

ANAS S.p.A.

anas Direzione Progettazione e Realizzazione Lavori

LAVORI DI COLLEGAMENTO TRA LA S.S.11 A MAGENTA E LA TANGENZIALE OVEST DI MILANO

VARIANTE DI ABBIATEGRASSO E ADEGUAMENTO IN SEDE DEL TRATTO ABBIATEGRASSO-VIGEVANO FINO AL PONTE SUL FIUME TICINO

1° STRALCIO DA MAGENTA A VIGEVANO - TRATTA C

PROGETTO ESECUTIVO



HF02

H - PROGETTO STRUTTURALE OPERE PRINCIPALI

HE - PO03 - PONTE NAVIGLIO BEREGUARDO

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REV.	DESCRIZIONE		DATA	REDATTO	VERIFICATO	APPROVATO



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PREMESSA

La presente relazione riporta i calcoli statici relativi alla progettazione esecutiva del viadotto di scavalco del Naviglio Bereguardo, di una strada locale e di un fosso irriguo, nell'ambito della Tratta "C" del "Collegamento tra la S.S. 11 "Padana Superiore" a Magenta e la Tangenziale ovest di Milano, con variante di Abbiategrasso e adeguamento in sede del tratto del Tratto Abbiategrasso-Vigevano fino al ponte sul fiume Ticino".

L'opera in oggetto presenta uno schema statico di trave continua su tre campate aventi luci tra gli assi di appoggio pari a 31+38+31 m.

L'impalcato è composto, da quattro travi continue in acciaio a doppio T ad altezza variabile sostenenti la soletta di scorrimento stradale in calcestruzzo armato ordinario.

In riguardo agli aspetti sismici, l'impalcato è isolato alla sommità delle pile e spalle mediante isolatori elastomerici armati.

Dimensioni dell'impalcato:

Larghezza cordoli = 0.75 mLarghezza carreggiata, categoria C1 = 10.50 mLarghezza totale soletta = 12.00 mNumero delle travi = 4 Interasse travi = 3.20 m

Altezza delle travi (variabile) $= 1.00 \div 2.00 \text{ m}$

Spessore soletta = 30 cm(lastra 6 cm + getto 24 cm)

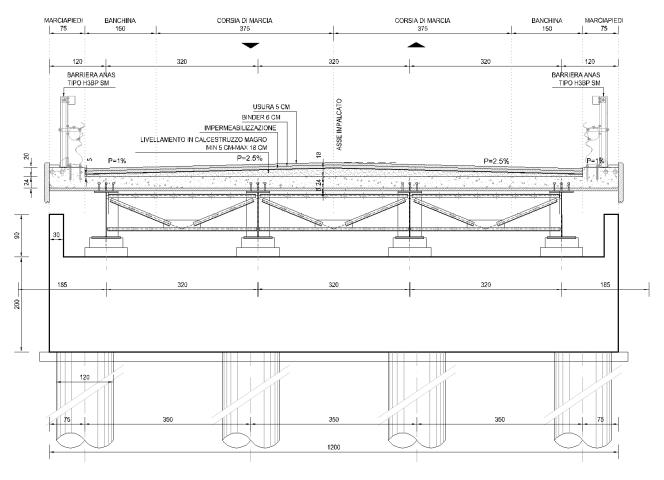


FIGURA 1 - SEZIONE TIPICA IMPALCATO (SU SPALLA)











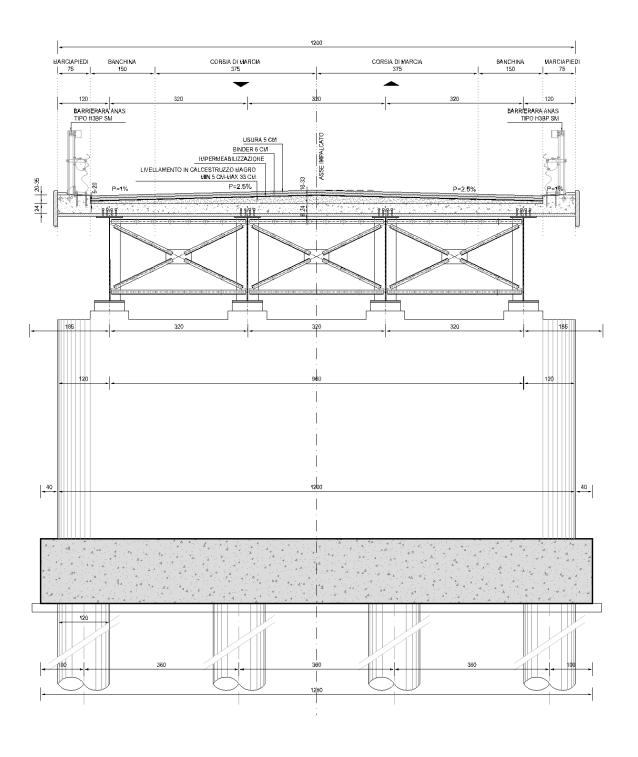


FIGURA 2- SEZIONE IMPALCATO (SU PILA)













1.1 NORMATIVA

Nella redazione dei calcoli statici ci si è attenuti alle prescrizioni della Normativa vigente; in particolare:

- Legge n°1086 del 05/11/1971 "Norme per la disciplina delle opere in conglomerato cementizio armato, normale e precompresso ed a struttura metallica"
- **Legge n°64 del 02/02/1974**: "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche"
- Decreto Ministeriale 17/01/2018 Aggiornamento delle "Norme tecniche per le costruzioni"
- Circolare Min. 02/02/2009, n° 617"Istruzioni per l'applicazione delle Norme tecniche per le costruzioni di cui al D.M. 14/01/2008"
- **UNI EN 1993-1-1:2005** "Eurocodice 3 Progettazione delle strutture in acciaio Parte 1-1: Regole generali e regole per gli edifici"
- UNI EN 1993-1-5:2007 "Eurocodice 3 Progettazione delle strutture in acciaio Parte 1-5:
 Elementi strutturali a lastra"
- **UNI EN 1993-1-9:2005** "Eurocodice 3 Progettazione delle strutture in acciaio Parte 1-9: Fatica"
- **UNI EN 1993-1-10:2005** "Eurocodice 3 Progettazione delle strutture in acciaio Parte 1-10: Resilienza del materiale e proprietà attraverso lo spessore"
- **UNI EN 1993-2:2007** "Eurocodice 3 Progettazione delle strutture in acciaio Parte 2: Ponti in acciaio"
- **UNI EN 1994-1-1:2005** "Eurocodice 4 Progettazione delle strutture composte acciaio-calcestruzzo Parte 1-1: Regole generali e regole per gli edifici"
- **UNI EN 1994-2:2006** "Eurocodice 4 Progettazione delle strutture composte acciaio-calcestruzzo Parte 2: Regole generali e regole per i ponti"

1.2 MATERIALI

I materiali di previsto impiego sono:	previsto impiego	previsto	previsto	l materiali
---------------------------------------	------------------	----------	----------	-------------

calcestruzzo pile / spalle (elevazioni) e soletta: classe C32/40 resistenza caratteristica cubica $R_{ck} \geq 40 \ N/mm^2$

resistenza caratteristica cilindrica $f_{ck} \geq 32 \ N/mm^2$

acciaio ordinario per c.a. tipo B450C

tensione caratteristica di snervamento $f_{Vk} \ge 450 \text{ N/mm}^2$

acciaio strutturale carpenteria metallica tipo S355W

t \leq 40 mm: tensione caratteristica di snervamento $f_{yk} \geq 355 \text{ N/mm}^2$ 40 mm < t \leq 80 mm: tensione caratt. di snervamento. $f_{yk} \geq 335 \text{ N/mm}^2$

acciaio connettori trave/soletta tipo "Nelson" tipo S235J2+C450

tensione caratteristica di snervamento $f_{yk} \ge 350 \text{ N/mm}^2$ tensione caratteristica di rottura: $f_{tk} \ge 450 \text{ N/mm}^2$













2

RELAZIONE DI CALCOLO IMPALCATO

MODELLAZIONE STRUTTURALE

Il viadotto è stato schematizzato in un modello ad elementi finiti di tipo "trave" (beam), risolto mediante il programma di calcolo "MIDAS/Civil 2015", versione 1.2, realizzato da "MIDAS Information Technology, Co., Ltd.; Areum B/D 4° floor, 258-1 Seohyeon-dong, Bundang-gu, Seongnam, Gyeonggi-do, 463-824, Korea"; distribuito in Italia da "CSPFea s.c., via Zuccherificio 5/D, 35042 Este (PD)".

L'affidabilità del codice di calcolo è assicurata da una vasta documentazione teorica e di supporto e da una serie di esempi di verifica in cui i risultati ottenuti sono confrontati con risultati teorici tratti dalla letteratura specialistica o, in mancanza, con risultati di altri codici di calcolo indipendenti.

Il programma, ancorché utilizzabile come codice agli "elementi finiti" di tipo generale, è stato scelto perché volto soprattutto al calcolo di ponti (semplici, continui, strallati, sospesi, ecc.) consentendo tra l'altro la gestione di fasi costruttive successive, l'introduzione di cavi di precompressione, il calcolo delle relative perdite immediate (attrito) e differite (ritiro, fluage, rilassamento) e una gestione semi-automatica di ricerca degli effetti massimi e minimi dovuti ai carichi mobili, nonché la possibilità di effettuare analisi dinamiche lineari con spettro di risposta o dinamiche non lineari (time-history).

La modellazione è stata estesa all'impalcato e ai fusti delle pile, la base dei fusti è considerata incastrata; le spalle sono solamente descritte con un vincolo di incastro.

L'analisi globale della struttura è condotta secondo il metodo "Elastico"; tutti gli elementi strutturali sono considerati indefinitamente elastici.

Viene condotta un'analisi statica per le condizioni di carico relative a permanenti, carichi mobili, frenamento, vento, carichi termici, e un'analisi dinamica lineare per gli effetti delle azioni sismiche. Si allegano i dati della modellazione strutturale e la spiegazione delle convenzioni usate nei files di dati del programma.

L'impalcato segue longitudinalmente l'asse coordinato X (da sinistra verso destra), le pile seguono l'asse Z (dall'alto verso il basso); l'asse Y (trasversale) forma con i precedenti una terna destrorsa. I nodi degli elementi strutturali sono posizionati secondo la disposizione reale; quando necessario sono tra loro collegati da "vincoli rigidi".

La numerazione degli elementi è la seguente (xxx: numeri variabili):

- travi principali: da 101÷401 a 140÷440 ordinati per X crescente (+1) e quindi per Y crescente (+100 per ogni trave)
- trasversi intermedi: 1xxx, ordinati per Y, Z e X crescenti
- trasversi su pile: 2xxx, ordinati per Y, Z, e X crescenti
- controventi: 3xxx, ordinati per X, Y e Z crescenti
- pile: 4xxx, ordinati per Z crescente e quindi per X crescente

Per la ripartizione trasversale dei carichi si sono inoltre schematizzati elementi trasversali fittizi rappresentanti la soletta.

La soletta considerata nelle sezioni composte è limitata alla parte gettata in opera, esclusa quindi la lastra prefabbricata inferiore, di 6 cm di spessore.

Si è assunta un'accelerazione gravitazionale pari a $g = 9,806 \text{ m/s}^2$.

Le unità di misura utilizzate sono coerenti con il Sistema Internazionale:

lunghezze: (metri) m

masse: t (tonnellate)

(kilo-Newton) forze kΝ









I materiali usati nella modellazione hanno le caratteristiche di calcolo seguenti:

b) calcestruzzo elevazioni pile e soletta impalcato (C32/40):

- modulo di elasticità: E = 33345 N/mm²

- coefficiente di Poisson: v = 0,20

- coefficiente di dilatazione termica: α = 0.00001 C⁻¹ - peso specifico: γ = 25 kN/m³ - massa specifica: m = 2.55 t/m³

c) acciaio strutturale viadotto (S355W):

- modulo di elasticità: $E = 210000 \text{ N/mm}^2$

- coefficiente di Poisson: v = 0.30

- coefficiente di dilatazione termica: α = 0.000012 C^{-1} - peso specifico(*): γ = 88.6 kN/m³ - massa specifica(*): m = 9.03 t/m³

Nota (*): le caratteristiche volumiche dell'acciaio vengono incrementate del 15% per tener conto forfetariamente dei particolari non rappresentati nel modello (piastre, connettori, bulloni, ecc.)

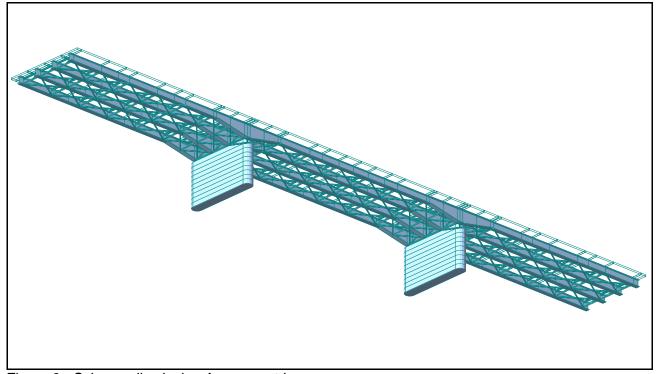


Figura 3 - Schema di calcolo - Assonometria











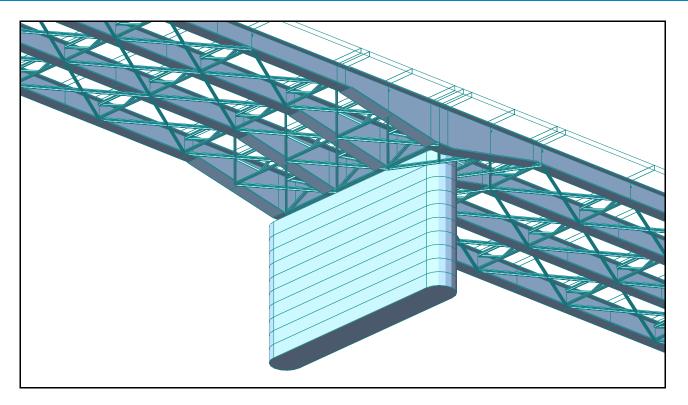


FIGURA 4 - SCHEMA DI CALCOLO - PARTICOLARE SU PILA







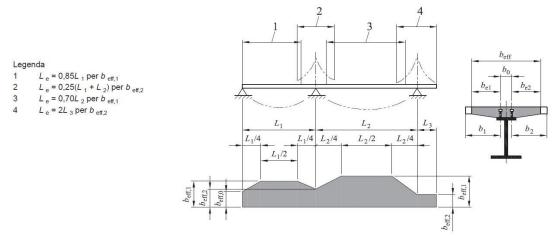




LARGHEZZE "EFFICACI" DI SOLETTA COLLABORANTE 2.1

Nel calcolo delle sezioni composte si tiene conto di una larghezza di soletta collaborante determinata secondo NTC 2018 # 4.3.2.3; il calcolo è riassunto nella seguente tabella.

TRAVE CONTINUA - CALCOLO DELLE LARGHEZZE EFFICACI DI SOLETTA COLLABORANTE - NTC 2008, § 4.3.2.3.



VIADOTTO NAVIGLIO BEREGUARDO TRAVI ESTERNE	Appoggio / Campata	Estremità / Intermedio	Luce (m)	b ₀ (m)	b ₁ (m)	b ₂ (m)	L _e (m)	L _e / 8 (m)	b _{e1} (m)	b _{e2} (m)	β1	β2	b _{eff} (m)
Spalla 1	Appoggio	Estremità		0.300	1.450	1.050	26.350	3.294	1.450	1.050	1.000	1.000	2.800
	Campata	Estremità	31.000	0.300	1.450	1.050	26.350	3.294	1.450	1.050	1.000	1.000	2.800
Pila 1	Appoggio	Intermedio		0.300	1.450	1.050	17.250	2.156	1.450	1.050	1.000	1.000	2.800
	Campata	Intermedio	38.000	0.300	1.450	1.050	26.600	3.325	1.450	1.050	1.000	1.000	2.800
Pila 2	Appoggio	Intermedio		0.300	1.450	1.050	17.250	2.156	1.450	1.050	1.000	1.000	2.800
	Campata	Estremità	31.000	0.300	1.450	1.050	26.350	3.294	1.450	1.050	1.000	1.000	2.800
Spalla 2	Appoggio	Estremità		0.300	1.450	1.050	26.350	3.294	1.450	1.050	1.000	1.000	2.800

VIADOTTO NAVIGLIO BEREGUARDO TRAVI INTERNE	Appoggio / Campata	Estremità / Intermedio	Luce (m)	b ₀ (m)	b ₁ (m)	b ₂ (m)	L _e (m)	L _e / 8 (m)	b _{e1} (m)	b _{e2} (m)	β1	β2	b _{eff} (m)
Spalla 1	Appoggio	Estremità		0.300	1.450	1.450	26.350	3.294	1.450	1.450	1.000	1.000	3.200
	Campata	Estremità	31.000	0.300	1.450	1.450	26.350	3.294	1.450	1.450	1.000	1.000	3.200
Pila 1	Appoggio	Intermedio		0.300	1.450	1.450	17.250	2.156	1.450	1.450	1.000	1.000	3.200
	Campata	Intermedio	38.000	0.300	1.450	1.450	26.600	3.325	1.450	1.450	1.000	1.000	3.200
Pila 2	Appoggio	Intermedio		0.300	1.450	1.450	17.250	2.156	1.450	1.450	1.000	1.000	3.200
	Campata	Estremità	31.000	0.300	1.450	1.450	26.350	3.294	1.450	1.450	1.000	1.000	3.200
Spalla 2	Appoggio	Estremità		0.300	1,450	1,450	26.350	3,294	1.450	1.450	1.000	1.000	3,200



3

DISPOSITIVI DI APPOGGIO E ISOLAMENTO

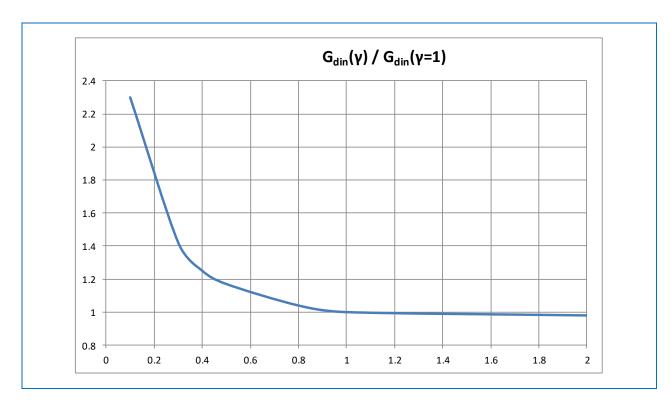
Alla sommità delle pile e spalle sono disposti apparecchi di appoggio antisismici costituiti da isolatori elastomerici armati, costituiti da strati alternati di lamiere di acciaio ed elastomero, collegati mediante vulcanizzazione.

Gli isolatori sono caratterizzati da una elevata rigidezza verticale, una ridotta rigidezza orizzontale e una modesta capacità dissipativa; queste caratteristiche consentono, rispettivamente, di sostenere i carichi verticali senza apprezzabili cedimenti, di contenere gli spostamenti sismici orizzontali dell' impalcato e aumentare i periodi di vibrazione dell'impalcato in modo da limitare le forze dinamiche orizzontali trasmesse dall'impalcato alle pile/spalle.

Le caratteristiche di progetto degli isolatori sono riportate nella seguente tabella

Caratteristiche di progetto isolatore		SPALLE	PILE	
Diametro elastomero	Øg=	300	450	mm
Spessore totale elastomero	te=	76	78	mm
Altezza totale escluse piastre di ancoraggio	h=	152	154	mm
Altezza totale comprese piastre di ancoraggio	H=	202	204	mm
Lato piastre di ancoraggio	Z=	350	500	mm
Modulo di elasticità tang. dinamico elastomero (γ = d/te = 1)	G(din)=	1.4	1.4	N/mmq
Deformazione massima statica di progetto SLU/SLD (d/te ≤ 1)	du=	76	78	mm
Deformazione massima sismica di progetto SLC (d/te ≤ 2)	dc=	152	156	mm
Rigidezza orizzontale equivalente (γ = d/te = 1)	Ke=	1.30	2.85	kN/mm
Rigidezza verticale	Kv⊨	768	1794	kN/mm

Il modulo tangenziale dinamico e quindi la rigidezza orizzontale equivalente sono definiti per una deformazione di taglio $\gamma = \frac{\Delta}{t_e} = 1$; G_{din} varia molto nel campo $\gamma < 1$ mentre per valori $1 < \gamma < 2$ risulta pressoché costante; la variazione media del modulo dinamico tangenziale in funzione della deformazione di taglio è rappresentata nel seguente grafico.





ANALISI DEI CARICHI

Qui di seguito si riporta l'analisi dei carichi eseguita distinguendo tra carichi permanenti ed accidentali.

4.1 **CARICHI PERMANENTI**

a) calcestruzzo pile:

 $y = 25 \text{ kN/m}^3$ - peso specifico: - massa specifica: $m = 2.55 \text{ t/m}^3$

b) acciaio strutturale: si definisce un incremento forfetario del 15% per tener conto degli elementi non rappresentati nel modello (piastrame, bulloneria, saldature, ecc.):

 $v = 88.6 \text{ kN/m}^3$ - peso specifico: - massa specifica: $m = 9.03 \text{ t/m}^3$

c) peso soletta: il peso viene assegnato sulle singole travi (sezione reagente solo acciaio):

- travi esterne: $g_1 = 25 \times 0.30 \times (1.20 + 1.60) = 21 \text{ kN/m}$

- travi interne: $q_1 = 25 \times 0.30 \times 3.20 = 24 \text{ kN/m}$

SOVRACCARICHI PERMANENTI (FINITURE)

Le finiture vengono assegnate sulle singole travi (con soletta collaborante) con la loro eccentricità Y rispetto all'asse trave:

Per quanto concerne il getto di livellamento è stato considerato uno spessore mediato longitudinalmente tra lo spessore previsto in corrispondenza delle spalle e lo spessore previsto in corrispondenza delle pile. Nel computo dello spessore dello strato di livellamento è stato considerato anche lo spessore dell'impermeabilizzazione (10 mm).

Nella tabella successiva è riportata la valutazione dello spessore medio longitudinale dello strato di livellamento per le travi esterne e le travi interne, indicando con:

- H_{L1} → spessore dello strato di livellamento all'esterno della larghezza di influenza della trave
- H_{L2} → spessore dello strato di livellamento all'interno della larghezza di influenza della trave

	TRAVE E	STERNA	TRAVE INTERNA			
SOTTOSTRUTTURA	H _{L1}	H _{L2}	H _{L1}	H _{L2}		
	[m]	[m]	[m]	[m]		
SPALLA A	0,06	0,11	0,11	0,19		
PILA 1	0,19	0,24	0,24	0,32		
PILA 2	0,19	0,24	0,24	0,32		
SPALLA B	0,06	0,11	0,11	0,18		
SPESSORE MEDIO LONGITUDINALE	0,12	0,18	0,18	0,26		

Il peso per unità di volume della pavimentazione stradale è assunto pari a 18,00 kN/m³. In previsione di future eventuali ricariche è stato considerato un carico per unità di superficie forfettario pari a 2,50 kN/m² (~ 22 kN/m³).

Di seguito è riportata la valutazione dei carichi permanenti portati medi disposti uniformemente sulle travi metalliche:

- travi esterne:

- getto di livellamento: $g_2 = 25 \times 2.05 \times (0.12 + 0.18) / 2 = 7.69 \text{ kN/m}$ e = +0.64 m- pavimentazione: $g_2 = 2.5 \times 2.05 = 5.13 \text{ kN/m}$ e = -0.575 m



- cordolo: e = +0.825 m $g_2 = 25 \times 0.30 \times 0.75 = 5.63 \text{ kN/m}$ e = +1.25 m- veletta: $g_2 = 25 \times 0.1 \times 0.8 = 2 \text{ kN/m}$ e = +0.80 m- sicurvia: $q_2 = 0.8 \text{ kN/m}$ - Totale finiture: $q_2 = 21.25 \text{ kN/m}$ e = +0.46 m

- travi interne:

- getto di livellamento: $g_2 = 25 \times 3.20 \times (0.18 + 0.26) / 2 = 17.6 \text{ kN/m}$

- pavimentazione: $g_2 = 2.5 \times 3.2 = 8 \text{ kN/m}$

- Totale finiture: $g_2 = 25.6 \text{ kN/m}$

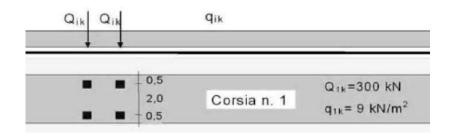
4.3 **CARICHI MOBILI DI ESERCIZIO**

L'impalcato si considera caricato secondo lo schema di carico 1 previsto dal D.M. 14/02/2008:

- una colonna di carico costituita da:

 Q_{1k} mezzo convenzionale da 600 kN a due assi carico ripartito pari a 9 kN/m² (27 kN/m) q_{1k}

Lo schema longitudinale della colonna è il seguente:



una seconda colonna di carico analoga alla precedente ma con carichi pari a:

mezzo convenzionale da 400 kN a due assi Q_{2k}

carico ripartito pari a 2.5 kN/m² (7.5 kN/m) q_{2k}

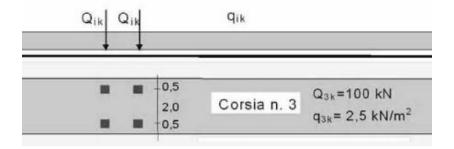


una terza colonna di carico analoga alla precedente ma con carichi pari a:

 Q_{2k} mezzo convenzionale da 200 kN a due assi

carico ripartito pari a 2.5 kN/m² (7.5 kN/m) q_{2k}





L'area rimanente viene caricata con un carico q_{rk} pari a 2.5 kN/m².

Lo schema complessivo di carico è rappresentato nelle seguenti figure, fermo restando che le corsie di carico possono essere scambiate o trascurate se più gravose per l'elemento considerato.

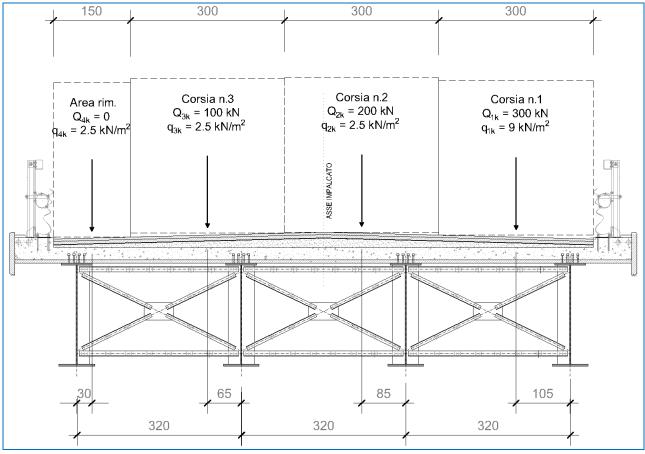


FIGURA 5 - CARICHI VARIABILI - DISPOSIZIONE A DX











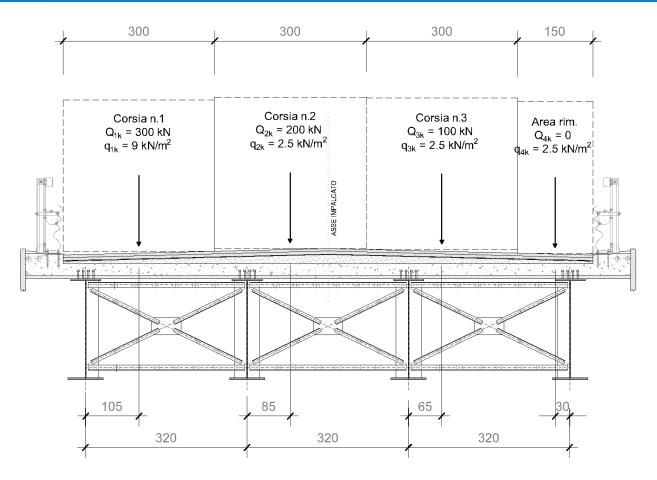


FIGURA 6 - CARICHI VARIABILI - DISPOSIZIONE A SX

Il D.M. del 2018, in accordo con quanto previsto dagli eurocodici, considera il coefficiente dinamico già compreso nel valore dei carichi mobili. La disposizione longitudinale e trasversale più gravosa dei carichi viene determinata automaticamente dal programma di calcolo per ogni sezione e componente di sollecitazione massima e minima.

Per la valutazione degli effetti dei carichi mobili agli stati limite di esercizio si applicano ai carichi i coefficienti di combinazione:

• Carichi tandem: $\psi_0 = 0.75$ $\psi_1 = 0.75$ $\psi_2 = 0$

• Carichi distribuiti: $\psi_0 = 0.4$ $\psi_1 = 0.4$ $\psi_2 = 0$









4.4 **CARICHI MOBILI PER VERIFICHE A FATICA**

4.4.1 **VERIFICHE PER VITA ILLIMITATA**

Le verifiche a fatica per vita illimitata (NTC 5.1.4.3) vengono eseguite per le anime e le saldature delle travi.

L'impalcato si considera caricato secondo il modello di carico a fatica 2, applicato al centro delle corsie convenzionali; il veicolo più gravoso viene determinato automaticamente considerando i massimi e minimi dell'inviluppo delle sollecitazioni ottenute per ciascun veicolo.

Sagoma del veicolo	Distanza tra gli assi (m)	Carico frequente per asse (kN)	Tipo di ruota (Tab. 5.1.IX)
	4,50	90 190	A B
	4,20 1,30	80 140 140	A B B
	3,20 5,20 1,30 1,30	90 180 120 120 120	A B C C
	3,40 6,00 1,80	90 190 140 140	A B B
	4,80 3,60 4,40 1,30	90 180 120 110 110	A B C C C

FIGURA 7 - MODELLO DI CARICO AI FATICA N. 2











4.4.2 VERIFICHE A DANNEGGIAMENTO

Le verifiche a danneggiamento si effettuano per i connettori trave/soletta (pioli Nelson).

L'impalcato si considera caricato secondo il modello di carico a fatica 3, applicato al centro delle corsie convenzionali; il modello consiste in 4 assi di 120 kN di peso (480 kN totali).

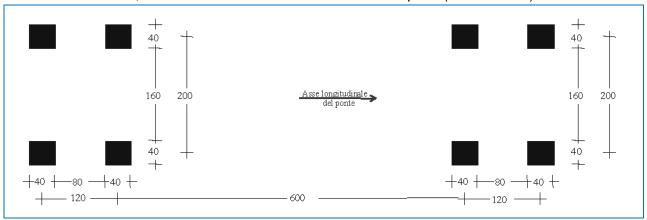
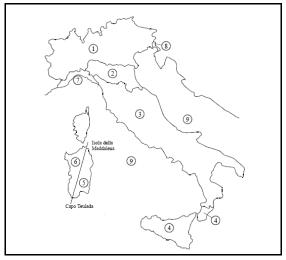


FIGURA 8 - MODELLO DI CARICO AI FATICA N.3

4.5 AZIONE DEL VENTO TRASVERSALE

Nelle NTC 2018 si valuta l'azione del vento in base alla zona considerata e non ad un valore convenzionale; l'opera si trova in zona 1) Valle d'Aosta, Piemonte, Lombardia, Trentino-Alto Adige, Veneto, Friuli-Venezia Giulia (con l'eccezione della provincia di Trieste).



NTC 2018 - Figura 3.3.1

La pressione esterna è definita da:

$$p = q \cdot c_e \cdot c_p \cdot c_d$$

La pressione cinetica di riferimento q (in N/m²) in zona 1 è data dall'espressione:

$$q_b = \frac{1}{2} \cdot \rho \cdot v_b^2 = \frac{1}{2} \cdot 1.25 \cdot 25^2 = 391 \text{ N/m}^2 (0.391 \text{ kN/m}^2)$$

dove: $\rho = 1.25 \text{ kg/m}^3$ densità dell'aria, assunta costante

v_b(T_R) è la velocità di riferimento del vento (in m/s)

$$v_{b,0} = 25 \text{ m/s} \quad (a_S < a_0)$$

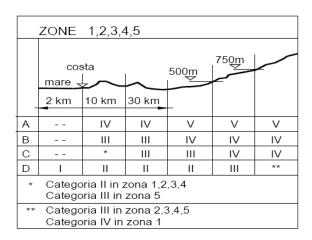
considerando un'altitudine sul livello del mare del sito: $a_s = 125$ m e un periodo di ritorno di 50 anni. c_e è il coefficiente di esposizione; avendo una <u>classe di rugosità D</u>



Classi di rugosità del terreno

Classe di rugosità del terreno	Descrizione
^	Aree urbane in cui almeno il 15% della superficie sia coperto da edifici la cui altezza
Α	media superi i 15 m
В	Aree urbane (non di classe A), suburbane, industriali e boschive
- C	Aree con ostacoli diffusi (alberi, case, muri, recinzioni); aree con rugosità non
C	riconducibile alle classi A, B, D
	Aree prive di ostacoli (aperta campagna, aeroporti, aree agricole, pascoli, zone
D	paludose o sabbiose, superfici innevate o ghiacciate, mare, laghi,)

in zona 1, si ottiene una categoria di esposizione II



a cui corrispondono i seguenti parametri per la definizione del coefficiente di esposizione

Parametri per la definizione del coefficiente di esposizione

Categoria di esposizione del sito	k_r	Z ₀ (m)	Z _{min} (m)
I	0,17	0,01	2
II	0,19	0,05	4
III	0,20	0,10	5
IV	0,22	0,30	8
V	0,23	0,70	12

Con l'opera in costruzione avente altezza massima sul terreno (compresi carichi mobili):

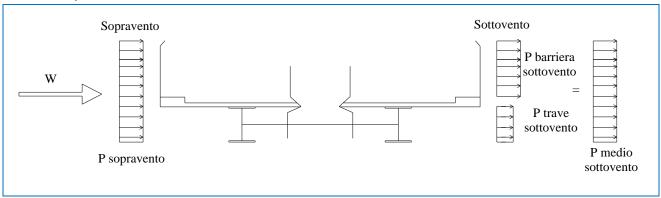
$$z \approx 12 \text{ m} > z_{min} = 4 \text{ m}$$

$$c_e(z) = k_r^2 \cdot c_t \cdot \alpha \cdot [7 + c_t \cdot \alpha] = 0.19^2 \cdot 68.4 = 2.47$$

dove
$$\alpha = \ln (z/z_0) = \ln (12/0.05) = 5.48$$
; $c_t = 1$

c_d è il coefficiente dinamico; posto pari ad uno

 c_p è il coefficiente di forma; nel caso di travi multiple (Circ. 02/02/2009, C3.3.10.4) si ha, per i vari elementi:



- travi principali, altezza h = 1 m, distanza reciproca media d = 3.2 m:

a) lato sopravento: $c_{p1} = 1.4$

b) lato sottovento:
$$d/h = 3.2/1 = 3.2 \quad (2 < d/h < 5)$$

$$\mu = 0.52$$

$$c_{o2} = 1.4 \times (0.52 + 0.52^2 + 0.52^3 + 0.52^4) = 1.41$$

- travi principali, altezza h = 2 m, distanza reciproca media d = 3.2 m:

a) lato sopravento: $c_{p1} = 1.4$

b) lato sottovento:
$$d/h = 3.2/2 = 1.6 \quad (d/h < 2)$$

$$\mu = 0.2$$

$$c_{p2} = 1.4 \times (0.2 + 0.2^2 + 0.2^3 + 0.2^4) = 0.35$$

- soletta, cordolo, sicurvia: per il solo lato sopravento si ha:

$$c_p = 1.2$$

La pressione esterna sulle strutture è quindi definita dalle espressioni seguenti:

a) impalcato con travi h = 1 m:

a1) lato sopravento:
$$p = q \cdot c_e \cdot c_p \cdot c_d = 0.391 \cdot 2.47 \cdot (1.4 \cdot 1.0 + 1.2 \cdot 1.45) = 1.35 + 1.68 = 3.03 \text{ kN/m}$$

con eccentricità rispetto al piano stradale di riferimento:

$$e_z = (-1.35 \cdot 0.90 + 1.68 \cdot 0.27) / 3.03 = -0.25 \text{ m}$$

a2) lato sottovento:
$$p = q \cdot c_e \cdot c_p \cdot c_d = 0.391 \cdot 2.47 \cdot (1.41 \cdot 1.0 + 1.2 \cdot 1.15) = 1.36 + 1.33 = 2.69 \text{ kN/m}$$

con eccentricità rispetto al piano stradale:

$$e_z = (-1.36 \cdot 0.90 + 1.33 \cdot 1.15) / 2.69 = +0.11 \text{ m}$$

b) impalcato con travi h = 2 m:

b1) lato sopravento:
$$p = q \cdot c_e \cdot c_p \cdot c_d = 0.391 \cdot 2.47 \cdot (1.4 \cdot 2.0 + 1.2 \cdot 1.45) = 2.70 + 1.68 = 4.38 \text{ kN/m}$$

con eccentricità rispetto al piano stradale di riferimento:

$$e_z = (-2.70 \cdot 1.40 + 1.68 \cdot 0.27) / 4.38 = -0.76 \text{ m}$$

b2) lato sottovento:
$$p = q \cdot c_e \cdot c_p \cdot c_d = 0.391 \cdot 2.47 \cdot (0.35 \cdot 2.0 + 1.2 \cdot 1.15) = 0.68 + 1.33 = 2.01 \text{ kN/m}$$

con eccentricità rispetto al piano stradale:

$$e_z = (-0.68 \cdot 1.40 + 1.33 \cdot 1.15) / 2.01 = +0.29 \text{ m}$$

Sulle pile si ha: $p = 0.391 \cdot 2.47 \cdot 1.2 \cdot 1.50 = 1.74 \text{ kN/m}$

La pressione dovuta ai carichi mobili, per l'altezza libera pari a 2.0 vale:

$$p = 0.391 \cdot 2.47 \cdot 1.2 \cdot 2.00 = 2.32 \text{ kN/m}$$

con eccentricità rispetto al piano stradale:

$$e_z = 1 + 2.00 / 2 = +2.00 m$$



4.6 **AZIONE DI FRENAMENTO**

L'azione di frenamento è funzione del carico verticale totale agente sulla corsia convenzionale n° 1 ed è uguale a:

$$F_f = 0.6 \times (2xQ_{1k}) + 0.10q_{1k} \times w_1 \times L =$$

$$= 0.6 \times (2 \times 300) + 0.10 \times 9 \times 3 \times 101.60 = 634.3 \text{ kN}$$
 (180 kN $\leq F_f \leq 900 \text{ kN}$)

L'azione si considera uniformemente distribuita sulle travi principali:

$$q_x = \frac{634.3}{4 \cdot 101.6} = 1.56 \text{ kN/m/trave}$$

DILATAZIONE TERMICA DIFFERENZIALE

Si assume che le travi dell'impalcato (sezioni miste acciaio/cls.) siano soggette alla variazione termica differenziale: $\Delta T/H = \pm 5^{\circ}$.

