							
3775	23.694	4.536	0.000							
3776	23.401	4.562	0.000							
3777	24.304	2.095	0.000							
3778	24.007	2.391	0.000							
3779	23.999	2.123	0.000							
3780	23.982	4.271	0.000							
3781	23.986	4.558	0.000							
3782	24.606	2.387	0.000							
3783	24.607	2.122	0.000							
3784	24.598	3.416	0.000							
3785	24.866	3.707	0.000							
3786	24.553	3.892	0.000							
3787	24.291	3.575	0.000							
3788	24.575	3.653	0.000							
3789	24.901	2.708	0.000							
3790	25.201	2.925	0.000							
3791	25.200	2.666	0.000							
3792	24.269	4.071	0.000							
3793	24.561	4.120	0.000							
3794	23.713	2.728	0.000							
3795	23.408	2.953	0.000							
3796	23.409	2.683	0.000							
3797	24.896	3.225	0.000							
3798	25.193	3.430	0.000							
3799	25.197	3.176	0.000							
3800	25.182	3.665	0.000							
3801	23.687	3.944	0.000							
3802	23.365	3.762	0.000							
3803	23.392	4.009	0.000							
3804	23.702	3.336	0.000							
3805	23.367	3.449	0.000							
3806	23.401	3.214	0.000							
3807	23.983	3.723	0.000							
3808	23.978	3.995	0.000							
3809	24.611	2.918	0.000							
3810	24.335	3.099	0.000							
3811	24.608	3.166	0.000							
3812	24.041	3.225	0.000							
3813	23.998	3.460	0.000							
3814	24.315	2.598	0.000							
3815	24.609	2.651	0.000							
3816	24.046	2.908	0.000							
3817	24.015	2.662	0.000							
3818	24.122	3.075	0.000							
3819	23.292	3.604	0.000							
3820	24.906	5.254	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3821	24.909	5.811	0.000							
3822	24.907	6.279	0.000							
3823	24.381	5.519	0.000							
3824	24.301	6.166	0.000							
3825	23.704	5.387	0.000							
3826	23.702	6.029	0.000							
3827	25.141	5.682	0.000							
3828	24.683	5.701	0.000							
3829	24.674	5.366	0.000							
3830	25.139	5.352	0.000							
3831	24.916	5.525	0.000							
3832	25.208	6.213	0.000							
3833	24.907	6.025	0.000							
3834	25.200	5.932	0.000							
3835	23.403	6.058	0.000							
3836	23.699	6.382	0.000							
3837	23.404	6.403	0.000							
3838	23.703	5.111	0.000							
3839	23.398	5.418	0.000							
3840	23.394	5.132	0.000							
3841	24.294	6.459	0.000							
3842	24.602	6.244	0.000							
3843	24.906	6.522	0.000							
3844	24.598	6.497	0.000							
3845	24.902	5.080	0.000							
3846	25.205	5.113	0.000							
3847	25.210	6.482	0.000							
3848	24.002	6.081	0.000							
3849	23.994	6.414	0.000							
3850	24.312	5.166	0.000							
3851	24.016	5.441	0.000							
3852	24.016	5.145	0.000							
3853	24.605	5.122	0.000							
3854	23.703	5.689	0.000							
3855	23.401	5.733	0.000							
3856	24.321	5.856	0.000							
3857	24.616	5.962	0.000							
3858	24.012	5.758	0.000							
3859	24.836	7.204	0.000							
3860	24.862	7.687	0.000							
3861	24.439	8.106	0.000							
3862	24.427	8.566	0.000							
3863	24.406	9.025	0.000							
3864	24.403	9.519	0.000							
3865	24.355	10.017	0.000							
3866	24.966	8.196	0.000							
3867	24.976	8.786	0.000							
3868	25.008	9.396	0.000							
3869	24.974	10.007	0.000							
3870	24.237	7.227	0.000							
3871	24.226	7.683	0.000							
3872	23.925	8.179	0.000							
3873	23.826	8.601	0.000							
3874	23.779	9.102	0.000							
3875	23.760	9.588	0.000							
3876	23.762	10.064	0.000							
3877	23.647	7.249	0.000							
3878	23.588	7.808	0.000							
3879	25.256	9.967	0.000							

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MODELO

Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3880	25.072	10.265	0.000							
3881	25.277	10.235	0.000							
3882	23.672	6.998	0.000							
3883	23.370	7.266	0.000							
3884	23.383	7.006	0.000							
3885	24.998	9.687	0.000							
3886	25.263	9.399	0.000							
3887	25.254	9.688	0.000							
3888	25.165	7.239	0.000							
3889	24.861	6.975	0.000							
3890	25.183	6.997	0.000							
3891	23.432	10.022	0.000							
3892	23.736	10.284	0.000							
3893	23.415	10.258	0.000							
3894	24.266	6.989	0.000							
3895	23.939	7.238	0.000							
3896	23.969	6.994	0.000							
3897	24.211	7.457	0.000							
3898	24.528	7.208	0.000							
3899	24.831	7.436	0.000							
3900	24.532	7.669	0.000							
3901	24.520	7.441	0.000							
3902	23.611	7.510	0.000							
3903	23.318	7.783	0.000							
3904	23.350	7.529	0.000							
3905	25.014	9.103	0.000							
3906	25.258	8.829	0.000							
3907	25.259	9.116	0.000							
3908	23.767	9.842	0.000							
3909	24.086	9.581	0.000							
3910	24.384	9.772	0.000							
3911	24.069	10.055	0.000							
3912	24.078	9.816	0.000							
3913	25.171	7.739	0.000							
3914	25.164	7.488	0.000							
3915	24.561	6.980	0.000							
3916	24.323	10.258	0.000							
3917	24.037	10.276	0.000							
3918	23.433	9.534	0.000							
3919	23.434	9.779	0.000							
3920	24.717	9.445	0.000							
3921	24.662	9.991	0.000							
3922	24.695	9.724	0.000							
3923	23.490	8.502	0.000							
3924	23.364	8.087	0.000							
3925	23.764	8.019	0.000							
3926	23.873	8.370	0.000							
3927	23.595	8.245	0.000							
3928	23.443	9.015	0.000							
3929	23.770	9.364	0.000							
3930	23.436	9.273	0.000							
3931	24.999	8.473	0.000							
3932	25.232	8.269	0.000							
3933	25.245	8.548	0.000							
3934	23.798	8.857	0.000							
3935	23.456	8.754	0.000							
3936	24.105	9.087	0.000							
3937	24.412	9.268	0.000							
3938	24.095	9.330	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3939	24.813	10.266	0.000							
3940	24.588	10.245	0.000							
3941	23.907	7.721	0.000							
3942	23.905	7.486	0.000							
3943	24.142	8.593	0.000							
3944	24.418	8.788	0.000							
3945	24.119	8.833	0.000							
3946	24.161	8.135	0.000							
3947	24.464	8.330	0.000							
3948	24.170	8.359	0.000							
3949	24.702	8.927	0.000							
3950	24.720	9.176	0.000							
3951	24.905	7.930	0.000							
3952	25.201	8.003	0.000							
3953	24.717	8.135	0.000							
3954	24.719	8.619	0.000							
3955	24.737	8.393	0.000							
3956	24.327	7.888	0.000							
3957	24.035	7.930	0.000							
3958	24.620	7.900	0.000							
3959	24.632	8.776	0.000							
3960	24.931	10.329	0.000							
3961	23.260	7.984	0.000							
3962	23.491	-1.323	0.000							
3963	24.030	-1.326	0.000							
3964	24.507	-1.325	0.000							
3965	25.050	-1.327	0.000							
3966	23.753	-0.860	0.000							
3967	24.385	-0.799	0.000							
3968	24.961	-0.785	0.000							
3969	23.635	-0.277	0.000							
3970	24.208	-0.265	0.000							
3971	24.832	-0.219	0.000							
3972	23.521	0.241	0.000							
3973	24.004	0.242	0.000							
3974	24.499	0.293	0.000							
3975	25.025	0.285	0.000							
3976	23.691	0.752	0.000							
3977	24.309	0.857	0.000							
3978	24.929	0.794	0.000							
3979	23.560	1.323	0.000							
3980	24.010	1.326	0.000							
3981	24.564	1.326	0.000							
3982	25.028	1.323	0.000							
3983	23.902	-1.532	0.000							
3984	23.927	-1.127	0.000							
3985	23.601	-1.118	0.000							
3986	23.580	-1.531	0.000							
3987	23.752	-1.332	0.000							
3988	24.426	-1.588	0.000							
3989	24.247	-1.325	0.000							
3990	24.145	-1.583	0.000							
3991	25.237	-0.785	0.000							
3992	25.027	-1.057	0.000							
3993	25.284	-1.327	0.000							
3994	25.267	-1.054	0.000							
3995	23.408	-0.801	0.000							
3996	23.699	-0.545	0.000							
3997	23.364	-0.274	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
3998	23.397	-0.543	0.000							
3999	23.568	-0.012	0.000							
4000	23.308	0.258	0.000							
4001	23.331	-0.010	0.000							
4002	23.321	-1.320	0.000							
4003	23.351	-1.588	0.000							
4004	25.187	-0.258	0.000							
4005	24.900	-0.518	0.000							
4006	25.202	-0.517	0.000							
4007	24.979	1.589	0.000							
4008	25.270	1.321	0.000							
4009	25.241	1.591	0.000							
4010	23.326	1.323	0.000							
4011	23.612	1.590	0.000							
4012	23.356	1.593	0.000							
4013	24.991	-1.591	0.000							
4014	25.246	-1.594	0.000							
4015	23.374	0.788	0.000							
4016	23.609	1.052	0.000							
4017	23.354	1.051	0.000							
4018	25.213	0.792	0.000							
4019	24.971	0.534	0.000							
4020	25.264	0.268	0.000							
4021	25.237	0.534	0.000							
4022	23.570	0.497	0.000							
4023	23.344	0.524	0.000							
4024	24.980	1.058	0.000							
4025	25.240	1.053	0.000							
4026	24.969	0.032	0.000							
4027	25.224	0.001	0.000							
4028	23.363	-1.058	0.000							
4029	24.084	-0.807	0.000							
4030	24.299	-0.531	0.000							
4031	23.918	-0.270	0.000							
4032	23.998	-0.541	0.000							
4033	24.506	-0.257	0.000							
4034	24.677	-0.793	0.000							
4035	24.599	-0.523	0.000							
4036	24.472	-1.061	0.000							
4037	24.795	-1.326	0.000							
4038	24.752	-1.061	0.000							
4039	24.455	1.533	0.000							
4040	24.777	1.326	0.000							
4041	24.705	1.584	0.000							
4042	24.105	-0.005	0.000							
4043	23.754	0.237	0.000							
4044	23.832	-0.010	0.000							
4045	23.799	1.324	0.000							
4046	24.121	1.533	0.000							
4047	23.883	1.585	0.000							
4048	24.710	-1.588	0.000							
4049	24.185	-1.069	0.000							
4050	24.401	0.542	0.000							
4051	24.768	0.290	0.000							
4052	24.634	0.802	0.000							
4053	24.688	0.541	0.000							
4054	23.995	0.798	0.000							
4055	24.117	1.125	0.000							
4056	23.877	1.062	0.000							

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Nodes

Number	X[m]	Y[m]	Z[m]	Support Conditions						
4057	23.876	0.495	0.000							
4058	24.247	0.267	0.000							
4059	24.124	0.531	0.000							
4060	24.634	0.036	0.000							
4061	24.382	0.006	0.000							
4062	24.455	1.124	0.000							
4063	24.707	1.065	0.000							
4064	24.287	1.332	0.000							
4065	24.793	0.108	0.000							
4066	23.730	0.424	0.000							
MIN	0.000	-1.850	-9.585							
MAX	25.500	10.500	0.000							

Kinematic Constraints

Grp	Node	Type	Reference		ΔX[m]	ΔY[m]	ΔZ[m]	dX	dY	dZ	df
10	121	F	123		0.000	1.850	0.000				
10	122	F	123		0.000	-1.850	0.000				
20	231	F	233		0.000	1.850	0.000				
20	232	F	233		0.000	-1.850	0.000				
10	1100	F	111		0.000	0.000	0.125				
10	1200	F	112		0.000	0.000	0.125				
20	1220	F	212		0.000	0.000	0.125				
30	2100	F	303		-1.200	0.000	0.000				
20	2110	F	211		0.000	0.000	0.125				
30	2200	F	303		1.200	0.000	0.000				

Grp	primary group number	dX,dY,dZ	direction of the kinematic constraint
Type	coupling condition	df	factor for intermediate nodes
ΔX[m],ΔY[m],ΔZ[m]	distance of the nodes		

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301	1	2576	2827	2577	2830	1	250.0		1.000	0.000	0.000		
301	2	2827	2672	2828	2577	1	250.0		1.000	0.000	0.000		
301	3	2828	2578	2829	2577	1	250.0		1.000	0.000	0.000		
301	4	2829	2742	2830	2577	1	250.0		1.000	0.000	0.000		
301	5	2599	2831	2600	2834	1	250.0		1.000	0.000	0.000		
301	6	2831	2713	2832	2600	1	250.0		1.000	0.000	0.000		
301	7	2832	2601	2833	2600	1	250.0		1.000	0.000	0.000		
301	8	2833	2816	2834	2600	1	250.0		1.000	0.000	0.000		
301	9	2639	2835	2647	2838	1	250.0		1.000	0.000	0.000		
301	10	2835	2640	2836	2647	1	250.0		1.000	0.000	0.000		
301	11	2836	2645	2837	2647	1	250.0		1.000	0.000	0.000		
301	12	2837	2644	2838	2647	1	250.0		1.000	0.000	0.000		
301	13	2824	2839	2825	2842	1	250.0		1.000	0.000	0.000		
301	14	2839	2826	2840	2825	1	250.0		1.000	0.000	0.000		
301	15	2840	2726	2841	2825	1	250.0		1.000	0.000	0.000		
301	16	2841	2727	2842	2825	1	250.0		1.000	0.000	0.000		
301	17	2566	2843	2846	2845	1	250.0		1.000	0.000	0.000		
301	18	2843	2258	2257	2846	1	250.0		1.000	0.000	0.000		
301	19	2257	2256	2844	2846	1	250.0		1.000	0.000	0.000		
301	20	2844	2728	2845	2846	1	250.0		1.000	0.000	0.000		
301	21	2566	2847	2849	2843	1	250.0		1.000	0.000	0.000		
301	22	2847	2729	2848	2849	1	250.0		1.000	0.000	0.000		
301	23	2848	2260	2259	2849	1	250.0		1.000	0.000	0.000		
301	24	2259	2258	2843	2849	1	250.0		1.000	0.000	0.000		
301	25	2599	2850	2853	2852	1	250.0		1.000	0.000	0.000		
301	26	2850	2712	2851	2853	1	250.0		1.000	0.000	0.000		
301	27	2851	2411	2412	2853	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	28	2412	2413	2852	2853	1	250.0		1.000	0.000	0.000		
301:	29	2599	2852	2855	2831	1	250.0		1.000	0.000	0.000		
301:	30	2852	2413	2414	2855	1	250.0		1.000	0.000	0.000		
301:	31	2414	2415	2854	2855	1	250.0		1.000	0.000	0.000		
301:	32	2854	2713	2831	2855	1	250.0		1.000	0.000	0.000		
301:	33	2819	2856	2860	2859	1	250.0		1.000	0.000	0.000		
301:	34	2856	2821	2857	2860	1	250.0		1.000	0.000	0.000		
301:	35	2857	2722	2858	2860	1	250.0		1.000	0.000	0.000		
301:	36	2858	2820	2859	2860	1	250.0		1.000	0.000	0.000		
301:	37	2821	2856	2864	2863	1	250.0		1.000	0.000	0.000		
301:	38	2856	2819	2861	2864	1	250.0		1.000	0.000	0.000		
301:	39	2861	2814	2862	2864	1	250.0		1.000	0.000	0.000		
301:	40	2862	2815	2863	2864	1	250.0		1.000	0.000	0.000		
301:	41	2821	2865	2868	2857	1	250.0		1.000	0.000	0.000		
301:	42	2865	2601	2866	2868	1	250.0		1.000	0.000	0.000		
301:	43	2866	2602	2867	2868	1	250.0		1.000	0.000	0.000		
301:	44	2867	2722	2857	2868	1	250.0		1.000	0.000	0.000		
301:	45	2601	2865	2870	2833	1	250.0		1.000	0.000	0.000		
301:	46	2865	2821	2863	2870	1	250.0		1.000	0.000	0.000		
301:	47	2863	2815	2869	2870	1	250.0		1.000	0.000	0.000		
301:	48	2869	2816	2833	2870	1	250.0		1.000	0.000	0.000		
301:	49	2700	2871	2875	2874	1	250.0		1.000	0.000	0.000		
301:	50	2871	2589	2872	2875	1	250.0		1.000	0.000	0.000		
301:	51	2872	2588	2873	2875	1	250.0		1.000	0.000	0.000		
301:	52	2873	2698	2874	2875	1	250.0		1.000	0.000	0.000		
301:	53	2700	2876	2879	2871	1	250.0		1.000	0.000	0.000		
301:	54	2876	2701	2877	2879	1	250.0		1.000	0.000	0.000		
301:	55	2877	2590	2878	2879	1	250.0		1.000	0.000	0.000		
301:	56	2878	2589	2871	2879	1	250.0		1.000	0.000	0.000		
301:	57	2693	2880	2884	2883	1	250.0		1.000	0.000	0.000		
301:	58	2880	2587	2881	2884	1	250.0		1.000	0.000	0.000		
301:	59	2881	2764	2882	2884	1	250.0		1.000	0.000	0.000		
301:	60	2882	2586	2883	2884	1	250.0		1.000	0.000	0.000		
301:	61	2587	2880	2888	2887	1	250.0		1.000	0.000	0.000		
301:	62	2880	2693	2885	2888	1	250.0		1.000	0.000	0.000		
301:	63	2885	2694	2886	2888	1	250.0		1.000	0.000	0.000		
301:	64	2886	2696	2887	2888	1	250.0		1.000	0.000	0.000		
301:	65	2670	2889	2893	2892	1	250.0		1.000	0.000	0.000		
301:	66	2889	2667	2890	2893	1	250.0		1.000	0.000	0.000		
301:	67	2890	2668	2891	2893	1	250.0		1.000	0.000	0.000		
301:	68	2891	2671	2892	2893	1	250.0		1.000	0.000	0.000		
301:	69	2671	2894	2897	2892	1	250.0		1.000	0.000	0.000		
301:	70	2894	2674	2895	2897	1	250.0		1.000	0.000	0.000		
301:	71	2895	2673	2896	2897	1	250.0		1.000	0.000	0.000		
301:	72	2896	2670	2892	2897	1	250.0		1.000	0.000	0.000		
301:	73	2573	2898	2902	2901	1	250.0		1.000	0.000	0.000		
301:	74	2898	2735	2899	2902	1	250.0		1.000	0.000	0.000		
301:	75	2899	2571	2900	2902	1	250.0		1.000	0.000	0.000		
301:	76	2900	2572	2901	2902	1	250.0		1.000	0.000	0.000		
301:	77	2573	2903	2906	2898	1	250.0		1.000	0.000	0.000		
301:	78	2903	2736	2904	2906	1	250.0		1.000	0.000	0.000		
301:	79	2904	2734	2905	2906	1	250.0		1.000	0.000	0.000		
301:	80	2905	2735	2898	2906	1	250.0		1.000	0.000	0.000		
301:	81	2686	2907	2911	2910	1	250.0		1.000	0.000	0.000		
301:	82	2907	2685	2908	2911	1	250.0		1.000	0.000	0.000		
301:	83	2908	2682	2909	2911	1	250.0		1.000	0.000	0.000		
301:	84	2909	2683	2910	2911	1	250.0		1.000	0.000	0.000		
301:	85	2686	2910	2915	2914	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	86	2910	2683	2912	2915	1	250.0		1.000	0.000	0.000		
301:	87	2912	2681	2913	2915	1	250.0		1.000	0.000	0.000		
301:	88	2913	2684	2914	2915	1	250.0		1.000	0.000	0.000		
301:	89	2519	2916	2918	2518	1	250.0		1.000	0.000	0.000		
301:	90	2916	2605	2917	2918	1	250.0		1.000	0.000	0.000		
301:	91	2917	2425	2426	2918	1	250.0		1.000	0.000	0.000		
301:	92	2426	1220	2518	2918	1	250.0		1.000	0.000	0.000		
301:	93	2506	2919	2921	2505	1	250.0		1.000	0.000	0.000		
301:	94	2919	2560	2920	2921	1	250.0		1.000	0.000	0.000		
301:	95	2920	2246	2245	2921	1	250.0		1.000	0.000	0.000		
301:	96	2245	1100	2505	2921	1	250.0		1.000	0.000	0.000		
301:	97	2421	2922	2925	2420	1	250.0		1.000	0.000	0.000		
301:	98	2922	2603	2923	2925	1	250.0		1.000	0.000	0.000		
301:	99	2923	2602	2924	2925	1	250.0		1.000	0.000	0.000		
301:	100	2924	2419	2420	2925	1	250.0		1.000	0.000	0.000		
301:	101	2246	2920	2928	2247	1	250.0		1.000	0.000	0.000		
301:	102	2920	2560	2926	2928	1	250.0		1.000	0.000	0.000		
301:	103	2926	2561	2927	2928	1	250.0		1.000	0.000	0.000		
301:	104	2927	2248	2247	2928	1	250.0		1.000	0.000	0.000		
301:	105	2314	2929	2932	2315	1	250.0		1.000	0.000	0.000		
301:	106	2929	2791	2930	2932	1	250.0		1.000	0.000	0.000		
301:	107	2930	2795	2931	2932	1	250.0		1.000	0.000	0.000		
301:	108	2931	2316	2315	2932	1	250.0		1.000	0.000	0.000		
301:	109	2604	2933	2935	2934	1	250.0		1.000	0.000	0.000		
301:	110	2933	2423	2424	2935	1	250.0		1.000	0.000	0.000		
301:	111	2424	2425	2917	2935	1	250.0		1.000	0.000	0.000		
301:	112	2917	2605	2934	2935	1	250.0		1.000	0.000	0.000		
301:	113	2312	2936	2938	2313	1	250.0		1.000	0.000	0.000		
301:	114	2936	2787	2937	2938	1	250.0		1.000	0.000	0.000		
301:	115	2937	2791	2929	2938	1	250.0		1.000	0.000	0.000		
301:	116	2929	2314	2313	2938	1	250.0		1.000	0.000	0.000		
301:	117	2316	2931	2941	2317	1	250.0		1.000	0.000	0.000		
301:	118	2931	2795	2939	2941	1	250.0		1.000	0.000	0.000		
301:	119	2939	2799	2940	2941	1	250.0		1.000	0.000	0.000		
301:	120	2940	2318	2317	2941	1	250.0		1.000	0.000	0.000		
301:	121	2310	2942	2944	2311	1	250.0		1.000	0.000	0.000		
301:	122	2942	2783	2943	2944	1	250.0		1.000	0.000	0.000		
301:	123	2943	2787	2936	2944	1	250.0		1.000	0.000	0.000		
301:	124	2936	2312	2311	2944	1	250.0		1.000	0.000	0.000		
301:	125	2423	2933	2946	2422	1	250.0		1.000	0.000	0.000		
301:	126	2933	2604	2945	2946	1	250.0		1.000	0.000	0.000		
301:	127	2945	2603	2922	2946	1	250.0		1.000	0.000	0.000		
301:	128	2922	2421	2422	2946	1	250.0		1.000	0.000	0.000		
301:	129	2248	2927	2949	2249	1	250.0		1.000	0.000	0.000		
301:	130	2927	2561	2947	2949	1	250.0		1.000	0.000	0.000		
301:	131	2947	2562	2948	2949	1	250.0		1.000	0.000	0.000		
301:	132	2948	2250	2249	2949	1	250.0		1.000	0.000	0.000		
301:	133	2741	2950	2953	2952	1	250.0		1.000	0.000	0.000		
301:	134	2950	2743	2951	2953	1	250.0		1.000	0.000	0.000		
301:	135	2951	2282	2281	2953	1	250.0		1.000	0.000	0.000		
301:	136	2281	2280	2952	2953	1	250.0		1.000	0.000	0.000		
301:	137	2308	2954	2956	2309	1	250.0		1.000	0.000	0.000		
301:	138	2954	2779	2955	2956	1	250.0		1.000	0.000	0.000		
301:	139	2955	2783	2942	2956	1	250.0		1.000	0.000	0.000		
301:	140	2942	2310	2309	2956	1	250.0		1.000	0.000	0.000		
301:	141	2791	2957	2960	2930	1	250.0		1.000	0.000	0.000		
301:	142	2957	2792	2958	2960	1	250.0		1.000	0.000	0.000		
301:	143	2958	2796	2959	2960	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	144	2959	2795	2930	2960	1	250.0		1.000	0.000	0.000		
301:	145	2250	2948	2963	2251	1	250.0		1.000	0.000	0.000		
301:	146	2948	2562	2961	2963	1	250.0		1.000	0.000	0.000		
301:	147	2961	2563	2962	2963	1	250.0		1.000	0.000	0.000		
301:	148	2962	2252	2251	2963	1	250.0		1.000	0.000	0.000		
301:	149	2679	2964	2967	2966	1	250.0		1.000	0.000	0.000		
301:	150	2964	2677	2965	2967	1	250.0		1.000	0.000	0.000		
301:	151	2965	2371	2372	2967	1	250.0		1.000	0.000	0.000		
301:	152	2372	2373	2966	2967	1	250.0		1.000	0.000	0.000		
301:	153	2764	2881	2971	2970	1	250.0		1.000	0.000	0.000		
301:	154	2881	2587	2968	2971	1	250.0		1.000	0.000	0.000		
301:	155	2968	2588	2969	2971	1	250.0		1.000	0.000	0.000		
301:	156	2969	2767	2970	2971	1	250.0		1.000	0.000	0.000		
301:	157	2787	2972	2974	2937	1	250.0		1.000	0.000	0.000		
301:	158	2972	2788	2973	2974	1	250.0		1.000	0.000	0.000		
301:	159	2973	2792	2957	2974	1	250.0		1.000	0.000	0.000		
301:	160	2957	2791	2937	2974	1	250.0		1.000	0.000	0.000		
301:	161	2306	2975	2977	2307	1	250.0		1.000	0.000	0.000		
301:	162	2975	2775	2976	2977	1	250.0		1.000	0.000	0.000		
301:	163	2976	2779	2954	2977	1	250.0		1.000	0.000	0.000		
301:	164	2954	2308	2307	2977	1	250.0		1.000	0.000	0.000		
301:	165	2783	2978	2980	2943	1	250.0		1.000	0.000	0.000		
301:	166	2978	2784	2979	2980	1	250.0		1.000	0.000	0.000		
301:	167	2979	2788	2972	2980	1	250.0		1.000	0.000	0.000		
301:	168	2972	2787	2943	2980	1	250.0		1.000	0.000	0.000		
301:	169	2521	2981	2983	2520	1	250.0		1.000	0.000	0.000		
301:	170	2981	2714	2982	2983	1	250.0		1.000	0.000	0.000		
301:	171	2982	2605	2916	2983	1	250.0		1.000	0.000	0.000		
301:	172	2916	2519	2520	2983	1	250.0		1.000	0.000	0.000		
301:	173	2795	2959	2986	2939	1	250.0		1.000	0.000	0.000		
301:	174	2959	2796	2984	2986	1	250.0		1.000	0.000	0.000		
301:	175	2984	2800	2985	2986	1	250.0		1.000	0.000	0.000		
301:	176	2985	2799	2939	2986	1	250.0		1.000	0.000	0.000		
301:	177	2322	2987	2990	2323	1	250.0		1.000	0.000	0.000		
301:	178	2987	2807	2988	2990	1	250.0		1.000	0.000	0.000		
301:	179	2988	2812	2989	2990	1	250.0		1.000	0.000	0.000		
301:	180	2989	2324	2323	2990	1	250.0		1.000	0.000	0.000		
301:	181	2788	2991	2994	2973	1	250.0		1.000	0.000	0.000		
301:	182	2991	2789	2992	2994	1	250.0		1.000	0.000	0.000		
301:	183	2992	2793	2993	2994	1	250.0		1.000	0.000	0.000		
301:	184	2993	2792	2973	2994	1	250.0		1.000	0.000	0.000		
301:	185	2779	2995	2997	2955	1	250.0		1.000	0.000	0.000		
301:	186	2995	2780	2996	2997	1	250.0		1.000	0.000	0.000		
301:	187	2996	2784	2978	2997	1	250.0		1.000	0.000	0.000		
301:	188	2978	2783	2955	2997	1	250.0		1.000	0.000	0.000		
301:	189	2792	2993	3000	2958	1	250.0		1.000	0.000	0.000		
301:	190	2993	2793	2998	3000	1	250.0		1.000	0.000	0.000		
301:	191	2998	2797	2999	3000	1	250.0		1.000	0.000	0.000		
301:	192	2999	2796	2958	3000	1	250.0		1.000	0.000	0.000		
301:	193	2508	3001	3003	2507	1	250.0		1.000	0.000	0.000		
301:	194	3001	2606	3002	3003	1	250.0		1.000	0.000	0.000		
301:	195	3002	2560	2919	3003	1	250.0		1.000	0.000	0.000		
301:	196	2919	2506	2507	3003	1	250.0		1.000	0.000	0.000		
301:	197	2655	3004	3007	3006	1	250.0		1.000	0.000	0.000		
301:	198	3004	2651	3005	3007	1	250.0		1.000	0.000	0.000		
301:	199	3005	2355	2356	3007	1	250.0		1.000	0.000	0.000		
301:	200	2356	2357	3006	3007	1	250.0		1.000	0.000	0.000		
301:	201	2318	2940	3010	2319	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	202	2940	2799	3008	3010	1	250.0		1.000	0.000	0.000		
301:	203	3008	2803	3009	3010	1	250.0		1.000	0.000	0.000		
301:	204	3009	2320	2319	3010	1	250.0		1.000	0.000	0.000		
301:	205	2675	3011	3014	3013	1	250.0		1.000	0.000	0.000		
301:	206	3011	2671	3012	3014	1	250.0		1.000	0.000	0.000		
301:	207	3012	2367	2368	3014	1	250.0		1.000	0.000	0.000		
301:	208	2368	2369	3013	3014	1	250.0		1.000	0.000	0.000		
301:	209	2789	3015	3018	2992	1	250.0		1.000	0.000	0.000		
301:	210	3015	2790	3016	3018	1	250.0		1.000	0.000	0.000		
301:	211	3016	2794	3017	3018	1	250.0		1.000	0.000	0.000		
301:	212	3017	2793	2992	3018	1	250.0		1.000	0.000	0.000		
301:	213	2569	3019	3023	3022	1	250.0		1.000	0.000	0.000		
301:	214	3019	2570	3020	3023	1	250.0		1.000	0.000	0.000		
301:	215	3020	2732	3021	3023	1	250.0		1.000	0.000	0.000		
301:	216	3021	2731	3022	3023	1	250.0		1.000	0.000	0.000		
301:	217	2784	3024	3026	2979	1	250.0		1.000	0.000	0.000		
301:	218	3024	2785	3025	3026	1	250.0		1.000	0.000	0.000		
301:	219	3025	2789	2991	3026	1	250.0		1.000	0.000	0.000		
301:	220	2991	2788	2979	3026	1	250.0		1.000	0.000	0.000		
301:	221	2304	3027	3029	2305	1	250.0		1.000	0.000	0.000		
301:	222	3027	2771	3028	3029	1	250.0		1.000	0.000	0.000		
301:	223	3028	2775	2975	3029	1	250.0		1.000	0.000	0.000		
301:	224	2975	2306	2305	3029	1	250.0		1.000	0.000	0.000		
301:	225	1200	2336	3032	2517	1	250.0		1.000	0.000	0.000		
301:	226	2336	2337	3030	3032	1	250.0		1.000	0.000	0.000		
301:	227	3030	2626	3031	3032	1	250.0		1.000	0.000	0.000		
301:	228	3031	2516	2517	3032	1	250.0		1.000	0.000	0.000		
301:	229	2284	2283	3035	3034	1	250.0		1.000	0.000	0.000		
301:	230	2283	2282	2951	3035	1	250.0		1.000	0.000	0.000		
301:	231	2951	2743	3033	3035	1	250.0		1.000	0.000	0.000		
301:	232	3033	2745	3034	3035	1	250.0		1.000	0.000	0.000		
301:	233	2284	3034	3038	2285	1	250.0		1.000	0.000	0.000		
301:	234	3034	2745	3036	3038	1	250.0		1.000	0.000	0.000		
301:	235	3036	2747	3037	3038	1	250.0		1.000	0.000	0.000		
301:	236	3037	2286	2285	3038	1	250.0		1.000	0.000	0.000		
301:	237	2780	3039	3041	2996	1	250.0		1.000	0.000	0.000		
301:	238	3039	2781	3040	3041	1	250.0		1.000	0.000	0.000		
301:	239	3040	2785	3024	3041	1	250.0		1.000	0.000	0.000		
301:	240	3024	2784	2996	3041	1	250.0		1.000	0.000	0.000		
301:	241	2751	3042	3045	3044	1	250.0		1.000	0.000	0.000		
301:	242	3042	2290	2289	3045	1	250.0		1.000	0.000	0.000		
301:	243	2289	2288	3043	3045	1	250.0		1.000	0.000	0.000		
301:	244	3043	2749	3044	3045	1	250.0		1.000	0.000	0.000		
301:	245	2731	3021	3048	3047	1	250.0		1.000	0.000	0.000		
301:	246	3021	2732	3046	3048	1	250.0		1.000	0.000	0.000		
301:	247	3046	2266	2265	3048	1	250.0		1.000	0.000	0.000		
301:	248	2265	2264	3047	3048	1	250.0		1.000	0.000	0.000		
301:	249	2252	2962	3051	2253	1	250.0		1.000	0.000	0.000		
301:	250	2962	2563	3049	3051	1	250.0		1.000	0.000	0.000		
301:	251	3049	2564	3050	3051	1	250.0		1.000	0.000	0.000		
301:	252	3050	2254	2253	3051	1	250.0		1.000	0.000	0.000		
301:	253	2561	3052	3055	2947	1	250.0		1.000	0.000	0.000		
301:	254	3052	2608	3053	3055	1	250.0		1.000	0.000	0.000		
301:	255	3053	2610	3054	3055	1	250.0		1.000	0.000	0.000		
301:	256	3054	2562	2947	3055	1	250.0		1.000	0.000	0.000		
301:	257	2110	2335	3058	2530	1	250.0		1.000	0.000	0.000		
301:	258	2335	2334	3056	3058	1	250.0		1.000	0.000	0.000		
301:	259	3056	2727	3057	3058	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	260	3057	2529	2530	3058	1	250.0		1.000	0.000	0.000		
301:	261	2567	3059	3063	3062	1	250.0		1.000	0.000	0.000		
301:	262	3059	2568	3060	3063	1	250.0		1.000	0.000	0.000		
301:	263	3060	2730	3061	3063	1	250.0		1.000	0.000	0.000		
301:	264	3061	2729	3062	3063	1	250.0		1.000	0.000	0.000		
301:	265	2715	3064	3068	3067	1	250.0		1.000	0.000	0.000		
301:	266	3064	2717	3065	3068	1	250.0		1.000	0.000	0.000		
301:	267	3065	2719	3066	3068	1	250.0		1.000	0.000	0.000		
301:	268	3066	2716	3067	3068	1	250.0		1.000	0.000	0.000		
301:	269	2353	2354	3071	3070	1	250.0		1.000	0.000	0.000		
301:	270	2354	2355	3005	3071	1	250.0		1.000	0.000	0.000		
301:	271	3005	2651	3069	3071	1	250.0		1.000	0.000	0.000		
301:	272	3069	2646	3070	3071	1	250.0		1.000	0.000	0.000		
301:	273	2793	3017	3074	2998	1	250.0		1.000	0.000	0.000		
301:	274	3017	2794	3072	3074	1	250.0		1.000	0.000	0.000		
301:	275	3072	2798	3073	3074	1	250.0		1.000	0.000	0.000		
301:	276	3073	2797	2998	3074	1	250.0		1.000	0.000	0.000		
301:	277	2286	3037	3076	2287	1	250.0		1.000	0.000	0.000		
301:	278	3037	2747	3075	3076	1	250.0		1.000	0.000	0.000		
301:	279	3075	2749	3043	3076	1	250.0		1.000	0.000	0.000		
301:	280	3043	2288	2287	3076	1	250.0		1.000	0.000	0.000		
301:	281	2730	3077	3079	3078	1	250.0		1.000	0.000	0.000		
301:	282	3077	2731	3047	3079	1	250.0		1.000	0.000	0.000		
301:	283	3047	2264	2263	3079	1	250.0		1.000	0.000	0.000		
301:	284	2263	2262	3078	3079	1	250.0		1.000	0.000	0.000		
301:	285	2688	3080	3083	3082	1	250.0		1.000	0.000	0.000		
301:	286	3080	2686	3081	3083	1	250.0		1.000	0.000	0.000		
301:	287	3081	2379	2380	3083	1	250.0		1.000	0.000	0.000		
301:	288	2380	2381	3082	3083	1	250.0		1.000	0.000	0.000		
301:	289	2510	2511	3087	3086	1	250.0		1.000	0.000	0.000		
301:	290	2511	2512	3084	3087	1	250.0		1.000	0.000	0.000		
301:	291	3084	2613	3085	3087	1	250.0		1.000	0.000	0.000		
301:	292	3085	2609	3086	3087	1	250.0		1.000	0.000	0.000		
301:	293	2607	3088	3092	3091	1	250.0		1.000	0.000	0.000		
301:	294	3088	2609	3089	3092	1	250.0		1.000	0.000	0.000		
301:	295	3089	2611	3090	3092	1	250.0		1.000	0.000	0.000		
301:	296	3090	2608	3091	3092	1	250.0		1.000	0.000	0.000		
301:	297	2761	3093	3096	3095	1	250.0		1.000	0.000	0.000		
301:	298	3093	2298	2297	3096	1	250.0		1.000	0.000	0.000		
301:	299	2297	2296	3094	3096	1	250.0		1.000	0.000	0.000		
301:	300	3094	2758	3095	3096	1	250.0		1.000	0.000	0.000		
301:	301	2775	3097	3099	2976	1	250.0		1.000	0.000	0.000		
301:	302	3097	2776	3098	3099	1	250.0		1.000	0.000	0.000		
301:	303	3098	2780	2995	3099	1	250.0		1.000	0.000	0.000		
301:	304	2995	2779	2976	3099	1	250.0		1.000	0.000	0.000		
301:	305	2567	3100	3104	3103	1	250.0		1.000	0.000	0.000		
301:	306	3100	2566	3101	3104	1	250.0		1.000	0.000	0.000		
301:	307	3101	2627	3102	3104	1	250.0		1.000	0.000	0.000		
301:	308	3102	2633	3103	3104	1	250.0		1.000	0.000	0.000		
301:	309	2796	2999	3107	2984	1	250.0		1.000	0.000	0.000		
301:	310	2999	2797	3105	3107	1	250.0		1.000	0.000	0.000		
301:	311	3105	2801	3106	3107	1	250.0		1.000	0.000	0.000		
301:	312	3106	2800	2984	3107	1	250.0		1.000	0.000	0.000		
301:	313	2732	3108	3110	3046	1	250.0		1.000	0.000	0.000		
301:	314	3108	2733	3109	3110	1	250.0		1.000	0.000	0.000		
301:	315	3109	2268	2267	3110	1	250.0		1.000	0.000	0.000		
301:	316	2267	2266	3046	3110	1	250.0		1.000	0.000	0.000		
301:	317	2324	2989	3113	2325	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	318	2989	2812	3111	3113	1	250.0		1.000	0.000	0.000		
301:	319	3111	2817	3112	3113	1	250.0		1.000	0.000	0.000		
301:	320	3112	2326	2325	3113	1	250.0		1.000	0.000	0.000		
301:	321	2690	3114	3116	3115	1	250.0		1.000	0.000	0.000		
301:	322	3114	2688	3082	3116	1	250.0		1.000	0.000	0.000		
301:	323	3082	2381	2382	3116	1	250.0		1.000	0.000	0.000		
301:	324	2382	2383	3115	3116	1	250.0		1.000	0.000	0.000		
301:	325	2776	3117	3119	3098	1	250.0		1.000	0.000	0.000		
301:	326	3117	2777	3118	3119	1	250.0		1.000	0.000	0.000		
301:	327	3118	2781	3039	3119	1	250.0		1.000	0.000	0.000		
301:	328	3039	2780	3098	3119	1	250.0		1.000	0.000	0.000		
301:	329	2801	3120	3124	3123	1	250.0		1.000	0.000	0.000		
301:	330	3120	2802	3121	3124	1	250.0		1.000	0.000	0.000		
301:	331	3121	2806	3122	3124	1	250.0		1.000	0.000	0.000		
301:	332	3122	2805	3123	3124	1	250.0		1.000	0.000	0.000		
301:	333	2632	3125	3128	3127	1	250.0		1.000	0.000	0.000		
301:	334	3125	2625	3126	3128	1	250.0		1.000	0.000	0.000		
301:	335	3126	2339	2340	3128	1	250.0		1.000	0.000	0.000		
301:	336	2340	2341	3127	3128	1	250.0		1.000	0.000	0.000		
301:	337	2820	3129	3132	2859	1	250.0		1.000	0.000	0.000		
301:	338	3129	2724	3130	3132	1	250.0		1.000	0.000	0.000		
301:	339	3130	2823	3131	3132	1	250.0		1.000	0.000	0.000		
301:	340	3131	2819	2859	3132	1	250.0		1.000	0.000	0.000		
301:	341	2777	3133	3136	3118	1	250.0		1.000	0.000	0.000		
301:	342	3133	2778	3134	3136	1	250.0		1.000	0.000	0.000		
301:	343	3134	2782	3135	3136	1	250.0		1.000	0.000	0.000		
301:	344	3135	2781	3118	3136	1	250.0		1.000	0.000	0.000		
301:	345	2781	3135	3139	3040	1	250.0		1.000	0.000	0.000		
301:	346	3135	2782	3137	3139	1	250.0		1.000	0.000	0.000		
301:	347	3137	2786	3138	3139	1	250.0		1.000	0.000	0.000		
301:	348	3138	2785	3040	3139	1	250.0		1.000	0.000	0.000		
301:	349	2419	2924	3141	2418	1	250.0		1.000	0.000	0.000		
301:	350	2924	2602	2866	3141	1	250.0		1.000	0.000	0.000		
301:	351	2866	2601	3140	3141	1	250.0		1.000	0.000	0.000		
301:	352	3140	2417	2418	3141	1	250.0		1.000	0.000	0.000		
301:	353	2661	3142	3145	3144	1	250.0		1.000	0.000	0.000		
301:	354	3142	2658	3143	3145	1	250.0		1.000	0.000	0.000		
301:	355	3143	2359	2360	3145	1	250.0		1.000	0.000	0.000		
301:	356	2360	2361	3144	3145	1	250.0		1.000	0.000	0.000		
301:	357	2729	3061	3146	2848	1	250.0		1.000	0.000	0.000		
301:	358	3061	2730	3078	3146	1	250.0		1.000	0.000	0.000		
301:	359	3078	2262	2261	3146	1	250.0		1.000	0.000	0.000		
301:	360	2261	2260	2848	3146	1	250.0		1.000	0.000	0.000		
301:	361	2778	3147	3150	3134	1	250.0		1.000	0.000	0.000		
301:	362	3147	2591	3148	3150	1	250.0		1.000	0.000	0.000		
301:	363	3148	2592	3149	3150	1	250.0		1.000	0.000	0.000		
301:	364	3149	2782	3134	3150	1	250.0		1.000	0.000	0.000		
301:	365	2280	2279	3153	2952	1	250.0		1.000	0.000	0.000		
301:	366	2279	2278	3151	3153	1	250.0		1.000	0.000	0.000		
301:	367	3151	2740	3152	3153	1	250.0		1.000	0.000	0.000		
301:	368	3152	2741	2952	3153	1	250.0		1.000	0.000	0.000		
301:	369	2785	3138	3155	3025	1	250.0		1.000	0.000	0.000		
301:	370	3138	2786	3154	3155	1	250.0		1.000	0.000	0.000		
301:	371	3154	2790	3015	3155	1	250.0		1.000	0.000	0.000		
301:	372	3015	2789	3025	3155	1	250.0		1.000	0.000	0.000		
301:	373	2523	2524	3159	3158	1	250.0		1.000	0.000	0.000		
301:	374	2524	2525	3156	3159	1	250.0		1.000	0.000	0.000		
301:	375	3156	2721	3157	3159	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	376	3157	2717	3158	3159	1	250.0		1.000	0.000	0.000		
301:	377	2742	3160	3163	3162	1	250.0		1.000	0.000	0.000		
301:	378	3160	2744	3161	3163	1	250.0		1.000	0.000	0.000		
301:	379	3161	2743	2950	3163	1	250.0		1.000	0.000	0.000		
301:	380	2950	2741	3162	3163	1	250.0		1.000	0.000	0.000		
301:	381	2604	3164	3167	2945	1	250.0		1.000	0.000	0.000		
301:	382	3164	2716	3165	3167	1	250.0		1.000	0.000	0.000		
301:	383	3165	2718	3166	3167	1	250.0		1.000	0.000	0.000		
301:	384	3166	2603	2945	3167	1	250.0		1.000	0.000	0.000		
301:	385	2739	3168	3170	3169	1	250.0		1.000	0.000	0.000		
301:	386	3168	2740	3151	3170	1	250.0		1.000	0.000	0.000		
301:	387	3151	2278	2277	3170	1	250.0		1.000	0.000	0.000		
301:	388	2277	2276	3169	3170	1	250.0		1.000	0.000	0.000		
301:	389	2574	3171	3175	3174	1	250.0		1.000	0.000	0.000		
301:	390	3171	2573	3172	3175	1	250.0		1.000	0.000	0.000		
301:	391	3172	2659	3173	3175	1	250.0		1.000	0.000	0.000		
301:	392	3173	2662	3174	3175	1	250.0		1.000	0.000	0.000		
301:	393	2575	3176	3179	3178	1	250.0		1.000	0.000	0.000		
301:	394	3176	2576	3177	3179	1	250.0		1.000	0.000	0.000		
301:	395	3177	2740	3168	3179	1	250.0		1.000	0.000	0.000		
301:	396	3168	2739	3178	3179	1	250.0		1.000	0.000	0.000		
301:	397	2689	3180	3183	3182	1	250.0		1.000	0.000	0.000		
301:	398	3180	2687	3181	3183	1	250.0		1.000	0.000	0.000		
301:	399	3181	2688	3114	3183	1	250.0		1.000	0.000	0.000		
301:	400	3114	2690	3182	3183	1	250.0		1.000	0.000	0.000		
301:	401	2377	2378	3185	3184	1	250.0		1.000	0.000	0.000		
301:	402	2378	2379	3081	3185	1	250.0		1.000	0.000	0.000		
301:	403	3081	2686	2914	3185	1	250.0		1.000	0.000	0.000		
301:	404	2914	2684	3184	3185	1	250.0		1.000	0.000	0.000		
301:	405	2711	3186	3189	3188	1	250.0		1.000	0.000	0.000		
301:	406	3186	2710	3187	3189	1	250.0		1.000	0.000	0.000		
301:	407	3187	2407	2408	3189	1	250.0		1.000	0.000	0.000		
301:	408	2408	2409	3188	3189	1	250.0		1.000	0.000	0.000		
301:	409	2681	3190	3192	3191	1	250.0		1.000	0.000	0.000		
301:	410	3190	2679	2966	3192	1	250.0		1.000	0.000	0.000		
301:	411	2966	2373	2374	3192	1	250.0		1.000	0.000	0.000		
301:	412	2374	2375	3191	3192	1	250.0		1.000	0.000	0.000		
301:	413	2270	2269	3195	3194	1	250.0		1.000	0.000	0.000		
301:	414	2269	2268	3109	3195	1	250.0		1.000	0.000	0.000		
301:	415	3109	2733	3193	3195	1	250.0		1.000	0.000	0.000		
301:	416	3193	2734	3194	3195	1	250.0		1.000	0.000	0.000		
301:	417	2618	3196	3200	3199	1	250.0		1.000	0.000	0.000		
301:	418	3196	2619	3197	3200	1	250.0		1.000	0.000	0.000		
301:	419	3197	2626	3198	3200	1	250.0		1.000	0.000	0.000		
301:	420	3198	2625	3199	3200	1	250.0		1.000	0.000	0.000		
301:	421	2637	3201	3204	3203	1	250.0		1.000	0.000	0.000		
301:	422	3201	2631	3202	3204	1	250.0		1.000	0.000	0.000		
301:	423	3202	2343	2344	3204	1	250.0		1.000	0.000	0.000		
301:	424	2344	2345	3203	3204	1	250.0		1.000	0.000	0.000		
301:	425	2304	2303	3207	3027	1	250.0		1.000	0.000	0.000		
301:	426	2303	2302	3205	3207	1	250.0		1.000	0.000	0.000		
301:	427	3205	2768	3206	3207	1	250.0		1.000	0.000	0.000		
301:	428	3206	2771	3027	3207	1	250.0		1.000	0.000	0.000		
301:	429	2603	3166	3209	2923	1	250.0		1.000	0.000	0.000		
301:	430	3166	2718	3208	3209	1	250.0		1.000	0.000	0.000		
301:	431	3208	2722	2867	3209	1	250.0		1.000	0.000	0.000		
301:	432	2867	2602	2923	3209	1	250.0		1.000	0.000	0.000		
301:	433	2712	3210	3211	2851	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	434	3210	2711	3188	3211	1	250.0		1.000	0.000	0.000		
301:	435	3188	2409	2410	3211	1	250.0		1.000	0.000	0.000		
301:	436	2410	2411	2851	3211	1	250.0		1.000	0.000	0.000		
301:	437	2322	2321	3213	2987	1	250.0		1.000	0.000	0.000		
301:	438	2321	2320	3009	3213	1	250.0		1.000	0.000	0.000		
301:	439	3009	2803	3212	3213	1	250.0		1.000	0.000	0.000		
301:	440	3212	2807	2987	3213	1	250.0		1.000	0.000	0.000		
301:	441	2389	2390	3217	3216	1	250.0		1.000	0.000	0.000		
301:	442	2390	2391	3214	3217	1	250.0		1.000	0.000	0.000		
301:	443	3214	2699	3215	3217	1	250.0		1.000	0.000	0.000		
301:	444	3215	2697	3216	3217	1	250.0		1.000	0.000	0.000		
301:	445	2579	3218	3222	3221	1	250.0		1.000	0.000	0.000		
301:	446	3218	2578	3219	3222	1	250.0		1.000	0.000	0.000		
301:	447	3219	2676	3220	3222	1	250.0		1.000	0.000	0.000		
301:	448	3220	2678	3221	3222	1	250.0		1.000	0.000	0.000		
301:	449	2638	3223	3227	3226	1	250.0		1.000	0.000	0.000		
301:	450	3223	2633	3224	3227	1	250.0		1.000	0.000	0.000		
301:	451	3224	2634	3225	3227	1	250.0		1.000	0.000	0.000		
301:	452	3225	2639	3226	3227	1	250.0		1.000	0.000	0.000		
301:	453	2387	2388	3230	3229	1	250.0		1.000	0.000	0.000		
301:	454	2388	2389	3216	3230	1	250.0		1.000	0.000	0.000		
301:	455	3216	2697	3228	3230	1	250.0		1.000	0.000	0.000		
301:	456	3228	2695	3229	3230	1	250.0		1.000	0.000	0.000		
301:	457	2772	3231	3234	3233	1	250.0		1.000	0.000	0.000		
301:	458	3231	2773	3232	3234	1	250.0		1.000	0.000	0.000		
301:	459	3232	2777	3117	3234	1	250.0		1.000	0.000	0.000		
301:	460	3117	2776	3233	3234	1	250.0		1.000	0.000	0.000		
301:	461	2692	3235	3237	3236	1	250.0		1.000	0.000	0.000		
301:	462	3235	2690	3115	3237	1	250.0		1.000	0.000	0.000		
301:	463	3115	2383	2384	3237	1	250.0		1.000	0.000	0.000		
301:	464	2384	2385	3236	3237	1	250.0		1.000	0.000	0.000		
301:	465	2797	3073	3239	3105	1	250.0		1.000	0.000	0.000		
301:	466	3073	2798	3238	3239	1	250.0		1.000	0.000	0.000		
301:	467	3238	2802	3120	3239	1	250.0		1.000	0.000	0.000		
301:	468	3120	2801	3105	3239	1	250.0		1.000	0.000	0.000		
301:	469	2300	3240	3242	2301	1	250.0		1.000	0.000	0.000		
301:	470	3240	2765	3241	3242	1	250.0		1.000	0.000	0.000		
301:	471	3241	2768	3205	3242	1	250.0		1.000	0.000	0.000		
301:	472	3205	2302	2301	3242	1	250.0		1.000	0.000	0.000		
301:	473	2568	3243	3244	3060	1	250.0		1.000	0.000	0.000		
301:	474	3243	2569	3022	3244	1	250.0		1.000	0.000	0.000		
301:	475	3022	2731	3077	3244	1	250.0		1.000	0.000	0.000		
301:	476	3077	2730	3060	3244	1	250.0		1.000	0.000	0.000		
301:	477	2678	3220	3247	3246	1	250.0		1.000	0.000	0.000		
301:	478	3220	2676	3245	3247	1	250.0		1.000	0.000	0.000		
301:	479	3245	2677	2964	3247	1	250.0		1.000	0.000	0.000		
301:	480	2964	2679	3246	3247	1	250.0		1.000	0.000	0.000		
301:	481	2256	2255	3249	2844	1	250.0		1.000	0.000	0.000		
301:	482	2255	2254	3050	3249	1	250.0		1.000	0.000	0.000		
301:	483	3050	2564	3248	3249	1	250.0		1.000	0.000	0.000		
301:	484	3248	2728	2844	3249	1	250.0		1.000	0.000	0.000		
301:	485	2773	3250	3252	3232	1	250.0		1.000	0.000	0.000		
301:	486	3250	2774	3251	3252	1	250.0		1.000	0.000	0.000		
301:	487	3251	2778	3133	3252	1	250.0		1.000	0.000	0.000		
301:	488	3133	2777	3232	3252	1	250.0		1.000	0.000	0.000		
301:	489	2349	3253	3256	2348	1	250.0		1.000	0.000	0.000		
301:	490	3253	2641	3254	3256	1	250.0		1.000	0.000	0.000		
301:	491	3254	2637	3255	3256	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	492	3255	2347	2348	3256	1	250.0		1.000	0.000	0.000		
301:	493	2687	3257	3258	3181	1	250.0		1.000	0.000	0.000		
301:	494	3257	2685	2907	3258	1	250.0		1.000	0.000	0.000		
301:	495	2907	2686	3080	3258	1	250.0		1.000	0.000	0.000		
301:	496	3080	2688	3181	3258	1	250.0		1.000	0.000	0.000		
301:	497	2332	3259	3260	2333	1	250.0		1.000	0.000	0.000		
301:	498	3259	2824	2842	3260	1	250.0		1.000	0.000	0.000		
301:	499	2842	2727	3056	3260	1	250.0		1.000	0.000	0.000		
301:	500	3056	2334	2333	3260	1	250.0		1.000	0.000	0.000		
301:	501	2583	3261	3264	3263	1	250.0		1.000	0.000	0.000		
301:	502	3261	2582	3262	3264	1	250.0		1.000	0.000	0.000		
301:	503	3262	2685	3257	3264	1	250.0		1.000	0.000	0.000		
301:	504	3257	2687	3263	3264	1	250.0		1.000	0.000	0.000		
301:	505	2800	3106	3267	3266	1	250.0		1.000	0.000	0.000		
301:	506	3106	2801	3123	3267	1	250.0		1.000	0.000	0.000		
301:	507	3123	2805	3265	3267	1	250.0		1.000	0.000	0.000		
301:	508	3265	2804	3266	3267	1	250.0		1.000	0.000	0.000		
301:	509	2648	3268	3272	3271	1	250.0		1.000	0.000	0.000		
301:	510	3268	2652	3269	3272	1	250.0		1.000	0.000	0.000		
301:	511	3269	2571	3270	3272	1	250.0		1.000	0.000	0.000		
301:	512	3270	2570	3271	3272	1	250.0		1.000	0.000	0.000		
301:	513	2270	3194	3274	2271	1	250.0		1.000	0.000	0.000		
301:	514	3194	2734	2904	3274	1	250.0		1.000	0.000	0.000		
301:	515	2904	2736	3273	3274	1	250.0		1.000	0.000	0.000		
301:	516	3273	2272	2271	3274	1	250.0		1.000	0.000	0.000		
301:	517	2361	2362	3277	3144	1	250.0		1.000	0.000	0.000		
301:	518	2362	2363	3275	3277	1	250.0		1.000	0.000	0.000		
301:	519	3275	2664	3276	3277	1	250.0		1.000	0.000	0.000		
301:	520	3276	2661	3144	3277	1	250.0		1.000	0.000	0.000		
301:	521	2399	3278	3281	2398	1	250.0		1.000	0.000	0.000		
301:	522	3278	2705	3279	3281	1	250.0		1.000	0.000	0.000		
301:	523	3279	2703	3280	3281	1	250.0		1.000	0.000	0.000		
301:	524	3280	2397	2398	3281	1	250.0		1.000	0.000	0.000		
301:	525	2290	3042	3284	2291	1	250.0		1.000	0.000	0.000		
301:	526	3042	2751	3282	3284	1	250.0		1.000	0.000	0.000		
301:	527	3282	2753	3283	3284	1	250.0		1.000	0.000	0.000		
301:	528	3283	2292	2291	3284	1	250.0		1.000	0.000	0.000		
301:	529	2660	3285	3288	3287	1	250.0		1.000	0.000	0.000		
301:	530	3285	2657	3286	3288	1	250.0		1.000	0.000	0.000		
301:	531	3286	2658	3142	3288	1	250.0		1.000	0.000	0.000		
301:	532	3142	2661	3287	3288	1	250.0		1.000	0.000	0.000		
301:	533	2590	3289	3292	2878	1	250.0		1.000	0.000	0.000		
301:	534	3289	2774	3290	3292	1	250.0		1.000	0.000	0.000		
301:	535	3290	2770	3291	3292	1	250.0		1.000	0.000	0.000		
301:	536	3291	2589	2878	3292	1	250.0		1.000	0.000	0.000		
301:	537	2799	2985	3294	3008	1	250.0		1.000	0.000	0.000		
301:	538	2985	2800	3266	3294	1	250.0		1.000	0.000	0.000		
301:	539	3266	2804	3293	3294	1	250.0		1.000	0.000	0.000		
301:	540	3293	2803	3008	3294	1	250.0		1.000	0.000	0.000		
301:	541	2771	3295	3296	3028	1	250.0		1.000	0.000	0.000		
301:	542	3295	2772	3233	3296	1	250.0		1.000	0.000	0.000		
301:	543	3233	2776	3097	3296	1	250.0		1.000	0.000	0.000		
301:	544	3097	2775	3028	3296	1	250.0		1.000	0.000	0.000		
301:	545	2725	3297	3301	3300	1	250.0		1.000	0.000	0.000		
301:	546	3297	2724	3298	3301	1	250.0		1.000	0.000	0.000		
301:	547	3298	2719	3299	3301	1	250.0		1.000	0.000	0.000		
301:	548	3299	2720	3300	3301	1	250.0		1.000	0.000	0.000		
301:	549	2674	3302	3304	2895	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	550	3302	2677	3245	3304	1	250.0		1.000	0.000	0.000		
301:	551	3245	2676	3303	3304	1	250.0		1.000	0.000	0.000		
301:	552	3303	2673	2895	3304	1	250.0		1.000	0.000	0.000		
301:	553	2365	3305	3307	2364	1	250.0		1.000	0.000	0.000		
301:	554	3305	2668	3306	3307	1	250.0		1.000	0.000	0.000		
301:	555	3306	2664	3275	3307	1	250.0		1.000	0.000	0.000		
301:	556	3275	2363	2364	3307	1	250.0		1.000	0.000	0.000		
301:	557	2707	3308	3311	3310	1	250.0		1.000	0.000	0.000		
301:	558	3308	2706	3309	3311	1	250.0		1.000	0.000	0.000		
301:	559	3309	2401	2402	3311	1	250.0		1.000	0.000	0.000		
301:	560	2402	2403	3310	3311	1	250.0		1.000	0.000	0.000		
301:	561	2635	3312	3316	3315	1	250.0		1.000	0.000	0.000		
301:	562	3312	2629	3313	3316	1	250.0		1.000	0.000	0.000		
301:	563	3313	2630	3314	3316	1	250.0		1.000	0.000	0.000		
301:	564	3314	2636	3315	3316	1	250.0		1.000	0.000	0.000		
301:	565	2635	3315	3320	3319	1	250.0		1.000	0.000	0.000		
301:	566	3315	2636	3317	3320	1	250.0		1.000	0.000	0.000		
301:	567	3317	2641	3318	3320	1	250.0		1.000	0.000	0.000		
301:	568	3318	2640	3319	3320	1	250.0		1.000	0.000	0.000		
301:	569	2584	3321	3323	3322	1	250.0		1.000	0.000	0.000		
301:	570	3321	2583	3263	3323	1	250.0		1.000	0.000	0.000		
301:	571	3263	2687	3180	3323	1	250.0		1.000	0.000	0.000		
301:	572	3180	2689	3322	3323	1	250.0		1.000	0.000	0.000		
301:	573	2405	2406	3326	3325	1	250.0		1.000	0.000	0.000		
301:	574	2406	2407	3187	3326	1	250.0		1.000	0.000	0.000		
301:	575	3187	2710	3324	3326	1	250.0		1.000	0.000	0.000		
301:	576	3324	2709	3325	3326	1	250.0		1.000	0.000	0.000		
301:	577	2294	3327	3329	2295	1	250.0		1.000	0.000	0.000		
301:	578	3327	2755	3328	3329	1	250.0		1.000	0.000	0.000		
301:	579	3328	2758	3094	3329	1	250.0		1.000	0.000	0.000		
301:	580	3094	2296	2295	3329	1	250.0		1.000	0.000	0.000		
301:	581	2809	3330	3333	3332	1	250.0		1.000	0.000	0.000		
301:	582	3330	2810	3331	3333	1	250.0		1.000	0.000	0.000		
301:	583	3331	2815	2862	3333	1	250.0		1.000	0.000	0.000		
301:	584	2862	2814	3332	3333	1	250.0		1.000	0.000	0.000		
301:	585	2330	3334	3337	3336	1	250.0		1.000	0.000	0.000		
301:	586	3334	2822	3335	3337	1	250.0		1.000	0.000	0.000		
301:	587	3335	2826	2839	3337	1	250.0		1.000	0.000	0.000		
301:	588	2839	2824	3336	3337	1	250.0		1.000	0.000	0.000		
301:	589	2580	3338	3341	3340	1	250.0		1.000	0.000	0.000		
301:	590	3338	2579	3221	3341	1	250.0		1.000	0.000	0.000		
301:	591	3221	2678	3339	3341	1	250.0		1.000	0.000	0.000		
301:	592	3339	2680	3340	3341	1	250.0		1.000	0.000	0.000		
301:	593	2405	3325	3343	2404	1	250.0		1.000	0.000	0.000		
301:	594	3325	2709	3342	3343	1	250.0		1.000	0.000	0.000		
301:	595	3342	2707	3310	3343	1	250.0		1.000	0.000	0.000		
301:	596	3310	2403	2404	3343	1	250.0		1.000	0.000	0.000		
301:	597	2807	3344	3347	2988	1	250.0		1.000	0.000	0.000		
301:	598	3344	2808	3345	3347	1	250.0		1.000	0.000	0.000		
301:	599	3345	2813	3346	3347	1	250.0		1.000	0.000	0.000		
301:	600	3346	2812	2988	3347	1	250.0		1.000	0.000	0.000		
301:	601	2597	3348	3351	3350	1	250.0		1.000	0.000	0.000		
301:	602	3348	2596	3349	3351	1	250.0		1.000	0.000	0.000		
301:	603	3349	2710	3186	3351	1	250.0		1.000	0.000	0.000		
301:	604	3186	2711	3350	3351	1	250.0		1.000	0.000	0.000		
301:	605	2399	2400	3353	3278	1	250.0		1.000	0.000	0.000		
301:	606	2400	2401	3309	3353	1	250.0		1.000	0.000	0.000		
301:	607	3309	2706	3352	3353	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	608	3352	2705	3278	3353	1	250.0		1.000	0.000	0.000		
301:	609	2365	2366	3354	3305	1	250.0		1.000	0.000	0.000		
301:	610	2366	2367	3012	3354	1	250.0		1.000	0.000	0.000		
301:	611	3012	2671	2891	3354	1	250.0		1.000	0.000	0.000		
301:	612	2891	2668	3305	3354	1	250.0		1.000	0.000	0.000		
301:	613	2786	3355	3358	3154	1	250.0		1.000	0.000	0.000		
301:	614	3355	2593	3356	3358	1	250.0		1.000	0.000	0.000		
301:	615	3356	2594	3357	3358	1	250.0		1.000	0.000	0.000		
301:	616	3357	2790	3154	3358	1	250.0		1.000	0.000	0.000		
301:	617	2639	3225	3360	2835	1	250.0		1.000	0.000	0.000		
301:	618	3225	2634	3359	3360	1	250.0		1.000	0.000	0.000		
301:	619	3359	2635	3319	3360	1	250.0		1.000	0.000	0.000		
301:	620	3319	2640	2835	3360	1	250.0		1.000	0.000	0.000		
301:	621	2387	3229	3362	2386	1	250.0		1.000	0.000	0.000		
301:	622	3229	2695	3361	3362	1	250.0		1.000	0.000	0.000		
301:	623	3361	2692	3236	3362	1	250.0		1.000	0.000	0.000		
301:	624	3236	2385	2386	3362	1	250.0		1.000	0.000	0.000		
301:	625	2744	3363	3365	3161	1	250.0		1.000	0.000	0.000		
301:	626	3363	2746	3364	3365	1	250.0		1.000	0.000	0.000		
301:	627	3364	2745	3033	3365	1	250.0		1.000	0.000	0.000		
301:	628	3033	2743	3161	3365	1	250.0		1.000	0.000	0.000		
301:	629	2395	3366	3369	2394	1	250.0		1.000	0.000	0.000		
301:	630	3366	2702	3367	3369	1	250.0		1.000	0.000	0.000		
301:	631	3367	2700	3368	3369	1	250.0		1.000	0.000	0.000		
301:	632	3368	2393	2394	3369	1	250.0		1.000	0.000	0.000		
301:	633	2808	3370	3372	3345	1	250.0		1.000	0.000	0.000		
301:	634	3370	2809	3332	3372	1	250.0		1.000	0.000	0.000		
301:	635	3332	2814	3371	3372	1	250.0		1.000	0.000	0.000		
301:	636	3371	2813	3345	3372	1	250.0		1.000	0.000	0.000		
301:	637	2357	2358	3374	3006	1	250.0		1.000	0.000	0.000		
301:	638	2358	2359	3143	3374	1	250.0		1.000	0.000	0.000		
301:	639	3143	2658	3373	3374	1	250.0		1.000	0.000	0.000		
301:	640	3373	2655	3006	3374	1	250.0		1.000	0.000	0.000		
301:	641	2294	2293	3376	3327	1	250.0		1.000	0.000	0.000		
301:	642	2293	2292	3283	3376	1	250.0		1.000	0.000	0.000		
301:	643	3283	2753	3375	3376	1	250.0		1.000	0.000	0.000		
301:	644	3375	2755	3327	3376	1	250.0		1.000	0.000	0.000		
301:	645	2598	3377	3379	3378	1	250.0		1.000	0.000	0.000		
301:	646	3377	2597	3350	3379	1	250.0		1.000	0.000	0.000		
301:	647	3350	2711	3210	3379	1	250.0		1.000	0.000	0.000		
301:	648	3210	2712	3378	3379	1	250.0		1.000	0.000	0.000		
301:	649	2617	3380	3383	3382	1	250.0		1.000	0.000	0.000		
301:	650	3380	2618	3199	3383	1	250.0		1.000	0.000	0.000		
301:	651	3199	2625	3381	3383	1	250.0		1.000	0.000	0.000		
301:	652	3381	2624	3382	3383	1	250.0		1.000	0.000	0.000		
301:	653	2633	3102	3386	3224	1	250.0		1.000	0.000	0.000		
301:	654	3102	2627	3384	3386	1	250.0		1.000	0.000	0.000		
301:	655	3384	2628	3385	3386	1	250.0		1.000	0.000	0.000		
301:	656	3385	2634	3224	3386	1	250.0		1.000	0.000	0.000		
301:	657	2274	3387	3389	2275	1	250.0		1.000	0.000	0.000		
301:	658	3387	2737	3388	3389	1	250.0		1.000	0.000	0.000		
301:	659	3388	2739	3169	3389	1	250.0		1.000	0.000	0.000		
301:	660	3169	2276	2275	3389	1	250.0		1.000	0.000	0.000		
301:	661	2274	2273	3391	3387	1	250.0		1.000	0.000	0.000		
301:	662	2273	2272	3273	3391	1	250.0		1.000	0.000	0.000		
301:	663	3273	2736	3390	3391	1	250.0		1.000	0.000	0.000		
301:	664	3390	2737	3387	3391	1	250.0		1.000	0.000	0.000		
301:	665	2657	3392	3394	3286	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	666	3392	2654	3393	3394	1	250.0		1.000	0.000	0.000		
301:	667	3393	2655	3373	3394	1	250.0		1.000	0.000	0.000		
301:	668	3373	2658	3286	3394	1	250.0		1.000	0.000	0.000		
301:	669	2790	3357	3397	3016	1	250.0		1.000	0.000	0.000		
301:	670	3357	2594	3395	3397	1	250.0		1.000	0.000	0.000		
301:	671	3395	2595	3396	3397	1	250.0		1.000	0.000	0.000		
301:	672	3396	2794	3016	3397	1	250.0		1.000	0.000	0.000		
301:	673	2805	3122	3401	3400	1	250.0		1.000	0.000	0.000		
301:	674	3122	2806	3398	3401	1	250.0		1.000	0.000	0.000		
301:	675	3398	2811	3399	3401	1	250.0		1.000	0.000	0.000		
301:	676	3399	2810	3400	3401	1	250.0		1.000	0.000	0.000		
301:	677	2716	3066	3404	3165	1	250.0		1.000	0.000	0.000		
301:	678	3066	2719	3402	3404	1	250.0		1.000	0.000	0.000		
301:	679	3402	2723	3403	3404	1	250.0		1.000	0.000	0.000		
301:	680	3403	2718	3165	3404	1	250.0		1.000	0.000	0.000		
301:	681	2570	3270	3406	3020	1	250.0		1.000	0.000	0.000		
301:	682	3270	2571	3405	3406	1	250.0		1.000	0.000	0.000		
301:	683	3405	2733	3108	3406	1	250.0		1.000	0.000	0.000		
301:	684	3108	2732	3020	3406	1	250.0		1.000	0.000	0.000		
301:	685	2585	3407	3410	3409	1	250.0		1.000	0.000	0.000		
301:	686	3407	2584	3322	3410	1	250.0		1.000	0.000	0.000		
301:	687	3322	2689	3408	3410	1	250.0		1.000	0.000	0.000		
301:	688	3408	2691	3409	3410	1	250.0		1.000	0.000	0.000		
301:	689	2351	3411	3414	3413	1	250.0		1.000	0.000	0.000		
301:	690	3411	2646	3412	3414	1	250.0		1.000	0.000	0.000		
301:	691	3412	2640	3318	3414	1	250.0		1.000	0.000	0.000		
301:	692	3318	2641	3413	3414	1	250.0		1.000	0.000	0.000		
301:	693	2749	3415	3418	3044	1	250.0		1.000	0.000	0.000		
301:	694	3415	2750	3416	3418	1	250.0		1.000	0.000	0.000		
301:	695	3416	2752	3417	3418	1	250.0		1.000	0.000	0.000		
301:	696	3417	2751	3044	3418	1	250.0		1.000	0.000	0.000		
301:	697	2377	3184	3419	2376	1	250.0		1.000	0.000	0.000		
301:	698	3184	2684	2913	3419	1	250.0		1.000	0.000	0.000		
301:	699	2913	2681	3191	3419	1	250.0		1.000	0.000	0.000		
301:	700	3191	2375	2376	3419	1	250.0		1.000	0.000	0.000		
301:	701	2802	3420	3422	3121	1	250.0		1.000	0.000	0.000		
301:	702	3420	2597	3377	3422	1	250.0		1.000	0.000	0.000		
301:	703	3377	2598	3421	3422	1	250.0		1.000	0.000	0.000		
301:	704	3421	2806	3121	3422	1	250.0		1.000	0.000	0.000		
301:	705	2629	3423	3426	3313	1	250.0		1.000	0.000	0.000		
301:	706	3423	2622	3424	3426	1	250.0		1.000	0.000	0.000		
301:	707	3424	2623	3425	3426	1	250.0		1.000	0.000	0.000		
301:	708	3425	2630	3313	3426	1	250.0		1.000	0.000	0.000		
301:	709	2691	3408	3428	3427	1	250.0		1.000	0.000	0.000		
301:	710	3408	2689	3182	3428	1	250.0		1.000	0.000	0.000		
301:	711	3182	2690	3235	3428	1	250.0		1.000	0.000	0.000		
301:	712	3235	2692	3427	3428	1	250.0		1.000	0.000	0.000		
301:	713	2748	3429	3431	3430	1	250.0		1.000	0.000	0.000		
301:	714	3429	2747	3036	3431	1	250.0		1.000	0.000	0.000		
301:	715	3036	2745	3364	3431	1	250.0		1.000	0.000	0.000		
301:	716	3364	2746	3430	3431	1	250.0		1.000	0.000	0.000		
301:	717	2766	3432	3436	3435	1	250.0		1.000	0.000	0.000		
301:	718	3432	2767	3433	3436	1	250.0		1.000	0.000	0.000		
301:	719	3433	2770	3434	3436	1	250.0		1.000	0.000	0.000		
301:	720	3434	2769	3435	3436	1	250.0		1.000	0.000	0.000		
301:	721	2560	3002	3438	2926	1	250.0		1.000	0.000	0.000		
301:	722	3002	2606	3437	3438	1	250.0		1.000	0.000	0.000		
301:	723	3437	2608	3052	3438	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	724	3052	2561	2926	3438	1	250.0		1.000	0.000	0.000		
301:	725	2659	3439	3442	3441	1	250.0		1.000	0.000	0.000		
301:	726	3439	2656	3440	3442	1	250.0		1.000	0.000	0.000		
301:	727	3440	2657	3285	3442	1	250.0		1.000	0.000	0.000		
301:	728	3285	2660	3441	3442	1	250.0		1.000	0.000	0.000		
301:	729	2648	3443	3446	3268	1	250.0		1.000	0.000	0.000		
301:	730	3443	2649	3444	3446	1	250.0		1.000	0.000	0.000		
301:	731	3444	2653	3445	3446	1	250.0		1.000	0.000	0.000		
301:	732	3445	2652	3268	3446	1	250.0		1.000	0.000	0.000		
301:	733	2804	3265	3448	3447	1	250.0		1.000	0.000	0.000		
301:	734	3265	2805	3400	3448	1	250.0		1.000	0.000	0.000		
301:	735	3400	2810	3330	3448	1	250.0		1.000	0.000	0.000		
301:	736	3330	2809	3447	3448	1	250.0		1.000	0.000	0.000		
301:	737	2569	3449	3451	3019	1	250.0		1.000	0.000	0.000		
301:	738	3449	2642	3450	3451	1	250.0		1.000	0.000	0.000		
301:	739	3450	2648	3271	3451	1	250.0		1.000	0.000	0.000		
301:	740	3271	2570	3019	3451	1	250.0		1.000	0.000	0.000		
301:	741	2326	3112	3454	2327	1	250.0		1.000	0.000	0.000		
301:	742	3112	2817	3452	3454	1	250.0		1.000	0.000	0.000		
301:	743	3452	2822	3453	3454	1	250.0		1.000	0.000	0.000		
301:	744	3453	2328	2327	3454	1	250.0		1.000	0.000	0.000		
301:	745	2755	3455	3458	3328	1	250.0		1.000	0.000	0.000		
301:	746	3455	2756	3456	3458	1	250.0		1.000	0.000	0.000		
301:	747	3456	2759	3457	3458	1	250.0		1.000	0.000	0.000		
301:	748	3457	2758	3328	3458	1	250.0		1.000	0.000	0.000		
301:	749	2680	3339	3460	3459	1	250.0		1.000	0.000	0.000		
301:	750	3339	2678	3246	3460	1	250.0		1.000	0.000	0.000		
301:	751	3246	2679	3190	3460	1	250.0		1.000	0.000	0.000		
301:	752	3190	2681	3459	3460	1	250.0		1.000	0.000	0.000		
301:	753	2761	3461	3465	3464	1	250.0		1.000	0.000	0.000		
301:	754	3461	2762	3462	3465	1	250.0		1.000	0.000	0.000		
301:	755	3462	2766	3463	3465	1	250.0		1.000	0.000	0.000		
301:	756	3463	2765	3464	3465	1	250.0		1.000	0.000	0.000		
301:	757	2569	3243	3468	3449	1	250.0		1.000	0.000	0.000		
301:	758	3243	2568	3466	3468	1	250.0		1.000	0.000	0.000		
301:	759	3466	2638	3467	3468	1	250.0		1.000	0.000	0.000		
301:	760	3467	2642	3449	3468	1	250.0		1.000	0.000	0.000		
301:	761	2581	3469	3472	3471	1	250.0		1.000	0.000	0.000		
301:	762	3469	2580	3340	3472	1	250.0		1.000	0.000	0.000		
301:	763	3340	2680	3470	3472	1	250.0		1.000	0.000	0.000		
301:	764	3470	2682	3471	3472	1	250.0		1.000	0.000	0.000		
301:	765	2812	3346	3475	3111	1	250.0		1.000	0.000	0.000		
301:	766	3346	2813	3473	3475	1	250.0		1.000	0.000	0.000		
301:	767	3473	2818	3474	3475	1	250.0		1.000	0.000	0.000		
301:	768	3474	2817	3111	3475	1	250.0		1.000	0.000	0.000		
301:	769	2391	2392	3477	3214	1	250.0		1.000	0.000	0.000		
301:	770	2392	2393	3368	3477	1	250.0		1.000	0.000	0.000		
301:	771	3368	2700	3476	3477	1	250.0		1.000	0.000	0.000		
301:	772	3476	2699	3214	3477	1	250.0		1.000	0.000	0.000		
301:	773	2798	3478	3479	3238	1	250.0		1.000	0.000	0.000		
301:	774	3478	2596	3348	3479	1	250.0		1.000	0.000	0.000		
301:	775	3348	2597	3420	3479	1	250.0		1.000	0.000	0.000		
301:	776	3420	2802	3238	3479	1	250.0		1.000	0.000	0.000		
301:	777	2810	3399	3481	3331	1	250.0		1.000	0.000	0.000		
301:	778	3399	2811	3480	3481	1	250.0		1.000	0.000	0.000		
301:	779	3480	2816	2869	3481	1	250.0		1.000	0.000	0.000		
301:	780	2869	2815	3331	3481	1	250.0		1.000	0.000	0.000		
301:	781	2581	3482	3485	3484	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	782	3482	2582	3483	3485	1	250.0		1.000	0.000	0.000		
301:	783	3483	2752	3416	3485	1	250.0		1.000	0.000	0.000		
301:	784	3416	2750	3484	3485	1	250.0		1.000	0.000	0.000		
301:	785	2617	3486	3490	3489	1	250.0		1.000	0.000	0.000		
301:	786	3486	2616	3487	3490	1	250.0		1.000	0.000	0.000		
301:	787	3487	2611	3488	3490	1	250.0		1.000	0.000	0.000		
301:	788	3488	2612	3489	3490	1	250.0		1.000	0.000	0.000		
301:	789	2395	2396	3492	3366	1	250.0		1.000	0.000	0.000		
301:	790	2396	2397	3280	3492	1	250.0		1.000	0.000	0.000		
301:	791	3280	2703	3491	3492	1	250.0		1.000	0.000	0.000		
301:	792	3491	2702	3366	3492	1	250.0		1.000	0.000	0.000		
301:	793	2817	3474	3495	3452	1	250.0		1.000	0.000	0.000		
301:	794	3474	2818	3493	3495	1	250.0		1.000	0.000	0.000		
301:	795	3493	2823	3494	3495	1	250.0		1.000	0.000	0.000		
301:	796	3494	2822	3452	3495	1	250.0		1.000	0.000	0.000		
301:	797	2774	3250	3497	3290	1	250.0		1.000	0.000	0.000		
301:	798	3250	2773	3496	3497	1	250.0		1.000	0.000	0.000		
301:	799	3496	2769	3434	3497	1	250.0		1.000	0.000	0.000		
301:	800	3434	2770	3290	3497	1	250.0		1.000	0.000	0.000		
301:	801	2298	3093	3498	2299	1	250.0		1.000	0.000	0.000		
301:	802	3093	2761	3464	3498	1	250.0		1.000	0.000	0.000		
301:	803	3464	2765	3240	3498	1	250.0		1.000	0.000	0.000		
301:	804	3240	2300	2299	3498	1	250.0		1.000	0.000	0.000		
301:	805	2726	3499	3502	2841	1	250.0		1.000	0.000	0.000		
301:	806	3499	2721	3500	3502	1	250.0		1.000	0.000	0.000		
301:	807	3500	2527	3501	3502	1	250.0		1.000	0.000	0.000		
301:	808	3501	2727	2841	3502	1	250.0		1.000	0.000	0.000		
301:	809	2662	3173	3505	3504	1	250.0		1.000	0.000	0.000		
301:	810	3173	2659	3441	3505	1	250.0		1.000	0.000	0.000		
301:	811	3441	2660	3503	3505	1	250.0		1.000	0.000	0.000		
301:	812	3503	2663	3504	3505	1	250.0		1.000	0.000	0.000		
301:	813	2590	2877	3509	3508	1	250.0		1.000	0.000	0.000		
301:	814	2877	2701	3506	3509	1	250.0		1.000	0.000	0.000		
301:	815	3506	2703	3507	3509	1	250.0		1.000	0.000	0.000		
301:	816	3507	2591	3508	3509	1	250.0		1.000	0.000	0.000		
301:	817	2765	3463	3511	3241	1	250.0		1.000	0.000	0.000		
301:	818	3463	2766	3435	3511	1	250.0		1.000	0.000	0.000		
301:	819	3435	2769	3510	3511	1	250.0		1.000	0.000	0.000		
301:	820	3510	2768	3241	3511	1	250.0		1.000	0.000	0.000		
301:	821	2586	3512	3514	2883	1	250.0		1.000	0.000	0.000		
301:	822	3512	2585	3409	3514	1	250.0		1.000	0.000	0.000		
301:	823	3409	2691	3513	3514	1	250.0		1.000	0.000	0.000		
301:	824	3513	2693	2883	3514	1	250.0		1.000	0.000	0.000		
301:	825	2605	2982	3516	2934	1	250.0		1.000	0.000	0.000		
301:	826	2982	2714	3515	3516	1	250.0		1.000	0.000	0.000		
301:	827	3515	2716	3164	3516	1	250.0		1.000	0.000	0.000		
301:	828	3164	2604	2934	3516	1	250.0		1.000	0.000	0.000		
301:	829	2578	3218	3519	3518	1	250.0		1.000	0.000	0.000		
301:	830	3218	2579	3517	3519	1	250.0		1.000	0.000	0.000		
301:	831	3517	2746	3363	3519	1	250.0		1.000	0.000	0.000		
301:	832	3363	2744	3518	3519	1	250.0		1.000	0.000	0.000		
301:	833	2586	3520	3523	3512	1	250.0		1.000	0.000	0.000		
301:	834	3520	2760	3521	3523	1	250.0		1.000	0.000	0.000		
301:	835	3521	2757	3522	3523	1	250.0		1.000	0.000	0.000		
301:	836	3522	2585	3512	3523	1	250.0		1.000	0.000	0.000		
301:	837	2562	3054	3526	2961	1	250.0		1.000	0.000	0.000		
301:	838	3054	2610	3524	3526	1	250.0		1.000	0.000	0.000		
301:	839	3524	2614	3525	3526	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	840	3525	2563	2961	3526	1	250.0		1.000	0.000	0.000		
301:	841	2568	3059	3527	3466	1	250.0		1.000	0.000	0.000		
301:	842	3059	2567	3103	3527	1	250.0		1.000	0.000	0.000		
301:	843	3103	2633	3223	3527	1	250.0		1.000	0.000	0.000		
301:	844	3223	2638	3466	3527	1	250.0		1.000	0.000	0.000		
301:	845	2415	2416	3528	2854	1	250.0		1.000	0.000	0.000		
301:	846	2416	2417	3140	3528	1	250.0		1.000	0.000	0.000		
301:	847	3140	2601	2832	3528	1	250.0		1.000	0.000	0.000		
301:	848	2832	2713	2854	3528	1	250.0		1.000	0.000	0.000		
301:	849	2630	3425	3532	3531	1	250.0		1.000	0.000	0.000		
301:	850	3425	2623	3529	3532	1	250.0		1.000	0.000	0.000		
301:	851	3529	2624	3530	3532	1	250.0		1.000	0.000	0.000		
301:	852	3530	2631	3531	3532	1	250.0		1.000	0.000	0.000		
301:	853	2747	3429	3534	3075	1	250.0		1.000	0.000	0.000		
301:	854	3429	2748	3533	3534	1	250.0		1.000	0.000	0.000		
301:	855	3533	2750	3415	3534	1	250.0		1.000	0.000	0.000		
301:	856	3415	2749	3075	3534	1	250.0		1.000	0.000	0.000		
301:	857	2512	2513	3537	3084	1	250.0		1.000	0.000	0.000		
301:	858	2513	2514	3535	3537	1	250.0		1.000	0.000	0.000		
301:	859	3535	2619	3536	3537	1	250.0		1.000	0.000	0.000		
301:	860	3536	2613	3084	3537	1	250.0		1.000	0.000	0.000		
301:	861	2628	3538	3541	3540	1	250.0		1.000	0.000	0.000		
301:	862	3538	2621	3539	3541	1	250.0		1.000	0.000	0.000		
301:	863	3539	2622	3423	3541	1	250.0		1.000	0.000	0.000		
301:	864	3423	2629	3540	3541	1	250.0		1.000	0.000	0.000		
301:	865	2598	3542	3544	3543	1	250.0		1.000	0.000	0.000		
301:	866	3542	2599	2834	3544	1	250.0		1.000	0.000	0.000		
301:	867	2834	2816	3480	3544	1	250.0		1.000	0.000	0.000		
301:	868	3480	2811	3543	3544	1	250.0		1.000	0.000	0.000		
301:	869	2725	3300	3547	3546	1	250.0		1.000	0.000	0.000		
301:	870	3300	2720	3545	3547	1	250.0		1.000	0.000	0.000		
301:	871	3545	2721	3499	3547	1	250.0		1.000	0.000	0.000		
301:	872	3499	2726	3546	3547	1	250.0		1.000	0.000	0.000		
301:	873	2592	3548	3552	3551	1	250.0		1.000	0.000	0.000		
301:	874	3548	2704	3549	3552	1	250.0		1.000	0.000	0.000		
301:	875	3549	2706	3550	3552	1	250.0		1.000	0.000	0.000		
301:	876	3550	2593	3551	3552	1	250.0		1.000	0.000	0.000		
301:	877	2594	3356	3554	3553	1	250.0		1.000	0.000	0.000		
301:	878	3356	2593	3550	3554	1	250.0		1.000	0.000	0.000		
301:	879	3550	2706	3308	3554	1	250.0		1.000	0.000	0.000		
301:	880	3308	2707	3553	3554	1	250.0		1.000	0.000	0.000		
301:	881	2718	3403	3556	3208	1	250.0		1.000	0.000	0.000		
301:	882	3403	2723	3555	3556	1	250.0		1.000	0.000	0.000		
301:	883	3555	2820	2858	3556	1	250.0		1.000	0.000	0.000		
301:	884	2858	2722	3208	3556	1	250.0		1.000	0.000	0.000		
301:	885	2622	3557	3559	3424	1	250.0		1.000	0.000	0.000		
301:	886	3557	2616	3486	3559	1	250.0		1.000	0.000	0.000		
301:	887	3486	2617	3558	3559	1	250.0		1.000	0.000	0.000		
301:	888	3558	2623	3424	3559	1	250.0		1.000	0.000	0.000		
301:	889	2655	3393	3562	3004	1	250.0		1.000	0.000	0.000		
301:	890	3393	2654	3560	3562	1	250.0		1.000	0.000	0.000		
301:	891	3560	2650	3561	3562	1	250.0		1.000	0.000	0.000		
301:	892	3561	2651	3004	3562	1	250.0		1.000	0.000	0.000		
301:	893	2575	3563	3566	3176	1	250.0		1.000	0.000	0.000		
301:	894	3563	2665	3564	3566	1	250.0		1.000	0.000	0.000		
301:	895	3564	2669	3565	3566	1	250.0		1.000	0.000	0.000		
301:	896	3565	2576	3176	3566	1	250.0		1.000	0.000	0.000		
301:	897	2595	3567	3570	3569	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	898	3567	2708	3568	3570	1	250.0		1.000	0.000	0.000		
301:	899	3568	2710	3349	3570	1	250.0		1.000	0.000	0.000		
301:	900	3349	2596	3569	3570	1	250.0		1.000	0.000	0.000		
301:	901	2514	2515	3571	3535	1	250.0		1.000	0.000	0.000		
301:	902	2515	2516	3031	3571	1	250.0		1.000	0.000	0.000		
301:	903	3031	2626	3197	3571	1	250.0		1.000	0.000	0.000		
301:	904	3197	2619	3535	3571	1	250.0		1.000	0.000	0.000		
301:	905	2661	3276	3573	3287	1	250.0		1.000	0.000	0.000		
301:	906	3276	2664	3572	3573	1	250.0		1.000	0.000	0.000		
301:	907	3572	2663	3503	3573	1	250.0		1.000	0.000	0.000		
301:	908	3503	2660	3287	3573	1	250.0		1.000	0.000	0.000		
301:	909	2588	2968	3575	2873	1	250.0		1.000	0.000	0.000		
301:	910	2968	2587	2887	3575	1	250.0		1.000	0.000	0.000		
301:	911	2887	2696	3574	3575	1	250.0		1.000	0.000	0.000		
301:	912	3574	2698	2873	3575	1	250.0		1.000	0.000	0.000		
301:	913	2579	3338	3577	3517	1	250.0		1.000	0.000	0.000		
301:	914	3338	2580	3576	3577	1	250.0		1.000	0.000	0.000		
301:	915	3576	2748	3430	3577	1	250.0		1.000	0.000	0.000		
301:	916	3430	2746	3517	3577	1	250.0		1.000	0.000	0.000		
301:	917	2764	2970	3580	3579	1	250.0		1.000	0.000	0.000		
301:	918	2970	2767	3432	3580	1	250.0		1.000	0.000	0.000		
301:	919	3432	2766	3578	3580	1	250.0		1.000	0.000	0.000		
301:	920	3578	2763	3579	3580	1	250.0		1.000	0.000	0.000		
301:	921	2369	2370	3582	3013	1	250.0		1.000	0.000	0.000		
301:	922	2370	2371	2965	3582	1	250.0		1.000	0.000	0.000		
301:	923	2965	2677	3581	3582	1	250.0		1.000	0.000	0.000		
301:	924	3581	2675	3013	3582	1	250.0		1.000	0.000	0.000		
301:	925	2565	3583	3587	3586	1	250.0		1.000	0.000	0.000		
301:	926	3583	2564	3584	3587	1	250.0		1.000	0.000	0.000		
301:	927	3584	2614	3585	3587	1	250.0		1.000	0.000	0.000		
301:	928	3585	2620	3586	3587	1	250.0		1.000	0.000	0.000		
301:	929	2573	2901	3589	3172	1	250.0		1.000	0.000	0.000		
301:	930	2901	2572	3588	3589	1	250.0		1.000	0.000	0.000		
301:	931	3588	2656	3439	3589	1	250.0		1.000	0.000	0.000		
301:	932	3439	2659	3172	3589	1	250.0		1.000	0.000	0.000		
301:	933	2803	3293	3591	3590	1	250.0		1.000	0.000	0.000		
301:	934	3293	2804	3447	3591	1	250.0		1.000	0.000	0.000		
301:	935	3447	2809	3370	3591	1	250.0		1.000	0.000	0.000		
301:	936	3370	2808	3590	3591	1	250.0		1.000	0.000	0.000		
301:	937	2627	3592	3594	3384	1	250.0		1.000	0.000	0.000		
301:	938	3592	2620	3593	3594	1	250.0		1.000	0.000	0.000		
301:	939	3593	2621	3538	3594	1	250.0		1.000	0.000	0.000		
301:	940	3538	2628	3384	3594	1	250.0		1.000	0.000	0.000		
301:	941	2638	3226	3597	3596	1	250.0		1.000	0.000	0.000		
301:	942	3226	2639	2838	3597	1	250.0		1.000	0.000	0.000		
301:	943	2838	2644	3595	3597	1	250.0		1.000	0.000	0.000		
301:	944	3595	2643	3596	3597	1	250.0		1.000	0.000	0.000		
301:	945	2649	3598	3600	3444	1	250.0		1.000	0.000	0.000		
301:	946	3598	2650	3560	3600	1	250.0		1.000	0.000	0.000		
301:	947	3560	2654	3599	3600	1	250.0		1.000	0.000	0.000		
301:	948	3599	2653	3444	3600	1	250.0		1.000	0.000	0.000		
301:	949	2508	2509	3602	3601	1	250.0		1.000	0.000	0.000		
301:	950	2509	2510	3086	3602	1	250.0		1.000	0.000	0.000		
301:	951	3086	2609	3088	3602	1	250.0		1.000	0.000	0.000		
301:	952	3088	2607	3601	3602	1	250.0		1.000	0.000	0.000		
301:	953	2617	3489	3605	3380	1	250.0		1.000	0.000	0.000		
301:	954	3489	2612	3603	3605	1	250.0		1.000	0.000	0.000		
301:	955	3603	2613	3604	3605	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	956	3604	2618	3380	3605	1	250.0		1.000	0.000	0.000		
301:	957	2813	3371	3607	3473	1	250.0		1.000	0.000	0.000		
301:	958	3371	2814	2861	3607	1	250.0		1.000	0.000	0.000		
301:	959	2861	2819	3606	3607	1	250.0		1.000	0.000	0.000		
301:	960	3606	2818	3473	3607	1	250.0		1.000	0.000	0.000		
301:	961	2773	3231	3609	3496	1	250.0		1.000	0.000	0.000		
301:	962	3231	2772	3608	3609	1	250.0		1.000	0.000	0.000		
301:	963	3608	2768	3510	3609	1	250.0		1.000	0.000	0.000		
301:	964	3510	2769	3496	3609	1	250.0		1.000	0.000	0.000		
301:	965	2761	3095	3611	3461	1	250.0		1.000	0.000	0.000		
301:	966	3095	2758	3457	3611	1	250.0		1.000	0.000	0.000		
301:	967	3457	2759	3610	3611	1	250.0		1.000	0.000	0.000		
301:	968	3610	2762	3461	3611	1	250.0		1.000	0.000	0.000		
301:	969	2634	3385	3612	3359	1	250.0		1.000	0.000	0.000		
301:	970	3385	2628	3540	3612	1	250.0		1.000	0.000	0.000		
301:	971	3540	2629	3312	3612	1	250.0		1.000	0.000	0.000		
301:	972	3312	2635	3359	3612	1	250.0		1.000	0.000	0.000		
301:	973	2574	3613	3615	3171	1	250.0		1.000	0.000	0.000		
301:	974	3613	2738	3614	3615	1	250.0		1.000	0.000	0.000		
301:	975	3614	2736	2903	3615	1	250.0		1.000	0.000	0.000		
301:	976	2903	2573	3171	3615	1	250.0		1.000	0.000	0.000		
301:	977	2585	3522	3618	3407	1	250.0		1.000	0.000	0.000		
301:	978	3522	2757	3616	3618	1	250.0		1.000	0.000	0.000		
301:	979	3616	2754	3617	3618	1	250.0		1.000	0.000	0.000		
301:	980	3617	2584	3407	3618	1	250.0		1.000	0.000	0.000		
301:	981	2760	3619	3622	3621	1	250.0		1.000	0.000	0.000		
301:	982	3619	2763	3620	3622	1	250.0		1.000	0.000	0.000		
301:	983	3620	2762	3610	3622	1	250.0		1.000	0.000	0.000		
301:	984	3610	2759	3621	3622	1	250.0		1.000	0.000	0.000		
301:	985	2754	3623	3625	3624	1	250.0		1.000	0.000	0.000		
301:	986	3623	2753	3282	3625	1	250.0		1.000	0.000	0.000		
301:	987	3282	2751	3417	3625	1	250.0		1.000	0.000	0.000		
301:	988	3417	2752	3624	3625	1	250.0		1.000	0.000	0.000		
301:	989	2616	3626	3629	3487	1	250.0		1.000	0.000	0.000		
301:	990	3626	2615	3627	3629	1	250.0		1.000	0.000	0.000		
301:	991	3627	2610	3628	3629	1	250.0		1.000	0.000	0.000		
301:	992	3628	2611	3487	3629	1	250.0		1.000	0.000	0.000		
301:	993	2756	3630	3631	3456	1	250.0		1.000	0.000	0.000		
301:	994	3630	2757	3521	3631	1	250.0		1.000	0.000	0.000		
301:	995	3521	2760	3621	3631	1	250.0		1.000	0.000	0.000		
301:	996	3621	2759	3456	3631	1	250.0		1.000	0.000	0.000		
301:	997	2575	3632	3634	3563	1	250.0		1.000	0.000	0.000		
301:	998	3632	2574	3174	3634	1	250.0		1.000	0.000	0.000		
301:	999	3174	2662	3633	3634	1	250.0		1.000	0.000	0.000		
301:	1000	3633	2665	3563	3634	1	250.0		1.000	0.000	0.000		
301:	1001	2584	3617	3636	3321	1	250.0		1.000	0.000	0.000		
301:	1002	3617	2754	3624	3636	1	250.0		1.000	0.000	0.000		
301:	1003	3624	2752	3635	3636	1	250.0		1.000	0.000	0.000		
301:	1004	3635	2583	3321	3636	1	250.0		1.000	0.000	0.000		
301:	1005	2521	2522	3638	3637	1	250.0		1.000	0.000	0.000		
301:	1006	2522	2523	3158	3638	1	250.0		1.000	0.000	0.000		
301:	1007	3158	2717	3064	3638	1	250.0		1.000	0.000	0.000		
301:	1008	3064	2715	3637	3638	1	250.0		1.000	0.000	0.000		
301:	1009	2698	3574	3641	3640	1	250.0		1.000	0.000	0.000		
301:	1010	3574	2696	3639	3641	1	250.0		1.000	0.000	0.000		
301:	1011	3639	2697	3215	3641	1	250.0		1.000	0.000	0.000		
301:	1012	3215	2699	3640	3641	1	250.0		1.000	0.000	0.000		
301:	1013	2672	3642	3645	3644	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	1014	3642	2669	3643	3645	1	250.0		1.000	0.000	0.000		
301:	1015	3643	2670	2896	3645	1	250.0		1.000	0.000	0.000		
301:	1016	2896	2673	3644	3645	1	250.0		1.000	0.000	0.000		
301:	1017	2595	3395	3647	3567	1	250.0		1.000	0.000	0.000		
301:	1018	3395	2594	3553	3647	1	250.0		1.000	0.000	0.000		
301:	1019	3553	2707	3646	3647	1	250.0		1.000	0.000	0.000		
301:	1020	3646	2708	3567	3647	1	250.0		1.000	0.000	0.000		
301:	1021	2643	3595	3650	3649	1	250.0		1.000	0.000	0.000		
301:	1022	3595	2644	3648	3650	1	250.0		1.000	0.000	0.000		
301:	1023	3648	2650	3598	3650	1	250.0		1.000	0.000	0.000		
301:	1024	3598	2649	3649	3650	1	250.0		1.000	0.000	0.000		
301:	1025	2644	2837	3652	3648	1	250.0		1.000	0.000	0.000		
301:	1026	2837	2645	3651	3652	1	250.0		1.000	0.000	0.000		
301:	1027	3651	2651	3561	3652	1	250.0		1.000	0.000	0.000		
301:	1028	3561	2650	3648	3652	1	250.0		1.000	0.000	0.000		
301:	1029	2571	3269	3654	2900	1	250.0		1.000	0.000	0.000		
301:	1030	3269	2652	3653	3654	1	250.0		1.000	0.000	0.000		
301:	1031	3653	2656	3588	3654	1	250.0		1.000	0.000	0.000		
301:	1032	3588	2572	2900	3654	1	250.0		1.000	0.000	0.000		
301:	1033	2636	3314	3656	3655	1	250.0		1.000	0.000	0.000		
301:	1034	3314	2630	3531	3656	1	250.0		1.000	0.000	0.000		
301:	1035	3531	2631	3201	3656	1	250.0		1.000	0.000	0.000		
301:	1036	3201	2637	3655	3656	1	250.0		1.000	0.000	0.000		
301:	1037	2337	2338	3657	3030	1	250.0		1.000	0.000	0.000		
301:	1038	2338	2339	3126	3657	1	250.0		1.000	0.000	0.000		
301:	1039	3126	2625	3198	3657	1	250.0		1.000	0.000	0.000		
301:	1040	3198	2626	3030	3657	1	250.0		1.000	0.000	0.000		
301:	1041	2574	3632	3659	3613	1	250.0		1.000	0.000	0.000		
301:	1042	3632	2575	3178	3659	1	250.0		1.000	0.000	0.000		
301:	1043	3178	2739	3658	3659	1	250.0		1.000	0.000	0.000		
301:	1044	3658	2738	3613	3659	1	250.0		1.000	0.000	0.000		
301:	1045	2734	3193	3660	2905	1	250.0		1.000	0.000	0.000		
301:	1046	3193	2733	3405	3660	1	250.0		1.000	0.000	0.000		
301:	1047	3405	2571	2899	3660	1	250.0		1.000	0.000	0.000		
301:	1048	2899	2735	2905	3660	1	250.0		1.000	0.000	0.000		
301:	1049	2782	3149	3661	3137	1	250.0		1.000	0.000	0.000		
301:	1050	3149	2592	3551	3661	1	250.0		1.000	0.000	0.000		
301:	1051	3551	2593	3355	3661	1	250.0		1.000	0.000	0.000		
301:	1052	3355	2786	3137	3661	1	250.0		1.000	0.000	0.000		
301:	1053	2621	3662	3663	3539	1	250.0		1.000	0.000	0.000		
301:	1054	3662	2615	3626	3663	1	250.0		1.000	0.000	0.000		
301:	1055	3626	2616	3557	3663	1	250.0		1.000	0.000	0.000		
301:	1056	3557	2622	3539	3663	1	250.0		1.000	0.000	0.000		
301:	1057	2665	3633	3666	3665	1	250.0		1.000	0.000	0.000		
301:	1058	3633	2662	3504	3666	1	250.0		1.000	0.000	0.000		
301:	1059	3504	2663	3664	3666	1	250.0		1.000	0.000	0.000		
301:	1060	3664	2666	3665	3666	1	250.0		1.000	0.000	0.000		
301:	1061	2592	3148	3668	3548	1	250.0		1.000	0.000	0.000		
301:	1062	3148	2591	3507	3668	1	250.0		1.000	0.000	0.000		
301:	1063	3507	2703	3667	3668	1	250.0		1.000	0.000	0.000		
301:	1064	3667	2704	3548	3668	1	250.0		1.000	0.000	0.000		
301:	1065	2774	3289	3669	3251	1	250.0		1.000	0.000	0.000		
301:	1066	3289	2590	3508	3669	1	250.0		1.000	0.000	0.000		
301:	1067	3508	2591	3147	3669	1	250.0		1.000	0.000	0.000		
301:	1068	3147	2778	3251	3669	1	250.0		1.000	0.000	0.000		
301:	1069	2642	3670	3671	3450	1	250.0		1.000	0.000	0.000		
301:	1070	3670	2643	3649	3671	1	250.0		1.000	0.000	0.000		
301:	1071	3649	2649	3443	3671	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	1072	3443	2648	3450	3671	1	250.0		1.000	0.000	0.000		
301:	1073	2620	3585	3673	3593	1	250.0		1.000	0.000	0.000		
301:	1074	3585	2614	3672	3673	1	250.0		1.000	0.000	0.000		
301:	1075	3672	2615	3662	3673	1	250.0		1.000	0.000	0.000		
301:	1076	3662	2621	3593	3673	1	250.0		1.000	0.000	0.000		
301:	1077	2696	2886	3675	3639	1	250.0		1.000	0.000	0.000		
301:	1078	2886	2694	3674	3675	1	250.0		1.000	0.000	0.000		
301:	1079	3674	2695	3228	3675	1	250.0		1.000	0.000	0.000		
301:	1080	3228	2697	3639	3675	1	250.0		1.000	0.000	0.000		
301:	1081	2581	3471	3676	3482	1	250.0		1.000	0.000	0.000		
301:	1082	3471	2682	2908	3676	1	250.0		1.000	0.000	0.000		
301:	1083	2908	2685	3262	3676	1	250.0		1.000	0.000	0.000		
301:	1084	3262	2582	3482	3676	1	250.0		1.000	0.000	0.000		
301:	1085	2656	3677	3678	3440	1	250.0		1.000	0.000	0.000		
301:	1086	3677	2653	3599	3678	1	250.0		1.000	0.000	0.000		
301:	1087	3599	2654	3392	3678	1	250.0		1.000	0.000	0.000		
301:	1088	3392	2657	3440	3678	1	250.0		1.000	0.000	0.000		
301:	1089	2578	2828	3679	3219	1	250.0		1.000	0.000	0.000		
301:	1090	2828	2672	3644	3679	1	250.0		1.000	0.000	0.000		
301:	1091	3644	2673	3303	3679	1	250.0		1.000	0.000	0.000		
301:	1092	3303	2676	3219	3679	1	250.0		1.000	0.000	0.000		
301:	1093	2665	3665	3681	3564	1	250.0		1.000	0.000	0.000		
301:	1094	3665	2666	3680	3681	1	250.0		1.000	0.000	0.000		
301:	1095	3680	2670	3643	3681	1	250.0		1.000	0.000	0.000		
301:	1096	3643	2669	3564	3681	1	250.0		1.000	0.000	0.000		
301:	1097	2693	3513	3683	2885	1	250.0		1.000	0.000	0.000		
301:	1098	3513	2691	3427	3683	1	250.0		1.000	0.000	0.000		
301:	1099	3427	2692	3682	3683	1	250.0		1.000	0.000	0.000		
301:	1100	3682	2694	2885	3683	1	250.0		1.000	0.000	0.000		
301:	1101	2341	2342	3685	3127	1	250.0		1.000	0.000	0.000		
301:	1102	2342	2343	3202	3685	1	250.0		1.000	0.000	0.000		
301:	1103	3202	2631	3684	3685	1	250.0		1.000	0.000	0.000		
301:	1104	3684	2632	3127	3685	1	250.0		1.000	0.000	0.000		
301:	1105	2757	3630	3687	3616	1	250.0		1.000	0.000	0.000		
301:	1106	3630	2756	3686	3687	1	250.0		1.000	0.000	0.000		
301:	1107	3686	2753	3623	3687	1	250.0		1.000	0.000	0.000		
301:	1108	3623	2754	3616	3687	1	250.0		1.000	0.000	0.000		
301:	1109	2741	3152	3688	3162	1	250.0		1.000	0.000	0.000		
301:	1110	3152	2740	3177	3688	1	250.0		1.000	0.000	0.000		
301:	1111	3177	2576	2830	3688	1	250.0		1.000	0.000	0.000		
301:	1112	2830	2742	3162	3688	1	250.0		1.000	0.000	0.000		
301:	1113	2700	3367	3689	2876	1	250.0		1.000	0.000	0.000		
301:	1114	3367	2702	3491	3689	1	250.0		1.000	0.000	0.000		
301:	1115	3491	2703	3506	3689	1	250.0		1.000	0.000	0.000		
301:	1116	3506	2701	2876	3689	1	250.0		1.000	0.000	0.000		
301:	1117	2668	2890	3691	3306	1	250.0		1.000	0.000	0.000		
301:	1118	2890	2667	3690	3691	1	250.0		1.000	0.000	0.000		
301:	1119	3690	2663	3572	3691	1	250.0		1.000	0.000	0.000		
301:	1120	3572	2664	3306	3691	1	250.0		1.000	0.000	0.000		
301:	1121	2682	3470	3692	2909	1	250.0		1.000	0.000	0.000		
301:	1122	3470	2680	3459	3692	1	250.0		1.000	0.000	0.000		
301:	1123	3459	2681	2912	3692	1	250.0		1.000	0.000	0.000		
301:	1124	2912	2683	2909	3692	1	250.0		1.000	0.000	0.000		
301:	1125	2566	3693	3694	3101	1	250.0		1.000	0.000	0.000		
301:	1126	3693	2565	3586	3694	1	250.0		1.000	0.000	0.000		
301:	1127	3586	2620	3592	3694	1	250.0		1.000	0.000	0.000		
301:	1128	3592	2627	3101	3694	1	250.0		1.000	0.000	0.000		
301:	1129	2822	3494	3697	3335	1	250.0		1.000	0.000	0.000		

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MODELO

Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	1130	3494	2823	3695	3697	1	250.0		1.000	0.000	0.000		
301:	1131	3695	2725	3696	3697	1	250.0		1.000	0.000	0.000		
301:	1132	3696	2826	3335	3697	1	250.0		1.000	0.000	0.000		
301:	1133	2794	3396	3698	3072	1	250.0		1.000	0.000	0.000		
301:	1134	3396	2595	3569	3698	1	250.0		1.000	0.000	0.000		
301:	1135	3569	2596	3478	3698	1	250.0		1.000	0.000	0.000		
301:	1136	3478	2798	3072	3698	1	250.0		1.000	0.000	0.000		
301:	1137	2586	2882	3699	3520	1	250.0		1.000	0.000	0.000		
301:	1138	2882	2764	3579	3699	1	250.0		1.000	0.000	0.000		
301:	1139	3579	2763	3619	3699	1	250.0		1.000	0.000	0.000		
301:	1140	3619	2760	3520	3699	1	250.0		1.000	0.000	0.000		
301:	1141	2767	2969	3700	3433	1	250.0		1.000	0.000	0.000		
301:	1142	2969	2588	2872	3700	1	250.0		1.000	0.000	0.000		
301:	1143	2872	2589	3291	3700	1	250.0		1.000	0.000	0.000		
301:	1144	3291	2770	3433	3700	1	250.0		1.000	0.000	0.000		
301:	1145	2736	3614	3701	3390	1	250.0		1.000	0.000	0.000		
301:	1146	3614	2738	3658	3701	1	250.0		1.000	0.000	0.000		
301:	1147	3658	2739	3388	3701	1	250.0		1.000	0.000	0.000		
301:	1148	3388	2737	3390	3701	1	250.0		1.000	0.000	0.000		
301:	1149	2580	3469	3702	3576	1	250.0		1.000	0.000	0.000		
301:	1150	3469	2581	3484	3702	1	250.0		1.000	0.000	0.000		
301:	1151	3484	2750	3533	3702	1	250.0		1.000	0.000	0.000		
301:	1152	3533	2748	3576	3702	1	250.0		1.000	0.000	0.000		
301:	1153	2663	3690	3703	3664	1	250.0		1.000	0.000	0.000		
301:	1154	3690	2667	2889	3703	1	250.0		1.000	0.000	0.000		
301:	1155	2889	2670	3680	3703	1	250.0		1.000	0.000	0.000		
301:	1156	3680	2666	3664	3703	1	250.0		1.000	0.000	0.000		
301:	1157	2703	3279	3704	3667	1	250.0		1.000	0.000	0.000		
301:	1158	3279	2705	3352	3704	1	250.0		1.000	0.000	0.000		
301:	1159	3352	2706	3549	3704	1	250.0		1.000	0.000	0.000		
301:	1160	3549	2704	3667	3704	1	250.0		1.000	0.000	0.000		
301:	1161	2631	3530	3705	3684	1	250.0		1.000	0.000	0.000		
301:	1162	3530	2624	3381	3705	1	250.0		1.000	0.000	0.000		
301:	1163	3381	2625	3125	3705	1	250.0		1.000	0.000	0.000		
301:	1164	3125	2632	3684	3705	1	250.0		1.000	0.000	0.000		
301:	1165	2719	3298	3706	3402	1	250.0		1.000	0.000	0.000		
301:	1166	3298	2724	3129	3706	1	250.0		1.000	0.000	0.000		
301:	1167	3129	2820	3555	3706	1	250.0		1.000	0.000	0.000		
301:	1168	3555	2723	3402	3706	1	250.0		1.000	0.000	0.000		
301:	1169	2707	3342	3707	3646	1	250.0		1.000	0.000	0.000		
301:	1170	3342	2709	3324	3707	1	250.0		1.000	0.000	0.000		
301:	1171	3324	2710	3568	3707	1	250.0		1.000	0.000	0.000		
301:	1172	3568	2708	3646	3707	1	250.0		1.000	0.000	0.000		
301:	1173	2564	3583	3708	3248	1	250.0		1.000	0.000	0.000		
301:	1174	3583	2565	3693	3708	1	250.0		1.000	0.000	0.000		
301:	1175	3693	2566	2845	3708	1	250.0		1.000	0.000	0.000		
301:	1176	2845	2728	3248	3708	1	250.0		1.000	0.000	0.000		
301:	1177	2671	3011	3709	2894	1	250.0		1.000	0.000	0.000		
301:	1178	3011	2675	3581	3709	1	250.0		1.000	0.000	0.000		
301:	1179	3581	2677	3302	3709	1	250.0		1.000	0.000	0.000		
301:	1180	3302	2674	2894	3709	1	250.0		1.000	0.000	0.000		
301:	1181	2613	3603	3710	3085	1	250.0		1.000	0.000	0.000		
301:	1182	3603	2612	3488	3710	1	250.0		1.000	0.000	0.000		
301:	1183	3488	2611	3089	3710	1	250.0		1.000	0.000	0.000		
301:	1184	3089	2609	3085	3710	1	250.0		1.000	0.000	0.000		
301:	1185	2721	3545	3711	3157	1	250.0		1.000	0.000	0.000		
301:	1186	3545	2720	3299	3711	1	250.0		1.000	0.000	0.000		
301:	1187	3299	2719	3065	3711	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	1188	3065	2717	3157	3711	1	250.0		1.000	0.000	0.000		
301:	1189	2640	3412	3712	2836	1	250.0		1.000	0.000	0.000		
301:	1190	3412	2646	3069	3712	1	250.0		1.000	0.000	0.000		
301:	1191	3069	2651	3651	3712	1	250.0		1.000	0.000	0.000		
301:	1192	3651	2645	2836	3712	1	250.0		1.000	0.000	0.000		
301:	1193	2521	3637	3713	2981	1	250.0		1.000	0.000	0.000		
301:	1194	3637	2715	3067	3713	1	250.0		1.000	0.000	0.000		
301:	1195	3067	2716	3515	3713	1	250.0		1.000	0.000	0.000		
301:	1196	3515	2714	2981	3713	1	250.0		1.000	0.000	0.000		
301:	1197	2508	3601	3714	3001	1	250.0		1.000	0.000	0.000		
301:	1198	3601	2607	3091	3714	1	250.0		1.000	0.000	0.000		
301:	1199	3091	2608	3437	3714	1	250.0		1.000	0.000	0.000		
301:	1200	3437	2606	3001	3714	1	250.0		1.000	0.000	0.000		
301:	1201	2611	3628	3715	3090	1	250.0		1.000	0.000	0.000		
301:	1202	2610	3053	3715	3628	1	250.0		1.000	0.000	0.000		
301:	1203	2608	3090	3715	3053	1	250.0		1.000	0.000	0.000		
301:	1204	2564	3049	3716	3584	1	250.0		1.000	0.000	0.000		
301:	1205	2563	3525	3716	3049	1	250.0		1.000	0.000	0.000		
301:	1206	2614	3584	3716	3525	1	250.0		1.000	0.000	0.000		
301:	1207	2614	3524	3717	3672	1	250.0		1.000	0.000	0.000		
301:	1208	2610	3627	3717	3524	1	250.0		1.000	0.000	0.000		
301:	1209	2615	3672	3717	3627	1	250.0		1.000	0.000	0.000		
301:	1210	2618	3604	3718	3196	1	250.0		1.000	0.000	0.000		
301:	1211	2613	3536	3718	3604	1	250.0		1.000	0.000	0.000		
301:	1212	2619	3196	3718	3536	1	250.0		1.000	0.000	0.000		
301:	1213	2624	3529	3719	3382	1	250.0		1.000	0.000	0.000		
301:	1214	2623	3558	3719	3529	1	250.0		1.000	0.000	0.000		
301:	1215	2617	3382	3719	3558	1	250.0		1.000	0.000	0.000		
301:	1216	2345	2346	3720	3203	1	250.0		1.000	0.000	0.000		
301:	1217	2347	3255	3720	2346	1	250.0		1.000	0.000	0.000		
301:	1218	2637	3203	3720	3255	1	250.0		1.000	0.000	0.000		
301:	1219	2636	3655	3721	3317	1	250.0		1.000	0.000	0.000		
301:	1220	2637	3254	3721	3655	1	250.0		1.000	0.000	0.000		
301:	1221	2641	3317	3721	3254	1	250.0		1.000	0.000	0.000		
301:	1222	2349	2350	3722	3253	1	250.0		1.000	0.000	0.000		
301:	1223	2351	3413	3722	2350	1	250.0		1.000	0.000	0.000		
301:	1224	2641	3253	3722	3413	1	250.0		1.000	0.000	0.000		
301:	1225	2642	3467	3723	3670	1	250.0		1.000	0.000	0.000		
301:	1226	2638	3596	3723	3467	1	250.0		1.000	0.000	0.000		
301:	1227	2643	3670	3723	3596	1	250.0		1.000	0.000	0.000		
301:	1228	2353	3070	3724	2352	1	250.0		1.000	0.000	0.000		
301:	1229	2646	3411	3724	3070	1	250.0		1.000	0.000	0.000		
301:	1230	2351	2352	3724	3411	1	250.0		1.000	0.000	0.000		
301:	1231	2652	3445	3725	3653	1	250.0		1.000	0.000	0.000		
301:	1232	2653	3677	3725	3445	1	250.0		1.000	0.000	0.000		
301:	1233	2656	3653	3725	3677	1	250.0		1.000	0.000	0.000		
301:	1234	2669	3642	3726	3565	1	250.0		1.000	0.000	0.000		
301:	1235	2672	2827	3726	3642	1	250.0		1.000	0.000	0.000		
301:	1236	2576	3565	3726	2827	1	250.0		1.000	0.000	0.000		
301:	1237	2694	3682	3727	3674	1	250.0		1.000	0.000	0.000		
301:	1238	2692	3361	3727	3682	1	250.0		1.000	0.000	0.000		
301:	1239	2695	3674	3727	3361	1	250.0		1.000	0.000	0.000		
301:	1240	2698	3640	3728	2874	1	250.0		1.000	0.000	0.000		
301:	1241	2699	3476	3728	3640	1	250.0		1.000	0.000	0.000		
301:	1242	2700	2874	3728	3476	1	250.0		1.000	0.000	0.000		
301:	1243	2598	3378	3729	3542	1	250.0		1.000	0.000	0.000		
301:	1244	2712	2850	3729	3378	1	250.0		1.000	0.000	0.000		
301:	1245	2599	3542	3729	2850	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
301:	1246	2527	3500	3730	2526	1	250.0		1.000	0.000	0.000		
301:	1247	2721	3156	3730	3500	1	250.0		1.000	0.000	0.000		
301:	1248	2525	2526	3730	3156	1	250.0		1.000	0.000	0.000		
301:	1249	2529	3057	3731	2528	1	250.0		1.000	0.000	0.000		
301:	1250	2727	3501	3731	3057	1	250.0		1.000	0.000	0.000		
301:	1251	2527	2528	3731	3501	1	250.0		1.000	0.000	0.000		
301:	1252	2567	3062	3732	3100	1	250.0		1.000	0.000	0.000		
301:	1253	2729	2847	3732	3062	1	250.0		1.000	0.000	0.000		
301:	1254	2566	3100	3732	2847	1	250.0		1.000	0.000	0.000		
301:	1255	2744	3160	3733	3518	1	250.0		1.000	0.000	0.000		
301:	1256	2742	2829	3733	3160	1	250.0		1.000	0.000	0.000		
301:	1257	2578	3518	3733	2829	1	250.0		1.000	0.000	0.000		
301:	1258	2583	3635	3734	3261	1	250.0		1.000	0.000	0.000		
301:	1259	2752	3483	3734	3635	1	250.0		1.000	0.000	0.000		
301:	1260	2582	3261	3734	3483	1	250.0		1.000	0.000	0.000		
301:	1261	2756	3455	3735	3686	1	250.0		1.000	0.000	0.000		
301:	1262	2755	3375	3735	3455	1	250.0		1.000	0.000	0.000		
301:	1263	2753	3686	3735	3375	1	250.0		1.000	0.000	0.000		
301:	1264	2762	3620	3736	3462	1	250.0		1.000	0.000	0.000		
301:	1265	2763	3578	3736	3620	1	250.0		1.000	0.000	0.000		
301:	1266	2766	3462	3736	3578	1	250.0		1.000	0.000	0.000		
301:	1267	2771	3206	3737	3295	1	250.0		1.000	0.000	0.000		
301:	1268	2768	3608	3737	3206	1	250.0		1.000	0.000	0.000		
301:	1269	2772	3295	3737	3608	1	250.0		1.000	0.000	0.000		
301:	1270	2807	3212	3738	3344	1	250.0		1.000	0.000	0.000		
301:	1271	2803	3590	3738	3212	1	250.0		1.000	0.000	0.000		
301:	1272	2808	3344	3738	3590	1	250.0		1.000	0.000	0.000		
301:	1273	2806	3421	3739	3398	1	250.0		1.000	0.000	0.000		
301:	1274	2598	3543	3739	3421	1	250.0		1.000	0.000	0.000		
301:	1275	2811	3398	3739	3543	1	250.0		1.000	0.000	0.000		
301:	1276	2819	3131	3740	3606	1	250.0		1.000	0.000	0.000		
301:	1277	2823	3493	3740	3131	1	250.0		1.000	0.000	0.000		
301:	1278	2818	3606	3740	3493	1	250.0		1.000	0.000	0.000		
301:	1279	2724	3297	3741	3130	1	250.0		1.000	0.000	0.000		
301:	1280	2725	3695	3741	3297	1	250.0		1.000	0.000	0.000		
301:	1281	2823	3130	3741	3695	1	250.0		1.000	0.000	0.000		
301:	1282	2328	3453	3742	2329	1	250.0		1.000	0.000	0.000		
301:	1283	2822	3334	3742	3453	1	250.0		1.000	0.000	0.000		
301:	1284	2330	2329	3742	3334	1	250.0		1.000	0.000	0.000		
301:	1285	2332	2331	3743	3259	1	250.0		1.000	0.000	0.000		
301:	1286	2330	3336	3743	2331	1	250.0		1.000	0.000	0.000		
301:	1287	2824	3259	3743	3336	1	250.0		1.000	0.000	0.000		
301:	1288	2725	3546	3744	3696	1	250.0		1.000	0.000	0.000		
301:	1289	2726	2840	3744	3546	1	250.0		1.000	0.000	0.000		
301:	1290	2826	3696	3744	2840	1	250.0		1.000	0.000	0.000		
302:	1	2485	2486	3761	3760	1	250.0		0.000	1.000	0.000		
302:	2	2486	2220	2538	3761	1	250.0		0.000	1.000	0.000		
302:	3	2538	2539	3759	3761	1	250.0		0.000	1.000	0.000		
302:	4	3759	3749	3760	3761	1	250.0		0.000	1.000	0.000		
302:	5	2539	2540	3764	3759	1	250.0		0.000	1.000	0.000		
302:	6	2540	2541	3762	3764	1	250.0		0.000	1.000	0.000		
302:	7	3762	3754	3763	3764	1	250.0		0.000	1.000	0.000		
302:	8	3763	3749	3759	3764	1	250.0		0.000	1.000	0.000		
302:	9	2210	2476	3767	2531	1	250.0		0.000	1.000	0.000		
302:	10	2476	2477	3765	3767	1	250.0		0.000	1.000	0.000		
302:	11	3765	3745	3766	3767	1	250.0		0.000	1.000	0.000		
302:	12	3766	2532	2531	3767	1	250.0		0.000	1.000	0.000		
302:	13	2110	2537	3770	2434	1	250.0		0.000	1.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
302:	14	2537	2536	3768	3770	1	250.0		0.000	1.000	0.000		
302:	15	3768	3755	3769	3770	1	250.0		0.000	1.000	0.000		
302:	16	3769	2435	2434	3770	1	250.0		0.000	1.000	0.000		
302:	17	2485	3760	3773	2484	1	250.0		0.000	1.000	0.000		
302:	18	3760	3749	3771	3773	1	250.0		0.000	1.000	0.000		
302:	19	3771	3748	3772	3773	1	250.0		0.000	1.000	0.000		
302:	20	3772	2483	2484	3773	1	250.0		0.000	1.000	0.000		
302:	21	2120	2444	3776	2544	1	250.0		0.000	1.000	0.000		
302:	22	2444	2443	3774	3776	1	250.0		0.000	1.000	0.000		
302:	23	3774	3758	3775	3776	1	250.0		0.000	1.000	0.000		
302:	24	3775	2543	2544	3776	1	250.0		0.000	1.000	0.000		
302:	25	2534	3777	3779	2535	1	250.0		0.000	1.000	0.000		
302:	26	3777	3750	3778	3779	1	250.0		0.000	1.000	0.000		
302:	27	3778	3755	3768	3779	1	250.0		0.000	1.000	0.000		
302:	28	3768	2536	2535	3779	1	250.0		0.000	1.000	0.000		
302:	29	2541	2542	3781	3762	1	250.0		0.000	1.000	0.000		
302:	30	2542	2543	3775	3781	1	250.0		0.000	1.000	0.000		
302:	31	3775	3758	3780	3781	1	250.0		0.000	1.000	0.000		
302:	32	3780	3754	3762	3781	1	250.0		0.000	1.000	0.000		
302:	33	2534	2533	3783	3777	1	250.0		0.000	1.000	0.000		
302:	34	2533	2532	3766	3783	1	250.0		0.000	1.000	0.000		
302:	35	3766	3745	3782	3783	1	250.0		0.000	1.000	0.000		
302:	36	3782	3750	3777	3783	1	250.0		0.000	1.000	0.000		
302:	37	3752	3784	3788	3787	1	250.0		0.000	1.000	0.000		
302:	38	3784	3747	3785	3788	1	250.0		0.000	1.000	0.000		
302:	39	3785	3748	3786	3788	1	250.0		0.000	1.000	0.000		
302:	40	3786	3753	3787	3788	1	250.0		0.000	1.000	0.000		
302:	41	3746	3789	3791	3790	1	250.0		0.000	1.000	0.000		
302:	42	3789	3745	3765	3791	1	250.0		0.000	1.000	0.000		
302:	43	3765	2477	2478	3791	1	250.0		0.000	1.000	0.000		
302:	44	2478	2479	3790	3791	1	250.0		0.000	1.000	0.000		
302:	45	3753	3786	3793	3792	1	250.0		0.000	1.000	0.000		
302:	46	3786	3748	3771	3793	1	250.0		0.000	1.000	0.000		
302:	47	3771	3749	3763	3793	1	250.0		0.000	1.000	0.000		
302:	48	3763	3754	3792	3793	1	250.0		0.000	1.000	0.000		
302:	49	2435	3769	3796	2436	1	250.0		0.000	1.000	0.000		
302:	50	3769	3755	3794	3796	1	250.0		0.000	1.000	0.000		
302:	51	3794	3756	3795	3796	1	250.0		0.000	1.000	0.000		
302:	52	3795	2437	2436	3796	1	250.0		0.000	1.000	0.000		
302:	53	3747	3797	3799	3798	1	250.0		0.000	1.000	0.000		
302:	54	3797	3746	3790	3799	1	250.0		0.000	1.000	0.000		
302:	55	3790	2479	2480	3799	1	250.0		0.000	1.000	0.000		
302:	56	2480	2481	3798	3799	1	250.0		0.000	1.000	0.000		
302:	57	3748	3785	3800	3772	1	250.0		0.000	1.000	0.000		
302:	58	3785	3747	3798	3800	1	250.0		0.000	1.000	0.000		
302:	59	3798	2481	2482	3800	1	250.0		0.000	1.000	0.000		
302:	60	2482	2483	3772	3800	1	250.0		0.000	1.000	0.000		
302:	61	3757	3801	3803	3802	1	250.0		0.000	1.000	0.000		
302:	62	3801	3758	3774	3803	1	250.0		0.000	1.000	0.000		
302:	63	3774	2443	2442	3803	1	250.0		0.000	1.000	0.000		
302:	64	2442	2441	3802	3803	1	250.0		0.000	1.000	0.000		
302:	65	2437	3795	3806	2438	1	250.0		0.000	1.000	0.000		
302:	66	3795	3756	3804	3806	1	250.0		0.000	1.000	0.000		
302:	67	3804	3757	3805	3806	1	250.0		0.000	1.000	0.000		
302:	68	3805	2439	2438	3806	1	250.0		0.000	1.000	0.000		
302:	69	3754	3780	3808	3792	1	250.0		0.000	1.000	0.000		
302:	70	3780	3758	3801	3808	1	250.0		0.000	1.000	0.000		
302:	71	3801	3757	3807	3808	1	250.0		0.000	1.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
302:	72	3807	3753	3792	3808	1	250.0		0.000	1.000	0.000		
302:	73	3751	3809	3811	3810	1	250.0		0.000	1.000	0.000		
302:	74	3809	3746	3797	3811	1	250.0		0.000	1.000	0.000		
302:	75	3797	3747	3784	3811	1	250.0		0.000	1.000	0.000		
302:	76	3784	3752	3810	3811	1	250.0		0.000	1.000	0.000		
302:	77	3756	3812	3813	3804	1	250.0		0.000	1.000	0.000		
302:	78	3812	3752	3787	3813	1	250.0		0.000	1.000	0.000		
302:	79	3787	3753	3807	3813	1	250.0		0.000	1.000	0.000		
302:	80	3807	3757	3804	3813	1	250.0		0.000	1.000	0.000		
302:	81	3750	3782	3815	3814	1	250.0		0.000	1.000	0.000		
302:	82	3782	3745	3789	3815	1	250.0		0.000	1.000	0.000		
302:	83	3789	3746	3809	3815	1	250.0		0.000	1.000	0.000		
302:	84	3809	3751	3814	3815	1	250.0		0.000	1.000	0.000		
302:	85	3750	3814	3817	3778	1	250.0		0.000	1.000	0.000		
302:	86	3814	3751	3816	3817	1	250.0		0.000	1.000	0.000		
302:	87	3816	3756	3794	3817	1	250.0		0.000	1.000	0.000		
302:	88	3794	3755	3778	3817	1	250.0		0.000	1.000	0.000		
302:	89	3751	3810	3818	3816	1	250.0		0.000	1.000	0.000		
302:	90	3752	3812	3818	3810	1	250.0		0.000	1.000	0.000		
302:	91	3756	3816	3818	3812	1	250.0		0.000	1.000	0.000		
302:	92	2439	3805	3819	2440	1	250.0		0.000	1.000	0.000		
302:	93	3757	3802	3819	3805	1	250.0		0.000	1.000	0.000		
302:	94	2441	2440	3819	3802	1	250.0		0.000	1.000	0.000		
302:	95	2488	3827	3831	3830	1	250.0		0.000	1.000	0.000		
302:	96	3827	3821	3828	3831	1	250.0		0.000	1.000	0.000		
302:	97	3828	3823	3829	3831	1	250.0		0.000	1.000	0.000		
302:	98	3829	3820	3830	3831	1	250.0		0.000	1.000	0.000		
302:	99	2488	2489	3834	3827	1	250.0		0.000	1.000	0.000		
302:	100	2489	2490	3832	3834	1	250.0		0.000	1.000	0.000		
302:	101	3832	3822	3833	3834	1	250.0		0.000	1.000	0.000		
302:	102	3833	3821	3827	3834	1	250.0		0.000	1.000	0.000		
302:	103	2130	2449	3837	2551	1	250.0		0.000	1.000	0.000		
302:	104	2449	2448	3835	3837	1	250.0		0.000	1.000	0.000		
302:	105	3835	3826	3836	3837	1	250.0		0.000	1.000	0.000		
302:	106	3836	2550	2551	3837	1	250.0		0.000	1.000	0.000		
302:	107	2543	3838	3840	2544	1	250.0		0.000	1.000	0.000		
302:	108	3838	3825	3839	3840	1	250.0		0.000	1.000	0.000		
302:	109	3839	2446	2445	3840	1	250.0		0.000	1.000	0.000		
302:	110	2445	2120	2544	3840	1	250.0		0.000	1.000	0.000		
302:	111	2546	2547	3844	3843	1	250.0		0.000	1.000	0.000		
302:	112	2547	2548	3841	3844	1	250.0		0.000	1.000	0.000		
302:	113	3841	3824	3842	3844	1	250.0		0.000	1.000	0.000		
302:	114	3842	3822	3843	3844	1	250.0		0.000	1.000	0.000		
302:	115	2539	2538	3846	3845	1	250.0		0.000	1.000	0.000		
302:	116	2538	2220	2487	3846	1	250.0		0.000	1.000	0.000		
302:	117	2487	2488	3830	3846	1	250.0		0.000	1.000	0.000		
302:	118	3830	3820	3845	3846	1	250.0		0.000	1.000	0.000		
302:	119	2546	3843	3847	2545	1	250.0		0.000	1.000	0.000		
302:	120	3843	3822	3832	3847	1	250.0		0.000	1.000	0.000		
302:	121	3832	2490	2491	3847	1	250.0		0.000	1.000	0.000		
302:	122	2491	2230	2545	3847	1	250.0		0.000	1.000	0.000		
302:	123	2548	2549	3849	3841	1	250.0		0.000	1.000	0.000		
302:	124	2549	2550	3836	3849	1	250.0		0.000	1.000	0.000		
302:	125	3836	3826	3848	3849	1	250.0		0.000	1.000	0.000		
302:	126	3848	3824	3841	3849	1	250.0		0.000	1.000	0.000		
302:	127	2543	2542	3852	3838	1	250.0		0.000	1.000	0.000		
302:	128	2542	2541	3850	3852	1	250.0		0.000	1.000	0.000		
302:	129	3850	3823	3851	3852	1	250.0		0.000	1.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
302:	130	3851	3825	3838	3852	1	250.0		0.000	1.000	0.000		
302:	131	2539	3845	3853	2540	1	250.0		0.000	1.000	0.000		
302:	132	3845	3820	3829	3853	1	250.0		0.000	1.000	0.000		
302:	133	3829	3823	3850	3853	1	250.0		0.000	1.000	0.000		
302:	134	3850	2541	2540	3853	1	250.0		0.000	1.000	0.000		
302:	135	3825	3854	3855	3839	1	250.0		0.000	1.000	0.000		
302:	136	3854	3826	3835	3855	1	250.0		0.000	1.000	0.000		
302:	137	3835	2448	2447	3855	1	250.0		0.000	1.000	0.000		
302:	138	2447	2446	3839	3855	1	250.0		0.000	1.000	0.000		
302:	139	3823	3828	3857	3856	1	250.0		0.000	1.000	0.000		
302:	140	3828	3821	3833	3857	1	250.0		0.000	1.000	0.000		
302:	141	3833	3822	3842	3857	1	250.0		0.000	1.000	0.000		
302:	142	3842	3824	3856	3857	1	250.0		0.000	1.000	0.000		
302:	143	3824	3848	3858	3856	1	250.0		0.000	1.000	0.000		
302:	144	3848	3826	3854	3858	1	250.0		0.000	1.000	0.000		
302:	145	3854	3825	3851	3858	1	250.0		0.000	1.000	0.000		
302:	146	3851	3823	3856	3858	1	250.0		0.000	1.000	0.000		
302:	147	3869	3879	3881	3880	1	250.0		0.000	1.000	0.000		
302:	148	3879	2503	2504	3881	1	250.0		0.000	1.000	0.000		
302:	149	2504	2200	2552	3881	1	250.0		0.000	1.000	0.000		
302:	150	2552	2553	3880	3881	1	250.0		0.000	1.000	0.000		
302:	151	2451	2450	3884	3883	1	250.0		0.000	1.000	0.000		
302:	152	2450	2130	2551	3884	1	250.0		0.000	1.000	0.000		
302:	153	2551	2550	3882	3884	1	250.0		0.000	1.000	0.000		
302:	154	3882	3877	3883	3884	1	250.0		0.000	1.000	0.000		
302:	155	2503	3879	3887	2502	1	250.0		0.000	1.000	0.000		
302:	156	3879	3869	3885	3887	1	250.0		0.000	1.000	0.000		
302:	157	3885	3868	3886	3887	1	250.0		0.000	1.000	0.000		
302:	158	3886	2501	2502	3887	1	250.0		0.000	1.000	0.000		
302:	159	2230	2492	3890	2545	1	250.0		0.000	1.000	0.000		
302:	160	2492	2493	3888	3890	1	250.0		0.000	1.000	0.000		
302:	161	3888	3859	3889	3890	1	250.0		0.000	1.000	0.000		
302:	162	3889	2546	2545	3890	1	250.0		0.000	1.000	0.000		
302:	163	2100	2462	3893	2559	1	250.0		0.000	1.000	0.000		
302:	164	2462	2461	3891	3893	1	250.0		0.000	1.000	0.000		
302:	165	3891	3876	3892	3893	1	250.0		0.000	1.000	0.000		
302:	166	3892	2558	2559	3893	1	250.0		0.000	1.000	0.000		
302:	167	3877	3882	3896	3895	1	250.0		0.000	1.000	0.000		
302:	168	3882	2550	2549	3896	1	250.0		0.000	1.000	0.000		
302:	169	2549	2548	3894	3896	1	250.0		0.000	1.000	0.000		
302:	170	3894	3870	3895	3896	1	250.0		0.000	1.000	0.000		
302:	171	3871	3897	3901	3900	1	250.0		0.000	1.000	0.000		
302:	172	3897	3870	3898	3901	1	250.0		0.000	1.000	0.000		
302:	173	3898	3859	3899	3901	1	250.0		0.000	1.000	0.000		
302:	174	3899	3860	3900	3901	1	250.0		0.000	1.000	0.000		
302:	175	3877	3902	3904	3883	1	250.0		0.000	1.000	0.000		
302:	176	3902	3878	3903	3904	1	250.0		0.000	1.000	0.000		
302:	177	3903	2453	2452	3904	1	250.0		0.000	1.000	0.000		
302:	178	2452	2451	3883	3904	1	250.0		0.000	1.000	0.000		
302:	179	2501	3886	3907	2500	1	250.0		0.000	1.000	0.000		
302:	180	3886	3868	3905	3907	1	250.0		0.000	1.000	0.000		
302:	181	3905	3867	3906	3907	1	250.0		0.000	1.000	0.000		
302:	182	3906	2499	2500	3907	1	250.0		0.000	1.000	0.000		
302:	183	3876	3908	3912	3911	1	250.0		0.000	1.000	0.000		
302:	184	3908	3875	3909	3912	1	250.0		0.000	1.000	0.000		
302:	185	3909	3864	3910	3912	1	250.0		0.000	1.000	0.000		
302:	186	3910	3865	3911	3912	1	250.0		0.000	1.000	0.000		
302:	187	3859	3888	3914	3899	1	250.0		0.000	1.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
302:	188	3888	2493	2494	3914	1	250.0		0.000	1.000	0.000		
302:	189	2494	2495	3913	3914	1	250.0		0.000	1.000	0.000		
302:	190	3913	3860	3899	3914	1	250.0		0.000	1.000	0.000		
302:	191	2546	3889	3915	2547	1	250.0		0.000	1.000	0.000		
302:	192	3889	3859	3898	3915	1	250.0		0.000	1.000	0.000		
302:	193	3898	3870	3894	3915	1	250.0		0.000	1.000	0.000		
302:	194	3894	2548	2547	3915	1	250.0		0.000	1.000	0.000		
302:	195	2558	3892	3917	2557	1	250.0		0.000	1.000	0.000		
302:	196	3892	3876	3911	3917	1	250.0		0.000	1.000	0.000		
302:	197	3911	3865	3916	3917	1	250.0		0.000	1.000	0.000		
302:	198	3916	303	2557	3917	1	250.0		0.000	1.000	0.000		
302:	199	3876	3891	3919	3908	1	250.0		0.000	1.000	0.000		
302:	200	3891	2461	2460	3919	1	250.0		0.000	1.000	0.000		
302:	201	2460	2459	3918	3919	1	250.0		0.000	1.000	0.000		
302:	202	3918	3875	3908	3919	1	250.0		0.000	1.000	0.000		
302:	203	3865	3910	3922	3921	1	250.0		0.000	1.000	0.000		
302:	204	3910	3864	3920	3922	1	250.0		0.000	1.000	0.000		
302:	205	3920	3868	3885	3922	1	250.0		0.000	1.000	0.000		
302:	206	3885	3869	3921	3922	1	250.0		0.000	1.000	0.000		
302:	207	3873	3923	3927	3926	1	250.0		0.000	1.000	0.000		
302:	208	3923	2455	3924	3927	1	250.0		0.000	1.000	0.000		
302:	209	3924	3878	3925	3927	1	250.0		0.000	1.000	0.000		
302:	210	3925	3872	3926	3927	1	250.0		0.000	1.000	0.000		
302:	211	3875	3918	3930	3929	1	250.0		0.000	1.000	0.000		
302:	212	3918	2459	2458	3930	1	250.0		0.000	1.000	0.000		
302:	213	2458	2457	3928	3930	1	250.0		0.000	1.000	0.000		
302:	214	3928	3874	3929	3930	1	250.0		0.000	1.000	0.000		
302:	215	2499	3906	3933	2498	1	250.0		0.000	1.000	0.000		
302:	216	3906	3867	3931	3933	1	250.0		0.000	1.000	0.000		
302:	217	3931	3866	3932	3933	1	250.0		0.000	1.000	0.000		
302:	218	3932	2497	2498	3933	1	250.0		0.000	1.000	0.000		
302:	219	3874	3928	3935	3934	1	250.0		0.000	1.000	0.000		
302:	220	3928	2457	2456	3935	1	250.0		0.000	1.000	0.000		
302:	221	2456	2455	3923	3935	1	250.0		0.000	1.000	0.000		
302:	222	3923	3873	3934	3935	1	250.0		0.000	1.000	0.000		
302:	223	3875	3929	3938	3909	1	250.0		0.000	1.000	0.000		
302:	224	3929	3874	3936	3938	1	250.0		0.000	1.000	0.000		
302:	225	3936	3863	3937	3938	1	250.0		0.000	1.000	0.000		
302:	226	3937	3864	3909	3938	1	250.0		0.000	1.000	0.000		
302:	227	303	3916	3940	2556	1	250.0		0.000	1.000	0.000		
302:	228	3916	3865	3921	3940	1	250.0		0.000	1.000	0.000		
302:	229	3921	3869	3939	3940	1	250.0		0.000	1.000	0.000		
302:	230	3939	2555	2556	3940	1	250.0		0.000	1.000	0.000		
302:	231	3878	3902	3942	3941	1	250.0		0.000	1.000	0.000		
302:	232	3902	3877	3895	3942	1	250.0		0.000	1.000	0.000		
302:	233	3895	3870	3897	3942	1	250.0		0.000	1.000	0.000		
302:	234	3897	3871	3941	3942	1	250.0		0.000	1.000	0.000		
302:	235	3874	3934	3945	3936	1	250.0		0.000	1.000	0.000		
302:	236	3934	3873	3943	3945	1	250.0		0.000	1.000	0.000		
302:	237	3943	3862	3944	3945	1	250.0		0.000	1.000	0.000		
302:	238	3944	3863	3936	3945	1	250.0		0.000	1.000	0.000		
302:	239	3873	3926	3948	3943	1	250.0		0.000	1.000	0.000		
302:	240	3926	3872	3946	3948	1	250.0		0.000	1.000	0.000		
302:	241	3946	3861	3947	3948	1	250.0		0.000	1.000	0.000		
302:	242	3947	3862	3943	3948	1	250.0		0.000	1.000	0.000		
302:	243	3867	3905	3950	3949	1	250.0		0.000	1.000	0.000		
302:	244	3905	3868	3920	3950	1	250.0		0.000	1.000	0.000		
302:	245	3920	3864	3937	3950	1	250.0		0.000	1.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
302:	246	3937	3863	3949	3950	1	250.0		0.000	1.000	0.000		
302:	247	2497	3932	3952	2496	1	250.0		0.000	1.000	0.000		
302:	248	3932	3866	3951	3952	1	250.0		0.000	1.000	0.000		
302:	249	3951	3860	3913	3952	1	250.0		0.000	1.000	0.000		
302:	250	3913	2495	2496	3952	1	250.0		0.000	1.000	0.000		
302:	251	3861	3953	3955	3947	1	250.0		0.000	1.000	0.000		
302:	252	3953	3866	3931	3955	1	250.0		0.000	1.000	0.000		
302:	253	3931	3867	3954	3955	1	250.0		0.000	1.000	0.000		
302:	254	3954	3862	3947	3955	1	250.0		0.000	1.000	0.000		
302:	255	3861	3946	3957	3956	1	250.0		0.000	1.000	0.000		
302:	256	3946	3872	3925	3957	1	250.0		0.000	1.000	0.000		
302:	257	3925	3878	3941	3957	1	250.0		0.000	1.000	0.000		
302:	258	3941	3871	3956	3957	1	250.0		0.000	1.000	0.000		
302:	259	3866	3953	3958	3951	1	250.0		0.000	1.000	0.000		
302:	260	3953	3861	3956	3958	1	250.0		0.000	1.000	0.000		
302:	261	3956	3871	3900	3958	1	250.0		0.000	1.000	0.000		
302:	262	3900	3860	3951	3958	1	250.0		0.000	1.000	0.000		
302:	263	3862	3954	3959	3944	1	250.0		0.000	1.000	0.000		
302:	264	3867	3949	3959	3954	1	250.0		0.000	1.000	0.000		
302:	265	3863	3944	3959	3949	1	250.0		0.000	1.000	0.000		
302:	266	2553	2554	3960	3880	1	250.0		0.000	1.000	0.000		
302:	267	2555	3939	3960	2554	1	250.0		0.000	1.000	0.000		
302:	268	3869	3880	3960	3939	1	250.0		0.000	1.000	0.000		
302:	269	2453	3903	3961	2454	1	250.0		0.000	1.000	0.000		
302:	270	3878	3924	3961	3903	1	250.0		0.000	1.000	0.000		
302:	271	2455	2454	3961	3924	1	250.0		0.000	1.000	0.000		
303:	1	2428	3983	3987	3986	1	250.0		1.000	0.000	0.000		
303:	2	3983	3963	3984	3987	1	250.0		1.000	0.000	0.000		
303:	3	3984	3966	3985	3987	1	250.0		1.000	0.000	0.000		
303:	4	3985	3962	3986	3987	1	250.0		1.000	0.000	0.000		
303:	5	2428	2429	3990	3983	1	250.0		1.000	0.000	0.000		
303:	6	2429	2430	3988	3990	1	250.0		1.000	0.000	0.000		
303:	7	3988	3964	3989	3990	1	250.0		1.000	0.000	0.000		
303:	8	3989	3963	3983	3990	1	250.0		1.000	0.000	0.000		
303:	9	2464	2465	3994	3993	1	250.0		1.000	0.000	0.000		
303:	10	2465	2466	3991	3994	1	250.0		1.000	0.000	0.000		
303:	11	3991	3968	3992	3994	1	250.0		1.000	0.000	0.000		
303:	12	3992	3965	3993	3994	1	250.0		1.000	0.000	0.000		
303:	13	2523	2522	3998	3997	1	250.0		1.000	0.000	0.000		
303:	14	2522	2521	3995	3998	1	250.0		1.000	0.000	0.000		
303:	15	3995	3966	3996	3998	1	250.0		1.000	0.000	0.000		
303:	16	3996	3969	3997	3998	1	250.0		1.000	0.000	0.000		
303:	17	2525	2524	4001	4000	1	250.0		1.000	0.000	0.000		
303:	18	2524	2523	3997	4001	1	250.0		1.000	0.000	0.000		
303:	19	3997	3969	3999	4001	1	250.0		1.000	0.000	0.000		
303:	20	3999	3972	4000	4001	1	250.0		1.000	0.000	0.000		
303:	21	2519	2518	4003	4002	1	250.0		1.000	0.000	0.000		
303:	22	2518	1220	2427	4003	1	250.0		1.000	0.000	0.000		
303:	23	2427	2428	3986	4003	1	250.0		1.000	0.000	0.000		
303:	24	3986	3962	4002	4003	1	250.0		1.000	0.000	0.000		
303:	25	2466	2467	4006	3991	1	250.0		1.000	0.000	0.000		
303:	26	2467	2468	4004	4006	1	250.0		1.000	0.000	0.000		
303:	27	4004	3971	4005	4006	1	250.0		1.000	0.000	0.000		
303:	28	4005	3968	3991	4006	1	250.0		1.000	0.000	0.000		
303:	29	2474	2475	4009	4008	1	250.0		1.000	0.000	0.000		
303:	30	2475	2210	2531	4009	1	250.0		1.000	0.000	0.000		
303:	31	2531	2532	4007	4009	1	250.0		1.000	0.000	0.000		
303:	32	4007	3982	4008	4009	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
303:	33	2529	4010	4012	2530	1	250.0		1.000	0.000	0.000		
303:	34	4010	3979	4011	4012	1	250.0		1.000	0.000	0.000		
303:	35	4011	2536	2537	4012	1	250.0		1.000	0.000	0.000		
303:	36	2537	2110	2530	4012	1	250.0		1.000	0.000	0.000		
303:	37	2464	3993	4014	2463	1	250.0		1.000	0.000	0.000		
303:	38	3993	3965	4013	4014	1	250.0		1.000	0.000	0.000		
303:	39	4013	2432	2433	4014	1	250.0		1.000	0.000	0.000		
303:	40	2433	1230	2463	4014	1	250.0		1.000	0.000	0.000		
303:	41	2529	2528	4017	4010	1	250.0		1.000	0.000	0.000		
303:	42	2528	2527	4015	4017	1	250.0		1.000	0.000	0.000		
303:	43	4015	3976	4016	4017	1	250.0		1.000	0.000	0.000		
303:	44	4016	3979	4010	4017	1	250.0		1.000	0.000	0.000		
303:	45	2470	2471	4021	4020	1	250.0		1.000	0.000	0.000		
303:	46	2471	2472	4018	4021	1	250.0		1.000	0.000	0.000		
303:	47	4018	3978	4019	4021	1	250.0		1.000	0.000	0.000		
303:	48	4019	3975	4020	4021	1	250.0		1.000	0.000	0.000		
303:	49	2525	4000	4023	2526	1	250.0		1.000	0.000	0.000		
303:	50	4000	3972	4022	4023	1	250.0		1.000	0.000	0.000		
303:	51	4022	3976	4015	4023	1	250.0		1.000	0.000	0.000		
303:	52	4015	2527	2526	4023	1	250.0		1.000	0.000	0.000		
303:	53	2474	4008	4025	2473	1	250.0		1.000	0.000	0.000		
303:	54	4008	3982	4024	4025	1	250.0		1.000	0.000	0.000		
303:	55	4024	3978	4018	4025	1	250.0		1.000	0.000	0.000		
303:	56	4018	2472	2473	4025	1	250.0		1.000	0.000	0.000		
303:	57	2470	4020	4027	2469	1	250.0		1.000	0.000	0.000		
303:	58	4020	3975	4026	4027	1	250.0		1.000	0.000	0.000		
303:	59	4026	3971	4004	4027	1	250.0		1.000	0.000	0.000		
303:	60	4004	2468	2469	4027	1	250.0		1.000	0.000	0.000		
303:	61	2519	4002	4028	2520	1	250.0		1.000	0.000	0.000		
303:	62	4002	3962	3985	4028	1	250.0		1.000	0.000	0.000		
303:	63	3985	3966	3995	4028	1	250.0		1.000	0.000	0.000		
303:	64	3995	2521	2520	4028	1	250.0		1.000	0.000	0.000		
303:	65	3969	3996	4032	4031	1	250.0		1.000	0.000	0.000		
303:	66	3996	3966	4029	4032	1	250.0		1.000	0.000	0.000		
303:	67	4029	3967	4030	4032	1	250.0		1.000	0.000	0.000		
303:	68	4030	3970	4031	4032	1	250.0		1.000	0.000	0.000		
303:	69	3968	4005	4035	4034	1	250.0		1.000	0.000	0.000		
303:	70	4005	3971	4033	4035	1	250.0		1.000	0.000	0.000		
303:	71	4033	3970	4030	4035	1	250.0		1.000	0.000	0.000		
303:	72	4030	3967	4034	4035	1	250.0		1.000	0.000	0.000		
303:	73	3967	4036	4038	4034	1	250.0		1.000	0.000	0.000		
303:	74	4036	3964	4037	4038	1	250.0		1.000	0.000	0.000		
303:	75	4037	3965	3992	4038	1	250.0		1.000	0.000	0.000		
303:	76	3992	3968	4034	4038	1	250.0		1.000	0.000	0.000		
303:	77	3982	4007	4041	4040	1	250.0		1.000	0.000	0.000		
303:	78	4007	2532	2533	4041	1	250.0		1.000	0.000	0.000		
303:	79	2533	2534	4039	4041	1	250.0		1.000	0.000	0.000		
303:	80	4039	3981	4040	4041	1	250.0		1.000	0.000	0.000		
303:	81	3972	3999	4044	4043	1	250.0		1.000	0.000	0.000		
303:	82	3999	3969	4031	4044	1	250.0		1.000	0.000	0.000		
303:	83	4031	3970	4042	4044	1	250.0		1.000	0.000	0.000		
303:	84	4042	3973	4043	4044	1	250.0		1.000	0.000	0.000		
303:	85	2534	2535	4047	4046	1	250.0		1.000	0.000	0.000		
303:	86	2535	2536	4011	4047	1	250.0		1.000	0.000	0.000		
303:	87	4011	3979	4045	4047	1	250.0		1.000	0.000	0.000		
303:	88	4045	3980	4046	4047	1	250.0		1.000	0.000	0.000		
303:	89	2430	2431	4048	3988	1	250.0		1.000	0.000	0.000		
303:	90	2431	2432	4013	4048	1	250.0		1.000	0.000	0.000		

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Quadrilateral Elements

Grp	Number	Node	Node	Node	Node	Mat	t[mm]	Kind	direction local x			Cb [kN/m3]	Ct [kN/m3]
303:	91	4013	3965	4037	4048	1	250.0		1.000	0.000	0.000		
303:	92	4037	3964	3988	4048	1	250.0		1.000	0.000	0.000		
303:	93	3966	3984	4049	4029	1	250.0		1.000	0.000	0.000		
303:	94	3984	3963	3989	4049	1	250.0		1.000	0.000	0.000		
303:	95	3989	3964	4036	4049	1	250.0		1.000	0.000	0.000		
303:	96	4036	3967	4029	4049	1	250.0		1.000	0.000	0.000		
303:	97	3977	4050	4053	4052	1	250.0		1.000	0.000	0.000		
303:	98	4050	3974	4051	4053	1	250.0		1.000	0.000	0.000		
303:	99	4051	3975	4019	4053	1	250.0		1.000	0.000	0.000		
303:	100	4019	3978	4052	4053	1	250.0		1.000	0.000	0.000		
303:	101	3979	4016	4056	4045	1	250.0		1.000	0.000	0.000		
303:	102	4016	3976	4054	4056	1	250.0		1.000	0.000	0.000		
303:	103	4054	3977	4055	4056	1	250.0		1.000	0.000	0.000		
303:	104	4055	3980	4045	4056	1	250.0		1.000	0.000	0.000		
303:	105	3976	4057	4059	4054	1	250.0		1.000	0.000	0.000		
303:	106	4057	3973	4058	4059	1	250.0		1.000	0.000	0.000		
303:	107	4058	3974	4050	4059	1	250.0		1.000	0.000	0.000		
303:	108	4050	3977	4054	4059	1	250.0		1.000	0.000	0.000		
303:	109	3973	4042	4061	4058	1	250.0		1.000	0.000	0.000		
303:	110	4042	3970	4033	4061	1	250.0		1.000	0.000	0.000		
303:	111	4033	3971	4060	4061	1	250.0		1.000	0.000	0.000		
303:	112	4060	3974	4058	4061	1	250.0		1.000	0.000	0.000		
303:	113	3977	4052	4063	4062	1	250.0		1.000	0.000	0.000		
303:	114	4052	3978	4024	4063	1	250.0		1.000	0.000	0.000		
303:	115	4024	3982	4040	4063	1	250.0		1.000	0.000	0.000		
303:	116	4040	3981	4062	4063	1	250.0		1.000	0.000	0.000		
303:	117	3977	4062	4064	4055	1	250.0		1.000	0.000	0.000		
303:	118	4062	3981	4039	4064	1	250.0		1.000	0.000	0.000		
303:	119	4039	2534	4046	4064	1	250.0		1.000	0.000	0.000		
303:	120	4046	3980	4055	4064	1	250.0		1.000	0.000	0.000		
303:	121	3974	4060	4065	4051	1	250.0		1.000	0.000	0.000		
303:	122	3971	4026	4065	4060	1	250.0		1.000	0.000	0.000		
303:	123	3975	4051	4065	4026	1	250.0		1.000	0.000	0.000		
303:	124	3972	4043	4066	4022	1	250.0		1.000	0.000	0.000		
303:	125	3973	4057	4066	4043	1	250.0		1.000	0.000	0.000		
303:	126	3976	4022	4066	4057	1	250.0		1.000	0.000	0.000		

Grp primary group number t[mm] thickness
Mat material number Cb,Ct elastic bedding perpendicular/tangential to element

Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
10	100001	123	0.000	1		S	133	0.000	
		133	0.050	1		S		0.050	
21	210001	231	0.000	20		S	231	0.000	
		2231	0.756	20		S		0.756	
21	210002	2231	0.000	20		S	231	0.756	
		2232	0.756	20		S		1.512	
21	210003	2232	0.000	20		S	231	1.512	
		2233	0.756	20		S		2.269	
21	210004	2233	0.000	20		S	231	2.269	
		2234	0.756	20		S		3.025	
21	210005	2234	0.000	20		S	231	3.025	
		2235	0.756	20		S		3.781	
21	210006	2235	0.000	20		S	231	3.781	
		2236	0.756	20		S		4.538	
21	210007	2236	0.000	20		S	231	4.538	
		2237	0.756	20		S		5.294	
21	210008	2237	0.000	20		S	231	5.294	
		221	0.756	20		S		6.050	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
22	220001	232	0.000	20		S	232	0.000	
		2238	0.756	20		S		0.756	
22	220002	2238	0.000	20		S	232	0.756	
		2239	0.756	20		S		1.512	
22	220003	2239	0.000	20		S	232	1.512	
		2240	0.756	20		S		2.269	
22	220004	2240	0.000	20		S	232	2.269	
		2241	0.756	20		S		3.025	
22	220005	2241	0.000	20		S	232	3.025	
		2242	0.756	20		S		3.781	
22	220006	2242	0.000	20		S	232	3.781	
		2243	0.756	20		S		4.538	
22	220007	2243	0.000	20		S	232	4.538	
		2244	0.756	20		S		5.294	
22	220008	2244	0.000	20		S	232	5.294	
		222	0.756	20		S		6.050	
23	230001	243	0.000	1		S	233	0.000	
		233	3.330	1		S		3.330	
30	300001	333	0.000	1		S	333	0.000	
		303	0.050	1		S		0.050	
111:	1	1100	0.000	1100		0	1110	0.000	
		2245	0.251	1100		0		0.251	
111:	2	2245	0.000	1100		0	1110	0.251	
		2246	0.251	1100		0		0.502	
111:	3	2246	0.000	1100		0	1110	0.502	
		2247	0.251	1100		0		0.753	
111:	4	2247	0.000	1100		0	1110	0.753	
		2248	0.251	1100		0		1.004	
111:	5	2248	0.000	1100		0	1110	1.004	
		2249	0.251	1100		0		1.255	
111:	6	2249	0.000	1100		0	1110	1.255	
		2250	0.251	1100		0		1.507	
111:	7	2250	0.000	1100		0	1110	1.507	
		2251	0.251	1100		0		1.758	
111:	8	2251	0.000	1100		0	1110	1.758	
		2252	0.251	1100		0		2.009	
111:	9	2252	0.000	1100		0	1110	2.009	
		2253	0.251	1100		0		2.260	
111:	10	2253	0.000	1100		0	1110	2.260	
		2254	0.251	1100		0		2.511	
111:	11	2254	0.000	1100		0	1110	2.511	
		2255	0.251	1100		0		2.762	
111:	12	2255	0.000	1100		0	1110	2.762	
		2256	0.251	1100		0		3.013	
111:	13	2256	0.000	1100		0	1110	3.013	
		2257	0.251	1100		0		3.264	
111:	14	2257	0.000	1100		0	1110	3.264	
		2258	0.251	1100		0		3.515	
111:	15	2258	0.000	1100		0	1110	3.515	
		2259	0.251	1100		0		3.766	
111:	16	2259	0.000	1100		0	1110	3.766	
		2260	0.251	1100		0		4.017	
111:	17	2260	0.000	1100		0	1110	4.017	
		2261	0.251	1100		0		4.268	
111:	18	2261	0.000	1100		0	1110	4.268	
		2262	0.251	1100		0		4.520	
111:	19	2262	0.000	1100		0	1110	4.520	
		2263	0.251	1100		0		4.771	
111:	20	2263	0.000	1100		0	1110	4.771	

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MODELO

Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference	Properties
111:	20	2264	0.251	1100		0	5.022	
111:	21	2264	0.000	1100		0	1110 5.022	
		2265	0.251	1100		0	5.273	
111:	22	2265	0.000	1100		0	1110 5.273	
		2266	0.251	1100		0	5.524	
111:	23	2266	0.000	1100		0	1110 5.524	
		2267	0.251	1100		0	5.775	
111:	24	2267	0.000	1100		0	1110 5.775	
		2268	0.251	1100		0	6.026	
111:	25	2268	0.000	1100		0	1110 6.026	
		2269	0.251	1100		0	6.277	
111:	26	2269	0.000	1100		0	1110 6.277	
		2270	0.251	1100		0	6.528	
111:	27	2270	0.000	1100		0	1110 6.528	
		2271	0.251	1100		0	6.779	
111:	28	2271	0.000	1100		0	1110 6.779	
		2272	0.251	1100		0	7.030	
111:	29	2272	0.000	1100		0	1110 7.030	
		2273	0.251	1100		0	7.282	
111:	30	2273	0.000	1100		0	1110 7.282	
		2274	0.251	1100		0	7.533	
111:	31	2274	0.000	1100		0	1110 7.533	
		2275	0.251	1100		0	7.784	
111:	32	2275	0.000	1100		0	1110 7.784	
		2276	0.251	1100		0	8.035	
111:	33	2276	0.000	1100		0	1110 8.035	
		2277	0.251	1100		0	8.286	
111:	34	2277	0.000	1100		0	1110 8.286	
		2278	0.251	1100		0	8.537	
111:	35	2278	0.000	1100		0	1110 8.537	
		2279	0.251	1100		0	8.788	
111:	36	2279	0.000	1100		0	1110 8.788	
		2280	0.251	1100		0	9.039	
111:	37	2280	0.000	1100		0	1110 9.039	
		2281	0.251	1100		0	9.290	
111:	38	2281	0.000	1100		0	1110 9.290	
		2282	0.251	1100		0	9.541	
111:	39	2282	0.000	1100		0	1110 9.541	
		2283	0.251	1100		0	9.792	
111:	40	2283	0.000	1100		0	1110 9.792	
		2284	0.251	1100		0	10.043	
111:	41	2284	0.000	1100		0	1110 10.043	
		2285	0.251	1100		0	10.295	
111:	42	2285	0.000	1100		0	1110 10.295	
		2286	0.251	1100		0	10.546	
111:	43	2286	0.000	1100		0	1110 10.546	
		2287	0.251	1100		0	10.797	
111:	44	2287	0.000	1100		0	1110 10.797	
		2288	0.251	1100		0	11.048	
111:	45	2288	0.000	1100		0	1110 11.048	
		2289	0.251	1100		0	11.299	
111:	46	2289	0.000	1100		0	1110 11.299	
		2290	0.251	1100		0	11.550	
111:	47	2290	0.000	1100		0	1110 11.550	
		2291	0.251	1100		0	11.801	
111:	48	2291	0.000	1100		0	1110 11.801	
		2292	0.251	1100		0	12.052	
111:	49	2292	0.000	1100		0	1110 12.052	
		2293	0.251	1100		0	12.303	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
111:	50	2293	0.000	1100		0	1110	12.303	
		2294	0.251	1100		0		12.554	
111:	51	2294	0.000	1100		0	1110	12.554	
		2295	0.251	1100		0		12.805	
111:	52	2295	0.000	1100		0	1110	12.805	
		2296	0.251	1100		0		13.057	
111:	53	2296	0.000	1100		0	1110	13.057	
		2297	0.251	1100		0		13.308	
111:	54	2297	0.000	1100		0	1110	13.308	
		2298	0.251	1100		0		13.559	
111:	55	2298	0.000	1100		0	1110	13.559	
		2299	0.251	1100		0		13.810	
111:	56	2299	0.000	1100		0	1110	13.810	
		2300	0.251	1100		0		14.061	
111:	57	2300	0.000	1100		0	1110	14.061	
		2301	0.251	1100		0		14.312	
111:	58	2301	0.000	1100		0	1110	14.312	
		2302	0.251	1100		0		14.563	
111:	59	2302	0.000	1100		0	1110	14.563	
		2303	0.251	1100		0		14.814	
111:	60	2303	0.000	1100		0	1110	14.814	
		2304	0.251	1100		0		15.065	
111:	61	2304	0.000	1100		0	1110	15.065	
		2305	0.251	1100		0		15.316	
111:	62	2305	0.000	1100		0	1110	15.316	
		2306	0.251	1100		0		15.567	
111:	63	2306	0.000	1100		0	1110	15.567	
		2307	0.251	1100		0		15.818	
111:	64	2307	0.000	1100		0	1110	15.818	
		2308	0.251	1100		0		16.070	
111:	65	2308	0.000	1100		0	1110	16.070	
		2309	0.251	1100		0		16.321	
111:	66	2309	0.000	1100		0	1110	16.321	
		2310	0.251	1100		0		16.572	
111:	67	2310	0.000	1100		0	1110	16.572	
		2311	0.251	1100		0		16.823	
111:	68	2311	0.000	1100		0	1110	16.823	
		2312	0.251	1100		0		17.074	
111:	69	2312	0.000	1100		0	1110	17.074	
		2313	0.251	1100		0		17.325	
111:	70	2313	0.000	1100		0	1110	17.325	
		2314	0.251	1100		0		17.576	
111:	71	2314	0.000	1100		0	1110	17.576	
		2315	0.251	1100		0		17.827	
111:	72	2315	0.000	1100		0	1110	17.827	
		2316	0.251	1100		0		18.078	
111:	73	2316	0.000	1100		0	1110	18.078	
		2317	0.251	1100		0		18.329	
111:	74	2317	0.000	1100		0	1110	18.329	
		2318	0.251	1100		0		18.580	
111:	75	2318	0.000	1100		0	1110	18.580	
		2319	0.251	1100		0		18.832	
111:	76	2319	0.000	1100		0	1110	18.832	
		2320	0.251	1100		0		19.083	
111:	77	2320	0.000	1100		0	1110	19.083	
		2321	0.251	1100		0		19.334	
111:	78	2321	0.000	1100		0	1110	19.334	
		2322	0.251	1100		0		19.585	
111:	79	2322	0.000	1100		0	1110	19.585	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference	Properties
111:	79	2323	0.251	1100		0	19.836	
111:	80	2323	0.000	1100		0	1110 19.836	
		2324	0.251	1100		0	20.087	
111:	81	2324	0.000	1100		0	1110 20.087	
		2325	0.251	1100		0	20.338	
111:	82	2325	0.000	1100		0	1110 20.338	
		2326	0.251	1100		0	20.589	
111:	83	2326	0.000	1100		0	1110 20.589	
		2327	0.251	1100		0	20.840	
111:	84	2327	0.000	1100		0	1110 20.840	
		2328	0.251	1100		0	21.091	
111:	85	2328	0.000	1100		0	1110 21.091	
		2329	0.252	1100		0	21.343	
111:	86	2329	0.000	1100		0	1110 21.343	
		2330	0.250	1100		0	21.593	
111:	87	2330	0.000	1100		0	1110 21.593	
		2331	0.301	1100		0	21.894	
111:	88	2331	0.000	1100		0	1110 21.894	
		2332	0.202	1100		0	22.096	
111:	89	2332	0.000	1100		0	1110 22.096	
		2333	0.251	1100		0	22.347	
111:	90	2333	0.000	1100		0	1110 22.347	
		2334	0.251	1100		0	22.598	
111:	91	2334	0.000	1100		0	1110 22.598	
		2335	0.251	1100		0	22.849	
111:	92	2335	0.000	1100		0	1110 22.849	
		2110	0.251	1100		0	23.100	
121:	1	1200	0.000	1200		0	1210 0.000	
		2336	0.251	1200		0	0.251	
121:	2	2336	0.000	1200		0	1210 0.251	
		2337	0.251	1200		0	0.502	
121:	3	2337	0.000	1200		0	1210 0.502	
		2338	0.251	1200		0	0.753	
121:	4	2338	0.000	1200		0	1210 0.753	
		2339	0.251	1200		0	1.004	
121:	5	2339	0.000	1200		0	1210 1.004	
		2340	0.251	1200		0	1.255	
121:	6	2340	0.000	1200		0	1210 1.255	
		2341	0.251	1200		0	1.507	
121:	7	2341	0.000	1200		0	1210 1.507	
		2342	0.251	1200		0	1.758	
121:	8	2342	0.000	1200		0	1210 1.758	
		2343	0.251	1200		0	2.009	
121:	9	2343	0.000	1200		0	1210 2.009	
		2344	0.251	1200		0	2.260	
121:	10	2344	0.000	1200		0	1210 2.260	
		2345	0.251	1200		0	2.511	
121:	11	2345	0.000	1200		0	1210 2.511	
		2346	0.259	1200		0	2.769	
121:	12	2346	0.000	1200		0	1210 2.769	
		2347	0.244	1200		0	3.013	
121:	13	2347	0.000	1200		0	1210 3.013	
		2348	0.251	1200		0	3.264	
121:	14	2348	0.000	1200		0	1210 3.264	
		2349	0.251	1200		0	3.515	
121:	15	2349	0.000	1200		0	1210 3.515	
		2350	0.217	1200		0	3.733	
121:	16	2350	0.000	1200		0	1210 3.733	
		2351	0.285	1200		0	4.017	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
121:	17	2351	0.000	1200		0	1210	4.017	
		2352	0.283	1200		0		4.301	
121:	18	2352	0.000	1200		0	1210	4.301	
		2353	0.219	1200		0		4.520	
121:	19	2353	0.000	1200		0	1210	4.520	
		2354	0.251	1200		0		4.771	
121:	20	2354	0.000	1200		0	1210	4.771	
		2355	0.251	1200		0		5.022	
121:	21	2355	0.000	1200		0	1210	5.022	
		2356	0.251	1200		0		5.273	
121:	22	2356	0.000	1200		0	1210	5.273	
		2357	0.251	1200		0		5.524	
121:	23	2357	0.000	1200		0	1210	5.524	
		2358	0.251	1200		0		5.775	
121:	24	2358	0.000	1200		0	1210	5.775	
		2359	0.251	1200		0		6.026	
121:	25	2359	0.000	1200		0	1210	6.026	
		2360	0.251	1200		0		6.277	
121:	26	2360	0.000	1200		0	1210	6.277	
		2361	0.251	1200		0		6.528	
121:	27	2361	0.000	1200		0	1210	6.528	
		2362	0.251	1200		0		6.779	
121:	28	2362	0.000	1200		0	1210	6.779	
		2363	0.251	1200		0		7.030	
121:	29	2363	0.000	1200		0	1210	7.030	
		2364	0.251	1200		0		7.282	
121:	30	2364	0.000	1200		0	1210	7.282	
		2365	0.251	1200		0		7.533	
121:	31	2365	0.000	1200		0	1210	7.533	
		2366	0.251	1200		0		7.784	
121:	32	2366	0.000	1200		0	1210	7.784	
		2367	0.251	1200		0		8.035	
121:	33	2367	0.000	1200		0	1210	8.035	
		2368	0.251	1200		0		8.286	
121:	34	2368	0.000	1200		0	1210	8.286	
		2369	0.251	1200		0		8.537	
121:	35	2369	0.000	1200		0	1210	8.537	
		2370	0.251	1200		0		8.788	
121:	36	2370	0.000	1200		0	1210	8.788	
		2371	0.251	1200		0		9.039	
121:	37	2371	0.000	1200		0	1210	9.039	
		2372	0.251	1200		0		9.290	
121:	38	2372	0.000	1200		0	1210	9.290	
		2373	0.251	1200		0		9.541	
121:	39	2373	0.000	1200		0	1210	9.541	
		2374	0.251	1200		0		9.792	
121:	40	2374	0.000	1200		0	1210	9.792	
		2375	0.251	1200		0		10.043	
121:	41	2375	0.000	1200		0	1210	10.043	
		2376	0.251	1200		0		10.295	
121:	42	2376	0.000	1200		0	1210	10.295	
		2377	0.251	1200		0		10.546	
121:	43	2377	0.000	1200		0	1210	10.546	
		2378	0.251	1200		0		10.797	
121:	44	2378	0.000	1200		0	1210	10.797	
		2379	0.251	1200		0		11.048	
121:	45	2379	0.000	1200		0	1210	11.048	
		2380	0.251	1200		0		11.299	
121:	46	2380	0.000	1200		0	1210	11.299	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference	Properties
121:	46	2381	0.251	1200		0	11.550	
121:	47	2381	0.000	1200		0	1210 11.550	
		2382	0.251	1200		0	11.801	
121:	48	2382	0.000	1200		0	1210 11.801	
		2383	0.251	1200		0	12.052	
121:	49	2383	0.000	1200		0	1210 12.052	
		2384	0.251	1200		0	12.303	
121:	50	2384	0.000	1200		0	1210 12.303	
		2385	0.251	1200		0	12.554	
121:	51	2385	0.000	1200		0	1210 12.554	
		2386	0.251	1200		0	12.805	
121:	52	2386	0.000	1200		0	1210 12.805	
		2387	0.251	1200		0	13.057	
121:	53	2387	0.000	1200		0	1210 13.057	
		2388	0.251	1200		0	13.308	
121:	54	2388	0.000	1200		0	1210 13.308	
		2389	0.251	1200		0	13.559	
121:	55	2389	0.000	1200		0	1210 13.559	
		2390	0.251	1200		0	13.810	
121:	56	2390	0.000	1200		0	1210 13.810	
		2391	0.251	1200		0	14.061	
121:	57	2391	0.000	1200		0	1210 14.061	
		2392	0.251	1200		0	14.312	
121:	58	2392	0.000	1200		0	1210 14.312	
		2393	0.251	1200		0	14.563	
121:	59	2393	0.000	1200		0	1210 14.563	
		2394	0.251	1200		0	14.814	
121:	60	2394	0.000	1200		0	1210 14.814	
		2395	0.251	1200		0	15.065	
121:	61	2395	0.000	1200		0	1210 15.065	
		2396	0.251	1200		0	15.316	
121:	62	2396	0.000	1200		0	1210 15.316	
		2397	0.251	1200		0	15.567	
121:	63	2397	0.000	1200		0	1210 15.567	
		2398	0.251	1200		0	15.818	
121:	64	2398	0.000	1200		0	1210 15.818	
		2399	0.251	1200		0	16.070	
121:	65	2399	0.000	1200		0	1210 16.070	
		2400	0.251	1200		0	16.321	
121:	66	2400	0.000	1200		0	1210 16.321	
		2401	0.251	1200		0	16.572	
121:	67	2401	0.000	1200		0	1210 16.572	
		2402	0.251	1200		0	16.823	
121:	68	2402	0.000	1200		0	1210 16.823	
		2403	0.251	1200		0	17.074	
121:	69	2403	0.000	1200		0	1210 17.074	
		2404	0.251	1200		0	17.325	
121:	70	2404	0.000	1200		0	1210 17.325	
		2405	0.251	1200		0	17.576	
121:	71	2405	0.000	1200		0	1210 17.576	
		2406	0.251	1200		0	17.827	
121:	72	2406	0.000	1200		0	1210 17.827	
		2407	0.251	1200		0	18.078	
121:	73	2407	0.000	1200		0	1210 18.078	
		2408	0.251	1200		0	18.329	
121:	74	2408	0.000	1200		0	1210 18.329	
		2409	0.251	1200		0	18.580	
121:	75	2409	0.000	1200		0	1210 18.580	
		2410	0.251	1200		0	18.832	

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Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
121:	76	2410	0.000	1200		0	1210	18.832	
		2411	0.251	1200		0		19.083	
121:	77	2411	0.000	1200		0	1210	19.083	
		2412	0.251	1200		0		19.334	
121:	78	2412	0.000	1200		0	1210	19.334	
		2413	0.251	1200		0		19.585	
121:	79	2413	0.000	1200		0	1210	19.585	
		2414	0.251	1200		0		19.836	
121:	80	2414	0.000	1200		0	1210	19.836	
		2415	0.251	1200		0		20.087	
121:	81	2415	0.000	1200		0	1210	20.087	
		2416	0.251	1200		0		20.338	
121:	82	2416	0.000	1200		0	1210	20.338	
		2417	0.251	1200		0		20.589	
121:	83	2417	0.000	1200		0	1210	20.589	
		2418	0.251	1200		0		20.840	
121:	84	2418	0.000	1200		0	1210	20.840	
		2419	0.251	1200		0		21.091	
121:	85	2419	0.000	1200		0	1210	21.091	
		2420	0.251	1200		0		21.342	
121:	86	2420	0.000	1200		0	1210	21.342	
		2421	0.251	1200		0		21.593	
121:	87	2421	0.000	1200		0	1210	21.593	
		2422	0.251	1200		0		21.845	
121:	88	2422	0.000	1200		0	1210	21.845	
		2423	0.251	1200		0		22.096	
121:	89	2423	0.000	1200		0	1210	22.096	
		2424	0.251	1200		0		22.347	
121:	90	2424	0.000	1200		0	1210	22.347	
		2425	0.251	1200		0		22.598	
121:	91	2425	0.000	1200		0	1210	22.598	
		2426	0.251	1200		0		22.849	
121:	92	2426	0.000	1200		0	1210	22.849	
		1220	0.251	1200		0		23.100	
122:	1	1220	0.000	1200		0	1220	0.000	
		2427	0.300	1200		0		0.300	
122:	2	2427	0.000	1200		0	1220	0.300	
		2428	0.300	1200		0		0.600	
122:	3	2428	0.000	1200		0	1220	0.600	
		2429	0.300	1200		0		0.900	
122:	4	2429	0.000	1200		0	1220	0.900	
		2430	0.300	1200		0		1.200	
122:	5	2430	0.000	1200		0	1220	1.200	
		2431	0.300	1200		0		1.500	
122:	6	2431	0.000	1200		0	1220	1.500	
		2432	0.300	1200		0		1.800	
122:	7	2432	0.000	1200		0	1220	1.800	
		2433	0.300	1200		0		2.100	
122:	8	2433	0.000	1200		0	1220	2.100	
		1230	0.300	1200		0		2.400	
211:	1	2110	0.000	2110		0	2110	0.000	
		2434	0.250	2110		0		0.250	
211:	2	2434	0.000	2110		0	2110	0.250	
		2435	0.250	2110		0		0.500	
211:	3	2435	0.000	2110		0	2110	0.500	
		2436	0.250	2110		0		0.750	
211:	4	2436	0.000	2110		0	2110	0.750	
		2437	0.250	2110		0		1.000	
211:	5	2437	0.000	2110		0	2110	1.000	

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MODELO

Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference	Properties
211:	5	2438	0.250	2110		0	1.250	
211:	6	2438	0.000	2110		0	2110 1.250	
		2439	0.250	2110		0	1.500	
211:	7	2439	0.000	2110		0	2110 1.500	
		2440	0.251	2110		0	1.751	
211:	8	2440	0.000	2110		0	2110 1.751	
		2441	0.249	2110		0	2.000	
211:	9	2441	0.000	2110		0	2110 2.000	
		2442	0.250	2110		0	2.250	
211:	10	2442	0.000	2110		0	2110 2.250	
		2443	0.250	2110		0	2.500	
211:	11	2443	0.000	2110		0	2110 2.500	
		2444	0.250	2110		0	2.750	
211:	12	2444	0.000	2110		0	2110 2.750	
		2120	0.250	2110		0	3.000	
212:	1	2120	0.000	2110		0	2120 0.000	
		2445	0.317	2130i		0	0.317	
212:	2	2445	0.000	2110i		0	2120 0.317	
		2446	0.317	2130i		0	0.633	
212:	3	2446	0.000	2110i		0	2120 0.633	
		2447	0.317	2130i		0	0.950	
212:	4	2447	0.000	2110i		0	2120 0.950	
		2448	0.317	2130i		0	1.267	
212:	5	2448	0.000	2110i		0	2120 1.267	
		2449	0.317	2130i		0	1.583	
212:	6	2449	0.000	2110i		0	2120 1.583	
		2130	0.317	2130		0	1.900	
213:	1	2130	0.000	2130		0	2130 0.000	
		2450	0.268	2130		0	0.268	
213:	2	2450	0.000	2130		0	2130 0.268	
		2451	0.268	2130		0	0.536	
213:	3	2451	0.000	2130		0	2130 0.536	
		2452	0.268	2130		0	0.804	
213:	4	2452	0.000	2130		0	2130 0.804	
		2453	0.268	2130		0	1.071	
213:	5	2453	0.000	2130		0	2130 1.071	
		2454	0.200	2130		0	1.271	
213:	6	2454	0.000	2130		0	2130 1.271	
		2455	0.336	2130		0	1.607	
213:	7	2455	0.000	2130		0	2130 1.607	
		2456	0.268	2130		0	1.875	
213:	8	2456	0.000	2130		0	2130 1.875	
		2457	0.268	2130		0	2.143	
213:	9	2457	0.000	2130		0	2130 2.143	
		2458	0.268	2130		0	2.411	
213:	10	2458	0.000	2130		0	2130 2.411	
		2459	0.268	2130		0	2.679	
213:	11	2459	0.000	2130		0	2130 2.679	
		2460	0.268	2130		0	2.946	
213:	12	2460	0.000	2130		0	2130 2.946	
		2461	0.268	2130		0	3.214	
213:	13	2461	0.000	2130		0	2130 3.214	
		2462	0.268	2130		0	3.482	
213:	14	2462	0.000	2130		0	2130 3.482	
		2100	0.268	2130		0	3.750	
220:	1	1230	0.000	1200		0	2200 0.000	
		2463	0.264	1200		0	0.264	
220:	2	2463	0.000	1200		0	2200 0.264	
		2464	0.264	1200		0	0.529	

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MODELO

Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
220:	3	2464	0.000	1200		0	2200	0.529	
		2465	0.264	1200		0		0.793	
220:	4	2465	0.000	1200		0	2200	0.793	
		2466	0.264	1200		0		1.057	
220:	5	2466	0.000	1200		0	2200	1.057	
		2467	0.264	1200		0		1.321	
220:	6	2467	0.000	1200		0	2200	1.321	
		2468	0.264	1200		0		1.586	
220:	7	2468	0.000	1200		0	2200	1.586	
		2469	0.264	1200		0		1.850	
220:	8	2469	0.000	1200		0	2200	1.850	
		2470	0.264	1200		0		2.114	
220:	9	2470	0.000	1200		0	2200	2.114	
		2471	0.264	1200		0		2.379	
220:	10	2471	0.000	1200		0	2200	2.379	
		2472	0.264	1200		0		2.643	
220:	11	2472	0.000	1200		0	2200	2.643	
		2473	0.264	1200		0		2.907	
220:	12	2473	0.000	1200		0	2200	2.907	
		2474	0.264	1200		0		3.171	
220:	13	2474	0.000	1200		0	2200	3.171	
		2475	0.264	1200		0		3.436	
220:	14	2475	0.000	1200		0	2200	3.436	
		2210	0.264	1200		0		3.700	
221:	1	2210	0.000	2210		0	2210	0.000	
		2476	0.250	2210		0		0.250	
221:	2	2476	0.000	2210		0	2210	0.250	
		2477	0.250	2210		0		0.500	
221:	3	2477	0.000	2210		0	2210	0.500	
		2478	0.250	2210		0		0.750	
221:	4	2478	0.000	2210		0	2210	0.750	
		2479	0.250	2210		0		1.000	
221:	5	2479	0.000	2210		0	2210	1.000	
		2480	0.250	2210		0		1.250	
221:	6	2480	0.000	2210		0	2210	1.250	
		2481	0.250	2210		0		1.500	
221:	7	2481	0.000	2210		0	2210	1.500	
		2482	0.250	2210		0		1.750	
221:	8	2482	0.000	2210		0	2210	1.750	
		2483	0.250	2210		0		2.000	
221:	9	2483	0.000	2210		0	2210	2.000	
		2484	0.250	2210		0		2.250	
221:	10	2484	0.000	2210		0	2210	2.250	
		2485	0.250	2210		0		2.500	
221:	11	2485	0.000	2210		0	2210	2.500	
		2486	0.250	2210		0		2.750	
221:	12	2486	0.000	2210		0	2210	2.750	
		2220	0.250	2210		0		3.000	
222:	1	2220	0.000	2210		0	2220	0.000	
		2487	0.317	2230i		0		0.317	
222:	2	2487	0.000	2210i		0	2220	0.317	
		2488	0.317	2230i		0		0.633	
222:	3	2488	0.000	2210i		0	2220	0.633	
		2489	0.317	2230i		0		0.950	
222:	4	2489	0.000	2210i		0	2220	0.950	
		2490	0.317	2230i		0		1.267	
222:	5	2490	0.000	2210i		0	2220	1.267	
		2491	0.317	2230i		0		1.583	
222:	6	2491	0.000	2210i		0	2220	1.583	

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MODELO

Beam Elements

Grp	Number	Node	x[m]	SNo	NoP	E	reference		Properties
222:	6	2230	0.317	2230		0		1.900	
223:	1	2230	0.000	2230		0	2230	0.000	
		2492	0.268	2230		0		0.268	
223:	2	2492	0.000	2230		0	2230	0.268	
		2493	0.268	2230		0		0.536	
223:	3	2493	0.000	2230		0	2230	0.536	
		2494	0.268	2230		0		0.804	
223:	4	2494	0.000	2230		0	2230	0.804	
		2495	0.268	2230		0		1.071	
223:	5	2495	0.000	2230		0	2230	1.071	
		2496	0.268	2230		0		1.339	
223:	6	2496	0.000	2230		0	2230	1.339	
		2497	0.268	2230		0		1.607	
223:	7	2497	0.000	2230		0	2230	1.607	
		2498	0.268	2230		0		1.875	
223:	8	2498	0.000	2230		0	2230	1.875	
		2499	0.268	2230		0		2.143	
223:	9	2499	0.000	2230		0	2230	2.143	
		2500	0.268	2230		0		2.411	
223:	10	2500	0.000	2230		0	2230	2.411	
		2501	0.268	2230		0		2.679	
223:	11	2501	0.000	2230		0	2230	2.679	
		2502	0.268	2230		0		2.946	
223:	12	2502	0.000	2230		0	2230	2.946	
		2503	0.268	2230		0		3.214	
223:	13	2503	0.000	2230		0	2230	3.214	
		2504	0.268	2230		0		3.482	
223:	14	2504	0.000	2230		0	2230	3.482	
		2200	0.268	2230		0		3.750	

Grp primary group number SNo section number
x[m] Distance of section to start of beam NoP number of bedding profile
E "0": beam axis refers to origin of the cross section, "S": to center of gravity
reference reference axis with stationing

Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
10	100001	0.050	0.000	1.000	0.000								
21	210001	0.756	0.000	-1.000	0.000								
21	210002	0.756	0.000	-1.000	0.000								
21	210003	0.756	0.000	-1.000	0.000								
21	210004	0.756	0.000	-1.000	0.000								
21	210005	0.756	0.000	-1.000	0.000								
21	210006	0.756	0.000	-1.000	0.000								
21	210007	0.756	0.000	-1.000	0.000								
21	210008	0.756	0.000	-1.000	0.000								
22	220001	0.756	0.000	-1.000	0.000								
22	220002	0.756	0.000	-1.000	0.000								
22	220003	0.756	0.000	-1.000	0.000								
22	220004	0.756	0.000	-1.000	0.000								
22	220005	0.756	0.000	-1.000	0.000								
22	220006	0.756	0.000	-1.000	0.000								
22	220007	0.756	0.000	-1.000	0.000								
22	220008	0.756	0.000	-1.000	0.000								
23	230001	3.330	0.000	-1.000	0.000								
30	300001	0.050	0.000	-1.000	0.000								
111:	1	0.251	0.000	-1.000	0.000								
111:	2	0.251	0.000	-1.000	0.000								
111:	3	0.251	0.000	-1.000	0.000								
111:	4	0.251	0.000	-1.000	0.000								

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MODELO

Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
111	5	0.251	0.000	-1.000	0.000								
111	6	0.251	0.000	-1.000	0.000								
111	7	0.251	0.000	-1.000	0.000								
111	8	0.251	0.000	-1.000	0.000								
111	9	0.251	0.000	-1.000	0.000								
111	10	0.251	0.000	-1.000	0.000								
111	11	0.251	0.000	-1.000	0.000								
111	12	0.251	0.000	-1.000	0.000								
111	13	0.251	0.000	-1.000	0.000								
111	14	0.251	0.000	-1.000	0.000								
111	15	0.251	0.000	-1.000	0.000								
111	16	0.251	0.000	-1.000	0.000								
111	17	0.251	0.000	-1.000	0.000								
111	18	0.251	0.000	-1.000	0.000								
111	19	0.251	0.000	-1.000	0.000								
111	20	0.251	0.000	-1.000	0.000								
111	21	0.251	0.000	-1.000	0.000								
111	22	0.251	0.000	-1.000	0.000								
111	23	0.251	0.000	-1.000	0.000								
111	24	0.251	0.000	-1.000	0.000								
111	25	0.251	0.000	-1.000	0.000								
111	26	0.251	0.000	-1.000	0.000								
111	27	0.251	0.000	-1.000	0.000								
111	28	0.251	0.000	-1.000	0.000								
111	29	0.251	0.000	-1.000	0.000								
111	30	0.251	0.000	-1.000	0.000								
111	31	0.251	0.000	-1.000	0.000								
111	32	0.251	0.000	-1.000	0.000								
111	33	0.251	0.000	-1.000	0.000								
111	34	0.251	0.000	-1.000	0.000								
111	35	0.251	0.000	-1.000	0.000								
111	36	0.251	0.000	-1.000	0.000								
111	37	0.251	0.000	-1.000	0.000								
111	38	0.251	0.000	-1.000	0.000								
111	39	0.251	0.000	-1.000	0.000								
111	40	0.251	0.000	-1.000	0.000								
111	41	0.251	0.000	-1.000	0.000								
111	42	0.251	0.000	-1.000	0.000								
111	43	0.251	0.000	-1.000	0.000								
111	44	0.251	0.000	-1.000	0.000								
111	45	0.251	0.000	-1.000	0.000								
111	46	0.251	0.000	-1.000	0.000								
111	47	0.251	0.000	-1.000	0.000								
111	48	0.251	0.000	-1.000	0.000								
111	49	0.251	0.000	-1.000	0.000								
111	50	0.251	0.000	-1.000	0.000								
111	51	0.251	0.000	-1.000	0.000								
111	52	0.251	0.000	-1.000	0.000								
111	53	0.251	0.000	-1.000	0.000								
111	54	0.251	0.000	-1.000	0.000								
111	55	0.251	0.000	-1.000	0.000								
111	56	0.251	0.000	-1.000	0.000								
111	57	0.251	0.000	-1.000	0.000								
111	58	0.251	0.000	-1.000	0.000								
111	59	0.251	0.000	-1.000	0.000								
111	60	0.251	0.000	-1.000	0.000								
111	61	0.251	0.000	-1.000	0.000								
111	62	0.251	0.000	-1.000	0.000								

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MODELO

Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
111:	63	0.251	0.000	-1.000	0.000								
111:	64	0.251	0.000	-1.000	0.000								
111:	65	0.251	0.000	-1.000	0.000								
111:	66	0.251	0.000	-1.000	0.000								
111:	67	0.251	0.000	-1.000	0.000								
111:	68	0.251	0.000	-1.000	0.000								
111:	69	0.251	0.000	-1.000	0.000								
111:	70	0.251	0.000	-1.000	0.000								
111:	71	0.251	0.000	-1.000	0.000								
111:	72	0.251	0.000	-1.000	0.000								
111:	73	0.251	0.000	-1.000	0.000								
111:	74	0.251	0.000	-1.000	0.000								
111:	75	0.251	0.000	-1.000	0.000								
111:	76	0.251	0.000	-1.000	0.000								
111:	77	0.251	0.000	-1.000	0.000								
111:	78	0.251	0.000	-1.000	0.000								
111:	79	0.251	0.000	-1.000	0.000								
111:	80	0.251	0.000	-1.000	0.000								
111:	81	0.251	0.000	-1.000	0.000								
111:	82	0.251	0.000	-1.000	0.000								
111:	83	0.251	0.000	-1.000	0.000								
111:	84	0.251	0.000	-1.000	0.000								
111:	85	0.252	0.000	-1.000	0.000								
111:	86	0.250	0.000	-1.000	0.000								
111:	87	0.301	0.000	-1.000	0.000								
111:	88	0.202	0.000	-1.000	0.000								
111:	89	0.251	0.000	-1.000	0.000								
111:	90	0.251	0.000	-1.000	0.000								
111:	91	0.251	0.000	-1.000	0.000								
111:	92	0.251	0.000	-1.000	0.000								
121:	1	0.251	0.000	-1.000	0.000								
121:	2	0.251	0.000	-1.000	0.000								
121:	3	0.251	0.000	-1.000	0.000								
121:	4	0.251	0.000	-1.000	0.000								
121:	5	0.251	0.000	-1.000	0.000								
121:	6	0.251	0.000	-1.000	0.000								
121:	7	0.251	0.000	-1.000	0.000								
121:	8	0.251	0.000	-1.000	0.000								
121:	9	0.251	0.000	-1.000	0.000								
121:	10	0.251	0.000	-1.000	0.000								
121:	11	0.259	0.000	-1.000	0.000								
121:	12	0.244	0.000	-1.000	0.000								
121:	13	0.251	0.000	-1.000	0.000								
121:	14	0.251	0.000	-1.000	0.000								
121:	15	0.217	0.000	-1.000	0.000								
121:	16	0.285	0.000	-1.000	0.000								
121:	17	0.283	0.000	-1.000	0.000								
121:	18	0.219	0.000	-1.000	0.000								
121:	19	0.251	0.000	-1.000	0.000								
121:	20	0.251	0.000	-1.000	0.000								
121:	21	0.251	0.000	-1.000	0.000								
121:	22	0.251	0.000	-1.000	0.000								
121:	23	0.251	0.000	-1.000	0.000								
121:	24	0.251	0.000	-1.000	0.000								
121:	25	0.251	0.000	-1.000	0.000								
121:	26	0.251	0.000	-1.000	0.000								
121:	27	0.251	0.000	-1.000	0.000								
121:	28	0.251	0.000	-1.000	0.000								

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MODELO

Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
121	29	0.251	0.000	-1.000	0.000								
121	30	0.251	0.000	-1.000	0.000								
121	31	0.251	0.000	-1.000	0.000								
121	32	0.251	0.000	-1.000	0.000								
121	33	0.251	0.000	-1.000	0.000								
121	34	0.251	0.000	-1.000	0.000								
121	35	0.251	0.000	-1.000	0.000								
121	36	0.251	0.000	-1.000	0.000								
121	37	0.251	0.000	-1.000	0.000								
121	38	0.251	0.000	-1.000	0.000								
121	39	0.251	0.000	-1.000	0.000								
121	40	0.251	0.000	-1.000	0.000								
121	41	0.251	0.000	-1.000	0.000								
121	42	0.251	0.000	-1.000	0.000								
121	43	0.251	0.000	-1.000	0.000								
121	44	0.251	0.000	-1.000	0.000								
121	45	0.251	0.000	-1.000	0.000								
121	46	0.251	0.000	-1.000	0.000								
121	47	0.251	0.000	-1.000	0.000								
121	48	0.251	0.000	-1.000	0.000								
121	49	0.251	0.000	-1.000	0.000								
121	50	0.251	0.000	-1.000	0.000								
121	51	0.251	0.000	-1.000	0.000								
121	52	0.251	0.000	-1.000	0.000								
121	53	0.251	0.000	-1.000	0.000								
121	54	0.251	0.000	-1.000	0.000								
121	55	0.251	0.000	-1.000	0.000								
121	56	0.251	0.000	-1.000	0.000								
121	57	0.251	0.000	-1.000	0.000								
121	58	0.251	0.000	-1.000	0.000								
121	59	0.251	0.000	-1.000	0.000								
121	60	0.251	0.000	-1.000	0.000								
121	61	0.251	0.000	-1.000	0.000								
121	62	0.251	0.000	-1.000	0.000								
121	63	0.251	0.000	-1.000	0.000								
121	64	0.251	0.000	-1.000	0.000								
121	65	0.251	0.000	-1.000	0.000								
121	66	0.251	0.000	-1.000	0.000								
121	67	0.251	0.000	-1.000	0.000								
121	68	0.251	0.000	-1.000	0.000								
121	69	0.251	0.000	-1.000	0.000								
121	70	0.251	0.000	-1.000	0.000								
121	71	0.251	0.000	-1.000	0.000								
121	72	0.251	0.000	-1.000	0.000								
121	73	0.251	0.000	-1.000	0.000								
121	74	0.251	0.000	-1.000	0.000								
121	75	0.251	0.000	-1.000	0.000								
121	76	0.251	0.000	-1.000	0.000								
121	77	0.251	0.000	-1.000	0.000								
121	78	0.251	0.000	-1.000	0.000								
121	79	0.251	0.000	-1.000	0.000								
121	80	0.251	0.000	-1.000	0.000								
121	81	0.251	0.000	-1.000	0.000								
121	82	0.251	0.000	-1.000	0.000								
121	83	0.251	0.000	-1.000	0.000								
121	84	0.251	0.000	-1.000	0.000								
121	85	0.251	0.000	-1.000	0.000								
121	86	0.251	0.000	-1.000	0.000								

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Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
121:	87	0.251	0.000	-1.000	0.000								
121:	88	0.251	0.000	-1.000	0.000								
121:	89	0.251	0.000	-1.000	0.000								
121:	90	0.251	0.000	-1.000	0.000								
121:	91	0.251	0.000	-1.000	0.000								
121:	92	0.251	0.000	-1.000	0.000								
122:	1	0.300	0.000	-1.000	0.000								
122:	2	0.300	0.000	-1.000	0.000								
122:	3	0.300	0.000	-1.000	0.000								
122:	4	0.300	0.000	-1.000	0.000								
122:	5	0.300	0.000	-1.000	0.000								
122:	6	0.300	0.000	-1.000	0.000								
122:	7	0.300	0.000	-1.000	0.000								
122:	8	0.300	0.000	-1.000	0.000								
211:	1	0.250	1.000	0.000	0.000								
211:	2	0.250	1.000	0.000	0.000								
211:	3	0.250	1.000	0.000	0.000								
211:	4	0.250	1.000	0.000	0.000								
211:	5	0.250	1.000	0.000	0.000								
211:	6	0.250	1.000	0.000	0.000								
211:	7	0.251	1.000	0.000	0.000								
211:	8	0.249	1.000	0.000	0.000								
211:	9	0.250	1.000	0.000	0.000								
211:	10	0.250	1.000	0.000	0.000								
211:	11	0.250	1.000	0.000	0.000								
211:	12	0.250	1.000	0.000	0.000								
212:	1	0.317	1.000	0.000	0.000								
212:	2	0.317	1.000	0.000	0.000								
212:	3	0.317	1.000	0.000	0.000								
212:	4	0.317	1.000	0.000	0.000								
212:	5	0.317	1.000	0.000	0.000								
212:	6	0.317	1.000	0.000	0.000								
213:	1	0.268	1.000	0.000	0.000								
213:	2	0.268	1.000	0.000	0.000								
213:	3	0.268	1.000	0.000	0.000								
213:	4	0.268	1.000	0.000	0.000								
213:	5	0.200	1.000	0.000	0.000								
213:	6	0.336	1.000	0.000	0.000								
213:	7	0.268	1.000	0.000	0.000								
213:	8	0.268	1.000	0.000	0.000								
213:	9	0.268	1.000	0.000	0.000								
213:	10	0.268	1.000	0.000	0.000								
213:	11	0.268	1.000	0.000	0.000								
213:	12	0.268	1.000	0.000	0.000								
213:	13	0.268	1.000	0.000	0.000								
213:	14	0.268	1.000	0.000	0.000								
220:	1	0.264	1.000	0.000	0.000								
220:	2	0.264	1.000	0.000	0.000								
220:	3	0.264	1.000	0.000	0.000								
220:	4	0.264	1.000	0.000	0.000								
220:	5	0.264	1.000	0.000	0.000								
220:	6	0.264	1.000	0.000	0.000								
220:	7	0.264	1.000	0.000	0.000								
220:	8	0.264	1.000	0.000	0.000								
220:	9	0.264	1.000	0.000	0.000								
220:	10	0.264	1.000	0.000	0.000								
220:	11	0.264	1.000	0.000	0.000								
220:	12	0.264	1.000	0.000	0.000								

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Beam Elements - Extended Properties

Grp	Number	length [m]	local y-axis			Eccentricity begin [mm]			Eccentricity end [mm]			β-y	β-z
220:	13	0.264	1.000	0.000	0.000								
220:	14	0.264	1.000	0.000	0.000								
221:	1	0.250	1.000	0.000	0.000								
221:	2	0.250	1.000	0.000	0.000								
221:	3	0.250	1.000	0.000	0.000								
221:	4	0.250	1.000	0.000	0.000								
221:	5	0.250	1.000	0.000	0.000								
221:	6	0.250	1.000	0.000	0.000								
221:	7	0.250	1.000	0.000	0.000								
221:	8	0.250	1.000	0.000	0.000								
221:	9	0.250	1.000	0.000	0.000								
221:	10	0.250	1.000	0.000	0.000								
221:	11	0.250	1.000	0.000	0.000								
221:	12	0.250	1.000	0.000	0.000								
222:	1	0.317	1.000	0.000	0.000								
222:	2	0.317	1.000	0.000	0.000								
222:	3	0.317	1.000	0.000	0.000								
222:	4	0.317	1.000	0.000	0.000								
222:	5	0.317	1.000	0.000	0.000								
222:	6	0.317	1.000	0.000	0.000								
223:	1	0.268	1.000	0.000	0.000								
223:	2	0.268	1.000	0.000	0.000								
223:	3	0.268	1.000	0.000	0.000								
223:	4	0.268	1.000	0.000	0.000								
223:	5	0.268	1.000	0.000	0.000								
223:	6	0.268	1.000	0.000	0.000								
223:	7	0.268	1.000	0.000	0.000								
223:	8	0.268	1.000	0.000	0.000								
223:	9	0.268	1.000	0.000	0.000								
223:	10	0.268	1.000	0.000	0.000								
223:	11	0.268	1.000	0.000	0.000								
223:	12	0.268	1.000	0.000	0.000								
223:	13	0.268	1.000	0.000	0.000								
223:	14	0.268	1.000	0.000	0.000								

Grp primary group number
β-y,β-z buckling length coefficient

Spring Elements

Grp	Number	Node	Node	dX[-]	dY[-]	dZ[-]	Cp[kN/m]	Ct[kN/m]	Cm[kNm]
				e-P[-]	e-T[-]	e-M[-]	DP[kNsec/m]	DT[kNsec/m]	DM[kNmsec]
10	100001	111	121	0.000	0.000	1.000	1.000E+12	1.590E+03	
10	100002	112	122	0.000	0.000	1.000	1.000E+12	1.590E+03	
13	130001	133		1.000	0.000	0.000	1.000E+12		
13	130002	133		0.000	1.000	0.000	1.000E+12		
13	130003	133		0.000	0.000	1.000	1.000E+12		
13	130004	133		1.000	0.000	0.000			1.000E+12
13	130005	133		0.000	1.000	0.000			1.000E+12
13	130006	133		0.000	0.000	1.000			1.000E+12
20	200001	211	221	0.000	0.000	1.000	1.000E+12	1.590E+03	
20	200002	212	222	0.000	0.000	1.000	1.000E+12	1.590E+03	
23	230001	243		1.000	0.000	0.000	1.000E+12		
23	230002	243		0.000	1.000	0.000	1.000E+12		
23	230003	243		0.000	0.000	1.000	1.000E+12		
23	230004	243		1.000	0.000	0.000			1.000E+12
23	230005	243		0.000	1.000	0.000			1.000E+12
23	230006	243		0.000	0.000	1.000			1.000E+12
33	330001	333		1.000	0.000	0.000	1.000E+12		
33	330002	333		0.000	1.000	0.000	1.000E+12		
33	330003	333		0.000	0.000	1.000	1.000E+12		

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Spring Elements

Grp	Number	Node	Node	dX[-]	dY[-]	dZ[-]	Cp[kN/m]	Ct[kN/m]	Cm[kNm]
				e-P[-]	e-T[-]	e-M[-]	DP[kNsec/m]	DT[kNsec/m]	DM[kNmsec]
33	330004	333		1.000	0.000	0.000			1.000E+12
33	330005	333		0.000	1.000	0.000			1.000E+12
33	330006	333		0.000	0.000	1.000			1.000E+12

All springs are defined with linear effects

Grp primary group number
dX[-],dY[-],dZ[-] component of the direction
Cp[kN/m],Ct[kN/m] axial / lateral spring stiffness
DP[kNsec/m],DT[kNsec/m],DM[kNmsec] axial / lateral / torsional damping
Cm[kNm] torsional spring stiffness
e-P[-],e-T[-],e-M[-] exponent of the non-linear damping

Summary of beam elements

Groups

Grp	TotLength [m]	Max.Length [m]	TotVolume [m3]	TotWeight [t]	Surface [m2]
10	0.050	0.050	0.000	0.000	0.016
21	6.050	0.756	1.188	2.970	9.503
22	6.050	0.756	1.188	2.970	9.503
23	3.330	3.330	0.026	0.000	1.046
30	0.050	0.050	0.000	0.000	0.016
111	23.100	0.301	9.384	23.461	83.922
121	23.100	0.285	9.384	23.461	83.922
122	2.400	0.300	0.975	2.437	8.719
211	3.000	0.251	1.219	3.047	10.899
212	1.900	0.317	0.772	1.930	6.903
213	3.750	0.336	1.523	3.809	13.624
220	3.700	0.264	1.503	3.758	13.442
221	3.000	0.250	1.219	3.047	10.899
222	1.900	0.317	0.772	1.930	6.903
223	3.750	0.268	1.523	3.809	13.624
Sum	85.130		30.678	76.627	272.939

Grp primary group number

Summary of quadrilateral elements

Groups

Grp	TotArea [m2]	TotVolume [m3]	TotWeight [t]	Material
301	85.470	21.368	53.419	1
302	20.760	5.190	12.975	1
303	8.880	2.220	5.550	1
Sum	115.110	28.777	71.944	

Grp primary group number

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INTERPOLA

Default design code is EuroNorm EN 1992-1-1:2004 Concrete Structures (Espagna) V 2018
Structure and Tab.7.1N: AN (Buildings)
Snow load zone : 1

Materials

Mat	Classification
1	C 35/45 (EN 1992)
2	C 30/37 (EN 1992)
100	S 355 (EN 1993)

Cross-sections static properties

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
1	100	7.8540E-03	6.734E-03	4.909E-06	0.0	0.0	**********	0.0	
		9.816E-06	6.734E-03	4.909E-06	0.0	0.0	**********	(BEAM)	
20	2	1.9635E-01	1.684E-01	3.068E-03	0.0	0.0	32837	490.9	
		6.135E-03	1.684E-01	3.068E-03	0.0	0.0	13682	(BEAM)	
1100	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
1200	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2110	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2130	1	4.0625E-01	2.398E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.551E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2131	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-465.4	-464.2	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2132	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-332.9	-331.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2133	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-200.4	-199.2	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2134	1	4.0625E-01	2.399E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.552E-03	3.013E-01	3.078E-03	-67.9	-66.7	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2135	1	4.0625E-01	2.398E-01	8.122E-02	-43.8	1.9	34077	1015.6	8.122E-02
		8.551E-03	3.013E-01	3.078E-03	64.6	65.8	14199	(BEAM)	3.078E-03
				-1.107E-04					0.08
2210	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-597.9	-596.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2230	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	197.1	198.3	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2231	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-465.4	-464.2	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2232	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-332.9	-331.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2233	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-200.4	-199.2	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

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Cross-sections static properties

SNo	Mat	A[m2]	Ay[m2]	Iy[m4]	yc[mm]	ysc[mm]	E[N/mm2]	g[kg/m]	I-1[m4]
	MRf	It[m4]	Az[m2]	Iz[m4]	zc[mm]	zsc[mm]	G[N/mm2]		I-2[m4]
			Ayz[m2]	Iyz[m4]					α[°]
2234	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	-67.9	-66.7	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08
2235	1	4.0625E-01	2.400E-01	8.122E-02	43.8	-2.0	34077	1015.6	8.122E-02
		8.553E-03	3.013E-01	3.078E-03	64.6	65.8	14199	(BEAM)	3.078E-03
				1.107E-04					-0.08

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m2]	sectional area	E[N/mm2]	Young's modulus
Ay[m2],Az[m2],Ayz[m2]	transverse shear deformation area	g[kg/m]	weight per length
Iy[m4],Iz[m4],Iyz[m4]	bending moment of inertia		
I-1[m4],I-2[m4],α[°]	principal moments of inertia and angle of the principal axes		
MRf	reinforcement material number		
It[m4]	torsional moment of inertia		
G[N/mm2]	Shear modulus		

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Load Case 1

Factor forces and moments 1.000
Factor dead weight DL-ZZ -1.000

Load Case 2

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.327 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.327 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.327 [o/oo]
						activated		100.00 percent

Load Case 11

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						PZZ	-2.16 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						PZZ	-2.16 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						PZZ	-2.88 [kN/m2]
						activated		100.00 percent

Load Case 12

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						PZZ	-1.25 [kN/m]
						activated		100.00 percent
Line	SLN 1210						PZZ	-1.25 [kN/m]
						activated		100.00 percent
Line	SLN 1220						PZZ	-1.25 [kN/m]
						activated		100.00 percent
Line	SLN 2200						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2210						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2220						PZZ	-0.50 [kN/m]

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MODELO
CARGAS PERMANENTES

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
						activated		100.00 percent
Line	SLN 2230						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2110						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2120						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2130						PZZ	-0.50 [kN/m]
						activated		100.00 percent

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MODELO
CARGAS PERMANENTES

The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 1 PESO PROPIO

Factor forces and moments		1.000
Factor dead weight	DL-ZZ	-1.000

Load Case 2 RETRACCION

Factor forces and moments	1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.327 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.327 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.327 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.327 [o/oo]
						activated		100.00 percent

Load Case 11 ACABADO Y PELDAÑEADO

Factor forces and moments	1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						PZZ	-2.16 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						PZZ	-2.16 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						PZZ	-2.88 [kN/m2]
						activated		100.00 percent

Load Case 12 BARRERAS

Factor forces and moments	1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						PZZ	-1.25 [kN/m]
						activated		100.00 percent
Line	SLN 1210						PZZ	-1.25 [kN/m]
						activated		100.00 percent
Line	SLN 1220						PZZ	-1.25 [kN/m]

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MODELO
CARGAS PERMANENTES

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
						activated		100.00 percent
Line	SLN 2200						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2210						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2220						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2230						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2110						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2120						PZZ	-0.50 [kN/m]
						activated		100.00 percent
Line	SLN 2130						PZZ	-0.50 [kN/m]
						activated		100.00 percent

Sum of Loadings

Loadcase	Σ(Loads) X[kN]	Y[kN]	Z[kN]	Designation
1	0.0	0.0	-1485.7	PESO PROPIO
2	0.0	0.0	0.0	RETRACCION
11	0.0	0.0	-263.6	ACABADO Y PELDAÑEADO
12	0.0	0.0	-71.2	BARRERAS

Nodal Reactions Loadcase 1 PESO PROPIO

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	4.0		483.6	8.06	0.36	
243	-0.6		826.7	144.96	-5.51	
333	-3.4		175.4	-155.18	74.82	-35.89

Nodal Reactions Loadcase 2 RETRACCION

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-24.0	-6.6		1.32	-2.16	
243		-4.1	0.6	39.96		
333	24.0	10.7		1.89	3.35	87.44

Nodal Reactions Loadcase 11 ACABADO Y PELDAÑEADO

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.7	-0.1	89.3	0.81	0.07	
243	-0.1		140.8	44.79	-1.06	
333	-0.6	0.1	33.4	-27.27	14.14	-9.22

Nodal Reactions Loadcase 12 BARRERAS

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.2	0.0	28.0	0.29	0.02	-0.01
243	-0.0		39.4	2.63	-0.36	
333	-0.2	-0.0	3.9	4.16	5.92	-1.00

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MODELO
CARGAS PERMANENTES

Sum of Reactions and Loadings

Loadcase	Σ(Reactions)			Designation
	X[kN]	Y[kN]	Z[kN]	
	Σ(Loads)			
1	0.0	0.0	1485.7	PESO PROPIO
	0.0	0.0	-1485.7	
2	0.0	0.0	0.0	RETRACCION
	0.0	0.0	0.0	
11	0.0	0.0	263.6	ACABADO Y PELDAÑEADO
	0.0	0.0	-263.6	
12	0.0	0.0	71.2	BARRERAS
	0.0	0.0	-71.2	

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MODELO
PP PREFABRICADO

Elementgroups

No.	Fac-S	Fac-B	Fac-L	Fac-G	LC-P
10	1.000	1.000	1.000	0.000	-
13	1.000	1.000	1.000	0.000	-
20	1.000	1.000	1.000	0.000	-
21	1.000	1.000	1.000	1.000	-
22	1.000	1.000	1.000	1.000	-
23	1.000	1.000	1.000	0.000	-
30	1.000	1.000	1.000	0.000	-
33	1.000	1.000	1.000	0.000	-
111	1.000	1.000	1.000	1.000	-
121	1.000	1.000	1.000	1.000	-
122	1.000	1.000	1.000	1.000	-
220	1.000	1.000	1.000	1.000	-
301	1.000	1.000	1.000	1.000	-
303	1.000	1.000	1.000	1.000	-

No. group number
Fac-S factor stiffness
Fac-B factor stiffness quad bedding
Fac-L factor loads from primary stress state
Fac-G factor group dead load
LC-P primary loadcase

The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):

303 2100 2200

Load Case 5 PP PREFABRICADO

Factor forces and moments 1.000

Sum of Loadings

Loadcase	Σ(Loads)			Designation
	X[kN]	Y[kN]	Z[kN]	
5	0.0	0.0	-1180.3	PP PREFABRICADO

Nodal Reactions Loadcase 5 PP PREFABRICADO

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	1.8		493.6	8.30	0.16	-0.08
243	-1.8		686.7	-54.45	-16.59	0.11

Sum of Reactions and Loadings

Loadcase	Σ(Reactions)			Designation
	X[kN]	Y[kN]	Z[kN]	
	Σ(Loads)			
5	0.0	0.0	1180.3	PP PREFABRICADO
	0.0	0.0	-1180.3	

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MODELO
PP IN SITU

Elementgroups

No.	Fac-S	Fac-B	Fac-L	Fac-G	LC-P
10	1.000	1.000	1.000	0.000	-
13	1.000	1.000	1.000	0.000	-
20	1.000	1.000	1.000	0.000	-
21	1.000	1.000	1.000	0.000	-
22	1.000	1.000	1.000	0.000	-
23	1.000	1.000	1.000	0.000	-
30	1.000	1.000	1.000	0.000	-
33	1.000	1.000	1.000	0.000	-
111	1.000	1.000	1.000	0.000	-
121	1.000	1.000	1.000	0.000	-
122	1.000	1.000	1.000	0.000	-
211	1.000	1.000	1.000	1.000	-
212	1.000	1.000	1.000	1.000	-
213	1.000	1.000	1.000	1.000	-
220	1.000	1.000	1.000	0.000	-
221	1.000	1.000	1.000	1.000	-
222	1.000	1.000	1.000	1.000	-
223	1.000	1.000	1.000	1.000	-
301	1.000	1.000	1.000	0.000	-
302	1.000	1.000	1.000	1.000	-
303	1.000	1.000	1.000	0.000	-

No. group number
Fac-S factor stiffness
Fac-B factor stiffness quad bedding
Fac-L factor loads from primary stress state
Fac-G factor group dead load
LC-P primary loadcase

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The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 6 PP IN SITU
Factor forces and moments 1.000

Sum of Loadings

Loadcase	Σ(Loads)			Designation
	X[kN]	Y[kN]	Z[kN]	
6	0.0	0.0	-305.5	PP IN SITU

Nodal Reactions Loadcase 6 PP IN SITU

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.1	-0.5	-3.8	3.28		0.04
243	0.1	0.0	101.5	105.76	0.83	0.08
333	-0.1	0.4	207.7	-404.45	-30.08	-13.02

Sum of Reactions and Loadings

Loadcase	Σ(Reactions)			Designation
	X[kN]	Y[kN]	Z[kN]	
	Σ(Loads)			
6	0.0	0.0	305.5	PP IN SITU
	0.0	0.0	-305.5	

MODELO

Load Case 21

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 22

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 23

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 31

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	0.50 [kN/m2]
						activated		100.00 percent

Load Case 32

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						Px	0.50 [kN/m2]
						activated		100.00 percent

Load Case 33

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						Px	0.50 [kN/m2]
						activated		100.00 percent

Load Case 41

Factor forces and moments 1.000

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Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	-0.50 [kN/m2]
						activated		100.00 percent

Load Case 42

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						Px	-0.50 [kN/m2]
						activated		100.00 percent

Load Case 43

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						Px	-0.50 [kN/m2]
						activated		100.00 percent

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The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 21 SC PEAT VERT L 1
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 22 SC PEAT VERT L 2
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 23 SC PEAT VERT L 3
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						PZZ	-5.00 [kN/m2]
						activated		100.00 percent

Load Case 31 SC PEAT LONG L 1 +
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	0.50 [kN/m2]
						activated		100.00 percent

Load Case 32 SC PEAT LONG L 2 +
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						Px	0.50 [kN/m2]
						activated		100.00 percent

Load Case 33 SC PEAT LONG L 3 +
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						Px	0.50 [kN/m2]
						activated		100.00 percent

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Load Case 41 SC PEAT LONG L 1 -
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	-0.50 [kN/m2]
						activated		100.00 percent

Load Case 42 SC PEAT LONG L 2 -
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						Px	-0.50 [kN/m2]
						activated		100.00 percent

Load Case 43 SC PEAT LONG L 3 -
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 303						Px	-0.50 [kN/m2]
						activated		100.00 percent

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Sum of Loadings

Loadcase	Σ(Loads) X[kN]	Y[kN]	Z[kN]	Designation
21	0.0	0.0	-427.4	SC PEAT VERT L 1
22	0.0	0.0	-103.8	SC PEAT VERT L 2
23	0.0	0.0	-44.4	SC PEAT VERT L 3
31	42.7	0.0	0.0	SC PEAT LONG L 1 +
32	0.0	10.4	0.0	SC PEAT LONG L 2 +
33	4.4	0.0	0.0	SC PEAT LONG L 3 +
41	-42.7	0.0	0.0	SC PEAT LONG L 1 -
42	0.0	-10.4	0.0	SC PEAT LONG L 2 -
43	-4.4	0.0	0.0	SC PEAT LONG L 3 -

Nodal Reactions Loadcase 21 SC PEAT VERT L 1

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	1.7		210.4	-1.32	0.15	
243	-0.3		236.8	70.33	-3.09	
333	-1.3		-19.9	139.35	52.73	-14.32

Nodal Reactions Loadcase 22 SC PEAT VERT L 2

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.0	-0.2	-1.3	0.82		0.02
243	0.0	0.0	35.0	38.64	0.26	0.02
333	-0.0	0.2	70.2	-135.25	-9.49	-4.85

Nodal Reactions Loadcase 23 SC PEAT VERT L 3

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133		0.0	-1.8	2.09		-0.02
243	0.0		42.6	-18.16	0.29	0.03
333	-0.0	0.0	3.6	-22.15	-7.36	-0.55

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Nodal Reactions Loadcase 31 SC PEAT LONG L 1 +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-1.0	2.6	0.2	-0.27	-0.09	-0.34
243	-0.5	0.1		-1.51	-4.33	-0.19
333	-41.2	-2.7	-0.2	2.65	-7.02	-368.60

Nodal Reactions Loadcase 32 SC PEAT LONG L 2 +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
243			-0.1	-0.17		
333		-10.4	0.1	-0.22	0.03	-0.04

Nodal Reactions Loadcase 33 SC PEAT LONG L 3 +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-0.1	0.3	0.0	-0.03	-0.01	-0.04
243	-0.0	0.0	0.0	-0.10	-0.45	-0.02
333	-4.3	-0.3	-0.0	0.44	-0.67	-38.34

Nodal Reactions Loadcase 41 SC PEAT LONG L 1 -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	1.0	-2.6	-0.2	0.27	0.09	0.34
243	0.5	-0.1		1.51	4.33	0.19
333	41.2	2.7	0.2	-2.65	7.02	368.60

Nodal Reactions Loadcase 42 SC PEAT LONG L 2 -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
243			0.1	0.17		
333		10.4	-0.1	0.22	-0.03	0.04

Nodal Reactions Loadcase 43 SC PEAT LONG L 3 -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.1	-0.3	-0.0	0.03	0.01	0.04
243	0.0	0.0	-0.0	0.10	0.45	0.02
333	4.3	0.3	0.0	-0.44	0.67	38.34

Sum of Reactions and Loadings

Loadcase	Σ(Reactions) X[kN]	Y[kN]	Z[kN]	Designation
	Σ(Loads)			
21	0.0	0.0	427.3	SC PEAT VERT L 1
	0.0	0.0	-427.3	
22	0.0	0.0	103.8	SC PEAT VERT L 2
	0.0	0.0	-103.8	
23	0.0	0.0	44.4	SC PEAT VERT L 3
	0.0	0.0	-44.4	
31	-42.7	0.0	0.0	SC PEAT LONG L 1 +
	42.7	0.0	0.0	
32	0.0	-10.4	0.0	SC PEAT LONG L 2 +
	0.0	10.4	0.0	
33	-4.4	0.0	0.0	SC PEAT LONG L 3 +
	4.4	0.0	0.0	
41	42.7	0.0	0.0	SC PEAT LONG L 1 -
	-42.7	0.0	0.0	
42	0.0	10.4	0.0	SC PEAT LONG L 2 -
	0.0	-10.4	0.0	

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MODELO
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Sum of Reactions and Loadings

Loadcase	Σ(Reactions)			Designation
	X[kN]	Y[kN]	Z[kN]	
	Σ(Loads)			
43	4.4	0.0	0.0	SC PEAT LONG L 3 -
	-4.4	0.0	0.0	

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MODELO
VIENTO

Load Case 101

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 231						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	-0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	-0.52 [kN/m]
						activated		100.00 percent

Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110001	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110002	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110003	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110004	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110005	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110006	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110007	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110008	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110009	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110010	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110011	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110012	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110013	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110014	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110015	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110016	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110017	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110018	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110019	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110020	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110021	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110022	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110023	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110024	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110025	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110026	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110027	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110028	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110029	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110030	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110031	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110032	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110033	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110034	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110035	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110036	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110037	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110038	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110039	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110040	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110041	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110042	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110043	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	

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Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110044	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110045	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110046	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110047	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110048	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110049	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110050	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110051	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110052	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110053	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110054	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110055	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110056	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110057	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110058	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110059	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110060	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110061	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110062	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110063	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110064	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110065	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110066	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110067	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110068	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110069	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110070	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110071	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110072	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110073	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110074	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110075	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110076	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110077	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110078	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110079	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110080	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110081	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110082	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110083	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110084	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110085	Py	0.000	0.252	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110086	Py	0.000	0.250	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110087	Py	0.000	0.301	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110088	Py	0.000	0.202	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110089	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110090	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110091	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1110092	Py	0.000	0.251	5.10	5.10	[kN/m]	-43.8	-1321.7	-43.8	-1321.7	
1210001	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210002	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210003	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210004	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210005	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210006	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210007	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210008	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210009	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	

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Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1210010	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210011	Py	0.000	0.259	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210012	Py	0.000	0.244	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210013	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210014	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210015	Py	0.000	0.217	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210016	Py	0.000	0.285	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210017	Py	0.000	0.283	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210018	Py	0.000	0.219	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210019	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210020	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210021	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210022	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210023	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210024	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210025	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210026	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210027	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210028	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210029	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210030	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210031	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210032	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210033	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210034	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210035	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210036	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210037	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210038	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210039	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210040	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210041	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210042	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210043	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210044	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210045	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210046	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210047	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210048	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210049	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210050	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210051	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210052	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210053	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210054	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210055	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210056	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210057	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210058	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210059	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210060	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210061	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210062	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210063	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210064	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210065	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210066	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210067	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	

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Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1210068	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210069	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210070	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210071	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210072	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210073	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210074	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210075	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210076	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210077	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210078	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210079	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210080	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210081	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210082	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210083	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210084	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210085	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210086	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210087	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210088	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210089	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210090	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210091	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1210092	Py	0.000	0.251	1.30	1.30	[kN/m]	43.8	-1321.8	43.8	-1321.8	
1220001	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220002	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220003	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220004	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220005	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220006	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220007	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
1220008	Py	0.000	0.300	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2110001	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110002	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110003	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110004	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110005	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110006	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110007	Py	0.000	0.251	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110008	Py	0.000	0.249	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110009	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110010	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110011	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2110012	Py	0.000	0.250	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1322.1	
2120001	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-1322.1	-43.8	-1189.6	
2120002	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-1189.6	-43.8	-1057.1	
2120003	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-1057.1	-43.8	-924.6	
2120004	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-924.6	-43.8	-792.1	
2120005	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-792.1	-43.8	-659.6	
2120006	Py	0.000	0.317	3.90	3.90	[kN/m]	-43.8	-659.6	-43.8	-527.1	
2130001	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130002	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130003	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130004	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130005	Py	0.000	0.200	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130006	Py	0.000	0.336	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130007	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	

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Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
2130008	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130009	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130010	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130011	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130012	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130013	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2130014	Py	0.000	0.268	3.90	3.90	[kN/m]	-43.8	-527.1	-43.8	-527.1	
2200001	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200002	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200003	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200004	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200005	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200006	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200007	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200008	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200009	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200010	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200011	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200012	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200013	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2200014	Py	0.000	0.264	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210001	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210002	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210003	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210004	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210005	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210006	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210007	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210008	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210009	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210010	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210011	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2210012	Py	0.000	0.250	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1322.2	
2220001	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-1322.2	43.8	-1189.7	
2220002	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-1189.7	43.8	-1057.2	
2220003	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-1057.2	43.8	-924.7	
2220004	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-924.7	43.8	-792.2	
2220005	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-792.2	43.8	-659.7	
2220006	Py	0.000	0.317	0.50	0.50	[kN/m]	43.8	-659.7	43.8	-527.2	
2230001	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230002	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230003	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230004	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230005	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230006	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230007	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230008	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230009	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230010	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230011	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230012	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230013	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	
2230014	Py	0.000	0.268	0.50	0.50	[kN/m]	43.8	-527.2	43.8	-527.2	

Load Case 102

Factor forces and moments 1.000

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MODELO
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Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 231						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	0.52 [kN/m]
						activated		100.00 percent

Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110001	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110002	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110003	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110004	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110005	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110006	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110007	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110008	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110009	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110010	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110011	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110012	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110013	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110014	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110015	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110016	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110017	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110018	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110019	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110020	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110021	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110022	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110023	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110024	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110025	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110026	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110027	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110028	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110029	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110030	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110031	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110032	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110033	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110034	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110035	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110036	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110037	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110038	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110039	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110040	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110041	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110042	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110043	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110044	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110045	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110046	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	

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Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110047	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110048	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110049	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110050	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110051	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110052	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110053	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110054	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110055	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110056	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110057	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110058	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110059	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110060	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110061	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110062	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110063	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110064	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110065	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110066	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110067	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110068	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110069	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110070	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110071	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110072	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110073	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110074	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110075	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110076	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110077	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110078	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110079	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110080	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110081	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110082	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110083	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110084	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110085	Py	0.000	0.252	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110086	Py	0.000	0.250	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110087	Py	0.000	0.301	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110088	Py	0.000	0.202	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110089	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110090	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110091	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1110092	Py	0.000	0.251	-1.30	-1.30	[kN/m]	-43.8	-1321.8	-43.8	-1321.8	
1210001	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210002	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210003	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210004	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210005	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210006	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210007	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210008	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210009	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210010	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210011	Py	0.000	0.259	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210012	Py	0.000	0.244	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	

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Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1210013	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210014	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210015	Py	0.000	0.217	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210016	Py	0.000	0.285	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210017	Py	0.000	0.283	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210018	Py	0.000	0.219	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210019	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210020	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210021	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210022	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210023	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210024	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210025	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210026	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210027	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210028	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210029	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210030	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210031	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210032	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210033	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210034	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210035	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210036	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210037	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210038	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210039	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210040	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210041	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210042	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210043	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210044	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210045	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210046	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210047	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210048	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210049	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210050	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210051	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210052	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210053	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210054	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210055	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210056	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210057	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210058	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210059	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210060	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210061	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210062	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210063	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210064	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210065	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210066	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210067	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210068	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210069	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210070	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	

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Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1210071	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210072	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210073	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210074	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210075	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210076	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210077	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210078	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210079	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210080	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210081	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210082	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210083	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210084	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210085	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210086	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210087	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210088	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210089	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210090	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210091	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1210092	Py	0.000	0.251	-5.10	-5.10	[kN/m]	43.8	-1321.7	43.8	-1321.7	
1220001	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220002	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220003	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220004	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220005	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220006	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220007	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
1220008	Py	0.000	0.300	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2110001	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110002	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110003	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110004	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110005	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110006	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110007	Py	0.000	0.251	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110008	Py	0.000	0.249	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110009	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110010	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110011	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2110012	Py	0.000	0.250	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1322.2	
2120001	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-1322.2	-43.8	-1189.7	
2120002	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-1189.7	-43.8	-1057.2	
2120003	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-1057.2	-43.8	-924.7	
2120004	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-924.7	-43.8	-792.2	
2120005	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-792.2	-43.8	-659.7	
2120006	Py	0.000	0.317	-0.50	-0.50	[kN/m]	-43.8	-659.7	-43.8	-527.2	
2130001	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130002	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130003	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130004	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130005	Py	0.000	0.200	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130006	Py	0.000	0.336	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130007	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130008	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130009	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130010	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	

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Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
2130011	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130012	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130013	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2130014	Py	0.000	0.268	-0.50	-0.50	[kN/m]	-43.8	-527.2	-43.8	-527.2	
2200001	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200002	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200003	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200004	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200005	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200006	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200007	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200008	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200009	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200010	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200011	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200012	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200013	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2200014	Py	0.000	0.264	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210001	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210002	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210003	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210004	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210005	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210006	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210007	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210008	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210009	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210010	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210011	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2210012	Py	0.000	0.250	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1322.1	
2220001	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-1322.1	43.8	-1189.6	
2220002	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-1189.6	43.8	-1057.1	
2220003	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-1057.1	43.8	-924.6	
2220004	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-924.6	43.8	-792.1	
2220005	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-792.1	43.8	-659.6	
2220006	Py	0.000	0.317	-3.90	-3.90	[kN/m]	43.8	-659.6	43.8	-527.1	
2230001	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230002	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230003	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230004	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230005	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230006	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230007	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230008	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230009	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230010	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230011	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230012	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230013	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	
2230014	Py	0.000	0.268	-3.90	-3.90	[kN/m]	43.8	-527.1	43.8	-527.1	

Load Case 111

Factor forces and moments 1.000

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MODELO
VIENTO

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Px	0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Px	0.45 [kN/m2]
						activated		100.00 percent
Line	SLN 231						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	0.52 [kN/m]
						activated		100.00 percent

Load Case 112

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	-0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Px	-0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Px	-0.45 [kN/m2]
						activated		100.00 percent
Line	SLN 231						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	-0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	-0.52 [kN/m]
						activated		100.00 percent

Load Case 121

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Pz	1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Pz	1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Pz	1.13 [kN/m2]
						activated		100.00 percent

Load Case 122

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Pz	-1.13 [kN/m2]
						activated		100.00 percent

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Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 302						Pz	-1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Pz	-1.13 [kN/m2]
						activated		100.00 percent

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The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 101 W TRANS INT
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 231						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	-0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	-0.52 [kN/m]
						activated		100.00 percent

Load Case 102 W TRANS EXT
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 231						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	0.52 [kN/m]
						activated		100.00 percent

Load Case 111 W LONG +
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Px	0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Px	0.45 [kN/m2]
						activated		100.00 percent
Line	SLN 231						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	0.52 [kN/m]
						activated		100.00 percent

Load Case 112 W LONG -
Factor forces and moments 1.000

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MODELO
VIENTO

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Px	-0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Px	-0.45 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Px	-0.45 [kN/m2]
						activated		100.00 percent
Line	SLN 231						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 232						PXX	-1.38 [kN/m]
						activated		100.00 percent
Line	SLN 231						PYY	-0.52 [kN/m]
						activated		100.00 percent
Line	SLN 232						PYY	-0.52 [kN/m]
						activated		100.00 percent

Load Case 121 W TAB VERT +

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Pz	1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Pz	1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Pz	1.13 [kN/m2]
						activated		100.00 percent

Load Case 122 W TAB VERT -

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Area	QGRP 301						Pz	-1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 302						Pz	-1.13 [kN/m2]
						activated		100.00 percent
Area	QGRP 303						Pz	-1.13 [kN/m2]
						activated		100.00 percent

Sum of Loadings

Loadcase	Σ(Loads) X[kN]	Y[kN]	Z[kN]	Designation
101	56.6	-155.3	0.0	W TRANS INT
102	-69.2	163.5	0.0	W TRANS EXT
111	59.2	15.6	0.0	W LONG +
112	-59.2	-15.6	0.0	W LONG -
121	0.0	0.0	-130.1	W TAB VERT +
122	0.0	0.0	130.1	W TAB VERT -

Nodal Reactions Loadcase 101 W TRANS INT

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-5.4	30.2	-0.3	-100.02	-0.49	-3.80
243	-15.8	5.6	4.8	-137.55	-97.63	-1.82
333	-35.4	119.6	-4.5	41.01	-36.47	-1283.64

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Nodal Reactions Loadcase 102 W TRANS EXT

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	5.7	-31.3	0.8	98.56	0.51	3.96
243	15.9	-5.6	-1.8	175.07	98.79	1.88
333	47.6	-126.6	1.0	-29.03	39.36	1384.32

Nodal Reactions Loadcase 111 W LONG +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-1.1	2.8	0.2	-0.29	-0.10	-0.36
243	-13.8	-4.9	-0.1	26.08	-79.05	-0.21
333	-44.2	-13.5	-0.2	3.01	-7.37	-394.43

Nodal Reactions Loadcase 112 W LONG -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	1.1	-2.8	-0.2	0.29	0.10	0.36
243	13.8	4.9	0.1	-26.08	79.05	0.21
333	44.2	13.5	0.2	-3.01	7.37	394.43

Nodal Reactions Loadcase 121 W TAB VERT +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.4	-0.0	46.8	0.36	0.03	
243	-0.1		71.0	20.52	-0.58	
333	-0.3	0.0	12.2	-4.08	8.11	-4.46

Nodal Reactions Loadcase 122 W TAB VERT -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-0.4	0.0	-46.8	-0.36	-0.03	
243	0.1		-71.0	-20.52	0.58	
333	0.3	-0.0	-12.2	4.08	-8.11	4.46

Sum of Reactions and Loadings

Loadcase	Σ(Reactions) X[kN]	Y[kN]	Z[kN]	Designation
	Σ(Loads)			
101	-56.6	155.3	0.0	W TRANS INT
	56.6	-155.3	0.0	
102	69.2	-163.5	0.0	W TRANS EXT
	-69.2	163.5	0.0	
111	-59.2	-15.6	0.0	W LONG +
	59.2	15.6	0.0	
112	59.2	15.6	0.0	W LONG -
	-59.2	-15.6	0.0	
121	0.0	0.0	130.1	W TAB VERT +
	0.0	0.0	-130.1	
122	0.0	0.0	-130.1	W TAB VERT -
	0.0	0.0	130.1	

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TEMPERATURA

Load Case 201

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	0.350 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	0.350 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	0.350 [o/oo]
						activated		100.00 percent

Load Case 202

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.150 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.150 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.150 [o/oo]
						activated		100.00 percent

Load Case 203

Factor forces and moments 1.000

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TEMPERATURA

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	0.500 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	0.500 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	0.500 [o/oo]
						activated		100.00 percent

Load Case 204

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.300 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.300 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.300 [o/oo]
						activated		100.00 percent

Load Case 211

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 1210						ky	-0.130 [1/km]

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MODELO
TEMPERATURA

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
						activated		100.00 percent
Line	SLN 1220						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2200						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2210						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2220						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2230						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2110						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2120						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2130						ky	-0.130 [1/km]
						activated		100.00 percent

Load Case 212

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 1210						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 1220						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2200						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2210						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2220						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2230						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2110						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2120						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2130						ky	0.069 [1/km]
						activated		100.00 percent

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The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 201 T UNIF +

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	0.350 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	0.350 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	0.350 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	0.350 [o/oo]
						activated		100.00 percent

Load Case 202 T UNIF -

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.150 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.150 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.150 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.150 [o/oo]
						activated		100.00 percent

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MODELO
TEMPERATURA

Load Case 203 T UNIF + APOYOS

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	0.500 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	0.500 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	0.500 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	0.500 [o/oo]
						activated		100.00 percent

Load Case 204 T UNIF - APOYOS

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 1210						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2210						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2220						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2230						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2110						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2120						epsx	-0.300 [o/oo]
						activated		100.00 percent
Line	SLN 2130						epsx	-0.300 [o/oo]
						activated		100.00 percent
Area	QGRP 301						epsx	-0.300 [o/oo]
						activated		100.00 percent
Area	QGRP 302						epsx	-0.300 [o/oo]
						activated		100.00 percent

Load Case 211 T GRAD +

Factor forces and moments 1.000

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TEMPERATURA

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 1210						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 1220						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2200						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2210						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2220						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2230						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2110						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2120						ky	-0.130 [1/km]
						activated		100.00 percent
Line	SLN 2130						ky	-0.130 [1/km]
						activated		100.00 percent

Load Case 212 T GRAD -
Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Line	SLN 1110						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 1210						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 1220						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2200						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2210						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2220						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2230						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2110						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2120						ky	0.069 [1/km]
						activated		100.00 percent
Line	SLN 2130						ky	0.069 [1/km]
						activated		100.00 percent

Sum of Loadings

Loadcase	Σ(Loads) X[kN]	Y[kN]	Z[kN]	Designation
201	0.0	0.0	0.0	T UNIF +
202	0.0	0.0	0.0	T UNIF -
203	0.0	0.0	0.0	T UNIF + APOYOS
204	0.0	0.0	0.0	T UNIF - APOYOS
211	0.0	0.0	0.0	T GRAD +
212	0.0	0.0	0.0	T GRAD -

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Nodal Reactions Loadcase 201 T UNIF +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	25.6	7.0		-1.42	2.31	
243		4.4	-0.6	-42.77		
333	-25.6	-11.4		-2.02	-3.59	-93.59

Nodal Reactions Loadcase 202 T UNIF -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-11.0	-3.0		0.61	-0.99	
243		-1.9		18.33		
333	11.0	4.9		0.87	1.54	40.11

Nodal Reactions Loadcase 203 T UNIF + APOYOS

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	36.6	10.1		-2.02	3.30	0.64
243		6.2	-0.9	-61.09		
333	-36.6	-16.3		-2.89	-5.13	-133.69

Nodal Reactions Loadcase 204 T UNIF - APOYOS

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-22.0	-6.0		1.21	-1.98	
243		-3.7	0.5	36.66		
333	22.0	9.8		1.73	3.08	80.22

Nodal Reactions Loadcase 211 T GRAD +

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	-1.5	0.7	-0.3	6.47	-0.14	-0.20
243	0.4	-0.2	67.1	-100.76	3.80	
333	1.1	-0.6	-66.8	797.10	-74.19	28.91

Nodal Reactions Loadcase 212 T GRAD -

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	0.8	-0.4	0.1	-3.43	0.07	0.10
243	-0.2	0.1	-35.6	53.48	-2.02	
333	-0.6	0.3	35.5	-423.08	39.38	-15.35

Sum of Reactions and Loadings

Loadcase	Σ(Reactions) X[kN]	Y[kN]	Z[kN]	Designation
	Σ(Loads)			
201	0.0	0.0	0.0	T UNIF +
	0.0	0.0	0.0	
202	0.0	0.0	0.0	T UNIF -
	0.0	0.0	0.0	
203	0.0	0.0	0.0	T UNIF + APOYOS
	0.0	0.0	0.0	
204	0.0	0.0	0.0	T UNIF - APOYOS
	0.0	0.0	0.0	
211	0.0	0.0	0.0	T GRAD +
	0.0	0.0	0.0	
212	0.0	0.0	0.0	T GRAD -
	0.0	0.0	0.0	

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Load Case 100

Factor forces and moments 1.000

Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110001	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110002	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110003	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110004	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110005	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110006	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110007	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110008	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110009	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110010	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110011	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110012	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110013	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110014	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110015	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110016	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110017	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110018	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110019	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110020	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110021	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110022	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110023	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110024	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110025	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110026	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110027	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110028	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110029	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110030	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110031	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110032	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110033	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110034	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110035	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110036	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110037	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110038	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110039	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110040	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110041	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110042	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110043	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110044	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110045	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110046	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110047	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110048	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110049	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110050	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110051	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110052	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110053	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110054	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110055	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110056	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	

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MODELO
PRUEBA

Loads acting on Beam elements

Number	Type	a[m]	l[m]	Load value	Load value	Unit	ya[mm]	za[mm]	ye[mm]	ze[mm]	Ref
1110057	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110058	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110059	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110060	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110061	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110062	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110063	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110064	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110065	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110066	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110067	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110068	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110069	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110070	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110071	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110072	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110073	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110074	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110075	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110076	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110077	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110078	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110079	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110080	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110081	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110082	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110083	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110084	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110085	PZZ	0.000	0.252	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110086	PZZ	0.000	0.250	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110087	PZZ	0.000	0.301	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110088	PZZ	0.000	0.202	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110089	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110090	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110091	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	
1110092	PZZ	0.000	0.251	-10.00	-10.00	[kN/m]	-43.8	-597.9	-43.8	-597.9	

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MODELO
PRUEBA

The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 100 PRUEBA
Factor forces and moments 1.000

Sum of Loadings

Loadcase	Σ(Loads)			Designation
	X[kN]	Y[kN]	Z[kN]	
100	0.0	0.0	-231.0	PRUEBA

Nodal Reactions Loadcase 100 PRUEBA

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133	1.1	3.2	113.4	208.48	0.10	-1.54
243	-0.1		126.2	276.62	-0.64	0.16
333	-1.1	-3.2	-8.7	42.81	37.48	67.73

Sum of Reactions and Loadings

Loadcase	Σ(Reactions)			Designation
	X[kN]	Y[kN]	Z[kN]	
	Σ(Loads)			
100	0.0	0.0	231.0	PRUEBA
	0.0	0.0	-231.0	

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MODELO

Sum of Masses

	TM-X[t]	TM-Y[t]	TM-Z[t]	RM-X[tm2]	RM-Y[tm2]	RM-Z[tm2]
total	148.571	148.571	148.571	36.272	36.087	1.251
activ	148.571	148.571	148.571	36.272	36.087	1.251

Center of mass

X[m]	Y[m]	Z[m]
15.671	1.239	-0.129

Parameter of System of Equations

Number of unknowns 11124 DIRECT-SPARSE
Total entries 132167
Total entries after fill in 824991
Mass matrix 22118 (consistent)

Eigenfrequencies

Using Lanczos Method
Iterationsvectors 80

No.	LC	Eigenvalue [1/Sec2]	Relativ error	frequency [Hertz]	Period [sec]	modal damping
1	300	2.03836E+02	1.03E-20	2.272	0.440088	0.00000
2	301	8.44468E+02	1.83E-20	4.625	0.216216	0.00000
3	302	1.63575E+03	9.19E-20	6.437	0.155354	0.00000
4	303	2.12751E+03	1.54E-19	7.341	0.136221	0.00000
5	304	3.96075E+03	6.46E-20	10.016	0.099837	0.00000
6	305	3.96304E+03	2.48E-19	10.019	0.099808	0.00000
7	306	3.96330E+03	5.69E-19	10.020	0.099805	0.00000
8	307	3.98789E+03	6.55E-20	10.051	0.099497	0.00000
9	308	1.03530E+04	2.49E-19	16.194	0.061751	0.00000
10	309	1.29471E+04	4.49E-19	18.109	0.055220	0.00000
11	310	1.77104E+04	2.32E-18	21.180	0.047213	0.00000
12	311	2.11181E+04	2.52E-18	23.129	0.043237	0.00000
13	312	2.55262E+04	1.50E-18	25.428	0.039327	0.00000
14	313	3.20420E+04	3.73E-19	28.489	0.035101	0.00000
15	314	3.82487E+04	1.49E-18	31.126	0.032127	0.00000
16	315	4.93922E+04	0.00E+00	35.371	0.028272	0.00000
17	316	5.09512E+04	0.00E+00	35.925	0.027836	0.00000
18	317	5.58372E+04	0.00E+00	37.608	0.026590	0.00000
19	318	6.18325E+04	0.00E+00	39.576	0.025268	0.00000
20	319	7.13808E+04	0.00E+00	42.522	0.023517	0.00000
21	320	7.52399E+04	8.03E-30	43.656	0.022906	0.00000
22	321	7.52421E+04	7.66E-30	43.657	0.022906	0.00000
23	322	7.52627E+04	3.31E-29	43.663	0.022903	0.00000
24	323	7.52819E+04	4.30E-29	43.668	0.022900	0.00000
25	324	8.34357E+04	5.59E-35	45.972	0.021752	0.00000
26	325	9.27942E+04	1.11E-32	48.482	0.020626	0.00000
27	326	1.00950E+05	5.15E-30	50.568	0.019775	0.00000
28	327	1.09838E+05	2.58E-28	52.747	0.018958	0.00000
29	328	1.21921E+05	1.51E-25	55.572	0.017995	0.00000
30	329	1.30881E+05	3.94E-23	57.578	0.017368	0.00000
31	330	1.39361E+05	1.22E-20	59.414	0.016831	0.00000
32	331	1.52827E+05	1.69E-17	62.219	0.016072	0.00000
33	332	1.56461E+05	4.32E-16	62.954	0.015885	0.00000
34	333	1.61714E+05	2.53E-15	64.002	0.015625	0.00000
35	334	1.66123E+05	8.99E-14	64.869	0.015416	0.00000
36	335	1.71010E+05	7.04E-15	65.816	0.015194	0.00000
37	336	1.83383E+05	4.20E-14	68.155	0.014672	0.00000
38	337	1.99297E+05	2.78E-12	71.051	0.014074	0.00000
39	338	2.10533E+05	1.58E-10	73.027	0.013694	0.00000
40	339	2.15819E+05	2.28E-10	73.938	0.013525	0.00000
41		2.26651E+05	6.44E-10	75.770	0.013198	

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MODELO
FRECUENCIAS

No.	LC	Eigenvalue [1/Sec2]	Relativ error	frequency [Hertz]	Period [sec]	modal damping
42		2.39723E+05	1.32E-08	77.925	0.012833	
43		2.52453E+05	3.14E-08	79.967	0.012505	
44		2.69007E+05	4.74E-07	82.547	0.012114	
45		2.85521E+05	3.44E-06	85.043	0.011759	
46		2.98774E+05	1.08E-05	86.994	0.011495	
47		3.12262E+05	8.13E-05	88.936	0.011244	
48		3.27118E+05	4.78E-04	91.027	0.010986	
49		3.48099E+05	6.87E-03	93.901	0.010649	
50		3.52879E+05	4.76E-03	94.544	0.010577	
51		3.78017E+05	1.76E-02	97.853	0.010219	
52		3.97763E+05	5.89E-03	100.377	0.009962	
53		4.22305E+05	4.06E-02	103.427	0.009669	
54		4.50227E+05	1.35E-02	106.791	0.009364	
55		4.80900E+05	1.20E-01	110.369	0.009061	
56		5.05602E+05	8.12E-02	113.168	0.008836	
57		5.31737E+05	6.05E-02	116.056	0.008617	
58		5.78730E+05	5.95E-02	121.076	0.008259	
59		6.18589E+05	1.41E-01	125.176	0.007989	
60		6.91386E+05	1.01E-01	132.337	0.007556	
61		7.36654E+05	9.26E-02	136.600	0.007321	
62		8.32617E+05	1.47E-01	145.225	0.006886	
63		8.95000E+05	1.45E-01	150.568	0.006642	
64		1.00325E+06	1.73E-01	159.413	0.006273	
65		1.13039E+06	1.18E-01	169.214	0.005910	
66		1.31118E+06	1.21E-01	182.243	0.005487	
67		1.49541E+06	2.10E-01	194.626	0.005138	
68		1.78137E+06	2.40E-01	212.421	0.004708	
69		2.05726E+06	2.41E-01	228.278	0.004381	
70		2.36866E+06	2.64E-01	244.947	0.004083	
71		3.03715E+06	3.12E-01	277.366	0.003605	
72		3.91241E+06	2.99E-01	314.805	0.003177	
73		4.91308E+06	3.20E-01	352.774	0.002835	
74		6.09505E+06	3.30E-01	392.924	0.002545	
75		8.82807E+06	5.53E-01	472.882	0.002115	
76		1.38206E+07	6.72E-01	591.676	0.001690	
77		2.35504E+07	6.90E-01	772.359	0.001295	
78		4.61758E+07	1.15E+00	1081.502	0.000925	
79		1.34369E+08	1.87E+00	1844.887	0.000542	
80		1.20607E+09	5.20E+00	5527.212	0.000181	

Modal masses - activated mass

No.	LC	frequency [Hertz]	effective modal Mass X[t]	Y[t]	Z[t]	factor X[%]	Y[%]	Z[%]	activated mass [%]*
1	300	2.272	11.5	69.1	0.0	7.73	46.51	0.00	24.37478
2	301	4.625	0.2	0.0	72.7	0.13	0.01	48.93	33.39661
3	302	6.437	18.6	1.7	0.1	12.52	1.14	0.10	27.51392
4	303	7.341	99.2	2.9	0.3	66.74	1.95	0.22	47.04272
5	304	10.016	0.0	3.6	0.0	0.02	2.45	0.00	0.77051
6	305	10.019	0.0	0.1	0.0	0.01	0.05	0.00	0.93610
7	306	10.020	0.0	0.2	0.0	0.01	0.10	0.00	0.77811
8	307	10.051	0.4	0.0	0.0	0.30	0.03	0.00	0.96022
9	308	16.194	0.0	0.1	2.8	0.01	0.04	1.89	26.21483
10	309	18.109	1.5	8.5	2.9	0.98	5.75	1.94	21.94379
11	310	21.180	1.0	8.7	20.8	0.66	5.87	14.02	12.62443
12	311	23.129	0.1	5.7	4.3	0.06	3.86	2.88	27.17734
13	312	25.428	0.0	0.0	5.1	0.00	0.00	3.41	4.09238
14	313	28.489	0.0	0.0	5.0	0.01	0.00	3.38	7.75728
15	314	31.126	0.0	0.0	1.9	0.00	0.01	1.27	8.17616

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MODELO
FRECUENCIAS

Modal masses - activated mass

No.	LC	frequency [Hertz]	effective modal Mass X[t]	Y[t]	Z[t]	factor X[%]	Y[%]	Z[%]	activated mass [%]*
16	315	35.371	0.0	0.8	5.0	0.01	0.56	3.36	13.64247
17	316	35.925	0.1	1.6	0.0	0.06	1.05	0.02	23.20280
18	317	37.608	0.2	0.1	1.9	0.16	0.08	1.26	14.43356
19	318	39.576	0.0	0.0	5.7	0.02	0.03	3.87	9.66511
20	319	42.522	0.0	0.0	1.1	0.00	0.01	0.74	11.63793
21	320	43.656	0.0	1.0	0.0	0.01	0.65	0.00	1.01706
22	321	43.657	1.1	0.0	0.0	0.74	0.01	0.00	1.02045
23	322	43.663	0.0	0.0	0.0	0.00	0.00	0.00	1.02969
24	323	43.668	0.0	0.0	0.0	0.00	0.00	0.00	1.02561
25	324	45.972	0.0	0.1	2.6	0.03	0.03	1.76	20.11942
26	325	48.482	0.0	5.3	0.2	0.00	3.60	0.15	19.41440
27	326	50.568	0.0	0.5	0.3	0.01	0.34	0.20	13.23625
28	327	52.747	0.0	0.3	0.0	0.01	0.19	0.00	11.37453
29	328	55.572	0.0	6.0	0.0	0.02	4.02	0.00	17.54241
30	329	57.578	2.9	1.5	0.0	1.98	0.99	0.00	12.33958
31	330	59.414	1.0	0.8	0.0	0.68	0.56	0.00	11.16210
32	331	62.219	0.0	8.5	0.1	0.01	5.70	0.07	5.47207
33	332	62.954	0.1	19.9	0.3	0.04	13.38	0.20	4.79876
34	333	64.002	0.0	0.9	0.0	0.02	0.63	0.01	12.60903
35	334	64.869	0.6	1.6	0.0	0.41	1.09	0.00	4.79238
36	335	65.816	0.3	10.3	0.0	0.23	6.92	0.00	6.41371
37	336	68.155	0.7	1.4	0.2	0.47	0.95	0.13	7.44716
38	337	71.051	1.2	0.1	0.8	0.78	0.04	0.55	22.45009
39	338	73.027	0.2	6.8	0.2	0.14	4.61	0.14	9.45071
40	339	73.938	0.1	0.3	1.4	0.05	0.19	0.95	13.88735
		sum	141.2	168.5	135.9	95.05	113.42	91.46	
		System activ	148.6	148.6	148.6				

The modal masses are evaluated for the global X, Y and Z direction,
the "activated mass" also includes torsional and opposite movements
without a global displacement (tuning fork):
 * activated mass in % = product u^2*M = displacement^2*mass, in relation to the
   sum of active mass, u scaled on a maximum displacement or rotation of 1.00.
(this activated mass is often also called generalized modal mass)

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MODELO
AUX SCP

Combination rule Number 1

SCP VERTICAL

Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
21	1.00	A1	SC PEAT VERT L 1
22	1.00	A2	SC PEAT VERT L 2
23	1.00	A3	SC PEAT VERT L 3

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

SCP LONGITUDINAL

Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
31	1.00	A1	SC PEAT LONG L 1 +
41	1.00	A1	SC PEAT LONG L 1 -
32	1.00	A2	SC PEAT LONG L 2 +
42	1.00	A2	SC PEAT LONG L 2 -
33	1.00	A3	SC PEAT LONG L 3 +
43	1.00	A3	SC PEAT LONG L 3 -

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
SCP

Combination rule Number 1
ENVOLVENTE SCP
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
1101	1.00	A1	MAX-MX QUAD SCP VERTICAL
1102	1.00	A1	MIN-MX QUAD SCP VERTICAL
1103	1.00	A1	MAX-MY QUAD SCP VERTICAL
1104	1.00	A1	MIN-MY QUAD SCP VERTICAL
1105	1.00	A1	MAX-MXY QUAD SCP VERTICAL
1106	1.00	A1	MIN-MXY QUAD SCP VERTICAL
1107	1.00	A1	MAX-VX QUAD SCP VERTICAL
1108	1.00	A1	MIN-VX QUAD SCP VERTICAL
1109	1.00	A1	MAX-VY QUAD SCP VERTICAL
1110	1.00	A1	MIN-VY QUAD SCP VERTICAL
1111	1.00	A1	MAX-NXX QUAD SCP VERTICAL
1112	1.00	A1	MIN-NXX QUAD SCP VERTICAL
1113	1.00	A1	MAX-NYY QUAD SCP VERTICAL
1114	1.00	A1	MIN-NYY QUAD SCP VERTICAL
1115	1.00	A1	MAX-NXY QUAD SCP VERTICAL
1116	1.00	A1	MIN-NXY QUAD SCP VERTICAL
1121	1.00	A1	MAX-N BSCT SCP VERTICAL
1122	1.00	A1	MIN-N BSCT SCP VERTICAL
1123	1.00	A1	MAX-VY BSCT SCP VERTICAL
1124	1.00	A1	MIN-VY BSCT SCP VERTICAL
1125	1.00	A1	MAX-VZ BSCT SCP VERTICAL
1126	1.00	A1	MIN-VZ BSCT SCP VERTICAL
1127	1.00	A1	MAX-MT BSCT SCP VERTICAL
1128	1.00	A1	MIN-MT BSCT SCP VERTICAL
1129	1.00	A1	MAX-MY BSCT SCP VERTICAL
1130	1.00	A1	MIN-MY BSCT SCP VERTICAL
1131	1.00	A1	MAX-MZ BSCT SCP VERTICAL
1132	1.00	A1	MIN-MZ BSCT SCP VERTICAL
1145	1.00	A1	MAX-P SPRI SCP VERTICAL
1146	1.00	A1	MIN-P SPRI SCP VERTICAL
1147	1.00	A1	MAX-M SPRI SCP VERTICAL
1148	1.00	A1	MIN-M SPRI SCP VERTICAL
1171	1.00	A1	MAX-UX NODE SCP VERTICAL
1172	1.00	A1	MIN-UX NODE SCP VERTICAL
1173	1.00	A1	MAX-UY NODE SCP VERTICAL
1174	1.00	A1	MIN-UY NODE SCP VERTICAL
1175	1.00	A1	MAX-UZ NODE SCP VERTICAL
1176	1.00	A1	MIN-UZ NODE SCP VERTICAL
1177	1.00	A1	MAX-URX NODE SCP VERTICAL
1178	1.00	A1	MIN-URX NODE SCP VERTICAL
1179	1.00	A1	MAX-URY NODE SCP VERTICAL
1180	1.00	A1	MIN-URY NODE SCP VERTICAL
1181	1.00	A1	MAX-URZ NODE SCP VERTICAL
1182	1.00	A1	MIN-URZ NODE SCP VERTICAL
1201	1.00	A2	MAX-MX QUAD SCP LONGITUDINAL
1202	1.00	A2	MIN-MX QUAD SCP LONGITUDINAL
1203	1.00	A2	MAX-MY QUAD SCP LONGITUDINAL
1204	1.00	A2	MIN-MY QUAD SCP LONGITUDINAL
1205	1.00	A2	MAX-MXY QUAD SCP LONGITUDINAL
1206	1.00	A2	MIN-MXY QUAD SCP LONGITUDINAL
1207	1.00	A2	MAX-VX QUAD SCP LONGITUDINAL
1208	1.00	A2	MIN-VX QUAD SCP LONGITUDINAL
1209	1.00	A2	MAX-VY QUAD SCP LONGITUDINAL
1210	1.00	A2	MIN-VY QUAD SCP LONGITUDINAL

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MODELO
SCP

Load Case selection

Number	Fact	Type	Designation
1211	1.00	A2	MAX-NXX QUAD SCP LONGITUDINAL
1212	1.00	A2	MIN-NXX QUAD SCP LONGITUDINAL
1213	1.00	A2	MAX-NYY QUAD SCP LONGITUDINAL
1214	1.00	A2	MIN-NYY QUAD SCP LONGITUDINAL
1215	1.00	A2	MAX-NXY QUAD SCP LONGITUDINAL
1216	1.00	A2	MIN-NXY QUAD SCP LONGITUDINAL
1221	1.00	A2	MAX-N BSCT SCP LONGITUDINAL
1222	1.00	A2	MIN-N BSCT SCP LONGITUDINAL
1223	1.00	A2	MAX-VY BSCT SCP LONGITUDINAL
1224	1.00	A2	MIN-VY BSCT SCP LONGITUDINAL
1225	1.00	A2	MAX-VZ BSCT SCP LONGITUDINAL
1226	1.00	A2	MIN-VZ BSCT SCP LONGITUDINAL
1227	1.00	A2	MAX-MT BSCT SCP LONGITUDINAL
1228	1.00	A2	MIN-MT BSCT SCP LONGITUDINAL
1229	1.00	A2	MAX-MY BSCT SCP LONGITUDINAL
1230	1.00	A2	MIN-MY BSCT SCP LONGITUDINAL
1231	1.00	A2	MAX-MZ BSCT SCP LONGITUDINAL
1232	1.00	A2	MIN-MZ BSCT SCP LONGITUDINAL
1245	1.00	A2	MAX-P SPRI SCP LONGITUDINAL
1246	1.00	A2	MIN-P SPRI SCP LONGITUDINAL
1247	1.00	A2	MAX-M SPRI SCP LONGITUDINAL
1248	1.00	A2	MIN-M SPRI SCP LONGITUDINAL
1271	1.00	A2	MAX-UX NODE SCP LONGITUDINAL
1272	1.00	A2	MIN-UX NODE SCP LONGITUDINAL
1273	1.00	A2	MAX-UY NODE SCP LONGITUDINAL
1274	1.00	A2	MIN-UY NODE SCP LONGITUDINAL
1275	1.00	A2	MAX-UZ NODE SCP LONGITUDINAL
1276	1.00	A2	MIN-UZ NODE SCP LONGITUDINAL
1277	1.00	A2	MAX-URX NODE SCP LONGITUDINAL
1278	1.00	A2	MIN-URX NODE SCP LONGITUDINAL
1279	1.00	A2	MAX-URY NODE SCP LONGITUDINAL
1280	1.00	A2	MIN-URY NODE SCP LONGITUDINAL
1281	1.00	A2	MAX-URZ NODE SCP LONGITUDINAL
1282	1.00	A2	MIN-URZ NODE SCP LONGITUDINAL

Fact factor for load case
Type type of the load case
A exclusive load

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Combination rule Number 1

W TRANVERSAL
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
101	1.00	A1	W TRANS INT
102	1.00	A1	W TRANS EXT

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

W LONGITUDINAL
Resulting Load Cases type Design com ...

Load Case selection

Number	Fact	Type	Designation
111	1.00	A1	W LONG +
112	1.00	A1	W LONG -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 3

W VERTICAL
Resulting Load Cases type Design ...

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Load Case selection

Number	Fact	Type	Designation
121	1.00	A1	W TAB VERT +
122	1.00	A1	W TAB VERT -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 4

W TRANVERSAL+VERTICAL
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
101	1.00	A1	W TRANS INT
102	1.00	A1	W TRANS EXT
121	1.00	A2	W TAB VERT +
122	1.00	A2	W TAB VERT -

Fact factor for load case
Type type of the load case
A exclusive load

Generated Load Cases

Number	Combination	Designation
2121	1	MAX-N BEAM W TRANVERSAL
2122	1	MIN-N BEAM W TRANVERSAL
2129	1	MAX-MY BEAM W TRANVERSAL
2130	1	MIN-MY BEAM W TRANVERSAL
2125	1	MAX-VZ BEAM W TRANVERSAL
2126	1	MIN-VZ BEAM W TRANVERSAL
2131	1	MAX-MZ BEAM W TRANVERSAL
2132	1	MIN-MZ BEAM W TRANVERSAL
2123	1	MAX-VY BEAM W TRANVERSAL
2124	1	MIN-VY BEAM W TRANVERSAL
2127	1	MAX-MT BEAM W TRANVERSAL
2128	1	MIN-MT BEAM W TRANVERSAL

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Generated Load Cases

Number	Combination	Designation
2101	1	MAX-MX QUAD W TRANVERSAL
2102	1	MIN-MX QUAD W TRANVERSAL
2103	1	MAX-MY QUAD W TRANVERSAL
2104	1	MIN-MY QUAD W TRANVERSAL
2105	1	MAX-MXY QUAD W TRANVERSAL
2106	1	MIN-MXY QUAD W TRANVERSAL
2107	1	MAX-VX QUAD W TRANVERSAL
2108	1	MIN-VX QUAD W TRANVERSAL
2109	1	MAX-VY QUAD W TRANVERSAL
2110	1	MIN-VY QUAD W TRANVERSAL
2111	1	MAX-NXX QUAD W TRANVERSAL
2112	1	MIN-NXX QUAD W TRANVERSAL
2113	1	MAX-NYY QUAD W TRANVERSAL
2114	1	MIN-NYY QUAD W TRANVERSAL
2115	1	MAX-NXY QUAD W TRANVERSAL
2116	1	MIN-NXY QUAD W TRANVERSAL
2145	1	MAX-P SPRI W TRANVERSAL
2146	1	MIN-P SPRI W TRANVERSAL
2147	1	MAX-M SPRI W TRANVERSAL
2148	1	MIN-M SPRI W TRANVERSAL
2171	1	MAX-UX NODE W TRANVERSAL
2172	1	MIN-UX NODE W TRANVERSAL
2173	1	MAX-UY NODE W TRANVERSAL
2174	1	MIN-UY NODE W TRANVERSAL
2175	1	MAX-UZ NODE W TRANVERSAL
2176	1	MIN-UZ NODE W TRANVERSAL
2177	1	MAX-URX NODE W TRANVERSAL
2178	1	MIN-URX NODE W TRANVERSAL
2179	1	MAX-URY NODE W TRANVERSAL
2180	1	MIN-URY NODE W TRANVERSAL
2181	1	MAX-URZ NODE W TRANVERSAL
2182	1	MIN-URZ NODE W TRANVERSAL
2121	1	MAX-N BSCT W TRANVERSAL
2122	1	MIN-N BSCT W TRANVERSAL
2123	1	MAX-VY BSCT W TRANVERSAL
2124	1	MIN-VY BSCT W TRANVERSAL
2125	1	MAX-VZ BSCT W TRANVERSAL
2126	1	MIN-VZ BSCT W TRANVERSAL
2127	1	MAX-MT BSCT W TRANVERSAL
2128	1	MIN-MT BSCT W TRANVERSAL
2129	1	MAX-MY BSCT W TRANVERSAL
2130	1	MIN-MY BSCT W TRANVERSAL
2131	1	MAX-MZ BSCT W TRANVERSAL
2132	1	MIN-MZ BSCT W TRANVERSAL
2221	2	MAX-N BEAM W LONGITUDINAL
2222	2	MIN-N BEAM W LONGITUDINAL
2229	2	MAX-MY BEAM W LONGITUDINAL
2230	2	MIN-MY BEAM W LONGITUDINAL
2225	2	MAX-VZ BEAM W LONGITUDINAL
2226	2	MIN-VZ BEAM W LONGITUDINAL
2231	2	MAX-MZ BEAM W LONGITUDINAL
2232	2	MIN-MZ BEAM W LONGITUDINAL
2223	2	MAX-VY BEAM W LONGITUDINAL
2224	2	MIN-VY BEAM W LONGITUDINAL
2227	2	MAX-MT BEAM W LONGITUDINAL
2228	2	MIN-MT BEAM W LONGITUDINAL
2201	2	MAX-MX QUAD W LONGITUDINAL
2202	2	MIN-MX QUAD W LONGITUDINAL

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Generated Load Cases

Number	Combination	Designation
2203	2	MAX-MY QUAD W LONGITUDINAL
2204	2	MIN-MY QUAD W LONGITUDINAL
2205	2	MAX-MXY QUAD W LONGITUDINAL
2206	2	MIN-MXY QUAD W LONGITUDINAL
2207	2	MAX-VX QUAD W LONGITUDINAL
2208	2	MIN-VX QUAD W LONGITUDINAL
2209	2	MAX-VY QUAD W LONGITUDINAL
2210	2	MIN-VY QUAD W LONGITUDINAL
2211	2	MAX-NXX QUAD W LONGITUDINAL
2212	2	MIN-NXX QUAD W LONGITUDINAL
2213	2	MAX-NYY QUAD W LONGITUDINAL
2214	2	MIN-NYY QUAD W LONGITUDINAL
2215	2	MAX-NXY QUAD W LONGITUDINAL
2216	2	MIN-NXY QUAD W LONGITUDINAL
2245	2	MAX-P SPRI W LONGITUDINAL
2246	2	MIN-P SPRI W LONGITUDINAL
2247	2	MAX-M SPRI W LONGITUDINAL
2248	2	MIN-M SPRI W LONGITUDINAL
2271	2	MAX-UX NODE W LONGITUDINAL
2272	2	MIN-UX NODE W LONGITUDINAL
2273	2	MAX-UY NODE W LONGITUDINAL
2274	2	MIN-UY NODE W LONGITUDINAL
2275	2	MAX-UZ NODE W LONGITUDINAL
2276	2	MIN-UZ NODE W LONGITUDINAL
2277	2	MAX-URX NODE W LONGITUDINAL
2278	2	MIN-URX NODE W LONGITUDINAL
2279	2	MAX-URY NODE W LONGITUDINAL
2280	2	MIN-URY NODE W LONGITUDINAL
2281	2	MAX-URZ NODE W LONGITUDINAL
2282	2	MIN-URZ NODE W LONGITUDINAL
2221	2	MAX-N BSCT W LONGITUDINAL
2222	2	MIN-N BSCT W LONGITUDINAL
2223	2	MAX-VY BSCT W LONGITUDINAL
2224	2	MIN-VY BSCT W LONGITUDINAL
2225	2	MAX-VZ BSCT W LONGITUDINAL
2226	2	MIN-VZ BSCT W LONGITUDINAL
2227	2	MAX-MT BSCT W LONGITUDINAL
2228	2	MIN-MT BSCT W LONGITUDINAL
2229	2	MAX-MY BSCT W LONGITUDINAL
2230	2	MIN-MY BSCT W LONGITUDINAL
2231	2	MAX-MZ BSCT W LONGITUDINAL
2232	2	MIN-MZ BSCT W LONGITUDINAL
2321	3	MAX-N BEAM W VERTICAL
2322	3	MIN-N BEAM W VERTICAL
2329	3	MAX-MY BEAM W VERTICAL
2330	3	MIN-MY BEAM W VERTICAL
2325	3	MAX-VZ BEAM W VERTICAL
2326	3	MIN-VZ BEAM W VERTICAL
2331	3	MAX-MZ BEAM W VERTICAL
2332	3	MIN-MZ BEAM W VERTICAL
2323	3	MAX-VY BEAM W VERTICAL
2324	3	MIN-VY BEAM W VERTICAL
2327	3	MAX-MT BEAM W VERTICAL
2328	3	MIN-MT BEAM W VERTICAL
2301	3	MAX-MX QUAD W VERTICAL
2302	3	MIN-MX QUAD W VERTICAL
2303	3	MAX-MY QUAD W VERTICAL
2304	3	MIN-MY QUAD W VERTICAL

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MODELO
AUX VIENTO IND

Generated Load Cases

Number	Combination	Designation
2305	3	MAX-MXY QUAD W VERTICAL
2306	3	MIN-MXY QUAD W VERTICAL
2307	3	MAX-VX QUAD W VERTICAL
2308	3	MIN-VX QUAD W VERTICAL
2309	3	MAX-VY QUAD W VERTICAL
2310	3	MIN-VY QUAD W VERTICAL
2311	3	MAX-NXX QUAD W VERTICAL
2312	3	MIN-NXX QUAD W VERTICAL
2313	3	MAX-NYY QUAD W VERTICAL
2314	3	MIN-NYY QUAD W VERTICAL
2315	3	MAX-NXY QUAD W VERTICAL
2316	3	MIN-NXY QUAD W VERTICAL
2345	3	MAX-P SPRI W VERTICAL
2346	3	MIN-P SPRI W VERTICAL
2347	3	MAX-M SPRI W VERTICAL
2348	3	MIN-M SPRI W VERTICAL
2371	3	MAX-UX NODE W VERTICAL
2372	3	MIN-UX NODE W VERTICAL
2373	3	MAX-UY NODE W VERTICAL
2374	3	MIN-UY NODE W VERTICAL
2375	3	MAX-UZ NODE W VERTICAL
2376	3	MIN-UZ NODE W VERTICAL
2377	3	MAX-URX NODE W VERTICAL
2378	3	MIN-URX NODE W VERTICAL
2379	3	MAX-URY NODE W VERTICAL
2380	3	MIN-URY NODE W VERTICAL
2381	3	MAX-URZ NODE W VERTICAL
2382	3	MIN-URZ NODE W VERTICAL
2321	3	MAX-N BSCT W VERTICAL
2322	3	MIN-N BSCT W VERTICAL
2323	3	MAX-VY BSCT W VERTICAL
2324	3	MIN-VY BSCT W VERTICAL
2325	3	MAX-VZ BSCT W VERTICAL
2326	3	MIN-VZ BSCT W VERTICAL
2327	3	MAX-MT BSCT W VERTICAL
2328	3	MIN-MT BSCT W VERTICAL
2329	3	MAX-MY BSCT W VERTICAL
2330	3	MIN-MY BSCT W VERTICAL
2331	3	MAX-MZ BSCT W VERTICAL
2332	3	MIN-MZ BSCT W VERTICAL
2421	4	MAX-N BEAM W TRANVERSAL+VERTICAL
2422	4	MIN-N BEAM W TRANVERSAL+VERTICAL
2429	4	MAX-MY BEAM W TRANVERSAL+VERTICAL
2430	4	MIN-MY BEAM W TRANVERSAL+VERTICAL
2425	4	MAX-VZ BEAM W TRANVERSAL+VERTICAL
2426	4	MIN-VZ BEAM W TRANVERSAL+VERTICAL
2431	4	MAX-MZ BEAM W TRANVERSAL+VERTICAL
2432	4	MIN-MZ BEAM W TRANVERSAL+VERTICAL
2423	4	MAX-VY BEAM W TRANVERSAL+VERTICAL
2424	4	MIN-VY BEAM W TRANVERSAL+VERTICAL
2427	4	MAX-MT BEAM W TRANVERSAL+VERTICAL
2428	4	MIN-MT BEAM W TRANVERSAL+VERTICAL
2401	4	MAX-MX QUAD W TRANVERSAL+VERTICAL
2402	4	MIN-MX QUAD W TRANVERSAL+VERTICAL
2403	4	MAX-MY QUAD W TRANVERSAL+VERTICAL
2404	4	MIN-MY QUAD W TRANVERSAL+VERTICAL
2405	4	MAX-MXY QUAD W TRANVERSAL+VERTICAL
2406	4	MIN-MXY QUAD W TRANVERSAL+VERTICAL

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MODELO
AUX VIENTO IND

Generated Load Cases

Number	Combination	Designation
2407	4	MAX-VX QUAD W TRANVERSAL+VERTICAL
2408	4	MIN-VX QUAD W TRANVERSAL+VERTICAL
2409	4	MAX-VY QUAD W TRANVERSAL+VERTICAL
2410	4	MIN-VY QUAD W TRANVERSAL+VERTICAL
2411	4	MAX-NXX QUAD W TRANVERSAL+VERTICAL
2412	4	MIN-NXX QUAD W TRANVERSAL+VERTICAL
2413	4	MAX-NYY QUAD W TRANVERSAL+VERTICAL
2414	4	MIN-NYY QUAD W TRANVERSAL+VERTICAL
2415	4	MAX-NXY QUAD W TRANVERSAL+VERTICAL
2416	4	MIN-NXY QUAD W TRANVERSAL+VERTICAL
2445	4	MAX-P SPRI W TRANVERSAL+VERTICAL
2446	4	MIN-P SPRI W TRANVERSAL+VERTICAL
2447	4	MAX-M SPRI W TRANVERSAL+VERTICAL
2448	4	MIN-M SPRI W TRANVERSAL+VERTICAL
2471	4	MAX-UX NODE W TRANVERSAL+VERTICAL
2472	4	MIN-UX NODE W TRANVERSAL+VERTICAL
2473	4	MAX-UY NODE W TRANVERSAL+VERTICAL
2474	4	MIN-UY NODE W TRANVERSAL+VERTICAL
2475	4	MAX-UZ NODE W TRANVERSAL+VERTICAL
2476	4	MIN-UZ NODE W TRANVERSAL+VERTICAL
2477	4	MAX-URX NODE W TRANVERSAL+VERTICAL
2478	4	MIN-URX NODE W TRANVERSAL+VERTICAL
2479	4	MAX-URY NODE W TRANVERSAL+VERTICAL
2480	4	MIN-URY NODE W TRANVERSAL+VERTICAL
2481	4	MAX-URZ NODE W TRANVERSAL+VERTICAL
2482	4	MIN-URZ NODE W TRANVERSAL+VERTICAL
2421	4	MAX-N BSCT W TRANVERSAL+VERTICAL
2422	4	MIN-N BSCT W TRANVERSAL+VERTICAL
2423	4	MAX-VY BSCT W TRANVERSAL+VERTICAL
2424	4	MIN-VY BSCT W TRANVERSAL+VERTICAL
2425	4	MAX-VZ BSCT W TRANVERSAL+VERTICAL
2426	4	MIN-VZ BSCT W TRANVERSAL+VERTICAL
2427	4	MAX-MT BSCT W TRANVERSAL+VERTICAL
2428	4	MIN-MT BSCT W TRANVERSAL+VERTICAL
2429	4	MAX-MY BSCT W TRANVERSAL+VERTICAL
2430	4	MIN-MY BSCT W TRANVERSAL+VERTICAL
2431	4	MAX-MZ BSCT W TRANVERSAL+VERTICAL
2432	4	MIN-MZ BSCT W TRANVERSAL+VERTICAL

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Combination rule Number 1
ENVOLVENTE W
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
2201	1.00	A1	MAX-MX QUAD W LONGITUDINAL
2202	1.00	A1	MIN-MX QUAD W LONGITUDINAL
2203	1.00	A1	MAX-MY QUAD W LONGITUDINAL
2204	1.00	A1	MIN-MY QUAD W LONGITUDINAL
2205	1.00	A1	MAX-MXY QUAD W LONGITUDINAL
2206	1.00	A1	MIN-MXY QUAD W LONGITUDINAL
2207	1.00	A1	MAX-VX QUAD W LONGITUDINAL
2208	1.00	A1	MIN-VX QUAD W LONGITUDINAL
2209	1.00	A1	MAX-VY QUAD W LONGITUDINAL
2210	1.00	A1	MIN-VY QUAD W LONGITUDINAL
2211	1.00	A1	MAX-NXX QUAD W LONGITUDINAL
2212	1.00	A1	MIN-NXX QUAD W LONGITUDINAL
2213	1.00	A1	MAX-NYY QUAD W LONGITUDINAL
2214	1.00	A1	MIN-NYY QUAD W LONGITUDINAL
2215	1.00	A1	MAX-NXY QUAD W LONGITUDINAL
2216	1.00	A1	MIN-NXY QUAD W LONGITUDINAL
2221	1.00	A1	MAX-N BSCT W LONGITUDINAL
2222	1.00	A1	MIN-N BSCT W LONGITUDINAL
2223	1.00	A1	MAX-VY BSCT W LONGITUDINAL
2224	1.00	A1	MIN-VY BSCT W LONGITUDINAL
2225	1.00	A1	MAX-VZ BSCT W LONGITUDINAL
2226	1.00	A1	MIN-VZ BSCT W LONGITUDINAL
2227	1.00	A1	MAX-MT BSCT W LONGITUDINAL
2228	1.00	A1	MIN-MT BSCT W LONGITUDINAL
2229	1.00	A1	MAX-MY BSCT W LONGITUDINAL
2230	1.00	A1	MIN-MY BSCT W LONGITUDINAL
2231	1.00	A1	MAX-MZ BSCT W LONGITUDINAL
2232	1.00	A1	MIN-MZ BSCT W LONGITUDINAL
2245	1.00	A1	MAX-P SPRI W LONGITUDINAL
2246	1.00	A1	MIN-P SPRI W LONGITUDINAL
2247	1.00	A1	MAX-M SPRI W LONGITUDINAL
2248	1.00	A1	MIN-M SPRI W LONGITUDINAL
2271	1.00	A1	MAX-UX NODE W LONGITUDINAL
2272	1.00	A1	MIN-UX NODE W LONGITUDINAL
2273	1.00	A1	MAX-UY NODE W LONGITUDINAL
2274	1.00	A1	MIN-UY NODE W LONGITUDINAL
2275	1.00	A1	MAX-UZ NODE W LONGITUDINAL
2276	1.00	A1	MIN-UZ NODE W LONGITUDINAL
2277	1.00	A1	MAX-URX NODE W LONGITUDINAL
2278	1.00	A1	MIN-URX NODE W LONGITUDINAL
2279	1.00	A1	MAX-URY NODE W LONGITUDINAL
2280	1.00	A1	MIN-URY NODE W LONGITUDINAL
2281	1.00	A1	MAX-URZ NODE W LONGITUDINAL
2282	1.00	A1	MIN-URZ NODE W LONGITUDINAL
2401	1.00	A1	MAX-MX QUAD W TRANVERSAL+VERTICA
2402	1.00	A1	MIN-MX QUAD W TRANVERSAL+VERTICA
2403	1.00	A1	MAX-MY QUAD W TRANVERSAL+VERTICA
2404	1.00	A1	MIN-MY QUAD W TRANVERSAL+VERTICA
2405	1.00	A1	MAX-MXY QUAD W TRANVERSAL+VERTIC
2406	1.00	A1	MIN-MXY QUAD W TRANVERSAL+VERTIC
2407	1.00	A1	MAX-VX QUAD W TRANVERSAL+VERTICA
2408	1.00	A1	MIN-VX QUAD W TRANVERSAL+VERTICA
2409	1.00	A1	MAX-VY QUAD W TRANVERSAL+VERTICA
2410	1.00	A1	MIN-VY QUAD W TRANVERSAL+VERTICA

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Load Case selection

Number	Fact	Type	Designation
2411	1.00	A1	MAX-NXX QUAD W TRANVERSAL+VERTIC
2412	1.00	A1	MIN-NXX QUAD W TRANVERSAL+VERTIC
2413	1.00	A1	MAX-NYY QUAD W TRANVERSAL+VERTIC
2414	1.00	A1	MIN-NYY QUAD W TRANVERSAL+VERTIC
2415	1.00	A1	MAX-NXY QUAD W TRANVERSAL+VERTIC
2416	1.00	A1	MIN-NXY QUAD W TRANVERSAL+VERTIC
2421	1.00	A1	MAX-N BSCT W TRANVERSAL+VERTICAL
2422	1.00	A1	MIN-N BSCT W TRANVERSAL+VERTICAL
2423	1.00	A1	MAX-VY BSCT W TRANVERSAL+VERTICA
2424	1.00	A1	MIN-VY BSCT W TRANVERSAL+VERTICA
2425	1.00	A1	MAX-VZ BSCT W TRANVERSAL+VERTICA
2426	1.00	A1	MIN-VZ BSCT W TRANVERSAL+VERTICA
2427	1.00	A1	MAX-MT BSCT W TRANVERSAL+VERTICA
2428	1.00	A1	MIN-MT BSCT W TRANVERSAL+VERTICA
2429	1.00	A1	MAX-MY BSCT W TRANVERSAL+VERTICA
2430	1.00	A1	MIN-MY BSCT W TRANVERSAL+VERTICA
2431	1.00	A1	MAX-MZ BSCT W TRANVERSAL+VERTICA
2432	1.00	A1	MIN-MZ BSCT W TRANVERSAL+VERTICA
2445	1.00	A1	MAX-P SPRI W TRANVERSAL+VERTICAL
2446	1.00	A1	MIN-P SPRI W TRANVERSAL+VERTICAL
2447	1.00	A1	MAX-M SPRI W TRANVERSAL+VERTICAL
2448	1.00	A1	MIN-M SPRI W TRANVERSAL+VERTICAL
2471	1.00	A1	MAX-UX NODE W TRANVERSAL+VERTICA
2472	1.00	A1	MIN-UX NODE W TRANVERSAL+VERTICA
2473	1.00	A1	MAX-UY NODE W TRANVERSAL+VERTICA
2474	1.00	A1	MIN-UY NODE W TRANVERSAL+VERTICA
2475	1.00	A1	MAX-UZ NODE W TRANVERSAL+VERTICA
2476	1.00	A1	MIN-UZ NODE W TRANVERSAL+VERTICA
2477	1.00	A1	MAX-URX NODE W TRANVERSAL+VERTIC
2478	1.00	A1	MIN-URX NODE W TRANVERSAL+VERTIC
2479	1.00	A1	MAX-URY NODE W TRANVERSAL+VERTIC
2480	1.00	A1	MIN-URY NODE W TRANVERSAL+VERTIC
2481	1.00	A1	MAX-URZ NODE W TRANVERSAL+VERTIC
2482	1.00	A1	MIN-URZ NODE W TRANVERSAL+VERTIC

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
AUX TEMP 1

Combination rule Number 1

T UNIF
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
201	1.00	A1	T UNIF +
202	1.00	A1	T UNIF -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

T GRAD
Resulting Load Cases type Design ...

Load Case selection

Number	Fact	Type	Designation
211	1.00	A1	T GRAD +
212	1.00	A1	T GRAD -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 3

T UNIF APOYOS
Resulting Load Cases type Design ...

Load Case selection

Number	Fact	Type	Designation
201	1.00	A1	T UNIF +
202	1.00	A1	T UNIF -

Fact factor for load case
Type type of the load case
A exclusive load

Generated Load Cases

Number	Combination	Designation
3121	1	MAX-N BEAM T UNIF
3122	1	MIN-N BEAM T UNIF
3129	1	MAX-MY BEAM T UNIF
3130	1	MIN-MY BEAM T UNIF
3125	1	MAX-VZ BEAM T UNIF
3126	1	MIN-VZ BEAM T UNIF
3131	1	MAX-MZ BEAM T UNIF
3132	1	MIN-MZ BEAM T UNIF
3123	1	MAX-VY BEAM T UNIF
3124	1	MIN-VY BEAM T UNIF
3127	1	MAX-MT BEAM T UNIF
3128	1	MIN-MT BEAM T UNIF
3101	1	MAX-MX QUAD T UNIF
3102	1	MIN-MX QUAD T UNIF
3103	1	MAX-MY QUAD T UNIF
3104	1	MIN-MY QUAD T UNIF
3105	1	MAX-MXY QUAD T UNIF
3106	1	MIN-MXY QUAD T UNIF
3107	1	MAX-VX QUAD T UNIF
3108	1	MIN-VX QUAD T UNIF
3109	1	MAX-VY QUAD T UNIF
3110	1	MIN-VY QUAD T UNIF
3111	1	MAX-NXX QUAD T UNIF
3112	1	MIN-NXX QUAD T UNIF
3113	1	MAX-NYY QUAD T UNIF

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Generated Load Cases

Number	Combination	Designation
3114	1	MIN-NYY QUAD T UNIF
3115	1	MAX-NXY QUAD T UNIF
3116	1	MIN-NXY QUAD T UNIF
3145	1	MAX-P SPRI T UNIF
3146	1	MIN-P SPRI T UNIF
3147	1	MAX-M SPRI T UNIF
3148	1	MIN-M SPRI T UNIF
3171	1	MAX-UX NODE T UNIF
3172	1	MIN-UX NODE T UNIF
3173	1	MAX-UY NODE T UNIF
3174	1	MIN-UY NODE T UNIF
3175	1	MAX-UZ NODE T UNIF
3176	1	MIN-UZ NODE T UNIF
3177	1	MAX-URX NODE T UNIF
3178	1	MIN-URX NODE T UNIF
3179	1	MAX-URY NODE T UNIF
3180	1	MIN-URY NODE T UNIF
3181	1	MAX-URZ NODE T UNIF
3182	1	MIN-URZ NODE T UNIF
3121	1	MAX-N BSCT T UNIF
3122	1	MIN-N BSCT T UNIF
3123	1	MAX-VY BSCT T UNIF
3124	1	MIN-VY BSCT T UNIF
3125	1	MAX-VZ BSCT T UNIF
3126	1	MIN-VZ BSCT T UNIF
3127	1	MAX-MT BSCT T UNIF
3128	1	MIN-MT BSCT T UNIF
3129	1	MAX-MY BSCT T UNIF
3130	1	MIN-MY BSCT T UNIF
3131	1	MAX-MZ BSCT T UNIF
3132	1	MIN-MZ BSCT T UNIF
3221	2	MAX-N BEAM T GRAD
3222	2	MIN-N BEAM T GRAD
3229	2	MAX-MY BEAM T GRAD
3230	2	MIN-MY BEAM T GRAD
3225	2	MAX-VZ BEAM T GRAD
3226	2	MIN-VZ BEAM T GRAD
3231	2	MAX-MZ BEAM T GRAD
3232	2	MIN-MZ BEAM T GRAD
3223	2	MAX-VY BEAM T GRAD
3224	2	MIN-VY BEAM T GRAD
3227	2	MAX-MT BEAM T GRAD
3228	2	MIN-MT BEAM T GRAD
3201	2	MAX-MX QUAD T GRAD
3202	2	MIN-MX QUAD T GRAD
3203	2	MAX-MY QUAD T GRAD
3204	2	MIN-MY QUAD T GRAD
3205	2	MAX-MXY QUAD T GRAD
3206	2	MIN-MXY QUAD T GRAD
3207	2	MAX-VX QUAD T GRAD
3208	2	MIN-VX QUAD T GRAD
3209	2	MAX-VY QUAD T GRAD
3210	2	MIN-VY QUAD T GRAD
3211	2	MAX-NXX QUAD T GRAD
3212	2	MIN-NXX QUAD T GRAD
3213	2	MAX-NYY QUAD T GRAD
3214	2	MIN-NYY QUAD T GRAD
3215	2	MAX-NXY QUAD T GRAD

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MODELO
AUX TEMP 1

Generated Load Cases

Number	Combination	Designation
3216	2	MIN-NXY QUAD T GRAD
3245	2	MAX-P SPRI T GRAD
3246	2	MIN-P SPRI T GRAD
3247	2	MAX-M SPRI T GRAD
3248	2	MIN-M SPRI T GRAD
3271	2	MAX-UX NODE T GRAD
3272	2	MIN-UX NODE T GRAD
3273	2	MAX-UY NODE T GRAD
3274	2	MIN-UY NODE T GRAD
3275	2	MAX-UZ NODE T GRAD
3276	2	MIN-UZ NODE T GRAD
3277	2	MAX-URX NODE T GRAD
3278	2	MIN-URX NODE T GRAD
3279	2	MAX-URY NODE T GRAD
3280	2	MIN-URY NODE T GRAD
3281	2	MAX-URZ NODE T GRAD
3282	2	MIN-URZ NODE T GRAD
3221	2	MAX-N BSCT T GRAD
3222	2	MIN-N BSCT T GRAD
3223	2	MAX-VY BSCT T GRAD
3224	2	MIN-VY BSCT T GRAD
3225	2	MAX-VZ BSCT T GRAD
3226	2	MIN-VZ BSCT T GRAD
3227	2	MAX-MT BSCT T GRAD
3228	2	MIN-MT BSCT T GRAD
3229	2	MAX-MY BSCT T GRAD
3230	2	MIN-MY BSCT T GRAD
3231	2	MAX-MZ BSCT T GRAD
3232	2	MIN-MZ BSCT T GRAD
3621	3	MAX-N BEAM T UNIF APOYOS
3622	3	MIN-N BEAM T UNIF APOYOS
3629	3	MAX-MY BEAM T UNIF APOYOS
3630	3	MIN-MY BEAM T UNIF APOYOS
3625	3	MAX-VZ BEAM T UNIF APOYOS
3626	3	MIN-VZ BEAM T UNIF APOYOS
3631	3	MAX-MZ BEAM T UNIF APOYOS
3632	3	MIN-MZ BEAM T UNIF APOYOS
3623	3	MAX-VY BEAM T UNIF APOYOS
3624	3	MIN-VY BEAM T UNIF APOYOS
3627	3	MAX-MT BEAM T UNIF APOYOS
3628	3	MIN-MT BEAM T UNIF APOYOS
3601	3	MAX-MX QUAD T UNIF APOYOS
3602	3	MIN-MX QUAD T UNIF APOYOS
3603	3	MAX-MY QUAD T UNIF APOYOS
3604	3	MIN-MY QUAD T UNIF APOYOS
3605	3	MAX-MXY QUAD T UNIF APOYOS
3606	3	MIN-MXY QUAD T UNIF APOYOS
3607	3	MAX-VX QUAD T UNIF APOYOS
3608	3	MIN-VX QUAD T UNIF APOYOS
3609	3	MAX-VY QUAD T UNIF APOYOS
3610	3	MIN-VY QUAD T UNIF APOYOS
3611	3	MAX-NXX QUAD T UNIF APOYOS
3612	3	MIN-NXX QUAD T UNIF APOYOS
3613	3	MAX-NYY QUAD T UNIF APOYOS
3614	3	MIN-NYY QUAD T UNIF APOYOS
3615	3	MAX-NXY QUAD T UNIF APOYOS
3616	3	MIN-NXY QUAD T UNIF APOYOS
3645	3	MAX-P SPRI T UNIF APOYOS

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MODELO
AUX TEMP 1

Generated Load Cases

Number	Combination	Designation
3646	3	MIN-P SPRI T UNIF APOYOS
3647	3	MAX-M SPRI T UNIF APOYOS
3648	3	MIN-M SPRI T UNIF APOYOS
3671	3	MAX-UX NODE T UNIF APOYOS
3672	3	MIN-UX NODE T UNIF APOYOS
3673	3	MAX-UY NODE T UNIF APOYOS
3674	3	MIN-UY NODE T UNIF APOYOS
3675	3	MAX-UZ NODE T UNIF APOYOS
3676	3	MIN-UZ NODE T UNIF APOYOS
3677	3	MAX-URX NODE T UNIF APOYOS
3678	3	MIN-URX NODE T UNIF APOYOS
3679	3	MAX-URY NODE T UNIF APOYOS
3680	3	MIN-URY NODE T UNIF APOYOS
3681	3	MAX-URZ NODE T UNIF APOYOS
3682	3	MIN-URZ NODE T UNIF APOYOS
3621	3	MAX-N BSCT T UNIF APOYOS
3622	3	MIN-N BSCT T UNIF APOYOS
3623	3	MAX-VY BSCT T UNIF APOYOS
3624	3	MIN-VY BSCT T UNIF APOYOS
3625	3	MAX-VZ BSCT T UNIF APOYOS
3626	3	MIN-VZ BSCT T UNIF APOYOS
3627	3	MAX-MT BSCT T UNIF APOYOS
3628	3	MIN-MT BSCT T UNIF APOYOS
3629	3	MAX-MY BSCT T UNIF APOYOS
3630	3	MIN-MY BSCT T UNIF APOYOS
3631	3	MAX-MZ BSCT T UNIF APOYOS
3632	3	MIN-MZ BSCT T UNIF APOYOS

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MODELO
AUX TEMP 2

Combination rule Number 1
T UNIF DOM
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3101	1.00	A1	MAX-MX QUAD T UNIF
3102	1.00	A1	MIN-MX QUAD T UNIF
3103	1.00	A1	MAX-MY QUAD T UNIF
3104	1.00	A1	MIN-MY QUAD T UNIF
3105	1.00	A1	MAX-MXY QUAD T UNIF
3106	1.00	A1	MIN-MXY QUAD T UNIF
3107	1.00	A1	MAX-VX QUAD T UNIF
3108	1.00	A1	MIN-VX QUAD T UNIF
3109	1.00	A1	MAX-VY QUAD T UNIF
3110	1.00	A1	MIN-VY QUAD T UNIF
3111	1.00	A1	MAX-NXX QUAD T UNIF
3112	1.00	A1	MIN-NXX QUAD T UNIF
3113	1.00	A1	MAX-NYY QUAD T UNIF
3114	1.00	A1	MIN-NYY QUAD T UNIF
3115	1.00	A1	MAX-NXY QUAD T UNIF
3116	1.00	A1	MIN-NXY QUAD T UNIF
3121	1.00	A1	MAX-N BSCT T UNIF
3122	1.00	A1	MIN-N BSCT T UNIF
3123	1.00	A1	MAX-VY BSCT T UNIF
3124	1.00	A1	MIN-VY BSCT T UNIF
3125	1.00	A1	MAX-VZ BSCT T UNIF
3126	1.00	A1	MIN-VZ BSCT T UNIF
3127	1.00	A1	MAX-MT BSCT T UNIF
3128	1.00	A1	MIN-MT BSCT T UNIF
3129	1.00	A1	MAX-MY BSCT T UNIF
3130	1.00	A1	MIN-MY BSCT T UNIF
3131	1.00	A1	MAX-MZ BSCT T UNIF
3132	1.00	A1	MIN-MZ BSCT T UNIF
3145	1.00	A1	MAX-P SPRI T UNIF
3146	1.00	A1	MIN-P SPRI T UNIF
3147	1.00	A1	MAX-M SPRI T UNIF
3148	1.00	A1	MIN-M SPRI T UNIF
3171	1.00	A1	MAX-UX NODE T UNIF
3172	1.00	A1	MIN-UX NODE T UNIF
3173	1.00	A1	MAX-UY NODE T UNIF
3174	1.00	A1	MIN-UY NODE T UNIF
3175	1.00	A1	MAX-UZ NODE T UNIF
3176	1.00	A1	MIN-UZ NODE T UNIF
3177	1.00	A1	MAX-URX NODE T UNIF
3178	1.00	A1	MIN-URX NODE T UNIF
3179	1.00	A1	MAX-URY NODE T UNIF
3180	1.00	A1	MIN-URY NODE T UNIF
3181	1.00	A1	MAX-URZ NODE T UNIF
3182	1.00	A1	MIN-URZ NODE T UNIF
3201	0.75	A2	MAX-MX QUAD T GRAD
3202	0.75	A2	MIN-MX QUAD T GRAD
3203	0.75	A2	MAX-MY QUAD T GRAD
3204	0.75	A2	MIN-MY QUAD T GRAD
3205	0.75	A2	MAX-MXY QUAD T GRAD
3206	0.75	A2	MIN-MXY QUAD T GRAD
3207	0.75	A2	MAX-VX QUAD T GRAD
3208	0.75	A2	MIN-VX QUAD T GRAD
3209	0.75	A2	MAX-VY QUAD T GRAD
3210	0.75	A2	MIN-VY QUAD T GRAD

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3211	0.75	A2	MAX-NXX QUAD T GRAD
3212	0.75	A2	MIN-NXX QUAD T GRAD
3213	0.75	A2	MAX-NYY QUAD T GRAD
3214	0.75	A2	MIN-NYY QUAD T GRAD
3215	0.75	A2	MAX-NXY QUAD T GRAD
3216	0.75	A2	MIN-NXY QUAD T GRAD
3221	0.75	A2	MAX-N BSCT T GRAD
3222	0.75	A2	MIN-N BSCT T GRAD
3223	0.75	A2	MAX-VY BSCT T GRAD
3224	0.75	A2	MIN-VY BSCT T GRAD
3225	0.75	A2	MAX-VZ BSCT T GRAD
3226	0.75	A2	MIN-VZ BSCT T GRAD
3227	0.75	A2	MAX-MT BSCT T GRAD
3228	0.75	A2	MIN-MT BSCT T GRAD
3229	0.75	A2	MAX-MY BSCT T GRAD
3230	0.75	A2	MIN-MY BSCT T GRAD
3231	0.75	A2	MAX-MZ BSCT T GRAD
3232	0.75	A2	MIN-MZ BSCT T GRAD
3245	0.75	A2	MAX-P SPRI T GRAD
3246	0.75	A2	MIN-P SPRI T GRAD
3247	0.75	A2	MAX-M SPRI T GRAD
3248	0.75	A2	MIN-M SPRI T GRAD
3271	0.75	A2	MAX-UX NODE T GRAD
3272	0.75	A2	MIN-UX NODE T GRAD
3273	0.75	A2	MAX-UY NODE T GRAD
3274	0.75	A2	MIN-UY NODE T GRAD
3275	0.75	A2	MAX-UZ NODE T GRAD
3276	0.75	A2	MIN-UZ NODE T GRAD
3277	0.75	A2	MAX-URX NODE T GRAD
3278	0.75	A2	MIN-URX NODE T GRAD
3279	0.75	A2	MAX-URY NODE T GRAD
3280	0.75	A2	MIN-URY NODE T GRAD
3281	0.75	A2	MAX-URZ NODE T GRAD
3282	0.75	A2	MIN-URZ NODE T GRAD

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

T GRAD DOM
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3101	0.35	A1	MAX-MX QUAD T UNIF
3102	0.35	A1	MIN-MX QUAD T UNIF
3103	0.35	A1	MAX-MY QUAD T UNIF
3104	0.35	A1	MIN-MY QUAD T UNIF
3105	0.35	A1	MAX-MXY QUAD T UNIF
3106	0.35	A1	MIN-MXY QUAD T UNIF
3107	0.35	A1	MAX-VX QUAD T UNIF
3108	0.35	A1	MIN-VX QUAD T UNIF
3109	0.35	A1	MAX-VY QUAD T UNIF
3110	0.35	A1	MIN-VY QUAD T UNIF
3111	0.35	A1	MAX-NXX QUAD T UNIF
3112	0.35	A1	MIN-NXX QUAD T UNIF
3113	0.35	A1	MAX-NYY QUAD T UNIF
3114	0.35	A1	MIN-NYY QUAD T UNIF
3115	0.35	A1	MAX-NXY QUAD T UNIF

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3116	0.35	A1	MIN-NXY QUAD T UNIF
3121	0.35	A1	MAX-N BSCT T UNIF
3122	0.35	A1	MIN-N BSCT T UNIF
3123	0.35	A1	MAX-VY BSCT T UNIF
3124	0.35	A1	MIN-VY BSCT T UNIF
3125	0.35	A1	MAX-VZ BSCT T UNIF
3126	0.35	A1	MIN-VZ BSCT T UNIF
3127	0.35	A1	MAX-MT BSCT T UNIF
3128	0.35	A1	MIN-MT BSCT T UNIF
3129	0.35	A1	MAX-MY BSCT T UNIF
3130	0.35	A1	MIN-MY BSCT T UNIF
3131	0.35	A1	MAX-MZ BSCT T UNIF
3132	0.35	A1	MIN-MZ BSCT T UNIF
3145	0.35	A1	MAX-P SPRI T UNIF
3146	0.35	A1	MIN-P SPRI T UNIF
3147	0.35	A1	MAX-M SPRI T UNIF
3148	0.35	A1	MIN-M SPRI T UNIF
3171	0.35	A1	MAX-UX NODE T UNIF
3172	0.35	A1	MIN-UX NODE T UNIF
3173	0.35	A1	MAX-UY NODE T UNIF
3174	0.35	A1	MIN-UY NODE T UNIF
3175	0.35	A1	MAX-UZ NODE T UNIF
3176	0.35	A1	MIN-UZ NODE T UNIF
3177	0.35	A1	MAX-URX NODE T UNIF
3178	0.35	A1	MIN-URX NODE T UNIF
3179	0.35	A1	MAX-URY NODE T UNIF
3180	0.35	A1	MIN-URY NODE T UNIF
3181	0.35	A1	MAX-URZ NODE T UNIF
3182	0.35	A1	MIN-URZ NODE T UNIF
3201	1.00	A2	MAX-MX QUAD T GRAD
3202	1.00	A2	MIN-MX QUAD T GRAD
3203	1.00	A2	MAX-MY QUAD T GRAD
3204	1.00	A2	MIN-MY QUAD T GRAD
3205	1.00	A2	MAX-MXY QUAD T GRAD
3206	1.00	A2	MIN-MXY QUAD T GRAD
3207	1.00	A2	MAX-VX QUAD T GRAD
3208	1.00	A2	MIN-VX QUAD T GRAD
3209	1.00	A2	MAX-VY QUAD T GRAD
3210	1.00	A2	MIN-VY QUAD T GRAD
3211	1.00	A2	MAX-NXX QUAD T GRAD
3212	1.00	A2	MIN-NXX QUAD T GRAD
3213	1.00	A2	MAX-NYY QUAD T GRAD
3214	1.00	A2	MIN-NYY QUAD T GRAD
3215	1.00	A2	MAX-NXY QUAD T GRAD
3216	1.00	A2	MIN-NXY QUAD T GRAD
3221	1.00	A2	MAX-N BSCT T GRAD
3222	1.00	A2	MIN-N BSCT T GRAD
3223	1.00	A2	MAX-VY BSCT T GRAD
3224	1.00	A2	MIN-VY BSCT T GRAD
3225	1.00	A2	MAX-VZ BSCT T GRAD
3226	1.00	A2	MIN-VZ BSCT T GRAD
3227	1.00	A2	MAX-MT BSCT T GRAD
3228	1.00	A2	MIN-MT BSCT T GRAD
3229	1.00	A2	MAX-MY BSCT T GRAD
3230	1.00	A2	MIN-MY BSCT T GRAD
3231	1.00	A2	MAX-MZ BSCT T GRAD
3232	1.00	A2	MIN-MZ BSCT T GRAD
3245	1.00	A2	MAX-P SPRI T GRAD

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3246	1.00	A2	MIN-P SPRI T GRAD
3247	1.00	A2	MAX-M SPRI T GRAD
3248	1.00	A2	MIN-M SPRI T GRAD
3271	1.00	A2	MAX-UX NODE T GRAD
3272	1.00	A2	MIN-UX NODE T GRAD
3273	1.00	A2	MAX-UY NODE T GRAD
3274	1.00	A2	MIN-UY NODE T GRAD
3275	1.00	A2	MAX-UZ NODE T GRAD
3276	1.00	A2	MIN-UZ NODE T GRAD
3277	1.00	A2	MAX-URX NODE T GRAD
3278	1.00	A2	MIN-URX NODE T GRAD
3279	1.00	A2	MAX-URY NODE T GRAD
3280	1.00	A2	MIN-URY NODE T GRAD
3281	1.00	A2	MAX-URZ NODE T GRAD
3282	1.00	A2	MIN-URZ NODE T GRAD

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
TEMPERATURA

Combination rule Number 1
ENVOLVENTE T
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3301	1.00	A1	MAX-MX QUAD T UNIF DOM
3302	1.00	A1	MIN-MX QUAD T UNIF DOM
3303	1.00	A1	MAX-MY QUAD T UNIF DOM
3304	1.00	A1	MIN-MY QUAD T UNIF DOM
3305	1.00	A1	MAX-MXY QUAD T UNIF DOM
3306	1.00	A1	MIN-MXY QUAD T UNIF DOM
3307	1.00	A1	MAX-VX QUAD T UNIF DOM
3308	1.00	A1	MIN-VX QUAD T UNIF DOM
3309	1.00	A1	MAX-VY QUAD T UNIF DOM
3310	1.00	A1	MIN-VY QUAD T UNIF DOM
3311	1.00	A1	MAX-NXX QUAD T UNIF DOM
3312	1.00	A1	MIN-NXX QUAD T UNIF DOM
3313	1.00	A1	MAX-NYY QUAD T UNIF DOM
3314	1.00	A1	MIN-NYY QUAD T UNIF DOM
3315	1.00	A1	MAX-NXY QUAD T UNIF DOM
3316	1.00	A1	MIN-NXY QUAD T UNIF DOM
3321	1.00	A1	MAX-N BSCT T UNIF DOM
3322	1.00	A1	MIN-N BSCT T UNIF DOM
3323	1.00	A1	MAX-VY BSCT T UNIF DOM
3324	1.00	A1	MIN-VY BSCT T UNIF DOM
3325	1.00	A1	MAX-VZ BSCT T UNIF DOM
3326	1.00	A1	MIN-VZ BSCT T UNIF DOM
3327	1.00	A1	MAX-MT BSCT T UNIF DOM
3328	1.00	A1	MIN-MT BSCT T UNIF DOM
3329	1.00	A1	MAX-MY BSCT T UNIF DOM
3330	1.00	A1	MIN-MY BSCT T UNIF DOM
3331	1.00	A1	MAX-MZ BSCT T UNIF DOM
3332	1.00	A1	MIN-MZ BSCT T UNIF DOM
3345	1.00	A1	MAX-P SPRI T UNIF DOM
3346	1.00	A1	MIN-P SPRI T UNIF DOM
3347	1.00	A1	MAX-M SPRI T UNIF DOM
3348	1.00	A1	MIN-M SPRI T UNIF DOM
3371	1.00	A1	MAX-UX NODE T UNIF DOM
3372	1.00	A1	MIN-UX NODE T UNIF DOM
3373	1.00	A1	MAX-UY NODE T UNIF DOM
3374	1.00	A1	MIN-UY NODE T UNIF DOM
3375	1.00	A1	MAX-UZ NODE T UNIF DOM
3376	1.00	A1	MIN-UZ NODE T UNIF DOM
3377	1.00	A1	MAX-URX NODE T UNIF DOM
3378	1.00	A1	MIN-URX NODE T UNIF DOM
3379	1.00	A1	MAX-URY NODE T UNIF DOM
3380	1.00	A1	MIN-URY NODE T UNIF DOM
3381	1.00	A1	MAX-URZ NODE T UNIF DOM
3382	1.00	A1	MIN-URZ NODE T UNIF DOM
3401	1.00	A1	MAX-MX QUAD T GRAD DOM
3402	1.00	A1	MIN-MX QUAD T GRAD DOM
3403	1.00	A1	MAX-MY QUAD T GRAD DOM
3404	1.00	A1	MIN-MY QUAD T GRAD DOM
3405	1.00	A1	MAX-MXY QUAD T GRAD DOM
3406	1.00	A1	MIN-MXY QUAD T GRAD DOM
3407	1.00	A1	MAX-VX QUAD T GRAD DOM
3408	1.00	A1	MIN-VX QUAD T GRAD DOM
3409	1.00	A1	MAX-VY QUAD T GRAD DOM
3410	1.00	A1	MIN-VY QUAD T GRAD DOM

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MODELO
TEMPERATURA

Load Case selection

Number	Fact	Type	Designation
3411	1.00	A1	MAX-NXX QUAD T GRAD DOM
3412	1.00	A1	MIN-NXX QUAD T GRAD DOM
3413	1.00	A1	MAX-NYY QUAD T GRAD DOM
3414	1.00	A1	MIN-NYY QUAD T GRAD DOM
3415	1.00	A1	MAX-NXY QUAD T GRAD DOM
3416	1.00	A1	MIN-NXY QUAD T GRAD DOM
3421	1.00	A1	MAX-N BSCT T GRAD DOM
3422	1.00	A1	MIN-N BSCT T GRAD DOM
3423	1.00	A1	MAX-VY BSCT T GRAD DOM
3424	1.00	A1	MIN-VY BSCT T GRAD DOM
3425	1.00	A1	MAX-VZ BSCT T GRAD DOM
3426	1.00	A1	MIN-VZ BSCT T GRAD DOM
3427	1.00	A1	MAX-MT BSCT T GRAD DOM
3428	1.00	A1	MIN-MT BSCT T GRAD DOM
3429	1.00	A1	MAX-MY BSCT T GRAD DOM
3430	1.00	A1	MIN-MY BSCT T GRAD DOM
3431	1.00	A1	MAX-MZ BSCT T GRAD DOM
3432	1.00	A1	MIN-MZ BSCT T GRAD DOM
3445	1.00	A1	MAX-P SPRI T GRAD DOM
3446	1.00	A1	MIN-P SPRI T GRAD DOM
3447	1.00	A1	MAX-M SPRI T GRAD DOM
3448	1.00	A1	MIN-M SPRI T GRAD DOM
3471	1.00	A1	MAX-UX NODE T GRAD DOM
3472	1.00	A1	MIN-UX NODE T GRAD DOM
3473	1.00	A1	MAX-UY NODE T GRAD DOM
3474	1.00	A1	MIN-UY NODE T GRAD DOM
3475	1.00	A1	MAX-UZ NODE T GRAD DOM
3476	1.00	A1	MIN-UZ NODE T GRAD DOM
3477	1.00	A1	MAX-URX NODE T GRAD DOM
3478	1.00	A1	MIN-URX NODE T GRAD DOM
3479	1.00	A1	MAX-URY NODE T GRAD DOM
3480	1.00	A1	MIN-URY NODE T GRAD DOM
3481	1.00	A1	MAX-URZ NODE T GRAD DOM
3482	1.00	A1	MIN-URZ NODE T GRAD DOM

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
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Superposition according to EuroNorm EN 1992-1-1:2004 Concrete Structures

Combination rule Number 1

ELU

Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

		Superposition Factors									
Act	Part	γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	PERM	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	LC										
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.50	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.50	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 2

ELU 2
Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

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ELU

Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	PERM	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T_1	Q	1.50	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
T_2	Q	1.50	0.00	1.00	0.30	0.20	0.00	1.00			temperature loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 3

ELU PP+SC

Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

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Superposition according to EuroNorm EN 1992-1-1:2004 Concrete Structures

Combination rule Number 1
ELS CARACTERÍSTICA
Superposition according to manual MAXIMA formula 2.4

$$E_{d,rare} = E\left\{\sum_{j\geq 1} G_{k,j} \oplus P_k \oplus Q_{k,1} \oplus \sum_{i>1} \psi_{0,i} \cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

		Superposition Factors									
Act	Part	γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.00	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP

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Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.00	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.00	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 2

ELS CUASI-PERMANENTE

Superposition according to manual MAXIMA formula 2.7

$$E_{d,perm} = E\left\{\sum_{j\geq 1} G_{k,j} \oplus P_k \oplus \sum_{i\geq 1} \psi_{2,i} \cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

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Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
G_1	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.00	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.00	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	LC										
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.00	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

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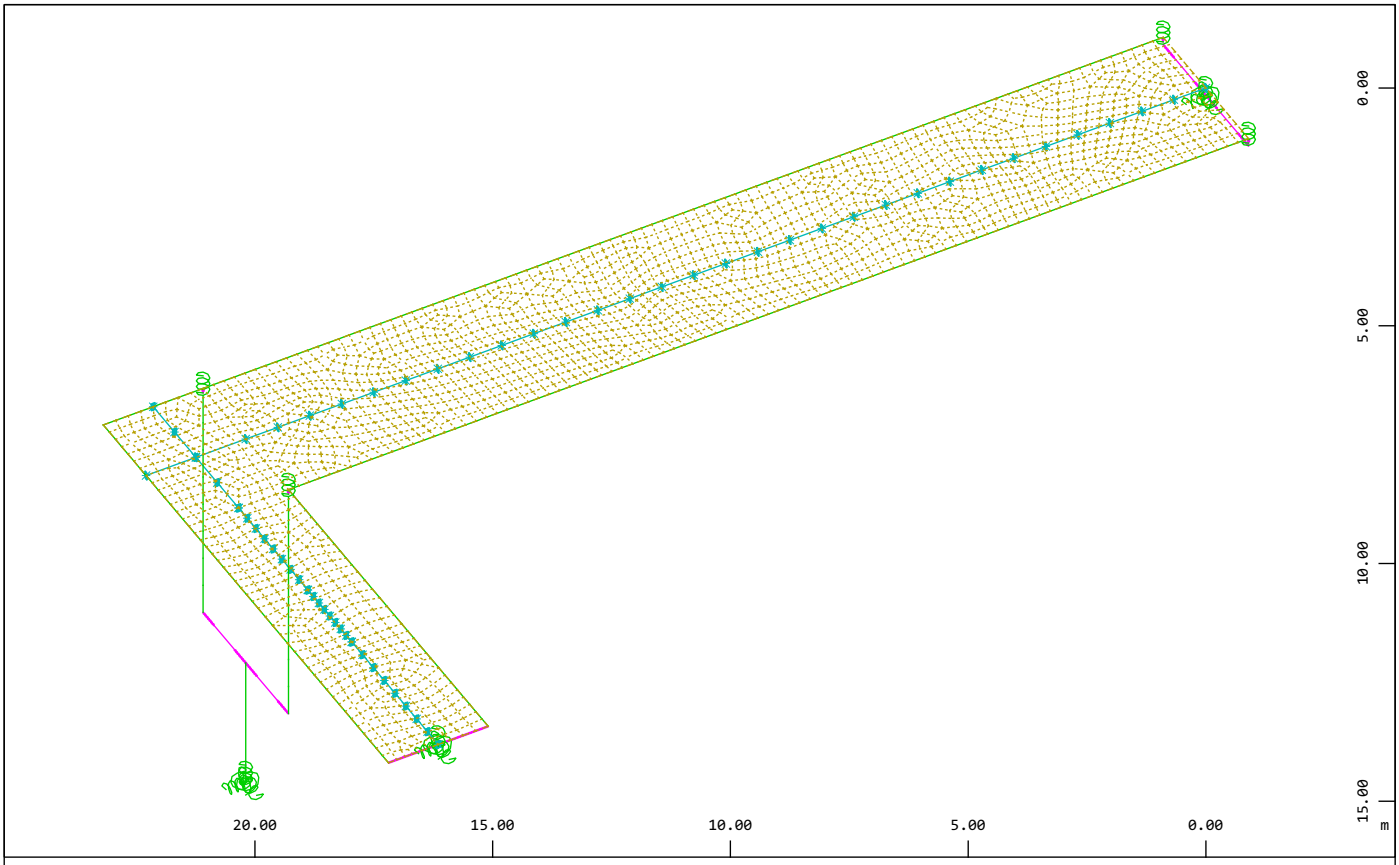

Z
X Y

Structure

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

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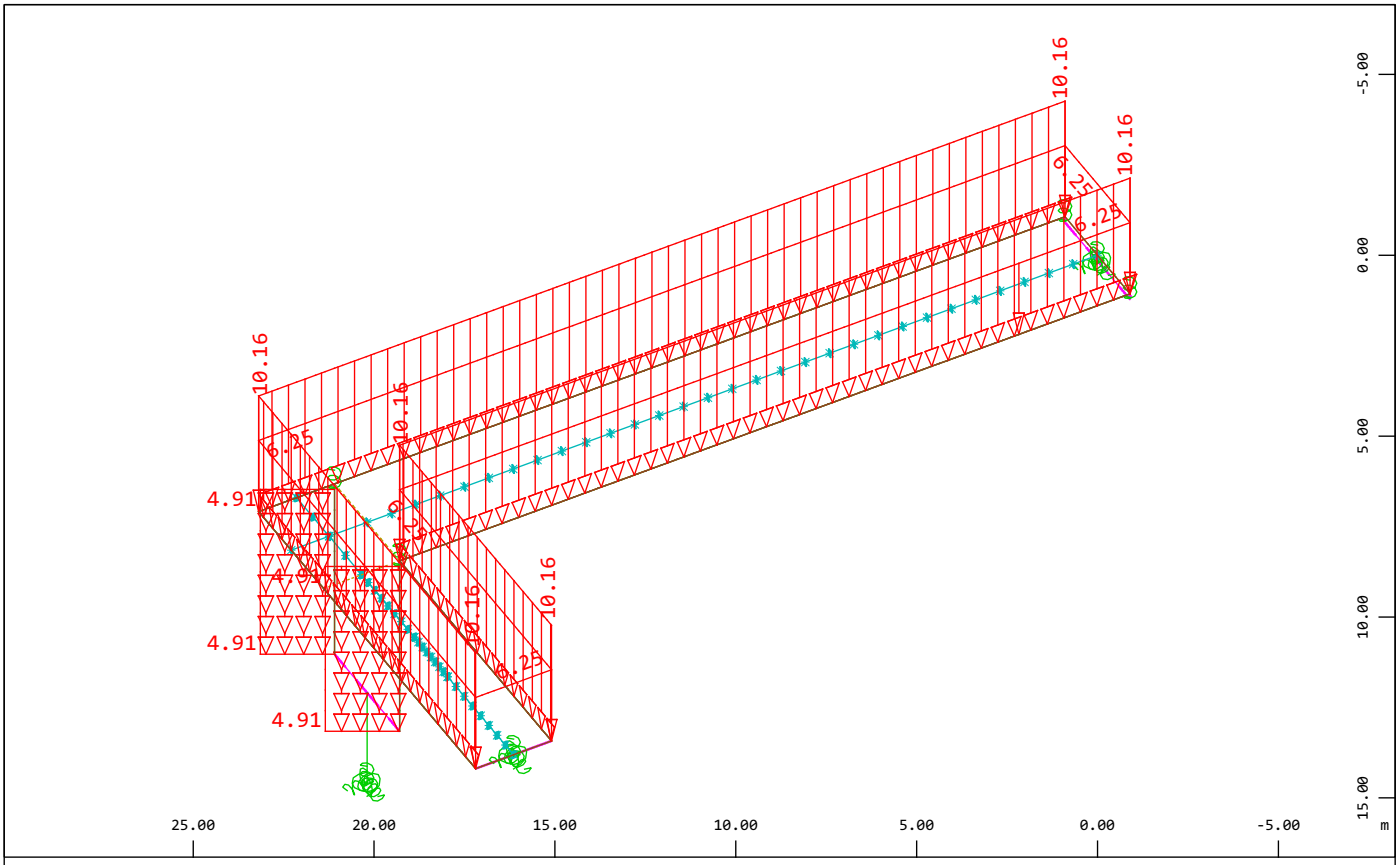
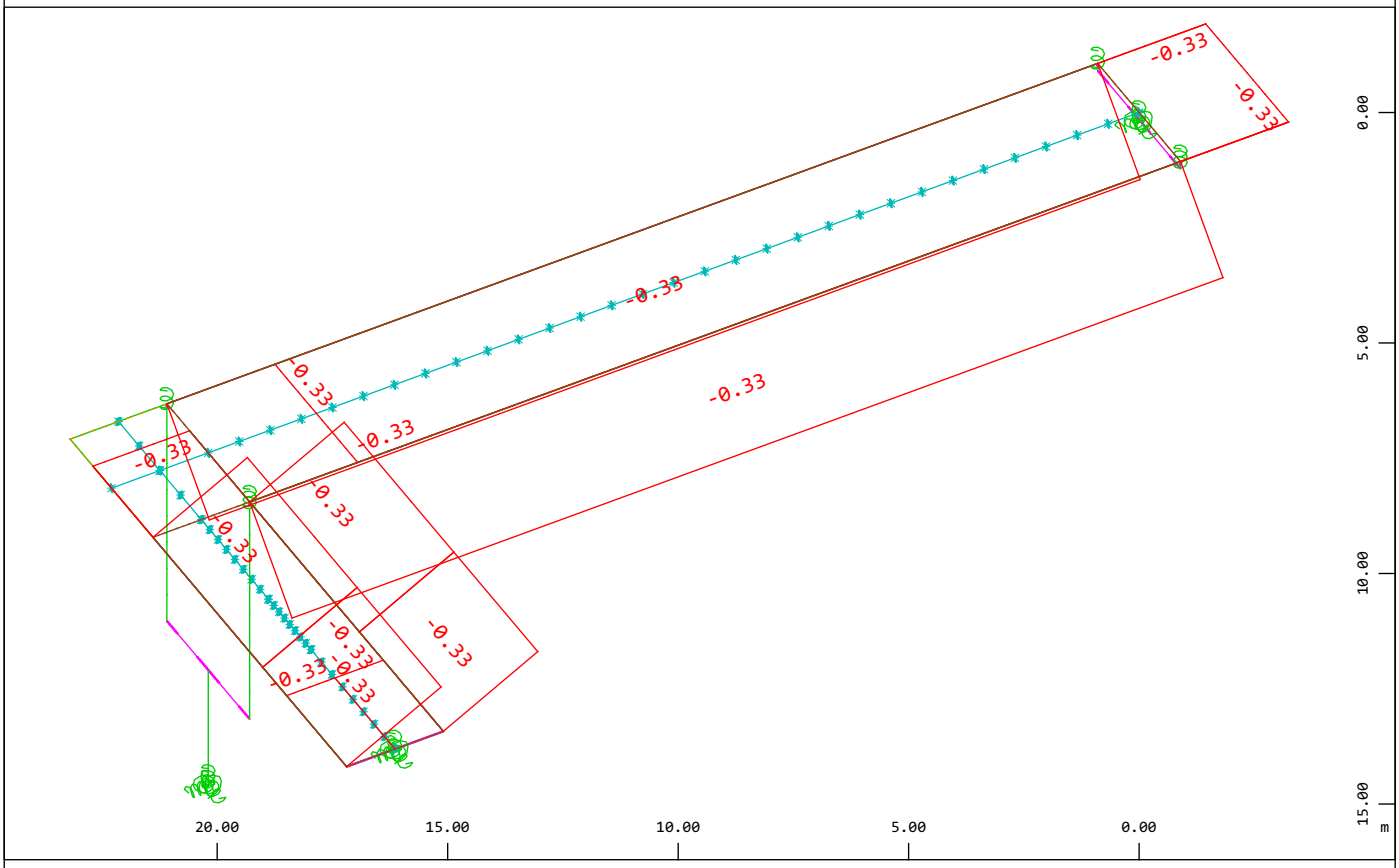
MODELO



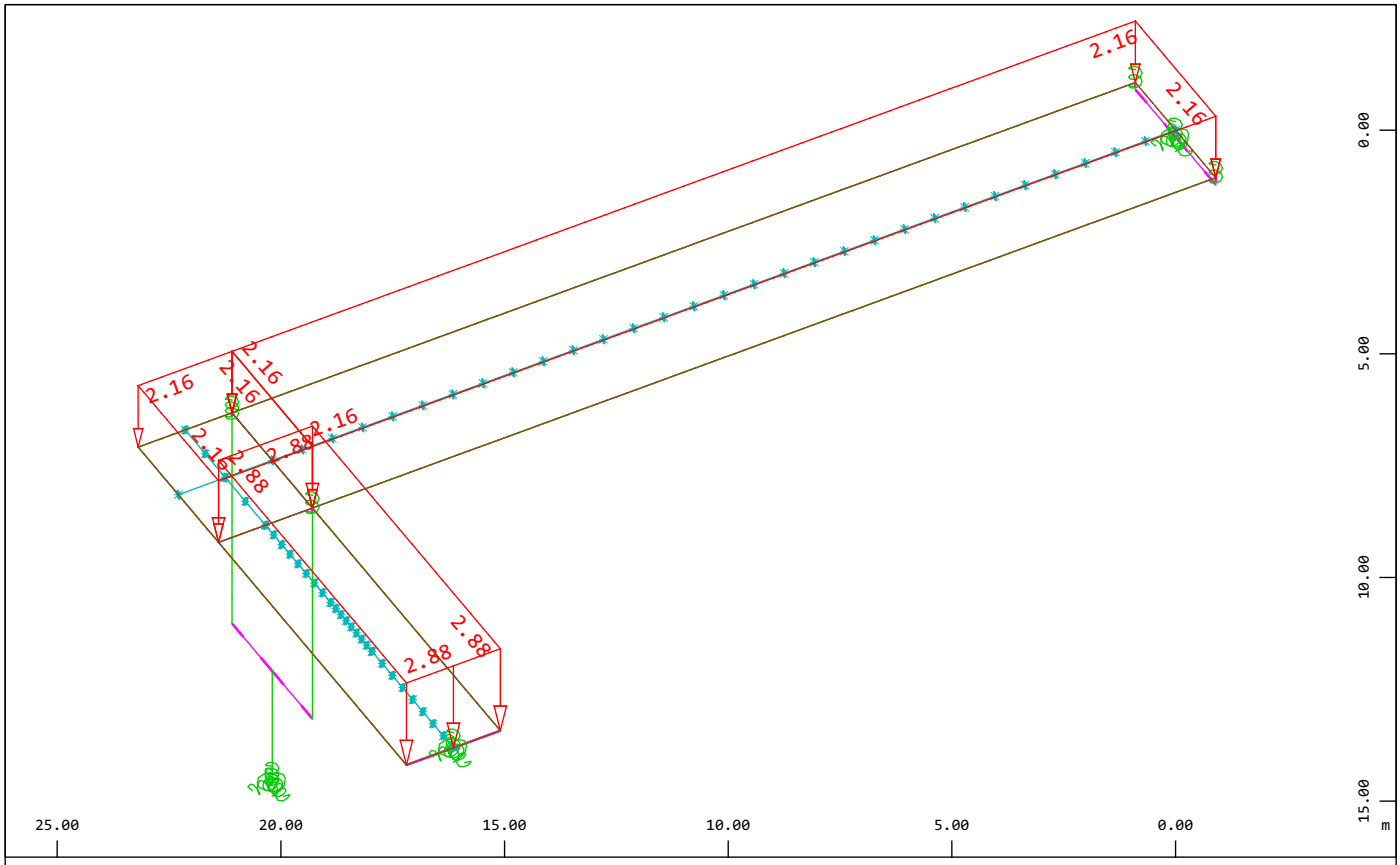
All loads (in components), Loadcase 1 PESO PROPIO , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-4.91)

M 1 : 209
X * 0.931
Y * 0.753
Z * 0.753



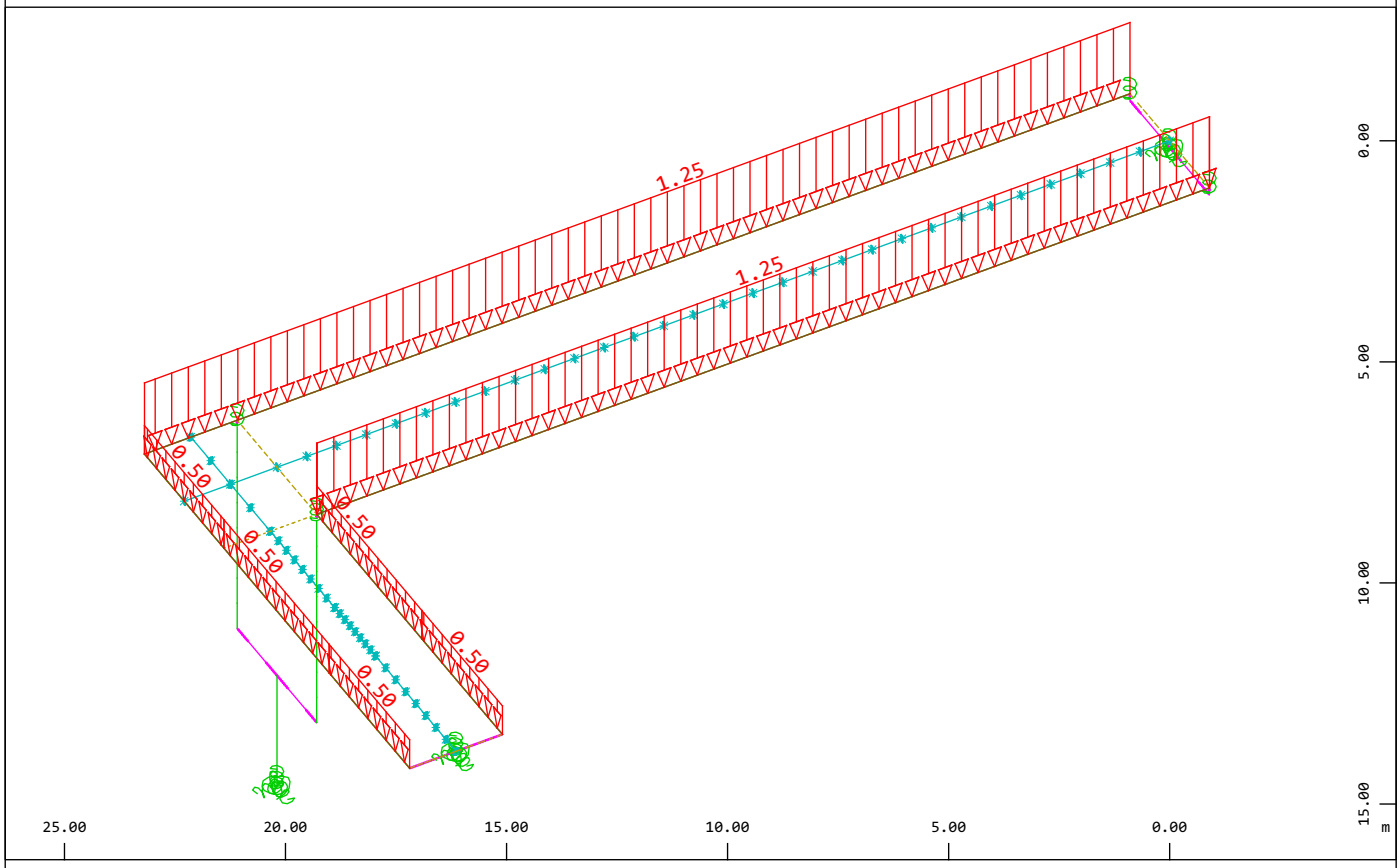
All loads (in components), Loadcase 2 RETRACCION , (1 cm 3D = unit) Free area load (strain) in local x (Unit=0.200 o/oo,Min=-0.327 Max=-0.327), Free line load (axial strain) (Unit=0.200 o/oo,Min=-0.327 Max=-0.327)

M 1 : 164
X * 0.931
Y * 0.753
Z * 0.753



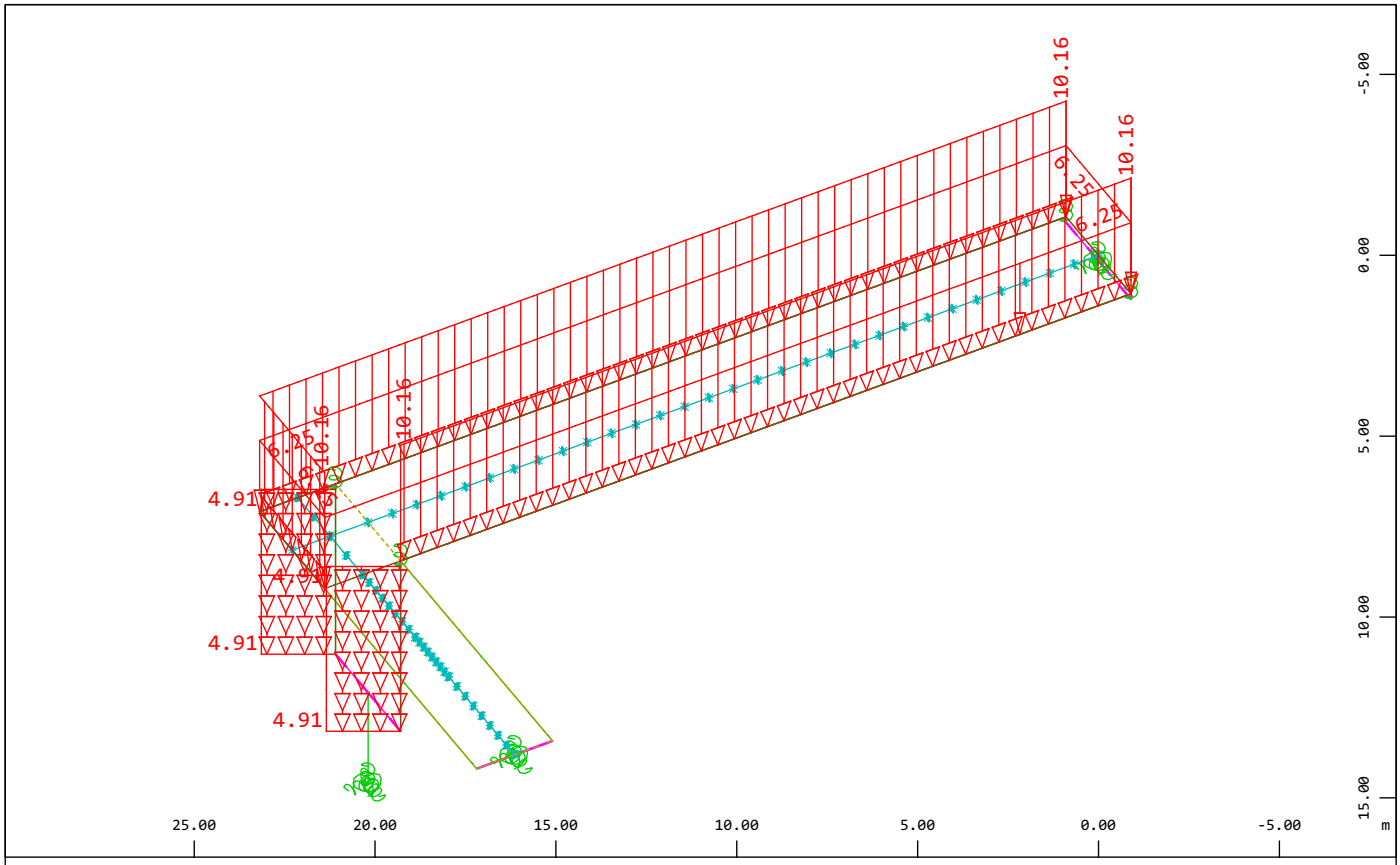
All loads (in components), Loadcase 11 ACABADO Y PELDAÑEADO , (1 cm 3D = unit) Free area load (force) in global Z (Unit=2.00 kN/m2) (Min=-2.88) (Max=-2.16)

M 1 : 169
X * 0.931
Y * 0.753
Z * 0.753



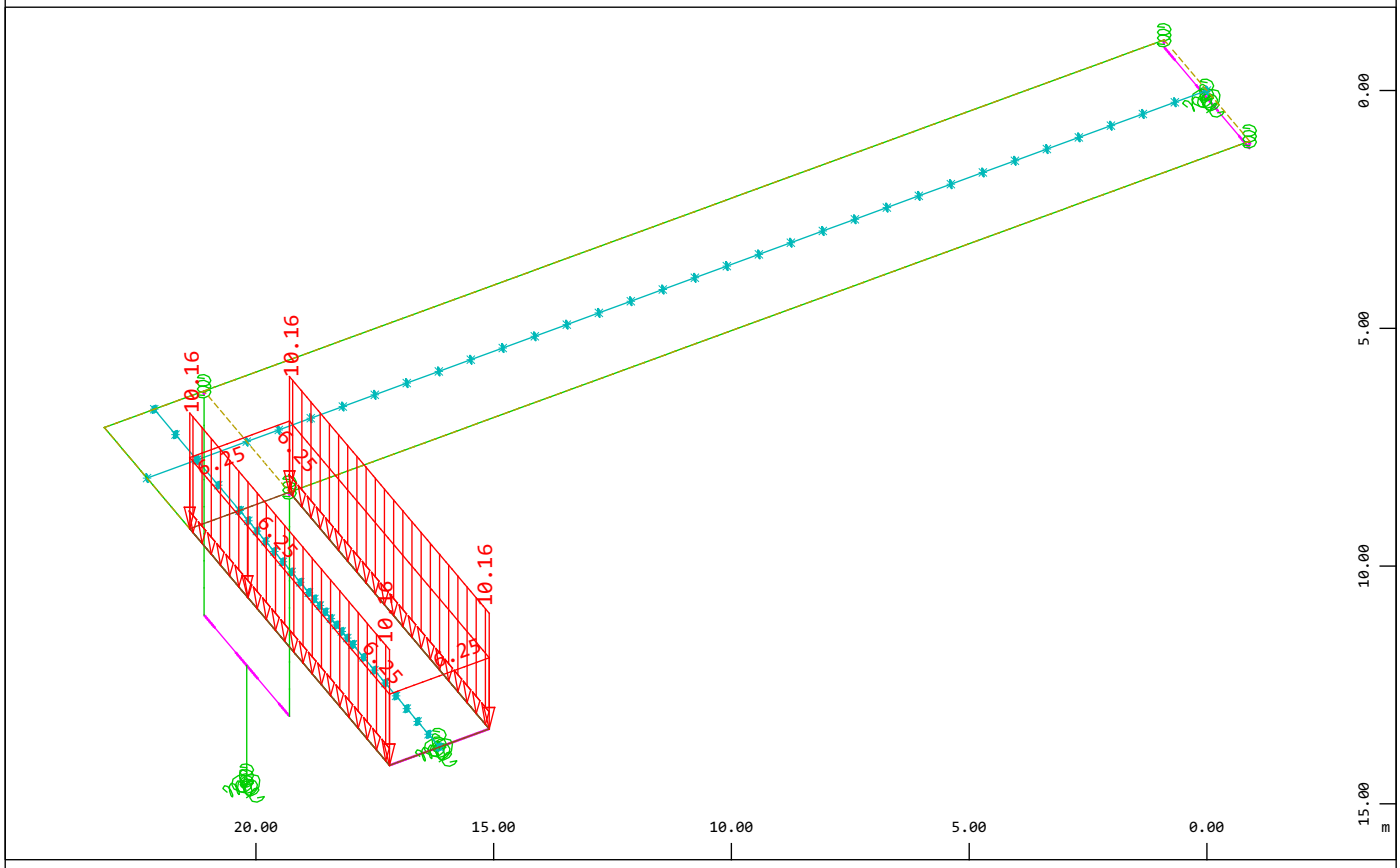
All loads (in components), Loadcase 12 BARRERAS , (1 cm 3D = unit) Free line load (force) in global Z (Unit=1.00 kN/m) (Min=-1.25) (Max=-0.500)

M 1 : 171
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 5 PP PREFABRICADO , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-4.91)

M 1 : 209
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 6 PP IN SITU , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-10.2)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

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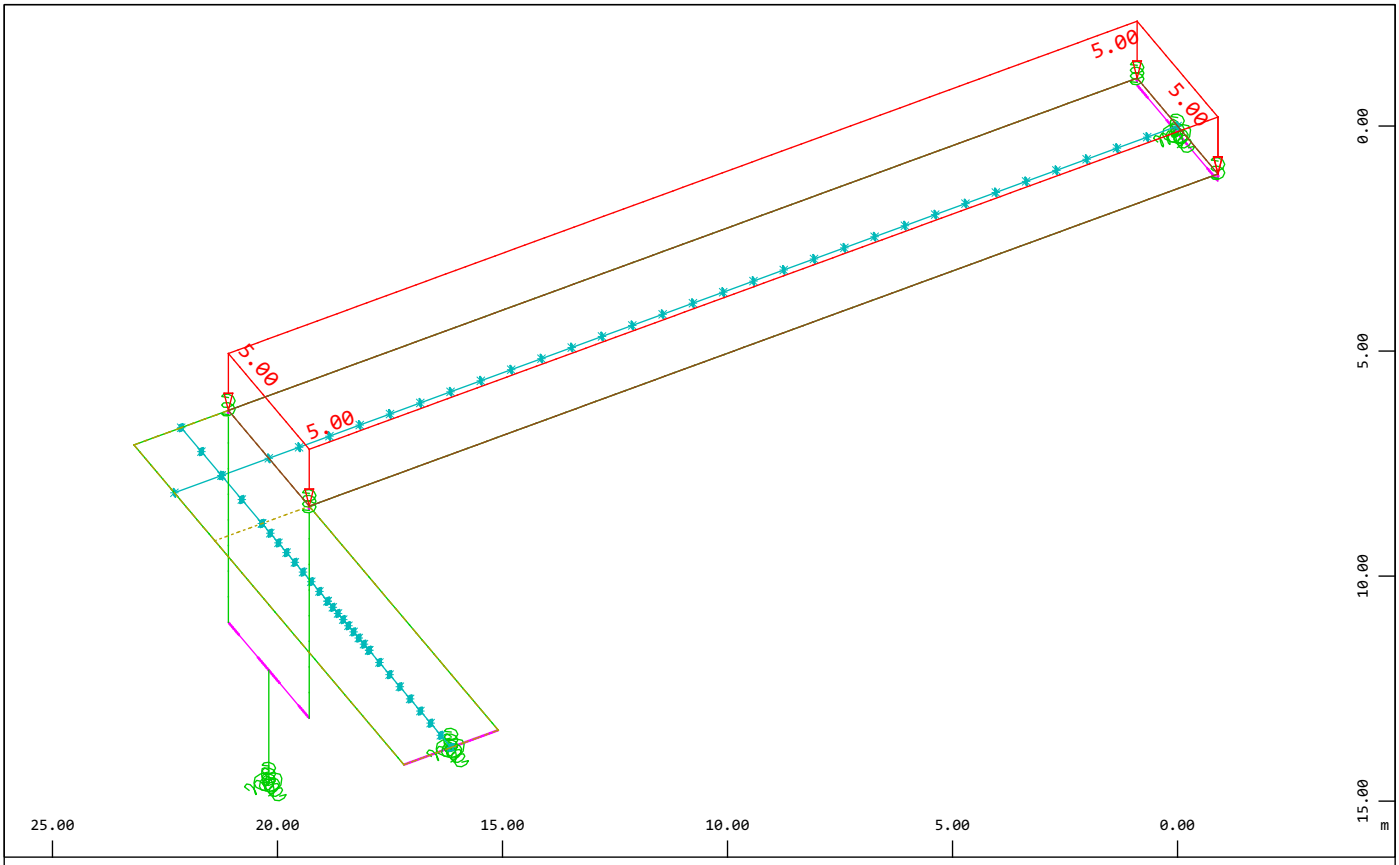
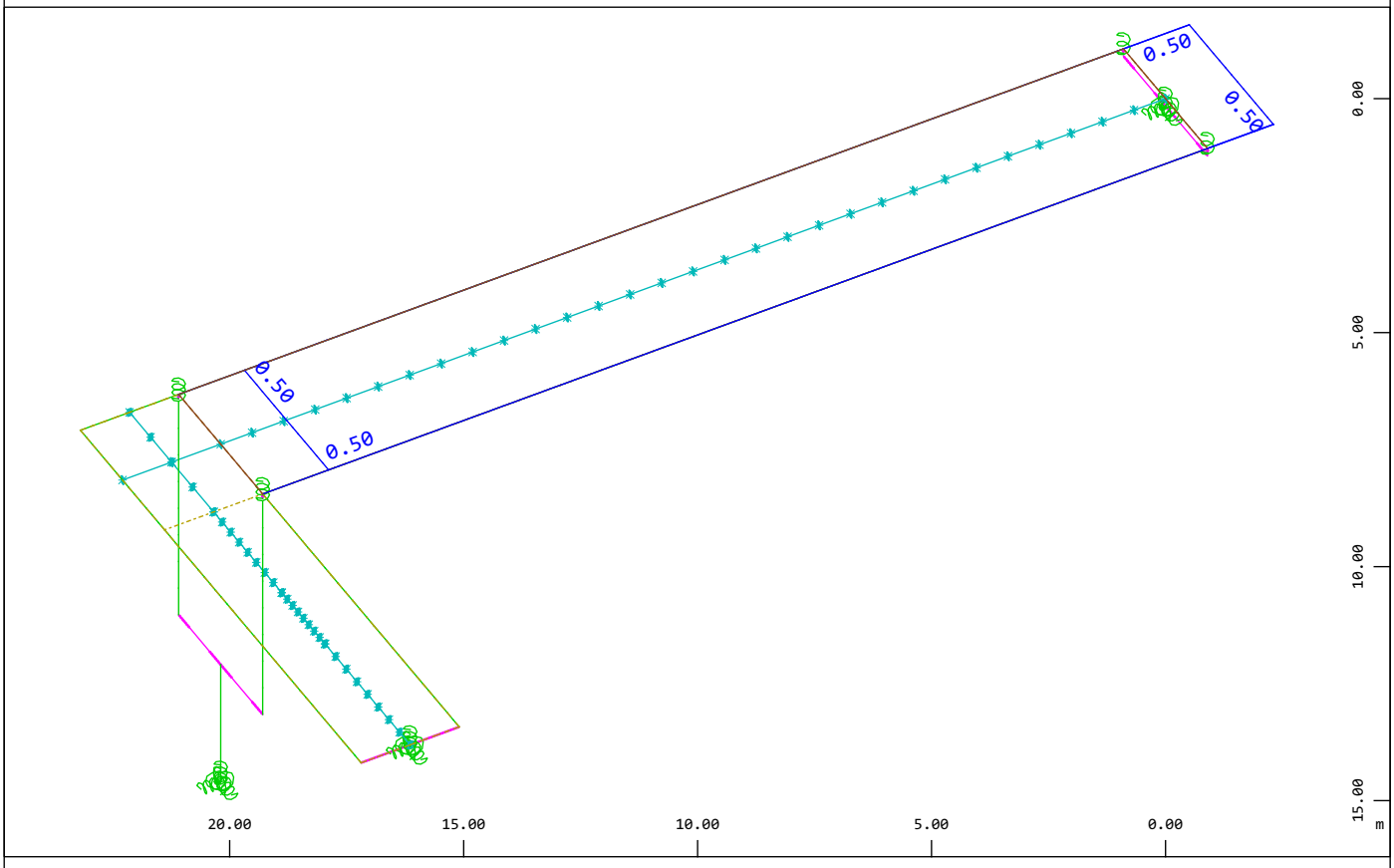
CARGAS



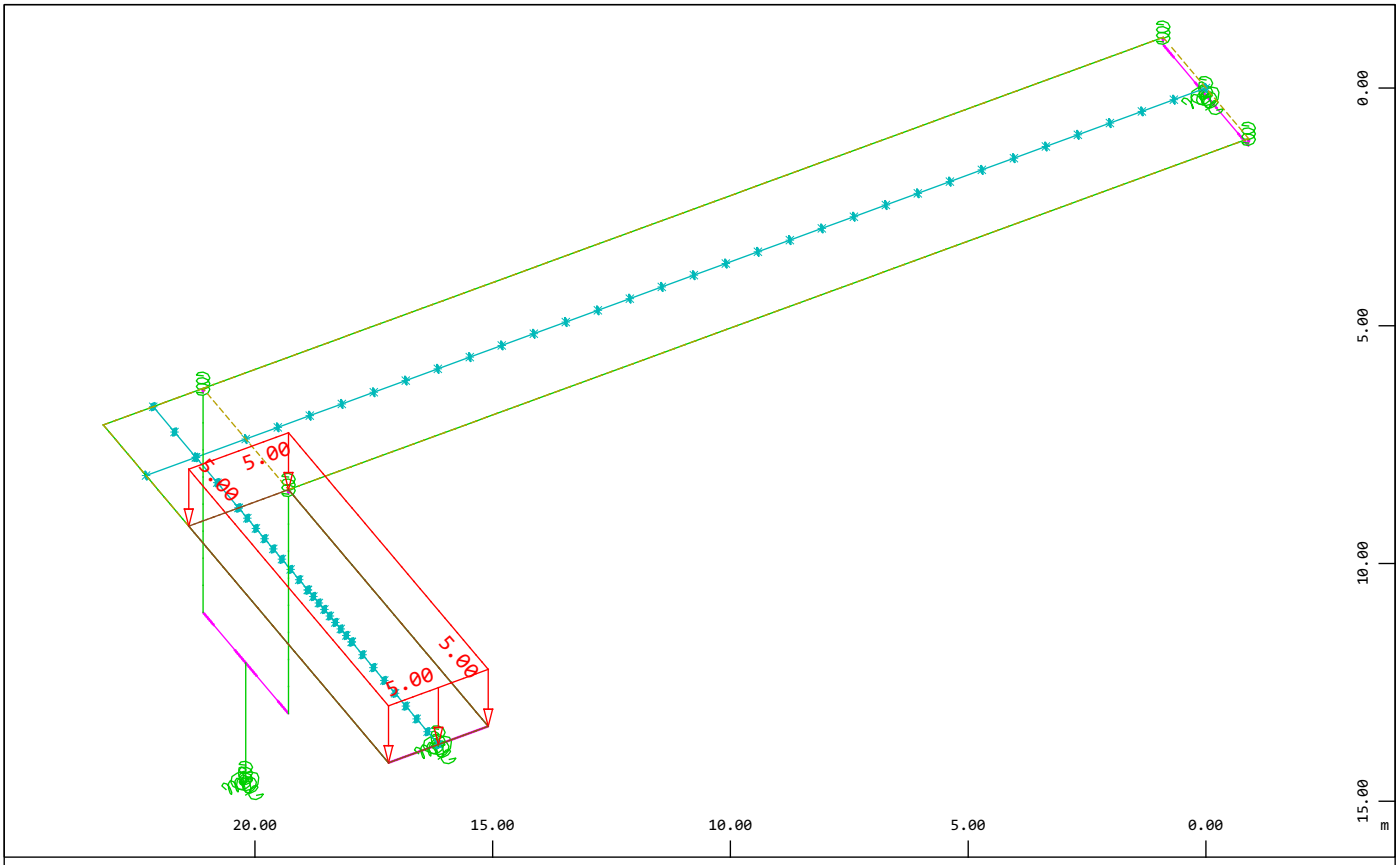
All loads (in components), Loadcase 21 SC PEAT VERT L 1 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

M 1 : 168
X * 0.931
Y * 0.753
Z * 0.753



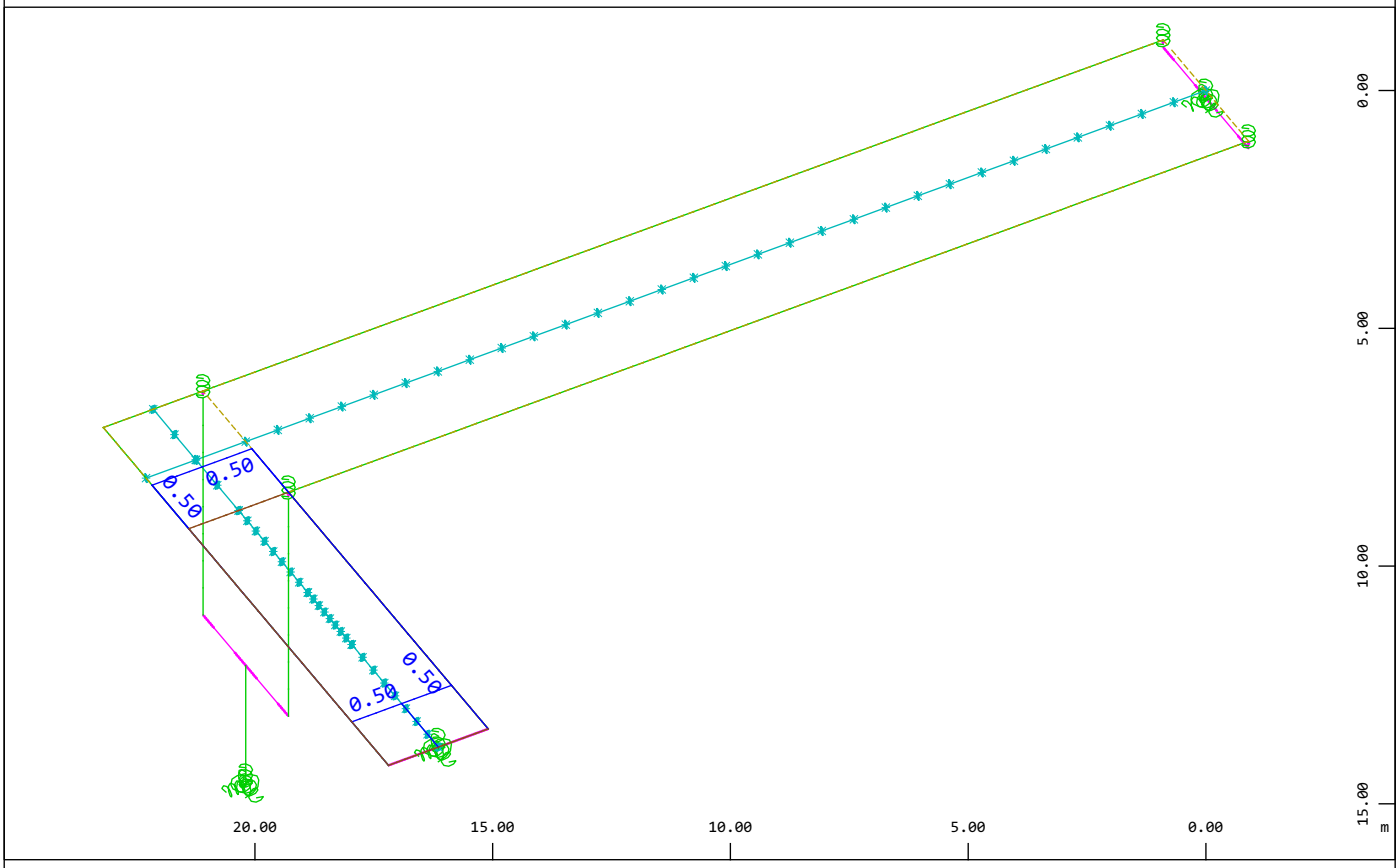
All loads (in components), Loadcase 31 SC PEAT LONG L 1 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

M 1 : 161
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 22 SC PEAT VERT L 2 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 32 SC PEAT LONG L 2 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

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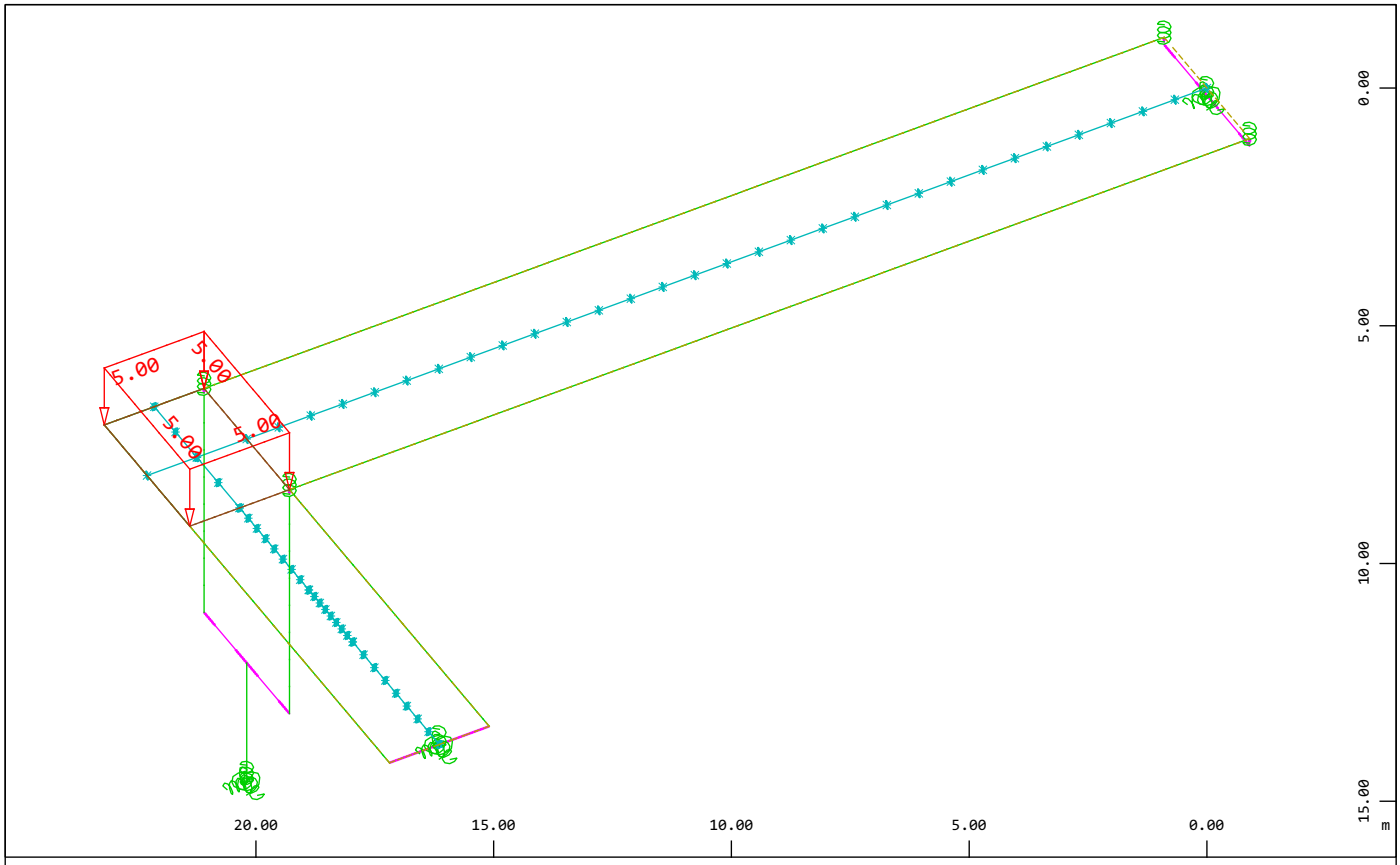
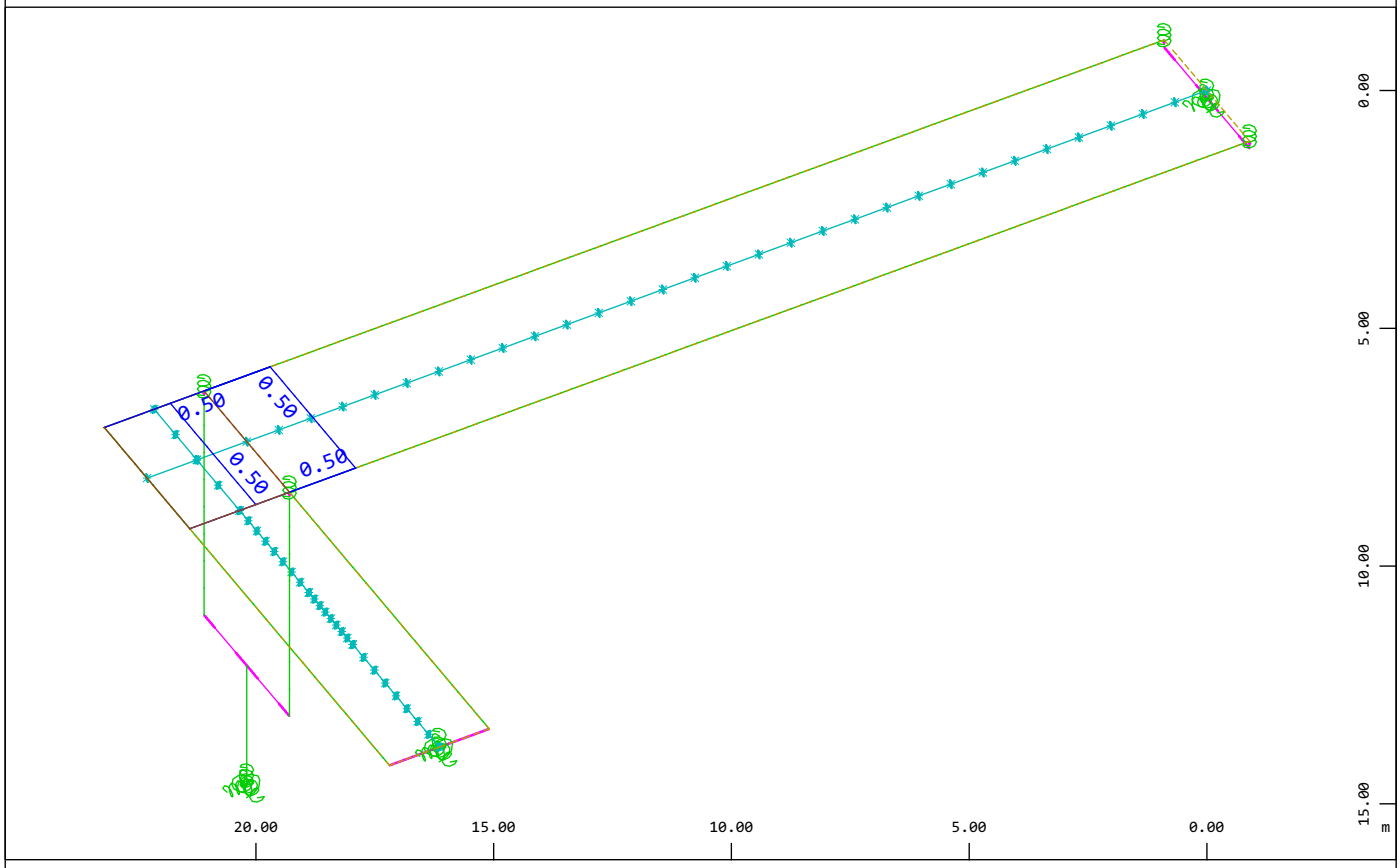


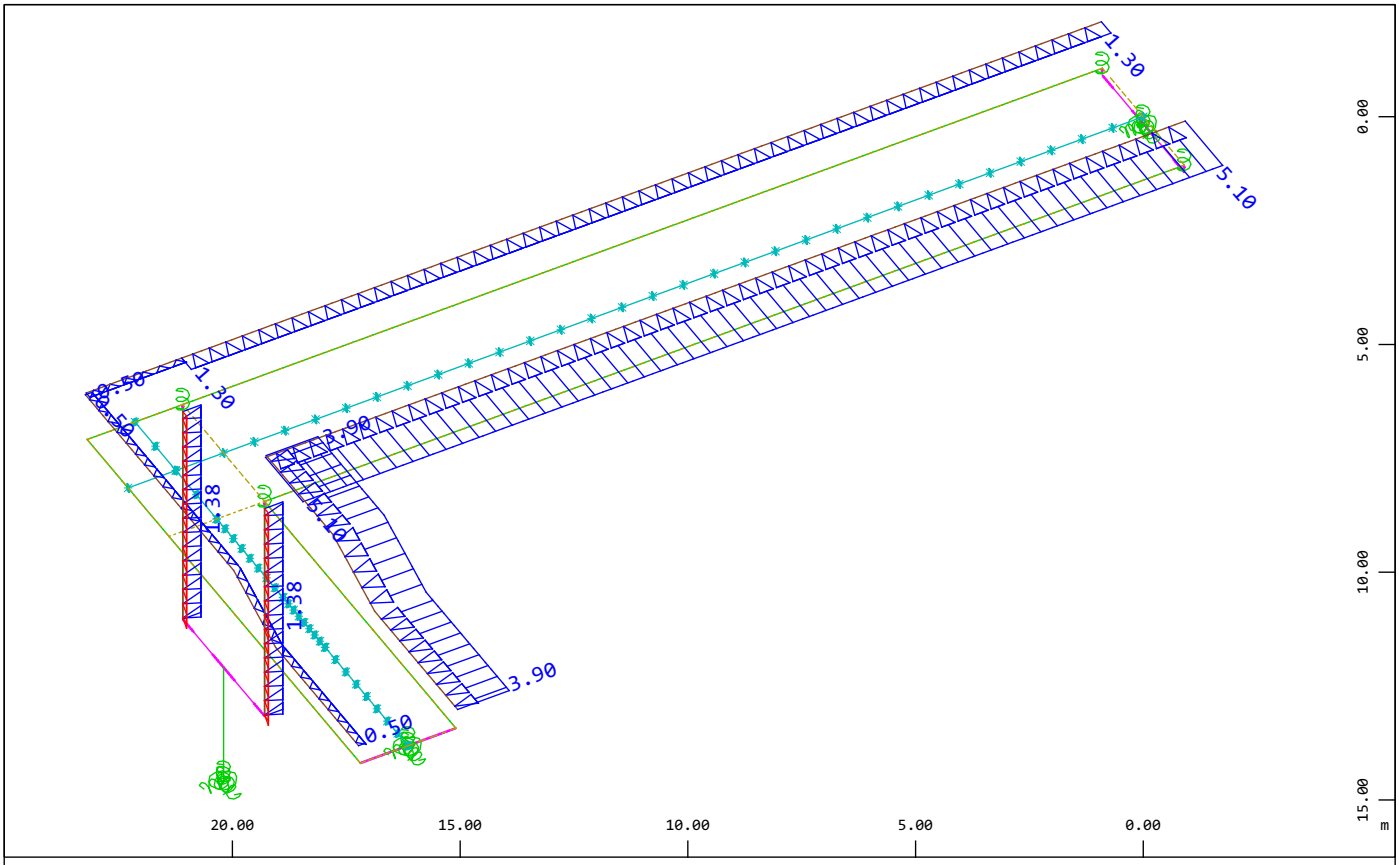
All loads (in components), Loadcase 23 SC PEAT VERT L 3 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