4.8 **DILATAZIONE TERMICA UNIFORME**

Si assume che le travi dell'impalcato (sezioni miste acciaio/cls.) siano soggette alla variazione termica uniforme: $\Delta T = \pm 15^{\circ}$.

4.9 **AZIONI SISMICHE**

La stima dei parametri spettrali necessari per la definizione dell'azione sismica è stata effettuata utilizzando le informazioni disponibili nel reticolo di riferimento (tabella 1 - Allegato B - D.M. 14/01/2008).

Considerando l'ubicazione ED50 del sito in oggetto (Lat: 45.3862; Long: 8.9376) ed ipotizzando una costruzione caratterizzata da:

- una vita nominale di 50 anni, ricadente in classe d'uso pari a IV (ponti di importanza critica per il mantenimento delle vie di comunicazione...);
- una categoria topografica T1;
- una categoria C per il sottosuolo;

Si hanno i seguenti valori dei parametri spettrali:

STATO	T _R	a _g	Fo	T _C *
LIMITE	[anni]	[g]	[-]	[s]
SLO	60	0.0229	2.545	0.195
SLD	101	0.0279	2.590	0.211
SLV	949	0.0513	2.727	0.303
SLC	1950	0.0601	2.817	0.317

Le espressioni dello spettro elastico S_e di risposta secondo le NTC 2018 sono le seguenti:

$$\begin{split} 0 &\leq T < T_B & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right] \\ T_B &\leq T < T_C & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \\ T_C &\leq T < T_D & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C}{T} \right) \\ T_D &\leq T & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C T_D}{T^2} \right) \end{split}$$







Trattandosi di struttura sismicamente isolata si assume:

• coefficiente di smorzamento viscoso convenzionale: $\xi = 5 \%$

• fattore di smorzamento viscoso:
$$\eta = \sqrt{\frac{10}{5 + \xi}} = 1$$

Lo spettro elastico definito viene ridotto per tutto il campo di periodi T≥0,8T_{is} , assumendo:

- periodo di vibrazione struttura isolata: T_{is} = 1.609 s
- coefficiente di smorzamento viscoso isolatori: ξ = 10 %

• oefficiente riduttivo
$$\eta = \sqrt{\frac{10}{5+\xi}} = \sqrt{\frac{10}{5+10}} = 0.816$$
 (≥ 0.55).

Si ottengono i seguenti andamenti degli spettri. Noto il periodo (ascissa) si ricava il relativo coefficiente sismico (ordinata).



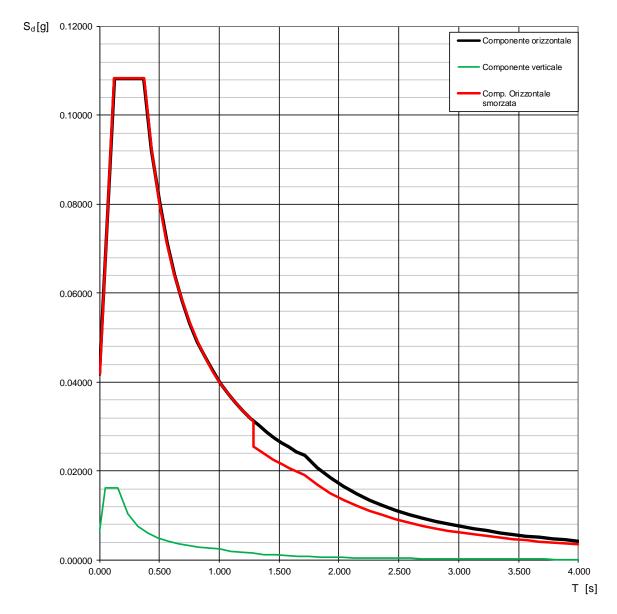








Spettri di risposta elastici (componenti orizz. e vert.) per lo stato limite: SLD



Spettri di risposta elastici e smorzati SLD





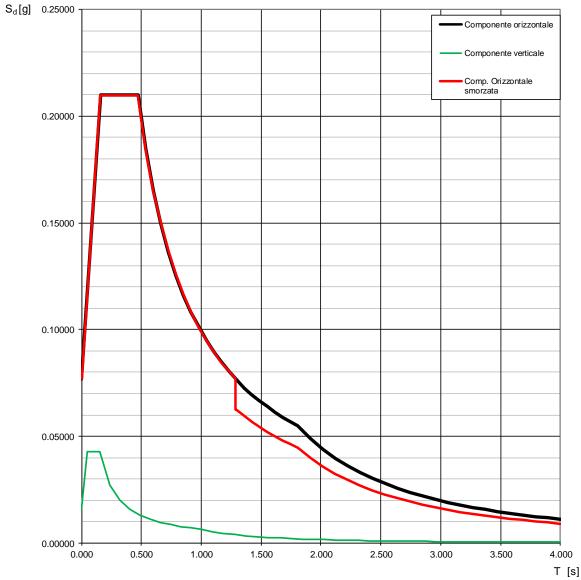








Spettri di risposta elastici (componenti orizz. e vert.) per lo stato limite: SLV



Spettri di risposta elastici e smorzati SLV





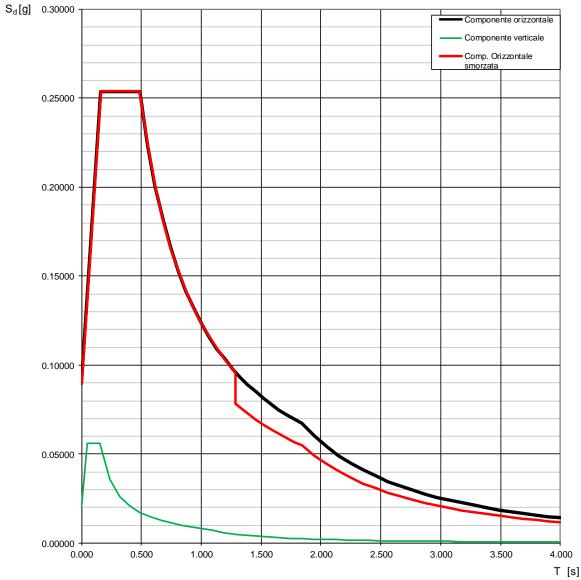








Spettri di risposta elastici (componenti orizz. e vert.) per lo stato limite: SLC



Spettri di risposta elastici e smorzati SLC















4.10 FENOMENI DEFORMATIVI LENTI DELLA SOLETTA IN CALCESTRUZZO

Come già detto, l'influenza di ritiro e fluage della soletta sulla struttura metallica viene considerata automaticamente dal programma di calcolo sulla base delle relazioni stabilite dal codice EN 1992-2 con i seguenti dati:

resistenza caratteristica cilindrica a 28 gg: f_{ck} = 32 N/mm²

- umidità relativa ambiente: 70 %

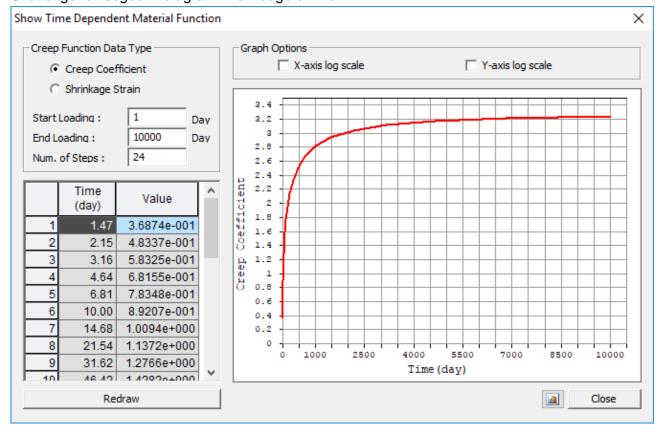
• - perimetro esposto all'atmosfera: $h = 2 \times Ac / u = 0.30 \text{ m}$

- calcestruzzo a indurimento normale: N
 - età del calcestruzzo iniziale per il ritiro: 1 gg

La variazione della resistenza caratteristica del calcestruzzo nel tempo viene determinata con la formula:

$$f_{c}(t) = f_{ck} \times e^{0.25 \times \left[1 - \left(\frac{28}{t}\right)^{0.5}\right]}$$

Si ottengono i seguenti diagrammi di fluage e ritiro:

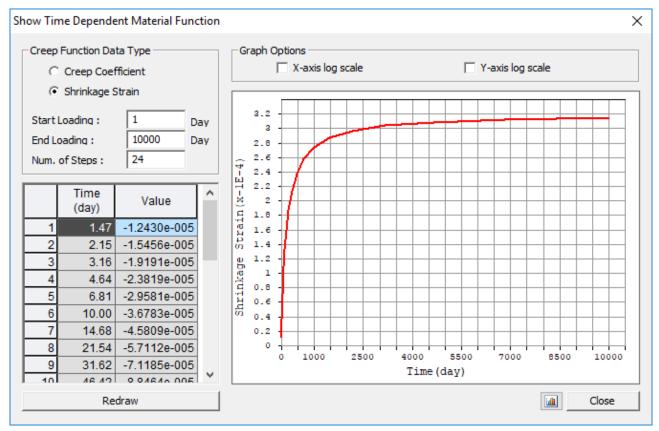


CREEP (FLUAGE)









SHRINKAGE (RITIRO)

5 COMBINAZIONI DI CARICO

I coefficienti moltiplicativi delle singole azioni sono riassunti nelle tabelle seguenti, per le condizioni di carico statiche e sismiche.

Nelle seguenti tabelle i carichi permanenti (pesi e finiture) non appaiono esplicitamente in combinazione perché il loro contributo alle sollecitazioni deriva dagli schemi statici in fase costruttiva (diversi che nella fase di esercizio) e sono quindi accumulati nei "Dead Load" e "Erection Load 1".

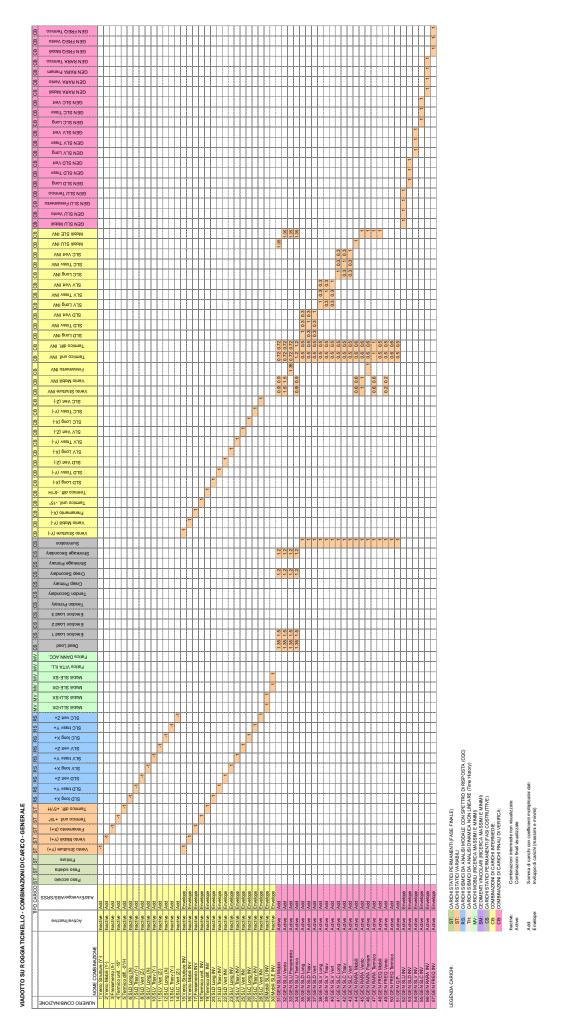






























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NUMERO COMBINAZIONE

VIADOTTO SU ROGGIA TICINELLO - COMBINAZIONI DI CARICO - ACCIAIO/SEZIONI COMPOSTE - IMPALCATO















6 CALCOLO DELLE SOLLECITAZIONI

Le travi composte acciaio-calcestruzzo vengono analizzate dal programma secondo le fasi di costruzione (construction stage):

• fase 1: corrisponde alla fase costruttiva fino al getto della soletta (30 giorni):

sezione reagente: trave di acciaio (soletta non reagente) carichi applicati: peso strutture acciaio e peso soletta

 fase 2: corrisponde a una fase costruttiva di lunga durata (10000 giorni) in cui la soletta ha caratteristiche elastiche variabili nel tempo e si tiene conto dei fenomeni di interazione lenti di ritiro e fluage, valutati secondo gli schemi EN 1992-2:

sezione reagente: trave di acciaio e soletta (con modulo variabile) carichi applicati: finiture, ritiro, fluage della soletta

• fase 3: corrisponde alla fase di esercizio:

sezione reagente: trave acciaio + soletta (modulo costante)

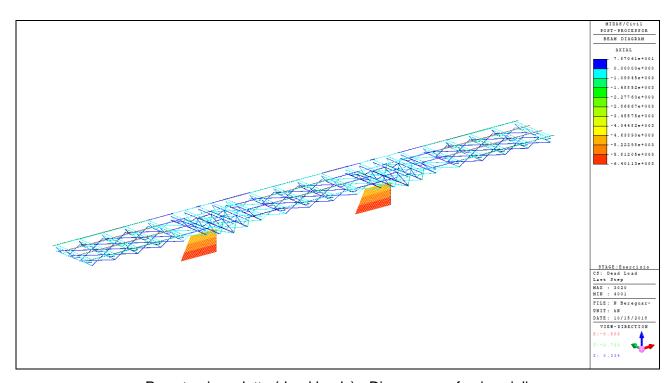
carichi applicati: carichi di esercizio (vento, carichi mobili, termici, frenamento, sisma)

Si è assunta un'accelerazione gravitazionale pari a $g = 9,806 \text{ m/s}^2$.

Le unità di misura utilizzate sono coerenti con il Sistema Internazionale:

lunghezze: m (metri)
masse: t (tonnellate)
forze kN (kilo-Newton)

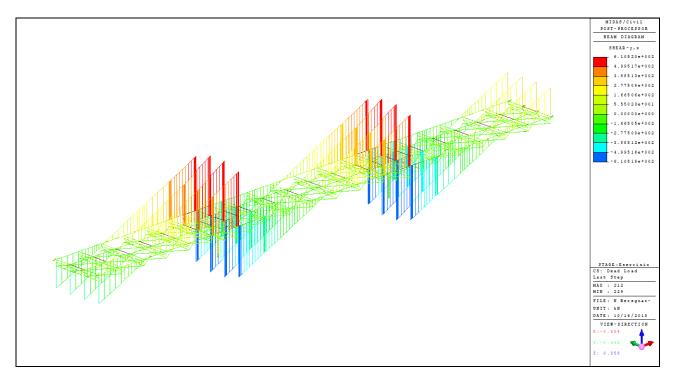
Seguono diagrammi delle azioni calcolate sulle travi composte dell'impalcato e le pile per le singole condizioni di carico (variabili inviluppati ±).



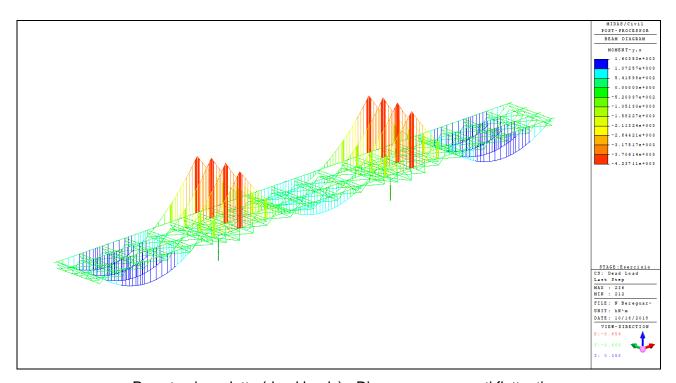
Peso travi e soletta (dead loads) - Diagramma sforzi assiali







Peso travi e soletta (dead loads)- Diagramma sforzi taglianti



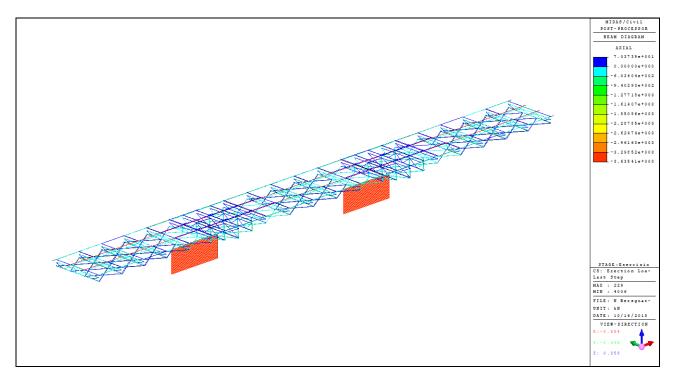
Peso travi e soletta (dead loads) - Diagramma momenti flettenti



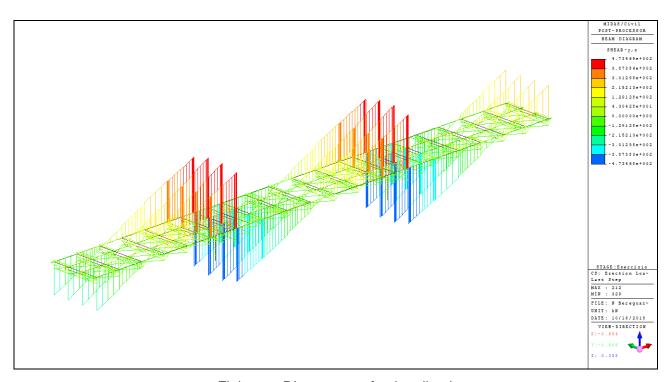








Finiture – Diagramma sforzi assiali



Finiture – Diagramma sforzi taglianti



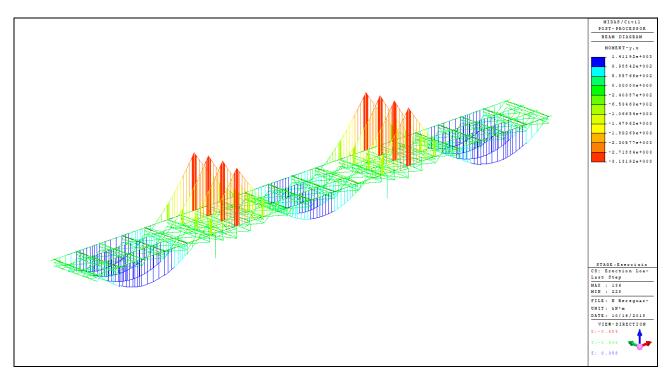




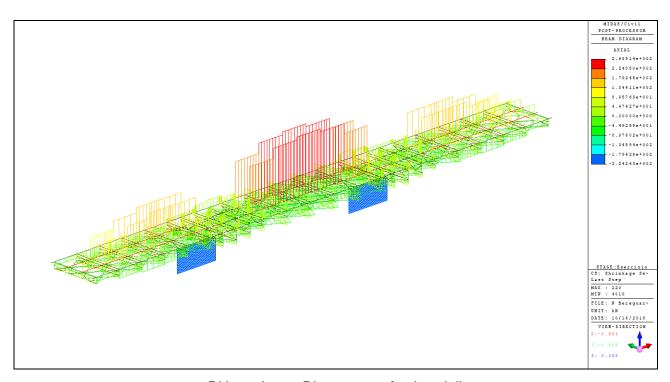








Finiture – Diagramma momenti flettenti



Ritiro soletta - Diagramma sforzi assiali



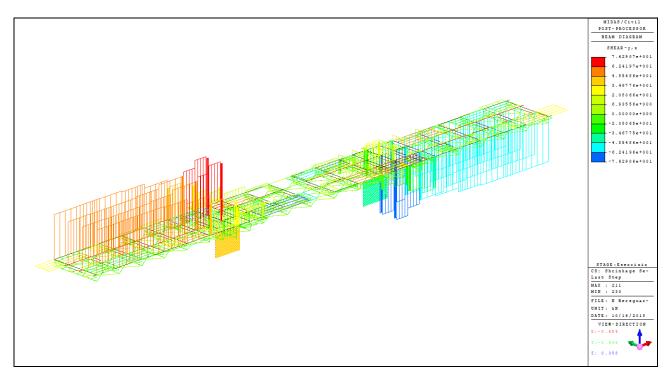




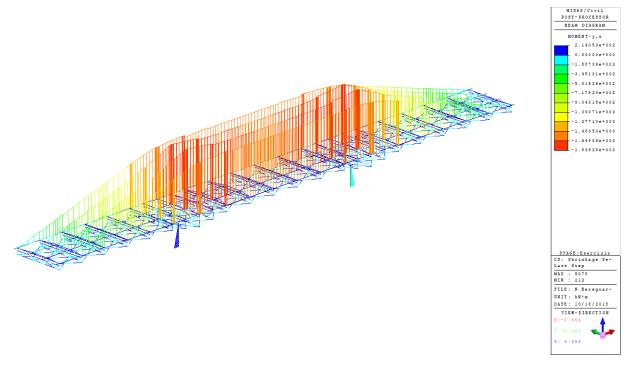








Ritiro soletta - Diagramma sforzi taglianti



Ritiro soletta - Diagramma momenti flettenti



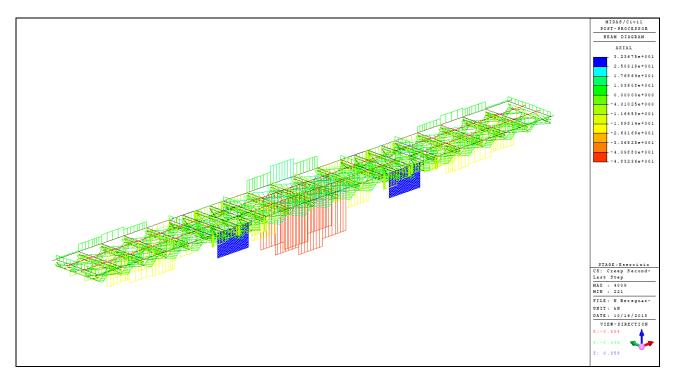




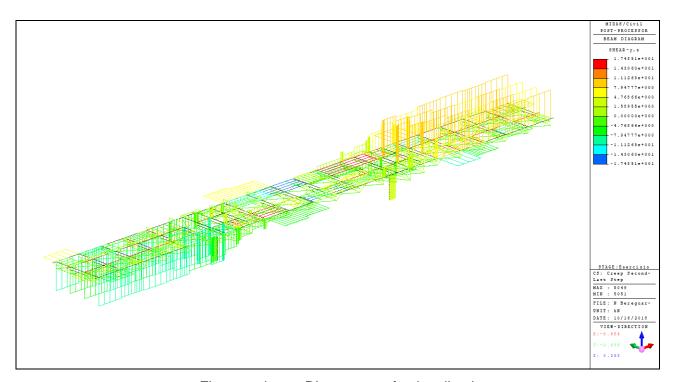








Fluage soletta - Diagramma sforzi assiali



Fluage soletta - Diagramma sforzi taglianti



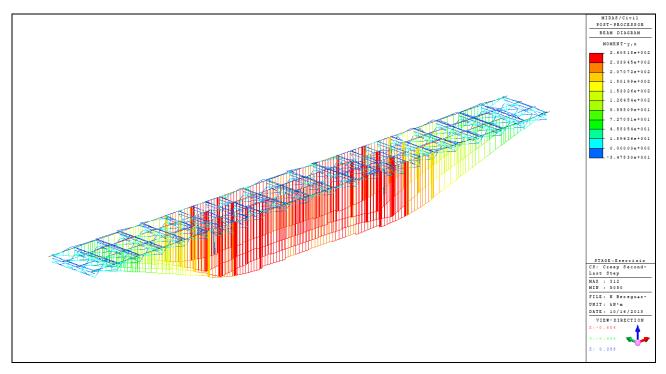




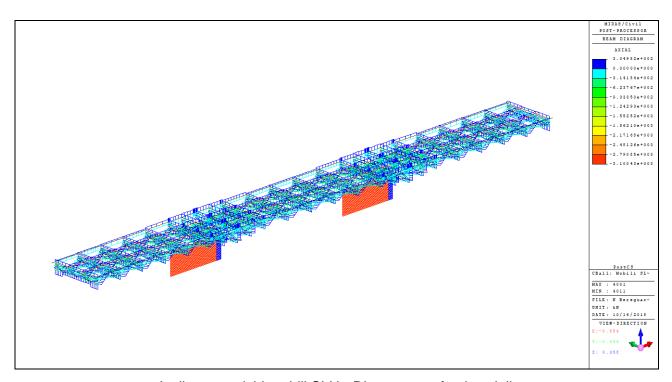








Fluage soletta - Diagramma momenti flettenti



Inviluppo carichi mobili SLU - Diagramma sforzi assiali

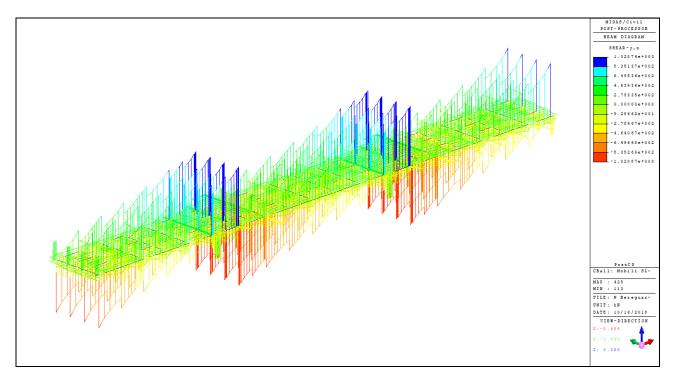




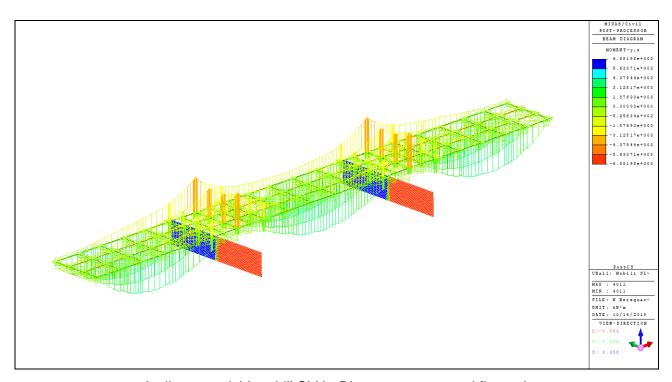








Inviluppo carichi mobili SLU - Diagramma sforzi taglianti



Inviluppo carichi mobili SLU - Diagramma momenti flettenti



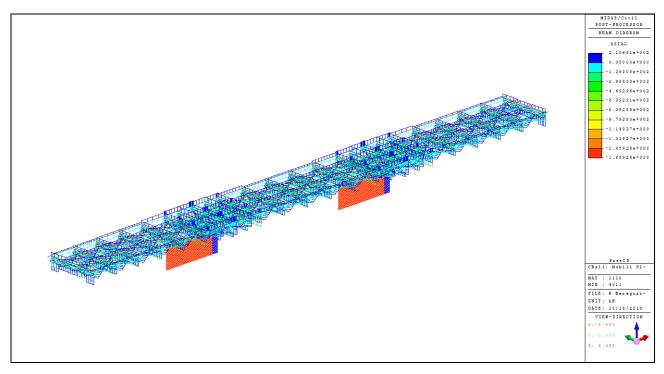




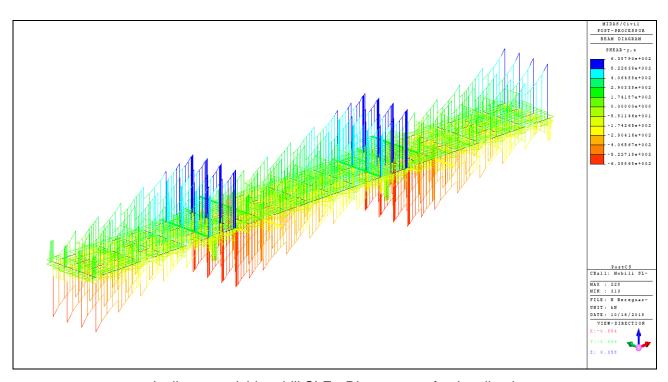








Inviluppo carichi mobili SLE - Diagramma sforzi assiali



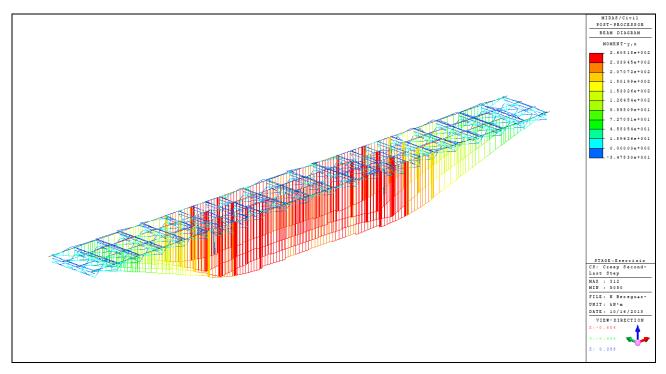
Inviluppo carichi mobili SLE - Diagramma sforzi taglianti