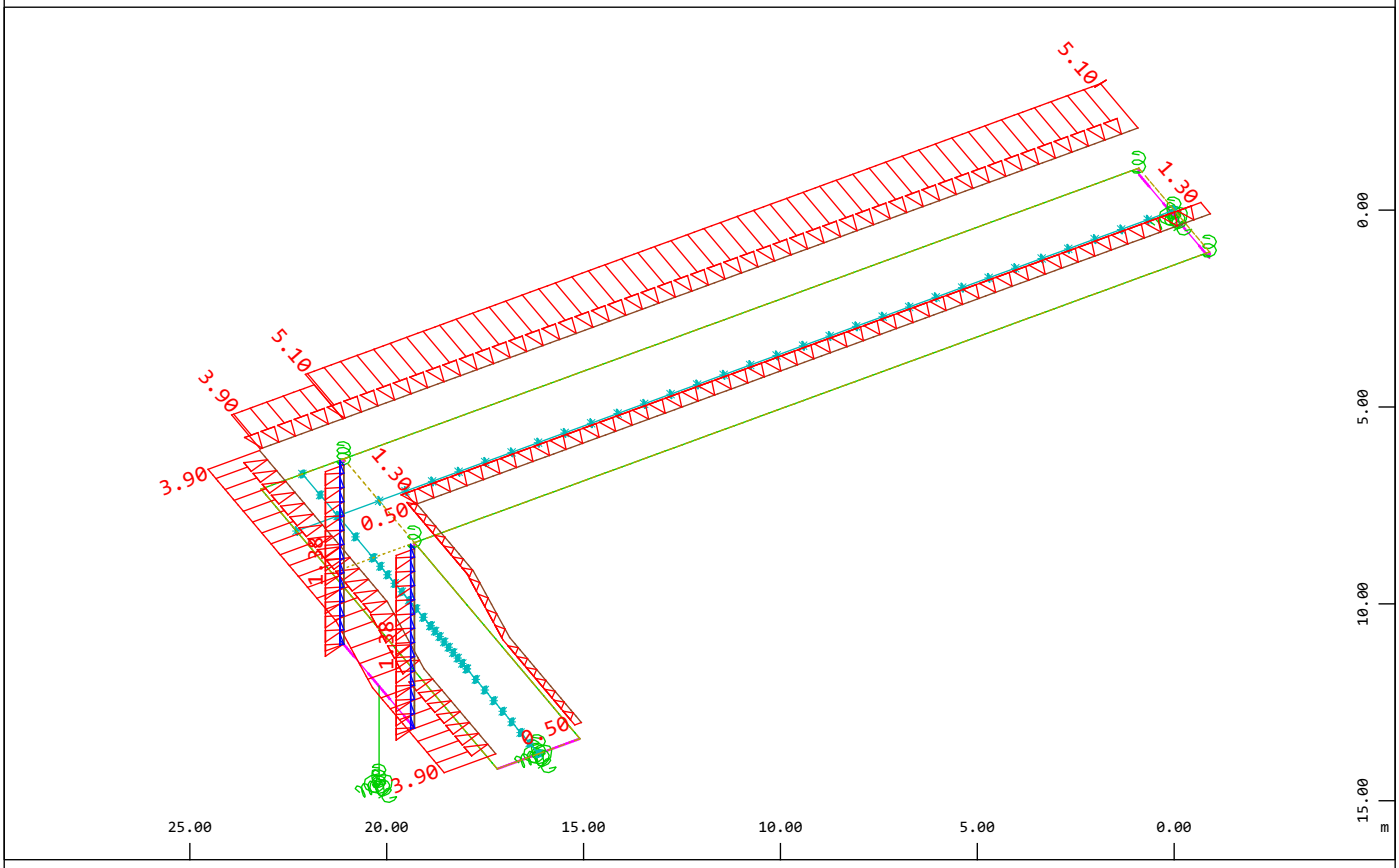
All loads (in components), Loadcase 33 SC PEAT LONG L 3 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



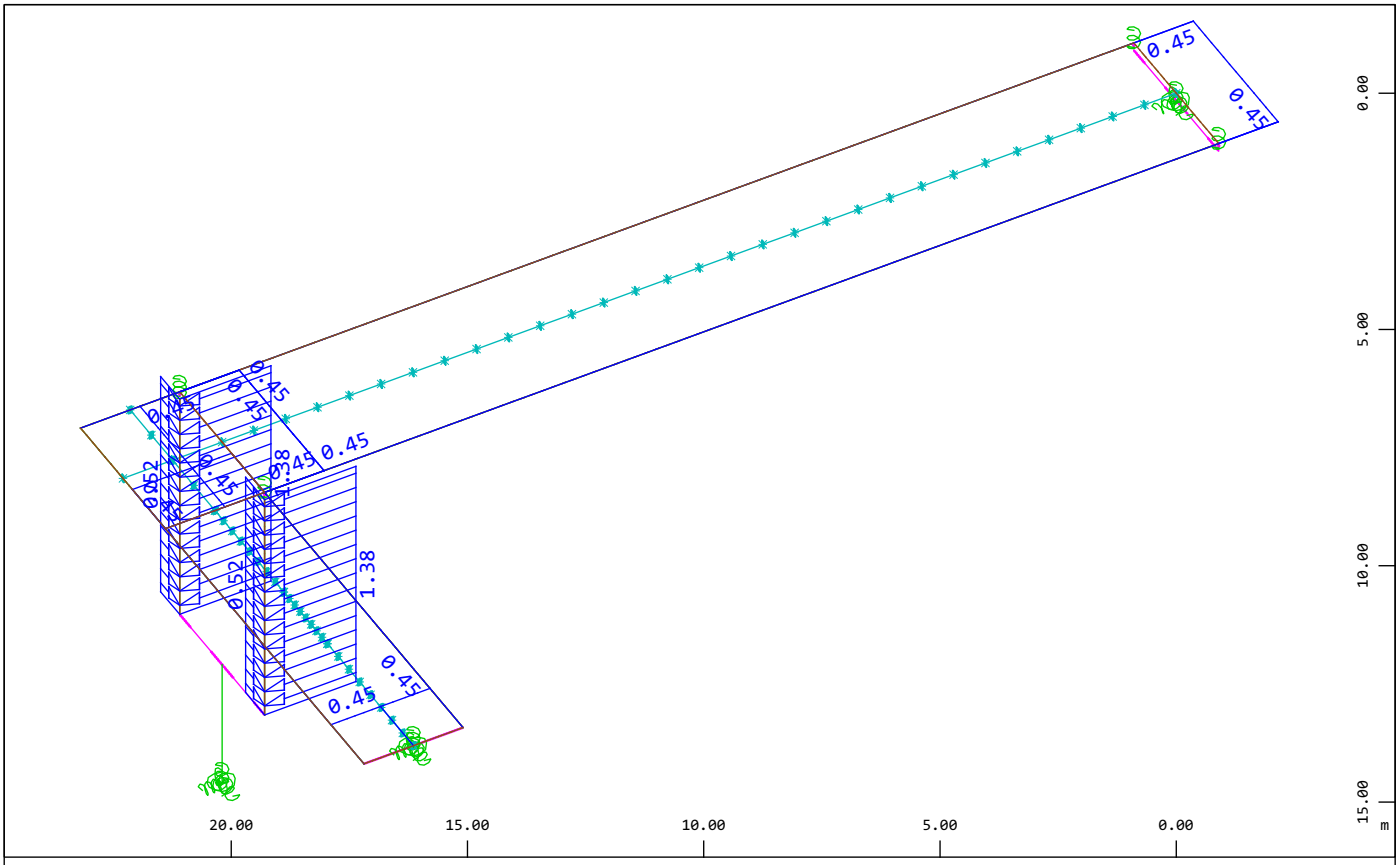
All loads (in components), Loadcase 101 W TRANS INT , (1 cm 3D = unit) Beam line load (force) in local y (Unit=5.00 kN/m,Max=5.10), Free line load (force) in global X (Unit=5.00 kN/m,Max=1.38), Free line load (force) in global Y (Unit=5.00 kN/m,Min=-0.517

M 1 : 166
X * 0.931
Y * 0.753
Z * 0.753



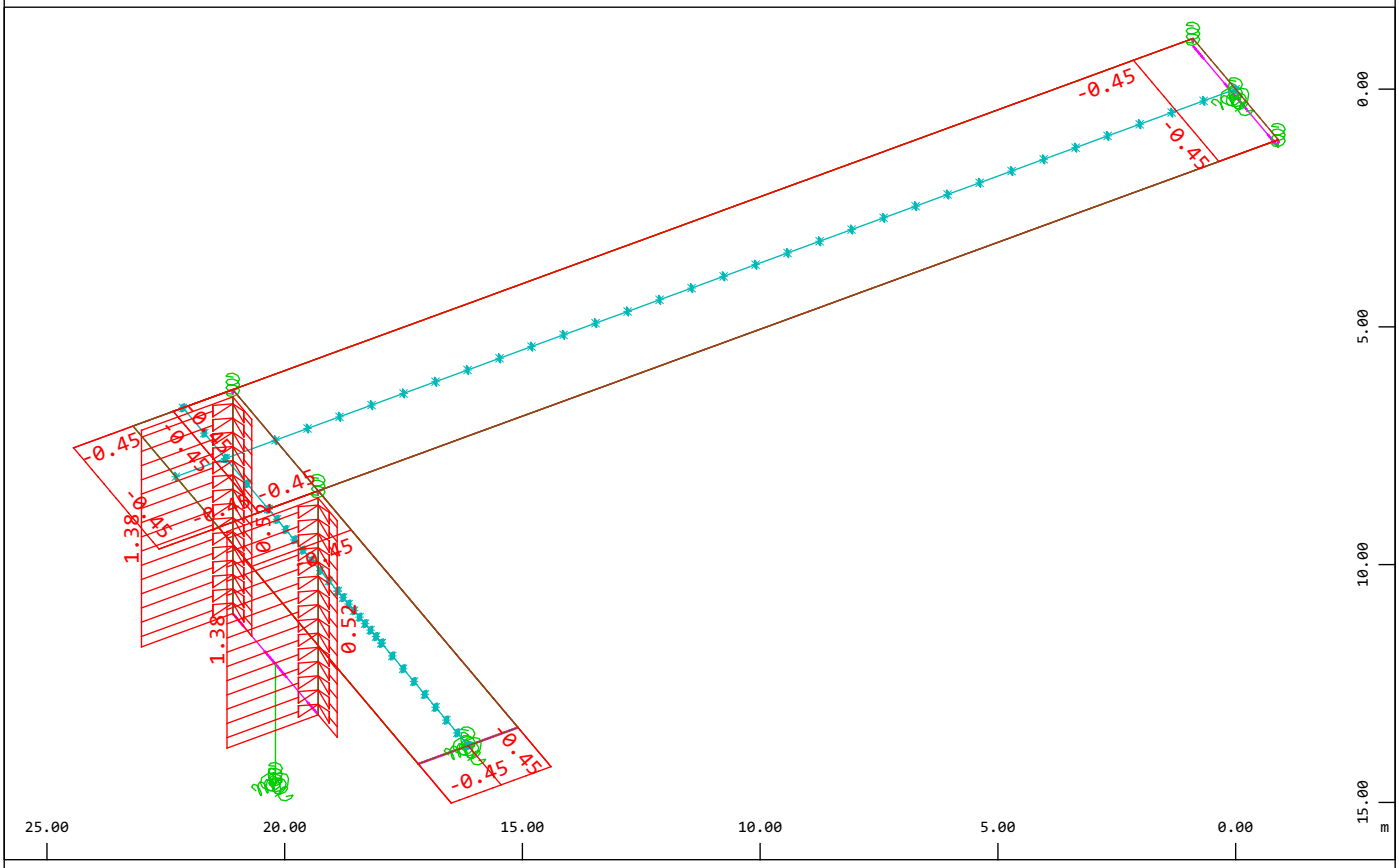
All loads (in components), Loadcase 102 W TRANS EXT , (1 cm 3D = unit) Beam line load (force) in local y (Unit=5.00 kN/m,Min=-5.10 Max=-0.500), Free line load (force) in global X (Unit=5.00 kN/m,Min=-1.38 Max=-1.38), Free line load (force) in global Y

M 1 : 192
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 111 W LONG + , (1 cm 3D = unit) Free line load (force) in global X (Unit=1.00 kN/m,Max=1.38), Free line load (force) in global Y (Unit=1.00 kN/m,Max=0.517), Free area load (force) in local x (Unit=0.500 kN/m2,Max=0.450)

M 1 : 160
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 112 W LONG - , (1 cm 3D = unit) Free line load (force) in global X (Unit=1.00 kN/m,Min=-1.38 Max=-1.38), Free line load (force) in global Y (Unit=1.00 kN/m,Min=-0.517 Max=-0.517), Free area load (force) in local x (Unit=0.500

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

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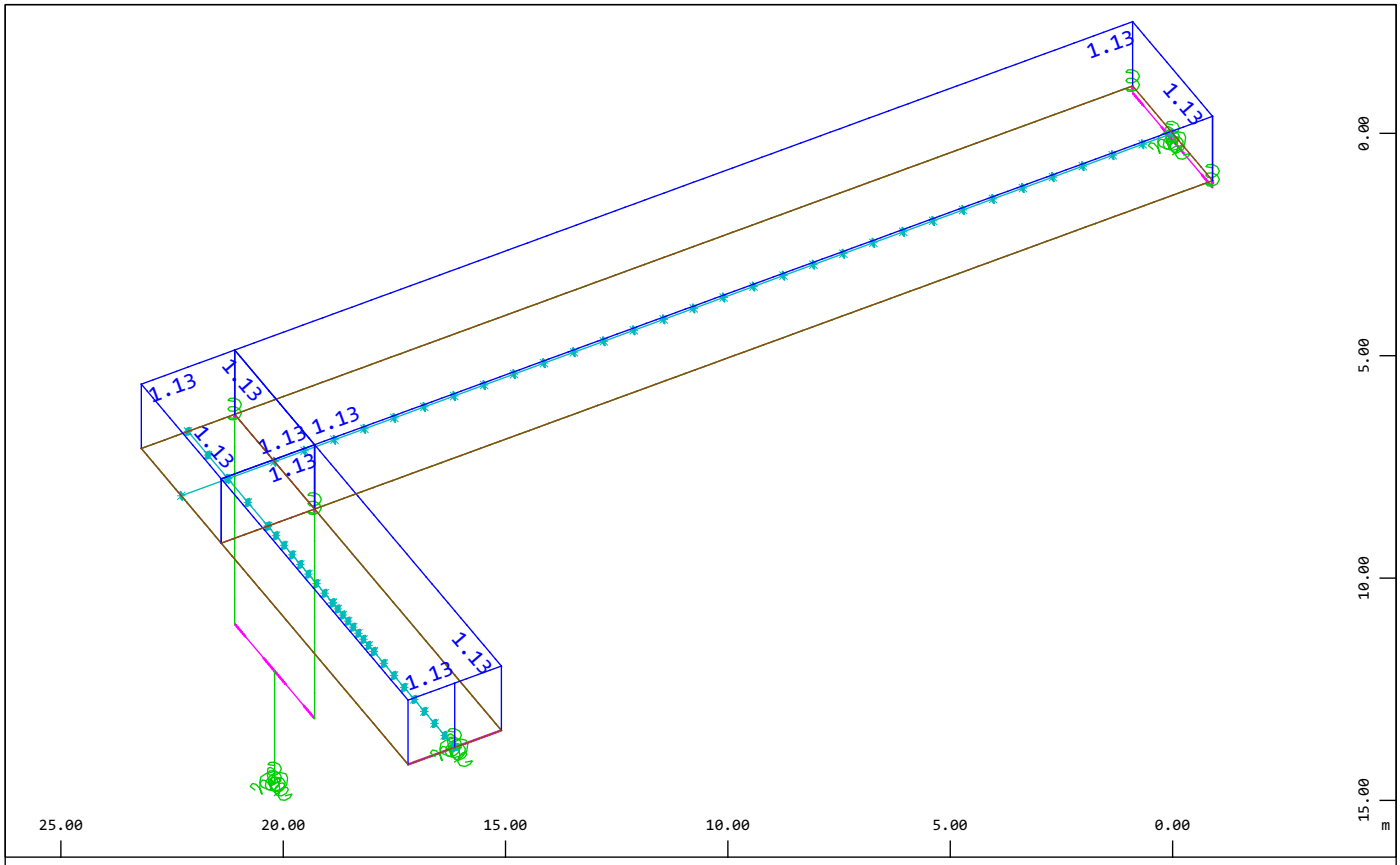
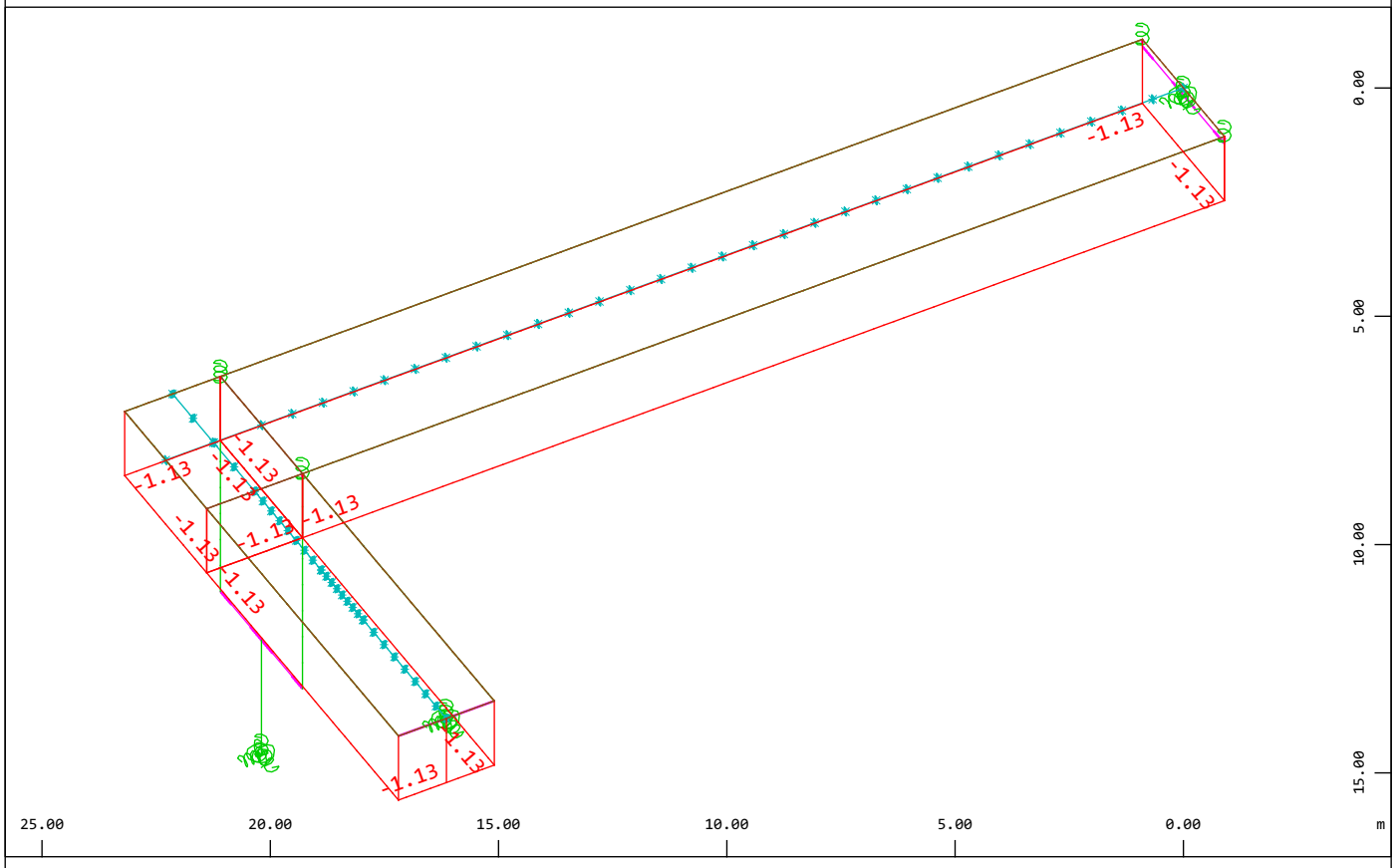


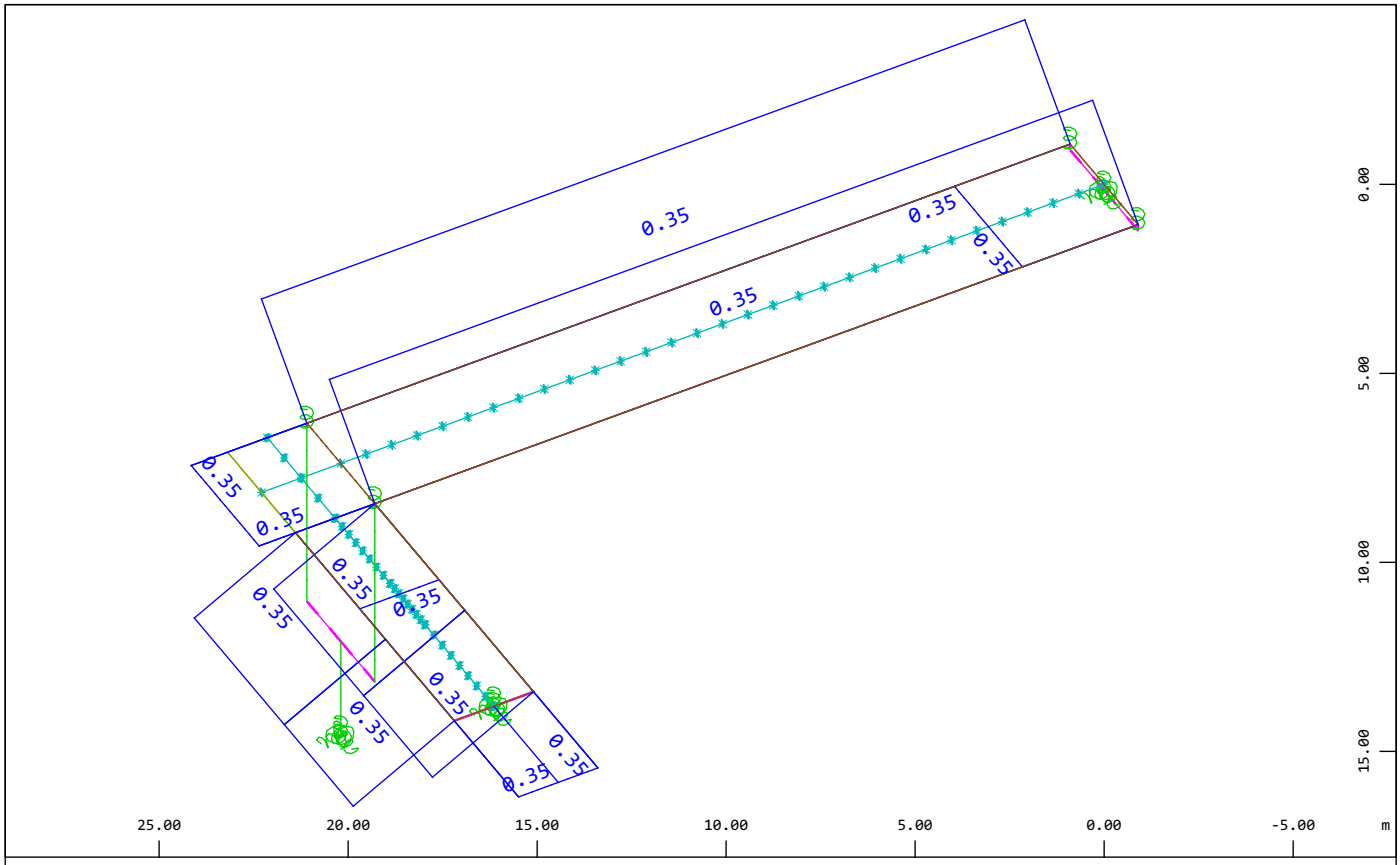
All loads (in components), Loadcase 121 W TAB VERT + , (1 cm 3D = unit) Free area load
(force) in local z (Unit=1.00 kN/m2) (Max=1.13)

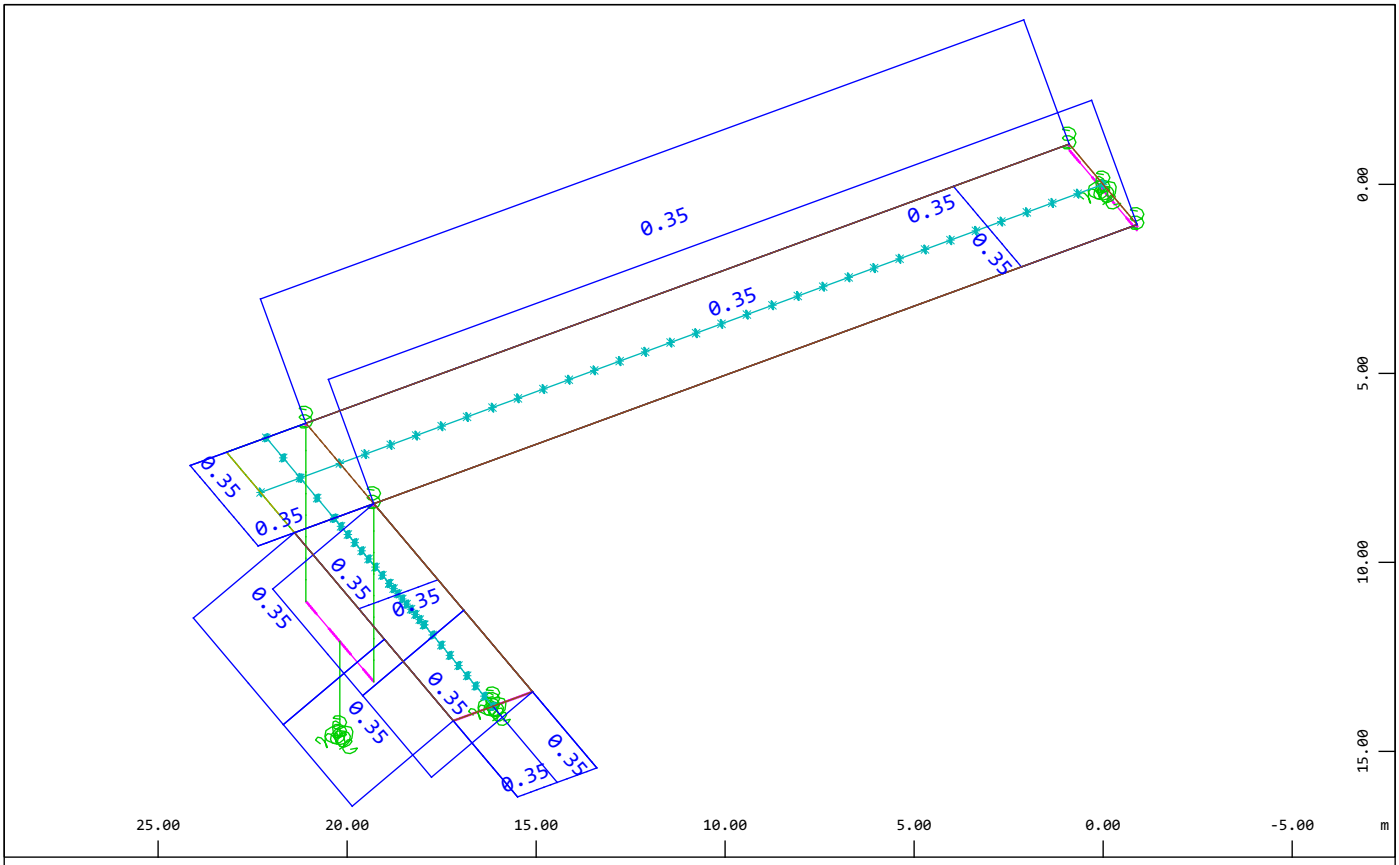
M 1 : 170
X * 0.931
Y * 0.753
Z * 0.753

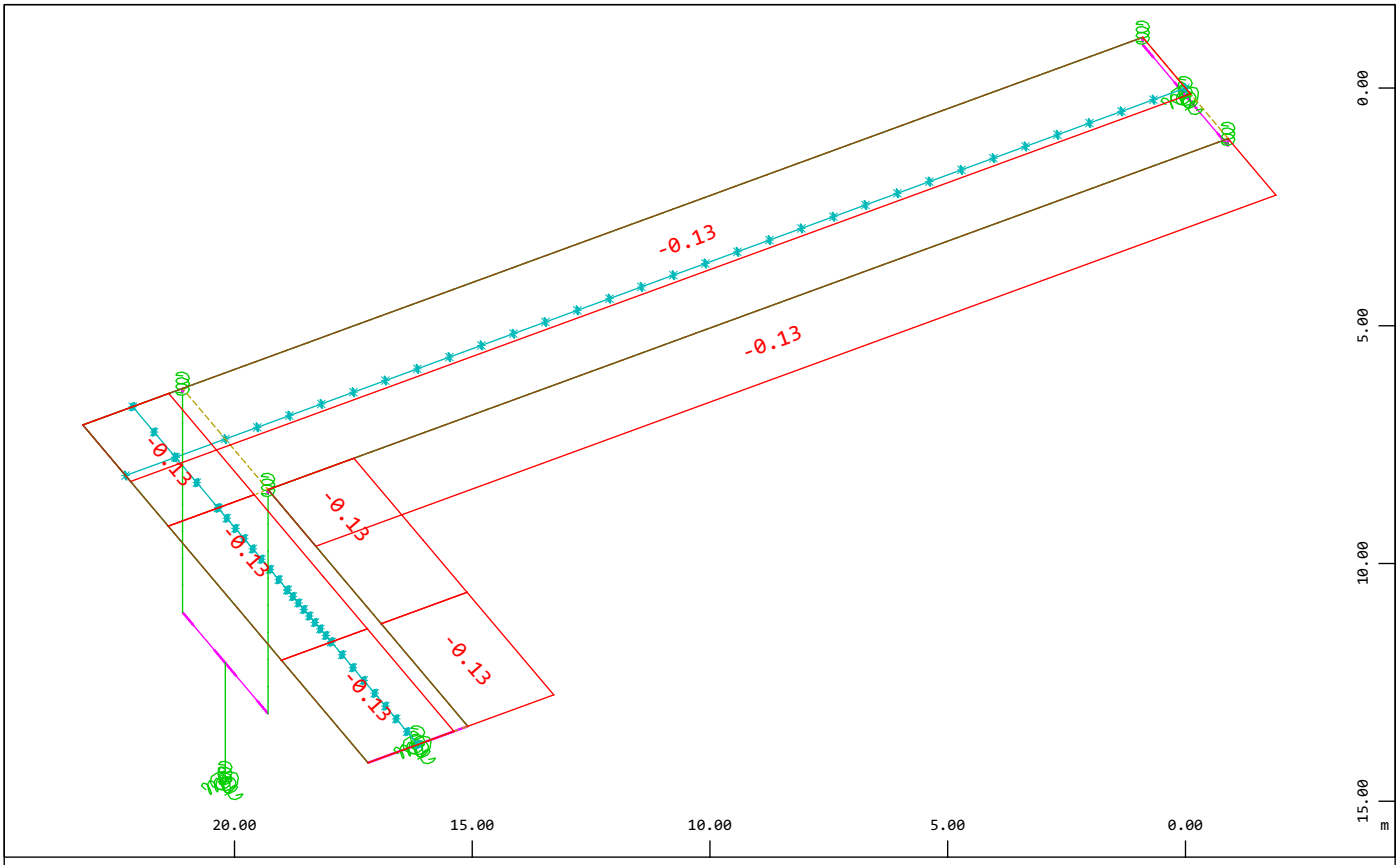


All loads (in components), Loadcase 122 W TAB VERT - , (1 cm 3D = unit) Free area load
(force) in local z (Unit=1.00 kN/m2) (Min=-1.13) (Max=-1.13)

M 1 : 165
X * 0.931
Y * 0.753
Z * 0.753

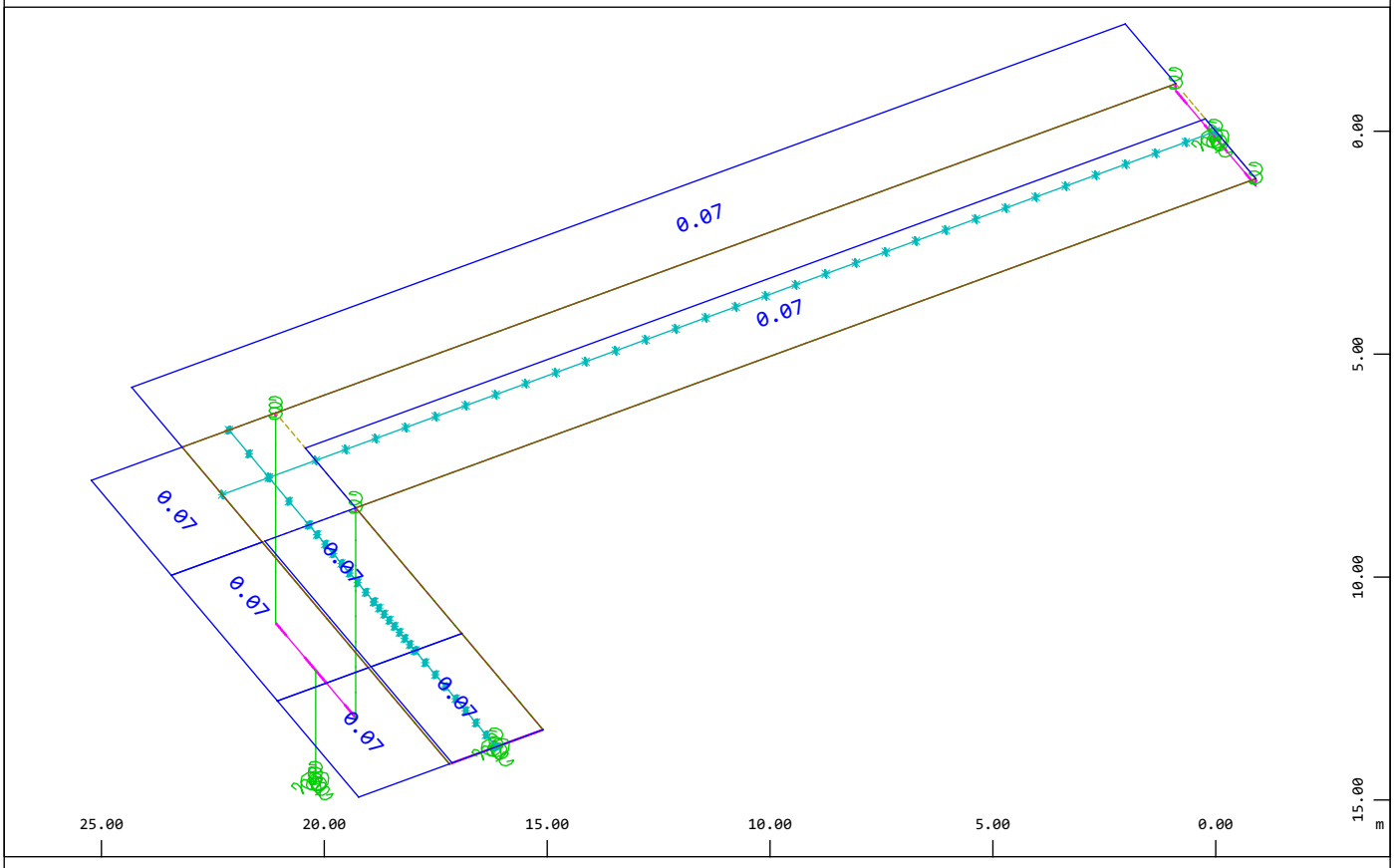

0.35
0.35
0.35


0.35
0.35
0.35



All loads (in components), Loadcase 211 T GRAD + , (1 cm 3D = unit) Free line load
(curvature) about local y (Unit=0.100 1/km) (Min=-0.130) (Max=-0.130)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 212 T GRAD - , (1 cm 3D = unit) Free line load
(curvature) about local y (Unit=0.0500 1/km) (Max=0.0690)

M 1 : 169
X * 0.931
Y * 0.753
Z * 0.753

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AUX SCP

Combination rule Number 1

SCP VERTICAL

Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
21	1.00	A1	SC PEAT VERT L 1
22	1.00	A2	SC PEAT VERT L 2
23	1.00	A3	SC PEAT VERT L 3

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

SCP LONGITUDINAL

Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
31	1.00	A1	SC PEAT LONG L 1 +
41	1.00	A1	SC PEAT LONG L 1 -
32	1.00	A2	SC PEAT LONG L 2 +
42	1.00	A2	SC PEAT LONG L 2 -
33	1.00	A3	SC PEAT LONG L 3 +
43	1.00	A3	SC PEAT LONG L 3 -

Fact factor for load case
Type type of the load case
A exclusive load

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SCP

Combination rule Number 1
ENVOLVENTE SCP
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
1101	1.00	A1	MAX-MX QUAD SCP VERTICAL
1102	1.00	A1	MIN-MX QUAD SCP VERTICAL
1103	1.00	A1	MAX-MY QUAD SCP VERTICAL
1104	1.00	A1	MIN-MY QUAD SCP VERTICAL
1105	1.00	A1	MAX-MXY QUAD SCP VERTICAL
1106	1.00	A1	MIN-MXY QUAD SCP VERTICAL
1107	1.00	A1	MAX-VX QUAD SCP VERTICAL
1108	1.00	A1	MIN-VX QUAD SCP VERTICAL
1109	1.00	A1	MAX-VY QUAD SCP VERTICAL
1110	1.00	A1	MIN-VY QUAD SCP VERTICAL
1111	1.00	A1	MAX-NXX QUAD SCP VERTICAL
1112	1.00	A1	MIN-NXX QUAD SCP VERTICAL
1113	1.00	A1	MAX-NYY QUAD SCP VERTICAL
1114	1.00	A1	MIN-NYY QUAD SCP VERTICAL
1115	1.00	A1	MAX-NXY QUAD SCP VERTICAL
1116	1.00	A1	MIN-NXY QUAD SCP VERTICAL
1121	1.00	A1	MAX-N BSCT SCP VERTICAL
1122	1.00	A1	MIN-N BSCT SCP VERTICAL
1123	1.00	A1	MAX-VY BSCT SCP VERTICAL
1124	1.00	A1	MIN-VY BSCT SCP VERTICAL
1125	1.00	A1	MAX-VZ BSCT SCP VERTICAL
1126	1.00	A1	MIN-VZ BSCT SCP VERTICAL
1127	1.00	A1	MAX-MT BSCT SCP VERTICAL
1128	1.00	A1	MIN-MT BSCT SCP VERTICAL
1129	1.00	A1	MAX-MY BSCT SCP VERTICAL
1130	1.00	A1	MIN-MY BSCT SCP VERTICAL
1131	1.00	A1	MAX-MZ BSCT SCP VERTICAL
1132	1.00	A1	MIN-MZ BSCT SCP VERTICAL
1145	1.00	A1	MAX-P SPRI SCP VERTICAL
1146	1.00	A1	MIN-P SPRI SCP VERTICAL
1147	1.00	A1	MAX-M SPRI SCP VERTICAL
1148	1.00	A1	MIN-M SPRI SCP VERTICAL
1171	1.00	A1	MAX-UX NODE SCP VERTICAL
1172	1.00	A1	MIN-UX NODE SCP VERTICAL
1173	1.00	A1	MAX-UY NODE SCP VERTICAL
1174	1.00	A1	MIN-UY NODE SCP VERTICAL
1175	1.00	A1	MAX-UZ NODE SCP VERTICAL
1176	1.00	A1	MIN-UZ NODE SCP VERTICAL
1177	1.00	A1	MAX-URX NODE SCP VERTICAL
1178	1.00	A1	MIN-URX NODE SCP VERTICAL
1179	1.00	A1	MAX-URY NODE SCP VERTICAL
1180	1.00	A1	MIN-URY NODE SCP VERTICAL
1181	1.00	A1	MAX-URZ NODE SCP VERTICAL
1182	1.00	A1	MIN-URZ NODE SCP VERTICAL
1201	1.00	A2	MAX-MX QUAD SCP LONGITUDINAL
1202	1.00	A2	MIN-MX QUAD SCP LONGITUDINAL
1203	1.00	A2	MAX-MY QUAD SCP LONGITUDINAL
1204	1.00	A2	MIN-MY QUAD SCP LONGITUDINAL
1205	1.00	A2	MAX-MXY QUAD SCP LONGITUDINAL
1206	1.00	A2	MIN-MXY QUAD SCP LONGITUDINAL
1207	1.00	A2	MAX-VX QUAD SCP LONGITUDINAL
1208	1.00	A2	MIN-VX QUAD SCP LONGITUDINAL
1209	1.00	A2	MAX-VY QUAD SCP LONGITUDINAL
1210	1.00	A2	MIN-VY QUAD SCP LONGITUDINAL

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Load Case selection

Number	Fact	Type	Designation
1211	1.00	A2	MAX-NXX QUAD SCP LONGITUDINAL
1212	1.00	A2	MIN-NXX QUAD SCP LONGITUDINAL
1213	1.00	A2	MAX-NYY QUAD SCP LONGITUDINAL
1214	1.00	A2	MIN-NYY QUAD SCP LONGITUDINAL
1215	1.00	A2	MAX-NXY QUAD SCP LONGITUDINAL
1216	1.00	A2	MIN-NXY QUAD SCP LONGITUDINAL
1221	1.00	A2	MAX-N BSCT SCP LONGITUDINAL
1222	1.00	A2	MIN-N BSCT SCP LONGITUDINAL
1223	1.00	A2	MAX-VY BSCT SCP LONGITUDINAL
1224	1.00	A2	MIN-VY BSCT SCP LONGITUDINAL
1225	1.00	A2	MAX-VZ BSCT SCP LONGITUDINAL
1226	1.00	A2	MIN-VZ BSCT SCP LONGITUDINAL
1227	1.00	A2	MAX-MT BSCT SCP LONGITUDINAL
1228	1.00	A2	MIN-MT BSCT SCP LONGITUDINAL
1229	1.00	A2	MAX-MY BSCT SCP LONGITUDINAL
1230	1.00	A2	MIN-MY BSCT SCP LONGITUDINAL
1231	1.00	A2	MAX-MZ BSCT SCP LONGITUDINAL
1232	1.00	A2	MIN-MZ BSCT SCP LONGITUDINAL
1245	1.00	A2	MAX-P SPRI SCP LONGITUDINAL
1246	1.00	A2	MIN-P SPRI SCP LONGITUDINAL
1247	1.00	A2	MAX-M SPRI SCP LONGITUDINAL
1248	1.00	A2	MIN-M SPRI SCP LONGITUDINAL
1271	1.00	A2	MAX-UX NODE SCP LONGITUDINAL
1272	1.00	A2	MIN-UX NODE SCP LONGITUDINAL
1273	1.00	A2	MAX-UY NODE SCP LONGITUDINAL
1274	1.00	A2	MIN-UY NODE SCP LONGITUDINAL
1275	1.00	A2	MAX-UZ NODE SCP LONGITUDINAL
1276	1.00	A2	MIN-UZ NODE SCP LONGITUDINAL
1277	1.00	A2	MAX-URX NODE SCP LONGITUDINAL
1278	1.00	A2	MIN-URX NODE SCP LONGITUDINAL
1279	1.00	A2	MAX-URY NODE SCP LONGITUDINAL
1280	1.00	A2	MIN-URY NODE SCP LONGITUDINAL
1281	1.00	A2	MAX-URZ NODE SCP LONGITUDINAL
1282	1.00	A2	MIN-URZ NODE SCP LONGITUDINAL

Fact factor for load case
Type type of the load case
A exclusive load

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Combination rule Number 1

W TRANVERSAL
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
101	1.00	A1	W TRANS INT
102	1.00	A1	W TRANS EXT

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

W LONGITUDINAL
Resulting Load Cases type Design com ...

Load Case selection

Number	Fact	Type	Designation
111	1.00	A1	W LONG +
112	1.00	A1	W LONG -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 3

W VERTICAL
Resulting Load Cases type Design ...

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Load Case selection

Number	Fact	Type	Designation
121	1.00	A1	W TAB VERT +
122	1.00	A1	W TAB VERT -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 4

W TRANVERSAL+VERTICAL
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
101	1.00	A1	W TRANS INT
102	1.00	A1	W TRANS EXT
121	1.00	A2	W TAB VERT +
122	1.00	A2	W TAB VERT -

Fact factor for load case
Type type of the load case
A exclusive load

Generated Load Cases

Number	Combination	Designation
2121	1	MAX-N BEAM W TRANVERSAL
2122	1	MIN-N BEAM W TRANVERSAL
2129	1	MAX-MY BEAM W TRANVERSAL
2130	1	MIN-MY BEAM W TRANVERSAL
2125	1	MAX-VZ BEAM W TRANVERSAL
2126	1	MIN-VZ BEAM W TRANVERSAL
2131	1	MAX-MZ BEAM W TRANVERSAL
2132	1	MIN-MZ BEAM W TRANVERSAL
2123	1	MAX-VY BEAM W TRANVERSAL
2124	1	MIN-VY BEAM W TRANVERSAL
2127	1	MAX-MT BEAM W TRANVERSAL
2128	1	MIN-MT BEAM W TRANVERSAL

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Generated Load Cases

Number	Combination	Designation
2101	1	MAX-MX QUAD W TRANVERSAL
2102	1	MIN-MX QUAD W TRANVERSAL
2103	1	MAX-MY QUAD W TRANVERSAL
2104	1	MIN-MY QUAD W TRANVERSAL
2105	1	MAX-MXY QUAD W TRANVERSAL
2106	1	MIN-MXY QUAD W TRANVERSAL
2107	1	MAX-VX QUAD W TRANVERSAL
2108	1	MIN-VX QUAD W TRANVERSAL
2109	1	MAX-VY QUAD W TRANVERSAL
2110	1	MIN-VY QUAD W TRANVERSAL
2111	1	MAX-NXX QUAD W TRANVERSAL
2112	1	MIN-NXX QUAD W TRANVERSAL
2113	1	MAX-NYY QUAD W TRANVERSAL
2114	1	MIN-NYY QUAD W TRANVERSAL
2115	1	MAX-NXY QUAD W TRANVERSAL
2116	1	MIN-NXY QUAD W TRANVERSAL
2145	1	MAX-P SPRI W TRANVERSAL
2146	1	MIN-P SPRI W TRANVERSAL
2147	1	MAX-M SPRI W TRANVERSAL
2148	1	MIN-M SPRI W TRANVERSAL
2171	1	MAX-UX NODE W TRANVERSAL
2172	1	MIN-UX NODE W TRANVERSAL
2173	1	MAX-UY NODE W TRANVERSAL
2174	1	MIN-UY NODE W TRANVERSAL
2175	1	MAX-UZ NODE W TRANVERSAL
2176	1	MIN-UZ NODE W TRANVERSAL
2177	1	MAX-URX NODE W TRANVERSAL
2178	1	MIN-URX NODE W TRANVERSAL
2179	1	MAX-URY NODE W TRANVERSAL
2180	1	MIN-URY NODE W TRANVERSAL
2181	1	MAX-URZ NODE W TRANVERSAL
2182	1	MIN-URZ NODE W TRANVERSAL
2121	1	MAX-N BSCT W TRANVERSAL
2122	1	MIN-N BSCT W TRANVERSAL
2123	1	MAX-VY BSCT W TRANVERSAL
2124	1	MIN-VY BSCT W TRANVERSAL
2125	1	MAX-VZ BSCT W TRANVERSAL
2126	1	MIN-VZ BSCT W TRANVERSAL
2127	1	MAX-MT BSCT W TRANVERSAL
2128	1	MIN-MT BSCT W TRANVERSAL
2129	1	MAX-MY BSCT W TRANVERSAL
2130	1	MIN-MY BSCT W TRANVERSAL
2131	1	MAX-MZ BSCT W TRANVERSAL
2132	1	MIN-MZ BSCT W TRANVERSAL
2221	2	MAX-N BEAM W LONGITUDINAL
2222	2	MIN-N BEAM W LONGITUDINAL
2229	2	MAX-MY BEAM W LONGITUDINAL
2230	2	MIN-MY BEAM W LONGITUDINAL
2225	2	MAX-VZ BEAM W LONGITUDINAL
2226	2	MIN-VZ BEAM W LONGITUDINAL
2231	2	MAX-MZ BEAM W LONGITUDINAL
2232	2	MIN-MZ BEAM W LONGITUDINAL
2223	2	MAX-VY BEAM W LONGITUDINAL
2224	2	MIN-VY BEAM W LONGITUDINAL
2227	2	MAX-MT BEAM W LONGITUDINAL
2228	2	MIN-MT BEAM W LONGITUDINAL
2201	2	MAX-MX QUAD W LONGITUDINAL
2202	2	MIN-MX QUAD W LONGITUDINAL

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Generated Load Cases

Number	Combination	Designation
2203	2	MAX-MY QUAD W LONGITUDINAL
2204	2	MIN-MY QUAD W LONGITUDINAL
2205	2	MAX-MXY QUAD W LONGITUDINAL
2206	2	MIN-MXY QUAD W LONGITUDINAL
2207	2	MAX-VX QUAD W LONGITUDINAL
2208	2	MIN-VX QUAD W LONGITUDINAL
2209	2	MAX-VY QUAD W LONGITUDINAL
2210	2	MIN-VY QUAD W LONGITUDINAL
2211	2	MAX-NXX QUAD W LONGITUDINAL
2212	2	MIN-NXX QUAD W LONGITUDINAL
2213	2	MAX-NYY QUAD W LONGITUDINAL
2214	2	MIN-NYY QUAD W LONGITUDINAL
2215	2	MAX-NXY QUAD W LONGITUDINAL
2216	2	MIN-NXY QUAD W LONGITUDINAL
2245	2	MAX-P SPRI W LONGITUDINAL
2246	2	MIN-P SPRI W LONGITUDINAL
2247	2	MAX-M SPRI W LONGITUDINAL
2248	2	MIN-M SPRI W LONGITUDINAL
2271	2	MAX-UX NODE W LONGITUDINAL
2272	2	MIN-UX NODE W LONGITUDINAL
2273	2	MAX-UY NODE W LONGITUDINAL
2274	2	MIN-UY NODE W LONGITUDINAL
2275	2	MAX-UZ NODE W LONGITUDINAL
2276	2	MIN-UZ NODE W LONGITUDINAL
2277	2	MAX-URX NODE W LONGITUDINAL
2278	2	MIN-URX NODE W LONGITUDINAL
2279	2	MAX-URY NODE W LONGITUDINAL
2280	2	MIN-URY NODE W LONGITUDINAL
2281	2	MAX-URZ NODE W LONGITUDINAL
2282	2	MIN-URZ NODE W LONGITUDINAL
2221	2	MAX-N BSCT W LONGITUDINAL
2222	2	MIN-N BSCT W LONGITUDINAL
2223	2	MAX-VY BSCT W LONGITUDINAL
2224	2	MIN-VY BSCT W LONGITUDINAL
2225	2	MAX-VZ BSCT W LONGITUDINAL
2226	2	MIN-VZ BSCT W LONGITUDINAL
2227	2	MAX-MT BSCT W LONGITUDINAL
2228	2	MIN-MT BSCT W LONGITUDINAL
2229	2	MAX-MY BSCT W LONGITUDINAL
2230	2	MIN-MY BSCT W LONGITUDINAL
2231	2	MAX-MZ BSCT W LONGITUDINAL
2232	2	MIN-MZ BSCT W LONGITUDINAL
2321	3	MAX-N BEAM W VERTICAL
2322	3	MIN-N BEAM W VERTICAL
2329	3	MAX-MY BEAM W VERTICAL
2330	3	MIN-MY BEAM W VERTICAL
2325	3	MAX-VZ BEAM W VERTICAL
2326	3	MIN-VZ BEAM W VERTICAL
2331	3	MAX-MZ BEAM W VERTICAL
2332	3	MIN-MZ BEAM W VERTICAL
2323	3	MAX-VY BEAM W VERTICAL
2324	3	MIN-VY BEAM W VERTICAL
2327	3	MAX-MT BEAM W VERTICAL
2328	3	MIN-MT BEAM W VERTICAL
2301	3	MAX-MX QUAD W VERTICAL
2302	3	MIN-MX QUAD W VERTICAL
2303	3	MAX-MY QUAD W VERTICAL
2304	3	MIN-MY QUAD W VERTICAL

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MODELO
AUX VIENTO IND

Generated Load Cases

Number	Combination	Designation
2305	3	MAX-MXY QUAD W VERTICAL
2306	3	MIN-MXY QUAD W VERTICAL
2307	3	MAX-VX QUAD W VERTICAL
2308	3	MIN-VX QUAD W VERTICAL
2309	3	MAX-VY QUAD W VERTICAL
2310	3	MIN-VY QUAD W VERTICAL
2311	3	MAX-NXX QUAD W VERTICAL
2312	3	MIN-NXX QUAD W VERTICAL
2313	3	MAX-NYY QUAD W VERTICAL
2314	3	MIN-NYY QUAD W VERTICAL
2315	3	MAX-NXY QUAD W VERTICAL
2316	3	MIN-NXY QUAD W VERTICAL
2345	3	MAX-P SPRI W VERTICAL
2346	3	MIN-P SPRI W VERTICAL
2347	3	MAX-M SPRI W VERTICAL
2348	3	MIN-M SPRI W VERTICAL
2371	3	MAX-UX NODE W VERTICAL
2372	3	MIN-UX NODE W VERTICAL
2373	3	MAX-UY NODE W VERTICAL
2374	3	MIN-UY NODE W VERTICAL
2375	3	MAX-UZ NODE W VERTICAL
2376	3	MIN-UZ NODE W VERTICAL
2377	3	MAX-URX NODE W VERTICAL
2378	3	MIN-URX NODE W VERTICAL
2379	3	MAX-URY NODE W VERTICAL
2380	3	MIN-URY NODE W VERTICAL
2381	3	MAX-URZ NODE W VERTICAL
2382	3	MIN-URZ NODE W VERTICAL
2321	3	MAX-N BSCT W VERTICAL
2322	3	MIN-N BSCT W VERTICAL
2323	3	MAX-VY BSCT W VERTICAL
2324	3	MIN-VY BSCT W VERTICAL
2325	3	MAX-VZ BSCT W VERTICAL
2326	3	MIN-VZ BSCT W VERTICAL
2327	3	MAX-MT BSCT W VERTICAL
2328	3	MIN-MT BSCT W VERTICAL
2329	3	MAX-MY BSCT W VERTICAL
2330	3	MIN-MY BSCT W VERTICAL
2331	3	MAX-MZ BSCT W VERTICAL
2332	3	MIN-MZ BSCT W VERTICAL
2421	4	MAX-N BEAM W TRANVERSAL+VERTICAL
2422	4	MIN-N BEAM W TRANVERSAL+VERTICAL
2429	4	MAX-MY BEAM W TRANVERSAL+VERTICAL
2430	4	MIN-MY BEAM W TRANVERSAL+VERTICAL
2425	4	MAX-VZ BEAM W TRANVERSAL+VERTICAL
2426	4	MIN-VZ BEAM W TRANVERSAL+VERTICAL
2431	4	MAX-MZ BEAM W TRANVERSAL+VERTICAL
2432	4	MIN-MZ BEAM W TRANVERSAL+VERTICAL
2423	4	MAX-VY BEAM W TRANVERSAL+VERTICAL
2424	4	MIN-VY BEAM W TRANVERSAL+VERTICAL
2427	4	MAX-MT BEAM W TRANVERSAL+VERTICAL
2428	4	MIN-MT BEAM W TRANVERSAL+VERTICAL
2401	4	MAX-MX QUAD W TRANVERSAL+VERTICAL
2402	4	MIN-MX QUAD W TRANVERSAL+VERTICAL
2403	4	MAX-MY QUAD W TRANVERSAL+VERTICAL
2404	4	MIN-MY QUAD W TRANVERSAL+VERTICAL
2405	4	MAX-MXY QUAD W TRANVERSAL+VERTICAL
2406	4	MIN-MXY QUAD W TRANVERSAL+VERTICAL

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AUX VIENTO IND

Generated Load Cases

Number	Combination	Designation
2407	4	MAX-VX QUAD W TRANVERSAL+VERTICAL
2408	4	MIN-VX QUAD W TRANVERSAL+VERTICAL
2409	4	MAX-VY QUAD W TRANVERSAL+VERTICAL
2410	4	MIN-VY QUAD W TRANVERSAL+VERTICAL
2411	4	MAX-NXX QUAD W TRANVERSAL+VERTICAL
2412	4	MIN-NXX QUAD W TRANVERSAL+VERTICAL
2413	4	MAX-NYY QUAD W TRANVERSAL+VERTICAL
2414	4	MIN-NYY QUAD W TRANVERSAL+VERTICAL
2415	4	MAX-NXY QUAD W TRANVERSAL+VERTICAL
2416	4	MIN-NXY QUAD W TRANVERSAL+VERTICAL
2445	4	MAX-P SPRI W TRANVERSAL+VERTICAL
2446	4	MIN-P SPRI W TRANVERSAL+VERTICAL
2447	4	MAX-M SPRI W TRANVERSAL+VERTICAL
2448	4	MIN-M SPRI W TRANVERSAL+VERTICAL
2471	4	MAX-UX NODE W TRANVERSAL+VERTICAL
2472	4	MIN-UX NODE W TRANVERSAL+VERTICAL
2473	4	MAX-UY NODE W TRANVERSAL+VERTICAL
2474	4	MIN-UY NODE W TRANVERSAL+VERTICAL
2475	4	MAX-UZ NODE W TRANVERSAL+VERTICAL
2476	4	MIN-UZ NODE W TRANVERSAL+VERTICAL
2477	4	MAX-URX NODE W TRANVERSAL+VERTICAL
2478	4	MIN-URX NODE W TRANVERSAL+VERTICAL
2479	4	MAX-URY NODE W TRANVERSAL+VERTICAL
2480	4	MIN-URY NODE W TRANVERSAL+VERTICAL
2481	4	MAX-URZ NODE W TRANVERSAL+VERTICAL
2482	4	MIN-URZ NODE W TRANVERSAL+VERTICAL
2421	4	MAX-N BSCT W TRANVERSAL+VERTICAL
2422	4	MIN-N BSCT W TRANVERSAL+VERTICAL
2423	4	MAX-VY BSCT W TRANVERSAL+VERTICAL
2424	4	MIN-VY BSCT W TRANVERSAL+VERTICAL
2425	4	MAX-VZ BSCT W TRANVERSAL+VERTICAL
2426	4	MIN-VZ BSCT W TRANVERSAL+VERTICAL
2427	4	MAX-MT BSCT W TRANVERSAL+VERTICAL
2428	4	MIN-MT BSCT W TRANVERSAL+VERTICAL
2429	4	MAX-MY BSCT W TRANVERSAL+VERTICAL
2430	4	MIN-MY BSCT W TRANVERSAL+VERTICAL
2431	4	MAX-MZ BSCT W TRANVERSAL+VERTICAL
2432	4	MIN-MZ BSCT W TRANVERSAL+VERTICAL

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Combination rule Number 1
ENVOLVENTE W
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
2201	1.00	A1	MAX-MX QUAD W LONGITUDINAL
2202	1.00	A1	MIN-MX QUAD W LONGITUDINAL
2203	1.00	A1	MAX-MY QUAD W LONGITUDINAL
2204	1.00	A1	MIN-MY QUAD W LONGITUDINAL
2205	1.00	A1	MAX-MXY QUAD W LONGITUDINAL
2206	1.00	A1	MIN-MXY QUAD W LONGITUDINAL
2207	1.00	A1	MAX-VX QUAD W LONGITUDINAL
2208	1.00	A1	MIN-VX QUAD W LONGITUDINAL
2209	1.00	A1	MAX-VY QUAD W LONGITUDINAL
2210	1.00	A1	MIN-VY QUAD W LONGITUDINAL
2211	1.00	A1	MAX-NXX QUAD W LONGITUDINAL
2212	1.00	A1	MIN-NXX QUAD W LONGITUDINAL
2213	1.00	A1	MAX-NYY QUAD W LONGITUDINAL
2214	1.00	A1	MIN-NYY QUAD W LONGITUDINAL
2215	1.00	A1	MAX-NXY QUAD W LONGITUDINAL
2216	1.00	A1	MIN-NXY QUAD W LONGITUDINAL
2221	1.00	A1	MAX-N BSCT W LONGITUDINAL
2222	1.00	A1	MIN-N BSCT W LONGITUDINAL
2223	1.00	A1	MAX-VY BSCT W LONGITUDINAL
2224	1.00	A1	MIN-VY BSCT W LONGITUDINAL
2225	1.00	A1	MAX-VZ BSCT W LONGITUDINAL
2226	1.00	A1	MIN-VZ BSCT W LONGITUDINAL
2227	1.00	A1	MAX-MT BSCT W LONGITUDINAL
2228	1.00	A1	MIN-MT BSCT W LONGITUDINAL
2229	1.00	A1	MAX-MY BSCT W LONGITUDINAL
2230	1.00	A1	MIN-MY BSCT W LONGITUDINAL
2231	1.00	A1	MAX-MZ BSCT W LONGITUDINAL
2232	1.00	A1	MIN-MZ BSCT W LONGITUDINAL
2245	1.00	A1	MAX-P SPRI W LONGITUDINAL
2246	1.00	A1	MIN-P SPRI W LONGITUDINAL
2247	1.00	A1	MAX-M SPRI W LONGITUDINAL
2248	1.00	A1	MIN-M SPRI W LONGITUDINAL
2271	1.00	A1	MAX-UX NODE W LONGITUDINAL
2272	1.00	A1	MIN-UX NODE W LONGITUDINAL
2273	1.00	A1	MAX-UY NODE W LONGITUDINAL
2274	1.00	A1	MIN-UY NODE W LONGITUDINAL
2275	1.00	A1	MAX-UZ NODE W LONGITUDINAL
2276	1.00	A1	MIN-UZ NODE W LONGITUDINAL
2277	1.00	A1	MAX-URX NODE W LONGITUDINAL
2278	1.00	A1	MIN-URX NODE W LONGITUDINAL
2279	1.00	A1	MAX-URY NODE W LONGITUDINAL
2280	1.00	A1	MIN-URY NODE W LONGITUDINAL
2281	1.00	A1	MAX-URZ NODE W LONGITUDINAL
2282	1.00	A1	MIN-URZ NODE W LONGITUDINAL
2401	1.00	A1	MAX-MX QUAD W TRANVERSAL+VERTICA
2402	1.00	A1	MIN-MX QUAD W TRANVERSAL+VERTICA
2403	1.00	A1	MAX-MY QUAD W TRANVERSAL+VERTICA
2404	1.00	A1	MIN-MY QUAD W TRANVERSAL+VERTICA
2405	1.00	A1	MAX-MXY QUAD W TRANVERSAL+VERTIC
2406	1.00	A1	MIN-MXY QUAD W TRANVERSAL+VERTIC
2407	1.00	A1	MAX-VX QUAD W TRANVERSAL+VERTICA
2408	1.00	A1	MIN-VX QUAD W TRANVERSAL+VERTICA
2409	1.00	A1	MAX-VY QUAD W TRANVERSAL+VERTICA
2410	1.00	A1	MIN-VY QUAD W TRANVERSAL+VERTICA

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Load Case selection

Number	Fact	Type	Designation
2411	1.00	A1	MAX-NXX QUAD W TRANVERSAL+VERTIC
2412	1.00	A1	MIN-NXX QUAD W TRANVERSAL+VERTIC
2413	1.00	A1	MAX-NYY QUAD W TRANVERSAL+VERTIC
2414	1.00	A1	MIN-NYY QUAD W TRANVERSAL+VERTIC
2415	1.00	A1	MAX-NXY QUAD W TRANVERSAL+VERTIC
2416	1.00	A1	MIN-NXY QUAD W TRANVERSAL+VERTIC
2421	1.00	A1	MAX-N BSCT W TRANVERSAL+VERTICAL
2422	1.00	A1	MIN-N BSCT W TRANVERSAL+VERTICAL
2423	1.00	A1	MAX-VY BSCT W TRANVERSAL+VERTICA
2424	1.00	A1	MIN-VY BSCT W TRANVERSAL+VERTICA
2425	1.00	A1	MAX-VZ BSCT W TRANVERSAL+VERTICA
2426	1.00	A1	MIN-VZ BSCT W TRANVERSAL+VERTICA
2427	1.00	A1	MAX-MT BSCT W TRANVERSAL+VERTICA
2428	1.00	A1	MIN-MT BSCT W TRANVERSAL+VERTICA
2429	1.00	A1	MAX-MY BSCT W TRANVERSAL+VERTICA
2430	1.00	A1	MIN-MY BSCT W TRANVERSAL+VERTICA
2431	1.00	A1	MAX-MZ BSCT W TRANVERSAL+VERTICA
2432	1.00	A1	MIN-MZ BSCT W TRANVERSAL+VERTICA
2445	1.00	A1	MAX-P SPRI W TRANVERSAL+VERTICAL
2446	1.00	A1	MIN-P SPRI W TRANVERSAL+VERTICAL
2447	1.00	A1	MAX-M SPRI W TRANVERSAL+VERTICAL
2448	1.00	A1	MIN-M SPRI W TRANVERSAL+VERTICAL
2471	1.00	A1	MAX-UX NODE W TRANVERSAL+VERTICA
2472	1.00	A1	MIN-UX NODE W TRANVERSAL+VERTICA
2473	1.00	A1	MAX-UY NODE W TRANVERSAL+VERTICA
2474	1.00	A1	MIN-UY NODE W TRANVERSAL+VERTICA
2475	1.00	A1	MAX-UZ NODE W TRANVERSAL+VERTICA
2476	1.00	A1	MIN-UZ NODE W TRANVERSAL+VERTICA
2477	1.00	A1	MAX-URX NODE W TRANVERSAL+VERTIC
2478	1.00	A1	MIN-URX NODE W TRANVERSAL+VERTIC
2479	1.00	A1	MAX-URY NODE W TRANVERSAL+VERTIC
2480	1.00	A1	MIN-URY NODE W TRANVERSAL+VERTIC
2481	1.00	A1	MAX-URZ NODE W TRANVERSAL+VERTIC
2482	1.00	A1	MIN-URZ NODE W TRANVERSAL+VERTIC

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
AUX TEMP 1

Combination rule Number 1

T UNIF
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
201	1.00	A1	T UNIF +
202	1.00	A1	T UNIF -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

T GRAD
Resulting Load Cases type Design ...

Load Case selection

Number	Fact	Type	Designation
211	1.00	A1	T GRAD +
212	1.00	A1	T GRAD -

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 3

T UNIF APOYOS
Resulting Load Cases type Design ...

Load Case selection

Number	Fact	Type	Designation
201	1.00	A1	T UNIF +
202	1.00	A1	T UNIF -

Fact factor for load case
Type type of the load case
A exclusive load

Generated Load Cases

Number	Combination	Designation
3121	1	MAX-N BEAM T UNIF
3122	1	MIN-N BEAM T UNIF
3129	1	MAX-MY BEAM T UNIF
3130	1	MIN-MY BEAM T UNIF
3125	1	MAX-VZ BEAM T UNIF
3126	1	MIN-VZ BEAM T UNIF
3131	1	MAX-MZ BEAM T UNIF
3132	1	MIN-MZ BEAM T UNIF
3123	1	MAX-VY BEAM T UNIF
3124	1	MIN-VY BEAM T UNIF
3127	1	MAX-MT BEAM T UNIF
3128	1	MIN-MT BEAM T UNIF
3101	1	MAX-MX QUAD T UNIF
3102	1	MIN-MX QUAD T UNIF
3103	1	MAX-MY QUAD T UNIF
3104	1	MIN-MY QUAD T UNIF
3105	1	MAX-MXY QUAD T UNIF
3106	1	MIN-MXY QUAD T UNIF
3107	1	MAX-VX QUAD T UNIF
3108	1	MIN-VX QUAD T UNIF
3109	1	MAX-VY QUAD T UNIF
3110	1	MIN-VY QUAD T UNIF
3111	1	MAX-NXX QUAD T UNIF
3112	1	MIN-NXX QUAD T UNIF
3113	1	MAX-NYY QUAD T UNIF

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AUX TEMP 1

Generated Load Cases

Number	Combination	Designation
3114	1	MIN-NYY QUAD T UNIF
3115	1	MAX-NXY QUAD T UNIF
3116	1	MIN-NXY QUAD T UNIF
3145	1	MAX-P SPRI T UNIF
3146	1	MIN-P SPRI T UNIF
3147	1	MAX-M SPRI T UNIF
3148	1	MIN-M SPRI T UNIF
3171	1	MAX-UX NODE T UNIF
3172	1	MIN-UX NODE T UNIF
3173	1	MAX-UY NODE T UNIF
3174	1	MIN-UY NODE T UNIF
3175	1	MAX-UZ NODE T UNIF
3176	1	MIN-UZ NODE T UNIF
3177	1	MAX-URX NODE T UNIF
3178	1	MIN-URX NODE T UNIF
3179	1	MAX-URY NODE T UNIF
3180	1	MIN-URY NODE T UNIF
3181	1	MAX-URZ NODE T UNIF
3182	1	MIN-URZ NODE T UNIF
3121	1	MAX-N BSCT T UNIF
3122	1	MIN-N BSCT T UNIF
3123	1	MAX-VY BSCT T UNIF
3124	1	MIN-VY BSCT T UNIF
3125	1	MAX-VZ BSCT T UNIF
3126	1	MIN-VZ BSCT T UNIF
3127	1	MAX-MT BSCT T UNIF
3128	1	MIN-MT BSCT T UNIF
3129	1	MAX-MY BSCT T UNIF
3130	1	MIN-MY BSCT T UNIF
3131	1	MAX-MZ BSCT T UNIF
3132	1	MIN-MZ BSCT T UNIF
3221	2	MAX-N BEAM T GRAD
3222	2	MIN-N BEAM T GRAD
3229	2	MAX-MY BEAM T GRAD
3230	2	MIN-MY BEAM T GRAD
3225	2	MAX-VZ BEAM T GRAD
3226	2	MIN-VZ BEAM T GRAD
3231	2	MAX-MZ BEAM T GRAD
3232	2	MIN-MZ BEAM T GRAD
3223	2	MAX-VY BEAM T GRAD
3224	2	MIN-VY BEAM T GRAD
3227	2	MAX-MT BEAM T GRAD
3228	2	MIN-MT BEAM T GRAD
3201	2	MAX-MX QUAD T GRAD
3202	2	MIN-MX QUAD T GRAD
3203	2	MAX-MY QUAD T GRAD
3204	2	MIN-MY QUAD T GRAD
3205	2	MAX-MXY QUAD T GRAD
3206	2	MIN-MXY QUAD T GRAD
3207	2	MAX-VX QUAD T GRAD
3208	2	MIN-VX QUAD T GRAD
3209	2	MAX-VY QUAD T GRAD
3210	2	MIN-VY QUAD T GRAD
3211	2	MAX-NXX QUAD T GRAD
3212	2	MIN-NXX QUAD T GRAD
3213	2	MAX-NYY QUAD T GRAD
3214	2	MIN-NYY QUAD T GRAD
3215	2	MAX-NXY QUAD T GRAD

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MODELO
AUX TEMP 1

Generated Load Cases

Number	Combination	Designation
3216	2	MIN-NXY QUAD T GRAD
3245	2	MAX-P SPRI T GRAD
3246	2	MIN-P SPRI T GRAD
3247	2	MAX-M SPRI T GRAD
3248	2	MIN-M SPRI T GRAD
3271	2	MAX-UX NODE T GRAD
3272	2	MIN-UX NODE T GRAD
3273	2	MAX-UY NODE T GRAD
3274	2	MIN-UY NODE T GRAD
3275	2	MAX-UZ NODE T GRAD
3276	2	MIN-UZ NODE T GRAD
3277	2	MAX-URX NODE T GRAD
3278	2	MIN-URX NODE T GRAD
3279	2	MAX-URY NODE T GRAD
3280	2	MIN-URY NODE T GRAD
3281	2	MAX-URZ NODE T GRAD
3282	2	MIN-URZ NODE T GRAD
3221	2	MAX-N BSCT T GRAD
3222	2	MIN-N BSCT T GRAD
3223	2	MAX-VY BSCT T GRAD
3224	2	MIN-VY BSCT T GRAD
3225	2	MAX-VZ BSCT T GRAD
3226	2	MIN-VZ BSCT T GRAD
3227	2	MAX-MT BSCT T GRAD
3228	2	MIN-MT BSCT T GRAD
3229	2	MAX-MY BSCT T GRAD
3230	2	MIN-MY BSCT T GRAD
3231	2	MAX-MZ BSCT T GRAD
3232	2	MIN-MZ BSCT T GRAD
3621	3	MAX-N BEAM T UNIF APOYOS
3622	3	MIN-N BEAM T UNIF APOYOS
3629	3	MAX-MY BEAM T UNIF APOYOS
3630	3	MIN-MY BEAM T UNIF APOYOS
3625	3	MAX-VZ BEAM T UNIF APOYOS
3626	3	MIN-VZ BEAM T UNIF APOYOS
3631	3	MAX-MZ BEAM T UNIF APOYOS
3632	3	MIN-MZ BEAM T UNIF APOYOS
3623	3	MAX-VY BEAM T UNIF APOYOS
3624	3	MIN-VY BEAM T UNIF APOYOS
3627	3	MAX-MT BEAM T UNIF APOYOS
3628	3	MIN-MT BEAM T UNIF APOYOS
3601	3	MAX-MX QUAD T UNIF APOYOS
3602	3	MIN-MX QUAD T UNIF APOYOS
3603	3	MAX-MY QUAD T UNIF APOYOS
3604	3	MIN-MY QUAD T UNIF APOYOS
3605	3	MAX-MXY QUAD T UNIF APOYOS
3606	3	MIN-MXY QUAD T UNIF APOYOS
3607	3	MAX-VX QUAD T UNIF APOYOS
3608	3	MIN-VX QUAD T UNIF APOYOS
3609	3	MAX-VY QUAD T UNIF APOYOS
3610	3	MIN-VY QUAD T UNIF APOYOS
3611	3	MAX-NXX QUAD T UNIF APOYOS
3612	3	MIN-NXX QUAD T UNIF APOYOS
3613	3	MAX-NYY QUAD T UNIF APOYOS
3614	3	MIN-NYY QUAD T UNIF APOYOS
3615	3	MAX-NXY QUAD T UNIF APOYOS
3616	3	MIN-NXY QUAD T UNIF APOYOS
3645	3	MAX-P SPRI T UNIF APOYOS

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MODELO
AUX TEMP 1

Generated Load Cases

Number	Combination	Designation
3646	3	MIN-P SPRI T UNIF APOYOS
3647	3	MAX-M SPRI T UNIF APOYOS
3648	3	MIN-M SPRI T UNIF APOYOS
3671	3	MAX-UX NODE T UNIF APOYOS
3672	3	MIN-UX NODE T UNIF APOYOS
3673	3	MAX-UY NODE T UNIF APOYOS
3674	3	MIN-UY NODE T UNIF APOYOS
3675	3	MAX-UZ NODE T UNIF APOYOS
3676	3	MIN-UZ NODE T UNIF APOYOS
3677	3	MAX-URX NODE T UNIF APOYOS
3678	3	MIN-URX NODE T UNIF APOYOS
3679	3	MAX-URY NODE T UNIF APOYOS
3680	3	MIN-URY NODE T UNIF APOYOS
3681	3	MAX-URZ NODE T UNIF APOYOS
3682	3	MIN-URZ NODE T UNIF APOYOS
3621	3	MAX-N BSCT T UNIF APOYOS
3622	3	MIN-N BSCT T UNIF APOYOS
3623	3	MAX-VY BSCT T UNIF APOYOS
3624	3	MIN-VY BSCT T UNIF APOYOS
3625	3	MAX-VZ BSCT T UNIF APOYOS
3626	3	MIN-VZ BSCT T UNIF APOYOS
3627	3	MAX-MT BSCT T UNIF APOYOS
3628	3	MIN-MT BSCT T UNIF APOYOS
3629	3	MAX-MY BSCT T UNIF APOYOS
3630	3	MIN-MY BSCT T UNIF APOYOS
3631	3	MAX-MZ BSCT T UNIF APOYOS
3632	3	MIN-MZ BSCT T UNIF APOYOS

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MODELO
AUX TEMP 2

Combination rule Number 1
T UNIF DOM
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3101	1.00	A1	MAX-MX QUAD T UNIF
3102	1.00	A1	MIN-MX QUAD T UNIF
3103	1.00	A1	MAX-MY QUAD T UNIF
3104	1.00	A1	MIN-MY QUAD T UNIF
3105	1.00	A1	MAX-MXY QUAD T UNIF
3106	1.00	A1	MIN-MXY QUAD T UNIF
3107	1.00	A1	MAX-VX QUAD T UNIF
3108	1.00	A1	MIN-VX QUAD T UNIF
3109	1.00	A1	MAX-VY QUAD T UNIF
3110	1.00	A1	MIN-VY QUAD T UNIF
3111	1.00	A1	MAX-NXX QUAD T UNIF
3112	1.00	A1	MIN-NXX QUAD T UNIF
3113	1.00	A1	MAX-NYY QUAD T UNIF
3114	1.00	A1	MIN-NYY QUAD T UNIF
3115	1.00	A1	MAX-NXY QUAD T UNIF
3116	1.00	A1	MIN-NXY QUAD T UNIF
3121	1.00	A1	MAX-N BSCT T UNIF
3122	1.00	A1	MIN-N BSCT T UNIF
3123	1.00	A1	MAX-VY BSCT T UNIF
3124	1.00	A1	MIN-VY BSCT T UNIF
3125	1.00	A1	MAX-VZ BSCT T UNIF
3126	1.00	A1	MIN-VZ BSCT T UNIF
3127	1.00	A1	MAX-MT BSCT T UNIF
3128	1.00	A1	MIN-MT BSCT T UNIF
3129	1.00	A1	MAX-MY BSCT T UNIF
3130	1.00	A1	MIN-MY BSCT T UNIF
3131	1.00	A1	MAX-MZ BSCT T UNIF
3132	1.00	A1	MIN-MZ BSCT T UNIF
3145	1.00	A1	MAX-P SPRI T UNIF
3146	1.00	A1	MIN-P SPRI T UNIF
3147	1.00	A1	MAX-M SPRI T UNIF
3148	1.00	A1	MIN-M SPRI T UNIF
3171	1.00	A1	MAX-UX NODE T UNIF
3172	1.00	A1	MIN-UX NODE T UNIF
3173	1.00	A1	MAX-UY NODE T UNIF
3174	1.00	A1	MIN-UY NODE T UNIF
3175	1.00	A1	MAX-UZ NODE T UNIF
3176	1.00	A1	MIN-UZ NODE T UNIF
3177	1.00	A1	MAX-URX NODE T UNIF
3178	1.00	A1	MIN-URX NODE T UNIF
3179	1.00	A1	MAX-URY NODE T UNIF
3180	1.00	A1	MIN-URY NODE T UNIF
3181	1.00	A1	MAX-URZ NODE T UNIF
3182	1.00	A1	MIN-URZ NODE T UNIF
3201	0.75	A2	MAX-MX QUAD T GRAD
3202	0.75	A2	MIN-MX QUAD T GRAD
3203	0.75	A2	MAX-MY QUAD T GRAD
3204	0.75	A2	MIN-MY QUAD T GRAD
3205	0.75	A2	MAX-MXY QUAD T GRAD
3206	0.75	A2	MIN-MXY QUAD T GRAD
3207	0.75	A2	MAX-VX QUAD T GRAD
3208	0.75	A2	MIN-VX QUAD T GRAD
3209	0.75	A2	MAX-VY QUAD T GRAD
3210	0.75	A2	MIN-VY QUAD T GRAD

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3211	0.75	A2	MAX-NXX QUAD T GRAD
3212	0.75	A2	MIN-NXX QUAD T GRAD
3213	0.75	A2	MAX-NYY QUAD T GRAD
3214	0.75	A2	MIN-NYY QUAD T GRAD
3215	0.75	A2	MAX-NXY QUAD T GRAD
3216	0.75	A2	MIN-NXY QUAD T GRAD
3221	0.75	A2	MAX-N BSCT T GRAD
3222	0.75	A2	MIN-N BSCT T GRAD
3223	0.75	A2	MAX-VY BSCT T GRAD
3224	0.75	A2	MIN-VY BSCT T GRAD
3225	0.75	A2	MAX-VZ BSCT T GRAD
3226	0.75	A2	MIN-VZ BSCT T GRAD
3227	0.75	A2	MAX-MT BSCT T GRAD
3228	0.75	A2	MIN-MT BSCT T GRAD
3229	0.75	A2	MAX-MY BSCT T GRAD
3230	0.75	A2	MIN-MY BSCT T GRAD
3231	0.75	A2	MAX-MZ BSCT T GRAD
3232	0.75	A2	MIN-MZ BSCT T GRAD
3245	0.75	A2	MAX-P SPRI T GRAD
3246	0.75	A2	MIN-P SPRI T GRAD
3247	0.75	A2	MAX-M SPRI T GRAD
3248	0.75	A2	MIN-M SPRI T GRAD
3271	0.75	A2	MAX-UX NODE T GRAD
3272	0.75	A2	MIN-UX NODE T GRAD
3273	0.75	A2	MAX-UY NODE T GRAD
3274	0.75	A2	MIN-UY NODE T GRAD
3275	0.75	A2	MAX-UZ NODE T GRAD
3276	0.75	A2	MIN-UZ NODE T GRAD
3277	0.75	A2	MAX-URX NODE T GRAD
3278	0.75	A2	MIN-URX NODE T GRAD
3279	0.75	A2	MAX-URY NODE T GRAD
3280	0.75	A2	MIN-URY NODE T GRAD
3281	0.75	A2	MAX-URZ NODE T GRAD
3282	0.75	A2	MIN-URZ NODE T GRAD

Fact factor for load case
Type type of the load case
A exclusive load

Combination rule Number 2

T GRAD DOM
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3101	0.35	A1	MAX-MX QUAD T UNIF
3102	0.35	A1	MIN-MX QUAD T UNIF
3103	0.35	A1	MAX-MY QUAD T UNIF
3104	0.35	A1	MIN-MY QUAD T UNIF
3105	0.35	A1	MAX-MXY QUAD T UNIF
3106	0.35	A1	MIN-MXY QUAD T UNIF
3107	0.35	A1	MAX-VX QUAD T UNIF
3108	0.35	A1	MIN-VX QUAD T UNIF
3109	0.35	A1	MAX-VY QUAD T UNIF
3110	0.35	A1	MIN-VY QUAD T UNIF
3111	0.35	A1	MAX-NXX QUAD T UNIF
3112	0.35	A1	MIN-NXX QUAD T UNIF
3113	0.35	A1	MAX-NYY QUAD T UNIF
3114	0.35	A1	MIN-NYY QUAD T UNIF
3115	0.35	A1	MAX-NXY QUAD T UNIF

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3116	0.35	A1	MIN-NXY QUAD T UNIF
3121	0.35	A1	MAX-N BSCT T UNIF
3122	0.35	A1	MIN-N BSCT T UNIF
3123	0.35	A1	MAX-VY BSCT T UNIF
3124	0.35	A1	MIN-VY BSCT T UNIF
3125	0.35	A1	MAX-VZ BSCT T UNIF
3126	0.35	A1	MIN-VZ BSCT T UNIF
3127	0.35	A1	MAX-MT BSCT T UNIF
3128	0.35	A1	MIN-MT BSCT T UNIF
3129	0.35	A1	MAX-MY BSCT T UNIF
3130	0.35	A1	MIN-MY BSCT T UNIF
3131	0.35	A1	MAX-MZ BSCT T UNIF
3132	0.35	A1	MIN-MZ BSCT T UNIF
3145	0.35	A1	MAX-P SPRI T UNIF
3146	0.35	A1	MIN-P SPRI T UNIF
3147	0.35	A1	MAX-M SPRI T UNIF
3148	0.35	A1	MIN-M SPRI T UNIF
3171	0.35	A1	MAX-UX NODE T UNIF
3172	0.35	A1	MIN-UX NODE T UNIF
3173	0.35	A1	MAX-UY NODE T UNIF
3174	0.35	A1	MIN-UY NODE T UNIF
3175	0.35	A1	MAX-UZ NODE T UNIF
3176	0.35	A1	MIN-UZ NODE T UNIF
3177	0.35	A1	MAX-URX NODE T UNIF
3178	0.35	A1	MIN-URX NODE T UNIF
3179	0.35	A1	MAX-URY NODE T UNIF
3180	0.35	A1	MIN-URY NODE T UNIF
3181	0.35	A1	MAX-URZ NODE T UNIF
3182	0.35	A1	MIN-URZ NODE T UNIF
3201	1.00	A2	MAX-MX QUAD T GRAD
3202	1.00	A2	MIN-MX QUAD T GRAD
3203	1.00	A2	MAX-MY QUAD T GRAD
3204	1.00	A2	MIN-MY QUAD T GRAD
3205	1.00	A2	MAX-MXY QUAD T GRAD
3206	1.00	A2	MIN-MXY QUAD T GRAD
3207	1.00	A2	MAX-VX QUAD T GRAD
3208	1.00	A2	MIN-VX QUAD T GRAD
3209	1.00	A2	MAX-VY QUAD T GRAD
3210	1.00	A2	MIN-VY QUAD T GRAD
3211	1.00	A2	MAX-NXX QUAD T GRAD
3212	1.00	A2	MIN-NXX QUAD T GRAD
3213	1.00	A2	MAX-NYY QUAD T GRAD
3214	1.00	A2	MIN-NYY QUAD T GRAD
3215	1.00	A2	MAX-NXY QUAD T GRAD
3216	1.00	A2	MIN-NXY QUAD T GRAD
3221	1.00	A2	MAX-N BSCT T GRAD
3222	1.00	A2	MIN-N BSCT T GRAD
3223	1.00	A2	MAX-VY BSCT T GRAD
3224	1.00	A2	MIN-VY BSCT T GRAD
3225	1.00	A2	MAX-VZ BSCT T GRAD
3226	1.00	A2	MIN-VZ BSCT T GRAD
3227	1.00	A2	MAX-MT BSCT T GRAD
3228	1.00	A2	MIN-MT BSCT T GRAD
3229	1.00	A2	MAX-MY BSCT T GRAD
3230	1.00	A2	MIN-MY BSCT T GRAD
3231	1.00	A2	MAX-MZ BSCT T GRAD
3232	1.00	A2	MIN-MZ BSCT T GRAD
3245	1.00	A2	MAX-P SPRI T GRAD

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MODELO
AUX TEMP 2

Load Case selection

Number	Fact	Type	Designation
3246	1.00	A2	MIN-P SPRI T GRAD
3247	1.00	A2	MAX-M SPRI T GRAD
3248	1.00	A2	MIN-M SPRI T GRAD
3271	1.00	A2	MAX-UX NODE T GRAD
3272	1.00	A2	MIN-UX NODE T GRAD
3273	1.00	A2	MAX-UY NODE T GRAD
3274	1.00	A2	MIN-UY NODE T GRAD
3275	1.00	A2	MAX-UZ NODE T GRAD
3276	1.00	A2	MIN-UZ NODE T GRAD
3277	1.00	A2	MAX-URX NODE T GRAD
3278	1.00	A2	MIN-URX NODE T GRAD
3279	1.00	A2	MAX-URY NODE T GRAD
3280	1.00	A2	MIN-URY NODE T GRAD
3281	1.00	A2	MAX-URZ NODE T GRAD
3282	1.00	A2	MIN-URZ NODE T GRAD

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
TEMPERATURA

Combination rule Number 1
ENVOLVENTE T
Resulting Load Cases type Design combination

Load Case selection

Number	Fact	Type	Designation
3301	1.00	A1	MAX-MX QUAD T UNIF DOM
3302	1.00	A1	MIN-MX QUAD T UNIF DOM
3303	1.00	A1	MAX-MY QUAD T UNIF DOM
3304	1.00	A1	MIN-MY QUAD T UNIF DOM
3305	1.00	A1	MAX-MXY QUAD T UNIF DOM
3306	1.00	A1	MIN-MXY QUAD T UNIF DOM
3307	1.00	A1	MAX-VX QUAD T UNIF DOM
3308	1.00	A1	MIN-VX QUAD T UNIF DOM
3309	1.00	A1	MAX-VY QUAD T UNIF DOM
3310	1.00	A1	MIN-VY QUAD T UNIF DOM
3311	1.00	A1	MAX-NXX QUAD T UNIF DOM
3312	1.00	A1	MIN-NXX QUAD T UNIF DOM
3313	1.00	A1	MAX-NYY QUAD T UNIF DOM
3314	1.00	A1	MIN-NYY QUAD T UNIF DOM
3315	1.00	A1	MAX-NXY QUAD T UNIF DOM
3316	1.00	A1	MIN-NXY QUAD T UNIF DOM
3321	1.00	A1	MAX-N BSCT T UNIF DOM
3322	1.00	A1	MIN-N BSCT T UNIF DOM
3323	1.00	A1	MAX-VY BSCT T UNIF DOM
3324	1.00	A1	MIN-VY BSCT T UNIF DOM
3325	1.00	A1	MAX-VZ BSCT T UNIF DOM
3326	1.00	A1	MIN-VZ BSCT T UNIF DOM
3327	1.00	A1	MAX-MT BSCT T UNIF DOM
3328	1.00	A1	MIN-MT BSCT T UNIF DOM
3329	1.00	A1	MAX-MY BSCT T UNIF DOM
3330	1.00	A1	MIN-MY BSCT T UNIF DOM
3331	1.00	A1	MAX-MZ BSCT T UNIF DOM
3332	1.00	A1	MIN-MZ BSCT T UNIF DOM
3345	1.00	A1	MAX-P SPRI T UNIF DOM
3346	1.00	A1	MIN-P SPRI T UNIF DOM
3347	1.00	A1	MAX-M SPRI T UNIF DOM
3348	1.00	A1	MIN-M SPRI T UNIF DOM
3371	1.00	A1	MAX-UX NODE T UNIF DOM
3372	1.00	A1	MIN-UX NODE T UNIF DOM
3373	1.00	A1	MAX-UY NODE T UNIF DOM
3374	1.00	A1	MIN-UY NODE T UNIF DOM
3375	1.00	A1	MAX-UZ NODE T UNIF DOM
3376	1.00	A1	MIN-UZ NODE T UNIF DOM
3377	1.00	A1	MAX-URX NODE T UNIF DOM
3378	1.00	A1	MIN-URX NODE T UNIF DOM
3379	1.00	A1	MAX-URY NODE T UNIF DOM
3380	1.00	A1	MIN-URY NODE T UNIF DOM
3381	1.00	A1	MAX-URZ NODE T UNIF DOM
3382	1.00	A1	MIN-URZ NODE T UNIF DOM
3401	1.00	A1	MAX-MX QUAD T GRAD DOM
3402	1.00	A1	MIN-MX QUAD T GRAD DOM
3403	1.00	A1	MAX-MY QUAD T GRAD DOM
3404	1.00	A1	MIN-MY QUAD T GRAD DOM
3405	1.00	A1	MAX-MXY QUAD T GRAD DOM
3406	1.00	A1	MIN-MXY QUAD T GRAD DOM
3407	1.00	A1	MAX-VX QUAD T GRAD DOM
3408	1.00	A1	MIN-VX QUAD T GRAD DOM
3409	1.00	A1	MAX-VY QUAD T GRAD DOM
3410	1.00	A1	MIN-VY QUAD T GRAD DOM

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MODELO
TEMPERATURA

Load Case selection

Number	Fact	Type	Designation
3411	1.00	A1	MAX-NXX QUAD T GRAD DOM
3412	1.00	A1	MIN-NXX QUAD T GRAD DOM
3413	1.00	A1	MAX-NYY QUAD T GRAD DOM
3414	1.00	A1	MIN-NYY QUAD T GRAD DOM
3415	1.00	A1	MAX-NXY QUAD T GRAD DOM
3416	1.00	A1	MIN-NXY QUAD T GRAD DOM
3421	1.00	A1	MAX-N BSCT T GRAD DOM
3422	1.00	A1	MIN-N BSCT T GRAD DOM
3423	1.00	A1	MAX-VY BSCT T GRAD DOM
3424	1.00	A1	MIN-VY BSCT T GRAD DOM
3425	1.00	A1	MAX-VZ BSCT T GRAD DOM
3426	1.00	A1	MIN-VZ BSCT T GRAD DOM
3427	1.00	A1	MAX-MT BSCT T GRAD DOM
3428	1.00	A1	MIN-MT BSCT T GRAD DOM
3429	1.00	A1	MAX-MY BSCT T GRAD DOM
3430	1.00	A1	MIN-MY BSCT T GRAD DOM
3431	1.00	A1	MAX-MZ BSCT T GRAD DOM
3432	1.00	A1	MIN-MZ BSCT T GRAD DOM
3445	1.00	A1	MAX-P SPRI T GRAD DOM
3446	1.00	A1	MIN-P SPRI T GRAD DOM
3447	1.00	A1	MAX-M SPRI T GRAD DOM
3448	1.00	A1	MIN-M SPRI T GRAD DOM
3471	1.00	A1	MAX-UX NODE T GRAD DOM
3472	1.00	A1	MIN-UX NODE T GRAD DOM
3473	1.00	A1	MAX-UY NODE T GRAD DOM
3474	1.00	A1	MIN-UY NODE T GRAD DOM
3475	1.00	A1	MAX-UZ NODE T GRAD DOM
3476	1.00	A1	MIN-UZ NODE T GRAD DOM
3477	1.00	A1	MAX-URX NODE T GRAD DOM
3478	1.00	A1	MIN-URX NODE T GRAD DOM
3479	1.00	A1	MAX-URY NODE T GRAD DOM
3480	1.00	A1	MIN-URY NODE T GRAD DOM
3481	1.00	A1	MAX-URZ NODE T GRAD DOM
3482	1.00	A1	MIN-URZ NODE T GRAD DOM

Fact factor for load case
Type type of the load case
A exclusive load

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MODELO
ELU

Superposition according to EuroNorm EN 1992-1-1:2004 Concrete Structures

Combination rule Number 1

ELU

Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

		Superposition Factors									
Act	Part	γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	PERM	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP

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MODELO
ELU

Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.50	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.50	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	LC										
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 2

ELU 2
Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

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Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	PERM	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T_1	Q	1.50	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	LC										
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
T_2	Q	1.50	0.00	1.00	0.30	0.20	0.00	1.00			temperature loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 3

ELU PP+SC

Superposition according to manual MAXIMA formula 2.1

$$E_d = E\left\{\sum_{j\geq 1}\gamma_{G,j}\cdot G_{k,j} \oplus \gamma_P \cdot P_k \oplus \gamma_{Q,1}\cdot Q_{k,1} \oplus \sum_{i>1}\gamma_{Q,i}\cdot\psi_{0,i}\cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.35	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.35	0.00	1.00	0.00	0.00	0.00	1.00			variable load

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

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Superposition according to EuroNorm EN 1992-1-1:2004 Concrete Structures

Combination rule Number 1
ELS CARACTERÍSTICA
Superposition according to manual MAXIMA formula 2.4

$$E_{d,rare} = E\left\{\sum_{j\geq 1} G_{k,j} \oplus P_k \oplus Q_{k,1} \oplus \sum_{i>1} \psi_{0,i} \cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

Load Case selection and Actions

		Superposition Factors									
Act	Part	γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
G_1	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.00	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP

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Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.00	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.00	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

Combination rule Number 2

ELS CUASI-PERMANENTE
Superposition according to manual MAXIMA formula 2.7

$$E_{d,perm} = E\left\{\sum_{j\geq 1} G_{k,j} \oplus P_k \oplus \sum_{i\geq 1} \psi_{2,i} \cdot Q_{k,i}\right\}$$

Resulting Load Cases type ULS fundamental combination

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Load Case selection and Actions

Act	Part / LC	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
G_1	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g1
	5								1.00	PERM	PP PREFABRICADO
	6								1.00	PERM	PP IN SITU
	2								1.00	A1	RETRACCION
G_2	G	1.00	1.00	1.00	1.00	1.00	1.00	1.00			dead load g2
	11								1.00	A2	ACABADO Y PELDAÑEADO
	12								1.00	PERM	BARRERAS
Q	Q	1.00	0.00	1.00	0.00	0.00	0.00	1.00			variable load
	1301								1.00	A1	MAX-MX QUAD ENVOLVENTE SCP
	1302								1.00	A1	MIN-MX QUAD ENVOLVENTE SCP
	1303								1.00	A1	MAX-MY QUAD ENVOLVENTE SCP
	1304								1.00	A1	MIN-MY QUAD ENVOLVENTE SCP
	1305								1.00	A1	MAX-MXY QUAD ENVOLVENTE SCP
	1306								1.00	A1	MIN-MXY QUAD ENVOLVENTE SCP
	1307								1.00	A1	MAX-VX QUAD ENVOLVENTE SCP
	1308								1.00	A1	MIN-VX QUAD ENVOLVENTE SCP
	1309								1.00	A1	MAX-VY QUAD ENVOLVENTE SCP
	1310								1.00	A1	MIN-VY QUAD ENVOLVENTE SCP
	1311								1.00	A1	MAX-NXX QUAD ENVOLVENTE SCP
	1312								1.00	A1	MIN-NXX QUAD ENVOLVENTE SCP
	1313								1.00	A1	MAX-NYY QUAD ENVOLVENTE SCP
	1314								1.00	A1	MIN-NYY QUAD ENVOLVENTE SCP
	1315								1.00	A1	MAX-NXY QUAD ENVOLVENTE SCP
	1316								1.00	A1	MIN-NXY QUAD ENVOLVENTE SCP
	1321								1.00	A1	MAX-N BSCT ENVOLVENTE SCP
	1322								1.00	A1	MIN-N BSCT ENVOLVENTE SCP
	1323								1.00	A1	MAX-VY BSCT ENVOLVENTE SCP
	1324								1.00	A1	MIN-VY BSCT ENVOLVENTE SCP
	1325								1.00	A1	MAX-VZ BSCT ENVOLVENTE SCP
	1326								1.00	A1	MIN-VZ BSCT ENVOLVENTE SCP
	1327								1.00	A1	MAX-MT BSCT ENVOLVENTE SCP
	1328								1.00	A1	MIN-MT BSCT ENVOLVENTE SCP
	1329								1.00	A1	MAX-MY BSCT ENVOLVENTE SCP
	1330								1.00	A1	MIN-MY BSCT ENVOLVENTE SCP
	1331								1.00	A1	MAX-MZ BSCT ENVOLVENTE SCP
	1332								1.00	A1	MIN-MZ BSCT ENVOLVENTE SCP
	1345								1.00	A1	MAX-P SPRI ENVOLVENTE SCP
	1346								1.00	A1	MIN-P SPRI ENVOLVENTE SCP
	1347								1.00	A1	MAX-M SPRI ENVOLVENTE SCP
	1348								1.00	A1	MIN-M SPRI ENVOLVENTE SCP
	1371								1.00	A1	MAX-UX NODE ENVOLVENTE SCP
	1372								1.00	A1	MIN-UX NODE ENVOLVENTE SCP
	1373								1.00	A1	MAX-UY NODE ENVOLVENTE SCP
	1374								1.00	A1	MIN-UY NODE ENVOLVENTE SCP
	1375								1.00	A1	MAX-UZ NODE ENVOLVENTE SCP
	1376								1.00	A1	MIN-UZ NODE ENVOLVENTE SCP
	1377								1.00	A1	MAX-URX NODE ENVOLVENTE SCP
	1378								1.00	A1	MIN-URX NODE ENVOLVENTE SCP
	1379								1.00	A1	MAX-URY NODE ENVOLVENTE SCP
	1380								1.00	A1	MIN-URY NODE ENVOLVENTE SCP
	1381								1.00	A1	MAX-URZ NODE ENVOLVENTE SCP
	1382								1.00	A1	MIN-URZ NODE ENVOLVENTE SCP
T	Q	1.00	0.00	1.00	0.60	0.60	0.50	1.00			temperature loading
	3501								1.00	A1	MAX-MX QUAD ENVOLVENTE T
	3502								1.00	A1	MIN-MX QUAD ENVOLVENTE T
	3503								1.00	A1	MAX-MY QUAD ENVOLVENTE T

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf	Fact	Type	Designation
	LC										
	3504								1.00	A1	MIN-MY QUAD ENVOLVENTE T
	3505								1.00	A1	MAX-MXY QUAD ENVOLVENTE T
	3506								1.00	A1	MIN-MXY QUAD ENVOLVENTE T
	3507								1.00	A1	MAX-VX QUAD ENVOLVENTE T
	3508								1.00	A1	MIN-VX QUAD ENVOLVENTE T
	3509								1.00	A1	MAX-VY QUAD ENVOLVENTE T
	3510								1.00	A1	MIN-VY QUAD ENVOLVENTE T
	3511								1.00	A1	MAX-NXX QUAD ENVOLVENTE T
	3512								1.00	A1	MIN-NXX QUAD ENVOLVENTE T
	3513								1.00	A1	MAX-NYY QUAD ENVOLVENTE T
	3514								1.00	A1	MIN-NYY QUAD ENVOLVENTE T
	3515								1.00	A1	MAX-NXY QUAD ENVOLVENTE T
	3516								1.00	A1	MIN-NXY QUAD ENVOLVENTE T
	3521								1.00	A1	MAX-N BSCT ENVOLVENTE T
	3522								1.00	A1	MIN-N BSCT ENVOLVENTE T
	3523								1.00	A1	MAX-VY BSCT ENVOLVENTE T
	3524								1.00	A1	MIN-VY BSCT ENVOLVENTE T
	3525								1.00	A1	MAX-VZ BSCT ENVOLVENTE T
	3526								1.00	A1	MIN-VZ BSCT ENVOLVENTE T
	3527								1.00	A1	MAX-MT BSCT ENVOLVENTE T
	3528								1.00	A1	MIN-MT BSCT ENVOLVENTE T
	3529								1.00	A1	MAX-MY BSCT ENVOLVENTE T
	3530								1.00	A1	MIN-MY BSCT ENVOLVENTE T
	3531								1.00	A1	MAX-MZ BSCT ENVOLVENTE T
	3532								1.00	A1	MIN-MZ BSCT ENVOLVENTE T
	3545								1.00	A1	MAX-P SPRI ENVOLVENTE T
	3546								1.00	A1	MIN-P SPRI ENVOLVENTE T
	3547								1.00	A1	MAX-M SPRI ENVOLVENTE T
	3548								1.00	A1	MIN-M SPRI ENVOLVENTE T
	3571								1.00	A1	MAX-UX NODE ENVOLVENTE T
	3572								1.00	A1	MIN-UX NODE ENVOLVENTE T
	3573								1.00	A1	MAX-UY NODE ENVOLVENTE T
	3574								1.00	A1	MIN-UY NODE ENVOLVENTE T
	3575								1.00	A1	MAX-UZ NODE ENVOLVENTE T
	3576								1.00	A1	MIN-UZ NODE ENVOLVENTE T
	3577								1.00	A1	MAX-URX NODE ENVOLVENTE T
	3578								1.00	A1	MIN-URX NODE ENVOLVENTE T
	3579								1.00	A1	MAX-URY NODE ENVOLVENTE T
	3580								1.00	A1	MIN-URY NODE ENVOLVENTE T
	3581								1.00	A1	MAX-URZ NODE ENVOLVENTE T
	3582								1.00	A1	MIN-URZ NODE ENVOLVENTE T
W	Q	1.00	0.00	1.00	0.30	0.20	0.00	1.00			wind loading
	2501								1.00	A1	MAX-MX QUAD ENVOLVENTE W
	2502								1.00	A1	MIN-MX QUAD ENVOLVENTE W
	2503								1.00	A1	MAX-MY QUAD ENVOLVENTE W
	2504								1.00	A1	MIN-MY QUAD ENVOLVENTE W
	2505								1.00	A1	MAX-MXY QUAD ENVOLVENTE W
	2506								1.00	A1	MIN-MXY QUAD ENVOLVENTE W
	2507								1.00	A1	MAX-VX QUAD ENVOLVENTE W
	2508								1.00	A1	MIN-VX QUAD ENVOLVENTE W
	2509								1.00	A1	MAX-VY QUAD ENVOLVENTE W
	2510								1.00	A1	MIN-VY QUAD ENVOLVENTE W
	2511								1.00	A1	MAX-NXX QUAD ENVOLVENTE W
	2512								1.00	A1	MIN-NXX QUAD ENVOLVENTE W
	2513								1.00	A1	MAX-NYY QUAD ENVOLVENTE W
	2514								1.00	A1	MIN-NYY QUAD ENVOLVENTE W

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Load Case selection and Actions

Act	Part	Superposition Factors γ-u	γ-f	γ-a	ψ_0	ψ_1	ψ_2	$\psi_1$inf			Designation
	LC								Fact	Type	
	2515								1.00	A1	MAX-NXY QUAD ENVOLVENTE W
	2516								1.00	A1	MIN-NXY QUAD ENVOLVENTE W
	2521								1.00	A1	MAX-N BSCT ENVOLVENTE W
	2522								1.00	A1	MIN-N BSCT ENVOLVENTE W
	2523								1.00	A1	MAX-VY BSCT ENVOLVENTE W
	2524								1.00	A1	MIN-VY BSCT ENVOLVENTE W
	2525								1.00	A1	MAX-VZ BSCT ENVOLVENTE W
	2526								1.00	A1	MIN-VZ BSCT ENVOLVENTE W
	2527								1.00	A1	MAX-MT BSCT ENVOLVENTE W
	2528								1.00	A1	MIN-MT BSCT ENVOLVENTE W
	2529								1.00	A1	MAX-MY BSCT ENVOLVENTE W
	2530								1.00	A1	MIN-MY BSCT ENVOLVENTE W
	2531								1.00	A1	MAX-MZ BSCT ENVOLVENTE W
	2532								1.00	A1	MIN-MZ BSCT ENVOLVENTE W
	2545								1.00	A1	MAX-P SPRI ENVOLVENTE W
	2546								1.00	A1	MIN-P SPRI ENVOLVENTE W
	2547								1.00	A1	MAX-M SPRI ENVOLVENTE W
	2548								1.00	A1	MIN-M SPRI ENVOLVENTE W
	2571								1.00	A1	MAX-UX NODE ENVOLVENTE W
	2572								1.00	A1	MIN-UX NODE ENVOLVENTE W
	2573								1.00	A1	MAX-UY NODE ENVOLVENTE W
	2574								1.00	A1	MIN-UY NODE ENVOLVENTE W
	2575								1.00	A1	MAX-UZ NODE ENVOLVENTE W
	2576								1.00	A1	MIN-UZ NODE ENVOLVENTE W
	2577								1.00	A1	MAX-URX NODE ENVOLVENTE W
	2578								1.00	A1	MIN-URX NODE ENVOLVENTE W
	2579								1.00	A1	MAX-URY NODE ENVOLVENTE W
	2580								1.00	A1	MIN-URY NODE ENVOLVENTE W
	2581								1.00	A1	MAX-URZ NODE ENVOLVENTE W
	2582								1.00	A1	MIN-URZ NODE ENVOLVENTE W

Act	action	Fact	factor for load case
Part	partition of the action	Type	type of the load case
γ-u,γ-f,γ-a	partial safety factors for unfavourable/favourable/accidental	PERM	permanent load grouped in actions
ψ_0,ψ_1,ψ_2,$\psi_1$inf	combination coefficients	A	exclusive load
LC	number of the load case		

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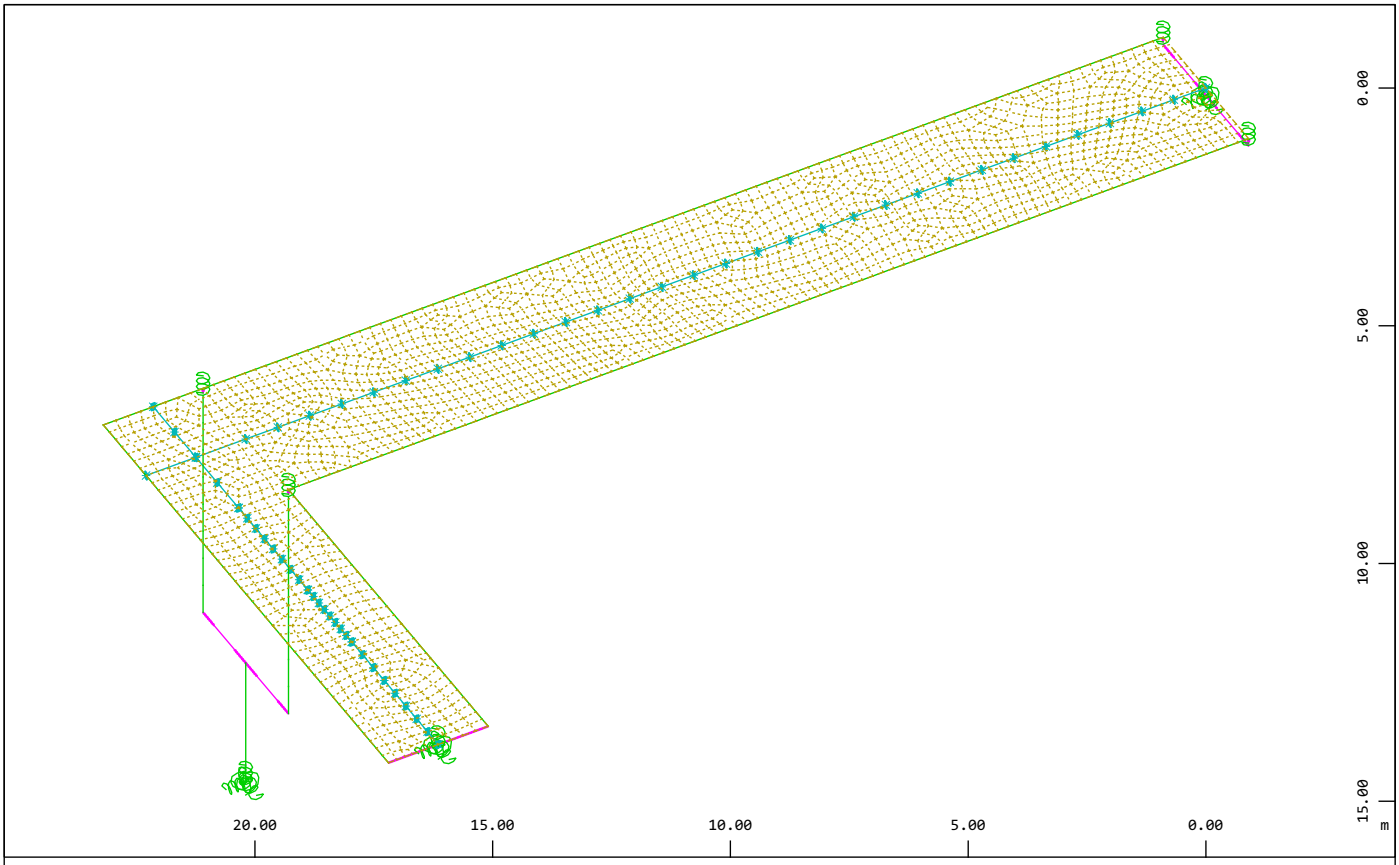

Z
X Y

Structure

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

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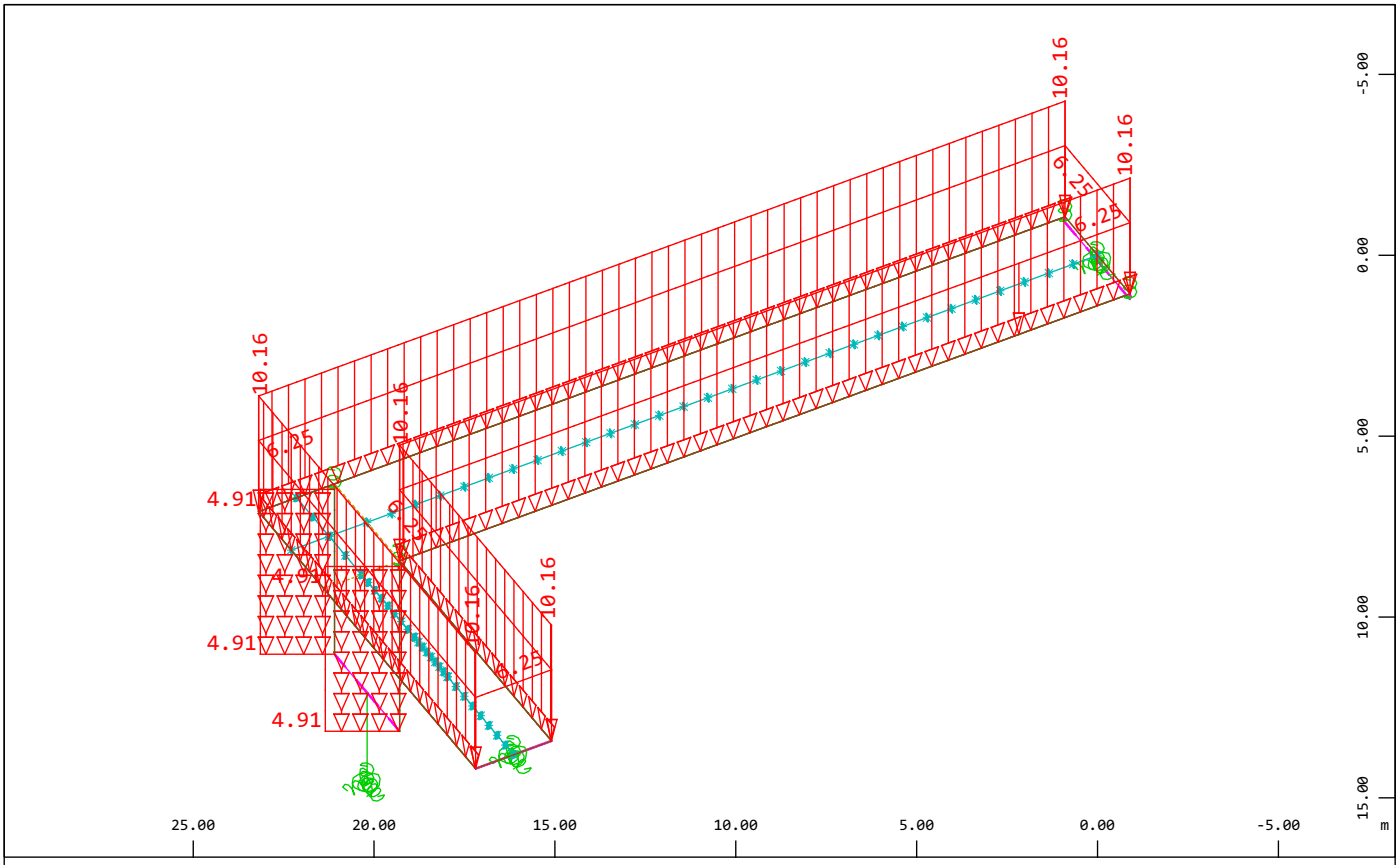
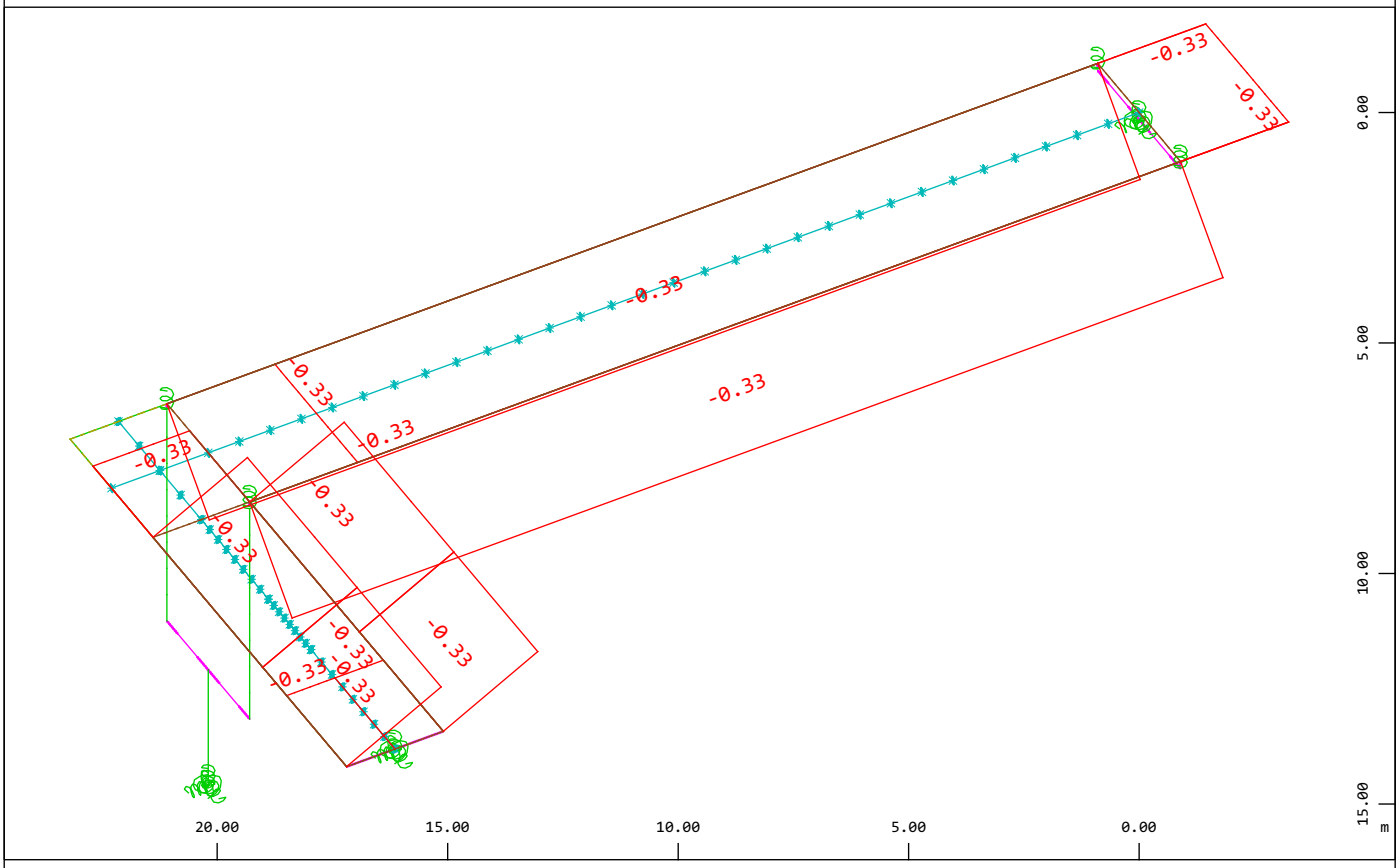


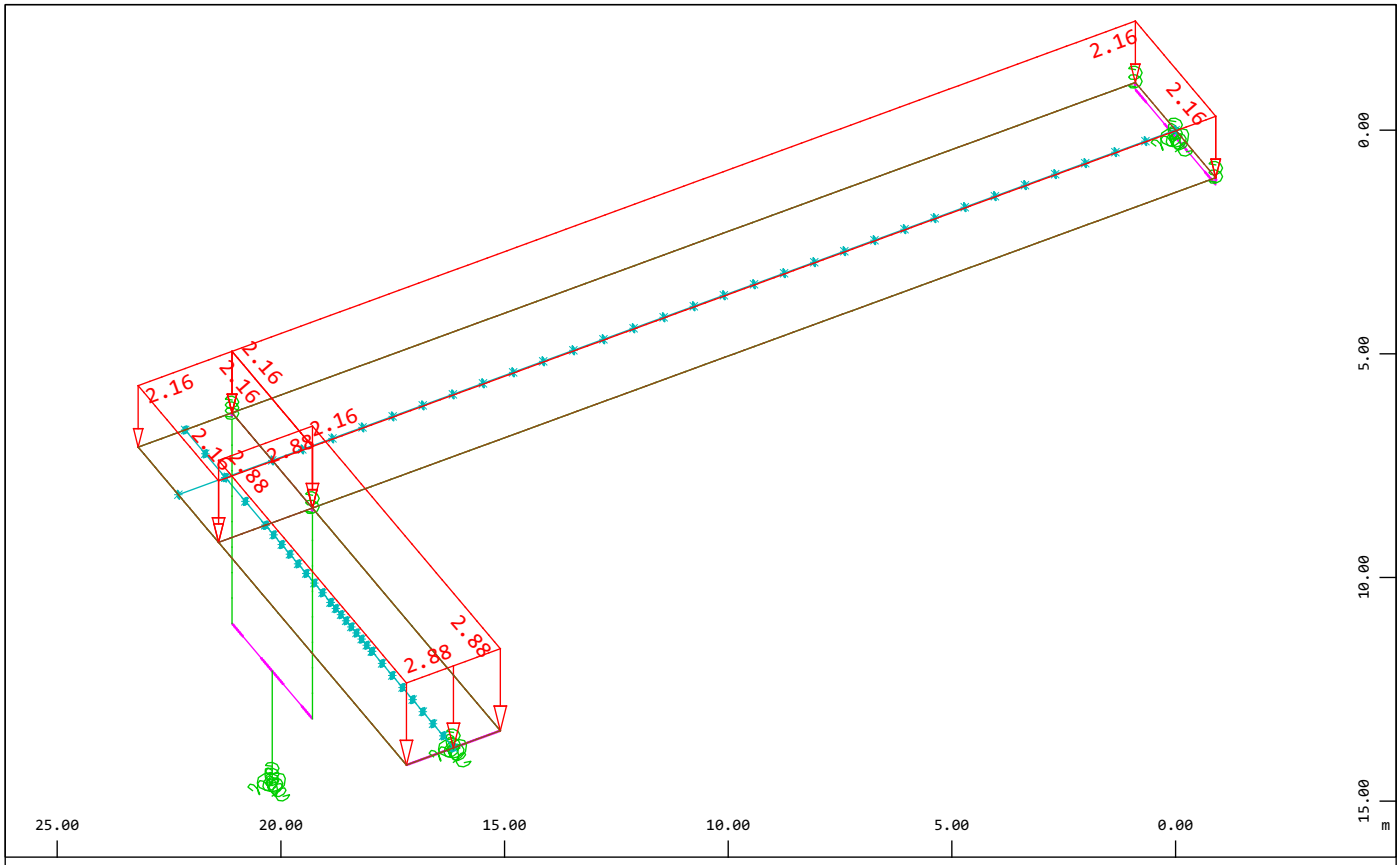
All loads (in components), Loadcase 1 PESO PROPIO , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-4.91)

M 1 : 209
X * 0.931
Y * 0.753
Z * 0.753



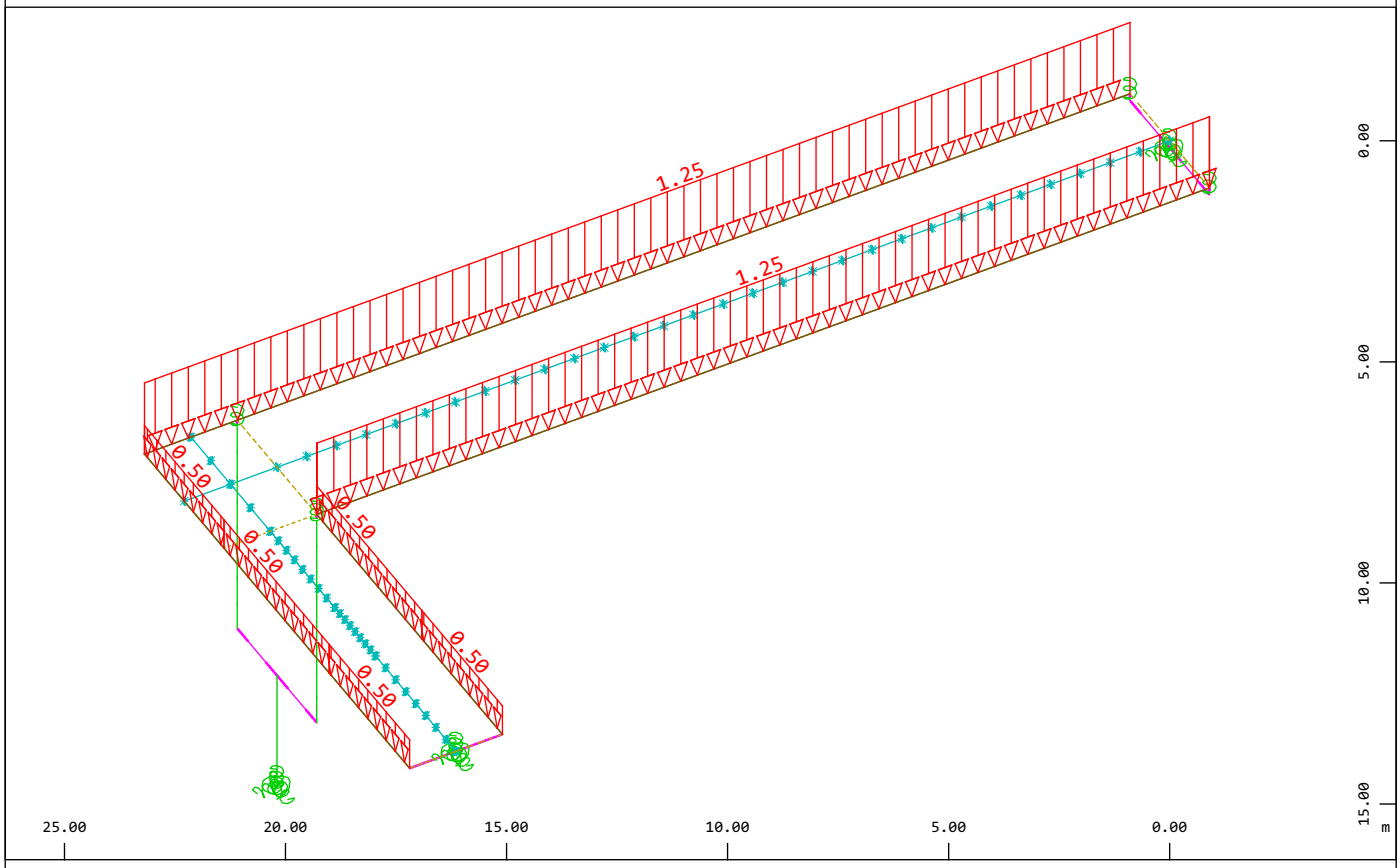
All loads (in components), Loadcase 2 RETRACCION , (1 cm 3D = unit) Free area load (strain) in local x (Unit=0.200 o/oo,Min=-0.327 Max=-0.327), Free line load (axial strain) (Unit=0.200 o/oo,Min=-0.327 Max=-0.327)

M 1 : 164
X * 0.931
Y * 0.753
Z * 0.753



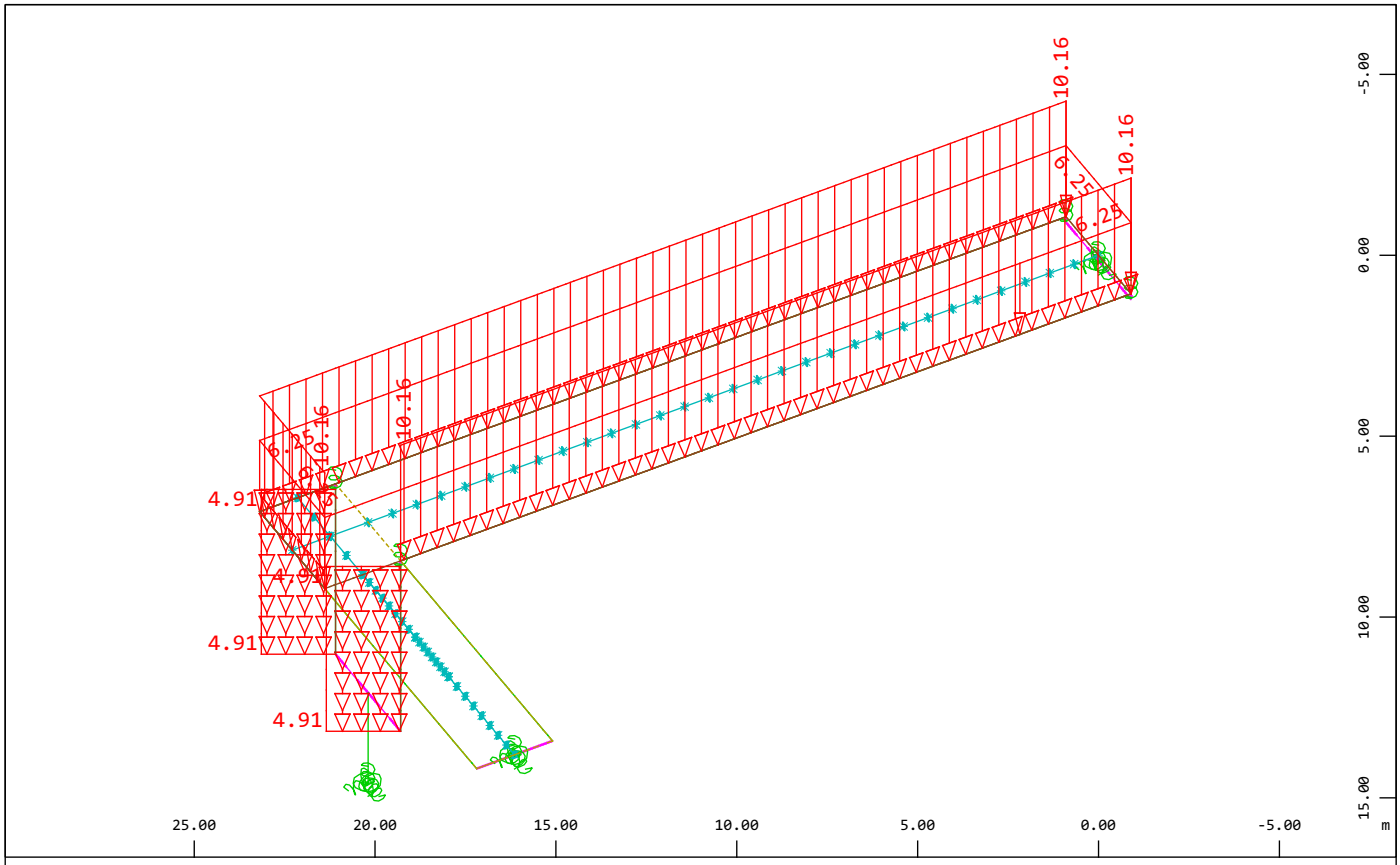
All loads (in components), Loadcase 11 ACABADO Y PELDAÑEADO , (1 cm 3D = unit) Free area load (force) in global Z (Unit=2.00 kN/m2) (Min=-2.88) (Max=-2.16)

M 1 : 169
X * 0.931
Y * 0.753
Z * 0.753



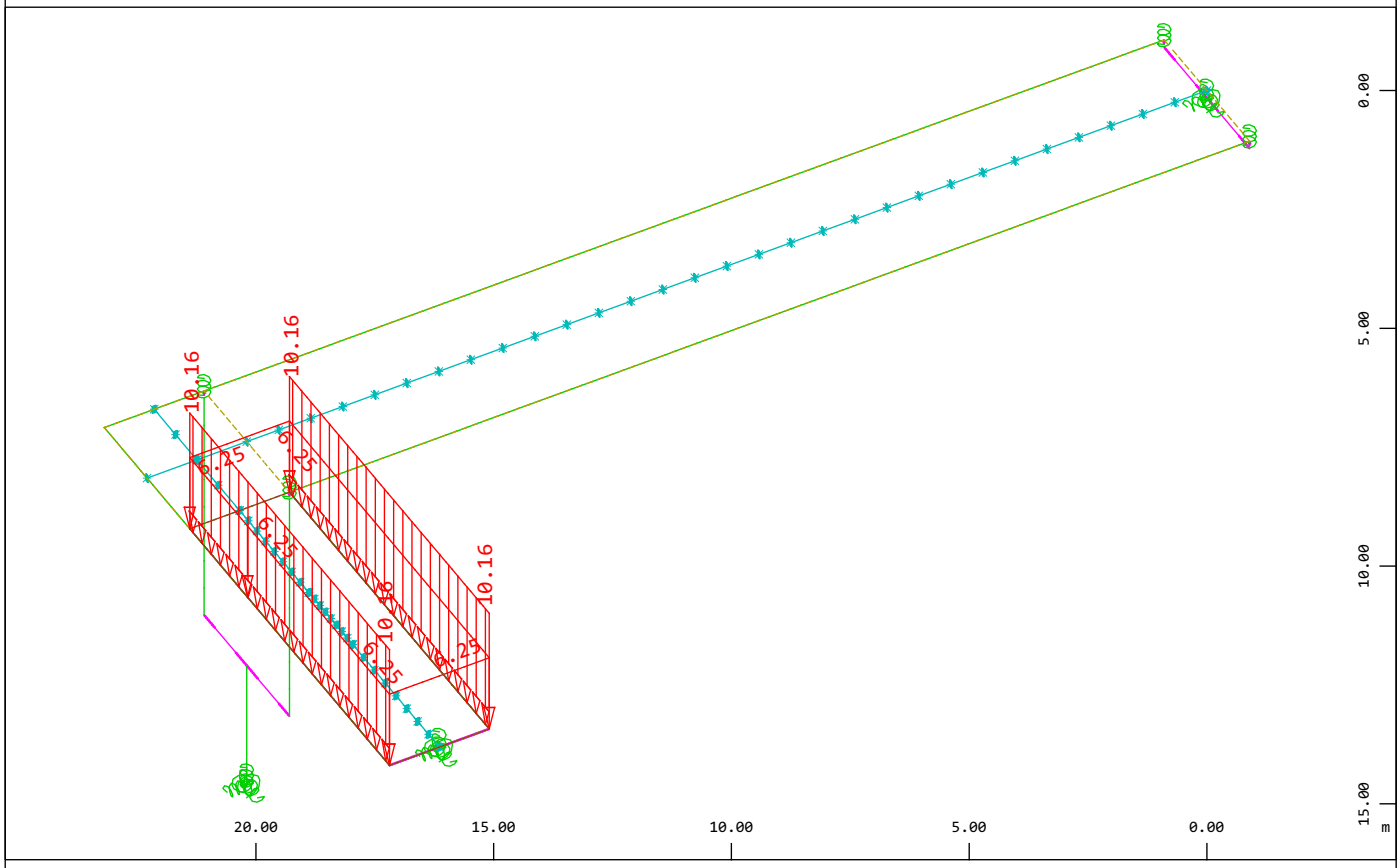
All loads (in components), Loadcase 12 BARRERAS , (1 cm 3D = unit) Free line load (force) in global Z (Unit=1.00 kN/m) (Min=-1.25) (Max=-0.500)

M 1 : 171
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 5 PP PREFABRICADO , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-4.91)

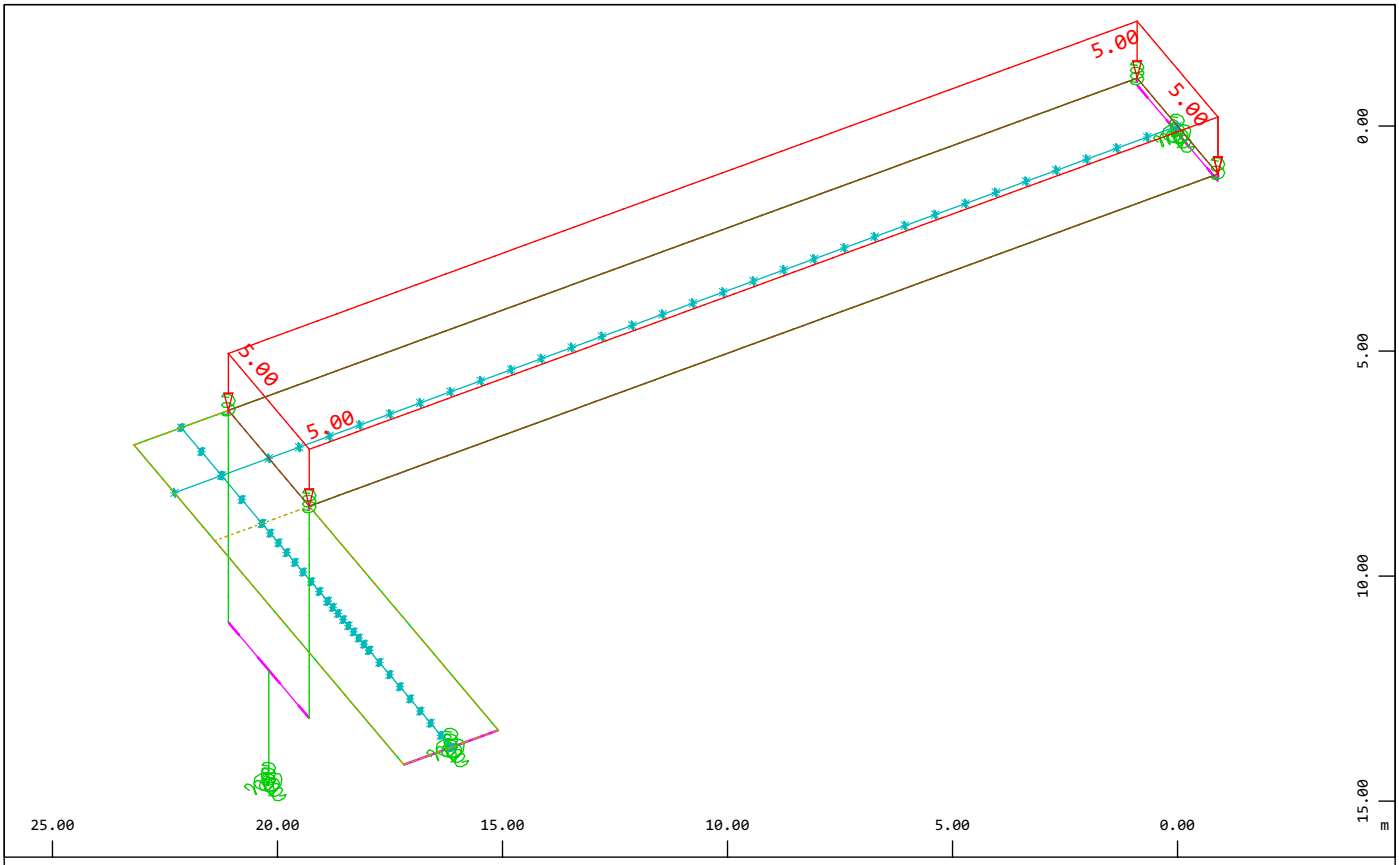
M 1 : 209
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 6 PP IN SITU , (1 cm 3D = unit) QUAD-Area dead load in global Z in Element (Unit=5.00 kN/m2,Min=-6.25 Max=-6.25), Beam dead load in global Z (Unit=5.00 kN/m,Min=-10.2 Max=-10.2)

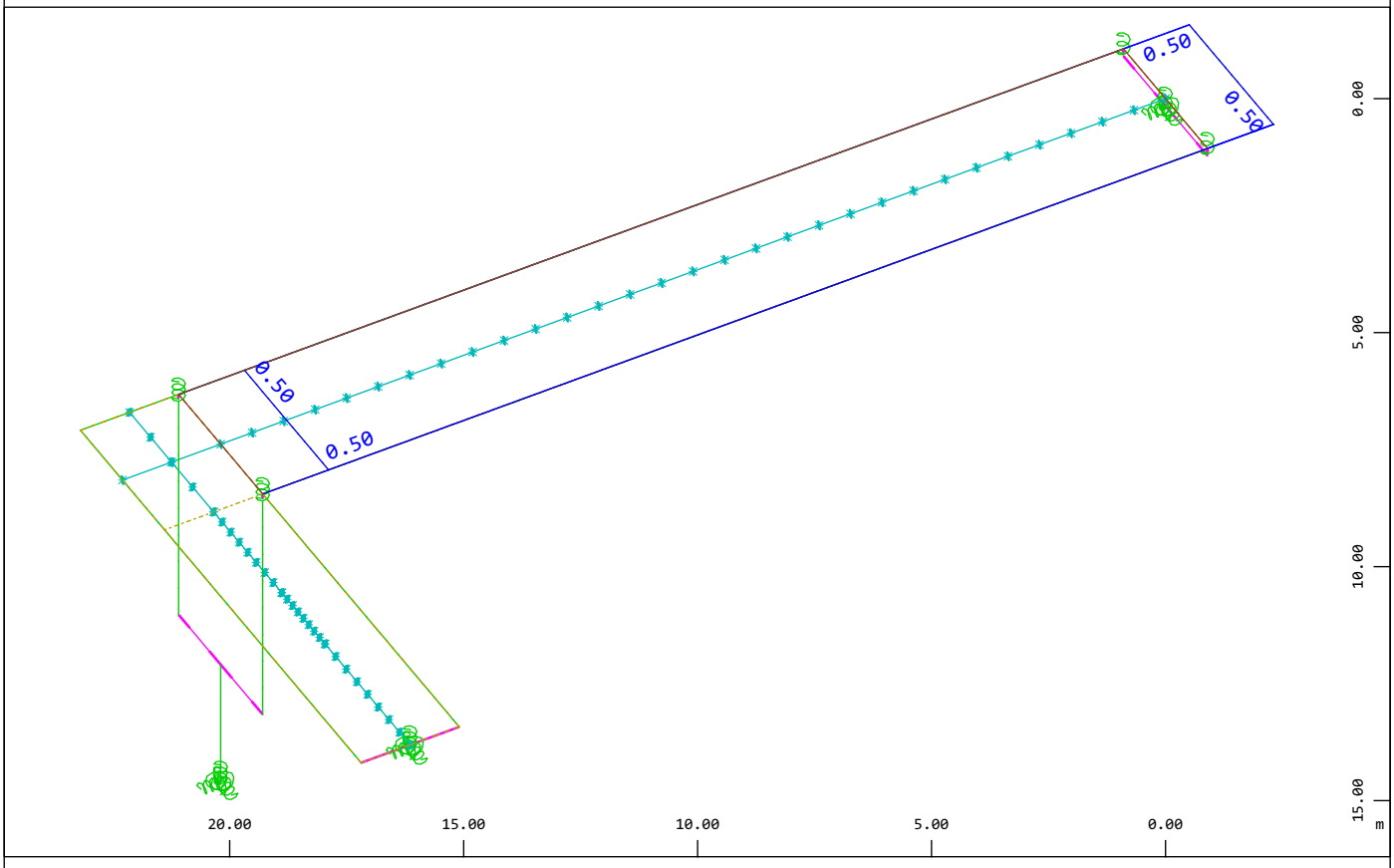
M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

MODELO
CARGAS



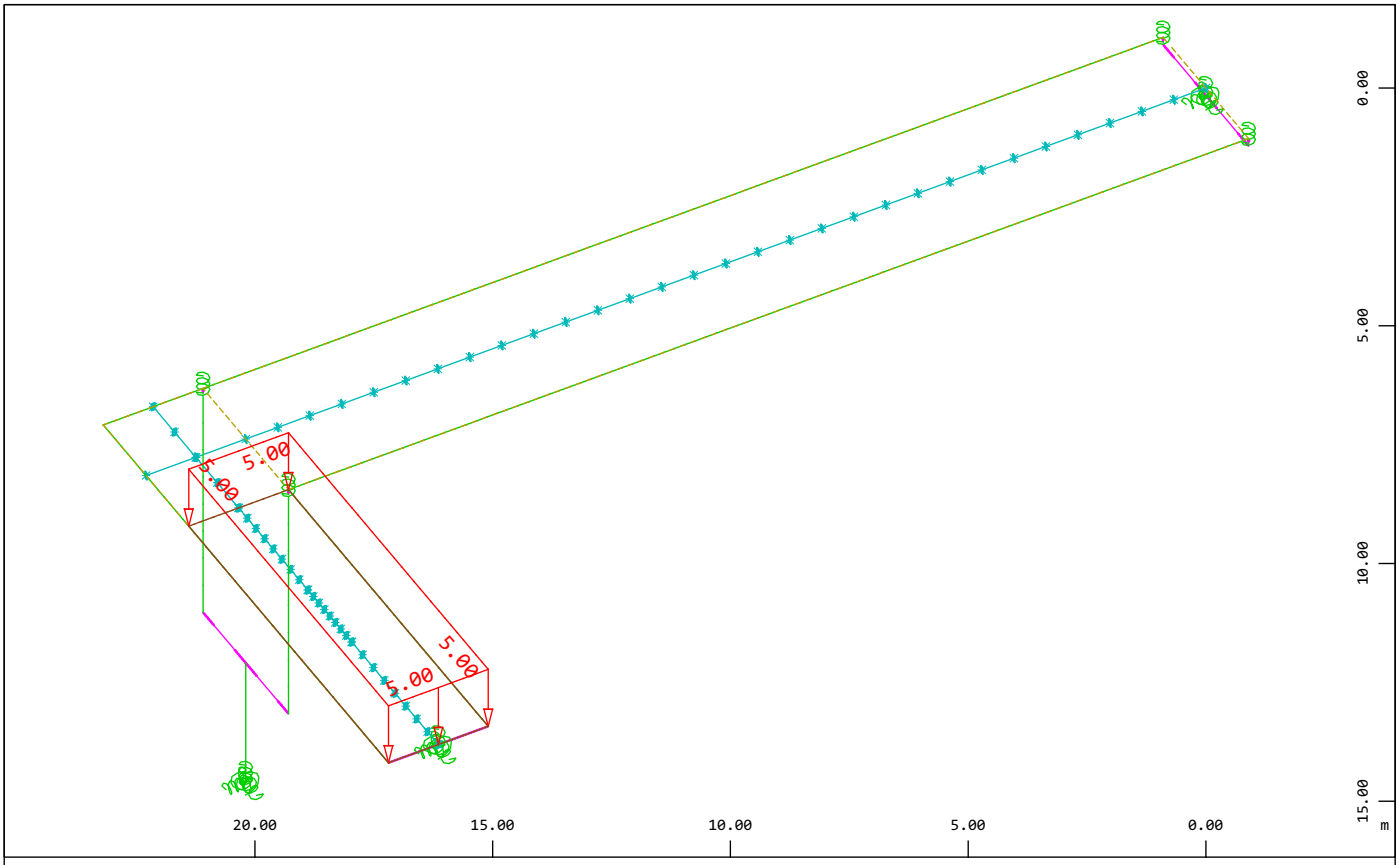
All loads (in components), Loadcase 21 SC PEAT VERT L 1 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

M 1 : 168
X * 0.931
Y * 0.753
Z * 0.753



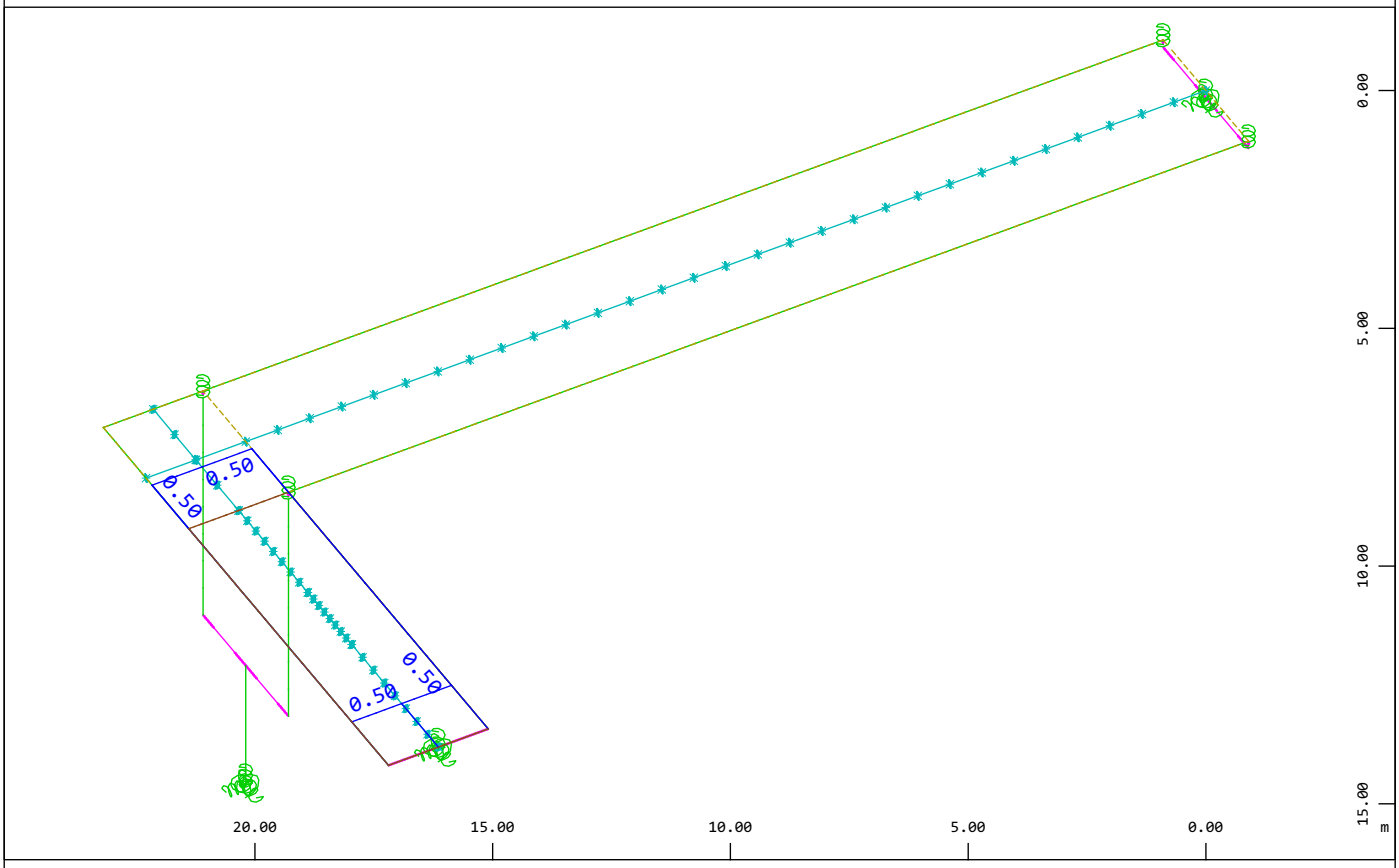
All loads (in components), Loadcase 31 SC PEAT LONG L 1 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

M 1 : 161
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 22 SC PEAT VERT L 2 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

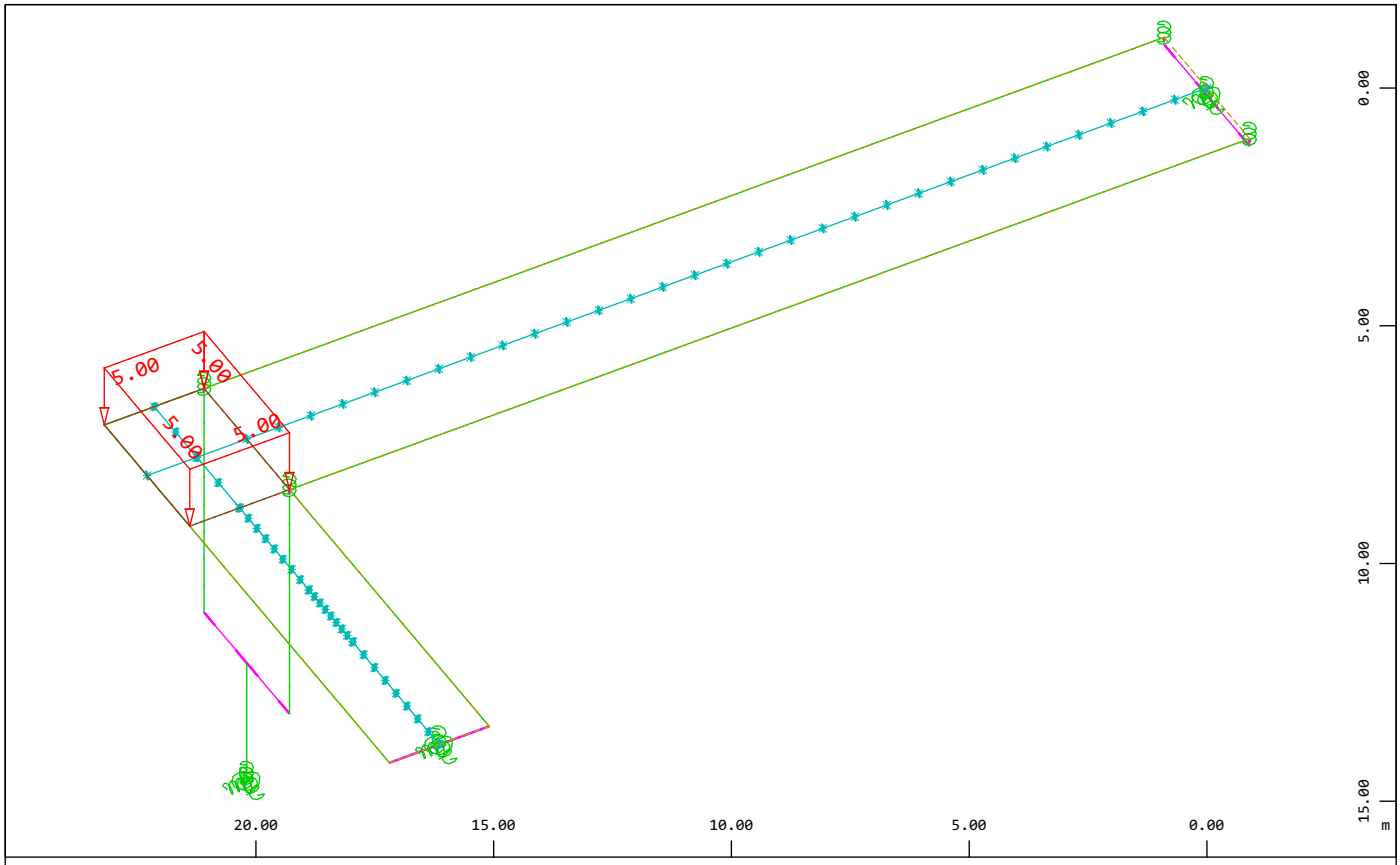
M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 32 SC PEAT LONG L 2 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

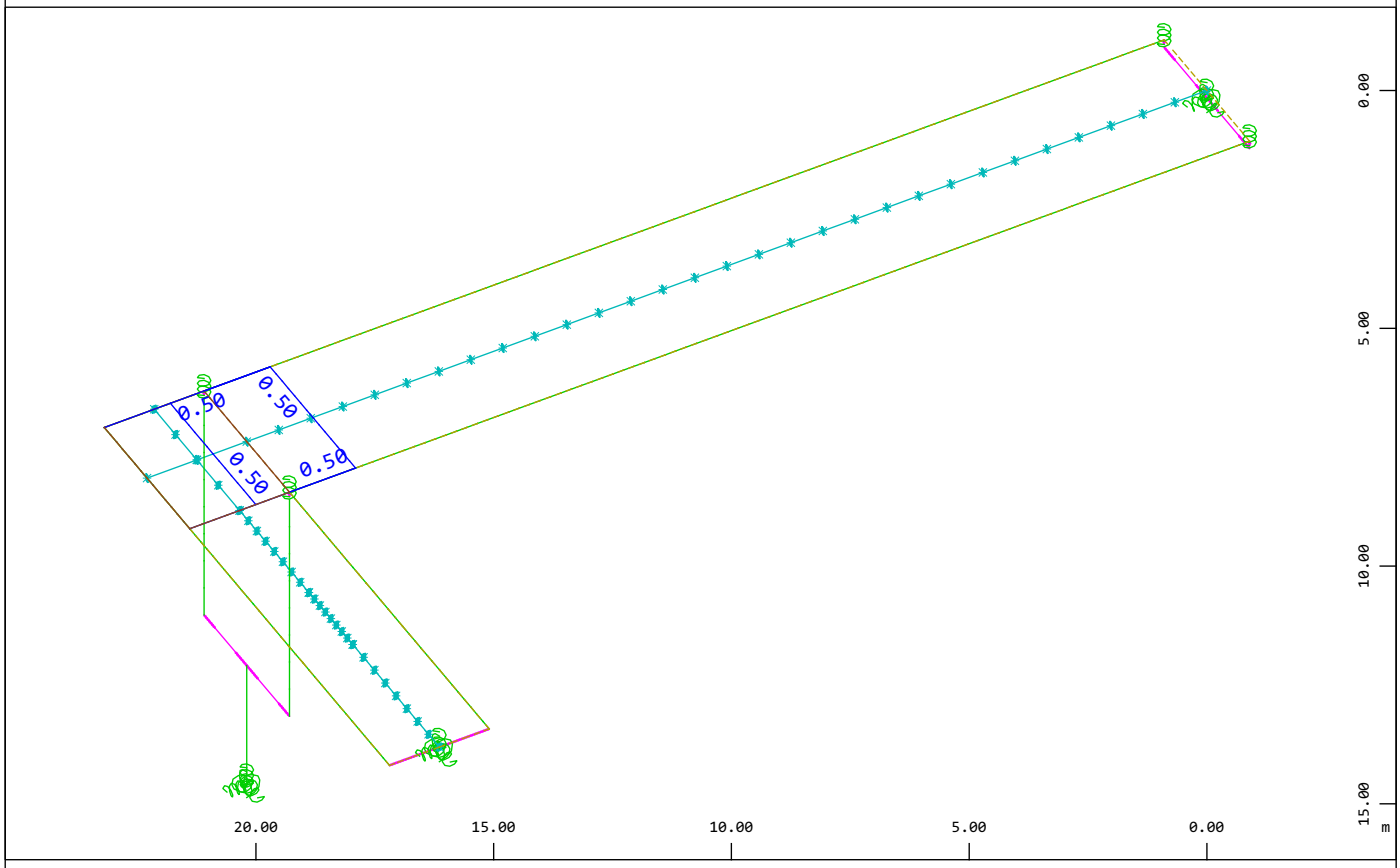
M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

MODELO
CARGAS



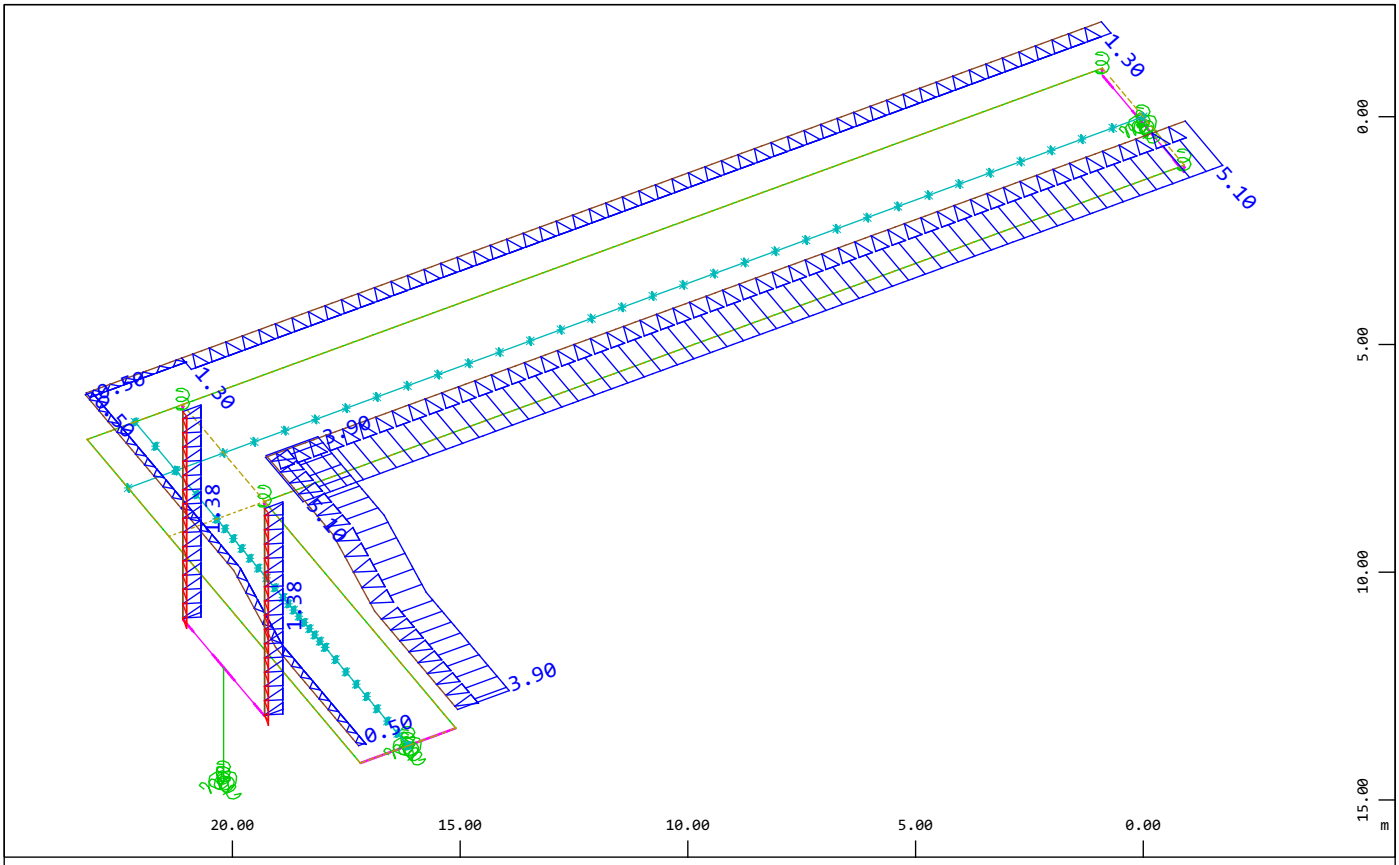
All loads (in components), Loadcase 23 SC PEAT VERT L 3 , (1 cm 3D = unit) Free area load
(force) in global Z (Unit=5.00 kN/m2) (Min=-5.00) (Max=-5.00)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



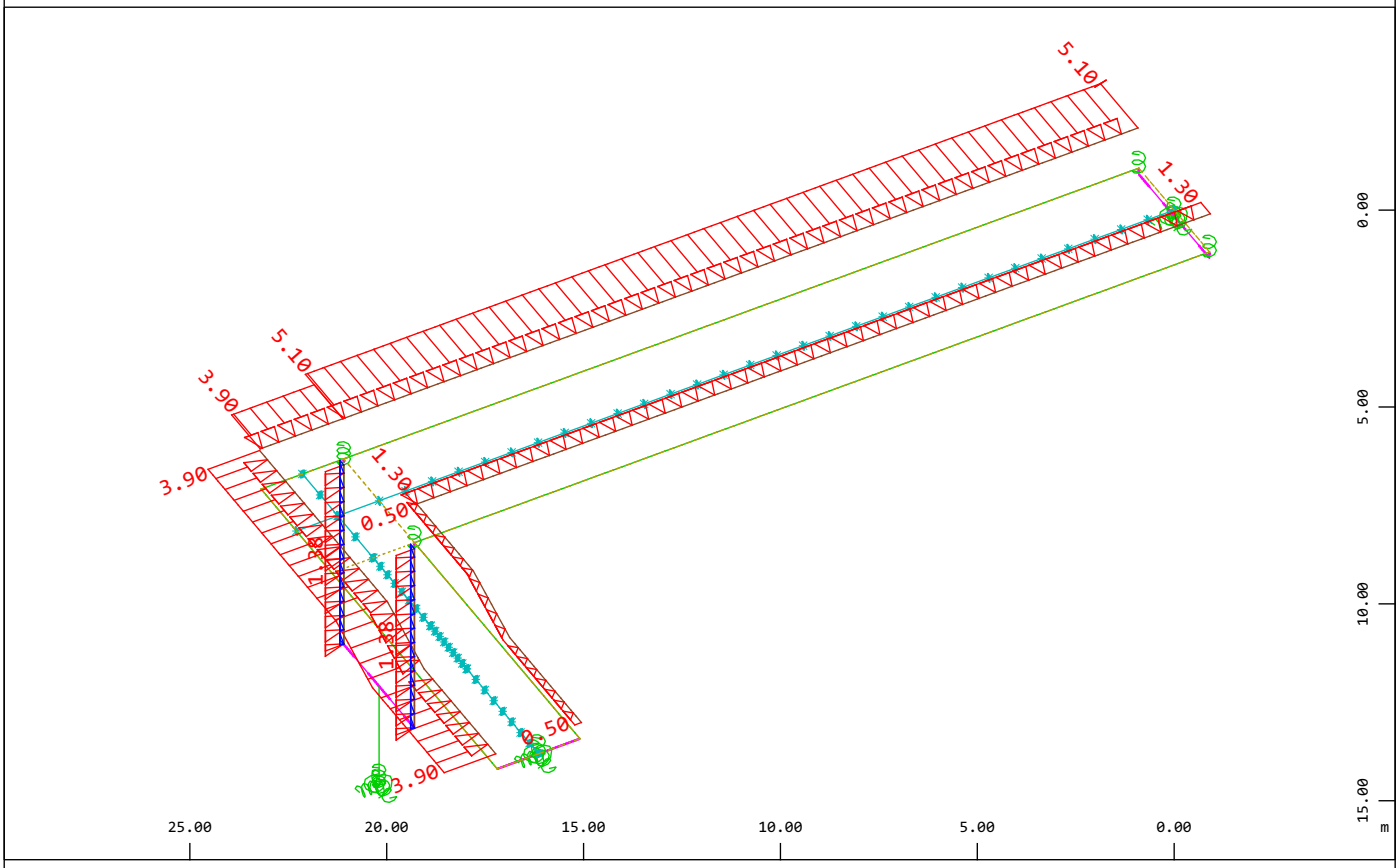
All loads (in components), Loadcase 33 SC PEAT LONG L 3 + , (1 cm 3D = unit) Free area load
(force) in local x (Unit=0.500 kN/m2) (Max=0.500)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



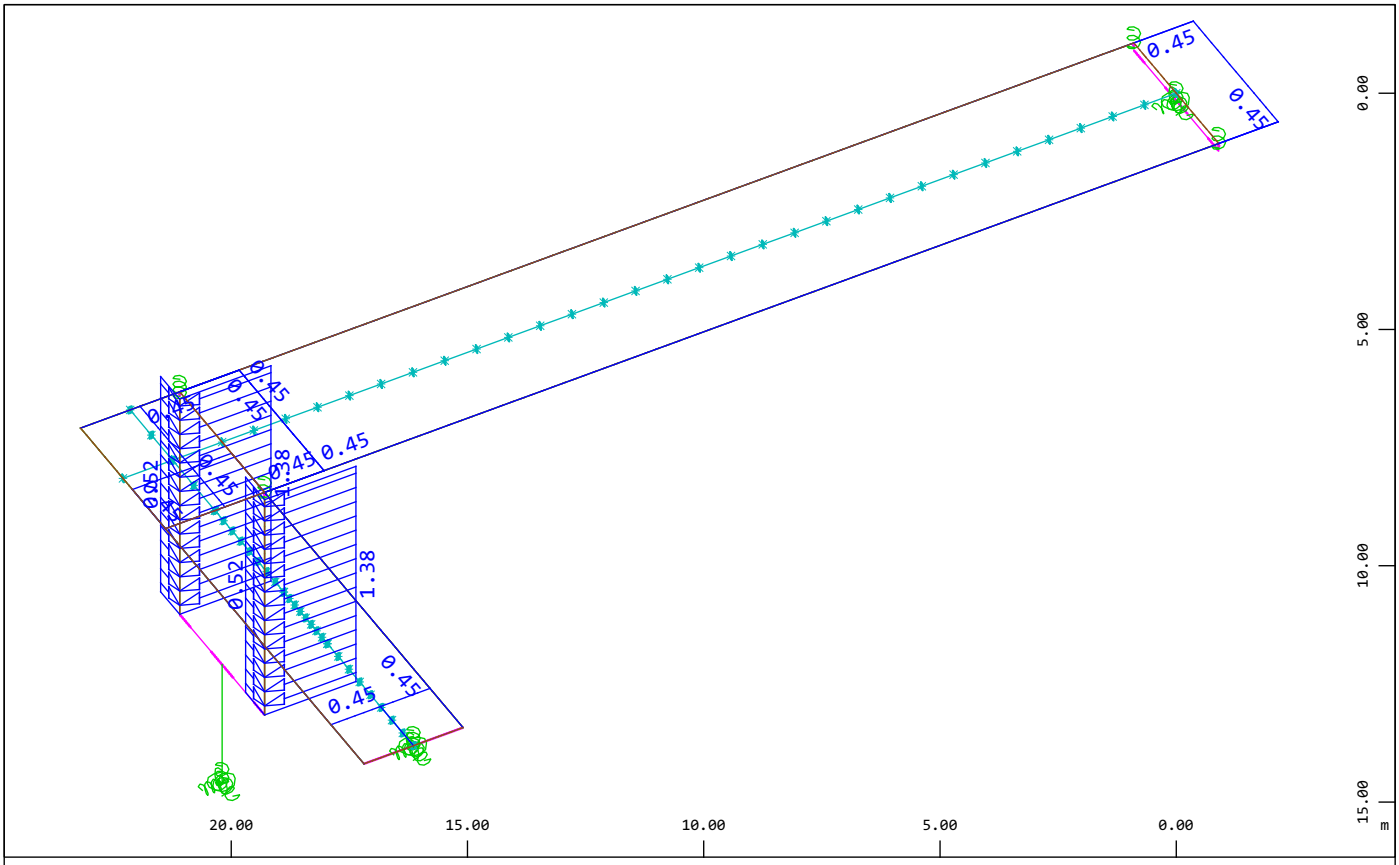
All loads (in components), Loadcase 101 W TRANS INT , (1 cm 3D = unit) Beam line load (force) in local y (Unit=5.00 kN/m,Max=5.10), Free line load (force) in global X (Unit=5.00 kN/m,Max=1.38), Free line load (force) in global Y (Unit=5.00 kN/m,Min=-0.517

M 1 : 166
X * 0.931
Y * 0.753
Z * 0.753



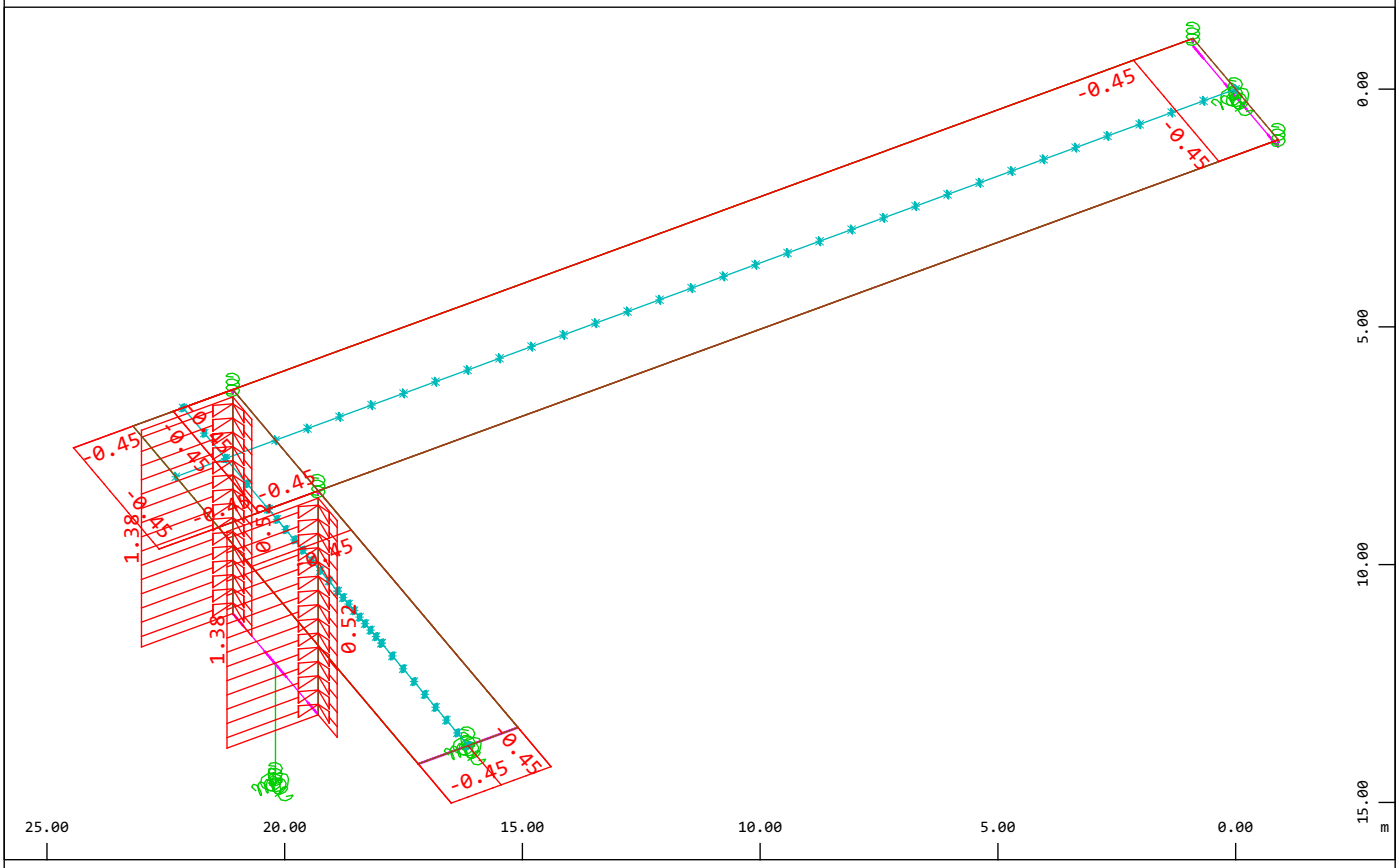
All loads (in components), Loadcase 102 W TRANS EXT , (1 cm 3D = unit) Beam line load (force) in local y (Unit=5.00 kN/m,Min=-5.10 Max=-0.500), Free line load (force) in global X (Unit=5.00 kN/m,Min=-1.38 Max=-1.38), Free line load (force) in global Y

M 1 : 192
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 111 W LONG + , (1 cm 3D = unit) Free line load (force) in global X (Unit=1.00 kN/m,Max=1.38), Free line load (force) in global Y (Unit=1.00 kN/m,Max=0.517), Free area load (force) in local x (Unit=0.500 kN/m2,Max=0.450)

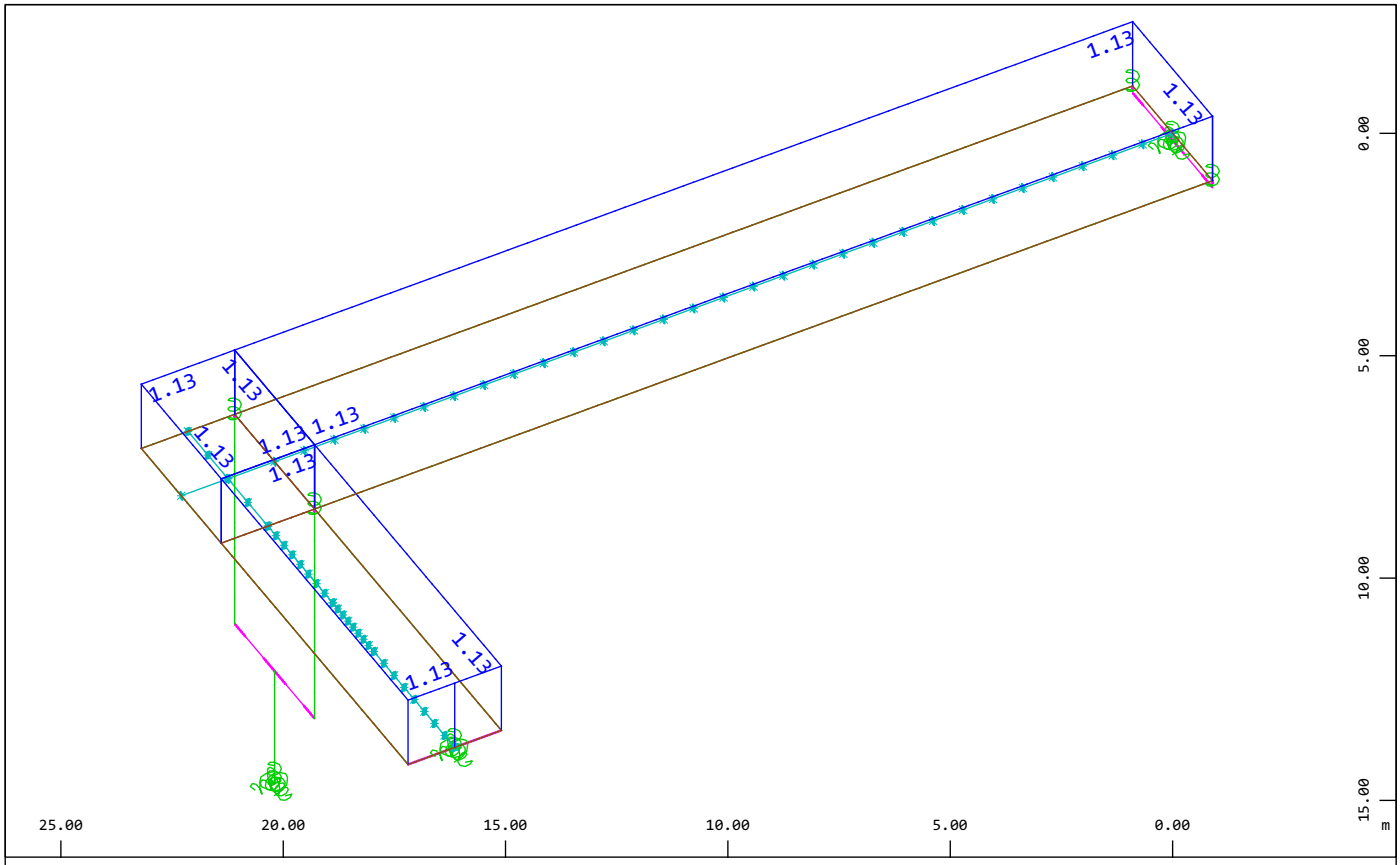
M 1 : 160
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 112 W LONG - , (1 cm 3D = unit) Free line load (force) in global X (Unit=1.00 kN/m,Min=-1.38 Max=-1.38), Free line load (force) in global Y (Unit=1.00 kN/m,Min=-0.517 Max=-0.517), Free area load (force) in local x (Unit=0.500

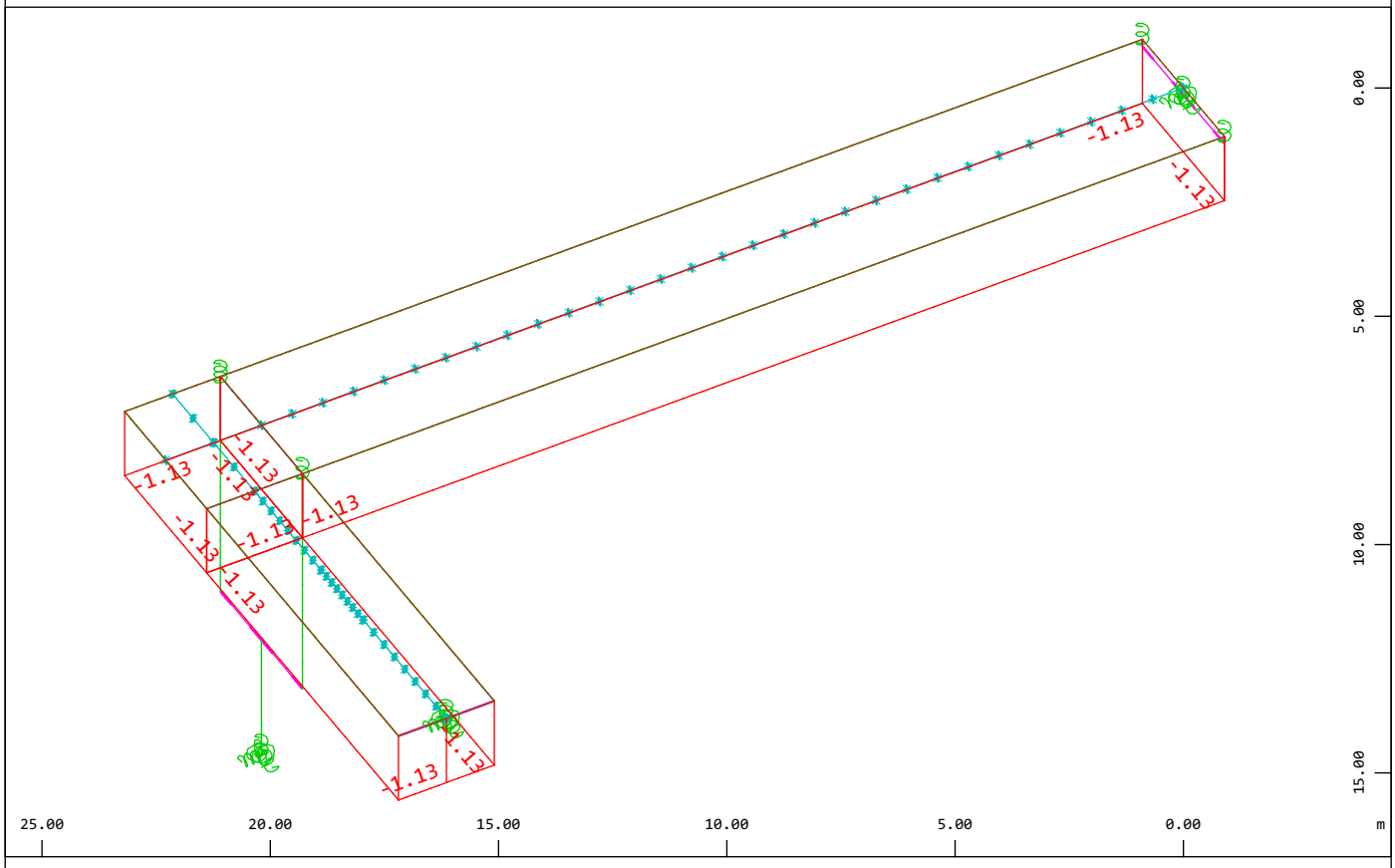
M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753

MODELO
CARGAS



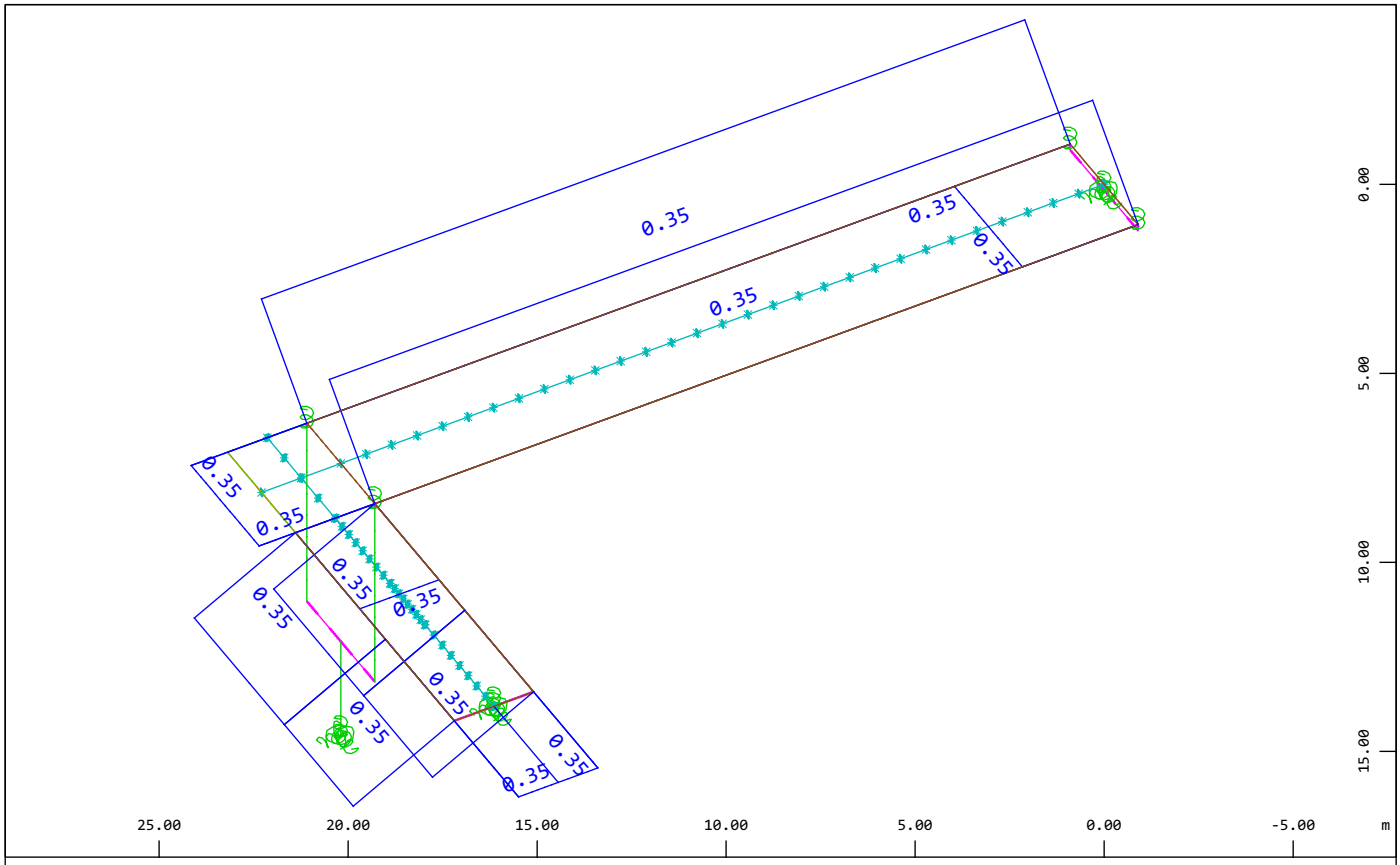
All loads (in components), Loadcase 121 W TAB VERT + , (1 cm 3D = unit) Free area load
(force) in local z (Unit=1.00 kN/m2) (Max=1.13)

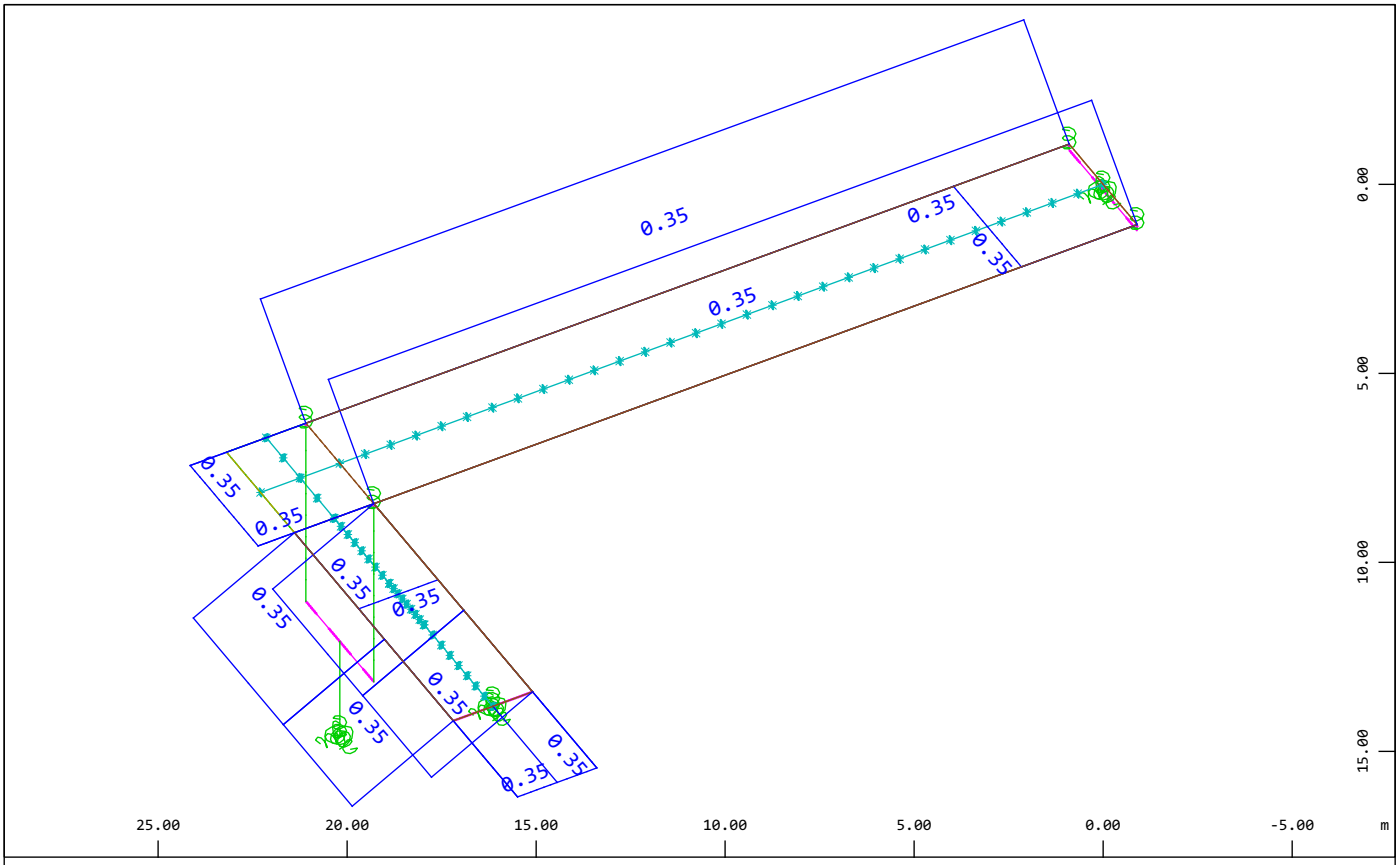
M 1 : 170
X * 0.931
Y * 0.753
Z * 0.753

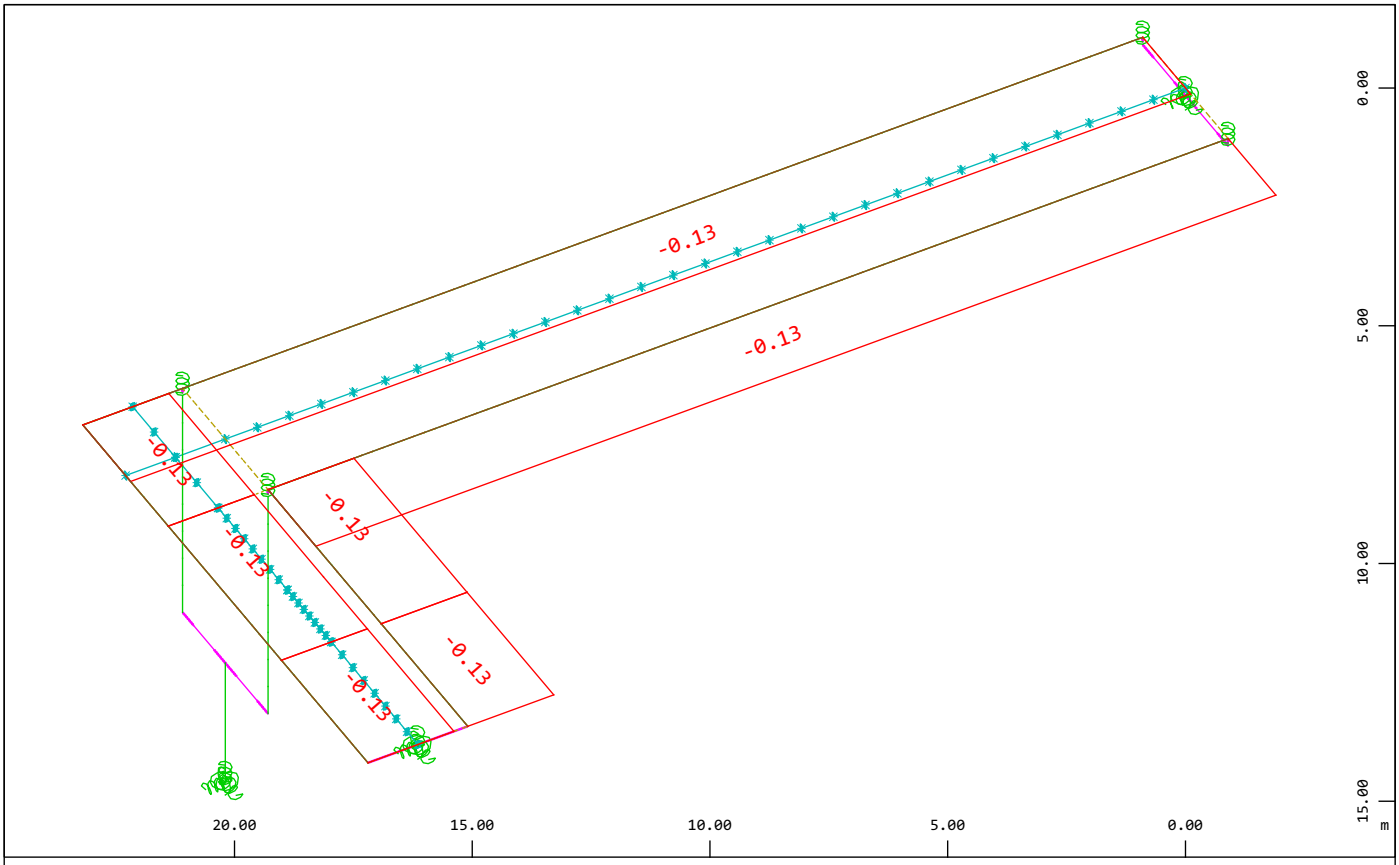


All loads (in components), Loadcase 122 W TAB VERT - , (1 cm 3D = unit) Free area load
(force) in local z (Unit=1.00 kN/m2) (Min=-1.13) (Max=-1.13)

M 1 : 165
X * 0.931
Y * 0.753
Z * 0.753

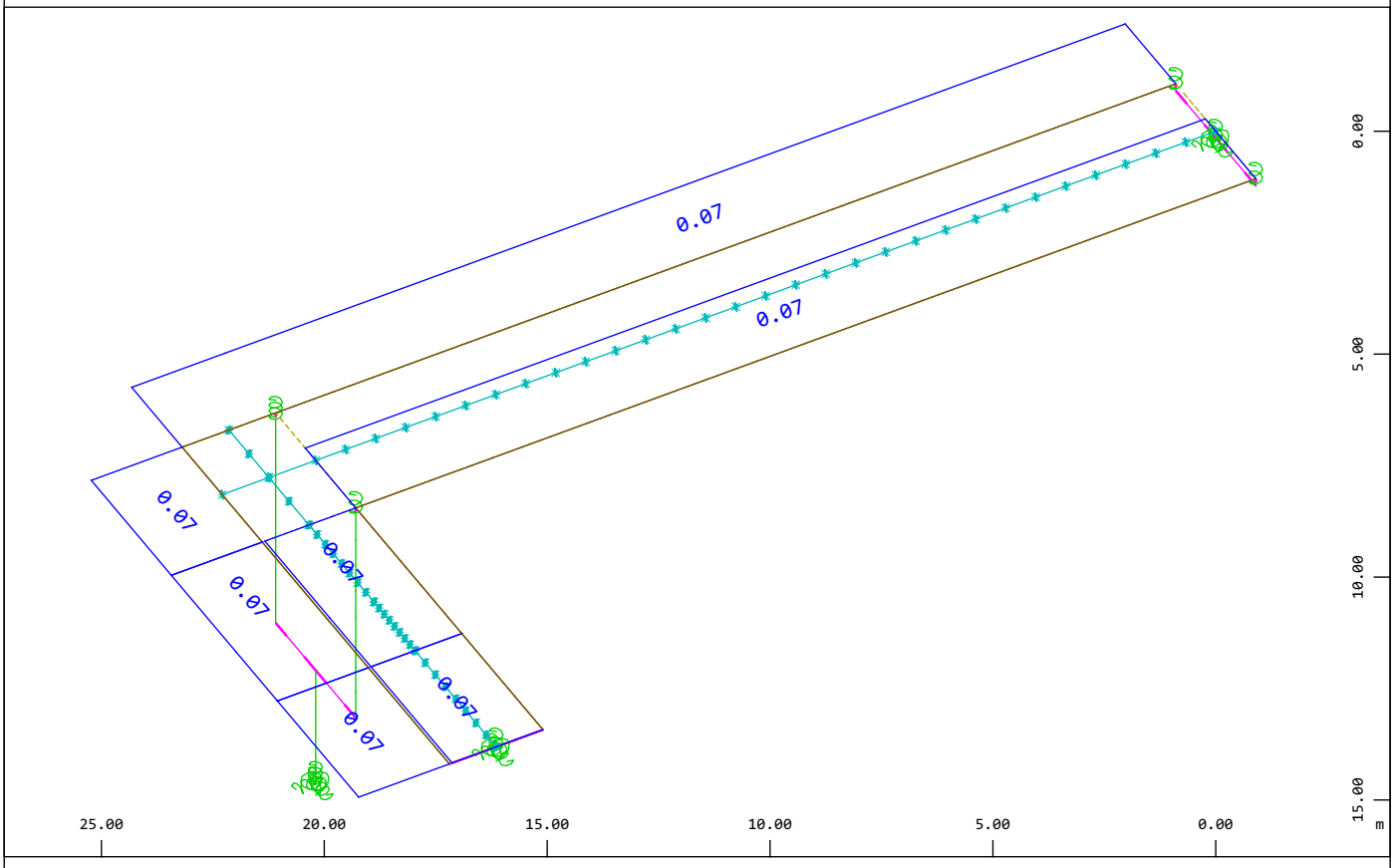

0.35
0.35
0.35


0.35
0.35
0.35



All loads (in components), Loadcase 211 T GRAD + , (1 cm 3D = unit) Free line load
(curvature) about local y (Unit=0.100 1/km) (Min=-0.130) (Max=-0.130)

M 1 : 159
X * 0.931
Y * 0.753
Z * 0.753



All loads (in components), Loadcase 212 T GRAD - , (1 cm 3D = unit) Free line load
(curvature) about local y (Unit=0.0500 1/km) (Max=0.0690)

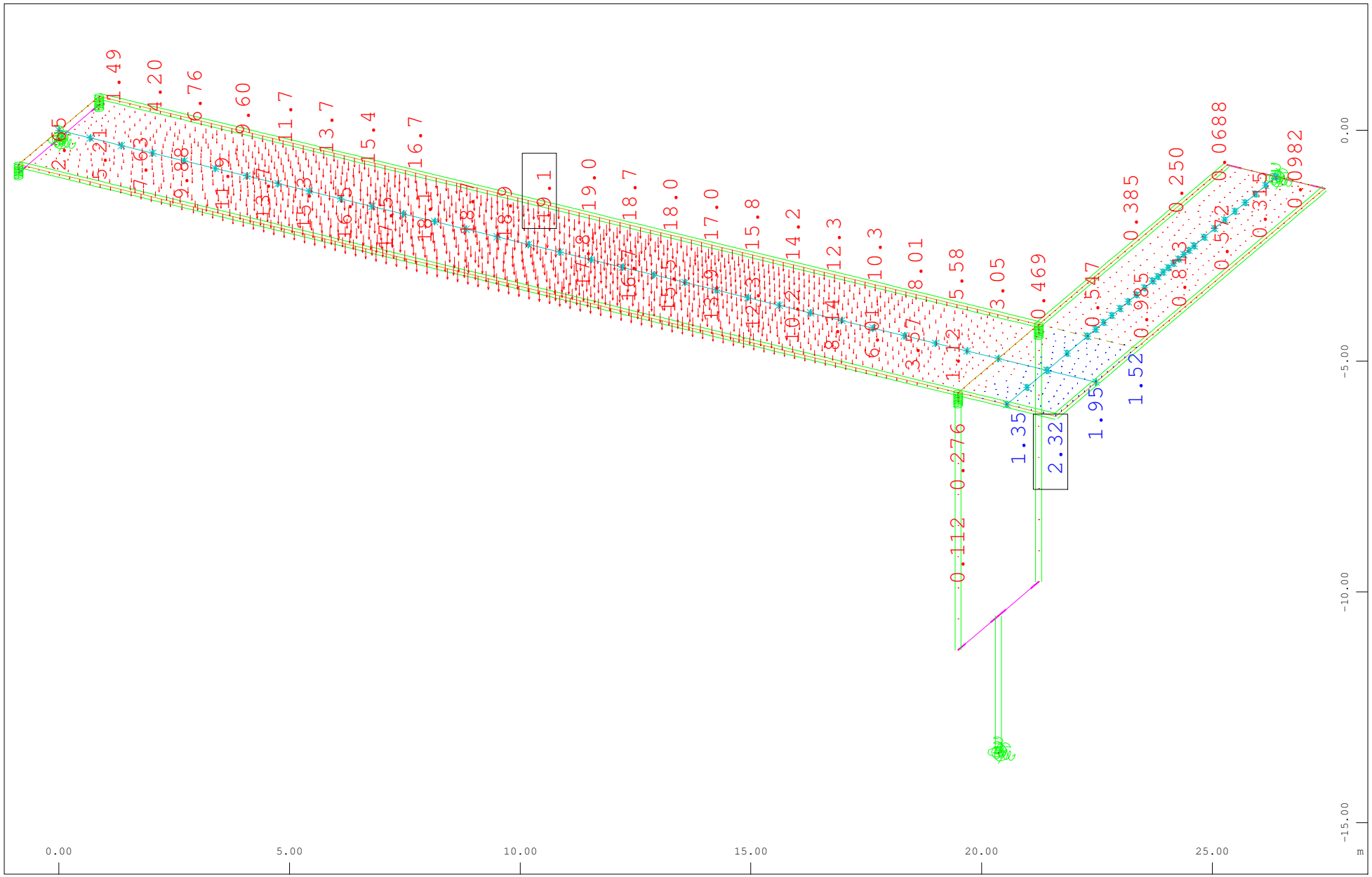
M 1 : 169
X * 0.931
Y * 0.753
Z * 0.753

MODELO
CARGAS

ELS DEFORMACIONES

Acorde a la IAP-11 se verifica que la flecha vertical máxima correspondiente al valor frecuente de la sobrecarga no supera $L/1200 = \frac{23100}{1200} = 19{,}25$ mm

Se obtiene $\delta_{máx} = 19{,}10$ mm $< 19{,}25$ mm → OK



Nodal displacement in global Z, Loadcase 11376 MIN-UZ NODE ELS FRECUENTE , 1 cm 3D = 81.4 mm

(Min=-19.1) (Max=2.32)

M 1 : 115

X * 0.907
Y * 0.619
Z * 0.891

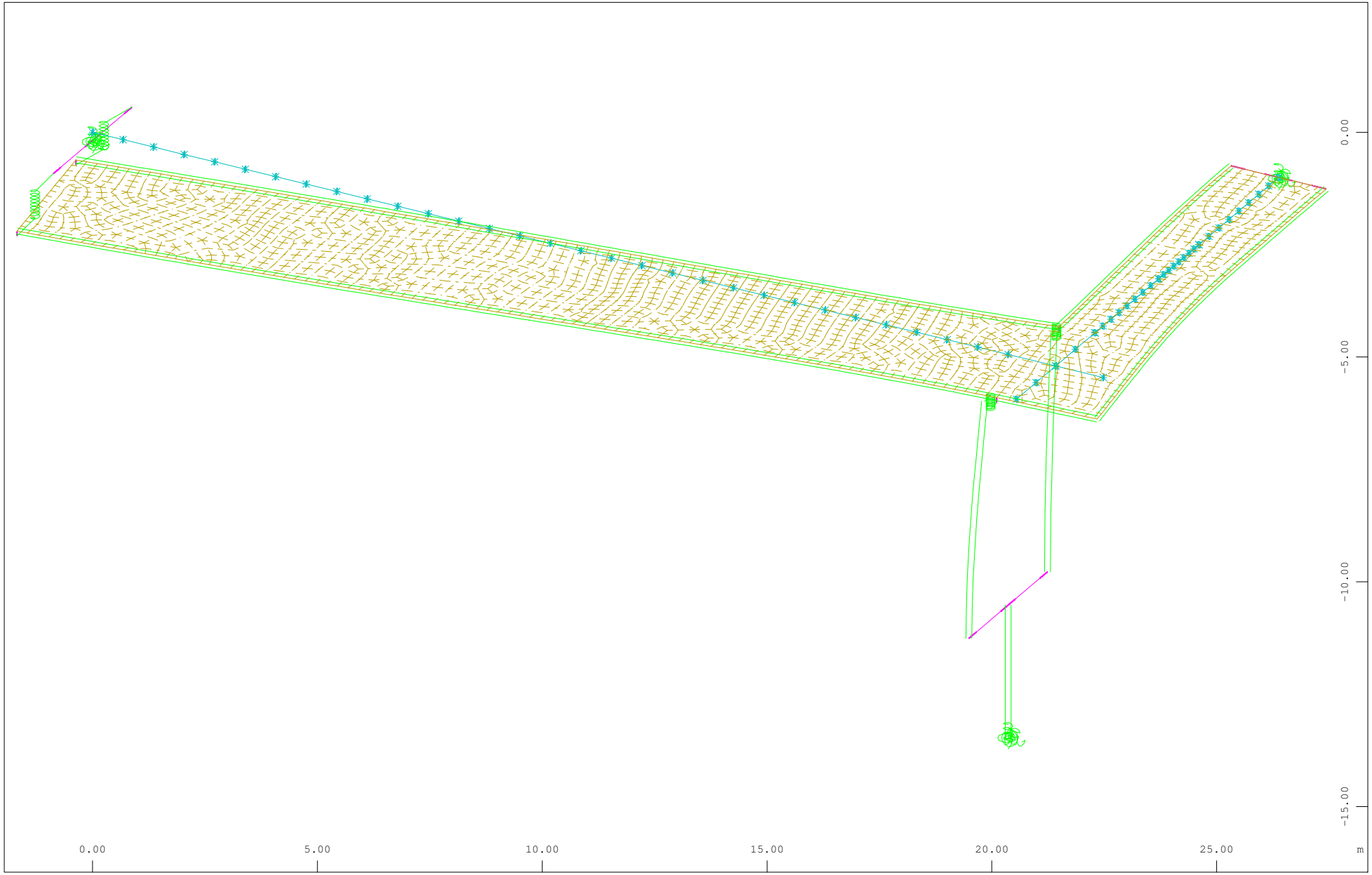
ELS VIBRACIONES

Acorde a la IAP-11, se comprueba que la frecuencia natural de la estructura se sitúa fuera del rango de:

- 1,25 a 4,60 Hz para vibraciones verticales y longitudinales
- 0,50 a 1,20 Hz para vibraciones laterales

Lo que se ha obtenido:

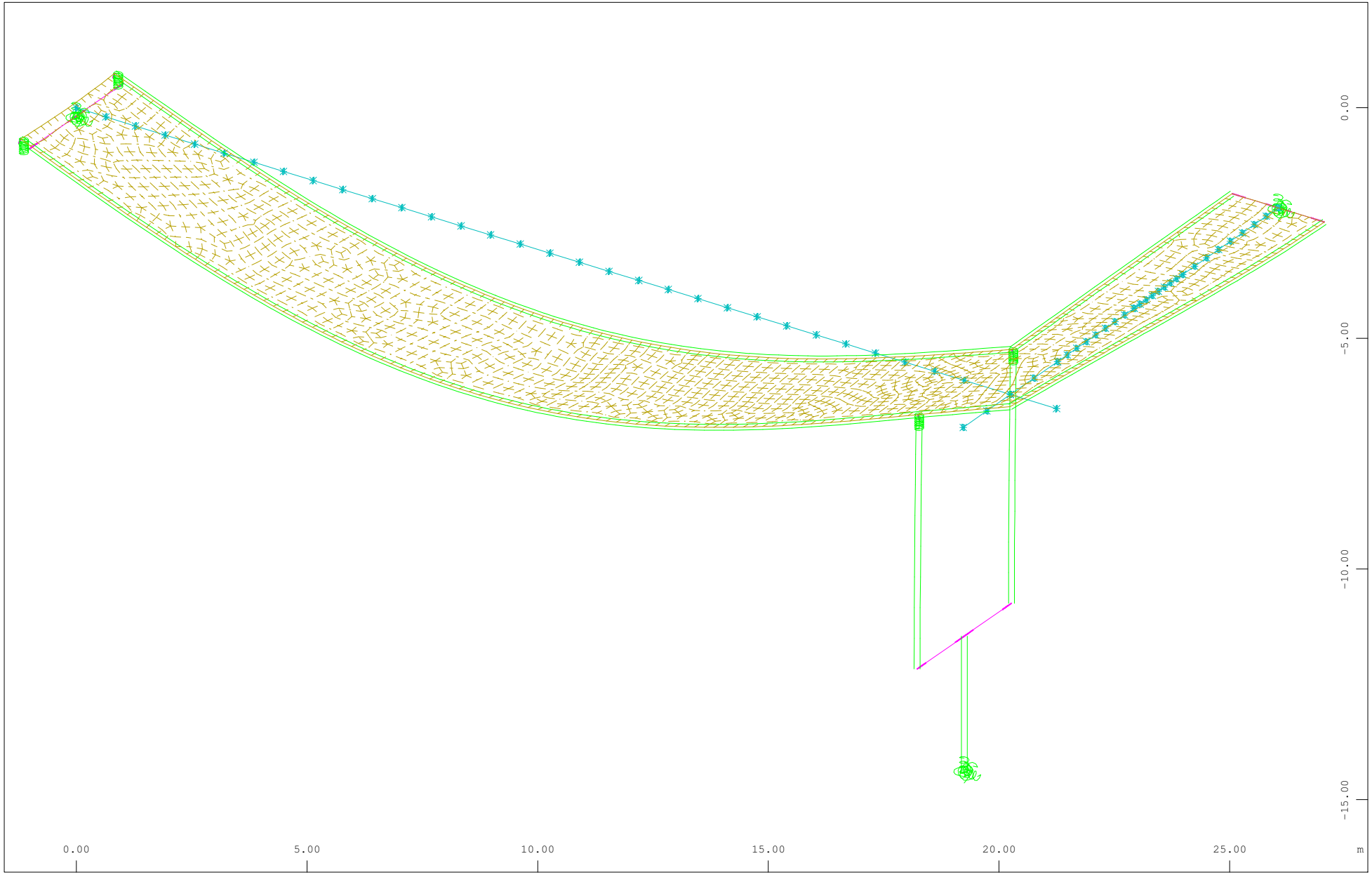
- 1er MODO DE VIB. VERTICAL ⇒ 4,62 Hz → OK
- 1er MODO DE VIB. LONGITUDINAL ⇒ 4,34 Hz → OK
- 1er MODO DE VIB. LATERAL ⇒ 2,27 Hz → OK.



Deformed Structure from LC 300 Eigenform 1 2.27 Hz Enlarged by 20.0

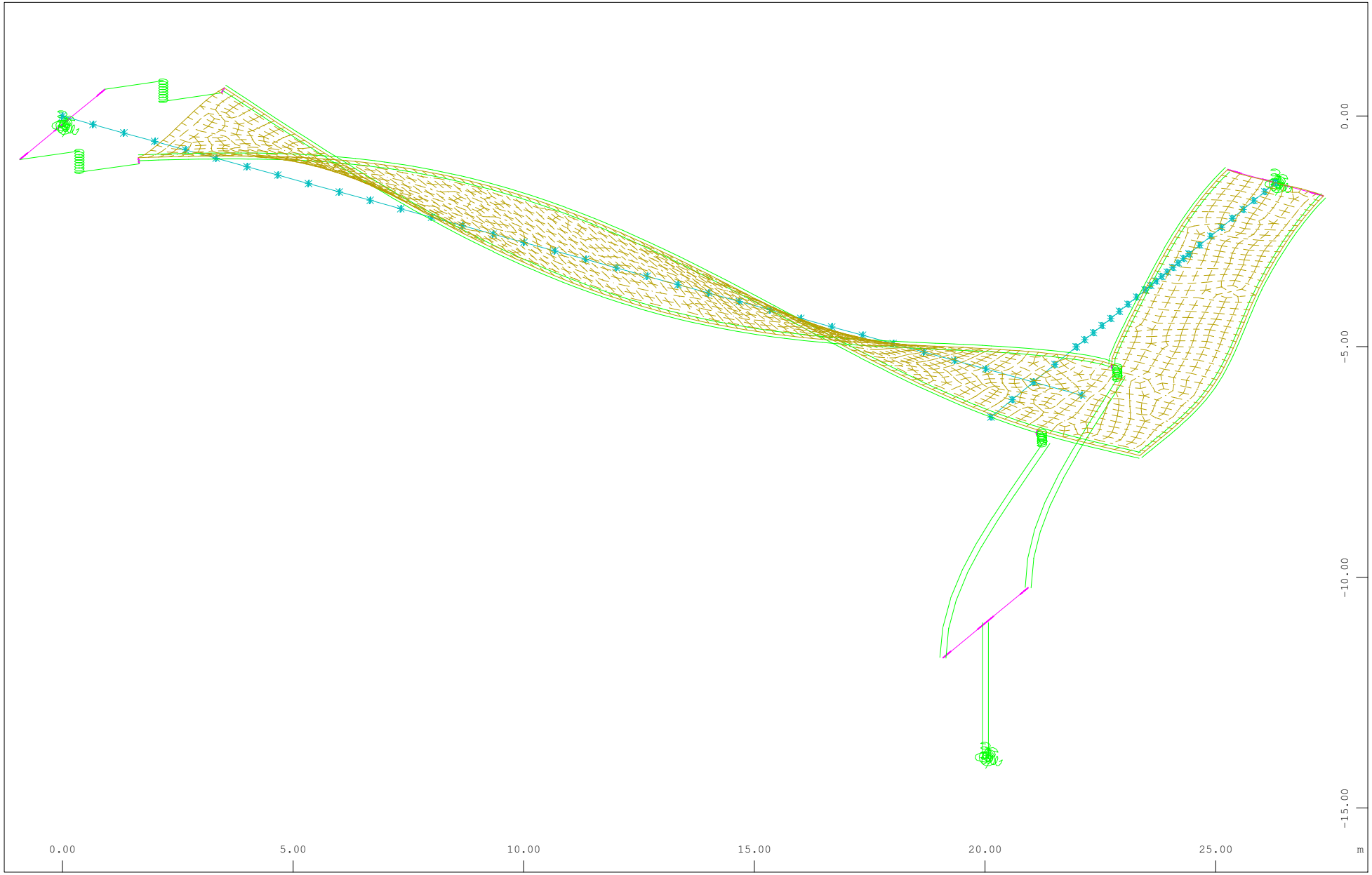
Z
Y
X

M 1 : 118
X * 0.907
Y * 0.619
Z * 0.891



Deformed Structure from LC 301 Eigenform 2 4.62 Hz Enlarged by 20.0

M 1 : 115
X * 0.872
Y * 0.674
Z * 0.887



Deformed Structure from LC 303 Eigenform 4 7.34 Hz Enlarged by 30.0

Z
Y
X

M 1 : 115
X * 0.898
Y * 0.647
Z * 0.880

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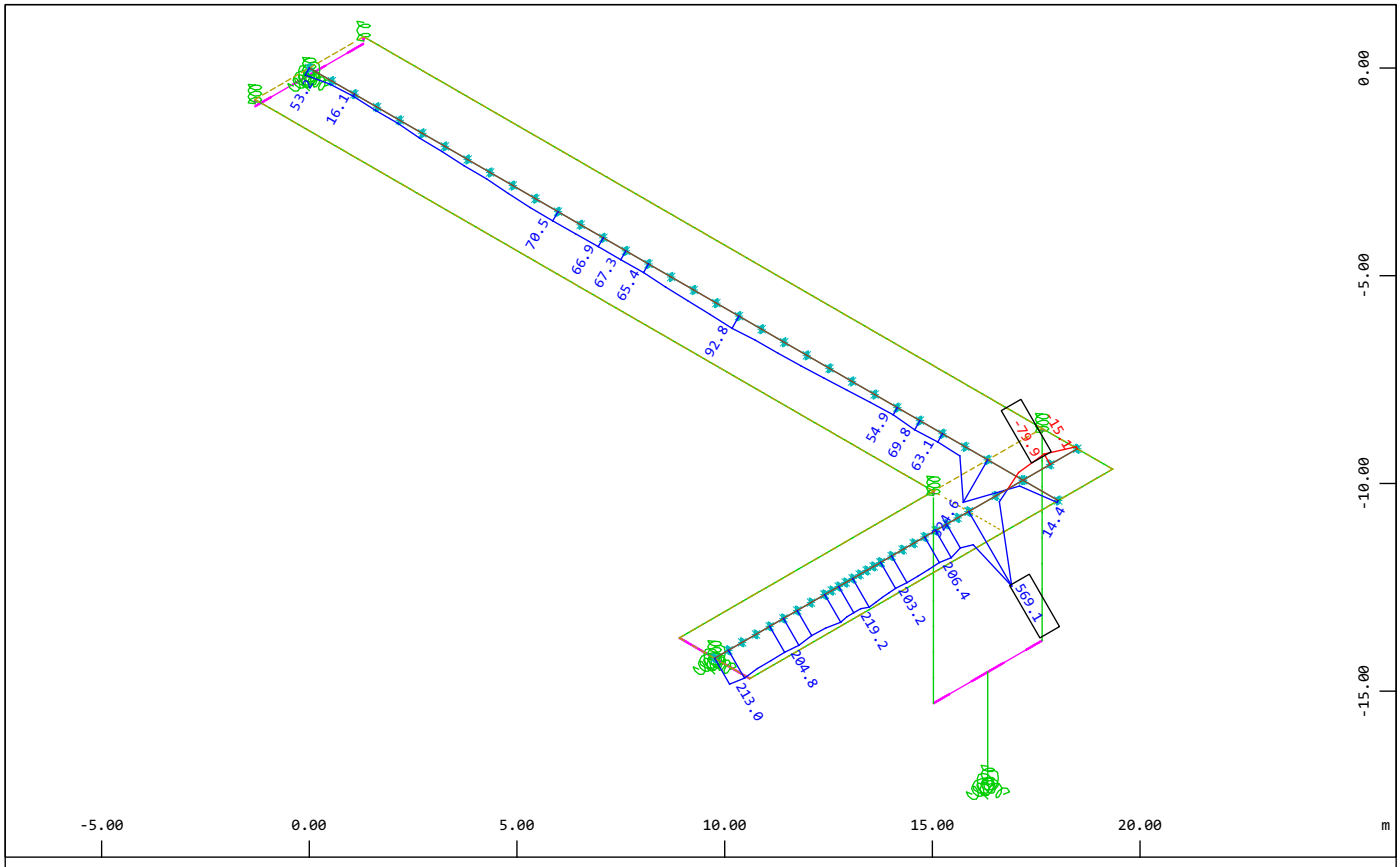
Proyecto/Project _ ELBA TABLERO
Fecha/Date _ 24/06/2019 Referencia/Reference _ _ _ Hoja Nº/Page Nº _ _

ULS / ELS LONGITUDINAL PASARELA Y ESCALERA

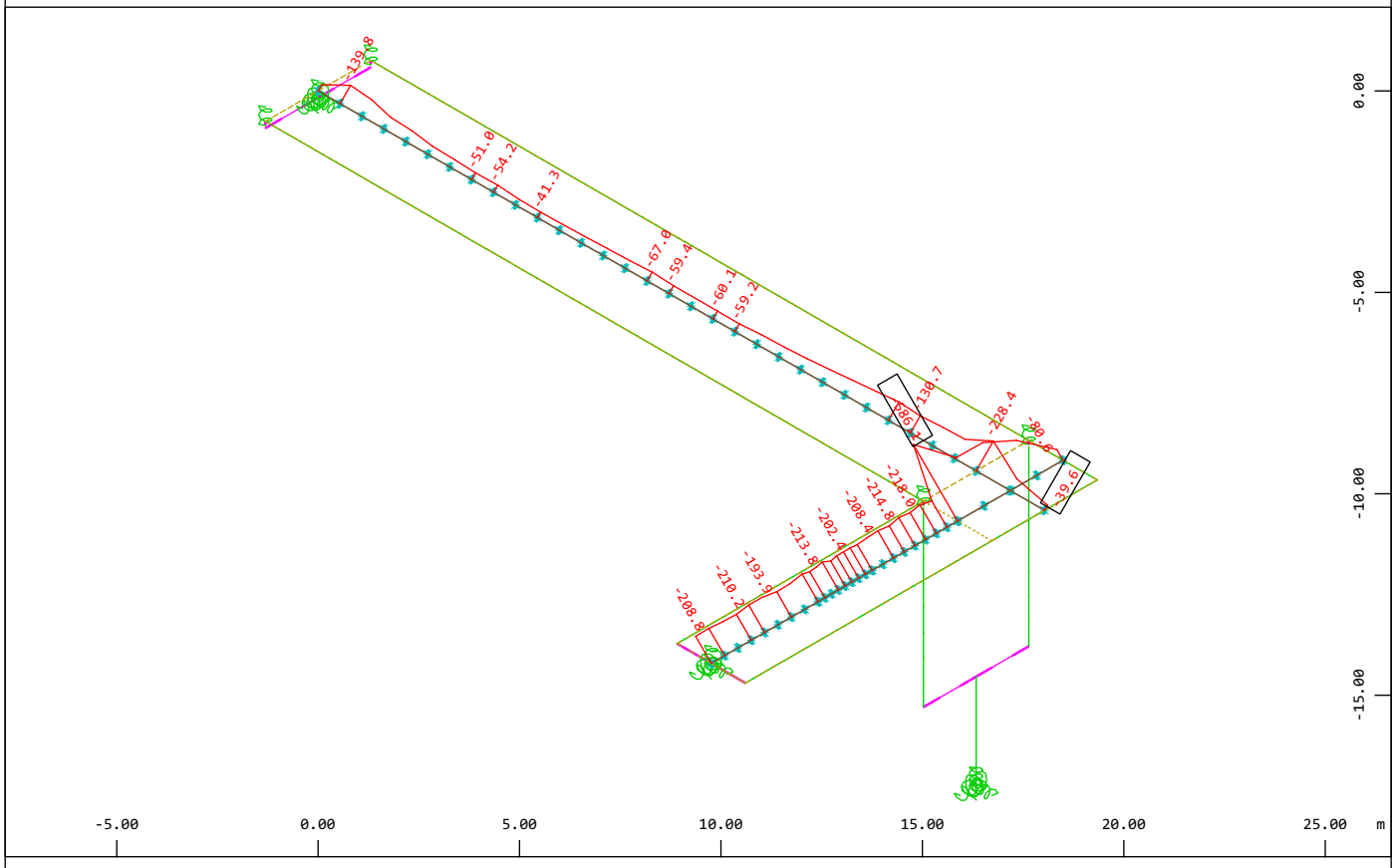
A continuación se incluyen las comprobaciones seccionales tanto para la pasarela como para la escalera.

Para ello se ha utilizado el programa de cálculo FAGUS-6 de la casa CUBUS A.G.



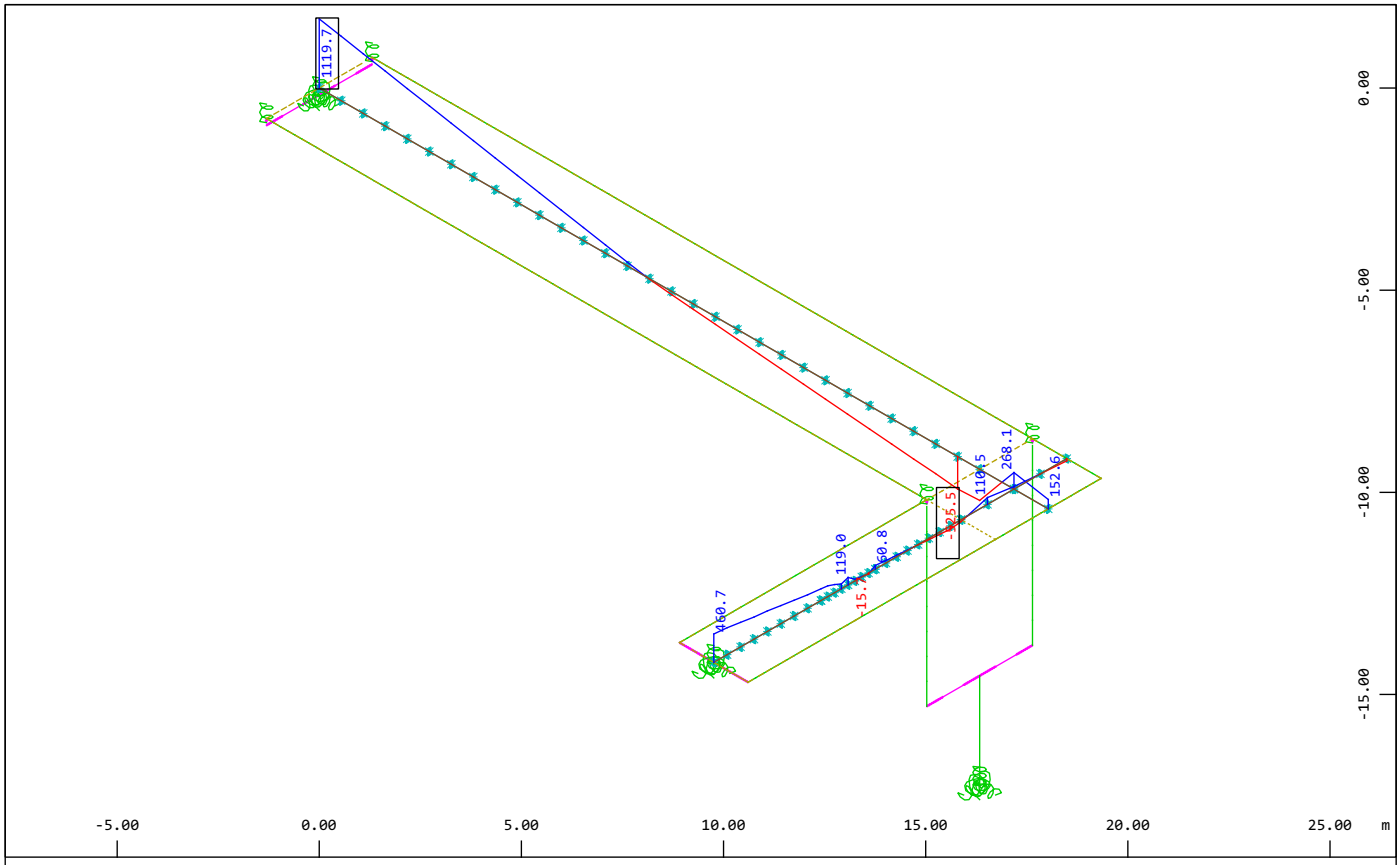
External beams , Normal force Nx, Loadcase 10121 MAX-N BSCT ELU , 1 cm 3D = 500.0 kN
(Min=-79.9) (Max=569.1)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



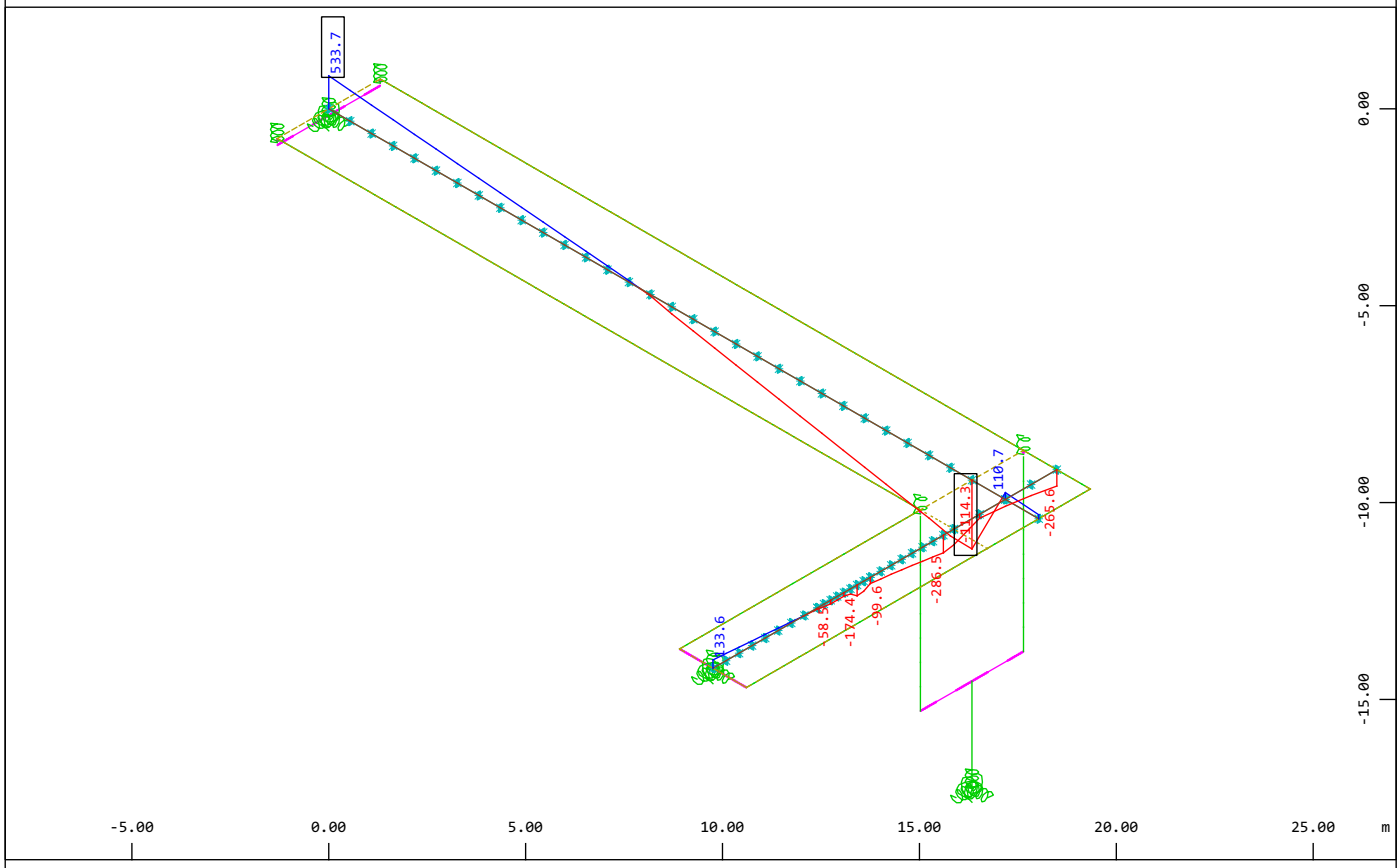
External beams , Normal force Nx, Loadcase 10122 MIN-N BSCT ELU , 1 cm 3D = 500.0 kN
(Min=-586.1) (Max=-39.6)

M 1 : 187
X * 0.816
Y * 0.816
Z * 0.816



External beams , Shear force Vz, Loadcase 10125 MAX-VZ BSCT ELU , 1 cm 3D = 1000. kN
(Min=-525.5) (Max=1120.)

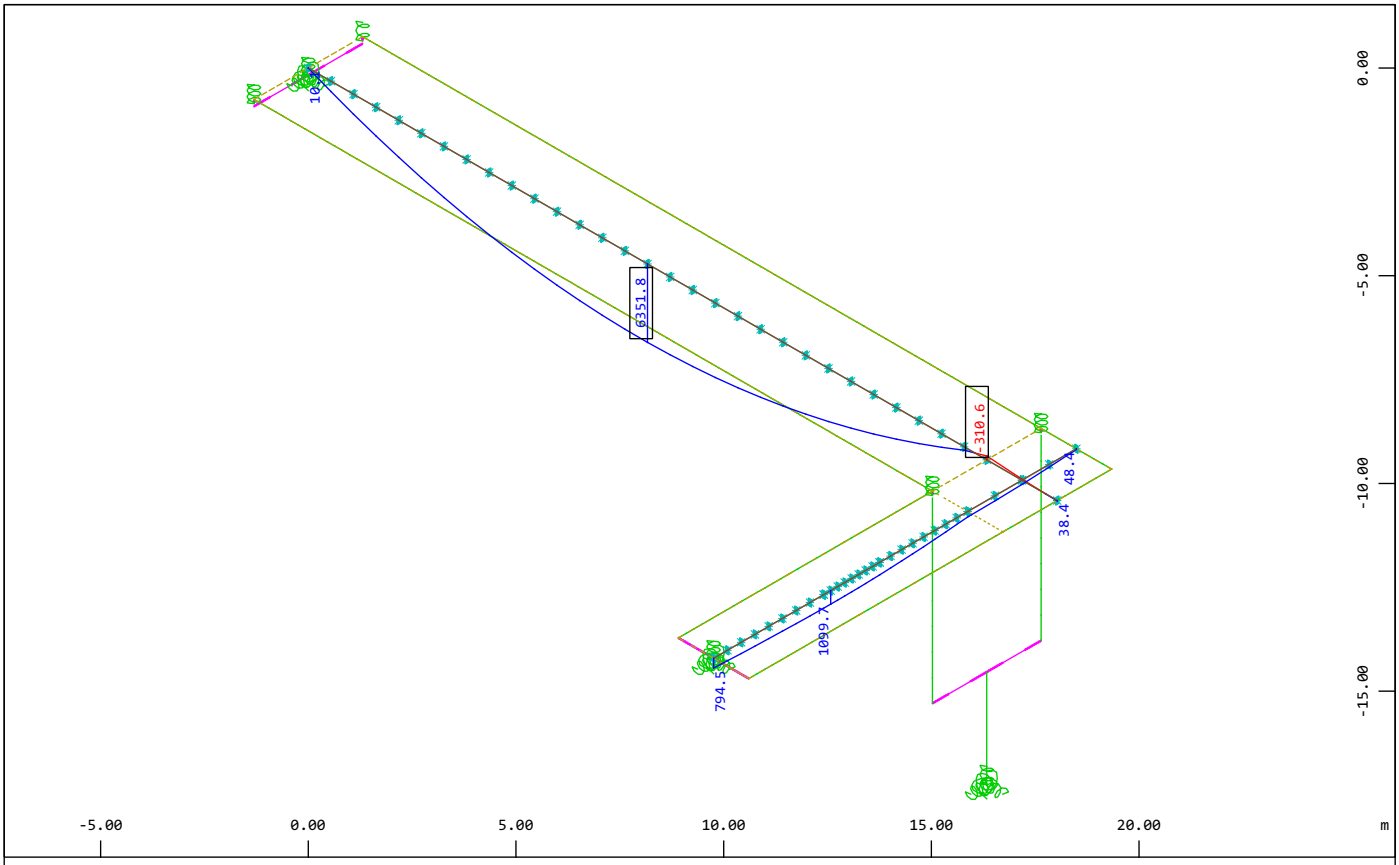
M 1 : 187
X * 0.816
Y * 0.816
Z * 0.816



External beams , Shear force Vz, Loadcase 10126 MIN-VZ BSCT ELU , 1 cm 3D = 1000. kN
(Min=-1114.) (Max=533.7)

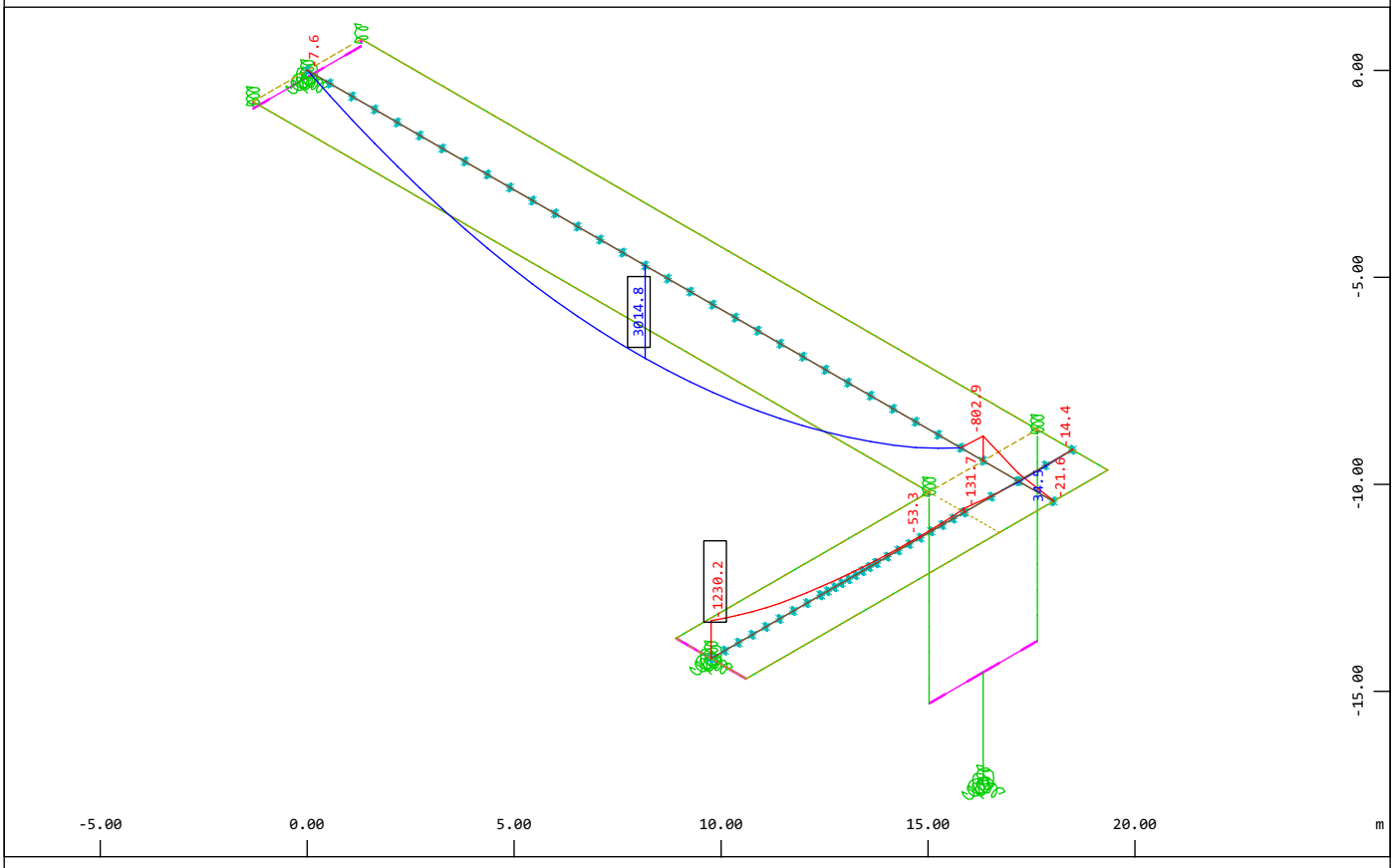
M 1 : 192
X * 0.816
Y * 0.816
Z * 0.816

MODELO
RESULTADOS ULS



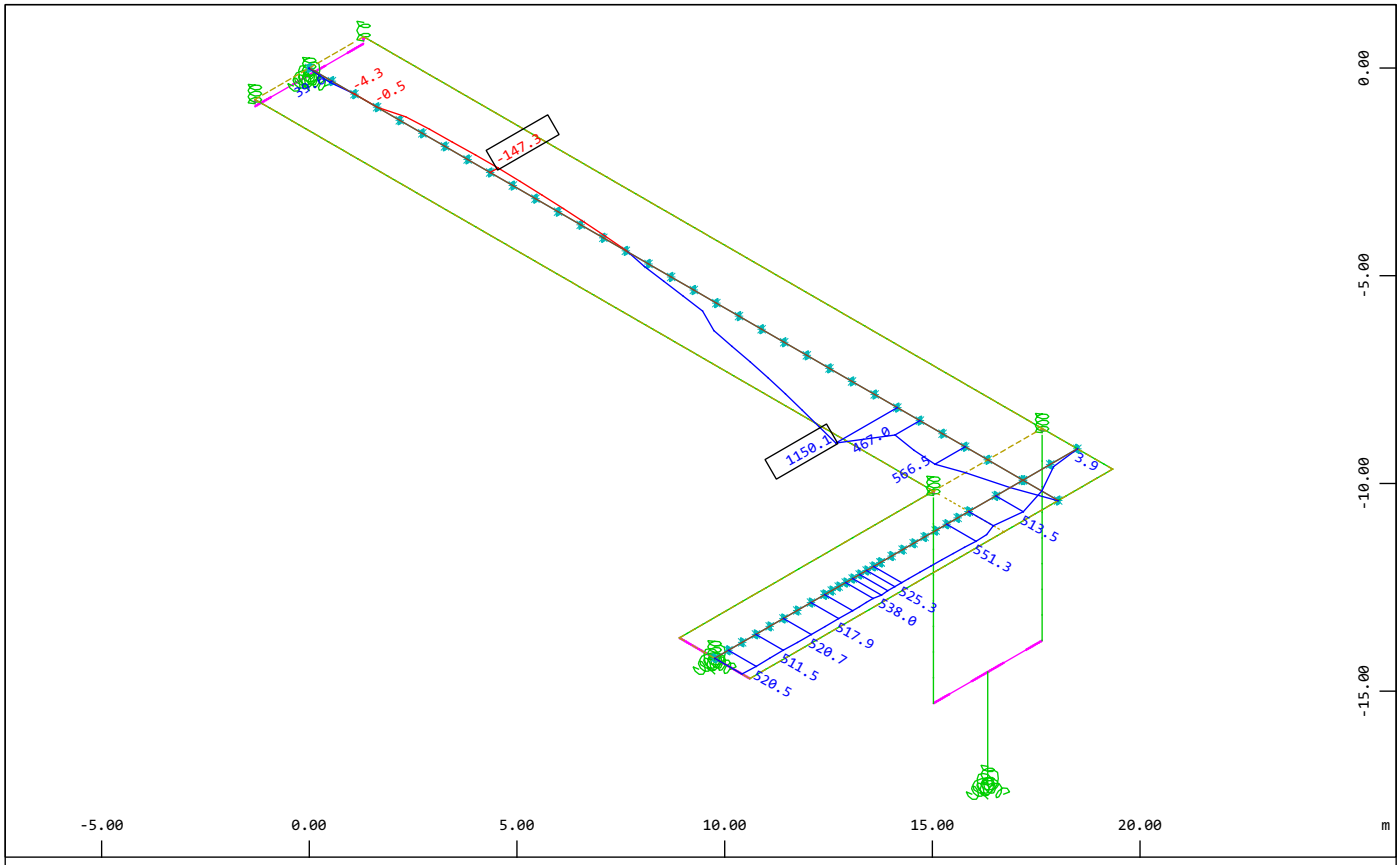
External beams , Bending moment My, Loadcase 10129 MAX-MY BSCT ELU , 1 cm 3D = 5000. kNm
(Min=-310.6) (Max=6352.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



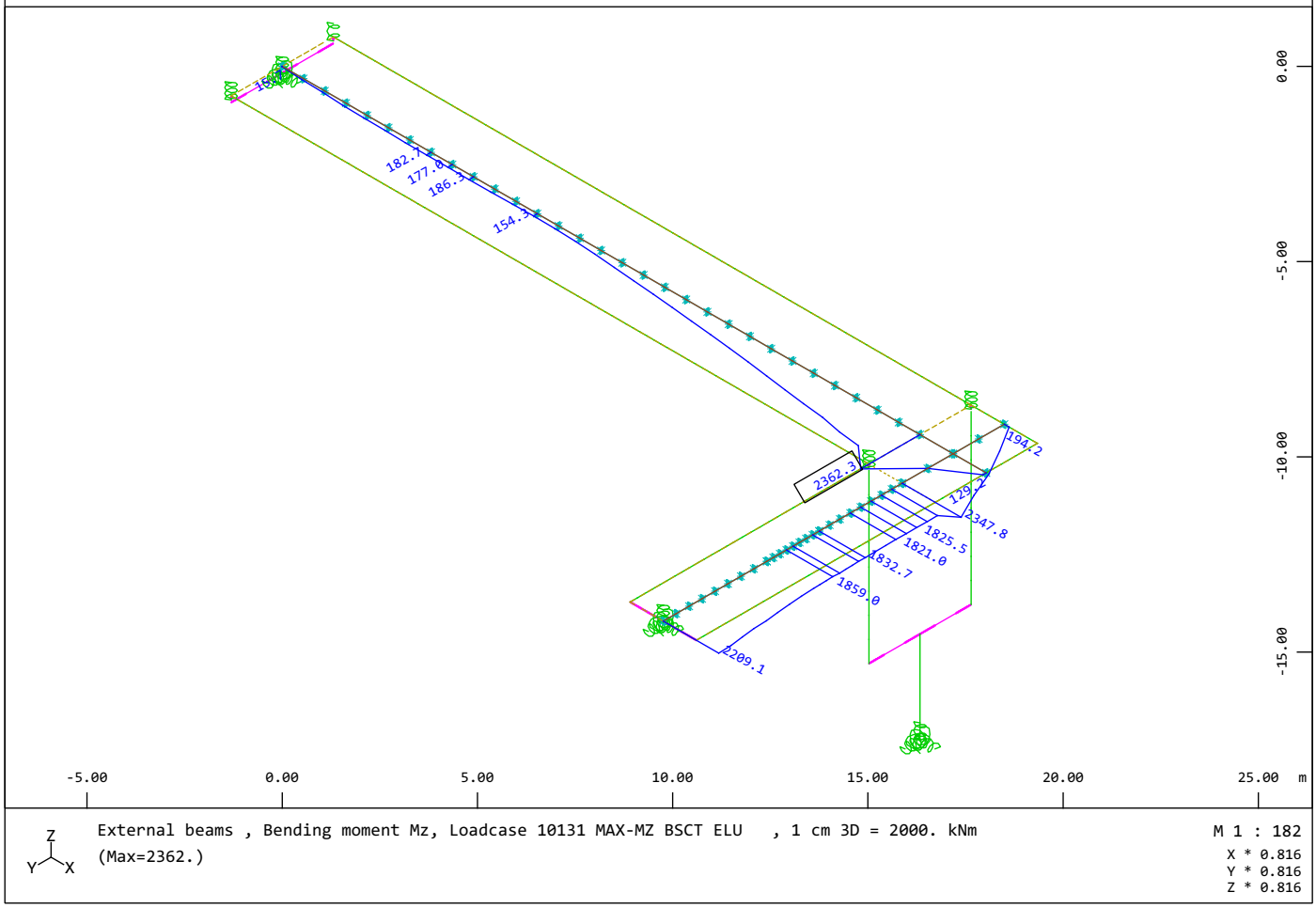
External beams , Bending moment My, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 2000. kNm
(Min=-1230.) (Max=3015.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



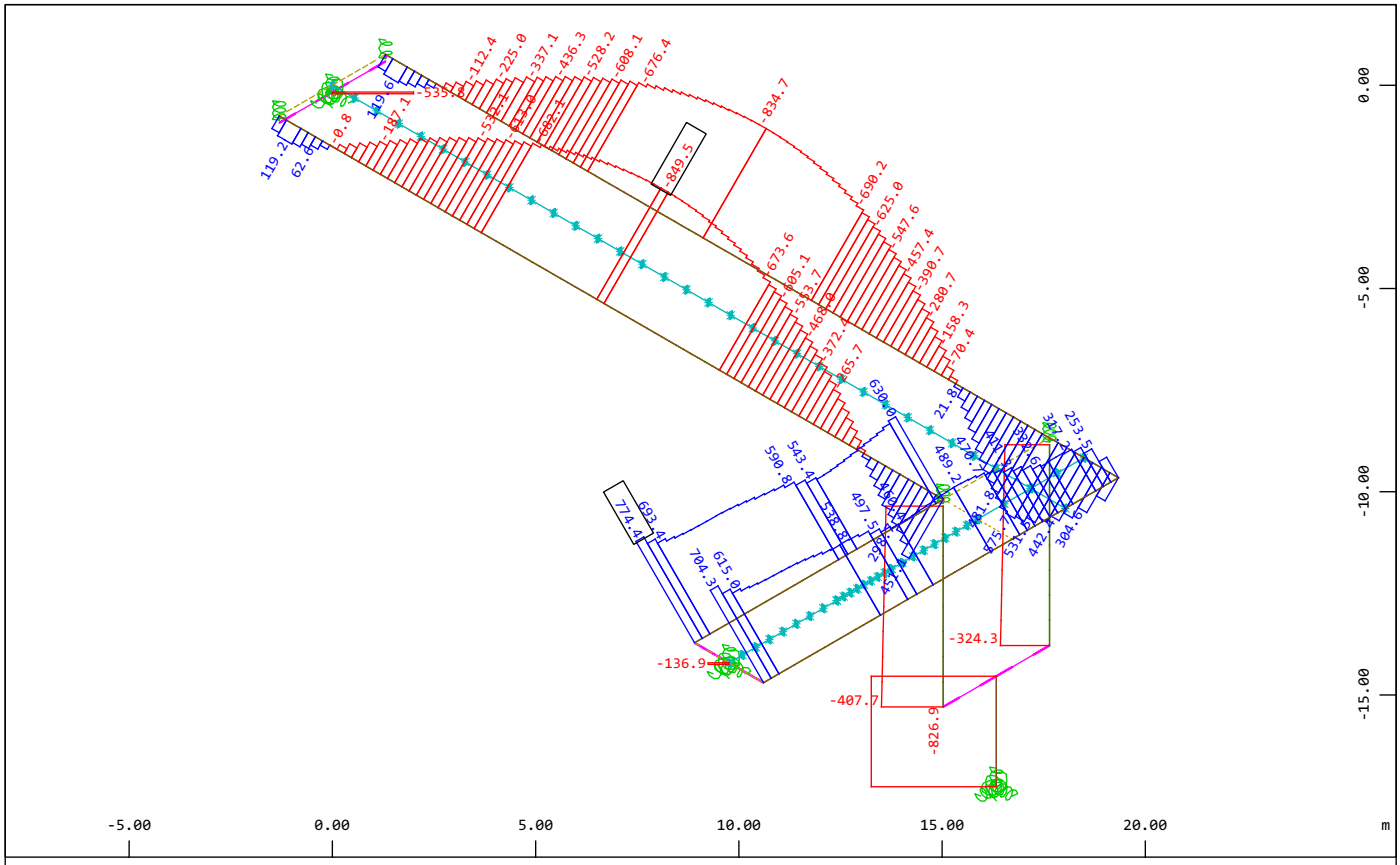
External beams , Bending moment Mz, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 1000. kNm
(Min=-147.3) (Max=1150.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



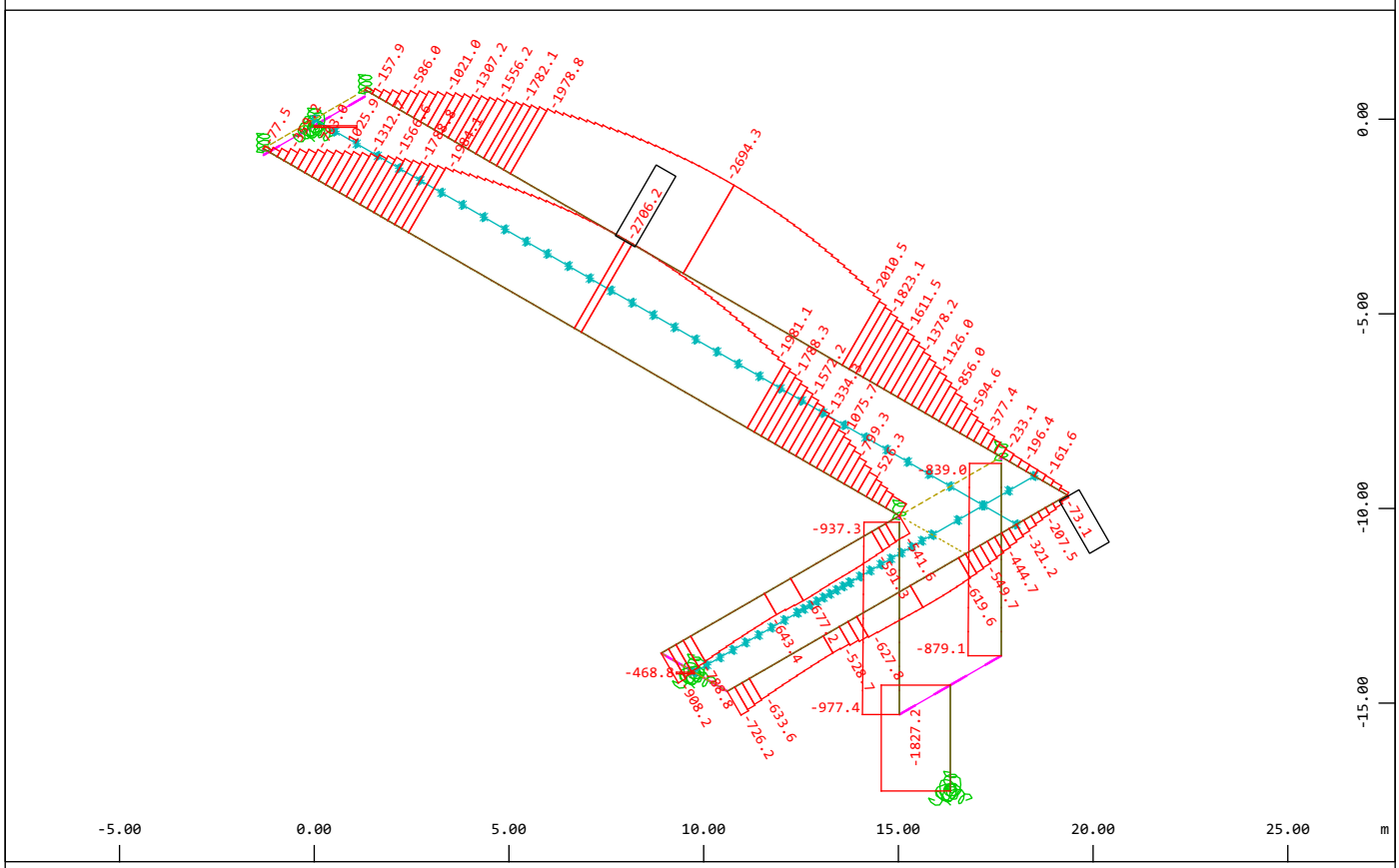
External beams , Bending moment Mz, Loadcase 10131 MAX-MZ BSCT ELU , 1 cm 3D = 2000. kNm
(Max=2362.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



Beam Elements , Normal force Nx, Loadcase 10121 MAX-N BSCT ELU , 1 cm 3D = 500.0 kN
(Min=-849.5) (Max=774.4)

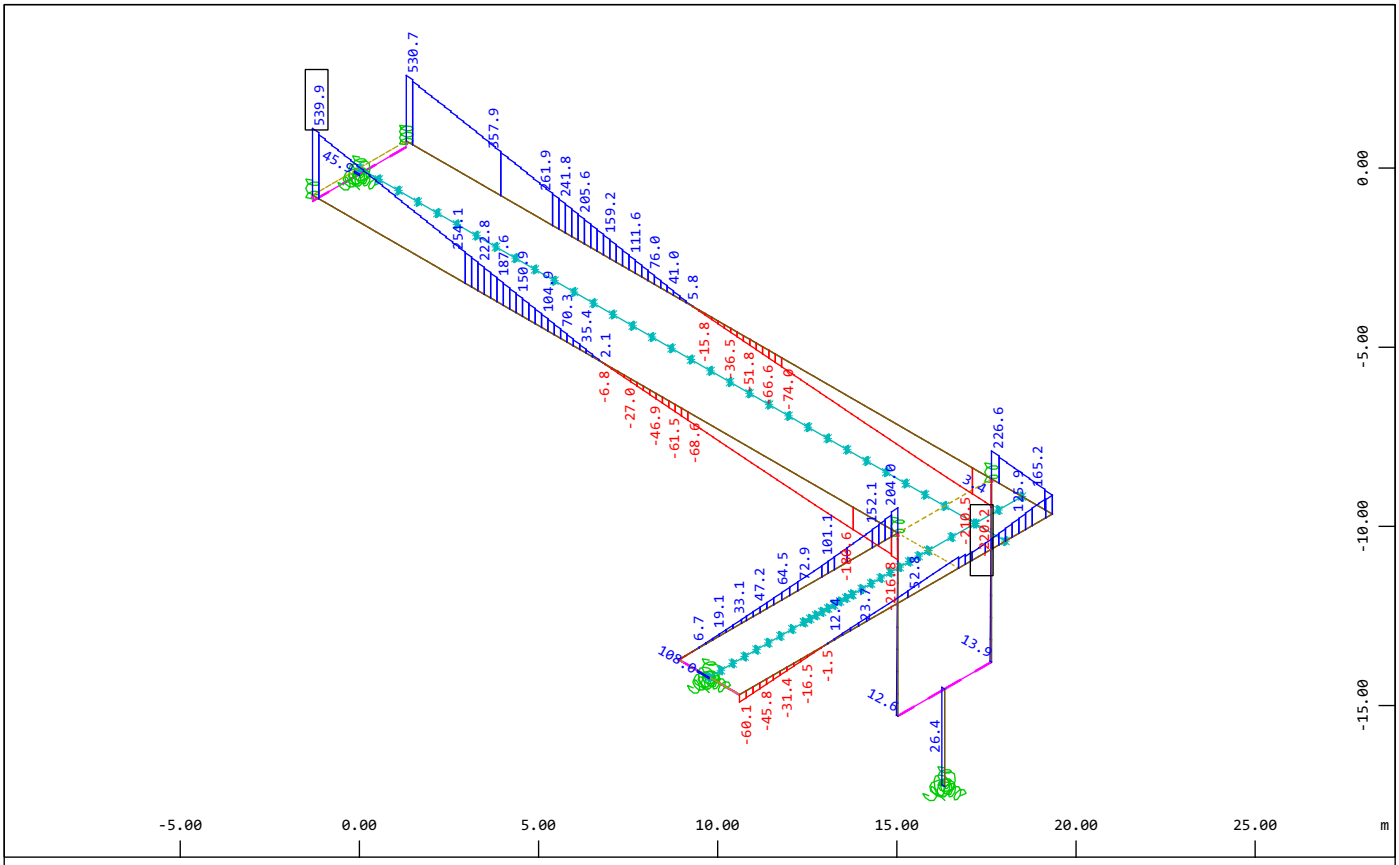
M 1 : 186
X * 0.816
Y * 0.816
Z * 0.816



Beam Elements , Normal force Nx, Loadcase 10122 MIN-N BSCT ELU , 1 cm 3D = 2000. kN
(Min=-2706.) (Max=-73.1)

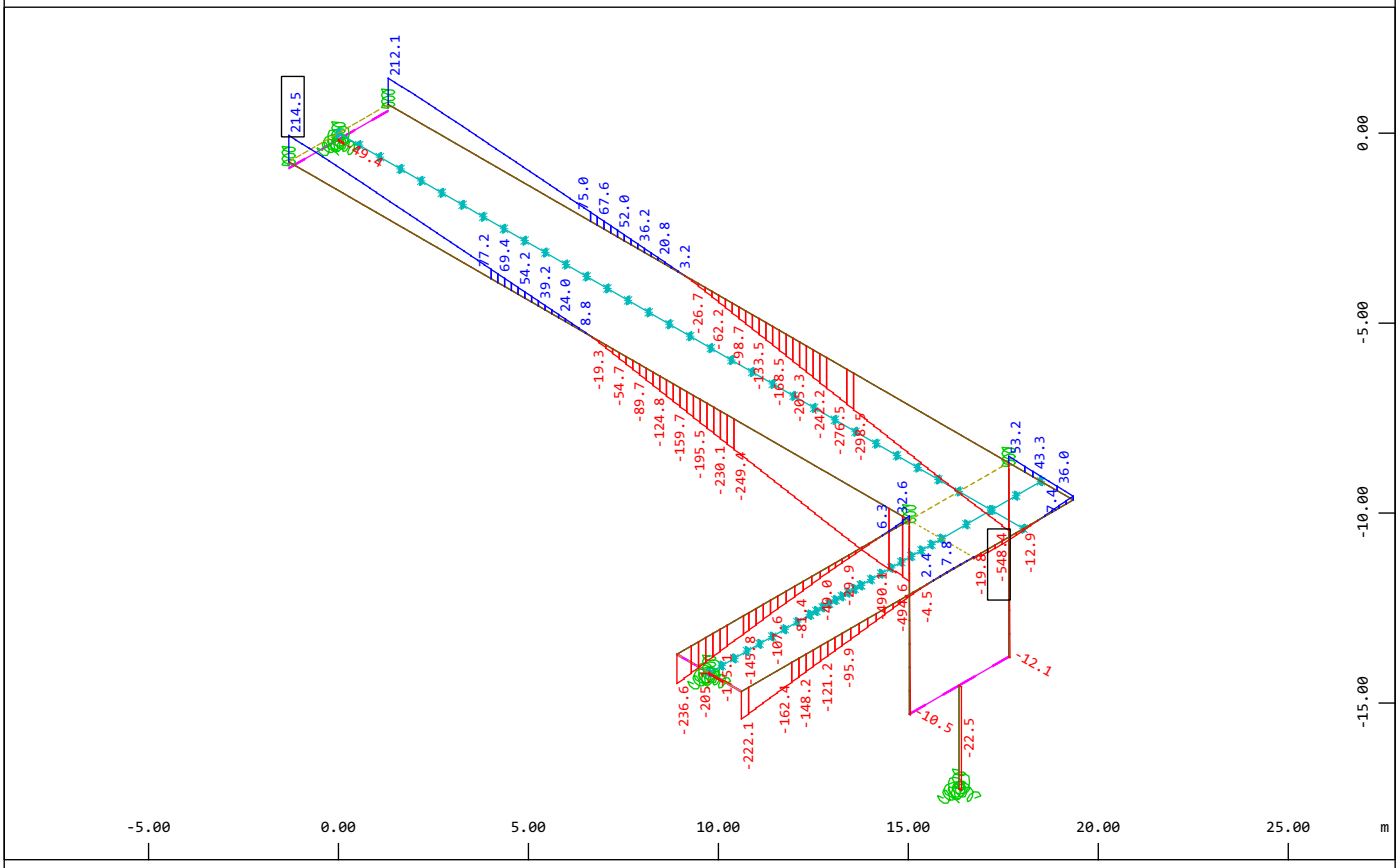
M 1 : 194
X * 0.816
Y * 0.816
Z * 0.816

MODELO
RESULTADOS ULS



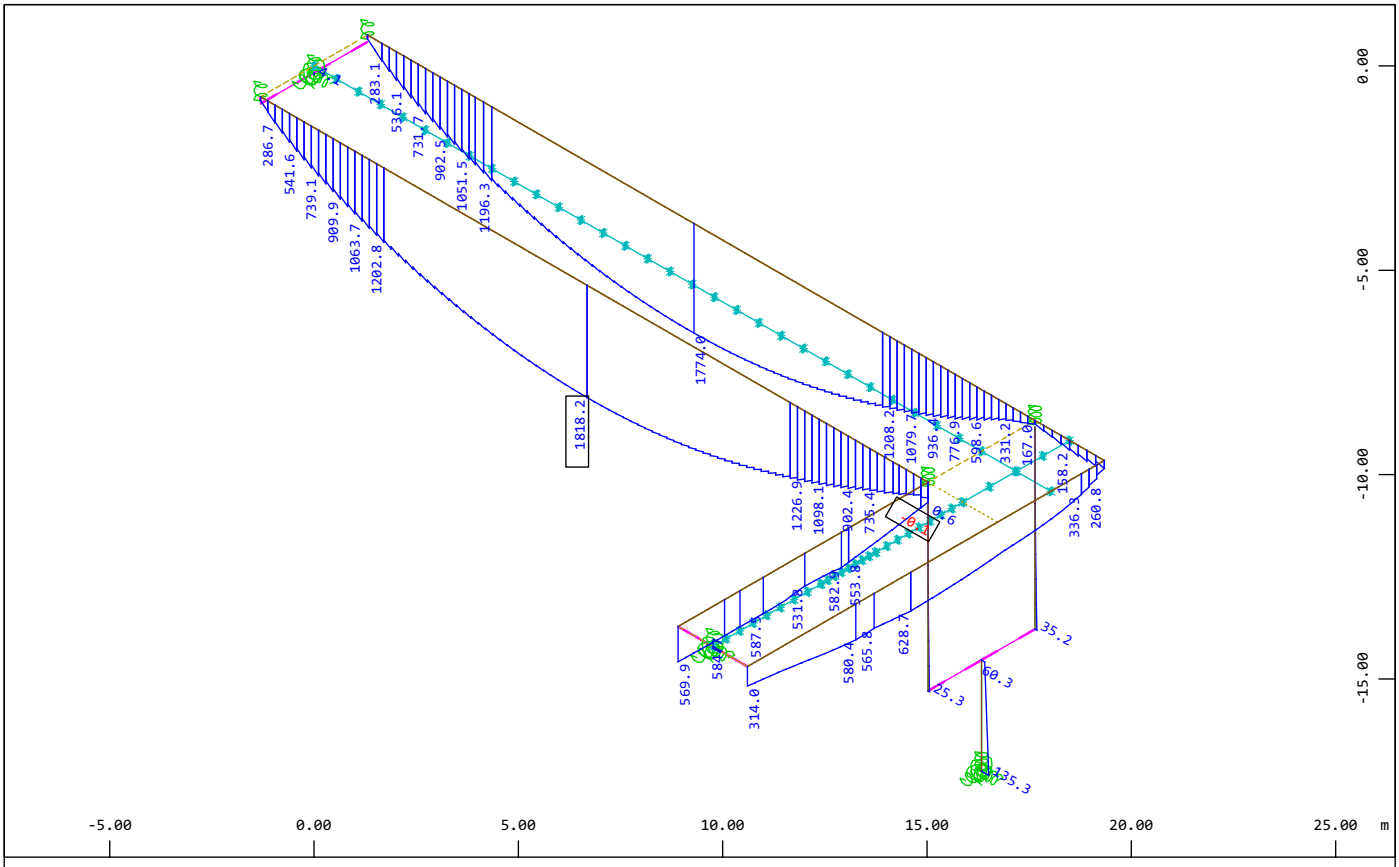
Beam Elements , Shear force Vz, Loadcase 10125 MAX-VZ BSCT ELU , 1 cm 3D = 500.0 kN
(Min=-220.2) (Max=539.9)

M 1 : 211
X * 0.816
Y * 0.816
Z * 0.816



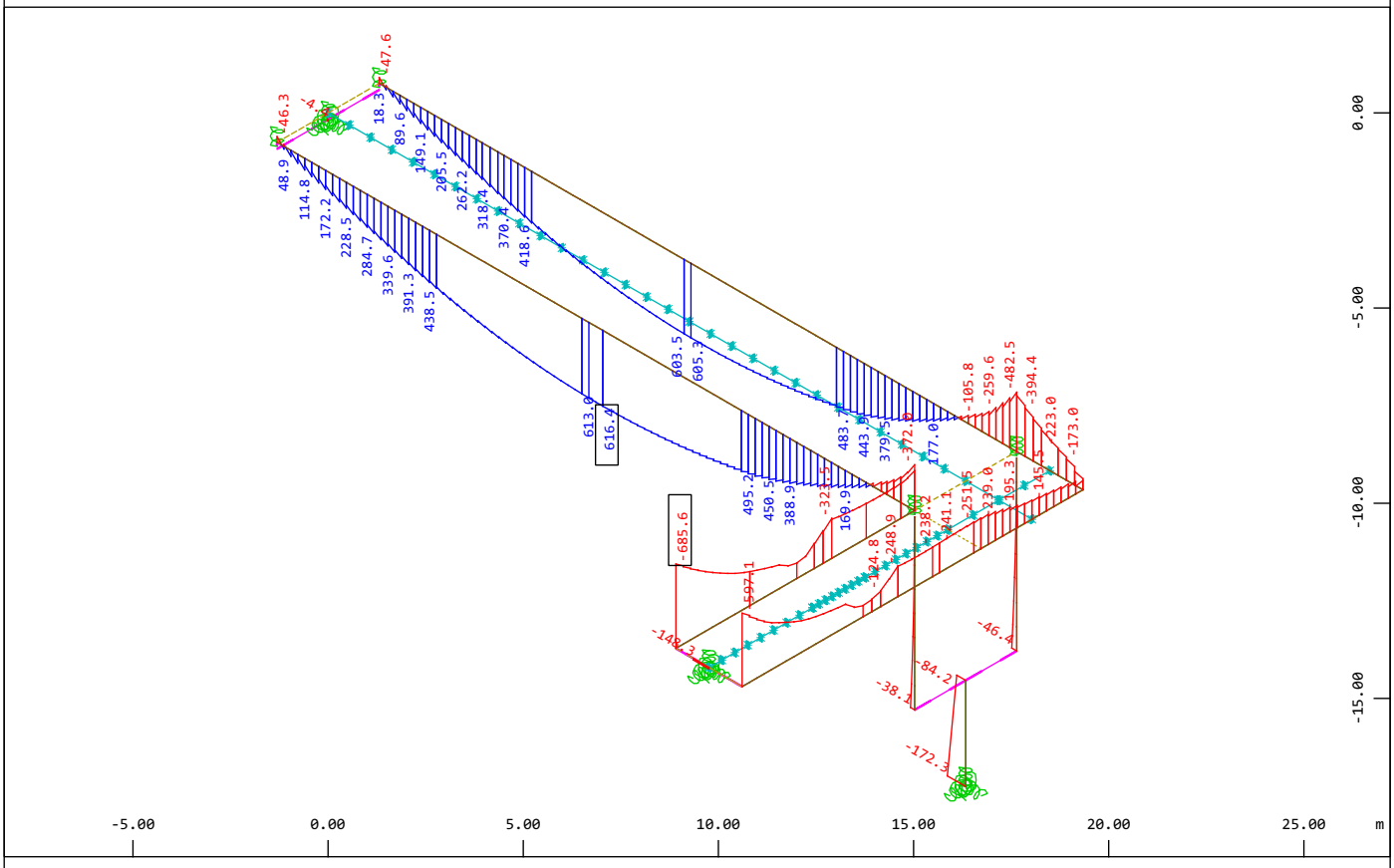
Beam Elements , Shear force Vz, Loadcase 10126 MIN-VZ BSCT ELU , 1 cm 3D = 500.0 kN
(Min=-548.4) (Max=214.5)

M 1 : 199
X * 0.816
Y * 0.816
Z * 0.816



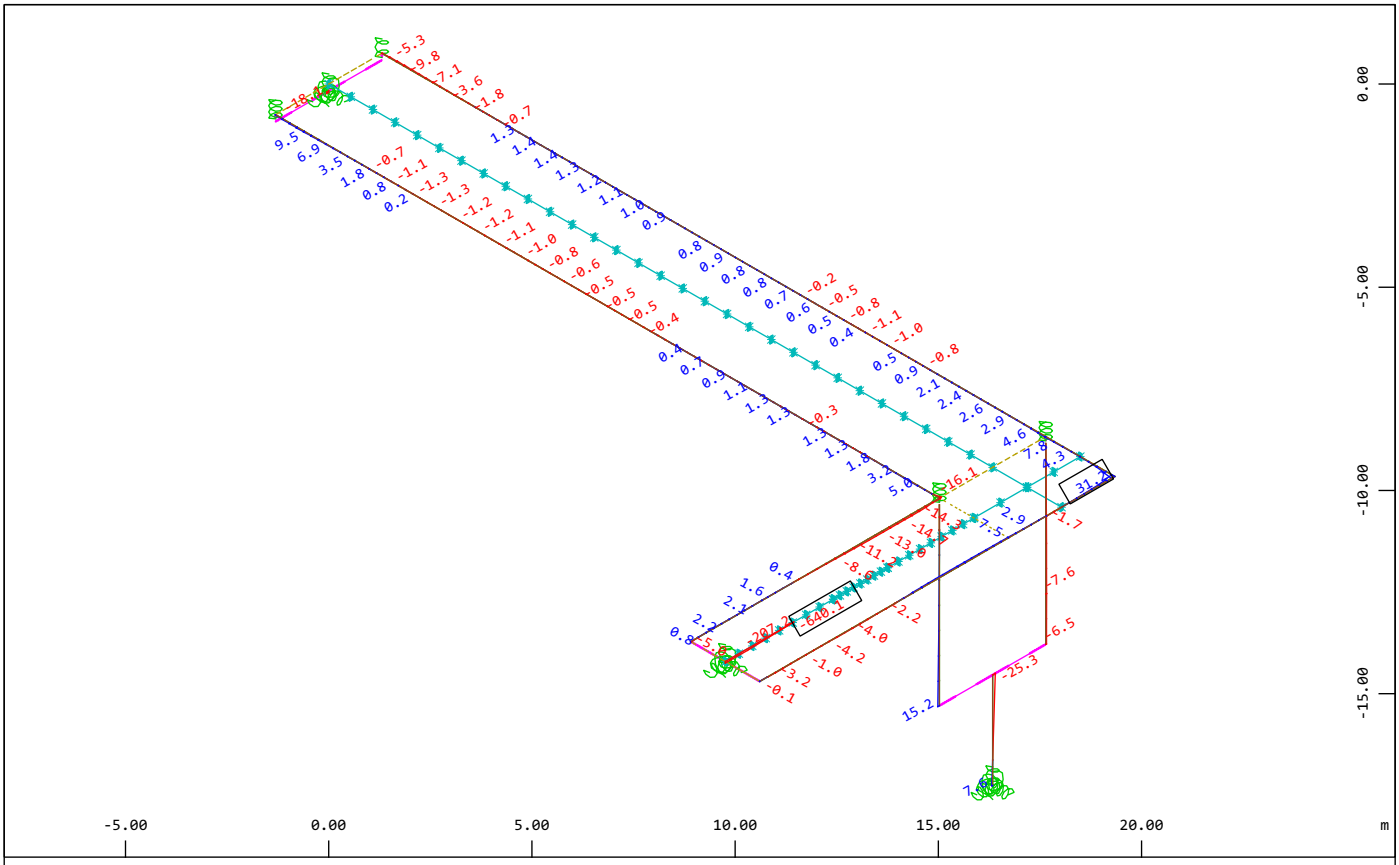
Beam Elements , Bending moment My, Loadcase 10129 MAX-MY BSCT ELU , 1 cm 3D = 1000. kNm
(Min=-0.0603) (Max=1818.)

M 1 : 185
X * 0.816
Y * 0.816
Z * 0.816



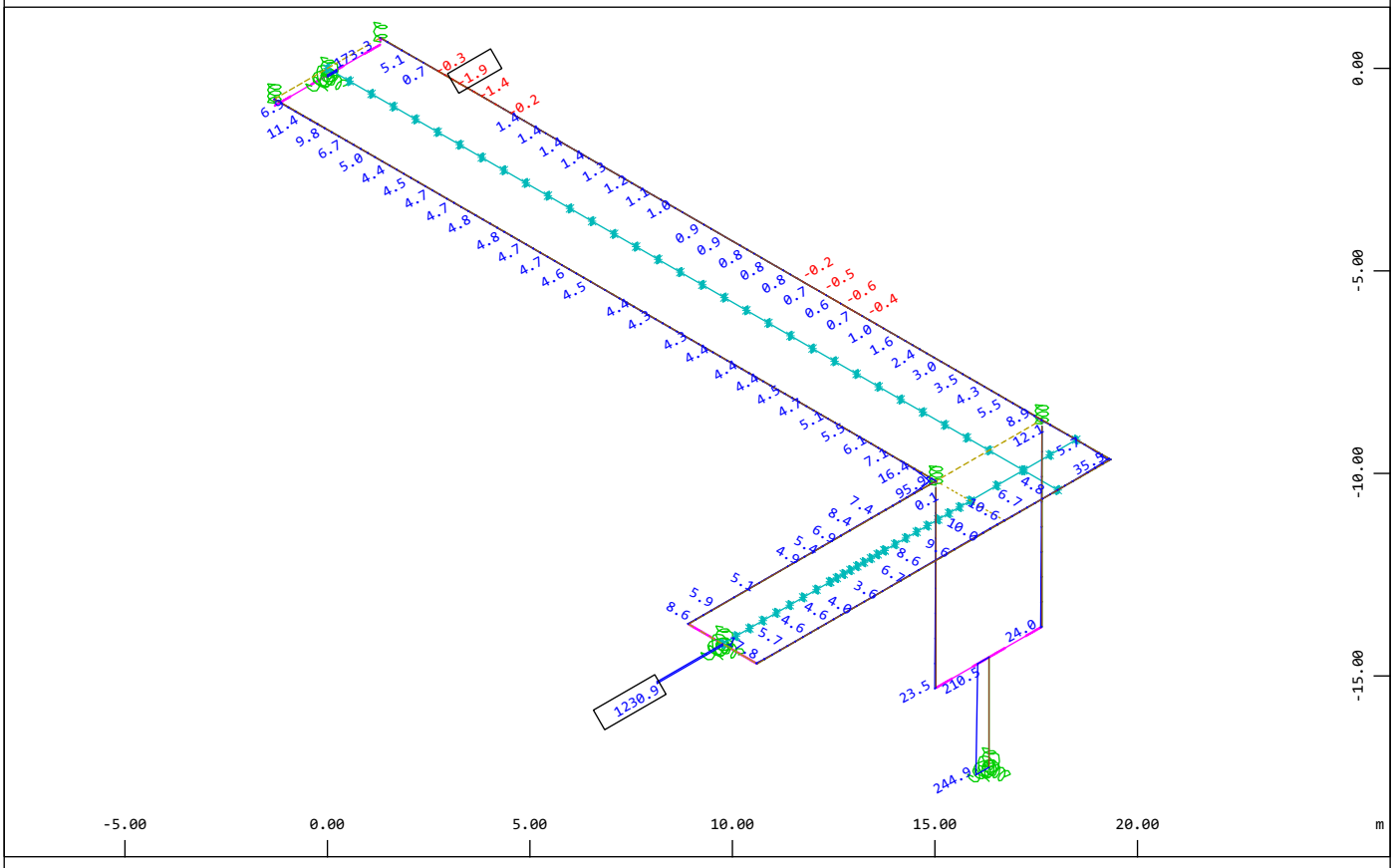
Beam Elements , Bending moment My, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 500.0 kNm
(Min=-685.6) (Max=616.4)

M 1 : 193
X * 0.816
Y * 0.816
Z * 0.816



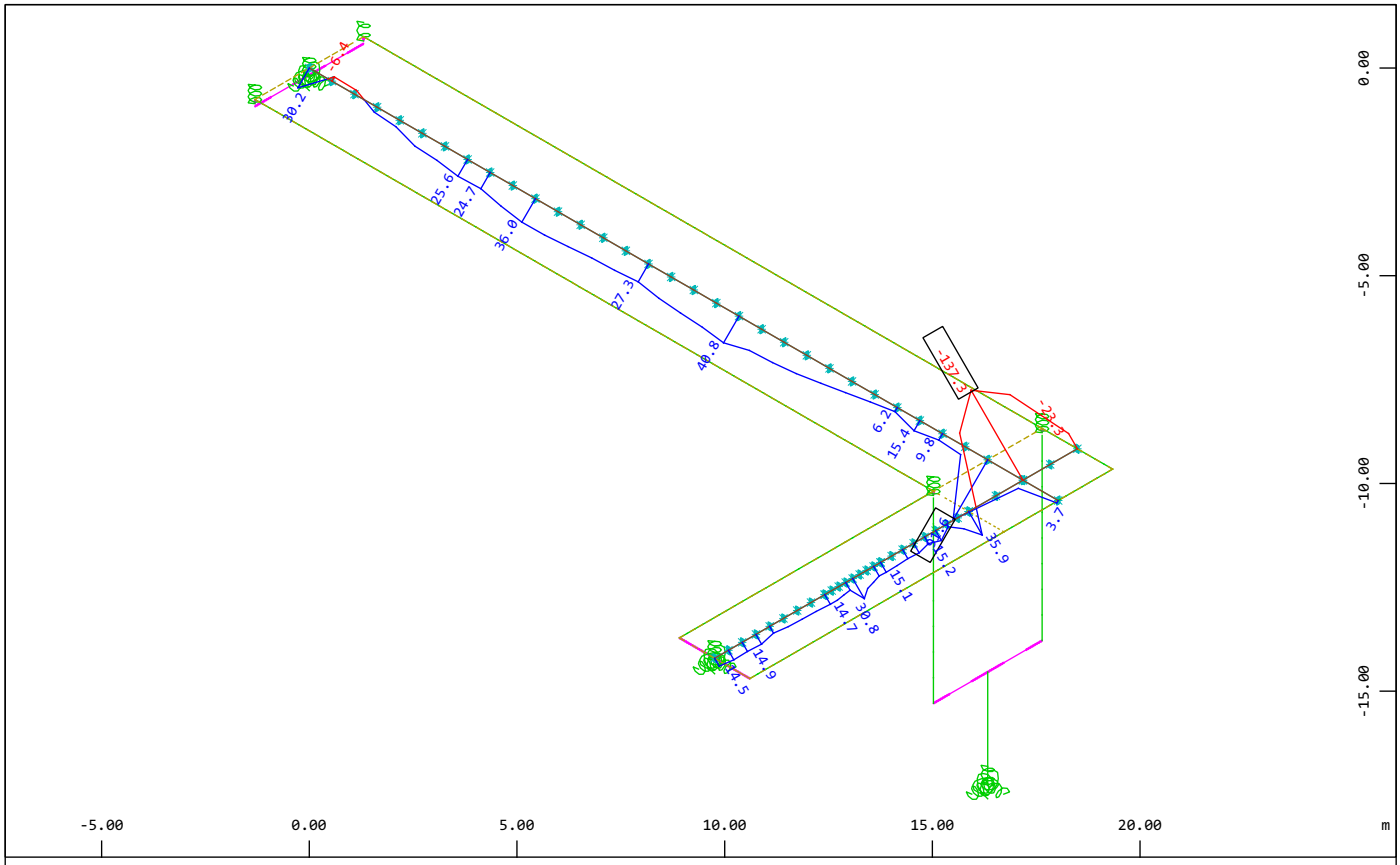
Beam Elements , Bending moment Mz, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 500.0 kNm
(Min=-640.1) (Max=31.2)

M 1 : 186
X * 0.816
Y * 0.816
Z * 0.816



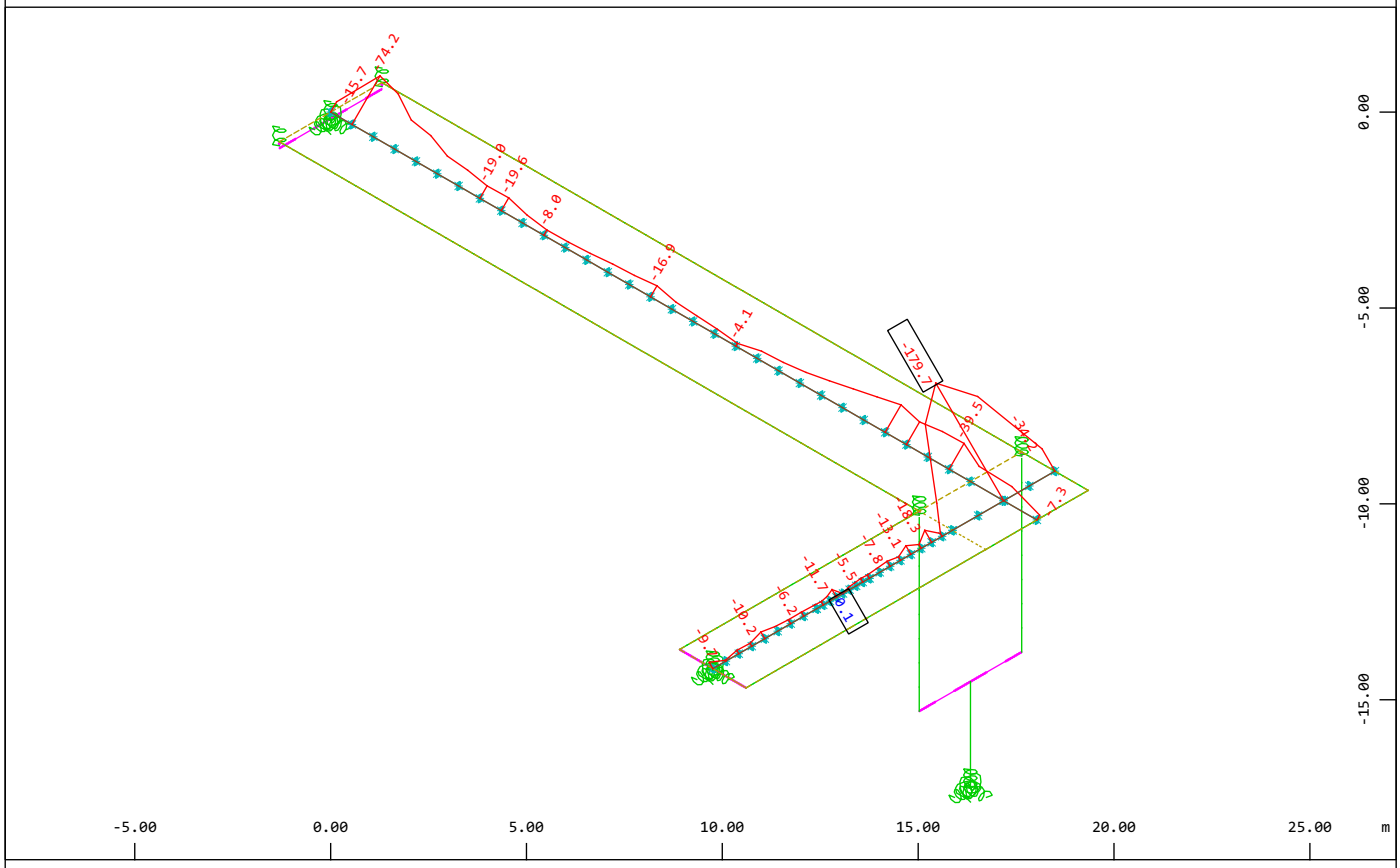
Beam Elements , Bending moment Mz, Loadcase 10131 MAX-MZ BSCT ELU , 1 cm 3D = 1000. kNm
(Min=-1.87) (Max=1231.)

M 1 : 186
X * 0.816
Y * 0.816
Z * 0.816



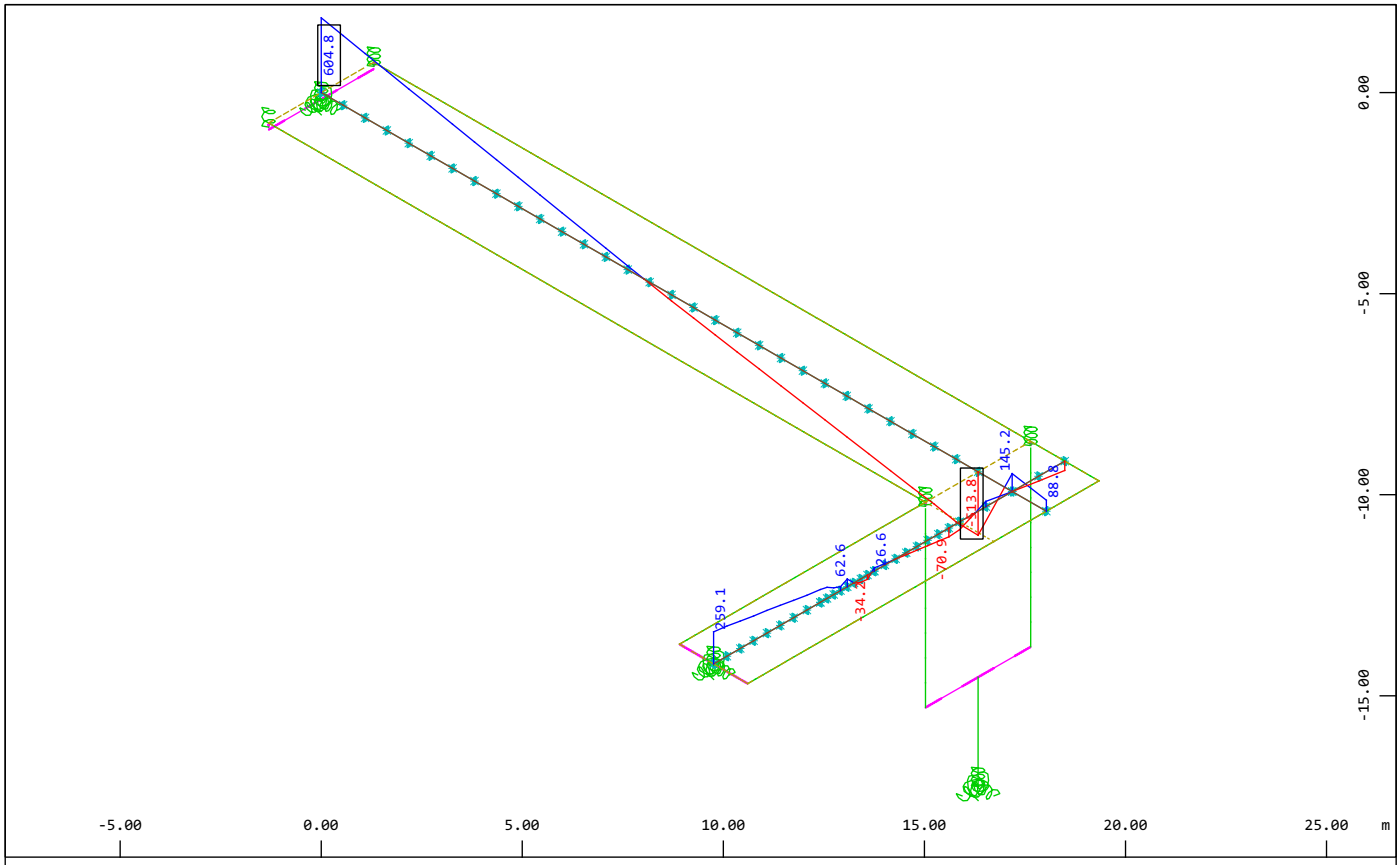
External beams , Normal force Nx, Loadcase 11221 MAX-N BSCT ELS CUASI-PERMANENTE , 1 cm 3D
= 100.0 kN (Min=-137.3) (Max=91.6)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



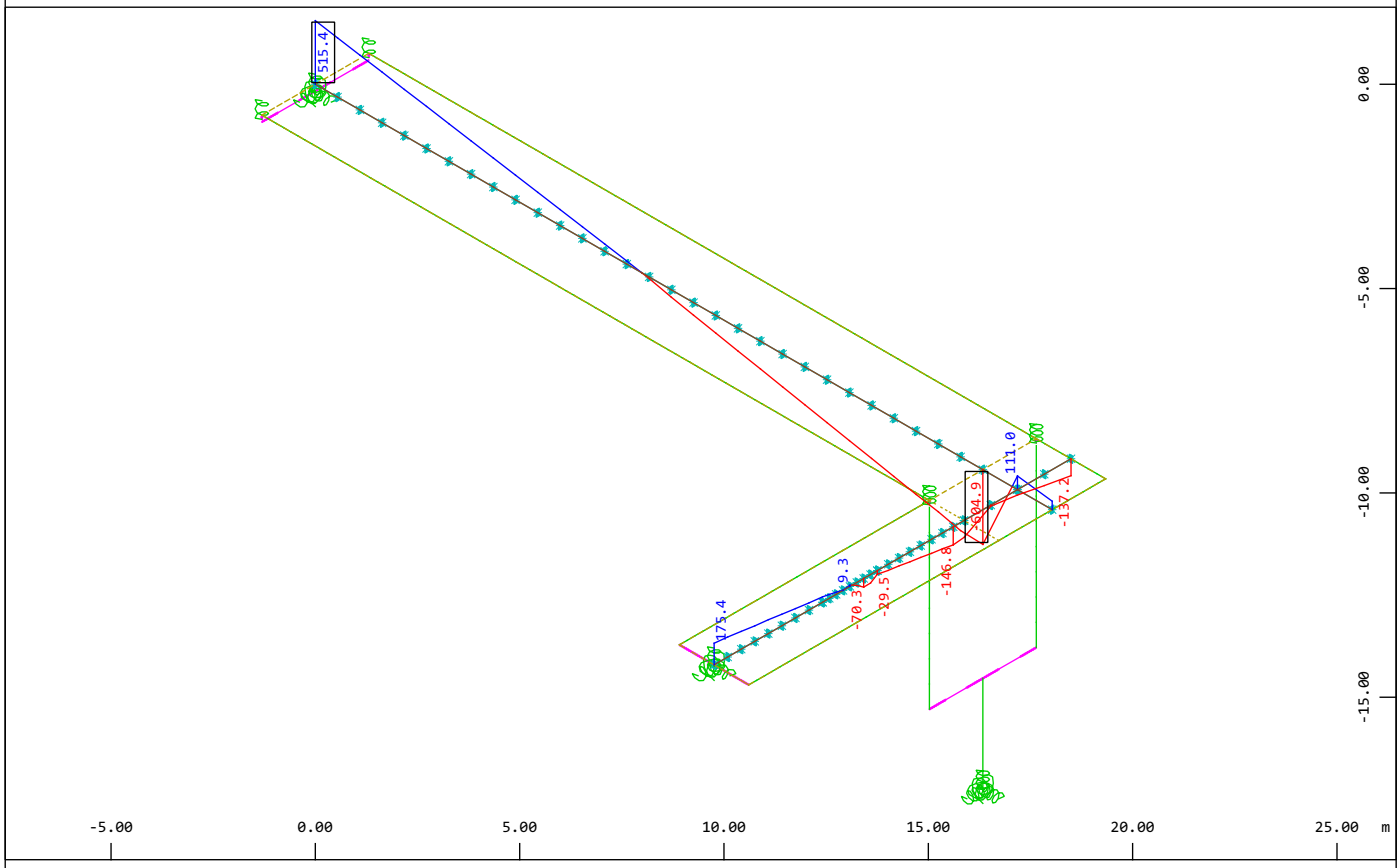
External beams , Normal force Nx, Loadcase 11222 MIN-N BSCT ELS CUASI-PERMANENTE , 1 cm 3D
= 100.0 kN (Min=-179.7) (Max=0.139)

M 1 : 193
X * 0.816
Y * 0.816
Z * 0.816



External beams , Shear force Vz, Loadcase 11225 MAX-VZ BSCT ELS CUASI-PERMANENTE , 1 cm 3D
= 500.0 kN (Min=-513.8) (Max=604.8)

M 1 : 188
X * 0.816
Y * 0.816
Z * 0.816



External beams , Shear force Vz, Loadcase 11226 MIN-VZ BSCT ELS CUASI-PERMANENTE , 1 cm 3D
= 500.0 kN (Min=-604.9) (Max=515.4)

M 1 : 185
X * 0.816
Y * 0.816
Z * 0.816

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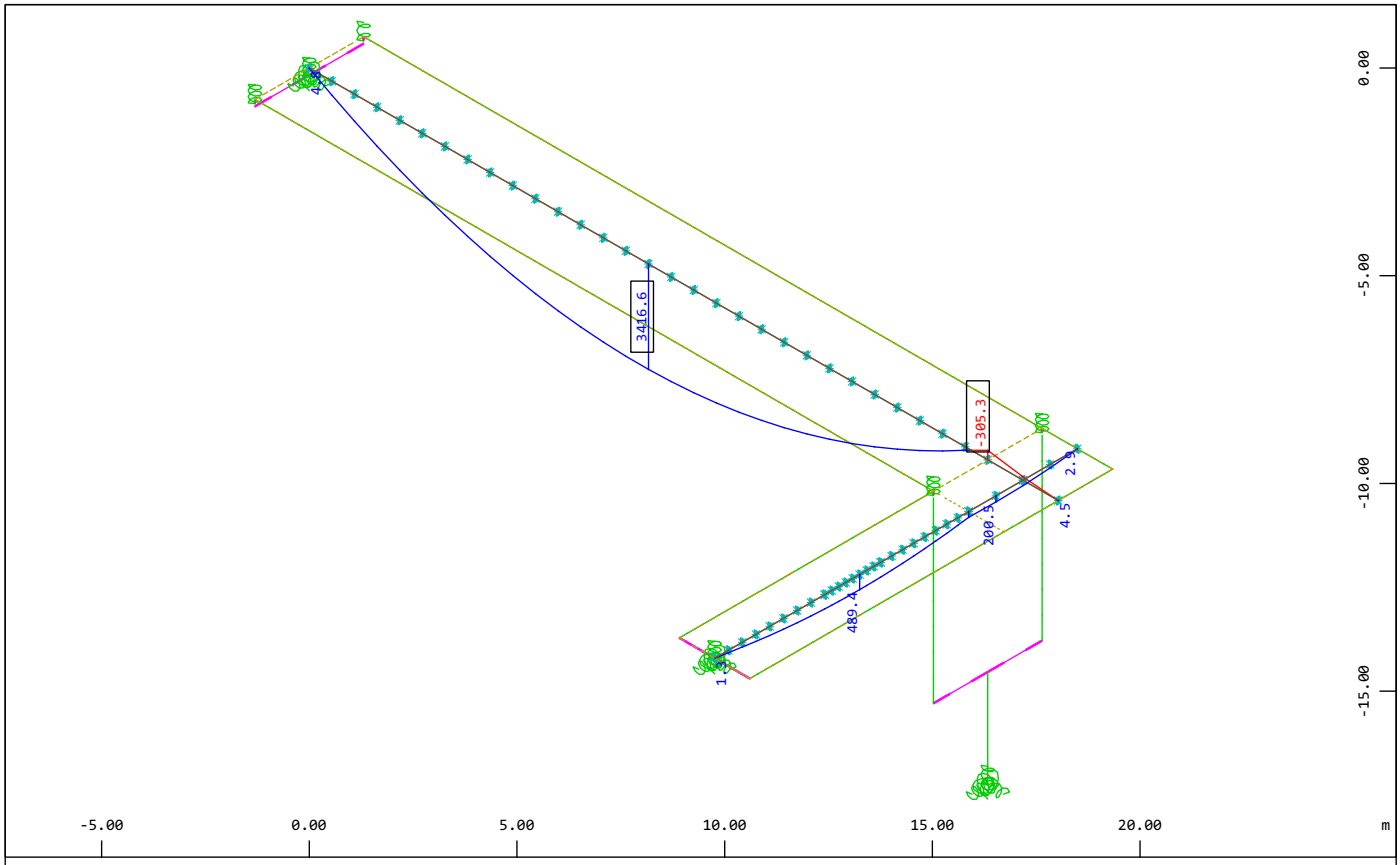
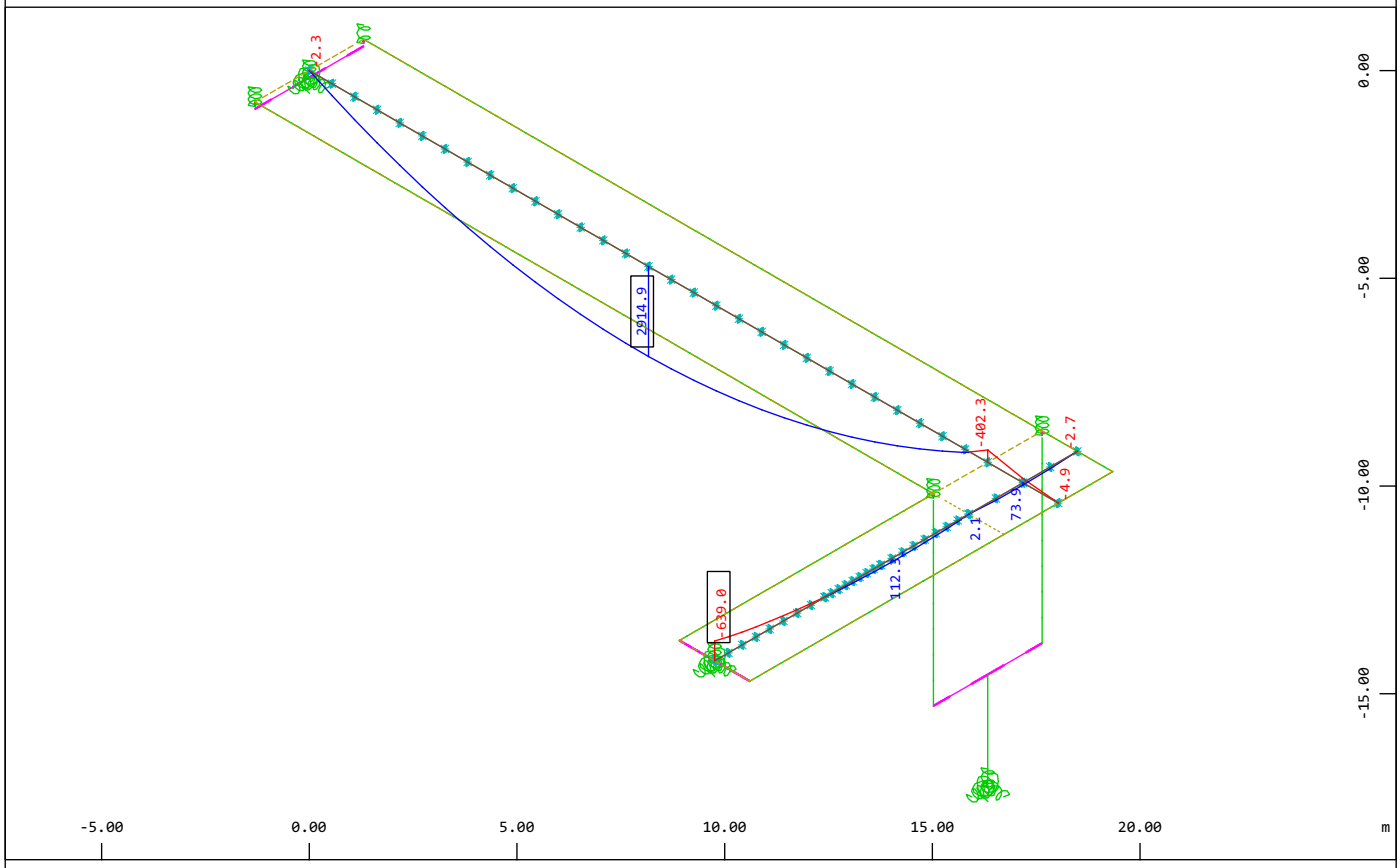


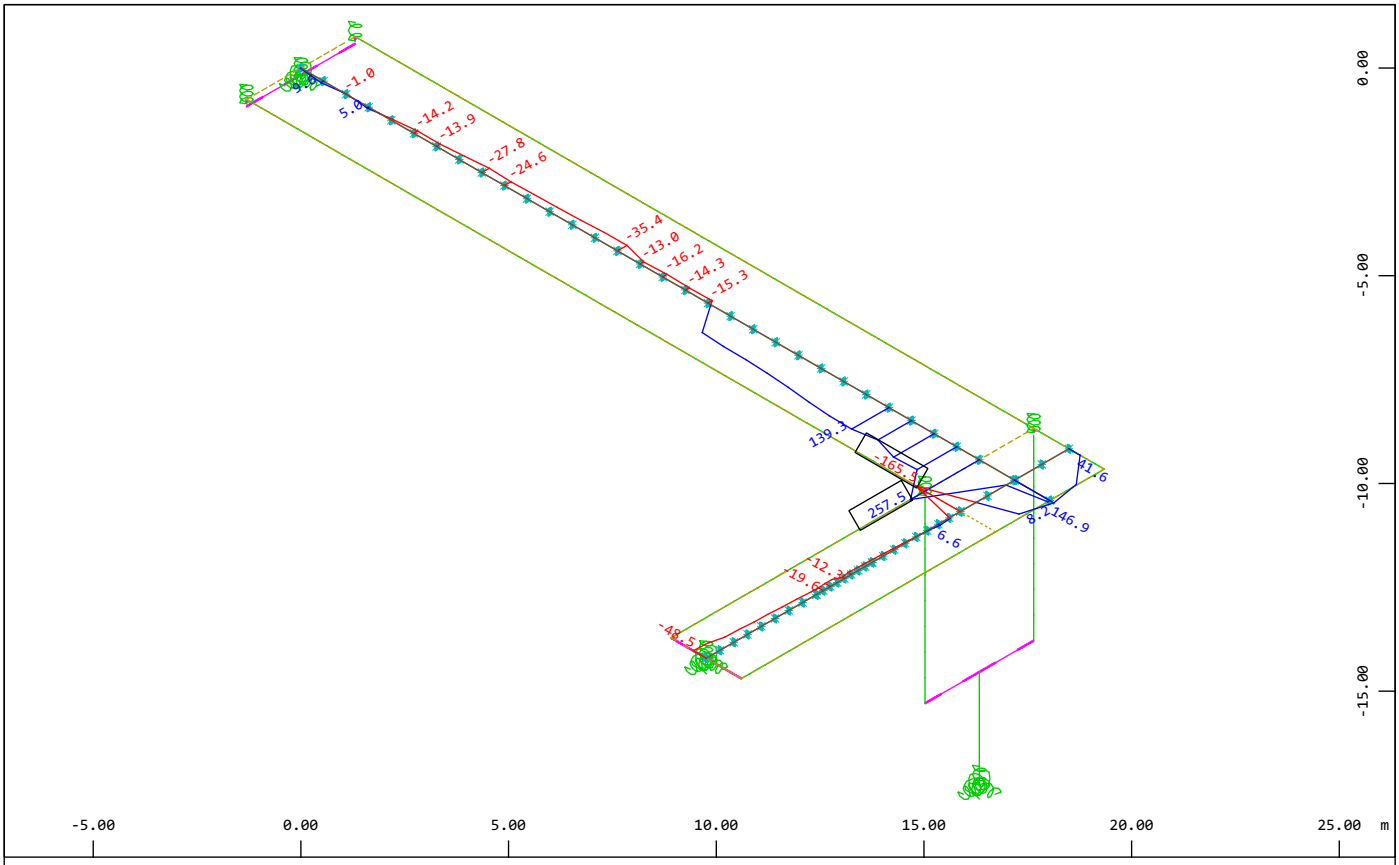
External beams , Bending moment My, Loadcase 11229 MAX-MY BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 2000. kNm (Min=-305.3) (Max=3417.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



External beams , Bending moment My, Loadcase 11230 MIN-MY BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 2000. kNm (Min=-639.0) (Max=2915.)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816

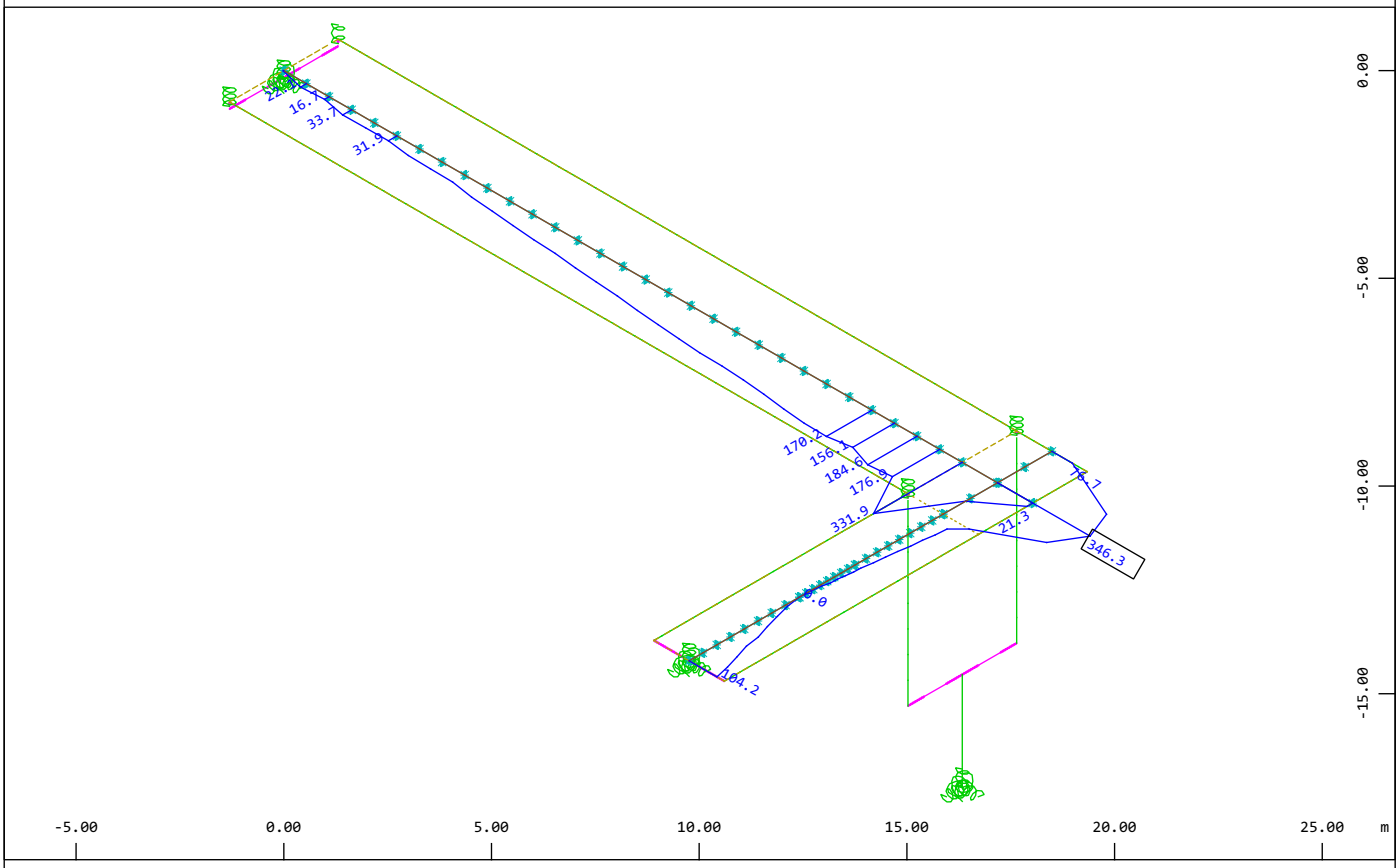


External beams , Bending moment Mz, Loadcase 11230 MIN-MY BSCT ELS CUASI-PERMANENTE , 1 cm

3D = 200.0 kNm (Min=-165.5) (Max=257.5)

M 1 : 182

X * 0.816
Y * 0.816
Z * 0.816

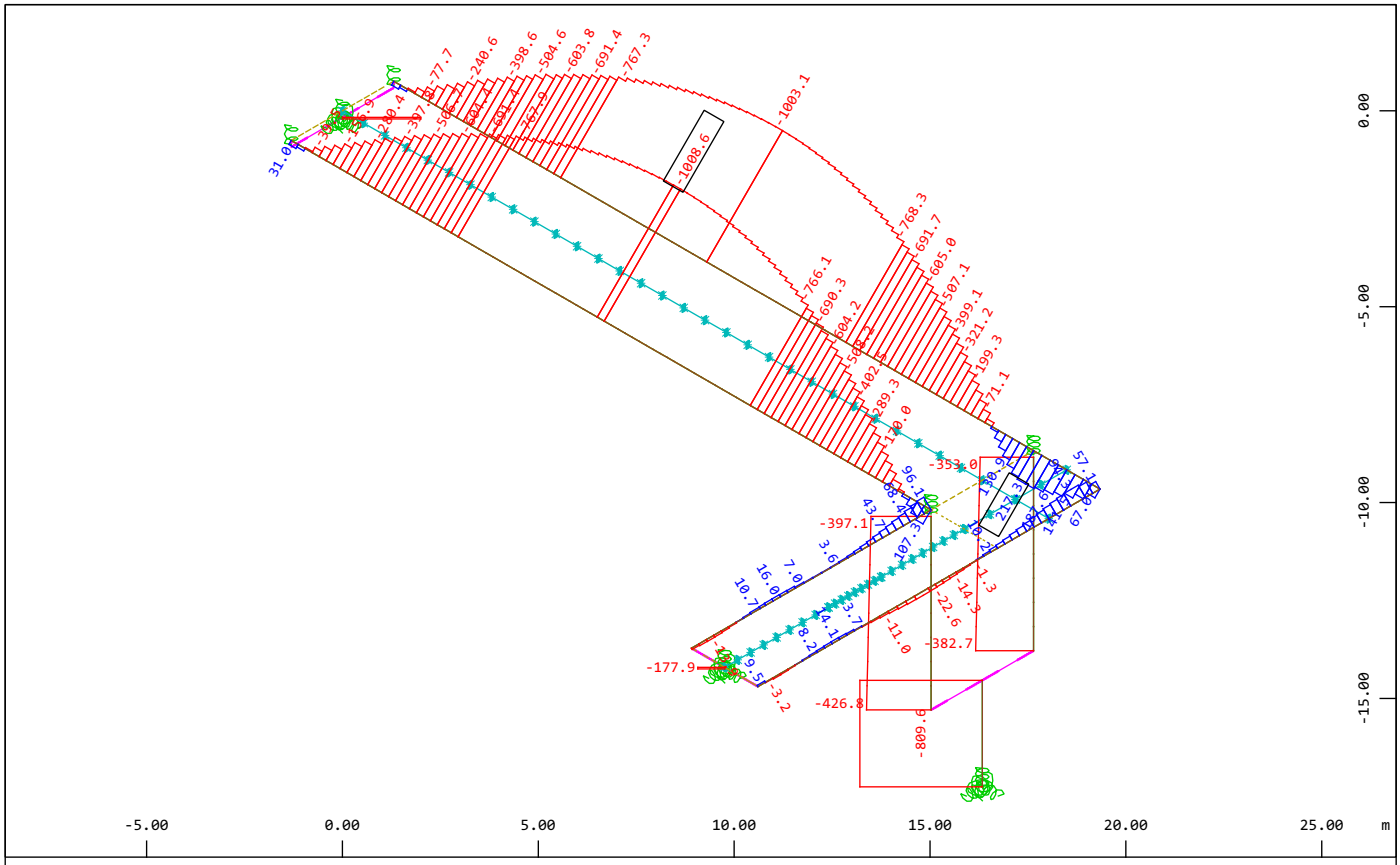


External beams , Bending moment Mz, Loadcase 11231 MAX-MZ BSCT ELS CUASI-PERMANENTE , 1 cm

3D = 200.0 kNm (Max=346.3)

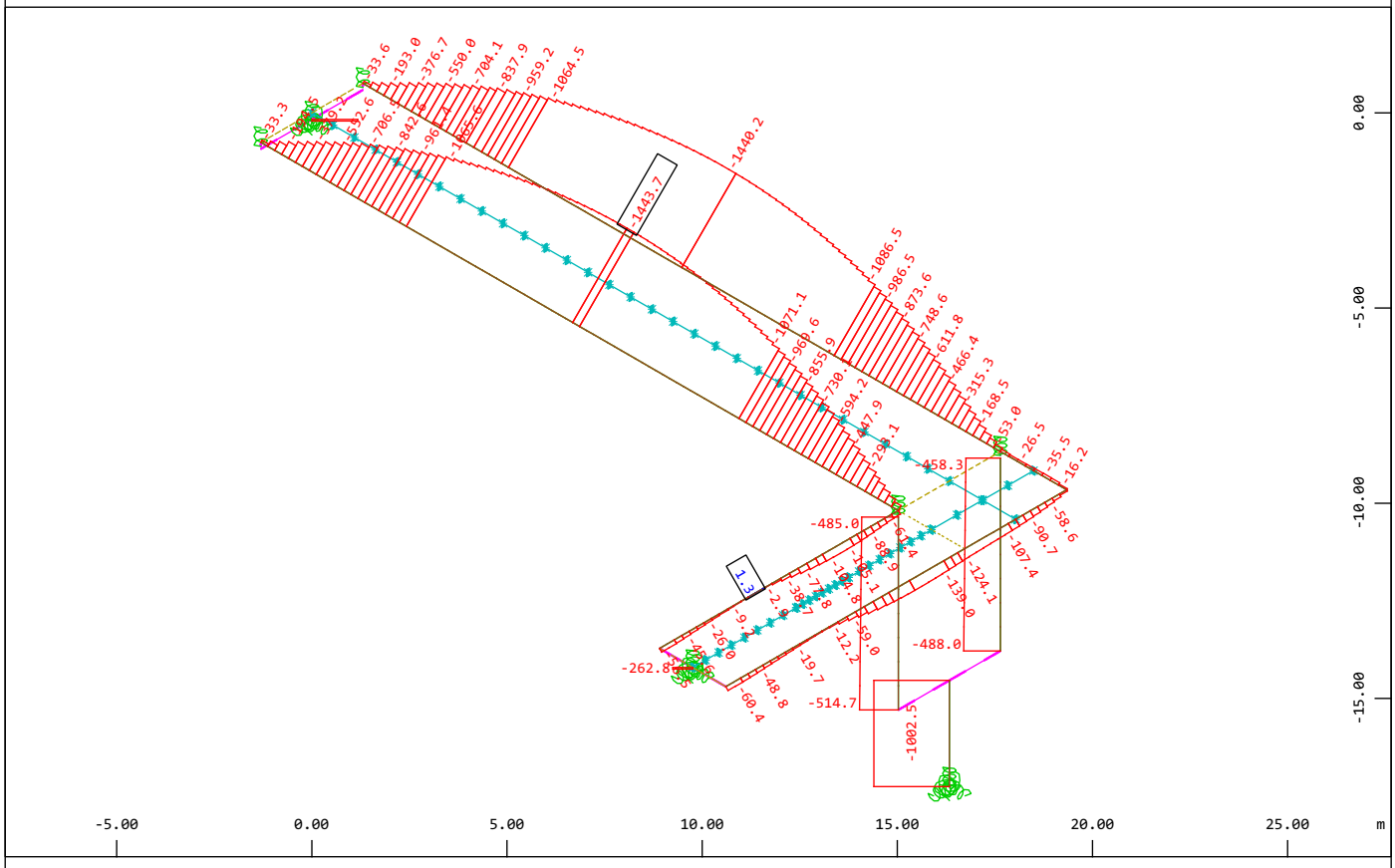
M 1 : 182

X * 0.816
Y * 0.816
Z * 0.816



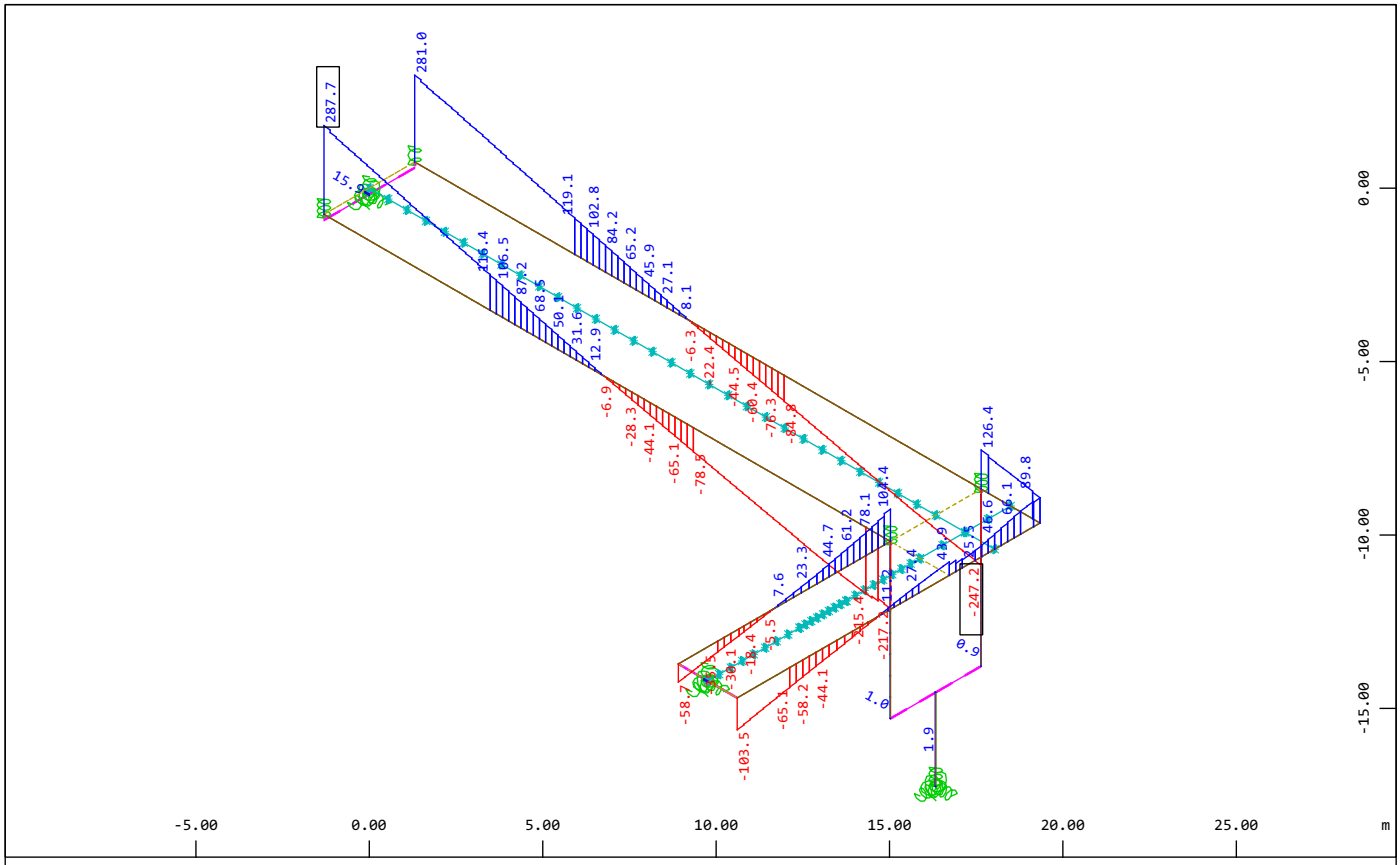
Beam Elements , Normal force Nx, Loadcase 11221 MAX-N BSCT ELS CUASI-PERMANENTE , 1 cm 3D = 500.0 kN (Min=-1009.) (Max=217.3)

M 1 : 193
X * 0.816
Y * 0.816
Z * 0.816



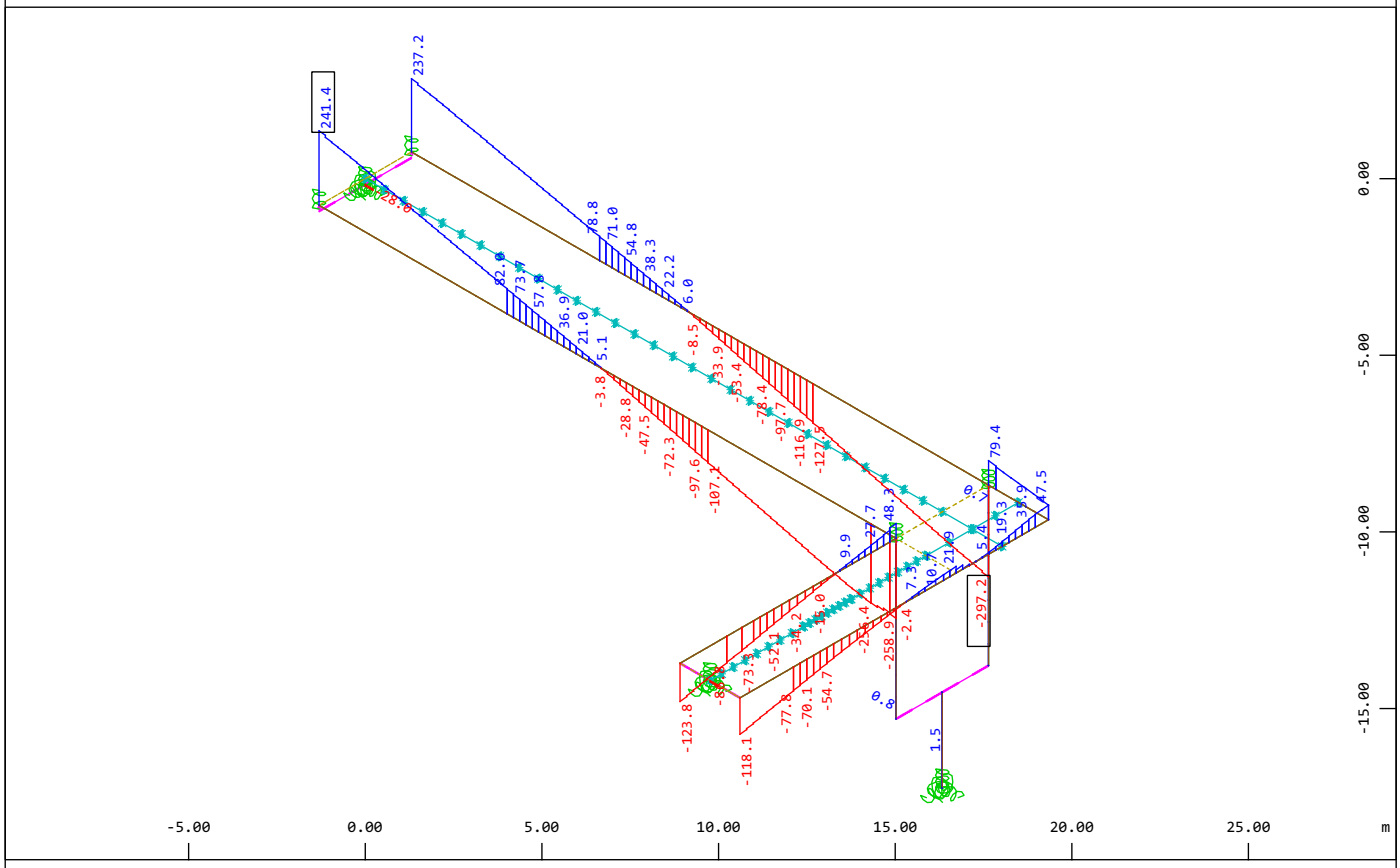
Beam Elements , Normal force Nx, Loadcase 11222 MIN-N BSCT ELS CUASI-PERMANENTE , 1 cm 3D = 1000. kN (Min=-1444.) (Max=1.30)

M 1 : 193
X * 0.816
Y * 0.816
Z * 0.816



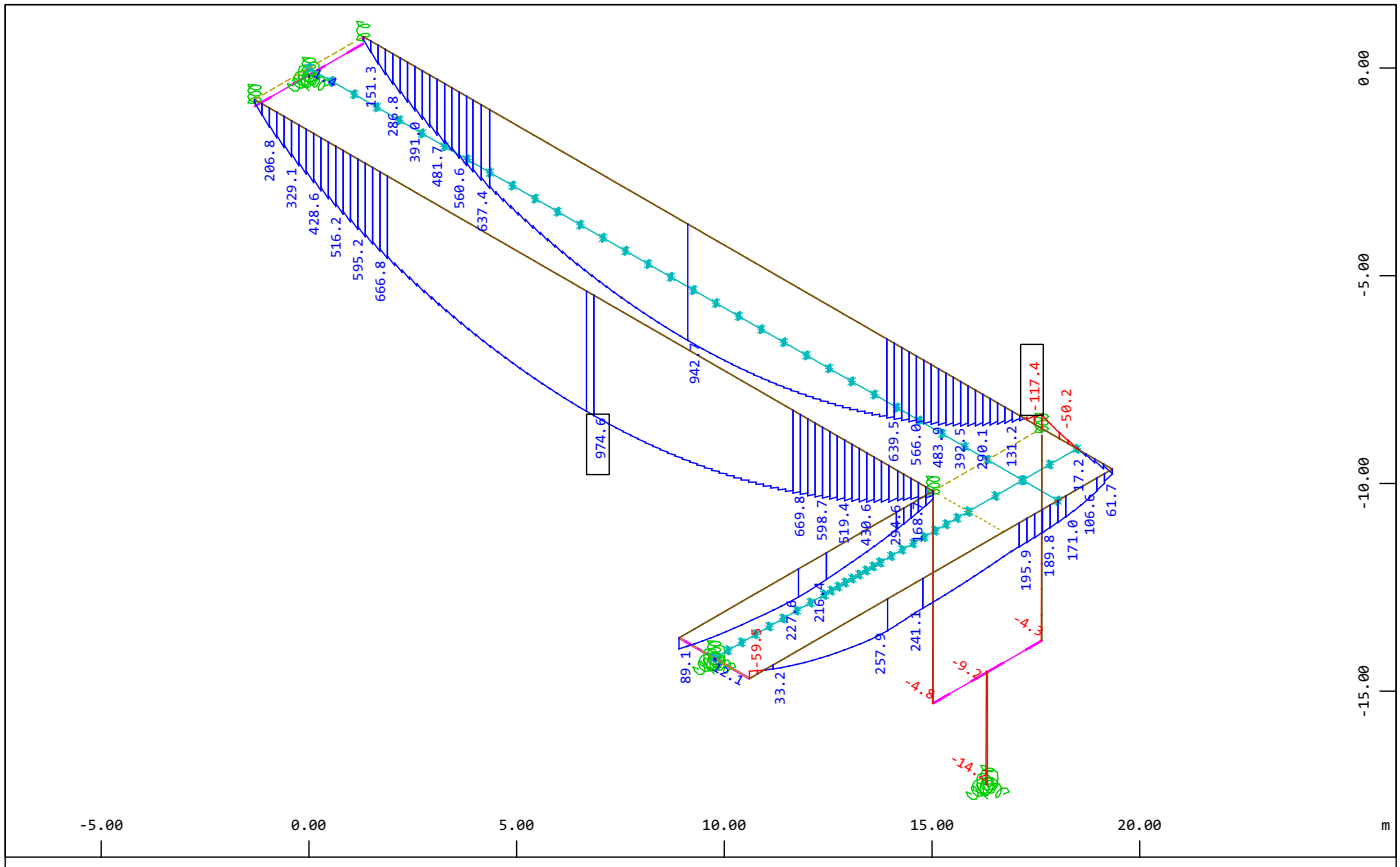
Beam Elements , Shear force Vz, Loadcase 11225 MAX-VZ BSCT ELS CUASI-PERMANENTE , 1 cm 3D =
200.0 kN (Min=-247.2) (Max=287.7)

M 1 : 218
X * 0.816
Y * 0.816
Z * 0.816



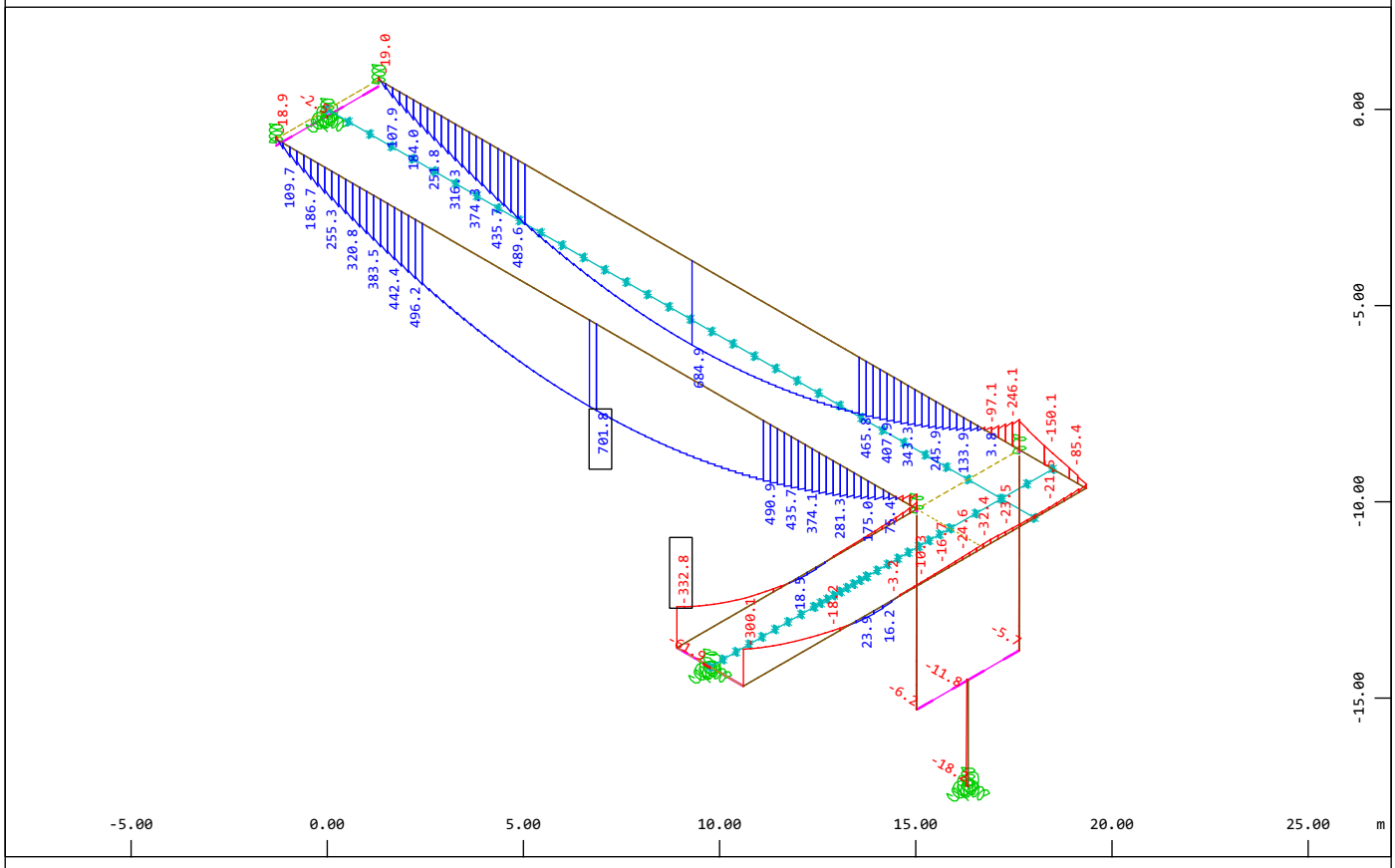
Beam Elements , Shear force Vz, Loadcase 11226 MIN-VZ BSCT ELS CUASI-PERMANENTE , 1 cm 3D =
200.0 kN (Min=-297.2) (Max=241.4)

M 1 : 214
X * 0.816
Y * 0.816
Z * 0.816



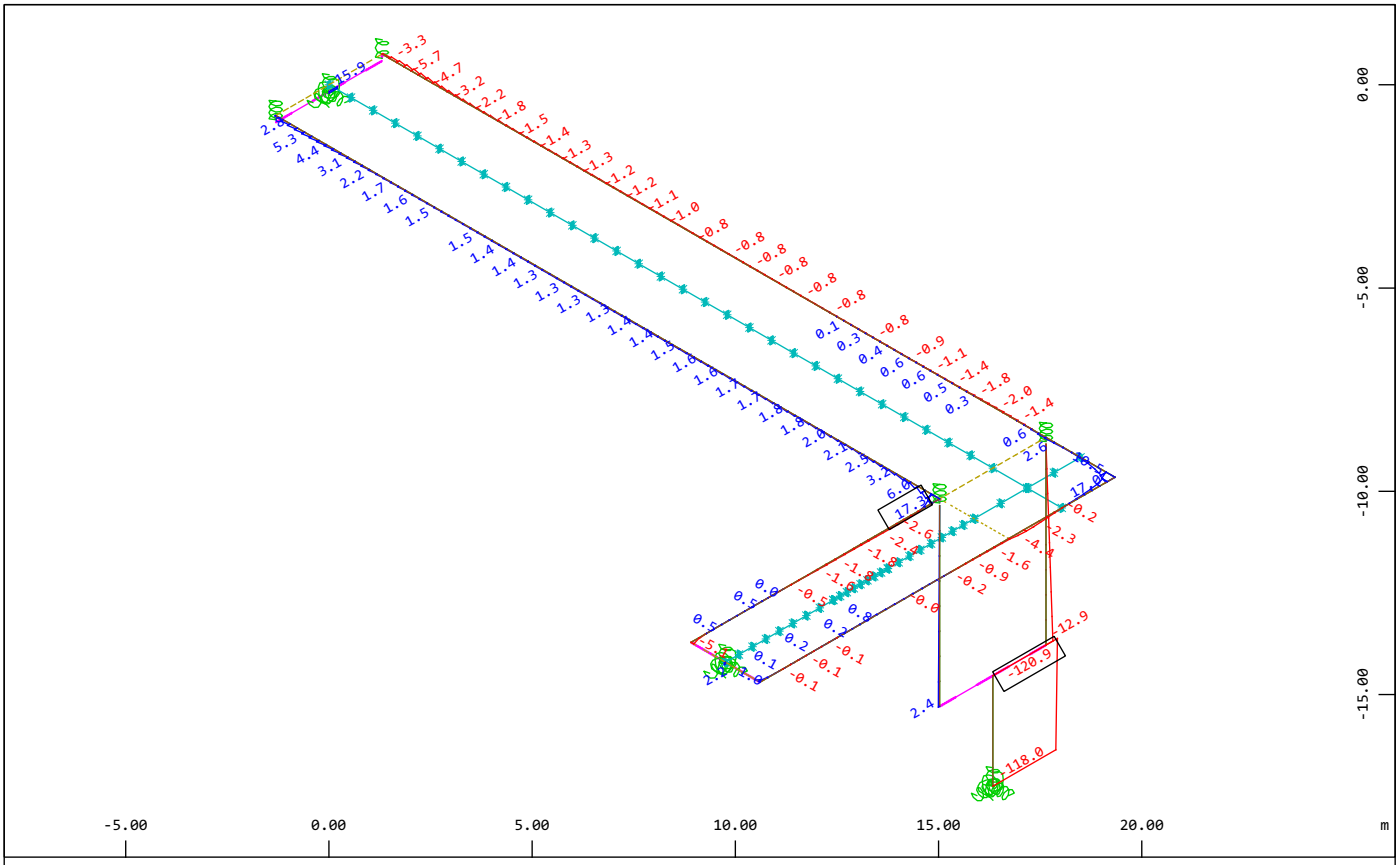
Beam Elements , Bending moment My, Loadcase 11229 MAX-MY BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 500.0 kNm (Min=-117.4) (Max=974.6)

M 1 : 182
X * 0.816
Y * 0.816
Z * 0.816



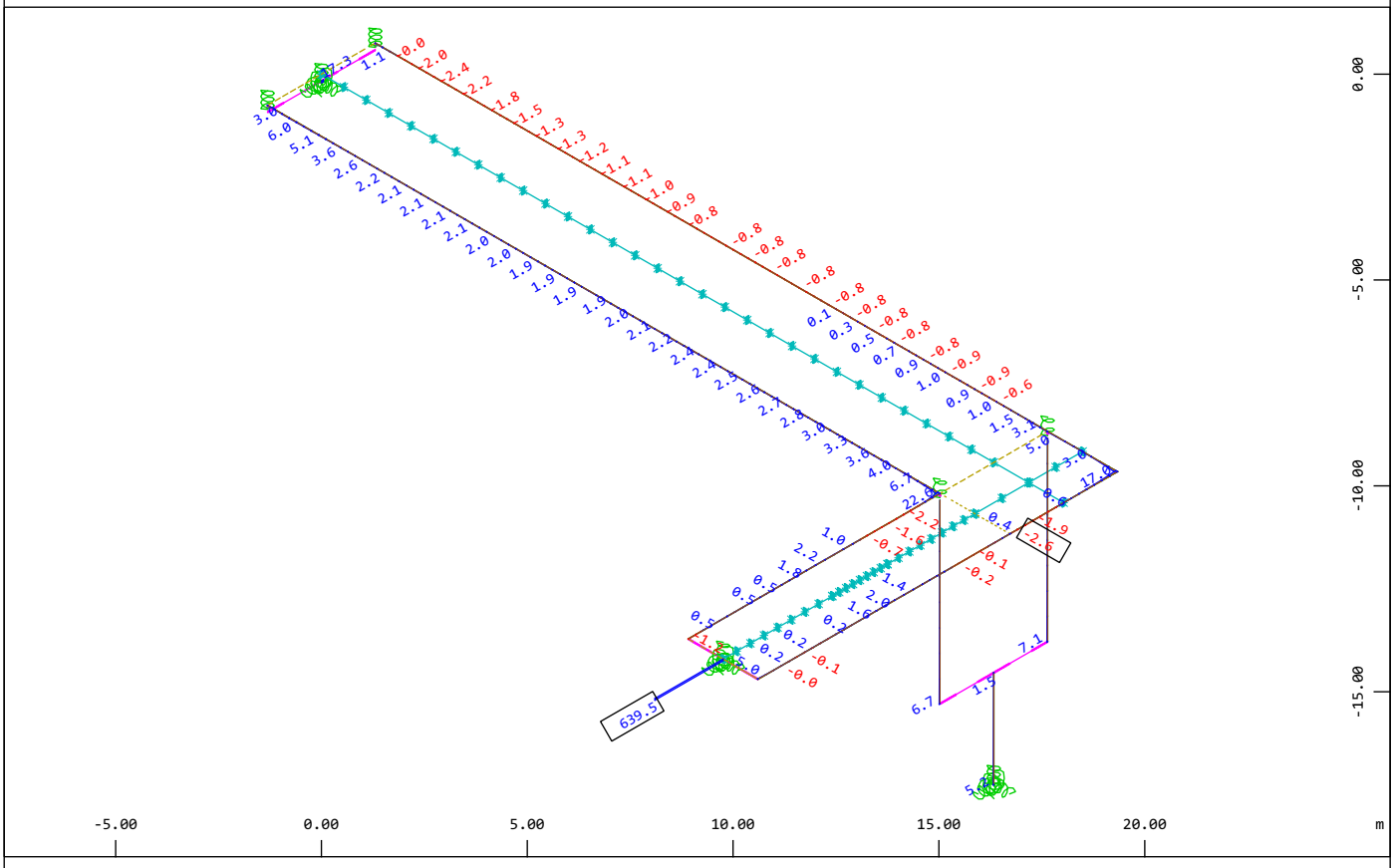
Beam Elements , Bending moment My, Loadcase 11230 MIN-MY BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 500.0 kNm (Min=-332.8) (Max=701.8)

M 1 : 192
X * 0.816
Y * 0.816
Z * 0.816



Beam Elements , Bending moment Mz, Loadcase 11230 MIN-MY BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 100.0 kNm (Min=-120.9) (Max=17.3)

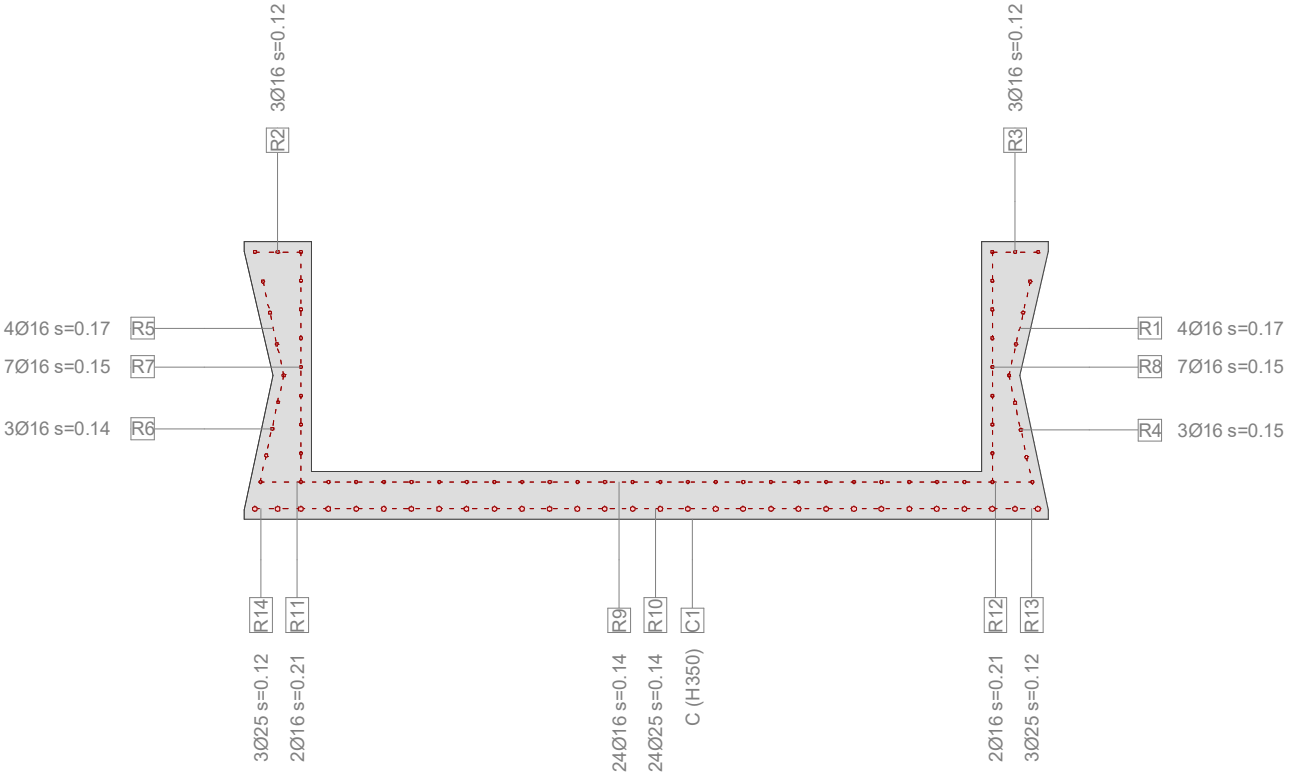
M 1 : 186
X * 0.816
Y * 0.816
Z * 0.816



Beam Elements , Bending moment Mz, Loadcase 11231 MAX-MZ BSCT ELS CUASI-PERMANENTE , 1 cm
3D = 500.0 kNm (Min=-2.58) (Max=639.5)

M 1 : 183
X * 0.816
Y * 0.816
Z * 0.816

Cross-section PA_MMAX_1 (H350;AEH500): Outline, Reinforcements Scale 1 :39.5



Cross section (column): PA_MMAX_1

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C1	C	H350	Polygon	1	0	0	2	4.20	0
				3	4.20	0.05	4	4.05	0.75
				5	4.20	1.40	6	4.20	1.45
				7	3.85	1.45	8	3.85	0.25
				9	0.35	0.25	10	0.35	1.45
				11	0	1.45	12	0	1.40
				13	0.15	0.75	14	0	0.05

Section properties: (reinforcement not considered, reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]			Mass [kg/m]	
Ax	**1.6875**	Ix	0.033811	ys	2.10			M_{CS}	4218.7
Ay	(=Ax)	**Iy**	**0.317610**	zs	0.41				
Az	(=Ax)	**Iz**	**3.813541**	β	0 [°]				

Cross section (column): PA_MMAX_1

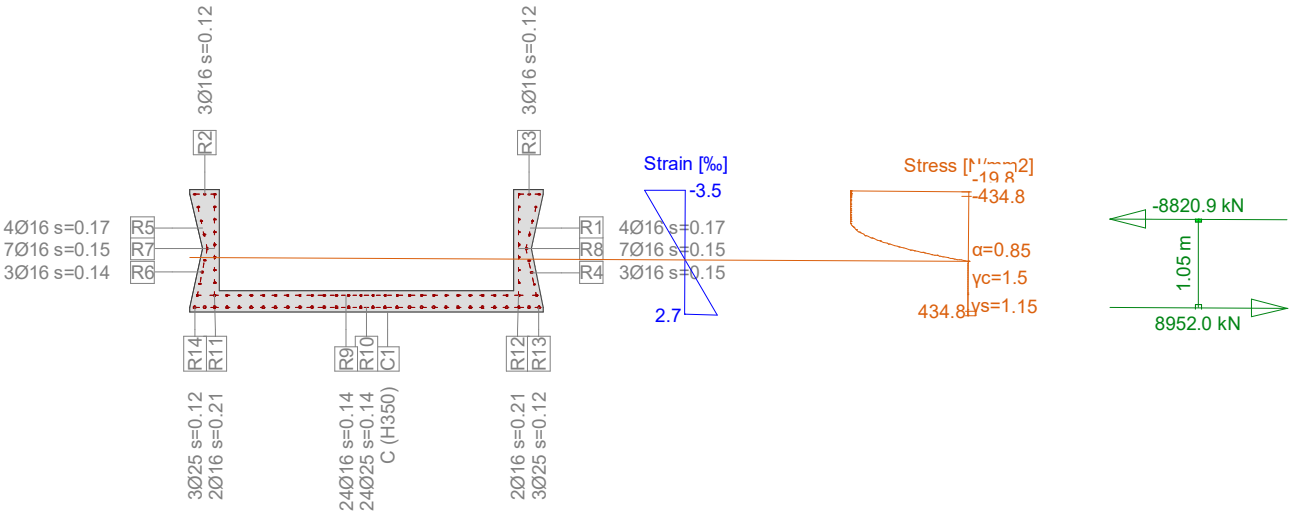
Mild reinforcement G0 $\Sigma A_s = 27192\ mm^2$, $\rho = 1.6\ \%$

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R3	R	AEH500	1	PL	3.90	1.40	4.14	1.40	3ϕ16	603
R2				PL	0.06	1.40	0.29	1.40	3ϕ16	603
R1				PL	4.10	1.24	3.99	0.75	4ϕ16	804
R5				PL	0.10	1.24	0.21	0.75	4ϕ16	804
R8				PL	3.90	1.40	3.90	0.20	* 7ϕ16	1407
R7				PL	0.29	1.40	0.29	0.20	* 7ϕ16	1407
R4				PL	3.99	0.75	4.12	0.18	* 3ϕ16	603
R6				PL	0.21	0.75	0.08	0.20	* 3ϕ16	603
R12				PL	3.90	0.20	4.12	0.20	2ϕ16	402

Name	Material	Class	BC	Type	y_{1g} [m]	z_{1g} [m]	y_{2g} [m]	z_{2g} [m]	n,∅	exist A_s [mm²]
R9				PL	0.29	0.20	3.90	0.20	* 24ϕ16	4825
R11				PL	0.29	0.20	0.08	0.20	2ϕ16	402
R13				PL	3.90	0.06	4.14	0.06	3ϕ25	1473
R10				PL	0.29	0.06	3.90	0.06	* 24ϕ25	11781
R14				PL	0.06	0.06	0.29	0.06	3ϕ25	1473

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Scale 1 :89.7
Cross-section PA_MMAX_1 (H350;AEH500): Efficiency (relative to axis point) Nx=92.0;My=6480.0;Mz=192.0; eff(M,N) = 0.70 OK



Ultimate strength analysis Cross section (column): PA_MMAX_1

Action forces / Efficiency: eff(M,N) = 0.70 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS	A	92.0	6480.0	192.0						
		S	92.0	6506.5	192.0	0.70					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

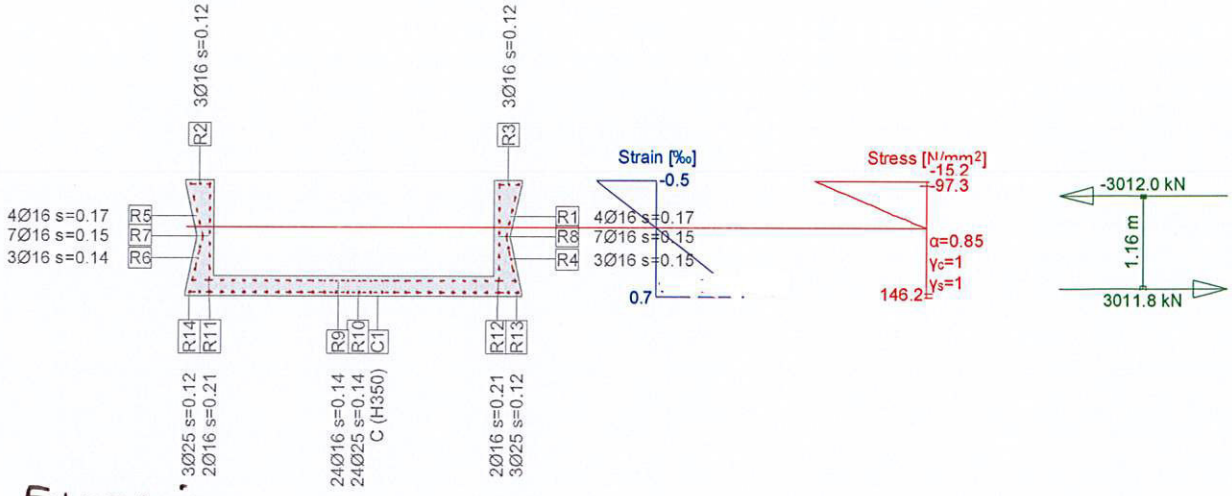
Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	4.20	1.45	-3.5	-19.8	1.76
C1	H350	0	0.00	2.7	0	1.76
R3	AEH500	4.15	1.40	-3.3	-434.8	1.15
R14	AEH500	0.06	0.06	2.5	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces			Strain and Curvature			Stiffness Values		
N [kN]	M_y [kNm]	M_z [kNm]	ε_x [‰]	χ_y [km^{-1}]	χ_z [km^{-1}]	N/ε_x [kN]	M_y/χ_y [kNm^2]	M_z/χ_z [kNm^2]
131.1	9299.7	274.3	0.9	4.2	0.0	1.381E+5	2.192E+6	1.198E+7

Cross-section PA_MMAX_1 (H350;AEH500): Stress analysis with given forces (relative to axis point) My=3485.0; Scale 1 :89.7



Fisuración:

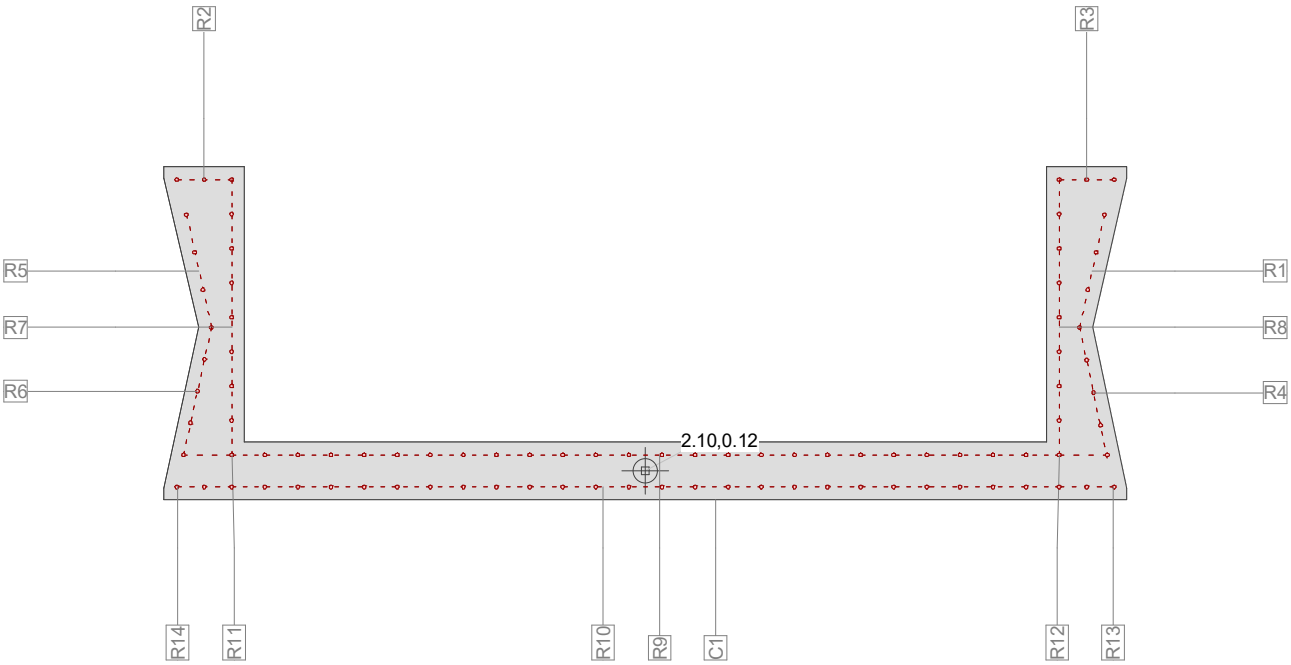
$s = 183$ mm

$\varepsilon_{sm} = 7{,}30 \cdot 10^{-4}$

$\beta = 1{,}70$

$w_k = 0{,}23$ mm $< 0{,}30$ mm → OK

Cross-section PA_MMAX_2 (H350;AEH500): Outline, Reinforcements Scale 1 :33.0



Cross section (column): PA_MMAX_2

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C1	C	H350	Polygon	1	0	0	2	4.20	0
				3	4.20	0.05	4	4.05	0.75
				5	4.20	1.40	6	4.20	1.45
				7	3.85	1.45	8	3.85	0.25
				9	0.35	0.25	10	0.35	1.45
				11	0	1.45	12	0	1.40
				13	0.15	0.75	14	0	0.05

Section properties: (reinforcement not considered, reference material: C)

Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]				Mass [kg/m]	
Ax	**1.6875**	Ix	0.033811	ys	2.10			M_{CS}	4218.7
Ay	(=Ax)	**Iy**	**0.317610**	zs	0.41				
Az	(=Ax)	**Iz**	**3.813541**	β	0 [°]				

Cross section (column): PA_MMAX_2

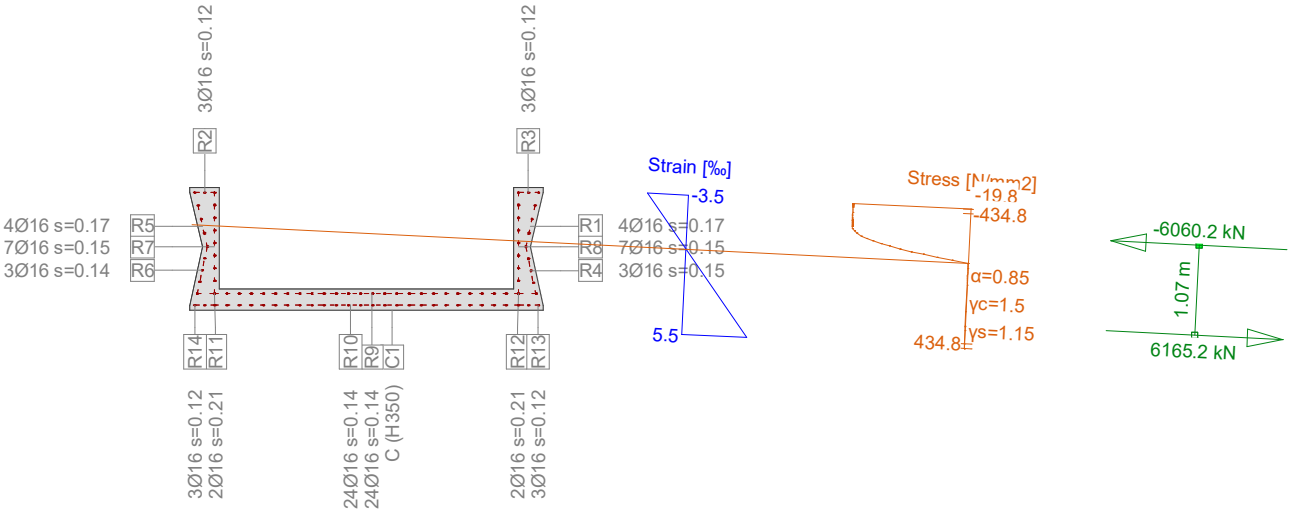
Mild reinforcement G0 ΣA_s = 18498 mm^2, ρ = 1.1 %

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R3	R	AEH500	1	PL	3.90	1.40	4.14	1.40	3ϕ16	603
R2				PL	0.06	1.40	0.29	1.40	3ϕ16	603
R1				PL	4.10	1.24	3.99	0.75	4ϕ16	804
R5				PL	0.10	1.24	0.21	0.75	4ϕ16	804
R8				PL	3.90	1.40	3.90	0.20	* 7ϕ16	1407
R7				PL	0.29	1.40	0.29	0.20	* 7ϕ16	1407
R4				PL	3.99	0.75	4.12	0.18	* 3ϕ16	603
R6				PL	0.21	0.75	0.08	0.20	* 3ϕ16	603
R12				PL	3.90	0.20	4.12	0.20	2ϕ16	402
R9				PL	0.29	0.20	3.90	0.20	* 24ϕ16	4825
R11				PL	0.29	0.20	0.08	0.20	2ϕ16	402
R13				PL	3.90	0.06	4.14	0.06	3ϕ16	603
R10				PL	0.29	0.06	3.90	0.06	* 24ϕ16	4825

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm²]
R14				PL	0.06	0.06	0.29	0.06	3ϕ16	603

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Scale 1 :89.9
Cross-section PA_MMAX_2 (H350;AEH500): Efficiency (relative to axis point) Nx=92.0;My=5550.0;Mz=2302.0; eff(M,N) = 0.87 OK



Ultimate strength analysis Cross section (column): PA_MMAX_2

Action forces / Efficiency: eff(M,N) = 0.87 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS	A	92.0	5550.0	2302.0						
		S	92.0	5576.5	2302.0	0.87					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

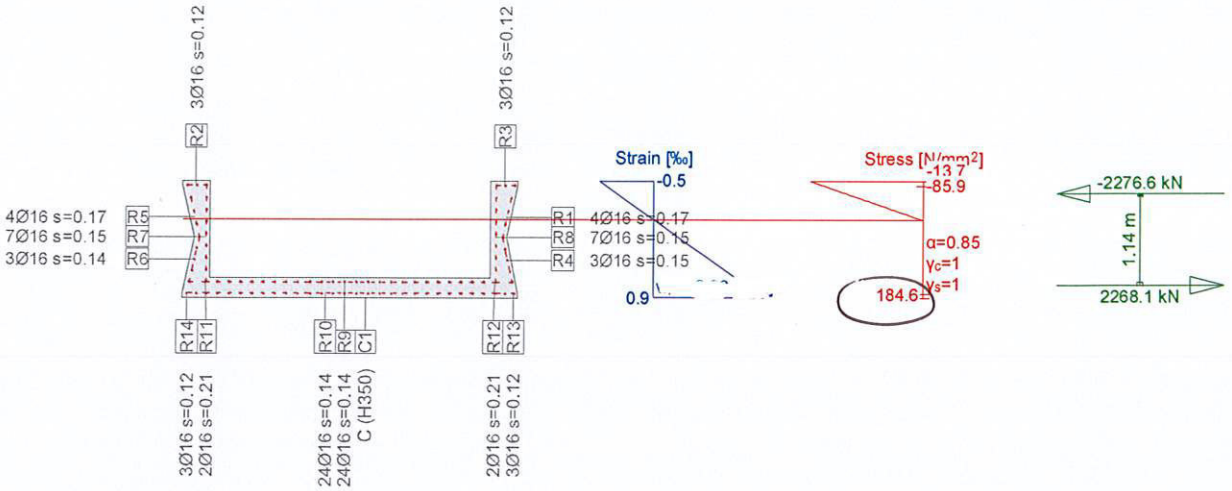
Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	4.20	1.45	-3.5	-19.8	1.76
C1	H350	-0.00	-0.00	5.5	0	1.76
R3	AEH500	4.15	1.40	-3.2	-434.8	1.15
R14	AEH500	0.06	0.05	5.2	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km⁻¹]	χ_z [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
105.0	6402.0	2642.6	2.7	5.4	0.3	38847.90	1.179E+6	9.760E+6

Scale 1 :89.6
Cross-section PA_MMAX_2 (H350;AEH500): Stress analysis with given forces (relative to axis point) Nx=-8.0;My=2587.0;Mz=-14.1;



Fisuración:

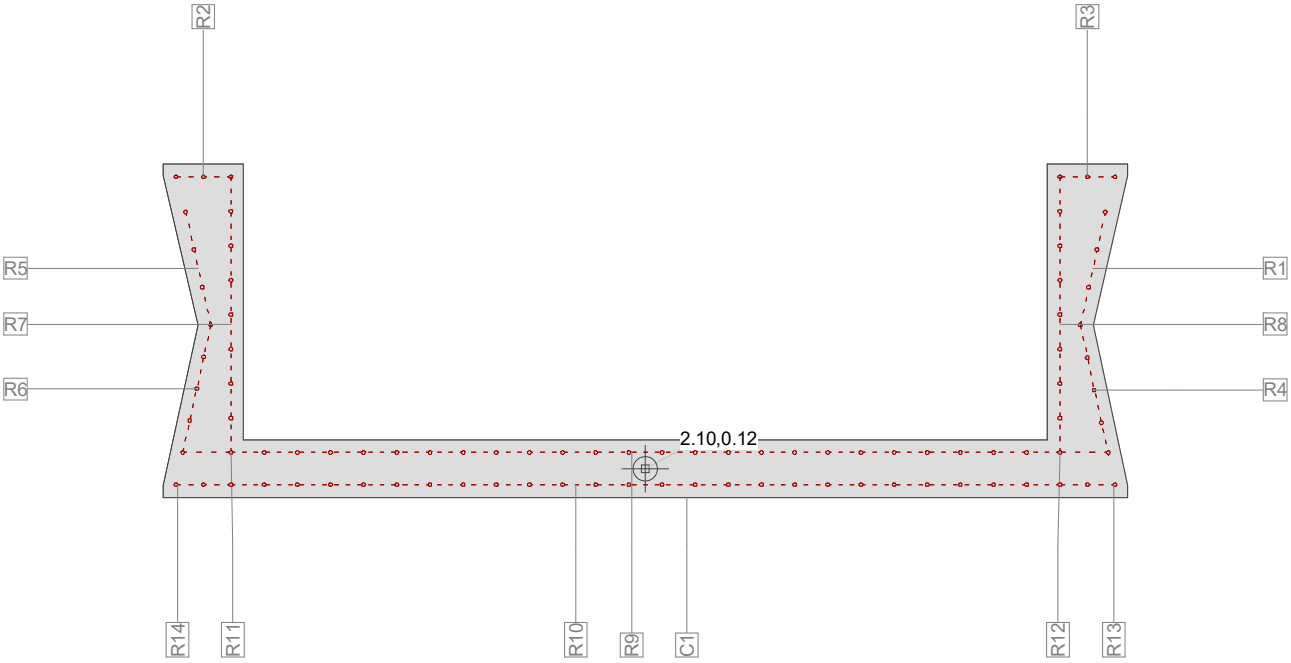
$d = 191\,mm$

$\varepsilon_{sm} = 9{,}23 \cdot 10^{-4}$

$w_k = \beta \cdot s \cdot \varepsilon_{sm} = 0{,}30\,mm \leq 0{,}30\,mm$ (1A)

OK

Cross-section PA_MMAX_2 (H350;AEH500): Outline, Reinforcements Scale 1 :32.9



Cross section (column): PA_MMAX_2

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C1	C	H350	Polygon	1	0	0	2	4.20	0
				3	4.20	0.05	4	4.05	0.75
				5	4.20	1.40	6	4.20	1.45
				7	3.85	1.45	8	3.85	0.25
				9	0.35	0.25	10	0.35	1.45
				11	0	1.45	12	0	1.40
				13	0.15	0.75	14	0	0.05

Section properties: (reinforcement not considered, reference material: C)

Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]			Mass [kg/m]	
Ax	**1.6875**	Ix	0.033811	ys	2.10		M_{CS}	4218.7
Ay	(=Ax)	**Iy**	**0.317610**	zs	0.41			
Az	(=Ax)	**Iz**	**3.813541**	β	0 [°]			

Cross section (column): PA_MMAX_2

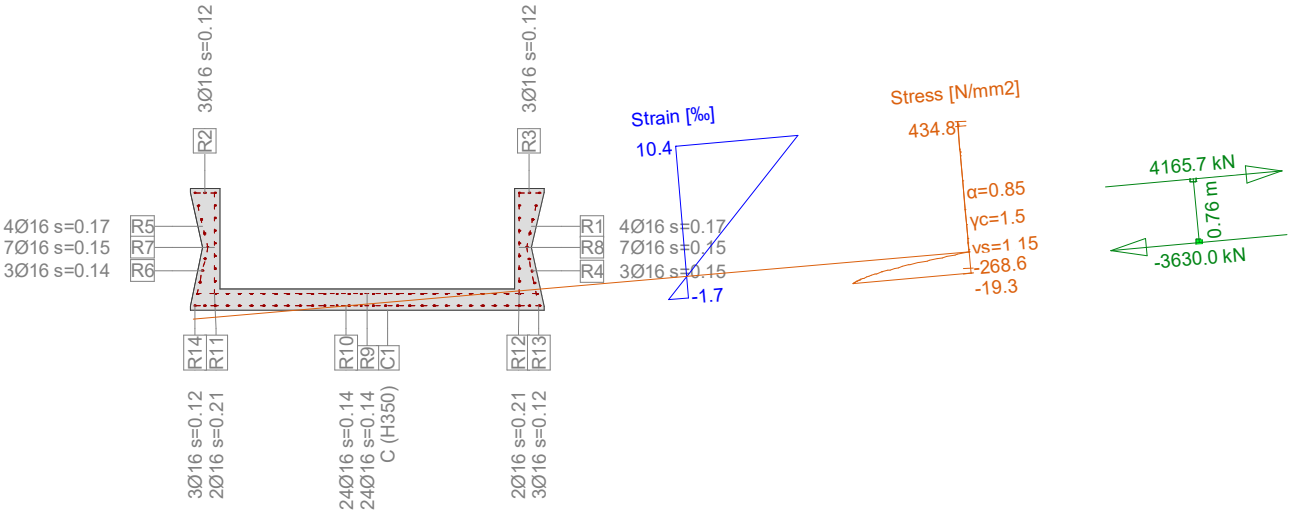
Mild reinforcement G0 ΣA_s = 18498 mm^2, ρ = 1.1 %

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R3	R	AEH500	1	PL	3.90	1.40	4.14	1.40	3ϕ16	603
R2				PL	0.06	1.40	0.29	1.40	3ϕ16	603
R1				PL	4.10	1.24	3.99	0.75	4ϕ16	804
R5				PL	0.10	1.24	0.21	0.75	4ϕ16	804
R8				PL	3.90	1.40	3.90	0.20	* 7ϕ16	1407
R7				PL	0.29	1.40	0.29	0.20	* 7ϕ16	1407
R4				PL	3.99	0.75	4.12	0.18	* 3ϕ16	603
R6				PL	0.21	0.75	0.08	0.20	* 3ϕ16	603
R12				PL	3.90	0.20	4.12	0.20	2ϕ16	402
R9				PL	0.29	0.20	3.90	0.20	* 24ϕ16	4825
R11				PL	0.29	0.20	0.08	0.20	2ϕ16	402
R13				PL	3.90	0.06	4.14	0.06	3ϕ16	603
R10				PL	0.29	0.06	3.90	0.06	* 24ϕ16	4825

Name	Material	Class	BC	Type	y_{1g} [m]	z_{1g} [m]	y_{2g} [m]	z_{2g} [m]	n,∅	exist A_s [mm²]
R14				PL	0.06	0.06	0.29	0.06	3ϕ16	603

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Scale 1 :89.7
Cross-section PA_MMAX_2 (H350;AEH500): Efficiency (relative to axis point) Nx=194.0;My=-906.0;Mz=2362.0; eff(M,N) = 0.36 OK



Ultimate strength analysis Cross section (column): PA_MMAX_2

Action forces / Efficiency: eff(M,N) = 0.36 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS	A	-228.0	-906.0	2362.0						
		S	-228.0	-971.7	2362.0	0.36					
2	!ULS	A	192.0	-906.0	2362.0						
		S	192.0	-850.7	2362.0	0.36					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