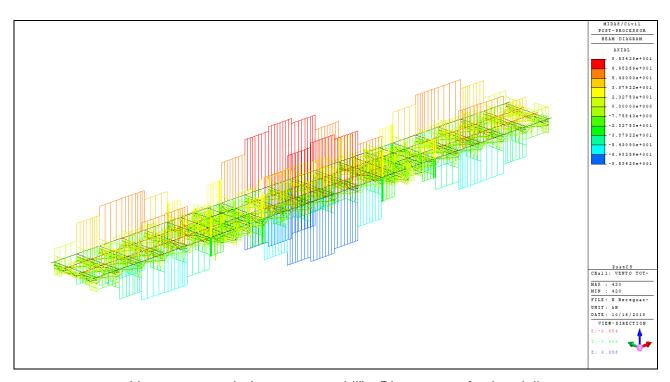








Inviluppo carichi mobili SLE - Diagramma momenti flettenti



Vento trasversale (strutture e mobili) - Diagramma sforzi assiali

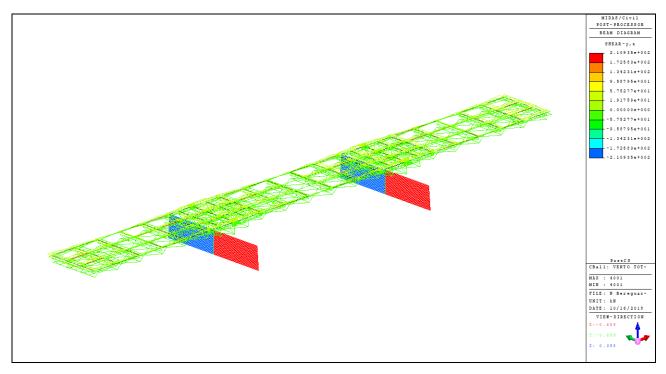




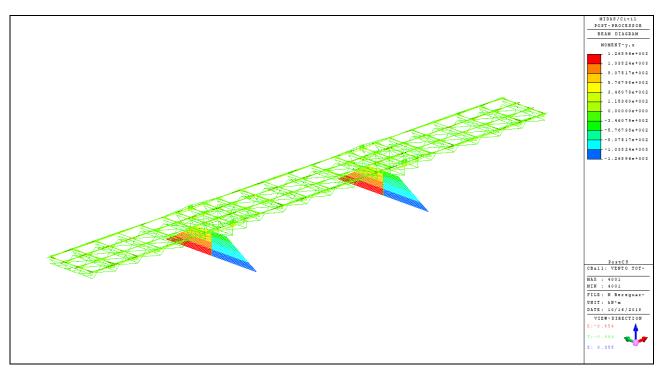








Vento trasversale (strutture e mobili) - Diagramma sforzi taglianti



Vento trasversale (strutture e mobili) - Diagramma momenti flettenti

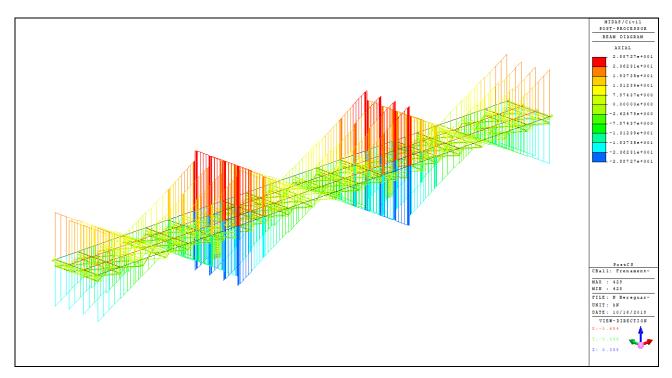




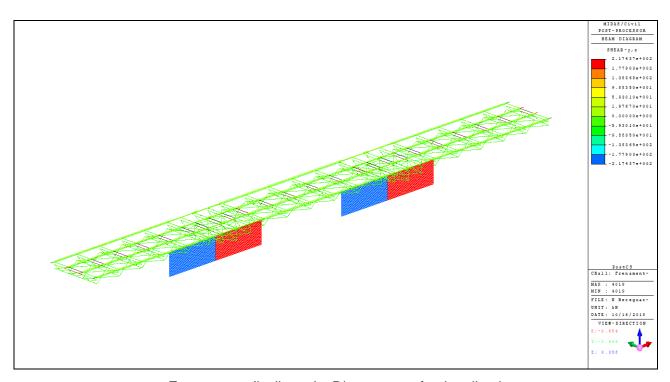








Frenamento (inviluppo) - Diagramma sforzi assiali



Frenamento (inviluppo) - Diagramma sforzi taglianti



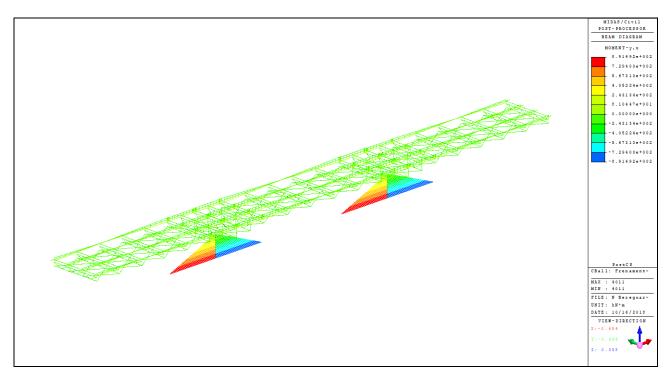




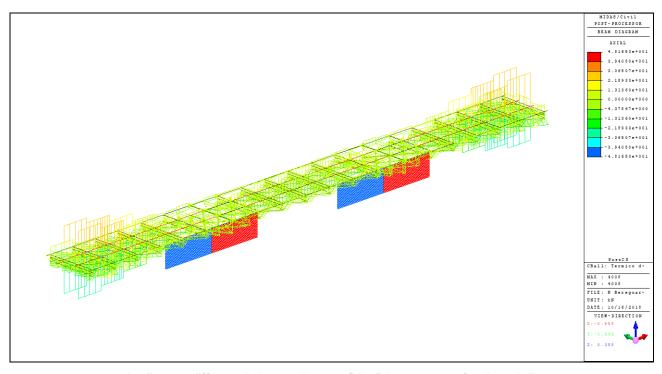








Frenamento (inviluppo) - Diagramma momenti flettenti



Inviluppo differenziale termico ±5°/H - Diagramma sforzi assiali



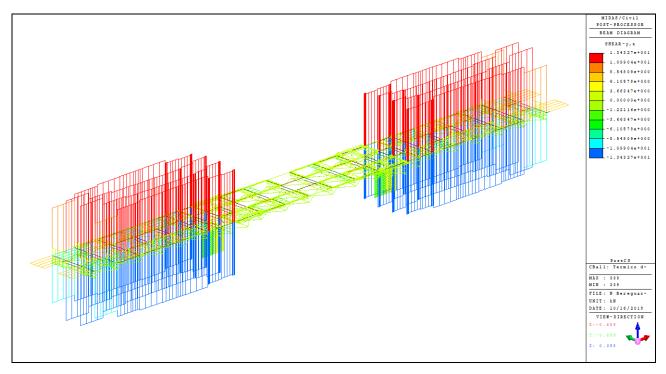




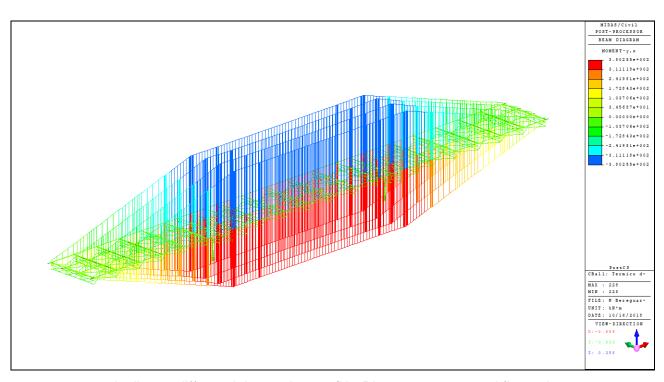








Inviluppo differenziale termico ±5°/H - Diagramma sforzi taglianti



Inviluppo differenziale termico ±5°/H - Diagramma momenti flettenti

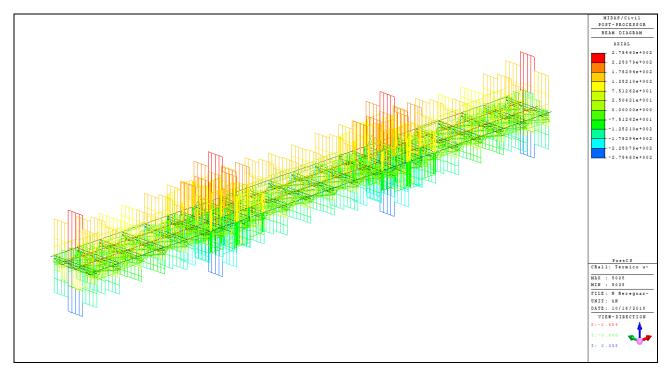




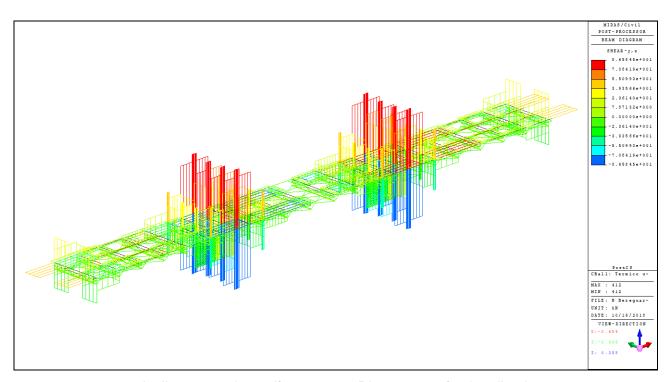








Inviluppo termico uniforme ±15°- Diagramma sforzi assiali



Inviluppo termico uniforme ±15°- Diagramma sforzi taglianti

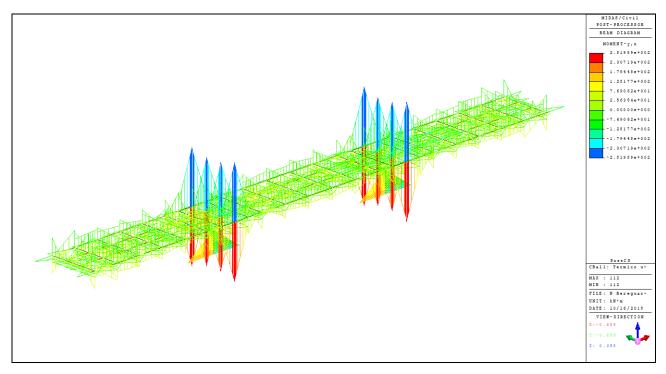




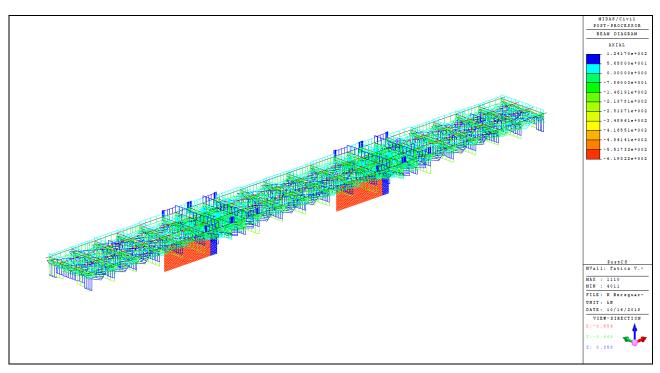








Inviluppo termico uniforme ±15° - Diagramma momenti flettenti



Carichi mobili fatica schema 2 (vita ill.) - Diagramma sforzi assiali

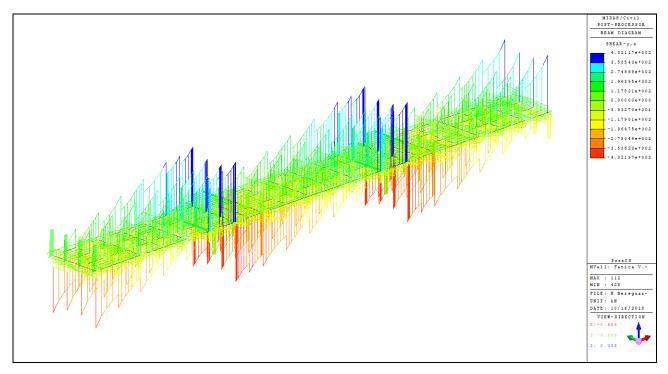




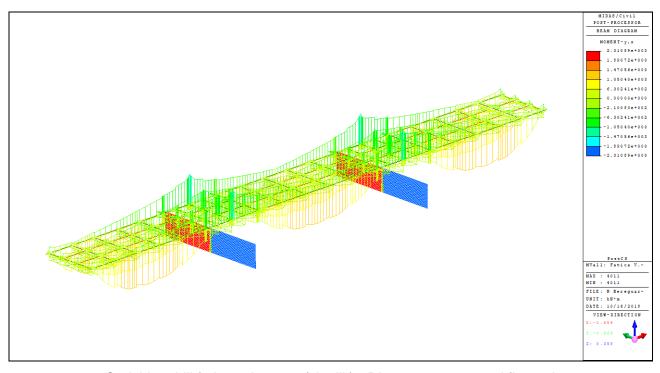








Carichi mobili fatica schema 2 (vita ill.) - Diagramma sforzi taglianti



Carichi mobili fatica schema 2 (vita ill.) - Diagramma momenti flettenti



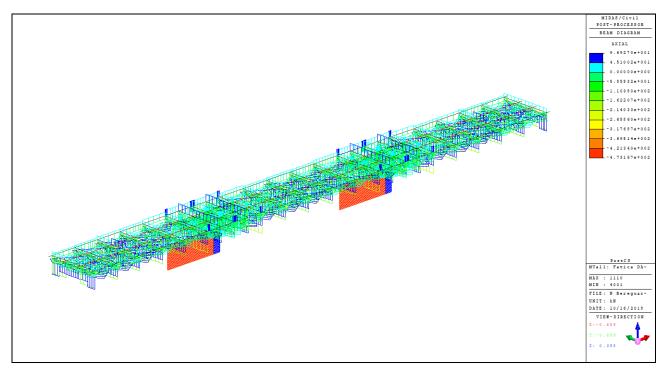




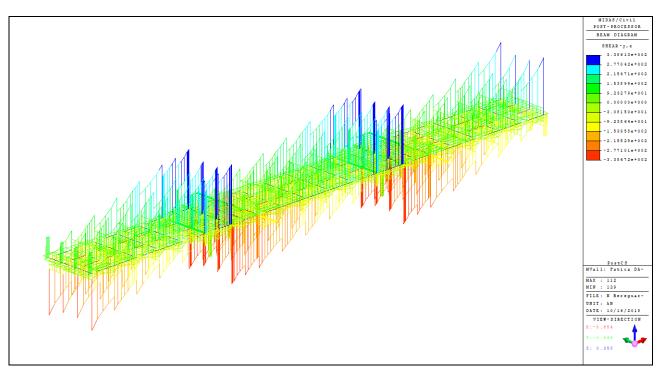








Inviluppo carichi mobili fatica schema 3 (dann.) - Diagramma sforzi assiali



Inviluppo carichi mobili fatica schema 3 (dann.) - Diagramma sforzi taglianti



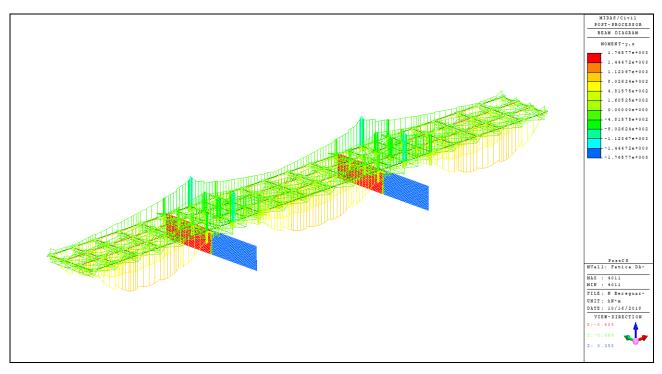












Inviluppo carichi mobili fatica schema 3 (dann.) - Diagramma momenti flettenti

7 VERIFICA DELLE TRAVI COMPOSTE ACCIAIO/CALCESTRUZZO

Le travature principali dell'impalcato sono così composte:

• altezza travi metalliche (variabile): $h = 1000 \div 2000 \text{ mm}$ • larghezza piattabanda superiore (variabile): $b_s = 500 \div 600 \text{ mm}$ • larghezza piattabanda inferiore (variabile): $b_i = 600 \div 700 \text{ mm}$ • spessore piattabande (variabile): $s = 30 \div 40 \text{ mm}$ • spessore anima (variabile): $t = 12 \div 20 \text{ mm}$

soletta cls. collaborante: Travi centrali:
 b x h = 3200 x 240 mm
 Travi laterali:
 b x h = 2800 x 240 mm

distanza soletta collaborante/trave:
 60 mm

Nei casi in cui la soletta in cls. risulti tesa si trascura il contributo della stessa e si considera unicamente il contributo delle armature longitudinali superiori e inferiori:

• conci C4: 1 Ø 20 / 10 cm

conci C3, C5:
 1 Ø 20 / 20 cm

altri tratti: 1 Ø 16 / 20 cm

ricoprimento armature inferiori: 8 cm
ricoprimento armature superiori: 5 cm

Si riporta la verifica dettagliata di una singola sezione, presa ad esempio di calcolo; seguono i tabulati delle verifiche condensate delle singole sezioni, asta per asta, eseguite secondo NTC 2018 ed EuroCodice 4-2.









Element Number 104 **Position Information** J

1 Design Condition

1.1 Design Parameters

- Partial factors

$\gamma_{ m C}$ for concrete	1.50 γ_V for headed sutd	1.25
γ_S for reinforcing steel	1.15 γ_{Ff} for equivalent constant Amplitude stress range	1.00
γ_{M0} for structural steel	1.05 γ_{Mf} for fatigue strength	1.15
γ_{M1} for structural steel	1.10 $\gamma_{Mf,s}$ for fatigue strength of studs in shear	1.00

1.2 Material Information

- Structural steel

355.000 MPa , E_s 210000.000 MPa $f_{sk} =$

- Concrete

 $32.000\ \text{MPa}$, E_{cm} 33000.000 MPa $f_{ck} =$

- Reinforcement

450.000 MPa , E_r 210000.000 MPa $f_{yk} =$

1.3 Sectional Information

Slab

Bc	2800.000	mm	t _c	240.000	mm	H _h	60.000	mm
Girder								
H _w	930.000	8	B ₁		8	B ₂	600.000	mm
t _w	15.000	8	t _{f1}	30.000	mm	t _{f2}	40.000	mm

Before

A _{,a}	52950.000	mm ²
$I_{y,a}$	9738865300.992	mm ⁴
l _{z,a}	1032761562.500	mm ⁴
$C_{y,a}$	300.000	mm
C _{z,a}	421.147	mm

After

A _{,c}	159653.928	mm ²
$I_{y,c}$	30629990284.149	mm ⁴
l _{z,c}	70745994755.043	mm ⁴
$C_{y,c}$	1400.000	mm
$C_{z,c}$	928.323	mm

Crack

A _{,c}	58578.000	mm ²
l _{y,c}	12594494470.772	mm ⁴
I _{z,c}	4691051638.245	mm ⁴
C _{y,c}	1400.000	mm
C _{z,c}	492.614	mm















2 Bending Resistance

2.1 Positive Moment

- Design load

Load combination name : ST SLU Mobili

 $\begin{array}{lll} N_{a,Ed} & = & -110.208 \ kN \\ N_{c,Ed} & = & -8.618 \ kN \\ M_{a,Ed} & = & 2145.531 \ kN \cdot m \\ M_{c,Ed} & = & 6484.517 \ kN \cdot m \end{array}$

- Stress

Top Flange

Loft	У1			Z ₁		i	σ_1	-144.528		
	У2	у ₂	-7.500	mm	z_2	71.677	mm	σ_2	-144.825	MPa
Dialet	У1	250.000	mm	Z ₁	71.677	mm	σ_1	-145.141	MPa	
	У2			z_2			σ_2	-144.844	MPa	

Bottom Flange

У2	У1	-300.000	mm	Z ₁	-928.323		σ_1		МРа
	у ₂	-7.500	mm	z_2		mm	σ_2	287.186	MPa
Diaht	У1	300.000	mm	Z ₁		mm	σ_1	286.809	MPa
Rigiil	y ₂	7.500	mm	z_2			σ_2	287.167	MPa

Web

Pight	У1	0.000	mm	Z ₁	41.677	mm	σ_1	-131.874	MPa	
ľ	Rigiit	у2	0.000	mm	Z 2	-888.323	mm	σ_2	269.896	MPa

- Classification of sections

Part	Class
Top flange	1
Web	1
Bottom flange	1
Section	1

- Plastic resistance moment, $M_{\text{pl},\text{Rd}}$

Plastic NA = 983.092 mm

 $N_{slab} = 12185.600 \text{ kN}$

 $N_{g,top}$ = 2858.271 kN (Upper side of PNA) $N_{g,bot}$ = 15043.871 kN (Lower side of PNA)

 $M_{pl,Rd} = 12507.784 \text{ kN} \cdot \text{m}$ $x_{pl} = 316.908 \text{ mm}$

 $M_{Rd} \quad = \quad \beta M_{pl,Rd} \quad = \quad 12507.784 \ kN \cdot m$

here, $\beta = 1.000$

 M_{Rd} = 12507.784 kN·m \rightarrow M_{Ed} = 8630.048 kN·m ...OK









3 Resistance to Vertical Shear

- Design load

Load combination name : ST SLU Mobili 73.213 kN N_{Ed} = 2145.531 kN·m Ma.Ed = 3681.729 kN · m -40.468 kN 646.160 kN 605.691 kN M_{c,Ed} =

 $V_{Ed,a} = V_{Ed,c} =$ V_{Ed} =

- Stress

Top Flange

У2	У1	-250.000	mm	Z ₁	71.677		σ1	-138.307	MPa
	У2	-7.500	mm	Z ₂	71.677	mm	σ_2	-137.779	MPa
B: 14	У1	250.000		Z ₁	71.677		σ_1		MPa
Right	у2	7.500	mm	Z ₂	71.677	mm	σ_2	-137.747	MPa

Bottom Flange

у	У1	-300.000	mm	Z ₁	-928.323		σ_1	202.090	MPa
	У2	-7.500	mm	Z ₂	-928.323	mm	σ_2	202.727	MPa
р: т.	У1	300.000	mm	Z ₁	-928.323	mm	σ_1	203.396	MPa
	У2	7.500	mm	Z ₂	-928.323	mm	σ_2	202.759	MPa

Web

Dight	у 1	0.000	mm	Z ₁	41.677	mm	σ1	-127.548	МРа
Right	у ₂	0.000	mm	Z ₂	-888.323	mm	σ_2		МРа

- Classification of sections

Part	Class
Top flange	1
Web	1
Bottom flange	1
Section	1

- Plastic resistance moment, $M_{\text{pl},\text{Rd}}$

Plastic NA = 983.092 mm

12185.600 kN 2858.271 kN $N_{g,top} =$ 15043.871 kN N_{g,bot} =

 $M_{pl,Rd} = 12507.784 \text{ kN} \cdot \text{m}$

- Calculation. $V_{\text{bw},\text{Rd}}$

$$\lambda_w = h_w / (37.4 \cdot t \cdot \epsilon \cdot \sqrt{k_\tau}) = 0.871$$

Contribution from the web

$$X_{w} = 0.83 / \lambda_{w} = 0.953$$
 $0.83/\eta \le \lambda_{w} < 1.08$

Contribution from the flange

 $M_{f,Rd0} = 10220.000 \text{ kN} \cdot \text{m}$

 $M_{f,Rd0}$ is calculated as $M_{pl,Rd}$ but neglecting the web contribution.

Reduction factor for
$$N_{Ed} = 1 - \frac{N_{Ed}}{(A_{f1} + A_{f2}) \cdot f_{yf}/\gamma_{M0}} = 1.000$$

$$M_{f,Rd}$$
 = Reduction factor for $N_{Ed} \cdot M_{f,Rd0}$ = 10220.000 kN · m

$$V_{Edi} / (V_{bw,Rd} + V_{bf,Rd}) = 0.244 \le 1.0$$
 ... OK





4 Resistance to Lateral Torsional Buckling

- Design load

Load combination name: ST SLU Mobili

 N_{Ed} -118.826 kN M_{Ed} 6484.517 kN·m V_1 -323.420 kN V_2 -11.081 kN 8093.186 kN·m M_1 M_2 8630.048 kN·m 12507.784 kN·m $M_{pl,Rd}$ = 10239.659 kN·m $M_{el,Rd}$ =

- M_{b,Rd} Buckling resistance moment

$$M_{Rd} = 12507.784 \text{ kN} \cdot \text{m}$$
 $M_{b,Rd} = X_{LT} \cdot M_{Rd} = 12507.784 \text{ kN} \cdot \text{m}$

- N_{b,Rd} Buckling resistance moment

$$X_{LT,N} = 0.996$$

 $N_{b,Rd} = X_{LT} \cdot Area \cdot f_{vd} = 53768.380 \text{ kN}$

Combined Ratio
$$= \frac{N_{Ed}}{N_{b,Rd}} + \frac{M_{Ed}}{M_{b,Rd}} = 0.520648529$$









5 Resistance to Longitudinal Shear

- Design load

Load combination name: ST SLU Mobili

7023.134 kN $N_{c.el}$ $N_{c,f}$ 12185.600 kN 5827.259 kN·m $M_{Ed} =$ 646.160 kN $V_{Ed} =$ 12507.784 kN·m $M_{pl,Rd} =$ 10239.659 kN·m $M_{el,Rd} =$

- Shear resistance of a single connector

where,
$$f_u=450.000$$
 MPa
$$\alpha=1$$
 for $h_{sc}/d>4$ Num. = 3
$$d=22.200$$
 mm
$$h_{sc}=175.000$$
 mm
$$Space=200.000$$
 mm

- Verification







6 Resistance to Fatigue

- Design load

Load comt ST FATICA DANN

$$M_y = 3298.122 \text{ kN} \cdot \text{m}$$

- Shear stress range for the connector

$$\Delta \tau = F_{sc} / A_{sc} = 25.074 \text{ MPa}$$
 where, $F_{sc} = v_{L,Ed} \cdot \text{space of stud / number of stud} = 9.705 \text{ kN}$
$$A_{sc} = 387.076 \text{ mm}^2$$

- Damage equivalent factor

- Equivalent constant amplitude range of shear stress related to 2 million cycles

$$\Delta \tau_{E,2} = \lambda_v \cdot \Delta \tau = 26.052 \text{ MPa}$$

Verification

$$\gamma_{\text{Ff}} \cdot \Delta \tau_{\text{E},2} / (\Delta \tau_{\text{c}} / \gamma_{\text{Mf},s}) = 0.289 \le 1$$

7 Stress Limitation

- In the structural steel

$$σ_{Ed,ser}$$
 ≤ $f_y / γ_{M,ser}$
-206.974 MPa ≤ 355.000 MPa ... OK
 $τ_{Ed,ser}$ ≤ $f_y / (√3 · γ_{M,ser})$
0.143 MPa ≤ 204.959 MPa ... OK
 $√(σ_{Ed,ser}^2 + 3τ_{Ed,ser}^2)$ ≤ $f_y / γ_{M,ser}$
206.974 MPa ≤ 355.000 MPa ... OK

- In the concrete of the slab

Characteristic load combination name : ST RARA Mobili

$$\sigma_c \le k_1 \, f_{ck}$$
 9.283 MPa \le 19.200 MPa ... OK

- In the reinforcement

Load combination name : ST RARA Mobili

$$\sigma_s \le k_3 f_{yk}$$
-51.333 MPa

Rebar is under compression. No need to check.









8 Longitudinal Shear for SLS(Serviceability limit state)

- Shear resistance of a single connector

Load combination name: ST RARA Mobili

$$P_{Rd,1} = 0.8 \cdot f_u \cdot \pi \cdot d^2 / 4 / \gamma_V = 111.478 \text{ kN}$$

 $P_{Rd,2} = 0.29 \cdot \alpha \cdot d^2 \cdot \sqrt{(f_{ck} \cdot E_{cm})} / \gamma_V = 117.497 \text{ kN}$

$$P_{Rd} = Min(P_{Rd,1}, P_{Rd,2}) = 111.478 \text{ kN}$$

 $P_{Rd,ser} = k_s \cdot P_{Rd} = 66.887 \text{ kN}$

where,
$$f_u = 450.000 \text{ MPa}$$

$$\alpha = 1$$
 for $h_{sc}/d > 4$
Num. = 3
 $d = 22.200 \text{ mm}$
 $h_{sc} = 175.000 \text{ mm}$
Space = 200.000 mm
 $k_s = 0.600$

- Verification

$$V_{L,Ed} = V_{Ed} \cdot (A \cdot z / I) = 431.814 \text{ kN/m}$$

 $V_{L,Rd} = P_{Rd,ser} \cdot \text{Num./Space} = 1003.300 \text{ kN/m}$

 $v_{L,Ed} \leq v_{L,Rd}$... OK

7.1 VERIFICHE DI RESISTENZA A FLESSIONE ALLO SLU

Si riportano le verifiche allo stato limite ultimo per flessione delle sezioni composte travi-soletta. I coefficienti parziali per SLU assunti sono i seguenti:

 $\gamma_{c} = 1.5$ materiale calcestruzzo $\gamma_{s} = 1.15$ acciaio armature soletta

 $\gamma_{MO} = 1.05$ acciaio strutturale: resistenza sezioni

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazioni di carichi positiva e negativa più gravose.

Dati tabulati:

Elem Property: nome delle caratteristiche geometriche dell'elemento

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento

Lcom: combinazione di carico positivo o negativo più gravosa

Type: sollecitazione (massima o minima)
Top class: classificazione flangia superiore
Bot class: classificazione flangia inferiore

Web class: classificazione anima

Sect. class: classificazione complessiva sezione

Ma,Ed: momento di calcolo applicato alla trave in acciaio isolata Mc,Ed: momento di calcolo applicato alla sezione composta Mpl,Rd: momento resistente plastico, per sezioni di classe 1 e 2

Mel,Rd: momento resistente elastico, per sezioni di classe 3, efficace per

classe 4

M Rd: momento resistente effettivo della sezione

La condizione di verifica della sezione è la seguente:







 $\frac{Ma, Ed + Mc, Ed}{M_Rd} \leq 1$ Verification ratio:

Second 1918 1979	Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Second 19.2 19.28 19.28 19.28 19.28 19.28 24.28 19.24 19.2	Concio 1	101	I[719]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.32	7926.43	6220.80	6220.80	0.000
Campa					_		1									0.000
Semina 192 1970 1966 3711 1966 1970 1971 1972 1971 1972				_	ST SLU MODIII	MIY-MIN					-10.87	-345.87	7926.43	6231.67	6231.67	
Seminary 1970 197					- ST SLLI Mobili	- MV-MIN	-				-26.86	-705 67	7026.43	6247.65	6247.65	
Seminary 1988 1972 1973 1974 1975 1974 1975 1974 1975 1974 1975 1974 1975 1974 1975 1974 1975 197				_												
General 192 1972					-	-				-	-20.80	- 203.07	-	- 3070.02	-	
Composition 1909 1972 Pers				_	ST SLU Mobili	MY-MAX	1	1	1	1	1524.35	4788.69	10626.81	8395.62	10626.81	
Concist 1989 1979	Concio 1	103		Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Seminary Company Com	Concio 1	103	I[721]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1507.57	4365.72	10626.81	8402.92	10626.81	0.553
Section Company Comp	Concio 1	103	J[722]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concor 1949 1723 1949	Concio 1	103	J[722]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1989.95	6097.44	10626.81	8193.01	10626.81	0.761
				_	-	-		-	-	-	-	-	-	-	-	0.000
Concide 10.0 17.33 19.0 19.3 19.0 19.3 19.0 19.					ST SLU Mobili	MY-MAX	1	1	1	1	1995.24	6097.95	12507.78	10303.81	12507.78	
Centes 105 1723 1985					-	-	-	-	-	-	-	-	-	-	-	
Centrol 2					ST SLU Mobili	MY-MAX				1	2145.53	6484.52	12507.78	10239.66	12507.78	
Centre 195 1724 Neg				_	CT CLLI Mobili	-	1			1	21/17/20	- 6242.01	12507.70	10229.01	12507.70	
Concide 105																
Senting				_												
Concio 105 1725 1986 1725 1986 1725 1725 17276 172																0.206
Concio 106 1725 Neg 57 SLY Traw FX-MIN 2 1 1 2 879.25 873.0 888.44 502772 502773 502873 502873 502773 502775																
Compos 107 1725 Neg 51 SLY Tray F.A.HIN 2 1 1 2 878.92 485.34 10096.60 6851.24 10096.60 0.209	Concio 2	106	J[725]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	879.25		8884.94	5627.72		0.089
Control 107 1725 Poc STSU Mobil MY-MAX 1 1 1 118655 51848 132576 116775 132576 0.0725 0.0025 0.	Concio 2	106	J[725]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1186.98	5134.64	12507.78	10648.80	12507.78	0.505
Section 107 1726 Neg 57 SLI Mobil	Concio 3	107	I[725]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	878.92	-85.34	10096.60	6851.24	10096.60	0.079
Concio a 107 1726 Pos	Concio 3	107	I[725]		ST SLU Mobili	MY-MAX	1			1						0.477
Compos 1,008 1726 Neg 57 SLU Mobil							1									
Conco 1 108 1/26 Pos STSLI Mobili MY-MANK 1 1 1 1 1 1 1 1 1					1											
Concio a 108 1727 Pos STSLI Mobili MY-MINI 1 1 1 1 3 1 3 3 5368.99 10096.00 8893.81 10096.00 0.070				_												
Concio 3																
CONCIO 3				_	-	-	-	-	-	-	-1366.33	-3348.33	-	- 6303.63	-	
Concio 3					ST SLU Mobili	MY-MIN	1	1	1	1	-1581.51	-5545.62	10096.60	8964.97	10096.60	
Concio A 100 1728 Pos					-	-	-	-	-	-	-	-	-	-	-	0.000
Concia de Hevar 110	Concio 3	109	J[728]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1845.45	-5955.64	10096.60	8891.91	10096.60	0.773
Concid A Hawar	Concio 3	109	J[728]	Pos	-	-	-	-	-	-	-		-	-	-	0.000
Concia of Hawar 110 J729 Neg ST SLU Mobili MY-MIN 1 3 3 3 334 9 8338.30 21408.67 16971.20 16971.20 0.6870	Concio 4 H=var	110	I[728]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-1843.16	-5930.81	13315.40	10799.77	10799.77	0.720
Concio 4 H=var 110 J[729] Pos Po	Concio 4 H=var	110	1[728]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var 111 1/29 Neg					ST SLU Mobili	MY-MIN	1				-3314.94	-8338.30	21408.67	16971.20	16971.20	
Concio 4 Hevar 111 1729 Pos					-	-	+				-	-	-	-	-	
Concio 4 Hewar 111 1730 Neg ST SLU Mobili MY-MIN 1 3 4 4 5007.19 -1138.46 30347.17 23254.44 23254.44 0.705 Concio 4 Hevar 111 1730 Pos - - - - - - - -					ST SLU Mobili	MY-MIN					-3315.38	-8372.38	21408.67	16971.14	16971.14	
Concio 4 H=var 111 J[730] Pos Po					- CT CLLI Mobili	- NAV NAINI					F007 10	11200 46	2024717	22254.44	- 22254 44	
Concio 4 H=200				_	-	-				-	-3007.19	-11300.40	30347.17	23234.44	23234.44	
Concio 4 H=200					ST SLU Mobili	MY-MIN				4	-5007 19	-11388 46	30347 17	23254 19	23254 19	
Concio 4 H=200					-	-		-	-	-	-	-	-	-	-	0.000
Concio 4 H=200					ST SLU Mobili	MY-MIN	1	3	4	4	-5371.84	-12184.76	30347.17	23221.71	23221.71	0.756
Concio 4 H=200	Concio 4 H=200	112			-	-	-	-	-	-	-		-	-	-	0.000
Concio 4 H=200	Concio 4 H=200	113	I[731]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5365.70	-12275.17	30347.17	23222.25	23222.25	0.760
Concio 4 H=200	Concio 4 H=200	113	I[731]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var 114 I[732] Neg ST SLU Mobili MY-MIN 1 3 4 4 -5023.13 -11476.59 30347.17 23252.85 23252.85 0.710				Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.13	-11476.59	30347.17	23252.77	23252.77	0.710
Concio 4 H=var 114 I[732] Pos - - - - - - - - -					-	-	1		-	-	-	-	-	-	-	
Concio 4 H=var 114 J[733] Neg ST SLU Mobili MY-MIN 1 3 3 3 3 -3439.96 -8432.43 21408.67 16954.25 16954.25 0.700					ST SLU Mobili	MY-MIN			4	4	-5023.13	-11476.59	30347.17	23252.85	23252.85	0.710
Concio 4 H=var					CT CLUBA-bili	-	-		-	-	- 2420.00	- 0422.42	- 24 400 67	46054.25	46054.25	
Concio 4 H=var 115 I[733] Neg ST SLU Mobili MY-MIN 1 3 3 3 -3435.77 -8419.18 21408.67 16954.82 16954.82 0.699					ST SLU MODIII	IVIY-IVIIIN		3	3	3	-3439.96	-8432.43	21408.67	16954.25	16954.25	
Concio 4 H=var 115 1733 Pos - - - - - - - - -					ST SLLI Mobili	MY-MIN	-	3	3	3	-3435 77	-8419 18	21408 67	16954.82	16954.82	
Concio 4 H=var 115 J[734] Neg ST SLU Mobili MY-MIN 1 3 3 3 -2076.40 -6181.46 13315.40 10758.91 10758.91 0.768					-	-	-	-	-	-	-3433.77	-8413.18	- 21408.07	- 10334.82	-	
Concio 4 H=var 115 J[734] Pos					ST SLU Mobili	MY-MIN	1	3	3	3	-2076.40	-6181.46	13315.40	10758.91	10758.91	
Concio 5					-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5 116 J[735] Neg ST SLU Mobili MY-MIN 1 1 1 1 1-1838.54 -5806.93 10096.60 8896.80 10096.60 0.757 Concio 5 116 J[735] Pos - 0.000 Concio 5 117 I[735] Neg ST SLU Mobili MY-MIN 1 1 1 1 - - - - - 0.000 Concio 5 117 J[736] Neg ST SLU Mobili MY-MIN 1 <th< td=""><td></td><td></td><td></td><td></td><td>ST SLU Mobili</td><td>MY-MIN</td><td>1</td><td>1</td><td>1</td><td>1</td><td>-2079.29</td><td>-6179.87</td><td>10096.60</td><td>8726.38</td><td>10096.60</td><td>0.818</td></th<>					ST SLU Mobili	MY-MIN	1	1	1	1	-2079.29	-6179.87	10096.60	8726.38	10096.60	0.818
Concio 5 116 J[735] Pos -	Concio 5	116	I[734]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5 117 I[735] Neg ST SLU Mobili MY-MIN 1 1 1 1 1-1841.72 -5809.21 10096.60 8894.55 10096.60 0.758 Concio 5 117 I[735] Pos - 0.000 Concio 5 117 J[736] Pos ST SLU Mobili MY-MAX 1 1 1 1 1 1.0.39 -966.70 1325.76 11413.94 13255.76 0.237 Concio 5 118 J[736] Pos ST SLU Mobili MY-MIN 1 1 1	Concio 5	116	J[735]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1838.54	-5806.93	10096.60	8896.80	10096.60	0.757
Concio 5 117 I[735] Pos - 0.000 Concio 5 117 J[736] Neg ST SLU Mobili MY-MAX 1 1 1 1 170.39 -3103.16 10096.60 7559.77 10096.60 0.290 Concio 5 118 I[736] Neg ST SLU Mobili MY-MIN 1 1 1 1 170.39 -2966.70 13255.76 11413.94 13255.76 0.237 Concio 5 118 I[736] Neg ST SLU Mobili MY-MAX 1 1 1 1 151.70 -3090.51 10096.60 7578.46 10096.60 0.291 Concio 5 118 J[737] Neg ST SLU Mobili MY-MAX 1 1 1 1 151.70				Pos	-	-	1		-	-	-	-	-	-	-	0.000
Concio 5 117 J[736] Neg STSLU Mobili MY-MIN 1 1 1 1 170.39 -3103.16 10096.60 7559.77 10096.60 0.290 Concio 5 117 J[736] Pos STSLU Mobili MY-MAX 1 1 1 1 170.39 2966.70 13255.76 11413.94 13255.76 0.237 Concio 5 118 I[736] Neg STSLU Mobili MY-MIN 1 1 1 1 151.70 -3090.51 10096.60 7578.46 10096.60 0.291 Concio 5 118 I[736] Pos STSLU Mobili MY-MAX 1 1 1 1 1 151.70 2613.00 13255.76 11395.25 13255.76 0.209 Concio 5 118 J[737] Neg STSLU Mobili MY-MIN 1 1 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos STSLU Mobili MY-MAX 1 1 1 1 1 716.23 4097.63 13255.76 11388.11 13255.76 0.363 Concio 6 119 I[737] Neg STSLU Mobili MY-MIN 1 2 2 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197						MY-MIN					-1841.72	-5809.21	10096.60	8894.55	10096.60	0.758
Concio 5 117 J[736] Pos ST SLU Mobili MY-MAX 1 1 1 10.39 2966.70 13255.76 11413.94 13255.76 0.237 Concio 5 118 I[736] Neg ST SLU Mobili MY-MIN 1 1 1 151.70 -3090.51 10096.60 7578.46 10096.60 0.291 Concio 5 118 I[736] Pos ST SLU Mobili MY-MAX 1 1 1 1 151.70 2613.00 13255.76 11395.25 13255.76 0.209 Concio 5 118 J[737] Neg ST SLU Mobili MY-MIN 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX						-	†					-	40		-	0.000
Concio 5 118 I[736] Neg ST SLU Mobili MY-MIN 1 1 1 1 151.70 -3090.51 10096.60 7578.46 10096.60 0.291 Concio 5 118 I[736] Pos ST SLU Mobili MY-MAX 1 1 1 151.70 2613.00 13255.76 11395.25 13255.76 0.209 Concio 5 118 J[737] Neg ST SLU Mobili MY-MIN 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX 1 1 1 716.23 4097.63 13255.76 11388.11 13255.76 0.363 Concio 6 119 I[737] Neg ST SLU Mobili MY-MIN 1 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197																
Concio 5 118 I[736] Pos ST SLU Mobili MY-MAX 1 1 1 151.70 2613.00 13255.76 11395.25 13255.76 0.209 Concio 5 118 J[737] Neg ST SLU Mobili MY-MIN 1 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX 1 1 1 716.23 4097.63 13255.76 11388.11 13255.76 0.363 Concio 6 119 I[737] Neg ST SLU Mobili MY-MIN 1 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197																
Concio 5 118 J[737] Neg ST SLU Mobili MY-MIN 1 1 1 1 716.23 -2423.61 10096.60 7013.93 10096.60 0.169 Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX 1 1 1 1 716.23 4097.63 13255.76 11388.11 13255.76 0.363 Concio 6 119 I[737] Neg ST SLU Mobili MY-MIN 1 2 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197																
Concio 5 118 J[737] Pos ST SLU Mobili MY-MAX 1 1 1 716.23 4097.63 13255.76 11388.11 13255.76 0.363 Concio 6 119 I[737] Neg ST SLU Mobili MY-MIN 1 2 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197																
Concio 6 119 I[737] Neg ST SLU Mobili MY-MIN 1 2 2 2 716.53 -2426.02 8656.92 5681.07 8656.92 0.197																
																0.197
, conicio 0 1127 1703 1703 1705 1705 1800 1801 1801 1800 1801 1800 18	Concio 6	119	I[737]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.53	4097.16	12055.49	10523.24	12055.49	0.399











Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 6	119	J[738]	Neg	ST SLU Frenamento	MX-MIN	2	1	2	2	1166.41	-0.86	8656.92	5231.20	8656.92	0.135
Concio 6	119	J[738]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1166.41	4888.33	12055.49	10343.69	12055.49	0.502
Concio 6	120 120	1[738]	Neg	ST SLV Vert ST SLU Mobili	FX-MAX	1	1	1	2	859.45 1160.25	-122.61 4754.81	12055 40	5538.16	8656.92 12055.49	0.085 0.491
Concio 6 Concio 6	120	J[738] J[739]	Pos Neg	ST SLV Vert	FX-MAX	2	1	2	2	945.44	-50.39	12055.49 8656.92	10346.15 5452.16	8656.92	0.491
Concio 6	120	J[739]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1276.35	5232.61	12055.49	10299.82	12055.49	0.540
Concio 6	121	I[739]	Neg	ST SLV Vert	FX-MAX	2	1	2	2	945.44	-50.35	8656.92	5452.16	8656.92	0.103
Concio 6	121	1[739]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1276.35	5232.61	12055.49	10299.82	12055.49	0.540
Concio 6	121	J[740]	Neg	ST SLV Vert	FX-MAX	2	1	2	2	859.46	-122.55	8656.92	5538.15	8656.92	0.085
Concio 6	121	J[740]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1160.27	4755.19	12055.49	10346.14	12055.49	0.491
Concio 6	122 122	I[740] I[740]	Neg Pos	ST SLV Vert ST SLU Mobili	FX-MAX MY-MAX	2	1	2	2	864.02 1166.43	-102.21 4888.06	8656.92 12055.49	5533.59 10343.69	8656.92 12055.49	0.088
Concio 6	122	J[741]	Neg	ST SLU Mobili	MY-MIN	1	2	2	2	716.57	-2425.83	8656.92	5681.04	8656.92	0.197
Concio 6	122	J[741]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.57	4096.68	12055.49	10523.22	12055.49	0.399
Concio 5	123	I[741]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	716.27	-2423.42	10096.60	7013.89	10096.60	0.169
Concio 5	123	I[741]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.27	4097.15	13255.76	11388.10	13255.76	0.363
Concio 5	123	J[742]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	151.75	-3090.20	10096.60	7578.41	10096.60	0.291
Concio 5	123	J[742]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	151.75	2613.68	13255.76	11395.30	13255.76	0.209
Concio 5 Concio 5	124 124	I[742] I[742]	Neg Pos	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MAX	1	1	1	1	170.44 170.44	-3102.90 2966.44	10096.60 13255.76	7559.72 11413.99	10096.60 13255.76	0.290 0.237
Concio 5	124	J[743]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1841.63	-5809.68	10096.60	8894.61	10096.60	0.758
Concio 5	124	J[743]	Pos	-	-	-			-	-		-	-	-	0.000
Concio 5	125	I[743]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1838.45	-5807.44	10096.60	8896.86	10096.60	0.757
Concio 5	125	I[743]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	125	J[744]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-2079.20	-6180.36	10096.60	8726.45	10096.60	0.818
Concio 5	125	J[744]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	126	1[744]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2076.31	-6181.94	13315.40	10758.92	10758.92	0.768
Concio 4 H=var	126 126	J[744] J[745]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3435.67	-8419.66	21408.67	16954.83	16954.83	0.000
Concio 4 H=var	126	J[745]	Pos	-	-	-	-	-	-	-3433.07	-8413.00	-	-	-	0.000
Concio 4 H=var	127	1[745]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3439.85	-8433.46	21408.67	16954.27	16954.27	0.700
Concio 4 H=var	127	1[745]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	127	J[746]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.00	-11476.53	30347.17	23252.86	23252.86	0.710
Concio 4 H=var	127	J[746]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	128	I[746]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.00	-11476.53	30347.17	23252.78	23252.78	0.710
Concio 4 H=200	128	1[746]	Pos	-	-	-	-	-	-	- 5065.57	-	- 20247.47	-	-	0.000
Concio 4 H=200 Concio 4 H=200	128 128	J[747] J[747]	Neg Pos	ST SLU Mobili	MY-MIN	1	3	4	4	-5365.57	-12274.99	30347.17	23222.27	23222.27	0.760
Concio 4 H=200	129	1[747]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5371.71	-12184.74	30347.17	23221.72	23221.72	0.756
Concio 4 H=200	129	1[747]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	129	J[748]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5007.05	-11388.28	30347.17	23254.21	23254.21	0.705
Concio 4 H=200	129	J[748]	Pos	-	-	-	-	-		-	-	-	-	-	0.000
Concio 4 H=var	130	I[748]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5007.05	-11388.28	30347.17	23254.45	23254.45	0.705
Concio 4 H=var	130	I[748]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	130	J[749]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3315.25	-8371.48	21408.67	16971.15	16971.15	0.689
Concio 4 H=var	130 131	J[749] I[749]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3314.81	-8337.585	21408.67	16971.21	16971.2	0.000 0.687
Concio 4 H=var	131	1[749]	Pos	-	-	-	-	-	-	-3314.01	-0337.303	-	-	-	0.000
Concio 4 H=var	131	J[750]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-1843.05	-5930.02	13315.40	10799.79	10799.79	0.720
Concio 4 H=var	131	J[750]	Pos	-	-	-	1	1	-	-				-	0.000
Concio 3	132	I[750]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1845.34	-5954.94	10096.60	8891.99	10096.60	0.773
Concio 3	132	I[750]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	132	J[751]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1581.40	-5544.86	10096.60	8964.98	10096.60	0.706
Concio 3	132	J[751]	Pos	CT CI II Mahili	- NAV NAINI	- 1	- 1	- 1	- 1	1500.03		10006.60	- 0062.04	10006.60	0.000
Concio 3	133 133	I[751] I[751]	Neg Pos	ST SLU Mobili	MY-MIN	1 -	1 -	1	-	-1588.82	-5548.31	10096.60	8963.84	10096.60	0.707
Concio 3	133	J[752]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	597.65	-2457.15	10096.60	7132.51	10096.60	0.184
Concio 3	133	J[752]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	597.65	4022.37	13255.76	11443.68	13255.76	0.349
Concio 3	134	I[752]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	576.77	-2519.53	10096.60	7153.39	10096.60	0.192
Concio 3	134	I[752]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	576.77	3681.83	13255.76	11453.46	13255.76	0.321
Concio 3	134	J[753]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	878.98	-85.23	10096.60	6851.18	10096.60	0.079
Concio 3	134	J[753]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1186.63	5135.70	13255.76	11167.71	13255.76	0.477
Concio 2	135	1[753]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	879.31	-87.09 E12E 40	8884.94	5627.66	8884.94 12507.78	0.089
Concio 2	135 135	J[753] J[754]	Pos Neg	ST SLU Mobili ST SLU Termico	MY-MAX MY-MIN	2	1	1	2	1187.06 1840.09	5135.49 -9.42	12507.78 8884.94	10648.77 4666.88	8884.94	0.505
Concio 2	135	J[754]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1840.09	6188.44	12507.78	10370.03	12507.78	0.642
Concio 2	136	I[754]	Neg	ST SLU Vento	MY-MIN	2	1	1	2	1830.38	-12.42	8884.94	4676.58	8884.94	0.205
Concio 2	136	I[754]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1830.38	6070.28	12507.78	10374.17	12507.78	0.632
Concio 2	136	J[755]	Neg	-	-	-		-	-	-	-	-	-	-	0.000
Concio 2	136	J[755]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2147.32	6342.43	12507.78	10238.89	12507.78	0.679
Concio 2	137	1[755]	Neg	- CT CILLA & 1.33		-	-	-	-	- 24.55		42505 55	40000	42507	0.000
C 2		I[755]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2145.58	6484.36	12507.78	10239.64	12507.78	0.690
Concio 2	137	1[756]			i -					_	1	-	-	_	0.000
Concio 2	137	J[756]	Neg	ST SLLI Mobili	MY-MAY	1	1	1	1	1995 27	6097 84	12507 79	10303 70	12507 79	
Concio 2	137 137	J[756]	Pos	ST SLU Mobili	MY-MAX	1 -	1 -	1 -	-	1995.27	6097.84	12507.78	10303.79	12507.78	0.000
Concio 2	137			ST SLU Mobili - ST SLU Mobili	MY-MAX - MY-MAX	1 - 1	1 1	1 - 1	1 - 1	1995.27 - 1989.99	6097.84	12507.78 - 10626.81	10303.79 - 8192.99	12507.78 - 10626.81	
Concio 2 Concio 2 Concio 1	137 137 138	J[756] I[756]	Pos Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 2 Concio 2 Concio 1 Concio 1	137 137 138 138	J[756] I[756] I[756]	Pos Neg Pos	-	-	-	-	-	- 1	-	-	-	-	-	0.000 0.761
Concio 2 Concio 2 Concio 1 Concio 1 Concio 1	137 137 138 138 138	J[756] I[756] I[756] J[757]	Pos Neg Pos Neg	- ST SLU Mobili -	- MY-MAX -	1	1	1	1 -	- 1989.99 -	6097.33	- 10626.81 -	- 8192.99 -	- 10626.81 -	0.000 0.761 0.000





Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 1	139	J[758]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-26.85	-795.65	7926.43	6247.65	6247.65	0.132
Concio 1	139	J[758]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	-26.85	263.71	10626.81	9070.62	10626.81	0.022
Concio 1	140	1[758]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-10.87	-345.85	7926.43	6231.67	6231.67	0.057
Concio 1	140	1[758]	Pos	-	-	-	-		-	- 0.00	- 0.24	- 7000 40			0.000
Concio 1 Concio 1	140 140	J[759] J[759]	Neg Pos	ST SLV Long ST SLV Long	FX-MIN FX-MAX	2	3	1	1	0.00	-0.31 0.31	7926.43 10626.81	6220.80 9058.94	6220.80 10626.81	0.000
Concio 1	201	1[760]	Neg	ST SLV Long	FX-IVIAX FX-MIN	2	3	4	4	0.00	-0.34	8093.91	6479.08	6479.08	0.000
Concio 1	201	1[760]	Pos	ST SLV Long	FX-MAX	1	1	1	1	0.00	0.34	10954.92	9129.34	10954.92	0.000
Concio 1	201	J[761]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-12.17	-347.96	8093.91	6491.25	6491.25	0.055
Concio 1	201	J[761]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	202	I[761]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-34.62	-536.47	8093.91	6513.71	6513.71	0.088
Concio 1	202	I[761]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	-34.62	135.35	10954.92	9144.79	10954.92	0.009
Concio 1	202	J[762]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	202	J[762]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1533.59	4379.60	10954.92	8444.90	10954.92	0.540
Concio 1	203	I[762]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	203	I[762]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1509.71	4094.36	10954.92	8455.55	10954.92	0.512
Concio 1	203	J[763]	Neg	-	-	-	-	<u> </u>	-	-	-	-	-	-	0.000
Concio 1	203	J[763]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2002.00	5482.60	10954.92	8235.84	10954.92	0.683
Concio 2	204	1[763]	Neg	-	-	-	-	H	-	- 2000 52	- 5405.40	- 42046.00	- 40050.00	- 42045.00	0.000
Concio 2	204	1[763]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2009.62	5495.48	12846.08	10358.68	12846.08	0.584
Concio 2	204	J[764] J[764]	Neg Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2146.27	5858.62	12846.08	10298.92	12846.08	0.000
Concio 2 Concio 2	204	1[764]	Neg	- 31 3LO IVIODIII	- IVIT-IVIAA		-	-		- 2140.27	3838.02	12040.00	10230.32	12040.00	0.000
Concio 2	205	1[764]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2149.76	5821.27	12846.08	10297.39	12846.08	0.621
Concio 2	205	J[765]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1844.03	-32.34	9113.78	4932.65	9113.78	0.199
Concio 2	205	J[765]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1844.03	5569.82	12846.08	10431.10	12846.08	0.577
Concio 2	206	1[765]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1854.32	-13.16	9113.78	4922.36	9113.78	0.202
Concio 2	206	1[765]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1854.32	5615.88	12846.08	10426.60	12846.08	0.582
Concio 2	206	J[766]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.73	-259.61	9113.78	5556.95	9113.78	0.105
Concio 2	206	J[766]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1219.73	4613.14	12846.08	10704.13	12846.08	0.454
Concio 3	207	1[766]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.03	-260.76	10397.59	6921.72	10397.59	0.092
Concio 3	207	I[766]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1219.03	4615.62	13602.15	11233.90	13602.15	0.429
Concio 3	207	J[767]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	601.21	-2319.83	10397.59	7539.54	10397.59	0.165
Concio 3	207	J[767]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	601.21	3505.01	13602.15	11530.81	13602.15	0.302
Concio 3	208	1[767]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	629.72	-2256.93	10397.59	7511.03	10397.59	0.156
Concio 3	208	1[767]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	629.72	3701.95	13602.15	11517.11	13602.15	0.318
Concio 3	208	J[768] J[768]	Neg Pos	ST SLU Mobili	MY-MIN	-	1	-	1	-1612.50	-5134.88	10397.59	9055.53	10397.59	0.649
Concio 3	208	1[768]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1604.33	-5166.74	10397.59	9056.90	10397.59	0.651
Concio 3	209	1[768]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	209	J[769]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1881.56	-5533.03	10397.59	9010.24	10397.59	0.713
Concio 3	209	J[769]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	210	1[769]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-1879.35	-5619.27	13534.54	10906.64	10906.64	0.688
Concio 4 H=var	210	1[769]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	210	J[770]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3432.48	-7900.97	21870.53	17101.96	17101.96	0.663
Concio 4 H=var	210	J[770]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	211	I[770]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3430.90	-7882.43	21870.53	17102.20	17102.20	0.662
Concio 4 H=var	211	1[770]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	211	J[771]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.66	-10928.95	31054.78	23330.77	23330.77	0.695
Concio 4 H=var	211	J[771]	Pos	-	-	-	-	\vdash	-	- 5200.55	- 10000 05	- 2405470	- 22222 40		0.000
Concio 4 H=200	212	1[771]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.66	-10928.95	31054.78	23330.48	23330.48	0.695
Concio 4 H=200 Concio 4 H=200	212 212	J[771] J[772]	Pos	ST SLU Mobili	MY-MIN	1	3	4	4	-5691.74	-11616.59	31054.78	23292.27	23292.27	0.000
Concio 4 H=200	212	J[772]	Neg Pos	- 31 3LO IVIODIII	-	-	-	-	-	-3031.74	-11010.39	31034.76	- 23232.21	-	0.000
Concio 4 H=200	213	1[772]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5689.85	-11675.46	31054.78	23292.45	23292.45	0.746
Concio 4 H=200	213	1[772]	Pos	-	-	-	T-		-	-	-	-	-	-	0.000
Concio 4 H=200	213	J[773]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.90	-10917.86	31054.78	23328.45	23328.45	0.696
Concio 4 H=200	213	J[773]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	214	I[773]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.90	-10917.86	31054.78	23328.66	23328.66	0.696
Concio 4 H=var	214	I[773]	Pos	-	-	-	-		-	-	-	-		-	0.000
Concio 4 H=var	214	J[774]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3567.46	-7991.72	21870.53	17082.01	17082.01	0.677
Concio 4 H=var	214	J[774]	Pos	-	-	-	-		-	-	-	-	- '	-	0.000
Concio 4 H=var	215	1[774]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3570.07	-8016.66	21870.53	17081.62	17081.62	0.678
Concio 4 H=var	215	I[774]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	215	J[775]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2129.22	-5879.93	13534.54	10859.13	10859.13	0.738
Concio 4 H=var	215	J[775]	Pos	CT CILLA 4 - Lili	- NAV NAV	- 1	- 1	- 1	- 1	2424.42	- 5040 70	10207.55	- 0000 10	10207.50	0.000
Concio 5	216	1[775]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-2131.42	-5810.79	10397.59	8968.18	10397.59	0.764
Concio 5 Concio 5	216 216	J[775]	Pos	- ST SLU Mobili	- MY-MIN	1	1	1	1	-1876.64	-5453.12	10397.59	9011.06	10397.59	0.000 0.705
Concio 5	216	J[776] J[776]	Neg Pos	- SI SEO IVIODIII	- IVIT-IVIIIN	-	-	-	-	-10/0.04	-5455.12	10397.59	3011.00	10397.59	0.705
Concio 5	217	1[776]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1880.39	-5432.41	10397.59	9010.43	10397.59	0.703
Concio 5	217	1[776]	Pos	-		-	-	-	-	-	-	-	-	-	0.000
Concio 5	217	J[770]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	203.44	-2911.27	10397.59	7937.31	10397.59	0.260
Concio 5	217	J[777]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	203.44	2650.22	13602.15	11721.98	13602.15	0.210
Concio 5	218	1[777]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	175.27	-2964.50	10397.59	7965.48	10397.59	0.268
Concio 5	218	1[777]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	175.27	2432.77	13602.15	11735.51	13602.15	0.192
	218	J[778]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	753.77	-2308.72	10397.59	7386.98	10397.59	0.150
Concio 5	210						-	-	-						
Concio 5 Concio 5	218	J[778]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	753.77	3544.65	13602.15	11457.50	13602.15	0.316
			Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	2	2	2	753.77 754.74	3544.65 -2304.72	13602.15 8891.06	11457.50 5915.32	13602.15 8891.06	0.316 0.174







Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Type	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 6	219	J[779]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1191.69	-419.27	8891.06	5478.37	8891.06	0.087
Concio 6	219	J[779]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1191.69	4290.10	12388.93	10396.31	12388.93	0.442
Concio 6	220 220	I[779] I[779]	Neg Pos	ST SLU Termico ST SLU Mobili	FX-MAX MY-MAX	1	1	2	2	1183.75 1183.75	-339.56 4231.47	8891.06 12388.93	5486.31 10399.56	8891.06 12388.93	0.095 0.437
Concio 6	220	J[780]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1313.54	-149.79	8891.06	5356.53	8891.06	0.131
Concio 6	220	J[780]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1313.54	4522.57	12388.93	10346.52	12388.93	0.471
Concio 6	221	I[780]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1313.54	-149.79	8891.06	5356.53	8891.06	0.131
Concio 6	221	1[780]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1313.54	4522.57	12388.93	10346.52	12388.93	0.471
Concio 6	221 221	J[781] J[781]	Neg	ST SLU Termico ST SLU Mobili	FX-MAX	2	1	2	2	1183.77 1183.77	-292.04 4231.86	8891.06 12388.93	5486.29 10399.55	8891.06 12388.93	0.100 0.437
Concio 6	222	I[781]	Pos Neg	ST SLU Termico	FX-MAX	2	1	2	2	1191.71	-419.32	8891.06	5478.36	8891.06	0.437
Concio 6	222	I[781]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1191.71	4289.76	12388.93	10396.31	12388.93	0.442
Concio 6	222	J[782]	Neg	ST SLU Mobili	MY-MIN	1	2	2	2	754.78	-2304.60	8891.06	5915.29	8891.06	0.174
Concio 6	222	J[782]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	754.78	3541.14	12388.93	10574.88	12388.93	0.347
Concio 5	223 223	I[782] I[782]	Neg	ST SLU Mobili ST SLU Mobili	MY-MIN	1	1	1	1	753.81	-2308.60 3544.24	10397.59 13602.15	7386.94	10397.59 13602.15	0.150 0.316
Concio 5 Concio 5	223	J[783]	Pos Neg	ST SLU Mobili	MY-MAX MY-MIN	1	1	1	1	753.81 175.32	-2964.37	10397.59	11457.48 7965.43	10397.59	0.310
Concio 5	223	J[783]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	175.32	2433.62	13602.15	11735.49	13602.15	0.192
Concio 5	224	I[783]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	203.49	-2911.36	10397.59	7937.26	10397.59	0.260
Concio 5	224	I[783]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	203.49	2650.26	13602.15	11721.95	13602.15	0.210
Concio 5	224	J[784]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1880.30	-5432.39	10397.59	9010.45	10397.59	0.703
Concio 5 Concio 5	224 225	J[784] I[784]	Pos Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1876.54	-5453.07	10397.59	9011.08	10397.59	0.000
Concio 5	225	1[784]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	225	J[785]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-2131.33	-5810.75	10397.59	8968.19	10397.59	0.764
Concio 5	225	J[785]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	226	I[785]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2129.13	-5879.77	13534.54	10859.15	10859.15	0.738
Concio 4 H=var	226	1[785]	Pos	- CT CILL MA-I:II	-	-	-	-	-	- 2500.00	- 004.6.45	- 24070 52	47004.64	47004.64	0.000
Concio 4 H=var	226 226	J[786] J[786]	Neg Pos	ST SLU Mobili	MY-MIN	1	3	3	3	-3569.96	-8016.45	21870.53	17081.64	17081.64	0.678
Concio 4 H=var	227	1[786]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3567.35	-7991.48	21870.53	17082.02	17082.02	0.677
Concio 4 H=var	227	1[786]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	227	J[787]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.77	-10917.70	31054.78	23328.67	23328.67	0.696
Concio 4 H=var	227	J[787]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	228	1[787]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.77	-10917.70	31054.78	23328.47	23328.47	0.696
Concio 4 H=200 Concio 4 H=200	228 228	J[787] J[788]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5689.71	-11675.33	31054.78	23292.47	23292.47	0.000 0.746
Concio 4 H=200	228	J[788]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	229	I[788]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5691.61	-11616.24	31054.78	23292.29	23292.29	0.743
Concio 4 H=200	229	I[788]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	229	J[789]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.52	-10928.65	31054.78	23330.49	23330.49	0.695
Concio 4 H=200 Concio 4 H=var	229	J[789] I[789]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.52	-10928.65	31054.78	23330.79	23330.79	0.000 0.695
Concio 4 H=var	230	1[789]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	230	J[790]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3430.78	-7882.26	21870.53	17102.21	17102.21	0.661
Concio 4 H=var	230	J[790]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	231	1[790]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3432.36	-7900.72	21870.53	17101.98	17101.98	0.663
Concio 4 H=var	231 231	J[790] J[791]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-1879.24	-5619.09	13534.54	10906.66	10906.66	0.000 0.687
Concio 4 H=var	231	J[791]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	232	I[791]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1881.45	-5532.75	10397.59	9010.25	10397.59	0.713
Concio 3	232	I[791]	Pos	-	-	-	-	-	-	-		-	-	-	0.000
Concio 3	232	J[792]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1604.22	-5166.47	10397.59	9056.92	10397.59	0.651
Concio 3	232 233	J[792] I[792]	Pos Neg	- ST SLU Mobili	- MY-MIN	1	1	1	1	-1612.39	-5134.51	10397.59	9055.54	10397.59	0.000 0.649
Concio 3	233	I[792]	Pos	-	-	-	-	-	-	-1012.39	-3134.31	-	- 9033.34	-	0.000
Concio 3	233	J[793]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	629.81	-2256.63	10397.59	7510.95	10397.59	0.156
Concio 3	233	J[793]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	629.81	3702.23	13602.15	11517.07	13602.15	0.318
Concio 3	234	I[793]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	601.30	-2319.65	10397.59	7539.45	10397.59	0.165
Concio 3	234	1[793]	Pos	ST SLU Mobili	MY-MAX	2	1	1	2	601.30	3504.51	13602.15	11530.77	13602.15	0.302
Concio 3	234 234	J[794] J[794]	Neg Pos	ST SLU Termico ST SLU Mobili	FX-MAX MY-MAX	1	1	1	1	1219.11 1219.11	-260.54 4616.39	10397.59 13602.15	6921.64 11233.87	10397.59 13602.15	0.092 0.429
Concio 2	235	1[794]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.11	-259.39	9113.78	5556.88	9113.78	0.105
Concio 2	235	1[794]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1219.81	4613.91	12846.08	10704.10	12846.08	0.454
Concio 2	235	J[795]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1854.39	-13.15	9113.78	4922.29	9113.78	0.202
Concio 2	235	J[795]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1854.39	5616.93	12846.08	10426.57	12846.08	0.582
Concio 2	236	1[795]	Neg	ST SLU Termico ST SLU Mobili	MY-MIN	1	1	1	2	1844.10	-32.24	9113.78	4932.59	9113.78	0.199
Concio 2	236 236	J[795] J[796]	Pos Neg	-	MY-MAX	-	-	-	-	1844.10	5569.84	12846.08	10431.07	12846.08	0.577
Concio 2	236	J[796]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2149.81	5821.53	12846.08	10297.37	12846.08	0.621
Concio 2	237	1[796]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 2	237	1[796]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2146.31	5857.99	12846.08	10298.90	12846.08	0.623
Concio 2	237	J[797]	Neg	- CT CILLAA-bill	- NAV NASY	-	-	-	-	2000.55	- 5405.00	12040.00	10350.00	12046.00	0.000
Concio 2 Concio 1	237 238	J[797] I[797]	Pos Neg	ST SLU Mobili	MY-MAX	1 -	1 -	1 -	1	2009.66	5495.36	12846.08	10358.66	12846.08	0.584
Concio 1	238	1[797]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2002.03	5482.68	10954.92	8235.83	10954.92	0.683
Concio 1	238	J[798]	Neg	-	-	-	-	-	-	-		-	-	-	0.000
Concio 1	238	J[798]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1509.73	4094.10	10954.92	8455.54	10954.92	0.512
Concio 1	239	1[798]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	239	1[798]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1533.61	4379.43	10954.92	8444.89	10954.92	0.540









Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 1	239	J[799]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-34.62	-536.60	8093.91	6513.71	6513.71	0.088
Concio 1	239 240	J[799] I[799]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	3	3	3	-34.62 -12.17	135.20 -347.94	10954.92 8093.91	9144.79 6491.25	10954.92 6491.25	0.009
Concio 1	240	1[799]	Pos	-	-	-	-	-	-	-12.17	-347.34	-	- 0431.23	-	0.000
Concio 1	240	J[800]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.34	8093.91	6479.08	6479.08	0.000
Concio 1	240	J[800]	Pos	ST SLV Long	FX-MAX	1	1	1	1	0.00	0.34	10954.92	9129.34	10954.92	0.000
Concio 1	301	I[801]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.34	8093.91	6479.08	6479.08	0.000
Concio 1 Concio 1	301 301	J[801]	Pos Neg	ST SLV Long ST SLU Mobili	FX-MAX MY-MIN	1	3	3	3	0.00 -12.17	-347.96	10954.92 8093.91	9129.34 6491.25	10954.92 6491.25	0.000
Concio 1	301	J[802]	Pos	-	-	-	-	-	-	-		-	-	-	0.000
Concio 1	302	I[802]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-34.62	-535.59	8093.91	6513.71	6513.71	0.088
Concio 1	302	1[802]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	-34.62	134.47	10954.92	9144.79	10954.92	0.009
Concio 1	302 302	J[803]	Neg Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1533.59	4385.29	10954.92	8444.90	10954.92	0.000
Concio 1	303	1[803]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	303	I[803]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1509.71	4096.42	10954.92	8455.55	10954.92	0.512
Concio 1	303	J[804]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1 Concio 2	303 304	J[804] I[804]	Pos Neg	ST SLU Mobili	MY-MAX	1	1	1	1	2002.00	5486.32	10954.92	8235.84	10954.92	0.684
Concio 2	304	1[804]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2009.62	5499.24	12846.08	10358.68	12846.08	0.585
Concio 2	304	J[805]	Neg	-	-	-	-	-	-	-		-	-	-	0.000
Concio 2	304	J[805]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2146.27	5863.47	12846.08	10298.92	12846.08	0.624
Concio 2 Concio 2	305 305	I[805] I[805]	Neg Pos	ST SLU Mobili	- MY-MAX	1	1	1	1	2149.76	5824.26	12846.08	10297.39	12846.08	0.000 0.621
Concio 2	305	J[806]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1844.03	-34.81	9113.78	4932.65	9113.78	0.021
Concio 2	305	J[806]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1844.03	5572.30	12846.08	10431.10	12846.08	0.577
Concio 2	306	1[806]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1854.32	-17.81	9113.78	4922.36	9113.78	0.202
Concio 2	306 306	I[806] J[807]	Pos	ST SLU Mobili	MY-MAX	2	1	1	2	1854.32 1219.73	5620.54 -257.21	12846.08 9113.78	10426.60	12846.08 9113.78	0.582 0.106
Concio 2	306	J[807] J[807]	Neg Pos	ST SLU Termico ST SLU Mobili	FX-MAX MY-MAX	1	1	1	1	1219.73	4615.54	12846.08	5556.95 10704.13	12846.08	0.106
Concio 3	307	1[807]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.03	-258.32	10397.59	6921.72	10397.59	0.092
Concio 3	307	I[807]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1219.03	4618.06	13602.15	11233.90	13602.15	0.429
Concio 3	307	J[808]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	601.21	-2320.76	10397.59	7539.54	10397.59	0.165
Concio 3	307 308	J[808] I[808]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	1	1	1	601.21 629.72	3505.94 -2259.71	13602.15 10397.59	11530.81 7511.03	13602.15 10397.59	0.302 0.157
Concio 3	308	1[808]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	629.72	3704.78	13602.15	11517.11	13602.15	0.319
Concio 3	308	J[809]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1612.50	-5138.40	10397.59	9055.53	10397.59	0.649
Concio 3	308	J[809]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	309 309	I[809] I[809]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1604.33	-5169.76	10397.59	9056.90	10397.59	0.652
Concio 3	309	J[810]	Pos Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1881.56	-5538.10	10397.59	9010.24	10397.59	0.000
Concio 3	309	J[810]	Pos	-	-	-		-	-	-	-	-	-	-	0.000
Concio 4 H=var	310	I[810]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-1879.35	-5620.46	13534.54	10906.64	10906.64	0.688
Concio 4 H=var	310	I[810]	Pos	- CT CILLBA-bili	-	-	-	-	-	- 2422.40	7000 63	- 24070 52	47404.06	47404.00	0.000
Concio 4 H=var	310 310	J[811] J[811]	Neg Pos	ST SLU Mobili	MY-MIN -	-	3	3	3	-3432.48	-7909.62	21870.53	17101.96	17101.96	0.663
Concio 4 H=var	311	I[811]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3430.90	-7889.28	21870.53	17102.20	17102.20	0.662
Concio 4 H=var	311	I[811]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	311	J[812]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.66	-10943.75	31054.78	23330.77	23330.77	0.696
Concio 4 H=var Concio 4 H=200	311 312	J[812] I[812]	Pos Neg	ST SLU Mobili	- MY-MIN	1	3	4	4	-5290.66	-10943.75	31054.78	23330.48	23330.48	0.000 0.696
Concio 4 H=200	312	I[812]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	312	J[813]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5691.74	-11633.24	31054.78	23292.27	23292.27	0.744
Concio 4 H=200	312	J[813]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200 Concio 4 H=200	313 313	I[813] I[813]	Neg Pos	ST SLU Mobili	MY-MIN	1	3	4	4	-5689.85	-11692.25	31054.78	23292.45	23292.45	0.746
Concio 4 H=200	313	J[814]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.90	-10932.67	31054.78	23328.45	23328.45	0.696
Concio 4 H=200	313	J[814]	Pos	-	-	-	-	-	-	-		-	-	-	0.000
Concio 4 H=var	314	I[814]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.90	-10932.67	31054.78	23328.66	23328.66	0.696
Concio 4 H=var	314	I[814]	Pos	- CT CI I Mahili	- MY-MIN	1	-	-	3	- 2567.46	7000.03	21070 52	17002.01	17002.01	0.000 0.677
Concio 4 H=var Concio 4 H=var	314 314	J[815] J[815]	Neg Pos	ST SLU Mobili	-	-	3	3	-	-3567.46	-7998.03	21870.53	17082.01	17082.01	0.000
Concio 4 H=var	315	I[815]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3570.07	-8024.93	21870.53	17081.62	17081.62	0.679
Concio 4 H=var	315	I[815]	Pos	-	-	-	,	-	-	-	-	-	-	-	0.000
Concio 4 H=var	315	J[816]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2129.22	-5880.57	13534.54	10859.13	10859.13	0.738
Concio 4 H=var Concio 5	315 316	J[816] I[816]	Pos Neg	- ST SLU Mobili	- MY-MIN	1	1	1	1	-2131.42	-5816.20	10397.59	8968.18	10397.59	0.000 0.764
Concio 5	316	I[816]	Pos	-	- IVIII-IVIIIV	-	-	-	-		-	-	- 0300.10	-	0.000
Concio 5	316	J[817]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1876.64	-5455.54	10397.59	9011.06	10397.59	0.705
Concio 5	316	J[817]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	317	I[817]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1880.39	-5436.68	10397.59	9010.43	10397.59	0.704
Concio 5 Concio 5	317 317	J[817] J[818]	Pos Neg	ST SLU Mobili	- MY-MIN	1	1	1	1	203.44	-2914.57	10397.59	7937.31	10397.59	0.000 0.261
	31/	J[818]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	203.44	2653.52	13602.15	11721.98	13602.15	0.210
Concio 5	317	1[010]							_						0.268
Concio 5	317 318	I[818]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	175.27	-2966.40	10397.59	7965.48	10397.59	
Concio 5 Concio 5	318 318	I[818] I[818]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	175.27	2434.67	13602.15	11735.51	13602.15	0.192
Concio 5 Concio 5 Concio 5	318 318 318	I[818] I[818] J[819]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	1	1	1	175.27 753.77	2434.67 -2312.13	13602.15 10397.59	11735.51 7386.98	13602.15 10397.59	0.192 0.150
Concio 5 Concio 5	318 318	I[818] I[818]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	175.27	2434.67	13602.15	11735.51	13602.15	0.192











Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Type	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 6	319	J[820]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1191.69	-414.02	8891.06	5478.37	8891.06	0.087
Concio 6	319	J[820]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1191.69	4295.36	12388.93	10396.31	12388.93	0.443
Concio 6	320 320	I[820] I[820]	Neg Pos	ST SLU Termico ST SLU Mobili	FX-MAX MY-MAX	1	1	1	2	1183.75 1183.75	-336.08 4234.95	8891.06 12388.93	5486.31 10399.56	8891.06 12388.93	0.095
Concio 6	320	J[821]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1313.54	-146.32	8891.06	5356.53	8891.06	0.131
Concio 6	320	J[821]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1313.54	4526.04	12388.93	10346.52	12388.93	0.471
Concio 6	321	I[821]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1313.54	-146.32	8891.06	5356.53	8891.06	0.131
Concio 6	321	I[821]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1313.54	4526.04	12388.93	10346.52	12388.93	0.471
Concio 6	321	J[822]	Neg	ST SLU Termico	FX-MAX	2	1	2	2	1183.77	-288.57	8891.06	5486.29	8891.06	0.101
Concio 6	321 322	J[822] I[822]	Pos	ST SLU Mobili ST SLU Termico	MY-MAX	2	1	2	2	1183.77 1191.71	4235.33 -414.01	12388.93 8891.06	10399.55 5478.36	12388.93 8891.06	0.437 0.087
Concio 6 Concio 6	322	1[822]	Neg Pos	ST SLU Mobili	FX-MAX MY-MAX	1	1	1	1	1191.71	4295.07	12388.93	10396.31	12388.93	0.087
Concio 6	322	J[823]	Neg	ST SLU Mobili	MY-MIN	1	2	2	2	754.78	-2307.96	8891.06	5915.29	8891.06	0.175
Concio 6	322	J[823]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	754.78	3544.50	12388.93	10574.88	12388.93	0.347
Concio 5	323	I[823]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	753.81	-2312.03	10397.59	7386.94	10397.59	0.150
Concio 5	323	I[823]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	753.81	3547.67	13602.15	11457.48	13602.15	0.316
Concio 5	323	J[824]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	175.32	-2966.24	10397.59	7965.43	10397.59	0.268
Concio 5 Concio 5	323 324	J[824] I[824]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	1	1	1	175.32 203.49	2435.49 -2914.42	13602.15 10397.59	11735.49 7937.26	13602.15 10397.59	0.192
Concio 5	324	1[824]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	203.49	2653.32	13602.15	11721.95	13602.15	0.210
Concio 5	324	J[825]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1880.30	-5436.80	10397.59	9010.45	10397.59	0.704
Concio 5	324	J[825]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	325	I[825]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1876.54	-5455.58	10397.59	9011.08	10397.59	0.705
Concio 5	325	I[825]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	325	J[826]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-2131.33	-5816.23	10397.59	8968.19	10397.59	0.764
Concio 5 Concio 4 H=var	325 326	J[826] I[826]	Pos Neg	ST SLU Mobili	- MY-MIN	1	3	3	3	-2129.13	-5880.65	13534.54	10859.15	10859.15	0.000
Concio 4 H=var	326	1[826]	Pos	-	-	-	-	-	-	-2129.13	-3660.03	-	-	-	0.000
Concio 4 H=var	326	J[827]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3569.96	-8025.01	21870.53	17081.64	17081.64	0.679
Concio 4 H=var	326	J[827]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	327	I[827]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3567.35	-7998.17	21870.53	17082.02	17082.02	0.677
Concio 4 H=var	327	I[827]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	327	J[828]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.77	-10932.50	31054.78	23328.67	23328.67	0.696
Concio 4 H=var Concio 4 H=200	327 328	J[828] I[828]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5311.77	-10932.50	31054.78	23328.47	23328.47	0.000
Concio 4 H=200	328	1[828]	Pos	-	-	-	-	-	-	- 3311.77	-	-	-	-	0.000
Concio 4 H=200	328	J[829]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5689.71	-11692.02	31054.78	23292.47	23292.47	0.746
Concio 4 H=200	328	J[829]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=200	329	1[829]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5691.61	-11632.98	31054.78	23292.29	23292.29	0.744
Concio 4 H=200	329	1[829]	Pos	-	-	-	-	-	-	- 5200.52	-	- 2405470	-	-	0.000
Concio 4 H=200	329 329	J[830] J[830]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.52	-10943.44	31054.78	23330.49	23330.49	0.696
Concio 4 H=200 Concio 4 H=var	330	1[830]	Pos Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5290.52	-10943.44	31054.78	23330.79	23330.79	0.696
Concio 4 H=var	330	1[830]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	330	J[831]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3430.78	-7888.73	21870.53	17102.21	17102.21	0.662
Concio 4 H=var	330	J[831]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	331	I[831]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3432.36	-7909.08	21870.53	17101.98	17101.98	0.663
Concio 4 H=var	331	I[831]	Pos	- CT CLUBA-bili	- MY-MIN	-	-	-	-	- 4070.24	- 5620.02	13534.54	10005.55	10000 00	0.000
Concio 4 H=var	331 331	J[832] J[832]	Neg Pos	ST SLU Mobili	IVIY-IVIIN	1 -	3	3	3	-1879.24	-5620.03	13534.54	10906.66	10906.66	0.688
Concio 3	332	1[832]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1881.45	-5537.75	10397.59	9010.25	10397.59	0.714
Concio 3	332	1[832]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	332	J[833]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1604.22	-5169.40	10397.59	9056.92	10397.59	0.651
Concio 3	332	J[833]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	333	1[833]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1612.39	-5138.00	10397.59	9055.54	10397.59	0.649
Concio 3	333	1[833]	Pos	CT CLUBA-bili	-	-	-	-	-	- 620.04	- 2250.64	10207.50	- 7540.05	10207.50	0.000
Concio 3	333 333	J[834] J[834]	Neg Pos	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MAX	1	1	1	1	629.81 629.81	-2259.64 3705.25	10397.59 13602.15	7510.95 11517.07	10397.59 13602.15	0.157 0.319
Concio 3	334	1[834]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	601.30	-2320.59	10397.59	7539.45	10397.59	0.165
Concio 3	334	I[834]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	601.30	3505.45	13602.15	11530.77	13602.15	0.302
Concio 3	334	J[835]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.11	-258.13	10397.59	6921.64	10397.59	0.092
Concio 3	334	J[835]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1219.11	4618.80	13602.15	11233.87	13602.15	0.429
Concio 2	335	1[835]	Neg	ST SLU Termico	FX-MAX	2	1	1	2	1219.81	-257.02	9113.78	5556.88	9113.78	0.106
Concio 2	335	1[835]	Pos	ST SLU Mobili	MY-MAX	2	1	1	2	1219.81	4616.28	12846.08 9113.78	10704.10	12846.08 9113.78	0.454
Concio 2	335 335	J[836] J[836]	Neg Pos	ST SLU Termico ST SLU Mobili	MY-MIN MY-MAX	1	1	1	1	1854.39 1854.39	-17.72 5621.51	12846.08	4922.29 10426.57	12846.08	0.582
Concio 2	336	1[836]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1844.10	-34.68	9113.78	4932.59	9113.78	0.199
Concio 2	336	1[836]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1844.10	5572.28	12846.08	10431.07	12846.08	0.577
Concio 2	336	J[837]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 2	336	J[837]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2149.81	5824.47	12846.08	10297.37	12846.08	0.621
Concio 2	337	1[837]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 2	337	1[837]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2146.31	5862.84	12846.08	10298.90	12846.08	0.623
Concio 2	337 337	J[838] J[838]	Neg Pos	ST SLU Mobili	- MY-MAX	1	1	1	1	2009.66	5499.11	12846.08	10358.66	12846.08	0.000
Concio 2	337	J[838] I[838]	Neg	-	- IVI I - IVIAX	-	-	-	-	- 2009.00	- 5499.11	- 12040.08	- 10358.66	- 14040.08	0.000
Concio 1	338	1[838]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2002.03	5486.39	10954.92	8235.83	10954.92	0.684
Concio 1	338	J[839]	Neg			-			-		-	-			0.000
Concio 1	338	J[839]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1509.73	4096.15	10954.92	8455.54	10954.92	0.512
Concio 1	339	1[839]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	339	1[839]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1533.61	4385.14	10954.92	8444.89	10954.92	0.540















Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 1	339	J[840]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-34.62	-535.73	8093.91	6513.71	6513.71	0.088
Concio 1	339 340	J[840] I[840]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	3	3	3	-34.62 -12.17	134.32 -347.94	10954.92 8093.91	9144.79 6491.25	10954.92 6491.25	0.009
Concio 1	340	I[840]	Pos	-	-	-	-	-	-	-12.17	-347.34	-	- 0431.23	-	0.000
Concio 1	340	J[841]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.34	8093.91	6479.08	6479.08	0.000
Concio 1	340	J[841]	Pos	ST SLV Long	FX-MAX	1	1	1	1	0.00	0.34	10954.92	9129.34	10954.92	0.000
Concio 1	401	1[842]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.32	7926.43	6220.80	6220.80	0.000
Concio 1	401 401	J[842] J[843]	Pos Neg	ST SLV Long ST SLU Mobili	FX-MAX MY-MIN	1	3	3	3	0.00 -10.87	-345.87	10626.81 7926.43	9058.94 6231.67	10626.81 6231.67	0.000
Concio 1	401	J[843]	Pos	-	-	-	-	-	-	-		-	-	-	0.000
Concio 1	402	I[843]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-26.86	-795.04	7926.43	6247.65	6247.65	0.132
Concio 1	402	1[843]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	-26.86	263.04	10626.81	9070.62	10626.81	0.022
Concio 1 Concio 1	402 402	J[844] J[844]	Neg Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1524.35	4778.23	10626.81	8395.62	10626.81	0.000 0.593
Concio 1	403	I[844]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1	403	I[844]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1507.57	4359.72	10626.81	8402.92	10626.81	0.552
Concio 1	403	J[845]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 1 Concio 2	403 404	J[845] I[845]	Pos Neg	ST SLU Mobili	MY-MAX	1	1	1	1	1989.95	6090.15	10626.81	8193.01	10626.81	0.760 0.000
Concio 2	404	1[845]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1995.24	6090.83	12507.78	10303.81	12507.78	0.646
Concio 2	404	J[846]	Neg	-	-	-	-		-	-	-	-	-	-	0.000
Concio 2	404	J[846]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	2145.53	6476.79	12507.78	10239.66	12507.78	0.689
Concio 2	405	1[846]	Neg	- CT CI II Mahili	- NAV NANV	- 1	- 1	- 1	- 1	- 2147.20	- 6226.10	12507.70	10220.01	12507.78	0.000
Concio 2	405 405	I[846] J[847]	Pos Neg	ST SLU Mobili ST SLU Vento	MY-MAX MY-MIN	2	1	1	2	2147.28 1830.32	6336.19 -3.46	12507.78 8884.94	10238.91 4676.65	12507.78 8884.94	0.678 0.206
Concio 2	405	J[847]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1830.32	6064.98	12507.78	10374.20	12507.78	0.631
Concio 2	406	I[847]	Neg	ST SLU Termico	MY-MIN	2	1	1	2	1840.02	-2.28	8884.94	4666.94	8884.94	0.207
Concio 2	406	I[847]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1840.02	6180.32	12507.78	10370.06	12507.78	0.641
Concio 2	406 406	J[848]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	879.25	-87.20 5130.13	8884.94 12507.78	5627.72	8884.94 12507.78	0.089 0.505
Concio 2 Concio 3	406	J[848] I[848]	Pos Neg	ST SLU Mobili ST SLV Trasv	MY-MAX FX-MIN	2	1	1	2	1186.98 878.92	-85.34	10096.60	10648.80 6851.24	10096.60	0.505
Concio 3	407	I[848]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1186.55	5130.32	13255.76	11167.75	13255.76	0.477
Concio 3	407	J[849]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	576.68	-2516.75	10096.60	7153.47	10096.60	0.192
Concio 3	407	J[849]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	576.68	3679.43	13255.76	11453.50	13255.76	0.321
Concio 3	408	1[849]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	597.56	-2449.73	10096.60	7132.60	10096.60	0.183
Concio 3 Concio 3	408 408	J[849] J[850]	Pos Neg	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MIN	1	1	1	1	597.56 -1588.93	4014.33 -5540.74	13255.76 10096.60	11443.72 8963.83	13255.76 10096.60	0.348 0.706
Concio 3	408	J[850]	Pos	-	-	-	-	-	-	-1300.93	-3340.74	-	-	-	0.000
Concio 3	409	1[850]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1581.51	-5541.86	10096.60	8964.97	10096.60	0.706
Concio 3	409	I[850]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 3	409	J[851]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1845.45	-5949.36	10096.60	8891.91	10096.60	0.772
Concio 3 Concio 4 H=var	409 410	J[851] I[851]	Pos Neg	- ST SLU Mobili	- MY-MIN	1	3	3	3	-1843.16	-5927.75	13315.40	10799.77	10799.77	0.000 0.720
Concio 4 H=var	410	I[851]	Pos	-	-	-	-	-	-	-1043.10	-3327.73	-	-	-	0.000
Concio 4 H=var	410	J[852]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3314.94	-8327.95	21408.67	16971.20	16971.20	0.686
Concio 4 H=var	410	J[852]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	411	1[852]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3315.38	-8362.98	21408.67	16971.14	16971.14	0.688
Concio 4 H=var	411 411	J[852] J[853]	Pos Neg	ST SLU Mobili	- MY-MIN	1	3	4	4	-5007.19	-11371.04	30347.17	23254.44	23254.44	0.000 0.704
Concio 4 H=var	411	J[853]	Pos	-	-	-	-	-	-	-3007.13	-11371.04	-	-	-	0.000
Concio 4 H=200	412	I[853]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5007.19	-11371.04	30347.17	23254.19	23254.19	0.704
Concio 4 H=200	412	I[853]	Pos	-	-	-	-		-	-			-	-	0.000
Concio 4 H=200	412	J[854]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5371.84	-12165.57	30347.17	23221.71	23221.71	0.755
Concio 4 H=200 Concio 4 H=200	412 413	J[854] I[854]	Pos Neg	- ST SLU Mobili	- MY-MIN	1	3	4	4	-5365.70	-12256.03	30347.17	23222.25	23222.25	0.000 0.759
Concio 4 H=200	413	1[854]	Pos	-	IVIIIN	-	-	-	-	-	-12256.03	-	-	-	0.000
Concio 4 H=200	413	J[855]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.13	-11459.30	30347.17	23252.77	23252.77	0.709
Concio 4 H=200	413	J[855]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	414	1[855]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.13	-11459.30	30347.17	23252.85	23252.85	0.709
Concio 4 H=var	414 414	J[855]	Pos	ST SLU Mobili	- MY-MIN	1	3	3	3	-3439.96	-8423.30	21408.67	16954.25	16954.25	0.000
Concio 4 H=var	414	J[856]	Neg Pos	-	IVIIIN	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	415	1[856]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3435.77	-8409.05	21408.67	16954.82	16954.82	0.699
Concio 4 H=var	415	I[856]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 4 H=var	415	J[857]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2076.40	-6178.37	13315.40	10758.91	10758.91	0.767
Concio 4 H=var Concio 5	415 416	J[857] I[857]	Pos	ST SLU Mobili	- MY-MIN	1	1	1	1	-2079.29	-6173.17	10096.60	8726.38	10096.60	0.000 0.817
Concio 5	416	1[857]	Neg Pos	-	IVIIIN	-	-	-	-	-	- 01/3.1/	-	-	-	0.000
Concio 5	416	J[858]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1838.54	-5802.68	10096.60	8896.80	10096.60	0.757
Concio 5	416	J[858]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio 5	417	1[858]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-1841.72	-5800.34	10096.60	8894.55	10096.60	0.757
Concio 5	417 417	1[858]	Pos	- ST SIII Mobili	- MY-MIN	1	- 1	- 1	- 1	170.20	-3096.11	10096.60	7550 77	10096.60	0.000
Concio 5	417 417	J[859] J[859]	Neg Pos	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MAX	1	1	1	1	170.39 170.39	-3096.11 2959.66	13255.76	7559.77 11413.94	13255.76	0.290
Concio 5	418	1[859]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	151.70	-3088.21	10096.60	7578.46	10096.60	0.291
Concio 5	418	1[859]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	151.70	2610.69	13255.76	11395.25	13255.76	0.208
Concio 5	418	J[860]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	716.23	-2419.78	10096.60	7013.93	10096.60	0.169
Concio 5	418	J[860]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.23	4093.80	13255.76	11388.11	13255.76	0.363
Concio 6	419 419	1[860]	Neg	ST SLU Mobili	MY-MIN MY-MAX	1	2	2	2	716.53	-2422.17 4093.31	8656.92 12055.49	5681.07	8656.92 12055.49	0.197
Concio 6	419	1[860]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.53	4093.31	12055.49	10523.24	12055.49	0.399















Common	Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Secret 440 1661 No. 75 175 No. 75 1	Concio 6	419	J[861]	Neg	ST SLV Vert	FX-MAX	2	1	2	2	864.01	-102.19	8656.92	5533.60	8656.92	0.088
Segreg	Concio 6	419	J[861]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1166.41	4882.57	12055.49	10343.69	12055.49	0.502
Second 18.5 May May TSU Part May M	Concio 6	420	I[861]	Neg	ST SLV Vert	FX-MAX	2	1	2	2	859.45			5538.16		
Seminary 1965 1965 1966 196																
Section 19				_												
Seminary 1.5																
Second March Second Se																
Second 142							_									
Concord 142 Seal Neg				_												
Conces 1.67 1.68 1.69 1.58							2									
Control Cont	Concio 6	422	I[863]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1166.43	4882.26	12055.49	10343.69	12055.49	0.502
Compos C	Concio 6	422	J[864]	Neg	ST SLU Mobili	MY-MIN	1	2	2	2	716.57	-2421.99	8656.92	5681.04	8656.92	0.197
Cambo	Concio 6	422	J[864]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	716.57	4092.84	12055.49	10523.22	12055.49	0.399
Concol 19.5 1985 1961 1962	Concio 5	423	I[864]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	716.27	-2419.60	10096.60	7013.89	10096.60	0.169
Compos C	Concio 5			Pos												
Carcia C				_			_									
Cereins 424 8855 796																
Centrols							_									
Centes 1472 1865							_									
Common 1427 1865 1867 1868 1869 1870 1869 1870 1869 1870				_	-	-		-		-	-1041.03	-3800.33	10030.00	- 8834.01	-	
Concis 425 685 687 6					ST SLU Mobili	MY-MIN		1	1	1	-1838.45	-5802.92	10096.60	8896.86	10096.60	
Center March Mar					-	-		-	-	-	-	-	-	-	-	
Concoc March Mar		425	J[867]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	-2079.20	-6173.38	10096.60	8726.45	10096.60	
Concol Alway Ass 1969 Proc					-	-					-	-	-	-	-	
Control Arthroy 4-66 1988 Neg 575 LU MODIN N° MONN 1 3 3 3 3+35 57 8-00.08 2108 87 1095-83 1095-83 0.099 Control Arthroy 4-77 1988 Neg 575 LU MODIN N° MONN 1 3 3 3 3+39 85 8-023 82 2108 87 1095-92 1095-82 0.700 Control Arthroy 4-77 1989 Neg 575 LU MODIN N° MONN 1 3 4 4 4 5023 00 1149-08 30347.77 2323.78 2323.28 0.700 Control Arthroy 4-77 1989 Neg 575 LU MODIN N° MONN 1 3 4 4 4 5023 00 1149-08 30347.77 2323.78 2323.28 0.700 Control Arthroy 4-78 1989 Neg 575 LU MODIN N° MONN 1 3 4 4 4 5023 00 1149-08 30347.77 2323.78 2323.28 0.700 Control Arthroy 4-88 1989 N° N° STSU MODIN N° MONN 1 3 4 4 4 5023 00 1149-08 30347.77 2323.77 2323.77 0.700 Control Arthroy 4-88 1989 N° N° STSU MODIN N° MONN 1 3 4 4 5025 00 1149-08 30347.77 2323.77 2323.77 0.700 Control Arthroy 4-88 1989 N° N° STSU MODIN N° MONN 1 3 4 4 5025 00 1149-08 30347.77 2322.77 2323.77 0.700 Control Arthroy 4-78 1989 N° N° STSU MODIN N° MONN 1 3 4 4 5025 00 1149-08 30347.77 2322.77 2323.77 0.700 Control Arthroy 4-79 1971 N° N° STSU MODIN N° MONN 1 3 4 4 5025 00 1117 0.0047.77 2323.77 0.700 0.000	Concio 4 H=var	426	1[867]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-2076.31	-6178.48	13315.40	10758.92	10758.92	0.767
Control of Harmar 426	Concio 4 H=var	426	1[867]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concol Affersion A-77 1986 Neg STSLU Mobile NY-MIN 1 3 3 3 348,985 A943.82 3408.67 1096-27 1096-27 0.700 Concol Affersion A-77 1986 Neg STSLU Mobile NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2302.86 2302.86 0.709 Concol Affersion A-77 1986 Neg STSLU Mobile NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2302.86 2302.86 0.709 Concol Affersion A-78 Ny - 1986 NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2302.78 2302.78 0.709 Concol Affersion A-88 1887 Neg STSLU Mobile NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2302.78 2322.78 0.709 Concol Affersion A-88 1887 Neg STSLU Mobile NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2322.77 2322.77 0.709 Concol Affersion A-88 1887 Neg STSLU Mobile NY-MIN 1 3 4 4 40,003.00 1145-68 30047.17 2322.27 2322.27 0.709 Concol Affersion A-88 1887 Neg STSLU Mobile NY-MIN 1 3 4 4 4 50,003.00 1145-68 30047.17 2322.27 2322.27 0.709 Concol Affersion A-89 1887 Ny - Ny - Ny - Ny - Ny - Ny - Ny - Ny	Concio 4 H=var	426	J[868]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3435.67	-8409.08	21408.67	16954.83	16954.83	0.699
Concide Human A27 1868 Post	Concio 4 H=var	426	J[868]		-	-	-	-	-	-	-	-	-	-	-	0.000
Control At Hewer 427 1869 Neg \$T \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Concio 4 H=var				ST SLU Mobili	MY-MIN	1	3	3	3	-3439.85	-8423.82	21408.67	16954.27	16954.27	
Concide A Harvor 422 6899 Post Pos					-	-	-	-	-	-	-	-	-	-	-	
Concol 41-1200 4-22 1869 Neg 57 SLU Mobil				_	ST SLU Mobili	MY-MIN	1	3	4	4	-5023.00	-11459.08	30347.17	23252.86	23252.86	
Concide 14-1200 428					CT CLU MA-bill	- NAV NAINI	-	-	-	-	- 5022.00	- 44450.00	- 20247.47	- 22252.70	- 22252.70	
Concio A 1+200 A28 JB/70 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 -398-57 1225-57 1225-57 1232-57 2322-27 0.700 0.000 0.0006 A128 JB/70 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 -398-57 1215-56 30947.17 2322-17 2322-17 0.700 0.000 0.0006 A128 JB/70 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 -398-77 31215-56 30947.17 2322-17 2322-17 0.700 0.000 0.0006 A128 JB/70 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 -590-706 1137-10 30947.17 2322-17 2322-17 0.700 0.000 0.0006 A129 JB/71 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 -500-706 1137-10 30947.17 2322-14 2322-14 0.700 0.000 0.0006 A129 JB/71 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 500-706 1137-10 30947.17 2322-14 2322-14 0.700 0.000 0.0006 A129 JB/71 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 500-706 1137-10 30947.17 2322-14 2322-14 0.700 0.000 0.0006 A129 JB/71 Pos STSLU MOBIL M-Y-MIN 1 3 4 4 500-706 1137-10 30947.17 2322-14 2322-14 0.700 0.000 0.0006 A129 JB/71 Pos STSLU MOBIL M-Y-MIN 1 5 5 5 5 5 5 5 5 5				_	ST SLU MODIII	IVIY-IVIIN				4	-5023.00	-11459.08	30347.17	23252.78	23252.78	
Concol 14-200 42-28 18701 Pos ST SLU Mobili					- ST SLLI Mobili	- MV-MIN				- 1	-5265 57	-12255 77	203/17/17	22222 27	22222 27	
Conco 4 H-200 4-99 1870					-	-					-3303.37	-12233.77	- 30347.17	- 23222.21	-	
Concio A 14-20 429 1870 Pes F. F. F. F. F. F. F. F					ST SLU Mobili	MY-MIN					-5371.71	-12165.61	30347.17	23221.72	23221.72	
Concio A H-200					-	-					-	-	-	-	-	
Concio al Ha-200 429 1871 Pos S. S. UMOBII NY-MIN 1 3 4 4 5.007.05 -1.371.02 3934.71 23254.45 0.704.00 0.000 0.00000 0.00000 0.0000 0.00000 0.00000 0.00000 0.00000 0.00000 0.0000					ST SLU Mobili	MY-MIN	1	3	4	4	-5007.05	-11371.02	30347.17	23254.21	23254.21	
Concio a Hewar	Concio 4 H=200	429	J[871]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio A Hwarr	Concio 4 H=var	430	I[871]	Neg	ST SLU Mobili	MY-MIN	1	3	4	4	-5007.05	-11371.02	30347.17	23254.45	23254.45	0.704
Concio A H-war Mag J[872] Pos Po	Concio 4 H=var	430	I[871]	Pos	-	-	-	-	-	-	-	-	-	-	-	0.000
Concio A H-war	Concio 4 H=var	430	J[872]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-3315.25	-8362.56	21408.67	16971.15	16971.15	0.688
Concio Hewar 431 1872 Pos	Concio 4 H=var	430	J[872]	Pos	-	-		-	-	-	-	-	-	-	-	
Concio 4 H=var					ST SLU Mobili	MY-MIN	1	3	3	3	-3314.81	-8327.70	21408.67	16971.21	16971.21	
Concio Heave					-	-					-	-	-	-	-	
Concio 3					ST SLU Mobili	MY-MIN			3	3	-1843.05	-5927.31	13315.40	10799.79	10799.79	
Concio 3					-	-			-	-	- 4045.04		40005.50		40005.50	
Concio 3				_	ST SLU MODIII	MY-MIN			1	1	-1845.34	-5948.93	10096.60	8891.99	10096.60	
CONCIO 3					CT CLLI Mobili	NAV NAINI			1	1	1501 40	- EEA1 26	10006 60	9064.09	10006 60	
Concio 3					-	-	-	-	-	-	-1361.40	-3341.30	10090.00	6504.56	10090.00	
CONCIO 3					ST SLU Mobili	MY-MIN	1	1	1	1	-1588.82	-5540.28	10096.60	8963.84	10096.60	
Concio 3					-	-	-	-	-	-	-	-	-	-	-	
Concio 3					ST SLU Mobili	MY-MIN	1	1	1	1	597.65	-2449.69	10096.60	7132.51	10096.60	
Concio 3	Concio 3					MY-MAX	1	1	1	1	597.65	4014.90	13255.76		13255.76	0.348
Concio 3	Concio 3	434	I[875]	Neg	ST SLU Mobili	MY-MIN	1	1	1	1	576.77	-2516.77	10096.60	7153.39	10096.60	0.192
Concio 3 434 J[876] Pos ST SLU Mobili MY-MAX 1 1 1 1 1186.63 5131.20 13255.76 11167.71 13255.76 0.477 Concio 2 435 I[876] Neg ST SLV Trasv FX-MIN 2 1 1 1 1186.63 5131.20 13255.76 11167.71 13255.76 0.089 Concio 2 435 I[876] Pos ST SLU Mobili MY-MAX 1 1 1 1187.06 5130.98 12507.78 10648.77 12507.78 0.0505 Concio 2 435 J[877] Neg ST SLU Termico MY-MIN 2 1 1 1 1840.09 6-231 8884.94 4666.88 8884.94 0.007 Concio 2 436 I[877] Neg ST SLU Mobili MY-MAX 1 1 1 1840.09 6-181.32 12507.78 10374.17 12507.78 0.631 Concio 2 436 I[878] Neg ST SLU	Concio 3	434	I[875]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	576.77	3679.07	13255.76	11453.46	13255.76	0.321
Concio 2 435 I[876] Neg ST SLV Trasv FX-MIN 2 1 1 2 879.31 -87.10 8884.94 5627.66 8884.94 0.089 Concio 2 435 I[876] Pos ST SLU Mobili MY-MAX 1 1 1 1187.06 5130.98 12507.78 10648.77 12507.78 0.505 Concio 2 435 J[877] Neg ST SLU Primico MY-MIN 2 1 1 1 1 14840.09 -2.31 8884.94 466.88 8884.94 0.207 Concio 2 435 J[877] Pos ST SLU Mobili MY-MAX 1 <td>Concio 3</td> <td>434</td> <td>J[876]</td> <td>Neg</td> <td>ST SLV Trasv</td> <td>FX-MIN</td> <td>2</td> <td>1</td> <td>1</td> <td>2</td> <td>878.98</td> <td>-85.24</td> <td>10096.60</td> <td>6851.18</td> <td>10096.60</td> <td>0.079</td>	Concio 3	434	J[876]	Neg	ST SLV Trasv	FX-MIN	2	1	1	2	878.98	-85.24	10096.60	6851.18	10096.60	0.079
Concio 2 435 I[876] Pos ST SLU Mobili MY-MAX 1 1 1 1 1187.06 5130.98 12507.78 10507.78 0.505 Concio 2 435 J[877] Neg ST SLU Termico MY-MIN 2 1 1 2 1840.09 -2.31 8884.94 4666.88 8884.94 0.207 Concio 2 435 J[877] Pos ST SLU Mobili MY-MAX 1 1 1 1 1840.09 6181.32 12507.78 10370.03 12507.78 0.641 Concio 2 436 I[877] Neg ST SLU Mobili MY-MAX 1 1 1 1 1840.09 6181.32 12507.78 10370.03 12507.78 0.641 Concio 2 436 I[877] Pos ST SLU Mobili MY-MAX 1 1 1 1 1 1 1 12507.78 10370.03 12507.78 0.631 Concio 2 436 J[878] Pos	Concio 3	434	J[876]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1186.63	5131.20	13255.76	11167.71	13255.76	0.477
Concio 2 435 J[877] Neg ST SLU Termico MY-MIN 2 1 1 2 1840.09 -2.31 8884.94 4666.88 8884.94 0.207 Concio 2 435 J[877] Pos ST SLU Mobili MY-MAX 1 1 1 1 840.09 6181.32 12507.78 10370.03 12507.78 0.641 Concio 2 436 I[877] Neg ST SLU Mobili MY-MAX 1 1 1 1 1840.09 6181.32 12507.78 10370.03 12507.78 0.641 Concio 2 436 I[877] Pos ST SLU Mobili MY-MAX 1 1 1 1 1830.38 6064.97 12507.78 10374.17 12507.78 0.631 Concio 2 436 J[878] Neg -				_												
Concio 2 435 J877 Pos ST SLU Mobili MY-MAX 1 1 1 1 1 1 1 1 1			I[876]	Pos		MY-MAX										
Concio 2 436 I[877] Neg ST SLU Vento MY-MIN 2 1 1 2 1830.38 -3.58 8884.94 4676.58 8884.94 0.206 Concio 2 436 I[877] Pos ST SLU Mobili MY-MAX 1 1 1 1830.38 6064.97 12507.78 10374.17 12507.78 0.631 Concio 2 436 J[878] Neg - - - - - - - - - - - - - 0.631 Concio 2 436 J[878] Neg -				_			_									
Concio 2 436 I[877] Pos ST SLU Mobili MY-MAX 1 1 1 1 1830.38 6064.97 12507.78 10374.17 12507.78 0.631 Concio 2 436 J[878] Neg - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							_									
Concio 2 436 J[878] Neg -							_									
Concio 2 436 J[878] Pos ST SLU Mobili MY-MAX 1 1 1 2147.32 6335.95 12507.78 10238.89 12507.78 0.678 Concio 2 437 I[878] Neg - <th< td=""><td></td><td></td><td></td><td></td><td>31 SLU MODIII</td><td>IVIY-IVIAX</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1830.38</td><td>6064.97</td><td>12507.78</td><td>103/4.17</td><td>12507.78</td><td></td></th<>					31 SLU MODIII	IVIY-IVIAX	1	1	1	1	1830.38	6064.97	12507.78	103/4.17	12507.78	
Concio 2 437 I[878] Neg - - - - - - - - - - - - - - - - - - - 0.000 Concio 2 437 I[878] Pos ST SLU Mobili MY-MAX 1 1 1 1 2145.58 6476.43 12507.78 10239.64 12507.78 0.689 Concio 2 437 J[879] Neg - <t< td=""><td></td><td></td><td></td><td></td><td>ST SLLI Mobili</td><td>MY-MAY</td><td>1</td><td>1</td><td>1</td><td>1</td><td>2147 22</td><td>6335.05</td><td>12507 79</td><td>10238 80</td><td>12507 79</td><td></td></t<>					ST SLLI Mobili	MY-MAY	1	1	1	1	2147 22	6335.05	12507 79	10238 80	12507 79	
Concio 2 437 I[878] Pos ST SLU Mobili MY-MAX 1 1 1 1 2145.58 6476.43 12507.78 10239.64 12507.78 0.689 Concio 2 437 J[879] Neg - - - - - - - - - - - 0.000 Concio 2 437 J[879] Neg - - - - - - - - - - - 0.000 Concio 1 438 I[879] Neg - - - - - - - - - - 0.000 Concio 1 438 I[879] Pos ST SLU Mobili MY-MAX 1 1 1 1 1999.9 6090.09 10626.1 8192.99 10626.81 0.760 Concio 1 438 J[880] Neg - - - - - - - - <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>- IVIII-IVIMA</td> <td></td> <td></td> <td></td> <td></td> <td>- 2147.32</td> <td>-</td> <td>-</td> <td>- 10230.03</td> <td>-</td> <td></td>					-	- IVIII-IVIMA					- 2147.32	-	-	- 10230.03	-	
Concio 2 437 J[879] Neg -					ST SLU Mobili	MY-MAX					2145 58	6476 43	12507 78	10239 64	12507 78	
Concio 2 437 J[879] Pos ST SLU Mobili MY-MAX 1 1 1 1 1995.27 6090.74 12507.78 10303.79 12507.78 0.646 Concio 1 438 I[879] Neg - <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td></td<>					-	-					-	-	-	-	-	
Concio 1 438 I[879] Neg -					ST SLU Mobili	MY-MAX					1995.27	6090.74	12507.78	10303.79	12507.78	
Concio 1 438 I[879] Pos ST SLU Mobili MY-MAX 1 1 1 1 989.99 6090.09 10626.81 8192.99 10626.81 0.760 Concio 1 438 J[880] Neg - <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td></td<>					-	-					-	-	-	-	-	
Concio 1 438 J[880] Neg - - - - - - - - - - 0.000 Concio 1 438 J[880] Pos STSLU Mobili MY-MAX 1 1 1 1 1507.59 4360.13 10626.81 8402.91 10626.81 0.552 Concio 1 439 I[880] Neg - - - - - - - - 0.000				_	ST SLU Mobili	MY-MAX			1	1	1989.99	6090.09	10626.81	8192.99	10626.81	
Concio 1 438 J[880] Pos ST SLU Mobili MY-MAX 1 1 1 1507.59 4360.13 10626.81 8402.91 10626.81 0.552 Concio 1 439 I[880] Neg -					-	-					-	-	-	-	-	
				_	ST SLU Mobili	MY-MAX	1	1	1	1	1507.59	4360.13	10626.81	8402.91	10626.81	
Concio 1 430 [1990] Doc ST.S.I.I.Mobili MAY MAY 1 1 1 1 1 1 1 1 1	Concio 1	439	1[880]	Neg	-	-	-	-	-	-	-	-	-	-	-	0.000
ביי בי בייסווסטן אוועסטווו אווסטעווו דייסטווועסטן אוועסטן דיסטוועסטן דיסטוועסטן דיסטוועסטן דיסטוועסטן דיסטוועסטן דיסטוועסטטווועסטן דיסטוועסטן	Concio 1	439	I[880]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	1524.37	4778.26	10626.81	8395.61	10626.81	0.593