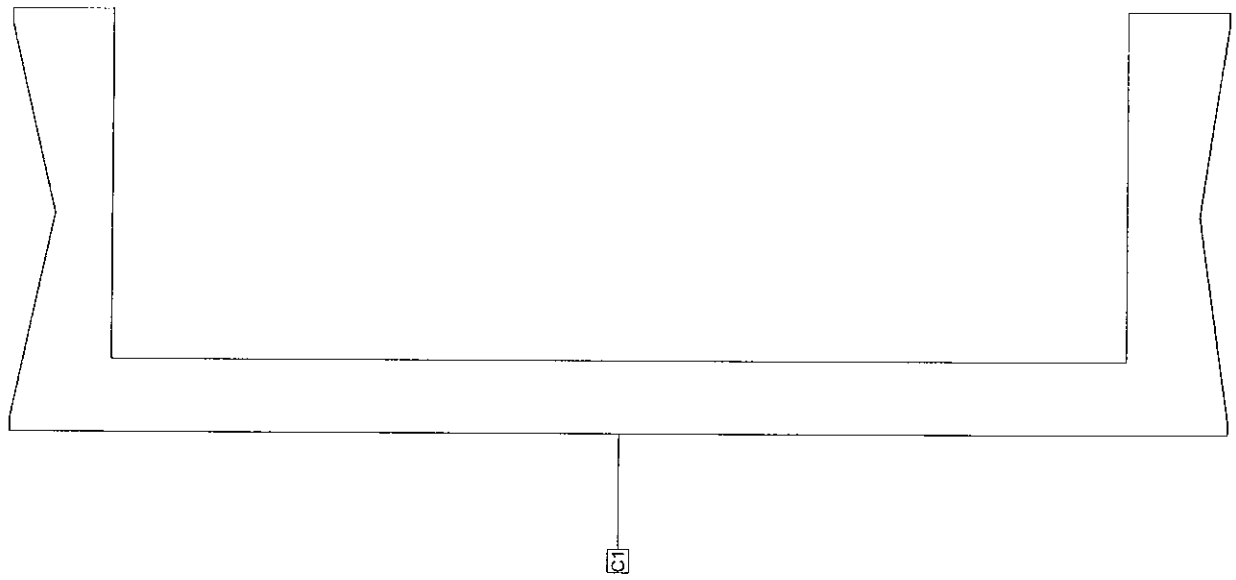
θ : Inclination of diagonal in compression
ϕ : Creep coefficient

Extreme stresses and strain (Results of run No 2)

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	4.20	-0.00	-1.7	-19.3	1.76
C1	H350	-0.00	1.45	10.4	0	1.76
R13	AEH500	4.15	0.06	-1.3	-268.7	1.15
R2	AEH500	0.05	1.40	10.0	434.8	1.15

Cross-section PA_MMIN (H350): Outline

Scale 1 :24.7



Cross section (column): PA_MMIN

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C1	C	H350	Polygon	1	0	0	2	4.20	0
				3	4.20	0.05	4	4.10	0.75
				5	4.20	1.40	6	4.20	1.45
				7	3.85	1.45	8	3.85	0.25
				9	0.35	0.25	10	0.35	1.45
				11	0	1.45	12	0	1.40
				13	0.15	0.75	14	0	0.05

Section properties: (reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]		Area moment [m^4]		Mass [kg/m]
Ax	**1.7212**	Ix	0.035976	ys	2.14	Iyz*	-0.021371	M_{cs}	4303.1
Ay	(=Ax)	**Iy**	**0.323446**	zs	0.42	Iy*	0.323572		
Az	(=Ax)	**Iz**	**3.948267**	β	0.3 [°]	Iz*	3.948141		

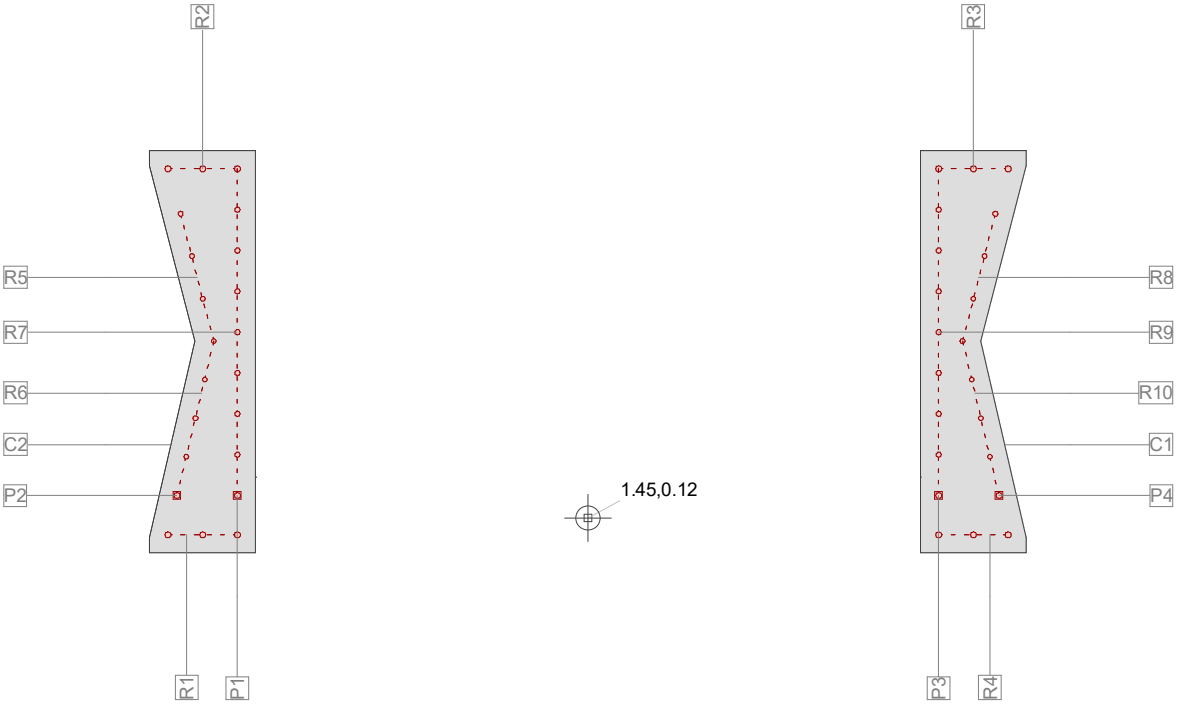
Moment of inertia : Moment of inertia with respect to principal axis (x = member axis)
Area moment : Second moment of area parallel to input axis

$$M_{fu} = -\frac{2{,}13 \cdot 10^{3} \cdot 0{,}323446}{(1{,}45 - 0{,}42)} = -6{,}68\ mkN$$

$$M_{Eu}^{-} = -45{,}4\ mkN$$

} OK

Cross-section ESC_S1 (H350;AEH500): Outline, Reinforcements Scale 1 :25.0



Cross section (Girder): ESC_S1_FIS

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C2	C	H350	Polygon	1	0	0	2	0.35	0
				3	0.35	0.25	4	0.35	0.25
				5	0.35	1.33	6	0	1.33
				7	0	1.28	8	0.15	0.70
				9	0	0.05			

Section properties: (reinforcement not considered, reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]		Area moment [m^4]		Mass [kg/m]
Ax	**0.3733**	Ix	0.009756	ys	0.21	Iyz*	-0.000141	M_{CS}	933.1
Ay	(=Ax)	**Iy**	**0.062782**	zs	0.66	Iy*	0.062781		
Az	(=Ax)	**Iz**	**0.002839**	β	-0.1 [°]	Iz*	0.002839		

Moment of inertia : Moment of inertia with respect to principal axis (x = member axis)
Area moment : Second moment of area parallel to input axis

Cross section (Girder): ESC_S1

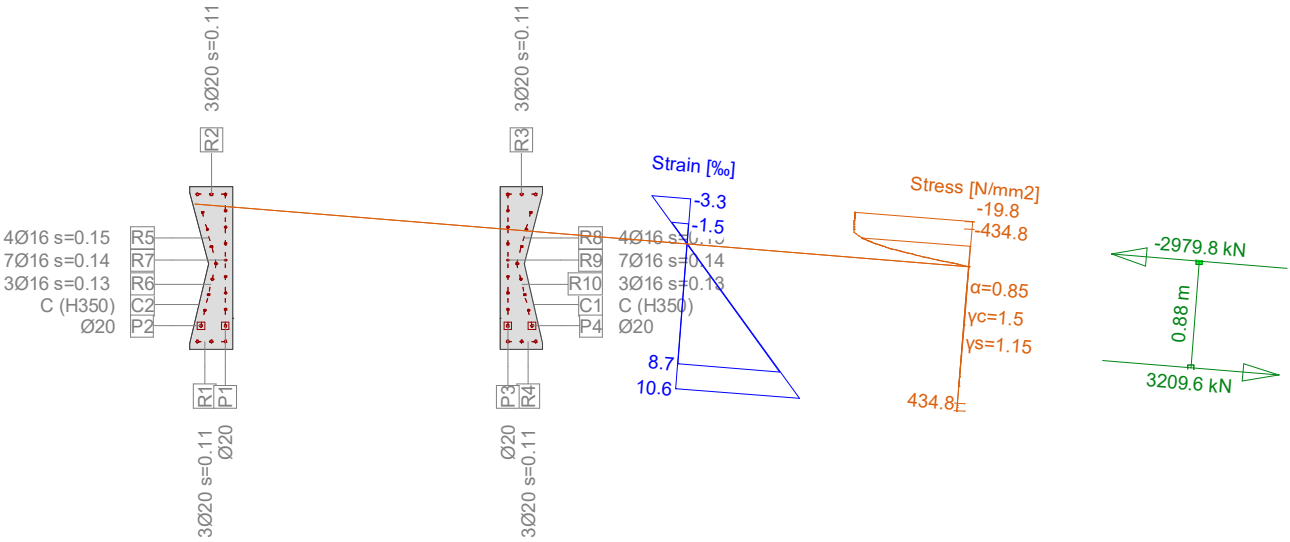
Mild reinforcement G0 $\Sigma A_s = 10656\ mm^2$, $\rho = 1.4\ \%$

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R3	R	AEH500	2	PL	2.61	1.27	2.84	1.27	3ϕ20	942
R2				PL	0.06	1.27	0.29	1.27	3ϕ20	942
R8				PL	2.80	1.12	2.69	0.70	4ϕ16	804
R5				PL	0.10	1.12	0.21	0.70	4ϕ16	804
R9				PL	2.61	1.27	2.61	0.19	* 7ϕ16	1407
R7				PL	0.29	1.27	0.29	0.19	* 7ϕ16	1407
R10				PL	2.69	0.70	2.81	0.19	* 3ϕ16	603
R6				PL	0.21	0.70	0.09	0.19	* 3ϕ16	603
R4				PL	2.84	0.06	2.61	0.06	3ϕ20	942
R1				PL	0.06	0.06	0.29	0.06	3ϕ20	942
P4				PL	2.81	0.19			1ϕ20	314

Name	Material	Class	BC	Type	y_{1g} [m]	z_{1g} [m]	y_{2g} [m]	z_{2g} [m]	n,∅	exist A_s [mm²]
P3				PL	2.61	0.19			1ϕ20	314
P1				PL	0.29	0.19			1ϕ20	314
P2				PL	0.09	0.19			1ϕ20	314

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Cross-section ESC_S1 (H350;AEH500): Efficiency (relative to axis point) Nx=203.0;My=2090.0;Mz=2090.0; eff(M,N) = 0.88 OK Scale 1 :62.1



Ultimate strength analysis Cross section (Girder): ESC_S1

Action forces / Efficiency: eff(M,N) = 0.88 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS	A	203.0	2090.0	2090.0						
		S	203.0	2201.1	2090.0	0.88					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

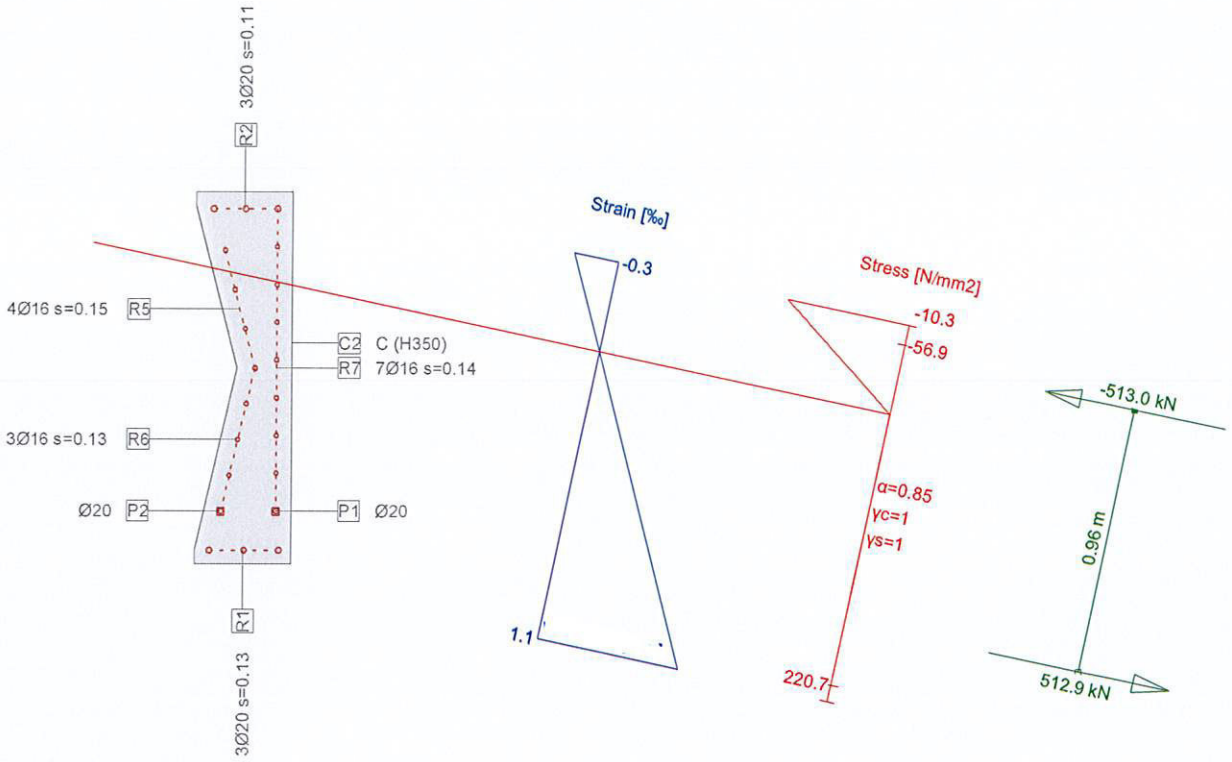
Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	2.90	1.33	-3.3	-19.8	1.76
C2	H350	0.00	0.00	10.6	0	1.76
R3	AEH500	2.84	1.27	-2.7	-434.8	1.15
R1	AEH500	0.06	0.06	10.0	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km⁻¹]	χ_z [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
229.8	2494.6	2368.8	3.7	8.9	0.7	62556.31	2.817E+5	3.309E+6

Cross-section ESC_S1_FIS (H350;AEH500): Stress analysis with given forces My=501.0; Scale 1 :25.8



Fisuración:

$s = 159\ mm$

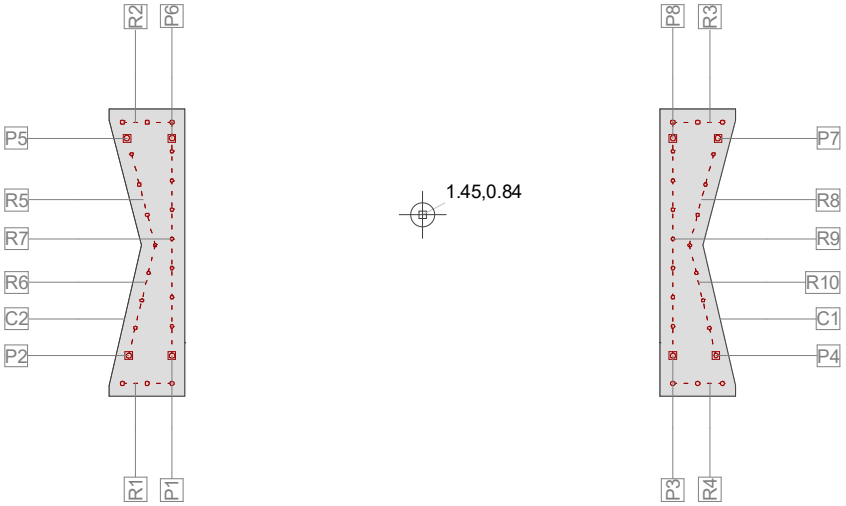
$\varepsilon_{sm} = 1{,}10 \cdot 10^{-3}$

$\beta = 1{,}70$

$\Big\}$ $w_k = 0{,}297\ mm < 0{,}30\ mm \rightarrow$ OK

Cross-section ESC_S2 (H350;AEH500): Outline, Reinforcements

Scale 1 :35.0



Cross section (Girder): ESC_S2

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C2	C	H350	Polygon	1	0	0	2	0.35	0
				3	0.35	0.25	4	0.35	0.25
				5	0.35	1.33	6	0	1.33
				7	0	1.28	8	0.15	0.70
				9	0	0.05			
C1			Polygon	1	2.90	0.05	2	2.75	0.70
				3	2.90	1.28	4	2.90	1.33
				5	2.55	1.33	6	2.55	0.25
				7	2.55	0.25	8	2.55	0
				9	2.90	0			

Section properties: (reinforcement not considered, reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]			Mass [kg/m]	
Ax	**0.7465**	Ix	0.019512	ys	1.45			M_{CS}	1866.3
Ay	(=Ax)	**Iy**	**0.125563**	zs	0.66				
Az	(=Ax)	**Iz**	**1.161110**	β	0 [°]				

Cross section (Girder): ESC_S2

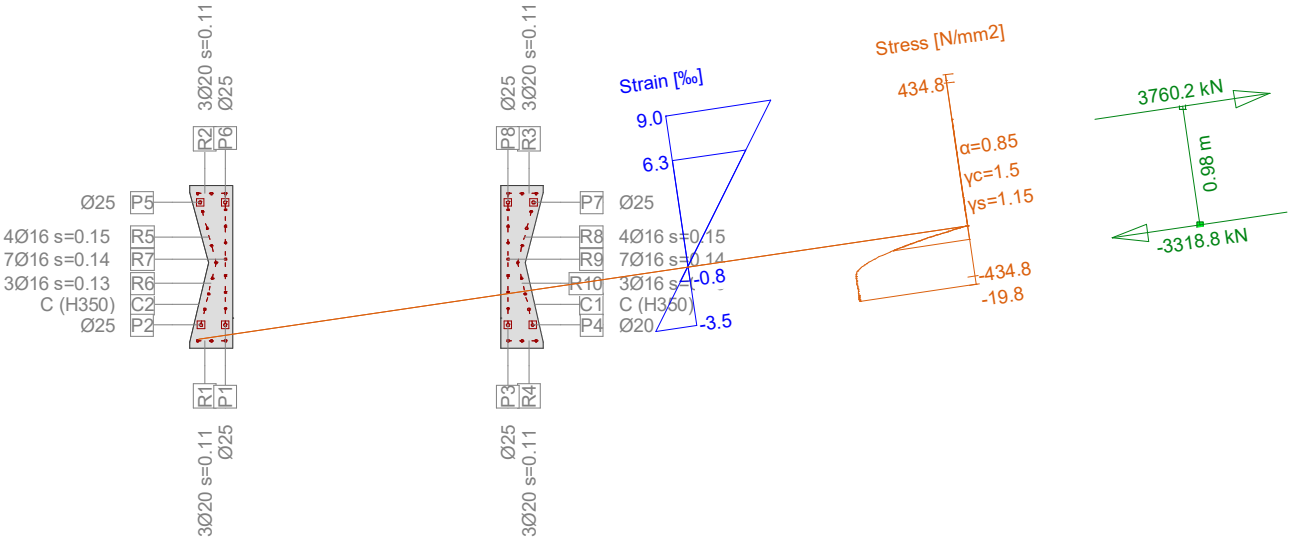
Mild reinforcement G0 ΣA_s = 13150 mm^2, ρ = 1.8 %

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R3	R	AEH500	2	PL	2.61	1.27	2.84	1.27	3ϕ20	942
R2				PL	0.06	1.27	0.29	1.27	3ϕ20	942
R8				PL	2.80	1.12	2.69	0.70	4ϕ16	804
R5				PL	0.10	1.12	0.21	0.70	4ϕ16	804
R9				PL	2.61	1.27	2.61	0.19	* 7ϕ16	1407
R7				PL	0.29	1.27	0.29	0.19	* 7ϕ16	1407
R10				PL	2.69	0.70	2.81	0.19	* 3ϕ16	603
R6				PL	0.21	0.70	0.09	0.19	* 3ϕ16	603
R4				PL	2.84	0.06	2.61	0.06	3ϕ20	942
R1				PL	0.06	0.06	0.29	0.06	3ϕ20	942
P7				PL	2.82	1.20			1ϕ25	491
P8				PL	2.61	1.20			1ϕ25	491
P6				PL	0.29	1.20			1ϕ25	491
P5				PL	0.08	1.20			1ϕ25	491
P4				PL	2.81	0.19			1ϕ20	314
P3				PL	2.61	0.19			1ϕ25	491
P1				PL	0.29	0.19			1ϕ25	491

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm²]
P2				PL	0.09	0.19			1ϕ25	491

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Scale 1 :62.0
Cross-section ESC_S2 (H350;AEH500): Efficiency (relative to axis point) Nx=213.0;My=-1316.0;Mz=2090.0; eff(M,N) = 0.48 OK



Ultimate strength analysis Cross section (Girder): ESC_S2

Action forces / Efficiency: eff(M,N) = 0.48 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS	A	213.0	-1316.0	2090.0						
		S	213.0	-1353.9	2090.0	0.48					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

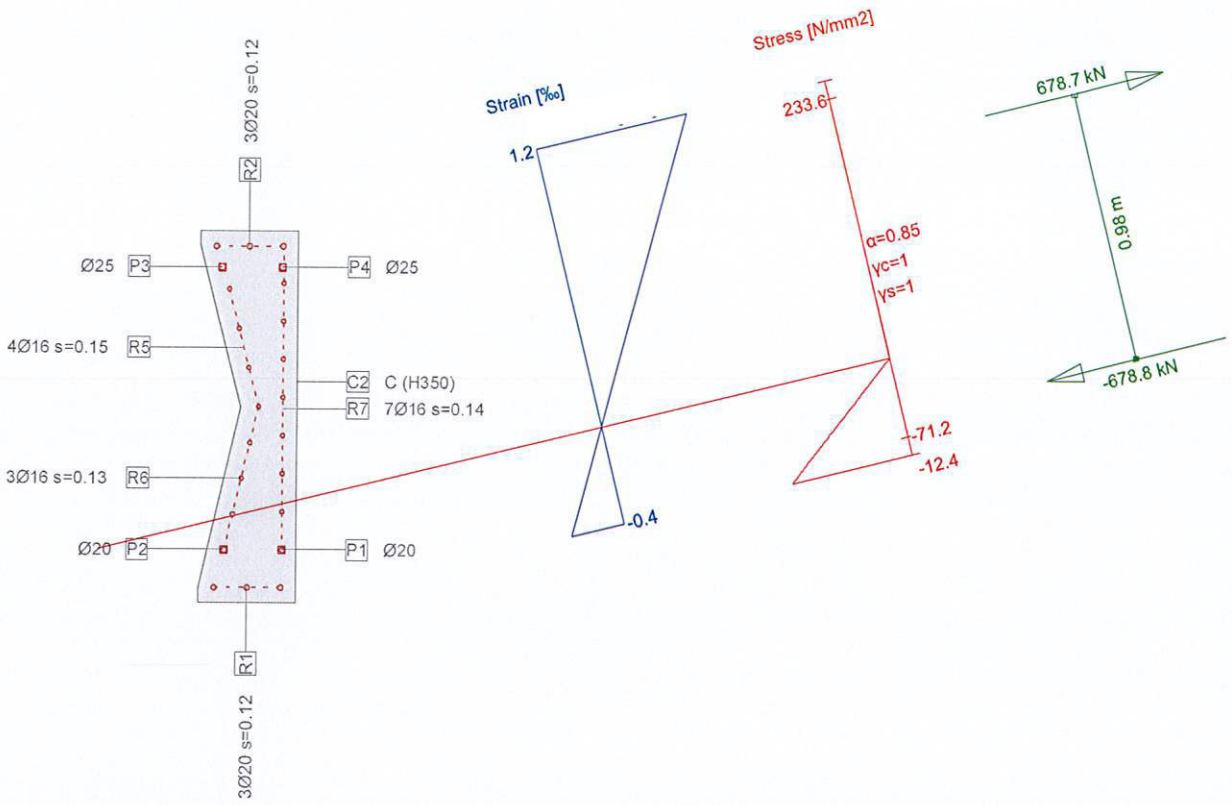
Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	2.90	-0.00	-3.5	-19.8	1.76
C2	H350	0	1.33	9.0	0	1.76
R4	AEH500	2.84	0.06	-3.0	-434.8	1.15
R2	AEH500	0.06	1.27	8.5	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_{y_1} [km⁻¹]	χ_{z_1} [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
441.4	-2808.0	4334.9	2.7	-7.1	1.0	1.619E+5	3.951E+5	4.135E+6

Cross-section ESC_S2_FIS (H350;AEH500): Stress analysis with given forces My=-683.0; Scale 1 :25.8



Fisuración:

$s = 138\,mm$

$\varepsilon_{sm} = 1{,}17 \cdot 10^{-3}$

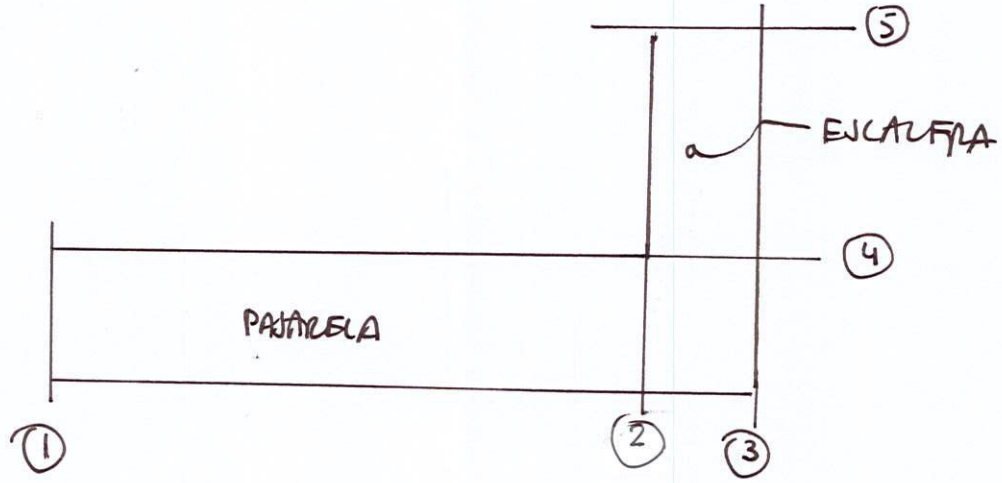
$\beta = 1{,}70$

$w_k = 0{,}274\,mm < 0{,}30\,mm$ → OK

CORTANTE, TORSOR, FLEXIÓN TRANSVERSAL Y TIRANTE (VERTICAL) POR AXIL

		Vz	Mt	As (Vz)	As (Mt)	As [cm2/m]	As(cΦ/0.15)	V por axil	A (N)	Astot [cm2/m]	As(cΦ/0.15)
	1	545	10.7	9.73	0.74	10.47	0.79			10.47	0.79
	2	720.95	60.1	12.87	4.14	17.02	1.28	254	7.9	24.96	1.87
	3	250	35.5	4.46	2.45	6.91	0.52			6.91	0.52
	4	288.67	115.1	5.15	7.94	13.09	0.98	435	13.6	26.69	2.00
	5	262	15	4.68	1.03	5.71	0.43			5.71	0.43

		Vz	Mt	As (Vz)	As (Mt)	As [cm2/m]	Astot [cm2/m]	As(cΦ/0.15)
	1			0.00	0.00	0.00	0.00	0.00
A 3 m	2	450	30	8.04	2.07	10.10	10.10	0.76
	3			0.00	0.00	0.00	0.00	0.00
A 2 m	4	175	86	3.13	5.93	9.06	9.06	0.68
	5			0.00	0.00	0.00	0.00	0.00



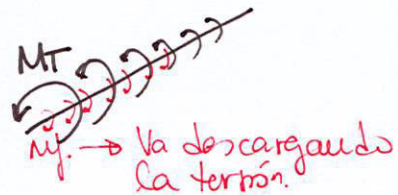
NOTA: $M_T > M_f$ en todos los casos:

M_T → Torsión

M_f → Flexión transversal

⇓

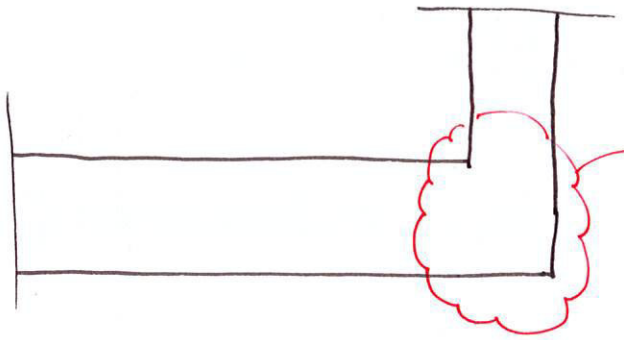
Dimensiona la torsión.



ULS / ELS TRANSVERSAL

A continuación se incluyen las comprobaciones seccionales de la losa de la pasarela y escalera en sentido transversal.

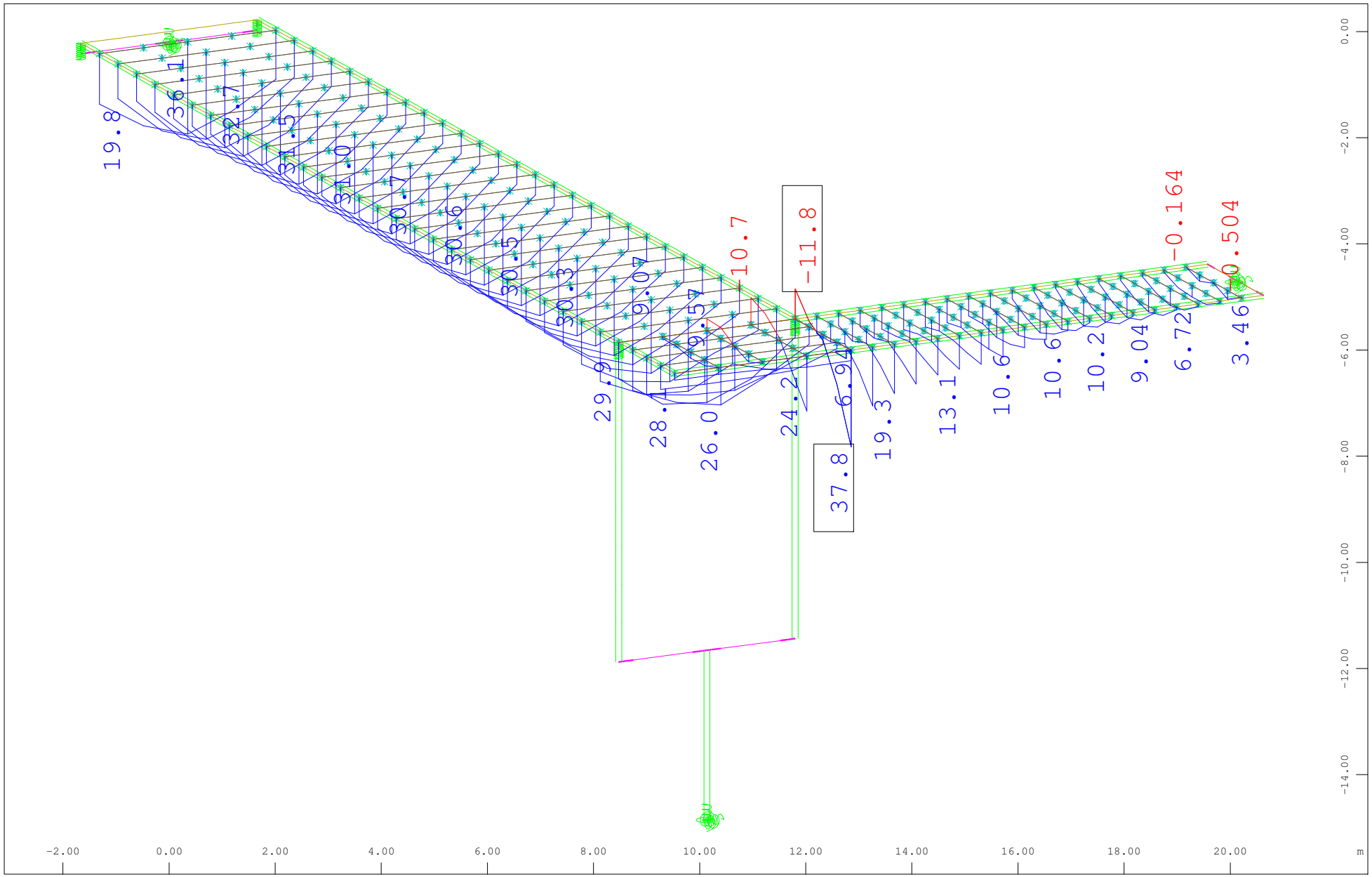
Para ello, se ha utilizado el programa de cálculo FAGUS - 6 de la casa CYPE S.L.



De estas comprobaciones se excluye la esquina

⇓

En el siguiente apartado se estudia en detalle esa zona.

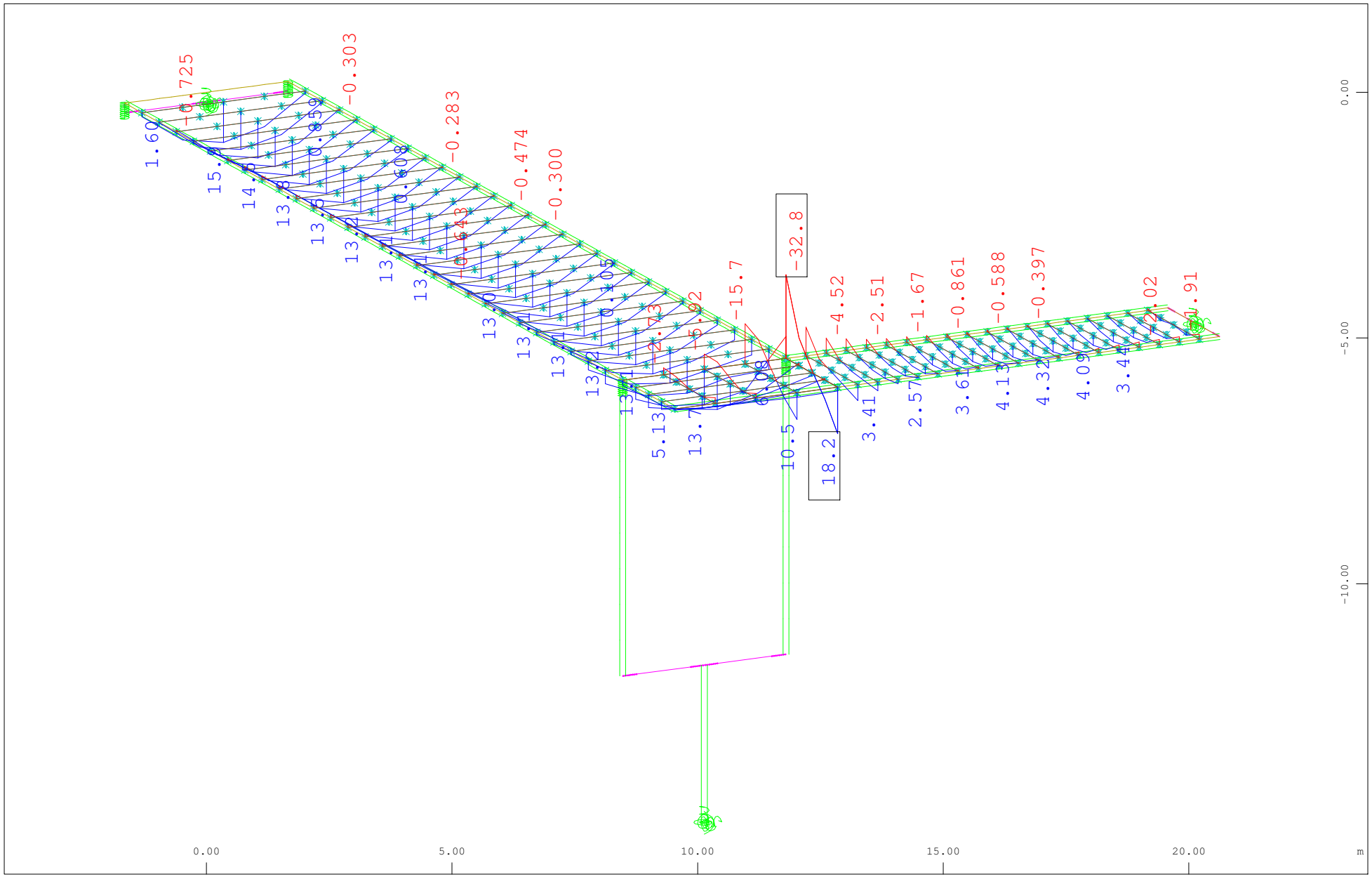


Z
Y
X

External beams , Bending moment My, Loadcase 10129 MAX-MY BSCT ELU , 1 cm 3D = 20.0 kNm (Min=-11.8) (Max=37.8)

M 1 : 100

X * 0.502
Y * 0.906
Z * 0.962

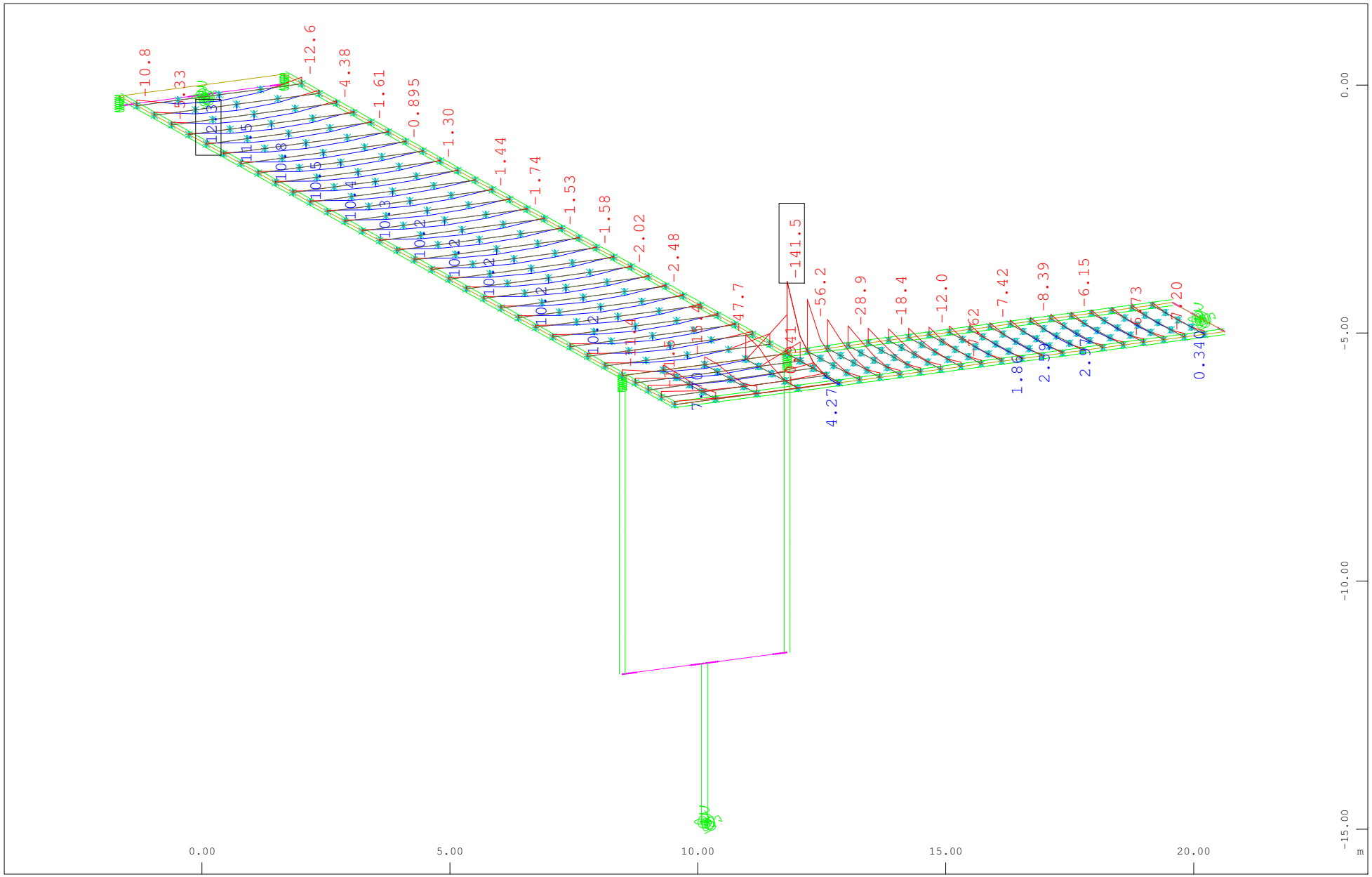


Z
Y
X

External beams , Bending moment My, Loadcase 11229 MAX-MY BSCT ELS CUASI-PERMANENTE , 1 cm 3D = 20.0 kNm (Min=-32.8) (Max=18.2)

M 1 : 108

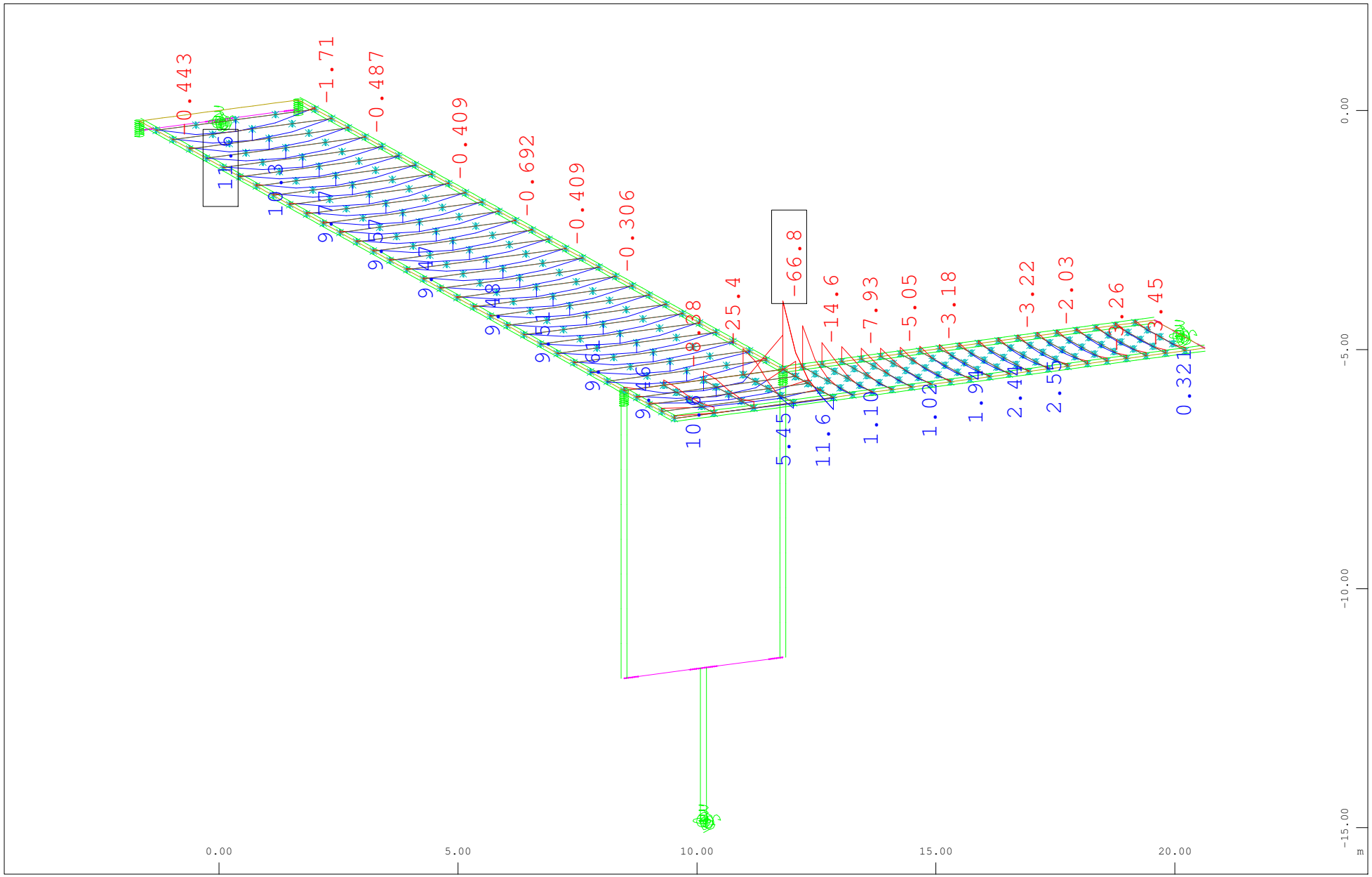
X * 0.502
Y * 0.906
Z * 0.962



External beams , Bending moment My, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 100.0 kNm (Min=-141.5) (Max=12.3)

Z
Y
X

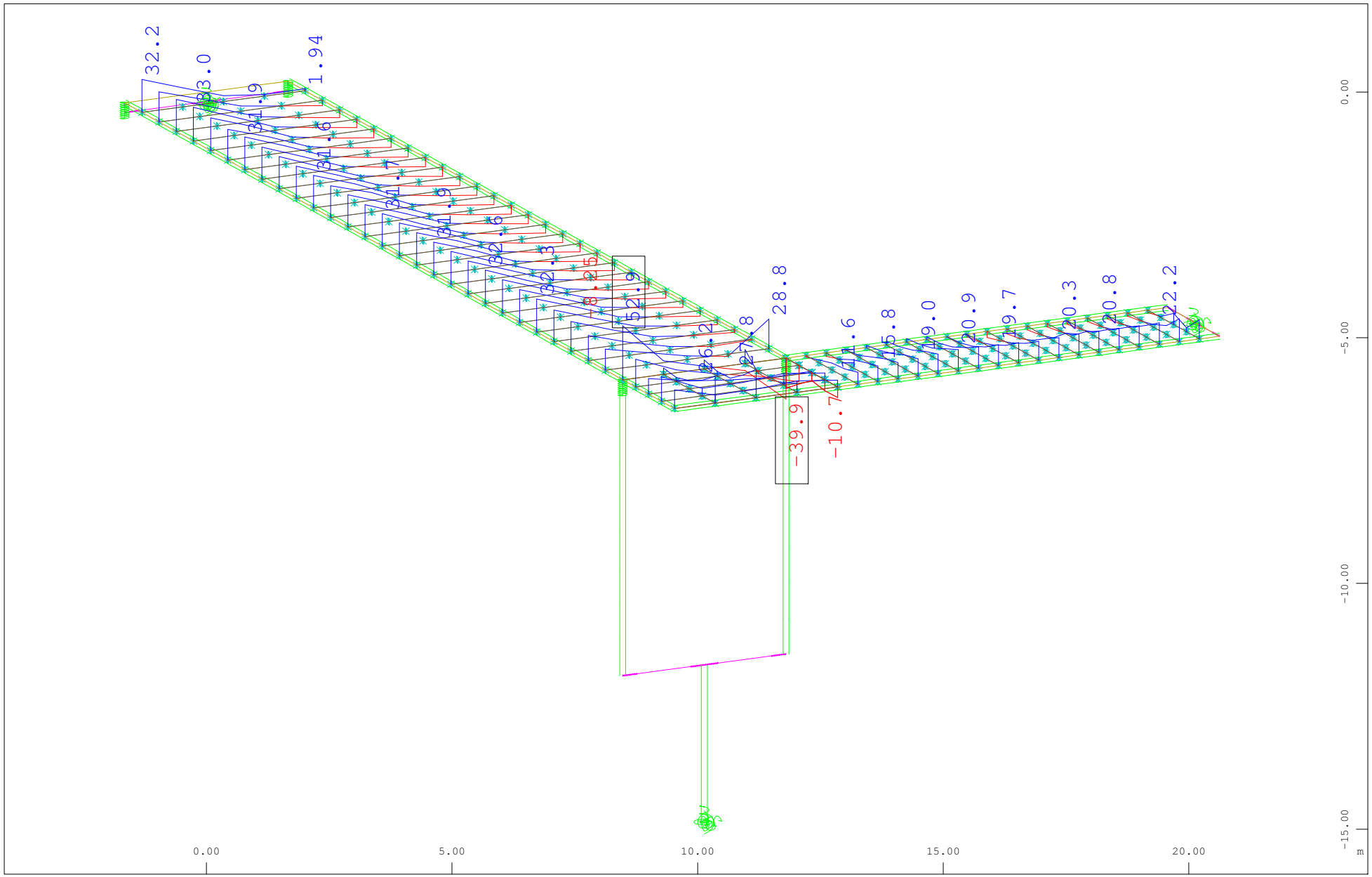
M 1 : 107
X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

External beams , Bending moment My, Loadcase 11230 MIN-MY BSCT ELS CUASI-PERMANENTE , 1 cm 3D = 50.0 kNm (Min=-66.8) (Max=11.6)

M 1 : 111
X * 0.502
Y * 0.906
Z * 0.962

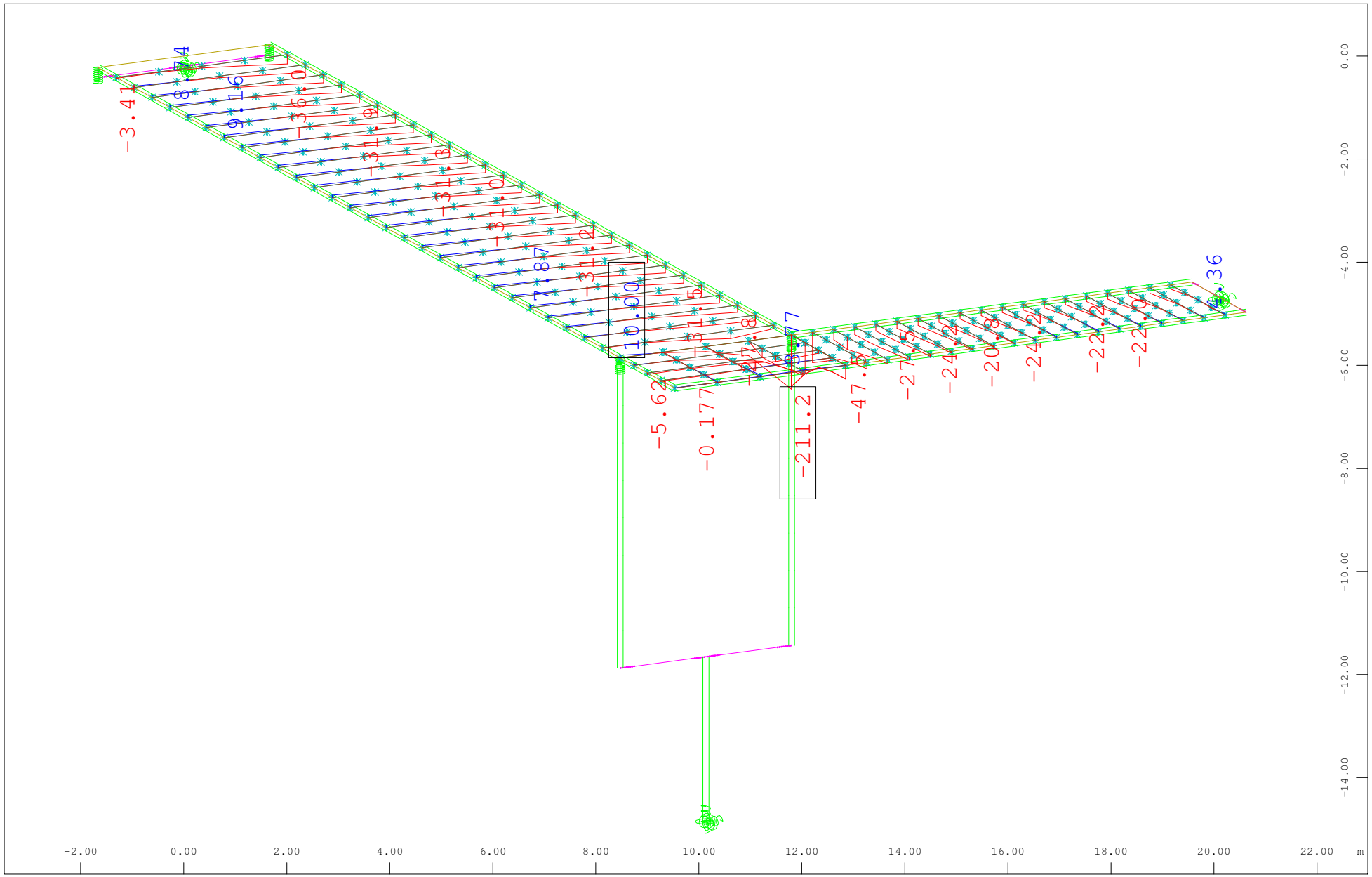


Z
Y
X

External beams , Shear force Vz, Loadcase 10125 MAX-VZ BSCT ELU , 1 cm 3D = 50.0 kN (Min=-39.9) (Max=52.9)

M 1 : 108

X * 0.502
Y * 0.906
Z * 0.962

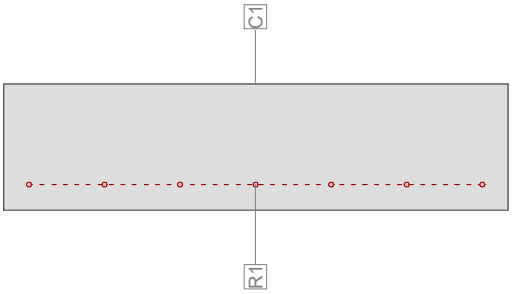


External beams , Shear force Vz, Loadcase 10126 MIN-VZ BSCT ELU , 1 cm 3D = 200.0 kN (Min=-211.2) (Max=10.00)

M 1 : 103

X * 0.502
Y * 0.906
Z * 0.962

Cross-section P_L_MMAX (H350;AEH500): Outline, Reinforcements Scale 1 :15.0



Cross section (Girder): P_L_MMAX

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C1	C	H350	Polygon	1	0	0	2	1.00	0
				3	1.00	0.25	4	0	0.25

Section properties: (reinforcement not considered, reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]			Mass [kg/m]	
Ax	**0.2500**	Ix	0.004388	ys	0.50			M_{CS}	625.0
Ay	(=Ax)	**Iy**	**0.001302**	zs	0.13				
Az	(=Ax)	**Iz**	**0.020833**	β	0 [°]				

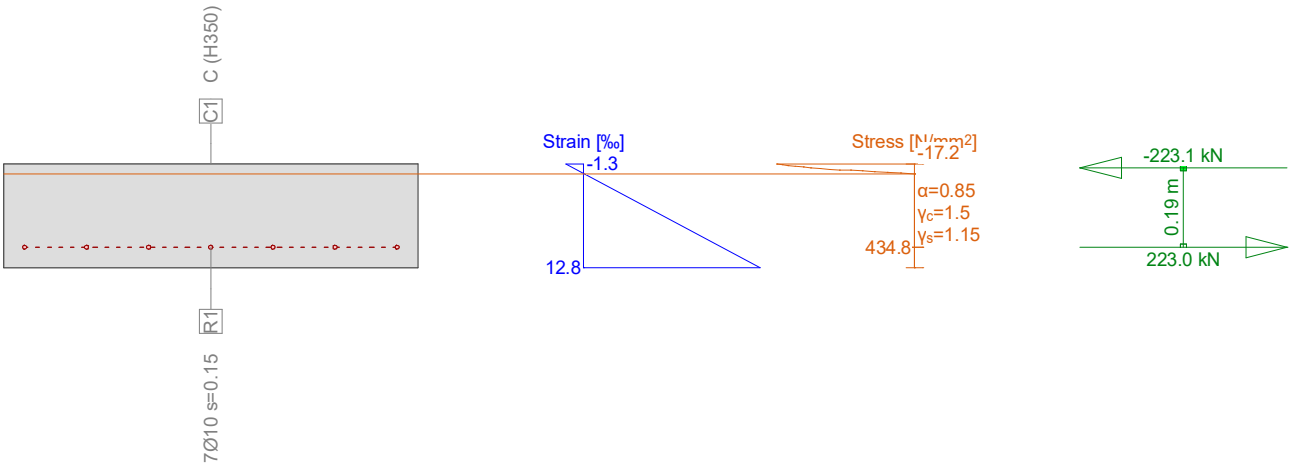
Cross section (Girder): P_L_MMAX

Mild reinforcement G0 ΣA_s = 513 mm^2, ρ = 0.2 %

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R1	R	AEH500	2	PL	0.05	0.05	0.95	0.05	7ϕ10	513

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring

Cross-section P_L_MMAX (H350;AEH500): Efficiency My=35.0; eff(M,N) = 0.82 OK Scale 1 :18.3



Ultimate strength analysis Cross section (Girder): P_L_MMAX

Action forces / Efficiency: eff(M,N) = 0.82 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS		0	35.0	0	0.82					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	H350	1.00	0.25	-1.3	-17.2	1.76
C1	H350	0	0	12.8	0	1.76
R1	AEH500	0.05	0.05	10.0	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km⁻¹]	χ_z [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
-0.1	42.8	0.0	5.8	56.3	-0.0	9.56	760.24	3538.96

CÁLCULO ABERTURA DE FISURA DE UNA SECCIÓN RECTANGULAR

(Sometida a FLEXIÓN SIMPLE o C

Preparado: JAO
Validado: HCA
Aprobado: JAO
Nombre Proyecto: EUBA- FLEXION TRANSVERSAL Llosa
Id. Proyecto:
Edición Hoja: 1

1. Datos

Tipo de sección: ARMADA

b (m) = 1.00 Armadura superior = 7 Ø8
h (m) = 0.25 Armadura inferior = 7 Ø8

Recubrimiento de cálculo armadura pasiva (cm) = 3.5

Clase de exposición: IIa
Abertura de fisura máxima, $\mathbf{w_{máx}}$ (según la tabla 5.1.1.2) = 0.3 mm

Tipo de hormigón: H-35

f_{ck} (MPa) = 35
E_c (MPa) = 29779
$f_{ct,m}$ (MPa) = 3.21

2. Esfuerzos

En elementos de **hormigón armado**: esfuerzos para combinación **cuasipermenente**.
En elementos de **hormigón pretensado**: esfuerzos para combinación **frecuente**.

N (kN) = 0.0
M (mkN) = 16.0

Excentricidad del esfuerzo axil (m) = 0.00

3. Resultados

3.1 Tensiones en el hormigón suponiendo la sección sin fisurar

Tensión en fibra superior (MPa) = -1.5
Tensión en fibra inferior (MPa) = 1.5

3.2 Tensión de servicio en la armadura pasiva en la hipótesis de sección fisurada

Profundidad de la fibra neutra de la sección fisurada, x (m) = 0.03

Tensión en la fibra superior de hormigón (MPa) = -5.5

Momento estático de la sección fisurada (m^3) = 0.0000
Inercia sección fisurada respecto a la f.n. sección fisurada (m^4) = 0.00009
Inercia sección fisurada respecto a la f.n. secc.sin fisurar (m^4) = 0.00040

Tensión en la armadura pasiva, σ_s (MPa) =	**231.8**

3.3 Tensión de la armadura en la sección fisurada para el momento de fisuración

Momento de fisuración (mkN) = 33.4

Profundidad de la fibra neutra de la sección fisurada, x (m) = 0.03

Tensión en la fibra superior de hormigón (MPa) = -11.4

Momento estático de la sección fisurada (m^3) = 0.0000
Inercia sección fisurada respecto a la f.n. sección fisurada (m^4) = 0.0001
Inercia sección fisurada respecto a la f.n. secc.sin fisurar (m^4) = 0.00040

Tensión en la armadura pasiva, σ_{sr} (MPa) =	**484.4**

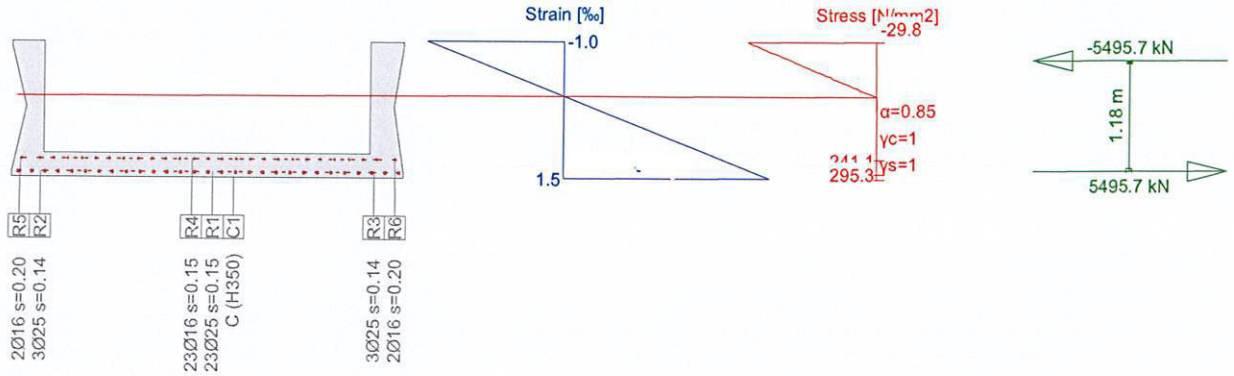
3.4 Abertura de fisura (Art. 49.2.4 EHE-08)

Abertura característica de fisura, $w_k = \beta s_m \varepsilon_{sm}$

β = 1.7
Separación media entre fisuras, s_m = 179
Alargamiento medio de las armaduras, ε_{sm} = 0.46 ‰

w_k (mm) =	**0.14**	OK

Cross-section P_MMAX_RASANTE (H350;AEH500): Stress analysis with given forces My=6480.0; Scale 1 :77.1



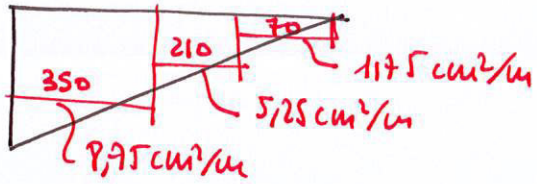
· F_1 = (12 Ø25) ⟶ 12 · 4,91 · 29,5 ≈ 1740 kN

· F_2 = (12 Ø16) ⟶ 12 · 2,01 · 24,2 = 583 kN.

2323 kN
↓ en 11,55 m
d_u = 201 kN/m.

· f_{u1} = 0,5 · f_{cd} · h_0 ≈ 0,21 = 980 kN/m.
(f_{cd} = 0,4 · f_{cd})

· f_{u2} ⟶ se hace un reparto elástico:



RASANTE + FLEXIÓN TRANSVERSAL ⟶ SUP : Ø16/0.15
INF : Ø12/0.15

CORTANTE SECCIONES RECTANGULARES SEGÚN EHE08 jsd-fdsb

Proyecto Euab - Losa pasarela y escalera (transversal)

SECCÍON	1
b (m)	1.00
h (m)	0.25
d' (m)	0.05
d (m)	0.20
Armadura de tracción (cm2)	7.53
fck (N/mm2)	35
γc	1.5
fyk (N/mm2)	500
γs	1.15
Nd (kN) compr (-)	0.00
Vd (kN)	35.00
∂º	45.00
cotg ∂	1.00
Ac (m2)	0.25
σcd (N/mm2)	0.00
K	1.00
Vu1 (kN)	1400
Vu1>Vd	**si**
σcd 2 (N/mm2)	0.00
ξ	2.00
ρ	0.0038
Vu2,1 (kN)	167.33
fct,m (N/mm2)	3.21
cotg ∂e	1.00
β	1.00
Vcu (kN)	167.33
Vsu (kN)	0.00
A90 (cm2/m)	0.00
A90 min (cm2/m)	10.70
A90 necesaria (cm2/m)	0.00

DIMENSIONAMIENTO ESQUINA.

Debido a que se trata de una zona de concentración de tensiones, se ha realizado un análisis específico para la zona de esquina interior.

Para las comprobaciones que se incluyen a continuación se ha utilizado el programa de cálculo RTATIK-7 para hacer los modelos de bielas y tirantes.

ESFUERZOS EN ESQUINA INTERIOR

FINAL VIGA INTERIOR - PASARELA

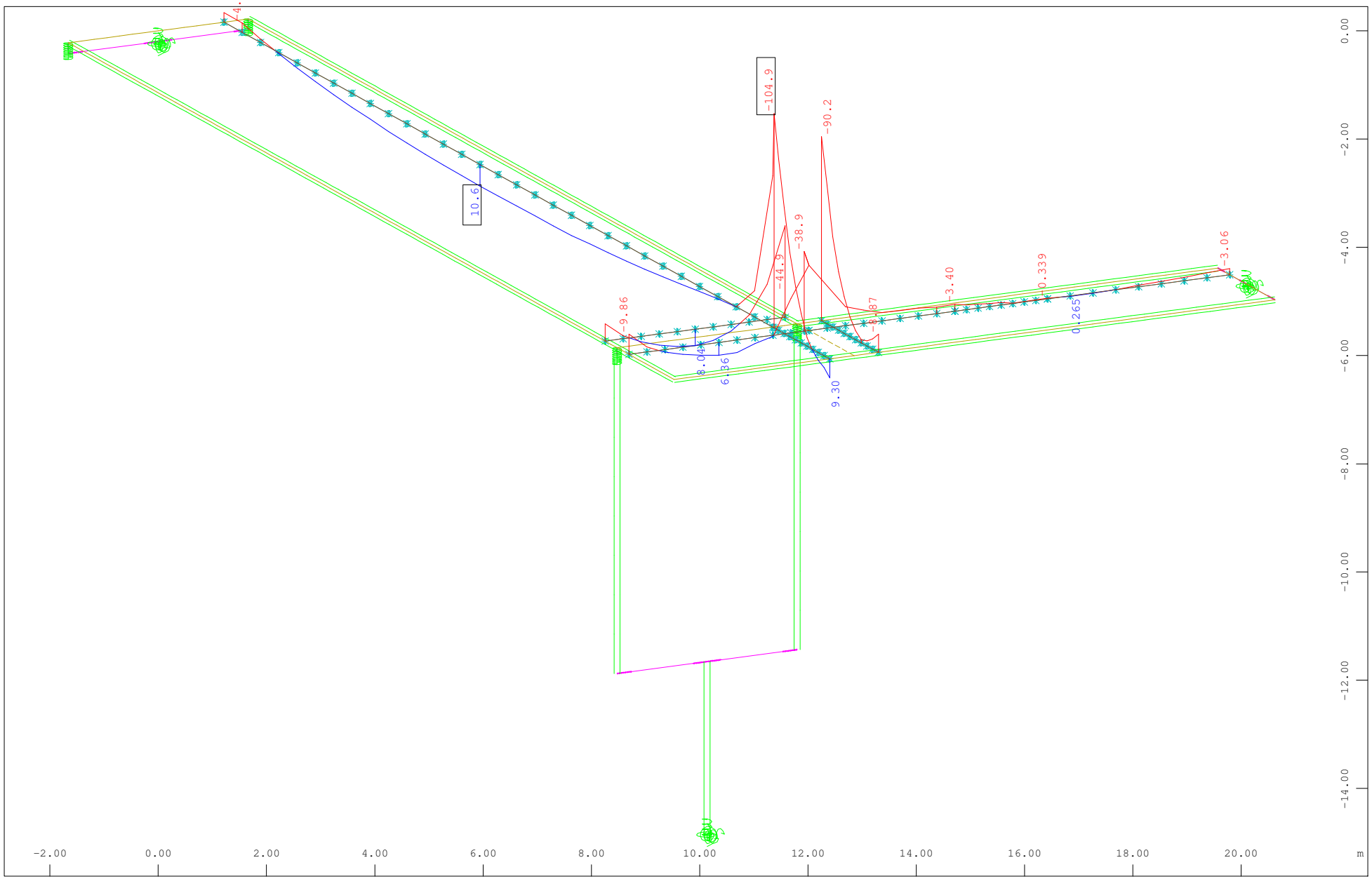
LC: 10121-10132

LC	LC-title	NR	X [m]	N [kN]	VY [kN]	VZ [kN]	MT [kNm]	MY [kNm]	MZ [kNm]
10121	MAX-N BSCT I	1110092	0.251	451.1	-193.95	-372.31	59.72	198.19	84.41
10122	MIN-N BSCT E	1110092	0.251	-362.8	94.07	-329.89	-26.9	-336.77	-29.42
10123	MAX-VY BSCT	1110092	0.251	-171.1	118.18	-238.99	-14.2	-146.1	-47.09
10124	MIN-VY BSCT	1110092	0.251	234.9	-206.16	-372.7	39.71	14.21	95.9
10125	MAX-VZ BSCT	1110092	0.251	435.1	-159.79	-216.78	55.3	255.95	64.1
10126	MIN-VZ BSCT	1110092	0.251	-195.5	-34.55	-494.55	-9.56	-300.75	30.3
10127	MAX-MT BSCT	1110092	0.251	440.6	-172.43	-307.32	60.79	233.39	71.12
10128	MIN-MT BSCT	1110092	0.251	-344.7	88.69	-304.32	-32.66	-335.48	-25.28
10129	MAX-MY BSCT	1110092	0.251	435.1	-159.79	-216.78	55.3	255.95	64.1
10130	MIN-MY BSCT	1110092	0.251	-352.3	72.55	-394.88	-27.97	-371.98	-16.13
10131	MAX-MZ BSCT	1110092	0.251	234.9	-206.16	-372.7	39.71	14.21	95.9
10132	MIN-MZ BSCT	1110092	0.251	-171.1	118.18	-238.99	-14.2	-146.1	-47.09

FINAL VIGA INTERIOR - ESCALERA

LC: 10121-10132

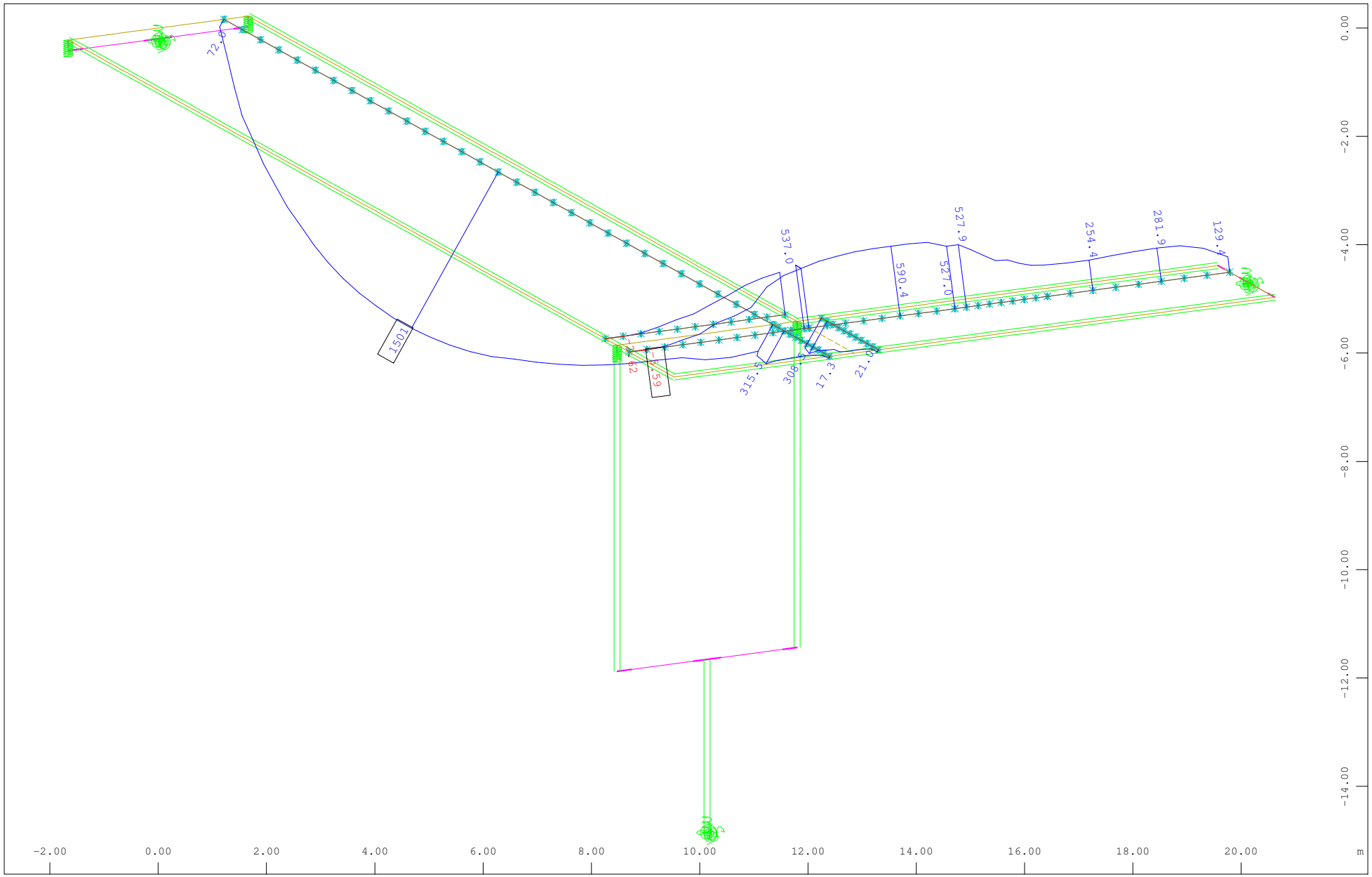
LC	LC-title	NR	X [m]	N [kN]	VY [kN]	VZ [kN]	MT [kNm]	MY [kNm]	MZ [kNm]
10121	MAX-N BSCT I	2110001	0	630	160.59	156.73	-46.34	306.27	76.57
10122	MIN-N BSCT E	2110001	0	-541.6	-40.99	89.06	93.41	-309.44	-25.02
10123	MAX-VY BSCT	2110001	0	466.8	163.95	92.53	-7.92	169.62	85.74
10124	MIN-VY BSCT	2110001	0	-398.5	-54.15	114.3	53.28	-185.72	-37.11
10125	MAX-VZ BSCT	2110001	0	43.2	105.1	204.02	56.27	3.07	41.47
10126	MIN-VZ BSCT	2110001	0	5.4	52.9	32.57	29.98	-55.08	30.98
10127	MAX-MT BSCT	2110001	0	-528.9	-9.11	104.99	113.78	-324.1	-8.36
10128	MIN-MT BSCT	2110001	0	611.9	118.9	107.24	-71.72	320	56.34
10129	MAX-MY BSCT	2110001	0	611.9	118.9	107.24	-71.72	320	56.34
10130	MIN-MY BSCT	2110001	0	-528.9	-9.11	104.99	113.78	-324.1	-8.36
10131	MAX-MZ BSCT	2110001	0	466.8	163.95	92.53	-7.92	169.62	85.74
10132	MIN-MZ BSCT	2110001	0	-398.5	-54.15	114.3	53.28	-185.72	-37.11



External beams , Bending moment My, Loadcase 10130 MIN-MY BSCT ELU , 1 cm 3D = 25.0 kNm (Min=-104.9) (Max=10.6)

Z
Y
X

M 1 : 98
X * 0.502
Y * 0.906
Z * 0.962

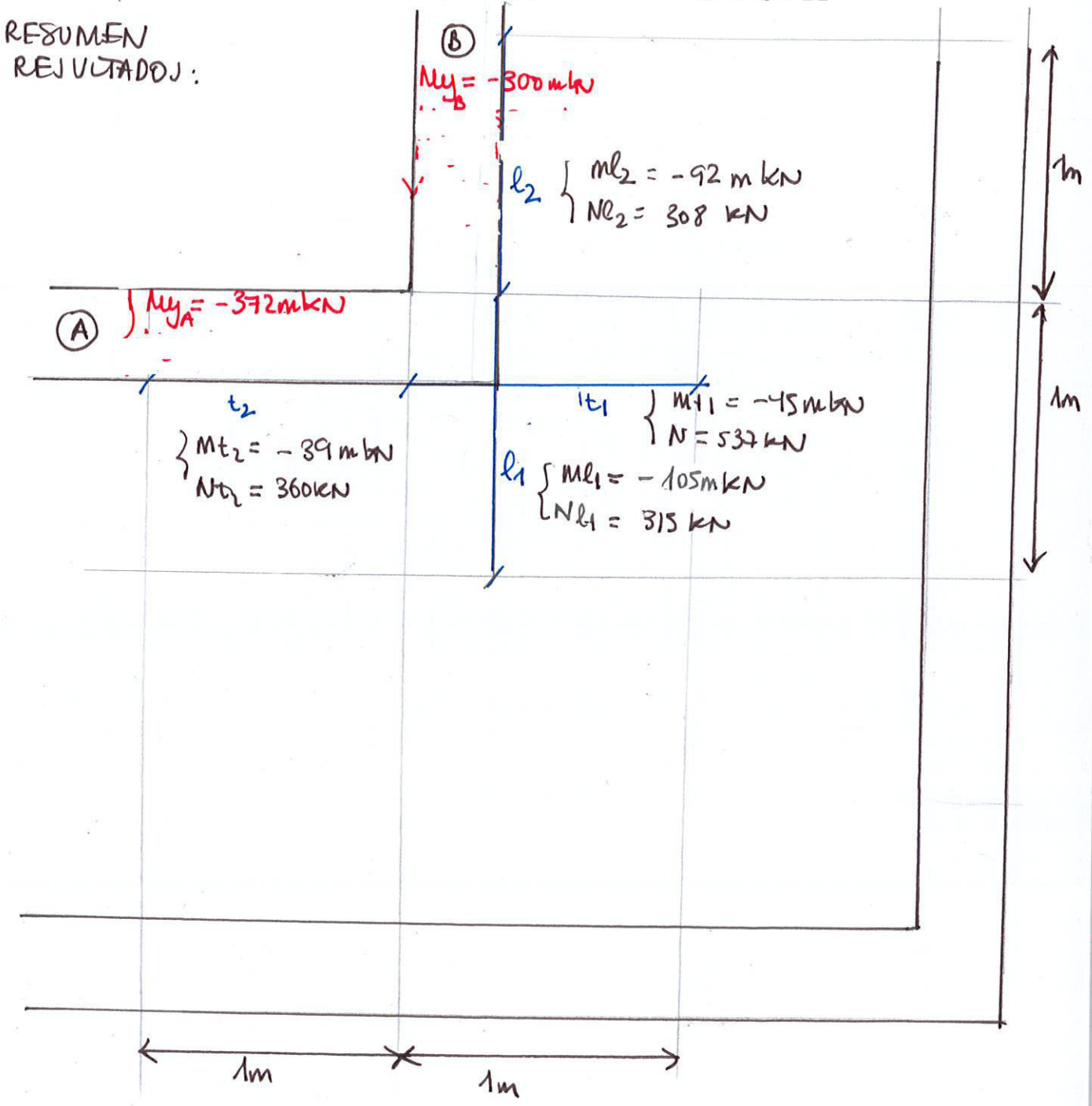


Z
Y
X

External beams , Normal force Nx, Loadcase 10121 MAX-N BSCT ELU , 1 cm 3D = 445.3 kN (Min=-5.59) (Max=1501.)

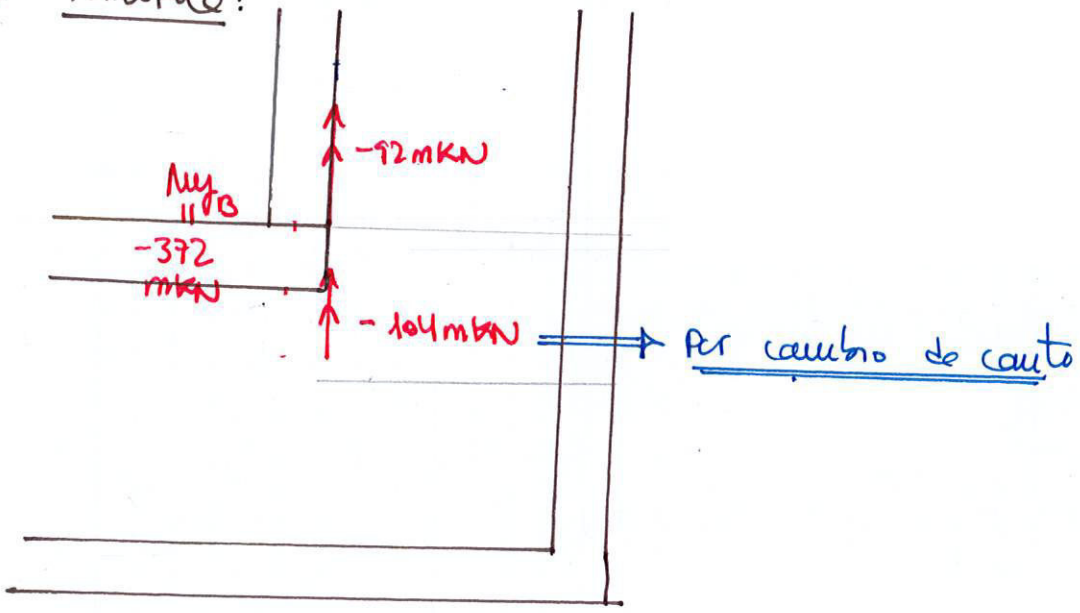
M 1 : 98
X * 0.502
Y * 0.906
Z * 0.962

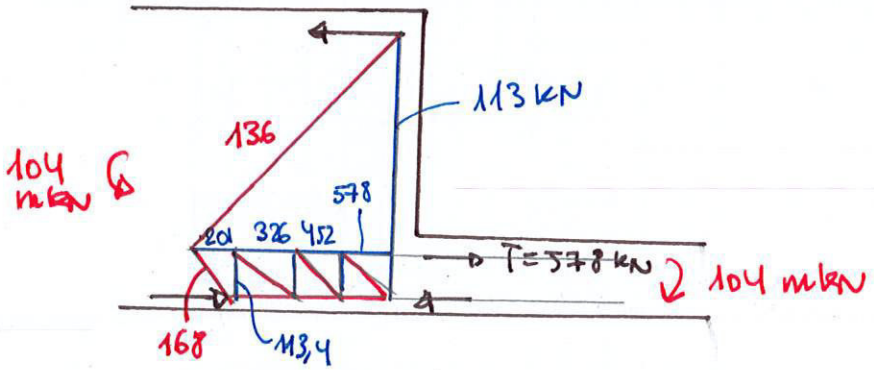
RESUMEN
RESULTADOS:



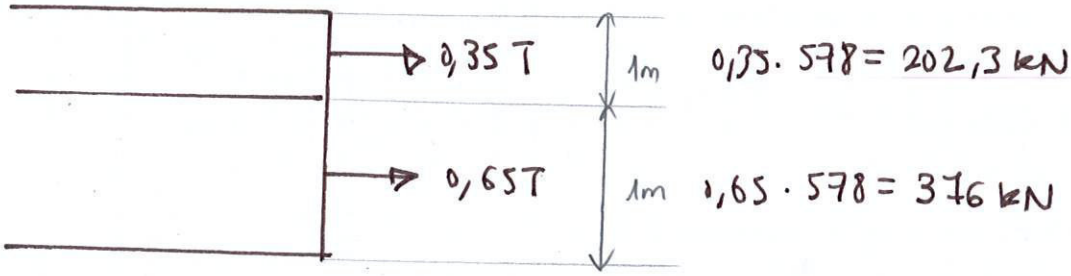
DIMENSIONAMIENTO

① Pantalla:



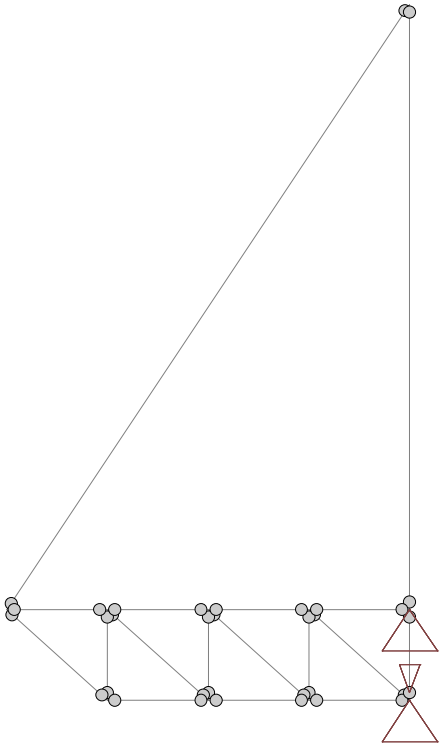


Para movilizar Mu ⟹ También es necesario que se forme mecanismo de bielas y tirantes en planta:



Structure

Scale 1 :15.0



STRUCTURE 2D

NODE DATA

Id	Coordinates X [m]	Coordinates Z [m]	Supports DX [kN/m]	Supports DZ [kN/m]	Supports RY [kNm]	Specialties
K_1	0	0	B	B		
K_2	0	0.180	B			
!1	-0.600	0.000				
!2	-0.400	0.000				
!3	-0.200	0.000				
!4	-0.800	0.180				
!5	-0.600	0.180				
!6	-0.400	0.180				
!7	-0.200	0.180				
!8	0.000	1.380				

B : Blocked

BAR DATA

ID	Cross section Name>Variant	Nodes beginning	Nodes end	Length [m]	Status	Specialties
S_1	P-S (HEA300)	!1	!4	0.269		G
S_2	P-S (HEA300)	!5	!1	0.180		G
S_3	P-S (HEA300)	!1	!2	0.200		G
S_4	P-S (HEA300)	!2	!5	0.269		G
S_5	P-S (HEA300)	!4	!5	0.200		G
S_6	P-S (HEA300)	!4	!8	1.442		G
S_7	P-S (HEA300)	!7	!3	0.180		G
S_8	P-S (HEA300)	!3	K_1	0.200		G
S_9	P-S (HEA300)	K_1	!7	0.269		G
S_10	P-S (HEA300)	K_2	!8	1.200		G
S_11	P-S (HEA300)	!6	!2	0.180		G
S_12	P-S (HEA300)	!2	!3	0.200		G
S_13	P-S (HEA300)	!3	!6	0.269		G
S_14	P-S (HEA300)	!5	!6	0.200		G
S_15	P-S (HEA300)	!6	!7	0.200		G
S_16	P-S (HEA300)	!7	K_2	0.200		G
S_17	P-S (HEA300)	K_2	K_1	0.180		G

G : Hinges (except truss elements) (s. table 'Members with hinges')

List of parts with base material S

CsName / (CsName2)	Area [m^2]	Perimeter [m]	Length [m]	No.	Ltot [m]	Surface [m^2]	Mass [t]
P-S (HEA300)	0.0113	1.723	var		**5.839**	**10.06**	**0.53**
by length:			0.180	4			
			0.200	7			
			0.269	4			
			1.200	1			
			1.442	1			
Total						**10.06**	**0.53**

Members with hinges

ID (*=SL-Abschn.)	Hinges	$Springs_{beginning}$ Dx [kN/m]	Dz [kN/m]	Ry [kNm]	$Springs_{end}$ Dx [kN/m]	Dz [kN/m]	Ry [kNm]	
S_1	--F --F							
S_2	--F --F							
S_3	--F --F							
S_4	--F --F							
S_5	--F --F							
S_6	--F --F							
S_7	--F --F							
S_8	--F --F							
S_9	--F --F							
S_10	--F --F							
S_11	--F --F							
S_12	--F --F							
S_13	--F --F							
S_14	--F --F							
S_15	--F --F							
S_16	--F --F							
S_17	--F --F							

F / E / P : Free / elastic / plastic support

Cross section: Geometry

Name	Variant	Materials	Type	Dimensions [m]
P-S		S	Profile	b=0.300, h=0.290 y_L=-0.150,y_R=0.150,z_B=-0.145,z_T=0.145

Materials : s. table 'Materials'

Cross section: CS stiffness

Name	Variant	β [°]	EA_x GA_z [kN]	EJ_y [kNm^2]	e_z [m]	CS mass Additional mass [t/m]	Materials
P-S		0	2362500.09 189486.41	38346.00	0	0.09	S

β : Angle between member Y axis and first principal axis of cross section
e_z : Distance center of gravity-axis point
Materials : s. table 'Materials'

Cross sections, cross section values

Cross section Name	Variants	Materials E_{ref} G_{ref}	Ideal cross section values $A_{x,id} = EA_x/E_{ref}$ [m^2]	$J_{y,id} = EJ_y/E_{ref}$ [m^4]	$J_{z,id} = EJ_z/E_{ref}$ [m^4]	$J_{x,id} = GJ_x/G_{ref}$ [m^4]	$A_{y,id} = GA_y/G_{ref}$ [m^2]	$A_{z,id} = GA_z/G_{ref}$ [m^2]
P-S		S	0.0113	0.000183	0.000063	0.000001	0.0084	0.0023

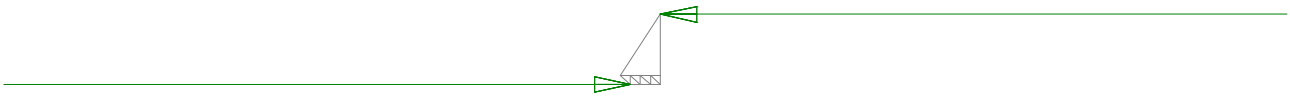
Materials : s. table 'Materials'

Materials

ID	Type	Member	E [kN/mm^2]	G [kN/mm^2]	ν	ρ [t/m^3]	α [‰]	Class	f [N/mm^2]	
S	Construction	(general)	210	81	0.30	8.0	0.012	AE235	235.0	f_y

Loading LC01: Pasarela

Scale 1 :148.7



Loading 'LC01': Pasarela

Point loads: Forces and moments

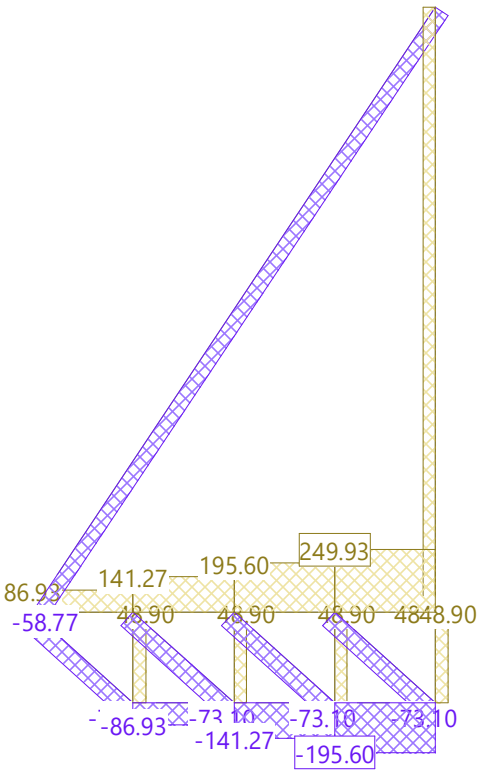
Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	X Global Member force	-75.36		-75.36	0	0
P2	X Global Member force	75.36		75.36	0	0

Summed load

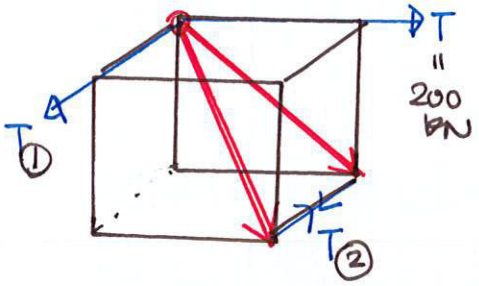
	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC01	0	0	0

Section force N [kN] for: LC02

Scale 1 :15.0



Para que se produzca la diferencia:

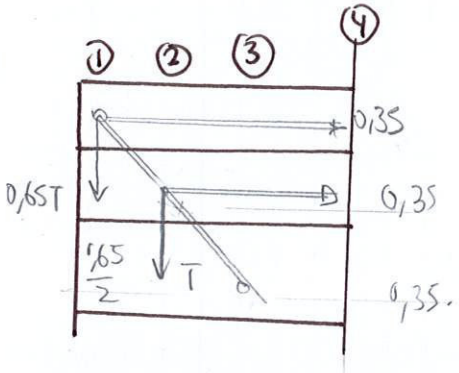


$T_① = \frac{200 \cdot 0,65}{40} = 3,25\ cm^2$ (SUP)

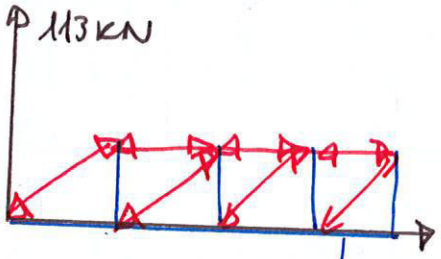
$T_② = 3,25\ cm^2$ (INF)

$T_② = \frac{3,25}{2} = 1,63 cm^2$ (MP)

$T_③ = 1,63 cm^2$ (INF)



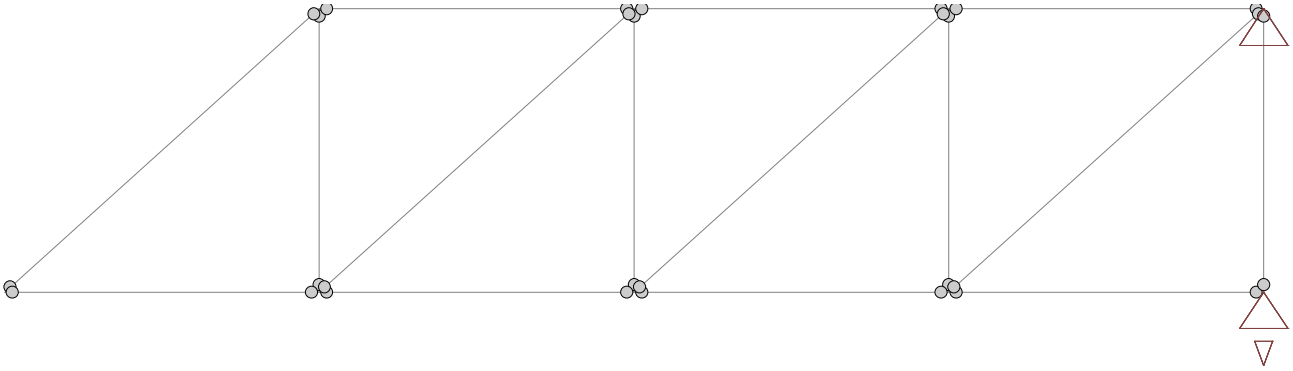
Además en sección ④ (final) para que se produzca el equilibrio en transversal:



$T = 313 \longrightarrow T = \frac{313}{40} = 7,8 cm^2$ (concentrado)

Structure

Scale 1 :4.8



STRUCTURE 2D

NODE DATA

Id	Coordinates X [m]	Coordinates Z [m]	Supports DX [kN/m]	Supports DZ [kN/m]	Supports RY [kNm]	Specialties
K_1	0	0	B			
K_2	0	0.180	B	B		
!1	-0.800	0				
!2	-0.600	0.000				
!3	-0.400	0.000				
!4	-0.200	0.000				
!5	-0.600	0.180				
!6	-0.400	0.180				
!7	-0.200	0.180				

B : Blocked

BAR DATA

ID	Cross section Name>Variant	Nodes beginning	Nodes end	Length [m]	Status	Specialties
S_1	P-S (HEA300)	!1	!2	0.200		G
S_2	P-S (HEA300)	!1	!5	0.269		G
S_3	P-S (HEA300)	!5	!2	0.180		G
S_4	P-S (HEA300)	!2	!3	0.200		G
S_5	P-S (HEA300)	!2	!6	0.269		G
S_6	P-S (HEA300)	!5	!6	0.200		G
S_7	P-S (HEA300)	!6	!3	0.180		G
S_8	P-S (HEA300)	!3	!4	0.200		G
S_9	P-S (HEA300)	!3	!7	0.269		G
S_10	P-S (HEA300)	!6	!7	0.200		G
S_11	P-S (HEA300)	!7	!4	0.180		G
S_12	P-S (HEA300)	!4	K_1	0.200		G
S_13	P-S (HEA300)	!4	K_2	0.269		G
S_14	P-S (HEA300)	!7	K_2	0.200		G
S_15	P-S (HEA300)	K_2	K_1	0.180		G

G : Hinges (except truss elements) (s. table 'Members with hinges')

List of parts with base material S

CsName / (CsName2)	Area [m^2]	Perimeter [m]	Length [m]	No.	Ltot [m]	Surface [m^2]	Mass [t]
P-S (HEA300)	0.0113	1.723	var		**3.196**	**5.51**	**0.29**
by length:			0.180	4			
			0.200	7			
			0.269	4			
Total						**5.51**	**0.29**

Members with hinges

ID (*=SL-Abschn.)	Hinges	Springs beginning Dx [kN/m]	Dz [kN/m]	Ry [kNm]	Springs end Dx [kN/m]	Dz [kN/m]	Ry [kNm]	
S_1	--F --F							
S_2	--F --F							
S_3	--F --F							
S_4	--F --F							
S_5	--F --F							
S_6	--F --F							
S_7	--F --F							
S_8	--F --F							
S_9	--F --F							
S_10	--F --F							
S_11	--F --F							
S_12	--F --F							
S_13	--F --F							
S_14	--F --F							
S_15	--F --F							

F / E / P : Free / elastic / plastic support

Cross section: Geometry

Name	Variant	Materials	Type	Dimensions [m]
P-S		S	Profile	b=0.300, h=0.290 y_L=-0.150,y_R=0.150,z_B=-0.145,z_T=0.145

Materials : s. table 'Materials'

Cross section: CS stiffness

Name	Variant	β [°]	EA_x GA_z [kN]	EJ_y [kNm²]	e_z [m]	CS mass Additional mass [t/m]	Materials
P-S		0	2362500.09 189486.41	38346.00	0	0.09	S

β : Angle between member Y axis and first principal axis of cross section
e_z : Distance center of gravity-axis point
Materials : s. table 'Materials'

Cross sections, cross section values

Cross section Name	Variants	Materials E_{ref} G_{ref}	Ideal cross section values $A_{x,id}$ = EA_x/E_{ref} [m²]	$J_{y,id}$ = EJ_y/E_{ref} [m⁴]	$J_{z,id}$ = EJ_z/E_{ref} [m⁴]	$J_{x,id}$ = GJ_x/G_{ref} [m⁴]	$A_{y,id}$ = GA_y/G_{ref} [m²]	$A_{z,id}$ = GA_z/G_{ref} [m²]
P-S		S	0.0113	0.000183	0.000063	0.000001	0.0084	0.0023

Materials : s. table 'Materials'

Materials

ID	Type	Member	E [kN/mm²]	G [kN/mm²]	ν	ρ [t/m³]	α [‰]	Class	f [N/mm²]	
S	Construction	(general)	210	81	0.30	8.0	0.012	AE235	235.0	f_y

Loading 'LC01': PASARELA

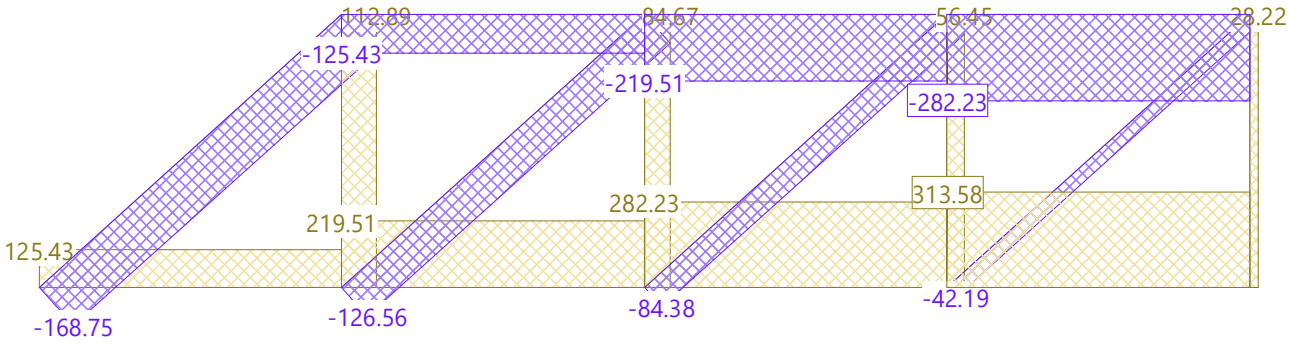
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-28.22		0	0	-28.22
P2	Z Global Member force	112.89		0	0	112.89
P3	Z Global Member force	-28.22		0	0	-28.22
P4	Z Global Member force	-28.22		0	0	-28.22
P5	Z Global Member force	-28.22		0	0	-28.22

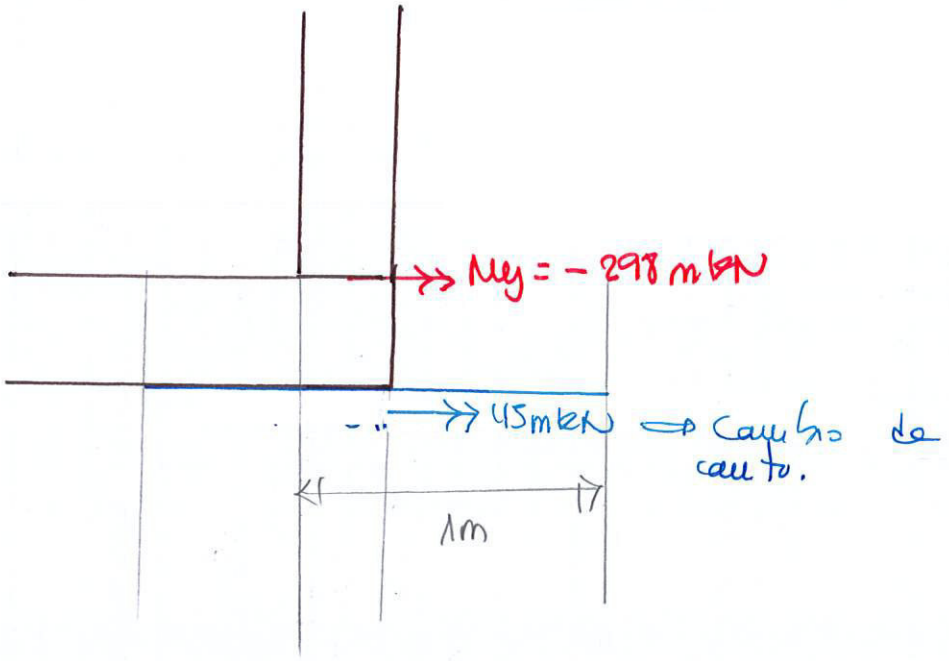
Summed load

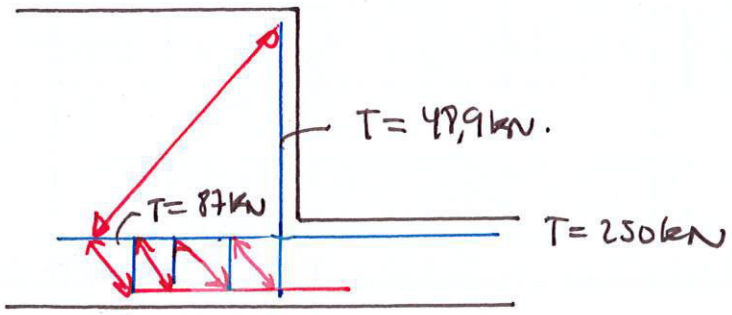
	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC01	0	0	0.00

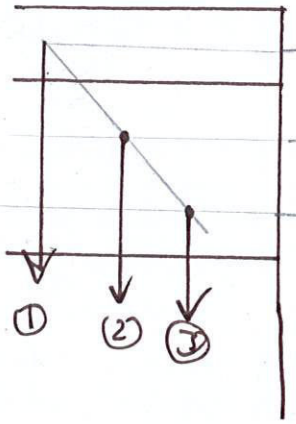
Section force N [kN] for: LC01 Scale 1 :5.0



② Escalera : se repite el cálculo de cante + difusión :







0,35 T = 250 · 0,35 = 87,5 kN → 2,20 cm²

0,35 T
0,35 T } 250 × 0,65 = 162,5 kN → 4,10 cm²

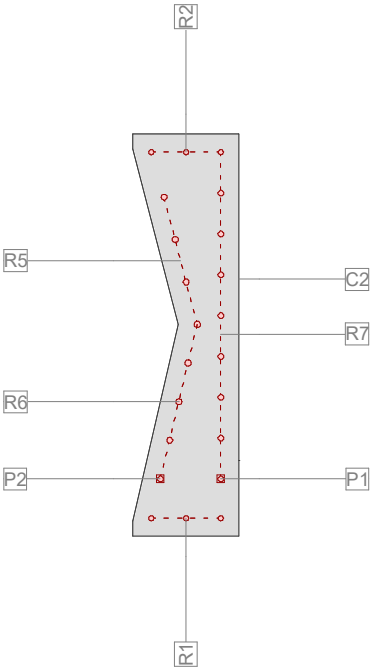
① (SUP) 87 · 0,65 = 56,55 → 1,4 cm²
② (SUP) 1,4 cm²
③ (INF) 0,7 cm²
(INF) 0,7 cm²

④ → (INF) $\frac{134}{40}$ = 3,35 cm²

Además, para tener en cuenta el rozamiento:

- Pancada: $N_{USA} = 451 - 162 = 289\,kN \rightarrow 7{,}22\,cm^2/m$
- Escalera: $N_{USA} = 630 - 206 = 424\,kN \rightarrow 10{,}6\,cm^2/m$.

Cross-section PAS_VIGA (H350;AEH500): Outline, Reinforcements Scale 1 :25.0



Cross section (Girder): PAS_VIGA

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C2	C	H350	Polygon	1	0	0	2	0.35	0
				3	0.35	0.25	4	0.35	0.25
				5	0.35	1.33	6	0	1.33
				7	0	1.28	8	0.15	0.70
				9	0	0.05			

Section properties: (reinforcement not considered, reference material: C)

Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]		Area moment [m^4]		Mass [kg/m]	
Ax	**0.3733**	Ix	0.009756	ys	0.21	Iyz*	-0.000141	M_{CS}	933.1
Ay	(=Ax)	**Iy**	**0.062782**	zs	0.66	Iy*	0.062781		
Az	(=Ax)	**Iz**	**0.002839**	β	-0.1 [°]	Iz*	0.002839		

Moment of inertia : Moment of inertia with respect to principal axis (x = member axis)
Area moment : Second moment of area parallel to input axis

Cross section (Girder): PAS_VIGA

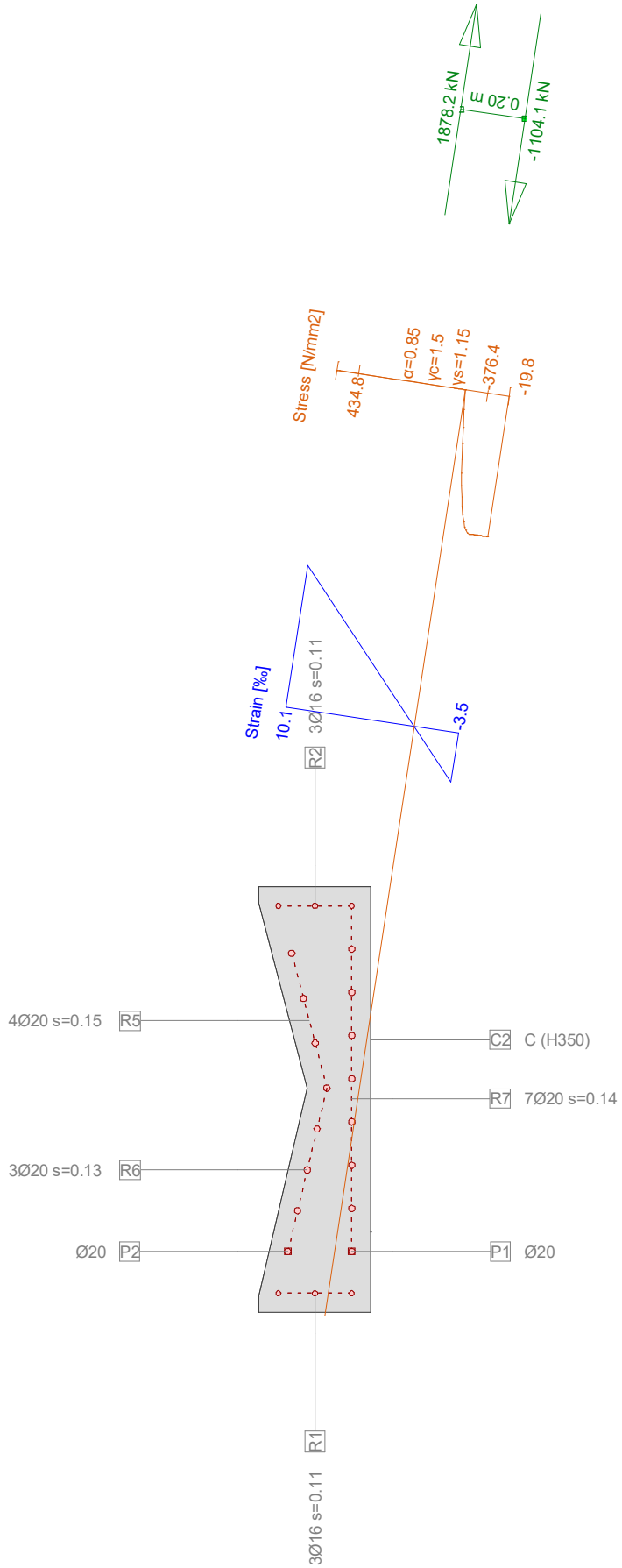
Mild reinforcement G0 $\Sigma A_s = 6233\ mm^2$, $\rho = 1.7\ \%$

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R2	R	AEH500	2	PL	0.06	1.27	0.29	1.27	3ϕ16	603
R5				PL	0.10	1.12	0.21	0.70	4ϕ20	1257
R7				PL	0.29	1.27	0.29	0.19	* 7ϕ20	2199
R6				PL	0.21	0.70	0.09	0.19	* 3ϕ20	942
R1				PL	0.06	0.06	0.29	0.06	3ϕ16	603
P1				PL	0.29	0.19			1ϕ20	314
P2				PL	0.09	0.19			1ϕ20	314

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Cross-section PAS_VIGA (H350;AEH500): Efficiency Nx=451.0;My=-371.0;Mz=96.0; eff(M,N) = 0.58 OK

Scale 1 :20.7



Nr.:

Ultimate strength analysis Cross section (Girder): PAS_VIGA

Action forces / Efficiency: eff(M,N) = 0.58 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS		451.0	-371.0	96.0	0.58					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

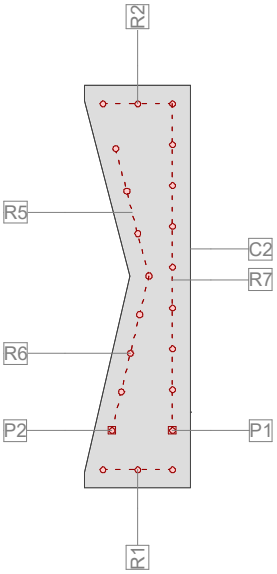
Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C2	H350	0.35	0.00	-3.5	-19.8	1.76
C2	H350	0.00	1.33	10.1	0	1.76
R1	AEH500	0.29	0.06	-1.8	-376.4	1.15
R2	AEH500	0.06	1.27	8.4	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km⁻¹]	χ_z [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
774.1	-636.9	164.8	2.5	-3.7	24.7	3.049E+5	1.703E+5	6664.60

Cross-section ESC_VIGA (H350;AEH500): Outline, Reinforcements Scale 1 :25.0



Cross section (Girder): ESC_VIGA

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [m]	z_q [m]	No.	y_q [m]	z_q [m]
C2	C	H350	Polygon	1	0	0	2	0.35	0
				3	0.35	0.25	4	0.35	0.25
				5	0.35	1.33	6	0	1.33
				7	0	1.28	8	0.15	0.70
				9	0	0.05			

Section properties: (reinforcement not considered, reference material: C)

	Area [m^2]		Moment of inertia [m^4]		C.G.,Angle [m]		Area moment [m^4]		Mass [kg/m]	
Ax	**0.3733**	Ix	0.009756	ys	0.21	Iyz*	-0.000141	M_{CS}	933.1
Ay	(=Ax)	**Iy**	**0.062782**	zs	0.66	Iy*	0.062781		
Az	(=Ax)	**Iz**	**0.002839**	β	-0.1 [°]	Iz*	0.002839		

Moment of inertia : Moment of inertia with respect to principal axis (x = member axis)
Area moment : Second moment of area parallel to input axis

Cross section (Girder): ESC_VIGA

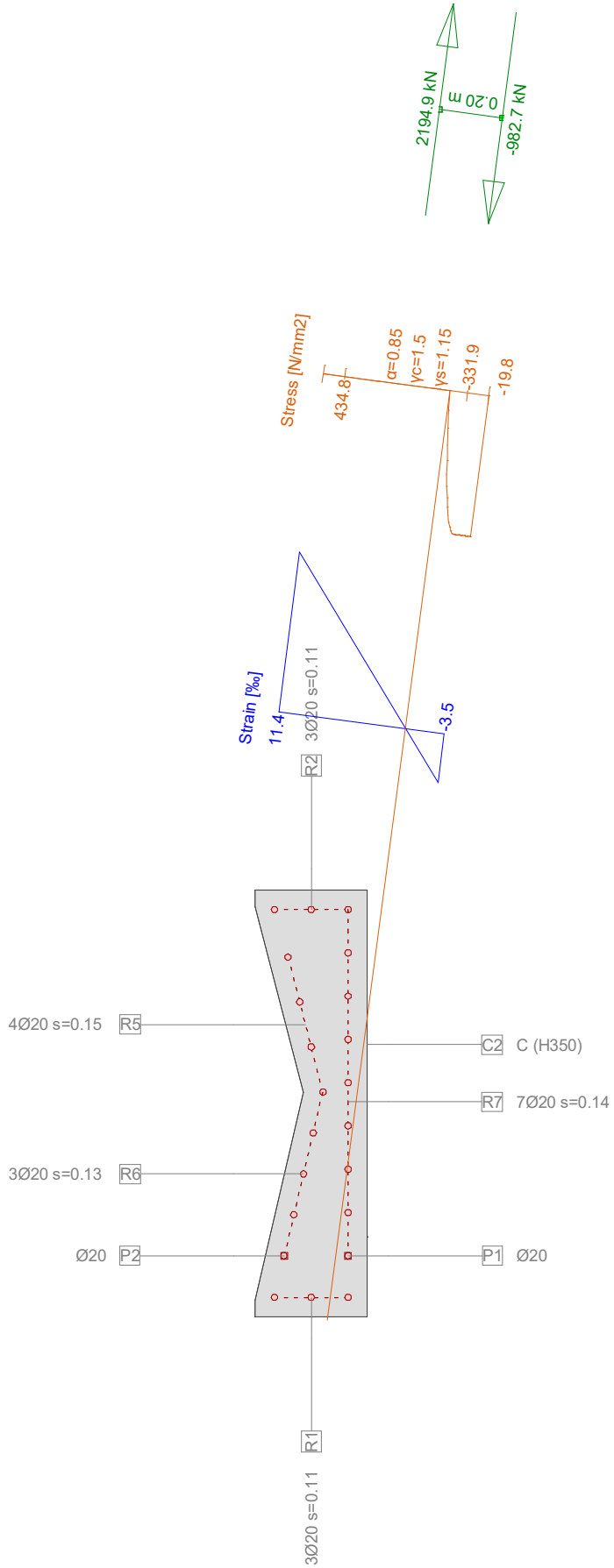
Mild reinforcement G0 ΣA_s = 6912 mm^2, ρ = 1.9 %

Name	Material	Class	BC	Type	y_{1q} [m]	z_{1q} [m]	y_{2q} [m]	z_{2q} [m]	n,∅	exist A_s [mm^2]
R2	R	AEH500	2	PL	0.06	1.27	0.29	1.27	3ϕ20	942
R5				PL	0.10	1.12	0.21	0.70	4ϕ20	1257
R7				PL	0.29	1.27	0.29	0.19	* 7ϕ20	2199
R6				PL	0.21	0.70	0.09	0.19	* 3ϕ20	942
R1				PL	0.06	0.06	0.29	0.06	3ϕ20	942
P1				PL	0.29	0.19			1ϕ20	314
P2				PL	0.09	0.19			1ϕ20	314

BC : BC: 0=constant area, 1=adapt always, 2=adapt area in tension zone
Type : Definition of reinforcement: P = Point, L= Line, R = Ring
* : gleichmässig verteilt, ohne Anfangs- und Endpunkt

Cross-section ESC_VIGA (H350;AEH500): Efficiency Nx=630.0;My=-324.0;Mz=86.0; eff(M,N) = 0.52 OK

Scale 1 :20.7



Nr.:

Ultimate strength analysis Cross section (Girder): ESC_VIGA

Action forces / Efficiency: eff(M,N) = 0.52 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS		630.0	-324.0	86.0	0.52					

Analysis-Parameters "!ULS", Standard: Spanish Code EHE

ID	σ-ε-Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	ϕ [-]		
!ULS	2/0	1			-2.0	-3.5	10.0		0.85	1.50	1.15			45.00	0		

θ : Inclination of diagonal in compression
ϕ : Creep coefficient

Extreme stresses and strain

Name	Class	y_q [m]	z_q [m]	ε [‰]	σ_d [N/mm²]	γ [-]
C2	H350	0.35	0	-3.5	-19.8	1.76
C2	H350	0	1.33	11.4	0	1.76
R1	AEH500	0.29	0.06	-1.6	-331.9	1.15
R2	AEH500	0.06	1.27	9.4	434.8	1.15

Stresses and strain during the last iterations step = Ultimate state

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km^{-1}]	χ_z [km^{-1}]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
1212.2	-623.7	165.5	3.0	-3.7	28.3	3.983E+5	1.672E+5	5854.48

PILA

A continuación se incluyen las comprobaciones llevadas a cabo por el dimensionamiento de la pila.

PILA SUR - ESFUERZOS EN CABEZA DE PILA

mi. jun. 5 09:30:14 2019
LC: 10121-10132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
10121	MAX-N BSCT ELU	220007	0.786	-323	-2	1	0	0	0
10122	MIN-N BSCT ELU	220007	0.786	-848	1	2	0	0	0
10123	MAX-VY BSCT ELU	220007	0.786	-553	3	1	0	0	0
10124	MIN-VY BSCT ELU	220007	0.786	-661	-4	1	0	0	0
10125	MAX-VZ BSCT ELU	220007	0.786	-560	-4	3	0	0	0
10126	MIN-VZ BSCT ELU	220007	0.786	-494	1	-1	0	0	0
10127	MAX-MT BSCT ELU	220007	0.786	-590	0	1	0	0	0
10128	MIN-MT BSCT ELU	220007	0.786	-590	0	1	0	0	0
10129	MAX-MY BSCT ELU	220007	0.786	-494	1	-1	0	0	0
10130	MIN-MY BSCT ELU	220007	0.786	-560	-4	3	0	0	0
10131	MAX-MZ BSCT ELU	220007	0.786	-553	3	1	0	0	0
10132	MIN-MZ BSCT ELU	220007	0.786	-661	-4	1	0	0	0
				-848					
				-323	Area		0.071 tension	135.59	kp/cm2
								45.74	

mi. jun. 5 09:30:38 2019
LC: 11221-11232

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11221	MAX-N BSCT ELS CUASI-PERMANENTE	220007	0.786	-420	-2	1	0	0	0
11222	MIN-N BSCT ELS CUASI-PERMANENTE	220007	0.786	-469	0	1	0	0	0
11223	MAX-VY BSCT ELS CUASI-PERMANENTE	220007	0.786	-425	1	1	0	0	0
11224	MIN-VY BSCT ELS CUASI-PERMANENTE	220007	0.786	-461	-2	1	0	0	0
11225	MAX-VZ BSCT ELS CUASI-PERMANENTE	220007	0.786	-420	-2	1	0	0	0
11226	MIN-VZ BSCT ELS CUASI-PERMANENTE	220007	0.786	-469	0	1	0	0	0
11227	MAX-MT BSCT ELS CUASI-PERMANENTE	220007	0.786	-437	0	1	0	0	0
11228	MIN-MT BSCT ELS CUASI-PERMANENTE	220007	0.786	-437	0	1	0	0	0
11229	MAX-MY BSCT ELS CUASI-PERMANENTE	220007	0.786	-469	0	1	0	0	0
11230	MIN-MY BSCT ELS CUASI-PERMANENTE	220007	0.786	-420	-2	1	0	0	0
11231	MAX-MZ BSCT ELS CUASI-PERMANENTE	220007	0.786	-425	1	1	0	0	0
11232	MIN-MZ BSCT ELS CUASI-PERMANENTE	220007	0.786	-461	-2	1	0	0	0
				-469					

PILA SUR - ESFUERZOS EN BASE

mi. jun. 5 09:33:12 2019
LC: 10121-10132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
10121	MAX-N BSCT ELU	220001	0	-345	-5	-8	0	20	-19
10122	MIN-N BSCT ELU	220001	0	-878	2	4	0	-16	6
10123	MAX-VY BSCT ELU	220001	0	-669	5	10	0	-31	18
10124	MIN-VY BSCT ELU	220001	0	-578	-6	-8	0	20	-26
10125	MAX-VZ BSCT ELU	220001	0	-661	0	10	0	-32	-8
10126	MIN-VZ BSCT ELU	220001	0	-432	-2	-8	0	22	-3
10127	MAX-MT BSCT ELU	220001	0	-459	0	1	0	-5	0
10128	MIN-MT BSCT ELU	220001	0	-620	0	1	0	-6	1
10129	MAX-MY BSCT ELU	220001	0	-432	-2	-8	0	22	-3
10130	MIN-MY BSCT ELU	220001	0	-661	0	10	0	-32	-8
10131	MAX-MZ BSCT ELU	220001	0	-604	4	4	0	-14	20
10132	MIN-MZ BSCT ELU	220001	0	-578	-6	-8	0	20	-26
				-878					
				-345					

mi. jun. 5 09:33:37 2019
LC: 11221-11232

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11221	MAX-N BSCT ELS CUASI-PERMANENTE	220001	0	-442	-2	1	0	-5	-11
11222	MIN-N BSCT ELS CUASI-PERMANENTE	220001	0	-490	0	1	0	-4	2
11223	MAX-VY BSCT ELS CUASI-PERMANENTE	220001	0	-447	1	1	0	-5	6
11224	MIN-VY BSCT ELS CUASI-PERMANENTE	220001	0	-482	-2	1	0	-4	-13
11225	MAX-VZ BSCT ELS CUASI-PERMANENTE	220001	0	-442	-2	1	0	-5	-11
11226	MIN-VZ BSCT ELS CUASI-PERMANENTE	220001	0	-490	0	1	0	-4	2
11227	MAX-MT BSCT ELS CUASI-PERMANENTE	220001	0	-459	0	1	0	-5	0
11228	MIN-MT BSCT ELS CUASI-PERMANENTE	220001	0	-459	0	1	0	-5	0
11229	MAX-MY BSCT ELS CUASI-PERMANENTE	220001	0	-490	0	1	0	-4	2
11230	MIN-MY BSCT ELS CUASI-PERMANENTE	220001	0	-442	-2	1	0	-5	-11
11231	MAX-MZ BSCT ELS CUASI-PERMANENTE	220001	0	-447	1	1	0	-5	6
11232	MIN-MZ BSCT ELS CUASI-PERMANENTE	220001	0	-482	-2	1	0	-4	-13
				-490					

mi. jun. 5 15:55:46 2019

LC: 11121-11132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11121	MAX-N BSCT ELS CARACTERÍSTICA	220001	0	-390	-4	-6	0	15	-19
11122	MIN-N BSCT ELS CARACTERÍSTICA	220001	0	-650	1	3	0	-14	5
11123	MAX-VY BSCT ELS CARACTERÍSTICA	220001	0	-500	4	7	0	-26	15
11124	MIN-VY BSCT ELS CARACTERÍSTICA	220001	0	-437	-5	-6	0	16	-22
11125	MAX-VZ BSCT ELS CARACTERÍSTICA	220001	0	-495	0	8	0	-27	-8
11126	MIN-VZ BSCT ELS CARACTERÍSTICA	220001	0	-447	-2	-6	0	17	-3
11127	MAX-MT BSCT ELS CARACTERÍSTICA	220001	0	-466	0	1	0	-5	0
11128	MIN-MT BSCT ELS CARACTERÍSTICA	220001	0	-466	0	1	0	-5	0
11129	MAX-MY BSCT ELS CARACTERÍSTICA	220001	0	-447	-2	-6	0	17	-3
11130	MIN-MY BSCT ELS CARACTERÍSTICA	220001	0	-495	0	8	0	-27	-8
11131	MAX-MZ BSCT ELS CARACTERÍSTICA	220001	0	-456	3	3	0	-12	16
11132	MIN-MZ BSCT ELS CARACTERÍSTICA	220001	0	-437	-5	-6	0	16	-22
				-650					

PILA NORTE - ESFUERZOS EN CABEZA DE PILA

mi. jun. 5 09:32:15 2019
LC: 10121-10132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
10121	MAX-N BSCT ELU	210007	0.786	-426	0	0	0	0	0
10122	MIN-N BSCT ELU	210007	0.786	-958	-3	1	0	0	0
10123	MAX-VY BSCT ELU	210007	0.786	-499	3	1	0	0	0
10124	MIN-VY BSCT ELU	210007	0.786	-689	-4	1	0	0	0
10125	MAX-VZ BSCT ELU	210007	0.786	-677	0	3	0	0	0
10126	MIN-VZ BSCT ELU	210007	0.786	-510	-2	-1	0	0	0
10127	MAX-MT BSCT ELU	210007	0.786	-680	0	1	0	0	0
10128	MIN-MT BSCT ELU	210007	0.786	-680	0	1	0	0	0
10129	MAX-MY BSCT ELU	210007	0.786	-510	-2	-1	0	0	0
10130	MIN-MY BSCT ELU	210007	0.786	-677	0	3	0	0	0
10131	MAX-MZ BSCT ELU	210007	0.786	-499	3	1	0	0	0
10132	MIN-MZ BSCT ELU	210007	0.786	-689	-4	1	0	0	0
				-958					
				240	**96**	**2.40**	cm2	**3.00**	0.05
				-426				6.65555556	0.5

mi. jun. 5 09:32:31 2019
LC: 11221-11232

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11221	MAX-N BSCT ELS CUASI-PERMANENTE	210007	0.786	-502	0	1	0	0	0
11222	MIN-N BSCT ELS CUASI-PERMANENTE	210007	0.786	-508	-2	1	0	0	0
11223	MAX-VY BSCT ELS CUASI-PERMANENTE	210007	0.786	-502	1	1	0	0	0
11224	MIN-VY BSCT ELS CUASI-PERMANENTE	210007	0.786	-507	-2	1	0	0	0
11225	MAX-VZ BSCT ELS CUASI-PERMANENTE	210007	0.786	-502	0	1	0	0	0
11226	MIN-VZ BSCT ELS CUASI-PERMANENTE	210007	0.786	-508	-2	1	0	0	0
11227	MAX-MT BSCT ELS CUASI-PERMANENTE	210007	0.786	-504	0	1	0	0	0
11228	MIN-MT BSCT ELS CUASI-PERMANENTE	210007	0.786	-504	0	1	0	0	0
11229	MAX-MY BSCT ELS CUASI-PERMANENTE	210007	0.786	-508	-2	1	0	0	0
11230	MIN-MY BSCT ELS CUASI-PERMANENTE	210007	0.786	-502	0	1	0	0	0
11231	MAX-MZ BSCT ELS CUASI-PERMANENTE	210007	0.786	-502	1	1	0	0	0
11232	MIN-MZ BSCT ELS CUASI-PERMANENTE	210007	0.786	-507	-2	1	0	0	0
				-508					

PILA NORTE - ESFUERZOS EN BASE

mi. jun. 5 09:34:27 2019
LC: 10121-10132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
10121	MAX-N BSCT ELU	210001	0	-448	4	9	0	-24	11
10122	MIN-N BSCT ELU	210001	0	-988	-4	-1	0	0	-19
10123	MAX-VY BSCT ELU	210001	0	-535	5	9	0	-24	17
10124	MIN-VY BSCT ELU	210001	0	-720	-6	-7	0	13	-26
10125	MAX-VZ BSCT ELU	210001	0	-718	4	9	0	-26	11
10126	MIN-VZ BSCT ELU	210001	0	-537	-5	-7	0	15	-20
10127	MAX-MT BSCT ELU	210001	0	-526	0	1	0	-5	0
10128	MIN-MT BSCT ELU	210001	0	-710	0	1	0	-7	0
10129	MAX-MY BSCT ELU	210001	0	-537	-5	-7	0	15	-20
10130	MIN-MY BSCT ELU	210001	0	-718	4	9	0	-26	11
10131	MAX-MZ BSCT ELU	210001	0	-524	4	3	0	-11	20
10132	MIN-MZ BSCT ELU	210001	0	-720	-6	-7	0	13	-26
				-988					

mi. jun. 5 09:34:04 2019
LC: 11221-11232

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11221	MAX-N BSCT ELS CUASI-PERMANENTE	210001	0	-524	0	1	0	-5	2
11222	MIN-N BSCT ELS CUASI-PERMANENTE	210001	0	-530	-2	1	0	-4	-12
11223	MAX-VY BSCT ELS CUASI-PERMANENTE	210001	0	-524	1	1	0	-5	6
11224	MIN-VY BSCT ELS CUASI-PERMANENTE	210001	0	-529	-2	1	0	-5	-13
11225	MAX-VZ BSCT ELS CUASI-PERMANENTE	210001	0	-524	0	1	0	-5	2
11226	MIN-VZ BSCT ELS CUASI-PERMANENTE	210001	0	-530	-2	1	0	-4	-12
11227	MAX-MT BSCT ELS CUASI-PERMANENTE	210001	0	-526	0	1	0	-5	0
11228	MIN-MT BSCT ELS CUASI-PERMANENTE	210001	0	-526	0	1	0	-5	0
11229	MAX-MY BSCT ELS CUASI-PERMANENTE	210001	0	-530	-2	1	0	-4	-12
11230	MIN-MY BSCT ELS CUASI-PERMANENTE	210001	0	-524	0	1	0	-5	2
11231	MAX-MZ BSCT ELS CUASI-PERMANENTE	210001	0	-524	1	1	0	-5	6
11232	MIN-MZ BSCT ELS CUASI-PERMANENTE	210001	0	-529	-2	1	0	-5	-13

mi. jun. 5 15:55:59 2019

LC: 11121-11132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11121	MAX-N BSCT ELS CARACTERÍSTICA	210001	0	-483	3	7	0	-22	9
11122	MIN-N BSCT ELS CARACTERÍSTICA	210001	0	-740	-3	-1	0	-1	-16
11123	MAX-VY BSCT ELS CARACTERÍSTICA	210001	0	-541	3	7	0	-22	14
11124	MIN-VY BSCT ELS CARACTERÍSTICA	210001	0	-543	-5	-5	0	10	-22
11125	MAX-VZ BSCT ELS CARACTERÍSTICA	210001	0	-541	3	7	0	-22	9
11126	MIN-VZ BSCT ELS CARACTERÍSTICA	210001	0	-544	-4	-5	0	10	-20
11127	MAX-MT BSCT ELS CARACTERÍSTICA	210001	0	-536	0	1	0	-6	0
11128	MIN-MT BSCT ELS CARACTERÍSTICA	210001	0	-536	0	1	0	-6	0
11129	MAX-MY BSCT ELS CARACTERÍSTICA	210001	0	-544	-4	-5	0	10	-20
11130	MIN-MY BSCT ELS CARACTERÍSTICA	210001	0	-541	3	7	0	-22	9
11131	MAX-MZ BSCT ELS CARACTERÍSTICA	210001	0	-535	3	3	0	-11	16
11132	MIN-MZ BSCT ELS CARACTERÍSTICA	210001	0	-543	-5	-5	0	10	-22
				-740					

	MAX-N BSCT ELS CARACTERÍSTICA			-873	-2	1	0	-6	-11
	MIN-N BSCT ELS CARACTERÍSTICA			-1390	-2	2	0	-14	-11
	MAX-VY BSCT ELS CARACTERÍSTICA			-1041	7	14	0	-48	29
	MIN-VY BSCT ELS CARACTERÍSTICA			-980	-10	-11	0	26	-44
	MAX-VZ BSCT ELS CARACTERÍSTICA			-1036	3	14	0	-49	1
	MIN-VZ BSCT ELS CARACTERÍSTICA			-990	-6	-11	0	27	-23
	MAX-MT BSCT ELS CARACTERÍSTICA			-1002	0	2	0	-12	0
	MIN-MT BSCT ELS CARACTERÍSTICA			-1002	0	2	0	-12	0
	MAX-MY BSCT ELS CARACTERÍSTICA			-990	-6	-11	0	27	-23
	MIN-MY BSCT ELS CARACTERÍSTICA			-1036	3	14	0	-49	1
	MAX-MZ BSCT ELS CARACTERÍSTICA			-991	6	6	0	-23	32
	MIN-MZ BSCT ELS CARACTERÍSTICA			-980	-10	-11	0	26	-44

ZAPATA - ESFUERZOS EN CARA SUPERIOR

mi. jun. 5 09:36:18 2019
LC: 10121-10132

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
10121	MAX-N BSCT ELU	230001	2.5	-873	-4	-15	-3	33	-343
10122	MIN-N BSCT ELU	230001	2.5	-1841	-4	8	1	-29	-188
10123	MAX-VY BSCT ELU	230001	2.5	-1388	10	19	2	-57	-57
10124	MIN-VY BSCT ELU	230001	2.5	-1299	-13	-14	-2	33	-315
10125	MAX-VZ BSCT ELU	230001	2.5	-1380	7	19	2	-57	-83
10126	MIN-VZ BSCT ELU	230001	2.5	-969	-10	-15	-2	36	-234
10127	MAX-MT BSCT ELU	230001	2.5	-894	0	18	2	-53	-26
10128	MIN-MT BSCT ELU	230001	2.5	-1447	-2	-14	-3	32	-294
10129	MAX-MY BSCT ELU	230001	2.5	-969	-10	-15	-2	36	-234
10130	MIN-MY BSCT ELU	230001	2.5	-1380	7	19	2	-57	-83
10131	MAX-MZ BSCT ELU	230001	2.5	-980	7	18	2	-50	145
10132	MIN-MZ BSCT ELU	230001	2.5	-1369	-11	-14	-2	29	-470

mi. jun. 5 09:36:35 2019
LC: 11221-11232

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11221	MAX-N BSCT ELS CUASI-PERMANENTE	230001	2.5	-966	1	2	0	-10	-147
11222	MIN-N BSCT ELS CUASI-PERMANENTE	230001	2.5	-1020	-4	2	0	-9	-96
11223	MAX-VY BSCT ELS CUASI-PERMANENTE	230001	2.5	-971	2	2	0	-10	-132
11224	MIN-VY BSCT ELS CUASI-PERMANENTE	230001	2.5	-1012	-5	2	0	-9	-113
11225	MAX-VZ BSCT ELS CUASI-PERMANENTE	230001	2.5	-966	1	2	0	-10	-147
11226	MIN-VZ BSCT ELS CUASI-PERMANENTE	230001	2.5	-1020	-4	2	0	-9	-96
11227	MAX-MT BSCT ELS CUASI-PERMANENTE	230001	2.5	-972	-5	2	0	-10	-172
11228	MIN-MT BSCT ELS CUASI-PERMANENTE	230001	2.5	-1010	2	2	0	-9	-72
11229	MAX-MY BSCT ELS CUASI-PERMANENTE	230001	2.5	-1020	-4	2	0	-9	-96
11230	MIN-MY BSCT ELS CUASI-PERMANENTE	230001	2.5	-966	1	2	0	-10	-147
11231	MAX-MZ BSCT ELS CUASI-PERMANENTE	230001	2.5	-1019	1	2	0	-9	-67
11232	MIN-MZ BSCT ELS CUASI-PERMANENTE	230001	2.5	-967	-4	2	0	-10	-176

mi. jun. 5 09:36:54 2019
LC: 11121-11132

PRIMER ORDEN

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11121	MAX-N BSCT ELS CARACTERÍSTICA	230001	2.5	-910	-3	-9	-2	19	-270
11122	MIN-N BSCT ELS CARACTERÍSTICA	230001	2.5	-1358	-3	6	1	-21	-148
11123	MAX-VY BSCT ELS CARACTERÍSTICA	230001	2.5	-1024	6	13	1	-39	-50
11124	MIN-VY BSCT ELS CARACTERÍSTICA	230001	2.5	-964	-9	-9	-2	21	-224
11125	MAX-VZ BSCT ELS CARACTERÍSTICA	230001	2.5	-1018	5	13	1	-39	-68
11126	MIN-VZ BSCT ELS CARACTERÍSTICA	230001	2.5	-975	-8	-10	-2	21	-205
11127	MAX-MT BSCT ELS CARACTERÍSTICA	230001	2.5	-924	-1	13	1	-39	-66
11128	MIN-MT BSCT ELS CARACTERÍSTICA	230001	2.5	-1063	-1	-9	-2	20	-208
11129	MAX-MY BSCT ELS CARACTERÍSTICA	230001	2.5	-975	-8	-10	-2	21	-205
11130	MIN-MY BSCT ELS CARACTERÍSTICA	230001	2.5	-1018	5	13	1	-39	-68
11131	MAX-MZ BSCT ELS CARACTERÍSTICA	230001	2.5	-982	5	12	1	-37	55
11132	MIN-MZ BSCT ELS CARACTERÍSTICA	230001	2.5	-1249	-5	-2	-1	-1	-332

SEGUNDO ORDEN

LC	LC-title	NR	X	N	VY	VZ	MT	MY	MZ
			[m]	[kN]	[kN]	[kN]	[kNm]	[kNm]	[kNm]
11121	MAX-N BSCT ELS CARACTERÍSTICA	230001	2.5	-910	-3	-9	-2	-17	-270
11122	MIN-N BSCT ELS CARACTERÍSTICA	230001	2.5	-1358	-3	6	1	-161	-148
11123	MAX-VY BSCT ELS CARACTERÍSTICA	230001	2.5	-1024	6	13	1	-158	-50
11124	MIN-VY BSCT ELS CARACTERÍSTICA	230001	2.5	-964	-9	-9	-2	124	-224
11125	MAX-VZ BSCT ELS CARACTERÍSTICA	230001	2.5	-1018	5	13	1	-158	-68
11126	MIN-VZ BSCT ELS CARACTERÍSTICA	230001	2.5	-975	-8	-10	-2	125	-205
11127	MAX-MT BSCT ELS CARACTERÍSTICA	230001	2.5	-924	-1	13	1	-116	-66
11128	MIN-MT BSCT ELS CARACTERÍSTICA	230001	2.5	-1063	-1	-9	-2	-116	-208
11129	MAX-MY BSCT ELS CARACTERÍSTICA	230001	2.5	-975	-8	-10	-2	125	-205
11130	MIN-MY BSCT ELS CARACTERÍSTICA	230001	2.5	-1018	5	13	1	-158	-68
11131	MAX-MZ BSCT ELS CARACTERÍSTICA	230001	2.5	-982	5	12	1	-118	55
11132	MIN-MZ BSCT ELS CARACTERÍSTICA	230001	2.5	-1249	-5	-2	-1	124	-332

ESFUERZOS A COTA INF

Ppzapata	alt zapata	B	L
[kN]	[m]	[m]	[m]
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30

N	VY	VZ	MY	MZ
[kN]	[kN]	[kN]	[kNm]	[kNm]
-1710	-3	-9	51	-279
-2157	-3	6	-40	-159
-1823	6	13	-83	-28
-1764	-9	-9	53	-255
-1818	5	13	-83	-51
-1774	-8	-10	54	-233
-1724	-1	13	-82	-70
-1863	-1	-9	53	-213
-1774	-8	-10	54	-233
-1818	5	13	-83	-51
-1781	5	12	-79	71
-2049	-5	-2	5	-350

ESFUERZOS A COTA INF

Ppzapata	alt zapata	B	L
[kN]	[m]	[m]	[m]
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30
-800	3.45	1.75	5.30

N	VY	VZ	MY	MZ
[kN]	[kN]	[kN]	[kNm]	[kNm]
-1710	-3	-9	14	-279
-2157	-3	6	-180	-159
-1823	6	13	-202	-28
-1764	-9	-9	156	-255
-1818	5	13	-203	-51
-1774	-8	-10	158	-233
-1724	-1	13	-160	-70
-1863	-1	-9	-84	-213
-1774	-8	-10	158	-233
-1818	5	13	-203	-51
-1781	5	12	-160	71
-2049	-5	-2	129	-350

EXC_B	B/3		EXC_L	L/3		B*	L*	Tension
[m]	[m]		[m]	[m]		[m]	[m]	kp/cm2
0.030	0.583	**ok**	0.163	1.767	**ok**	1.691	4.973	2.0
0.019	0.583	**ok**	0.074	1.767	**ok**	1.713	5.153	2.4
0.046	0.583	**ok**	0.015	1.767	**ok**	1.659	5.269	2.1
0.030	0.583	**ok**	0.144	1.767	**ok**	1.689	5.011	2.1
0.046	0.583	**ok**	0.028	1.767	**ok**	1.658	5.243	2.1
0.030	0.583	**ok**	0.131	1.767	**ok**	1.689	5.038	2.1
0.048	0.583	**ok**	0.041	1.767	**ok**	1.655	5.219	2.0
0.028	0.583	**ok**	0.114	1.767	**ok**	1.694	5.072	2.2
0.030	0.583	**ok**	0.131	1.767	**ok**	1.689	5.038	2.1
0.046	0.583	**ok**	0.028	1.767	**ok**	1.658	5.243	2.1
0.045	0.583	**ok**	0.040	1.767	**ok**	1.661	5.220	2.1
0.002	0.583	**ok**	0.171	1.767	**ok**	1.745	4.958	2.4
0.048			**0.171**					**2.4**

EXC_B	B/3		EXC_L	L/3		B*	L*	Tension
[m]	[m]		[m]	[m]		[m]	[m]	kp/cm2
0.008	0.583	**ok**	0.163	1.767	**ok**	1.733	4.973	2.0
0.083	0.583	**ok**	0.074	1.767	**ok**	1.583	5.153	2.6
0.111	0.583	**ok**	0.015	1.767	**ok**	1.528	5.269	2.3
0.089	0.583	**ok**	0.144	1.767	**ok**	1.573	5.011	2.2
0.111	0.583	**ok**	0.028	1.767	**ok**	1.527	5.243	2.3
0.089	0.583	**ok**	0.131	1.767	**ok**	1.572	5.038	2.2
0.093	0.583	**ok**	0.041	1.767	**ok**	1.565	5.219	2.1
0.045	0.583	**ok**	0.114	1.767	**ok**	1.660	5.072	2.2
0.089	0.583	**ok**	0.131	1.767	**ok**	1.572	5.038	2.2
0.111	0.583	**ok**	0.028	1.767	**ok**	1.527	5.243	2.3
0.090	0.583	**ok**	0.040	1.767	**ok**	1.570	5.220	2.2
0.063	0.583	**ok**	0.171	1.767	**ok**	1.624	4.958	2.5
0.111			**0.171**					**2.6**

SECCION ARRANQUE-ELU

BARRA	a (x) (m)	ɔ (y) (m)	Es (Mpa)	fyk (Mpa)	γs	εy
FUSTE 1	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
FUSTE 2	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207

β	A (m2)	Iz (m4)	Iy (m4)	iz	iy	L (m)	αx
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35

αy	lpx (m)	lpy (m)	λmx	λmy	n° de barra	dist.a origen (m)	Nd (kN)	Vy (kN)
1.35	8.1675	8.1675	65.34	65.34	220001	0	-345	-5
1.35	8.1675	8.1675	65.34	65.34	220001	0	-878	2
1.35	8.1675	8.1675	65.34	65.34	220001	0	-669	5
1.35	8.1675	8.1675	65.34	65.34	220001	0	-578	-6
1.35	8.1675	8.1675	65.34	65.34	220001	0	-661	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-432	-2
1.35	8.1675	8.1675	65.34	65.34	220001	0	-459	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-620	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-432	-2
1.35	8.1675	8.1675	65.34	65.34	220001	0	-661	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-604	4
1.35	8.1675	8.1675	65.34	65.34	220001	0	-578	-6
1.35	8.1675	8.1675	65.34	65.34	210001	0	-448	4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-988	-4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-535	5
1.35	8.1675	8.1675	65.34	65.34	210001	0	-720	-6
1.35	8.1675	8.1675	65.34	65.34	210001	0	-718	4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-537	-5
1.35	8.1675	8.1675	65.34	65.34	210001	0	-526	0
1.35	8.1675	8.1675	65.34	65.34	210001	0	-710	0
1.35	8.1675	8.1675	65.34	65.34	210001	0	-537	-5
1.35	8.1675	8.1675	65.34	65.34	210001	0	-718	4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-524	4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-720	-6

Vz (kN)	T (kN*m)	Myd (kN*m)	Mzd (kN*m)	Nd (kN)	eacc,y	Myd (kN*m)	eacc,z
-8	0	20	-19	-345	0.022	20	0.022
4	0	-16	6	-878	0.022	-19	0.022
10	0	-31	18	-669	0.022	-31	0.022
-8	0	20	-26	-578	0.022	20	0.022
10	0	-32	-8	-661	0.022	-32	0.022
-8	0	22	-3	-432	0.022	22	0.022
1	0	-5	0	-459	0.022	-10	0.022
1	0	-6	1	-620	0.022	-14	0.022
-8	0	22	-3	-432	0.022	22	0.022
10	0	-32	-8	-661	0.022	-32	0.022
4	0	-14	20	-604	0.022	-14	0.022
-8	0	20	-26	-578	0.022	20	0.022
9	0	-24	11	-448	0.022	-24	0.022
-1	0	0	-19	-988	0.022	-22	0.022
9	0	-24	17	-535	0.022	-24	0.022
-7	0	13	-26	-720	0.022	16	0.022
9	0	-26	11	-718	0.022	-26	0.022
-7	0	15	-20	-537	0.022	15	0.022
1	0	-5	0	-526	0.022	-12	0.022
1	0	-7	0	-710	0.022	-16	0.022
-7	0	15	-20	-537	0.022	15	0.022
9	0	-26	11	-718	0.022	-26	0.022
3	0	-11	20	-524	0.022	-12	0.022
-7	0	13	-26	-720	0.022	16	0.022

Mzd (kN*m)	¿pandeo plano x?	¿pandeo plano y?	ε	eoy (m)	eoz (m)	eo2y (m)
-19	si	si	0.0035	-0.059	0.054	0.059
19	si	si	0.0035	0.022	-0.022	0.022
18	si	si	0.0035	0.047	-0.027	0.047
-26	si	si	0.0035	-0.035	0.044	0.035
-15	si	si	0.0035	0.048	0.022	0.048
-10	si	si	0.0035	-0.051	0.022	0.051
10	si	si	0.0035	0.022	-0.022	0.022
14	si	si	0.0035	0.022	-0.022	0.022
-10	si	si	0.0035	-0.051	0.022	0.051
-15	si	si	0.0035	0.048	0.022	0.048
20	si	si	0.0035	0.023	-0.033	0.023
-26	si	si	0.0035	-0.035	0.044	0.035
11	si	si	0.0035	0.053	-0.024	0.053
-22	si	si	0.0035	0.022	0.022	0.022
17	si	si	0.0035	0.045	-0.032	0.045
-26	si	si	0.0035	-0.022	0.036	0.022
16	si	si	0.0035	0.036	-0.022	0.036
-20	si	si	0.0035	-0.027	0.036	0.027
-12	si	si	0.0035	0.022	0.022	0.022
-16	si	si	0.0035	0.022	0.022	0.022
-20	si	si	0.0035	-0.027	0.036	0.027
16	si	si	0.0035	0.036	-0.022	0.036
20	si	si	0.0035	0.022	-0.037	0.022
-26	si	si	0.0035	-0.022	0.036	0.022

e02z (m)	h+20e0/h+10e0	lp2/50i	eay (m)	h+20e0/h+10e0	lp2/50i	eaz (m)
0.054	1.571	10.673	0.110	1.551	10.673	0.109
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.027	1.515	10.673	0.106	1.378	10.673	0.097
0.044	1.439	10.673	0.101	1.501	10.673	0.105
0.022	1.521	10.673	0.107	1.333	10.673	0.094
0.022	1.536	10.673	0.108	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.536	10.673	0.108	1.333	10.673	0.094
0.022	1.521	10.673	0.107	1.333	10.673	0.094
0.033	1.345	10.673	0.094	1.428	10.673	0.100
0.044	1.439	10.673	0.101	1.501	10.673	0.105
0.024	1.543	10.673	0.108	1.347	10.673	0.095
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.032	1.502	10.673	0.105	1.421	10.673	0.100
0.036	1.333	10.673	0.094	1.450	10.673	0.102
0.022	1.447	10.673	0.102	1.333	10.673	0.094
0.036	1.380	10.673	0.097	1.452	10.673	0.102
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.036	1.380	10.673	0.097	1.452	10.673	0.102
0.022	1.447	10.673	0.102	1.333	10.673	0.094
0.037	1.333	10.673	0.094	1.457	10.673	0.102
0.036	1.333	10.673	0.094	1.450	10.673	0.102

etoty (m)	etotz (m)	Nd (kN)	Myd (kN*m)	Mzd (kN*m)
0.169	0.163	**-345**	**58**	**-56**
0.116	0.116	**-878**	**-102**	**102**
0.153	0.124	**-669**	**-103**	**83**
0.136	0.150	**-578**	**78**	**-87**
0.155	0.116	**-661**	**-102**	**-76**
0.159	0.116	**-432**	**69**	**-50**
0.116	0.116	**-459**	**-53**	**53**
0.116	0.116	**-620**	**-72**	**72**
0.159	0.116	**-432**	**69**	**-50**
0.155	0.116	**-661**	**-102**	**-76**
0.118	0.133	**-604**	**-71**	**81**
0.136	0.150	**-578**	**78**	**-87**
0.161	0.118	**-448**	**-72**	**53**
0.116	0.116	**-988**	**-114**	**-114**
0.150	0.132	**-535**	**-80**	**71**
0.116	0.138	**-720**	**83**	**-99**
0.137	0.116	**-718**	**-99**	**83**
0.124	0.138	**-537**	**67**	**-74**
0.116	0.116	**-526**	**-61**	**-61**
0.116	0.116	**-710**	**-82**	**-82**
0.124	0.138	**-537**	**67**	**-74**
0.137	0.116	**-718**	**-99**	**83**
0.116	0.140	**-524**	**-61**	**73**
0.116	0.138	**-720**	**83**	**-99**

Nd (kN)	Myd (kN*m)
-345	81
-878	144
-669	132
-578	117
-661	128
-432	85
-459	75
-620	101
-432	85
-661	128
-604	107
-578	117
-448	89
-988	162
-535	107
-720	130
-718	129
-537	100
-526	86
-710	116
-537	100
-718	129
-524	95
-720	130

SECCION ARRANQUE-ELU

BARRA	a (x) (m)	ɔ (y) (m)	Es (Mpa)	fyk (Mpa)	γs	εy
FUSTE 1	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
FUSTE 2	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207
	0.44	0.44	210000	500	1.15	0.00207

β	A (m2)	Iz (m4)	Iy (m4)	iz	iy	L (m)	αx
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35
1.5	0.196	0.003068	0.003068	0.125	0.125	6.05	1.35

αy	lpx (m)	lpy (m)	λmx	λmy	n° de barra	dist.a origen (m)	Nd (kN)	Vy (kN)
1.35	8.1675	8.1675	65.34	65.34	220001	0	-390	-4
1.35	8.1675	8.1675	65.34	65.34	220001	0	-650	1
1.35	8.1675	8.1675	65.34	65.34	220001	0	-500	4
1.35	8.1675	8.1675	65.34	65.34	220001	0	-437	-5
1.35	8.1675	8.1675	65.34	65.34	220001	0	-495	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-447	-2
1.35	8.1675	8.1675	65.34	65.34	220001	0	-466	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-466	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-447	-2
1.35	8.1675	8.1675	65.34	65.34	220001	0	-495	0
1.35	8.1675	8.1675	65.34	65.34	220001	0	-456	3
1.35	8.1675	8.1675	65.34	65.34	220001	0	-437	-5
1.35	8.1675	8.1675	65.34	65.34	210001	0	-483	3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-740	-3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-541	3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-543	-5
1.35	8.1675	8.1675	65.34	65.34	210001	0	-541	3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-544	-4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-536	0
1.35	8.1675	8.1675	65.34	65.34	210001	0	-536	0
1.35	8.1675	8.1675	65.34	65.34	210001	0	-544	-4
1.35	8.1675	8.1675	65.34	65.34	210001	0	-541	3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-535	3
1.35	8.1675	8.1675	65.34	65.34	210001	0	-543	-5

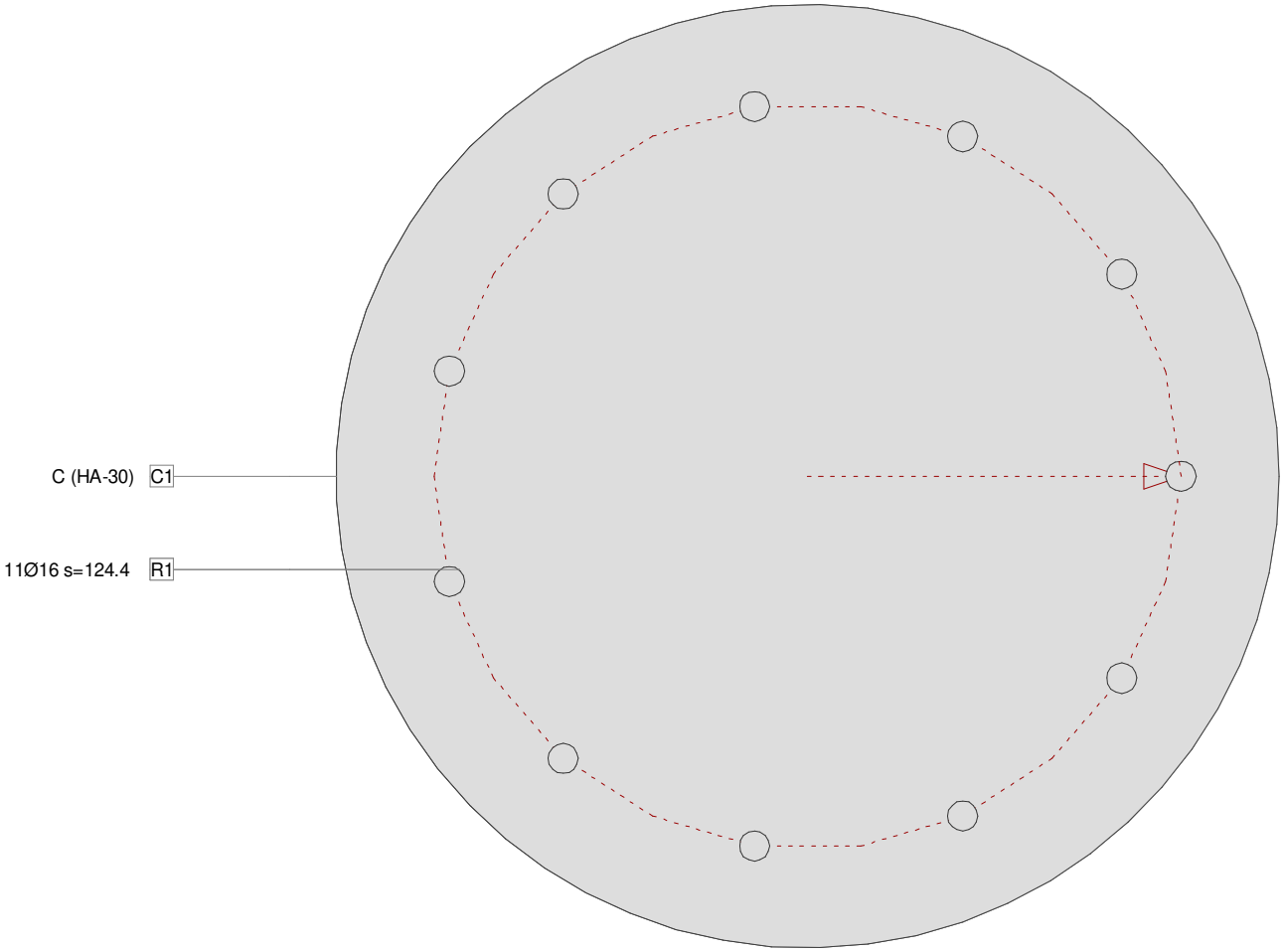
Vz (kN)	T (kN*m)	Myd (kN*m)	Mzd (kN*m)	Nd (kN)	eacc,y	Myd (kN*m)	eacc,z
-6	0	15	-19	-390	0.022	15	0.022
3	0	-14	5	-650	0.022	-14	0.022
7	0	-26	15	-500	0.022	-26	0.022
-6	0	16	-22	-437	0.022	16	0.022
8	0	-27	-8	-495	0.022	-27	0.022
-6	0	17	-3	-447	0.022	17	0.022
1	0	-5	0	-466	0.022	-10	0.022
1	0	-5	0	-466	0.022	-10	0.022
-6	0	17	-3	-447	0.022	17	0.022
8	0	-27	-8	-495	0.022	-27	0.022
3	0	-12	16	-456	0.022	-12	0.022
-6	0	16	-22	-437	0.022	16	0.022
7	0	-22	9	-483	0.022	-22	0.022
-1	0	-1	-16	-740	0.022	-16	0.022
7	0	-22	14	-541	0.022	-22	0.022
-5	0	10	-22	-543	0.022	12	0.022
7	0	-22	9	-541	0.022	-22	0.022
-5	0	10	-20	-544	0.022	12	0.022
1	0	-6	0	-536	0.022	-12	0.022
1	0	-6	0	-536	0.022	-12	0.022
-5	0	10	-20	-544	0.022	12	0.022
7	0	-22	9	-541	0.022	-22	0.022
3	0	-11	16	-535	0.022	-12	0.022
-5	0	10	-22	-543	0.022	12	0.022

Mzd (kN*m)	¿pandeo plano x?	¿pandeo plano y?	ε	eoy (m)	eoz (m)	eo2y (m)
-19	si	si	0.0035	-0.039	0.049	0.039
14	si	si	0.0035	0.022	-0.022	0.022
15	si	si	0.0035	0.053	-0.029	0.053
-22	si	si	0.0035	-0.037	0.050	0.037
-11	si	si	0.0035	0.054	0.022	0.054
-10	si	si	0.0035	-0.037	0.022	0.037
10	si	si	0.0035	0.022	-0.022	0.022
10	si	si	0.0035	0.022	-0.022	0.022
-10	si	si	0.0035	-0.037	0.022	0.037
-11	si	si	0.0035	0.054	0.022	0.054
16	si	si	0.0035	0.026	-0.035	0.026
-22	si	si	0.0035	-0.037	0.050	0.037
11	si	si	0.0035	0.045	-0.022	0.045
-16	si	si	0.0035	0.022	0.022	0.022
14	si	si	0.0035	0.040	-0.026	0.040
-22	si	si	0.0035	-0.022	0.041	0.022
12	si	si	0.0035	0.040	-0.022	0.040
-20	si	si	0.0035	-0.022	0.037	0.022
-12	si	si	0.0035	0.022	0.022	0.022
-12	si	si	0.0035	0.022	0.022	0.022
-20	si	si	0.0035	-0.022	0.037	0.022
12	si	si	0.0035	0.040	-0.022	0.040
16	si	si	0.0035	0.022	-0.029	0.022
-22	si	si	0.0035	-0.022	0.041	0.022

e02z (m)	h+20e0/h+10e0	lp2/50i	eay (m)	h+20e0/h+10e0	lp2/50i	eaz (m)
0.049	1.466	10.673	0.103	1.527	10.673	0.107
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.029	1.544	10.673	0.108	1.397	10.673	0.098
0.050	1.454	10.673	0.102	1.530	10.673	0.107
0.022	1.550	10.673	0.109	1.333	10.673	0.094
0.022	1.455	10.673	0.102	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.455	10.673	0.102	1.333	10.673	0.094
0.022	1.550	10.673	0.109	1.333	10.673	0.094
0.035	1.373	10.673	0.096	1.442	10.673	0.101
0.050	1.454	10.673	0.102	1.530	10.673	0.107
0.022	1.502	10.673	0.105	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.026	1.476	10.673	0.104	1.368	10.673	0.096
0.041	1.333	10.673	0.094	1.481	10.673	0.104
0.022	1.477	10.673	0.104	1.333	10.673	0.094
0.037	1.333	10.673	0.094	1.455	10.673	0.102
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.022	1.333	10.673	0.094	1.333	10.673	0.094
0.037	1.333	10.673	0.094	1.455	10.673	0.102
0.022	1.477	10.673	0.104	1.333	10.673	0.094
0.029	1.333	10.673	0.094	1.397	10.673	0.098
0.041	1.333	10.673	0.094	1.481	10.673	0.104

etoty (m)	etotz (m)	Nd (kN)	Myd (kN*m)	Mzd (kN*m)
0.142	0.157	**-390**	**55**	**-61**
0.116	0.116	**-650**	**-75**	**75**
0.161	0.127	**-500**	**-81**	**64**
0.139	0.157	**-437**	**61**	**-69**
0.163	0.116	**-495**	**-80**	**-57**
0.139	0.116	**-447**	**62**	**-52**
0.116	0.116	**-466**	**-54**	**54**
0.116	0.116	**-466**	**-54**	**54**
0.139	0.116	**-447**	**62**	**-52**
0.163	0.116	**-495**	**-80**	**-57**
0.123	0.136	**-456**	**-56**	**62**
0.139	0.157	**-437**	**61**	**-69**
0.150	0.116	**-483**	**-72**	**56**
0.116	0.116	**-740**	**-86**	**-86**
0.144	0.122	**-541**	**-78**	**66**
0.116	0.145	**-543**	**63**	**-79**
0.144	0.116	**-541**	**-78**	**63**
0.116	0.139	**-544**	**63**	**-76**
0.116	0.116	**-536**	**-62**	**-62**
0.116	0.116	**-536**	**-62**	**-62**
0.116	0.139	**-544**	**63**	**-76**
0.144	0.116	**-541**	**-78**	**63**
0.116	0.127	**-535**	**-62**	**68**
0.116	0.145	**-543**	**63**	**-79**

Cross-section PILA-ED1 (HA-30;AEH500): Outline, Reinforcements Scale 1 :4.0



Ultimate strength analysis Cross section (Girder): PILA-ED1

Action forces / Efficiency: eff(M,N) = 0.61 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	AP4		-345.0	81.0	-	0.30400					
2	AP4		-878.0	144.0	-	0.54049					
3	AP4		-669.0	132.0	-	0.48863					
4	AP4		-578.0	117.0	-	0.43325					
5	AP4		-661.0	128.0	-	0.47375					
6	AP4		-432.0	85.0	-	0.31464					
7	AP4		-459.0	75.0	-	0.28168					
8	AP4		-620.0	101.0	-	0.37953					
9	AP4		-432.0	85.0	-	0.31464					
10	AP4		-661.0	128.0	-	0.47375					
11	AP4		-604.0	107.0	-	0.39752					
12	AP4		-578.0	117.0	-	0.43325					
13	AP4		-448.0	89.0	-	0.32948					
14	AP4		-988.0	162.0	-	0.60807					
15	AP4		-535.0	107.0	-	0.39615					
16	AP4		-720.0	130.0	-	0.48216					
17	AP4		-718.0	129.0	-	0.47866					
18	AP4		-537.0	100.0	-	0.37013					
19	AP4		-526.0	86.0	-	0.32296					
20	AP4		-710.0	116.0	-	0.43568					
21	AP4		-537.0	100.0	-	0.37013					
22	AP4		-718.0	129.0	-	0.47866					
23	AP4		-524.0	95.0	-	0.35223					

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
24	AP4		-720.0	130.0	-	0.48216					

- : Calculation with uniaxial bending (neutral axis is horizontal)!!

Analysis-Parameters "AP4" Standard: Spanish Code EHE

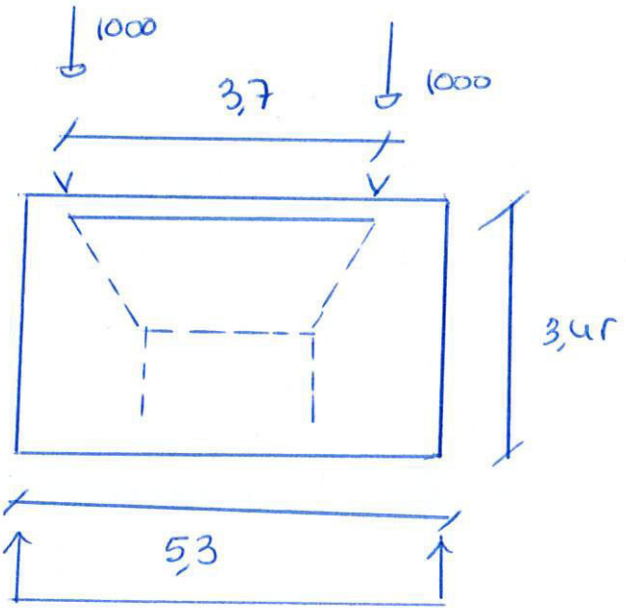
ID	Diagram σ-ε c	s			Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]			Various parameters θ [-]	φ [-]		
AP4	2/0	1			-2.0	-3.5	10.0		0.850	1.500	1.150			45.00	0		

θ : Inclination of diagonal in compression
φ : Creep coefficient

Extreme stresses and strain (Results of run No 24)

Name	Class	y_q [mm]	z_q [mm]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	HA-30	6.4	249.9	-3.5	-17.0	1.76
C1	HA-30	6.4	-249.9	2.9	0	1.76
R1	AEH500	-28.2	195.9	-2.8	-434.8	1.15
R1	AEH500	-28.2	-195.9	2.2	434.8	1.15

Arm.



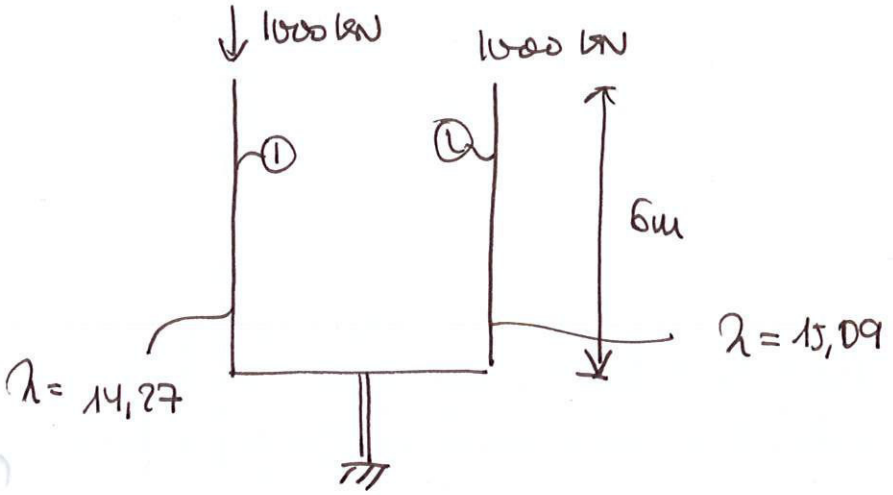
$z \leq 0{,}6 \cdot L = 2{,}22$

$z \leq 0{,}67 \cdot h = 2{,}31$

$$Td = \frac{1000 \cdot 3{,}7}{4 \cdot 2{,}22} = 416{,}6 \text{ kN} <> 10{,}4 \text{ cm}^2 <<< \text{cuantía mín.}$$

2

Arm. 1% en dirección y cara



$N_{CR①} = 14{,}27 \cdot 1010 = 14412\ kN \longrightarrow N_{CR} = \dfrac{\pi^2 \cdot EI}{L_p^2}$

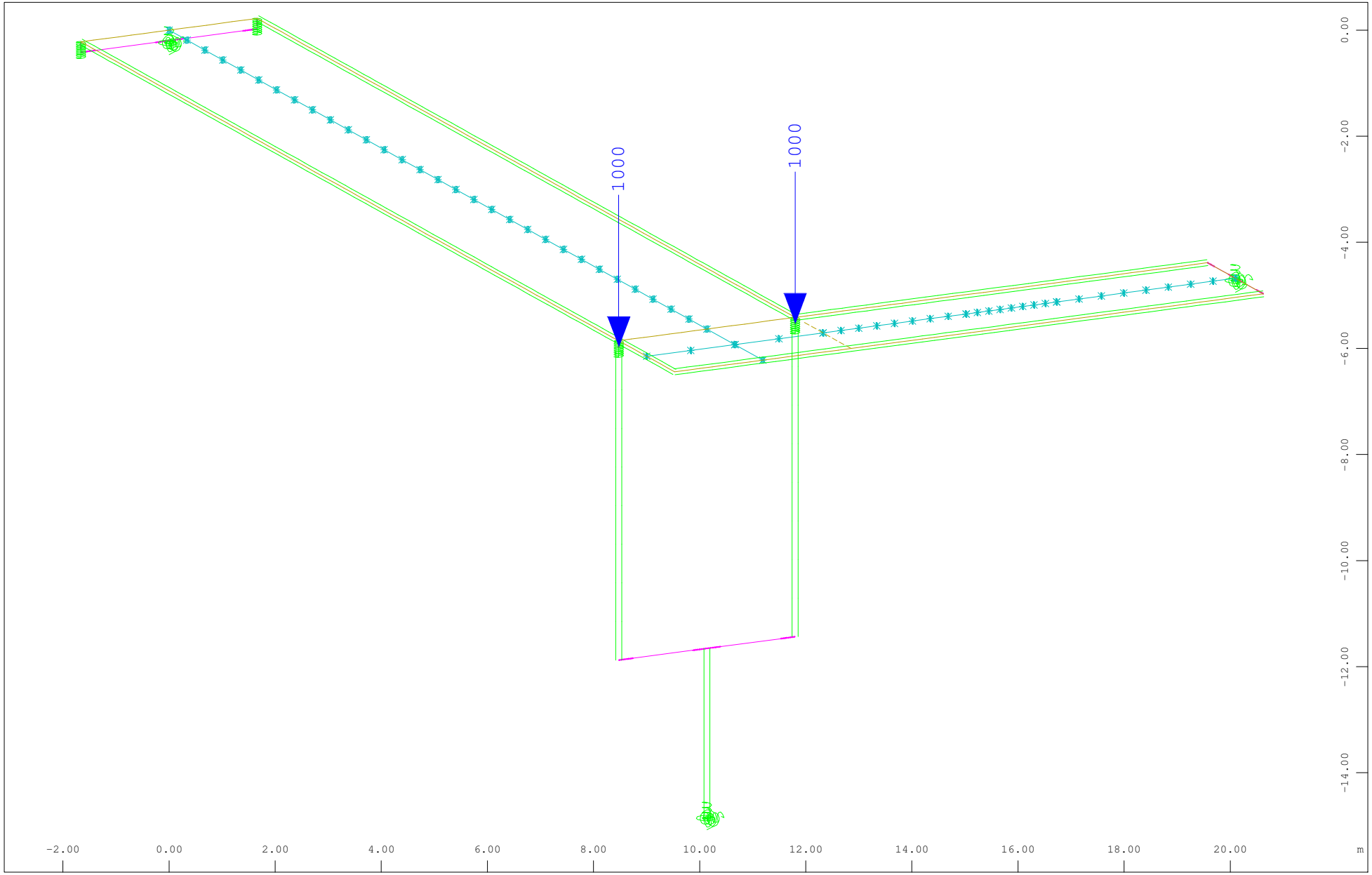
$N_{CR②} = 15{,}09 \cdot 962 = 14516\ kN$

$$L_p = \sqrt{\frac{\pi^2 \cdot EI}{N_{CR}}}$$

$$L_p = \sqrt{\frac{\pi^2 \cdot 32837 \cdot 10^3 \cdot \pi \cdot 9{,}5^4/64}{14412}} =$$

$$= 8{,}31\ m$$

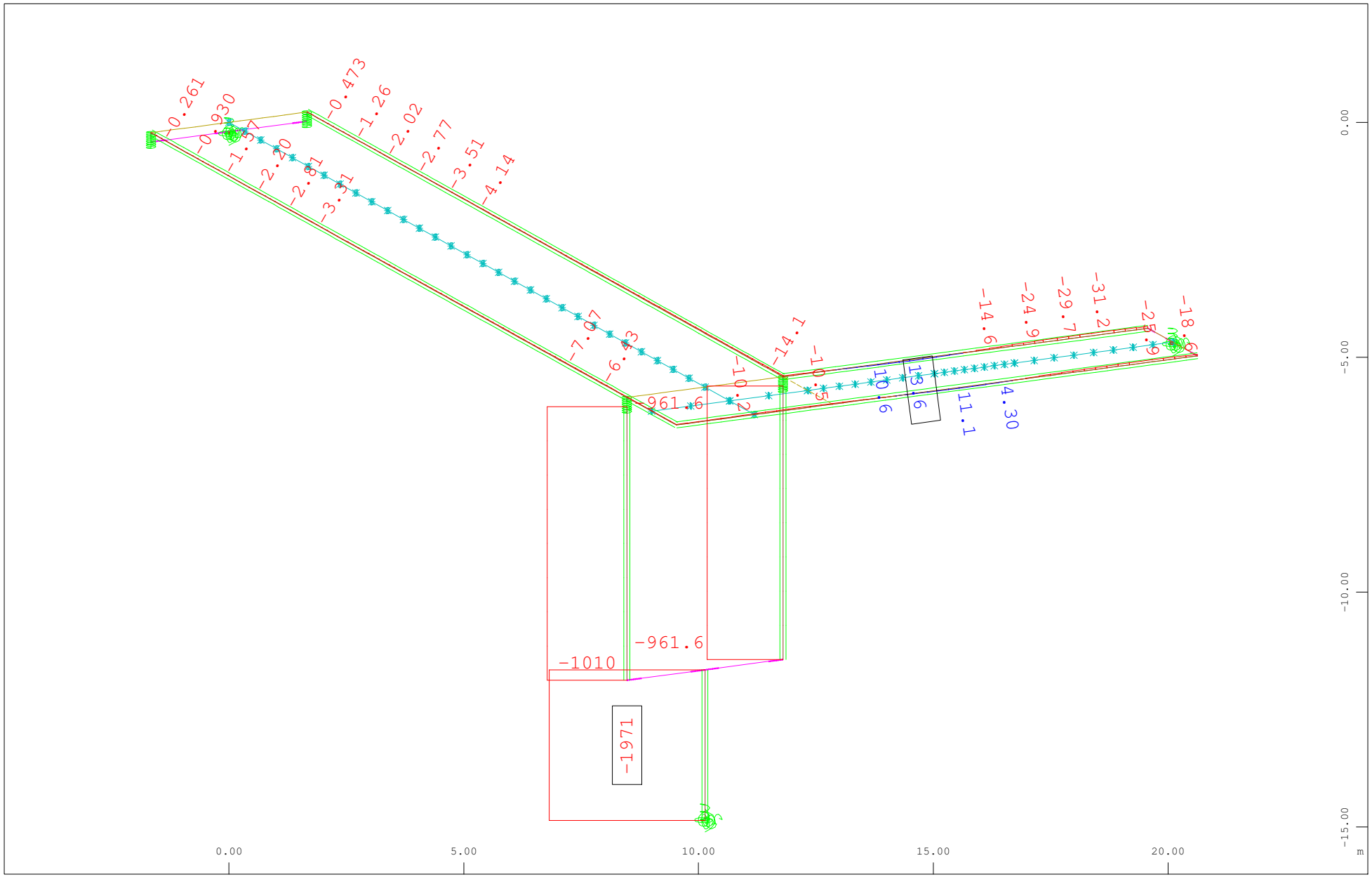
$$\alpha = \frac{8{,}31}{6{,}00} = 1{,}38$$



All loads, Loadcase 20000 Q PANDEO PILA , (1 cm 3D = unit) Nodal load (force) vector (Unit=335.9 kN) (Max=1000.)

M 1 : 100

X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

Beam Elements , Normal force Nx, Loadcase 20000 Q PANDEO PILA , 1 cm 3D = 671.9 kN (Min=-1971.) (Max=13.6)

M 1 : 113
X * 0.502
Y * 0.906
Z * 0.962

MODELO

Load Case 20000

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Point	NODE 212			23.100	-1.850	-0.125	PZZ	-1000.0 [kN]
						activated		100.00 percent
Point	NODE 211			23.100	1.850	-0.125	PZZ	-1000.0 [kN]
						activated		100.00 percent

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MODELO
Q PANDEO PILA

The following nodes have been detected to connect beams+springs with wall elements. The adjacent quad elements will get an internal inplane torsional stiffness to transform the bending moment into pairs of forces on the quad nodes (see CTRL INPL and CTRL SPRI):
303

Load Case 20000 Q PANDEO PILA

Factor forces and moments 1.000

Loads

Kind	Reference to	Projection Designation	W[m]	Coordinates X[m]	Y[m]	Z[m]	Type	Load value
Point	NODE 212			23.100	-1.850	-0.125	PZZ	-1000.0 [kN]
						activated		100.00 percent
Point	NODE 211			23.100	1.850	-0.125	PZZ	-1000.0 [kN]
						activated		100.00 percent

Sum of Loadings

Loadcase	Σ(Loads) X[kN]	Y[kN]	Z[kN]	Designation
20000	0.0	0.0	-2000.0	Q PANDEO PILA

Nodal Reactions Loadcase 20000 Q PANDEO PILA

Node No	P-X [kN]	P-Y [kN]	P-Z [kN]	M-X [kNm]	M-Y [kNm]	M-Z [kNm]
133			1.1	0.25		
243			1971.2	-88.79		
333			27.7	-202.53	7.44	2.05

Sum of Reactions and Loadings

Loadcase	Σ(Reactions) X[kN]	Y[kN]	Z[kN]	Designation
	Σ(Loads)			
20000	0.0	0.0	2000.0	Q PANDEO PILA
	0.0	0.0	-2000.0	

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MODELO
CÁLCULO MODOS DE PANDEO

Primary loadcase for eigenvalue analysis is loadcase 20000
with deformation factor 0.0000 (on undeformed system)
Element stiffnesses are calculated on the stress state of the primary loadcase

Parameter of System of Equations

Number of unknowns 11124 DIRECT-SPARSE
Total entries 132197
Total entries after fill in 823578
Mass matrix 0 -
Geometric matrix 38085 (consistent)

Buckling Eigenvalues

Using Vectoriteration
Iterationsvectors 30
Eigenvalueshift 14.250 (automatically determined)

No.	LC	Relativ error	buckling factor
	120100	8.35E-21	14.275
	220101	1.39E-19	14.415
	320102	3.55E-19	15.091
	420103	3.20E-19	15.139
	520104	1.95E-16	59.922
	620105	3.75E-16	59.941
	720106	4.61E-16	62.927
	820107	8.84E-17	62.936
	920108	1.23E-14	157.458
	1020109	8.85E-15	157.465
	1120110	1.75E-11	165.326
	1220111	1.74E-11	165.329
	1320112	1.13E-11	290.994
	1420113	1.12E-11	290.997
	1520114	1.16E-13	305.528
	1620115	7.21E-15	305.529
	1720116	3.42E-14	449.220
	1820117	9.04E-14	449.224
	1920118	1.32E-13	471.656
	2020119	4.85E-15	471.659
	2120120	1.60E-13	619.439
	2220121	7.21E-14	619.444
	2320122	8.57E-14	650.375
	2420123	3.52E-14	650.379
	2520124	3.20E-13	781.685
	2620125	1.88E-13	781.693
	2720126	6.86E-14	820.724
	2820127	1.81E-13	820.730
	2920128	1.19E-11	893.476
	3020129	3.27E-11	893.621

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ESTRIBO 1

A continuación se incluye:

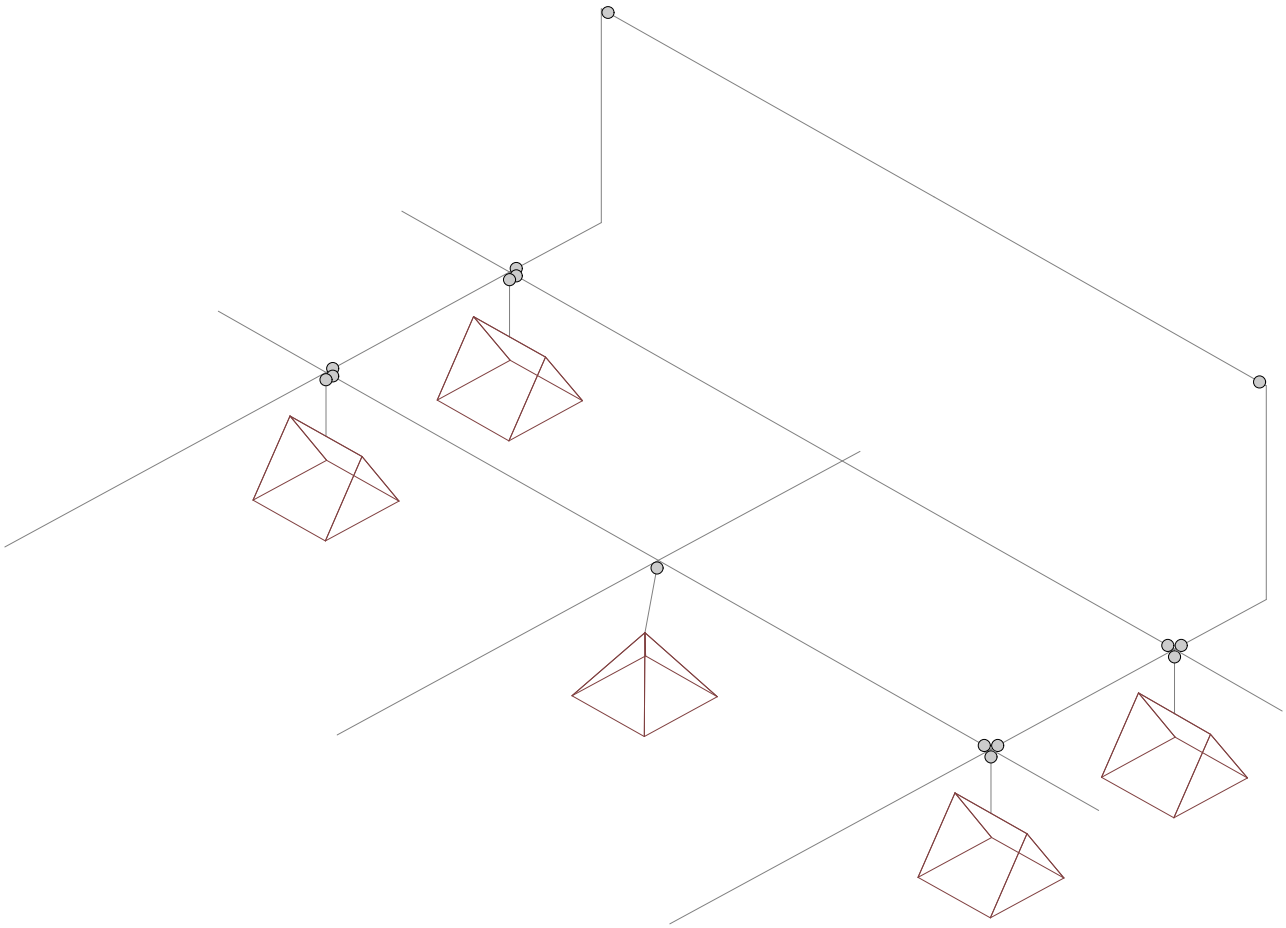
1 – Tabla con esfuerzos en ELU obtenidos a partir del modelo general

2 – Modelo en STATIK-7 donde se recoge los esfuerzos máximos para viga + peso propio de encepado.

3 – Dimensionamiento de armadura principal de encepado.

4 – Dimensionamiento de micropilotes + chapas.

Structure

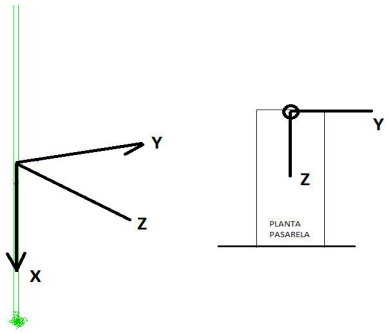


STRUCTURE 3D

NODE DATA

Id	Coordinates X [m]	Y [m]	Z [m]	Supports DX	DY	DZ	RX	RY	RZ	Specialties
K_1	-1.475	0	-0.300	B	B	B				
K_2	-1.400	-1.850	-0.300	B	B	B	B		B	
K_3	-1.400	1.850	-0.300	B	B	B	B		B	
K_4	-0.400	-1.850	-0.300	B	B	B	B		B	
K_5	-0.400	1.850	-0.300	B	B	B	B		B	
!1	-1.400	-2.450	0							
!2	-0.400	-2.450	0							
!3	0.100	-1.850	0							
!4	-3.150	-1.850	0							
!5	-1.400	-1.850	0							
!6	-0.400	-1.850	0							
!7	-3.150	0	0							
!8	-1.400	0	0							
!9	-0.400	0	0							
!10	-0.300	0	0							
!11	-3.150	1.850	0							
!12	-1.400	1.850	0							
!13	-0.400	1.850	0							
!14	0.100	1.850	0							
!15	-1.400	2.450	0							
!16	-0.400	2.450	0							
!17	0.100	-1.850	1.000							
!18	0.100	0	1.000							
!19	0.100	1.850	1.000							

B / E : Blocked / Elastically supported



RESULTADOS DE SFK - BARRA 100001
lu. jun. 24 12:48:04 2019
LC: 10121-10130

LC	LC-title	NR	X [m]	N [kN]	VY [kN]	VZ [kN]	MT [kNm]	MY [kNm]	MZ [kNm]
10121	MAX-N BSCT ELU	100001	0	-535.8	35.98	-40.79	6.46	-1.63	-129.85
10121	MAX-N BSCT ELU	100001	0.05	-535.8	35.98	-40.79	6.46	-3.67	-131.65
10122	MIN-N BSCT ELU	100001	0	-1125.7	-4.86	30.81	-1.71	1.23	55.61
10122	MIN-N BSCT ELU	100001	0.05	-1125.7	-4.86	30.81	-1.71	2.77	55.85
10123	MAX-VY BSCT ELU	100001	0	-536.5	51.61	16.15	5.47	0.65	-132.21
10123	MAX-VY BSCT ELU	100001	0.05	-536.5	51.61	16.15	5.47	1.45	-134.79
10124	MIN-VY BSCT ELU	100001	0	-890.7	-59.57	-28.84	-5.23	-1.15	162.52
10124	MIN-VY BSCT ELU	100001	0.05	-890.7	-59.57	-28.84	-5.23	-2.6	165.5
10125	MAX-VZ BSCT ELU	100001	0	-841.7	-4.7	45.85	-2.52	1.83	55.4
10125	MAX-VZ BSCT ELU	100001	0.05	-841.7	-4.7	45.85	-2.52	4.13	55.64
10126	MIN-VZ BSCT ELU	100001	0	-797.6	0.27	-49.4	2.83	-1.98	-18.07
10126	MIN-VZ BSCT ELU	100001	0.05	-797.6	0.27	-49.4	2.83	-4.45	-18.08
10127	MAX-MT BSCT ELU	100001	0	-748.2	33.49	-48.21	6.61	-1.93	-125.08
10127	MAX-MT BSCT ELU	100001	0.05	-748.2	33.49	-48.21	6.61	-4.34	-126.75
10128	MIN-MT BSCT ELU	100001	0	-678.9	-41.46	35.51	-6.38	1.42	155.39
10128	MIN-MT BSCT ELU	100001	0.05	-678.9	-41.46	35.51	-6.38	3.2	157.46
10129	MAX-MY BSCT ELU	100001	0	-841.7	-4.7	45.85	-2.52	1.83	55.4
10129	MAX-MY BSCT ELU	100001	0.05	-841.7	-4.7	45.85	-2.52	4.13	55.64
10130	MIN-MY BSCT ELU	100001	0	-797.6	0.27	-49.4	2.83	-1.98	-18.07
10130	MIN-MY BSCT ELU	100001	0.05	-797.6	0.27	-49.4	2.83	-4.45	-18.08
10131	MAX-MZ BSCT ELU	100001	0	-902.8	-58.21	-26.28	-5.06	-1.05	166.95
10131	MAX-MZ BSCT ELU	100001	0.05	-902.8	-58.21	-26.28	-5.06	-2.37	169.86
10132	MIN-MZ BSCT ELU	100001	0	-546	47.23	3.47	5.51	0.14	-134.38
10132	MIN-MZ BSCT ELU	100001	0.05	-546.1	51.65	19.31	5.24	1.74	-136.84

BAR DATA

ID	Cross section Name>Variant	Nodes beginning	Nodes end	Length [m]	Status	Specialties
S_1	01_MICRO	!8	K_1	0.309		O S G
S_2	01_MICRO	!5	K_2	0.300		S G
S_3	01_MICRO	!12	K_3	0.300		S G
S_4	00_RIGID	!6	!5	1.000		S G
S_5	00_RIGID	!10	!8	1.100		S
S_6	00_RIGID	!13	!12	1.000		S G
S_7	01_MICRO	!6	K_4	0.300		S G
S_8	01_MICRO	!13	K_5	0.300		S G
S_9	00_RIGID	!3	!6	0.500		S G
S_11	00_RIGID	!14	!13	0.500		S G
S_12	00_RIGID	!17	!3	1.000		S
S_14	00_RIGID	!18	!17	1.850		S G
S_17	00_RIGID	!18	!19	1.850		S G
S_18	00_RIGID	!19	!14	1.000		S
S_19	00_RIGID	!5	!1	0.600		S
S_22	00_RIGID	!9	!13	1.850		S G
S_23	00_RIGID	!9	!6	1.850		S G
S_24	00_RIGID	!8	!12	1.850		S G
S_25	00_RIGID	!8	!5	1.850		S G
S_26	00_RIGID	!12	!15	0.600		S
S_27	00_RIGID	!6	!2	0.600		S
S_28	00_RIGID	!13	!16	0.600		S
S_29	00_RIGID	!12	!11	1.750		S
S_30	00_RIGID	!5	!4	1.750		S
S_31	00_RIGID	!8	!7	1.750		S

O : Special case, local coordinate system (s. table 'Oriented members')
S : Stiffness of cross section will be overwritten (s. table 'Members with overrwritten stiffness')
G : Hinges (except truss elements) (s. table 'Members with hinges')

List of parts with base material C

CsName / (CsName2)	Area [m^2]	Perimeter [m]	Length [m]	No.	Ltot [m]	Surface [m^2]	Mass [t]
00_RIGID	0.0707	0.942	var		**24.850**	**23.42**	**4.39**
by length:			0.500	2			
			0.600	4			
			1.000	4			
			1.100	1			
			1.750	3			
			1.850	6			
Total						**23.42**	**4.39**

List of parts with base material S

CsName / (CsName2)	Area [m^2]	Perimeter [m]	Length [m]	No.	Ltot [m]	Surface [m^2]	Mass [t]
01_MICRO	0.0019	0.276	var		**1.509**	**0.42**	**0.02**
by length:			0.300	4			
			0.309	1			
Total						**0.42**	**0.02**

Oriented members

ID (*=SL-Abschn.)	α [°]	XY plane type	X [m]	Y [m]	Z [m]
S_1	180.0				

Members with overrwritten stiffness

ID (*=SL-Abschn.)	Position	β [°]	EA_x [kN]	GA_y [kN]	GA_z [kN]	GJ_x [kNm^2]	EJ_y [kNm^2]	EJ_z [kNm^2]
S_1	Member	0	-	-	-	-	-	-
	Factor		1E0008	1E0008	1E0008	1E0008	1E0008	1E0008
S_2	Member	0	-	-	-	-	-	-
	Factor		1E0008	1E0008	1E0008	1E0008	1E0008	1E0008
S_3	Member	0	-	-	-	-	-	-
	Factor		1E0008	1E0008	1E0008	1E0008	1E0008	1E0008
S_4	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_5	Member	0	-	-	-	-	-	-

ID (*=SL-Abschn.)	Position	β [°]	EA_x [kN]	GA_y [kN]	GA_z [kN]	GJ_x [kNm²]	EJ_y [kNm²]	EJ_z [kNm²]
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_6	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_7	Member	0	-	-	-	-	-	-
	Factor		1E0008	1E0008	1E0008	1E0008	1E0008	1E0008
S_8	Member	0	-	-	-	-	-	-
	Factor		1E0008	1E0008	1E0008	1E0008	1E0008	1E0008
S_9	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_11	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_12	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_14	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_17	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_18	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_19	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_22	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_23	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_24	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_25	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_26	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_27	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_28	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_29	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_30	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000
S_31	Member	0	-	-	-	-	-	-
	Factor		10000000	10000000	10000000	10000000	10000000	10000000

β : Angle between member Y axis and first principal axis of cross section

Members with hinges

ID (*=SL-Abschn.)	Hinges beginning	Hinges end	Springs Dx [kN/m]	Dy [kN/m]	Dz [kN/m]	Rx [kNm]	Ry [kNm]	Rz [kNm]
S_1	--- -FF							
S_2	--- FFF							
S_3	--- FFF							
S_4		--- F--						
S_6		--- F--						
S_7	--- FFF							
S_8	--- FFF							
S_9		--- F--						
S_11		--- F--						
S_14		--- -FF						
S_17		--- FFF						
S_22		--- F--						
S_23		--- F--						
S_24		--- F--						
S_25		--- F--						

F / E / P : Free / elastic / plastic support

Cross section: Geometry

Name	Variant	Materials	Type	Dimensions [m]
00_RIGID		C	S-O	D=0.300 y_L=-0.150,y_R=0.150,z_B=-0.150,z_T=0.150
01_MICRO		S	P_R	D=0.088, T=0.007 y_L=-0.044,y_R=0.044,z_B=-0.044,z_T=0.044

Materials : s. table 'Materials'

Cross section: CS stiffness

Name	Variant	β [°]	EA_x GA_y GA_z [kN]	GJ_x EJ_y EJ_z [kNm²]	e_y e_z [m]	CS mass Additional mass [t/m]	Materials
00_RIGID		0	2270051.91 856581.09 856581.09	11419.30 12787.24 12762.98	0 0	0.18	C
01_MICRO		0	398496.65 153269.40 153269.40	250.35 326.06 325.44	0 0	0.02	S

β : Angle between member Y axis and first principal axis of cross section
e_y e_z : Distance center of gravity-axis point
Materials : s. table 'Materials'

Cross sections, cross section values

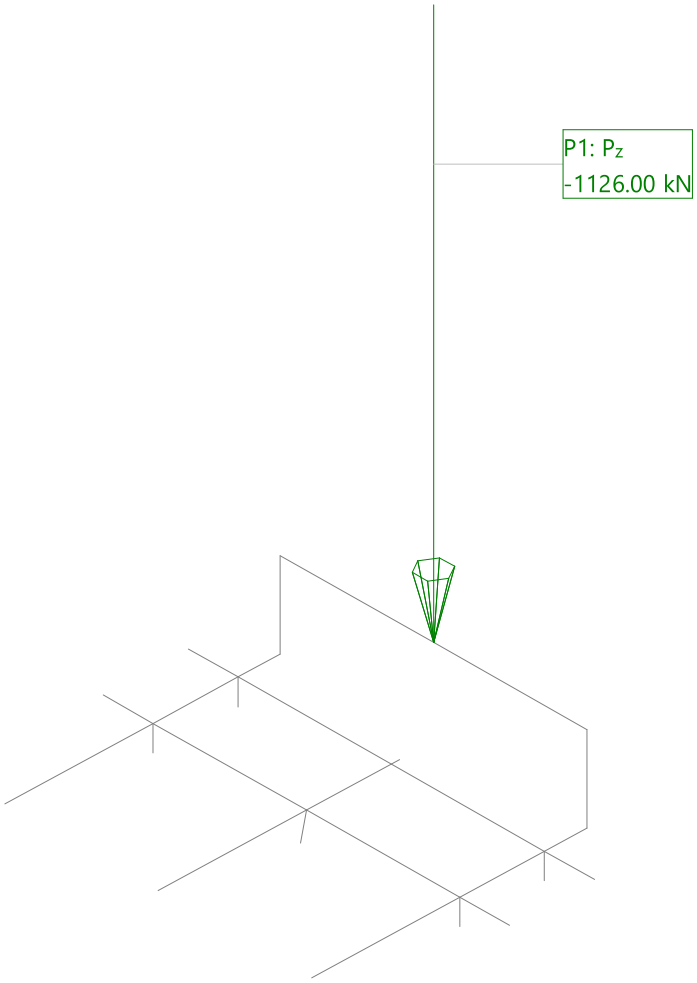
Cross section Name	Variants	Materials E_{ref} G_{ref}	Ideal cross section values $A_{x,id}$ = EA_x/E_{ref} [m²]	$J_{y,id}$ = EJ_y/E_{ref} [m⁴]	$J_{z,id}$ = EJ_z/E_{ref} [m⁴]	$J_{x,id}$ = GJ_x/G_{ref} [m⁴]	$A_{y,id}$ = GA_y/G_{ref} [m²]	$A_{z,id}$ = GA_z/G_{ref} [m²]
00_RIGID		C	0.0707	0.000398	0.000398	0.000795	0.0597	0.0597
01_MICRO		S	0.0019	0.000002	0.000002	0.000003	0.0019	0.0019

Materials : s. table 'Materials'

Materials

ID	Type	Member	E [kN/mm²]	G [kN/mm²]	ν	ρ [t/m³]	α [‰]	Class	f [N/mm²]	
C	Concrete	(general)	32	14	0.17	2.5	0.010	H250	-25.0	f_{ck}
S	Construction	(general)	210	81	0.30	8.0	0.012	AE235	235.0	f_y

Loading LC01a-FZ: Vertical MAX



Loading 'LC01a-FZ': Vertical MAX

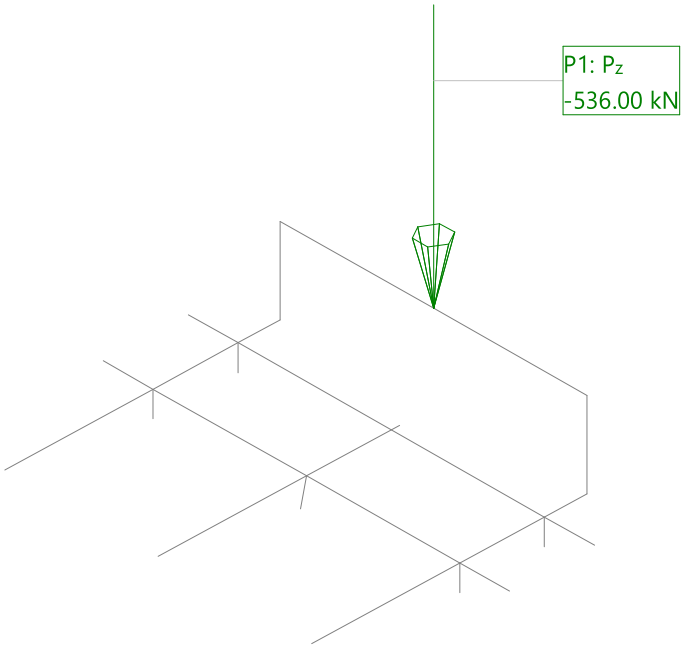
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-1126.00		0	0	-1126.00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC01a-FZ	0	0	-1126.00

Loading LC01b-FZ: Vertical MIN



Loading 'LC01b-FZ': Vertical MIN

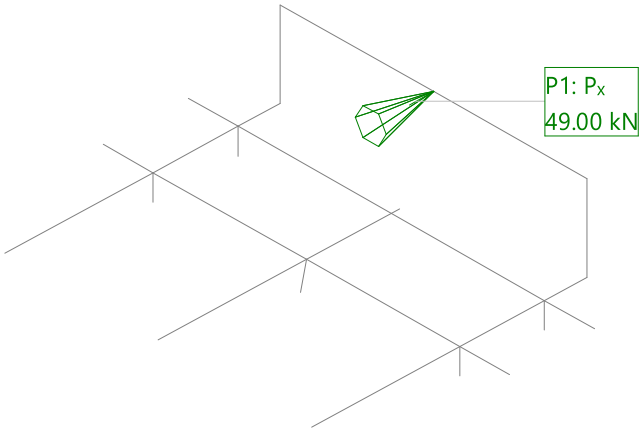
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Z Global Member force	-536.00		0	0	-536.00

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC01b-FZ	0	0	-536.00

Loading LC02-FX: Longitudinal



Loading 'LC02-FX': Longitudinal

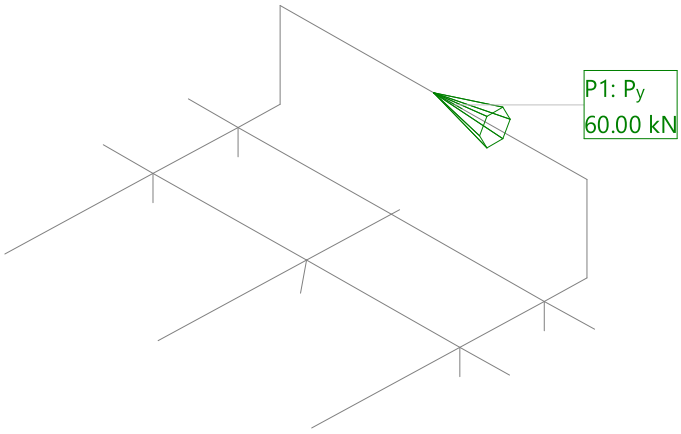
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	X Global Member force	49.00		49.00	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC02-FX	49.00	0	0

Loading LC03-FY: Transversal



Loading 'LC03-FY': Transversal

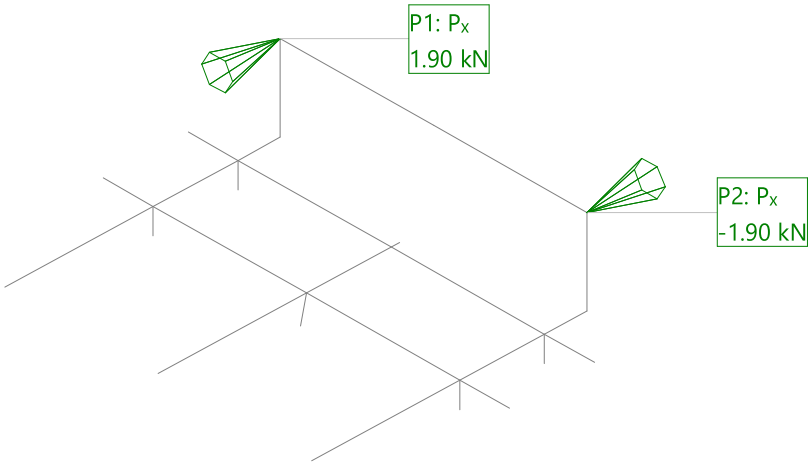
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Y Global Member force	60.00		0	60.00	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC03-FY	0	60.00	0

Loading LC04-Mz: Momento de eje vertical



Loading 'LC04-Mz': Momento de eje vertical

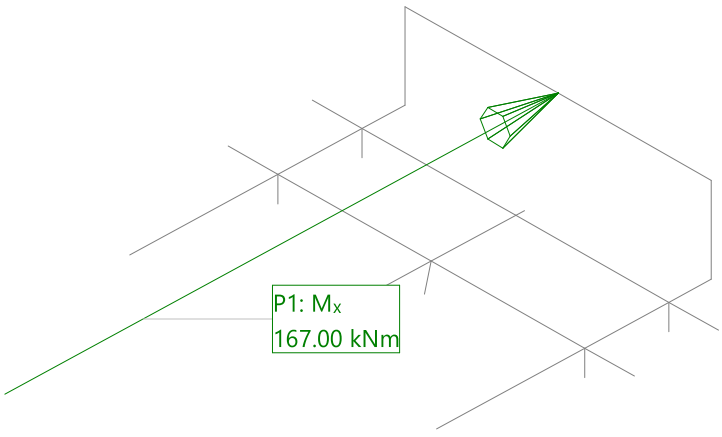
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	X Global Member force	1.90		1.90	0	0
P2	X Global Member force	-1.90		-1.90	0	0

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC04-Mz	0	0	0

Loading LC05-Mx: Momento de eje longitudinal



Loading 'LC05-Mx': Momento de eje longitudinal

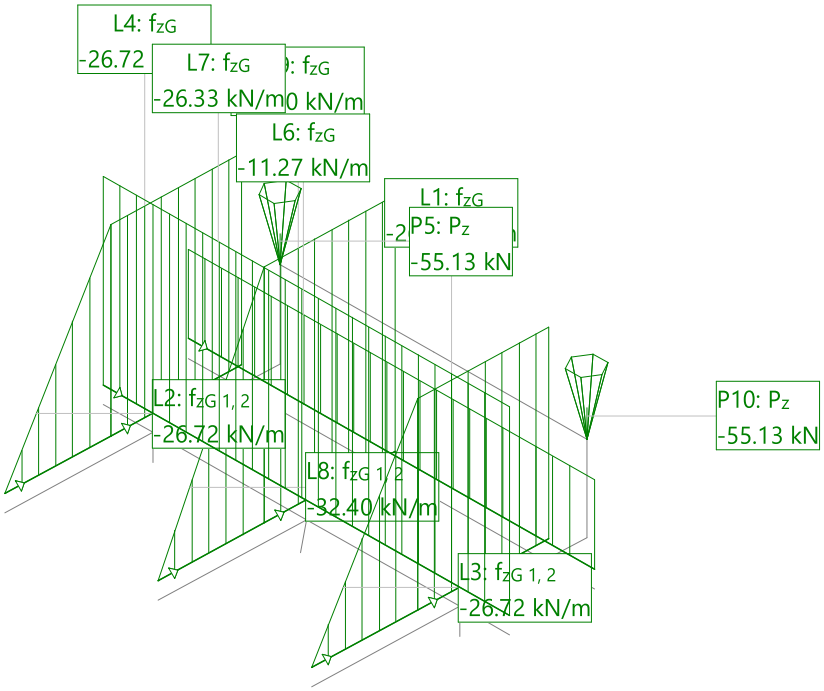
Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P1	Member moment Global X		167.00			

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC05-Mx	0	0	0

Loading LC10-PP: Peso propio



Loading 'LC10-PP': Peso propio

Line loads: Forces

Id	Type	Length [m]	p_1 [kN/m]	p_2 [kN/m]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
L1	Z Global	1.550	-26.72		0	0	-41.42
L2	Z Global	1.250	0	-26.72	0	0	-16.70
L3	Z Global	1.250	0	-26.72	0	0	-16.70
L4	Z Global	1.550	-26.72		0	0	-41.42
L6	Z Global	4.900	-11.27		0	0	-55.22
L7	Z Global	4.900	-26.33		0	0	-129.02
L8	Z Global	1.250	0	-32.40	0	0	-20.25
L9	Z Global	1.550	-32.40		0	0	-50.22

Point loads: Forces and moments

Id	Type	P [kN]	M [kNm]	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
P5	Z Global Member force	-55.13		0	0	-55.13
P10	Z Global Member force	-55.13		0	0	-55.13

Summed load

	X_{Sum} [kN]	Y_{Sum} [kN]	Z_{Sum} [kN]
Summed load for loading LC10-PP	0	0	-481.19

Limit state specification: C-DESFAV-TOTAL

Description
Standard design situation: Ultimate, ULS type 2 (1B)

Action combinations

Action No	Action Name	Action Fac	Action combinations 1	
1	Dead load	1	1	

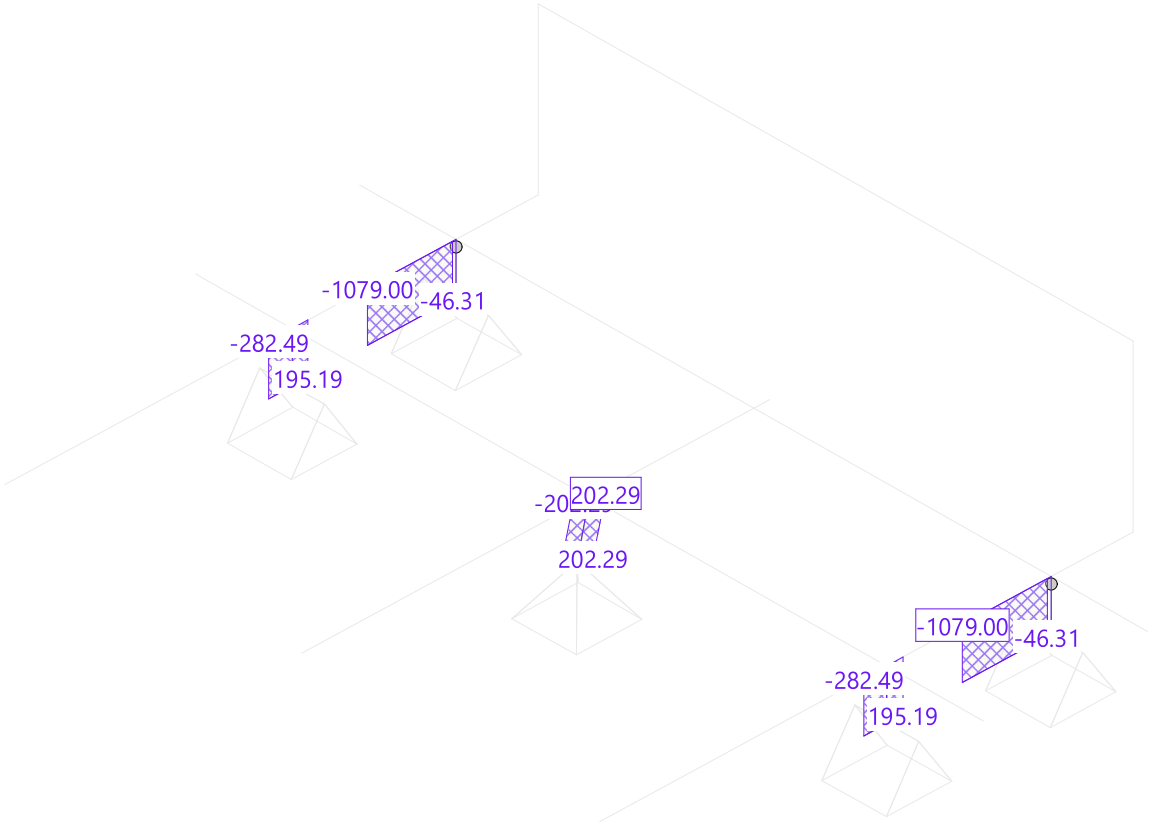
Fac : all combination factors are multiplied by this factor

Loading superpositions for the actions
for limit state specification C-DESFAV-TOTAL

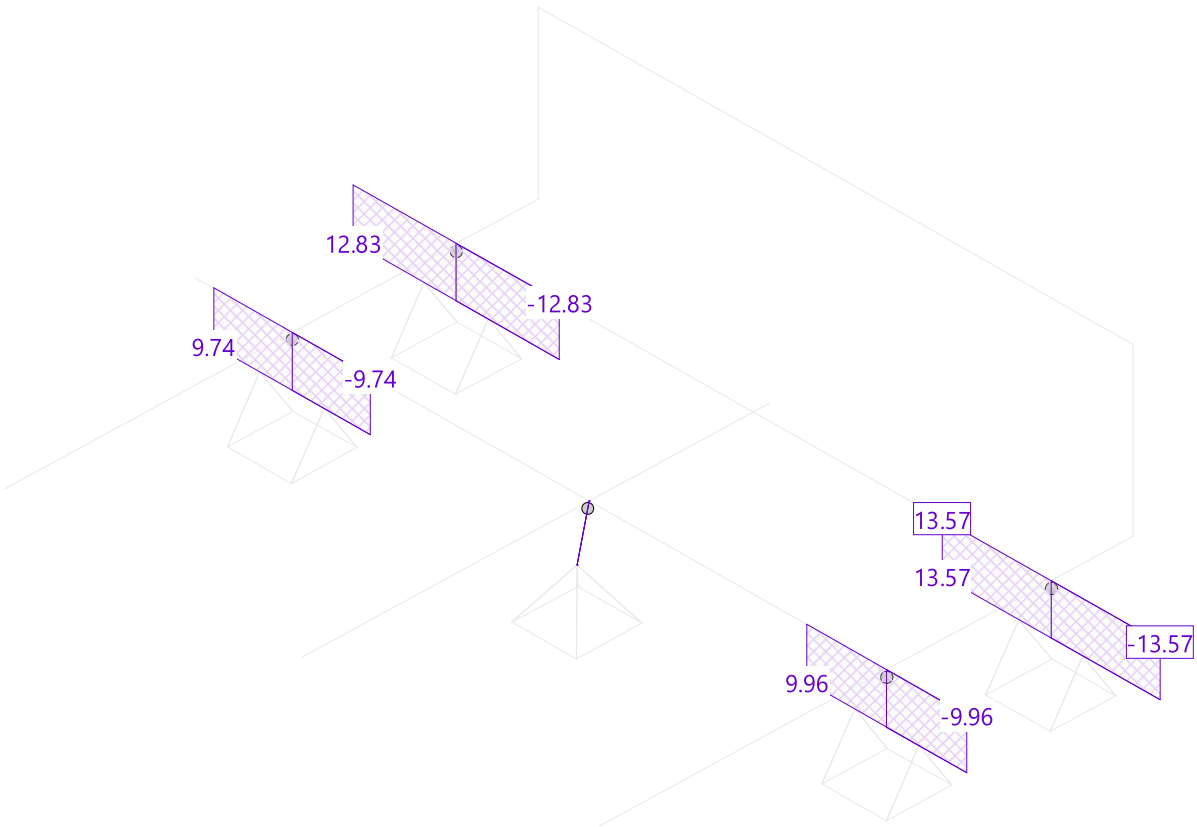
Action	Alt	additive	exclusive	Loading	Factor	Comb.
Dead load		permanent		LC10-PP Peso propio	1.350	C1_1
		plus where crit	either	LC01a-FZ Vertical MAX	1.000	
			or	LC01b-FZ Vertical MIN	1.000	
		plus where crit	either	LC02-FX Longitudinal	1.000	
			or	LC02-FX Longitudinal	-1.000	C1_2
		plus where crit	either	LC03-FY Transversal	1.000	
			or	LC03-FY Transversal	-1.000	C1_3
		plus where crit	either	LC04-Mz Momento de eje vertical	1.000	
			or	LC04-Mz Momento de eje vertical	-1.000	C1_4
		plus where crit	either	LC05-Mx Momento de eje longitudinal	1.000	
			or	LC05-Mx Momento de eje longitudinal	-1.000	C1_5

Alt : Alternative superposition

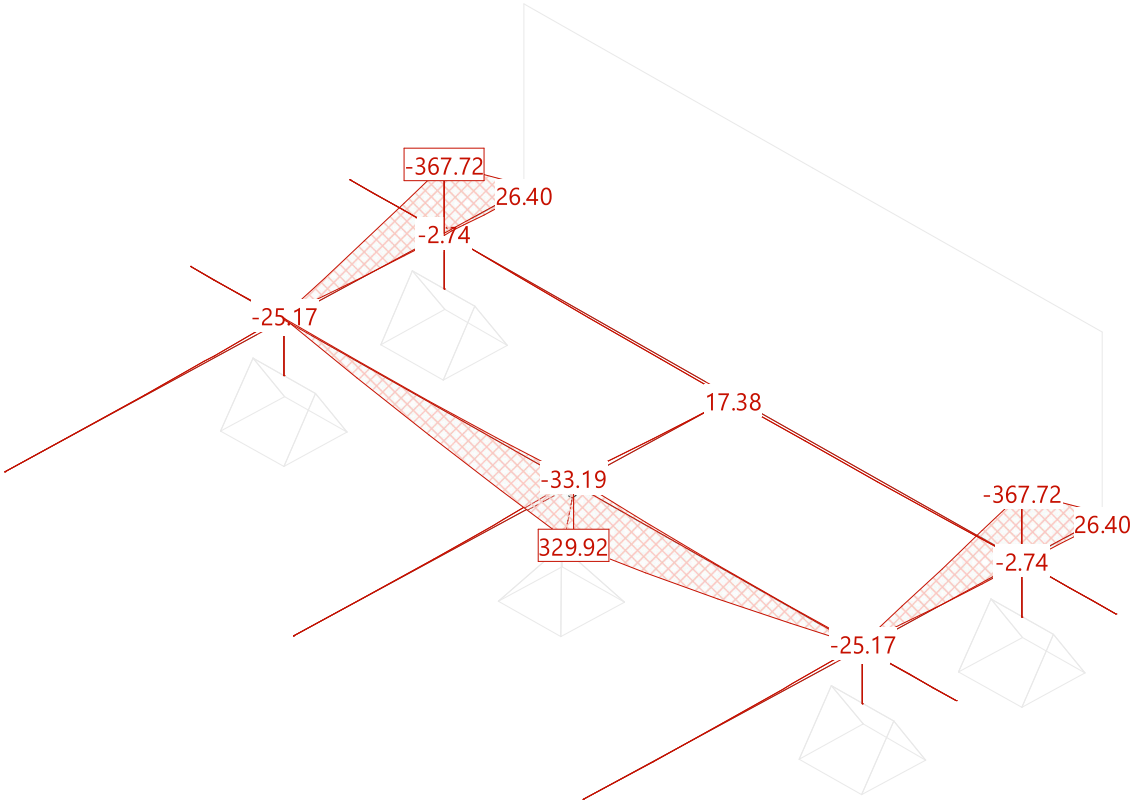
Section force envelopes N [kN] for: C-DESFAV-TOTAL, Subsystem: Micros



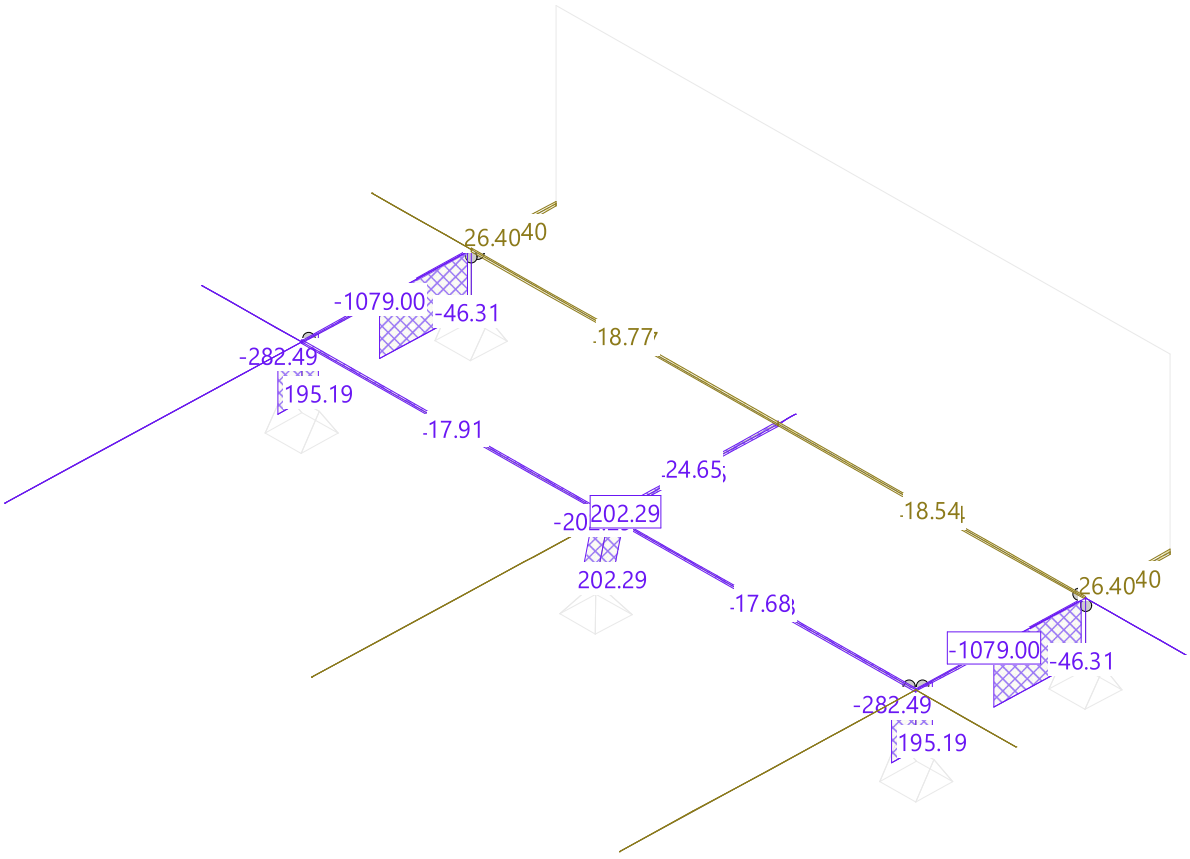
Section force envelopes Vy [kN] for: C-DESFAV-TOTAL, Subsystem: Micros



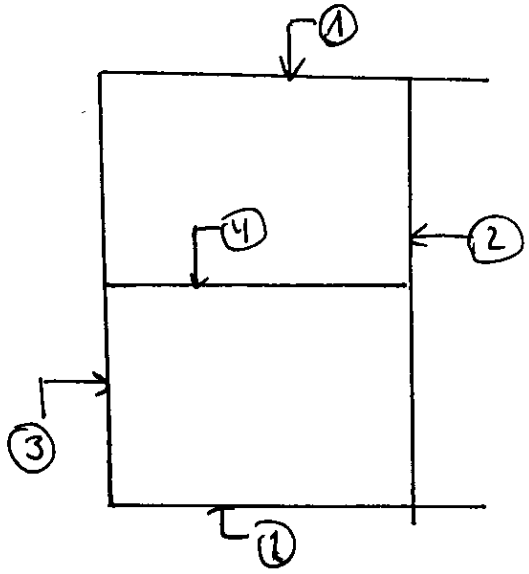
Section force envelopes My [kNm] for: C-DESFAV-TOTAL, Multiple subsystems



Section force envelopes N [kN] for: C-DESFAV-TOTAL, Multiple subsystems



ARMADO ENCEPADO — Armadura principal



① { SUP $\frac{367\ (My^-)}{0,9 \cdot 0,95 \cdot 50/1,15} + \frac{26,4\ (T)}{50/1,15} = 9,87 + 0,60 = 10,47\ cm^2$

INF $\frac{26,4\ (T)}{50/1,15} = 0,60\ cm^2$

② { SUP $\frac{19\ (T)}{50/1,15} = 0,45\ cm^2$

IN $\frac{19\ (T)}{50/1,15} + \frac{18\ (My^+)}{0,9 \cdot 0,95 \cdot 50/1,15} = 0,45 + 0,45 = 0,9\ cm^2$

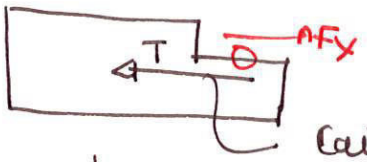
③ { SUP $\frac{33\ (My^-)}{0,9 \cdot 0,95 \cdot 50/1,15} + \frac{18\ (T)}{50/1,15} = 0,89 + 0,45 = 1,34\ cm^2$

INF $\frac{329\ (My^+)}{0,9 \cdot 0,95 \cdot 50/1,15} + \frac{18\ (T)}{50/1,15} = 8,85 + 0,45 = 9,30\ cm^2$

④ { SUP $\frac{25\ (T)}{50/1,15} + \frac{24\ (My^-)}{0,9 \cdot 0,95 \cdot 50/1,15} = 0,6 + 0,65 = 1,25\ cm^2$

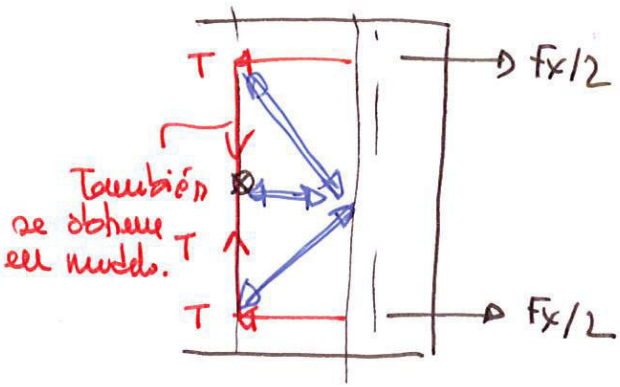
INF $\frac{25\ (T)}{50/1,15} = 0,60\ cm^2$

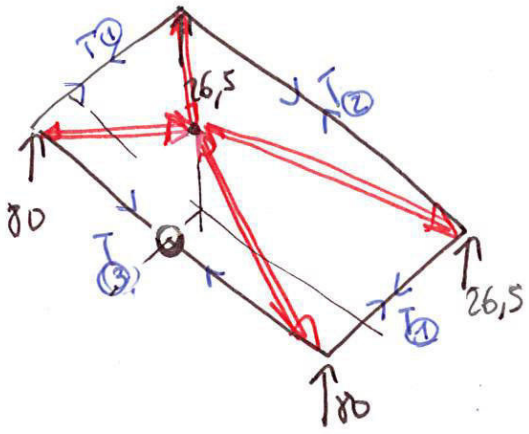
Además → Bielas y tirantes para Fx:



Cortar placa en el modelo.

Vista en planta:





$T_1 = 29$ kN → 0,725 cm²

$T_2 = 57$ kN → 1,425 cm²

$T_3 = 105$ kN → 2,625 cm²

Hay que cincar a armaduras ① ② ③ de la página anterior.

Armadura de difusión:

$N = 1080$ kN (max) → $A_s = \frac{1080 / 1,5}{40} = 18\,cm^2$ en 2,35m → en 1,85 + 0,5 → 7,65 cm²/m

MICROPILOTES 139x12

COMPRESION

diametro nominal	0.225	m
diametro armadura tubular	139	mm
espesor armadura tubular	12	mm
diametro interior	115	mm
re	1.2	mm
limite elástico armadura tubular	355	Mpa
γa	1.1	
fyd	322.7	Mpa
Fu,c	1	
Aa	4268	mm2
Na,rd	**1377**	kN
As (seccion total de la arm pasiva)	0	mm2
fsk (lim elastico arm pasiva)	500	Mpa
γs	1.15	
fsd	400.0	Mpa
Ns,rd	**0**	
Anominal tubular	4788	mm2
Ac	0.0350	m2
fck	25	Mpa
γc	1.5	
Nh,rd	**495**	kN
R pandeo	1	
Fe	1.3	
Na,rd	**883**	kN
Ns,rd	**0**	kN
Nh,rd	**318**	kN
Nc,rd	**1201**	kN

TRACCION

fyd	322.7	Mpa
fsd	434.8	Mpa
Aa	4268	mm2
As	0	mm3
Na,rd	**1377**	kN
Ns,rd	**0**	kN
Nt,rd	**1252**	kN

COMPRESION

rozamiento límite	0.6	Mpa
Fr	1.65	
rozamiento de cálculo	**0.36**	
Nd, compresion	1100	
Long emp	**4.28**	m

TRACCION

η	0.6	
rozamiento límite	0.36	Mpa
Fr	1.65	
rozamiento de cálculo	**0.22**	
Nd, traccion	0	
Long emp	**0.00**	m

EMPOTRAMIENTO EN ROCA

Longitud de empotramiento mínima: 1.35 m

A_{pe}	0.0398	m2
A_{le}	0.7069	m2/m
fe,d	0.6	Mpa
resistencia a compresion simple roca	319	Mpa
qpe,d	31.9	Mpa
Long empotramiento	1.35	m
resistencia por punta	**1268**	kN
resistencia por fuste	**573**	kN
Rc,d	**1841**	kN

CHAPA DE ANCLAJE

COMPRESION

Axil de cálculo en micropilote	1100	kN
f1cd encepado	14.0	Mpa
tension última mortero	9.08	Mpa
Area interior de mortero	0.010	m2
F,int,mortero	**94**	kN
tension última armadura pasiva	256.41	Mpa
Area armadura pasiva	0.00	cm2
F,int armadura pasiva	**0**	kN
Total capacidad interior	**94**	kN
Area necesaria (chapa de testa)	0.0718	m2
Diametro ext mínimo	**324**	mm
Diametro ext	350	mm
Fuerza exterior	**1006**	kN
Area exterior mortero	0.025	m2
Fext mortero	**223**	kN
F_ext/2	**503**	kN
ycdg_chapa media	74.9	mm
F_mortero/2	**112**	kN
ycdg_mortero exterior	59.0	mm
F_tuberia/2	**391**	kN
ycdg_anillo tuberia	40.425	mm
Md	**15.27**	kNm
b	235.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**28**	mm

soldadura

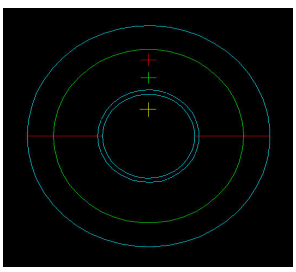
F	**782**	kN
perimetro	**437**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**6.8**	mm

TRACCION

f1cd encepado	14.0	Mpa
F_traccion	0.0	kN
Area ext (chpa de testa)	0.0000	m2
Diametro ext mínimo	**139**	mm
Diametro ext	310	mm
F_chapa/2	**0**	kN
ycdg_chapa media	74.9	mm
F_tuberia/2	**0**	kN
ycdg_anillo tuberia	40.4	mm
Md	**0.00**	kNm
b	171.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**0**	mm

soldadura

F	**0**	kN
perimetro	**437**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**0.0**	mm



MICROPILOTES 114.3x5

COMPRESION

diametro nominal	0.225	m
diametro armadura tubular	114	mm
espesor armadura tubular	5	mm
diametro interior	104	mm
re	1.2	mm
limite elástico armadura tubular	355	Mpa
γ_a	1.1	
fyd	322.7	Mpa
Fu,c	1	
Aa	1287	mm2
Na,rd	**415**	kN
As (seccion total de la arm pasiva)	0	mm2
fsk (lim elastico arm pasiva)	500	Mpa
γ_s	1.15	
fsd	400.0	Mpa
Ns,rd	**0**	
Anominal tubular	1712	mm2
Ac	0.0380	m2
fck	25	Mpa
γ_c	1.5	
Nh,rd	**539**	kN
R pandeo	1	
Fe	1.3	
Na,rd	**266**	kN
Ns,rd	**0**	kN
Nh,rd	**346**	kN
Nc,rd	**612**	kN

TRACCION

fyd	322.7	Mpa
fsd	434.8	Mpa
Aa	1287	mm2
As	0	mm3
Na,rd	**415**	kN
Ns,rd	**0**	kN
Nt,rd	**378**	kN

COMPRESION

rozamiento límite	0.6	Mpa
Fr	1.65	
rozamiento de cálculo	**0.36**	
Nd, compresion	300	
Long emp	**1.17**	m

TRACCION

η	0.6	
rozamiento límite	0.36	Mpa
Fr	1.65	
rozamiento de cálculo	**0.22**	
Nd, traccion	200	
Long emp	**1.30**	m

EMPOTRAMIENTO EN ROCA

Longitud de empotramiento mínima: 1.35 m

A_{pe}	0.0398	m2
A_{le}	0.7069	m2/m
fe,d	0.6	Mpa
resistencia a compresion simple roca	319	Mpa
qpe,d	31.9	Mpa
Long empotramiento	1.35	m
resistencia por punta	**1268**	kN
resistencia por fuste	**573**	kN
Rc,d	**1841**	kN

CHAPA DE ANCLAJE

COMPRESION

Axil de cálculo en micropilote	300	kN
f1cd encepado	14.0	Mpa
tension última mortero	9.08	Mpa
Area interior de mortero	0.008	m2
F,int,mortero	**77**	kN
tension última armadura pasiva	256.41	Mpa
Area armadura pasiva	0.00	cm2
F,int armadura pasiva	**0**	kN
Total capacidad interior	**77**	kN
Area necesaria (chapa de testa)	0.0159	m2
Diametro ext mínimo	**176**	mm
Diametro ext	250	mm
Fuerza exterior	**223**	kN
Area exterior mortero	0.030	m2
Fext mortero	**268**	kN
F_ext/2	**111**	kN
ycdg_chapa media	51.2	mm
F_mortero/2	**134**	kN
ycdg_mortero exterior	55.9	mm
F_tuberia/2	**-23**	kN
ycdg_anillo tuberia	34.696	mm
Md	**-1.00**	kNm
b	146.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**#¡NUM!**	mm

soldadura

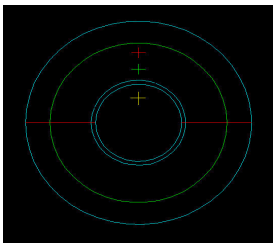
F	**-46**	kN
perimetro	**358**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**-0.5**	mm

TRACCION

f1cd encepado	14.0	Mpa
F_traccion	200.0	kN
Area ext (chpa de testa)	0.0143	m2
Diametro ext mínimo	**177**	mm
Diametro ext	200	mm
F_chapa/2	**100**	kN
ycdg_chapa media	51.2	mm
F_tuberia/2	**100**	kN
ycdg_anillo tuberia	34.7	mm
Md	**1.65**	kNm
b	86.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**15**	mm

soldadura

F	**200**	kN
perimetro	**358**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**2.1**	mm



MICROPILOTES 114.3x5

COMPRESION

diametro nominal	0.225	m
diametro armadura tubular	114	mm
espesor armadura tubular	5	mm
diametro interior	104	mm
re	1.2	mm
limite elástico armadura tubular	355	Mpa
γ_a	1.1	
fyd	322.7	Mpa
Fu,c	1	
Aa	1287	mm2
Na,rd	**415**	kN
As (seccion total de la arm pasiva)	0	mm2
fsk (lim elastico arm pasiva)	500	Mpa
γ_s	1.15	
fsd	400.0	Mpa
Ns,rd	**0**	
Anominal tubular	1712	mm2
Ac	0.0380	m2
fck	25	Mpa
γ_c	1.5	
Nh,rd	**539**	kN
R pandeo	1	
Fe	1.3	
Na,rd	**266**	kN
Ns,rd	**0**	kN
Nh,rd	**346**	kN
Nc,rd	**612**	kN

TRACCION

fyd	322.7	Mpa
fsd	434.8	Mpa
Aa	1287	mm2
As	0	mm3
Na,rd	**415**	kN
Ns,rd	**0**	kN
Nt,rd	**378**	kN

COMPRESION

rozamiento límite	0.6	Mpa
Fr	1.65	
rozamiento de cálculo	**0.36**	
Nd, compresion	205	
Long emp	**0.80**	m

TRACCION

η	0.6	
rozamiento límite	0.36	Mpa
Fr	1.65	
rozamiento de cálculo	**0.22**	
Nd, traccion	205	
Long emp	**1.33**	m

EMPOTRAMIENTO EN ROCA

Longitud de empotramiento mínima: 1.35 m

A_{pe}	0.0398	m2
A_{le}	0.7069	m2/m
fe,d	0.6	Mpa
resistencia a compresion simple roca	319	Mpa
qpe,d	31.9	Mpa
Long empotramiento	1.35	m
resistencia por punta	**1268**	kN
resistencia por fuste	**573**	kN
Rc,d	**1841**	kN

CHAPA DE ANCLAJE

COMPRESION

Axil de cálculo en micropilote	205	kN
f1cd encepado	14.0	Mpa
tension última mortero	9.08	Mpa
Area interior de mortero	0.008	m2
F,int,mortero	**77**	kN
tension última armadura pasiva	256.41	Mpa
Area armadura pasiva	0.00	cm2
F,int armadura pasiva	**0**	kN
Total capacidad interior	**77**	kN
Area necesaria (chapa de testa)	0.0091	m2
Diametro ext mínimo	**150**	mm
Diametro ext	250	mm
Fuerza exterior	**128**	kN
Area exterior mortero	0.030	m2
Fext mortero	**268**	kN
F_ext/2	**64**	kN
ycdg_chapa media	51.2	mm
F_mortero/2	**134**	kN
ycdg_mortero exterior	55.9	mm
F_tuberia/2	**-70**	kN
ycdg_anillo tuberia	34.696	mm
Md	**-1.79**	kNm
b	146.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**#¡NUM!**	mm

soldadura

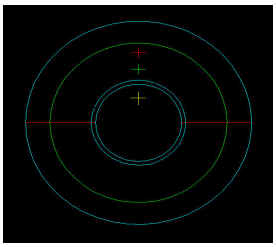
F	**-141**	kN
perimetro	**358**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**-1.5**	mm

TRACCION

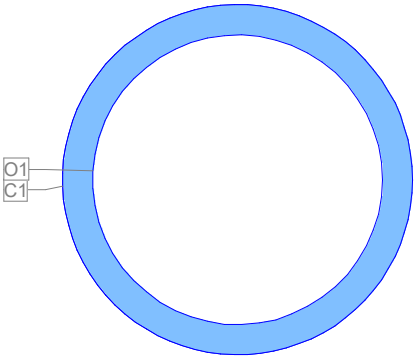
f1cd encepado	14.0	Mpa
F_traccion	205.0	kN
Area ext (chpa de testa)	0.0146	m2
Diametro ext mínimo	**178**	mm
Diametro ext	200	mm
F_chapa/2	**103**	kN
ycdg_chapa media	51.2	mm
F_tuberia/2	**103**	kN
ycdg_anillo tuberia	34.7	mm
Md	**1.69**	kNm
b	86.0	mm
fyd_acero	322.7	Mpa
espesor chapa	**16**	mm

soldadura

F	**205**	kN
perimetro	**358**	mm
capacidad soldadura	26.17	kN/cm2
a min a cuello simple	**2.2**	mm



Cross-section MICRO (AE355): Outline, Openings Scale 1 :3.0



Cross section (Girder): MICRO

Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [mm]	z_q [mm]	No.	y_q [mm]	z_q [mm]
C1	S	AE355	Polygon	1	3.94	69.39	2	-1.32	69.49
				3	-6.57	69.19	4	-11.78	68.49
				5	-16.93	67.41	6	-21.98	65.93
				7	-26.90	64.08	8	-31.67	61.87
				9	-36.26	59.29	10	-40.64	56.38
				11	-44.79	53.15	12	-48.68	49.61
				13	-52.29	45.78	14	-55.60	41.70
				15	-58.60	37.37	16	-61.25	32.83
				17	-63.56	28.11	18	-65.51	23.22
				19	-67.07	18.20	20	-68.26	13.07
				21	-69.05	7.87	22	-69.45	2.63
				23	-69.45	-2.63	24	-69.05	-7.87
				25	-68.26	-13.07	26	-67.07	-18.20
				27	-65.51	-23.22	28	-63.56	-28.11
				29	-61.25	-32.83	30	-58.60	-37.37
				31	-55.60	-41.70	32	-52.29	-45.78
				33	-48.68	-49.61	34	-44.79	-53.15
				35	-40.64	-56.38	36	-36.26	-59.29
				37	-31.67	-61.87	38	-26.90	-64.08
				39	-21.98	-65.93	40	-16.93	-67.41
				41	-11.78	-68.49	42	-6.57	-69.19
				43	-1.32	-69.49	44	3.94	-69.39
				45	9.18	-68.89	46	14.36	-68.00
				47	19.47	-66.72	48	24.46	-65.06
				49	29.31	-63.02	50	33.99	-60.62
				51	38.48	-57.88	52	42.74	-54.80
				53	46.76	-51.41	54	50.52	-47.73
				55	53.98	-43.77	56	57.14	-39.56
				57	59.97	-35.13	58	62.45	-30.49
				59	64.58	-25.68	60	66.34	-20.72
				61	67.72	-15.65	62	68.70	-10.48
				63	69.30	-5.26	64	69.50	0
				65	69.30	5.26	66	68.70	10.48
				67	67.72	15.65	68	66.34	20.72
				69	64.58	25.68	70	62.45	30.49
				71	59.97	35.13	72	57.14	39.56
				73	53.98	43.77	74	50.52	47.73
				75	46.76	51.41	76	42.74	54.80
				77	38.48	57.88	78	33.99	60.62
				79	29.31	63.02	80	24.46	65.06
				81	19.47	66.72	82	14.36	68.00
				83	9.18	68.89			
-O1	Opening		Polygon	1	-41.26	40.05	2	-45.70	34.89
				3	-49.51	29.24	4	-52.62	23.18
				5	-54.99	16.79	6	-56.59	10.17
				7	-57.40	3.41	8	-57.40	-3.41
				9	-56.59	-10.17	10	-54.99	-16.79
				11	-52.62	-23.18	12	-49.51	-29.24
				13	-45.70	-34.89	14	-41.26	-40.05
				15	-36.23	-44.65	16	-30.69	-48.62
				17	-24.73	-51.91	18	-18.42	-54.47
				19	-11.84	-56.27	20	-5.11	-57.27
				21	1.70	-57.47	22	8.49	-56.87
				23	15.16	-55.47	24	21.61	-53.28

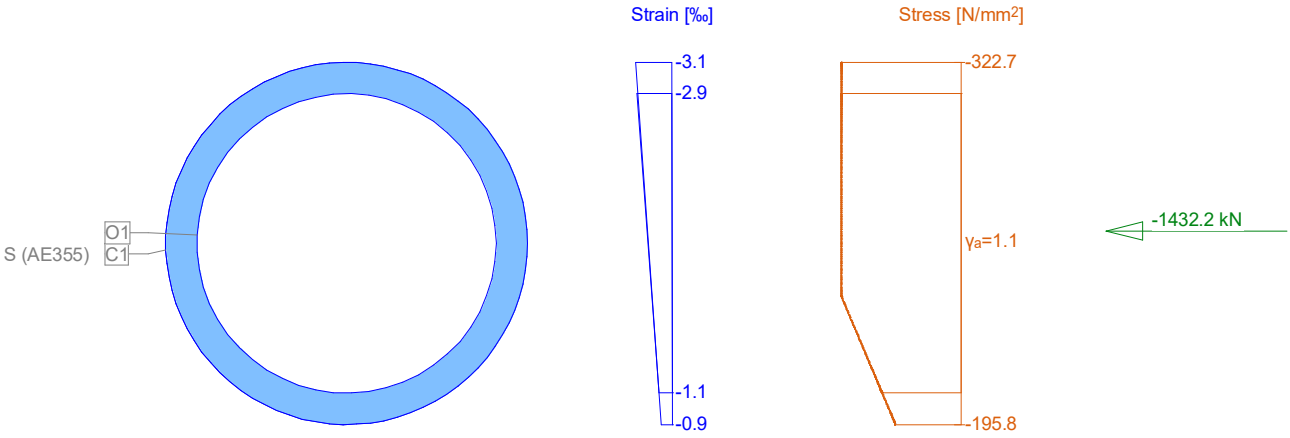
Name	Material	Class	Type	No.	y_q [mm]	z_q [mm]	No.	y_q [mm]	z_q [mm]
				25	27.76	-50.35	26	33.52	-46.72
				27	38.81	-42.43	28	43.56	-37.54
				29	47.69	-32.12	30	51.16	-26.26
				31	53.90	-20.02	32	55.89	-13.51
				33	57.10	-6.80	34	57.50	0
				35	57.10	6.80	36	55.89	13.51
				37	53.90	20.02	38	51.16	26.26
				39	47.69	32.12	40	43.56	37.54
				41	38.81	42.43	42	33.52	46.72
				43	27.76	50.35	44	21.61	53.28
				45	15.16	55.47	46	8.49	56.87
				47	1.70	57.47	48	-5.11	57.27
				49	-11.84	56.27	50	-18.42	54.47
				51	-24.73	51.91	52	-30.69	48.62
				53	-36.23	44.65			

Section properties: (reference material: S)

	Area [cm^2]		Moment of inertia [cm^4]		C.G.,Angle [mm]			Mass [kg/m]	
Ax	**47.9772**	Ix	1.949 x10^3	ys	-0.00			M_{CS}	38.4
Ay	(=Ax)	**Iy**	**974.501557**	zs	-0.00				
Az	(=Ax)	**Iz**	**974.351370**	β	0 [°]				

Cross-section MICRO (AE355): Efficiency Nx=-1080.0;My=5.0; eff(M,N) = 0.75 OK

Scale 1 :2.9



Ultimate strength analysis Cross section (Girder): MICRO

Action forces / Efficiency: eff(M,N) = 0.75 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS		-1080.0	5.0	0	0.75					

Analysis-Parameters "!ULS" Standard: Spanish Code EHE

ID	Diagram σ-ε c	s		a	Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm^2]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]		γ_M [-]	Various parameters θ [-]	φ [-]		
!ULS	2/0	1		1	-2.0	-3.5	10.0		0.85	1.50	1.15		1.10	45.00	0		

θ : Inclination of diagonal in compression
φ : Creep coefficient

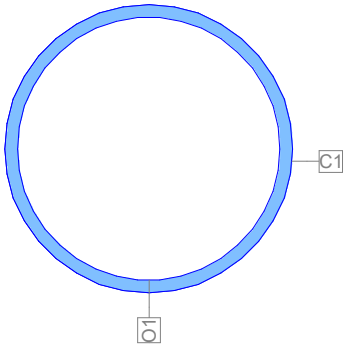
Extreme stresses and strain

Name	Class	y_q [mm]	z_q [mm]	ε [‰]	σ_d [N/mm^2]	γ [-]
C1	AE355	-1.32	69.49	-3.1	-322.7	1.10
C1	AE355	-1.32	-69.49	-0.9	-195.8	1.10

Ultimate state "!ULS"

Internal forces			Strain and Curvature			Stiffness Values		
N [kN]	M_y [kNm]	M_z [kNm]	ε_x [‰]	χ_y [km^{-1}]	χ_z [km^{-1}]	N/ε_x [kN]	M_y/χ_y [kNm^2]	M_z/χ_z [kNm^2]
-1432.2	6.6	0.0	-2.0	15.4	-0.0	7.161E+5	431.62	1.06

Cross-section MICRO_2 (AE355): Outline, Openings Scale 1 :3.0



Cross section (Girder): MICRO_2

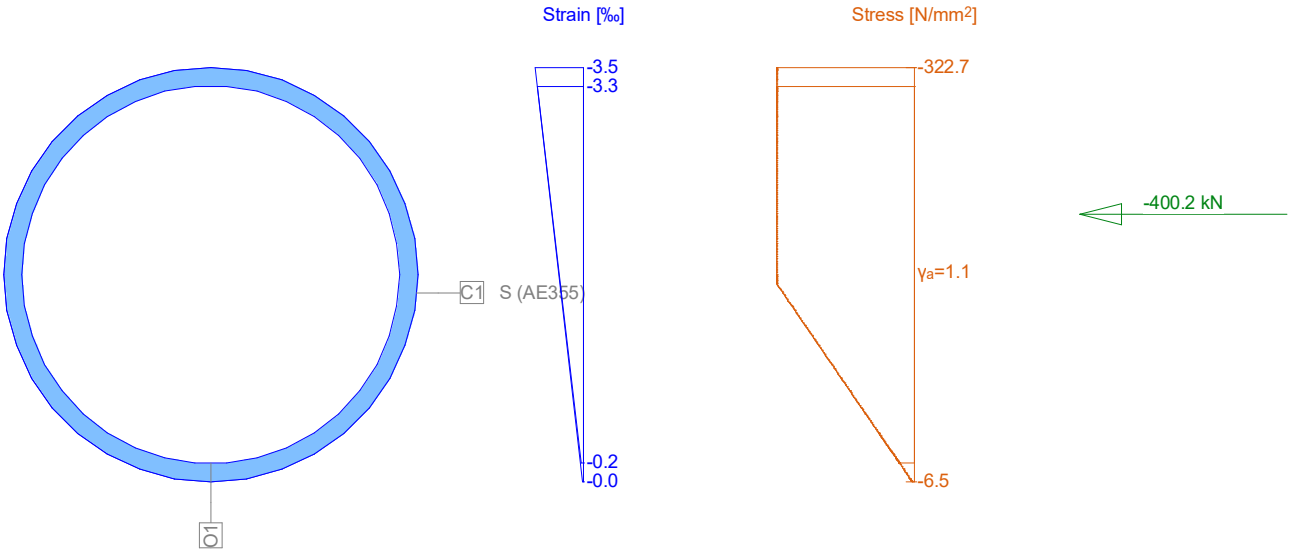
Geometrical definition of cross section

Name	Material	Class	Type	No.	y_q [mm]	z_q [mm]	No.	y_q [mm]	z_q [mm]
C1	S	AE355	Polygon	1	-53.70	-19.55	2	-49.49	-28.57
				3	-43.78	-36.74	4	-36.74	-43.78
				5	-28.58	-49.49	6	-19.55	-53.70
				7	-9.92	-56.28	8	0	-57.15
				9	9.92	-56.28	10	19.55	-53.70
				11	28.58	-49.49	12	36.74	-43.78
				13	43.78	-36.74	14	49.49	-28.58
				15	53.70	-19.55	16	56.28	-9.92
				17	57.15	0	18	56.28	9.92
				19	53.70	19.55	20	49.49	28.57
				21	43.78	36.74	22	36.74	43.78
				23	28.58	49.49	24	19.55	53.70
				25	9.92	56.28	26	0	57.15
				27	-9.92	56.28	28	-19.55	53.70
				29	-28.57	49.49	30	-36.74	43.78
				31	-43.78	36.74	32	-49.49	28.57
				33	-53.70	19.55	34	-56.28	9.92
				35	-57.15	0	36	-56.28	-9.92
-O1	Opening		Polygon	1	-51.44	-8.58	2	-49.32	-16.93
				3	-45.86	-24.82	4	-41.15	-32.03
				5	-35.32	-38.37	6	-28.52	-43.66
				7	-20.95	-47.76	8	-12.80	-50.55
				9	-4.31	-51.97	10	4.31	-51.97
				11	12.80	-50.55	12	20.95	-47.76
				13	28.52	-43.66	14	35.32	-38.37
				15	41.15	-32.03	16	45.86	-24.82
				17	49.32	-16.93	18	51.44	-8.58
				19	52.15	0	20	51.44	8.58
				21	49.32	16.93	22	45.86	24.82
				23	41.15	32.03	24	35.32	38.37
				25	28.52	43.66	26	20.95	47.76
				27	12.80	50.55	28	4.31	51.97
				29	-4.31	51.97	30	-12.80	50.55
				31	-20.95	47.76	32	-28.52	43.66
				33	-35.32	38.37	34	-41.15	32.03
				35	-45.86	24.82	36	-49.32	16.93
				37	-51.44	8.58	38	-52.15	0

Section properties: (reference material: S)

Area [cm^2]		Moment of inertia [cm^4]		C.G.,Angle [mm]				Mass [kg/m]	
Ax	**17.0394**	Ix	507.309066	ys	0.00			M_{CS}	13.6
Ay	(=Ax)	**Iy**	**253.736301**	zs	-0.00				
Az	(=Ax)	**Iz**	**253.748713**	β	0 [°]				

Cross-section MICRO_2 (AE355): Efficiency Nx=-300.0;My=5.0; eff(M,N) = 0.75 OK Scale 1 :2.1



Ultimate strength analysis Cross section (Girder): MICRO_2

Action forces / Efficiency: eff(M,N) = 0.75 OK

No.	AP	P	Bending and axial force N [kN]	M_y [kNm]	M_z [kNm]	eff(M,N) [-]	Shear forces and torsion V_y [kN]	V_z [kN]	T [kNm]	eff(V,T) [-]	Complete CS eff(M,N,V,T) [-]
1	!ULS		-300.0	5.0	0	0.75					

Analysis-Parameters "!ULS" Standard: Spanish Code EHE

ID	Diagram σ-ε c	s		a	Strain Limits ε_{c2} [‰]	ε_{cu3} [‰]	ε_{ud} [‰]	σ_s [N/mm²]	Partial safety factor α_{cc} [-]	γ_c [-]	γ_s [-]		γ_M [-]	Various parameters θ [-]	φ [-]		
!ULS	2/0	1		1	-2.0	-3.5	10.0		0.85	1.50	1.15		1.10	45.00	0		

θ : Inclination of diagonal in compression
φ : Creep coefficient

Extreme stresses and strain

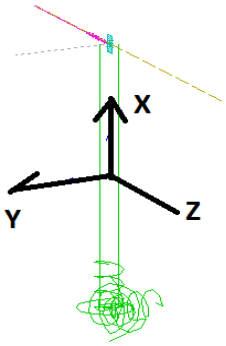
Name	Class	y_q [mm]	z_q [mm]	ε [‰]	σ_d [N/mm²]	γ [-]
C1	AE355	0.00	57.15	-3.5	-322.7	1.10
C1	AE355	0	-57.15	-0.0	-6.5	1.10

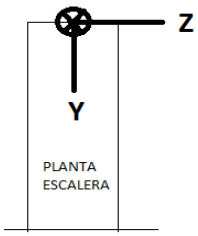
Ultimate state "!ULS"

Internal forces N [kN]	M_y [kNm]	M_z [kNm]	Strain and Curvature ε_x [‰]	χ_y [km⁻¹]	χ_z [km⁻¹]	Stiffness Values N/ε_x [kN]	M_y/χ_y [kNm²]	M_z/χ_z [kNm²]
-400.2	6.7	0.0	-1.8	30.4	-0.0	2.267E+5	219.77	0.47

ESTRIBO 2

Para el dimensionamiento del estribo 2 se ha seguido un procedimiento simplificado analizando por separado muros laterales, frontales y zapata mediante elementos finitos tipo placa y laja con el programa CEDRUS 7 de la casa CYPE A.G.





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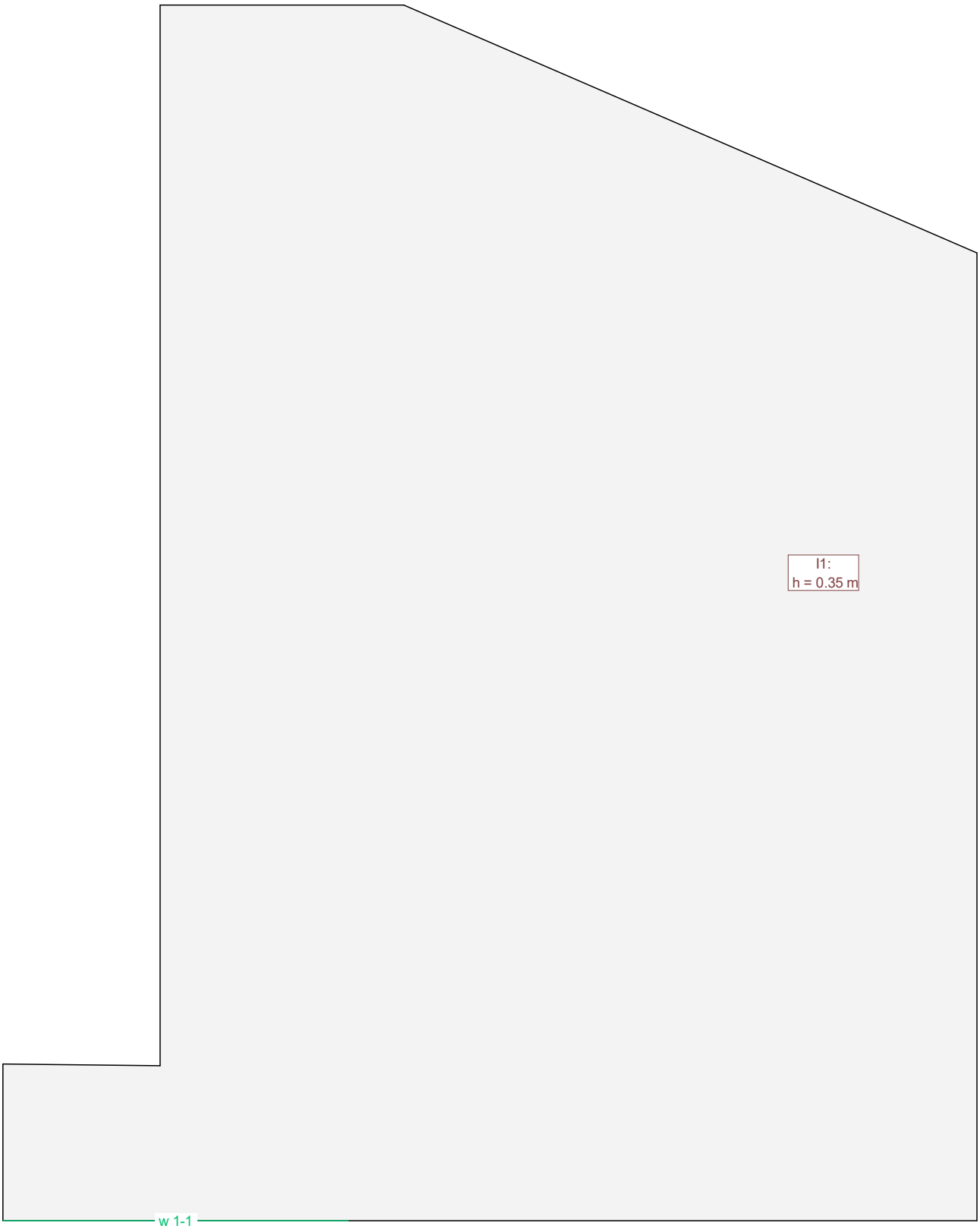
lu. jun. 24 15:46:43 2019
LC: 10121-10132

LC	LC-title	NR	X [m]	N [kN]	VY [kN]	VZ [kN]	MT [kNm]	MY [kNm]	MZ [kNm]
10121	MAX-N BSCT EL	300001	0	-136.9	66.65	-14.65	447.01	-137.22	-790.73
10121	MAX-N BSCT EL	300001	0.05	-136.9	66.65	-14.65	447.01	-137.95	-794.07
10122	MIN-N BSCT ELI	300001	0	-468.8	-69.38	-72.73	-1088.29	29.82	1190.47
10122	MIN-N BSCT ELI	300001	0.05	-468.8	-69.38	-72.73	-1088.29	26.19	1193.94
10123	MAX-VY BSCT E	300001	0	-365.7	199.02	13.04	1819.74	-23.58	804.05
10123	MAX-VY BSCT E	300001	0.05	-365.7	199.02	13.04	1819.74	-22.93	794.1
10124	MIN-VY BSCT EI	300001	0	-183.4	-200.09	-48.58	-1995.22	-16.47	-71.24
10124	MIN-VY BSCT EI	300001	0.05	-183.4	-200.09	-48.58	-1995.22	-18.89	-61.23
10125	MAX-VZ BSCT E	300001	0	-427.3	-5.24	108.03	879.4	44.52	883.14
10125	MAX-VZ BSCT E	300001	0.05	-427.3	-5.24	108.03	879.4	49.92	883.4
10126	MIN-VZ BSCT EI	300001	0	-280.6	-47.92	-124.72	-1316.55	-33.21	51.53
10126	MIN-VZ BSCT EI	300001	0.05	-280.6	-47.92	-124.72	-1316.55	-39.45	53.92
10127	MAX-MT BSCT I	300001	0	-366.5	169.98	78.36	2058.1	-32.73	809.2
10127	MAX-MT BSCT I	300001	0.05	-366.5	169.98	78.36	2058.1	-28.81	800.71
10128	MIN-MT BSCT E	300001	0	-268.4	-170.88	-113.56	-2225.45	-10.83	73.26
10128	MIN-MT BSCT E	300001	0.05	-268.4	-170.88	-113.56	-2225.45	-16.51	81.8
10129	MAX-MY BSCT I	300001	0	-256.2	-54.01	-106.85	-1213.95	132.23	637.41
10129	MAX-MY BSCT I	300001	0.05	-256.2	-54.01	-106.85	-1213.95	126.89	640.11
10130	MIN-MY BSCT E	300001	0	-245.7	175.84	61	1953.6	-148.31	-207.19
10130	MIN-MY BSCT E	300001	0.05	-223.2	47.62	28.87	612.77	-145.33	-640.06
10131	MAX-MZ BSCT I	300001	0	-390.1	-61.84	-5.64	-517.41	65.01	1227.78
10131	MAX-MZ BSCT I	300001	0.05	-390.1	-61.84	-5.64	-517.41	64.73	1230.87
10132	MIN-MZ BSCT E	300001	0	-136.9	66.65	-14.65	447.01	-137.22	-790.73
10132	MIN-MZ BSCT E	300001	0.05	-136.9	66.65	-14.65	447.01	-137.95	-794.07

Structure



STRUCTURE DATA

MATERIALS Code: Spanish Code EHE

Id	Type	Member	E [kN/mm²]	ν	ρ [t/m³]	α [‰]	Class	f [N/mm²]	
C	Concrete	(general)	32.10	0.17	2.50	0.010	H250	-25.00	f_{ck}
CC	Concrete	Column	33.60	0.17	2.50	0.010	H300	-30.00	f_{ck}
R	Reinforcement ste	(general)	205.00	0.30	8.00	0.012	AEH500	500.00	f_{yk}

MATERIAL BOXES: Isotropic

Id		Geometry		Materials		
		Scheibendicke [m]	Top surface level [m]	f_E	Body	Reinforcement
I1		0.35	-	1.000	CC	R

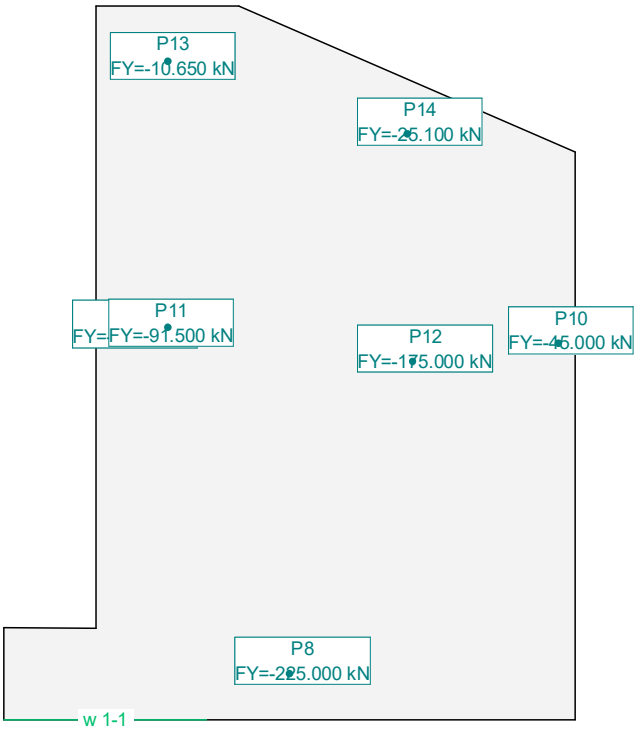
MATERIAL BOXES: Grundbewehrungen

Id	Basic reinforcement	
	as_X [cm²/m]	as_Y [cm²/m]
I1	-	-

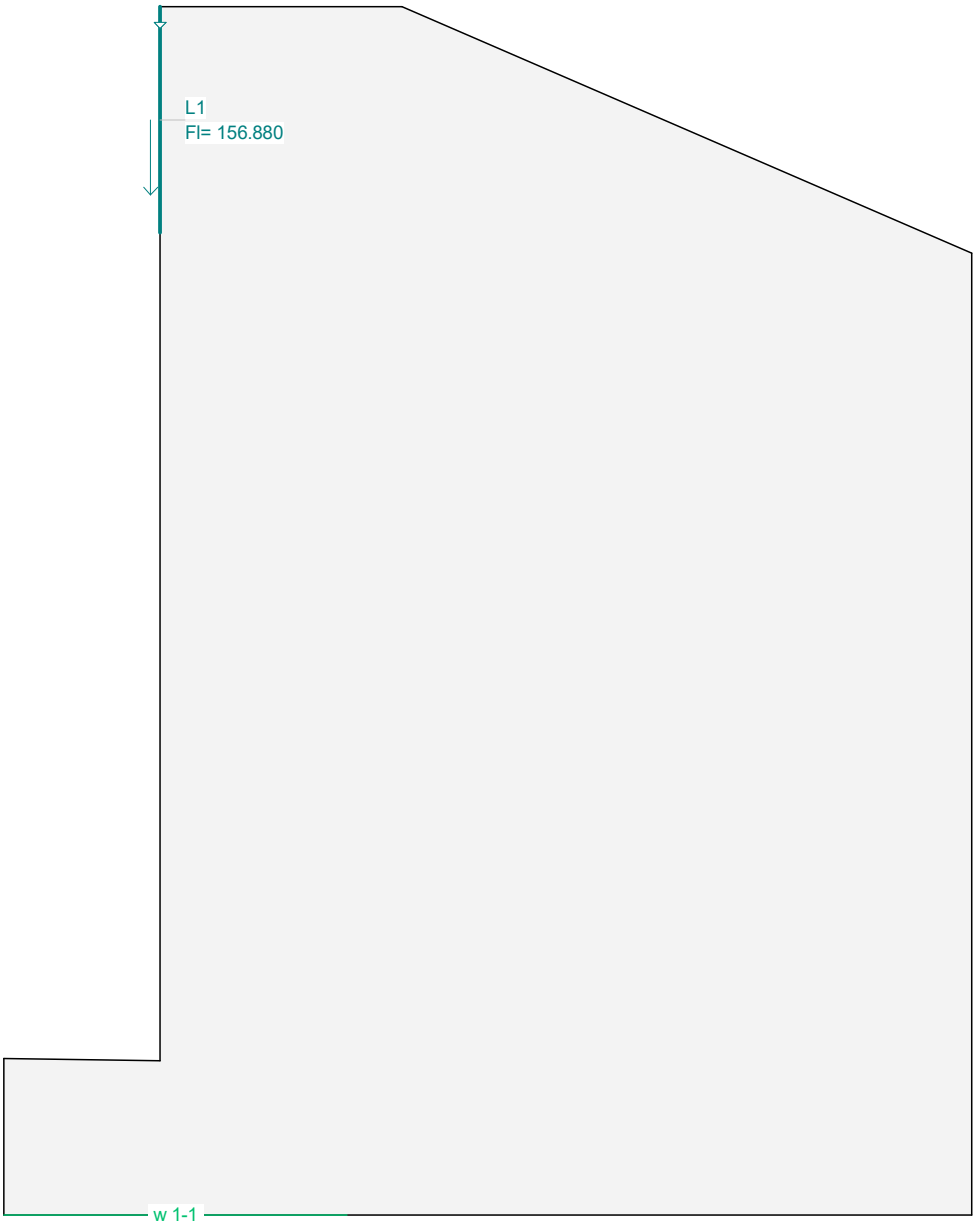
LINE SUPPORTS

Id	Type Description		Support sdl [kN/m²]	sdn [kN/m²]	srz [kN]	
W1	general		100.000	100.000	free	

Loading LC01: Peso propio estribo



Loading LC10: VZ



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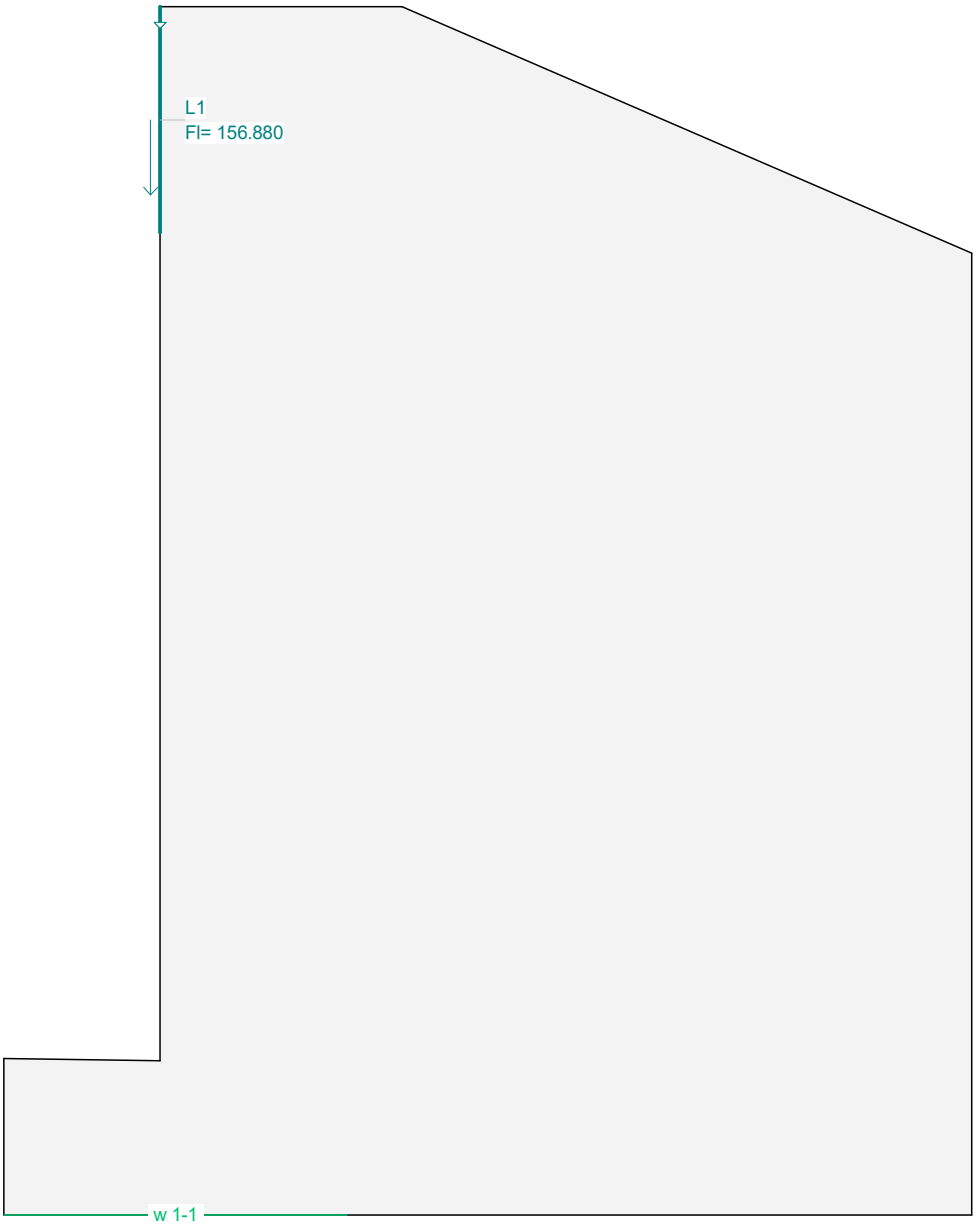
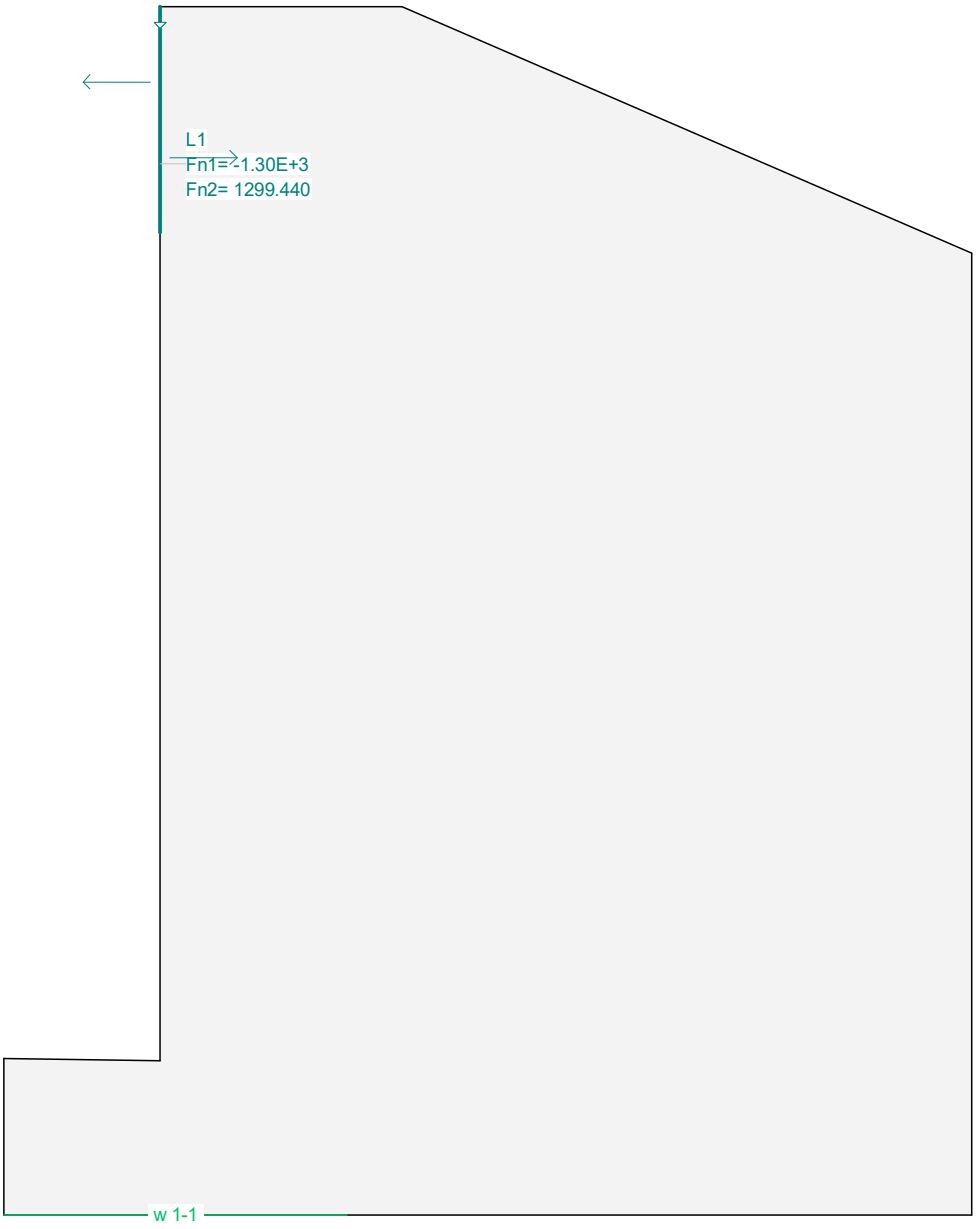


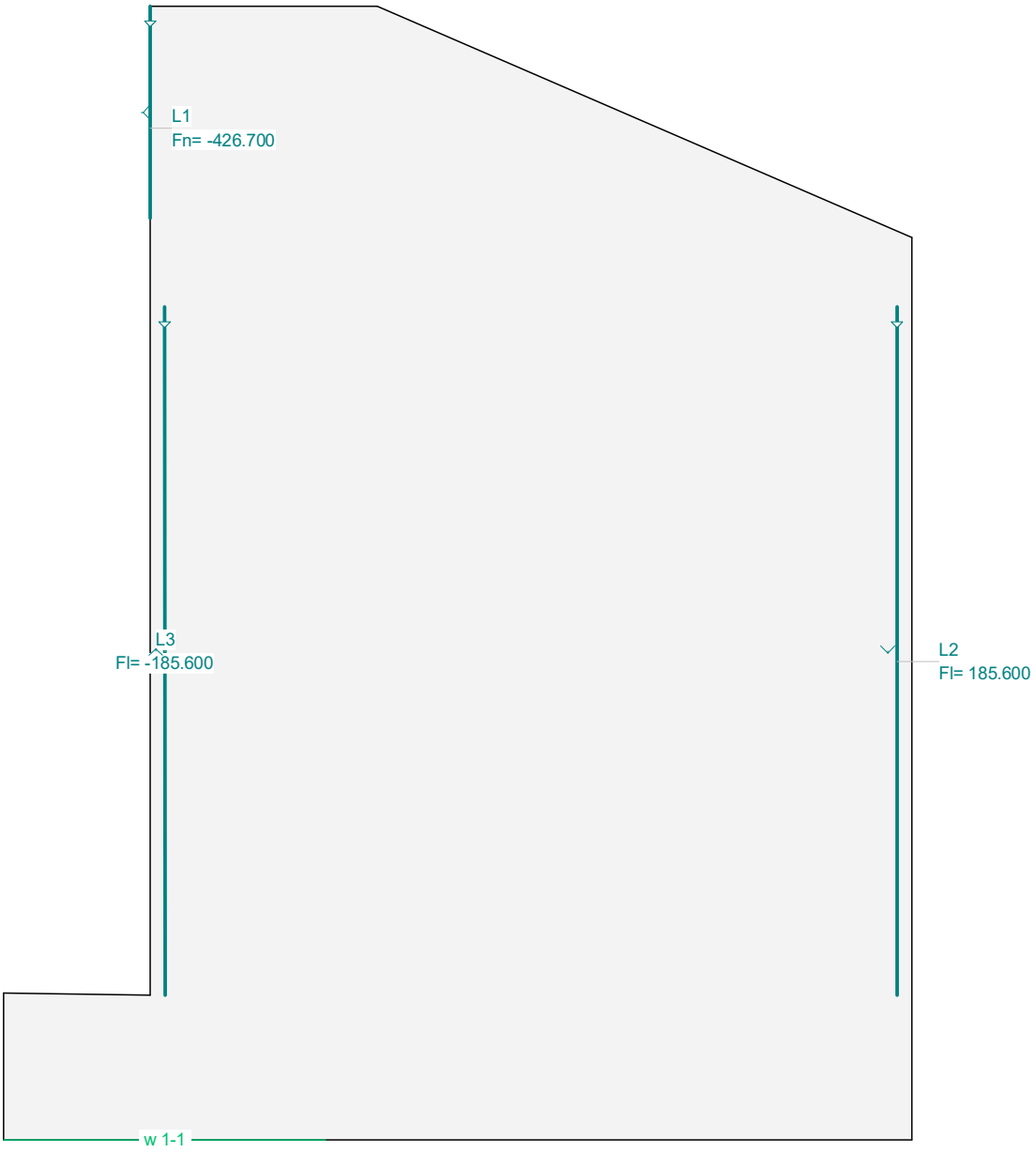
Loading LC11: N



Loading LC12: MY



Loading LC20: Horizontal 0.9 Mz

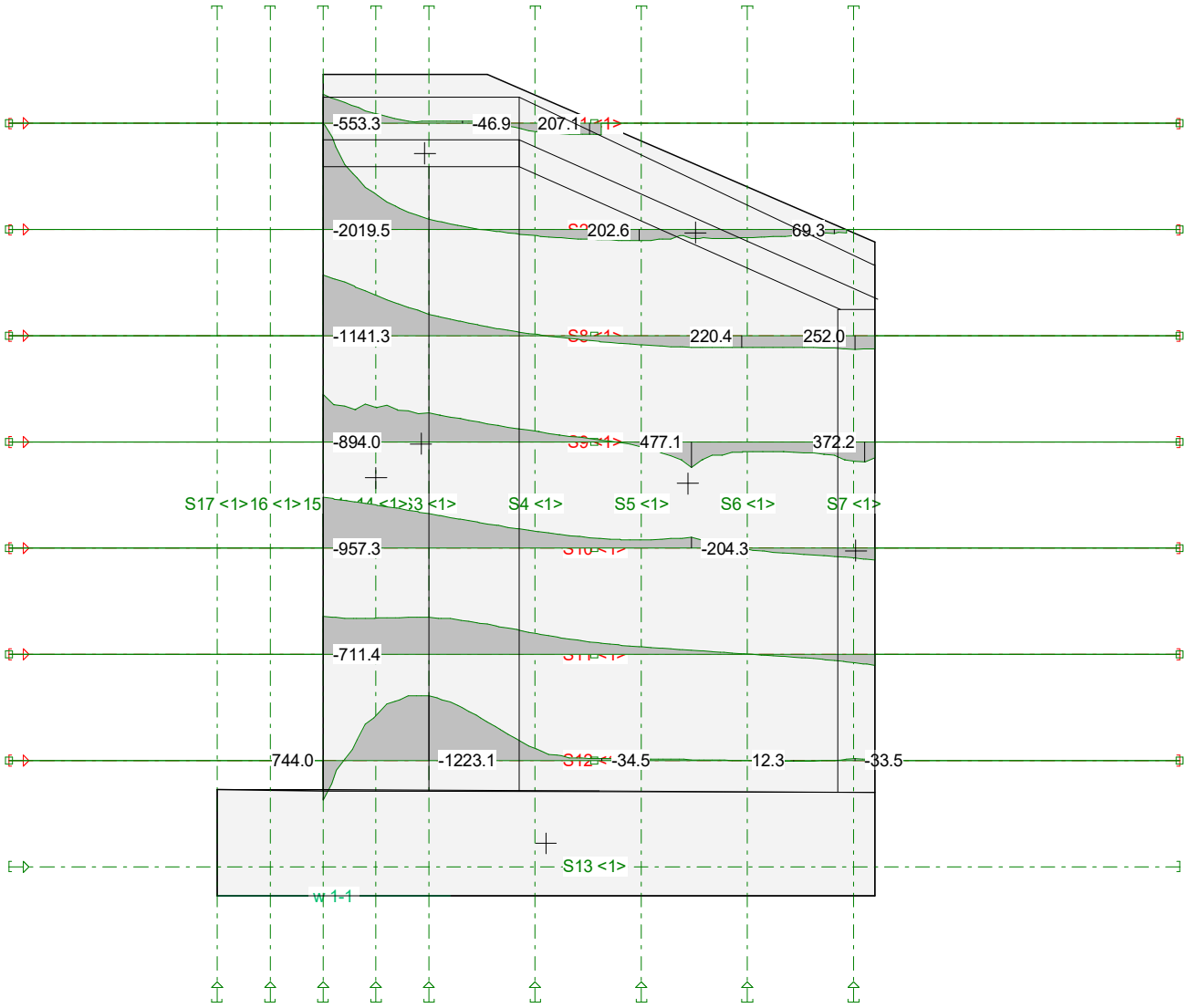


Result combination

Resultat combination C02

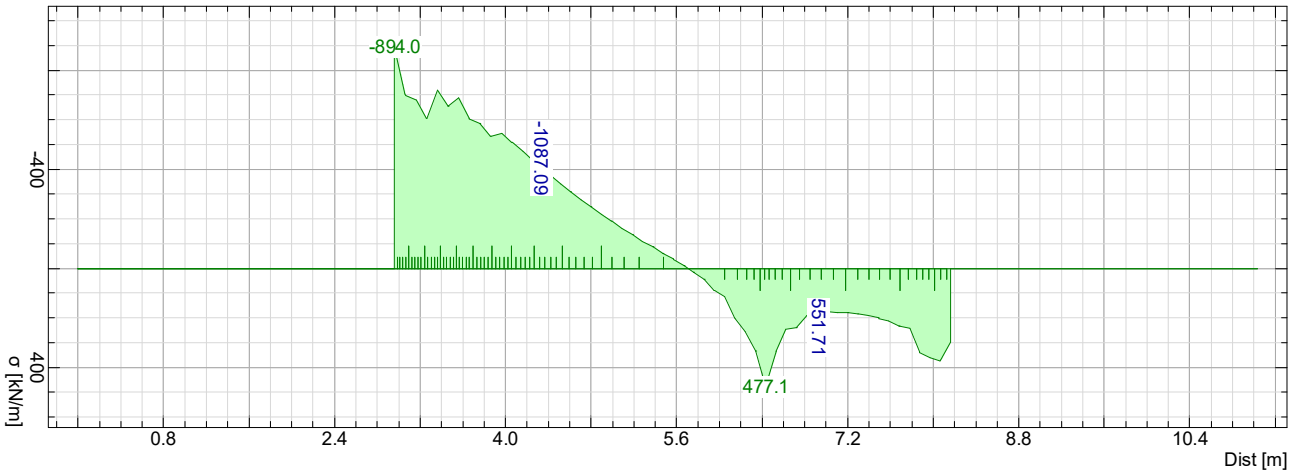
Loading Id	Factor	Description
LC01	1.350	Peso propio estribo
LC10	1.350	VZ
LC12	1.350	MY
LC11	1.350	N
LC20	1.350	Horizontal 0.9 Mz

Section(s): Forces perpendicular to direction of section [kN/m], Result combination C02



Section: S9 (-1.96,4.27 - 9.08,4.27)

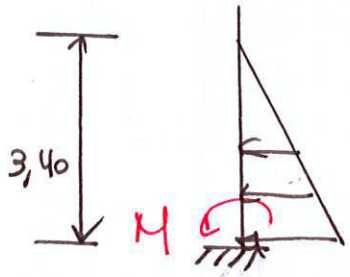
Wall axial forces normal to section, Result combination C02, stroke of integral each 20.00, unit of integral [kN]



- Armado muro Lateral:

1) DEL Modelo: T = 552 kN
   → En 2m → 276 kN/m ⟹ 6,36 cm²/m. (cambio cara)

2) Empuje de tierras:



20 · 3,4 · 0,5 = 34 kN/m

$M = (0{,}5 \cdot 3{,}4 \cdot 34) \cdot 3{,}4/3 = 65{,}5 \text{ mkN} \longrightarrow A_s = \frac{65{,}5 \cdot 1{,}5}{0{,}9 \cdot 0{,}3 \cdot 43{,}4} = 8{,}38 \text{ cm}^2/\text{m}$ (cara exterior)

3) Cortante de N por M_t

$V = 1168$ kN
$H_M = 5{,}725$ m (medio) → $A_{st} = 3{,}38$ cm²/m.
$b = 0{,}35$ m

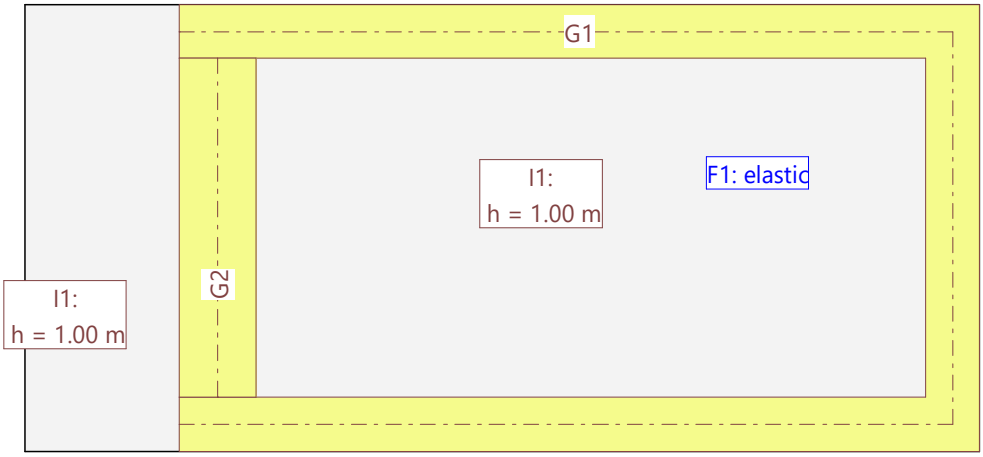
TOTAL ARMADURA VERTICAL

EXT (2m) $6{,}36/2 + 8{,}38 + 3{,}38/2 = 13{,}27 \text{ cm}^2/\text{m}$ → Ø16/0.15

EXT (cinta) $8{,}38 + 3{,}38/2 = 10{,}07$ → Ø14/0.20

(INT) $\frac{3{,}38}{2} + \frac{6{,}36}{2} = 4{,}87 \text{ cm}^2/\text{m}$ → Ø12/0.20

Structure



STRUCTURE DATA

MATERIALS Code: Spanish Code EHE

ID	Type	Member	E [kN/mm²]	ν	ρ [t/m³]	α [‰]	Class	f [N/mm²]	
CC	Concrete	Column	33.60	0.17	2.50	0.010	H300	-30.00	f_{ck}
R	Reinforcement ste	(general)	205.00	0.30	8.00	0.012	AEH500	500.00	f_{yk}

MATERIAL BOXES: Isotropic

Id		Geometry		f_E	Materials	
		Slab thickness [m]	Top surface level [m]		Body	Reinforcement
I1		1.00	0.13	1.000	CC	R

MATERIAL BOXES: Distance to edge and basic reinforcement

Id	Reinforcement cover				Basic reinforcement			
	u_{XT} [cm]	u_{YT} [cm]	u_{XB} [cm]	u_{YB} [cm]	as_{XT} [cm²/m]	as_{YT} [cm²/m]	as_{XB} [cm²/m]	as_{YB} [cm²/m]
I1	3.0	3.0	3.0	3.0	-	-	-	-
I1	3.0	3.0	3.0	3.0	-	-	-	-

MATERIAL BOXES: Additional reinforcement data

Id	Type	Bar diameter				As fixed				Bar spacing			
		$\varnothing_{XT}$ [mm]	$\varnothing_{YT}$ [mm]	$\varnothing_{XB}$ [mm]	$\varnothing_{YB}$ [mm]	As_{XT} [cm²/m]	As_{YT} [cm²/m]	As_{XB} [cm²/m]	As_{YB} [cm²/m]	s_{XT} [cm]	s_{YT} [cm]	s_{XB} [cm]	s_{YB} [cm]
I1	As designed	-	-	-	-	-	-	-	-	15.0	15.0	15.0	15.0
I1	As designed	-	-	-	-	-	-	-	-	15.0	15.0	15.0	15.0

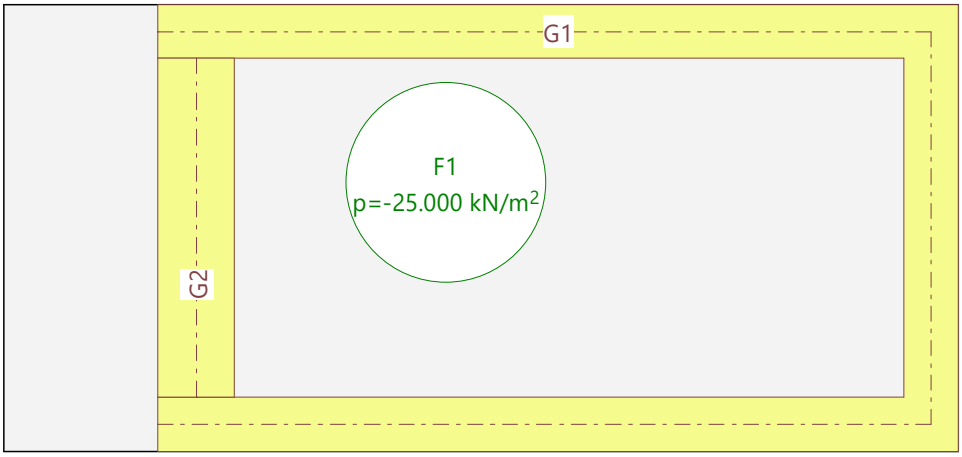
DOWNSTANDING

Id		D.L. upst.beam not considered	Geometry			Materials	
			Width [m]	Total height [m]	Top surface level [m]	f_E	Body	Reinforcement
G1		No	0.35	7.00	3.50	1.000	CC	R
G2		No	0.50	7.00	3.50	1.000	CC	R

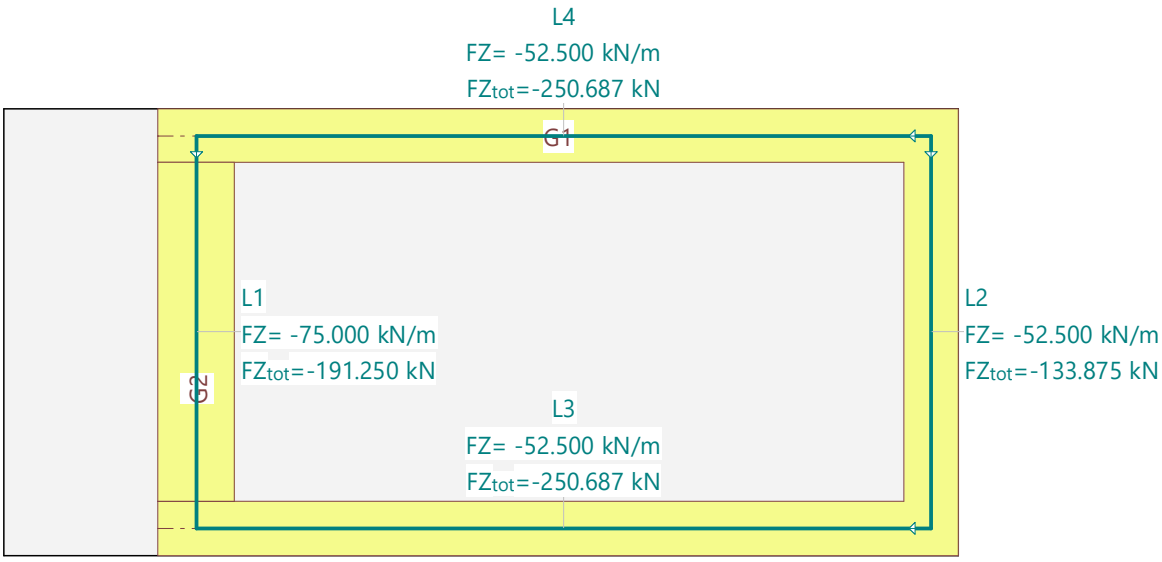
AREA SUPPORT

Id	Type		Support ks [kN/m³]	
		Non lin.		
F1		Yes	100.00	

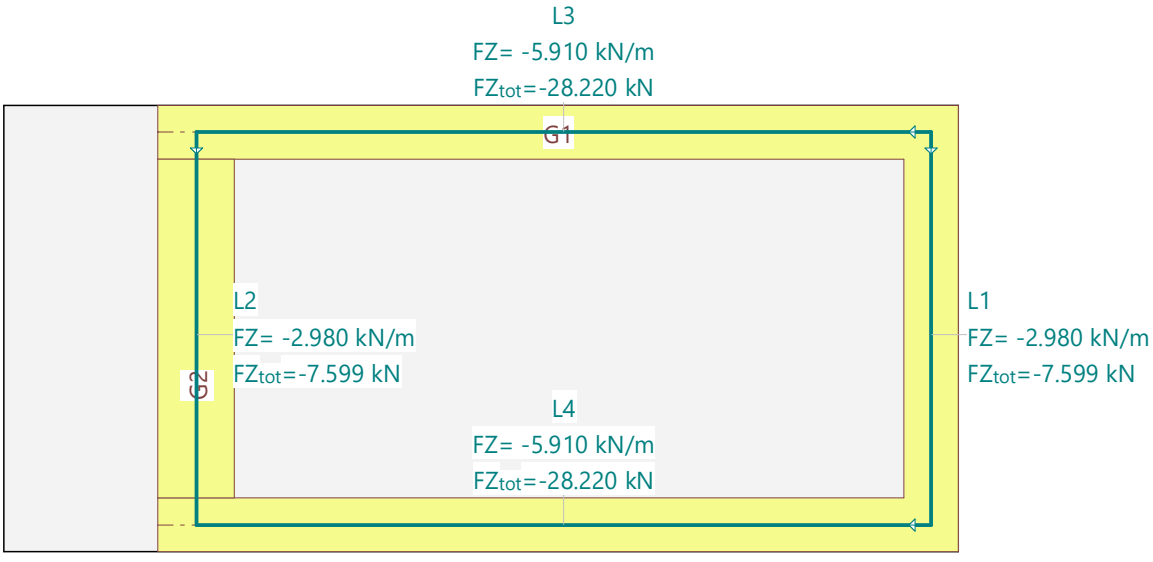
Loading LC01: PP zapata



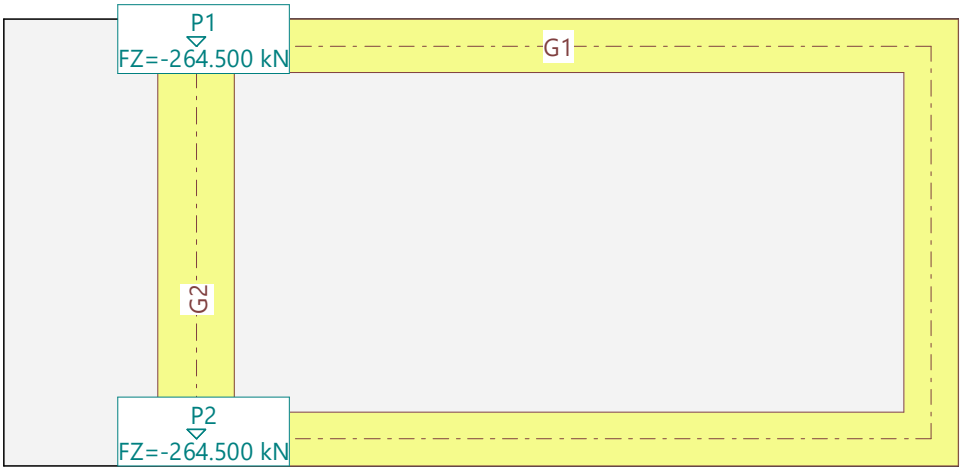
Loading LC02: PP muros



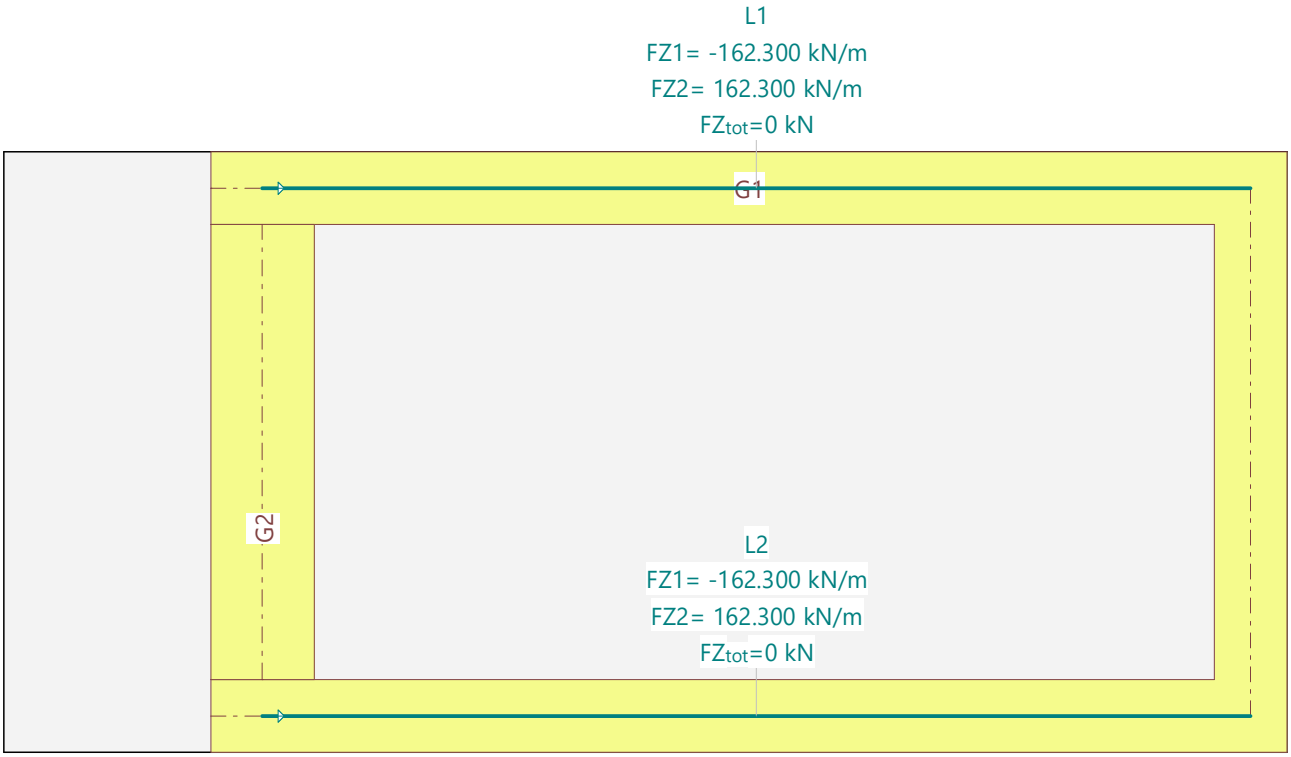
Loading LC03: PP losa sup



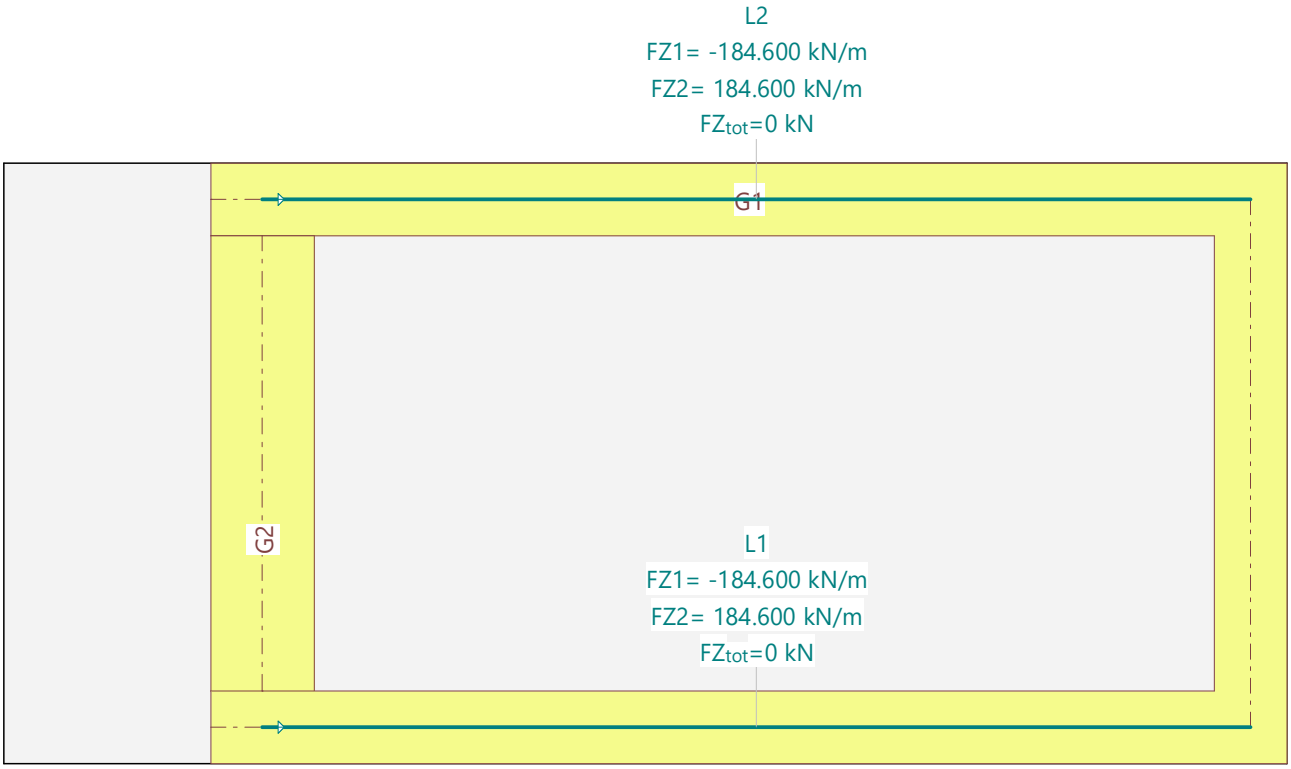
Loading LC11: Vz



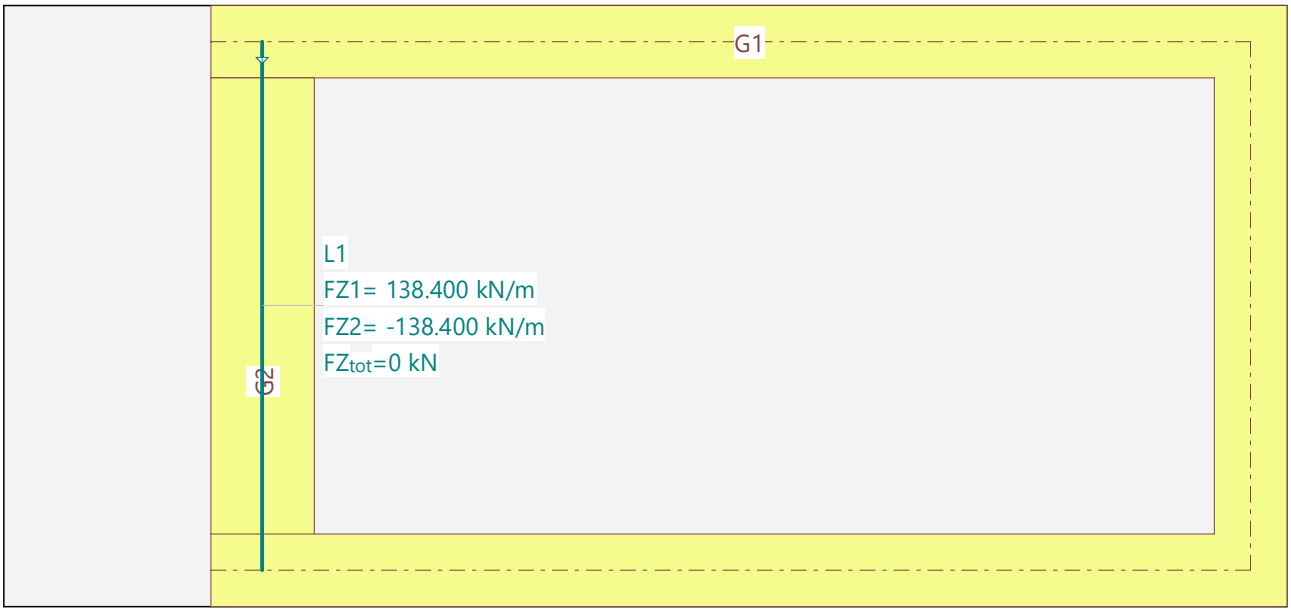
Loading LC12: My



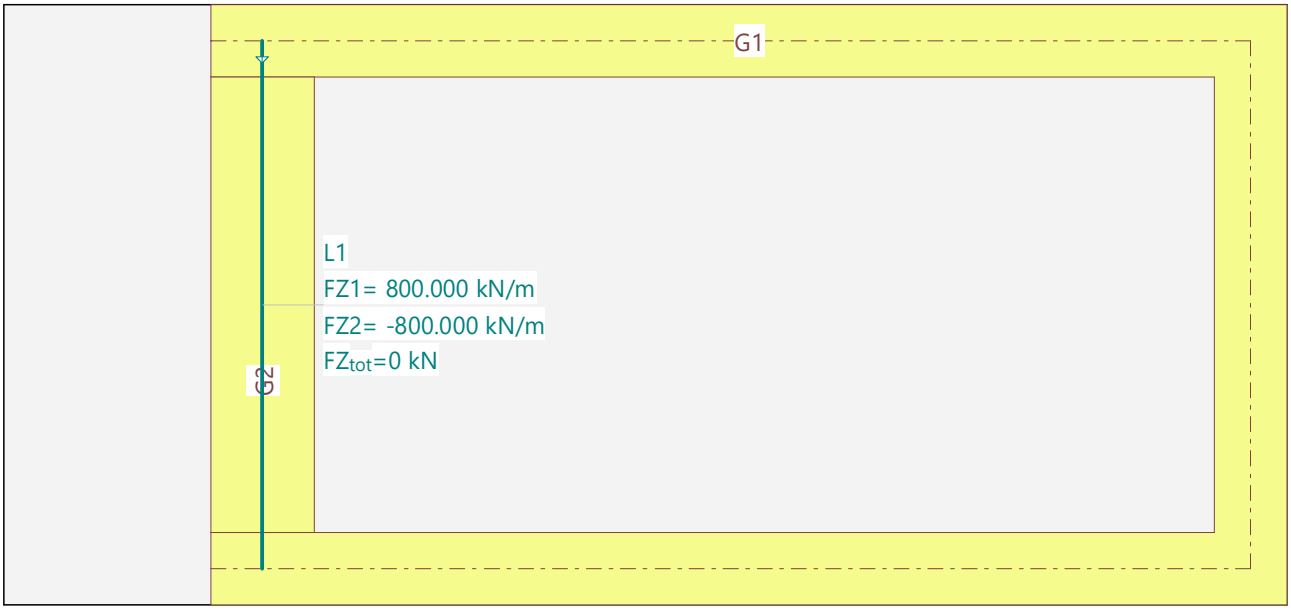
Loading LC13: N



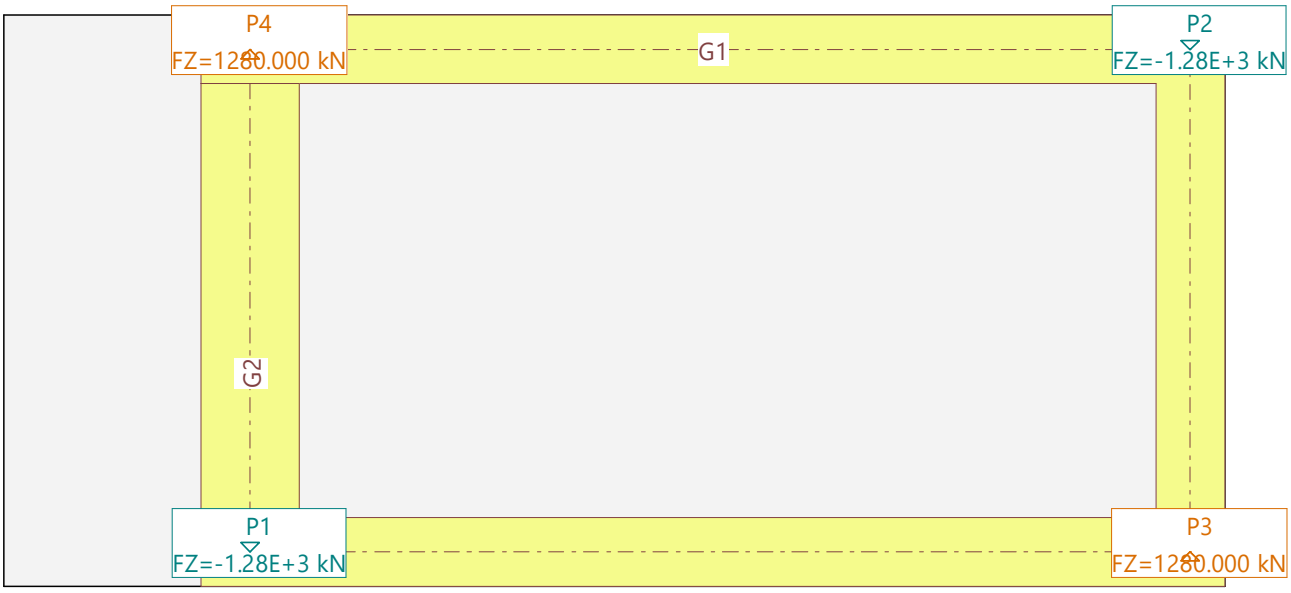
Loading LC14: Mt



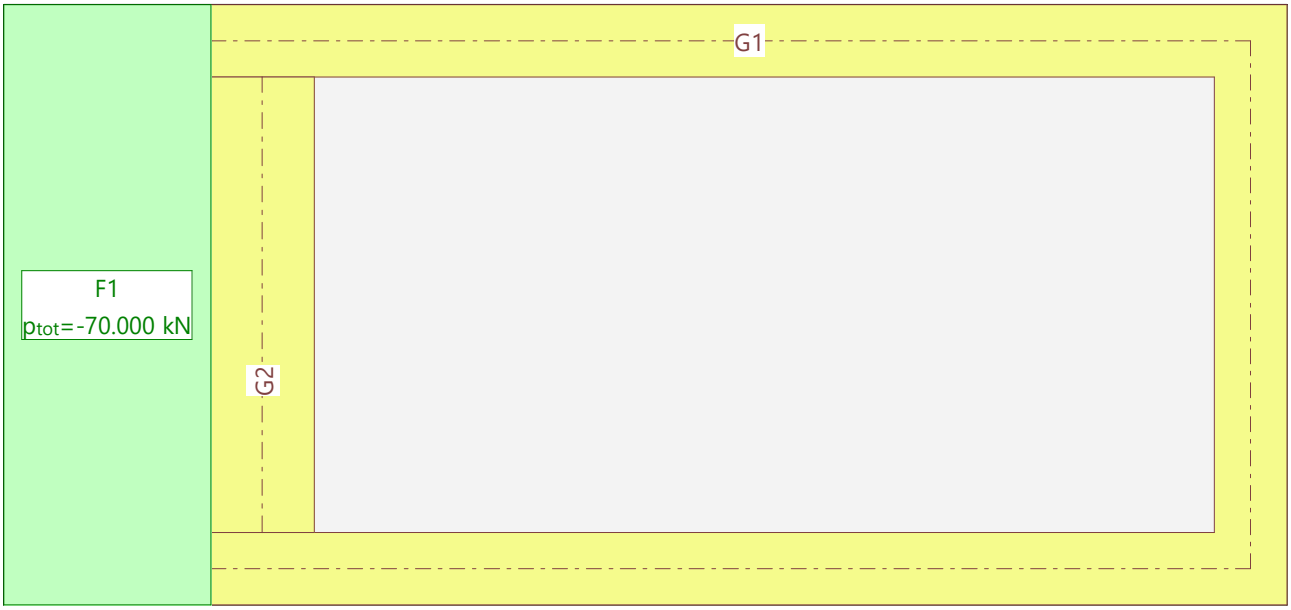
Loading LC15: Vy



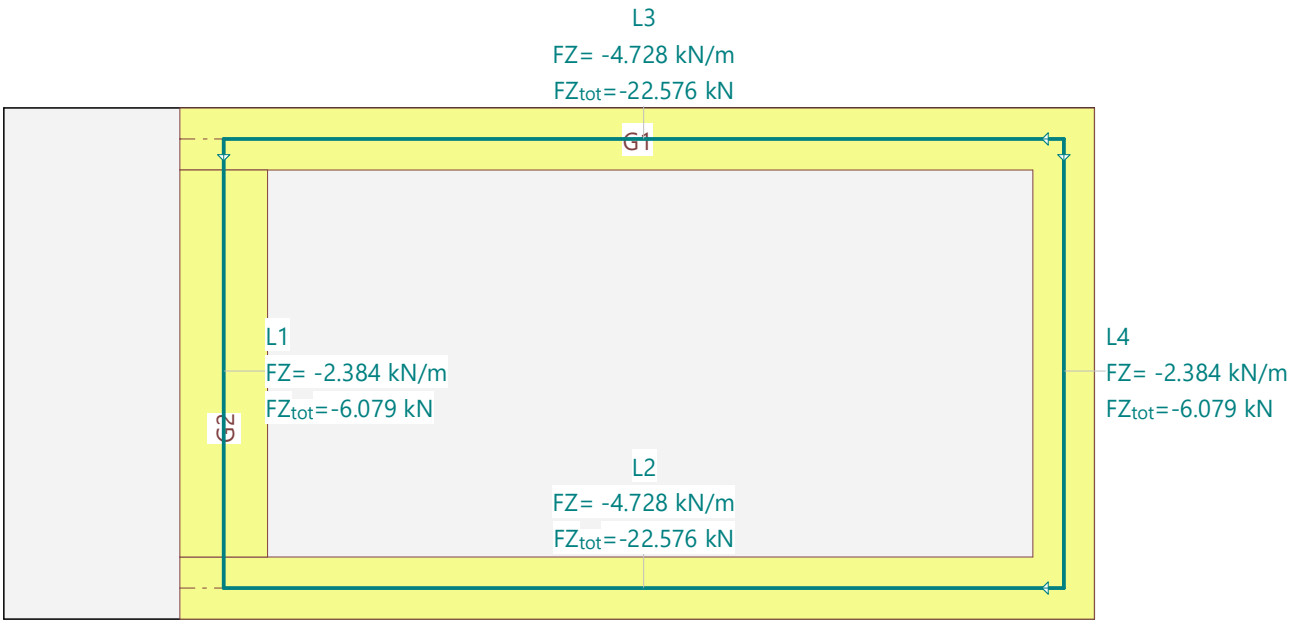
Loading LC16: Mtorsor



Loading LC21: Peso tierras



Loading LC22: SC Peatonal



LOADING LC01 : PP zapata

Distributed load (whole structure)

ID	Geometry Volume [m³]	Thickenss [cm]	Area [m²]		Loads Value [kN/m²]		Sub total Load Z [kN]
F1	51.04	var.	17.98		-25.000		-449.500

Sum Z

		Total Load [kN]
Total		**-449.500**

COMBINATION !Exp-G : permanent

Export combination

	Loading Factor	ID	Description
	1.00	LC01	PP zapata
	1.00	LC02	PP muros
	1.00	LC03	PP losa sup
	1.00	LC11	Vz
	1.00	LC12	My
	1.00	LC13	N
	1.00	LC14	Mt
	1.00	LC15	Vy
	1.00	LC16	Mtorsor
	1.00	LC21	Peso tierras
	1.00	LC22	SC Peatonal

LC02 : PP muros

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	3.23			0	-75.000		
	1.25	0.68		2.55	0	-75.000		-191.250
L2	6.02	3.23			0	-52.500		
	6.02	0.68		2.55	0	-52.500		-133.875
L3	6.02	0.68			0	-52.500		
	1.25	0.68		4.77	0	-52.500		-250.687
L4	6.02	3.23			0	-52.500		
	1.25	3.23		4.77	0	-52.500		-250.687

Sum Z

		Total Load [kN]
Total		**-826.500**

LC03 : PP losa sup

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	6.03	3.23			0	-2.980		
	6.02	0.68		2.55	0	-2.980		-7.599
L2	1.25	3.23			0	-2.980		
	1.25	0.68		2.55	0	-2.980		-7.599
L3	6.03	3.23			0	-5.910		
	1.25	3.23		4.78	0	-5.910		-28.220
L4	6.02	0.68			0	-5.910		
	1.25	0.68		4.77	0	-5.910		-28.220

Sum Z

		Total Load [kN]
Total		**-71.638**

LC11 : Vz

Point load

ID	Geometry X [m]	Y [m]		Moment MX [kNm]	MY [kNm]		Sub total Load Z [kN]
P1	1.25	3.23		0	0		-234.000
P2	1.25	0.68		0	0		-234.000

Sum Z

		Total Load [kN]
Total		**-468.000**

LC12 : My

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	3.23			0	-162.300		
	6.02	3.23		4.77	0	162.300		0.000
L2	1.25	0.68			0	-162.300		
	6.02	0.68		4.77	0	162.300		0.000

Sum Z

		Total Load [kN]
Total		**0.000**

LC13 : N

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	0.68			0	-184.600		
	6.02	0.68		4.77	0	184.600		0.000
L2	1.25	3.23			0	-184.600		
	6.02	3.23		4.77	0	184.600		0.000

Sum Z

		Total Load [kN]
Total		**0.000**

LC14 : Mt

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	3.23			0	138.400		
	1.25	0.68		2.55	0	-138.400		-0.000

Sum Z

		Total Load [kN]
Total		**-0.000**

LC15 : Vy

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	3.23			0	800.000		
	1.25	0.68		2.55	0	-800.000		0.000

Sum Z

		Total Load [kN]
Total		**0.000**

LC16 : Mtorsor

Point load

ID	Geometry X [m]	Y [m]		Moment MX [kNm]	MY [kNm]		Sub total Load Z [kN]
P1	1.25	0.68		0	0		-1280.000
P2	6.02	3.23		0	0		-1280.000
P3	6.02	0.68		0	0		1280.000
P4	1.25	3.23		0	0		1280.000

Sum Z

		Total Load [kN]
Total		**0**

LC21 : Peso tierras

Distributed load (Polygon)

ID	Geometry X [m]	Y [m]	Polygon	Area [m^2]		Loads Value [kN/m^2]		Sub total Load Z [kN]
F1	0.50	1.95	with 4 Pages	2.90		-24.138		-70.000

Sum Z

		Total Load [kN]
Total		**-70.000**

LC22 : SC Peatonal

Line load

ID	Geometry X [m]	Y [m]		Length [m]	Loads MI [kNm/m]	FZ [kN/m]		Sub total Load Z [kN]
L1	1.25	3.23			0	-2.384		
	1.25	0.68		2.55	0	-2.384		-6.079
L2	6.02	0.68			0	-4.728		
	1.25	0.68		4.77	0	-4.728		-22.576
L3	6.03	3.23			0	-4.728		
	1.25	3.23		4.78	0	-4.728		-22.576
L4	6.03	3.23			0	-2.384		
	6.02	0.68		2.55	0	-2.384		-6.079

Sum Z

		Total Load [kN]
Total		-57.311

COMBINATION CC01 : Todas ELU

Combination

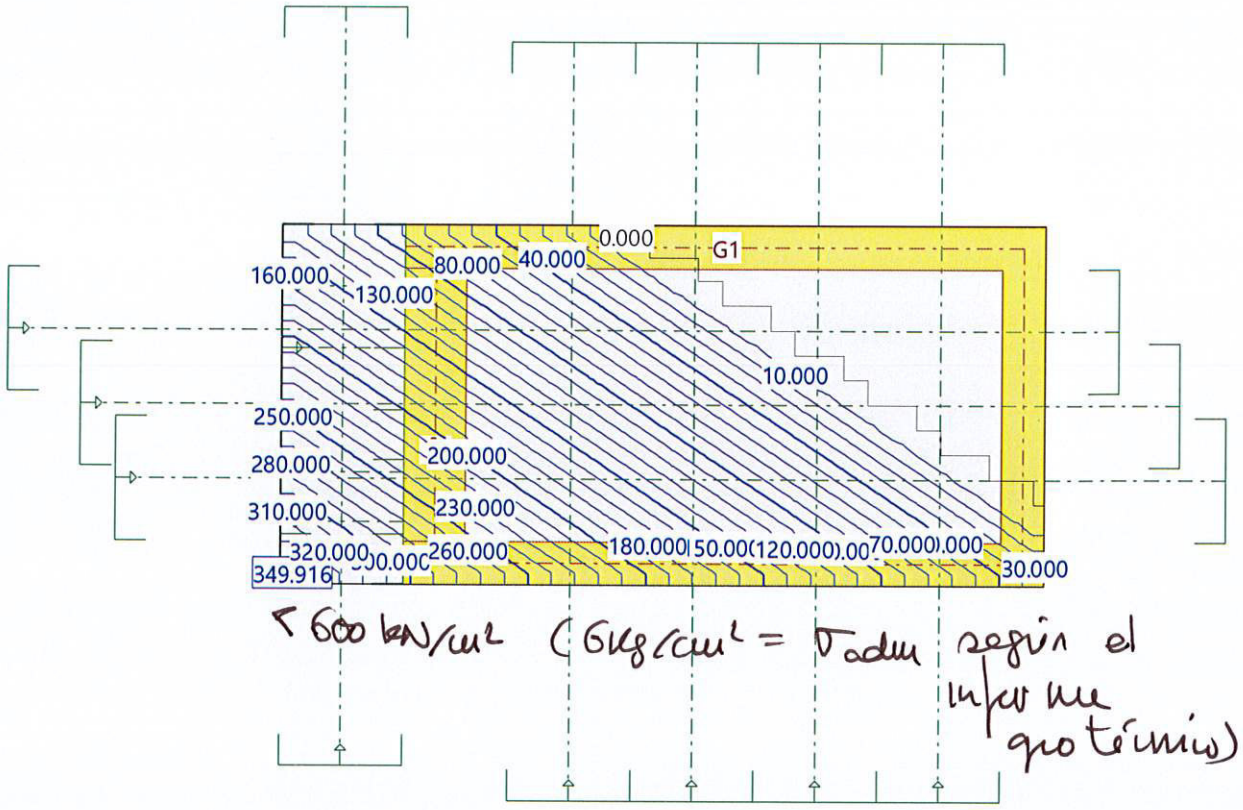
	Loading		
	Factor	ID	Description
	1.35	LC01	PP zapata
	1.35	LC02	PP muros
	1.35	LC03	PP losa sup
	1.00	LC11	Vz
	1.00	LC12	My
	1.00	LC13	N
	1.00	LC14	Mt
	1.00	LC15	Vy
	1.00	LC16	Mtorsor
	1.50	LC21	Peso tierras
	1.35	LC22	SC Peatonal

COMBINATION CC02 : Todas ELS

Combination

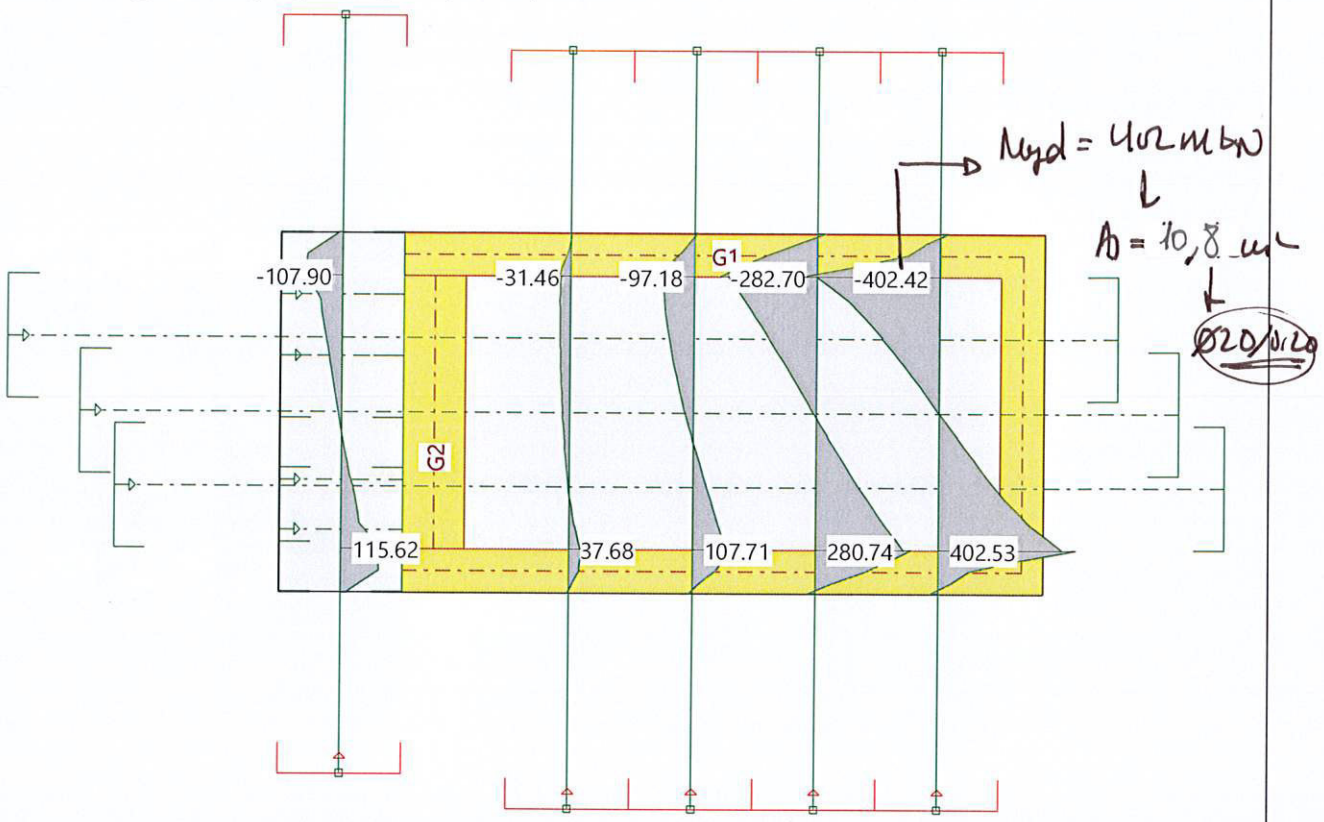
	Loading		
	Factor	ID	Description
	1.00	LC01	PP zapata
	1.00	LC02	PP muros
	1.00	LC03	PP losa sup
	0.74	LC11	Vz
	0.74	LC12	My
	0.74	LC13	N
	0.74	LC14	Mt
	0.74	LC15	Vy
	0.74	LC16	Mtorsor
	1.00	LC21	Peso tierras
	1.00	LC22	SC Peatonal

Area reactions [kN/m2], Equidistance: 10.000 [kN/m2], Reference line: 0.000
Loading CC02 (nonlinear)



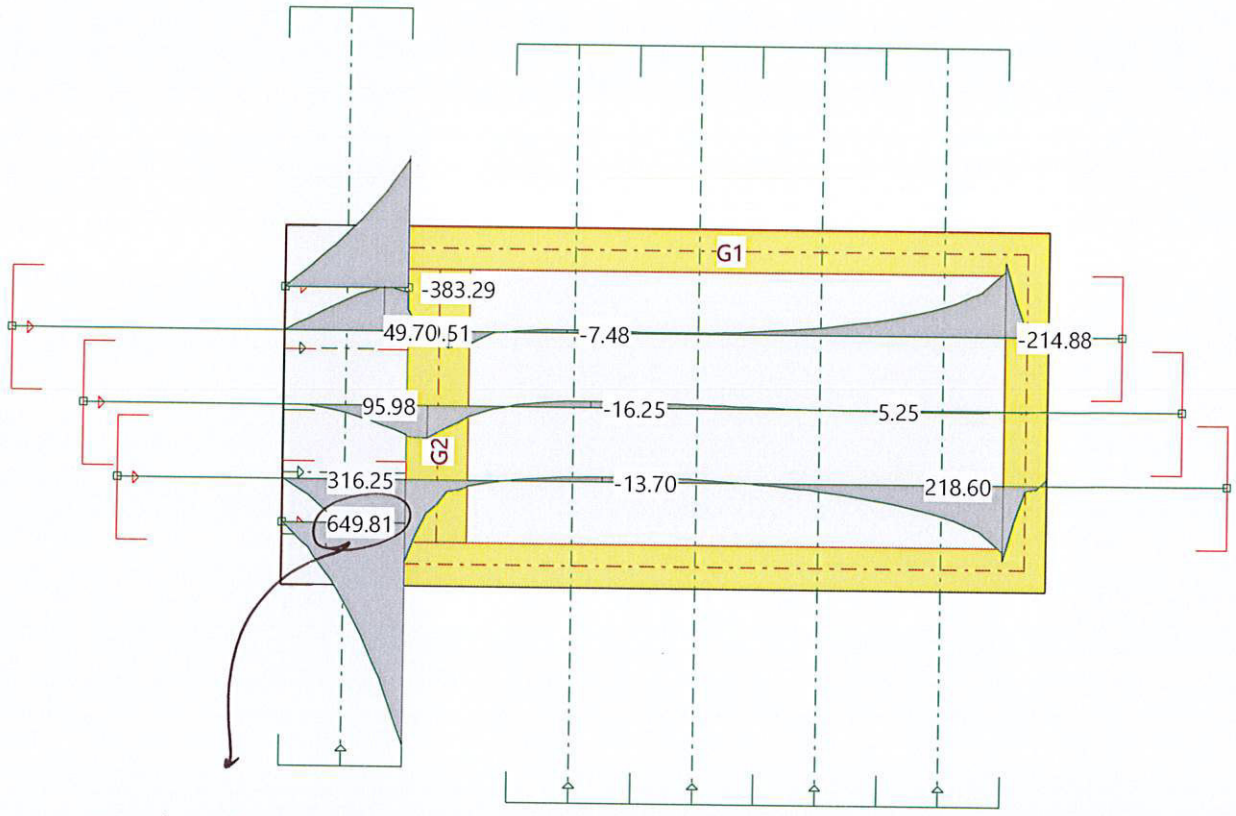
< 600 kN/cm² (6 kg/cm² = σadm según el informe geotécnico)

Beam section(s): Moments [kNm], Loading CC01 (nonlinear)



M_{yd} = 402 mkN
↓
A_s = 10,8 cm²
↓
Ø20/0,20

Beam section(s): Moments [kNm], Loading CC01 (nonlinear)



$M_{yd} = 650$ mkN/m → $A_s = 17{,}8$ cm²/m → Ø16/0.20
+ REF Ø16/0.20

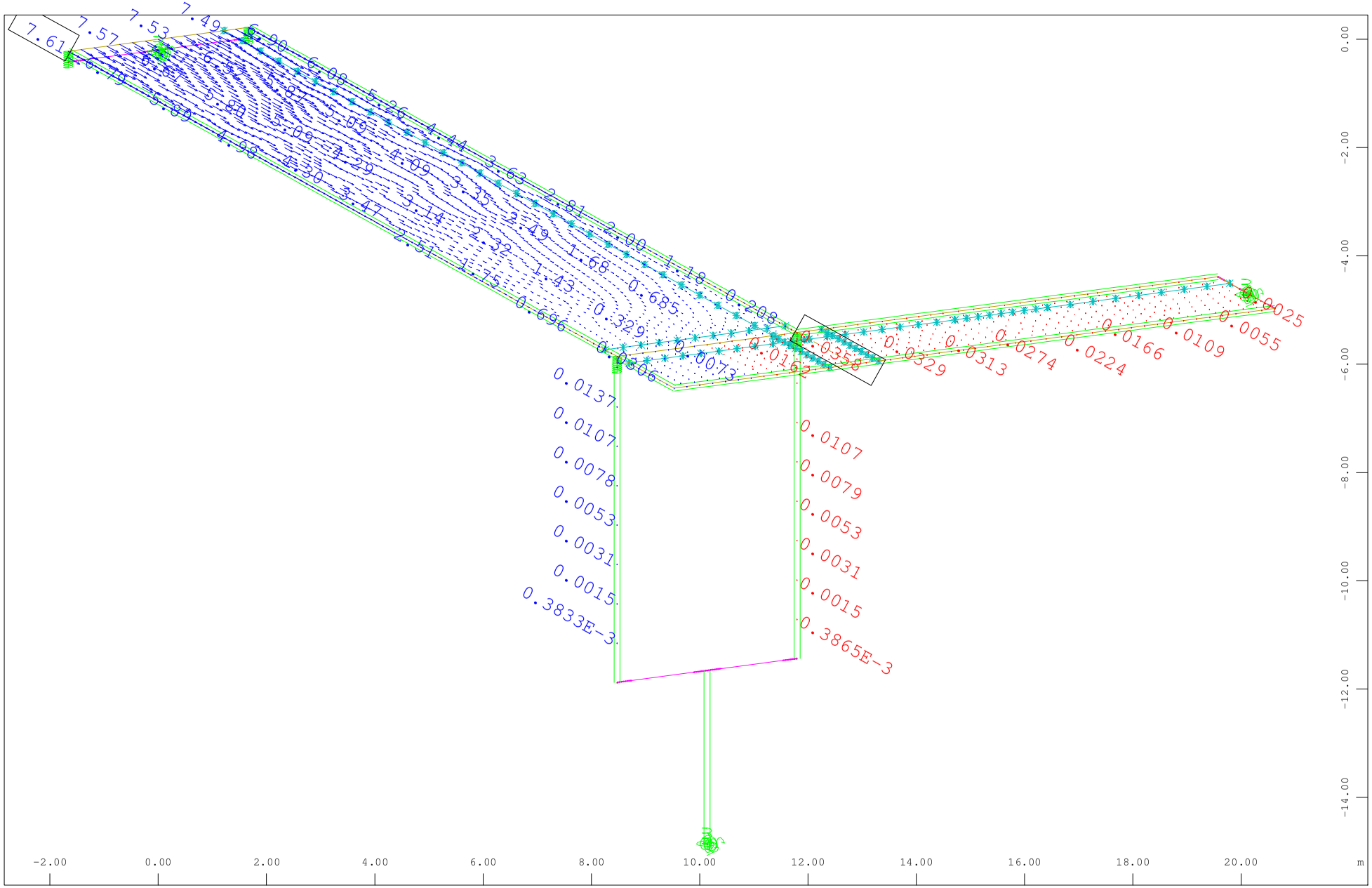
JUNTA DE DILATACIÓN.

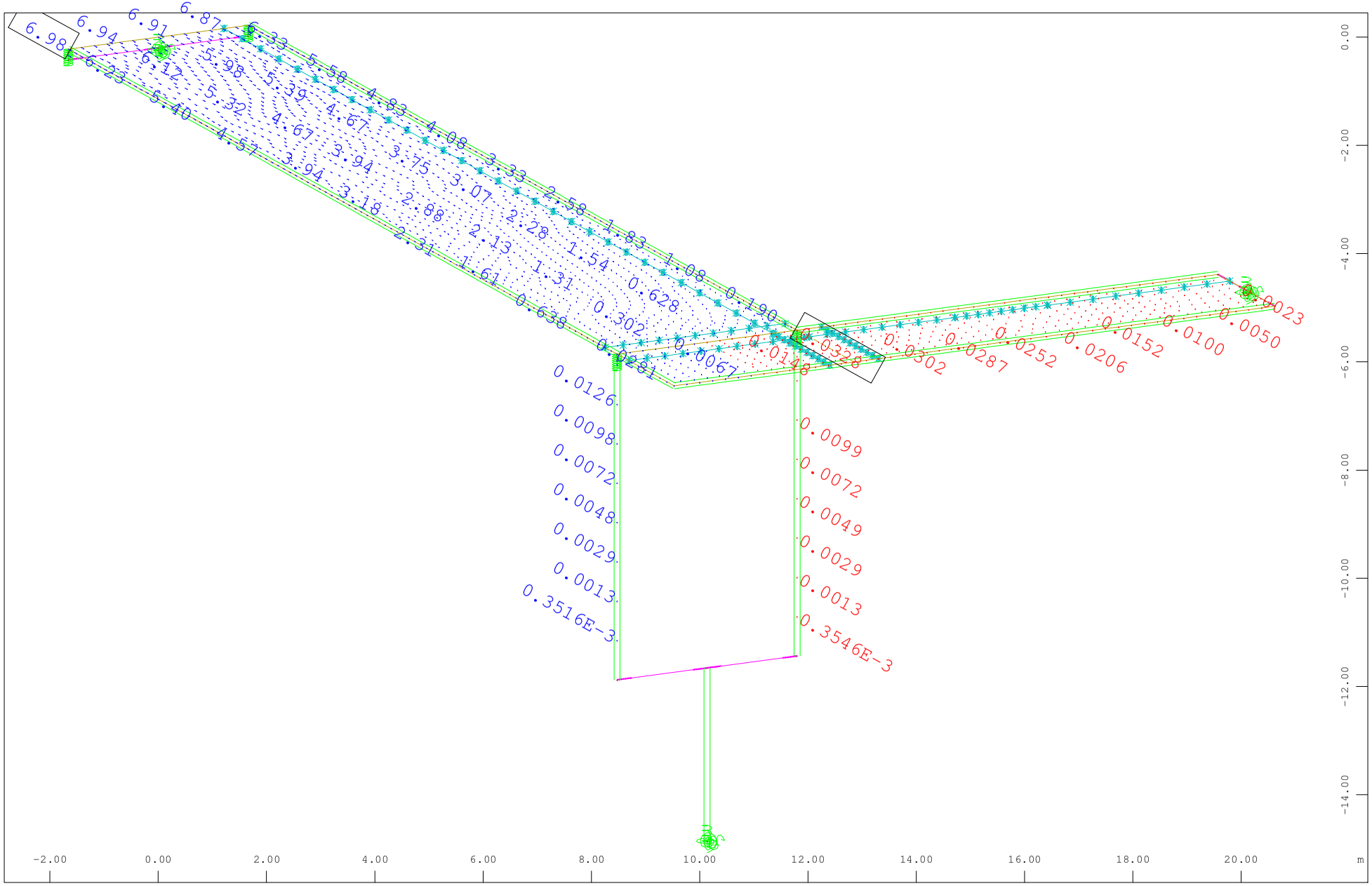
Para el dimensionamiento de la junta se ha considerado:

$$\delta_{ELS\ CARAC} = \underbrace{8mm}_{RET} + \underbrace{7mm}_{\Delta T} = 15mm$$

Se dispone una junta que permite una carrera de movimiento de $\pm 25mm$.

A continuación se incluyen los resultados obtenidos del modelo de SOFISTIK.

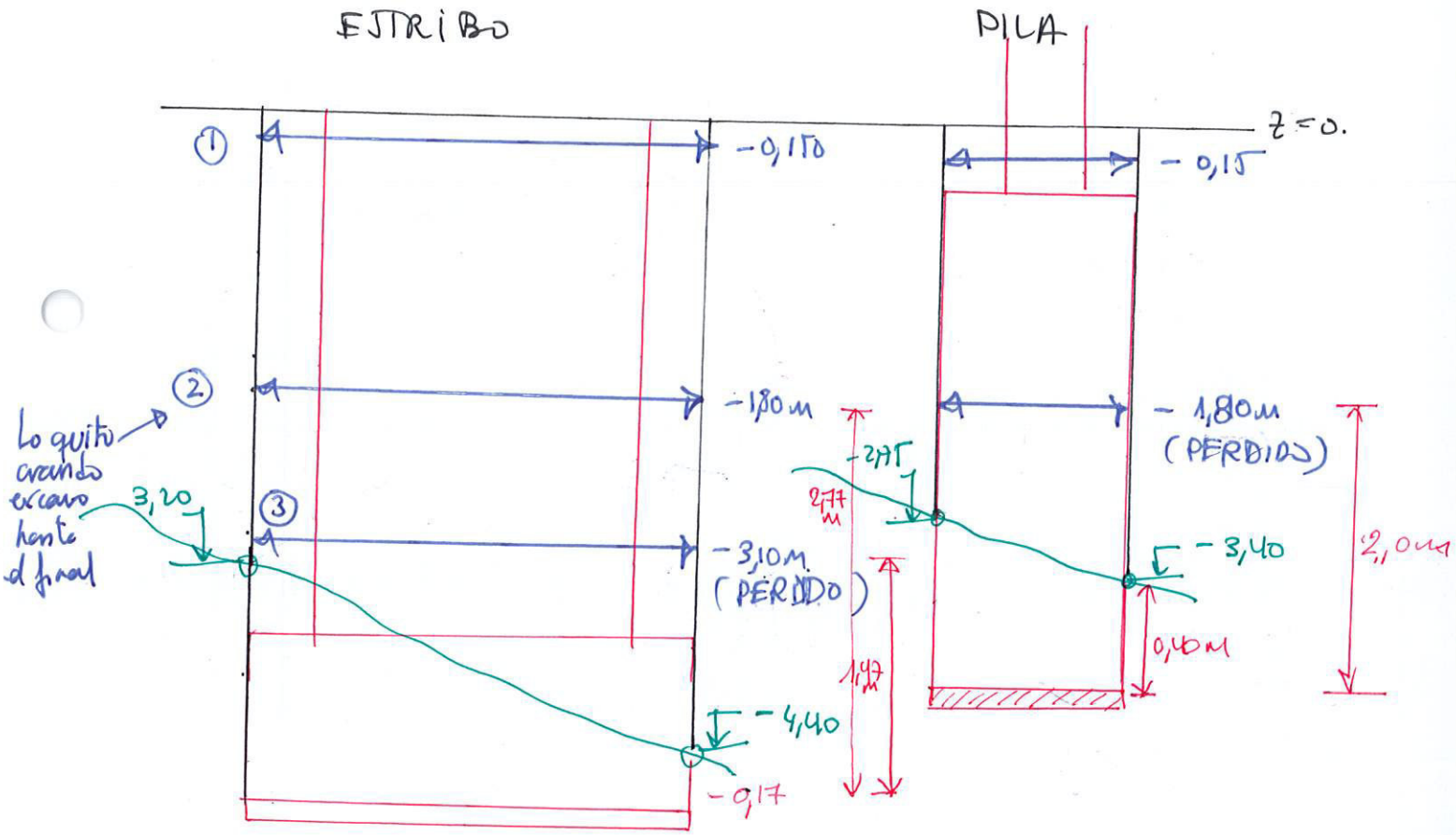

7.61
7.57
7.53
7.49
6.90
6.09
5.26
4.44
3.63
2.81
2.00
1.18
0.208
0.696
1.15
1.51
2.51
3.47
4.30
4.98
5.09
4.29
3.14
2.32
1.43
0.329
0.685
1.68
2.49
3.35
4.09
4.29
5.09
5.80
6.67
6.79
0.0073
0.0162
0.0329
0.0313
0.0274
0.0224
0.0166
0.0109
0.0055
0.0025
0.0137
0.0107
0.0078
0.0053
0.0031
0.0015
0.3833E-3
0.0107
0.0079
0.0053
0.0031
0.0015
0.3865E-3
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
-12.00
-14.00
-2.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
m
Z
Y
X
Nodal displacement in global X, Loadcase 2 RETRACCION , 1 cm 3D = 15.4 mm
(Min=-0.0358) (Max=7.61)
M 1 : 98
X * 0.502
Y * 0.906
Z * 0.962


6.98
6.94
6.91
6.87
6.33
5.98
5.59
5.32
4.93
4.67
4.08
3.75
3.07
2.88
2.32
2.13
1.54
1.31
0.628
0.302
0.190
0.0067
0.0148
0.0281
0.0328
0.0302
0.0287
0.0252
0.0206
0.0152
0.0100
0.0050
0.0023
0.0126
0.0098
0.0072
0.0048
0.0029
0.0013
0.3516E-3
0.0099
0.0072
0.0049
0.0029
0.0013
0.3546E-3
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
-12.00
-14.00
-2.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
m
Z
Y
X
Nodal displacement in global X, Loadcase 204 T UNIF - APOYOS , 1 cm 3D = 57.1 mm
(Min=-0.0328) (Max=6.98)
M 1 : 98
X * 0.502
Y * 0.906
Z * 0.962

EXCAVACIÓN

A continuación se incluyen los cálculos de las excavaciones mediante entibación tanto de la pila intermedia como del Estribo 2.

Para ello, se ha utilizado el programa de cálculo RIDO -4.



- Terreno { $\phi = 30°$; $c' = 0$ kPa ; $\gamma = 20$ kN/m³ ; $k_h = 40\,000$ kN/m³.
- PUNTALES: HEB – 100
  - En el caso en el que sean más flexibles → $k = \frac{EA}{L} = 376571$ kN/m
    - $E = 210 \cdot 10^6$
    - $A = 26\,cm^2 \cdot 10^{-4}$
    - $L = \frac{2,9}{2}$
    - ↓ 1,60m
    - 235344 kN/m
    - ↓
    - ≈ 23000 t/m

De todos los resultados obtenidos:

- $N_{max\ puntal} = 82{,}9\,kN \longrightarrow N = 85\,kN$
- $M_{pant} = 30{,}9\,mkN \longrightarrow N = 31\,mkN$

1) Comprobación pantalla:

$$\sigma = \frac{31 \cdot (1{,}5)}{(W)} \cdot 10^{-3} = 144\,MPa < \frac{275}{1{,}1} = 250\,MPa \quad \underline{OK}$$

(1,5: ELU; $W = 322 \cdot 10^{-6}$)

2) Comprobación puntales:

$$N_{max} = 85 \cdot (1{,}6) \cdot 1{,}5 = 204\,kN$$

(1,6: separación máxima)

HEB-100 → CLASE (1).

Aplicando EC-3 → $\varepsilon = \sqrt{\frac{275}{275}} = 1$

$$\lambda = \frac{l_p}{i} = \frac{(1)\ 290}{2{,}53} = 114{,}6 \quad \left.\right\} \quad \bar{\lambda} = \frac{114{,}6}{93{,}9} = 1{,}22$$

$$\lambda_1 = 93{,}9 \cdot (\varepsilon) = 93{,}9$$

(1: long. pandeo)

Perfil laminado $h/b = 1 \leq 1{,}2$ y $t_f \leq 100\,mm$ y Eje z → CURVA (c).

↓

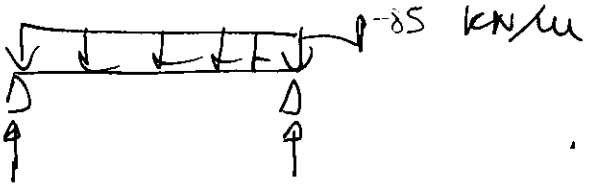
$\chi = 0{,}43$

$$N_{max} = 26 \cdot 10^{-4} \cdot \frac{275 \cdot 10^3}{1{,}1} \cdot 0{,}43 = 279{,}5\,kN > \boxed{204\,kN}$$

OK

3) Comprobación viga reparto

↳ Del lado de la seguridad.



$$M = \frac{85 \cdot 1,5 \cdot 1,6^2}{8} = 40,8 \text{ mkN}$$

HEB 140 → $W_x = 216 \text{ cm}^3$

↳ $\sigma = \frac{40,8}{216 \cdot 10^{-6}} \cdot 10^{-3} = 189 < 250 \text{ MPa}$

↓

OK

Product information

1.17.1 PAL and PAU sections

Fig 1.17.1

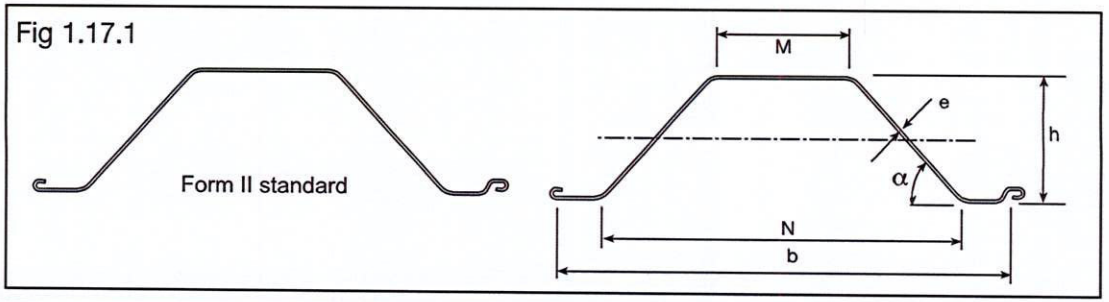


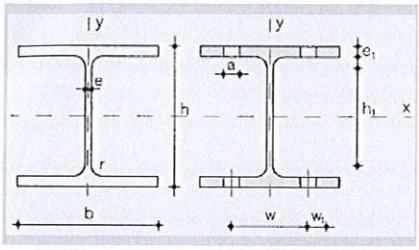
Table 1.17.1

	Type	Thickness	System width	Height	Angle	Other dimensions		Mass single pile	Mass wall	Section modulus elastic	Inertia	Radius of gyration	Cross section area	Coating area (*) single SSP
		e	b	h	α	M	N				I			
		mm	mm	mm	°	mm	mm	kg/m	kg/m²	cm³/m	cm⁴/m	cm	cm²/m	m²/m
	**PAL3030**	3.00	660	89.0	41	260	466	19.4	29.4	**112**	500	3.70	37.5	0.80
	PAL3040	4.00	660	90.0	41	260	466	25.8	39.2	**147**	666	3.70	49.9	0.80
	PAL3050	5.00	660	91.0	41	260	466	32.2	48.8	**181**	831	3.70	62.2	0.80
	**PAL3130**	3.00	711	125.0	79	350	419	23.5	33.1	**199**	1244	5.40	42.2	0.97
	PAL3140	4.00	711	126.0	79	350	419	31.3	44.0	**261**	1655	5.40	56.1	0.97
	PAL3150	5.00	711	127.0	79	350	419	39.0	54.9	**322**	2063	5.40	70.0	0.97
	**PAL3260**	6.00	700	149.0	61	299	471	46.2	66.0	**413**	3096	6.10	84.1	0.92
	PAL3270	7.00	700	150.0	61	299	471	53.2	76.0	**479**	3604	6.10	96.8	0.92
	PAL3280	8.00	700	151.0	61	299	471	61.6	88.0	**545**	4109	6.10	112.1	0.92
	PAL3290	9.00	700	152.0	61	299	471	70.0	100.0	**605**	4611	6.00	127.4	0.92
	**PAU2240**	4.00	922	252.0	48	252	725	39.0	42.3	**404**	5101	9.70	53.9	1.22
	PAU2250	5.00	921	253.0	48	252	725	48.7	52.8	**504**	6363	9.70	67.3	1.22
	PAU2260	6.00	921	254.0	48	252	725	58.3	63.3	**600**	7620	9.70	80.7	1.22
	**PAU2440**	4.00	813	293.0	60	252	615	39.0	48.0	**537**	7897	11.40	61.1	1.22
	PAU2450	5.00	813	294.0	60	252	615	48.7	59.9	**669**	9858	11.40	76.3	1.22
	PAU2460	6.00	813	295.0	60	252	615	58.3	71.8	**801**	11813	11.40	91.4	1.22
	**PAU2760**	6.00	804	295.0	60	252	615	60.4	75.1	**803**	12059	11.20	95.7	1.16
	PAU2770	7.00	804	296.0	60	252	615	70.4	87.5	**934**	14030	11.20	111.4	1.16
	PAU2780	8.00	804	297.0	60	252	615	80.3	99.8	**1063**	15995	11.20	127.1	1.16

Other thicknesses in the PAL and PAU series can be formed.