Elem property	Elem number	Position [node]	Positive/ Negative	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	Ma,Ed (kN*m)	Mc,Ed (kN*m)	Mpl,Rd (kN*m)	Mel,Rd (kN*m)	M_Rd (kN*m)	Verif. Ratio
Concio 1	439	J[881]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-26.85	-795.02	7926.43	6247.65	6247.65	0.132
Concio 1	439	J[881]	Pos	ST SLU Mobili	MY-MAX	1	1	1	1	-26.85	263.08	10626.81	9070.62	10626.81	0.022
Concio 1	440	I[881]	Neg	ST SLU Mobili	MY-MIN	1	3	3	3	-10.87	-345.85	7926.43	6231.67	6231.67	0.057
Concio 1	440	I[881]	Pos	-	-	-	1	1	-		i	-	-	-	0.000
Concio 1	440	J[882]	Neg	ST SLV Long	FX-MIN	2	3	4	4	0.00	-0.31	7926.43	6220.80	6220.80	0.000
Concio 1	440	J[882]	Pos	ST SLV Long	FX-MAX	1	1	1	1	0.00	0.31	10626.81	9058.94	10626.81	0.000

7.2 VERIFICHE DI RESISTENZA AL TAGLIO VERTICALE ALLO SLU

Si effettuano le verifiche allo stato limite ultimo per taglio verticale delle sezioni composte travisoletta

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazione di carichi più gravose. Dati tabulati:

Elem Property: nome delle caratteristiche geometriche dell'elemento

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento

Lcom: combinazione di carico My positivo o negativo più gravosa

Type: sollecitazione (massima o minima)
Top class: classificazione flangia superiore
Bot class: classificazione flangia inferiore

Web class: classificazione anima

Sect. class: classificazione complessiva sezione

N_Ed: sforzo assiale di calcoloM_Ed: momento di calcoloV_Ed: sforzo tagliante di calcolo

Vpl,Rd: resistenza al taglio della sezione di acciaio (≥ V Ed)

Vb,Rd: resistenza all'instabilità per taglio dell'anima di acciaio (≥ V_Ed)

La condizione di verifica della sezione è la seguente:

Verification ratio: $\frac{V_{-Ed}}{\min(V_{pl,Rd}, V_{b,Rd})} \le 1$

Elem property	Elem number	Position	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	V_Ed (kN)	Vpl,Rd (kN)	Vb,Rd (kN)	Verif. Ratio
Concio 1	101	I[719]	ST SLV Vert	FX-MAX	1	1	1	1	0.43	1.78	0.75	3302.77	2574.42	0.000
Concio 1	101	J[720]	ST SLU Mobili	FZ-MAX	1	3	3	3	0.00	362.09	486.84	3302.77	2574.10	0.189
Concio 1	102	I[720]	ST SLU Mobili	FZ-MIN	1	3	3	3	-161.88	490.75	-1983.80	3302.77	2573.82	0.771
Concio 1	102	J[721]	ST SLU Mobili	FZ-MIN	1	1	1	1	-107.91	68760.61	-1130.94	3302.77	2478.97	0.456
Concio 1	103	I[721]	ST SLU Mobili	FZ-MIN	1	1	1	1	-134.14	68511.04	-1323.46	3302.77	2478.97	0.534
Concio 1	103	J[722]	ST SLU Mobili	FZ-MIN	1	1	1	1	-120.61	89971.33	-821.28	3302.77	2478.97	0.331
Concio 2	104	I[722]	ST SLU Mobili	FZ-MIN	1	1	1	1	-120.61	57229.54	-821.28	3267.64	2478.30	0.331
Concio 2	104	J[723]	ST SLU Mobili	FZ-MAX	1	1	1	1	73.21	58870.67	605.69	3267.64	2478.30	0.244
Concio 2	105	I[723]	ST SLU Mobili	FZ-MIN	1	1	1	1	-87.17	60604.46	-749.98	3267.64	2478.30	0.303
Concio 2	105	J[724]	ST SLU Mobili	FZ-MAX	1	1	1	1	70.28	50879.05	1109.77	3267.64	2478.30	0.448
Concio 2	106	1[724]	ST SLU Mobili	FZ-MAX	1	1	1	1	-0.08	51645.67	898.97	3267.64	2478.30	0.363
Concio 2	106	J[725]	ST SLU Mobili	FZ-MAX	1	1	1	1	50.73	33705.05	1342.85	3267.64	2478.30	0.542
Concio 3	107	I[725]	ST SLU Mobili	FZ-MAX	1	1	1	1	50.73	28996.09	1342.85	4356.85	4158.81	0.323
Concio 3	107	J[726]	ST SLU Mobili	FZ-MAX	1	1	1	1	31.38	14402.99	1671.51	4356.85	4158.81	0.402
Concio 3	108	I[726]	ST SLU Mobili	FZ-MAX	1	1	1	1	-4.50	15169.03	1463.55	4356.85	4158.81	0.352
Concio 3	108	J[727]	ST SLU Mobili	FZ-MAX	1	1	1	1	48.78	5093.20	2242.86	4356.85	4158.81	0.539
Concio 3	109	1[727]	ST SLU Mobili	FZ-MAX	1	1	1	1	75.87	4636.46	2021.19	4356.85	4158.81	0.486
Concio 3	109	J[728]	ST SLU Mobili	FZ-MAX	1	1	1	1	72.21	5590.16	2107.79	4356.85	4158.81	0.507
Concio 4 H=var	110	I[728]	ST SLU Mobili	FZ-MAX	1	3	3	3	-25.74	6213.50	2097.90	4310.00	4114.09	0.510
Concio 4 H=var	110	J[729]	ST SLU Mobili	FZ-MAX	1	3	3	3	59.45	11503.69	2538.23	6652.39	4852.97	0.523
Concio 4 H=var	111	1[729]	ST SLU Mobili	FZ-MAX	1	3	3	3	-5.32	11140.63	2371.42	6652.39	4865.67	0.487
Concio 4 H=var	111	J[730]	ST SLU Mobili	FZ-MAX	1	3	4	4	90.17	15403.66	2804.83	8994.79	5327.56	0.526
Concio 4 H=200	112	I[730]	ST SLU Mobili	FZ-MAX	1	3	4	4	235.01	15525.98	2806.25	8994.79	5323.92	0.527







Elem property	Elem number	Position	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	V_Ed (kN)	Vpl,Rd (kN)	Vb,Rd (kN)	Verif. Ratio
Concio 4 H=200	112	J[731]	ST SLU Mobili	FZ-MAX	1	3	4	4	199.95	16768.87	2895.46	8994.79	5285.27	0.548
Concio 4 H=200	113	I[731]	ST SLU Mobili	FZ-MIN	1	3	4	4	23.14	17958.97	-2778.27	8994.79	5245.48	0.530
Concio 4 H=200 Concio 4 H=var	113 114	J[732] I[732]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	4	4	47.01 -123.44	16688.62 16433.65	-2689.04 -2690.03	8994.79 8994.79	5287.85 5292.30	0.509 0.508
Concio 4 H=var	114	J[733]	ST SLU Mobili	FZ-MIN	1	3	3	3	-123.44	12264.22	-2090.03	6652.39	4818.89	0.308
Concio 4 H=var	115	1[733]	ST SLU Mobili	FZ-MIN	1	3	3	3	-158.45	12719.92	-2421.34	6652.39	4802.45	0.504
Concio 4 H=var	115	J[734]	ST SLU Mobili	FZ-MIN	1	3	3	3	-246.39	7682.23	-1981.42	4310.00	4114.09	0.482
Concio 5	116	I[734]	ST SLU Mobili	FZ-MIN	1	1	1	1	-134.50	7014.75	-1987.46	4356.85	4158.81	0.478
Concio 5	116	J[735]	ST SLU Mobili	FZ-MIN	1	1	1	1	-121.38	6106.07	-1900.89	4356.85	4158.81	0.457
Concio 5	117	1[735]	ST SLU Mobili	FZ-MIN	1	1	1	1	-101.45	6590.66	-2125.60	4356.85	4158.81	0.511
Concio 5	117 118	J[736] I[736]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	-160.84 -169.25	4855.65 4411.14	-1322.62 -1537.24	4356.85 4356.85	4158.81 4158.81	0.318
Concio 5	118	J[737]	ST SLU Mobili	FZ-MIN	1	1	1	1	-150.62	18037.91	-1357.24	4356.85	4158.81	0.370
Concio 6	119	I[737]	ST SLU Mobili	FZ-MIN	1	1	1	1	-150.62	23295.28	-1164.83	2614.11	1592.23	0.732
Concio 6	119	J[738]	ST SLU Mobili	FZ-MIN	1	1	1	1	-202.35	37214.76	-744.44	2614.11	1592.23	0.468
Concio 6	120	I[738]	ST SLU Mobili	FZ-MIN	1	1	1	1	-164.64	36374.98	-962.80	2614.11	1592.23	0.605
Concio 6	120	J[739]	ST SLU Mobili	FZ-MIN	1	1	1	1	-146.79	40294.51	-550.56	2614.11	1592.23	0.346
Concio 6	121 121	1[739]	ST SLU Mobili	FZ-MIN	1	1	1	1	-146.79	40294.51	-550.56	2614.11	1592.23	0.346
Concio 6	121	J[740] I[740]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	80.16 17.26	36273.52 37211.05	962.61 744.40	2614.11 2614.11	1592.23 1592.23	0.605 0.468
Concio 6	122	J[741]	ST SLU Mobili	FZ-MAX	1	1	1	1	68.99	23263.09	1164.69	2614.11	1592.23	0.731
Concio 5	123	I[741]	ST SLU Mobili	FZ-MAX	1	1	1	1	68.99	18147.42	1164.69	4356.85	4158.81	0.280
Concio 5	123	J[742]	ST SLU Mobili	FZ-MAX	1	1	1	1	50.40	4498.21	1537.11	4356.85	4158.81	0.370
Concio 5	124	I[742]	ST SLU Mobili	FZ-MAX	1	1	1	1	5.25	5137.22	1322.59	4356.85	4158.81	0.318
Concio 5	124	J[743]	ST SLU Mobili	FZ-MAX	1	1	1	1	64.67	6040.92	2125.36	4356.85	4158.81	0.511
Concio 5	125 125	1[743]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	83.10 80.59	5582.01	1900.72 1987.28	4356.85	4158.81 4158.81	0.457 0.478
Concio 5 Concio 4 H=var	126	J[744] I[744]	ST SLU Mobili	FZ-IVIAX FZ-MAX	1	3	3	3	-13.67	6473.10 7161.64	1987.28	4356.85 4310.00	4114.09	0.478
Concio 4 H=var	126	J[745]	ST SLU Mobili	FZ-MAX	1	3	3	3	70.40	12047.74	2421.14	6652.39	4833.00	0.501
Concio 4 H=var	127	I[745]	ST SLU Mobili	FZ-MAX	1	3	3	3	-7.22	11677.05	2255.81	6652.39	4846.53	0.465
Concio 4 H=var	127	J[746]	ST SLU Mobili	FZ-MAX	1	3	4	4	93.90	15581.43	2689.59	8994.79	5322.26	0.505
Concio 4 H=200	128	I[746]	ST SLU Mobili	FZ-MAX	1	3	4	4	230.07	15702.85	2688.59	8994.79	5318.60	0.506
Concio 4 H=200	128	J[747]	ST SLU Mobili	FZ-MAX	1	3	4	4	198.84	16886.23	2777.81	8994.79	5281.47	0.526
Concio 4 H=200 Concio 4 H=200	129 129	J[747] J[748]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	4	4	11.94 36.30	17846.31 16508.50	-2895.91 -2806.70	8994.79 8994.79	5249.36 5293.61	0.552 0.530
Concio 4 H=var	130	1[748]	ST SLU Mobili	FZ-MIN	1	3	4	4	-137.89	16240.71	-2805.26	8994.79	5298.03	0.529
Concio 4 H=var	130	J[749]	ST SLU Mobili	FZ-MIN	1	3	3	3	-229.65	11693.03	-2371.79	6652.39	4840.45	0.490
Concio 4 H=var	131	I[749]	ST SLU Mobili	FZ-MIN	1	3	3	3	-164.69	12141.33	-2538.42	6652.39	4825.11	0.526
Concio 4 H=var	131	J[750]	ST SLU Mobili	FZ-MIN	1	3	3	3	-257.59	6625.37	-2098.07	4310.00	4114.09	0.510
Concio 3	132	I[750]	ST SLU Mobili	FZ-MIN	1	1	1	1	-133.09	6061.39	-2107.96	4356.85	4158.81	0.507
Concio 3	132	J[751]	ST SLU Mobili	FZ-MIN	1	1	1	1	-122.39	5062.62	-2021.34	4356.85	4158.81	0.486
Concio 3	133 133	J[751] J[752]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	-97.01 -150.27	5574.85 15051.44	-2243.08 -1463.56	4356.85 4356.85	4158.81 4158.81	0.539
Concio 3	134	I[752]	ST SLU Mobili	FZ-MIN	1	1	1	1	-124.22	14365.21	-1671.62	4356.85	4158.81	0.402
Concio 3	134	J[753]	ST SLU Mobili	FZ-MIN	1	1	1	1	-104.84	28970.31	-1342.98	4356.85	4158.81	0.323
Concio 2	135	I[753]	ST SLU Mobili	FZ-MIN	1	1	1	1	-104.84	33735.12	-1342.98	3267.64	2478.30	0.542
Concio 2	135	J[754]	ST SLU Mobili	FZ-MIN	1	1	1	1	-155.63	51693.51	-899.03	3267.64	2478.30	0.363
Concio 2	136	1[754]	ST SLU Mobili	FZ-MIN	1	1	1	1	-105.81	50993.96	-1110.02	3267.64	2478.30	0.448
Concio 2	136 137	J[755] I[755]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MIN	1	1	1	1	-90.45	60415.06 58995.38	749.65 -605.84	3267.64 3267.64	2478.30 2478.30	0.302
Concio 2	137	J[756]	ST SLU Mobili	FZ-MAX	1	1	1	1	43.08	57056.84	821.17	3267.64	2478.30	0.331
Concio 1	138	1[756]	ST SLU Mobili	FZ-MAX	1	1	1	1	43.08	89514.70	821.17	3302.77	2478.97	0.331
Concio 1	138	J[757]	ST SLU Mobili	FZ-MAX	1	1	1	1	29.59	67978.32	1323.28	3302.77	2478.97	0.534
Concio 1	139	I[757]	ST SLU Mobili	FZ-MAX	1	1	1	1	6.43	68535.22	1130.76	3302.77	2478.97	0.456
Concio 1	139	J[758]	ST SLU Mobili	FZ-MAX	1	3	3	3	-47.46	434.49	1983.47	3302.77	2573.96	0.771
Concio 1	140	1[758]	ST SLU Mobili	MY-MIN	1	3	3	3	0.00	362.07	-486.84	3302.77	2574.10	0.189
Concio 1	140 201	J[759] I[760]	ST SLV Vert ST SLV Vert	FX-MAX FX-MAX	1	1	1	1	0.41	1.71 4.14	0.74 1.00	3302.77 3302.77	2574.42 2574.42	0.000
Concio 1	201	J[760]	ST SLU Mobili	FZ-MAX	1	3	3	3	0.49	367.00	495.30	3302.77	2574.42	0.192
Concio 1	202	I[761]	ST SLU Mobili	FZ-MIN	1	3	4	4	-271.40	479.34	-1973.27	3302.77	2573.85	0.767
Concio 1	202	J[762]	ST SLU Mobili	FZ-MIN	1	1	1	1	-288.05	145314.38	-1044.14	3302.77	2478.97	0.421
Concio 1	203	1[762]	ST SLU Mobili	FZ-MIN	1	1	1	1	-438.83	146519.20	-1311.93	3302.77	2478.97	0.529
Concio 1	203	J[763]	ST SLU Mobili	FZ-MIN	1	1	1	1	-417.08	191543.72	-807.07	3302.77	2478.97	0.326
Concio 2	204	1[763]	ST SLU Mobili	FZ-MIN	1	1	1	1	-417.08	84173.65	-807.07	3267.64	2478.30	0.326
Concio 2	204	J[764] I[764]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MIN	1	1	1	1	-121.81 -400.88	86776.87 88877.77	686.33 -818.77	3267.64 3267.64	2478.30 2478.30	0.277
Concio 2	205	J[765]	ST SLU Mobili	FZ-MAX	1	1	1	1	-179.96	75447.13	1156.47	3267.64	2478.30	0.330
Concio 2	206	1[765]	ST SLU Mobili	FZ-MAX	1	1	1	1	-162.48	76160.27	854.91	3267.64	2478.30	0.345
Concio 2	206	J[766]	ST SLU Mobili	FZ-MAX	1	1	1	1	-53.82	50542.77	1319.00	3267.64	2478.30	0.532
Concio 3	207	1[766]	ST SLU Mobili	FZ-MAX	1	1	1	1	-53.82	41164.47	1319.00	4356.85	4158.81	0.317
Concio 3	207	J[767]	ST SLU Mobili	FZ-MAX	1	1	1	1	-97.74	21121.54	1653.59	4356.85	4158.81	0.398
Concio 3	208	1[767]	ST SLU Mobili	FZ-MAX	1	1	1	1	48.69	21298.69	1402.51	4356.85	4158.81	0.337
Concio 3	208	J[768]	ST SLU Mobili	FZ-MAX	1	1	1	1	119.73	5148.38	2221.20	4356.85	4158.81	0.534
Concio 3	209	J[768] J[769]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	76.99 117.71	4605.85 5664.83	2022.07 2100.68	4356.85 4356.85	4158.81 4158.81	0.486 0.505
Concio 4 H=var	210	1[769]	ST SLU Mobili	FZ-MAX	1	3	3	3	18.92	6408.23	2095.47	4310.00	4114.09	0.509
Concio 4 H=var	210	J[770]	ST SLU Mobili	FZ-MAX	1	3	3	3	207.39	12068.66	2556.01	6652.39	4837.71	0.528
Concio 4 H=var	211	I[770]	ST SLU Mobili	FZ-MAX	1	3	3	3	83.22	11615.16	2471.79	6652.39	4854.04	0.509
Concio 4 H=var	211	J[771]	ST SLU Mobili	FZ-MAX	1	3	4	4	184.20	16105.59	2947.12	8994.79	5310.89	0.555
Concio 4 H=200	212	I[771]	ST SLU Mobili	FZ-MAX	1	3	4	4	339.16	16216.83	2940.42	8994.79	5307.49	0.554











Elem property	Elem number	Position	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	V_Ed (kN)	Vpl,Rd (kN)	Vb,Rd (kN)	Verif. Ratio
Concio 4 H=200	212	J[772]	ST SLU Mobili	FZ-MAX	1	3	4	4	317.70	17591.86	3034.87	8994.79	5263.56	0.577
Concio 4 H=200	213	I[772]	ST SLU Mobili	FZ-MIN	1	3	4	4	108.52	18509.74	-2909.58	8994.79	5232.25	0.556
Concio 4 H=200	213	J[773]	ST SLU Mobili	FZ-MIN	1	3	4	4	119.76	17134.30	-2815.17	8994.79	5278.58	0.533
Concio 4 H=var	214	I[773]	ST SLU Mobili	FZ-MIN	1	3	4	4	-57.76	16961.99	-2821.87	8994.79	5282.33	0.534
Concio 4 H=var	214	J[774]	ST SLU Mobili	FZ-MIN	1	3	3	3	-154.76	12653.42	-2346.67	6652.39	4811.39	0.488
Concio 4 H=var	215	1[774]	ST SLU Mobili	FZ-MIN	1	3	3	3	31.41	13183.92	-2434.27	6652.39	4794.89	0.508
Concio 4 H=var	215 216	J[775]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	3	3	-161.22 -48.61	7928.42	-1974.64	4310.00	4114.09 4158.81	0.480 0.476
Concio 5 Concio 5	216	J[775] J[776]	ST SLU Mobili	FZ-MIN	1	1	1	1	-48.61	7076.86 6089.26	-1979.80 -1901.27	4356.85 4356.85	4158.81	0.476
Concio 5	217	1[776]	ST SLU Mobili	FZ-MIN	1	1	1	1	80.99	6688.60	-2108.03	4356.85	4158.81	0.507
Concio 5	217	J[777]	ST SLU Mobili	FZ-MIN	1	1	1	1	7.56	7075.66	-1259.47	4356.85	4158.81	0.303
Concio 5	218	1[777]	ST SLU Mobili	FZ-MIN	1	1	1	1	-87.58	6744.00	-1523.63	4356.85	4158.81	0.366
Concio 5	218	J[778]	ST SLU Mobili	FZ-MIN	1	1	1	1	-46.81	25620.54	-1140.14	4356.85	4158.81	0.274
Concio 6	219	I[778]	ST SLU Mobili	FZ-MIN	1	1	1	1	-46.81	36797.77	-1140.14	2614.11	1592.23	0.716
Concio 6	219	J[779]	ST SLU Mobili	FZ-MIN	1	1	1	1	-160.23	57655.40	-697.76	2614.11	1592.23	0.438
Concio 6	220	I[779]	ST SLU Mobili	FZ-MIN	1	1	1	1	-178.03	57001.80	-1015.77	2614.11	1592.23	0.638
Concio 6	220	J[780]	ST SLU Mobili	FZ-MIN	1	1	1	1	-133.21	63349.39	-588.74	2614.11	1592.23	0.370
Concio 6	221	1[780]	ST SLU Mobili	FZ-MIN	1	1	1	1	-133.21	63349.39	-588.74	2614.11	1592.23	0.370
Concio 6	221	J[781]	ST SLU Mobili	FZ-MAX	1	1	1	1	-83.18	57169.80	1015.60	2614.11	1592.23	0.638
Concio 6	222	I[781]	ST SLU Mobili	FZ-MAX	1	1	1	1	-70.07	57858.42	697.66	2614.11	1592.23	0.438
Concio 6	222	J[782]	ST SLU Mobili	FZ-MAX	1	1	1	1	43.34	36988.63	1139.97	2614.11	1592.23	0.716
Concio 5 Concio 5	223 223	J[782] J[783]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	43.34 2.65	25920.80 7034.35	1139.97 1523.47	4356.85 4356.85	4158.81 4158.81	0.274 0.366
Concio 5	223	I[783]	ST SLU Mobili	FZ-MAX	1	1	1	1	118.30	7359.62	1259.42	4356.85	4158.81	0.303
Concio 5	224	J[784]	ST SLU Mobili	FZ-MAX	1	1	1	1	191.79	6119.38	2107.80	4356.85	4158.81	0.503
Concio 5	225	1[784]	ST SLU Mobili	FZ-MAX	1	1	1	1	88.74	5571.14	1901.02	4356.85	4158.81	0.457
Concio 5	225	J[785]	ST SLU Mobili	FZ-MAX	1	1	1	1	129.99	6536.97	1979.55	4356.85	4158.81	0.476
Concio 4 H=var	226	I[785]	ST SLU Mobili	FZ-MAX	1	3	3	3	35.66	7414.27	1974.40	4310.00	4114.09	0.480
Concio 4 H=var	226	J[786]	ST SLU Mobili	FZ-MAX	1	3	3	3	223.83	12604.76	2434.07	6652.39	4817.60	0.505
Concio 4 H=var	227	I[786]	ST SLU Mobili	FZ-MAX	1	3	3	3	91.60	12099.44	2346.37	6652.39	4836.58	0.485
Concio 4 H=var	227	J[787]	ST SLU Mobili	FZ-MAX	1	3	4	4	195.19	16193.71	2821.54	8994.79	5308.20	0.532
Concio 4 H=200	228	I[787]	ST SLU Mobili	FZ-MAX	1	3	4	4	344.88	16320.55	2814.83	8994.79	5304.30	0.531
Concio 4 H=200	228	J[788]	ST SLU Mobili	FZ-MAX	1	3	4	4	325.11	17630.72	2909.24	8994.79	5262.27	0.553
Concio 4 H=200	229	1[788]	ST SLU Mobili	FZ-MIN	1	3	4	4	115.43	18458.90	-3035.18	8994.79	5234.02	0.580
Concio 4 H=200	229	J[789]	ST SLU Mobili	FZ-MIN	1	3	4	4	126.91	17010.11	-2940.73	8994.79	5282.58	0.557
Concio 4 H=var	230	1[789]	ST SLU Mobili	FZ-MIN	1	3	4	4	-56.06	16829.51	-2947.41	8994.79	5286.64	0.558
Concio 4 H=var	230	J[790]	ST SLU Mobili	FZ-MIN	1	3	3	3	-151.78	12077.71	-2472.04	6652.39	4833.50	0.511
Concio 4 H=var Concio 4 H=var	231 231	J[790] J[791]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	3	3	35.60 -158.99	12583.89 6850.27	-2556.17 -2095.67	6652.39 4310.00	4818.40 4114.09	0.531 0.509
Concio 3	232	I[791]	ST SLU Mobili	FZ-MIN	1	1	1	1	-40.20	6088.53	-2100.89	4356.85	4158.81	0.505
Concio 3	232	J[792]	ST SLU Mobili	FZ-MIN	1	1	1	1	-71.74	5040.07	-2022.28	4356.85	4158.81	0.486
Concio 3	233	1[792]	ST SLU Mobili	FZ-MIN	1	1	1	1	32.88	5598.92	-2221.40	4356.85	4158.81	0.534
Concio 3	233	J[793]	ST SLU Mobili	FZ-MIN	1	1	1	1	-38.11	21109.69	-1402.53	4356.85	4158.81	0.337
Concio 3	234	I[793]	ST SLU Mobili	FZ-MIN	1	1	1	1	-173.92	20952.42	-1653.74	4356.85	4158.81	0.398
Concio 3	234	J[794]	ST SLU Mobili	FZ-MIN	1	1	1	1	-129.93	41017.44	-1319.17	4356.85	4158.81	0.317
Concio 2	235	I[794]	ST SLU Mobili	FZ-MIN	1	1	1	1	-129.93	50445.02	-1319.17	3267.64	2478.30	0.532
Concio 2	235	J[795]	ST SLU Mobili	FZ-MIN	1	1	1	1	-238.55	76095.60	-855.07	3267.64	2478.30	0.345
Concio 2	236	I[795]	ST SLU Mobili	FZ-MIN	1	1	1	1	-276.98	75467.84	-1156.72	3267.64	2478.30	0.467
Concio 2	236	J[796]	ST SLU Mobili	FZ-MAX	1	1	1	1	-303.90	88781.89	818.51	3267.64	2478.30	0.330
Concio 2	237	1[796]	ST SLU Mobili	FZ-MIN	1	1	1	1	-237.91	86916.84	-686.50	3267.64	2478.30	0.277
Concio 2	237	J[797]	ST SLU Mobili	FZ-MAX	1	1	1	1	-301.08	83992.99	806.92	3267.64	2478.30	0.326
Concio 1	238	1[797]	ST SLU Mobili	FZ-MAX	1	1	1	1	-301.08	190782.52	806.92	3302.77	2478.97	0.326
Concio 1	238 239	J[798] I[798]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	-322.74 -161.44	145689.50 144480.35	1311.72 1044.02	3302.77 3302.77	2478.97 2478.97	0.529 0.421
Concio 1	239	J[798]	ST SLU Mobili	FZ-IVIAX FZ-MAX	1	3	3	3	-161.44	342.13	1972.90	3302.77	2574.13	0.421
Concio 1	240	1[799]	ST SLU Mobili	MY-MIN	1	3	3	3	0.00	366.98	-495.30	3302.77	2574.10	0.700
Concio 1	240	J[800]	ST SLV Vert	FX-MAX	1	1	1	1	0.48	4.01	0.99	3302.77	2574.42	0.000
Concio 1	301	I[801]	ST SLV Vert	FX-MAX	1	1	1	1	0.49	4.13	1.00	3302.77	2574.42	0.000
Concio 1	301	J[802]	ST SLU Mobili	FZ-MAX	1	3	3	3	0.00	367.00	495.30	3302.77	2574.10	0.192
Concio 1	302	I[802]	ST SLU Mobili	FZ-MIN	1	3	4	4	-268.76	477.38	-1974.23	3302.77	2573.85	0.767
Concio 1	302	J[803]	ST SLU Mobili	FZ-MIN	1	1	1	1	-285.42	145285.85	-1045.10	3302.77	2478.97	0.422
Concio 1	303	I[803]	ST SLU Mobili	FZ-MIN	1	1	1	1	-437.55	146506.04	-1312.48	3302.77	2478.97	0.529
Concio 1	303	J[804]	ST SLU Mobili	FZ-MIN	1	1	1	1	-415.80	191528.90	-807.63	3302.77	2478.97	0.326
Concio 2	304	I[804]	ST SLU Mobili	FZ-MIN	1	1	1	1	-415.80	84165.25	-807.63	3267.64	2478.30	0.326
Concio 2	304	J[805]	ST SLU Mobili	FZ-MAX	1	1	1	1	-123.09	86786.38	686.88	3267.64	2478.30	0.277
Concio 2	305	1[805]	ST SLU Mobili	FZ-MIN	1	1	1	1	-399.21	88868.72	-818.86	3267.64	2478.30	0.330
Concio 2	305	J[806]	ST SLU Mobili	FZ-MAX	1	1	1	1	-181.63	75455.66	1156.56	3267.64	2478.30	0.467
Concio 2	306	1[806]	ST SLU Mobili	FZ-MAX	1	1	1	1	-166.78	76180.56	855.66	3267.64	2478.30	0.345
Concio 2	306	J[807]	ST SLU Mobili	FZ-MAX	1	1	1	1	-58.12	50560.81	1319.75	3267.64	2478.30	0.533
Concio 3	307	1[807]	ST SLU Mobili	FZ-MAX	1	1	1	1	-58.12 -102.05	41179.75	1319.75	4356.85	4158.81	0.317
Concio 3	307 308	J[808] I[808]	ST SLU Mobili	FZ-MAX	1	1	1	1	-102.05 38.95	21135.31 21330.55	1654.34	4356.85 4356.85	4158.81 4158.81	0.398
Concio 3	308	J[808]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	109.98	5143.11	1403.70 2222.40	4356.85 4356.85	4158.81 4158.81	0.534
Concio 3	308	1[809]	ST SLU Mobili	FZ-IVIAX FZ-MAX	1	1	1	1	71.48	4601.84	2023.51	4356.85	4158.81	0.534
	505	.[200]		FZ-MAX	1	1	1	1	112.21	5658.78	2102.12	4356.85	4158.81	0.505
Concio 3		J[810]	ST SLU Mobili											
Concio 3 Concio 4 H=var	309 310	J[810] I[810]	ST SLU Mobili ST SLU Mobili	FZ-MAX	1	3	3	3	13.74	6405.54	2097.89	4310.00	4114.09	0.510
Concio 3 Concio 4 H=var Concio 4 H=var	309		ST SLU Mobili ST SLU Mobili ST SLU Mobili				3	3		6405.54 12057.99	2097.89 2558.43	4310.00 6652.39	4114.09 4838.10	0.510 0.529
Concio 4 H=var	309 310	I[810]	ST SLU Mobili	FZ-MAX	1	3			13.74					
Concio 4 H=var Concio 4 H=var	309 310 310	I[810] J[811]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	3	3	3	13.74 202.22	12057.99	2558.43	6652.39	4838.10	0.529