(*) 1 side, excluding inside of interlocks

Tabla 2.A1.3. Perfiles HEB, HEA y HEM

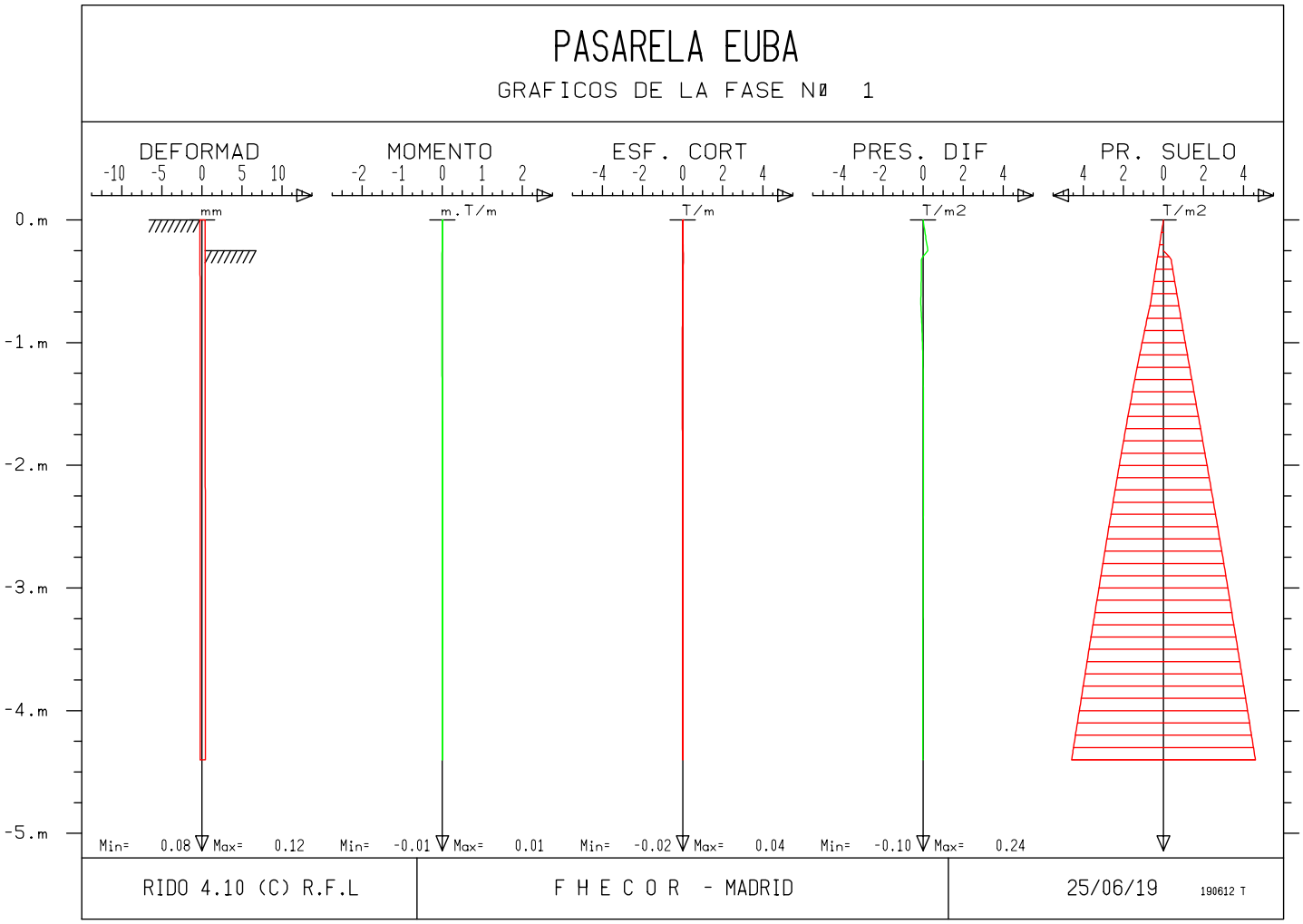


A = Área de la sección
S_x = Momento estático de media sección, respecto a X
I_x = Momento de inercia de la sección, respecto a X
$W_x = 2I_x : h$. Módulo resistente de la sección, respecto a X
$i_x = \sqrt{I_x : A}$. Radio de giro de la sección, respecto a X
I_y = Momento de inercia de la sección, respecto a Y
$W_y = 2I_y : b$. Módulo resistente de la sección, respecto a Y
$i_y = \sqrt{I_y : A}$. Radio de giro de la sección, respecto a Y
I_t = Módulo de torsión de la sección
I_a = Módulo de alabeo de la sección
u = Perímetro de la sección
a = Diámetro del agujero del roblón normal
w = Gramil, distancia entre ejes de agujeros
h_1 = Altura de la parte plana del alma
p = Peso por m

Perfil	Dimensiones							Términos de sección										Agujeros			Peso	
	h	b	e	e_1	r_1	h_1	u	A	S_x	I_x	W_x	i_x	I_y	W_y	i_y	I_t	I_a	w	w_1	a	p	
	mm	mm	mm	mm	mm	mm	mm	cm^2	cm^3	cm^4	cm^3	cm	cm^4	cm^3	cm	cm^4	cm^6	mm	mm	mm	kp/m	
HEB 100	100	100	6,0	10,0	12	56	567	26,0	52,1	450	90	4,16	167	33	2,53	9,34	3.375	55	–	13	20,4	P
HEB 120	120	120	6,5	11,0	12	74	686	34,0	82,6	864	144	5,04	318	53	3,06	14,90	9.410	65	–	17	26,7	P
HEB 140	140	140	7,0	12,0	12	92	805	43,0	123,0	1.509	216	5,93	550	79	3,58	22,50	22.480	75	–	21	33,7	P
HEB 160	160	160	8,0	13,0	15	104	918	54,3	177,0	2.492	311	6,78	889	111	4,05	33,20	47.940	85	–	23	42,6	P
HEB 180	180	180	8,5	14,0	15	122	1.040	65,3	241,0	3.831	426	7,66	1.363	151	4,57	46,50	93.750	100	–	25	51,2	P
HEB 200	200	200	9,0	15,0	18	134	1.150	78,1	321,0	5.696	570	8,54	2.003	200	5,07	63,40	171.100	110	–	25	61,3	P
HEB 220	220	220	9,5	16,0	18	152	1.270	91,0	414,0	8.091	736	9,43	2.843	258	5,59	84,40	295.400	120	–	25	71,5	P
HEB 240	240	240	10,0	17,0	21	164	1.380	106,0	527,0	11.259	938	10,30	3.923	327	6,08	110,00	486.900	90	35	25	83,2	P
HEB 260	260	260	10,0	17,5	24	177	1.500	118,4	641,0	14.919	1.150	11,20	5.135	395	6,58	130,00	753.700	100	40	25	93,0	P
HEB 280	280	280	10,5	18,0	24	196	1.620	131,4	767,0	19.270	1.380	12,10	6.595	471	7,09	153,00	1.130.000	110	45	25	103,0	P
HEB 300	300	300	11,0	19,0	27	208	1.730	149,1	934,0	25.166	1.680	13,00	8.563	571	7,58	192,00	1.688.000	120	50	25	117,0	P
HEB 320	320	300	11,5	20,5	27	225	1.770	161,3	1.070,0	30.823	1.930	13,80	9.239	616	7,57	241,00	2.069.000	120	50	25	127,0	P
HEB 340	340	300	12,0	21,5	27	243	1.810	170,9	1.200,0	36.656	2.160	14,60	9.690	646	7,53	278,00	2.454.000	120	50	25	134,0	P
HEB 360	300	300	12,5	22,5	27	261	1.850	180,6	1.340,0	43.193	2.400	15,50	10.140	676	7,49	320,00	2.883.000	120	50	25	142,0	P
HEB 400	400	300	13,5	24,0	27	298	1.930	197,8	1.620,0	57.680	2.880	17,10	10.819	721	7,40	394,00	3.817.000	120	50	25	155,0	P
HEB 450	450	300	14,0	26,0	27	344	2.030	218,0	1.990,0	79.887	3.550	19,10	11.721	781	7,33	500,00	5.258.000	120	50	25	171,0	P
HEB 500	500	300	14,5	28,0	27	390	2.120	238,6	2.410,0	107.176	4.290	21,20	12.624	842	7,27	625,00	7.018.000	120	45	28	187,0	C
HEB 550	550	300	15,0	29,0	27	438	2.220	254,1	2.800,0	136.691	4.970	23,20	13.077	872	7,17	701,00	8.856.000	120	45	28	199,0	C
HEB 600	600	300	15,5	30,0	27	486	2.320	270,0	3.210,0	171.041	5.700	25,20	13.530	902	7,08	783,00	10.965.000	120	45	28	212,0	C
HEA 100	96	100	5,0	8,0	12	56	561	21,2	41,5	349	73	4,06	134	27	2,51	4,83	2.581	55	–	13	16,7	C
HEA 120	114	120	5,0	8,0	12	74	677	25,3	59,7	606	106	4,89	231	38	3,02	5,81	6.472	65	–	17	19,9	C
HEA 140	133	140	5,5	8,5	12	92	794	31,4	86,7	1.033	155	5,73	389	56	3,52	8,22	15.060	75	–	21	24,7	C
HEA 150	152	160	6,0	9,0	15	104	906	38,8	123,0	1.673	220	6,57	616	77	3,98	11,30	31.410	85	–	23	30,4	C
HEA 180	171	180	6,0	9,5	15	122	1020	45,3	162,0	2.510	294	7,45	925	103	4,52	14,70	60.210	100	–	25	35,5	C
HEA 200	190	200	6,5	10,0	18	134	1140	53,8	215,0	3.692	389	8,28	1.336	134	4,98	19,20	108.000	110	–	25	42,3	C
HEA 220	210	220	7,0	11,0	18	152	1260	64,3	284,0	5.410	515	9,17	1.955	178	5,51	28,00	193.300	120	–	25	50,5	C
HEA 240	230	240	7,5	12,0	21	164	1370	76,8	372,0	7.763	675	10,10	2.769	231	6,00	39,40	328.500	90	35	25	60,3	C
HEA 260	250	260	7,5	12,5	24	177	1480	86,8	460,0	10.455	836	11,00	3.668	282	6,50	47,80	516.400	100	40	25	68,2	C
HEA 280	270	280	8,0	13,0	24	196	1600	97,3	556,0	13.673	1.010	11,90	4.763	340	7,00	58,30	785.400	110	45	25	76,4	C
HEA 300	290	300	8,5	14,0	27	208	1720	112,5	692,0	18.263	1.260	12,70	6.310	421	7,49	77,70	1.200.000	120	50	25	88,3	C
HEA 320	310	300	9,0	15,5	27	225	1760	124,4	814,0	22.928	1.480	13,60	6.985	466	7,49	105,00	1.512.000	120	50	25	97,6	C
HEA 340	330	300	9,5	16,5	27	243	1790	133,5	925,0	27.693	1.680	14,40	7.436	496	7,46	127,00	1.824.000	120	50	25	105,0	C
HEA 360	350	300	10,0	17,5	27	261	1830	142,8	1.040,0	33.090	1.890	15,20	7.887	526	7,43	152,00	2.177.000	120	50	25	112,0	C
HEA 400	390	300	11,0	19,0	27	298	1910	159,0	1.280,0	45.069	2.310	16,80	8.564	571	7,34	197,00	2.942.000	120	50	25	125,0	C
HEA 450	440	300	11,5	21,0	27	344	2010	178,0	1.610,0	63.722	2.900	18,90	9.465	631	7,29	265,00	4.148.000	120	50	25	140,0	C
HEA 500	490	300	12,0	23,0	27	390	2110	197,5	1.970,0	86.975	3.550	21,00	10.367	691	7,24	347,00	5.643.000	120	45	28	155,0	C
HEA 550	540	300	12,5	24,0	27	438	2210	211,8	2.310,0	111.932	4.150	23,00	10.819	721	7,15	398,00	7.189.000	120	45	28	166,0	C
HEA 600	590	300	13,0	25,0	27	486	2310	226,5	2.680,0	141.208	4.790	25,00	11.271	751	7,05	454,00	8.978.000	120	45	28	178,0	C

(continúa)

ESTRIBO 2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RIDO 4.10 (C) R.F.L
F H E C O R - MADRID
25/06/19
190612 T

PASARELA EUBA

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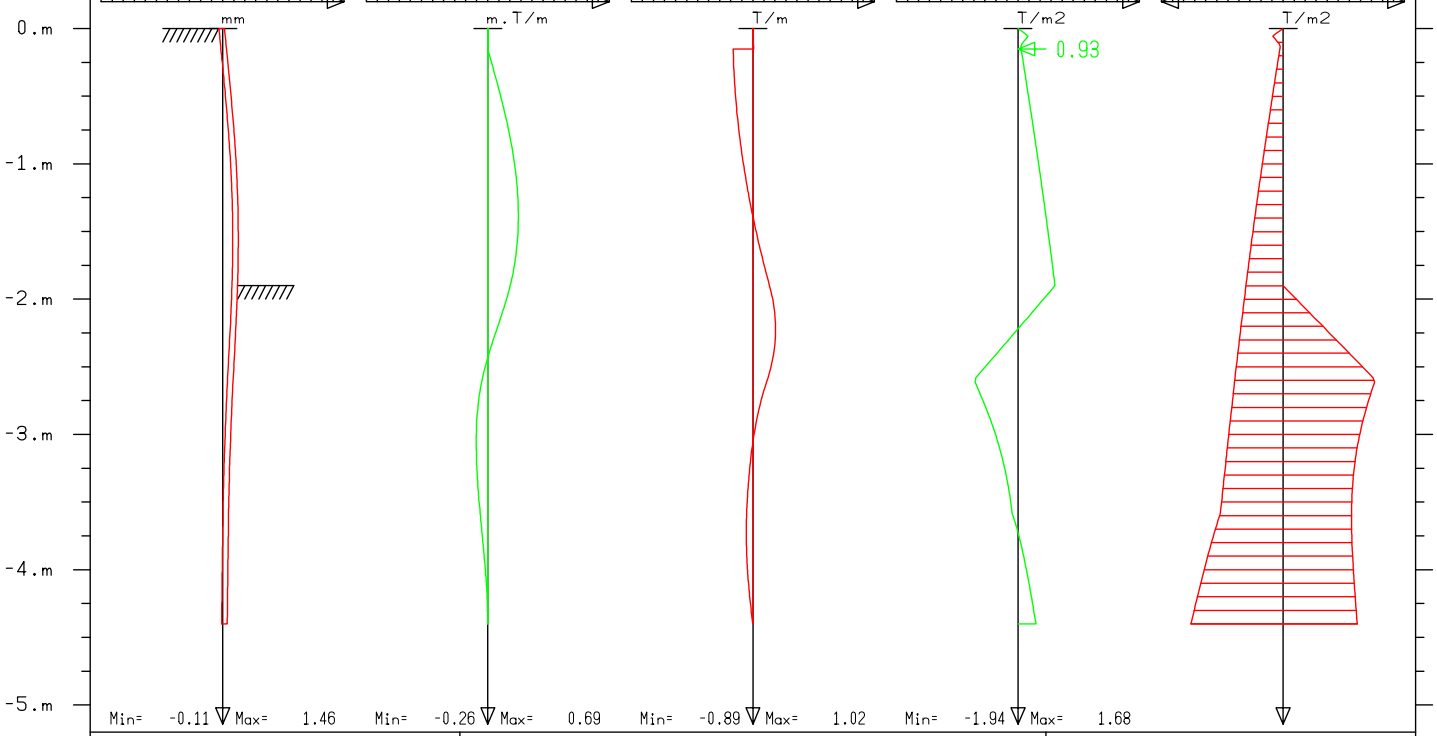

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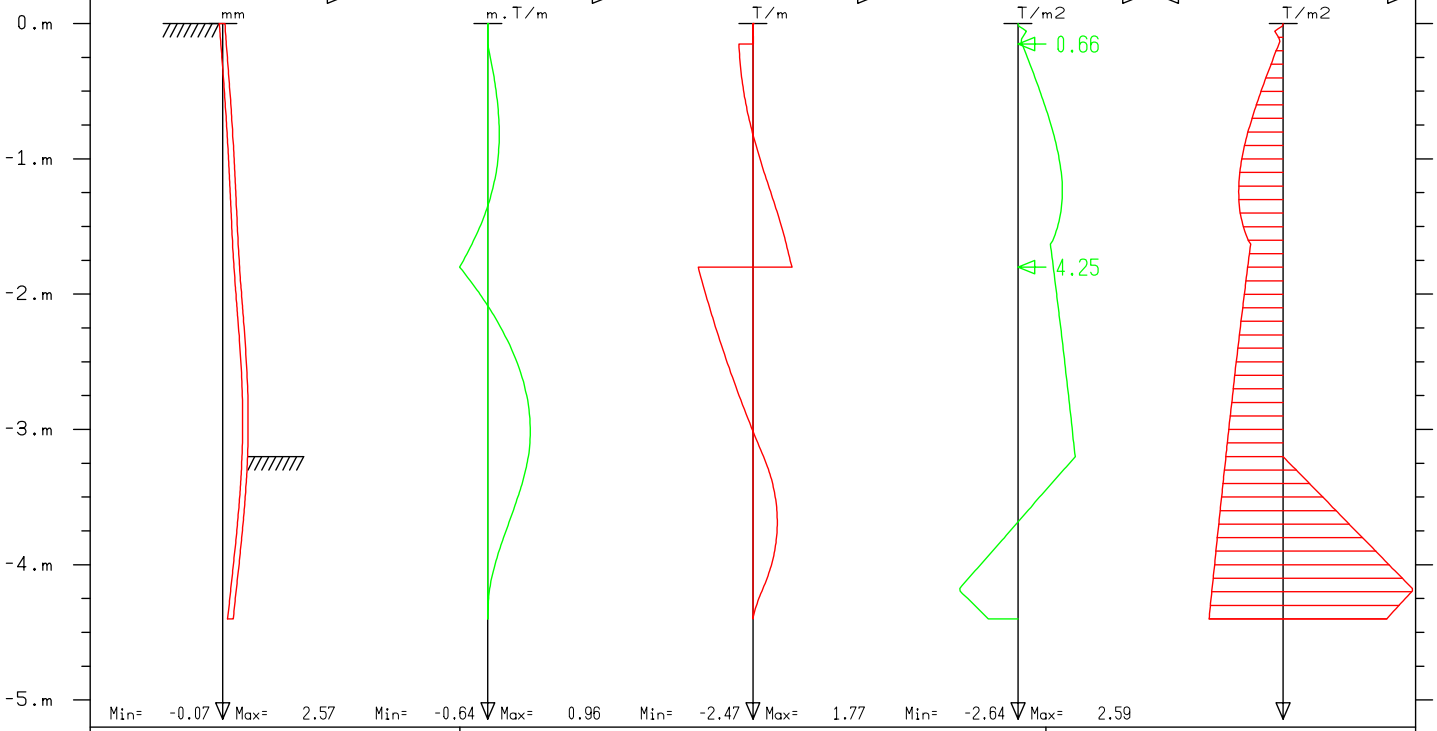

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PASARELA EUBA

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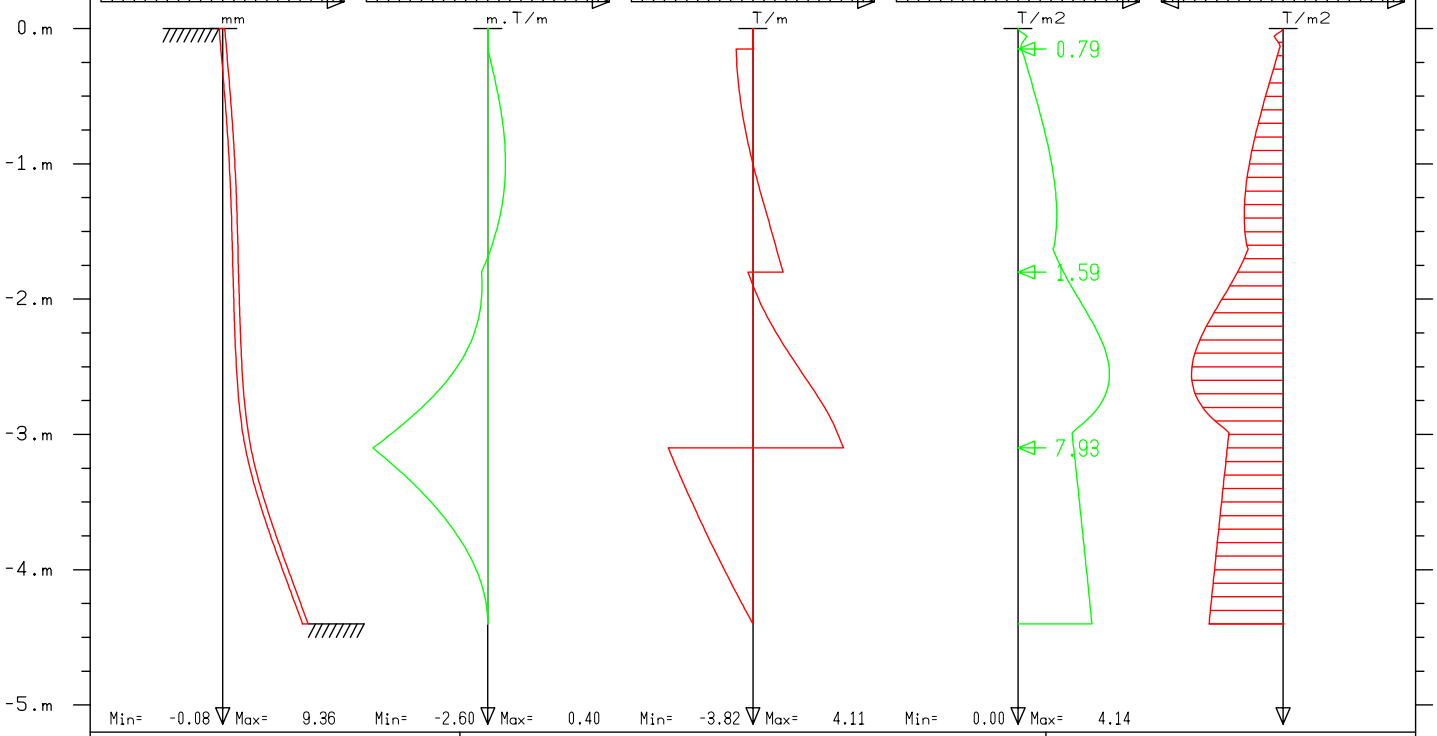
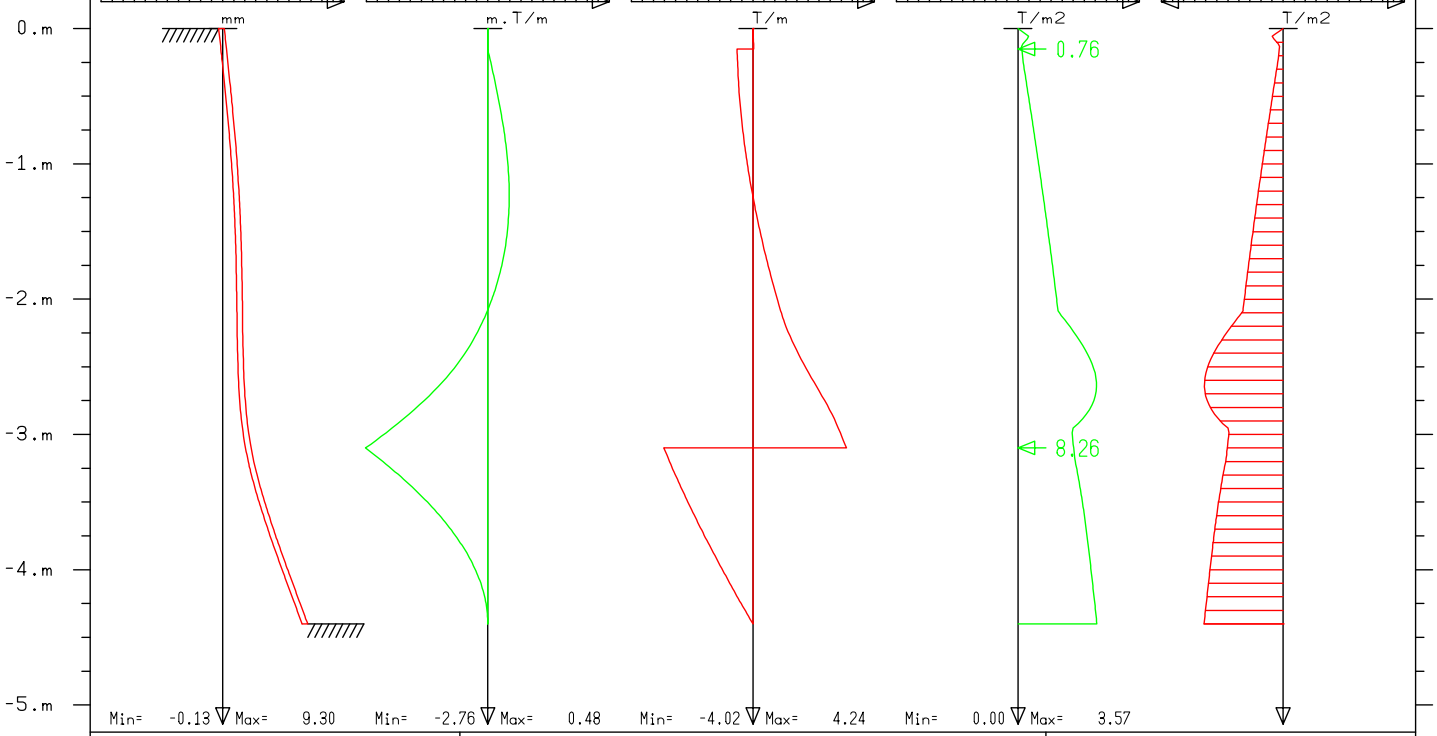


RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

GRAFICOS DE LA FASE Nº 5



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

ENVOLVENTES DESDE LA FASE 1 HASTA LA FASE 5



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

********* CALCULO *********
*Pantalla tablestacas

** STARTING DATA **
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* BOUSSINESQ SURCHARGES FUNCTION OF STATE OF SOIL

*** WALL DESCRIPTION :

	INERTIA PRODUCT EI	CYLINDRICAL RIGIDITY
SECTION Nb 1 FROM 0.000 m TO -4.400 m :	433. T.m2/m	0. T/m3

*Terreno

*** SOIL DESCRIPTION :

LAYER Nb 1 FROM 0.000 m TO -20.000 m :

SATURATED UNIT WEIGHT	GH	=	2.000	T/m3
SUBMERGED UNIT WEIGHT	GD	=	1.000	T/m3
HOR. ACTIVE PRESSURE COEFFICIENT	KA	=	0.333	
HOR. AT REST PRESSURE COEFFICIENT	K0	=	0.500	
HOR. PASSIVE PRESSURE COEFFICIENT	KP	=	3.000	
COHESION	C	=	0.000	T/m2
ANGLE OF INTERNAL FRICTION	PHI	=	30.000	DEGREES
FOR ACTIVE PRESS. DELTA/PHI		=	0.000	
FOR PASSIVE PRESS. DELTA/PHI		=	0.000	
ELASTIC REACTION COEFFICIENT (AT P=0)		=	4000.000	T/m3
INCR. OF THIS COEFF. WITH PRESSURE		=	0.000	1/m

*Nivel de agua

** PHASE Nb 1 **

*FASE 1: Primera excavacion

* CANCELLATION BOUSSINESQ SURCHARGE ON SOIL 1

* ADDING A BOUSSINESQ SURCHARGE ON SOIL 1
LEV. = 0.000 m A = 3.000 m B = 10.000 m Q = 3.000 T/m2

* EXCAVATION IN SOIL 2 TO LEVEL = -0.250 m

PHASE 1

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -0.25 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	0.078	0.002	0.00	0.00		1	0.00		4000	0					
-0.019	0.078	0.002	0.00	0.00		1	0.02	0.01	4000	0					
-0.038	0.078	0.002	0.00	0.00		1	0.04	0.01	4000	0					
-0.056	0.078	0.002	0.00	0.00		1	0.05	0.02	4000	0					
-0.075	0.078	0.002	0.00	0.00		1	0.07	0.02	4000	0					
-0.094	0.078	0.002	0.00	0.00		1	0.09	0.03	4000	0					
-0.113	0.078	0.002	0.00	0.01		1	0.11	0.03	4000	0					
-0.131	0.078	0.002	0.00	0.01		1	0.13	0.04	4000	0					
-0.150	0.078	0.002	0.00	0.01		1	0.14	0.04	4000	0					
-0.175	0.078	0.002	0.00	0.01		1	0.17	0.05	4000	0					
-0.200	0.078	0.002	0.00	0.02		1	0.19	0.06	4000	0					
-0.225	0.078	0.002	0.00	0.02		1	0.22	0.07	4000	0					
-0.250	0.078	0.002	0.00	0.03		1	0.24	0.07	4000	0					
-0.274	0.078	0.002	0.00	0.03		1	0.26	0.08	4000	3	0.15		4000		
-0.298	0.078	0.003	0.00	0.04		1	0.29	0.09	4000	3	0.29		4000		
-0.323	0.078	0.003	-0.01	0.03		1	0.31	0.09	4000	2	0.39		4000		
-0.347	0.079	0.003	-0.01	0.03		1	0.33	0.10	4000	2	0.41		4000		
-0.371	0.079	0.004	-0.01	0.03		1	0.36	0.11	4000	2	0.44		4000		
-0.395	0.079	0.004	-0.01	0.03		1	0.38	0.12	4000	2	0.46		4000		
-0.420	0.079	0.004	-0.01	0.03		1	0.40	0.12	4000	2	0.48		4000		
-0.444	0.079	0.005	-0.01	0.03		1	0.43	0.13	4000	2	0.51		4000		
-0.468	0.079	0.005	-0.01	0.02		1	0.45	0.14	4000	2	0.53		4000		
-0.492	0.079	0.006	-0.01	0.02		1	0.47	0.14	4000	2	0.56		4000		
-0.516	0.079	0.006	-0.01	0.02		1	0.49	0.15	4000	2	0.58		4000		
-0.541	0.079	0.007	-0.01	0.02		1	0.52	0.16	4000	2	0.61		4000		
-0.565	0.080	0.008	-0.01	0.01		1	0.54	0.16	4000	2	0.63		4000		
-0.589	0.080	0.008	-0.01	0.01		1	0.56	0.17	4000	2	0.66		4000		
-0.613	0.080	0.009	-0.01	0.01		1	0.58	0.18	4000	2	0.68		4000		
-0.637	0.080	0.010	-0.01	0.01		1	0.61	0.18	4000	2	0.71		4000		
-0.662	0.081	0.010	-0.01	0.00		1	0.63	0.19	4000	2	0.73		4000		
-0.686	0.081	0.011	-0.01	0.00		2	0.65	0.20	4000	2	0.76		4000		
-0.710	0.081	0.012	-0.01	0.00		2	0.69	0.21	4000	2	0.78		4000		
-0.734	0.081	0.012	-0.01	0.00		2	0.72	0.23	4000	2	0.81		4000		
-0.759	0.082	0.013	-0.01	0.00		2	0.75	0.25	4000	2	0.84		4000		
-0.783	0.082	0.014	-0.01	-0.01		2	0.78	0.26	4000	2	0.86		4000		
-0.807	0.082	0.014	-0.01	-0.01		2	0.81	0.28	4000	2	0.89		4000		
-0.831	0.083	0.015	-0.01	-0.01		2	0.85	0.29	4000	2	0.91		4000		
-0.855	0.083	0.015	-0.01	-0.01		2	0.88	0.31	4000	2	0.94		4000		
-0.880	0.083	0.016	-0.01	-0.01		2	0.91	0.32	4000	2	0.96		4000		
-0.904	0.084	0.017	-0.01	-0.01		2	0.94	0.34	4000	2	0.99		4000		
-0.928	0.084	0.017	-0.01	-0.02		2	0.97	0.35	4000	2	1.02		4000		
-0.952	0.085	0.018	-0.01	-0.02		2	1.00	0.37	4000	2	1.04		4000		
-0.977	0.085	0.018	-0.01	-0.02		2	1.03	0.38	4000	2	1.07		4000		
-1.001	0.086	0.019	-0.01	-0.02		2	1.06	0.40	4000	2	1.09		4000		
-1.025	0.086	0.019	-0.01	-0.02		2	1.09	0.41	4000	2	1.12		4000		
-1.049	0.086	0.020	-0.01	-0.02		2	1.12	0.42	4000	2	1.15		4000		
-1.073	0.087	0.020	-0.01	-0.02		2	1.15	0.43	4000	2	1.17		4000		
-1.098	0.087	0.021	-0.01	-0.02		2	1.18	0.44	4000	2	1.20		4000		
-1.122	0.088	0.021	-0.01	-0.02		2	1.21	0.44	4000	2	1.22		4000		
-1.146	0.088	0.021	-0.01	-0.02		2	1.24	0.45	4000	2	1.25		4000		
-1.170	0.089	0.022	-0.01	-0.02		2	1.27	0.46	4000	2	1.28		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-1.195	0.090	0.022	-0.01	-0.02		2	1.30	0.46	4000	2	1.30		4000		
-1.219	0.090	0.022	0.00	-0.02		2	1.33	0.47	4000	2	1.33		4000		
-1.243	0.091	0.023	0.00	-0.02		2	1.36	0.48	4000	2	1.36		4000		
-1.267	0.091	0.023	0.00	-0.02		2	1.39	0.48	4000	2	1.38		4000		
-1.291	0.092	0.023	0.00	-0.02		2	1.42	0.49	4000	2	1.41		4000		
-1.316	0.092	0.023	0.00	-0.02		2	1.44	0.50	4000	2	1.43		4000		
-1.340	0.093	0.023	0.00	-0.02		2	1.47	0.50	4000	2	1.46		4000		
-1.364	0.093	0.023	0.00	-0.02		2	1.50	0.51	4000	2	1.49		4000		
-1.388	0.094	0.023	0.00	-0.02		2	1.53	0.52	4000	2	1.51		4000		
-1.412	0.095	0.023	0.00	-0.02		2	1.56	0.52	4000	2	1.54		4000		
-1.437	0.095	0.023	0.00	-0.02		2	1.58	0.53	4000	2	1.57		4000		
-1.461	0.096	0.023	0.00	-0.02		2	1.61	0.53	4000	2	1.59		4000		
-1.485	0.096	0.023	0.00	-0.02		2	1.64	0.54	4000	2	1.62		4000		
-1.509	0.097	0.023	0.00	-0.02		2	1.67	0.54	4000	2	1.65		4000		
-1.534	0.097	0.023	0.00	-0.02		2	1.69	0.55	4000	2	1.67		4000		
-1.558	0.098	0.023	0.00	-0.02		2	1.72	0.56	4000	2	1.70		4000		
-1.582	0.098	0.023	0.00	-0.02		2	1.75	0.56	4000	2	1.73		4000		
-1.606	0.099	0.023	0.00	-0.02		2	1.78	0.57	4000	2	1.75		4000		
-1.630	0.100	0.023	0.00	-0.01		2	1.80	0.57	4000	2	1.78		4000		
-1.655	0.100	0.023	0.00	-0.01		2	1.83	0.57	4000	2	1.81		4000		
-1.679	0.101	0.022	0.00	-0.01		2	1.86	0.58	4000	2	1.83		4000		
-1.703	0.101	0.022	0.00	-0.01		2	1.88	0.58	4000	2	1.86		4000		
-1.727	0.102	0.022	0.00	-0.01		2	1.91	0.59	4000	2	1.88		4000		
-1.752	0.102	0.022	0.00	-0.01		2	1.93	0.59	4000	2	1.91		4000		
-1.776	0.103	0.021	0.01	-0.01		2	1.96	0.60	4000	2	1.94		4000		
-1.800	0.103	0.021	0.01	-0.01		2	1.99	0.60	4000	2	1.96		4000		
-1.825	0.104	0.021	0.01	-0.01		2	2.01	0.60	4000	2	1.99		4000		
-1.850	0.104	0.020	0.01	-0.01		2	2.04	0.61	4000	2	2.02		4000		
-1.875	0.105	0.020	0.01	-0.01		2	2.07	0.61	4000	2	2.04		4000		
-1.900	0.105	0.020	0.01	-0.01		2	2.09	0.62	4000	2	2.07		4000		
-1.934	0.106	0.019	0.01	-0.01		2	2.13	0.62	4000	2	2.11		4000		
-1.951	0.106	0.019	0.01	-0.01		2	2.15	0.62	4000	2	2.13		4000		
-1.968	0.107	0.019	0.01	-0.01		2	2.17	0.63	4000	2	2.14		4000		
-1.985	0.107	0.018	0.01	-0.01		2	2.18	0.63	4000	2	2.16		4000		
-2.002	0.107	0.018	0.01	-0.01		2	2.20	0.63	4000	2	2.18		4000		
-2.019	0.108	0.018	0.01	-0.01		2	2.22	0.63	4000	2	2.20		4000		
-2.036	0.108	0.018	0.01	-0.01		2	2.24	0.63	4000	2	2.22		4000		
-2.070	0.109	0.017	0.01	0.00		2	2.27	0.64	4000	2	2.25		4000		
-2.087	0.109	0.017	0.01	0.00		2	2.29	0.64	4000	2	2.27		4000		
-2.104	0.109	0.016	0.01	0.00		2	2.31	0.64	4000	2	2.29		4000		
-2.121	0.109	0.016	0.01	0.00		2	2.33	0.64	4000	2	2.31		4000		
-2.138	0.110	0.016	0.01	0.00		2	2.35	0.65	4000	2	2.33		4000		
-2.155	0.110	0.016	0.01	0.00		2	2.36	0.65	4000	2	2.34		4000		
-2.172	0.110	0.015	0.01	0.00		2	2.38	0.65	4000	2	2.36		4000		
-2.206	0.111	0.015	0.01	0.00		2	2.42	0.65	4000	2	2.40		4000		
-2.240	0.111	0.014	0.01	0.00		2	2.45	0.66	4000	2	2.43		4000		
-2.273	0.112	0.013	0.01	0.00		2	2.49	0.66	4000	2	2.47		4000		
-2.307	0.112	0.013	0.01	0.00		2	2.52	0.66	4000	2	2.51		4000		
-2.341	0.112	0.012	0.01	0.00		2	2.56	0.66	4000	2	2.54		4000		
-2.375	0.113	0.012	0.01	0.00		2	2.59	0.67	4000	2	2.58		4000		
-2.409	0.113	0.011	0.01	0.00		2	2.63	0.67	4000	2	2.61		4000		
-2.443	0.114	0.010	0.01	0.00		2	2.66	0.67	4000	2	2.65		4000		
-2.477	0.114	0.010	0.01	0.00		2	2.69	0.67	4000	2	2.68		4000		
-2.511	0.114	0.009	0.01	0.00		2	2.73	0.68	4000	2	2.72		4000		
-2.545	0.115	0.008	0.01	0.00		2	2.76	0.68	4000	2	2.75		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.579	0.115	0.008	0.01	0.00		2	2.80	0.68	4000	2	2.79		4000		
-2.613	0.115	0.007	0.01	0.00		2	2.83	0.68	4000	2	2.82		4000		
-2.647	0.115	0.007	0.01	0.00		2	2.87	0.68	4000	2	2.86		4000		
-2.681	0.116	0.006	0.01	0.00		2	2.90	0.68	4000	2	2.89		4000		
-2.715	0.116	0.006	0.01	0.00		2	2.93	0.68	4000	2	2.93		4000		
-2.749	0.116	0.005	0.01	0.00		2	2.97	0.68	4000	2	2.96		4000		
-2.783	0.116	0.004	0.01	0.00		2	3.00	0.68	4000	2	3.00		4000		
-2.817	0.116	0.004	0.01	0.00		2	3.04	0.69	4000	2	3.03		4000		
-2.851	0.116	0.003	0.01	0.00		2	3.07	0.69	4000	2	3.07		4000		
-2.885	0.116	0.003	0.01	0.00		2	3.10	0.69	4000	2	3.10		4000		
-2.919	0.117	0.002	0.01	0.00		2	3.14	0.69	4000	2	3.13		4000		
-2.952	0.117	0.002	0.01	0.01		2	3.17	0.69	4000	2	3.17		4000		
-2.986	0.117	0.001	0.01	0.01		2	3.21	0.69	4000	2	3.20		4000		
-3.015	0.117	0.001	0.01	0.01		2	3.23	0.69	4000	2	3.23		4000		
-3.043	0.117	0.001	0.01	0.01		2	3.26	0.69	4000	2	3.26		4000		
-3.072	0.117	0.000	0.01	0.01		2	3.29	0.69	4000	2	3.29		4000		
-3.100	0.117	0.000	0.01	0.01		2	3.32	0.69	4000	2	3.32		4000		
-3.125	0.117	0.000	0.01	0.01		2	3.34	0.69	4000	2	3.34		4000		
-3.150	0.117	-0.001	0.00	0.01		2	3.37	0.69	4000	2	3.37		4000		
-3.175	0.117	-0.001	0.00	0.01		2	3.39	0.68	4000	2	3.39		4000		
-3.200	0.117	-0.001	0.00	0.01		2	3.42	0.68	4000	2	3.42		4000		
-3.219	0.117	-0.001	0.00	0.01		2	3.44	0.68	4000	2	3.44		4000		
-3.238	0.117	-0.002	0.00	0.01		2	3.45	0.68	4000	2	3.45		4000		
-3.256	0.117	-0.002	0.00	0.01		2	3.47	0.68	4000	2	3.47		4000		
-3.275	0.117	-0.002	0.00	0.01		2	3.49	0.68	4000	2	3.49		4000		
-3.294	0.117	-0.002	0.00	0.01		2	3.51	0.68	4000	2	3.51		4000		
-3.312	0.117	-0.002	0.00	0.01		2	3.53	0.68	4000	2	3.53		4000		
-3.331	0.116	-0.002	0.00	0.01		2	3.55	0.68	4000	2	3.55		4000		
-3.350	0.116	-0.003	0.00	0.01		2	3.57	0.68	4000	2	3.57		4000		
-3.369	0.116	-0.003	0.00	0.01		2	3.58	0.68	4000	2	3.58		4000		
-3.387	0.116	-0.003	0.00	0.01		2	3.60	0.68	4000	2	3.60		4000		
-3.406	0.116	-0.003	0.00	0.01		2	3.62	0.68	4000	2	3.62		4000		
-3.425	0.116	-0.003	0.00	0.01		2	3.64	0.68	4000	2	3.64		4000		
-3.444	0.116	-0.003	0.00	0.01		2	3.66	0.68	4000	2	3.66		4000		
-3.463	0.116	-0.004	0.00	0.01		2	3.68	0.68	4000	2	3.68		4000		
-3.481	0.116	-0.004	0.00	0.01		2	3.69	0.68	4000	2	3.70		4000		
-3.500	0.116	-0.004	0.00	0.01		2	3.71	0.68	4000	2	3.71		4000		
-3.519	0.116	-0.004	0.00	0.01		2	3.73	0.68	4000	2	3.73		4000		
-3.537	0.116	-0.004	0.00	0.01		2	3.75	0.67	4000	2	3.75		4000		
-3.556	0.116	-0.004	0.00	0.01		2	3.77	0.67	4000	2	3.77		4000		
-3.575	0.116	-0.004	0.00	0.01		2	3.79	0.67	4000	2	3.79		4000		
-3.594	0.116	-0.004	0.00	0.01		2	3.80	0.67	4000	2	3.81		4000		
-3.613	0.115	-0.005	0.00	0.01		2	3.82	0.67	4000	2	3.82		4000		
-3.631	0.115	-0.005	0.00	0.01		2	3.84	0.67	4000	2	3.84		4000		
-3.650	0.115	-0.005	0.00	0.00		2	3.86	0.67	4000	2	3.86		4000		
-3.669	0.115	-0.005	0.00	0.00		2	3.88	0.67	4000	2	3.88		4000		
-3.688	0.115	-0.005	0.00	0.00		2	3.89	0.67	4000	2	3.90		4000		
-3.706	0.115	-0.005	0.00	0.00		2	3.91	0.67	4000	2	3.92		4000		
-3.725	0.115	-0.005	0.00	0.00		2	3.93	0.67	4000	2	3.93		4000		
-3.744	0.115	-0.005	0.00	0.00		2	3.95	0.67	4000	2	3.95		4000		
-3.763	0.115	-0.005	0.00	0.00		2	3.97	0.66	4000	2	3.97		4000		
-3.781	0.115	-0.005	0.00	0.00		2	3.99	0.66	4000	2	3.99		4000		
-3.800	0.115	-0.005	0.00	0.00		2	4.00	0.66	4000	2	4.01		4000		
-3.819	0.114	-0.006	0.00	0.00		2	4.02	0.66	4000	2	4.03		4000		
-3.838	0.114	-0.006	0.00	0.00		2	4.04	0.66	4000	2	4.04		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-3.856	0.114	-0.006	0.00	0.00		2	4.06	0.66	4000	2	4.06		4000		
-3.875	0.114	-0.006	0.00	0.00		2	4.08	0.66	4000	2	4.08		4000		
-3.894	0.114	-0.006	0.00	0.00		2	4.10	0.66	4000	2	4.10		4000		
-3.913	0.114	-0.006	0.00	0.00		2	4.11	0.66	4000	2	4.12		4000		
-3.931	0.114	-0.006	0.00	0.00		2	4.13	0.66	4000	2	4.14		4000		
-3.950	0.114	-0.006	0.00	0.00		2	4.15	0.65	4000	2	4.15		4000		
-3.969	0.114	-0.006	0.00	0.00		2	4.17	0.65	4000	2	4.17		4000		
-3.988	0.113	-0.006	0.00	0.00		2	4.19	0.65	4000	2	4.19		4000		
-4.006	0.113	-0.006	0.00	0.00		2	4.20	0.65	4000	2	4.21		4000		
-4.025	0.113	-0.006	0.00	0.00		2	4.22	0.65	4000	2	4.23		4000		
-4.044	0.113	-0.006	0.00	0.00		2	4.24	0.65	4000	2	4.25		4000		
-4.063	0.113	-0.006	0.00	0.00		2	4.26	0.65	4000	2	4.26		4000		
-4.081	0.113	-0.006	0.00	0.00		2	4.28	0.65	4000	2	4.28		4000		
-4.100	0.113	-0.006	0.00	0.00		2	4.29	0.65	4000	2	4.30		4000		
-4.119	0.113	-0.006	0.00	0.00		2	4.31	0.64	4000	2	4.32		4000		
-4.138	0.113	-0.006	0.00	0.00		2	4.33	0.64	4000	2	4.34		4000		
-4.156	0.112	-0.006	0.00	0.00		2	4.35	0.64	4000	2	4.36		4000		
-4.175	0.112	-0.006	0.00	0.00		2	4.37	0.64	4000	2	4.37		4000		
-4.194	0.112	-0.006	0.00	0.00		2	4.38	0.64	4000	2	4.39		4000		
-4.213	0.112	-0.006	0.00	0.00		2	4.40	0.64	4000	2	4.41		4000		
-4.231	0.112	-0.006	0.00	0.00		2	4.42	0.64	4000	2	4.43		4000		
-4.250	0.112	-0.006	0.00	0.00		2	4.44	0.64	4000	2	4.45		4000		
-4.269	0.112	-0.006	0.00	0.00		2	4.46	0.63	4000	2	4.47		4000		
-4.287	0.112	-0.006	0.00	0.00		2	4.47	0.63	4000	2	4.48		4000		
-4.306	0.112	-0.006	0.00	0.00		2	4.49	0.63	4000	2	4.50		4000		
-4.325	0.111	-0.006	0.00	0.00		2	4.51	0.63	4000	2	4.52		4000		
-4.344	0.111	-0.006	0.00	0.00		2	4.53	0.63	4000	2	4.54		4000		
-4.363	0.111	-0.006	0.00	0.00		2	4.55	0.63	4000	2	4.56		4000		
-4.381	0.111	-0.006	0.00	0.00		2	4.56	0.63	4000	2	4.58		4000		
-4.400	0.111	-0.006	0.00	0.00		2	4.58	0.63	4000	2	4.59		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 0.12 mm

MAXIMUM MOMENT = -0.01 m.T/m

CODIFICATION OF STATE :
-1 = SEPARATION
0 = EXCAVATION
1 = ACTIVE PR.

CODIFICATION OF SOIL :
2 = ELASTIC
3 = PASSIVE PR.

(4 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 2.29 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.143 = (10.33 T/m)/(72.14 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = 0.200 = (10.33 T/m)/(51.67 T/m)

** PHASE Nb 2 **

*FASE 2: Apuntalamiento y excavacion

* INSTALLATION LEVEL OF STRUTS Nb 1

LEVEL	=	-0.150 m
SPACE	=	1.000 m
INCLINATION	=	0.000 DEGREES
PRELOAD	=	0.000 T
STIFFNESS	=	23000.000 T/m

BILATERAL CONNECTION

* EXCAVATION IN SOIL 2 TO LEVEL = -1.900 m

PHASE 2

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -1.90 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	-0.109	1.515	0.00	0.00	3	0.00		4000	0					
-0.019	-0.080	1.515	0.00	0.00	3	0.16	0.05	4000	0					
-0.038	-0.052	1.515	0.00	0.01	3	0.33	0.10	4000	0					
-0.056	-0.024	1.515	0.00	0.01	2	0.46	0.12	4000	0					
-0.075	0.005	1.515	0.00	0.02	2	0.36	0.03	4000	0					
-0.094	0.033	1.515	0.00	0.03	2	0.27	0.04	4000	0					
-0.113	0.062	1.515	0.00	0.03	2	0.17	0.05	4000	0					
-0.131	0.090	1.515	0.00	0.03	1	0.13	0.04	4000	0					
-0.150	0.118	1.515	0.00	0.04	1	0.14	0.04	4000	0					
				-0.89	1	0.14	0.04	4000	0				1	-0.93
-0.175	0.156	1.515	0.02	-0.89	1	0.17	0.05	4000	0					
-0.200	0.194	1.513	0.04	-0.88	1	0.19	0.06	4000	0					
-0.225	0.232	1.510	0.06	-0.88	1	0.22	0.07	4000	0					
-0.250	0.270	1.506	0.09	-0.87	1	0.24	0.07	4000	0					
-0.274	0.306	1.500	0.11	-0.87	1	0.26	0.08	4000	0					
-0.298	0.342	1.494	0.13	-0.86	1	0.29	0.09	4000	0					
-0.323	0.378	1.486	0.15	-0.85	1	0.31	0.09	4000	0					
-0.347	0.414	1.477	0.17	-0.84	1	0.33	0.10	4000	0					
-0.371	0.450	1.467	0.19	-0.84	1	0.36	0.11	4000	0					
-0.395	0.485	1.456	0.21	-0.83	1	0.38	0.12	4000	0					
-0.420	0.520	1.444	0.23	-0.82	1	0.40	0.12	4000	0					
-0.444	0.555	1.430	0.25	-0.81	1	0.43	0.13	4000	0					
-0.468	0.590	1.416	0.27	-0.80	1	0.45	0.14	4000	0					
-0.492	0.624	1.400	0.29	-0.79	1	0.47	0.14	4000	0					
-0.516	0.658	1.384	0.31	-0.77	1	0.49	0.15	4000	0					
-0.541	0.691	1.366	0.32	-0.76	1	0.52	0.16	4000	0					
-0.565	0.724	1.348	0.34	-0.75	1	0.54	0.16	4000	0					
-0.589	0.756	1.328	0.36	-0.74	1	0.56	0.17	4000	0					
-0.613	0.788	1.307	0.38	-0.72	1	0.58	0.18	4000	0					
-0.637	0.819	1.285	0.40	-0.71	1	0.61	0.18	4000	0					
-0.662	0.850	1.263	0.41	-0.69	1	0.63	0.19	4000	0					
-0.686	0.881	1.239	0.43	-0.68	1	0.65	0.19	4000	0					
-0.710	0.910	1.215	0.45	-0.66	1	0.67	0.20	4000	0					
-0.734	0.939	1.189	0.46	-0.64	1	0.70	0.21	4000	0					
-0.759	0.968	1.163	0.48	-0.63	1	0.72	0.21	4000	0					
-0.783	0.996	1.136	0.49	-0.61	1	0.74	0.22	4000	0					
-0.807	1.023	1.108	0.51	-0.59	1	0.76	0.22	4000	0					
-0.831	1.049	1.079	0.52	-0.57	1	0.78	0.23	4000	0					
-0.855	1.075	1.050	0.53	-0.55	1	0.81	0.24	4000	0					
-0.880	1.100	1.020	0.55	-0.53	1	0.83	0.24	4000	0					
-0.904	1.125	0.989	0.56	-0.51	1	0.85	0.25	4000	0					
-0.928	1.148	0.957	0.57	-0.49	1	0.87	0.25	4000	0					
-0.952	1.171	0.925	0.58	-0.47	1	0.89	0.26	4000	0					
-0.977	1.193	0.892	0.60	-0.45	1	0.92	0.26	4000	0					
-1.001	1.214	0.858	0.61	-0.43	1	0.94	0.27	4000	0					
-1.025	1.234	0.824	0.62	-0.40	1	0.96	0.27	4000	0					
-1.049	1.254	0.789	0.63	-0.38	1	0.98	0.28	4000	0					
-1.073	1.273	0.754	0.63	-0.36	1	1.00	0.29	4000	0					
-1.098	1.291	0.718	0.64	-0.33	1	1.02	0.29	4000	0					
-1.122	1.308	0.682	0.65	-0.31	1	1.04	0.30	4000	0					
-1.146	1.324	0.646	0.66	-0.28	1	1.06	0.30	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-1.170	1.339	0.609	0.66	-0.26		1	1.08	0.30	4000	0					
-1.195	1.353	0.571	0.67	-0.23		1	1.11	0.31	4000	0					
-1.219	1.366	0.534	0.68	-0.20		1	1.13	0.31	4000	0					
-1.243	1.379	0.496	0.68	-0.17		1	1.15	0.32	4000	0					
-1.267	1.390	0.458	0.68	-0.15		1	1.17	0.32	4000	0					
-1.291	1.401	0.419	0.69	-0.12		1	1.19	0.33	4000	0					
-1.316	1.411	0.381	0.69	-0.09		1	1.21	0.33	4000	0					
-1.340	1.420	0.342	0.69	-0.06		1	1.23	0.34	4000	0					
-1.364	1.427	0.304	0.69	-0.03		1	1.25	0.34	4000	0					
-1.388	1.434	0.265	0.69	0.00		1	1.27	0.34	4000	0					
-1.412	1.440	0.226	0.69	0.03		1	1.29	0.35	4000	0					
-1.437	1.445	0.188	0.69	0.06		1	1.31	0.35	4000	0					
-1.461	1.449	0.149	0.69	0.10		1	1.33	0.36	4000	0					
-1.485	1.452	0.111	0.69	0.13		1	1.35	0.36	4000	0					
-1.509	1.455	0.072	0.68	0.16		1	1.37	0.36	4000	0					
-1.534	1.456	0.034	0.68	0.19		1	1.39	0.37	4000	0					
-1.558	1.456	-0.004	0.67	0.23		1	1.41	0.37	4000	0					
-1.582	1.456	-0.041	0.67	0.26		1	1.43	0.37	4000	0					
-1.606	1.454	-0.078	0.66	0.30		1	1.45	0.38	4000	0					
-1.630	1.452	-0.115	0.65	0.33		1	1.47	0.38	4000	0					
-1.655	1.449	-0.151	0.64	0.37		1	1.49	0.38	4000	0					
-1.679	1.445	-0.187	0.64	0.40		1	1.51	0.39	4000	0					
-1.703	1.440	-0.222	0.63	0.44		1	1.52	0.39	4000	0					
-1.727	1.434	-0.257	0.61	0.48		1	1.54	0.39	4000	0					
-1.752	1.427	-0.291	0.60	0.52		1	1.56	0.40	4000	0					
-1.776	1.420	-0.324	0.59	0.55		1	1.58	0.40	4000	0					
-1.800	1.412	-0.357	0.58	0.59		1	1.60	0.40	4000	0					
-1.825	1.402	-0.389	0.56	0.63		1	1.62	0.40	4000	0					
-1.850	1.392	-0.421	0.54	0.67		1	1.64	0.41	4000	0					
-1.875	1.381	-0.452	0.53	0.71		1	1.66	0.41	4000	0					
-1.900	1.370	-0.482	0.51	0.76		1	1.68	0.41	4000	0					
-1.934	1.353	-0.521	0.48	0.81		1	1.70	0.41	4000	3	0.20		4000		
-1.951	1.344	-0.539	0.47	0.84		1	1.72	0.42	4000	3	0.31		4000		
-1.968	1.334	-0.557	0.45	0.86		1	1.73	0.42	4000	3	0.41		4000		
-1.985	1.325	-0.575	0.44	0.88		1	1.74	0.42	4000	3	0.51		4000		
-2.002	1.315	-0.592	0.42	0.90		1	1.75	0.42	4000	3	0.61		4000		
-2.019	1.305	-0.608	0.41	0.92		1	1.77	0.42	4000	3	0.71		4000		
-2.036	1.294	-0.624	0.39	0.94		1	1.78	0.42	4000	3	0.81		4000		
-2.070	1.272	-0.653	0.36	0.97		1	1.81	0.43	4000	3	1.02		4000		
-2.087	1.261	-0.667	0.34	0.98		1	1.82	0.43	4000	3	1.12		4000		
-2.104	1.250	-0.680	0.33	0.99		1	1.83	0.43	4000	3	1.22		4000		
-2.121	1.238	-0.692	0.31	1.00		1	1.84	0.43	4000	3	1.32		4000		
-2.138	1.226	-0.704	0.29	1.01		1	1.86	0.43	4000	3	1.43		4000		
-2.155	1.214	-0.715	0.28	1.01		1	1.87	0.43	4000	3	1.53		4000		
-2.172	1.202	-0.726	0.26	1.02		1	1.88	0.43	4000	3	1.63		4000		
-2.206	1.177	-0.744	0.22	1.02		1	1.91	0.44	4000	3	1.83		4000		
-2.240	1.151	-0.761	0.19	1.02		1	1.93	0.44	4000	3	2.04		4000		
-2.273	1.125	-0.774	0.15	1.02		1	1.95	0.44	4000	3	2.24		4000		
-2.307	1.099	-0.785	0.12	1.00		1	1.98	0.44	4000	3	2.44		4000		
-2.341	1.072	-0.793	0.09	0.99		1	2.00	0.44	4000	3	2.65		4000		
-2.375	1.045	-0.798	0.05	0.96		1	2.03	0.44	4000	3	2.85		4000		
-2.409	1.018	-0.801	0.02	0.93		1	2.05	0.45	4000	3	3.06		4000		
-2.443	0.991	-0.801	-0.01	0.89		1	2.08	0.45	4000	3	3.26		4000		
-2.477	0.964	-0.799	-0.04	0.85		1	2.10	0.45	4000	3	3.46		4000		
-2.511	0.937	-0.795	-0.07	0.80		1	2.12	0.45	4000	3	3.67		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.545	0.910	-0.789	-0.09	0.74		1	2.15	0.45	4000	3	3.87		4000		
-2.579	0.883	-0.780	-0.12	0.68		1	2.17	0.45	4000	3	4.07		4000		
-2.613	0.857	-0.770	-0.14	0.62		1	2.20	0.45	4000	2	4.14		4000		
-2.647	0.831	-0.758	-0.16	0.55		1	2.22	0.45	4000	2	4.07		4000		
-2.681	0.805	-0.745	-0.18	0.49		1	2.24	0.45	4000	2	4.00		4000		
-2.715	0.780	-0.731	-0.19	0.43		1	2.27	0.46	4000	2	3.94		4000		
-2.749	0.756	-0.715	-0.21	0.38		1	2.29	0.46	4000	2	3.87		4000		
-2.783	0.732	-0.698	-0.22	0.33		1	2.31	0.46	4000	2	3.81		4000		
-2.817	0.708	-0.680	-0.23	0.28		1	2.33	0.46	4000	2	3.75		4000		
-2.851	0.685	-0.662	-0.24	0.23		1	2.36	0.46	4000	2	3.69		4000		
-2.885	0.663	-0.643	-0.25	0.19		1	2.38	0.46	4000	2	3.64		4000		
-2.919	0.642	-0.624	-0.25	0.14		1	2.40	0.46	4000	2	3.59		4000		
-2.952	0.621	-0.604	-0.26	0.11		1	2.43	0.46	4000	2	3.54		4000		
-2.986	0.601	-0.584	-0.26	0.07		1	2.45	0.46	4000	2	3.49		4000		
-3.015	0.584	-0.567	-0.26	0.04		1	2.47	0.46	4000	2	3.45		4000		
-3.043	0.569	-0.550	-0.26	0.01		1	2.49	0.46	4000	2	3.42		4000		
-3.072	0.553	-0.532	-0.26	-0.01		1	2.51	0.46	4000	2	3.38		4000		
-3.100	0.538	-0.515	-0.26	-0.04		1	2.52	0.46	4000	2	3.35		4000		
-3.125	0.526	-0.500	-0.26	-0.06		1	2.54	0.46	4000	2	3.33		4000		
-3.150	0.513	-0.486	-0.26	-0.08		1	2.56	0.46	4000	2	3.30		4000		
-3.175	0.501	-0.471	-0.25	-0.09		1	2.57	0.46	4000	2	3.28		4000		
-3.200	0.490	-0.456	-0.25	-0.11		1	2.59	0.46	4000	2	3.26		4000		
-3.219	0.481	-0.445	-0.25	-0.12		1	2.60	0.46	4000	2	3.24		4000		
-3.238	0.473	-0.434	-0.25	-0.14		1	2.61	0.46	4000	2	3.23		4000		
-3.256	0.465	-0.424	-0.25	-0.15		1	2.63	0.46	4000	2	3.22		4000		
-3.275	0.457	-0.413	-0.24	-0.16		1	2.64	0.46	4000	2	3.20		4000		
-3.294	0.450	-0.403	-0.24	-0.17		1	2.65	0.45	4000	2	3.19		4000		
-3.312	0.442	-0.393	-0.24	-0.18		1	2.66	0.45	4000	2	3.18		4000		
-3.331	0.435	-0.382	-0.23	-0.19		1	2.68	0.45	4000	2	3.17		4000		
-3.350	0.428	-0.372	-0.23	-0.20		1	2.69	0.45	4000	2	3.16		4000		
-3.369	0.421	-0.363	-0.23	-0.21		1	2.70	0.45	4000	2	3.15		4000		
-3.387	0.414	-0.353	-0.22	-0.21		1	2.71	0.45	4000	2	3.14		4000		
-3.406	0.408	-0.343	-0.22	-0.22		1	2.72	0.45	4000	2	3.14		4000		
-3.425	0.401	-0.334	-0.21	-0.23		1	2.74	0.45	4000	2	3.13		4000		
-3.444	0.395	-0.325	-0.21	-0.24		1	2.75	0.45	4000	2	3.12		4000		
-3.463	0.389	-0.316	-0.20	-0.24		1	2.76	0.45	4000	2	3.12		4000		
-3.481	0.383	-0.307	-0.20	-0.25		1	2.77	0.45	4000	2	3.11		4000		
-3.500	0.378	-0.299	-0.19	-0.26		1	2.78	0.45	4000	2	3.11		4000		
-3.519	0.372	-0.290	-0.19	-0.26		1	2.80	0.45	4000	2	3.11		4000		
-3.537	0.367	-0.282	-0.18	-0.27		1	2.81	0.45	4000	2	3.10		4000		
-3.556	0.361	-0.274	-0.18	-0.27		1	2.82	0.45	4000	2	3.10		4000		
-3.575	0.356	-0.267	-0.17	-0.28		1	2.83	0.45	4000	2	3.10		4000		
-3.594	0.351	-0.259	-0.17	-0.28		2	2.86	0.46	4000	2	3.10		4000		
-3.613	0.347	-0.252	-0.16	-0.29		2	2.90	0.49	4000	2	3.10		4000		
-3.631	0.342	-0.245	-0.16	-0.29		2	2.93	0.51	4000	2	3.10		4000		
-3.650	0.337	-0.238	-0.15	-0.29		2	2.97	0.54	4000	2	3.10		4000		
-3.669	0.333	-0.232	-0.15	-0.30		2	3.01	0.56	4000	2	3.10		4000		
-3.688	0.329	-0.226	-0.14	-0.30		2	3.04	0.58	4000	2	3.10		4000		
-3.706	0.325	-0.220	-0.14	-0.30		2	3.07	0.60	4000	2	3.10		4000		
-3.725	0.321	-0.214	-0.13	-0.30		2	3.11	0.63	4000	2	3.11		4000		
-3.744	0.317	-0.208	-0.13	-0.30		2	3.14	0.65	4000	2	3.11		4000		
-3.763	0.313	-0.203	-0.12	-0.30		2	3.18	0.66	4000	2	3.11		4000		
-3.781	0.309	-0.198	-0.11	-0.30		2	3.21	0.66	4000	2	3.12		4000		
-3.800	0.305	-0.193	-0.11	-0.29		2	3.24	0.66	4000	2	3.12		4000		
-3.819	0.302	-0.189	-0.10	-0.29		2	3.27	0.66	4000	2	3.13		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-3.838	0.298	-0.184	-0.10	-0.29	2	3.31	0.66	4000	2	3.13		4000		
-3.856	0.295	-0.180	-0.09	-0.28	2	3.34	0.66	4000	2	3.14		4000		
-3.875	0.291	-0.176	-0.09	-0.28	2	3.37	0.66	4000	2	3.14		4000		
-3.894	0.288	-0.173	-0.08	-0.28	2	3.40	0.66	4000	2	3.15		4000		
-3.913	0.285	-0.169	-0.08	-0.27	2	3.43	0.66	4000	2	3.15		4000		
-3.931	0.282	-0.166	-0.07	-0.27	2	3.46	0.66	4000	2	3.16		4000		
-3.950	0.279	-0.163	-0.07	-0.26	2	3.49	0.65	4000	2	3.17		4000		
-3.969	0.276	-0.160	-0.06	-0.25	2	3.52	0.65	4000	2	3.17		4000		
-3.988	0.273	-0.158	-0.06	-0.25	2	3.55	0.65	4000	2	3.18		4000		
-4.006	0.270	-0.155	-0.05	-0.24	2	3.58	0.65	4000	2	3.19		4000		
-4.025	0.267	-0.153	-0.05	-0.23	2	3.61	0.65	4000	2	3.19		4000		
-4.044	0.264	-0.151	-0.04	-0.22	2	3.64	0.65	4000	2	3.20		4000		
-4.063	0.261	-0.149	-0.04	-0.22	2	3.66	0.65	4000	2	3.21		4000		
-4.081	0.258	-0.148	-0.04	-0.21	2	3.69	0.65	4000	2	3.22		4000		
-4.100	0.256	-0.146	-0.03	-0.20	2	3.72	0.65	4000	2	3.22		4000		
-4.119	0.253	-0.145	-0.03	-0.19	2	3.75	0.64	4000	2	3.23		4000		
-4.138	0.250	-0.144	-0.02	-0.18	2	3.78	0.64	4000	2	3.24		4000		
-4.156	0.248	-0.143	-0.02	-0.17	2	3.81	0.64	4000	2	3.25		4000		
-4.175	0.245	-0.142	-0.02	-0.16	2	3.84	0.64	4000	2	3.25		4000		
-4.194	0.242	-0.141	-0.02	-0.15	2	3.86	0.64	4000	2	3.26		4000		
-4.213	0.240	-0.140	-0.01	-0.13	2	3.89	0.64	4000	2	3.27		4000		
-4.231	0.237	-0.140	-0.01	-0.12	2	3.92	0.64	4000	2	3.28		4000		
-4.250	0.234	-0.139	-0.01	-0.11	2	3.95	0.64	4000	2	3.29		4000		
-4.269	0.232	-0.139	-0.01	-0.10	2	3.98	0.63	4000	2	3.30		4000		
-4.287	0.229	-0.139	0.00	-0.09	2	4.00	0.63	4000	2	3.30		4000		
-4.306	0.227	-0.139	0.00	-0.07	2	4.03	0.63	4000	2	3.31		4000		
-4.325	0.224	-0.139	0.00	-0.06	2	4.06	0.63	4000	2	3.32		4000		
-4.344	0.221	-0.138	0.00	-0.04	2	4.09	0.63	4000	2	3.33		4000		
-4.363	0.219	-0.138	0.00	-0.03	2	4.12	0.63	4000	2	3.34		4000		
-4.381	0.216	-0.138	0.00	-0.02	2	4.14	0.63	4000	2	3.35		4000		
-4.400	0.214	-0.138	0.00	0.00	2	4.17	0.63	4000	2	3.35		4000		
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 1.46 mm
MAXIMUM MOMENT = 0.69 m.T/m

CODIFICATION OF STATE : -1 = SEPARATION, 0 = EXCAVATION, 1 = ACTIVE PR., 2 = ELASTIC
CODIFICATION OF SOIL : 3 = PASSIVE PR.

(5 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.73 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.116 = (8.40 T/m)/(72.14 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = 0.399 = (7.48 T/m)/(18.75 T/m)

** PHASE Nb 3 **

*FASE 3: Apuntalamiento y excavacion

* INSTALLATION LEVEL OF STRUTS Nb 2

LEVEL	=	-1.800 m
SPACE	=	1.000 m
INCLINATION	=	0.000 DEGREES
PRELOAD	=	0.000 T
STIFFNESS	=	23000.000 T/m

BILATERAL CONNECTION

* EXCAVATION IN SOIL 2 TO LEVEL = -3.200 m

PHASE 3

	WALL	SOIL 1	SOIL 2	
		EXCAVATION: 0.00 m	EXCAVATION: -3.20 m	STRUTS/
		WATER LEVEL: -20.00 m	WATER LEVEL: -20.00 m	ANCHORS
		CAQUOT SURC.: 0.00 T/m2	CAQUOT SURC.: 0.00 T/m2	

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	-0.068	1.165	0.00	0.00		1	0.00		4000	0					
-0.019	-0.046	1.165	0.00	0.00		2	0.03	0.01	4000	0					
-0.038	-0.025	1.165	0.00	0.00		2	0.22	0.02	4000	0					
-0.056	-0.003	1.165	0.00	0.01		2	0.38	0.04	4000	0					
-0.075	0.019	1.165	0.00	0.01		2	0.31	0.03	4000	0					
-0.094	0.041	1.165	0.00	0.02		2	0.24	0.04	4000	0					
-0.113	0.063	1.166	0.00	0.02		2	0.17	0.05	4000	0					
-0.131	0.085	1.166	0.00	0.03		2	0.15	0.06	4000	0					
-0.150	0.107	1.166	0.00	0.03		2	0.19	0.07	4000	0					
				-0.63		2	0.19	0.07	4000	0				1	-0.66
-0.175	0.136	1.165	0.01	-0.62		2	0.25	0.08	4000	0					
-0.200	0.165	1.164	0.03	-0.61		2	0.31	0.09	4000	0					
-0.225	0.194	1.162	0.04	-0.61		2	0.37	0.10	4000	0					
-0.250	0.223	1.159	0.06	-0.60		2	0.43	0.11	4000	0					
-0.274	0.251	1.155	0.07	-0.58		2	0.48	0.12	4000	0					
-0.298	0.279	1.151	0.09	-0.57		2	0.54	0.13	4000	0					
-0.323	0.307	1.145	0.10	-0.56		2	0.60	0.14	4000	0					
-0.347	0.334	1.139	0.11	-0.54		2	0.65	0.15	4000	0					
-0.371	0.362	1.133	0.13	-0.53		2	0.71	0.16	4000	0					
-0.395	0.389	1.125	0.14	-0.51		2	0.76	0.17	4000	0					
-0.420	0.416	1.117	0.15	-0.49		2	0.82	0.18	4000	0					
-0.444	0.443	1.108	0.16	-0.47		2	0.87	0.19	4000	0					
-0.468	0.470	1.099	0.17	-0.45		2	0.93	0.20	4000	0					
-0.492	0.497	1.089	0.19	-0.42		2	0.98	0.21	4000	0					
-0.516	0.523	1.078	0.20	-0.40		2	1.03	0.22	4000	0					
-0.541	0.549	1.067	0.20	-0.37		2	1.08	0.23	4000	0					
-0.565	0.574	1.055	0.21	-0.35		2	1.14	0.24	4000	0					
-0.589	0.600	1.043	0.22	-0.32		2	1.19	0.25	4000	0					
-0.613	0.625	1.030	0.23	-0.29		2	1.24	0.26	4000	0					
-0.637	0.650	1.017	0.24	-0.26		2	1.29	0.27	4000	0					
-0.662	0.674	1.004	0.24	-0.23		2	1.33	0.28	4000	0					
-0.686	0.698	0.990	0.25	-0.19		2	1.38	0.29	4000	0					
-0.710	0.722	0.976	0.25	-0.16		2	1.43	0.30	4000	0					
-0.734	0.746	0.962	0.25	-0.13		2	1.47	0.31	4000	0					
-0.759	0.769	0.948	0.26	-0.09		2	1.51	0.32	4000	0					
-0.783	0.792	0.934	0.26	-0.05		2	1.56	0.33	4000	0					
-0.807	0.814	0.919	0.26	-0.01		2	1.60	0.34	4000	0					
-0.831	0.836	0.905	0.26	0.03		2	1.64	0.35	4000	0					
-0.855	0.858	0.890	0.26	0.07		2	1.68	0.35	4000	0					
-0.880	0.879	0.876	0.26	0.11		2	1.71	0.36	4000	0					
-0.904	0.900	0.862	0.25	0.15		2	1.75	0.37	4000	0					
-0.928	0.921	0.847	0.25	0.19		2	1.78	0.38	4000	0					
-0.952	0.941	0.834	0.24	0.23		2	1.81	0.39	4000	0					
-0.977	0.961	0.820	0.24	0.28		2	1.84	0.40	4000	0					
-1.001	0.981	0.807	0.23	0.32		2	1.87	0.40	4000	0					
-1.025	1.000	0.794	0.22	0.37		2	1.89	0.41	4000	0					
-1.049	1.020	0.782	0.21	0.42		2	1.92	0.42	4000	0					
-1.073	1.038	0.771	0.20	0.46		2	1.94	0.43	4000	0					
-1.098	1.057	0.760	0.19	0.51		2	1.96	0.44	4000	0					
-1.122	1.075	0.749	0.18	0.56		2	1.97	0.44	4000	0					
-1.146	1.093	0.740	0.16	0.60		2	1.99	0.45	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-1.170	1.111	0.731	0.15	0.65	2	2.00	0.46	4000	0					
-1.195	1.129	0.723	0.13	0.70	2	2.00	0.46	4000	0					
-1.219	1.146	0.717	0.11	0.75	2	2.01	0.47	4000	0					
-1.243	1.163	0.711	0.10	0.80	2	2.01	0.48	4000	0					
-1.267	1.180	0.706	0.08	0.85	2	2.01	0.48	4000	0					
-1.291	1.198	0.702	0.05	0.90	2	2.00	0.49	4000	0					
-1.316	1.215	0.700	0.03	0.94	2	1.99	0.50	4000	0					
-1.340	1.231	0.699	0.01	0.99	2	1.98	0.50	4000	0					
-1.364	1.248	0.699	-0.02	1.04	2	1.97	0.51	4000	0					
-1.388	1.265	0.701	-0.04	1.09	2	1.95	0.52	4000	0					
-1.412	1.282	0.704	-0.07	1.13	2	1.92	0.52	4000	0					
-1.437	1.299	0.708	-0.10	1.18	2	1.89	0.53	4000	0					
-1.461	1.317	0.714	-0.13	1.23	2	1.86	0.53	4000	0					
-1.485	1.334	0.722	-0.16	1.27	2	1.82	0.54	4000	0					
-1.509	1.352	0.732	-0.19	1.31	2	1.78	0.54	4000	0					
-1.534	1.370	0.743	-0.22	1.36	2	1.73	0.55	4000	0					
-1.558	1.388	0.757	-0.25	1.40	2	1.68	0.56	4000	0					
-1.582	1.406	0.772	-0.29	1.44	2	1.63	0.56	4000	0					
-1.606	1.425	0.789	-0.32	1.48	2	1.56	0.49	4000	0					
-1.630	1.444	0.808	-0.36	1.51	1	1.47	0.38	4000	0					
-1.655	1.464	0.829	-0.40	1.55	1	1.49	0.38	4000	0					
-1.679	1.485	0.852	-0.43	1.59	1	1.51	0.39	4000	0					
-1.703	1.505	0.877	-0.47	1.62	1	1.52	0.39	4000	0					
-1.727	1.527	0.905	-0.51	1.66	1	1.54	0.39	4000	0					
-1.752	1.549	0.935	-0.55	1.70	1	1.56	0.40	4000	0					
-1.776	1.572	0.967	-0.59	1.74	1	1.58	0.40	4000	0					
-1.800	1.596	1.001	-0.64	1.77	1	1.60	0.40	4000	0					
				-2.47	1	1.60	0.40	4000	0				2	-4.25
-1.825	1.622	1.036	-0.58	-2.43	1	1.62	0.40	4000	0					
-1.850	1.648	1.068	-0.52	-2.39	1	1.64	0.41	4000	0					
-1.875	1.675	1.096	-0.46	-2.35	1	1.66	0.41	4000	0					
-1.900	1.703	1.120	-0.40	-2.31	1	1.68	0.41	4000	0					
-1.934	1.741	1.149	-0.32	-2.25	1	1.70	0.41	4000	0					
-1.951	1.761	1.160	-0.28	-2.22	1	1.72	0.42	4000	0					
-1.968	1.781	1.171	-0.25	-2.19	1	1.73	0.42	4000	0					
-1.985	1.801	1.180	-0.21	-2.16	1	1.74	0.42	4000	0					
-2.002	1.821	1.187	-0.17	-2.13	1	1.75	0.42	4000	0					
-2.019	1.841	1.193	-0.14	-2.10	1	1.77	0.42	4000	0					
-2.036	1.861	1.198	-0.10	-2.07	1	1.78	0.42	4000	0					
-2.070	1.902	1.203	-0.03	-2.01	1	1.81	0.43	4000	0					
-2.087	1.922	1.204	0.00	-1.98	1	1.82	0.43	4000	0					
-2.104	1.943	1.203	0.04	-1.95	1	1.83	0.43	4000	0					
-2.121	1.963	1.201	0.07	-1.92	1	1.84	0.43	4000	0					
-2.138	1.984	1.197	0.10	-1.89	1	1.86	0.43	4000	0					
-2.155	2.004	1.193	0.13	-1.86	1	1.87	0.43	4000	0					
-2.172	2.024	1.187	0.16	-1.82	1	1.88	0.43	4000	0					
-2.206	2.064	1.172	0.23	-1.76	1	1.91	0.44	4000	0					
-2.240	2.104	1.152	0.28	-1.70	1	1.93	0.44	4000	0					
-2.273	2.142	1.127	0.34	-1.63	1	1.95	0.44	4000	0					
-2.307	2.180	1.098	0.39	-1.56	1	1.98	0.44	4000	0					
-2.341	2.217	1.065	0.45	-1.50	1	2.00	0.44	4000	0					
-2.375	2.252	1.029	0.50	-1.43	1	2.03	0.44	4000	0					
-2.409	2.287	0.988	0.54	-1.36	1	2.05	0.45	4000	0					
-2.443	2.319	0.943	0.59	-1.29	1	2.08	0.45	4000	0					
-2.477	2.351	0.896	0.63	-1.22	1	2.10	0.45	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.511	2.380	0.845	0.67	-1.14		1	2.12	0.45	4000	0					
-2.545	2.408	0.791	0.71	-1.07		1	2.15	0.45	4000	0					
-2.579	2.434	0.734	0.74	-1.00		1	2.17	0.45	4000	0					
-2.613	2.458	0.674	0.78	-0.92		1	2.20	0.45	4000	0					
-2.647	2.480	0.612	0.81	-0.85		1	2.22	0.45	4000	0					
-2.681	2.499	0.548	0.83	-0.77		1	2.24	0.45	4000	0					
-2.715	2.517	0.481	0.86	-0.70		1	2.27	0.46	4000	0					
-2.749	2.532	0.413	0.88	-0.62		1	2.29	0.46	4000	0					
-2.783	2.545	0.343	0.90	-0.54		1	2.31	0.46	4000	0					
-2.817	2.555	0.272	0.92	-0.46		1	2.33	0.46	4000	0					
-2.851	2.563	0.200	0.93	-0.38		1	2.36	0.46	4000	0					
-2.885	2.569	0.126	0.94	-0.30		1	2.38	0.46	4000	0					
-2.919	2.572	0.052	0.95	-0.22		1	2.40	0.46	4000	0					
-2.952	2.572	-0.023	0.96	-0.14		1	2.43	0.46	4000	0					
-2.986	2.570	-0.099	0.96	-0.06		1	2.45	0.46	4000	0					
-3.015	2.567	-0.162	0.96	0.01		1	2.47	0.46	4000	0					
-3.043	2.561	-0.225	0.96	0.08		1	2.49	0.46	4000	0					
-3.072	2.554	-0.288	0.96	0.15		1	2.51	0.46	4000	0					
-3.100	2.545	-0.350	0.95	0.22		1	2.52	0.46	4000	0					
-3.125	2.535	-0.405	0.95	0.29		1	2.54	0.46	4000	0					
-3.150	2.524	-0.460	0.94	0.35		1	2.56	0.46	4000	0					
-3.175	2.512	-0.514	0.93	0.42		1	2.57	0.46	4000	0					
-3.200	2.499	-0.567	0.92	0.48		1	2.59	0.46	4000	0					
-3.219	2.488	-0.606	0.91	0.53		1	2.60	0.46	4000	3	0.11		4000		
-3.238	2.476	-0.646	0.90	0.57		1	2.61	0.46	4000	3	0.23		4000		
-3.256	2.464	-0.684	0.89	0.62		1	2.63	0.46	4000	3	0.34		4000		
-3.275	2.450	-0.722	0.87	0.66		1	2.64	0.46	4000	3	0.45		4000		
-3.294	2.436	-0.760	0.86	0.70		1	2.65	0.45	4000	3	0.56		4000		
-3.312	2.422	-0.797	0.85	0.74		1	2.66	0.45	4000	3	0.67		4000		
-3.331	2.407	-0.833	0.83	0.77		1	2.68	0.45	4000	3	0.79		4000		
-3.350	2.391	-0.869	0.82	0.81		1	2.69	0.45	4000	3	0.90		4000		
-3.369	2.374	-0.904	0.80	0.84		1	2.70	0.45	4000	3	1.01		4000		
-3.387	2.357	-0.939	0.79	0.87		1	2.71	0.45	4000	3	1.12		4000		
-3.406	2.339	-0.973	0.77	0.90		1	2.72	0.45	4000	3	1.24		4000		
-3.425	2.320	-1.006	0.75	0.93		1	2.74	0.45	4000	3	1.35		4000		
-3.444	2.301	-1.038	0.74	0.95		1	2.75	0.45	4000	3	1.46		4000		
-3.463	2.281	-1.069	0.72	0.98		1	2.76	0.45	4000	3	1.58		4000		
-3.481	2.261	-1.100	0.70	1.00		1	2.77	0.45	4000	3	1.69		4000		
-3.500	2.240	-1.130	0.68	1.02		1	2.78	0.45	4000	3	1.80		4000		
-3.519	2.219	-1.159	0.66	1.03		1	2.80	0.45	4000	3	1.91		4000		
-3.537	2.197	-1.187	0.64	1.05		1	2.81	0.45	4000	3	2.02		4000		
-3.556	2.174	-1.215	0.62	1.06		1	2.82	0.45	4000	3	2.14		4000		
-3.575	2.151	-1.241	0.60	1.08		1	2.83	0.45	4000	3	2.25		4000		
-3.594	2.128	-1.267	0.58	1.09		1	2.84	0.45	4000	3	2.36		4000		
-3.613	2.104	-1.292	0.56	1.09		1	2.86	0.45	4000	3	2.48		4000		
-3.631	2.079	-1.315	0.54	1.10		1	2.87	0.45	4000	3	2.59		4000		
-3.650	2.054	-1.338	0.52	1.10		1	2.88	0.45	4000	3	2.70		4000		
-3.669	2.029	-1.360	0.50	1.11		1	2.89	0.45	4000	3	2.81		4000		
-3.688	2.003	-1.382	0.48	1.11		1	2.90	0.45	4000	3	2.92		4000		
-3.706	1.977	-1.402	0.46	1.11		1	2.92	0.44	4000	3	3.04		4000		
-3.725	1.951	-1.421	0.44	1.10		1	2.93	0.44	4000	3	3.15		4000		
-3.744	1.924	-1.440	0.42	1.10		1	2.94	0.44	4000	3	3.26		4000		
-3.763	1.897	-1.457	0.40	1.09		1	2.95	0.44	4000	3	3.38		4000		
-3.781	1.869	-1.474	0.38	1.08		1	2.96	0.44	4000	3	3.49		4000		
-3.800	1.841	-1.490	0.36	1.07		1	2.97	0.44	4000	3	3.60		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-3.819	1.813	-1.505	0.34	1.06	1	2.99	0.44	4000	3	3.71		4000		
-3.838	1.785	-1.519	0.32	1.04	1	3.00	0.44	4000	3	3.83		4000		
-3.856	1.756	-1.532	0.30	1.03	1	3.01	0.44	4000	3	3.94		4000		
-3.875	1.728	-1.545	0.28	1.01	1	3.02	0.44	4000	3	4.05		4000		
-3.894	1.698	-1.556	0.26	0.99	1	3.03	0.44	4000	3	4.16		4000		
-3.913	1.669	-1.567	0.24	0.97	1	3.05	0.44	4000	3	4.28		4000		
-3.931	1.640	-1.577	0.22	0.94	1	3.06	0.44	4000	3	4.39		4000		
-3.950	1.610	-1.587	0.21	0.92	1	3.07	0.44	4000	3	4.50		4000		
-3.969	1.580	-1.595	0.19	0.89	1	3.08	0.44	4000	3	4.61		4000		
-3.988	1.550	-1.603	0.17	0.86	1	3.09	0.43	4000	3	4.73		4000		
-4.006	1.520	-1.610	0.16	0.83	1	3.10	0.43	4000	3	4.84		4000		
-4.025	1.490	-1.616	0.14	0.79	1	3.12	0.43	4000	3	4.95		4000		
-4.044	1.459	-1.622	0.13	0.76	1	3.13	0.43	4000	3	5.06		4000		
-4.063	1.429	-1.627	0.11	0.72	1	3.14	0.43	4000	3	5.18		4000		
-4.081	1.398	-1.632	0.10	0.68	1	3.15	0.43	4000	3	5.29		4000		
-4.100	1.368	-1.636	0.09	0.64	1	3.16	0.43	4000	3	5.40		4000		
-4.119	1.337	-1.640	0.08	0.60	1	3.18	0.43	4000	3	5.51		4000		
-4.138	1.306	-1.643	0.06	0.55	1	3.19	0.43	4000	3	5.63		4000		
-4.156	1.276	-1.645	0.05	0.51	1	3.20	0.43	4000	3	5.74		4000		
-4.175	1.245	-1.647	0.05	0.46	1	3.21	0.43	4000	3	5.85		4000		
-4.194	1.214	-1.649	0.04	0.41	1	3.22	0.43	4000	2	5.85		4000		
-4.213	1.183	-1.651	0.03	0.36	1	3.23	0.43	4000	2	5.74		4000		
-4.231	1.152	-1.652	0.02	0.32	1	3.25	0.42	4000	2	5.64		4000		
-4.250	1.121	-1.653	0.02	0.27	1	3.26	0.42	4000	2	5.53		4000		
-4.269	1.090	-1.653	0.01	0.23	1	3.27	0.42	4000	2	5.43		4000		
-4.287	1.059	-1.654	0.01	0.19	1	3.28	0.42	4000	2	5.32		4000		
-4.306	1.028	-1.654	0.01	0.15	1	3.29	0.42	4000	2	5.22		4000		
-4.325	0.997	-1.655	0.00	0.12	1	3.30	0.42	4000	2	5.11		4000		
-4.344	0.966	-1.655	0.00	0.09	1	3.32	0.42	4000	2	5.01		4000		
-4.363	0.935	-1.655	0.00	0.05	1	3.33	0.42	4000	2	4.90		4000		
-4.381	0.904	-1.655	0.00	0.03	1	3.34	0.42	4000	2	4.80		4000		
-4.400	0.873	-1.655	0.00	0.00	1	3.35	0.42	4000	2	4.69		4000		
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 2.57 mm

MAXIMUM MOMENT = 0.96 m.T/m

CODIFICATION OF STATE :
-1 = SEPARATION
0 = EXCAVATION
1 = ACTIVE PR.

CODIFICATION OF SOIL :
2 = ELASTIC
3 = PASSIVE PR.

(6 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.73 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.124 = (8.95 T/m)/(72.14 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = 0.937 = (4.05 T/m)/(4.32 T/m)

** PHASE Nb 4 **

*FASE 4: Apuntalamiento y excavacion

* INSTALLATION LEVEL OF STRUTS Nb 3

LEVEL	=	-3.100 m
SPACE	=	1.000 m
INCLINATION	=	0.000 DEGREES
PRELOAD	=	0.000 T
STIFFNESS	=	23000.000 T/m

BILATERAL CONNECTION

* EXCAVATION IN SOIL 2 TO LEVEL = -4.400 m

PHASE 4

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -4.40 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	-0.083	1.302	0.00	0.00	3	0.00		4000	0					
-0.019	-0.059	1.302	0.00	0.00	2	0.08	0.01	4000	0					
-0.038	-0.034	1.302	0.00	0.00	2	0.25	0.03	4000	0					
-0.056	-0.010	1.302	0.00	0.01	2	0.40	0.07	4000	0					
-0.075	0.015	1.302	0.00	0.02	2	0.33	0.03	4000	0					
-0.094	0.039	1.302	0.00	0.02	2	0.25	0.04	4000	0					
-0.113	0.063	1.302	0.00	0.03	2	0.17	0.05	4000	0					
-0.131	0.088	1.302	0.00	0.03	2	0.13	0.05	4000	0					
-0.150	0.112	1.302	0.00	0.03	2	0.17	0.07	4000	0					
				-0.76	2	0.17	0.07	4000	0				1	-0.79
-0.175	0.145	1.302	0.02	-0.75	2	0.21	0.08	4000	0					
-0.200	0.177	1.300	0.04	-0.75	2	0.26	0.09	4000	0					
-0.225	0.210	1.298	0.05	-0.74	2	0.30	0.10	4000	0					
-0.250	0.242	1.294	0.07	-0.73	2	0.35	0.11	4000	0					
-0.274	0.274	1.290	0.09	-0.72	2	0.39	0.12	4000	0					
-0.298	0.305	1.284	0.11	-0.71	2	0.44	0.13	4000	0					
-0.323	0.336	1.278	0.12	-0.70	2	0.48	0.14	4000	0					
-0.347	0.367	1.270	0.14	-0.69	2	0.52	0.15	4000	0					
-0.371	0.397	1.262	0.16	-0.67	2	0.57	0.16	4000	0					
-0.395	0.428	1.253	0.17	-0.66	2	0.61	0.17	4000	0					
-0.420	0.458	1.242	0.19	-0.64	2	0.65	0.18	4000	0					
-0.444	0.488	1.231	0.20	-0.63	2	0.69	0.19	4000	0					
-0.468	0.518	1.220	0.22	-0.61	2	0.74	0.20	4000	0					
-0.492	0.547	1.207	0.23	-0.59	2	0.78	0.21	4000	0					
-0.516	0.576	1.193	0.25	-0.57	2	0.82	0.22	4000	0					
-0.541	0.605	1.179	0.26	-0.55	2	0.86	0.23	4000	0					
-0.565	0.633	1.164	0.28	-0.53	2	0.90	0.24	4000	0					
-0.589	0.661	1.148	0.29	-0.51	2	0.94	0.25	4000	0					
-0.613	0.689	1.132	0.30	-0.49	2	0.98	0.26	4000	0					
-0.637	0.716	1.115	0.31	-0.46	2	1.02	0.27	4000	0					
-0.662	0.743	1.097	0.32	-0.44	2	1.06	0.28	4000	0					
-0.686	0.769	1.079	0.33	-0.41	2	1.10	0.29	4000	0					
-0.710	0.795	1.060	0.34	-0.38	2	1.14	0.30	4000	0					
-0.734	0.820	1.040	0.35	-0.36	2	1.17	0.31	4000	0					
-0.759	0.845	1.021	0.36	-0.33	2	1.21	0.32	4000	0					
-0.783	0.870	1.000	0.37	-0.30	2	1.24	0.33	4000	0					
-0.807	0.894	0.980	0.37	-0.27	2	1.28	0.34	4000	0					
-0.831	0.917	0.958	0.38	-0.24	2	1.31	0.35	4000	0					
-0.855	0.940	0.937	0.39	-0.20	2	1.35	0.35	4000	0					
-0.880	0.963	0.915	0.39	-0.17	2	1.38	0.36	4000	0					
-0.904	0.985	0.894	0.39	-0.14	2	1.41	0.37	4000	0					
-0.928	1.006	0.871	0.40	-0.10	2	1.44	0.38	4000	0					
-0.952	1.027	0.849	0.40	-0.07	2	1.47	0.39	4000	0					
-0.977	1.047	0.827	0.40	-0.03	2	1.50	0.40	4000	0					
-1.001	1.067	0.805	0.40	0.01	2	1.53	0.40	4000	0					
-1.025	1.086	0.782	0.40	0.04	2	1.55	0.41	4000	0					
-1.049	1.105	0.760	0.40	0.08	2	1.58	0.42	4000	0					
-1.073	1.123	0.738	0.40	0.12	2	1.60	0.43	4000	0					
-1.098	1.140	0.716	0.39	0.16	2	1.62	0.44	4000	0					
-1.122	1.158	0.694	0.39	0.20	2	1.64	0.44	4000	0					
-1.146	1.174	0.672	0.38	0.24	2	1.66	0.45	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-1.170	1.190	0.651	0.38	0.28		2	1.68	0.46	4000	0					
-1.195	1.206	0.630	0.37	0.32		2	1.70	0.46	4000	0					
-1.219	1.221	0.610	0.36	0.36		2	1.71	0.47	4000	0					
-1.243	1.235	0.590	0.35	0.40		2	1.72	0.48	4000	0					
-1.267	1.249	0.571	0.34	0.44		2	1.73	0.48	4000	0					
-1.291	1.263	0.552	0.33	0.49		2	1.74	0.49	4000	0					
-1.316	1.276	0.534	0.32	0.53		2	1.75	0.50	4000	0					
-1.340	1.289	0.516	0.30	0.57		2	1.75	0.50	4000	0					
-1.364	1.301	0.500	0.29	0.61		2	1.75	0.51	4000	0					
-1.388	1.313	0.484	0.27	0.66		2	1.75	0.52	4000	0					
-1.412	1.324	0.469	0.26	0.70		2	1.75	0.52	4000	0					
-1.437	1.336	0.455	0.24	0.74		2	1.75	0.53	4000	0					
-1.461	1.347	0.442	0.22	0.78		2	1.74	0.53	4000	0					
-1.485	1.357	0.430	0.20	0.82		2	1.73	0.54	4000	0					
-1.509	1.367	0.420	0.18	0.87		2	1.72	0.54	4000	0					
-1.534	1.377	0.410	0.16	0.91		2	1.70	0.55	4000	0					
-1.558	1.387	0.402	0.14	0.95		2	1.69	0.56	4000	0					
-1.582	1.397	0.394	0.11	0.99		2	1.66	0.56	4000	0					
-1.606	1.406	0.389	0.09	1.03		2	1.64	0.57	4000	0					
-1.630	1.416	0.384	0.07	1.07		2	1.58	0.49	4000	0					
-1.655	1.425	0.381	0.04	1.11		2	1.64	0.54	4000	0					
-1.679	1.434	0.380	0.01	1.15		2	1.71	0.58	4000	0					
-1.703	1.443	0.380	-0.02	1.19		2	1.77	0.58	4000	0					
-1.727	1.453	0.382	-0.05	1.23		2	1.84	0.59	4000	0					
-1.752	1.462	0.385	-0.08	1.28		2	1.91	0.59	4000	0					
-1.776	1.471	0.391	-0.11	1.33		2	1.99	0.60	4000	0					
-1.800	1.481	0.398	-0.14	1.38		2	2.06	0.60	4000	0					
				-0.22		2	2.06	0.60	4000	0				2	-1.59
-1.825	1.491	0.406	-0.14	-0.16		2	2.14	0.60	4000	0					
-1.850	1.501	0.413	-0.13	-0.11		2	2.23	0.61	4000	0					
-1.875	1.512	0.421	-0.13	-0.05		2	2.31	0.61	4000	0					
-1.900	1.522	0.428	-0.13	0.01		2	2.40	0.62	4000	0					
-1.934	1.537	0.439	-0.13	0.09		2	2.52	0.62	4000	0					
-1.951	1.544	0.444	-0.13	0.13		2	2.58	0.62	4000	0					
-1.968	1.552	0.449	-0.14	0.18		2	2.64	0.63	4000	0					
-1.985	1.560	0.455	-0.14	0.22		2	2.71	0.63	4000	0					
-2.002	1.567	0.460	-0.14	0.27		2	2.77	0.63	4000	0					
-2.019	1.575	0.466	-0.15	0.32		2	2.83	0.63	4000	0					
-2.036	1.583	0.472	-0.15	0.37		2	2.89	0.63	4000	0					
-2.070	1.599	0.484	-0.17	0.47		2	3.02	0.64	4000	0					
-2.087	1.608	0.491	-0.18	0.52		2	3.08	0.64	4000	0					
-2.104	1.616	0.498	-0.19	0.57		2	3.14	0.64	4000	0					
-2.121	1.625	0.506	-0.20	0.62		2	3.20	0.64	4000	0					
-2.138	1.633	0.514	-0.21	0.68		2	3.26	0.65	4000	0					
-2.155	1.642	0.522	-0.22	0.73		2	3.32	0.65	4000	0					
-2.172	1.651	0.531	-0.23	0.79		2	3.37	0.65	4000	0					
-2.206	1.669	0.550	-0.26	0.91		2	3.48	0.65	4000	0					
-2.240	1.688	0.572	-0.29	1.03		2	3.59	0.66	4000	0					
-2.273	1.708	0.597	-0.33	1.15		2	3.69	0.66	4000	0					
-2.307	1.729	0.624	-0.37	1.28		2	3.78	0.66	4000	0					
-2.341	1.751	0.655	-0.42	1.41		2	3.87	0.66	4000	0					
-2.375	1.773	0.690	-0.47	1.54		2	3.94	0.67	4000	0					
-2.409	1.798	0.728	-0.52	1.68		2	4.01	0.67	4000	0					
-2.443	1.823	0.772	-0.58	1.81		2	4.06	0.67	4000	0					
-2.477	1.850	0.820	-0.65	1.95		2	4.10	0.67	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.511	1.879	0.873	-0.71	2.09	2	4.13	0.68	4000	0					
-2.545	1.909	0.932	-0.79	2.23	2	4.14	0.68	4000	0					
-2.579	1.942	0.997	-0.87	2.37	2	4.14	0.68	4000	0					
-2.613	1.977	1.068	-0.95	2.51	2	4.12	0.68	4000	0					
-2.647	2.015	1.145	-1.04	2.65	2	4.08	0.68	4000	0					
-2.681	2.055	1.230	-1.13	2.79	2	4.02	0.68	4000	0					
-2.715	2.098	1.322	-1.23	2.92	2	3.94	0.68	4000	0					
-2.749	2.145	1.422	-1.33	3.06	2	3.84	0.68	4000	0					
-2.783	2.195	1.531	-1.43	3.18	2	3.71	0.68	4000	0					
-2.817	2.249	1.647	-1.54	3.31	2	3.56	0.69	4000	0					
-2.851	2.307	1.773	-1.66	3.43	2	3.38	0.69	4000	0					
-2.885	2.369	1.907	-1.78	3.54	2	3.18	0.69	4000	0					
-2.919	2.436	2.051	-1.90	3.64	2	2.94	0.69	4000	0					
-2.952	2.509	2.205	-2.02	3.74	2	2.68	0.69	4000	0					
-2.986	2.586	2.368	-2.15	3.82	1	2.45	0.46	4000	0					
-3.015	2.656	2.513	-2.26	3.89	1	2.47	0.46	4000	0					
-3.043	2.729	2.665	-2.37	3.96	1	2.49	0.46	4000	0					
-3.072	2.807	2.824	-2.49	4.03	1	2.51	0.46	4000	0					
-3.100	2.889	2.990	-2.60	4.11	1	2.52	0.46	4000	0					
				-3.82	1	2.52	0.46	4000	0				3	-7.93
-3.125	2.966	3.138	-2.51	-3.76	1	2.54	0.46	4000	0					
-3.150	3.046	3.280	-2.41	-3.70	1	2.56	0.46	4000	0					
-3.175	3.130	3.416	-2.32	-3.63	1	2.57	0.46	4000	0					
-3.200	3.217	3.548	-2.23	-3.57	1	2.59	0.46	4000	0					
-3.219	3.284	3.643	-2.17	-3.52	1	2.60	0.46	4000	0					
-3.238	3.354	3.735	-2.10	-3.47	1	2.61	0.46	4000	0					
-3.256	3.425	3.825	-2.04	-3.42	1	2.63	0.46	4000	0					
-3.275	3.497	3.911	-1.97	-3.37	1	2.64	0.46	4000	0					
-3.294	3.571	3.995	-1.91	-3.32	1	2.65	0.45	4000	0					
-3.312	3.647	4.077	-1.85	-3.27	1	2.66	0.45	4000	0					
-3.331	3.724	4.155	-1.79	-3.22	1	2.68	0.45	4000	0					
-3.350	3.803	4.231	-1.73	-3.17	1	2.69	0.45	4000	0					
-3.369	3.883	4.305	-1.67	-3.12	1	2.70	0.45	4000	0					
-3.387	3.964	4.376	-1.61	-3.07	1	2.71	0.45	4000	0					
-3.406	4.047	4.444	-1.55	-3.02	1	2.72	0.45	4000	0					
-3.425	4.131	4.510	-1.50	-2.97	1	2.74	0.45	4000	0					
-3.444	4.216	4.574	-1.44	-2.92	1	2.75	0.45	4000	0					
-3.463	4.302	4.635	-1.39	-2.87	1	2.76	0.45	4000	0					
-3.481	4.390	4.694	-1.33	-2.81	1	2.77	0.45	4000	0					
-3.500	4.478	4.750	-1.28	-2.76	1	2.78	0.45	4000	0					
-3.519	4.568	4.804	-1.23	-2.71	1	2.80	0.45	4000	0					
-3.537	4.658	4.857	-1.18	-2.66	1	2.81	0.45	4000	0					
-3.556	4.750	4.907	-1.13	-2.60	1	2.82	0.45	4000	0					
-3.575	4.842	4.954	-1.08	-2.55	1	2.83	0.45	4000	0					
-3.594	4.936	5.000	-1.03	-2.50	1	2.84	0.45	4000	0					
-3.613	5.030	5.044	-0.99	-2.44	1	2.86	0.45	4000	0					
-3.631	5.125	5.086	-0.94	-2.39	1	2.87	0.45	4000	0					
-3.650	5.221	5.126	-0.90	-2.34	1	2.88	0.45	4000	0					
-3.669	5.317	5.164	-0.86	-2.28	1	2.89	0.45	4000	0					
-3.688	5.414	5.200	-0.81	-2.23	1	2.90	0.45	4000	0					
-3.706	5.512	5.234	-0.77	-2.17	1	2.92	0.44	4000	0					
-3.725	5.610	5.266	-0.73	-2.12	1	2.93	0.44	4000	0					
-3.744	5.709	5.297	-0.69	-2.06	1	2.94	0.44	4000	0					
-3.763	5.809	5.326	-0.65	-2.01	1	2.95	0.44	4000	0					
-3.781	5.909	5.354	-0.62	-1.95	1	2.96	0.44	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-3.800	6.010	5.380	-0.58	-1.90	1	2.97	0.44	4000	0					
-3.819	6.111	5.404	-0.55	-1.84	1	2.99	0.44	4000	0					
-3.838	6.212	5.427	-0.51	-1.79	1	3.00	0.44	4000	0					
-3.856	6.314	5.448	-0.48	-1.73	1	3.01	0.44	4000	0					
-3.875	6.417	5.468	-0.45	-1.67	1	3.02	0.44	4000	0					
-3.894	6.519	5.487	-0.42	-1.62	1	3.03	0.44	4000	0					
-3.913	6.623	5.504	-0.39	-1.56	1	3.05	0.44	4000	0					
-3.931	6.726	5.521	-0.36	-1.50	1	3.06	0.44	4000	0					
-3.950	6.830	5.535	-0.33	-1.44	1	3.07	0.44	4000	0					
-3.969	6.933	5.549	-0.30	-1.39	1	3.08	0.44	4000	0					
-3.988	7.038	5.562	-0.28	-1.33	1	3.09	0.43	4000	0					
-4.006	7.142	5.573	-0.25	-1.27	1	3.10	0.43	4000	0					
-4.025	7.247	5.584	-0.23	-1.21	1	3.12	0.43	4000	0					
-4.044	7.351	5.593	-0.21	-1.15	1	3.13	0.43	4000	0					
-4.063	7.456	5.602	-0.19	-1.10	1	3.14	0.43	4000	0					
-4.081	7.561	5.609	-0.17	-1.04	1	3.15	0.43	4000	0					
-4.100	7.667	5.616	-0.15	-0.98	1	3.16	0.43	4000	0					
-4.119	7.772	5.622	-0.13	-0.92	1	3.18	0.43	4000	0					
-4.138	7.878	5.627	-0.11	-0.86	1	3.19	0.43	4000	0					
-4.156	7.983	5.632	-0.10	-0.80	1	3.20	0.43	4000	0					
-4.175	8.089	5.636	-0.08	-0.74	1	3.21	0.43	4000	0					
-4.194	8.194	5.639	-0.07	-0.68	1	3.22	0.43	4000	0					
-4.213	8.300	5.642	-0.06	-0.62	1	3.23	0.43	4000	0					
-4.231	8.406	5.644	-0.05	-0.56	1	3.25	0.42	4000	0					
-4.250	8.512	5.646	-0.04	-0.50	1	3.26	0.42	4000	0					
-4.269	8.618	5.647	-0.03	-0.43	1	3.27	0.42	4000	0					
-4.287	8.724	5.649	-0.02	-0.37	1	3.28	0.42	4000	0					
-4.306	8.830	5.649	-0.01	-0.31	1	3.29	0.42	4000	0					
-4.325	8.935	5.650	-0.01	-0.25	1	3.30	0.42	4000	0					
-4.344	9.041	5.650	-0.01	-0.19	1	3.32	0.42	4000	0					
-4.363	9.147	5.650	0.00	-0.13	1	3.33	0.42	4000	0					
-4.381	9.253	5.650	0.00	-0.06	1	3.34	0.42	4000	0					
-4.400	9.359	5.650	0.00	0.00	1	3.35	0.42	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 9.36 mm

MAXIMUM MOMENT = -2.60 m.T/m

CODIFICATION OF STATE :
-1 = SEPARATION
0 = EXCAVATION
1 = ACTIVE PR.

CODIFICATION OF SOIL :
2 = ELASTIC
3 = PASSIVE PR.

(2 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 2.03 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.143 = (10.31 T/m)/(72.14 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = WITHOUT INTEREST

** PHASE Nb 5 **

*FASE 5: Retirada de puntal intermedio

* REMOVAL LEVEL OF STRUTS Nb 2

PHASE 5

	WALL					SOIL 1				SOIL 2					
						EXCAVATION: 0.00 m				EXCAVATION: -4.40 m				STRUTS/	
						WATER LEVEL: -20.00 m				WATER LEVEL: -20.00 m				ANCHORS	
						CAQUOT SURC.: 0.00 T/m2				CAQUOT SURC.: 0.00 T/m2					
LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	-0.130	1.604	0.00	0.00		3	0.00		4000	0					
-0.019	-0.100	1.604	0.00	0.00		3	0.16	0.05	4000	0					
-0.038	-0.070	1.604	0.00	0.01		3	0.33	0.10	4000	0					
-0.056	-0.039	1.604	0.00	0.01		3	0.49	0.15	4000	0					
-0.075	-0.009	1.604	0.00	0.02		2	0.42	0.03	4000	0					
-0.094	0.021	1.604	0.00	0.03		2	0.32	0.04	4000	0					
-0.113	0.051	1.604	0.00	0.03		2	0.22	0.05	4000	0					
-0.131	0.081	1.604	0.00	0.04		2	0.16	0.06	4000	0					
-0.150	0.111	1.604	0.00	0.04		2	0.17	0.07	4000	0					
				-0.71		2	0.17	0.07	4000	0				1	-0.76
-0.175	0.151	1.604	0.01	-0.71		2	0.19	0.07	4000	0					
-0.200	0.191	1.603	0.03	-0.71		2	0.20	0.07	4000	0					
-0.225	0.231	1.600	0.05	-0.70		2	0.22	0.07	4000	0					
-0.250	0.271	1.597	0.07	-0.69		1	0.24	0.07	4000	0					
-0.274	0.310	1.593	0.08	-0.69		1	0.26	0.08	4000	0					
-0.298	0.348	1.588	0.10	-0.68		1	0.29	0.09	4000	0					
-0.323	0.387	1.581	0.12	-0.67		1	0.31	0.09	4000	0					
-0.347	0.425	1.574	0.13	-0.67		1	0.33	0.10	4000	0					
-0.371	0.463	1.567	0.15	-0.66		1	0.36	0.11	4000	0					
-0.395	0.501	1.558	0.17	-0.65		1	0.38	0.12	4000	0					
-0.420	0.538	1.548	0.18	-0.64		1	0.40	0.12	4000	0					
-0.444	0.576	1.538	0.20	-0.63		1	0.43	0.13	4000	0					
-0.468	0.613	1.526	0.21	-0.62		1	0.45	0.14	4000	0					
-0.492	0.650	1.514	0.23	-0.61		1	0.47	0.14	4000	0					
-0.516	0.686	1.501	0.24	-0.60		1	0.49	0.15	4000	0					
-0.541	0.722	1.487	0.26	-0.58		1	0.52	0.16	4000	0					
-0.565	0.758	1.472	0.27	-0.57		1	0.54	0.16	4000	0					
-0.589	0.794	1.457	0.28	-0.56		1	0.56	0.17	4000	0					
-0.613	0.829	1.441	0.30	-0.54		1	0.58	0.18	4000	0					
-0.637	0.863	1.424	0.31	-0.53		1	0.61	0.18	4000	0					
-0.662	0.898	1.406	0.32	-0.51		1	0.63	0.19	4000	0					
-0.686	0.932	1.388	0.33	-0.50		1	0.65	0.19	4000	0					
-0.710	0.965	1.369	0.35	-0.48		1	0.67	0.20	4000	0					
-0.734	0.998	1.349	0.36	-0.47		1	0.70	0.21	4000	0					
-0.759	1.030	1.329	0.37	-0.45		1	0.72	0.21	4000	0					
-0.783	1.062	1.308	0.38	-0.43		1	0.74	0.22	4000	0					
-0.807	1.094	1.286	0.39	-0.41		1	0.76	0.22	4000	0					
-0.831	1.124	1.264	0.40	-0.39		1	0.78	0.23	4000	0					
-0.855	1.155	1.242	0.41	-0.38		1	0.81	0.24	4000	0					
-0.880	1.185	1.219	0.42	-0.36		1	0.83	0.24	4000	0					
-0.904	1.214	1.195	0.43	-0.34		1	0.85	0.25	4000	0					
-0.928	1.243	1.171	0.43	-0.31		1	0.87	0.25	4000	0					
-0.952	1.271	1.147	0.44	-0.29		1	0.89	0.26	4000	0					
-0.977	1.298	1.122	0.45	-0.27		1	0.92	0.26	4000	0					
-1.001	1.325	1.097	0.45	-0.25		1	0.94	0.27	4000	0					
-1.025	1.351	1.071	0.46	-0.23		1	0.96	0.27	4000	0					
-1.049	1.377	1.045	0.47	-0.20		1	0.98	0.28	4000	0					
-1.073	1.402	1.019	0.47	-0.18		1	1.00	0.29	4000	0					
-1.098	1.426	0.993	0.47	-0.15		1	1.02	0.29	4000	0					
-1.122	1.450	0.966	0.48	-0.13		1	1.04	0.30	4000	0					
-1.146	1.473	0.939	0.48	-0.10		1	1.06	0.30	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-1.170	1.495	0.912	0.48	-0.08		1	1.08	0.30	4000	0					
-1.195	1.517	0.885	0.48	-0.05		1	1.11	0.31	4000	0					
-1.219	1.538	0.858	0.48	-0.02		1	1.13	0.31	4000	0					
-1.243	1.559	0.831	0.48	0.00		1	1.15	0.32	4000	0					
-1.267	1.579	0.804	0.48	0.03		1	1.17	0.32	4000	0					
-1.291	1.598	0.777	0.48	0.06		1	1.19	0.33	4000	0					
-1.316	1.616	0.750	0.48	0.09		1	1.21	0.33	4000	0					
-1.340	1.634	0.723	0.48	0.12		1	1.23	0.34	4000	0					
-1.364	1.651	0.697	0.48	0.15		1	1.25	0.34	4000	0					
-1.388	1.668	0.670	0.47	0.18		1	1.27	0.34	4000	0					
-1.412	1.684	0.644	0.47	0.21		1	1.29	0.35	4000	0					
-1.437	1.699	0.618	0.46	0.24		1	1.31	0.35	4000	0					
-1.461	1.714	0.592	0.46	0.27		1	1.33	0.36	4000	0					
-1.485	1.728	0.567	0.45	0.31		1	1.35	0.36	4000	0					
-1.509	1.741	0.542	0.44	0.34		1	1.37	0.36	4000	0					
-1.534	1.754	0.518	0.43	0.37		1	1.39	0.37	4000	0					
-1.558	1.766	0.494	0.42	0.41		1	1.41	0.37	4000	0					
-1.582	1.778	0.471	0.41	0.44		1	1.43	0.37	4000	0					
-1.606	1.789	0.448	0.40	0.48		1	1.45	0.38	4000	0					
-1.630	1.800	0.426	0.39	0.51		1	1.47	0.38	4000	0					
-1.655	1.810	0.404	0.38	0.55		1	1.49	0.38	4000	0					
-1.679	1.819	0.384	0.36	0.58		1	1.51	0.39	4000	0					
-1.703	1.828	0.364	0.35	0.62		1	1.52	0.39	4000	0					
-1.727	1.837	0.345	0.33	0.66		1	1.54	0.39	4000	0					
-1.752	1.845	0.327	0.32	0.69		1	1.56	0.40	4000	0					
-1.776	1.853	0.309	0.30	0.73		1	1.58	0.40	4000	0					
-1.800	1.860	0.293	0.28	0.77		1	1.60	0.40	4000	0					
-1.825	1.867	0.277	0.26	0.81		1	1.62	0.40	4000	0					
-1.850	1.874	0.263	0.24	0.85		1	1.64	0.41	4000	0					
-1.875	1.880	0.250	0.22	0.89		1	1.66	0.41	4000	0					
-1.900	1.886	0.238	0.20	0.93		1	1.68	0.41	4000	0					
-1.934	1.894	0.224	0.16	0.99		1	1.70	0.41	4000	0					
-1.951	1.898	0.218	0.15	1.02		1	1.72	0.42	4000	0					
-1.968	1.901	0.212	0.13	1.05		1	1.73	0.42	4000	0					
-1.985	1.905	0.208	0.11	1.08		1	1.74	0.42	4000	0					
-2.002	1.909	0.204	0.09	1.11		1	1.75	0.42	4000	0					
-2.019	1.912	0.200	0.07	1.14		1	1.77	0.42	4000	0					
-2.036	1.915	0.198	0.05	1.17		1	1.78	0.42	4000	0					
-2.070	1.922	0.195	0.01	1.23		1	1.81	0.43	4000	0					
-2.087	1.925	0.195	-0.01	1.26		1	1.82	0.43	4000	0					
-2.104	1.929	0.196	-0.03	1.29		2	1.89	0.49	4000	0					
-2.121	1.932	0.198	-0.05	1.33		2	1.97	0.55	4000	0					
-2.138	1.935	0.200	-0.08	1.36		2	2.05	0.62	4000	0					
-2.155	1.939	0.204	-0.10	1.39		2	2.13	0.65	4000	0					
-2.172	1.942	0.208	-0.12	1.43		2	2.21	0.65	4000	0					
-2.206	1.950	0.220	-0.17	1.51		2	2.36	0.65	4000	0					
-2.240	1.957	0.235	-0.23	1.59		2	2.52	0.66	4000	0					
-2.273	1.966	0.255	-0.28	1.68		2	2.66	0.66	4000	0					
-2.307	1.975	0.279	-0.34	1.77		2	2.80	0.66	4000	0					
-2.341	1.985	0.308	-0.40	1.87		2	2.93	0.66	4000	0					
-2.375	1.996	0.342	-0.47	1.97		2	3.06	0.67	4000	0					
-2.409	2.008	0.382	-0.54	2.08		2	3.17	0.67	4000	0					
-2.443	2.022	0.426	-0.61	2.19		2	3.27	0.67	4000	0					
-2.477	2.037	0.477	-0.68	2.30		2	3.36	0.67	4000	0					
-2.511	2.054	0.534	-0.76	2.41		2	3.43	0.68	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.545	2.073	0.597	-0.85	2.53	2	3.49	0.68	4000	0					
-2.579	2.095	0.667	-0.94	2.65	2	3.53	0.68	4000	0					
-2.613	2.119	0.744	-1.03	2.77	2	3.55	0.68	4000	0					
-2.647	2.145	0.828	-1.12	2.89	2	3.56	0.68	4000	0					
-2.681	2.175	0.920	-1.22	3.01	2	3.54	0.68	4000	0					
-2.715	2.208	1.020	-1.33	3.13	2	3.50	0.68	4000	0					
-2.749	2.244	1.128	-1.44	3.25	2	3.44	0.68	4000	0					
-2.783	2.284	1.245	-1.55	3.36	2	3.35	0.68	4000	0					
-2.817	2.329	1.371	-1.67	3.48	2	3.24	0.69	4000	0					
-2.851	2.378	1.506	-1.79	3.58	2	3.10	0.69	4000	0					
-2.885	2.431	1.651	-1.91	3.69	2	2.93	0.69	4000	0					
-2.919	2.490	1.806	-2.04	3.78	2	2.73	0.69	4000	0					
-2.952	2.554	1.970	-2.17	3.87	2	2.50	0.53	4000	0					
-2.986	2.624	2.145	-2.30	3.96	1	2.45	0.46	4000	0					
-3.015	2.687	2.299	-2.41	4.03	1	2.47	0.46	4000	0					
-3.043	2.754	2.461	-2.53	4.10	1	2.49	0.46	4000	0					
-3.072	2.827	2.631	-2.64	4.17	1	2.51	0.46	4000	0					
-3.100	2.904	2.808	-2.76	4.24	1	2.52	0.46	4000	0					
				-4.02	1	2.52	0.46	4000	0				3	-8.26
-3.125	2.976	2.964	-2.66	-3.96	1	2.54	0.46	4000	0					
-3.150	3.052	3.115	-2.57	-3.90	1	2.56	0.46	4000	0					
-3.175	3.132	3.260	-2.47	-3.83	1	2.57	0.46	4000	0					
-3.200	3.215	3.400	-2.37	-3.77	2	2.60	0.46	4000	0					
-3.219	3.280	3.501	-2.30	-3.72	2	2.62	0.47	4000	0					
-3.238	3.346	3.600	-2.23	-3.67	2	2.64	0.49	4000	0					
-3.256	3.415	3.695	-2.17	-3.62	2	2.67	0.49	4000	0					
-3.275	3.485	3.787	-2.10	-3.57	2	2.69	0.50	4000	0					
-3.294	3.557	3.876	-2.03	-3.52	2	2.71	0.51	4000	0					
-3.312	3.630	3.963	-1.97	-3.47	2	2.73	0.52	4000	0					
-3.331	3.705	4.047	-1.90	-3.42	2	2.75	0.53	4000	0					
-3.350	3.782	4.128	-1.84	-3.36	2	2.77	0.54	4000	0					
-3.369	3.860	4.206	-1.78	-3.31	2	2.79	0.54	4000	0					
-3.387	3.940	4.281	-1.71	-3.26	2	2.81	0.55	4000	0					
-3.406	4.021	4.354	-1.65	-3.21	2	2.83	0.56	4000	0					
-3.425	4.103	4.425	-1.59	-3.15	2	2.85	0.56	4000	0					
-3.444	4.186	4.492	-1.54	-3.10	2	2.87	0.57	4000	0					
-3.463	4.271	4.557	-1.48	-3.05	2	2.88	0.58	4000	0					
-3.481	4.357	4.620	-1.42	-2.99	2	2.90	0.58	4000	0					
-3.500	4.445	4.680	-1.37	-2.94	2	2.92	0.59	4000	0					
-3.519	4.533	4.738	-1.31	-2.88	2	2.94	0.59	4000	0					
-3.537	4.622	4.794	-1.26	-2.83	2	2.95	0.59	4000	0					
-3.556	4.713	4.847	-1.20	-2.77	2	2.97	0.60	4000	0					
-3.575	4.804	4.898	-1.15	-2.72	2	2.99	0.60	4000	0					
-3.594	4.896	4.947	-1.10	-2.66	2	3.00	0.61	4000	0					
-3.613	4.990	4.994	-1.05	-2.60	2	3.02	0.61	4000	0					
-3.631	5.084	5.038	-1.01	-2.55	2	3.03	0.61	4000	0					
-3.650	5.178	5.081	-0.96	-2.49	2	3.05	0.61	4000	0					
-3.669	5.274	5.121	-0.91	-2.43	2	3.06	0.62	4000	0					
-3.688	5.370	5.160	-0.87	-2.38	2	3.08	0.62	4000	0					
-3.706	5.468	5.196	-0.82	-2.32	2	3.09	0.62	4000	0					
-3.725	5.565	5.231	-0.78	-2.26	2	3.11	0.62	4000	0					
-3.744	5.664	5.264	-0.74	-2.20	2	3.12	0.63	4000	0					
-3.763	5.763	5.295	-0.70	-2.14	2	3.14	0.63	4000	0					
-3.781	5.862	5.324	-0.66	-2.08	2	3.15	0.63	4000	0					
-3.800	5.962	5.352	-0.62	-2.02	2	3.16	0.63	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-3.819	6.063	5.378	-0.58	-1.96		2	3.18	0.63	4000	0					
-3.838	6.164	5.402	-0.55	-1.90		2	3.19	0.63	4000	0					
-3.856	6.266	5.425	-0.51	-1.84		2	3.21	0.64	4000	0					
-3.875	6.367	5.447	-0.48	-1.78		2	3.22	0.64	4000	0					
-3.894	6.470	5.466	-0.44	-1.72		2	3.23	0.64	4000	0					
-3.913	6.572	5.485	-0.41	-1.66		2	3.25	0.64	4000	0					
-3.931	6.675	5.502	-0.38	-1.60		2	3.26	0.64	4000	0					
-3.950	6.779	5.518	-0.35	-1.54		2	3.27	0.64	4000	0					
-3.969	6.882	5.533	-0.32	-1.48		2	3.29	0.64	4000	0					
-3.988	6.986	5.546	-0.30	-1.42		2	3.30	0.64	4000	0					
-4.006	7.090	5.558	-0.27	-1.36		2	3.31	0.64	4000	0					
-4.025	7.195	5.569	-0.25	-1.29		2	3.32	0.64	4000	0					
-4.044	7.299	5.580	-0.22	-1.23		2	3.34	0.64	4000	0					
-4.063	7.404	5.589	-0.20	-1.17		2	3.35	0.64	4000	0					
-4.081	7.509	5.597	-0.18	-1.11		2	3.36	0.64	4000	0					
-4.100	7.614	5.604	-0.16	-1.04		2	3.38	0.64	4000	0					
-4.119	7.719	5.610	-0.14	-0.98		2	3.39	0.64	4000	0					
-4.138	7.824	5.616	-0.12	-0.92		2	3.40	0.64	4000	0					
-4.156	7.929	5.621	-0.10	-0.85		2	3.41	0.64	4000	0					
-4.175	8.035	5.625	-0.09	-0.79		2	3.43	0.64	4000	0					
-4.194	8.140	5.629	-0.08	-0.72		2	3.44	0.64	4000	0					
-4.213	8.246	5.632	-0.06	-0.66		2	3.45	0.64	4000	0					
-4.231	8.352	5.634	-0.05	-0.59		2	3.46	0.64	4000	0					
-4.250	8.457	5.636	-0.04	-0.53		2	3.48	0.64	4000	0					
-4.269	8.563	5.638	-0.03	-0.46		2	3.49	0.63	4000	0					
-4.287	8.669	5.639	-0.02	-0.40		2	3.50	0.63	4000	0					
-4.306	8.774	5.640	-0.02	-0.33		2	3.51	0.63	4000	0					
-4.325	8.880	5.640	-0.01	-0.27		2	3.52	0.63	4000	0					
-4.344	8.986	5.640	-0.01	-0.20		2	3.54	0.63	4000	0					
-4.363	9.092	5.641	0.00	-0.13		2	3.55	0.63	4000	0					
-4.381	9.197	5.641	0.00	-0.07		2	3.56	0.63	4000	0					
-4.400	9.303	5.641	0.00	0.00		2	3.57	0.63	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 9.30 mm

MAXIMUM MOMENT = -2.76 m.T/m

CODIFICATION OF STATE :
-1 = SEPARATION
0 = EXCAVATION
1 = ACTIVE PR.

CODIFICATION OF SOIL :
2 = ELASTIC
3 = PASSIVE PR.

(4 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.95 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.125 = (9.02 T/m)/(72.14 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = WITHOUT INTEREST

*** END OF CALCULUS

*** MAXIMUM DISPLACEMENT IN PHASE Nb 4 = 9.359 mm IN FINAL PHASE Nb 5 = 9.303 mm

*** MAXIMUM MOMENT IN PHASE Nb 5 = -2.763 m.T/m IN FINAL PHASE Nb 5 = -2.763 m.T/m

STRUT/ANCHOR		PRELOAD		MAXIMUM		FINAL STATE	
NUMBER	LEVEL	PHASE	FORCE	PHASE	FORCE	PHASE	FORCE
1	-0.15	2	0.00	2	-0.93	5	-0.76
2	-1.80	3	0.00	3	-4.25	5	REMOVED
3	-3.10	4	0.00	5	-8.26	5	-8.26
	m		T		T		T

* ENVELOPE CURVES FROM PHASE 1 TO PHASE 5 *

LEVEL	MINI CRO.FO	MAXI CRO.FO
0.000	0.00	0.00
-0.019	0.00	0.00
-0.038	0.00	0.01
-0.056	0.00	0.01
-0.075	0.00	0.02
-0.094	0.00	0.03
-0.113	0.00	0.03
-0.131	0.00	0.04
-0.150	0.00	0.04
	-0.89	0.01
-0.175	-0.89	0.01
-0.200	-0.88	0.02
-0.225	-0.88	0.02
-0.250	-0.87	0.03
-0.274	-0.87	0.03
-0.298	-0.86	0.04
-0.323	-0.85	0.03
-0.347	-0.84	0.03
-0.371	-0.84	0.03
-0.395	-0.83	0.03
-0.420	-0.82	0.03
-0.444	-0.81	0.03
-0.468	-0.80	0.02
-0.492	-0.79	0.02
-0.516	-0.77	0.02
-0.541	-0.76	0.02
-0.565	-0.75	0.01
-0.589	-0.74	0.01
-0.613	-0.72	0.01
-0.637	-0.71	0.01
-0.662	-0.69	0.00
-0.686	-0.68	0.00
-0.710	-0.66	0.00
-0.734	-0.64	0.00
-0.759	-0.63	0.00
-0.783	-0.61	0.00
-0.807	-0.59	0.00
-0.831	-0.57	0.03
-0.855	-0.55	0.07
-0.880	-0.53	0.11
-0.904	-0.51	0.15
-0.928	-0.49	0.19
-0.952	-0.47	0.23
-0.977	-0.45	0.28
-1.001	-0.43	0.32
-1.025	-0.40	0.37
-1.049	-0.38	0.42
-1.073	-0.36	0.46
-1.098	-0.33	0.51
-1.122	-0.31	0.56
-1.146	-0.28	0.60
-1.170	-0.26	0.65
-1.195	-0.23	0.70

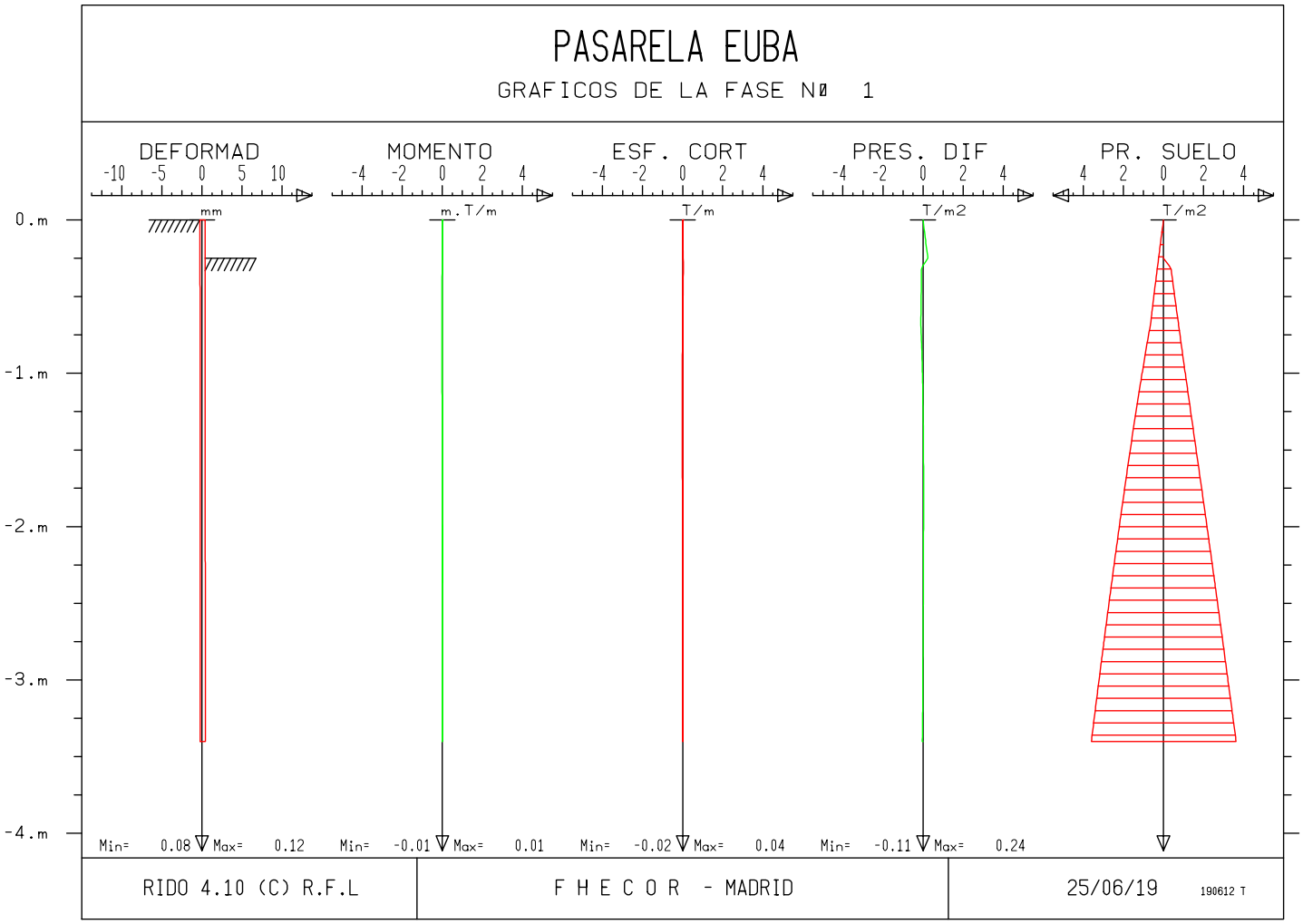
LEVEL	MINI MOMENT	MAXI MOMENT
0.000	0.00	0.00
-0.019	0.00	0.00
-0.038	0.00	0.00
-0.056	0.00	0.00
-0.075	0.00	0.00
-0.094	0.00	0.00
-0.113	0.00	0.00
-0.131	0.00	0.00
-0.150	0.00	0.00
	0.00	0.00
-0.175	0.00	0.02
-0.200	0.00	0.04
-0.225	0.00	0.06
-0.250	0.00	0.09
-0.274	0.00	0.11
-0.298	0.00	0.13
-0.323	-0.01	0.15
-0.347	-0.01	0.17
-0.371	-0.01	0.19
-0.395	-0.01	0.21
-0.420	-0.01	0.23
-0.444	-0.01	0.25
-0.468	-0.01	0.27
-0.492	-0.01	0.29
-0.516	-0.01	0.31
-0.541	-0.01	0.32
-0.565	-0.01	0.34
-0.589	-0.01	0.36
-0.613	-0.01	0.38
-0.637	-0.01	0.40
-0.662	-0.01	0.41
-0.686	-0.01	0.43
-0.710	-0.01	0.45
-0.734	-0.01	0.46
-0.759	-0.01	0.48
-0.783	-0.01	0.49
-0.807	-0.01	0.51
-0.831	-0.01	0.52
-0.855	-0.01	0.53
-0.880	-0.01	0.55
-0.904	-0.01	0.56
-0.928	-0.01	0.57
-0.952	-0.01	0.58
-0.977	-0.01	0.60
-1.001	-0.01	0.61
-1.025	-0.01	0.62
-1.049	-0.01	0.63
-1.073	-0.01	0.63
-1.098	-0.01	0.64
-1.122	-0.01	0.65
-1.146	-0.01	0.66
-1.170	-0.01	0.66
-1.195	-0.01	0.67

-1.219	-0.20	0.75	-1.219	0.00	0.68
-1.243	-0.17	0.80	-1.243	0.00	0.68
-1.267	-0.15	0.85	-1.267	0.00	0.68
-1.291	-0.12	0.90	-1.291	0.00	0.69
-1.316	-0.09	0.94	-1.316	0.00	0.69
-1.340	-0.06	0.99	-1.340	0.00	0.69
-1.364	-0.03	1.04	-1.364	-0.02	0.69
-1.388	-0.02	1.09	-1.388	-0.04	0.69
-1.412	-0.02	1.13	-1.412	-0.07	0.69
-1.437	-0.02	1.18	-1.437	-0.10	0.69
-1.461	-0.02	1.23	-1.461	-0.13	0.69
-1.485	-0.02	1.27	-1.485	-0.16	0.69
-1.509	-0.02	1.31	-1.509	-0.19	0.68
-1.534	-0.02	1.36	-1.534	-0.22	0.68
-1.558	-0.02	1.40	-1.558	-0.25	0.67
-1.582	-0.02	1.44	-1.582	-0.29	0.67
-1.606	-0.02	1.48	-1.606	-0.32	0.66
-1.630	-0.01	1.51	-1.630	-0.36	0.65
-1.655	-0.01	1.55	-1.655	-0.40	0.64
-1.679	-0.01	1.59	-1.679	-0.43	0.64
-1.703	-0.01	1.62	-1.703	-0.47	0.63
-1.727	-0.01	1.66	-1.727	-0.51	0.61
-1.752	-0.01	1.70	-1.752	-0.55	0.60
-1.776	-0.01	1.74	-1.776	-0.59	0.59
-1.800	-0.01	1.77	-1.800	-0.64	0.58
	-2.47	0.77		-0.64	0.58
-1.825	-2.43	0.81	-1.825	-0.58	0.56
-1.850	-2.39	0.85	-1.850	-0.52	0.54
-1.875	-2.35	0.89	-1.875	-0.46	0.53
-1.900	-2.31	0.93	-1.900	-0.40	0.51
-1.934	-2.25	0.99	-1.934	-0.32	0.48
-1.951	-2.22	1.02	-1.951	-0.28	0.47
-1.968	-2.19	1.05	-1.968	-0.25	0.45
-1.985	-2.16	1.08	-1.985	-0.21	0.44
-2.002	-2.13	1.11	-2.002	-0.17	0.42
-2.019	-2.10	1.14	-2.019	-0.15	0.41
-2.036	-2.07	1.17	-2.036	-0.15	0.39
-2.070	-2.01	1.23	-2.070	-0.17	0.36
-2.087	-1.98	1.26	-2.087	-0.18	0.34
-2.104	-1.95	1.29	-2.104	-0.19	0.33
-2.121	-1.92	1.33	-2.121	-0.20	0.31
-2.138	-1.89	1.36	-2.138	-0.21	0.29
-2.155	-1.86	1.39	-2.155	-0.22	0.28
-2.172	-1.82	1.43	-2.172	-0.23	0.26
-2.206	-1.76	1.51	-2.206	-0.26	0.23
-2.240	-1.70	1.59	-2.240	-0.29	0.28
-2.273	-1.63	1.68	-2.273	-0.33	0.34
-2.307	-1.56	1.77	-2.307	-0.37	0.39
-2.341	-1.50	1.87	-2.341	-0.42	0.45
-2.375	-1.43	1.97	-2.375	-0.47	0.50
-2.409	-1.36	2.08	-2.409	-0.54	0.54
-2.443	-1.29	2.19	-2.443	-0.61	0.59
-2.477	-1.22	2.30	-2.477	-0.68	0.63
-2.511	-1.14	2.41	-2.511	-0.76	0.67
-2.545	-1.07	2.53	-2.545	-0.85	0.71
-2.579	-1.00	2.65	-2.579	-0.94	0.74
-2.613	-0.92	2.77	-2.613	-1.03	0.78
-2.647	-0.85	2.89	-2.647	-1.12	0.81
-2.681	-0.77	3.01	-2.681	-1.22	0.83
-2.715	-0.70	3.13	-2.715	-1.33	0.86
-2.749	-0.62	3.25	-2.749	-1.44	0.88

-2.783	-0.54	3.36	-2.783	-1.55	0.90
-2.817	-0.46	3.48	-2.817	-1.67	0.92
-2.851	-0.38	3.58	-2.851	-1.79	0.93
-2.885	-0.30	3.69	-2.885	-1.91	0.94
-2.919	-0.22	3.78	-2.919	-2.04	0.95
-2.952	-0.14	3.87	-2.952	-2.17	0.96
-2.986	-0.06	3.96	-2.986	-2.30	0.96
-3.015	0.00	4.03	-3.015	-2.41	0.96
-3.043	0.00	4.10	-3.043	-2.53	0.96
-3.072	-0.01	4.17	-3.072	-2.64	0.96
-3.100	-0.04	4.24	-3.100	-2.76	0.95
	-4.02	0.22		-2.76	0.95
-3.125	-3.96	0.29	-3.125	-2.66	0.95
-3.150	-3.90	0.35	-3.150	-2.57	0.94
-3.175	-3.83	0.42	-3.175	-2.47	0.93
-3.200	-3.77	0.48	-3.200	-2.37	0.92
-3.219	-3.72	0.53	-3.219	-2.30	0.91
-3.238	-3.67	0.57	-3.238	-2.23	0.90
-3.256	-3.62	0.62	-3.256	-2.17	0.89
-3.275	-3.57	0.66	-3.275	-2.10	0.87
-3.294	-3.52	0.70	-3.294	-2.03	0.86
-3.312	-3.47	0.74	-3.312	-1.97	0.85
-3.331	-3.42	0.77	-3.331	-1.90	0.83
-3.350	-3.36	0.81	-3.350	-1.84	0.82
-3.369	-3.31	0.84	-3.369	-1.78	0.80
-3.387	-3.26	0.87	-3.387	-1.71	0.79
-3.406	-3.21	0.90	-3.406	-1.65	0.77
-3.425	-3.15	0.93	-3.425	-1.59	0.75
-3.444	-3.10	0.95	-3.444	-1.54	0.74
-3.463	-3.05	0.98	-3.463	-1.48	0.72
-3.481	-2.99	1.00	-3.481	-1.42	0.70
-3.500	-2.94	1.02	-3.500	-1.37	0.68
-3.519	-2.88	1.03	-3.519	-1.31	0.66
-3.537	-2.83	1.05	-3.537	-1.26	0.64
-3.556	-2.77	1.06	-3.556	-1.20	0.62
-3.575	-2.72	1.08	-3.575	-1.15	0.60
-3.594	-2.66	1.09	-3.594	-1.10	0.58
-3.613	-2.60	1.09	-3.613	-1.05	0.56
-3.631	-2.55	1.10	-3.631	-1.01	0.54
-3.650	-2.49	1.10	-3.650	-0.96	0.52
-3.669	-2.43	1.11	-3.669	-0.91	0.50
-3.688	-2.38	1.11	-3.688	-0.87	0.48
-3.706	-2.32	1.11	-3.706	-0.82	0.46
-3.725	-2.26	1.10	-3.725	-0.78	0.44
-3.744	-2.20	1.10	-3.744	-0.74	0.42
-3.763	-2.14	1.09	-3.763	-0.70	0.40
-3.781	-2.08	1.08	-3.781	-0.66	0.38
-3.800	-2.02	1.07	-3.800	-0.62	0.36
-3.819	-1.96	1.06	-3.819	-0.58	0.34
-3.838	-1.90	1.04	-3.838	-0.55	0.32
-3.856	-1.84	1.03	-3.856	-0.51	0.30
-3.875	-1.78	1.01	-3.875	-0.48	0.28
-3.894	-1.72	0.99	-3.894	-0.44	0.26
-3.913	-1.66	0.97	-3.913	-0.41	0.24
-3.931	-1.60	0.94	-3.931	-0.38	0.22
-3.950	-1.54	0.92	-3.950	-0.35	0.21
-3.969	-1.48	0.89	-3.969	-0.32	0.19
-3.988	-1.42	0.86	-3.988	-0.30	0.17
-4.006	-1.36	0.83	-4.006	-0.27	0.16
-4.025	-1.29	0.79	-4.025	-0.25	0.14
-4.044	-1.23	0.76	-4.044	-0.22	0.13

-4.063	-1.17	0.72	-4.063	-0.20	0.11
-4.081	-1.11	0.68	-4.081	-0.18	0.10
-4.100	-1.04	0.64	-4.100	-0.16	0.09
-4.119	-0.98	0.60	-4.119	-0.14	0.08
-4.138	-0.92	0.55	-4.138	-0.12	0.06
-4.156	-0.85	0.51	-4.156	-0.10	0.05
-4.175	-0.79	0.46	-4.175	-0.09	0.05
-4.194	-0.72	0.41	-4.194	-0.08	0.04
-4.213	-0.66	0.36	-4.213	-0.06	0.03
-4.231	-0.59	0.32	-4.231	-0.05	0.02
-4.250	-0.53	0.27	-4.250	-0.04	0.02
-4.269	-0.46	0.23	-4.269	-0.03	0.01
-4.287	-0.40	0.19	-4.287	-0.02	0.01
-4.306	-0.33	0.15	-4.306	-0.02	0.01
-4.325	-0.27	0.12	-4.325	-0.01	0.00
-4.344	-0.20	0.09	-4.344	-0.01	0.00
-4.363	-0.13	0.05	-4.363	0.00	0.00
-4.381	-0.07	0.03	-4.381	0.00	0.00
-4.400	0.00	0.00	-4.400	0.00	0.00
0.000	6.08	0.67	0.000	0.00	1.00
m	T/m	T/m	m	m.T/m	m.T/m

PILA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mm
MOMENTO
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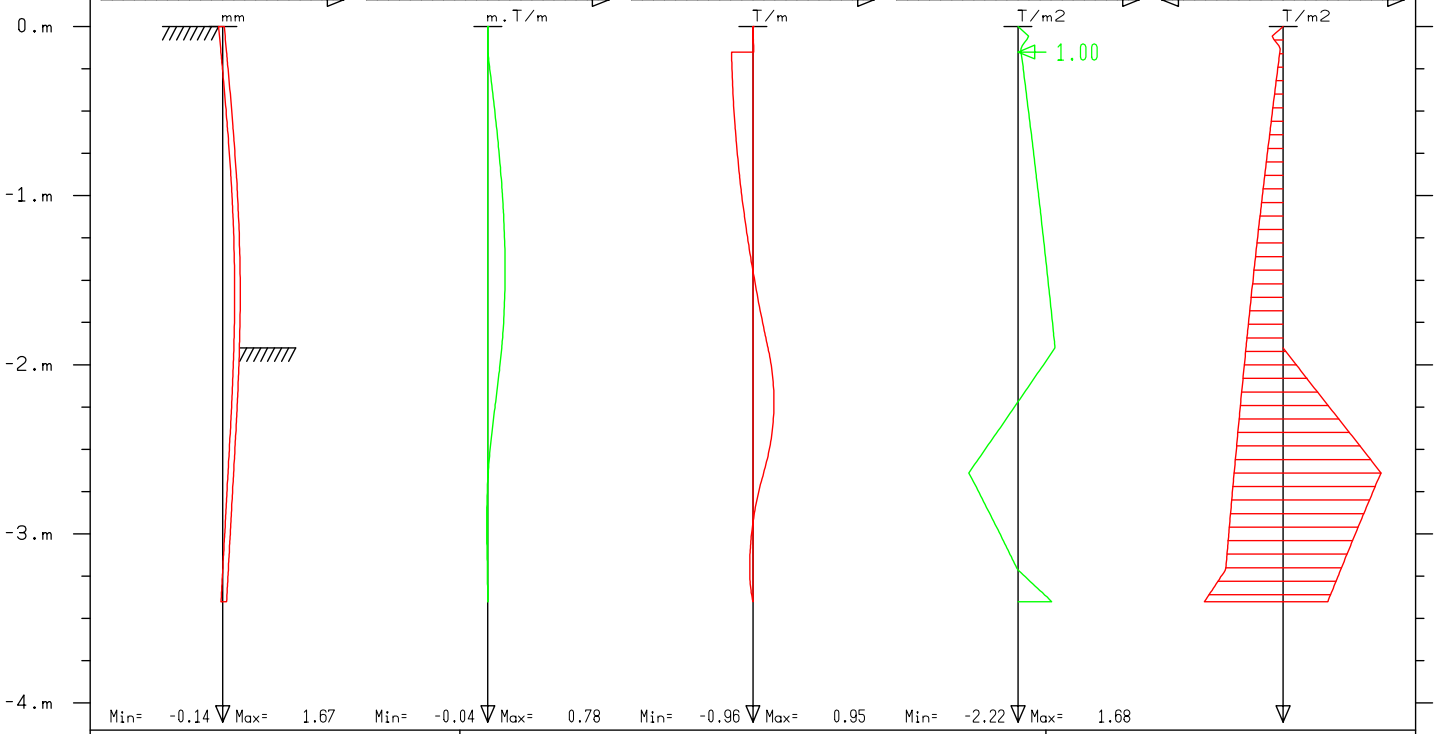
m.T/m
ESF. CORT
-4 -2 0 2 4
T/m
PRES. DIF
-4 -2 0 2 4
T/m2
PR. SUELO
4 2 0 2 4
T/m2
0.m
-1.m
-2.m
-3.m
-4.m
Min= 0.08 Max= 0.12
Min= -0.01 Max= 0.01
Min= -0.02 Max= 0.04
Min= -0.11 Max= 0.24
RIDO 4.10 (C) R.F.L
F H E C O R - MADRID
25/06/19
190612 T

PASARELA EUBA

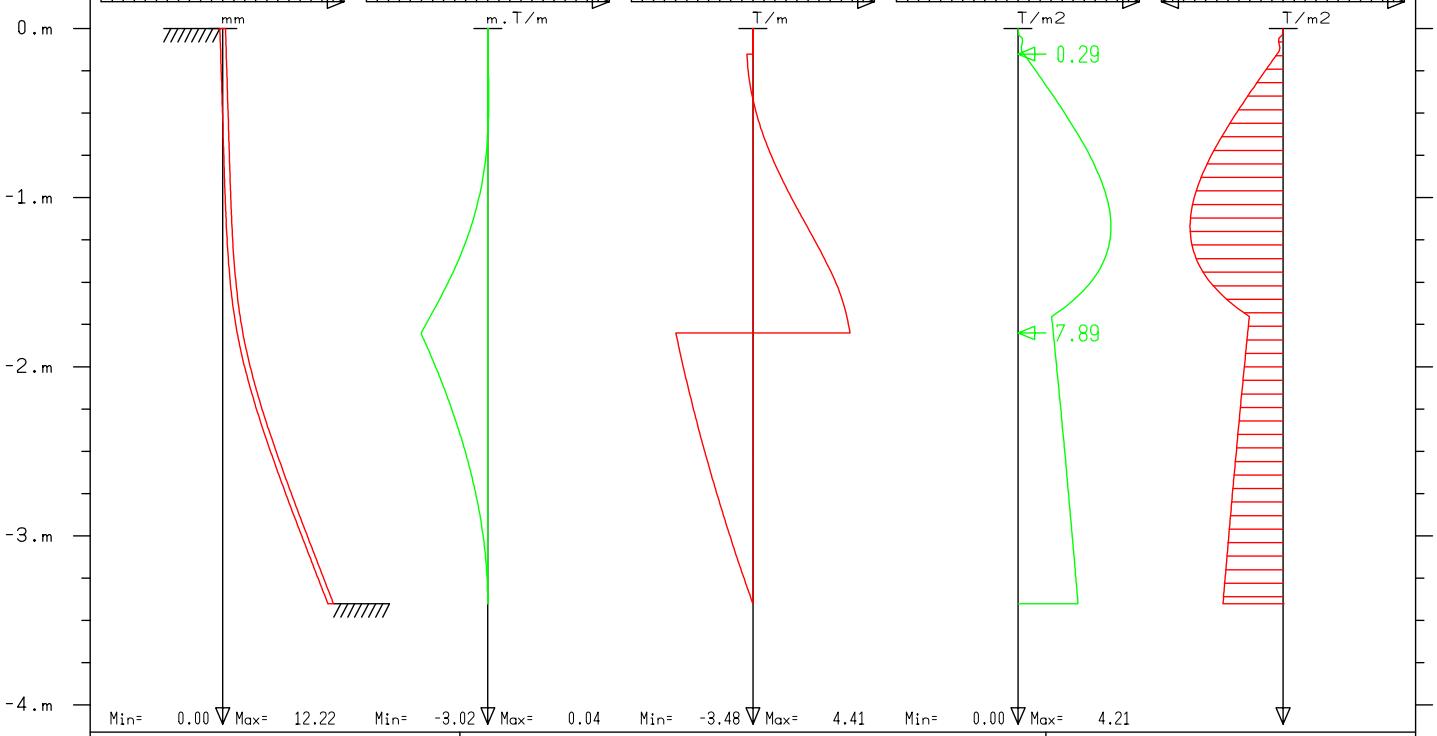
GRAFICOS DE LA FASE Nº 2



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

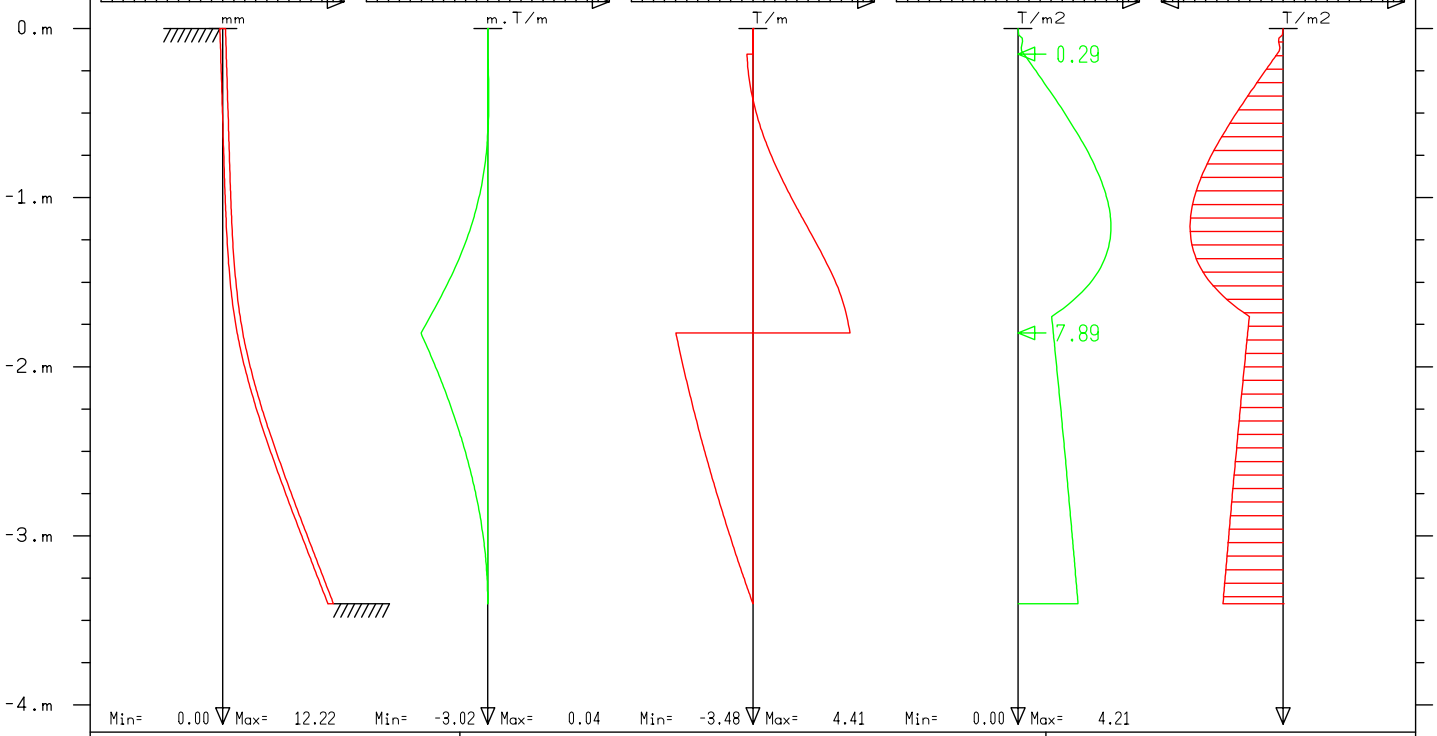
GRAFICOS DE LA FASE Nº 3



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

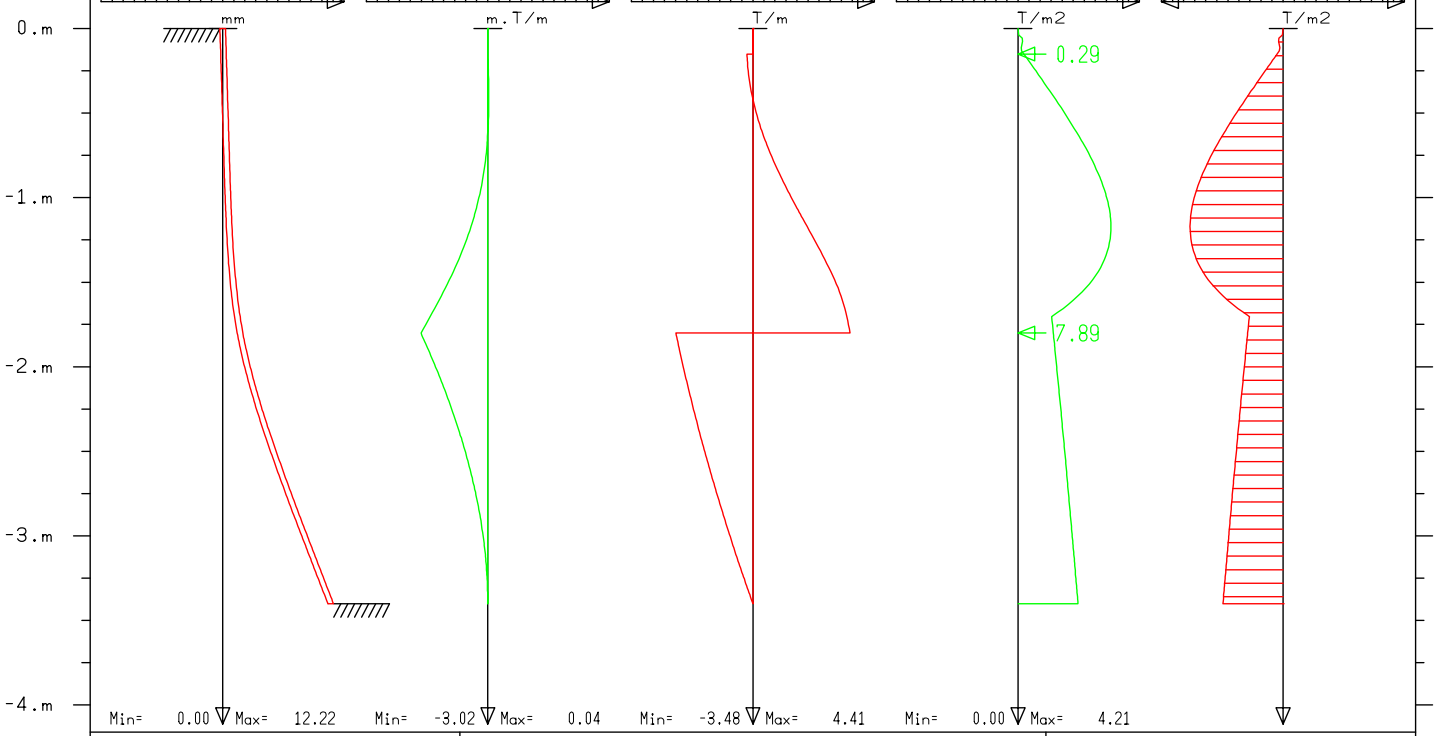
GRAFICOS DE LA FASE Nº 4



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

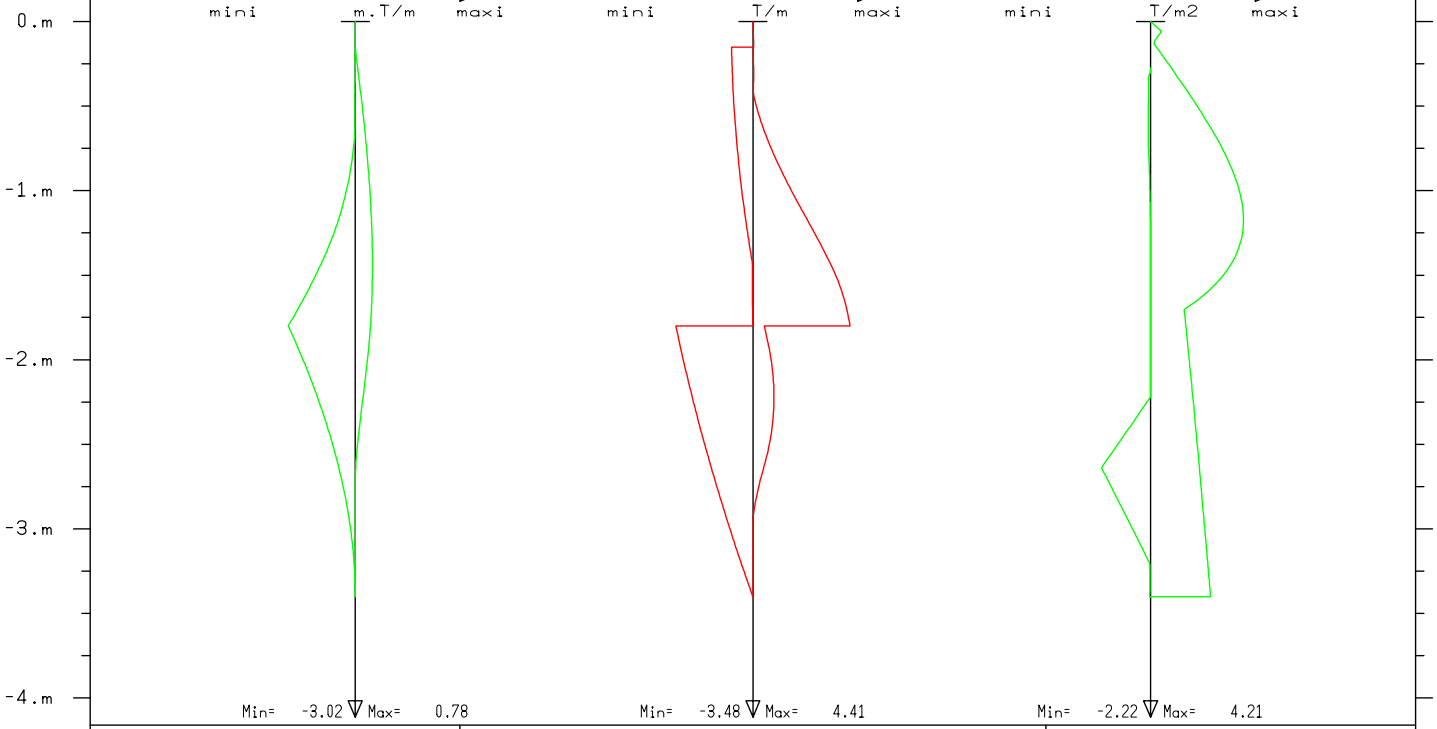
GRAFICOS DE LA FASE Nº 5



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

PASARELA EUBA

ENVOLVENTES DESDE LA FASE 1 HASTA LA FASE 5



RIDO 4.10 (C) R.F.L | F H E C O R - MADRID | 25/06/19 190612 T

********* CALCULO *********
*Pantalla tablestacas

** STARTING DATA **

* BOUSSINESQ SURCHARGES FUNCTION OF STATE OF SOIL

*** WALL DESCRIPTION :

	INERTIA PRODUCT EI	CYLINDRICAL RIGIDITY
SECTION Nb 1 FROM 0.000 m TO -3.400 m :	433. T.m2/m	0. T/m3

*Terreno

*** SOIL DESCRIPTION :

LAYER Nb 1 FROM 0.000 m TO -20.000 m :

SATURATED UNIT WEIGHT	GH	=	2.000	T/m3
SUBMERGED UNIT WEIGHT	GD	=	1.000	T/m3
HOR. ACTIVE PRESSURE COEFFICIENT	KA	=	0.333	
HOR. AT REST PRESSURE COEFFICIENT	K0	=	0.500	
HOR. PASSIVE PRESSURE COEFFICIENT	KP	=	3.000	
COHESION	C	=	0.000	T/m2
ANGLE OF INTERNAL FRICTION	PHI	=	30.000	DEGREES
FOR ACTIVE PRESS. DELTA/PHI		=	0.000	
FOR PASSIVE PRESS. DELTA/PHI		=	0.000	
ELASTIC REACTION COEFFICIENT (AT P=0)		=	4000.000	T/m3
INCR. OF THIS COEFF. WITH PRESSURE		=	0.000	1/m

*Nivel de agua

** PHASE Nb 1 **

*FASE 1: Primera excavacion

* CANCELLATION BOUSSINESQ SURCHARGE ON SOIL 1

* ADDING A BOUSSINESQ SURCHARGE ON SOIL 1
LEV. = 0.000 m A = 3.000 m B = 10.000 m Q = 3.000 T/m2

* EXCAVATION IN SOIL 2 TO LEVEL = -0.250 m

PHASE 1

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -0.25 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	0.078	0.002	0.00	0.00		1	0.00		4000	0					
-0.019	0.078	0.002	0.00	0.00		1	0.02	0.01	4000	0					
-0.038	0.078	0.002	0.00	0.00		1	0.04	0.01	4000	0					
-0.056	0.078	0.002	0.00	0.00		1	0.05	0.02	4000	0					
-0.075	0.078	0.002	0.00	0.00		1	0.07	0.02	4000	0					
-0.094	0.078	0.002	0.00	0.00		1	0.09	0.03	4000	0					
-0.113	0.078	0.002	0.00	0.01		1	0.11	0.03	4000	0					
-0.131	0.078	0.002	0.00	0.01		1	0.13	0.04	4000	0					
-0.150	0.078	0.002	0.00	0.01		1	0.14	0.04	4000	0					
-0.163	0.078	0.002	0.00	0.01		1	0.16	0.05	4000	0					
-0.175	0.078	0.002	0.00	0.01		1	0.17	0.05	4000	0					
-0.188	0.078	0.002	0.00	0.02		1	0.18	0.06	4000	0					
-0.200	0.078	0.002	0.00	0.02		1	0.19	0.06	4000	0					
-0.213	0.078	0.002	0.00	0.02		1	0.20	0.06	4000	0					
-0.225	0.078	0.002	0.00	0.02		1	0.22	0.07	4000	0					
-0.237	0.078	0.002	0.00	0.03		1	0.23	0.07	4000	0					
-0.250	0.078	0.002	0.00	0.03		1	0.24	0.07	4000	0					
-0.274	0.079	0.002	0.00	0.03		1	0.26	0.08	4000	3	0.15		4000		
-0.298	0.079	0.002	0.00	0.04		1	0.29	0.09	4000	3	0.29		4000		
-0.323	0.079	0.003	-0.01	0.03		1	0.31	0.09	4000	2	0.39		4000		
-0.347	0.079	0.003	-0.01	0.03		1	0.33	0.10	4000	2	0.41		4000		
-0.371	0.079	0.003	-0.01	0.03		1	0.36	0.11	4000	2	0.44		4000		
-0.395	0.079	0.004	-0.01	0.03		1	0.38	0.12	4000	2	0.46		4000		
-0.420	0.079	0.004	-0.01	0.03		1	0.40	0.12	4000	2	0.49		4000		
-0.444	0.079	0.005	-0.01	0.03		1	0.43	0.13	4000	2	0.51		4000		
-0.468	0.079	0.005	-0.01	0.02		1	0.45	0.14	4000	2	0.53		4000		
-0.492	0.079	0.006	-0.01	0.02		1	0.47	0.14	4000	2	0.56		4000		
-0.516	0.079	0.006	-0.01	0.02		1	0.49	0.15	4000	2	0.58		4000		
-0.541	0.080	0.007	-0.01	0.02		1	0.52	0.16	4000	2	0.61		4000		
-0.565	0.080	0.007	-0.01	0.01		1	0.54	0.16	4000	2	0.63		4000		
-0.589	0.080	0.008	-0.01	0.01		1	0.56	0.17	4000	2	0.66		4000		
-0.601	0.080	0.008	-0.01	0.01		1	0.57	0.17	4000	2	0.67		4000		
-0.613	0.080	0.009	-0.01	0.01		1	0.58	0.18	4000	2	0.68		4000		
-0.637	0.080	0.009	-0.01	0.01		1	0.61	0.18	4000	2	0.71		4000		
-0.662	0.081	0.010	-0.01	0.00		1	0.63	0.19	4000	2	0.73		4000		
-0.674	0.081	0.010	-0.01	0.00		1	0.64	0.19	4000	2	0.75		4000		
-0.686	0.081	0.011	-0.01	0.00		2	0.65	0.20	4000	2	0.76		4000		
-0.710	0.081	0.011	-0.01	0.00		2	0.69	0.21	4000	2	0.78		4000		
-0.734	0.081	0.012	-0.01	0.00		2	0.72	0.23	4000	2	0.81		4000		
-0.759	0.082	0.013	-0.01	0.00		2	0.75	0.25	4000	2	0.84		4000		
-0.783	0.082	0.013	-0.01	-0.01		2	0.78	0.26	4000	2	0.86		4000		
-0.807	0.082	0.014	-0.01	-0.01		2	0.81	0.28	4000	2	0.89		4000		
-0.831	0.083	0.015	-0.01	-0.01		2	0.85	0.29	4000	2	0.91		4000		
-0.855	0.083	0.015	-0.01	-0.01		2	0.88	0.31	4000	2	0.94		4000		
-0.880	0.083	0.016	-0.01	-0.01		2	0.91	0.32	4000	2	0.96		4000		
-0.892	0.084	0.016	-0.01	-0.01		2	0.92	0.33	4000	2	0.98		4000		
-0.904	0.084	0.016	-0.01	-0.01		2	0.94	0.34	4000	2	0.99		4000		
-0.928	0.084	0.017	-0.01	-0.02		2	0.97	0.35	4000	2	1.01		4000		
-0.952	0.085	0.017	-0.01	-0.02		2	1.00	0.37	4000	2	1.04		4000		
-0.964	0.085	0.018	-0.01	-0.02		2	1.02	0.37	4000	2	1.05		4000		
-0.977	0.085	0.018	-0.01	-0.02		2	1.03	0.38	4000	2	1.07		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-0.989	0.085	0.018	-0.01	-0.02		2	1.05	0.39	4000	2	1.08		4000		
-1.001	0.085	0.019	-0.01	-0.02		2	1.06	0.40	4000	2	1.09		4000		
-1.025	0.086	0.019	-0.01	-0.02		2	1.09	0.41	4000	2	1.12		4000		
-1.049	0.086	0.019	-0.01	-0.02		2	1.12	0.42	4000	2	1.14		4000		
-1.061	0.087	0.020	-0.01	-0.02		2	1.14	0.42	4000	2	1.16		4000		
-1.073	0.087	0.020	-0.01	-0.02		2	1.15	0.43	4000	2	1.17		4000		
-1.086	0.087	0.020	-0.01	-0.02		2	1.17	0.43	4000	2	1.18		4000		
-1.098	0.087	0.020	-0.01	-0.02		2	1.18	0.44	4000	2	1.20		4000		
-1.110	0.088	0.020	-0.01	-0.02		2	1.20	0.44	4000	2	1.21		4000		
-1.122	0.088	0.021	-0.01	-0.02		2	1.21	0.44	4000	2	1.22		4000		
-1.146	0.088	0.021	-0.01	-0.02		2	1.24	0.45	4000	2	1.25		4000		
-1.170	0.089	0.021	-0.01	-0.02		2	1.27	0.46	4000	2	1.28		4000		
-1.195	0.089	0.022	0.00	-0.02		2	1.30	0.46	4000	2	1.30		4000		
-1.219	0.090	0.022	0.00	-0.02		2	1.33	0.47	4000	2	1.33		4000		
-1.243	0.090	0.022	0.00	-0.02		2	1.36	0.48	4000	2	1.35		4000		
-1.267	0.091	0.022	0.00	-0.02		2	1.39	0.48	4000	2	1.38		4000		
-1.291	0.092	0.023	0.00	-0.02		2	1.42	0.49	4000	2	1.41		4000		
-1.316	0.092	0.023	0.00	-0.02		2	1.44	0.50	4000	2	1.43		4000		
-1.340	0.093	0.023	0.00	-0.02		2	1.47	0.50	4000	2	1.46		4000		
-1.364	0.093	0.023	0.00	-0.02		2	1.50	0.51	4000	2	1.49		4000		
-1.388	0.094	0.023	0.00	-0.02		2	1.53	0.52	4000	2	1.51		4000		
-1.412	0.094	0.023	0.00	-0.02		2	1.56	0.52	4000	2	1.54		4000		
-1.437	0.095	0.023	0.00	-0.02		2	1.59	0.53	4000	2	1.57		4000		
-1.461	0.095	0.023	0.00	-0.02		2	1.61	0.53	4000	2	1.59		4000		
-1.485	0.096	0.023	0.00	-0.02		2	1.64	0.54	4000	2	1.62		4000		
-1.509	0.097	0.023	0.00	-0.02		2	1.67	0.54	4000	2	1.65		4000		
-1.534	0.097	0.023	0.00	-0.02		2	1.70	0.55	4000	2	1.67		4000		
-1.558	0.098	0.023	0.00	-0.02		2	1.72	0.56	4000	2	1.70		4000		
-1.582	0.098	0.023	0.00	-0.02		2	1.75	0.56	4000	2	1.72		4000		
-1.606	0.099	0.022	0.00	-0.01		2	1.78	0.57	4000	2	1.75		4000		
-1.630	0.099	0.022	0.00	-0.01		2	1.80	0.57	4000	2	1.78		4000		
-1.655	0.100	0.022	0.00	-0.01		2	1.83	0.57	4000	2	1.80		4000		
-1.679	0.100	0.022	0.00	-0.01		2	1.86	0.58	4000	2	1.83		4000		
-1.703	0.101	0.022	0.00	-0.01		2	1.88	0.58	4000	2	1.86		4000		
-1.727	0.101	0.022	0.00	-0.01		2	1.91	0.59	4000	2	1.88		4000		
-1.752	0.102	0.021	0.00	-0.01		2	1.94	0.59	4000	2	1.91		4000		
-1.776	0.102	0.021	0.00	-0.01		2	1.96	0.60	4000	2	1.94		4000		
-1.800	0.103	0.021	0.01	-0.01		2	1.99	0.60	4000	2	1.96		4000		
-1.812	0.103	0.021	0.01	-0.01		2	2.00	0.60	4000	2	1.98		4000		
-1.825	0.103	0.020	0.01	-0.01		2	2.02	0.60	4000	2	1.99		4000		
-1.837	0.104	0.020	0.01	-0.01		2	2.03	0.61	4000	2	2.00		4000		
-1.850	0.104	0.020	0.01	-0.01		2	2.04	0.61	4000	2	2.02		4000		
-1.862	0.104	0.020	0.01	-0.01		2	2.06	0.61	4000	2	2.03		4000		
-1.875	0.104	0.020	0.01	-0.01		2	2.07	0.61	4000	2	2.04		4000		
-1.888	0.105	0.020	0.01	-0.01		2	2.08	0.61	4000	2	2.06		4000		
-1.900	0.105	0.019	0.01	-0.01		2	2.10	0.62	4000	2	2.07		4000		
-1.917	0.105	0.019	0.01	-0.01		2	2.11	0.62	4000	2	2.09		4000		
-1.934	0.106	0.019	0.01	-0.01		2	2.13	0.62	4000	2	2.11		4000		
-1.950	0.106	0.019	0.01	-0.01		2	2.15	0.62	4000	2	2.12		4000		
-1.967	0.106	0.019	0.01	0.00		2	2.17	0.63	4000	2	2.14		4000		
-1.984	0.107	0.018	0.01	0.00		2	2.19	0.63	4000	2	2.16		4000		
-2.001	0.107	0.018	0.01	0.00		2	2.20	0.63	4000	2	2.18		4000		
-2.018	0.107	0.018	0.01	0.00		2	2.22	0.63	4000	2	2.20		4000		
-2.035	0.107	0.018	0.01	0.00		2	2.24	0.63	4000	2	2.21		4000		
-2.051	0.108	0.017	0.01	0.00		2	2.26	0.64	4000	2	2.23		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.068	0.108	0.017	0.01	0.00		2	2.27	0.64	4000	2	2.25		4000		
-2.085	0.108	0.017	0.01	0.00		2	2.29	0.64	4000	2	2.27		4000		
-2.102	0.109	0.017	0.01	0.00		2	2.31	0.64	4000	2	2.29		4000		
-2.119	0.109	0.016	0.01	0.00		2	2.33	0.64	4000	2	2.30		4000		
-2.135	0.109	0.016	0.01	0.00		2	2.34	0.65	4000	2	2.32		4000		
-2.152	0.109	0.016	0.01	0.00		2	2.36	0.65	4000	2	2.34		4000		
-2.169	0.110	0.015	0.01	0.00		2	2.38	0.65	4000	2	2.36		4000		
-2.186	0.110	0.015	0.01	0.00		2	2.40	0.65	4000	2	2.38		4000		
-2.203	0.110	0.015	0.01	0.00		2	2.41	0.65	4000	2	2.39		4000		
-2.219	0.110	0.015	0.01	0.00		2	2.43	0.65	4000	2	2.41		4000		
-2.236	0.111	0.014	0.01	0.00		2	2.45	0.66	4000	2	2.43		4000		
-2.253	0.111	0.014	0.01	0.00		2	2.47	0.66	4000	2	2.45		4000		
-2.270	0.111	0.014	0.01	0.00		2	2.48	0.66	4000	2	2.46		4000		
-2.287	0.111	0.014	0.01	0.00		2	2.50	0.66	4000	2	2.48		4000		
-2.304	0.112	0.013	0.01	0.00		2	2.52	0.66	4000	2	2.50		4000		
-2.320	0.112	0.013	0.01	0.00		2	2.54	0.66	4000	2	2.52		4000		
-2.337	0.112	0.013	0.01	0.00		2	2.55	0.66	4000	2	2.54		4000		
-2.354	0.112	0.013	0.01	0.00		2	2.57	0.67	4000	2	2.55		4000		
-2.371	0.112	0.012	0.01	0.00		2	2.59	0.67	4000	2	2.57		4000		
-2.388	0.113	0.012	0.01	0.00		2	2.60	0.67	4000	2	2.59		4000		
-2.404	0.113	0.012	0.01	0.00		2	2.62	0.67	4000	2	2.61		4000		
-2.421	0.113	0.012	0.01	0.00		2	2.64	0.67	4000	2	2.62		4000		
-2.438	0.113	0.011	0.01	0.01		2	2.66	0.67	4000	2	2.64		4000		
-2.455	0.113	0.011	0.01	0.01		2	2.67	0.67	4000	2	2.66		4000		
-2.472	0.114	0.011	0.01	0.01		2	2.69	0.67	4000	2	2.68		4000		
-2.489	0.114	0.011	0.01	0.01		2	2.71	0.67	4000	2	2.69		4000		
-2.505	0.114	0.011	0.01	0.01		2	2.72	0.67	4000	2	2.71		4000		
-2.522	0.114	0.010	0.01	0.01		2	2.74	0.68	4000	2	2.73		4000		
-2.539	0.114	0.010	0.01	0.01		2	2.76	0.68	4000	2	2.75		4000		
-2.556	0.115	0.010	0.01	0.01		2	2.77	0.68	4000	2	2.76		4000		
-2.573	0.115	0.010	0.01	0.01		2	2.79	0.68	4000	2	2.78		4000		
-2.589	0.115	0.010	0.01	0.01		2	2.81	0.68	4000	2	2.80		4000		
-2.606	0.115	0.009	0.00	0.01		2	2.83	0.68	4000	2	2.82		4000		
-2.623	0.115	0.009	0.00	0.01		2	2.84	0.68	4000	2	2.83		4000		
-2.640	0.115	0.009	0.00	0.01		2	2.86	0.68	4000	2	2.85		4000		
-2.657	0.115	0.009	0.00	0.01		2	2.88	0.68	4000	2	2.87		4000		
-2.674	0.116	0.009	0.00	0.01		2	2.89	0.68	4000	2	2.89		4000		
-2.690	0.116	0.008	0.00	0.01		2	2.91	0.68	4000	2	2.90		4000		
-2.707	0.116	0.008	0.00	0.01		2	2.93	0.68	4000	2	2.92		4000		
-2.724	0.116	0.008	0.00	0.01		2	2.94	0.68	4000	2	2.94		4000		
-2.741	0.116	0.008	0.00	0.01		2	2.96	0.68	4000	2	2.96		4000		
-2.758	0.116	0.008	0.00	0.01		2	2.98	0.68	4000	2	2.97		4000		
-2.774	0.116	0.008	0.00	0.01		2	2.99	0.68	4000	2	2.99		4000		
-2.791	0.117	0.007	0.00	0.01		2	3.01	0.68	4000	2	3.01		4000		
-2.808	0.117	0.007	0.00	0.01		2	3.03	0.68	4000	2	3.02		4000		
-2.825	0.117	0.007	0.00	0.01		2	3.04	0.69	4000	2	3.04		4000		
-2.842	0.117	0.007	0.00	0.01		2	3.06	0.69	4000	2	3.06		4000		
-2.858	0.117	0.007	0.00	0.01		2	3.08	0.69	4000	2	3.08		4000		
-2.875	0.117	0.007	0.00	0.01		2	3.09	0.69	4000	2	3.09		4000		
-2.892	0.117	0.007	0.00	0.01		2	3.11	0.69	4000	2	3.11		4000		
-2.909	0.117	0.007	0.00	0.01		2	3.13	0.69	4000	2	3.13		4000		
-2.926	0.117	0.007	0.00	0.01		2	3.14	0.69	4000	2	3.15		4000		
-2.943	0.118	0.006	0.00	0.01		2	3.16	0.69	4000	2	3.16		4000		
-2.959	0.118	0.006	0.00	0.01		2	3.17	0.69	4000	2	3.18		4000		
-2.976	0.118	0.006	0.00	0.01		2	3.19	0.69	4000	2	3.20		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 1 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.989	0.118	0.006	0.00	0.01		2	3.20	0.69	4000	2	3.21		4000		
-3.003	0.118	0.006	0.00	0.01		2	3.22	0.69	4000	2	3.22		4000		
-3.016	0.118	0.006	0.00	0.01		2	3.23	0.69	4000	2	3.24		4000		
-3.029	0.118	0.006	0.00	0.01		2	3.24	0.69	4000	2	3.25		4000		
-3.042	0.118	0.006	0.00	0.01		2	3.26	0.69	4000	2	3.27		4000		
-3.056	0.118	0.006	0.00	0.01		2	3.27	0.69	4000	2	3.28		4000		
-3.069	0.118	0.006	0.00	0.01		2	3.28	0.69	4000	2	3.29		4000		
-3.082	0.118	0.006	0.00	0.01		2	3.29	0.69	4000	2	3.31		4000		
-3.095	0.119	0.006	0.00	0.01		2	3.31	0.69	4000	2	3.32		4000		
-3.109	0.119	0.006	0.00	0.01		2	3.32	0.69	4000	2	3.33		4000		
-3.122	0.119	0.006	0.00	0.01		2	3.33	0.69	4000	2	3.35		4000		
-3.135	0.119	0.006	0.00	0.01		2	3.35	0.69	4000	2	3.36		4000		
-3.148	0.119	0.006	0.00	0.01		2	3.36	0.69	4000	2	3.37		4000		
-3.162	0.119	0.006	0.00	0.01		2	3.37	0.68	4000	2	3.39		4000		
-3.175	0.119	0.006	0.00	0.01		2	3.38	0.68	4000	2	3.40		4000		
-3.188	0.119	0.006	0.00	0.01		2	3.40	0.68	4000	2	3.41		4000		
-3.201	0.119	0.006	0.00	0.01		2	3.41	0.68	4000	2	3.43		4000		
-3.215	0.119	0.006	0.00	0.00		2	3.42	0.68	4000	2	3.44		4000		
-3.228	0.119	0.006	0.00	0.00		2	3.43	0.68	4000	2	3.45		4000		
-3.241	0.119	0.006	0.00	0.00		2	3.45	0.68	4000	2	3.47		4000		
-3.254	0.119	0.006	0.00	0.00		2	3.46	0.68	4000	2	3.48		4000		
-3.268	0.120	0.006	0.00	0.00		2	3.47	0.68	4000	2	3.50		4000		
-3.281	0.120	0.006	0.00	0.00		2	3.49	0.68	4000	2	3.51		4000		
-3.294	0.120	0.006	0.00	0.00		2	3.50	0.68	4000	2	3.52		4000		
-3.307	0.120	0.006	0.00	0.00		2	3.51	0.68	4000	2	3.54		4000		
-3.321	0.120	0.006	0.00	0.00		2	3.52	0.68	4000	2	3.55		4000		
-3.334	0.120	0.006	0.00	0.00		2	3.54	0.68	4000	2	3.56		4000		
-3.347	0.120	0.006	0.00	0.00		2	3.55	0.68	4000	2	3.58		4000		
-3.360	0.120	0.006	0.00	0.00		2	3.56	0.68	4000	2	3.59		4000		
-3.374	0.120	0.006	0.00	0.00		2	3.57	0.68	4000	2	3.60		4000		
-3.387	0.120	0.006	0.00	0.00		2	3.59	0.68	4000	2	3.62		4000		
-3.400	0.120	0.006	0.00	0.00		2	3.60	0.68	4000	2	3.63		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 0.12 mm

MAXIMUM MOMENT = -0.01 m.T/m

CODIFICATION OF STATE :
-1 = SEPARATION
0 = EXCAVATION
1 = ACTIVE PR.

CODIFICATION OF SOIL :
2 = ELASTIC
3 = PASSIVE PR.

(4 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.64 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.139 = (6.22 T/m)/(44.81 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = 0.209 = (6.22 T/m)/(29.77 T/m)

** PHASE Nb 2 **

*FASE 2: Apuntalamiento y excavacion

* INSTALLATION LEVEL OF STRUTS Nb 1

LEVEL	=	-0.150 m
SPACE	=	1.000 m
INCLINATION	=	0.000 DEGREES
PRELOAD	=	0.000 T
STIFFNESS	=	23000.000 T/m

BILATERAL CONNECTION

* EXCAVATION IN SOIL 2 TO LEVEL = -1.900 m

PHASE 2

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -1.90 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	-0.136	1.717	0.00	0.00	3	0.00		4000	0					
-0.019	-0.104	1.717	0.00	0.00	3	0.16	0.05	4000	0					
-0.038	-0.071	1.717	0.00	0.01	3	0.33	0.10	4000	0					
-0.056	-0.039	1.717	0.00	0.01	3	0.49	0.15	4000	0					
-0.075	-0.007	1.717	0.00	0.02	2	0.41	0.03	4000	0					
-0.094	0.025	1.717	0.00	0.03	2	0.30	0.04	4000	0					
-0.113	0.057	1.717	0.00	0.03	2	0.19	0.05	4000	0					
-0.131	0.090	1.717	0.00	0.04	1	0.13	0.04	4000	0					
-0.150	0.122	1.717	0.00	0.04	1	0.14	0.04	4000	0					
				-0.96	1	0.14	0.04	4000	0				1	-1.00
-0.163	0.143	1.717	0.01	-0.96	1	0.16	0.05	4000	0					
-0.175	0.165	1.716	0.02	-0.96	1	0.17	0.05	4000	0					
-0.188	0.186	1.716	0.03	-0.96	1	0.18	0.06	4000	0					
-0.200	0.208	1.715	0.04	-0.95	1	0.19	0.06	4000	0					
-0.213	0.229	1.713	0.06	-0.95	1	0.20	0.06	4000	0					
-0.225	0.250	1.711	0.07	-0.95	1	0.22	0.07	4000	0					
-0.237	0.272	1.709	0.08	-0.95	1	0.23	0.07	4000	0					
-0.250	0.293	1.707	0.09	-0.94	1	0.24	0.07	4000	0					
-0.274	0.334	1.701	0.12	-0.94	1	0.26	0.08	4000	0					
-0.298	0.376	1.694	0.14	-0.93	1	0.29	0.09	4000	0					
-0.323	0.416	1.685	0.16	-0.92	1	0.31	0.09	4000	0					
-0.347	0.457	1.676	0.18	-0.92	1	0.33	0.10	4000	0					
-0.371	0.498	1.665	0.20	-0.91	1	0.36	0.11	4000	0					
-0.395	0.538	1.653	0.23	-0.90	1	0.38	0.12	4000	0					
-0.420	0.578	1.640	0.25	-0.89	1	0.40	0.12	4000	0					
-0.444	0.617	1.625	0.27	-0.88	1	0.43	0.13	4000	0					
-0.468	0.656	1.610	0.29	-0.87	1	0.45	0.14	4000	0					
-0.492	0.695	1.593	0.31	-0.86	1	0.47	0.14	4000	0					
-0.516	0.734	1.575	0.33	-0.85	1	0.49	0.15	4000	0					
-0.541	0.771	1.556	0.35	-0.83	1	0.52	0.16	4000	0					
-0.565	0.809	1.535	0.37	-0.82	1	0.54	0.16	4000	0					
-0.589	0.846	1.514	0.39	-0.81	1	0.56	0.17	4000	0					
-0.601	0.864	1.503	0.40	-0.80	1	0.57	0.17	4000	0					
-0.613	0.882	1.492	0.41	-0.79	1	0.58	0.18	4000	0					
-0.637	0.918	1.468	0.43	-0.78	1	0.61	0.18	4000	0					
-0.662	0.953	1.443	0.45	-0.76	1	0.63	0.19	4000	0					
-0.674	0.971	1.431	0.46	-0.76	1	0.64	0.19	4000	0					
-0.686	0.988	1.418	0.47	-0.75	1	0.65	0.19	4000	0					
-0.710	1.022	1.391	0.49	-0.73	1	0.67	0.20	4000	0					
-0.734	1.055	1.364	0.50	-0.72	1	0.70	0.21	4000	0					
-0.759	1.088	1.335	0.52	-0.70	1	0.72	0.21	4000	0					
-0.783	1.120	1.305	0.54	-0.68	1	0.74	0.22	4000	0					
-0.807	1.151	1.275	0.55	-0.66	1	0.76	0.22	4000	0					
-0.831	1.182	1.244	0.57	-0.64	1	0.78	0.23	4000	0					
-0.855	1.212	1.211	0.58	-0.62	1	0.81	0.24	4000	0					
-0.880	1.240	1.178	0.60	-0.60	1	0.83	0.24	4000	0					
-0.892	1.255	1.161	0.61	-0.59	1	0.84	0.24	4000	0					
-0.904	1.269	1.144	0.61	-0.58	1	0.85	0.25	4000	0					
-0.928	1.296	1.110	0.63	-0.56	1	0.87	0.25	4000	0					
-0.952	1.322	1.074	0.64	-0.54	1	0.89	0.26	4000	0					
-0.964	1.335	1.056	0.65	-0.53	1	0.90	0.26	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-0.977	1.348	1.038	0.65	-0.52		1	0.92	0.26	4000	0					
-0.989	1.360	1.020	0.66	-0.51		1	0.93	0.27	4000	0					
-1.001	1.373	1.001	0.67	-0.50		1	0.94	0.27	4000	0					
-1.025	1.396	0.964	0.68	-0.47		1	0.96	0.27	4000	0					
-1.049	1.419	0.925	0.69	-0.45		1	0.98	0.28	4000	0					
-1.061	1.430	0.906	0.69	-0.44		1	0.99	0.28	4000	0					
-1.073	1.441	0.887	0.70	-0.43		1	1.00	0.29	4000	0					
-1.086	1.452	0.867	0.70	-0.42		1	1.01	0.29	4000	0					
-1.098	1.462	0.847	0.71	-0.40		1	1.02	0.29	4000	0					
-1.110	1.472	0.827	0.71	-0.39		1	1.03	0.29	4000	0					
-1.122	1.482	0.807	0.72	-0.38		1	1.04	0.30	4000	0					
-1.146	1.501	0.767	0.73	-0.35		1	1.06	0.30	4000	0					
-1.170	1.519	0.726	0.74	-0.33		1	1.08	0.30	4000	0					
-1.195	1.536	0.685	0.74	-0.30		1	1.11	0.31	4000	0					
-1.219	1.553	0.643	0.75	-0.27		1	1.13	0.31	4000	0					
-1.243	1.568	0.601	0.76	-0.25		1	1.15	0.32	4000	0					
-1.267	1.582	0.558	0.76	-0.22		1	1.17	0.32	4000	0					
-1.291	1.595	0.515	0.77	-0.19		1	1.19	0.33	4000	0					
-1.316	1.607	0.472	0.77	-0.16		1	1.21	0.33	4000	0					
-1.340	1.617	0.429	0.78	-0.13		1	1.23	0.34	4000	0					
-1.364	1.627	0.386	0.78	-0.10		1	1.25	0.34	4000	0					
-1.388	1.636	0.342	0.78	-0.07		1	1.27	0.34	4000	0					
-1.412	1.644	0.298	0.78	-0.04		1	1.29	0.35	4000	0					
-1.437	1.651	0.255	0.78	-0.01		1	1.31	0.35	4000	0					
-1.461	1.656	0.211	0.78	0.02		1	1.33	0.36	4000	0					
-1.485	1.661	0.167	0.78	0.06		1	1.35	0.36	4000	0					
-1.509	1.664	0.124	0.78	0.09		1	1.37	0.36	4000	0					
-1.534	1.667	0.080	0.78	0.12		1	1.39	0.37	4000	0					
-1.558	1.668	0.037	0.77	0.16		1	1.41	0.37	4000	0					
-1.582	1.669	-0.006	0.77	0.19		1	1.43	0.37	4000	0					
-1.606	1.668	-0.049	0.76	0.23		1	1.45	0.38	4000	0					
-1.630	1.666	-0.092	0.76	0.26		1	1.47	0.38	4000	0					
-1.655	1.664	-0.134	0.75	0.30		1	1.49	0.38	4000	0					
-1.679	1.660	-0.175	0.74	0.33		1	1.51	0.39	4000	0					
-1.703	1.655	-0.217	0.73	0.37		1	1.52	0.39	4000	0					
-1.727	1.649	-0.258	0.73	0.41		1	1.54	0.39	4000	0					
-1.752	1.643	-0.298	0.72	0.45		1	1.56	0.40	4000	0					
-1.776	1.635	-0.338	0.70	0.48		1	1.58	0.40	4000	0					
-1.800	1.626	-0.377	0.69	0.52		1	1.60	0.40	4000	0					
-1.812	1.621	-0.396	0.69	0.54		1	1.61	0.40	4000	0					
-1.825	1.616	-0.416	0.68	0.56		1	1.62	0.40	4000	0					
-1.837	1.611	-0.436	0.67	0.58		1	1.63	0.40	4000	0					
-1.850	1.605	-0.455	0.66	0.60		1	1.64	0.41	4000	0					
-1.862	1.600	-0.474	0.66	0.62		1	1.65	0.41	4000	0					
-1.875	1.594	-0.493	0.65	0.64		1	1.66	0.41	4000	0					
-1.888	1.587	-0.511	0.64	0.66		1	1.67	0.41	4000	0					
-1.900	1.581	-0.530	0.63	0.69		1	1.68	0.41	4000	0					
-1.917	1.572	-0.554	0.62	0.71		1	1.69	0.41	4000	3	0.10		4000		
-1.934	1.562	-0.578	0.61	0.74		1	1.70	0.41	4000	3	0.20		4000		
-1.950	1.552	-0.601	0.59	0.76		1	1.72	0.42	4000	3	0.30		4000		
-1.967	1.542	-0.624	0.58	0.79		1	1.73	0.42	4000	3	0.40		4000		
-1.984	1.531	-0.646	0.57	0.81		1	1.74	0.42	4000	3	0.50		4000		
-2.001	1.520	-0.668	0.55	0.83		1	1.75	0.42	4000	3	0.61		4000		
-2.018	1.509	-0.689	0.54	0.85		1	1.77	0.42	4000	3	0.71		4000		
-2.035	1.497	-0.710	0.53	0.86		1	1.78	0.42	4000	3	0.81		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.051	1.485	-0.730	0.51	0.88		1	1.79	0.42	4000	3	0.91		4000		
-2.068	1.473	-0.750	0.50	0.89		1	1.80	0.43	4000	3	1.01		4000		
-2.085	1.460	-0.769	0.48	0.91		1	1.82	0.43	4000	3	1.11		4000		
-2.102	1.447	-0.787	0.47	0.92		1	1.83	0.43	4000	3	1.21		4000		
-2.119	1.433	-0.805	0.45	0.93		1	1.84	0.43	4000	3	1.31		4000		
-2.135	1.420	-0.822	0.43	0.94		1	1.85	0.43	4000	3	1.41		4000		
-2.152	1.406	-0.839	0.42	0.94		1	1.87	0.43	4000	3	1.51		4000		
-2.169	1.391	-0.854	0.40	0.95		1	1.88	0.43	4000	3	1.61		4000		
-2.186	1.377	-0.870	0.39	0.95		1	1.89	0.43	4000	3	1.72		4000		
-2.203	1.362	-0.885	0.37	0.95		1	1.90	0.44	4000	3	1.82		4000		
-2.219	1.347	-0.899	0.36	0.95		1	1.92	0.44	4000	3	1.92		4000		
-2.236	1.332	-0.912	0.34	0.95		1	1.93	0.44	4000	3	2.02		4000		
-2.253	1.316	-0.925	0.32	0.95		1	1.94	0.44	4000	3	2.12		4000		
-2.270	1.301	-0.937	0.31	0.95		1	1.95	0.44	4000	3	2.22		4000		
-2.287	1.285	-0.949	0.29	0.94		1	1.96	0.44	4000	3	2.32		4000		
-2.304	1.269	-0.960	0.28	0.94		1	1.98	0.44	4000	3	2.42		4000		
-2.320	1.253	-0.970	0.26	0.93		1	1.99	0.44	4000	3	2.52		4000		
-2.337	1.236	-0.980	0.24	0.92		1	2.00	0.44	4000	3	2.62		4000		
-2.354	1.220	-0.989	0.23	0.91		1	2.01	0.44	4000	3	2.72		4000		
-2.371	1.203	-0.998	0.21	0.89		1	2.02	0.44	4000	3	2.83		4000		
-2.388	1.186	-1.006	0.20	0.88		1	2.04	0.45	4000	3	2.93		4000		
-2.404	1.169	-1.013	0.18	0.86		1	2.05	0.45	4000	3	3.03		4000		
-2.421	1.152	-1.020	0.17	0.85		1	2.06	0.45	4000	3	3.13		4000		
-2.438	1.135	-1.026	0.16	0.83		1	2.07	0.45	4000	3	3.23		4000		
-2.455	1.118	-1.032	0.14	0.81		1	2.08	0.45	4000	3	3.33		4000		
-2.472	1.100	-1.037	0.13	0.79		1	2.10	0.45	4000	3	3.43		4000		
-2.489	1.083	-1.042	0.12	0.76		1	2.11	0.45	4000	3	3.53		4000		
-2.505	1.065	-1.046	0.10	0.74		1	2.12	0.45	4000	3	3.63		4000		
-2.522	1.048	-1.050	0.09	0.71		1	2.13	0.45	4000	3	3.73		4000		
-2.539	1.030	-1.053	0.08	0.68		1	2.14	0.45	4000	3	3.83		4000		
-2.556	1.012	-1.056	0.07	0.65		1	2.16	0.45	4000	3	3.93		4000		
-2.573	0.994	-1.059	0.06	0.62		1	2.17	0.45	4000	3	4.04		4000		
-2.589	0.977	-1.061	0.05	0.59		1	2.18	0.45	4000	3	4.14		4000		
-2.606	0.959	-1.062	0.04	0.56		1	2.19	0.45	4000	3	4.24		4000		
-2.623	0.941	-1.064	0.03	0.52		1	2.20	0.45	4000	3	4.34		4000		
-2.640	0.923	-1.065	0.02	0.49		1	2.21	0.45	4000	2	4.43		4000		
-2.657	0.905	-1.065	0.01	0.45		1	2.23	0.45	4000	2	4.38		4000		
-2.674	0.887	-1.065	0.00	0.41		1	2.24	0.45	4000	2	4.32		4000		
-2.690	0.869	-1.065	0.00	0.38		1	2.25	0.45	4000	2	4.27		4000		
-2.707	0.851	-1.065	-0.01	0.35		1	2.26	0.46	4000	2	4.21		4000		
-2.724	0.833	-1.065	-0.01	0.31		1	2.27	0.46	4000	2	4.16		4000		
-2.741	0.815	-1.064	-0.02	0.28		1	2.28	0.46	4000	2	4.10		4000		
-2.758	0.798	-1.063	-0.02	0.25		1	2.29	0.46	4000	2	4.05		4000		
-2.774	0.780	-1.062	-0.03	0.22		1	2.31	0.46	4000	2	3.99		4000		
-2.791	0.762	-1.061	-0.03	0.20		1	2.32	0.46	4000	2	3.94		4000		
-2.808	0.744	-1.060	-0.03	0.17		1	2.33	0.46	4000	2	3.88		4000		
-2.825	0.726	-1.059	-0.04	0.14		1	2.34	0.46	4000	2	3.83		4000		
-2.842	0.708	-1.057	-0.04	0.12		1	2.35	0.46	4000	2	3.78		4000		
-2.858	0.691	-1.056	-0.04	0.10		1	2.36	0.46	4000	2	3.72		4000		
-2.875	0.673	-1.054	-0.04	0.07		1	2.37	0.46	4000	2	3.67		4000		
-2.892	0.655	-1.052	-0.04	0.05		1	2.39	0.46	4000	2	3.61		4000		
-2.909	0.637	-1.051	-0.04	0.03		1	2.40	0.46	4000	2	3.56		4000		
-2.926	0.620	-1.049	-0.04	0.01		1	2.41	0.46	4000	2	3.51		4000		
-2.943	0.602	-1.047	-0.04	0.00		1	2.42	0.46	4000	2	3.45		4000		
-2.959	0.585	-1.046	-0.04	-0.02		1	2.43	0.46	4000	2	3.40		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 2 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.976	0.567	-1.044	-0.04	-0.04		1	2.44	0.46	4000	2	3.34		4000		
-2.989	0.553	-1.043	-0.04	-0.05		1	2.45	0.46	4000	2	3.30		4000		
-3.003	0.539	-1.041	-0.04	-0.06		1	2.46	0.46	4000	2	3.26		4000		
-3.016	0.526	-1.040	-0.04	-0.07		1	2.47	0.46	4000	2	3.22		4000		
-3.029	0.512	-1.039	-0.04	-0.08		1	2.48	0.46	4000	2	3.18		4000		
-3.042	0.498	-1.037	-0.04	-0.09		1	2.49	0.46	4000	2	3.13		4000		
-3.056	0.484	-1.036	-0.04	-0.10		1	2.49	0.46	4000	2	3.09		4000		
-3.069	0.471	-1.035	-0.04	-0.10		1	2.50	0.46	4000	2	3.05		4000		
-3.082	0.457	-1.034	-0.04	-0.11		1	2.51	0.46	4000	2	3.01		4000		
-3.095	0.443	-1.033	-0.03	-0.12		1	2.52	0.46	4000	2	2.97		4000		
-3.109	0.430	-1.032	-0.03	-0.12		1	2.53	0.46	4000	2	2.93		4000		
-3.122	0.416	-1.031	-0.03	-0.13		1	2.54	0.46	4000	2	2.89		4000		
-3.135	0.402	-1.030	-0.03	-0.13		1	2.55	0.46	4000	2	2.84		4000		
-3.148	0.389	-1.029	-0.03	-0.14		1	2.56	0.46	4000	2	2.80		4000		
-3.162	0.375	-1.028	-0.03	-0.14		1	2.56	0.46	4000	2	2.76		4000		
-3.175	0.361	-1.028	-0.02	-0.14		1	2.57	0.46	4000	2	2.72		4000		
-3.188	0.348	-1.027	-0.02	-0.14		1	2.58	0.46	4000	2	2.68		4000		
-3.201	0.334	-1.026	-0.02	-0.14		1	2.59	0.46	4000	2	2.64		4000		
-3.215	0.321	-1.026	-0.02	-0.14		2	2.62	0.47	4000	2	2.60		4000		
-3.228	0.307	-1.025	-0.02	-0.14		2	2.68	0.53	4000	2	2.56		4000		
-3.241	0.293	-1.025	-0.01	-0.14		2	2.75	0.59	4000	2	2.51		4000		
-3.254	0.280	-1.024	-0.01	-0.14		2	2.82	0.65	4000	2	2.47		4000		
-3.268	0.266	-1.024	-0.01	-0.13		2	2.89	0.68	4000	2	2.43		4000		
-3.281	0.253	-1.024	-0.01	-0.12		2	2.95	0.68	4000	2	2.39		4000		
-3.294	0.239	-1.024	-0.01	-0.12		2	3.02	0.68	4000	2	2.35		4000		
-3.307	0.226	-1.023	-0.01	-0.11		2	3.09	0.68	4000	2	2.31		4000		
-3.321	0.212	-1.023	0.00	-0.10		2	3.15	0.68	4000	2	2.27		4000		
-3.334	0.199	-1.023	0.00	-0.08		2	3.22	0.68	4000	2	2.23		4000		
-3.347	0.185	-1.023	0.00	-0.07		2	3.29	0.68	4000	2	2.19		4000		
-3.360	0.171	-1.023	0.00	-0.05		2	3.35	0.68	4000	2	2.15		4000		
-3.374	0.158	-1.023	0.00	-0.04		2	3.42	0.68	4000	2	2.11		4000		
-3.387	0.144	-1.023	0.00	-0.02		2	3.49	0.68	4000	2	2.06		4000		
-3.400	0.131	-1.023	0.00	0.00		2	3.56	0.68	4000	2	2.02		4000		
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 1.67 mm

MAXIMUM MOMENT = 0.78 m.T/m

CODIFICATION OF STATE : -1 = SEPARATION
CODIFICATION OF SOIL : 0 = EXCAVATION, 1 = ACTIVE PR., 2 = ELASTIC, 3 = PASSIVE PR.

(5 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.17 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.114 = (5.09 T/m)/(44.81 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = 0.605 = (4.09 T/m)/(6.75 T/m)

** PHASE Nb 3 **

*FASE 3: Apuntalamiento y excavacion

* INSTALLATION LEVEL OF STRUTS Nb 2

LEVEL	=	-1.800 m
SPACE	=	1.000 m
INCLINATION	=	0.000 DEGREES
PRELOAD	=	0.000 T
STIFFNESS	=	23000.000 T/m

BILATERAL CONNECTION

* EXCAVATION IN SOIL 2 TO LEVEL = -3.400 m

PHASE 3

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -3.40 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	0.000	0.603	0.00	0.00	1	0.00		4000	0					
-0.019	0.011	0.603	0.00	0.00	1	0.02	0.01	4000	0					
-0.038	0.023	0.603	0.00	0.00	1	0.04	0.01	4000	0					
-0.056	0.034	0.603	0.00	0.00	2	0.19	0.03	4000	0					
-0.075	0.045	0.603	0.00	0.01	2	0.20	0.03	4000	0					
-0.094	0.057	0.603	0.00	0.01	2	0.18	0.04	4000	0					
-0.113	0.068	0.603	0.00	0.01	2	0.15	0.05	4000	0					
-0.131	0.079	0.604	0.00	0.02	2	0.17	0.06	4000	0					
-0.150	0.091	0.604	0.00	0.02	2	0.27	0.07	4000	0					
				-0.27	2	0.27	0.07	4000	0				1	-0.29
-0.163	0.098	0.604	0.00	-0.26	2	0.34	0.07	4000	0					
-0.175	0.106	0.603	0.01	-0.26	2	0.40	0.08	4000	0					
-0.188	0.113	0.603	0.01	-0.25	2	0.47	0.08	4000	0					
-0.200	0.121	0.603	0.01	-0.25	2	0.54	0.09	4000	0					
-0.213	0.128	0.603	0.01	-0.24	2	0.61	0.09	4000	0					
-0.225	0.136	0.602	0.02	-0.23	2	0.67	0.10	4000	0					
-0.237	0.143	0.602	0.02	-0.22	2	0.74	0.11	4000	0					
-0.250	0.151	0.601	0.02	-0.21	2	0.81	0.11	4000	0					
-0.274	0.166	0.599	0.03	-0.19	2	0.94	0.12	4000	0					
-0.298	0.180	0.598	0.03	-0.17	2	1.07	0.13	4000	0					
-0.323	0.194	0.596	0.04	-0.14	2	1.20	0.14	4000	0					
-0.347	0.209	0.594	0.04	-0.11	2	1.33	0.15	4000	0					
-0.371	0.223	0.592	0.04	-0.07	2	1.45	0.16	4000	0					
-0.395	0.238	0.589	0.04	-0.04	2	1.58	0.17	4000	0					
-0.420	0.252	0.587	0.04	0.00	2	1.71	0.18	4000	0					
-0.444	0.266	0.584	0.04	0.04	2	1.83	0.19	4000	0					
-0.468	0.280	0.582	0.04	0.09	2	1.95	0.20	4000	0					
-0.492	0.294	0.580	0.04	0.14	2	2.08	0.21	4000	0					
-0.516	0.308	0.578	0.03	0.19	2	2.20	0.22	4000	0					
-0.541	0.322	0.576	0.03	0.25	2	2.31	0.23	4000	0					
-0.565	0.336	0.575	0.02	0.30	2	2.43	0.24	4000	0					
-0.589	0.350	0.574	0.01	0.36	2	2.55	0.25	4000	0					
-0.601	0.357	0.573	0.01	0.39	2	2.60	0.26	4000	0					
-0.613	0.364	0.573	0.00	0.43	2	2.66	0.26	4000	0					
-0.637	0.378	0.573	-0.01	0.49	2	2.77	0.27	4000	0					
-0.662	0.392	0.574	-0.02	0.56	2	2.88	0.28	4000	0					
-0.674	0.399	0.574	-0.03	0.60	2	2.93	0.29	4000	0					
-0.686	0.406	0.575	-0.03	0.63	2	2.98	0.29	4000	0					
-0.710	0.419	0.578	-0.05	0.70	2	3.08	0.30	4000	0					
-0.734	0.434	0.581	-0.07	0.78	2	3.18	0.31	4000	0					
-0.759	0.448	0.585	-0.09	0.86	2	3.28	0.32	4000	0					
-0.783	0.462	0.591	-0.11	0.94	2	3.37	0.33	4000	0					
-0.807	0.476	0.598	-0.13	1.02	2	3.46	0.34	4000	0					
-0.831	0.491	0.606	-0.16	1.11	2	3.55	0.35	4000	0					
-0.855	0.506	0.615	-0.19	1.19	2	3.63	0.35	4000	0					
-0.880	0.521	0.627	-0.22	1.28	2	3.71	0.36	4000	0					
-0.892	0.528	0.633	-0.23	1.33	2	3.74	0.37	4000	0					
-0.904	0.536	0.640	-0.25	1.37	2	3.78	0.37	4000	0					
-0.928	0.552	0.655	-0.28	1.47	2	3.85	0.38	4000	0					
-0.952	0.568	0.671	-0.32	1.56	2	3.91	0.39	4000	0					
-0.964	0.576	0.681	-0.34	1.61	2	3.94	0.39	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-0.977	0.584	0.690	-0.36	1.66		2	3.97	0.40	4000	0					
-0.989	0.593	0.701	-0.38	1.70		2	4.00	0.40	4000	0					
-1.001	0.601	0.712	-0.40	1.75		2	4.02	0.40	4000	0					
-1.025	0.619	0.735	-0.44	1.85		2	4.07	0.41	4000	0					
-1.049	0.637	0.761	-0.49	1.95		2	4.11	0.42	4000	0					
-1.061	0.646	0.775	-0.51	2.00		2	4.13	0.42	4000	0					
-1.073	0.656	0.790	-0.54	2.05		2	4.14	0.43	4000	0					
-1.086	0.665	0.805	-0.56	2.10		2	4.16	0.43	4000	0					
-1.098	0.675	0.821	-0.59	2.15		2	4.17	0.44	4000	0					
-1.110	0.685	0.838	-0.62	2.20		2	4.18	0.44	4000	0					
-1.122	0.695	0.856	-0.64	2.25		2	4.19	0.44	4000	0					
-1.146	0.717	0.893	-0.70	2.35		2	4.20	0.45	4000	0					
-1.170	0.739	0.934	-0.76	2.45		2	4.21	0.46	4000	0					
-1.195	0.762	0.978	-0.82	2.56		2	4.20	0.46	4000	0					
-1.219	0.786	1.025	-0.88	2.66		2	4.19	0.47	4000	0					
-1.243	0.812	1.077	-0.95	2.76		2	4.17	0.48	4000	0					
-1.267	0.838	1.131	-1.01	2.86		2	4.14	0.48	4000	0					
-1.291	0.866	1.190	-1.08	2.96		2	4.10	0.49	4000	0					
-1.316	0.896	1.253	-1.16	3.06		2	4.05	0.50	4000	0					
-1.340	0.927	1.319	-1.23	3.16		2	3.99	0.50	4000	0					
-1.364	0.960	1.390	-1.31	3.25		2	3.92	0.51	4000	0					
-1.388	0.994	1.466	-1.39	3.35		2	3.84	0.52	4000	0					
-1.412	1.031	1.546	-1.47	3.44		2	3.74	0.52	4000	0					
-1.437	1.069	1.631	-1.56	3.53		2	3.63	0.53	4000	0					
-1.461	1.110	1.720	-1.64	3.61		2	3.52	0.53	4000	0					
-1.485	1.153	1.814	-1.73	3.70		2	3.38	0.54	4000	0					
-1.509	1.198	1.914	-1.82	3.78		2	3.24	0.54	4000	0					
-1.534	1.245	2.018	-1.91	3.85		2	3.07	0.55	4000	0					
-1.558	1.296	2.128	-2.01	3.93		2	2.90	0.56	4000	0					
-1.582	1.349	2.243	-2.10	3.99		2	2.71	0.56	4000	0					
-1.606	1.404	2.363	-2.20	4.06		2	2.50	0.57	4000	0					
-1.630	1.463	2.489	-2.30	4.12		2	2.28	0.57	4000	0					
-1.655	1.525	2.620	-2.40	4.17		2	2.04	0.57	4000	0					
-1.679	1.590	2.758	-2.50	4.21		2	1.78	0.58	4000	0					
-1.703	1.659	2.900	-2.61	4.25		1	1.52	0.39	4000	0					
-1.727	1.731	3.049	-2.71	4.29		1	1.54	0.39	4000	0					
-1.752	1.806	3.203	-2.81	4.33		1	1.56	0.40	4000	0					
-1.776	1.886	3.363	-2.92	4.37		1	1.58	0.40	4000	0					
-1.800	1.969	3.530	-3.02	4.41		1	1.60	0.40	4000	0					
				-3.48		1	1.60	0.40	4000	0				2	-7.89
-1.812	2.014	3.616	-2.98	-3.46		1	1.61	0.40	4000	0					
-1.825	2.060	3.702	-2.94	-3.44		1	1.62	0.40	4000	0					
-1.837	2.106	3.786	-2.90	-3.42		1	1.63	0.40	4000	0					
-1.850	2.154	3.869	-2.85	-3.40		1	1.64	0.41	4000	0					
-1.862	2.203	3.950	-2.81	-3.38		1	1.65	0.41	4000	0					
-1.875	2.253	4.031	-2.77	-3.36		1	1.66	0.41	4000	0					
-1.888	2.304	4.110	-2.73	-3.34		1	1.67	0.41	4000	0					
-1.900	2.356	4.188	-2.68	-3.32		1	1.68	0.41	4000	0					
-1.917	2.427	4.291	-2.63	-3.29		1	1.69	0.41	4000	0					
-1.934	2.500	4.392	-2.57	-3.26		1	1.70	0.41	4000	0					
-1.950	2.575	4.491	-2.52	-3.23		1	1.72	0.42	4000	0					
-1.967	2.651	4.588	-2.47	-3.21		1	1.73	0.42	4000	0					
-1.984	2.729	4.683	-2.41	-3.18		1	1.74	0.42	4000	0					
-2.001	2.809	4.775	-2.36	-3.15		1	1.75	0.42	4000	0					
-2.018	2.890	4.866	-2.31	-3.12		1	1.77	0.42	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.035	2.972	4.954	-2.25	-3.09		1	1.78	0.42	4000	0					
-2.051	3.056	5.041	-2.20	-3.06		1	1.79	0.42	4000	0					
-2.068	3.142	5.125	-2.15	-3.03		1	1.80	0.43	4000	0					
-2.085	3.229	5.208	-2.10	-3.00		1	1.82	0.43	4000	0					
-2.102	3.317	5.288	-2.05	-2.97		1	1.83	0.43	4000	0					
-2.119	3.406	5.367	-2.00	-2.94		1	1.84	0.43	4000	0					
-2.135	3.497	5.443	-1.95	-2.90		1	1.85	0.43	4000	0					
-2.152	3.590	5.518	-1.90	-2.87		1	1.87	0.43	4000	0					
-2.169	3.683	5.591	-1.85	-2.84		1	1.88	0.43	4000	0					
-2.186	3.778	5.662	-1.81	-2.81		1	1.89	0.43	4000	0					
-2.203	3.873	5.731	-1.76	-2.78		1	1.90	0.44	4000	0					
-2.219	3.970	5.799	-1.71	-2.75		1	1.92	0.44	4000	0					
-2.236	4.068	5.865	-1.67	-2.71		1	1.93	0.44	4000	0					
-2.253	4.168	5.928	-1.62	-2.68		1	1.94	0.44	4000	0					
-2.270	4.268	5.990	-1.58	-2.65		1	1.95	0.44	4000	0					
-2.287	4.369	6.051	-1.53	-2.62		1	1.96	0.44	4000	0					
-2.304	4.471	6.110	-1.49	-2.58		1	1.98	0.44	4000	0					
-2.320	4.574	6.166	-1.45	-2.55		1	1.99	0.44	4000	0					
-2.337	4.679	6.222	-1.40	-2.52		1	2.00	0.44	4000	0					
-2.354	4.784	6.275	-1.36	-2.48		1	2.01	0.44	4000	0					
-2.371	4.890	6.328	-1.32	-2.45		1	2.02	0.44	4000	0					
-2.388	4.996	6.378	-1.28	-2.41		1	2.04	0.45	4000	0					
-2.404	5.104	6.427	-1.24	-2.38		1	2.05	0.45	4000	0					
-2.421	5.213	6.474	-1.20	-2.34		1	2.06	0.45	4000	0					
-2.438	5.322	6.520	-1.16	-2.31		1	2.07	0.45	4000	0					
-2.455	5.432	6.564	-1.12	-2.27		1	2.08	0.45	4000	0					
-2.472	5.543	6.607	-1.08	-2.24		1	2.10	0.45	4000	0					
-2.489	5.654	6.649	-1.05	-2.20		1	2.11	0.45	4000	0					
-2.505	5.766	6.688	-1.01	-2.17		1	2.12	0.45	4000	0					
-2.522	5.879	6.727	-0.97	-2.13		1	2.13	0.45	4000	0					
-2.539	5.992	6.764	-0.94	-2.10		1	2.14	0.45	4000	0					
-2.556	6.106	6.800	-0.90	-2.06		1	2.16	0.45	4000	0					
-2.573	6.221	6.834	-0.87	-2.02		1	2.17	0.45	4000	0					
-2.589	6.336	6.867	-0.84	-1.99		1	2.18	0.45	4000	0					
-2.606	6.452	6.899	-0.80	-1.95		1	2.19	0.45	4000	0					
-2.623	6.568	6.930	-0.77	-1.91		1	2.20	0.45	4000	0					
-2.640	6.685	6.959	-0.74	-1.88		1	2.21	0.45	4000	0					
-2.657	6.802	6.987	-0.71	-1.84		1	2.23	0.45	4000	0					
-2.674	6.920	7.014	-0.68	-1.80		1	2.24	0.45	4000	0					
-2.690	7.038	7.039	-0.65	-1.76		1	2.25	0.45	4000	0					
-2.707	7.157	7.064	-0.62	-1.73		1	2.26	0.46	4000	0					
-2.724	7.276	7.087	-0.59	-1.69		1	2.27	0.46	4000	0					
-2.741	7.395	7.109	-0.56	-1.65		1	2.28	0.46	4000	0					
-2.758	7.515	7.131	-0.53	-1.61		1	2.29	0.46	4000	0					
-2.774	7.635	7.151	-0.51	-1.57		1	2.31	0.46	4000	0					
-2.791	7.755	7.170	-0.48	-1.53		1	2.32	0.46	4000	0					
-2.808	7.876	7.188	-0.45	-1.50		1	2.33	0.46	4000	0					
-2.825	7.997	7.205	-0.43	-1.46		1	2.34	0.46	4000	0					
-2.842	8.118	7.221	-0.40	-1.42		1	2.35	0.46	4000	0					
-2.858	8.240	7.237	-0.38	-1.38		1	2.36	0.46	4000	0					
-2.875	8.362	7.251	-0.36	-1.34		1	2.37	0.46	4000	0					
-2.892	8.484	7.264	-0.34	-1.30		1	2.39	0.46	4000	0					
-2.909	8.606	7.277	-0.32	-1.26		1	2.40	0.46	4000	0					
-2.926	8.729	7.289	-0.29	-1.22		1	2.41	0.46	4000	0					
-2.943	8.851	7.300	-0.27	-1.18		1	2.42	0.46	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 3 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.959	8.974	7.310	-0.25	-1.13	1	2.43	0.46	4000	0					
-2.976	9.097	7.320	-0.24	-1.09	1	2.44	0.46	4000	0					
-2.989	9.194	7.327	-0.22	-1.06	1	2.45	0.46	4000	0					
-3.003	9.291	7.333	-0.21	-1.03	1	2.46	0.46	4000	0					
-3.016	9.388	7.339	-0.19	-1.00	1	2.47	0.46	4000	0					
-3.029	9.485	7.345	-0.18	-0.96	1	2.48	0.46	4000	0					
-3.042	9.583	7.350	-0.17	-0.93	1	2.49	0.46	4000	0					
-3.056	9.680	7.355	-0.16	-0.90	1	2.49	0.46	4000	0					
-3.069	9.778	7.360	-0.15	-0.86	1	2.50	0.46	4000	0					
-3.082	9.875	7.364	-0.13	-0.83	1	2.51	0.46	4000	0					
-3.095	9.973	7.368	-0.12	-0.80	1	2.52	0.46	4000	0					
-3.109	10.070	7.372	-0.11	-0.76	1	2.53	0.46	4000	0					
-3.122	10.168	7.375	-0.10	-0.73	1	2.54	0.46	4000	0					
-3.135	10.266	7.378	-0.09	-0.70	1	2.55	0.46	4000	0					
-3.148	10.363	7.381	-0.08	-0.66	1	2.56	0.46	4000	0					
-3.162	10.461	7.383	-0.08	-0.63	1	2.56	0.46	4000	0					
-3.175	10.559	7.385	-0.07	-0.60	1	2.57	0.46	4000	0					
-3.188	10.657	7.387	-0.06	-0.56	1	2.58	0.46	4000	0					
-3.201	10.755	7.389	-0.05	-0.53	1	2.59	0.46	4000	0					
-3.215	10.852	7.391	-0.05	-0.49	1	2.60	0.46	4000	0					
-3.228	10.950	7.392	-0.04	-0.46	1	2.61	0.46	4000	0					
-3.241	11.048	7.393	-0.03	-0.42	1	2.62	0.46	4000	0					
-3.254	11.146	7.394	-0.03	-0.39	1	2.63	0.46	4000	0					
-3.268	11.244	7.395	-0.02	-0.35	1	2.63	0.46	4000	0					
-3.281	11.342	7.396	-0.02	-0.32	1	2.64	0.46	4000	0					
-3.294	11.440	7.396	-0.02	-0.28	1	2.65	0.45	4000	0					
-3.307	11.538	7.396	-0.01	-0.25	1	2.66	0.45	4000	0					
-3.321	11.636	7.397	-0.01	-0.21	1	2.67	0.45	4000	0					
-3.334	11.734	7.397	-0.01	-0.18	1	2.68	0.45	4000	0					
-3.347	11.832	7.397	0.00	-0.14	1	2.69	0.45	4000	0					
-3.360	11.930	7.397	0.00	-0.11	1	2.69	0.45	4000	0					
-3.374	12.028	7.397	0.00	-0.07	1	2.70	0.45	4000	0					
-3.387	12.126	7.397	0.00	-0.04	1	2.71	0.45	4000	0					
-3.400	12.224	7.397	0.00	0.00	1	2.72	0.45	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 12.22 mm

MAXIMUM MOMENT = -3.02 m.T/m

CODIFICATION OF STATE : -1 = SEPARATION, 0 = EXCAVATION, 1 = ACTIVE PR.

CODIFICATION OF SOIL : 2 = ELASTIC, 3 = PASSIVE PR.

(3 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.31 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.182 = (8.17 T/m)/(44.81 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = WITHOUT INTEREST

** PHASE Nb 4 **

*FASE 4: Apuntalamiento y excavacion
*STR(0) -2.1 1 0 0 25000
*EXC(2) -2.75

PHASE 4

	WALL	SOIL 1 EXCAVATION: 0.00 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	SOIL 2 EXCAVATION: -3.40 m WATER LEVEL: -20.00 m CAQUOT SURC.: 0.00 T/m2	STRUTS/ ANCHORS

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
0.000	0.000	0.603	0.00	0.00	3	0.00		4000	0					
-0.019	0.011	0.603	0.00	0.00	2	0.02	0.01	4000	0					
-0.038	0.023	0.603	0.00	0.00	2	0.04	0.01	4000	0					
-0.056	0.034	0.603	0.00	0.00	2	0.19	0.03	4000	0					
-0.075	0.045	0.603	0.00	0.01	2	0.20	0.03	4000	0					
-0.094	0.057	0.603	0.00	0.01	2	0.18	0.04	4000	0					
-0.113	0.068	0.603	0.00	0.01	2	0.15	0.05	4000	0					
-0.131	0.079	0.604	0.00	0.02	2	0.17	0.06	4000	0					
-0.150	0.091	0.604	0.00	0.02	2	0.27	0.07	4000	0					
				-0.27	2	0.27	0.07	4000	0				1	-0.29
-0.163	0.098	0.604	0.00	-0.26	2	0.34	0.07	4000	0					
-0.175	0.106	0.603	0.01	-0.26	2	0.40	0.08	4000	0					
-0.188	0.113	0.603	0.01	-0.25	2	0.47	0.08	4000	0					
-0.200	0.121	0.603	0.01	-0.25	2	0.54	0.09	4000	0					
-0.213	0.128	0.603	0.01	-0.24	2	0.61	0.09	4000	0					
-0.225	0.136	0.602	0.02	-0.23	2	0.67	0.10	4000	0					
-0.237	0.143	0.602	0.02	-0.22	2	0.74	0.11	4000	0					
-0.250	0.151	0.601	0.02	-0.21	2	0.81	0.11	4000	0					
-0.274	0.166	0.599	0.03	-0.19	2	0.94	0.12	4000	0					
-0.298	0.180	0.598	0.03	-0.17	2	1.07	0.13	4000	0					
-0.323	0.194	0.596	0.04	-0.14	2	1.20	0.14	4000	0					
-0.347	0.209	0.594	0.04	-0.11	2	1.33	0.15	4000	0					
-0.371	0.223	0.592	0.04	-0.07	2	1.45	0.16	4000	0					
-0.395	0.238	0.589	0.04	-0.04	2	1.58	0.17	4000	0					
-0.420	0.252	0.587	0.04	0.00	2	1.71	0.18	4000	0					
-0.444	0.266	0.584	0.04	0.04	2	1.83	0.19	4000	0					
-0.468	0.280	0.582	0.04	0.09	2	1.95	0.20	4000	0					
-0.492	0.294	0.580	0.04	0.14	2	2.08	0.21	4000	0					
-0.516	0.308	0.578	0.03	0.19	2	2.20	0.22	4000	0					
-0.541	0.322	0.576	0.03	0.25	2	2.31	0.23	4000	0					
-0.565	0.336	0.575	0.02	0.30	2	2.43	0.24	4000	0					
-0.589	0.350	0.574	0.01	0.36	2	2.55	0.25	4000	0					
-0.601	0.357	0.573	0.01	0.39	2	2.60	0.26	4000	0					
-0.613	0.364	0.573	0.00	0.43	2	2.66	0.26	4000	0					
-0.637	0.378	0.573	-0.01	0.49	2	2.77	0.27	4000	0					
-0.662	0.392	0.574	-0.02	0.56	2	2.88	0.28	4000	0					
-0.674	0.399	0.574	-0.03	0.60	2	2.93	0.29	4000	0					
-0.686	0.406	0.575	-0.03	0.63	2	2.98	0.29	4000	0					
-0.710	0.419	0.578	-0.05	0.70	2	3.08	0.30	4000	0					
-0.734	0.434	0.581	-0.07	0.78	2	3.18	0.31	4000	0					
-0.759	0.448	0.585	-0.09	0.86	2	3.28	0.32	4000	0					
-0.783	0.462	0.591	-0.11	0.94	2	3.37	0.33	4000	0					
-0.807	0.476	0.598	-0.13	1.02	2	3.46	0.34	4000	0					
-0.831	0.491	0.606	-0.16	1.11	2	3.55	0.35	4000	0					
-0.855	0.506	0.615	-0.19	1.19	2	3.63	0.35	4000	0					
-0.880	0.521	0.627	-0.22	1.28	2	3.71	0.36	4000	0					
-0.892	0.528	0.633	-0.23	1.33	2	3.74	0.37	4000	0					
-0.904	0.536	0.640	-0.25	1.37	2	3.78	0.37	4000	0					
-0.928	0.552	0.655	-0.28	1.47	2	3.85	0.38	4000	0					
-0.952	0.568	0.671	-0.32	1.56	2	3.91	0.39	4000	0					
-0.964	0.576	0.681	-0.34	1.61	2	3.94	0.39	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-0.977	0.584	0.690	-0.36	1.66		2	3.97	0.40	4000	0					
-0.989	0.593	0.701	-0.38	1.70		2	4.00	0.40	4000	0					
-1.001	0.601	0.712	-0.40	1.75		2	4.02	0.40	4000	0					
-1.025	0.619	0.735	-0.44	1.85		2	4.07	0.41	4000	0					
-1.049	0.637	0.761	-0.49	1.95		2	4.11	0.42	4000	0					
-1.061	0.646	0.775	-0.51	2.00		2	4.13	0.42	4000	0					
-1.073	0.656	0.790	-0.54	2.05		2	4.14	0.43	4000	0					
-1.086	0.665	0.805	-0.56	2.10		2	4.16	0.43	4000	0					
-1.098	0.675	0.821	-0.59	2.15		2	4.17	0.44	4000	0					
-1.110	0.685	0.838	-0.62	2.20		2	4.18	0.44	4000	0					
-1.122	0.695	0.856	-0.64	2.25		2	4.19	0.44	4000	0					
-1.146	0.717	0.893	-0.70	2.35		2	4.20	0.45	4000	0					
-1.170	0.739	0.934	-0.76	2.45		2	4.21	0.46	4000	0					
-1.195	0.762	0.978	-0.82	2.56		2	4.20	0.46	4000	0					
-1.219	0.786	1.025	-0.88	2.66		2	4.19	0.47	4000	0					
-1.243	0.812	1.077	-0.95	2.76		2	4.17	0.48	4000	0					
-1.267	0.838	1.131	-1.01	2.86		2	4.14	0.48	4000	0					
-1.291	0.866	1.190	-1.08	2.96		2	4.10	0.49	4000	0					
-1.316	0.896	1.253	-1.16	3.06		2	4.05	0.50	4000	0					
-1.340	0.927	1.319	-1.23	3.16		2	3.99	0.50	4000	0					
-1.364	0.960	1.390	-1.31	3.25		2	3.92	0.51	4000	0					
-1.388	0.994	1.466	-1.39	3.35		2	3.84	0.52	4000	0					
-1.412	1.031	1.546	-1.47	3.44		2	3.74	0.52	4000	0					
-1.437	1.069	1.631	-1.56	3.53		2	3.63	0.53	4000	0					
-1.461	1.110	1.720	-1.64	3.61		2	3.52	0.53	4000	0					
-1.485	1.153	1.814	-1.73	3.70		2	3.38	0.54	4000	0					
-1.509	1.198	1.914	-1.82	3.78		2	3.24	0.54	4000	0					
-1.534	1.245	2.018	-1.91	3.85		2	3.07	0.55	4000	0					
-1.558	1.296	2.128	-2.01	3.93		2	2.90	0.56	4000	0					
-1.582	1.349	2.243	-2.10	3.99		2	2.71	0.56	4000	0					
-1.606	1.404	2.363	-2.20	4.06		2	2.50	0.57	4000	0					
-1.630	1.463	2.489	-2.30	4.12		2	2.28	0.57	4000	0					
-1.655	1.525	2.620	-2.40	4.17		2	2.04	0.57	4000	0					
-1.679	1.590	2.758	-2.50	4.21		2	1.78	0.58	4000	0					
-1.703	1.659	2.900	-2.61	4.25		1	1.52	0.39	4000	0					
-1.727	1.731	3.049	-2.71	4.29		1	1.54	0.39	4000	0					
-1.752	1.806	3.203	-2.81	4.33		1	1.56	0.40	4000	0					
-1.776	1.886	3.363	-2.92	4.37		1	1.58	0.40	4000	0					
-1.800	1.969	3.530	-3.02	4.41		2	1.60	0.40	4000	0					
				-3.48		2	1.60	0.40	4000	0				2	-7.89
-1.812	2.014	3.616	-2.98	-3.46		2	1.61	0.40	4000	0					
-1.825	2.060	3.702	-2.94	-3.44		2	1.62	0.40	4000	0					
-1.837	2.106	3.786	-2.90	-3.42		2	1.63	0.40	4000	0					
-1.850	2.154	3.869	-2.85	-3.40		2	1.64	0.41	4000	0					
-1.862	2.203	3.950	-2.81	-3.38		2	1.65	0.41	4000	0					
-1.875	2.253	4.031	-2.77	-3.36		2	1.66	0.41	4000	0					
-1.888	2.304	4.110	-2.73	-3.34		2	1.67	0.41	4000	0					
-1.900	2.356	4.188	-2.68	-3.32		2	1.68	0.41	4000	0					
-1.917	2.427	4.291	-2.63	-3.29		2	1.69	0.41	4000	0					
-1.934	2.500	4.392	-2.57	-3.26		2	1.70	0.41	4000	0					
-1.950	2.575	4.491	-2.52	-3.23		2	1.72	0.42	4000	0					
-1.967	2.651	4.588	-2.47	-3.21		2	1.73	0.42	4000	0					
-1.984	2.729	4.683	-2.41	-3.18		2	1.74	0.42	4000	0					
-2.001	2.809	4.775	-2.36	-3.15		2	1.75	0.42	4000	0					
-2.018	2.890	4.866	-2.31	-3.12		2	1.77	0.42	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.035	2.972	4.954	-2.25	-3.09		2	1.78	0.42	4000	0					
-2.051	3.056	5.041	-2.20	-3.06		2	1.79	0.42	4000	0					
-2.068	3.142	5.125	-2.15	-3.03		2	1.80	0.43	4000	0					
-2.085	3.229	5.208	-2.10	-3.00		2	1.82	0.43	4000	0					
-2.102	3.317	5.288	-2.05	-2.97		2	1.83	0.43	4000	0					
-2.119	3.406	5.367	-2.00	-2.94		2	1.84	0.43	4000	0					
-2.135	3.497	5.443	-1.95	-2.90		2	1.85	0.43	4000	0					
-2.152	3.590	5.518	-1.90	-2.87		2	1.87	0.43	4000	0					
-2.169	3.683	5.591	-1.85	-2.84		2	1.88	0.43	4000	0					
-2.186	3.778	5.662	-1.81	-2.81		2	1.89	0.43	4000	0					
-2.203	3.873	5.731	-1.76	-2.78		2	1.90	0.44	4000	0					
-2.219	3.970	5.799	-1.71	-2.75		2	1.92	0.44	4000	0					
-2.236	4.068	5.865	-1.67	-2.71		2	1.93	0.44	4000	0					
-2.253	4.168	5.928	-1.62	-2.68		2	1.94	0.44	4000	0					
-2.270	4.268	5.990	-1.58	-2.65		2	1.95	0.44	4000	0					
-2.287	4.369	6.051	-1.53	-2.62		2	1.96	0.44	4000	0					
-2.304	4.471	6.110	-1.49	-2.58		2	1.98	0.44	4000	0					
-2.320	4.574	6.166	-1.45	-2.55		2	1.99	0.44	4000	0					
-2.337	4.679	6.222	-1.40	-2.52		2	2.00	0.44	4000	0					
-2.354	4.784	6.275	-1.36	-2.48		2	2.01	0.44	4000	0					
-2.371	4.890	6.328	-1.32	-2.45		2	2.02	0.44	4000	0					
-2.388	4.996	6.378	-1.28	-2.41		2	2.04	0.45	4000	0					
-2.404	5.104	6.427	-1.24	-2.38		2	2.05	0.45	4000	0					
-2.421	5.213	6.474	-1.20	-2.34		2	2.06	0.45	4000	0					
-2.438	5.322	6.520	-1.16	-2.31		2	2.07	0.45	4000	0					
-2.455	5.432	6.564	-1.12	-2.27		2	2.08	0.45	4000	0					
-2.472	5.543	6.607	-1.08	-2.24		2	2.10	0.45	4000	0					
-2.489	5.654	6.649	-1.05	-2.20		2	2.11	0.45	4000	0					
-2.505	5.766	6.688	-1.01	-2.17		2	2.12	0.45	4000	0					
-2.522	5.879	6.727	-0.97	-2.13		2	2.13	0.45	4000	0					
-2.539	5.992	6.764	-0.94	-2.10		2	2.14	0.45	4000	0					
-2.556	6.106	6.800	-0.90	-2.06		2	2.16	0.45	4000	0					
-2.573	6.221	6.834	-0.87	-2.02		2	2.17	0.45	4000	0					
-2.589	6.336	6.867	-0.84	-1.99		2	2.18	0.45	4000	0					
-2.606	6.452	6.899	-0.80	-1.95		2	2.19	0.45	4000	0					
-2.623	6.568	6.930	-0.77	-1.91		2	2.20	0.45	4000	0					
-2.640	6.685	6.959	-0.74	-1.88		2	2.21	0.45	4000	0					
-2.657	6.802	6.987	-0.71	-1.84		2	2.23	0.45	4000	0					
-2.674	6.920	7.014	-0.68	-1.80		2	2.24	0.45	4000	0					
-2.690	7.038	7.039	-0.65	-1.76		2	2.25	0.45	4000	0					
-2.707	7.157	7.064	-0.62	-1.73		2	2.26	0.46	4000	0					
-2.724	7.276	7.087	-0.59	-1.69		2	2.27	0.46	4000	0					
-2.741	7.395	7.109	-0.56	-1.65		2	2.28	0.46	4000	0					
-2.758	7.515	7.131	-0.53	-1.61		2	2.29	0.46	4000	0					
-2.774	7.635	7.151	-0.51	-1.57		2	2.31	0.46	4000	0					
-2.791	7.755	7.170	-0.48	-1.53		2	2.32	0.46	4000	0					
-2.808	7.876	7.188	-0.45	-1.50		2	2.33	0.46	4000	0					
-2.825	7.997	7.205	-0.43	-1.46		2	2.34	0.46	4000	0					
-2.842	8.118	7.221	-0.40	-1.42		2	2.35	0.46	4000	0					
-2.858	8.240	7.237	-0.38	-1.38		2	2.36	0.46	4000	0					
-2.875	8.362	7.251	-0.36	-1.34		2	2.37	0.46	4000	0					
-2.892	8.484	7.264	-0.34	-1.30		2	2.39	0.46	4000	0					
-2.909	8.606	7.277	-0.32	-1.26		2	2.40	0.46	4000	0					
-2.926	8.729	7.289	-0.29	-1.22		2	2.41	0.46	4000	0					
-2.943	8.851	7.300	-0.27	-1.18		2	2.42	0.46	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 4 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.959	8.974	7.310	-0.25	-1.13	2	2.43	0.46	4000	0					
-2.976	9.097	7.320	-0.24	-1.09	2	2.44	0.46	4000	0					
-2.989	9.194	7.327	-0.22	-1.06	2	2.45	0.46	4000	0					
-3.003	9.291	7.333	-0.21	-1.03	2	2.46	0.46	4000	0					
-3.016	9.388	7.339	-0.19	-1.00	2	2.47	0.46	4000	0					
-3.029	9.485	7.345	-0.18	-0.96	2	2.48	0.46	4000	0					
-3.042	9.583	7.350	-0.17	-0.93	2	2.49	0.46	4000	0					
-3.056	9.680	7.355	-0.16	-0.90	2	2.49	0.46	4000	0					
-3.069	9.778	7.360	-0.15	-0.86	2	2.50	0.46	4000	0					
-3.082	9.875	7.364	-0.13	-0.83	2	2.51	0.46	4000	0					
-3.095	9.973	7.368	-0.12	-0.80	2	2.52	0.46	4000	0					
-3.109	10.070	7.372	-0.11	-0.76	2	2.53	0.46	4000	0					
-3.122	10.168	7.375	-0.10	-0.73	2	2.54	0.46	4000	0					
-3.135	10.266	7.378	-0.09	-0.70	2	2.55	0.46	4000	0					
-3.148	10.363	7.381	-0.08	-0.66	2	2.56	0.46	4000	0					
-3.162	10.461	7.383	-0.08	-0.63	2	2.56	0.46	4000	0					
-3.175	10.559	7.385	-0.07	-0.60	2	2.57	0.46	4000	0					
-3.188	10.657	7.387	-0.06	-0.56	2	2.58	0.46	4000	0					
-3.201	10.755	7.389	-0.05	-0.53	2	2.59	0.46	4000	0					
-3.215	10.852	7.391	-0.05	-0.49	2	2.60	0.46	4000	0					
-3.228	10.950	7.392	-0.04	-0.46	2	2.61	0.46	4000	0					
-3.241	11.048	7.393	-0.03	-0.42	2	2.62	0.46	4000	0					
-3.254	11.146	7.394	-0.03	-0.39	2	2.63	0.46	4000	0					
-3.268	11.244	7.395	-0.02	-0.35	2	2.63	0.46	4000	0					
-3.281	11.342	7.396	-0.02	-0.32	2	2.64	0.46	4000	0					
-3.294	11.440	7.396	-0.02	-0.28	2	2.65	0.45	4000	0					
-3.307	11.538	7.396	-0.01	-0.25	2	2.66	0.45	4000	0					
-3.321	11.636	7.397	-0.01	-0.21	2	2.67	0.45	4000	0					
-3.334	11.734	7.397	-0.01	-0.18	2	2.68	0.45	4000	0					
-3.347	11.832	7.397	0.00	-0.14	2	2.69	0.45	4000	0					
-3.360	11.930	7.397	0.00	-0.11	2	2.69	0.45	4000	0					
-3.374	12.028	7.397	0.00	-0.07	2	2.70	0.45	4000	0					
-3.387	12.126	7.397	0.00	-0.04	2	2.71	0.45	4000	0					
-3.400	12.224	7.397	0.00	0.00	2	2.72	0.45	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 12.22 mm

MAXIMUM MOMENT = -3.02 m.T/m

CODIFICATION OF STATE : -1 = SEPARATION, 0 = EXCAVATION, 1 = ACTIVE PR., 2 = ELASTIC

CODIFICATION OF SOIL : 2 = ELASTIC, 3 = PASSIVE PR.

(2 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.31 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.182 = (8.17 T/m)/(44.81 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = WITHOUT INTEREST

** PHASE Nb 5 **

*FASE 5: Retirada de puntal intermedio
*STR(0,2)

PHASE 5

	WALL					SOIL 1				SOIL 2					
						EXCAVATION: 0.00 m				EXCAVATION: -3.40 m				STRUTS/	
						WATER LEVEL: -20.00 m				WATER LEVEL: -20.00 m				ANCHORS	
						CAQUOT SURC.: 0.00 T/m2				CAQUOT SURC.: 0.00 T/m2					
LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T
0.000	0.000	0.603	0.00	0.00		3	0.00		4000	0					
-0.019	0.011	0.603	0.00	0.00		2	0.02	0.01	4000	0					
-0.038	0.023	0.603	0.00	0.00		2	0.04	0.01	4000	0					
-0.056	0.034	0.603	0.00	0.00		2	0.19	0.03	4000	0					
-0.075	0.045	0.603	0.00	0.01		2	0.20	0.03	4000	0					
-0.094	0.057	0.603	0.00	0.01		2	0.18	0.04	4000	0					
-0.113	0.068	0.603	0.00	0.01		2	0.15	0.05	4000	0					
-0.131	0.079	0.604	0.00	0.02		2	0.17	0.06	4000	0					
-0.150	0.091	0.604	0.00	0.02		2	0.27	0.07	4000	0					
				-0.27		2	0.27	0.07	4000	0				1	-0.29
-0.163	0.098	0.604	0.00	-0.26		2	0.34	0.07	4000	0					
-0.175	0.106	0.603	0.01	-0.26		2	0.40	0.08	4000	0					
-0.188	0.113	0.603	0.01	-0.25		2	0.47	0.08	4000	0					
-0.200	0.121	0.603	0.01	-0.25		2	0.54	0.09	4000	0					
-0.213	0.128	0.603	0.01	-0.24		2	0.61	0.09	4000	0					
-0.225	0.136	0.602	0.02	-0.23		2	0.67	0.10	4000	0					
-0.237	0.143	0.602	0.02	-0.22		2	0.74	0.11	4000	0					
-0.250	0.151	0.601	0.02	-0.21		2	0.81	0.11	4000	0					
-0.274	0.166	0.599	0.03	-0.19		2	0.94	0.12	4000	0					
-0.298	0.180	0.598	0.03	-0.17		2	1.07	0.13	4000	0					
-0.323	0.194	0.596	0.04	-0.14		2	1.20	0.14	4000	0					
-0.347	0.209	0.594	0.04	-0.11		2	1.33	0.15	4000	0					
-0.371	0.223	0.592	0.04	-0.07		2	1.45	0.16	4000	0					
-0.395	0.238	0.589	0.04	-0.04		2	1.58	0.17	4000	0					
-0.420	0.252	0.587	0.04	0.00		2	1.71	0.18	4000	0					
-0.444	0.266	0.584	0.04	0.04		2	1.83	0.19	4000	0					
-0.468	0.280	0.582	0.04	0.09		2	1.95	0.20	4000	0					
-0.492	0.294	0.580	0.04	0.14		2	2.08	0.21	4000	0					
-0.516	0.308	0.578	0.03	0.19		2	2.20	0.22	4000	0					
-0.541	0.322	0.576	0.03	0.25		2	2.31	0.23	4000	0					
-0.565	0.336	0.575	0.02	0.30		2	2.43	0.24	4000	0					
-0.589	0.350	0.574	0.01	0.36		2	2.55	0.25	4000	0					
-0.601	0.357	0.573	0.01	0.39		2	2.60	0.26	4000	0					
-0.613	0.364	0.573	0.00	0.43		2	2.66	0.26	4000	0					
-0.637	0.378	0.573	-0.01	0.49		2	2.77	0.27	4000	0					
-0.662	0.392	0.574	-0.02	0.56		2	2.88	0.28	4000	0					
-0.674	0.399	0.574	-0.03	0.60		2	2.93	0.29	4000	0					
-0.686	0.406	0.575	-0.03	0.63		2	2.98	0.29	4000	0					
-0.710	0.419	0.578	-0.05	0.70		2	3.08	0.30	4000	0					
-0.734	0.434	0.581	-0.07	0.78		2	3.18	0.31	4000	0					
-0.759	0.448	0.585	-0.09	0.86		2	3.28	0.32	4000	0					
-0.783	0.462	0.591	-0.11	0.94		2	3.37	0.33	4000	0					
-0.807	0.476	0.598	-0.13	1.02		2	3.46	0.34	4000	0					
-0.831	0.491	0.606	-0.16	1.11		2	3.55	0.35	4000	0					
-0.855	0.506	0.615	-0.19	1.19		2	3.63	0.35	4000	0					
-0.880	0.521	0.627	-0.22	1.28		2	3.71	0.36	4000	0					
-0.892	0.528	0.633	-0.23	1.33		2	3.74	0.37	4000	0					
-0.904	0.536	0.640	-0.25	1.37		2	3.78	0.37	4000	0					
-0.928	0.552	0.655	-0.28	1.47		2	3.85	0.38	4000	0					
-0.952	0.568	0.671	-0.32	1.56		2	3.91	0.39	4000	0					
-0.964	0.576	0.681	-0.34	1.61		2	3.94	0.39	4000	0					

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-0.977	0.584	0.690	-0.36	1.66		2	3.97	0.40	4000	0					
-0.989	0.593	0.701	-0.38	1.70		2	4.00	0.40	4000	0					
-1.001	0.601	0.712	-0.40	1.75		2	4.02	0.40	4000	0					
-1.025	0.619	0.735	-0.44	1.85		2	4.07	0.41	4000	0					
-1.049	0.637	0.761	-0.49	1.95		2	4.11	0.42	4000	0					
-1.061	0.646	0.775	-0.51	2.00		2	4.13	0.42	4000	0					
-1.073	0.656	0.790	-0.54	2.05		2	4.14	0.43	4000	0					
-1.086	0.665	0.805	-0.56	2.10		2	4.16	0.43	4000	0					
-1.098	0.675	0.821	-0.59	2.15		2	4.17	0.44	4000	0					
-1.110	0.685	0.838	-0.62	2.20		2	4.18	0.44	4000	0					
-1.122	0.695	0.856	-0.64	2.25		2	4.19	0.44	4000	0					
-1.146	0.717	0.893	-0.70	2.35		2	4.20	0.45	4000	0					
-1.170	0.739	0.934	-0.76	2.45		2	4.21	0.46	4000	0					
-1.195	0.762	0.978	-0.82	2.56		2	4.20	0.46	4000	0					
-1.219	0.786	1.025	-0.88	2.66		2	4.19	0.47	4000	0					
-1.243	0.812	1.077	-0.95	2.76		2	4.17	0.48	4000	0					
-1.267	0.838	1.131	-1.01	2.86		2	4.14	0.48	4000	0					
-1.291	0.866	1.190	-1.08	2.96		2	4.10	0.49	4000	0					
-1.316	0.896	1.253	-1.16	3.06		2	4.05	0.50	4000	0					
-1.340	0.927	1.319	-1.23	3.16		2	3.99	0.50	4000	0					
-1.364	0.960	1.390	-1.31	3.25		2	3.92	0.51	4000	0					
-1.388	0.994	1.466	-1.39	3.35		2	3.84	0.52	4000	0					
-1.412	1.031	1.546	-1.47	3.44		2	3.74	0.52	4000	0					
-1.437	1.069	1.631	-1.56	3.53		2	3.63	0.53	4000	0					
-1.461	1.110	1.720	-1.64	3.61		2	3.52	0.53	4000	0					
-1.485	1.153	1.814	-1.73	3.70		2	3.38	0.54	4000	0					
-1.509	1.198	1.914	-1.82	3.78		2	3.24	0.54	4000	0					
-1.534	1.245	2.018	-1.91	3.85		2	3.07	0.55	4000	0					
-1.558	1.296	2.128	-2.01	3.93		2	2.90	0.56	4000	0					
-1.582	1.349	2.243	-2.10	3.99		2	2.71	0.56	4000	0					
-1.606	1.404	2.363	-2.20	4.06		2	2.50	0.57	4000	0					
-1.630	1.463	2.489	-2.30	4.12		2	2.28	0.57	4000	0					
-1.655	1.525	2.620	-2.40	4.17		2	2.04	0.57	4000	0					
-1.679	1.590	2.758	-2.50	4.21		2	1.78	0.58	4000	0					
-1.703	1.659	2.900	-2.61	4.25		1	1.52	0.39	4000	0					
-1.727	1.731	3.049	-2.71	4.29		1	1.54	0.39	4000	0					
-1.752	1.806	3.203	-2.81	4.33		1	1.56	0.40	4000	0					
-1.776	1.886	3.363	-2.92	4.37		1	1.58	0.40	4000	0					
-1.800	1.969	3.530	-3.02	4.41		2	1.60	0.40	4000	0					
				-3.48		2	1.60	0.40	4000	0				2	-7.89
-1.812	2.014	3.616	-2.98	-3.46		2	1.61	0.40	4000	0					
-1.825	2.060	3.702	-2.94	-3.44		2	1.62	0.40	4000	0					
-1.837	2.106	3.786	-2.90	-3.42		2	1.63	0.40	4000	0					
-1.850	2.154	3.869	-2.85	-3.40		2	1.64	0.41	4000	0					
-1.862	2.203	3.950	-2.81	-3.38		2	1.65	0.41	4000	0					
-1.875	2.253	4.031	-2.77	-3.36		2	1.66	0.41	4000	0					
-1.888	2.304	4.110	-2.73	-3.34		2	1.67	0.41	4000	0					
-1.900	2.356	4.188	-2.68	-3.32		2	1.68	0.41	4000	0					
-1.917	2.427	4.291	-2.63	-3.29		2	1.69	0.41	4000	0					
-1.934	2.500	4.392	-2.57	-3.26		2	1.70	0.41	4000	0					
-1.950	2.575	4.491	-2.52	-3.23		2	1.72	0.42	4000	0					
-1.967	2.651	4.588	-2.47	-3.21		2	1.73	0.42	4000	0					
-1.984	2.729	4.683	-2.41	-3.18		2	1.74	0.42	4000	0					
-2.001	2.809	4.775	-2.36	-3.15		2	1.75	0.42	4000	0					
-2.018	2.890	4.866	-2.31	-3.12		2	1.77	0.42	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO.	SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.035	2.972	4.954	-2.25	-3.09		2	1.78	0.42	4000	0					
-2.051	3.056	5.041	-2.20	-3.06		2	1.79	0.42	4000	0					
-2.068	3.142	5.125	-2.15	-3.03		2	1.80	0.43	4000	0					
-2.085	3.229	5.208	-2.10	-3.00		2	1.82	0.43	4000	0					
-2.102	3.317	5.288	-2.05	-2.97		2	1.83	0.43	4000	0					
-2.119	3.406	5.367	-2.00	-2.94		2	1.84	0.43	4000	0					
-2.135	3.497	5.443	-1.95	-2.90		2	1.85	0.43	4000	0					
-2.152	3.590	5.518	-1.90	-2.87		2	1.87	0.43	4000	0					
-2.169	3.683	5.591	-1.85	-2.84		2	1.88	0.43	4000	0					
-2.186	3.778	5.662	-1.81	-2.81		2	1.89	0.43	4000	0					
-2.203	3.873	5.731	-1.76	-2.78		2	1.90	0.44	4000	0					
-2.219	3.970	5.799	-1.71	-2.75		2	1.92	0.44	4000	0					
-2.236	4.068	5.865	-1.67	-2.71		2	1.93	0.44	4000	0					
-2.253	4.168	5.928	-1.62	-2.68		2	1.94	0.44	4000	0					
-2.270	4.268	5.990	-1.58	-2.65		2	1.95	0.44	4000	0					
-2.287	4.369	6.051	-1.53	-2.62		2	1.96	0.44	4000	0					
-2.304	4.471	6.110	-1.49	-2.58		2	1.98	0.44	4000	0					
-2.320	4.574	6.166	-1.45	-2.55		2	1.99	0.44	4000	0					
-2.337	4.679	6.222	-1.40	-2.52		2	2.00	0.44	4000	0					
-2.354	4.784	6.275	-1.36	-2.48		2	2.01	0.44	4000	0					
-2.371	4.890	6.328	-1.32	-2.45		2	2.02	0.44	4000	0					
-2.388	4.996	6.378	-1.28	-2.41		2	2.04	0.45	4000	0					
-2.404	5.104	6.427	-1.24	-2.38		2	2.05	0.45	4000	0					
-2.421	5.213	6.474	-1.20	-2.34		2	2.06	0.45	4000	0					
-2.438	5.322	6.520	-1.16	-2.31		2	2.07	0.45	4000	0					
-2.455	5.432	6.564	-1.12	-2.27		2	2.08	0.45	4000	0					
-2.472	5.543	6.607	-1.08	-2.24		2	2.10	0.45	4000	0					
-2.489	5.654	6.649	-1.05	-2.20		2	2.11	0.45	4000	0					
-2.505	5.766	6.688	-1.01	-2.17		2	2.12	0.45	4000	0					
-2.522	5.879	6.727	-0.97	-2.13		2	2.13	0.45	4000	0					
-2.539	5.992	6.764	-0.94	-2.10		2	2.14	0.45	4000	0					
-2.556	6.106	6.800	-0.90	-2.06		2	2.16	0.45	4000	0					
-2.573	6.221	6.834	-0.87	-2.02		2	2.17	0.45	4000	0					
-2.589	6.336	6.867	-0.84	-1.99		2	2.18	0.45	4000	0					
-2.606	6.452	6.899	-0.80	-1.95		2	2.19	0.45	4000	0					
-2.623	6.568	6.930	-0.77	-1.91		2	2.20	0.45	4000	0					
-2.640	6.685	6.959	-0.74	-1.88		2	2.21	0.45	4000	0					
-2.657	6.802	6.987	-0.71	-1.84		2	2.23	0.45	4000	0					
-2.674	6.920	7.014	-0.68	-1.80		2	2.24	0.45	4000	0					
-2.690	7.038	7.039	-0.65	-1.76		2	2.25	0.45	4000	0					
-2.707	7.157	7.064	-0.62	-1.73		2	2.26	0.46	4000	0					
-2.724	7.276	7.087	-0.59	-1.69		2	2.27	0.46	4000	0					
-2.741	7.395	7.109	-0.56	-1.65		2	2.28	0.46	4000	0					
-2.758	7.515	7.131	-0.53	-1.61		2	2.29	0.46	4000	0					
-2.774	7.635	7.151	-0.51	-1.57		2	2.31	0.46	4000	0					
-2.791	7.755	7.170	-0.48	-1.53		2	2.32	0.46	4000	0					
-2.808	7.876	7.188	-0.45	-1.50		2	2.33	0.46	4000	0					
-2.825	7.997	7.205	-0.43	-1.46		2	2.34	0.46	4000	0					
-2.842	8.118	7.221	-0.40	-1.42		2	2.35	0.46	4000	0					
-2.858	8.240	7.237	-0.38	-1.38		2	2.36	0.46	4000	0					
-2.875	8.362	7.251	-0.36	-1.34		2	2.37	0.46	4000	0					
-2.892	8.484	7.264	-0.34	-1.30		2	2.39	0.46	4000	0					
-2.909	8.606	7.277	-0.32	-1.26		2	2.40	0.46	4000	0					
-2.926	8.729	7.289	-0.29	-1.22		2	2.41	0.46	4000	0					
-2.943	8.851	7.300	-0.27	-1.18		2	2.42	0.46	4000	0					
m	mm	/1000	m.T/m	T/m	T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

PHASE 5 (CONTINUATION)

LEVEL	DISPLAC.	ROTATION	MOMENT	CR.FO. SH LOAD	STATE	PRE.	SURCH.	ELAST.	STATE	PRE.	SURCH.	ELAST.	NB	LOAD
-2.959	8.974	7.310	-0.25	-1.13	2	2.43	0.46	4000	0					
-2.976	9.097	7.320	-0.24	-1.09	2	2.44	0.46	4000	0					
-2.989	9.194	7.327	-0.22	-1.06	2	2.45	0.46	4000	0					
-3.003	9.291	7.333	-0.21	-1.03	2	2.46	0.46	4000	0					
-3.016	9.388	7.339	-0.19	-1.00	2	2.47	0.46	4000	0					
-3.029	9.485	7.345	-0.18	-0.96	2	2.48	0.46	4000	0					
-3.042	9.583	7.350	-0.17	-0.93	2	2.49	0.46	4000	0					
-3.056	9.680	7.355	-0.16	-0.90	2	2.49	0.46	4000	0					
-3.069	9.778	7.360	-0.15	-0.86	2	2.50	0.46	4000	0					
-3.082	9.875	7.364	-0.13	-0.83	2	2.51	0.46	4000	0					
-3.095	9.973	7.368	-0.12	-0.80	2	2.52	0.46	4000	0					
-3.109	10.070	7.372	-0.11	-0.76	2	2.53	0.46	4000	0					
-3.122	10.168	7.375	-0.10	-0.73	2	2.54	0.46	4000	0					
-3.135	10.266	7.378	-0.09	-0.70	2	2.55	0.46	4000	0					
-3.148	10.363	7.381	-0.08	-0.66	2	2.56	0.46	4000	0					
-3.162	10.461	7.383	-0.08	-0.63	2	2.56	0.46	4000	0					
-3.175	10.559	7.385	-0.07	-0.60	2	2.57	0.46	4000	0					
-3.188	10.657	7.387	-0.06	-0.56	2	2.58	0.46	4000	0					
-3.201	10.755	7.389	-0.05	-0.53	2	2.59	0.46	4000	0					
-3.215	10.852	7.391	-0.05	-0.49	2	2.60	0.46	4000	0					
-3.228	10.950	7.392	-0.04	-0.46	2	2.61	0.46	4000	0					
-3.241	11.048	7.393	-0.03	-0.42	2	2.62	0.46	4000	0					
-3.254	11.146	7.394	-0.03	-0.39	2	2.63	0.46	4000	0					
-3.268	11.244	7.395	-0.02	-0.35	2	2.63	0.46	4000	0					
-3.281	11.342	7.396	-0.02	-0.32	2	2.64	0.46	4000	0					
-3.294	11.440	7.396	-0.02	-0.28	2	2.65	0.45	4000	0					
-3.307	11.538	7.396	-0.01	-0.25	2	2.66	0.45	4000	0					
-3.321	11.636	7.397	-0.01	-0.21	2	2.67	0.45	4000	0					
-3.334	11.734	7.397	-0.01	-0.18	2	2.68	0.45	4000	0					
-3.347	11.832	7.397	0.00	-0.14	2	2.69	0.45	4000	0					
-3.360	11.930	7.397	0.00	-0.11	2	2.69	0.45	4000	0					
-3.374	12.028	7.397	0.00	-0.07	2	2.70	0.45	4000	0					
-3.387	12.126	7.397	0.00	-0.04	2	2.71	0.45	4000	0					
-3.400	12.224	7.397	0.00	0.00	2	2.72	0.45	4000	0					
m	mm	/1000	m.T/m	T/m T/m2		T/m2	T/m2	T/m3		T/m2	T/m2	T/m3		T

MAXIMUM DISPLACEMENT = 12.22 mm

MAXIMUM MOMENT = -3.02 m.T/m

CODIFICATION OF STATE : -1 = SEPARATION, 0 = EXCAVATION, 1 = ACTIVE PR., 2 = ELASTIC

CODIFICATION OF SOIL : 3 = PASSIVE PR.

(4 IT.)

INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 1 = 1.31 T/m
INTEGRATED HORIZONTAL EFFECT OF SURCHARGES ON THE SOIL 2 = 0.00 T/m

(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 1 = 0.182 = (8.17 T/m)/(44.81 T/m) WITHOUT INTEREST
(MOBILIZED PRESSURE)/(PASSIVE PRESSURE) RATIO FOR SOIL NB 2 = WITHOUT INTEREST

*** END OF CALCULUS

*** MAXIMUM DISPLACEMENT IN PHASE Nb 3 = 12.224 mm IN FINAL PHASE Nb 5 = 12.224 mm

*** MAXIMUM MOMENT IN PHASE Nb 3 = -3.025 m.T/m IN FINAL PHASE Nb 5 = -3.025 m.T/m

STRUT/ANCHOR		PRELOAD		MAXIMUM		FINAL STATE	
NUMBER	LEVEL	PHASE	FORCE	PHASE	FORCE	PHASE	FORCE
1	-0.15	2	0.00	2	-1.00	5	-0.29
2	-1.80	3	0.00	5	-7.89	5	-7.89
	m		T		T		T

* ENVELOPE CURVES FROM PHASE 1 TO PHASE 5 *

LEVEL	MINI CRO.FO	MAXI CRO.FO
0.000	0.00	0.00
-0.019	0.00	0.00
-0.038	0.00	0.01
-0.056	0.00	0.01
-0.075	0.00	0.02
-0.094	0.00	0.03
-0.113	0.00	0.03
-0.131	0.00	0.04
-0.150	0.00	0.04
	-0.96	0.01
-0.163	-0.96	0.01
-0.175	-0.96	0.01
-0.188	-0.96	0.02
-0.200	-0.95	0.02
-0.213	-0.95	0.02
-0.225	-0.95	0.02
-0.237	-0.95	0.03
-0.250	-0.94	0.03
-0.274	-0.94	0.03
-0.298	-0.93	0.04
-0.323	-0.92	0.03
-0.347	-0.92	0.03
-0.371	-0.91	0.03
-0.395	-0.90	0.03
-0.420	-0.89	0.03
-0.444	-0.88	0.04
-0.468	-0.87	0.09
-0.492	-0.86	0.14
-0.516	-0.85	0.19
-0.541	-0.83	0.25
-0.565	-0.82	0.30
-0.589	-0.81	0.36
-0.601	-0.80	0.39
-0.613	-0.79	0.43
-0.637	-0.78	0.49
-0.662	-0.76	0.56
-0.674	-0.76	0.60
-0.686	-0.75	0.63
-0.710	-0.73	0.70
-0.734	-0.72	0.78
-0.759	-0.70	0.86
-0.783	-0.68	0.94
-0.807	-0.66	1.02
-0.831	-0.64	1.11
-0.855	-0.62	1.19
-0.880	-0.60	1.28
-0.892	-0.59	1.33
-0.904	-0.58	1.37
-0.928	-0.56	1.47
-0.952	-0.54	1.56
-0.964	-0.53	1.61
-0.977	-0.52	1.66
-0.989	-0.51	1.70

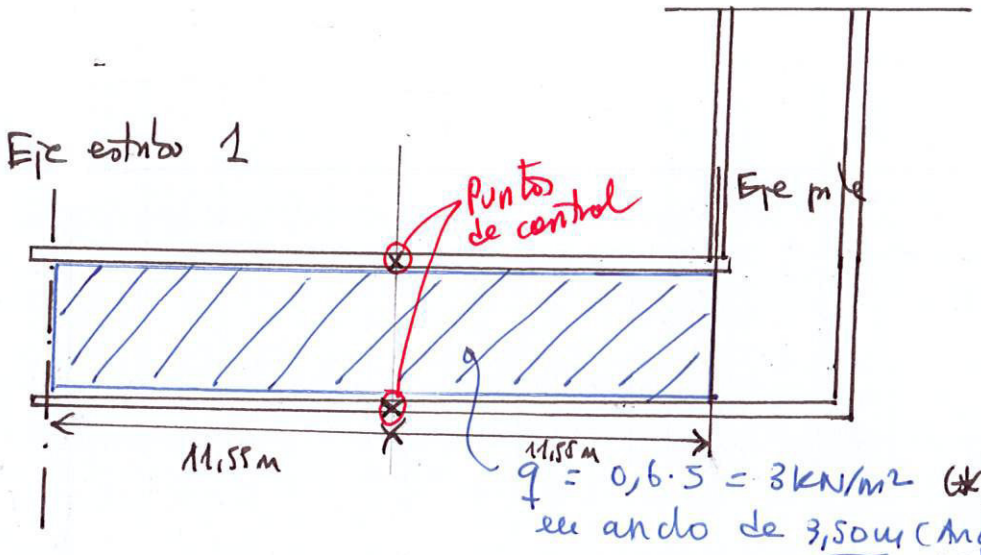
LEVEL	MINI MOMENT	MAXI MOMENT
0.000	0.00	0.00
-0.019	0.00	0.00
-0.038	0.00	0.00
-0.056	0.00	0.00
-0.075	0.00	0.00
-0.094	0.00	0.00
-0.113	0.00	0.00
-0.131	0.00	0.00
-0.150	0.00	0.00
	0.00	0.00
-0.163	0.00	0.01
-0.175	0.00	0.02
-0.188	0.00	0.03
-0.200	0.00	0.04
-0.213	0.00	0.06
-0.225	0.00	0.07
-0.237	0.00	0.08
-0.250	0.00	0.09
-0.274	0.00	0.12
-0.298	0.00	0.14
-0.323	-0.01	0.16
-0.347	-0.01	0.18
-0.371	-0.01	0.20
-0.395	-0.01	0.23
-0.420	-0.01	0.25
-0.444	-0.01	0.27
-0.468	-0.01	0.29
-0.492	-0.01	0.31
-0.516	-0.01	0.33
-0.541	-0.01	0.35
-0.565	-0.01	0.37
-0.589	-0.01	0.39
-0.601	-0.01	0.40
-0.613	-0.01	0.41
-0.637	-0.01	0.43
-0.662	-0.02	0.45
-0.674	-0.03	0.46
-0.686	-0.03	0.47
-0.710	-0.05	0.49
-0.734	-0.07	0.50
-0.759	-0.09	0.52
-0.783	-0.11	0.54
-0.807	-0.13	0.55
-0.831	-0.16	0.57
-0.855	-0.19	0.58
-0.880	-0.22	0.60
-0.892	-0.23	0.61
-0.904	-0.25	0.61
-0.928	-0.28	0.63
-0.952	-0.32	0.64
-0.964	-0.34	0.65
-0.977	-0.36	0.65
-0.989	-0.38	0.66

-1.001	-0.50	1.75	-1.001	-0.40	0.67
-1.025	-0.47	1.85	-1.025	-0.44	0.68
-1.049	-0.45	1.95	-1.049	-0.49	0.69
-1.061	-0.44	2.00	-1.061	-0.51	0.69
-1.073	-0.43	2.05	-1.073	-0.54	0.70
-1.086	-0.42	2.10	-1.086	-0.56	0.70
-1.098	-0.40	2.15	-1.098	-0.59	0.71
-1.110	-0.39	2.20	-1.110	-0.62	0.71
-1.122	-0.38	2.25	-1.122	-0.64	0.72
-1.146	-0.35	2.35	-1.146	-0.70	0.73
-1.170	-0.33	2.45	-1.170	-0.76	0.74
-1.195	-0.30	2.56	-1.195	-0.82	0.74
-1.219	-0.27	2.66	-1.219	-0.88	0.75
-1.243	-0.25	2.76	-1.243	-0.95	0.76
-1.267	-0.22	2.86	-1.267	-1.01	0.76
-1.291	-0.19	2.96	-1.291	-1.08	0.77
-1.316	-0.16	3.06	-1.316	-1.16	0.77
-1.340	-0.13	3.16	-1.340	-1.23	0.78
-1.364	-0.10	3.25	-1.364	-1.31	0.78
-1.388	-0.07	3.35	-1.388	-1.39	0.78
-1.412	-0.04	3.44	-1.412	-1.47	0.78
-1.437	-0.02	3.53	-1.437	-1.56	0.78
-1.461	-0.02	3.61	-1.461	-1.64	0.78
-1.485	-0.02	3.70	-1.485	-1.73	0.78
-1.509	-0.02	3.78	-1.509	-1.82	0.78
-1.534	-0.02	3.85	-1.534	-1.91	0.78
-1.558	-0.02	3.93	-1.558	-2.01	0.77
-1.582	-0.02	3.99	-1.582	-2.10	0.77
-1.606	-0.01	4.06	-1.606	-2.20	0.76
-1.630	-0.01	4.12	-1.630	-2.30	0.76
-1.655	-0.01	4.17	-1.655	-2.40	0.75
-1.679	-0.01	4.21	-1.679	-2.50	0.74
-1.703	-0.01	4.25	-1.703	-2.61	0.73
-1.727	-0.01	4.29	-1.727	-2.71	0.73
-1.752	-0.01	4.33	-1.752	-2.81	0.72
-1.776	-0.01	4.37	-1.776	-2.92	0.70
-1.800	-0.01	4.41	-1.800	-3.02	0.69
	-3.48	0.52		-3.02	0.69
-1.812	-3.46	0.54	-1.812	-2.98	0.69
-1.825	-3.44	0.56	-1.825	-2.94	0.68
-1.837	-3.42	0.58	-1.837	-2.90	0.67
-1.850	-3.40	0.60	-1.850	-2.85	0.66
-1.862	-3.38	0.62	-1.862	-2.81	0.66
-1.875	-3.36	0.64	-1.875	-2.77	0.65
-1.888	-3.34	0.66	-1.888	-2.73	0.64
-1.900	-3.32	0.69	-1.900	-2.68	0.63
-1.917	-3.29	0.71	-1.917	-2.63	0.62
-1.934	-3.26	0.74	-1.934	-2.57	0.61
-1.950	-3.23	0.76	-1.950	-2.52	0.59
-1.967	-3.21	0.79	-1.967	-2.47	0.58
-1.984	-3.18	0.81	-1.984	-2.41	0.57
-2.001	-3.15	0.83	-2.001	-2.36	0.55
-2.018	-3.12	0.85	-2.018	-2.31	0.54
-2.035	-3.09	0.86	-2.035	-2.25	0.53
-2.051	-3.06	0.88	-2.051	-2.20	0.51
-2.068	-3.03	0.89	-2.068	-2.15	0.50
-2.085	-3.00	0.91	-2.085	-2.10	0.48
-2.102	-2.97	0.92	-2.102	-2.05	0.47
-2.119	-2.94	0.93	-2.119	-2.00	0.45
-2.135	-2.90	0.94	-2.135	-1.95	0.43
-2.152	-2.87	0.94	-2.152	-1.90	0.42

-2.169	-2.84	0.95	-2.169	-1.85	0.40
-2.186	-2.81	0.95	-2.186	-1.81	0.39
-2.203	-2.78	0.95	-2.203	-1.76	0.37
-2.219	-2.75	0.95	-2.219	-1.71	0.36
-2.236	-2.71	0.95	-2.236	-1.67	0.34
-2.253	-2.68	0.95	-2.253	-1.62	0.32
-2.270	-2.65	0.95	-2.270	-1.58	0.31
-2.287	-2.62	0.94	-2.287	-1.53	0.29
-2.304	-2.58	0.94	-2.304	-1.49	0.28
-2.320	-2.55	0.93	-2.320	-1.45	0.26
-2.337	-2.52	0.92	-2.337	-1.40	0.24
-2.354	-2.48	0.91	-2.354	-1.36	0.23
-2.371	-2.45	0.89	-2.371	-1.32	0.21
-2.388	-2.41	0.88	-2.388	-1.28	0.20
-2.404	-2.38	0.86	-2.404	-1.24	0.18
-2.421	-2.34	0.85	-2.421	-1.20	0.17
-2.438	-2.31	0.83	-2.438	-1.16	0.16
-2.455	-2.27	0.81	-2.455	-1.12	0.14
-2.472	-2.24	0.79	-2.472	-1.08	0.13
-2.489	-2.20	0.76	-2.489	-1.05	0.12
-2.505	-2.17	0.74	-2.505	-1.01	0.10
-2.522	-2.13	0.71	-2.522	-0.97	0.09
-2.539	-2.10	0.68	-2.539	-0.94	0.08
-2.556	-2.06	0.65	-2.556	-0.90	0.07
-2.573	-2.02	0.62	-2.573	-0.87	0.06
-2.589	-1.99	0.59	-2.589	-0.84	0.05
-2.606	-1.95	0.56	-2.606	-0.80	0.04
-2.623	-1.91	0.52	-2.623	-0.77	0.03
-2.640	-1.88	0.49	-2.640	-0.74	0.02
-2.657	-1.84	0.45	-2.657	-0.71	0.01
-2.674	-1.80	0.41	-2.674	-0.68	0.00
-2.690	-1.76	0.38	-2.690	-0.65	0.00
-2.707	-1.73	0.35	-2.707	-0.62	0.00
-2.724	-1.69	0.31	-2.724	-0.59	0.00
-2.741	-1.65	0.28	-2.741	-0.56	0.00
-2.758	-1.61	0.25	-2.758	-0.53	0.00
-2.774	-1.57	0.22	-2.774	-0.51	0.00
-2.791	-1.53	0.20	-2.791	-0.48	0.00
-2.808	-1.50	0.17	-2.808	-0.45	0.00
-2.825	-1.46	0.14	-2.825	-0.43	0.00
-2.842	-1.42	0.12	-2.842	-0.40	0.00
-2.858	-1.38	0.10	-2.858	-0.38	0.00
-2.875	-1.34	0.07	-2.875	-0.36	0.00
-2.892	-1.30	0.05	-2.892	-0.34	0.00
-2.909	-1.26	0.03	-2.909	-0.32	0.00
-2.926	-1.22	0.01	-2.926	-0.29	0.00
-2.943	-1.18	0.01	-2.943	-0.27	0.00
-2.959	-1.13	0.01	-2.959	-0.25	0.00
-2.976	-1.09	0.01	-2.976	-0.24	0.00
-2.989	-1.06	0.01	-2.989	-0.22	0.00
-3.003	-1.03	0.01	-3.003	-0.21	0.00
-3.016	-1.00	0.01	-3.016	-0.19	0.00
-3.029	-0.96	0.01	-3.029	-0.18	0.00
-3.042	-0.93	0.01	-3.042	-0.17	0.00
-3.056	-0.90	0.01	-3.056	-0.16	0.00
-3.069	-0.86	0.01	-3.069	-0.15	0.00
-3.082	-0.83	0.01	-3.082	-0.13	0.00
-3.095	-0.80	0.01	-3.095	-0.12	0.00
-3.109	-0.76	0.01	-3.109	-0.11	0.00
-3.122	-0.73	0.01	-3.122	-0.10	0.00
-3.135	-0.70	0.01	-3.135	-0.09	0.00

-3.148	-0.66	0.01		-3.148	-0.08	0.00
-3.162	-0.63	0.01		-3.162	-0.08	0.00
-3.175	-0.60	0.01		-3.175	-0.07	0.00
-3.188	-0.56	0.01		-3.188	-0.06	0.00
-3.201	-0.53	0.01		-3.201	-0.05	0.00
-3.215	-0.49	0.00		-3.215	-0.05	0.00
-3.228	-0.46	0.00		-3.228	-0.04	0.00
-3.241	-0.42	0.00		-3.241	-0.03	0.00
-3.254	-0.39	0.00		-3.254	-0.03	0.00
-3.268	-0.35	0.00		-3.268	-0.02	0.00
-3.281	-0.32	0.00		-3.281	-0.02	0.00
-3.294	-0.28	0.00		-3.294	-0.02	0.00
-3.307	-0.25	0.00		-3.307	-0.01	0.00
-3.321	-0.21	0.00		-3.321	-0.01	0.00
-3.334	-0.18	0.00		-3.334	-0.01	0.00
-3.347	-0.14	0.00		-3.347	0.00	0.00
-3.360	-0.11	0.00		-3.360	0.00	0.00
-3.374	-0.07	0.00		-3.374	0.00	0.00
-3.387	-0.04	0.00		-3.387	0.00	0.00
-3.400	0.00	0.00		-3.400	0.00	0.00
0.000	5.19	0.63		0.000	**********	1.00
m	T/m	T/m		m	m.T/m	m.T/m

PRUEBA DE CARGA.

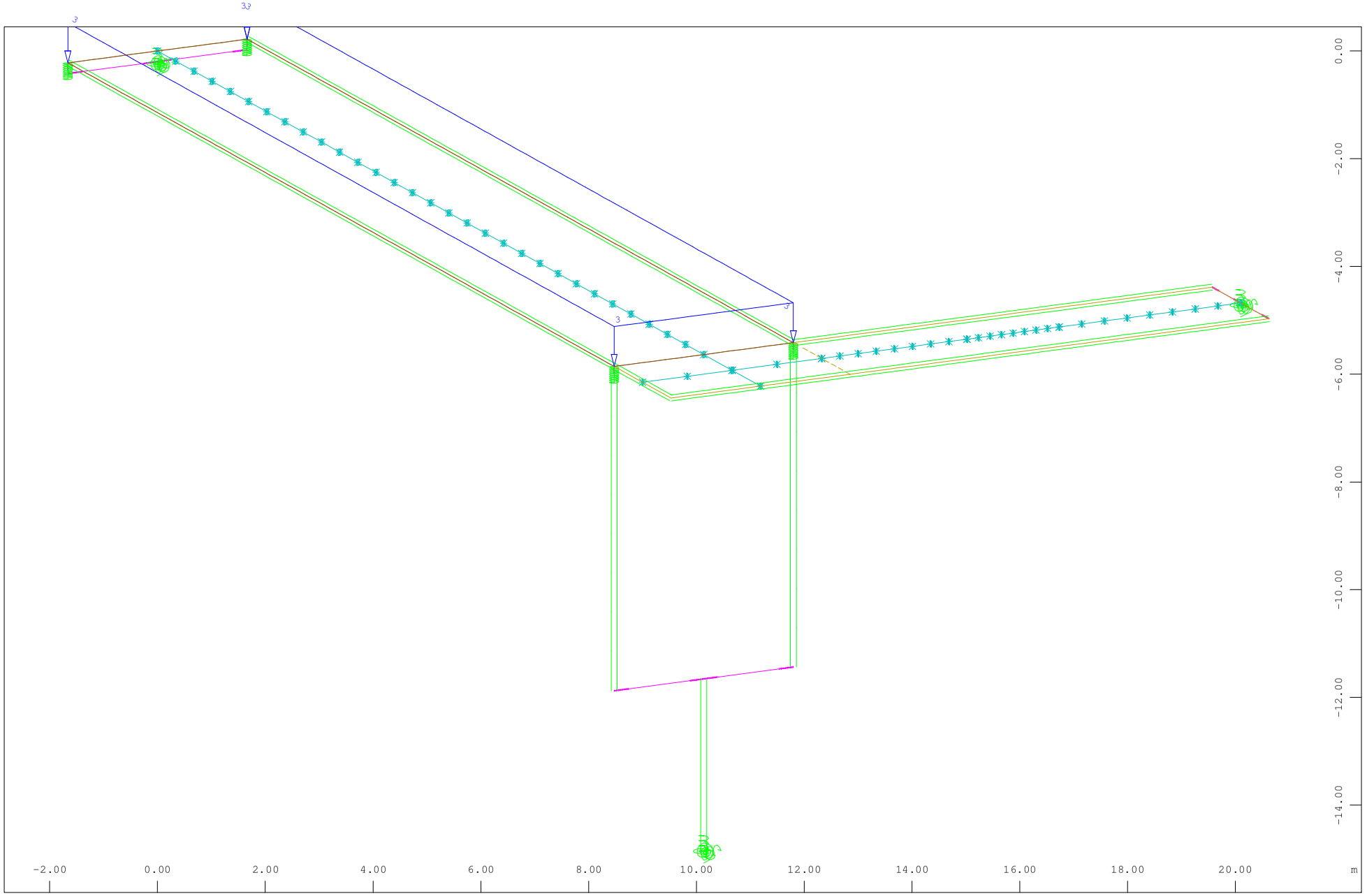


$M_{sc(60\%)} = 678,5$ mkN ⟶ $\delta_{(EXT)} = 3,6$ mm

ELÁSTICA (Obtenida modelo SAP)

↳ Por fisuración se prevee la flecha aumente hasta **4 mm**

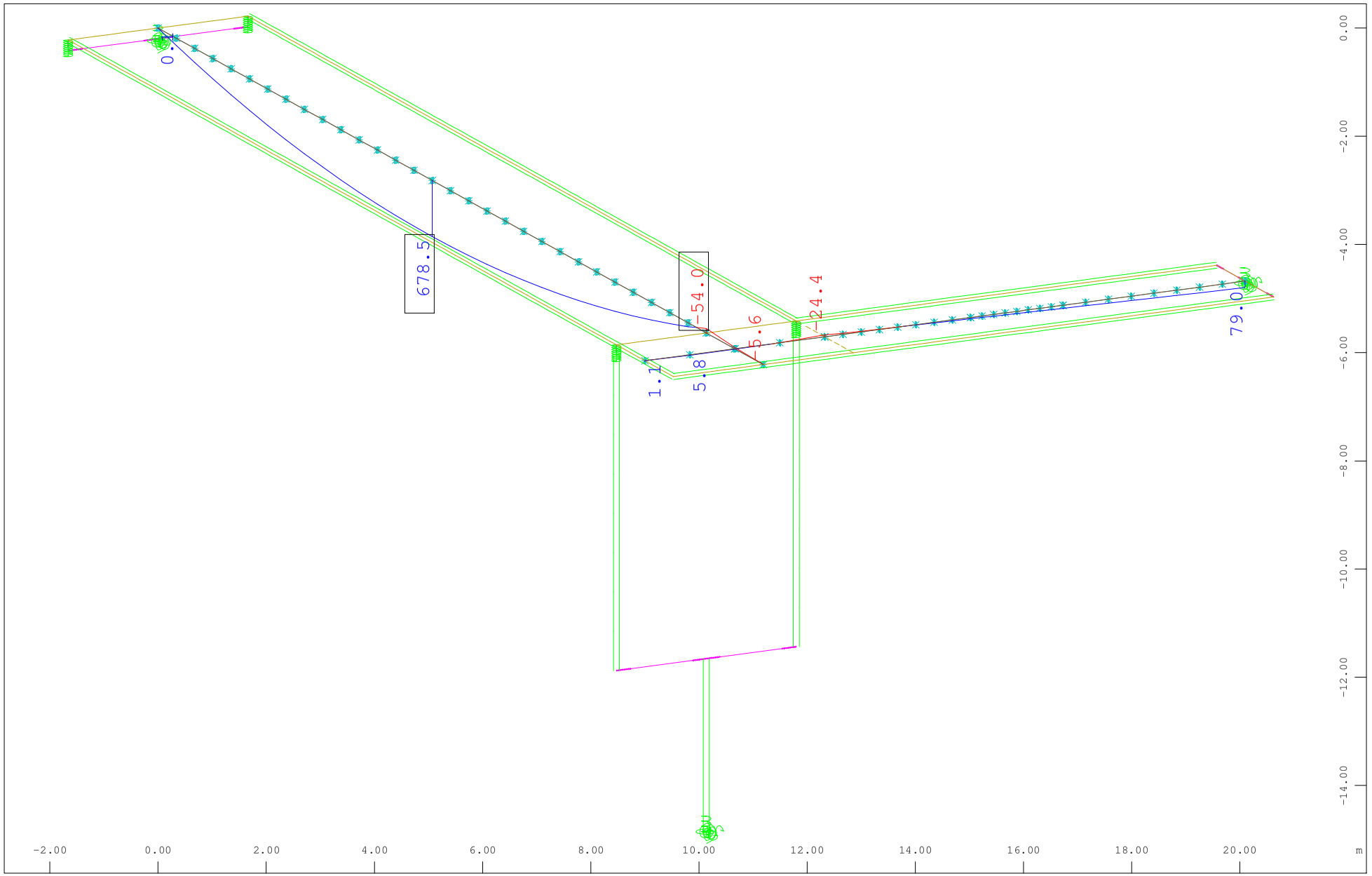
(*) Para definir la hipótesis de prueba de carga se han reproducido unas cargas que produzcan un momento flector del 60-70% de los producidos por la SC peatonal.



All loads, Loadcase 1000 PRUEBA DE CARGA , (1 cm 3D = unit) Area element load (force) vector (Unit=3.61 kN/m2) (Max=2.84)

M 1 : 98

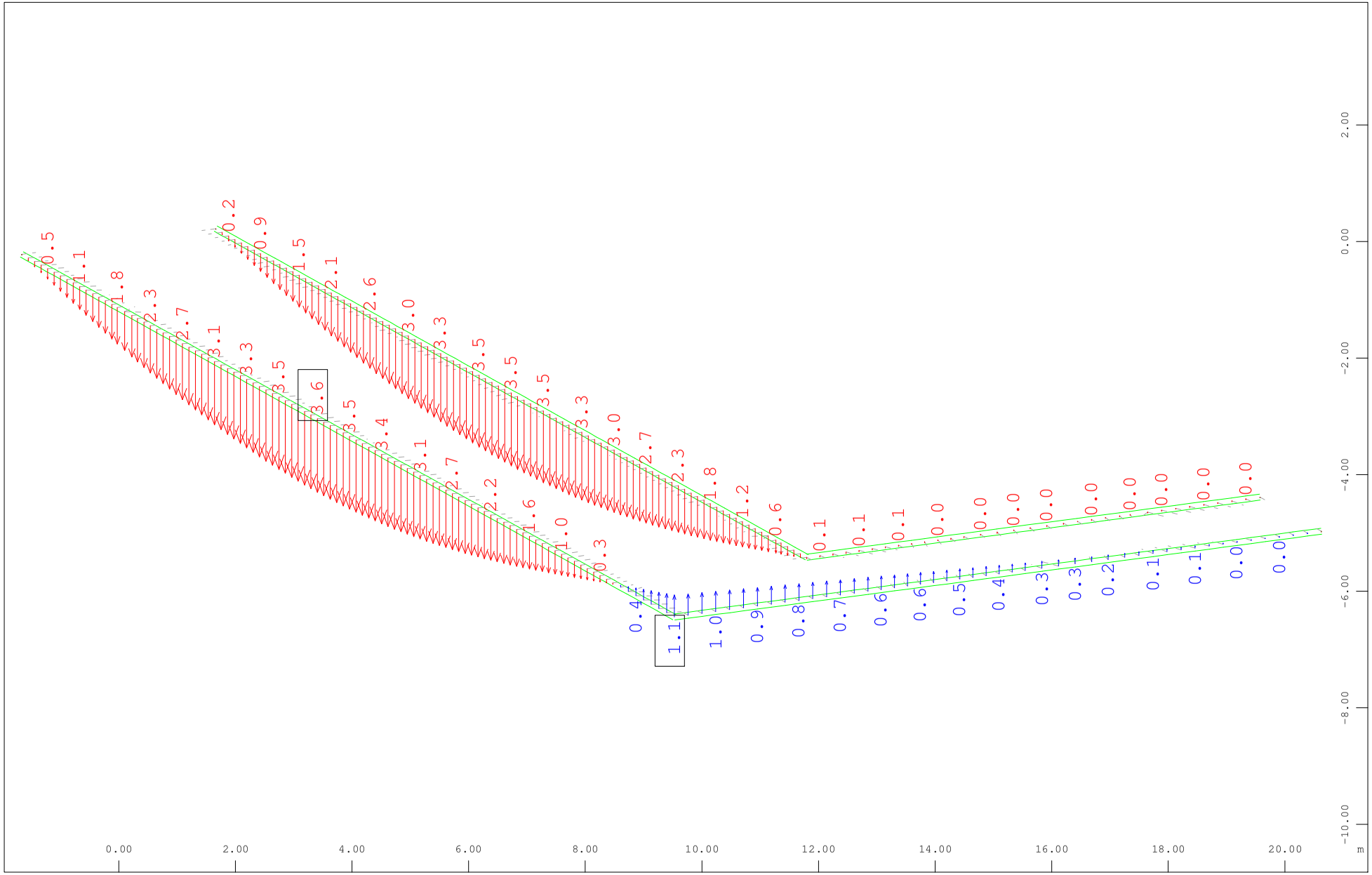
X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

External beams , Bending moment My, Loadcase 1000 PRUEBA DE CARGA , 1 cm 3D = 617.2 kNm (Min=-54.0) (Max=678.5)

M 1 : 98
X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

Sector of system Beam Elements Group 111 121 122 211...213 220...223

Nodal displacement in global Z, Loadcase 1000 PRUEBA DE CARGA , 1 cm 3D = 2.47 mm

(Min=-3.56) (Max=1.06)

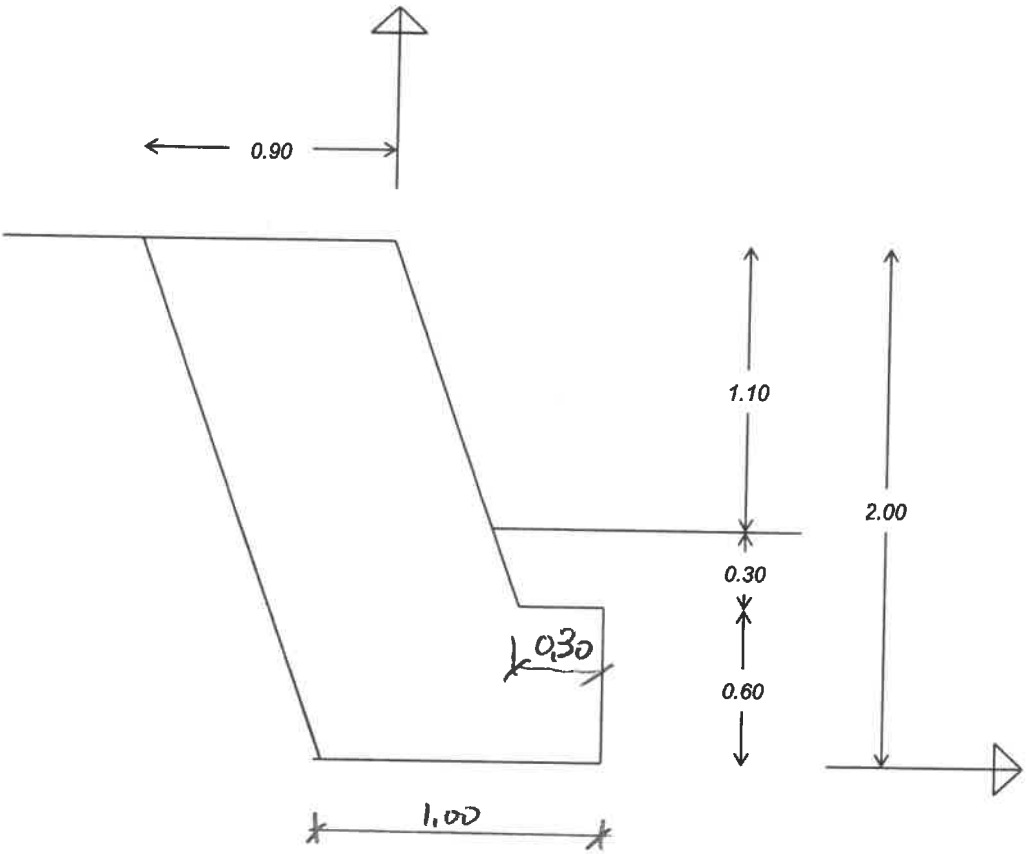
M 1 : 91

X * 0.502
Y * 0.906
Z * 0.962

10.02.- Cálculos justificativos escollera hormigonada

ESQUEMA DEL MURO

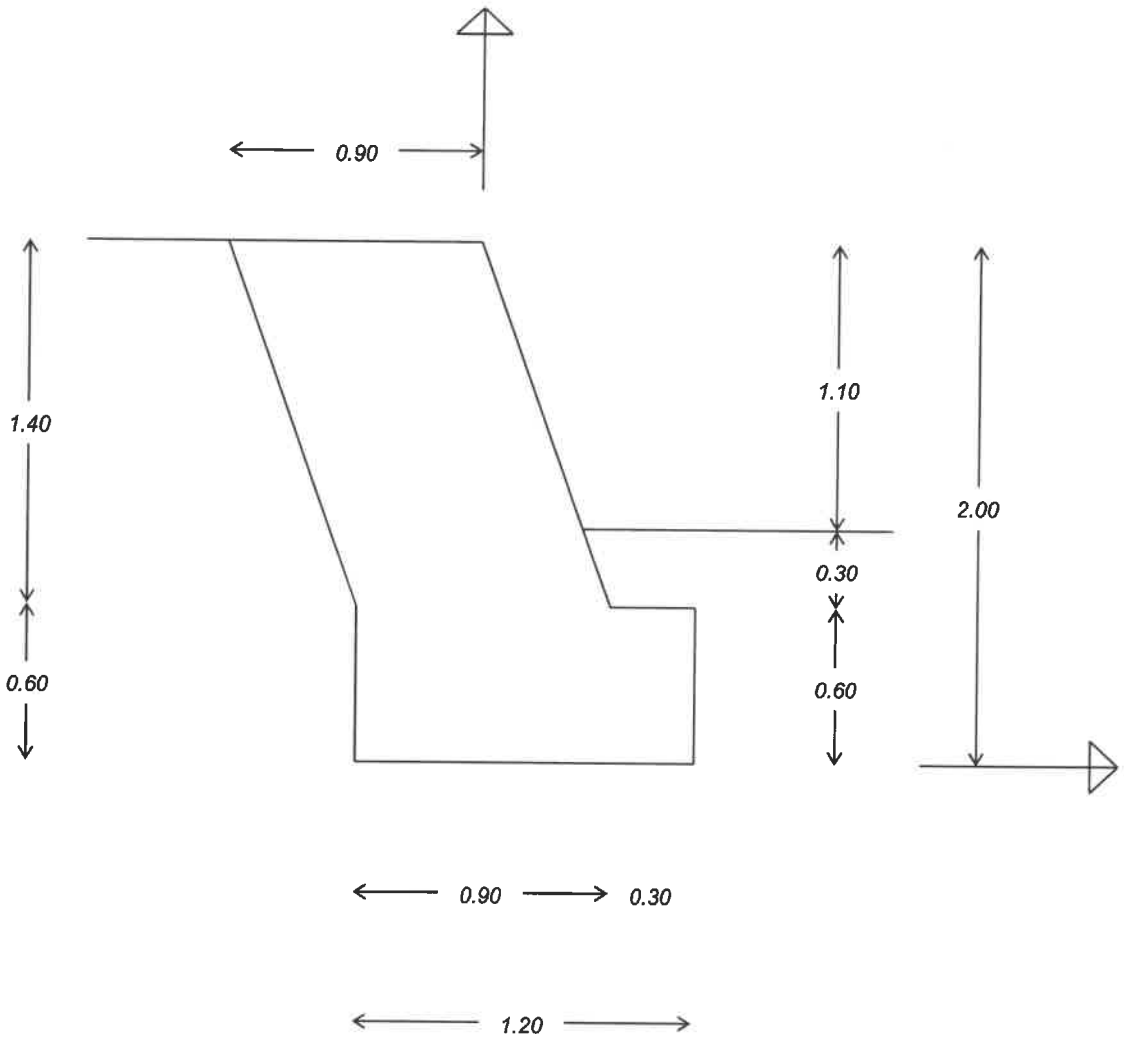
PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H200



ST- H2

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H200



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H200

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333 Mpa
γc=	1,50	fcv=	20,000 Mpa
αcc=	1,00	fct,m=	2,210 MPa
αct=	1,00	fct,k=	1,547 MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032 MPa

ACERO

fyk=	500 MPa	fyd=	434,783 MPa
γs=	1,15	fyc,d=	420,000 MPa
rec.mec.d´=	0,05 m		

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	1,10	0,90	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,30	-----
0.CIMENTACION	0	-0,90	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/Bli(m)	SECC.PARCIALES INTRADOS ASi/Ali(m)	SECCION TOTAL CANTO ESi/Eli(m)	SECCION TOTAL XCG GSi/Gli(m)
5,ALZ-S	1,10	5I	2,00	0,90	0,00	0,90	-0,45
	------	4S	0,90	0,53	0,37	0,90	-0,08
4,ALZ-MS	0,00	4I	0,90	0,53	0,37	0,90	-0,08
	------	3S	0,90	0,53	0,37	0,90	-0,08
3,ALZ-MI	0,00	3I	0,90	0,53	0,37	0,90	-0,08
	------	2S	0,90	0,53	0,37	0,90	-0,08
2.ALZ-I	0,30	2I	0,90	0,53	0,37	0,90	-0,08
	------	1S	0,60	0,43	0,47	0,90	0,02
1.ZAPATA	0,60	1I	0,60	0,43	0,77	1,20	0,17
0.CIMEN	------	0S	0,00	0,43	0,77	1,20	0,17

ALTURA TOTAL DEL MURO	**(m):**	2,00	**ESPESOR DE LA ZAPATA**	**(m):**	0,60
ALTURA DEL ALZADO	**(m):**	1,40	**LONGITUD DE LA PUNTERA**	**(m):**	0,30
ESPESOR EN CORONACION	**(m):**	0,90	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	0,90	**LONGITUD TOTAL DE ZAPATA**	**(m):**	1,20

HIPOTESIS : ALTURA H200

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (º)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (º)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (º)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	2,00				
4.ALZADO-MS	4	0,90				
3.ALZADO-MI	3	0,90				
2.ALZADO-I	2	0,90				
1.ZAPATA	1	0,60				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H200

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	16,37 kN		
FUERZA ANTIDESLIZANTE	Fant=	-27,50 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,68	>	1,50
MOMENTO VOLCADOR	Mvol=	9,98 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-38,80 m*kN		
SEGURIDAD AL VUELCO	γv=	3,89	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	50,85 kN		
CARGA HORIZONTAL	Ht=	18,23 kN		
MOMENTO EN EL EJE	Mo=	1,70 m*kN		
EXCENTRICIDAD	e=	0,033 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	29,36 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,61	>	1,50
LONGITUD EFICAZ	Le=	1,200 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,049 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,035 Mpa	<	0,313
TENSION MEDIA	σmed=	0,042 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	1,133 m		
TENSION DE COMPARACION	$\sigma comp$=	0,045 Mpa	<	0,250

HIPOTESIS: ALTURA H200

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS			RESIS. SECCION			
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	0,90	0,0	0,0	0,0	0,000	1,032	928,4	
4S	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
4I	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
3S	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
3I	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
2S	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
2I	0,90	36,0	-2,6	10,5	0,000	1,032	928,4	
1S	**0,90**	**46,6**	**-3,0**	**15,3**	**0,000**	**1,032**	**393,6**	(Junta Horm)
1I	1,20	49,3	-8,8	15,3	0,000	1,032	1237,8	
0	1,20	76,3	2,5	27,3	0,000	1,032	1237,8	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 0,60 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,434	35,30	0,00	13,80	0,00		
CORT. S2	-0,434	35,30	0,00	13,80	0,00	0,00	
PUNZ. S2´	-0,434	35,30	0,00	13,80	0,00	0,00	
FLEX. S1	-0,299	36,90	0,00	13,80	0,00		0,30
PUNTERA							
FLEX. S1	0,331	44,32	0,00	13,80	6,00		3,97
PUNZ. S2´	0,741	49,16	0,00	13,80	6,00	1,11	
CORT. S2	0,766	49,45	0,00	13,80	6,00	0,00	
EXTR. S0	0,766	49,45	0,00	13,80	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	567,34
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	567,34
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

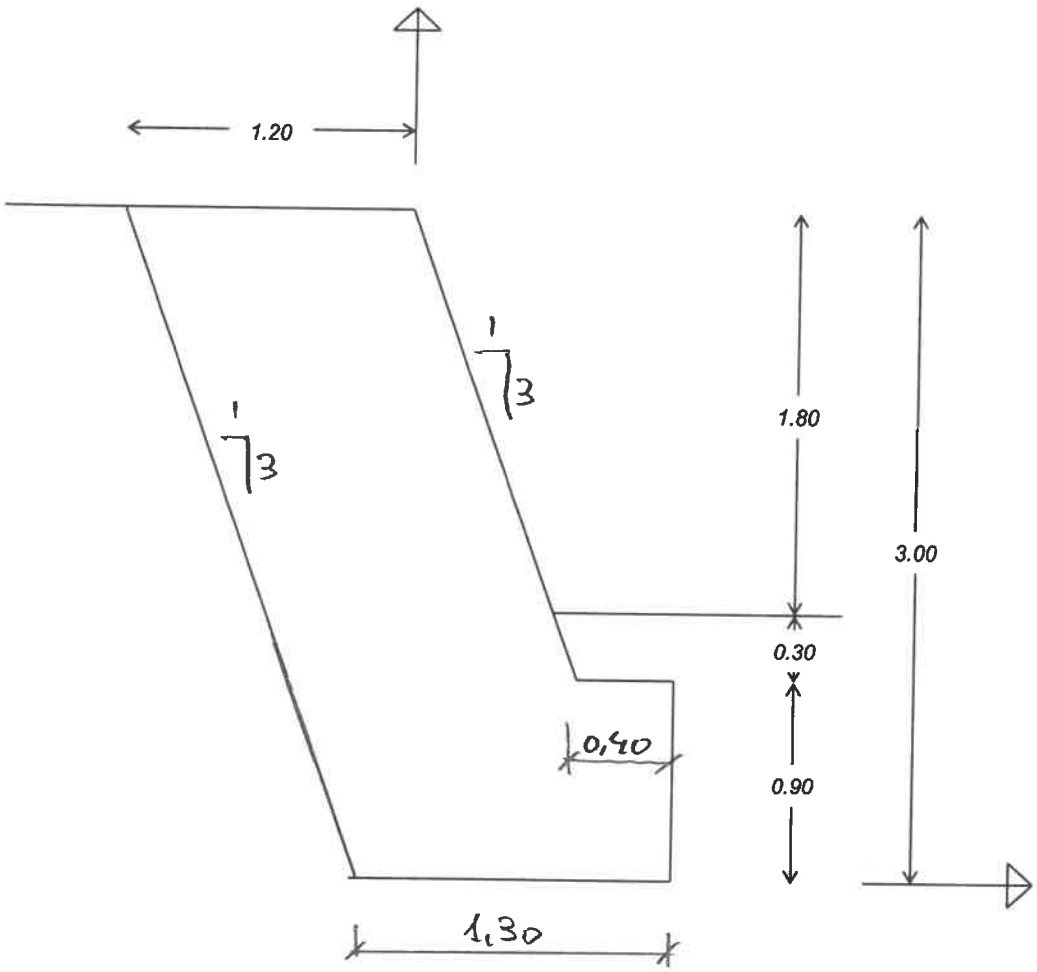
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1134,68
PUNTERA	(Vd,p)=	1,11	<	Vcu,p=	1134,68
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	0,30	σmin =	-0,01	>	- fct,d =	-1,03
PUNTERA	Md,p=	3,97	σmin =	-0,07	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H300



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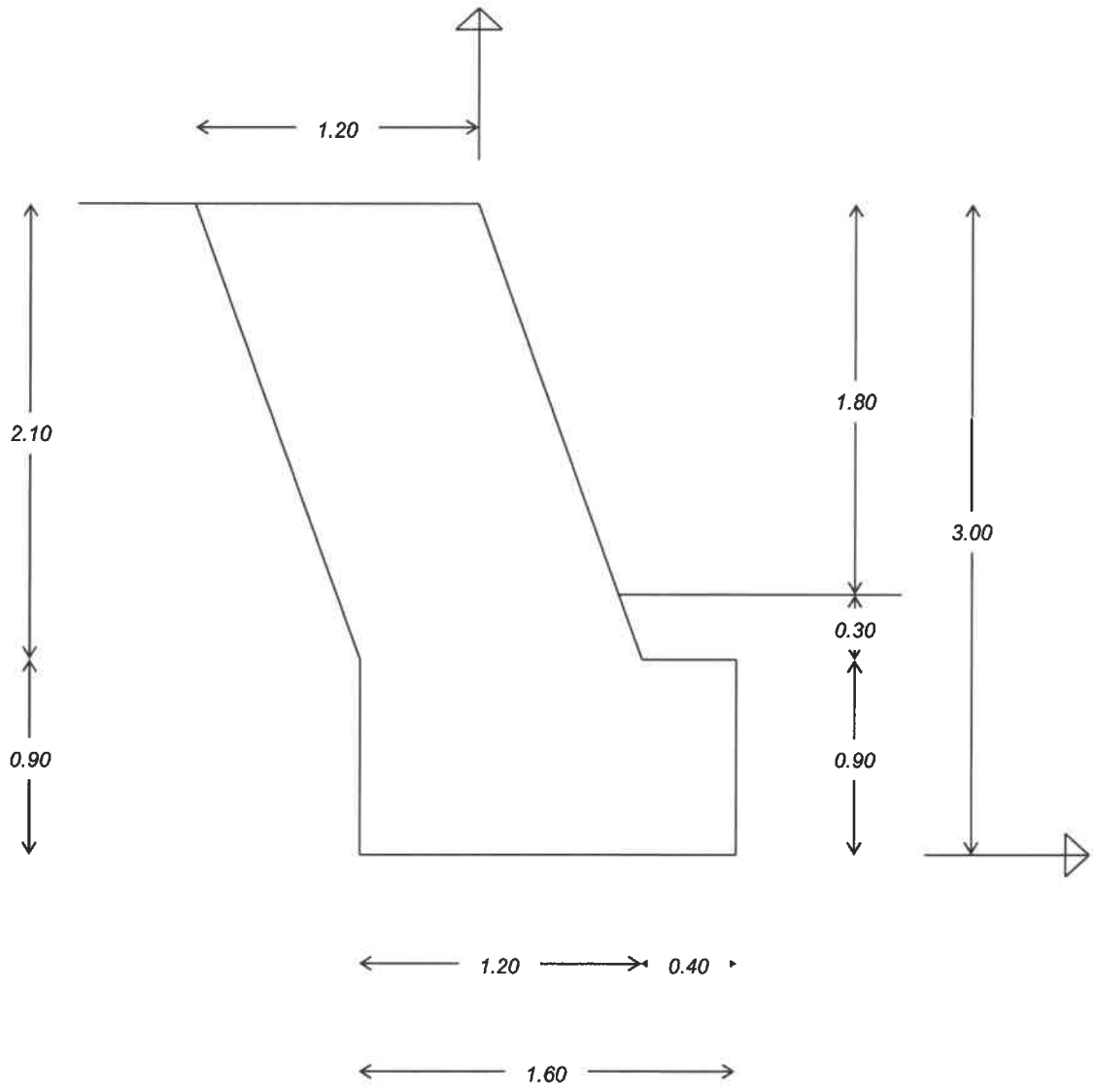
ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H300



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H300

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333	Mpa
γc=	1,50	fcv=	20,000	Mpa
αcc=	1,00	fct,m=	2,210	MPa
αct=	1,00	fct,k=	1,547	MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032	MPa

ACERO

fyk=	500 MPa	fyd=	434,783	MPa
γs=	1,15	fyc,d=	420,000	MPa
rec.mec.d´=	0,05 m			

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	1,80	1,20	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,40	-----
0.CIMENTACION	0	-1,20	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/BIi(m)	SECC.PARCIALES INTRADOS ASi/AIi(m)	SECCION TOTAL CANTO ESi/EIi(m)	SECCION TOTAL XCG GSi/GIi(m)
5,ALZ-S	1,80	5I	3,00	1,20	0,00	1,20	-0,60
	------	4S	1,20	0,60	0,60	1,20	0,00
4,ALZ-MS	0,00	4I	1,20	0,60	0,60	1,20	0,00
	------	3S	1,20	0,60	0,60	1,20	0,00
3,ALZ-MI	0,00	3I	1,20	0,60	0,60	1,20	0,00
	------	2S	1,20	0,60	0,60	1,20	0,00
2.ALZ-I	0,30	2I	1,20	0,60	0,60	1,20	0,00
	------	1S	0,90	0,50	0,70	1,20	0,10
1.ZAPATA	0,90	1I	0,90	0,50	1,10	1,60	0,30
0.CIMEN	------	0S	0,00	0,50	1,10	1,60	0,30

ALTURA TOTAL DEL MURO	**(m):**	3,00	**ESPESOR DE LA ZAPATA**	**(m):**	0,90
ALTURA DEL ALZADO	**(m):**	2,10	**LONGITUD DE LA PUNTERA**	**(m):**	0,40
ESPESOR EN CORONACION	**(m):**	1,20	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	1,20	**LONGITUD TOTAL DE ZAPATA**	**(m):**	1,60

HIPOTESIS : ALTURA H300

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL	ALTURA RELATIVA	DIST. AL EJE Z	CARGA VERTICAL	CARGA HORIZON.	MOMENTO
	i	HRi	XCi	NCi	HCi	MCi
5.ALZADO-S	5	3,00				
4.ALZADO-MS	4	1,20				
3.ALZADO-MI	3	1,20				
2.ALZADO-I	2	1,20				
1.ZAPATA	1	0,90				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H300

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	32,74 kN		
FUERZA ANTIDESLIZANTE	Fant=	-54,14 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,65	>	1,50
MOMENTO VOLCADOR	Mvol=	29,78 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-105,33 m*kN		
SEGURIDAD AL VUELCO	γv=	3,54	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	100,21 kN		
CARGA HORIZONTAL	Ht=	36,45 kN		
MOMENTO EN EL EJE	Mo=	4,62 m*kN		
EXCENTRICIDAD	e=	0,046 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	57,85 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,59	>	1,50
LONGITUD EFICAZ	Le=	1,600 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,073 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,052 Mpa	<	0,313
TENSION MEDIA	σmed=	0,063 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	1,508 m		
TENSION DE COMPARACION	$\sigma comp$=	0,066 Mpa	<	0,250

HIPOTESIS: ALTURA H300

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS			RESIS. SECCION			
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	1,20	0,0	0,0	0,0	0,000	1,032	1237,8	
4S	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
4I	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
3S	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
3I	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
2S	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
2I	1,20	78,6	-9,5	23,0	0,000	1,032	1237,8	
1S	**1,20**	**92,6**	**-10,6**	**29,7**	**0,000**	**1,032**	**524,8**	(Junta Horm)
1I	1,60	96,2	-26,9	29,7	0,000	1,032	1650,4	
0	1,60	150,3	6,9	54,7	0,000	1,032	1650,4	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 0,90 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,501	51,81	0,00	20,70	0,00		
CORT. S2	-0,501	51,81	0,00	20,70	0,00	0,00	
PUNZ. S2´	-0,501	51,81	0,00	20,70	0,00	0,00	
FLEX. S1	-0,321	54,24	0,00	20,70	0,00		0,78
PUNTERA							
FLEX. S1	0,519	65,60	0,00	20,70	6,00		11,14
PUNZ. S2´	1,099	73,45	0,00	20,70	6,00	0,00	
CORT. S2	1,099	73,45	0,00	20,70	6,00	0,00	
EXTR. S0	1,099	73,45	0,00	20,70	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	876,80
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	876,80
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

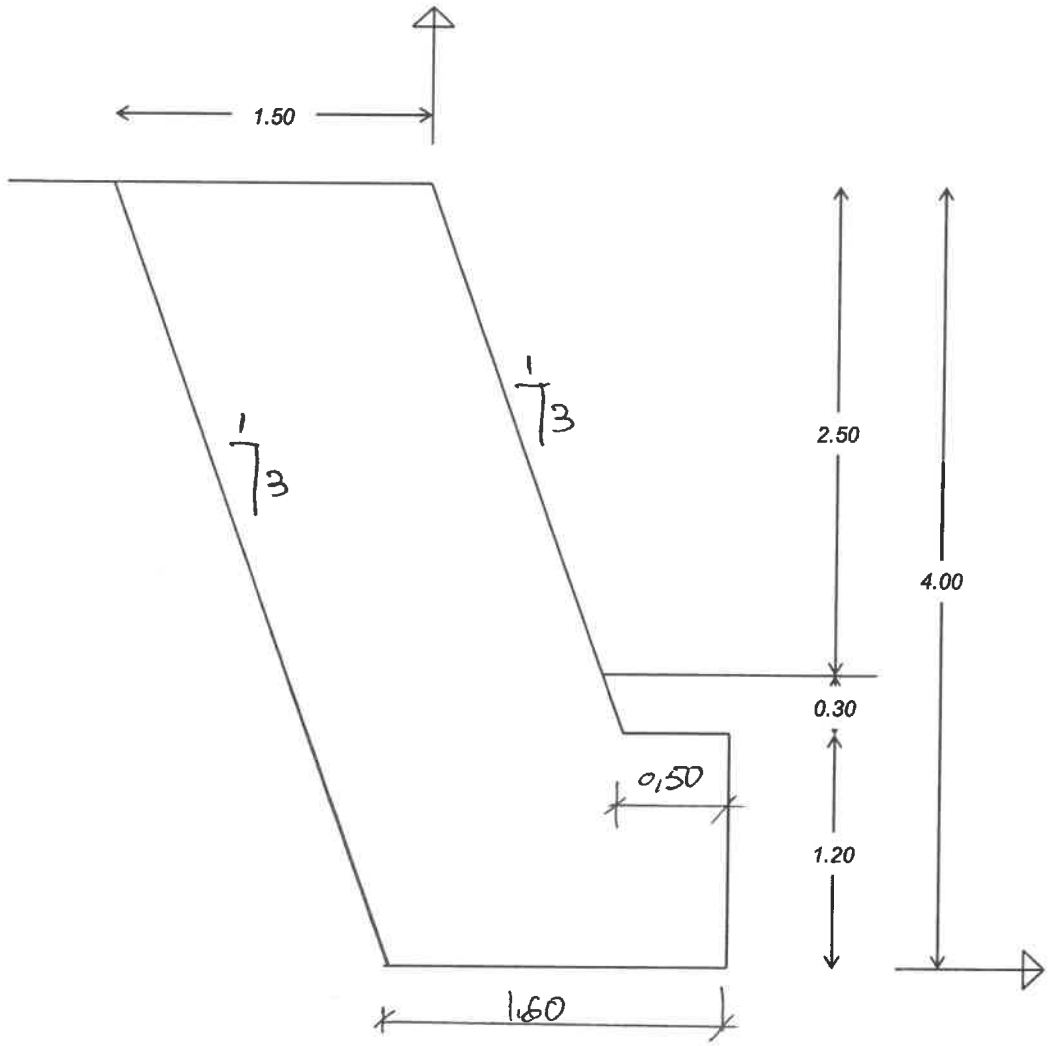
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1753,60
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1753,60
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	0,78	σmin =	-0,01	>	- fct,d =	-1,03
PUNTERA	Md,p=	11,14	σmin =	-0,08	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H400



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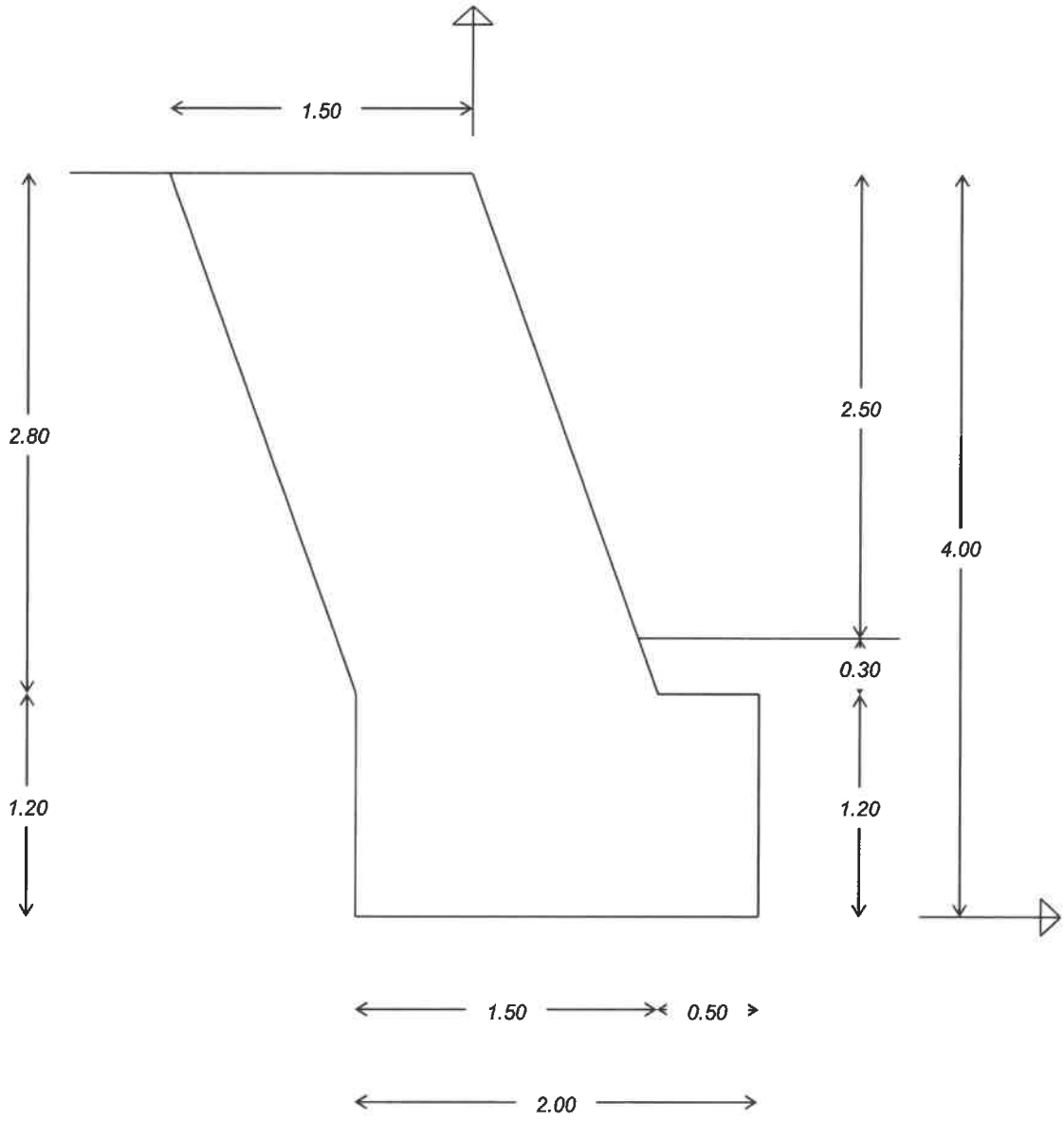
ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H400



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H400

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20	MPa	fcd=	13,333	Mpa
γc=	1,50		fcv=	20,000	Mpa
αcc=	1,00		fct,m=	2,210	MPa
αct=	1,00		fct,k=	1,547	MPa
DENSID. γh=	23,00	kN/m3	fct,d=	1,032	MPa

ACERO

fyk=	500	MPa	fyd=	434,783	MPa
γs=	1,15		fyc,d=	420,000	MPa
rec.mec.d´=	0,05	m			

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	2,50	1,50	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/Bli(m)	SECC.PARCIALES INTRADOS ASi/Ali(m)	SECCION TOTAL CANTO ESi/Eli(m)	SECCION TOTAL XCG GSi/Gli(m)
5,ALZ-S	2,50	5I	4,00	1,50	0,00	1,50	-0,75
	------	4S	1,50	0,67	0,83	1,50	0,08
4,ALZ-MS	0,00	4I	1,50	0,67	0,83	1,50	0,08
	------	3S	1,50	0,67	0,83	1,50	0,08
3,ALZ-MI	0,00	3I	1,50	0,67	0,83	1,50	0,08
	------	2S	1,50	0,67	0,83	1,50	0,08
2.ALZ-I	0,30	2I	1,50	0,67	0,83	1,50	0,08
	------	1S	1,20	0,57	0,93	1,50	0,18
1.ZAPATA	1,20	1I	1,20	0,57	1,43	2,00	0,43
0.CIMEN	------	0S	0,00	0,57	1,43	2,00	0,43

ALTURA TOTAL DEL MURO	**(m):**	4,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	2,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	1,50	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	1,50	**LONGITUD TOTAL DE ZAPATA**	**(m):**	2,00

HIPOTESIS : ALTURA H400

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL	ALTURA RELATIVA	DIST. AL EJE Z	CARGA VERTICAL	CARGA HORIZON.	MOMENTO
	i	HRi	XCi	NCi	HCi	MCi
5.ALZADO-S	5	4,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H400

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	54,57 kN		
FUERZA ANTIDESLIZANTE	Fant=	-89,55 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,64	>	1,50
MOMENTO VOLCADOR	Mvol=	65,68 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-221,89 m*kN		
SEGURIDAD AL VUELCO	γv=	3,38	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	165,81 kN		
CARGA HORIZONTAL	Ht=	60,76 kN		
MOMENTO EN EL EJE	Mo=	9,60 m*kN		
EXCENTRICIDAD	e=	0,058 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	95,73 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,58	>	1,50
LONGITUD EFICAZ	Le=	2,000 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,097 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,069 Mpa	<	0,313
TENSION MEDIA	σmed=	0,083 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	1,884 m		
TENSION DE COMPARACION	$\sigma comp$=	0,088 Mpa	<	0,250

HIPOTESIS: ALTURA H400

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS			RESIS. SECCION			
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	1,50	0,0	0,0	0,0	0,000	1,032	1547,3	
4S	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
4I	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
3S	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
3I	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
2S	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
2I	1,50	136,4	-23,4	39,9	0,000	1,032	1547,3	
1S	**1,50**	**153,9**	**-25,4**	**48,5**	**0,000**	**1,032**	**656,1**	(Junta Horm)
1I	2,00	158,4	-60,5	48,5	0,000	1,032	2063,1	
0	2,00	248,7	14,4	91,1	0,000	1,032	2063,1	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,568	68,51	0,00	27,60	0,00		
CORT. S2	-0,568	68,51	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,568	68,51	0,00	27,60	0,00	0,00	
FLEX. S1	-0,343	71,75	0,00	27,60	0,00		1,59
PUNTERA							
FLEX. S1	0,707	86,86	0,00	27,60	6,00		23,74
PUNZ. S2´	1,432	97,30	0,00	27,60	6,00	0,00	
CORT. S2	1,432	97,30	0,00	27,60	6,00	0,00	
EXTR. S0	1,432	97,30	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

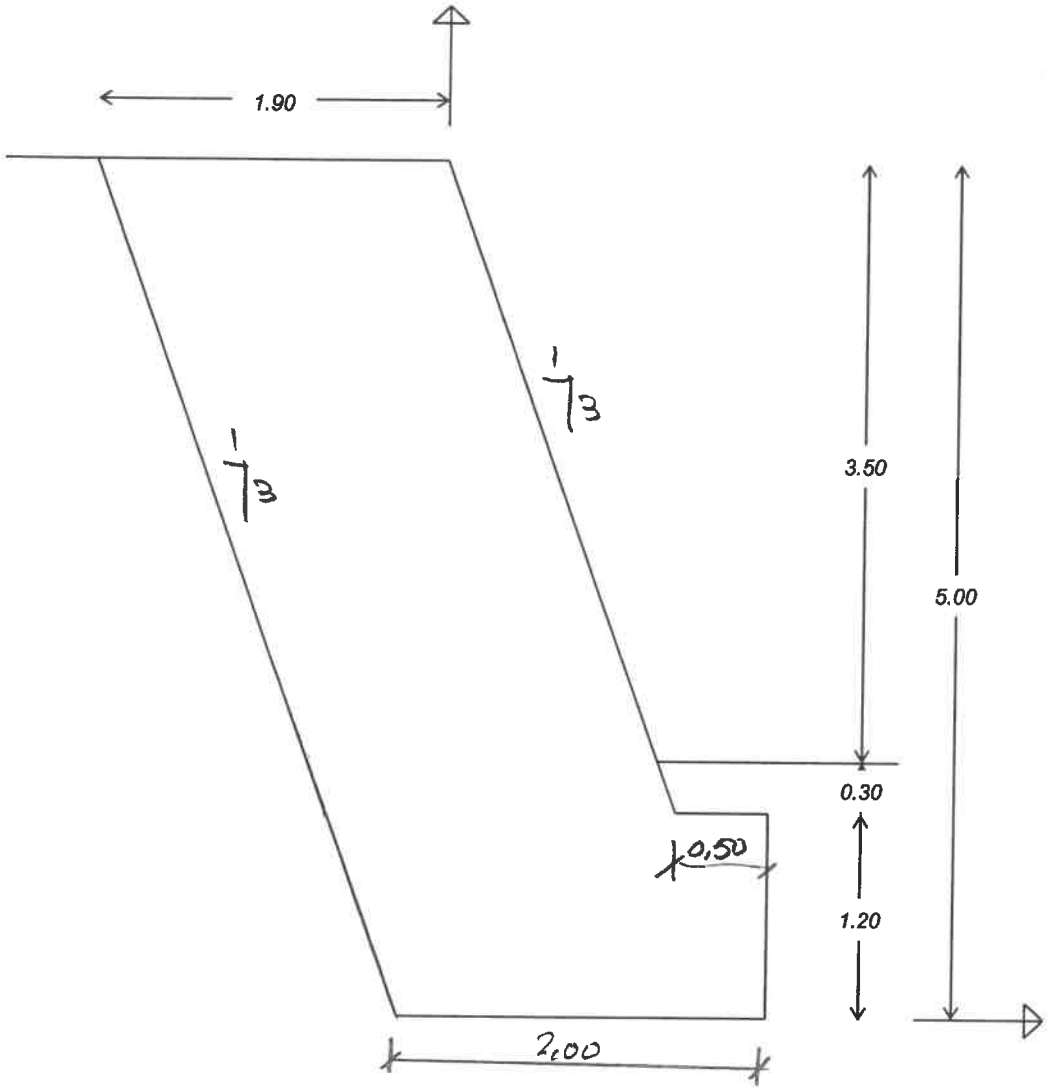
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	1,59	σmin =	-0,01	>	- fct,d =	-1,03
PUNTERA	Md,p=	23,74	σmin =	-0,10	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

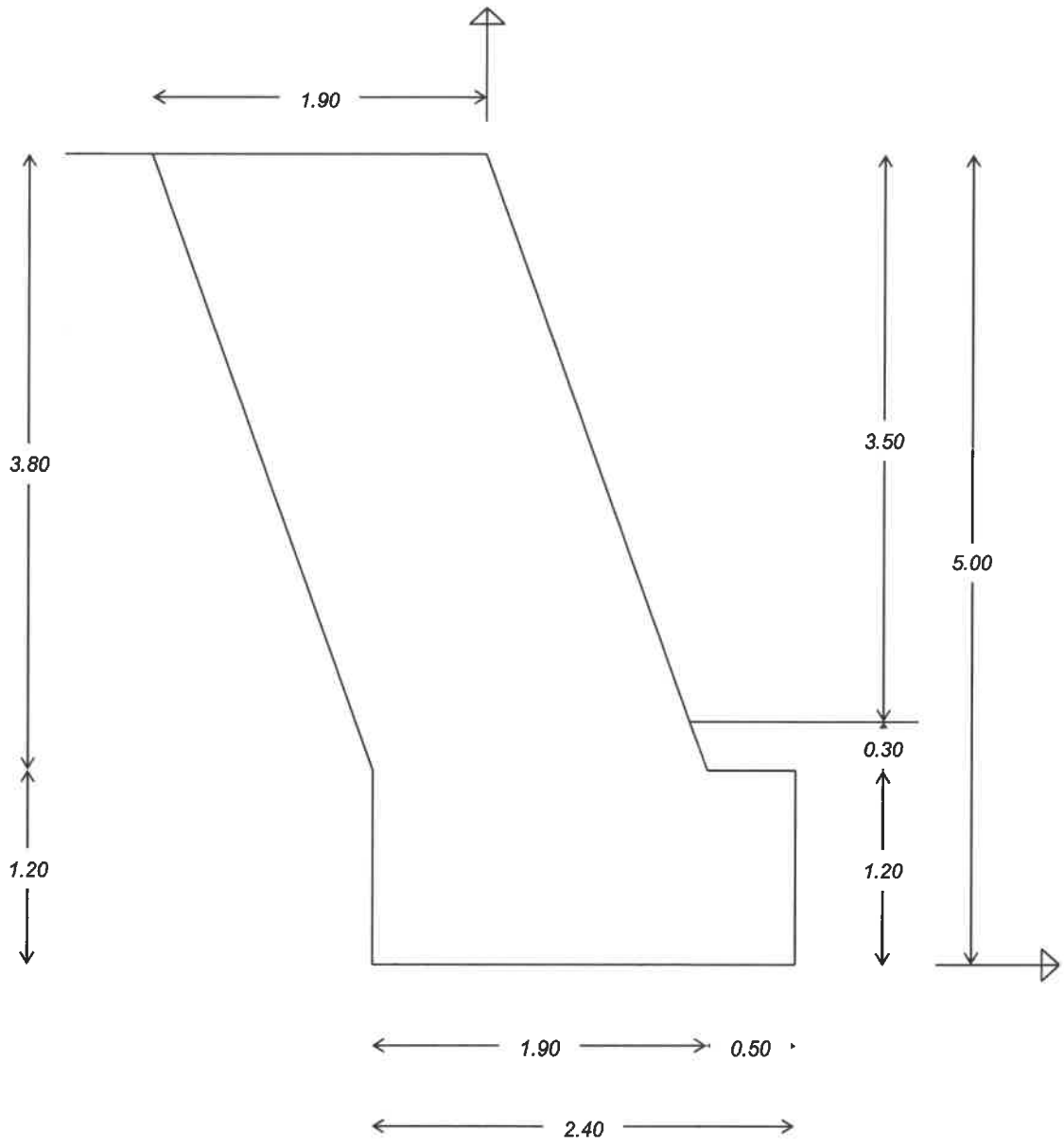
PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H500



ST- H5

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H500



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H500

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333	Mpa
γc=	1,50	fcv=	20,000	Mpa
αcc=	1,00	fct,m=	2,210	MPa
αct=	1,00	fct,k=	1,547	MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032	MPa

ACERO

fyk=	500 MPa	fyd=	434,783	MPa
γs=	1,15	fyc,d=	420,000	MPa
rec.mec.d´=	0,05 m			

COEFICIENTES DE SEGURIDAD

ACCIONES	γf= 1,50	DESLIZAMIENTO	γd= 1,50
		VUELCO	γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	3,50	1,90	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/Bli(m)	SECC.PARCIALES INTRADOS ASi/Ali(m)	SECCION TOTAL CANTO ESi/Eli(m)	SECCION TOTAL XCG GSi/Gli(m)
5,ALZ-S	3,50	5I	5,00	1,90	0,00	1,90	-0,95
	------	4S	1,50	0,73	1,17	1,90	0,22
4,ALZ-MS	0,00	4I	1,50	0,73	1,17	1,90	0,22
	------	3S	1,50	0,73	1,17	1,90	0,22
3,ALZ-MI	0,00	3I	1,50	0,73	1,17	1,90	0,22
	------	2S	1,50	0,73	1,17	1,90	0,22
2.ALZ-I	0,30	2I	1,50	0,73	1,17	1,90	0,22
	------	1S	1,20	0,63	1,27	1,90	0,32
1.ZAPATA	1,20	1I	1,20	0,63	1,77	2,40	0,57
0.CIMEN	------	0S	0,00	0,63	1,77	2,40	0,57

ALTURA TOTAL DEL MURO	**(m):**	5,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	3,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	1,90	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	1,90	**LONGITUD TOTAL DE ZAPATA**	**(m):**	2,40

HIPOTESIS : ALTURA H500

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	5,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H500

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	81,86 kN		
FUERZA ANTIDESLIZANTE	Fant=	-136,02 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,66	>	1,50
MOMENTO VOLCADOR	Mvol=	121,43 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-426,25 m*kN		
SEGURIDAD AL VUELCO	γv=	3,51	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	251,67 kN		
CARGA HORIZONTAL	Ht=	91,13 kN		
MOMENTO EN EL EJE	Mo=	-2,82 m*kN		
EXCENTRICIDAD	e=	-0,011 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	145,30 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,59	>	1,50
LONGITUD EFICAZ	Le=	2,400 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,102 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,108 Mpa	<	0,313
TENSION MEDIA	σmed=	0,105 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	2,378 m		
TENSION DE COMPARACION	$\sigma comp$=	0,106 Mpa	<	0,250

HIPOTESIS: ALTURA H500

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS				RESIS. SECCION		
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	1,90	0,0	0,0	0,0	0,000	1,032	1959,9	
4S	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
4I	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
3S	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
3I	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
2S	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
2I	1,90	242,1	-58,1	71,8	0,000	1,032	1959,9	
1S	**1,90**	**264,2**	**-61,7**	**83,1**	**0,000**	**1,032**	**831,0**	(Junta Horm)
1I	2,40	268,7	-123,5	83,1	0,000	1,032	2475,7	
0	2,40	377,5	-4,2	136,7	0,000	1,032	2475,7	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,635	107,80	0,00	27,60	0,00		
CORT. S2	-0,635	107,80	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,635	107,80	0,00	27,60	0,00	0,00	
FLEX. S1	-0,350	107,10	0,00	27,60	0,00		4,87
PUNTERA							
FLEX. S1	0,980	103,85	0,00	27,60	6,00		31,87
PUNZ. S2´	1,765	101,93	0,00	27,60	6,00	0,00	
CORT. S2	1,765	101,93	0,00	27,60	6,00	0,00	
EXTR. S0	1,765	101,93	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

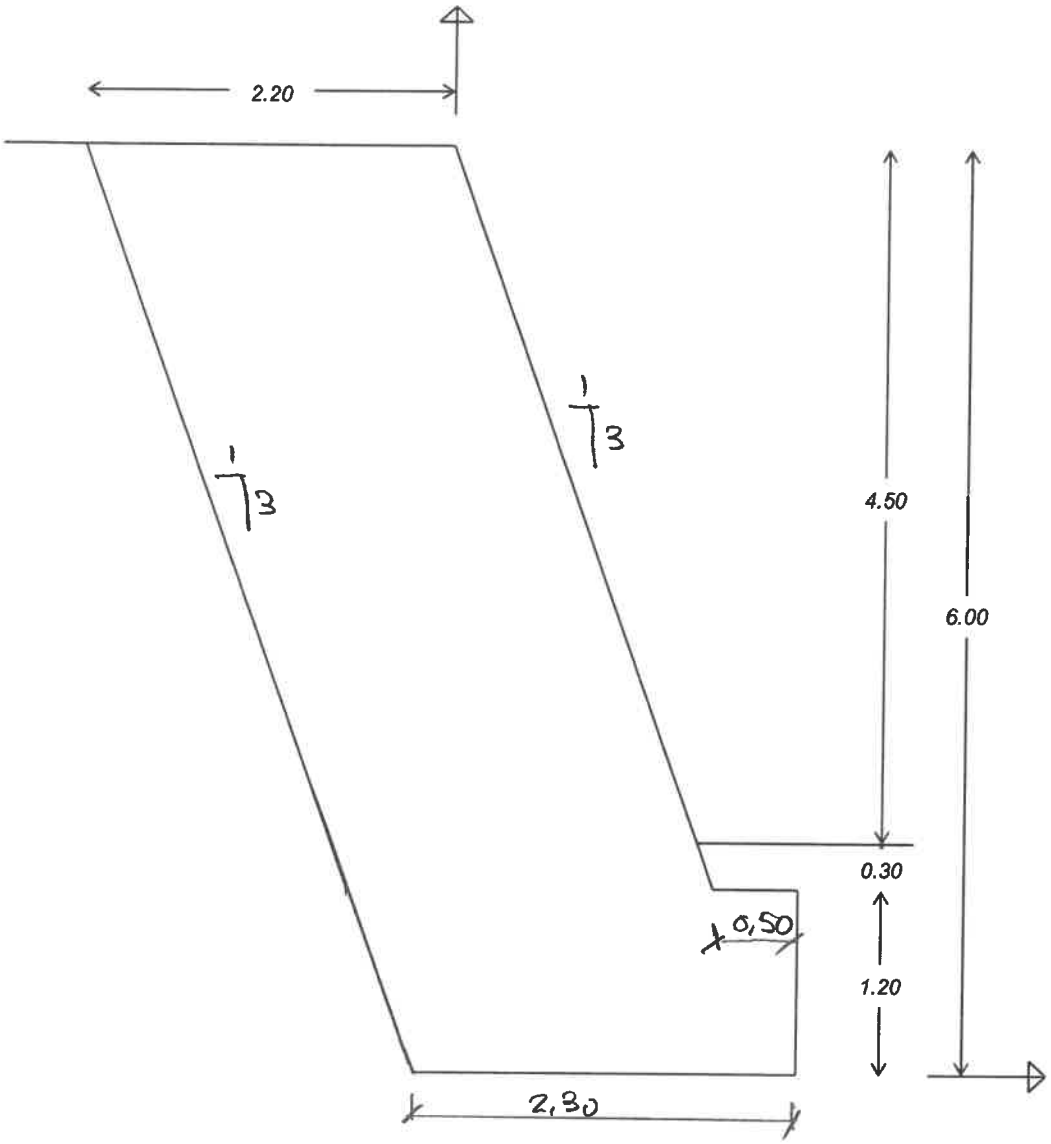
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	4,87	σmin =	-0,02	>	- fct,d =	-1,03
PUNTERA	Md,p=	31,87	σmin =	-0,13	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

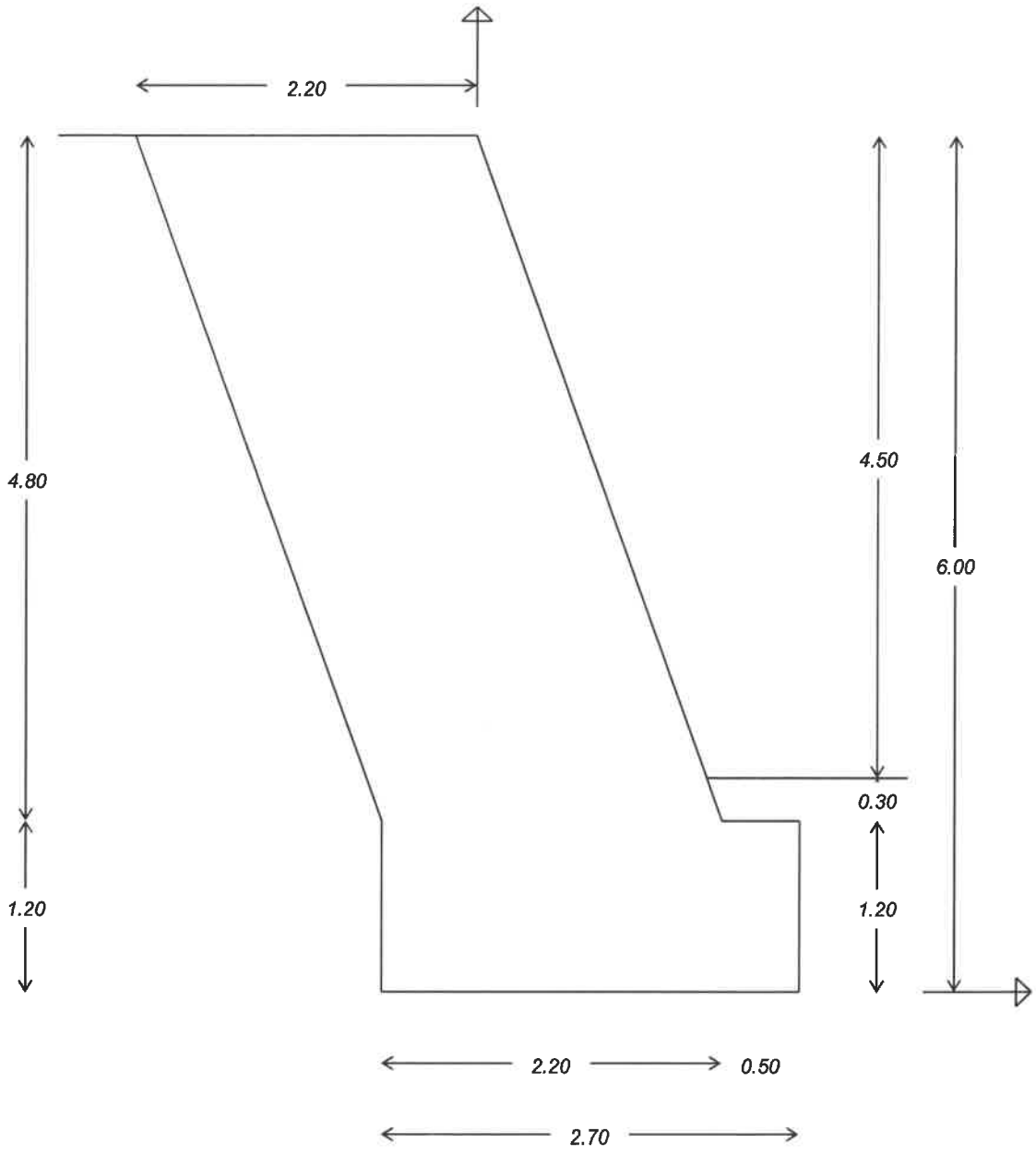
PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H600



ST-H6

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H600



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H600

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333	Mpa
γc=	1,50	fcv=	20,000	Mpa
αcc=	1,00	fct,m=	2,210	MPa
αct=	1,00	fct,k=	1,547	MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032	MPa

ACERO

fyk=	500 MPa	fyd=	434,783	MPa
γs=	1,15	fyc,d=	420,000	MPa
rec.mec.d´=	0,05 m			

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	4,50	2,20	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/BIi(m)	SECC.PARCIALES INTRADOS ASi/AIi(m)	SECCION TOTAL CANTO ESi/EIi(m)	SECCION TOTAL XCG GSi/GIi(m)
5,ALZ-S	4,50	5I	6,00	2,20	0,00	2,20	-1,10
	------	4S	1,50	0,70	1,50	2,20	0,40
4,ALZ-MS	0,00	4I	1,50	0,70	1,50	2,20	0,40
	------	3S	1,50	0,70	1,50	2,20	0,40
3,ALZ-MI	0,00	3I	1,50	0,70	1,50	2,20	0,40
	------	2S	1,50	0,70	1,50	2,20	0,40
2.ALZ-I	0,30	2I	1,50	0,70	1,50	2,20	0,40
	------	1S	1,20	0,60	1,60	2,20	0,50
1.ZAPATA	1,20	1I	1,20	0,60	2,10	2,70	0,75
0.CIMEN	------	0S	0,00	0,60	2,10	2,70	0,75

ALTURA TOTAL DEL MURO	**(m):**	6,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	4,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	2,20	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	2,20	**LONGITUD TOTAL DE ZAPATA**	**(m):**	2,70

HIPOTESIS : ALTURA H600

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	6,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H600

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	114,60 kN		
FUERZA ANTIDESLIZANTE	Fant=	-185,16 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,62	>	1,50
MOMENTO VOLCADOR	Mvol=	204,03 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-684,23 m*kN		
SEGURIDAD AL VUELCO	γv=	3,35	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	343,20 kN		
CARGA HORIZONTAL	Ht=	127,59 kN		
MOMENTO EN EL EJE	Mo=	-16,88 m*kN		
EXCENTRICIDAD	e=	-0,049 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	198,14 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,55	>	1,50
LONGITUD EFICAZ	Le=	2,700 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,113 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,141 Mpa	<	0,313
TENSION MEDIA	σmed=	0,127 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	2,602 m		
TENSION DE COMPARACION	$\sigma comp$=	0,132 Mpa	<	0,250

HIPOTESIS: ALTURA H600

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS				RESIS. SECCION		
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	2,20	0,0	0,0	0,0	0,000	1,032	2269,4	
4S	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
4I	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
3S	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
3I	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
2S	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
2I	2,20	361,4	-104,1	112,8	0,000	1,032	2269,4	
1S	**2,20**	**387,1**	**-107,8**	**126,9**	**0,000**	**1,032**	**962,2**	(Junta Horm)
1I	2,70	391,6	-199,6	126,9	0,000	1,032	2785,1	
0	2,70	514,8	-25,3	191,4	0,000	1,032	2785,1	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,602	141,01	0,00	27,60	0,00		
CORT. S2	-0,602	141,01	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,602	141,01	0,00	27,60	0,00	0,00	
FLEX. S1	-0,272	137,61	0,00	27,60	0,00		9,17
PUNTERA							
FLEX. S1	1,268	121,76	0,00	27,60	6,00		42,61
PUNZ. S2´	2,098	113,21	0,00	27,60	6,00	0,00	
CORT. S2	2,098	113,21	0,00	27,60	6,00	0,00	
EXTR. S0	2,098	113,21	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

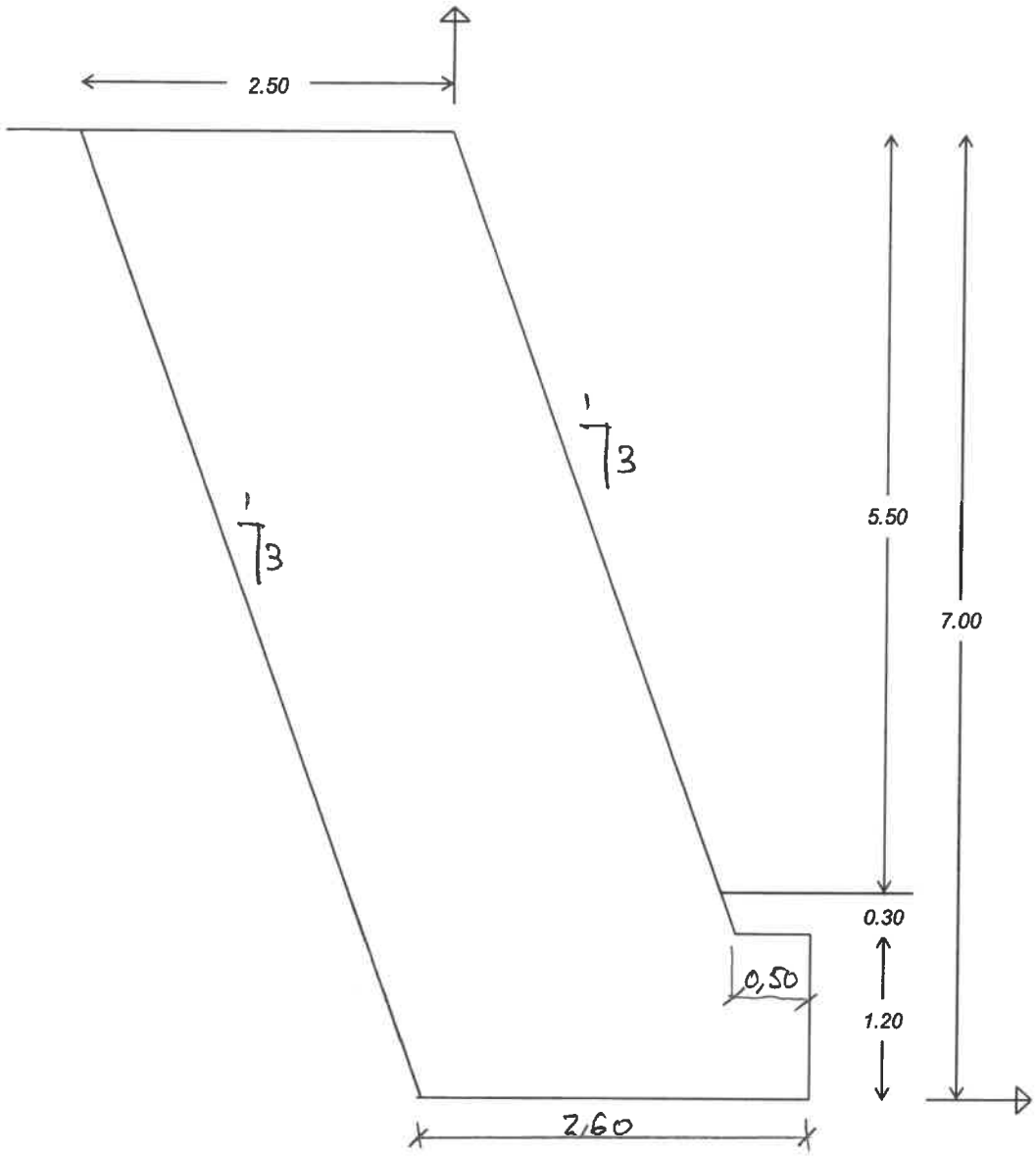
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	9,17	σmin =	-0,04	>	- fct,d =	-1,03
PUNTERA	Md,p=	42,61	σmin =	-0,18	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H700



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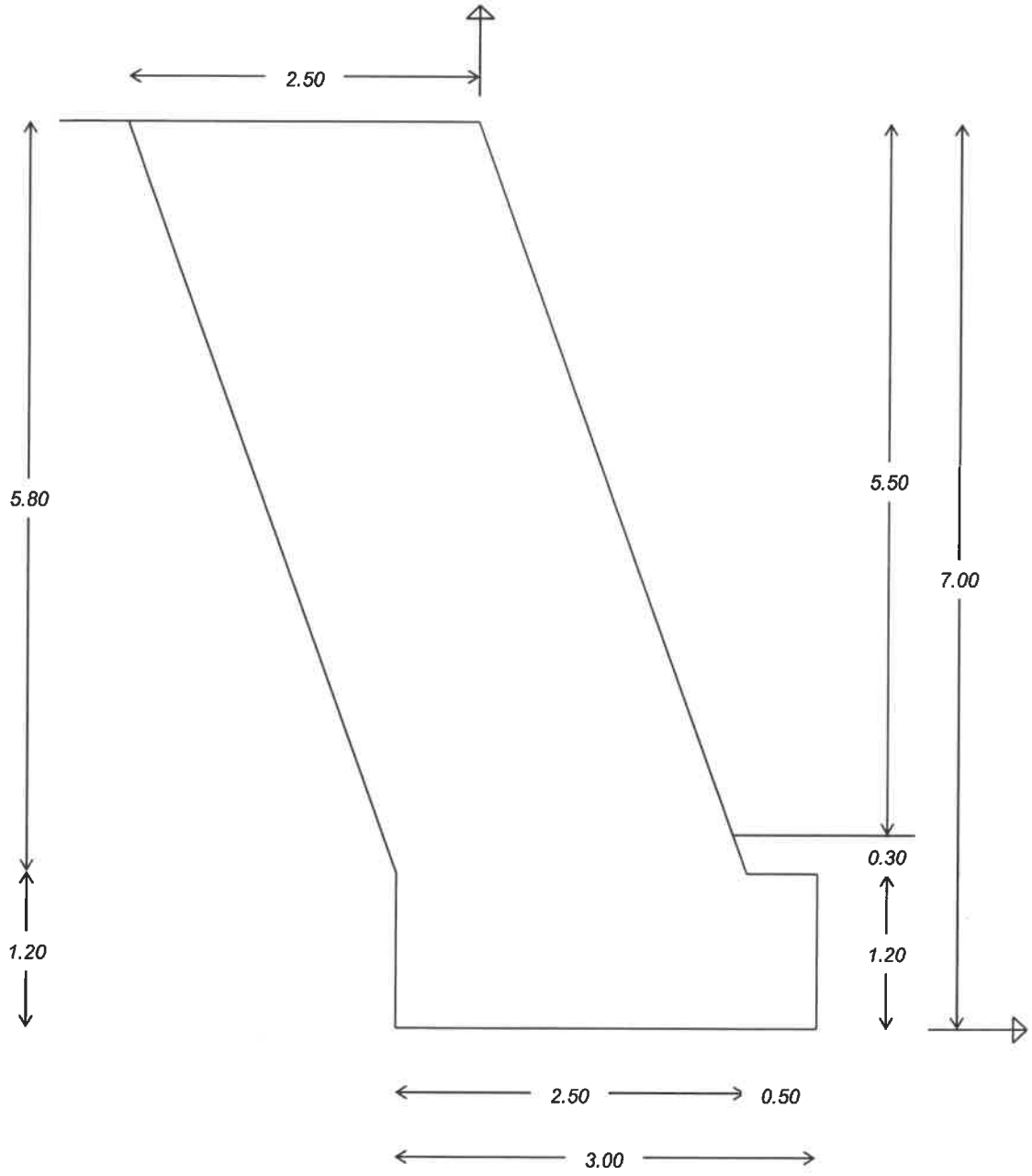
ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H700



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H700

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333	Mpa
γc=	1,50	fcv=	20,000	Mpa
αcc=	1,00	fct,m=	2,210	MPa
αct=	1,00	fct,k=	1,547	MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032	MPa

ACERO

fyk=	500 MPa	fyd=	434,783	MPa
γs=	1,15	fyc,d=	420,000	MPa
rec.mec.d´=	0,05 m			

COEFICIENTES DE SEGURIDAD

ACCIONES	γf= 1,50	DESLIZAMIENTO	γd= 1,50
		VUELCO	γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	5,50	2,50	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/BIi(m)	SECC.PARCIALES INTRADOS ASi/AIi(m)	SECCION TOTAL CANTO ESi/EIi(m)	SECCION TOTAL XCG GSi/GIi(m)
5,ALZ-S	5,50	5I	7,00	2,50	0,00	2,50	-1,25
	------	4S	1,50	0,67	1,83	2,50	0,58
4,ALZ-MS	0,00	4I	1,50	0,67	1,83	2,50	0,58
	------	3S	1,50	0,67	1,83	2,50	0,58
3,ALZ-MI	0,00	3I	1,50	0,67	1,83	2,50	0,58
	------	2S	1,50	0,67	1,83	2,50	0,58
2.ALZ-I	0,30	2I	1,50	0,67	1,83	2,50	0,58
	------	1S	1,20	0,57	1,93	2,50	0,68
1.ZAPATA	1,20	1I	1,20	0,57	2,43	3,00	0,93
0.CIMEN	------	0S	0,00	0,57	2,43	3,00	0,93

ALTURA TOTAL DEL MURO	**(m):**	7,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	5,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	2,50	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	2,50	**LONGITUD TOTAL DE ZAPATA**	**(m):**	3,00

HIPOTESIS : ALTURA H700

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL N°:(0 a 5)		SOBRECARGA	
	TIERRAS	AGUA		
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	7,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H700

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	152,80 kN		
FUERZA ANTIDESLIZANTE	Fant=	-242,26 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,59	>	1,50
MOMENTO VOLCADOR	Mvol=	317,16 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-1030,80 m*kN		
SEGURIDAD AL VUELCO	γv=	3,25	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	449,60 kN		
CARGA HORIZONTAL	Ht=	170,12 kN		
MOMENTO EN EL EJE	Mo=	-39,24 m*kN		
EXCENTRICIDAD	e=	-0,087 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	259,57 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,53	>	1,50
LONGITUD EFICAZ	Le=	3,000 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,124 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,176 Mpa	<	0,313
TENSION MEDIA	σmed=	0,150 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	2,825 m		
TENSION DE COMPARACION	$\sigma comp$=	0,159 Mpa	<	0,250

HIPOTESIS: ALTURA H700

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS				RESIS. SECCION		
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	2,50	0,0	0,0	0,0	0,000	1,032	2578,8	
4S	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
4I	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
3S	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
3I	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
2S	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
2I	2,50	503,1	-167,6	162,9	0,000	1,032	2578,8	
1S	**2,50**	**532,4**	**-171,1**	**179,7**	**0,000**	**1,032**	**1093,4**	(Junta Horm)
1I	3,00	536,9	-298,5	179,7	0,000	1,032	3094,6	
0	3,00	674,4	-58,9	255,2	0,000	1,032	3094,6	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,569	176,03	0,00	27,60	0,00		
CORT. S2	-0,569	176,03	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,569	176,03	0,00	27,60	0,00	0,00	
FLEX. S1	-0,194	169,49	0,00	27,60	0,00		15,42
PUNTERA							
FLEX. S1	1,556	138,96	0,00	27,60	6,00		54,66
PUNZ. S2´	2,431	123,70	0,00	27,60	6,00	0,00	
CORT. S2	2,431	123,70	0,00	27,60	6,00	0,00	
EXTR. S0	2,431	123,70	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

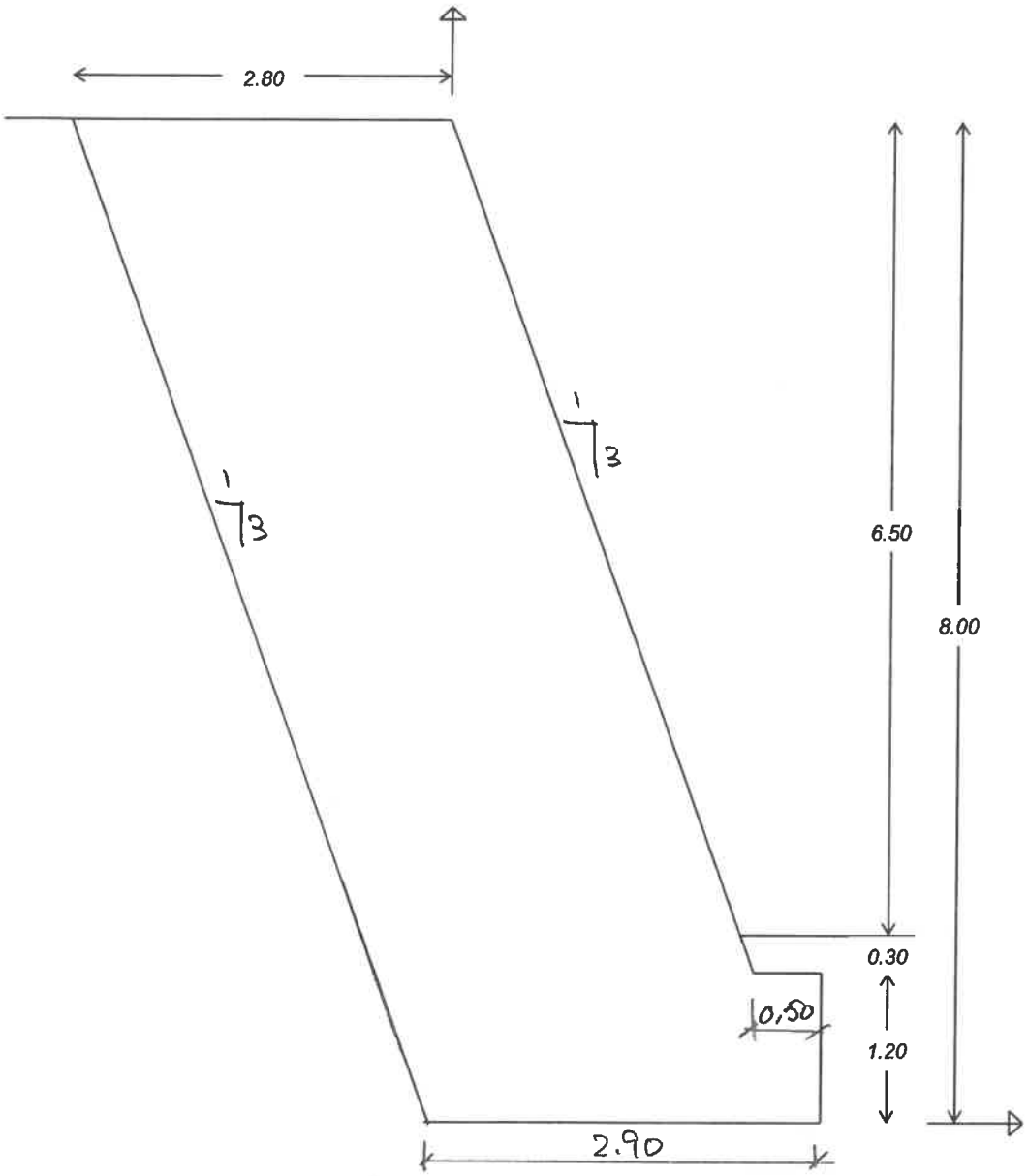
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	15,42	σmin =	-0,06	>	- fct,d =	-1,03
PUNTERA	Md,p=	54,66	σmin =	-0,23	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H800



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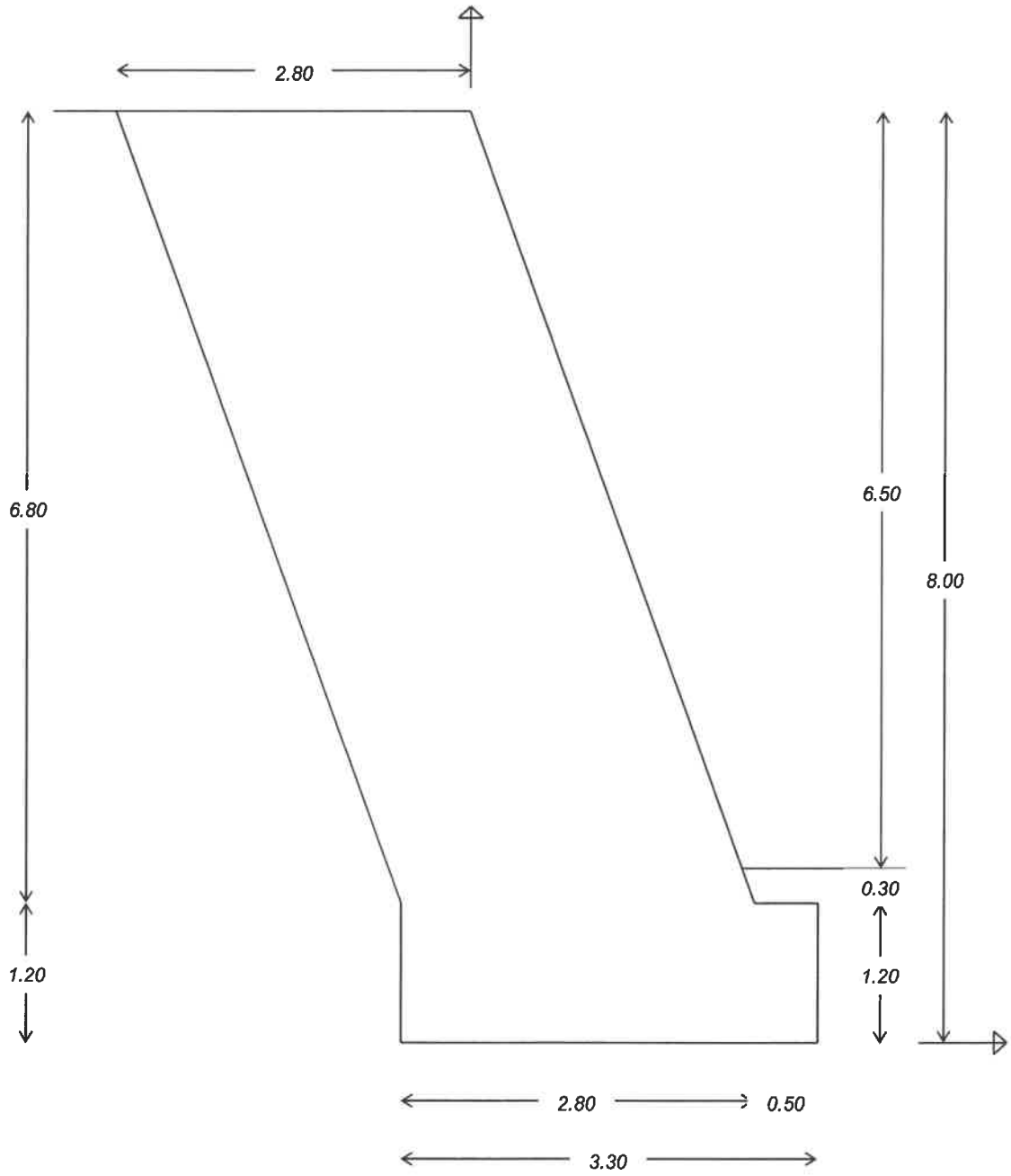
ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H800



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H800

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333 Mpa
γc=	1,50	fcv=	20,000 Mpa
αcc=	1,00	fct,m=	2,210 MPa
αct=	1,00	fct,k=	1,547 MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032 MPa

ACERO

fyk=	500 MPa	fyd=	434,783 MPa
γs=	1,15	fyc,d=	420,000 MPa
rec.mec.d´=	0,05 m		

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS		INTRADOS	
		Zi(m)	ESCALON Bi(m)	PEND.H/V PBi	ESCALON Ai(m)	PEND.H/V PAi
5.ALZADO-S	5	6,50	2,80	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/BIi(m)	SECC.PARCIALES INTRADOS ASi/AIi(m)	SECCION TOTAL CANTO ESi/EIi(m)	SECCION TOTAL XCG GSi/GIi(m)
5,ALZ-S	6,50	5I	8,00	2,80	0,00	2,80	-1,40
	------	4S	1,50	0,64	2,16	2,80	0,76
4,ALZ-MS	0,00	4I	1,50	0,64	2,16	2,80	0,76
	------	3S	1,50	0,64	2,16	2,80	0,76
3,ALZ-MI	0,00	3I	1,50	0,64	2,16	2,80	0,76
	------	2S	1,50	0,64	2,16	2,80	0,76
2.ALZ-I	0,30	2I	1,50	0,64	2,16	2,80	0,76
	------	1S	1,20	0,54	2,26	2,80	0,86
1.ZAPATA	1,20	1I	1,20	0,54	2,76	3,30	1,11
0.CIMEN	------	0S	0,00	0,54	2,76	3,30	1,11

ALTURA TOTAL DEL MURO	**(m):**	8,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	6,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	2,80	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	2,80	**LONGITUD TOTAL DE ZAPATA**	**(m):**	3,30

HIPOTESIS : ALTURA H800

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	γap=	20 kN/m3
SUMERGIDA	γsum=	11 kN/m3

DENSIDAD DEL AGUA

γw= 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	ϕ= 30
TIERRAS/MURO	δ= 10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	β= 0
TRASDOS DE MURO	α= 90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	λah= 0,304	λav= 0,054
REPOSO	λrh= 0,448	λrv= 0,079
PASIVO	λph= 3,000	λpv= 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	λh,t= 0,304	λv,t= 0,054
INTRADOS	λh,i= 0,000	λv,i= 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	kw,t= 1,000
INTRADOS	kw,i= 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	σadm=	0,25 MPa
EN PUNTA	σ*adm=	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5) TIERRAS	NIVEL Nº:(0 a 5) AGUA	SOBRECARGA	
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	8,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H800

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	196,45 kN		
FUERZA ANTIDESLIZANTE	Fant=	-307,32 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,56	>	1,50
MOMENTO VOLCADOR	Mvol=	465,57 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-1479,05 m*kN		
SEGURIDAD AL VUELCO	γv=	3,18	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	570,87 kN		
CARGA HORIZONTAL	Ht=	218,72 kN		
MOMENTO EN EL EJE	Mo=	-71,55 m*kN		
EXCENTRICIDAD	e=	-0,125 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	329,59 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,51	>	1,50
LONGITUD EFICAZ	Le=	3,300 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,134 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,212 Mpa	<	0,313
TENSION MEDIA	σmed=	0,173 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	3,049 m		
TENSION DE COMPARACION	$\sigma comp$=	0,187 Mpa	<	0,250

HIPOTESIS: ALTURA H800

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS			RESIS. SECCION			
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	2,80	0,0	0,0	0,0	0,000	1,032	2888,3	
4S	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
4I	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
3S	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
3I	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
2S	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
2I	2,80	667,1	-251,1	222,1	0,000	1,032	2888,3	
1S	**2,80**	**699,9**	**-254,1**	**241,7**	**0,000**	**1,032**	**1224,6**	(Junta Horm)
1I	3,30	704,4	-422,7	241,7	0,000	1,032	3404,0	
0	3,30	856,3	-107,3	328,1	0,000	1,032	3404,0	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,536	212,41	0,00	27,60	0,00		
CORT. S2	-0,536	212,41	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,536	212,41	0,00	27,60	0,00	0,00	
FLEX. S1	-0,116	202,38	0,00	27,60	0,00		24,01
PUNTERA							
FLEX. S1	1,844	155,55	0,00	27,60	6,00		68,11
PUNZ. S2´	2,764	133,57	0,00	27,60	6,00	0,00	
CORT. S2	2,764	133,57	0,00	27,60	6,00	0,00	
EXTR. S0	2,764	133,57	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

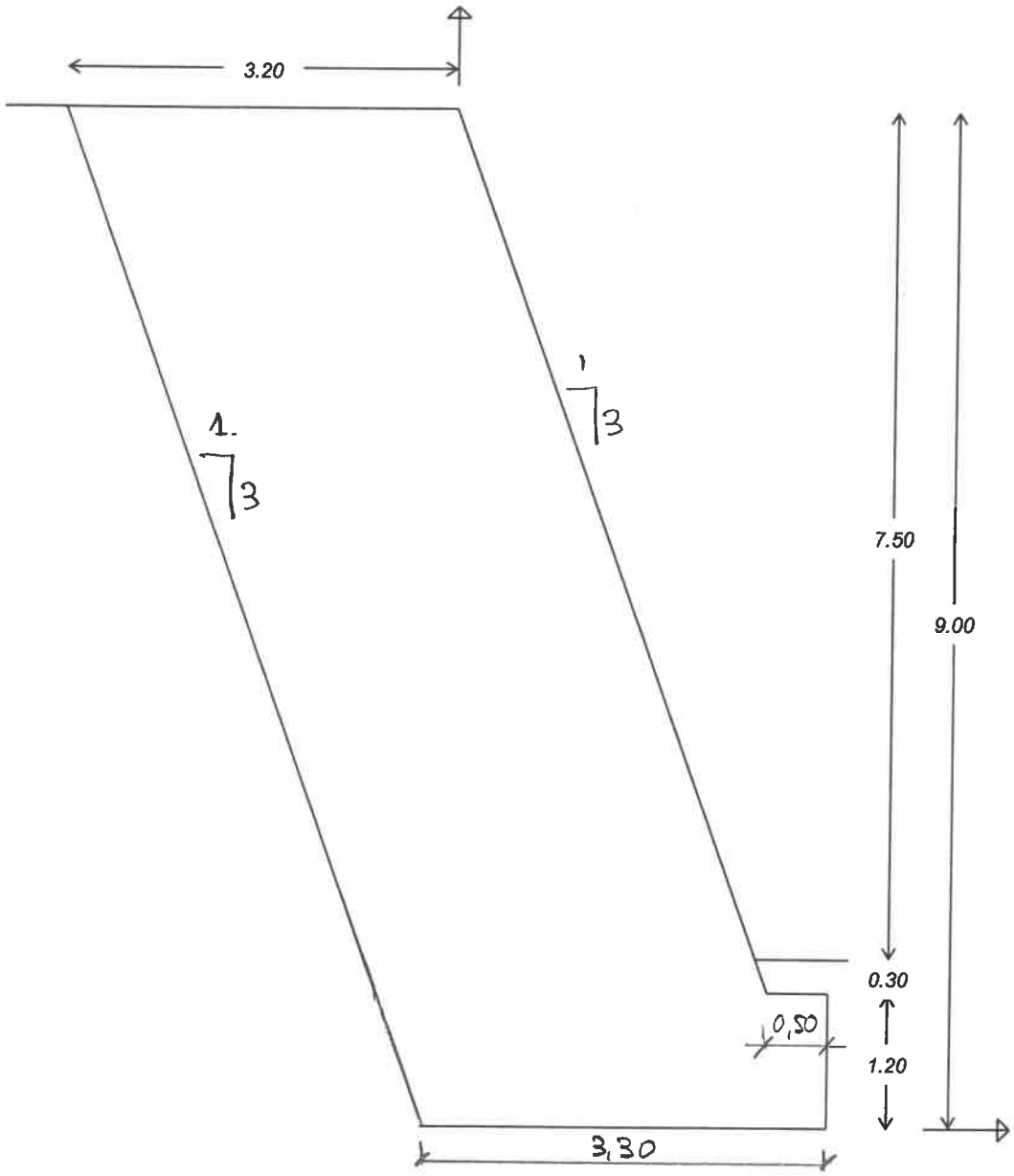
	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	24,01	σmin =	-0,10	>	- fct,d =	-1,03
PUNTERA	Md,p=	68,11	σmin =	-0,28	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)

ESQUEMA DEL MURO

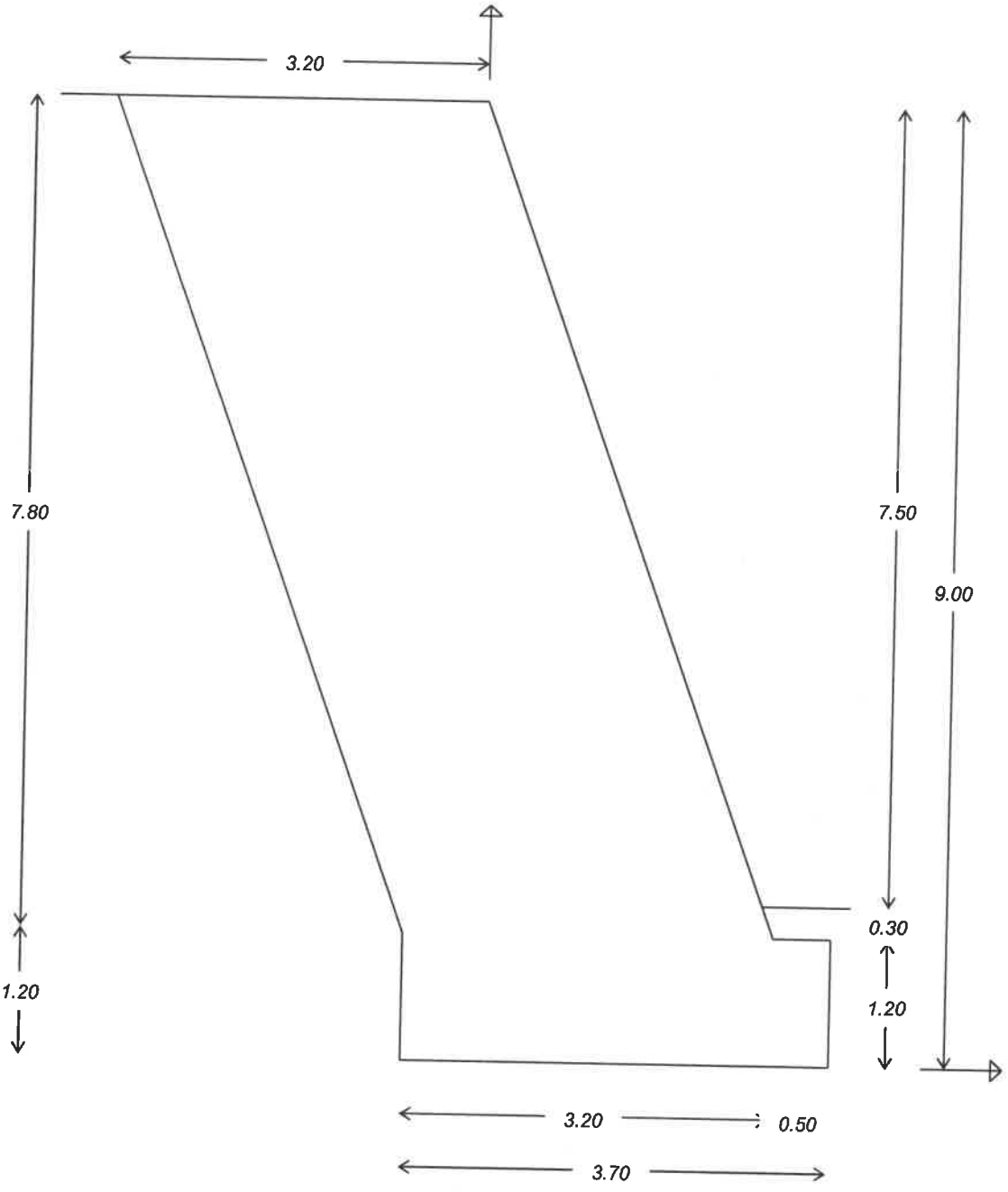
PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H900



ST-H9

ESQUEMA DEL MURO

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H900



DIMENSIONAMIENTO DE MUROS

PROYECTO : ETS - PASARELA EN EUBA
ESTRUCTURA: MURO DE SOSTENIMIENTO DE ESCOLLERA HORMIGONADA
HIPOTESIS : ALTURA H900

CARACTERISTICAS DE LOS MATERIALES

HORMIGON:

fck=	20 MPa	fcd=	13,333 Mpa
γc=	1,50	fcv=	20,000 Mpa
αcc=	1,00	fct,m=	2,210 MPa
αct=	1,00	fct,k=	1,547 MPa
DENSID. γh=	23,00 kN/m3	fct,d=	1,032 MPa

ACERO

fyk=	500 MPa	fyd=	434,783 MPa
γs=	1,15	fyc,d=	420,000 MPa
rec.mec.d´=	0,05 m		

COEFICIENTES DE SEGURIDAD

ACCIONES γf= 1,50 DESLIZAMIENTO γd= 1,50
VUELCO γv= 2,00

DEFINICION GEOMETRICA

TRAMO	NIVEL	COTA	TRASDOS ESCALON	TRASDOS PEND.H/V	INTRADOS ESCALON	INTRADOS PEND.H/V
		Zi(m)	Bi(m)	PBi	Ai(m)	PAi
5.ALZADO-S	5	7,50	3,20	-0,333	0,00	0,333
4.ALZADO-MS	4	0,00	0,00	-0,333	0,00	0,333
3.ALZADO-MI	3	0,00	0,00	-0,333	0,00	0,333
2.ALZADO-I	2	0,00	0,00	-0,333	0,00	0,333
1.ZAPATA	1	-0,30	0,00	-----	0,50	-----
0.CIMENTACION	0	-1,50	-----	-----	-----	-----

RESULTADOS DE SECCIONES Y DATOS GENERALES

TRAMO	ALTURA PARCIAL HPi(m)	NIVEL i	ALTURA RELATIVA HRi(m)	SECC.PARCIALES TRASDOS BSi/Bli(m)	SECC.PARCIALES INTRADOS ASi/Ali(m)	SECCION TOTAL CANTO ESi/Eli(m)	SECCION TOTAL XCG GSi/Gli(m)
5,ALZ-S	7,50	5I	9,00	3,20	0,00	3,20	-1,60
	------	4S	1,50	0,70	2,50	3,20	0,90
4,ALZ-MS	0,00	4I	1,50	0,70	2,50	3,20	0,90
	------	3S	1,50	0,70	2,50	3,20	0,90
3,ALZ-MI	0,00	3I	1,50	0,70	2,50	3,20	0,90
	------	2S	1,50	0,70	2,50	3,20	0,90
2.ALZ-I	0,30	2I	1,50	0,70	2,50	3,20	0,90
	------	1S	1,20	0,60	2,60	3,20	1,00
1.ZAPATA	1,20	1I	1,20	0,60	3,10	3,70	1,25
0.CIMEN	------	0S	0,00	0,60	3,10	3,70	1,25

ALTURA TOTAL DEL MURO	**(m):**	9,00	**ESPESOR DE LA ZAPATA**	**(m):**	1,20
ALTURA DEL ALZADO	**(m):**	7,80	**LONGITUD DE LA PUNTERA**	**(m):**	0,50
ESPESOR EN CORONACION	**(m):**	3,20	**LONGITUD DEL TALON**	**(m):**	0,00
ESPESOR EN EL ARRANQUE	**(m):**	3,20	**LONGITUD TOTAL DE ZAPATA**	**(m):**	3,70

HIPOTESIS : ALTURA H900

CARACTERISTICAS DE RELLENO:

DENSIDAD DE TIERRAS

APARENTE	$\gamma ap=$	20 kN/m3
SUMERGIDA	$\gamma sum=$	11 kN/m3

DENSIDAD DEL AGUA

$\gamma w=$ 10 kN/m3

ANGULO DE ROZAMIENTO (°)

INTERNO	$\phi=$	30
TIERRAS/MURO	$\delta=$	10

ANGULO CON LA HORIZONTAL (°)

TALUD DE TIERRAS	$\beta=$	0
TRASDOS DE MURO	$\alpha=$	90

COEFICIENTES DE EMPUJE TEORICOS

	HORIZONTAL	VERTICAL
ACTIVO	$\lambda ah=$ 0,304	$\lambda av=$ 0,054
REPOSO	$\lambda rh=$ 0,448	$\lambda rv=$ 0,079
PASIVO	$\lambda ph=$ 3,000	$\lambda pv=$ 0

COEFICIENTES DE EMPUJE ADOPTADOS EN EL CALCULO

	HORIZONTAL	VERTICAL
TRASDOS	$\lambda h,t=$ 0,304	$\lambda v,t=$ 0,054
INTRADOS	$\lambda h,i=$ 0,000	$\lambda v,i=$ 0,000

COEFICIENTES REDUCTORES DE LA SUBPRESION

TRASDOS	$kw,t=$ 1,000
INTRADOS	$kw,i=$ 1,000

CARACTERISTICAS DE LA CIMENTACION:

TENSION ADMISIBLE

MEDIA	$\sigma adm=$	0,25 MPa
EN PUNTA	$\sigma^*adm=$	0,313 MPa

ROZAMIENTO SUELO/ZAPATA

ANGULO (°)	φ = 30
COEF. ROZ.	μ = 0,577

EMPUJES Y SOBRECARGAS

	NIVEL Nº:(0 a 5) TIERRAS	NIVEL Nº:(0 a 5) AGUA	SOBRECARGA	
TRASDOS	5	0	St=	10,00 kN/m2
INTRADOS	2	0	Si=	0,00 kN/m2

CARGAS CONCENTRADAS

TRAMO	NIVEL i	ALTURA RELATIVA HRi	DIST. AL EJE Z XCi	CARGA VERTICAL NCi	CARGA HORIZON. HCi	MOMENTO MCi
5.ALZADO-S	5	9,00				
4.ALZADO-MS	4	1,50				
3.ALZADO-MI	3	1,50				
2.ALZADO-I	2	1,50				
1.ZAPATA	1	1,20				
		(m)	(m)	(kN)	(kN)	(m*kN)

HIPOTESIS: ALTURA H900

SEGURIDAD GLOBAL

FUERZA DESLIZANTE	Fdes=	245,57 kN		
FUERZA ANTIDESLIZANTE	Fant=	-392,31 kN		
SEGURIDAD AL DESLIZAMIENTO	γd=	1,60	>	1,50
MOMENTO VOLCADOR	Mvol=	649,20 m*kN		
MOMENTO ESTABILIZADOR	Mest=	-2140,96 m*kN		
SEGURIDAD AL VUELCO	γv=	3,30	>	2,00

SEGURIDAD DE LA CIMENTACION

CARGA VERTICAL	Nt=	727,71 kN		
CARGA HORIZONTAL	Ht=	273,40 kN		
MOMENTO EN EL EJE	Mo=	-145,49 m*kN		
EXCENTRICIDAD	e=	-0,200 m		
CARGA DE ROTURA HORIZONTAL	Hrot=	420,14 kN		
SEGURIDAD AL CORTE HORIZONTAL	Fd=	1,54	>	1,50
LONGITUD EFICAZ	Le=	3,700 m		
RELACION Le/Lt	K=	1,000	>	0,750
TENSION EN LA PUNTERA	σp=	0,133 Mpa	<	0,313
TENSION EN EL TALON	σt=	0,260 Mpa	<	0,313
TENSION MEDIA	σmed=	0,197 Mpa	<	0,250
ANCHO EQUIVALENTE	B'=	3,300 m		
TENSION DE COMPARACION	$\sigma comp$=	0,221 Mpa	<	0,250

HIPOTESIS: ALTURA H900

HORMIGON EN MASA

ESFUERZOS EN EL ALZADO

NIVEL	CANTO	ESFUERZOS			RESIS. SECCION			
		AXIL	FLECTOR	CORTAN.	TENS. TRACC.	FLEXION	CORTAN.	
i	h	Nd	Md	Vd	σt,d	fct,d	Vu	
5I	3,20	0,0	0,0	0,0	0,000	1,032	3300,9	
4S	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
4I	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
3S	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
3I	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
2S	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
2I	3,20	879,2	-392,1	290,5	0,000	1,032	3300,9	
1S	**3,20**	**916,7**	**-396,9**	**312,8**	**0,000**	**1,032**	**1399,6**	(Junta Horm)
1I	3,70	921,2	-618,9	312,8	0,000	1,032	3816,7	
0	3,70	1091,6	-218,2	410,1	0,000	1,032	3816,7	
	(m)	(kN)	(m*kN)	(kN)	(Mpa)		(kN)	

ESFUERZOS EN LA ZAPATA ESPESOR= 1,20 m

SECCION	DISTANC. AL EJE X XTi/XPi	TENSION CIMENT. STi/SPi	SUBPRES. AGUA WTi/WPi	PESO P. ZAPATA PZ	CARGA S/ZAPATA ZTi/ZPi	CORTANTE DE DIS. Vdt/Vdp	MOMENTO DE DIS. Mdt/Mdp
TALON							
EXTR. S0	-0,603	260,44	0,00	27,60	0,00		
CORT. S2	-0,603	260,44	0,00	27,60	0,00	0,00	
PUNZ. S2´	-0,603	260,44	0,00	27,60	0,00	0,00	
FLEX. S1	-0,123	243,90	0,00	27,60	0,00		39,28
PUNTERA							
FLEX. S1	2,117	166,69	0,00	27,60	6,00		79,64
PUNZ. S2´	3,097	132,91	0,00	27,60	6,00	0,00	
CORT. S2	3,097	132,91	0,00	27,60	6,00	0,00	
EXTR. S0	3,097	132,91	0,00	27,60	6,00		
	(m)	(kN/m2)	(kN/m2)	(kN/m2)	(kN/m2)	(kN)	(m*kN)

COMPROBACION A CORTANTE

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	1186,26
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	1186,26
		(kN)			(kN)

COMPROBACION A PUNZONAMIENTO

	ESFUERZOS DIS.			CORT. RESIS. HORM.	
TALON	(Vd,t)=	0,00	<	Vcu,t=	2372,52
PUNTERA	(Vd,p)=	0,00	<	Vcu,p=	2372,52
		(kN)			(kN)

COMPROBACION A FLEXION

	ESFUERZOS DIS.		TENSION MINIMA			TENSION LIM. A TRACC.	
TALON	Md,t=	39,28	σmin =	-0,16	>	- fct,d =	-1,03
PUNTERA	Md,p=	79,64	σmin =	-0,33	>	- fct,d =	-1,03
		(m*kN)		(MPa)			(MPa)