Elem property	Elem number	Position	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	V_Ed (kN)	Vpl,Rd (kN)	Vb,Rd (kN)	Verif. Ratio
Concio 4 H=200	312	J[813]	ST SLU Mobili	FZ-MAX	1	3	4	4	313.03	17573.40	3036.81	8994.79	5264.17	0.577
Concio 4 H=200	313	I[813]	ST SLU Mobili	FZ-MIN	1	3	4	4	113.83	18528.58	-2911.52	8994.79	5231.59	0.557
Concio 4 H=200 Concio 4 H=var	313 314	J[814] I[814]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	4	4	125.08 -53.01	17151.16 16983.59	-2817.11 -2824.92	8994.79 8994.79	5278.03 5281.78	0.534 0.535
Concio 4 H=var	314	J[815]	ST SLU Mobili	FZ-MIN	1	3	3	3	-150.01	12661.58	-2349.72	6652.39	4811.20	0.488
Concio 4 H=var	315	I[815]	ST SLU Mobili	FZ-MIN	1	3	3	3	38.14	13194.82	-2436.83	6652.39	4794.45	0.508
Concio 4 H=var	315	J[816]	ST SLU Mobili	FZ-MIN	1	3	3	3	-154.48	7931.01	-1977.20	4310.00	4114.09	0.481
Concio 5	316	I[816]	ST SLU Mobili	FZ-MIN	1	1	1	1	-41.54	7083.52	-1981.24	4356.85	4158.81	0.476
Concio 5	316	J[817]	ST SLU Mobili ST SLU Mobili	FZ-MIN	1	1	1	1	-72.06	6092.95	-1902.71	4356.85	4158.81	0.458
Concio 5	317 317	J[817] J[818]	ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	91.23 17.81	6694.71 7041.79	-2109.26 -1260.70	4356.85 4356.85	4158.81 4158.81	0.507 0.303
Concio 5	318	I[818]	ST SLU Mobili	FZ-MIN	1	1	1	1	-82.74	6727.66	-1524.29	4356.85	4158.81	0.367
Concio 5	318	J[819]	ST SLU Mobili	FZ-MIN	1	1	1	1	-41.97	25602.68	-1140.80	4356.85	4158.81	0.274
Concio 6	319	I[819]	ST SLU Mobili	FZ-MIN	1	1	1	1	-41.97	36774.03	-1140.80	2614.11	1592.23	0.716
Concio 6	319	J[820]	ST SLU Mobili	FZ-MIN	1	1	1	1	-155.38	57629.75	-698.42	2614.11	1592.23	0.439
Concio 6	320 320	J[820] J[821]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	-174.24 -129.42	56982.37 63329.96	-1015.77 -588.74	2614.11 2614.11	1592.23 1592.23	0.638 0.370
Concio 6	321	I[821]	ST SLU Mobili	FZ-MIN	1	1	1	1	-129.42	63329.96	-588.74	2614.11	1592.23	0.370
Concio 6	321	J[822]	ST SLU Mobili	FZ-MAX	1	1	1	1	-86.97	57189.22	1015.60	2614.11	1592.23	0.638
Concio 6	322	I[822]	ST SLU Mobili	FZ-MAX	1	1	1	1	-74.82	57883.76	698.33	2614.11	1592.23	0.439
Concio 6	322	J[823]	ST SLU Mobili	FZ-MAX	1	1	1	1	38.59	37012.02	1140.65	2614.11	1592.23	0.716
Concio 5	323 323	1[823]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	38.59 -2.10	25938.41 7050.41	1140.65 1524.14	4356.85 4356.85	4158.81 4158.81	0.274 0.366
Concio 5	323	J[824] I[824]	ST SLU Mobili	FZ-IVIAX	1	1	1	1	108.39	7392.25	1260.62	4356.85	4158.81	0.303
Concio 5	324	J[825]	ST SLU Mobili	FZ-MAX	1	1	1	1	181.87	6113.20	2109.00	4356.85	4158.81	0.507
Concio 5	325	I[825]	ST SLU Mobili	FZ-MAX	1	1	1	1	81.76	5567.38	1902.45	4356.85	4158.81	0.457
Concio 5	325	J[826]	ST SLU Mobili	FZ-MAX	1	1	1	1	123.02	6530.24	1980.98	4356.85	4158.81	0.476
Concio 4 H=var	326	I[826]	ST SLU Mobili	FZ-MAX	1	3	3	3	29.03	7411.46	1976.93	4310.00	4114.09	0.481
Concio 4 H=var	326 327	J[827]	ST SLU Mobili ST SLU Mobili	FZ-MAX	1	3	3	3	217.19 87.00	12593.61	2436.61	6652.39	4818.02 4836.89	0.506 0.486
Concio 4 H=var	327	J[827] J[828]	ST SLU Mobili	FZ-MAX FZ-MAX	1	3	4	4	190.59	12090.96 16177.14	2349.49 2824.66	6652.39 8994.79	5308.71	0.486
Concio 4 H=200	328	I[828]	ST SLU Mobili	FZ-MAX	1	3	4	4	339.70	16303.75	2816.85	8994.79	5304.82	0.531
Concio 4 H=200	328	J[829]	ST SLU Mobili	FZ-MAX	1	3	4	4	319.93	17612.03	2911.27	8994.79	5262.89	0.553
Concio 4 H=200	329	I[829]	ST SLU Mobili	FZ-MIN	1	3	4	4	120.24	18477.50	-3037.05	8994.79	5233.37	0.580
Concio 4 H=200	329	J[830]	ST SLU Mobili	FZ-MIN	1	3	4	4	131.73	17026.76	-2942.60	8994.79	5282.05	0.557
Concio 4 H=var	330 330	J[830] J[831]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	3	3	3	-51.80 -147.52	16850.39 12085.84	-2950.34 -2474.98	8994.79 6652.39	5286.11 4833.31	0.558 0.512
Concio 4 H=var	331	I[831]	ST SLU Mobili	FZ-MIN	1	3	3	3	40.87	12594.30	-2558.63	6652.39	4818.00	0.512
Concio 4 H=var	331	J[832]	ST SLU Mobili	FZ-MIN	1	3	3	3	-153.71	6852.73	-2098.12	4310.00	4114.09	0.510
Concio 3	332	I[832]	ST SLU Mobili	FZ-MIN	1	1	1	1	-34.59	6094.53	-2102.36	4356.85	4158.81	0.506
Concio 3	332	J[833]	ST SLU Mobili	FZ-MIN	1	1	1	1	-66.14	5044.00	-2023.75	4356.85	4158.81	0.487
Concio 3	333	1[833]	ST SLU Mobili	FZ-MIN	1	1	1	1	42.97	5604.21	-2222.63	4356.85	4158.81	0.534
Concio 3	333 334	J[834] I[834]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	-28.01 -169.51	21076.57 20938.32	-1403.75 -1654.47	4356.85 4356.85	4158.81 4158.81	0.338
Concio 3	334	J[835]	ST SLU Mobili	FZ-MIN	1	1	1	1	-125.52	41001.87	-1319.91	4356.85	4158.81	0.317
Concio 2	335	I[835]	ST SLU Mobili	FZ-MIN	1	1	1	1	-125.52	50426.63	-1319.91	3267.64	2478.30	0.533
Concio 2	335	J[836]	ST SLU Mobili	FZ-MIN	1	1	1	1	-234.14	76075.00	-855.80	3267.64	2478.30	0.345
Concio 2	336	I[836]	ST SLU Mobili	FZ-MIN	1	1	1	1	-275.28	75459.21	-1156.80	3267.64	2478.30	0.467
Concio 2	336 337	J[837] I[837]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MIN	1	1	1	1	-305.61 -236.62	88791.02 86907.31	818.58 -687.05	3267.64 3267.64	2478.30 2478.30	0.330 0.277
Concio 2	337	J[838]	ST SLU Mobili	FZ-MAX	1	1	1	1	-302.37	84001.42	807.48	3267.64	2478.30	0.326
Concio 1	338	I[838]	ST SLU Mobili	FZ-MAX	1	1	1	1	-302.37	190797.43	807.48	3302.77	2478.97	0.326
Concio 1	338	J[839]	ST SLU Mobili	FZ-MAX	1	1	1	1	-324.03	145702.75	1312.27	3302.77	2478.97	0.529
Concio 1	339	1[839]	ST SLU Mobili	FZ-MAX	1	1	1	1	-164.08	144508.92	1044.99	3302.77	2478.97	0.422
Concio 1	339 340	J[840]	ST SLU Mobili ST SLU Mobili	FZ-MAX	1	3	3	3	-147.25	343.34	1973.86	3302.77	2574.13	0.767 0.192
Concio 1	340	J[840] J[841]	ST SLU MODIII ST SLV Vert	MY-MIN FX-MAX	1	1	3 1	1	0.00	366.98 4.01	-495.30 0.99	3302.77 3302.77	2574.10 2574.42	0.192
Concio 1	401	I[842]	ST SLV Vert	FX-MAX	1	1	1	1	0.43	1.77	0.75	3302.77	2574.42	0.000
Concio 1	401	J[843]	ST SLU Mobili	FZ-MAX	1	3	3	3	0.00	362.09	486.84	3302.77	2574.10	0.189
Concio 1	402	I[843]	ST SLU Mobili	FZ-MIN	1	3	3	3	-160.58	489.94	-1981.53	3302.77	2573.82	0.770
Concio 1	402	J[844]	ST SLU Mobili	FZ-MIN	1	1	1	1	-106.60	68765.81	-1128.67	3302.77	2478.97	0.455
Concio 1	403 403	J[844] J[845]	ST SLU Mobili ST SLU Mobili	FZ-MIN FZ-MIN	1	1	1	1	-129.76 -116.23	68497.58 89959.14	-1323.04 -820.86	3302.77 3302.77	2478.97 2478.97	0.534 0.331
Concio 2	404	1[845]	ST SLU Mobili	FZ-MIN	1	1	1	1	-116.23	57224.95	-820.86	3267.64	2478.30	0.331
Concio 2	404	J[846]	ST SLU Mobili	FZ-MAX	1	1	1	1	68.84	58874.42	605.27	3267.64	2478.30	0.244
Concio 2	405	I[846]	ST SLU Mobili	FZ-MIN	1	1	1	1	-82.63	60598.81	-749.63	3267.64	2478.30	0.302
Concio 2	405	J[847]	ST SLU Mobili	FZ-MAX	1	1	1	1	65.73	50885.89	1109.43	3267.64	2478.30	0.448
Concio 2	406	1[847]	ST SLU Mobili	FZ-MAX	1	1	1	1	-1.47	51642.24	898.08	3267.64	2478.30	0.362
Concio 2 Concio 3	406 407	J[848] I[848]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	1	1	1	49.33 49.33	33704.28 28994.81	1341.96 1341.96	3267.64 4356.85	2478.30 4158.81	0.541
Concio 3	407	J[849]	ST SLU Mobili	FZ-IVIAX FZ-MAX	1	1	1	1	29.98	14403.49	1670.63	4356.85	4158.81	0.323
Concio 3	408	I[849]	ST SLU Mobili	FZ-MAX	1	1	1	1	1.47	15147.77	1460.77	4356.85	4158.81	0.351
Concio 3	408	J[850]	ST SLU Mobili	FZ-MAX	1	1	1	1	54.75	5102.60	2240.08	4356.85	4158.81	0.539
Concio 3	409	1[850]	ST SLU Mobili	FZ-MAX	1	1	1	1	82.03	4641.35	2017.73	4356.85	4158.81	0.485
Concio 3	409	J[851]	ST SLU Mobili	FZ-MAX	1	1	1	1	78.37	5597.57	2104.33	4356.85	4158.81	0.506
Concio 4 H=var	410 410	J[851] J[852]	ST SLU Mobili ST SLU Mobili	FZ-MAX FZ-MAX	1	3	3	3	-19.29 65.90	6218.45 11516.57	2095.01 2535.34	4310.00 6652.39	4114.09 4852.51	0.509 0.522
Concio 4 H=var	411	I[852]	ST SLU Mobili	FZ-IVIAX	1	3	3	3	-11.06	11147.76	2368.25	6652.39	4865.29	0.322
Concio 4 H=var	411	J[853]	ST SLU Mobili	FZ-MAX	1	3	4	4	84.43	15418.73	2801.65	8994.79	5327.11	0.526
Concio 4 H=200	412	I[853]	ST SLU Mobili	FZ-MAX	1	3	4	4	231.40	15541.91	2802.65	8994.79	5323.44	0.526





Elem property	Elem number	Position	Lcom	Туре	Top Class	Bot Class	Web Class	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	V_Ed (kN)	Vpl,Rd (kN)	Vb,Rd (kN)	Verif. Ratio
Concio 4 H=200	412	J[854]	ST SLU Mobili	FZ-MAX	1	3	4	4	196.34	16786.60	2891.86	8994.79	5284.70	0.547
Concio 4 H=200	413	I[854]	ST SLU Mobili	FZ-MIN	1	3	4	4	25.17	17940.64	-2774.58	8994.79	5246.11	0.529
Concio 4 H=200	413	J[855]	ST SLU Mobili	FZ-MIN	1	3	4	4	49.05	16672.14	-2685.35	8994.79	5288.38	0.508
Concio 4 H=var	414	I[855]	ST SLU Mobili	FZ-MIN	1	3	4	4	-119.15	16422.22	-2686.77	8994.79	5292.79	0.508
Concio 4 H=var	414	J[856]	ST SLU Mobili	FZ-MIN	1	3	3	3	-213.49	12256.76	-2252.94	6652.39	4819.30	0.467
Concio 4 H=var	415	I[856]	ST SLU Mobili	FZ-MIN	1	3	3	3	-165.22	12707.11	-2418.53	6652.39	4802.77	0.504
Concio 4 H=var	415	J[857]	ST SLU Mobili	FZ-MIN	1	3	3	3	-253.16	7677.15	-1978.62	4310.00	4114.09	0.481
Concio 5	416	I[857]	ST SLU Mobili	FZ-MIN	1	1	1	1	-140.99	7006.86	-1984.06	4356.85	4158.81	0.477
Concio 5	416	J[858]	ST SLU Mobili	FZ-MIN	1	1	1	1	-127.87	6100.64	-1897.48	4356.85	4158.81	0.456
Concio 5	417	I[858]	ST SLU Mobili	FZ-MIN	1	1	1	1	-107.82	6580.62	-2122.97	4356.85	4158.81	0.510
Concio 5	417	J[859]	ST SLU Mobili	FZ-MIN	1	1	1	1	-167.22	4877.43	-1319.98	4356.85	4158.81	0.317
Concio 5	418	I[859]	ST SLU Mobili	FZ-MIN	1	1	1	1	-168.29	4411.23	-1536.58	4356.85	4158.81	0.369
Concio 5	418	J[860]	ST SLU Mobili	FZ-MIN	1	1	1	1	-149.66	18039.52	-1164.17	4356.85	4158.81	0.280
Concio 6	419	I[860]	ST SLU Mobili	FZ-MIN	1	1	1	1	-149.66	23296.27	-1164.17	2614.11	1592.23	0.731
Concio 6	419	J[861]	ST SLU Mobili	FZ-MIN	1	1	1	1	-201.39	37217.67	-743.78	2614.11	1592.23	0.467
Concio 6	420	I[861]	ST SLU Mobili	FZ-MIN	1	1	1	1	-162.19	36371.98	-962.79	2614.11	1592.23	0.605
Concio 6	420	J[862]	ST SLU Mobili	FZ-MIN	1	1	1	1	-144.34	40291.51	-550.56	2614.11	1592.23	0.346
Concio 6	421	I[862]	ST SLU Mobili	FZ-MIN	1	1	1	1	-144.34	40291.51	-550.56	2614.11	1592.23	0.346
Concio 6	421	J[863]	ST SLU Mobili	FZ-MAX	1	1	1	1	77.70	36276.52	962.61	2614.11	1592.23	0.605
Concio 6	422	I[863]	ST SLU Mobili	FZ-MAX	1	1	1	1	16.24	37208.30	743.72	2614.11	1592.23	0.467
Concio 6	422	J[864]	ST SLU Mobili	FZ-MAX	1	1	1	1	67.96	23262.30	1164.01	2614.11	1592.23	0.731
Concio 5	423	I[864]	ST SLU Mobili	FZ-MAX	1	1	1	1	67.96	18145.97	1164.01	4356.85	4158.81	0.280
Concio 5	423	J[865]	ST SLU Mobili	FZ-MAX	1	1	1	1	49.38	4498.32	1536.43	4356.85	4158.81	0.369
Concio 5	424	I[865]	ST SLU Mobili	FZ-MAX	1	1	1	1	11.35	5116.10	1319.90	4356.85	4158.81	0.317
Concio 5	424	J[866]	ST SLU Mobili	FZ-MAX	1	1	1	1	70.77	6051.19	2122.67	4356.85	4158.81	0.510
Concio 5	425	1[866]	ST SLU Mobili	FZ-MAX	1	1	1	1	89.32	5587.67	1897.30	4356.85	4158.81	0.456
Concio 5	425	J[867]	ST SLU Mobili	FZ-MAX	1	1	1	1	86.81	6481.22	1983.87	4356.85	4158.81	0.477
Concio 4 H=var	426	I[867]	ST SLU Mobili	FZ-MAX	1	3	3	3	-7.17	7167.01	1978.41	4310.00	4114.09	0.481
Concio 4 H=var	426	J[868]	ST SLU Mobili	FZ-MAX	1	3	3	3	76.91	12060.90	2418.30	6652.39	4832.51	0.500
Concio 4 H=var	427	1[868]	ST SLU Mobili	FZ-MAX	1	3	3	3	-11.50	11685.00	2252.70	6652.39	4846.14	0.465
Concio 4 H=var	427	J[869]	ST SLU Mobili	FZ-MAX	1	3	4	4	89.62	15597.15	2686.48	8994.79	5321.78	0.505
Concio 4 H=200	428	1[869]	ST SLU Mobili	FZ-MAX	1	3	4	4	228.01	15719.47	2685.06	8994.79	5318.10	0.505
Concio 4 H=200	428	J[870]	ST SLU Mobili	FZ-MAX	1	3	4	4	196.78	16904.61	2774.28	8994.79	5280.87	0.525
Concio 4 H=200	429	I[870]	ST SLU Mobili	FZ-MIN	1	3	4	4	15.51	17828.62	-2892.16	8994.79	5249.97	0.551
Concio 4 H=200	429	J[871]	ST SLU Mobili	FZ-MIN	1	3	4	4	39.87	16492.69	-2802.94	8994.79	5294.11	0.529
Concio 4 H=var	430	I[871]	ST SLU Mobili	FZ-MIN	1	3	4	4	-132.15	16231.34	-2801.94	8994.79	5298.49	0.529
Concio 4 H=var	430	J[872]	ST SLU Mobili	FZ-MIN	1	3	3	3	-223.91	11686.38	-2368.48	6652.39	4840.84	0.489
Concio 4 H=var	431	I[872]	ST SLU Mobili	FZ-MIN	1	3	3	3	-171.40	12128.79	-2535.56	6652.39	4825.42	0.525
Concio 4 H=var	431	J[873]	ST SLU Mobili	FZ-MIN	1	3	3	3	-264.30	6620.71	-2095.21	4310.00	4114.09	0.509
Concio 3	432	I[873]	ST SLU Mobili	FZ-MIN	1	1	1	1	-139.52	6054.20	-2104.50	4356.85	4158.81	0.506
Concio 3	432	J[874]	ST SLU Mobili	FZ-MIN	1	1	1	1	-128.81	5057.93	-2017.89	4356.85	4158.81	0.485
Concio 3	433	I[874]	ST SLU Mobili	FZ-MIN	1	1	1	1	-103.26	5565.67	-2240.35	4356.85	4158.81	0.539
Concio 3	433	J[875]	ST SLU Mobili	FZ-MIN	1	1	1	1	-156.53	15073.37	-1460.83	4356.85	4158.81	0.351
Concio 3	434	I[875]	ST SLU Mobili	FZ-MIN	1	1	1	1	-122.90	14364.92	-1670.75	4356.85	4158.81	0.402
Concio 3	434	J[876]	ST SLU Mobili	FZ-MIN	1	1	1	1	-103.52	28971.76	-1342.11	4356.85	4158.81	0.323
Concio 2	435	1[876]	ST SLU Mobili	FZ-MIN	1	1	1	1	-103.52	33736.10	-1342.11	3267.64	2478.30	0.542
Concio 2	435	J[877]	ST SLU Mobili	FZ-MIN	1	1	1	1	-154.31	51697.09	-898.16	3267.64	2478.30	0.362
Concio 2	436	I[877]	ST SLU Mobili	FZ-MIN	1	1	1	1	-101.28	50987.15	-1109.69	3267.64	2478.30	0.448
Concio 2	436	J[878]	ST SLU Mobili	FZ-MAX	1	1	1	1	84.42	60420.69	749.31	3267.64	2478.30	0.302
Concio 2	437	1[878]	ST SLU Mobili	FZ-MIN	1	1	1	1	-86.08	58991.63	-605.43	3267.64	2478.30	0.244
Concio 2	437	J[879]	ST SLU Mobili	FZ-MAX	1	1	1	1	38.71	57061.43	820.75	3267.64	2478.30	0.331
Concio 1	438	I[879]	ST SLU Mobili	FZ-MAX	1	1	1	1	38.71	89526.88	820.75	3302.77	2478.97	0.331
Concio 1	438	J[880]	ST SLU Mobili	FZ-MAX	1	1	1	1	25.22	67991.76	1322.86	3302.77	2478.97	0.534
Concio 1	439	1[880]	ST SLU Mobili	FZ-MAX	1	1	1	1	5.13	68530.02	1128.49	3302.77	2478.97	0.455
Concio 1	439	J[881]	ST SLU Mobili	FZ-MAX	1	3	3	3	-48.76	435.29	1981.20	3302.77	2573.96	0.770
				MY-MIN	1	3	3	3	0.00	362.07	-486.84	3302.77	2574.10	0.189
Concio 1	440	I[881]	ST SLU Mobili										2574 10	













7.3 VERIFICHE ALL'INSTABILITÀ FLESSO-TORSIONALE DELL'ANIMA

Si effettuano le verifiche allo stato limite ultimo per instabilità flesso-torsionale delle sezioni composte travi-soletta secondo lo schema ad U invertita (Circ. 02/02/2009, C4.3.4.4).

I coefficienti parziali per SLU assunti sono i seguenti:

 $\gamma_{M1} = 1.10$ acciaio strutturale: resistenza all'instabilità (ponti)

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazioni di carichi più gravose. Dati tabulati:

Elem Property: nome delle caratteristiche geometriche dell'elemento

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento

Lcom: combinazione di carico positivo o negativo più gravosa

Type: sollecitazione (massima o minima)
Sect. class: classificazione complessiva sezione

N_Ed: sforzo assiale di calcolo M_Ed: momento di calcolo

Nb,Rd: sforzo assiale resistente all'instabilità del corrente compresso

Mb,Rd: momento resistente all'instabilità

Mcr: momento critico

Interaction ratio: condizione di verifica: $\frac{N_Ed}{Nb,Rd} + \frac{M_Ed}{Mb,Rd} \le 1$

Elem property	Elem number	Position	Lcom	Туре	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	Nb,Rd (kN)	Mb,Rd (kN*m)	Mcr (kN*m)	Interaction Ratio
Concio 1	101	I[719]	ST SLV Long	FX-MIN	4	-0.98	-0.32	17827.09	6220.80	110.47	0.000
Concio 1	101	J[720]	ST SLU Mobili	MY-MIN	3	0.00	-345.87	17827.09	6231.67	111.80	0.056
Concio 1	102	I[720]	ST SLU Mobili	MY-MIN	3	-203.27	-795.67	15765.18	6000.26	25.35	0.146
Concio 1	102	J[721]	ST SLU Mobili	MY-MAX	1	-45.83	4788.69	43259.16	9909.48	45.39	0.484
Concio 1	103	I[721]	ST SLU Mobili	MY-MAX	1	-159.52	4365.72	49041.71	10335.82	46.48	0.426
Concio 1	103	J[722]	ST SLU Mobili	MY-MAX	1	-124.18	6097.44	49041.71	10335.82	46.48	0.593
Concio 2	104	I[722]	ST SLU Mobili	MY-MAX	1	-124.71	6097.95	53768.38	12507.78	87.78	0.490
Concio 2	104	J[723]	ST SLU Mobili	MY-MAX	1	-118.83	6484.52	53768.38	12507.78	87.78	0.521
Concio 2	105	I[723]	ST SLU Mobili	MY-MAX	1	-136.85	6343.01	44924.69	10872.71	37.65	0.586
Concio 2	105	J[724]	ST SLU Mobili	MY-MAX	1	-154.04	6070.32	44924.69	10872.71	37.65	0.562
Concio 2	106	I[724]	ST SLU Mobili	MY-MAX	1	-128.75	6187.52	50917.97	12116.00	64.50	0.513
Concio 2	106	J[725]	ST SLU Mobili	MY-MAX	1	-88.84	5134.64	50917.97	12116.00	64.50	0.426
Concio 3	107	I[725]	ST SLU Mobili	MY-MAX	1	-88.84	5134.84	55107.17	13255.76	108.92	0.389
Concio 3	107	J[726]	ST SLU Mobili	MY-MAX	1	-138.56	3682.16	55107.17	13255.76	108.92	0.280
Concio 3	108	I[726]	ST SLU Mobili	MY-MAX	1	23.60	4021.78	45598.35	12371.37	92.66	0.326
Concio 3	108	J[727]	ST SLU Mobili	MY-MIN	1	-142.01	-5548.99	19856.21	9499.79	28.41	0.591
Concio 3	109	I[727]	ST SLU Mobili	MY-MIN	1	-75.81	-5545.62	22446.82	10096.60	167.19	0.553
Concio 3	109	J[728]	ST SLU Mobili	MY-MIN	1	-80.00	-5955.64	22446.82	10096.60	167.19	0.593
Concio 4 H=var	110	I[728]	ST SLU Mobili	MY-MIN	3	-206.99	-5930.81	29746.97	10799.77	77.15	0.556
Concio 4 H=var	110	J[729]	ST SLU Mobili	MY-MIN	3	-241.83	-8338.30	33127.92	16971.20	77.15	0.499
Concio 4 H=var	111	I[729]	ST SLU Mobili	MY-MIN	3	-228.50	-8372.38	33127.92	16971.14	75.07	0.500
Concio 4 H=var	111	J[730]	ST SLU Mobili	MY-MIN	4	-271.60	-11388.46	36508.88	23254.44	75.83	0.497
Concio 4 H=200	112	I[730]	ST SLU Mobili	MY-MIN	4	-55.73	-11388.46	36508.88	23254.19	331.63	0.491
Concio 4 H=200	112	J[731]	ST SLU Mobili	MY-MIN	4	-53.71	-12184.76	36508.88	23221.71	331.63	0.526
Concio 4 H=200	113	I[731]	ST SLU Mobili	MY-MIN	4	-41.85	-12275.17	36508.88	23222.25	331.36	0.530
Concio 4 H=200	113	J[732]	ST SLU Mobili	MY-MIN	4	-45.53	-11476.59	36508.88	23252.77	331.36	0.495
Concio 4 H=var	114	I[732]	ST SLU Mobili	MY-MIN	4	-257.18	-11476.59	36508.88	23252.85	75.52	0.501
Concio 4 H=var	114	J[733]	ST SLU Mobili	MY-MIN	3	-179.45	-8432.43	33127.92	16954.25	74.76	0.503
Concio 4 H=var	115	I[733]	ST SLU Mobili	MY-MIN	3	-195.50	-8419.18	33127.92	16954.82	75.81	0.503
Concio 4 H=var	115	J[734]	ST SLU Mobili	MY-MIN	3	-160.16	-6181.46	29746.97	10758.91	75.81	0.580
Concio 5	116	I[734]	ST SLU Mobili	MY-MIN	1	-43.27	-6179.87	22446.82	10096.60	166.07	0.614
Concio 5	116	J[735]	ST SLU Mobili	MY-MIN	1	-39.33	-5806.93	22446.82	10096.60	166.07	0.577
Concio 5	117	I[735]	ST SLU Mobili	MY-MIN	1	-95.24	-5809.21	19651.54	9359.48	25.75	0.626
Concio 5	117	J[736]	ST SLU Mobili	MY-MIN	1	-46.02	-3103.16	19651.54	9359.48	25.75	0.334
Concio 5	118	I[736]	ST SLU Mobili	MY-MIN	1	-185.26	-3090.51	22446.82	10096.60	45.41	0.314
Concio 5	118	J[737]	ST SLU Mobili	MY-MAX	1	-55.35	4097.63	54194.22	13255.76	101.20	0.310
Concio 6	119	I[737]	ST SLU Mobili	MY-MAX	1	-55.35	4097.16	50504.53	11739.87	63.88	0.350
Concio 6	119	J[738]	ST SLU Mobili	MY-MAX	1	-97.62	4888.33	50504.53	11739.87	63.88	0.418
Concio 6	120	I[738]	ST SLU Mobili	MY-MAX	1	-116.10	4754.81	51324.47	11847.48	66.85	0.404
Concio 6	120	J[739]	ST SLU Mobili	MY-MAX	1	-78.08	5232.61	51324.47	11847.48	66.85	0.443
Concio 6	121	I[739]	ST SLU Mobili	MY-MAX	1	-78.08	5232.61	51324.47	11852.39	66.85	0.443
Concio 6	121	J[740]	ST SLU Mobili	MY-MAX	1	-116.11	4755.19	51324.47	11852.39	66.85	0.404
Concio 6	122	1[740]	ST SLU Mobili	MY-MAX	1	-97.55	4888.06	50504.53	11732.23	63.88	0.419







Campa	Elem property	Elem number	Position	Lcom	Туре	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	Nb,Rd (kN)	Mb,Rd (kN*m)	Mcr (kN*m)	Interaction Ratio
Demonst	Concio 6	122	J[741]	ST SLU Mobili	MY-MAX	1						0.350
Second 1924 974	Concio 5	123	I[741]	ST SLU Mobili	MY-MAX	1	-55.30	4097.15	54194.22	13255.76	101.19	0.310
Corone 126 1761 7750 1750	Concio 5		J[742]	ST SLU Mobili	MY-MIN	1		-3090.20	22446.82	10096.60	45.41	0.314
Corces 137 [761] 1751 Massis Marsans 1 59.05 50.05 7												
Congres 128 1741 1741 1741 1840 1841												
Second Harder 129 [764] 075 10488												
Composition 120 16 120 15 15 15 15 15 15 15 1			· ·									
Common shower 177 1764 37 SLUVINSES MPCANN 4 45.55 1.1715 51 SUSSES 272.22 50.00 50.00 50.00 17.00 50.												
Control 44-9026 139 1796 57-50 Mobile APP-ARM 4 41.77 1500068 232-278 331-30 0.055 0.056 0.056 139 1707 0.056	Concio 4 H=var	127	1[745]	ST SLU Mobili	MY-MIN	3	-179.32	-8433.46	33127.92	16954.27	74.76	0.503
Cented 1470/05 139 1767 1710 Medial MP-AIM 4 41.77 1272-95 1908-88 1272-127 131.56 0.536 0.5			J[746]	ST SLU Mobili	MY-MIN		-257.28	-11476.53	36508.88		75.52	0.501
Seroe 1-120 17-21 17-2												
General Fallow 1929 1948 \$3 SU Morbis												
Second Inferent 130												
Coronia Filtrey 130 1748 \$15 UM Mobils Mr Molin 3 241.76 481.72 481.22 1877.15 7.50 7.00 5.00												
Semble All 1986 1986 1986 1986 1986 1986 1986 1987 1987 1987 1987 1987 1988 1987 1												
Compo 3		131				3	-241.76					
Compos 121 1751	Concio 4 H=var	131	J[750]	ST SLU Mobili	MY-MIN	3	-206.92	-5930.02	29746.97	10799.79	77.15	0.556
Compos 113 1751	Concio 3	132	I[750]	ST SLU Mobili	MY-MIN	1	-79.93	-5954.94	22446.82	10096.60	167.19	0.593
Cornect 113 1772	Concio 3	132	J[751]	ST SLU Mobili	MY-MIN			-5544.86	22446.82	10096.60	167.19	
Cemen 2												
Centrol 2												
Common 15 17-38												
Concide 2												
Concide 2												
Connect 136 1755 STALL Mobell NY-MAX 1 -136.61 6342.43 4424.66 1697.43 375.5 0.598 Connect 137 1755 STALL Mobell NY-MAX 1 -124.61 6097.61 5378.83 12507.78 8.77.8 0.690 Connect 138 1755 STALL Mobell NY-MAX 1 -124.61 6097.61 5378.83 12507.78 8.77.8 0.690 Connect 138 1757 STALL Mobell NY-MAX 1 -124.61 6097.61 5378.83 12507.78 8.77.8 0.690 Connect 138 1757 STALL Mobell NY-MAX 1 -124.61 6097.31 4094.71 13023.62 44.64 0.593 Connect 139 1757 STALL Mobell NY-MAX 1 -1359.44 4386.81 4094.71 13023.62 44.64 0.693 Connect 139 1757 STALL Mobell NY-MAX 1 -145.81 4789.31 4389.61 4094.71 13023.62 43.64 0.646 Connect 139 1758 STALL Mobell NY-MAX 1 -145.81 4789.31 4329.51 600.029 22.35 0.145 Connect 140 1759 STALL Mobell NY-MAX 3 -0.00 -3.65 51762.70 6220.80 110.64 0.005 Connect 140 1759 STALL Mobell NY-MAX 4 -0.98 -0.31 17472.70 6220.80 110.68 0.005 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 -0.31 17472.70 6220.80 110.68 0.000 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 -0.31 17472.70 6220.80 110.68 0.000 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 -0.31 17472.70 6220.80 110.68 0.000 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 -0.31 17472.70 6220.80 110.68 0.000 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 -0.31 17472.70 6220.80 110.68 0.000 Connect 140 1759 STALL Mobell NY-MAX 1 -0.98 0.000												
Control 133 1756 ST SLU Mobil				ST SLU Mobili								
Control 138 1756 575 SLU Mobil	Concio 2	137	I[755]	ST SLU Mobili	MY-MAX	1	-118.75	6484.36	53768.38	12507.78	87.78	0.521
Center 138 1757 57 SU Mobil	Concio 2	137	J[756]	ST SLU Mobili	MY-MAX	1	-124.63	6097.84	53768.38	12507.78	87.78	0.490
Centrol 139 1757 57 SLU Mobil MY-MANK 1 4-5 SL 4789_23 4329_16 992_29 65.39 0.485	Concio 1			ST SLU Mobili	MY-MAX							
Concio 1 139 JPS8 51 SLU Mobil MY-AMN 3 203.25 -795.65 1578-18 600.23 25.35 0.465 Concio 1 140 JPS8 51 SLU Mobil MY-AMN 4 0.98 0.31 178727.09 62.23.67 11.80 0.050 Concio 1 201 JPS9 51 SLU Long P.AMN 4 0.98 0.31 178727.09 62.20.00 110.88 0.000 Concio 1 201 JPS9 51 SLU Long P.AMN 4 0.11 0.38 0.31 178727.09 62.20.00 110.88 0.000 Concio 1 201 JPS9 51 SLU Mobil MY-AMN 3 0.00 0.347.96 15088.91 6479.88 111.55 0.000 Concio 1 202 JPS9 51 SLU Mobil MY-AMN 3 0.00 0.347.96 15088.91 6493.58 112.51 0.054 Concio 1 202 JPS9 51 SLU Mobil MY-AMN 3 0.00 0.347.96 15088.91 6493.58 112.51 0.054 Concio 1 203 JPS9 51 SLU Mobil MY-AMN 1 2.503.65 4.379.00 40645.95 0.0044.64 4.615 0.395 Concio 2 204 JPS9 57 SLU Mobil MY-AMN 1 5.503.65 5.505.94 0.0644.64 4.615 0.395 Concio 2 204 JPS9 57 SLU Mobil MY-AMN 1 5.507.79 5.485.60 55059.46 0.0644.64 4.615 0.395 Concio 2 204 JPS9 57 SLU Mobil MY-AMN 1 5.507.79 5.485.60 55059.46 0.0644.64 4.615 0.395 Concio 2 205 JPS9 57 SLU Mobil MY-AMN 1 5.507.79 5.485.60 5.5059.46 0.0644.64 4.615 0.395 Concio 2 206 JPS9 57 SLU Mobil MY-AMN 1 5.507.79 5.485.60 5.5059.46 0.0644.64 4.615 0.395 Concio 2 206 JPS9 57 SLU Mobil MY-AMN 1 5.507.79 5.495.46 5.500.00 Concio 2 206 JPS9 57 SLU Mobil MY-AMN 1 6.673.89 Concio 2 206 JPS9 57 SLU Mobil MY-AMN 1 6.673.89 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207 JPS9 57 SLU Mobil MY-AMN 1 4.675.61 Concio 3 207												
Control 1-40												
Concol 140 1759 ST SLV Long F.M.M. 4 -0.38 -0.31 3727.09 5228.80 110.48 0.000												
Concol 1 201. 1780 ST SLV Long F.K-MIN 4 -1.3 0.04 13098 91 5491.5 11.25 0.000												
Concio 1 201 1761 ST SLU Mobili				_								
Concol 202 1/Fe2 ST SLU Mobil MY-MAX 1 229.03 4379.60 4964.55 10250.63 462.6 0.432		201		_		3		-347.96				
Concio 203 1/762 STSLU Mobili MY-MAX 1 -550.96 4094.3 6 55099.46 10044.64 46.15 0.355 Concio 2 204 1/763 STSLU Mobili MY-MAX 1 -533.71 5495.48 55099.46 10044.64 46.15 0.555 Concio 2 204 1/763 STSLU Mobili MY-MAX 1 -535.71 5495.48 58902.07 12846.08 88.37 0.437 Concio 2 204 1/764 STSLU Mobili MY-MAX 1 -577.49 S688.62 58902.07 12846.08 88.37 0.465 Concio 2 205 1/764 STSLU Mobili MY-MAX 1 -647.08 S5912.07 12846.08 88.37 0.465 Concio 2 205 1/764 STSLU Mobili MY-MAX 1 -647.08 S599.26 4921.400 11180.48 37.91 0.554 Concio 2 205 1/765 STSLU Mobili MY-MAX 1 -476.61 5615.88 24921.400 11180.48 37.91 0.554 Concio 2 206 1/765 STSLU Mobili MY-MAX 1 -476.61 5615.88 24921.400 11180.48 37.91 0.513 Concio 2 206 1/766 STSLU Mobili MY-MAX 1 -476.61 5615.88 25779.51 12453.21 6515 0.460 Concio 2 206 1/766 STSLU Mobili MY-MAX 1 -471.30 44613.14 55779.51 12453.21 6515 0.460 Concio 3 207 1/767 STSLU Mobili MY-MAX 1 -471.30 44613.14 55779.51 12453.21 6515 0.460 Concio 3 208 1/768 STSLU Mobili MY-MAX 1 -471.30 471.5	Concio 1	202	I[761]	ST SLU Mobili	MY-MIN	3	-314.82	-536.47	16005.57	6258.92	23.83	0.105
Concio 1 203 JT/53 STSLU Mobili MY-MAX 1 -534.77 5482.60 5505.46 1064.64 46.15 0.225	Concio 1	202	J[762]	ST SLU Mobili	MY-MAX	1	-229.03	4379.60	49645.95	10250.63	46.26	0.432
CONCIO 2 204 1753 STSLU Mobili MY-MAX 1 -533.71 5-95.48 S890.207 12846.08 88.37 0.457	Concio 1	203	1[762]	ST SLU Mobili	MY-MAX		-550.96	4094.36	55059.46		46.15	0.395
Concio 2 204 744 ST SLU Mobili MY-MAX 1 -577.49 SS88.67 SS88.07 1284.608 88.37 0.465												
Concio 2 205 1764 STSLU Mobili MY-MAX 1 644.00 5821.27 49214.00 11180.48 37.91 0.534												
Concio 2 205 1765 ST SLU Mobili MY-MAX 1 -447.86 5569.82 49214.00 1118.048 37.91 0.511												
Concio 2 206												
Concio 2 206 J766 ST SLU Mobili MY-MAX 1 -413.30 4613.14 55779.51 1243.21 65.15 0.378												
Concio 3 207 1/767 STSLU Mobili MY-MAX 1 -485.56 3505.01 60219.77 13602.15 107.75 0.266	Concio 2	206	J[766]	ST SLU Mobili	MY-MAX	1	-413.30	4613.14	55779.51	12453.21		0.378
Concio 3 208 I[767] STSLU Mobili MY-MAX 1 -80.77 3701.95 49828.77 12705.61 94.57 0.293 Concio 3 208 I[768] STSLU Mobili MY-MIN 1 343.82 -513.48 20231.85 9792.36 29.03 0.541 0.505 0.606 209 I[768] STSLU Mobili MY-MIN 1 191.50 -5166.74 22871.47 10397.59 168.91 0.505 0.606 209 I[769] STSLU Mobili MY-MIN 1 189.60 -5533.03 22871.47 10397.59 168.91 0.540 0.606 4.1494 210 I[769] STSLU Mobili MY-MIN 3 67.50 -5619.27 30596.27 10906.64 78.32 0.517 0.606 4.1494 210 I[770] STSLU Mobili MY-MIN 3 48.43 7.790.97 33977.22 17101.96 77.79 0.463 0.606 4.1494 211 I[770] STSLU Mobili MY-MIN 3 48.83 -7882.43 33977.22 17101.20 76.28 0.462 0.606 4.1494 211 I[771] STSLU Mobili MY-MIN 4 -95.14 -10928.95 37358.17 22330.77 76.79 0.471 0.606 4.14920 212 I[771] STSLU Mobili MY-MIN 4 104.09 -10928.95 37358.17 22330.78 323.15 0.471 0.606 4.14920 212 I[772] STSLU Mobili MY-MIN 4 54.32 -11616.59 37358.17 23330.48 332.15 0.500 0.606 4.14920 213 I[772] STSLU Mobili MY-MIN 4 -54.32 -11616.59 37358.17 2332.84 332.61 0.505 0.606 4.14920 213 I[772] STSLU Mobili MY-MIN 4 -65.26 -10917.86 37358.17 2332.84 332.61 0.470 0.606 4.14920 213 I[773] STSLU Mobili MY-MIN 4 -65.26 -10917.86 37358.17 2332.84 332.61 0.470 0.606 4.14920 213 I[773] STSLU Mobili MY-MIN 4 -65.26 -10917.86 37358.17 2332.84 332.61 0.470 0.606 4.14920 213 I[773] STSLU Mobili MY-MIN 4 -65.26 -10917.86 37358.17 2332.85 6 76.11 0.472 0.606 4.14920 213 I[774] STSLU Mobili MY-MIN 4 -65.26 -10917.86 37358.17 2332.86 76.11 0.472 0.606 0.	Concio 3	207	1[766]	ST SLU Mobili	MY-MAX	1	-413.30	4615.62	60219.77	13602.15	107.75	0.346
Concio 3 208 I/F68 ST SLU Mobili MY-MIN 1 343.82 -5134.88 20231.85 9792.36 29.03 0.541	Concio 3		J[767]									
Concio 3 1768												
Concio 3 209 I[769] ST SLU Mobili MY-MIN 1 189.60 .5533.03 22871.47 10397.59 168.91 0.540												
Concio 4 H=var 210 I[769] ST SLU Mobili MY-MIN 3 67.50 -5619.27 30596.27 10906.64 78.32 0.517												
Concio 4 H=var 210 J[770] ST SLU Mobili MY-MIN 3 48.43 -7900.97 33977.22 1710.196 77.92 0.463												
Concio 4 H=var 211 I[770] ST SLU Mobili MY-MIN 3 -48.83 -7882.43 33977.22 17102.20 76.28 0.462												
Concio 4 H=200 212 I[771]												
Concio 4 H=200 212 J772 ST SLU Mobili MY-MIN	Concio 4 H=var	211	J[771]	ST SLU Mobili	MY-MIN	4	-95.14	-10928.95	37358.17	23330.77	76.79	0.471
Concio 4 H=200	Concio 4 H=200	212	I[771]	ST SLU Mobili	MY-MIN	4	104.09	-10928.95	37358.17	23330.48	332.15	0.471
Concio 4 H=200 213 1[773] ST SLU Mobili MY-MIN 4 65.26 -10917.86 37358.17 23328.45 332.61 0.470	Concio 4 H=200	212	J[772]		MY-MIN	4	54.32	-11616.59	37358.17		332.15	0.500
Concio 4 H=var 214 I[773] ST SLU Mobili MY-MIN 4 -145.63 -10917.86 37358.17 23328.66 76.11 0.472 Concio 4 H=var 214 J[774] ST SLU Mobili MY-MIN 3 -37.66 -7991.72 33977.22 17082.01 75.60 0.469 Concio 4 H=var 215 I[774] ST SLU Mobili MY-MIN 3 57.39 -8016.66 33977.22 17081.62 76.56 0.471 Concio 5 216 I[775] ST SLU Mobili MY-MIN 1 192.61 -5810.79 22871.47 10397.59 168.01 0.567 Concio 5 216 J[776] ST SLU Mobili MY-MIN 1 193.57 -5453.12 22871.47 10397.59 168.01 0.563 Concio 5 216 J[776] ST SLU Mobili MY-MIN 1 398.02 -5432.41 20023.30 9644.51 26.21 0.583 Concio 5 217 I[777] ST SLU Mobili MY-MIN 1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>												
Concio 4 H=var 214 J[774] ST SLU Mobili MY-MIN 3 -37.66 -7991.72 33977.22 17082.01 75.60 0.469 Concio 4 H=var 215 I[774] ST SLU Mobili MY-MIN 3 57.39 -8016.66 33977.22 17081.62 76.56 0.471 Concio 4 H=var 215 J[775] ST SLU Mobili MY-MIN 3 80.28 -5879.93 30596.27 10859.13 76.96 0.544 Concio 5 216 I[775] ST SLU Mobili MY-MIN 1 192.61 -5810.79 22871.47 10397.59 168.01 0.567 Concio 5 216 J[776] ST SLU Mobili MY-MIN 1 193.57 -543.14 20023.30 9644.51 26.21 0.583 Concio 5 217 I[776] ST SLU Mobili MY-MIN 1 425.66 -2911.27 20023.30 9644.51 26.21 0.583 Concio 5 218 I[777] ST SLU Mobili MY-MIN 1												
Concio 4 H=var 215 I[774] ST SLU Mobili MY-MIN 3 57.39 -8016.66 33977.22 17081.62 76.56 0.471 Concio 4 H=var 215 J[775] ST SLU Mobili MY-MIN 3 80.28 -5879.93 30596.27 10859.13 76.96 0.544 Concio 5 216 I[775] ST SLU Mobili MY-MIN 1 192.61 -5810.79 22871.47 10397.59 168.01 0.567 Concio 5 216 J[776] ST SLU Mobili MY-MIN 1 193.57 -543.12 22871.47 10397.59 168.01 0.533 Concio 5 217 J[776] ST SLU Mobili MY-MIN 1 389.02 -5432.41 20023.30 9644.51 26.21 0.583 Concio 5 217 J[777] ST SLU Mobili MY-MIN 1 425.66 -2911.27 20023.30 9644.51 26.21 0.323 Concio 5 218 I[777] ST SLU Mobili MY-MIN 1 <												
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Concio 6 219 I[778] ST SLU Mobili MY-MAX 1 -269.87 3541.55 55412.36 12076.20 64.66 0.298 Concio 6 219 J[779] ST SLU Mobili MY-MAX 1 -327.34 4290.10 55412.36 12076.20 64.66 0.361 Concio 6 220 I[779] ST SLU Mobili MY-MAX 1 -477.67 4231.47 56311.98 12175.06 66.57 0.356 Concio 6 220 J[780] ST SLU Mobili MY-MAX 1 -411.66 4522.57 56311.98 12175.06 66.57 0.379 Concio 6 221 I[780] ST SLU Mobili MY-MAX 1 -411.66 4522.57 56311.98 12177.44 66.56 0.379 Concio 6 221 J[781] ST SLU Mobili MY-MAX 1 -477.67 4231.86 56311.98 12177.44 66.56 0.356 Concio 6 222 I[781] ST SLU Mobili MY-MAX 1 -477.6												
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Elem property	Elem number	Position	Lcom	Туре	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	Nb,Rd (kN)	Mb,Rd (kN*m)	Mcr (kN*m)	Interaction Ratio
Concio 5	223	1[782]	ST SLU Mobili	MY-MAX	1	-269.95	3544.24	59222.13	13602.15	100.06	0.265
Concio 5	223	J[783]	ST SLU Mobili	MY-MIN	1	179.76	-2964.37	22871.47	10397.59	46.48	0.293
Concio 5	224	1[783]	ST SLU Mobili	MY-MIN	1	425.85	-2911.36	20023.30	9645.45	26.21	0.323
Concio 5	224	J[784]	ST SLU Mobili	MY-MIN	1	398.20	-5432.39	20023.30	9645.45	26.21	0.583
Concio 5	225	1[784]	ST SLU Mobili	MY-MIN	1	193.84	-5453.07	22871.47	10397.59	168.01	0.533
Concio 5	225 226	J[785]	ST SLU Mobili	MY-MIN	1	192.89 80.54	-5810.75	22871.47 30596.27	10397.59 10859.15	168.01	0.567
Concio 4 H=var Concio 4 H=var	226	J[785] J[786]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	3	57.67	-5879.77 -8016.45	33977.22	17081.64	76.96 76.56	0.544 0.471
Concio 4 H=var	227	1[786]	ST SLU Mobili	MY-MIN	3	-37.46	-7991.48	33977.22	17082.02	75.60	0.469
Concio 4 H=var	227	J[787]	ST SLU Mobili	MY-MIN	4	-145.33	-10917.70	37358.17	23328.67	76.11	0.472
Concio 4 H=200	228	I[787]	ST SLU Mobili	MY-MIN	4	65.54	-10917.70	37358.17	23328.47	332.61	0.470
Concio 4 H=200	228	J[788]	ST SLU Mobili	MY-MIN	4	-130.88	-11675.33	37358.17	23292.47	332.61	0.505
Concio 4 H=200	229	1[788]	ST SLU Mobili	MY-MIN	4	54.10	-11616.24	37358.17	23292.29	332.15	0.500
Concio 4 H=200 Concio 4 H=var	229 230	J[789] I[789]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	4	103.88 -95.36	-10928.65 -10928.65	37358.17 37358.17	23330.49 23330.79	332.15 76.79	0.471 0.471
Concio 4 H=var	230	J[790]	ST SLU Mobili	MY-MIN	3	-49.05	-7882.26	33977.22	17102.21	76.28	0.471
Concio 4 H=var	231	1[790]	ST SLU Mobili	MY-MIN	3	48.14	-7900.72	33977.22	17101.98	77.92	0.463
Concio 4 H=var	231	J[791]	ST SLU Mobili	MY-MIN	3	67.21	-5619.09	30596.27	10906.66	78.32	0.517
Concio 3	232	I[791]	ST SLU Mobili	MY-MIN	1	189.30	-5532.75	22871.47	10397.59	168.91	0.540
Concio 3	232	J[792]	ST SLU Mobili	MY-MIN	1	191.21	-5166.47	22871.47	10397.59	168.91	0.505
Concio 3	233	1[792]	ST SLU Mobili	MY-MIN	1	343.59	-5134.51	20231.85	9791.22	29.04	0.541
Concio 3 Concio 3	233 234	J[793] I[793]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-80.58 -485.55	3702.23 3504.51	49828.77 60219.77	12717.00 13602.15	94.57 107.76	0.293 0.266
Concio 3	234	J[794]	ST SLU Mobili	MY-MAX	1	-413.22	4616.39	60219.77	13602.15	107.76	0.346
Concio 2	235	1[794]	ST SLU Mobili	MY-MAX	1	-413.22	4613.91	55779.51	12460.10	65.15	0.378
Concio 2	235	J[795]	ST SLU Mobili	MY-MAX	1	-476.61	5616.93	55779.51	12460.10	65.15	0.459
Concio 2	236	1[795]	ST SLU Mobili	MY-MAX	1	-647.82	5569.84	49214.00	11177.81	37.91	0.512
Concio 2	236	J[796]	ST SLU Mobili	MY-MAX	1	-644.03	5821.53	49214.00	11177.81	37.91	0.534
Concio 2 Concio 2	237 237	J[796] J[797]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-577.46 -535.72	5857.99 5495.36	58902.07 58902.07	12846.08 12846.08	88.37 88.37	0.466 0.437
Concio 1	238	1[797]	ST SLU Mobili	MY-MAX	1	-533.72	5482.68	55059.46	10638.79	46.16	0.437
Concio 1	238	J[798]	ST SLU Mobili	MY-MAX	1	-550.95	4094.10	55059.46	10638.79	46.16	0.395
Concio 1	239	1[798]	ST SLU Mobili	MY-MAX	1	-229.03	4379.43	49645.95	10233.66	46.26	0.433
Concio 1	239	J[799]	ST SLU Mobili	MY-MIN	3	-314.76	-536.60	16005.57	6261.74	23.83	0.105
Concio 1	240	1[799]	ST SLU Mobili	MY-MIN	3	0.00	-347.94	18098.91	6491.25	112.51	0.054
Concio 1	240	J[800]	ST SLV Long	FX-MIN	4	-1.13	-0.34	18098.91	6479.08	111.26	0.000
Concio 1 Concio 1	301 301	J[801] J[802]	ST SLV Long ST SLU Mobili	FX-MIN MY-MIN	3	-1.13 0.00	-0.34 -347.96	18098.91 18098.91	6479.08 6491.25	111.25 112.51	0.000 0.054
Concio 1	302	1[802]	ST SLU Mobili	MY-MIN	3	-312.19	-535.59	16005.57	6258.86	23.83	0.105
Concio 1	302	J[803]	ST SLU Mobili	MY-MAX	1	-231.66	4385.29	49645.95	10250.79	46.26	0.433
Concio 1	303	1[803]	ST SLU Mobili	MY-MAX	1	-552.24	4096.42	55059.46	10644.70	46.16	0.395
Concio 1	303	J[804]	ST SLU Mobili	MY-MAX	1	-536.04	5486.32	55059.46	10644.70	46.16	0.525
Concio 2	304	1[804]	ST SLU Mobili	MY-MAX	1	-536.99	5499.24	58902.07	12846.08	88.37	0.437
Concio 2	304 305	J[805]	ST SLU Mobili	MY-MAX	1	-578.76	5863.47	58902.07 49214.00	12846.08 11180.50	88.37 37.91	0.466 0.534
Concio 2 Concio 2	305	J[805] J[806]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-645.67 -649.55	5824.26 5572.30	49214.00	11180.50	37.91	0.512
Concio 2	306	1[806]	ST SLU Mobili	MY-MAX	1	-480.92	5620.54	55779.51	12453.29	65.16	0.460
Concio 2	306	J[807]	ST SLU Mobili	MY-MAX	1	-417.61	4615.54	55779.51	12453.29	65.16	0.378
Concio 3	307	I[807]	ST SLU Mobili	MY-MAX	1	-417.61	4618.06	60219.77	13602.15	107.76	0.346
Concio 3	307	J[808]	ST SLU Mobili	MY-MAX	1	-489.86	3505.94	60219.77	13602.15	107.76	0.266
Concio 3	308	1[808]	ST SLU Mobili	MY-MAX	1	-90.51	3704.78	49828.77	12705.59	94.52	0.293
Concio 3 Concio 3	308 309	J[809]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	1	353.57 197.00	-5138.40 -5169.76	20231.85 22871.47	9792.21 10397.59	29.03 168.93	0.542 0.506
Concio 3	309	J[810]	ST SLU Mobili	MY-MIN	1	195.10	-5538.10	22871.47	10397.59	168.93	0.541
Concio 4 H=var	310	I[810]	ST SLU Mobili	MY-MIN	3	72.67	-5620.46	30596.27	10906.64	78.34	0.518
Concio 4 H=var	310	J[811]	ST SLU Mobili	MY-MIN	3	53.60	-7909.62	33977.22	17101.96	77.94	0.464
Concio 4 H=var	311	1[811]	ST SLU Mobili	MY-MIN	3	-44.72	-7889.28	33977.22	17102.20	76.29	0.463
Concio 4 H=var	311	J[812]	ST SLU Mobili	MY-MIN	4	-91.03	-10943.75	37358.17	23330.77	76.80	0.472
Concio 4 H=200	312	1[812]	ST SLU Mobili ST SLU Mobili	MY-MIN	4	108.76	-10943.75	37358.17	23330.48	332.16	0.472
Concio 4 H=200 Concio 4 H=200	312 313	J[813] I[813]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	4	58.99 -125.79	-11633.24 -11692.25	37358.17 37358.17	23292.27 23292.45	332.16 332.62	0.501 0.505
Concio 4 H=200	313	J[814]	ST SLU Mobili	MY-MIN	4	70.58	-11092.23	37358.17	23328.45	332.62	0.303
Concio 4 H=var	314	I[814]	ST SLU Mobili	MY-MIN	4	-140.88	-10932.67	37358.17	23328.66	76.12	0.472
Concio 4 H=var	314	J[815]	ST SLU Mobili	MY-MIN	3	-32.92	-7998.03	33977.22	17082.01	75.61	0.469
Concio 4 H=var	315	I[815]	ST SLU Mobili	MY-MIN	3	64.12	-8024.93	33977.22	17081.62	76.58	0.472
Concio 4 H=var	315	J[816]	ST SLU Mobili	MY-MIN	3	87.01	-5880.57	30596.27	10859.13	76.98	0.544
Concio 5	316	I[816]	ST SLU Mobili	MY-MIN	1	199.69	-5816.20 -5455.54	22871.47	10397.59	168.04	0.568
Concio 5 Concio 5	316 317	J[817] I[817]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	1	200.65 408.27	-5455.54 -5436.68	22871.47 20023.30	10397.59 9644.29	168.04 26.21	0.534 0.584
Concio 5	317	J[818]	ST SLU Mobili	MY-MIN	1	435.91	-2914.57	20023.30	9644.29	26.21	0.324
Concio 5	318	I[818]	ST SLU Mobili	MY-MIN	1	184.56	-2966.40	22871.47	10397.59	46.45	0.293
Concio 5	318	J[819]	ST SLU Mobili	MY-MAX	1	-274.71	3548.06	59222.13	13602.15	100.08	0.266
Concio 6	319	I[819]	ST SLU Mobili	MY-MAX	1	-274.71	3544.89	55412.36	12076.31	64.67	0.299
Concio 6	319	J[820]	ST SLU Mobili	MY-MAX	1	-332.19	4295.36	55412.36	12076.31	64.67	0.362
Concio 6	320	1[820]	ST SLU Mobili	MY-MAX	1	-481.46	4234.95	56311.98	12175.05	66.56	0.356
Concio 6	320 321	J[821] I[821]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-415.45 -415.45	4526.04 4526.04	56311.98 56311.98	12175.05 12177.43	66.56 66.56	0.379 0.379
Concio 6	321	J[821]	ST SLU Mobili	MY-MAX	1	-415.45	4526.04	56311.98	12177.43	66.56	0.379
Concio 6	322	1[822]	ST SLU Mobili	MY-MAX	1	-332.10	4295.07	55412.36	12066.84	64.67	0.362
Concio 6	322	J[823]	ST SLU Mobili	MY-MAX	1	-274.71	3544.50	55412.36	12066.84	64.67	0.299
Concio 5	323	I[823]	ST SLU Mobili	MY-MAX	1	-274.71	3547.67	59222.13	13602.15	100.06	0.266













Elem property	Elem number	Position	Lcom	Туре	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	Nb,Rd (kN)	Mb,Rd (kN*m)	Mcr (kN*m)	Interaction Ratio
Concio 5	323	J[824]	ST SLU Mobili	MY-MIN	1	184.52	-2966.24	22871.47	10397.59	46.45	0.293
Concio 5	324	1[824]	ST SLU Mobili	MY-MIN	1	435.76	-2914.42	20023.30	9645.36	26.21	0.324
Concio 5	324	J[825]	ST SLU Mobili	MY-MIN	1	408.12	-5436.80	20023.30	9645.36	26.21	0.584
Concio 5 Concio 5	325 325	J[825]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	1	200.82 199.86	-5455.58 -5816.23	22871.47 22871.47	10397.59 10397.59	168.04 168.04	0.534 0.568
Concio 4 H=var	325	1[826]	ST SLU Mobili	MY-MIN	3	87.18	-5880.65	30596.27	10397.39	76.98	0.544
Concio 4 H=var	326	J[827]	ST SLU Mobili	MY-MIN	3	64.31	-8025.01	33977.22	17081.64	76.58	0.472
Concio 4 H=var	327	1[827]	ST SLU Mobili	MY-MIN	3	-32.86	-7998.17	33977.22	17082.02	75.61	0.469
Concio 4 H=var	327	J[828]	ST SLU Mobili	MY-MIN	4	-140.73	-10932.50	37358.17	23328.67	76.12	0.472
Concio 4 H=200	328	1[828]	ST SLU Mobili	MY-MIN	4	70.72	-10932.50	37358.17	23328.47	332.62	0.471
Concio 4 H=200	328	J[829]	ST SLU Mobili	MY-MIN	4	-125.71	-11692.02	37358.17	23292.47	332.62	0.505
Concio 4 H=200	329 329	1[829]	ST SLU Mobili ST SLU Mobili	MY-MIN	4	58.91	-11632.98	37358.17	23292.29	332.16	0.501 0.472
Concio 4 H=200 Concio 4 H=var	330	J[830] I[830]	ST SLU Mobili	MY-MIN MY-MIN	4	108.69 -91.11	-10943.44 -10943.44	37358.17 37358.17	23330.49 23330.79	332.16 76.80	0.472
Concio 4 H=var	330	J[831]	ST SLU Mobili	MY-MIN	3	-44.80	-7888.73	33977.22	17102.21	76.29	0.472
Concio 4 H=var	331	I[831]	ST SLU Mobili	MY-MIN	3	53.41	-7909.08	33977.22	17101.98	77.94	0.464
Concio 4 H=var	331	J[832]	ST SLU Mobili	MY-MIN	3	72.48	-5620.03	30596.27	10906.66	78.34	0.518
Concio 3	332	1[832]	ST SLU Mobili	MY-MIN	1	194.91	-5537.75	22871.47	10397.59	168.93	0.541
Concio 3	332	J[833]	ST SLU Mobili	MY-MIN	1	196.81	-5169.40	22871.47	10397.59	168.93	0.506
Concio 3	333	1[833]	ST SLU Mobili	MY-MIN	1	353.68	-5138.00	20231.85	9790.97	29.03	0.542
Concio 3	333	J[834]	ST SLU Mobili	MY-MAX	1	-90.67	3705.25	49828.77	12717.04	94.51	0.293
Concio 3	334	1[834]	ST SLU Mobili	MY-MAX	1	-489.96	3505.45	60219.77	13602.15	107.77	0.266
Concio 3 Concio 2	334 335	J[835] I[835]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-417.63 -417.63	4618.80 4616.28	60219.77 55779.51	13602.15 12460.21	107.77 65.16	0.347 0.378
Concio 2	335	J[836]	ST SLU Mobili	MY-MAX	1	-417.63	5621.51	55779.51	12460.21	65.16	0.460
Concio 2	336	1[836]	ST SLU Mobili	MY-MAX	1	-649.52	5572.28	49214.00	11177.84	37.91	0.400
Concio 2	336	J[837]	ST SLU Mobili	MY-MAX	1	-645.74	5824.47	49214.00	11177.84	37.91	0.534
Concio 2	337	1[837]	ST SLU Mobili	MY-MAX	1	-578.75	5862.84	58902.07	12846.08	88.37	0.466
Concio 2	337	J[838]	ST SLU Mobili	MY-MAX	1	-537.01	5499.11	58902.07	12846.08	88.37	0.437
Concio 1	338	1[838]	ST SLU Mobili	MY-MAX	1	-536.07	5486.39	55059.46	10638.83	46.16	0.525
Concio 1	338	J[839]	ST SLU Mobili	MY-MAX	1	-552.24	4096.15	55059.46	10638.83	46.16	0.395
Concio 1	339	1[839]	ST SLU Mobili	MY-MAX	1	-231.67	4385.14	49645.95	10233.75	46.26	0.433
Concio 1	339 340	J[840]	ST SLU Mobili	MY-MIN	3	-312.12	-535.73	16005.57	6261.79	23.83	0.105
Concio 1 Concio 1	340	I[840] J[841]	ST SLU Mobili ST SLV Long	MY-MIN FX-MIN	3 4	0.00 -1.13	-347.94 -0.34	18098.91 18098.91	6491.25 6479.08	112.51 111.26	0.054
Concio 1	401	1[842]	ST SLV Long	FX-MIN	4	-0.98	-0.32	17827.09	6220.80	110.47	0.000
Concio 1	401	J[843]	ST SLU Mobili	MY-MIN	3	0.00	-345.87	17827.09	6231.67	111.80	0.056
Concio 1	402	1[843]	ST SLU Mobili	MY-MIN	3	-201.97	-795.04	15765.18	6000.36	25.32	0.145
Concio 1	402	J[844]	ST SLU Mobili	MY-MAX	1	-47.13	4778.23	43259.16	9909.45	45.40	0.483
Concio 1	403	1[844]	ST SLU Mobili	MY-MAX	1	-163.89	4359.72	49041.71	10335.86	46.48	0.425
Concio 1	403	J[845]	ST SLU Mobili	MY-MAX	1	-128.56	6090.15	49041.71	10335.86	46.48	0.592
Concio 2	404	1[845]	ST SLU Mobili	MY-MAX	1	-129.08	6090.83	53768.38	12507.78	87.77	0.489
Concio 2	404 405	J[846]	ST SLU Mobili	MY-MAX	1	-123.20	6476.79 6336.19	53768.38	12507.78	87.77 37.65	0.520 0.586
Concio 2 Concio 2	405	J[846]	ST SLU Mobili ST SLU Mobili	MY-MAX MY-MAX	1	-141.40 -158.59	6064.98	44924.69 44924.69	10872.63 10872.63	37.65	0.561
Concio 2	406	1[847]	ST SLU Mobili	MY-MAX	1	-130.15	6180.32	50917.97	12115.93	64.49	0.513
Concio 2	406	J[848]	ST SLU Mobili	MY-MAX	1	-90.23	5130.13	50917.97	12115.93	64.49	0.425
Concio 3	407	1[848]	ST SLU Mobili	MY-MAX	1	-90.23	5130.32	55107.17	13255.76	108.92	0.389
Concio 3	407	J[849]	ST SLU Mobili	MY-MAX	1	-139.96	3679.43	55107.17	13255.76	108.92	0.280
Concio 3	408	1[849]	ST SLU Mobili	MY-MAX	1	29.57	4014.33	45598.35	12371.42	92.78	0.325
Concio 3	408	J[850]	ST SLU Mobili	MY-MIN	1	-147.98	-5540.74	19856.21	9500.18	28.42	0.591
Concio 3	409	1[850]	ST SLU Mobili	MY-MIN	1	-81.97	-5541.86	22446.82	10096.60	167.17	0.553
Concio 3	409 410	J[851]	ST SLU Mobili	MY-MIN	1	-86.16 -213.44	-5949.36	22446.82	10096.60	167.17	0.593
Concio 4 H=var Concio 4 H=var	410	I[851] J[852]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	3	-213.44	-5927.75 -8327.95	29746.97 33127.92	10799.77 16971.20	77.14 77.13	0.556 0.498
Concio 4 H=var	410	1[852]	ST SLU Mobili	MY-MIN	3	-222.76	-8362.98	33127.92	16971.14	75.06	0.500
Concio 4 H=var	411	J[853]	ST SLU Mobili	MY-MIN	4	-265.86	-11371.04	36508.88	23254.44	75.82	0.496
Concio 4 H=200	412	1[853]	ST SLU Mobili	MY-MIN	4	-52.13	-11371.04	36508.88	23254.19	331.62	0.490
Concio 4 H=200	412	J[854]	ST SLU Mobili	MY-MIN	4	-50.11	-12165.57	36508.88	23221.71	331.62	0.525
Concio 4 H=200	413	1[854]	ST SLU Mobili	MY-MIN	4	-39.81	-12256.03	36508.88	23222.25	331.36	0.529
Concio 4 H=200	413	J[855]	ST SLU Mobili	MY-MIN	4	-43.50	-11459.30	36508.88	23252.77	331.36	0.494
Concio 4 H=var	414	1[855]	ST SLU Mobili	MY-MIN	4	-252.90	-11459.30	36508.88	23252.85	75.51	0.500
Concio 4 H=var Concio 4 H=var	414 415	J[856] I[856]	ST SLU Mobili ST SLU Mobili	MY-MIN MY-MIN	3	-175.17 -202.27	-8423.30 -8409.05	33127.92 33127.92	16954.25 16954.82	74.75 75.79	0.502 0.502
Concio 4 H=var	415	J[857]	ST SLU Mobili	MY-MIN	3	-166.93	-6178.37	29746.97	10758.91	75.80	0.580
Concio 5	416	1[857]	ST SLU Mobili	MY-MIN	1	-49.76	-6173.17	22446.82	10096.60	166.05	0.614
Concio 5	416	J[858]	ST SLU Mobili	MY-MIN	1	-45.82	-5802.68	22446.82	10096.60	166.05	0.577
Concio 5	417	1[858]	ST SLU Mobili	MY-MIN	1	-101.61	-5800.34	19651.54	9359.92	25.76	0.625
Concio 5	417	J[859]	ST SLU Mobili	MY-MIN	1	-52.40	-3096.11	19651.54	9359.92	25.76	0.334
Concio 5	418	1[859]	ST SLU Mobili	MY-MIN	1	-184.30	-3088.21	22446.82	10096.60	45.44	0.314
Concio 5	418	J[860]	ST SLU Mobili	MY-MAX	1	-56.31	4093.80	54194.22	13255.76	101.20	0.310
Concio 6 Concio 6	419 419	J[860] J[861]	ST SLU Mobili	MY-MAX MY-MAX	1	-56.31 -98.58	4093.31 4882.57	50504.53 50504.53	11739.79 11739.79	63.88 63.88	0.350 0.418
Concio 6	419	I[861]	ST SLU Mobili ST SLU Mobili	MY-MAX	1	-98.58	4882.57 4750.50	51324.47	11739.79	66.85	0.418
Concio 6	420	J[862]	ST SLU Mobili	MY-MAX	1	-80.54	5228.31	51324.47	11847.50	66.85	0.443
Concio 6	421	1[862]	ST SLU Mobili	MY-MAX	1	-80.54	5228.31	51324.47	11852.42	66.85	0.443
Concio 6	421	J[863]	ST SLU Mobili	MY-MAX	1	-118.56	4750.89	51324.47	11852.42	66.85	0.403
Concio 6	422	1[863]	ST SLU Mobili	MY-MAX	1	-98.58	4882.26	50504.53	11732.17	63.88	0.418
Concio 6	422	J[864]	ST SLU Mobili	MY-MAX	1	-56.32	4092.84	50504.53	11732.17	63.88	0.350
Concio 5	423	I[864]	ST SLU Mobili	MY-MAX	1	-56.32	4093.33	54194.22	13255.76	101.19	0.310
Concio 5	423	J[865]	ST SLU Mobili	MY-MIN	1	-184.26	-3087.94	22446.82	10096.60	45.44	0.314













Elem property	Elem number	Position	Lcom	Туре	Sect. Class	N_Ed (kN)	M_Ed (kN*m)	Nb,Rd (kN)	Mb,Rd (kN*m)	Mcr (kN*m)	Interaction Ratio
Concio 5	424	1[865]	ST SLU Mobili	MY-MIN	1	-52.25	-3095.88	19651.54	9361.07	25.76	0.333
Concio 5	424	J[866]	ST SLU Mobili	MY-MIN	1	-101.46	-5800.53	19651.54	9361.07	25.76	0.625
Concio 5	425	1[866]	ST SLU Mobili	MY-MIN	1	-45.61	-5802.92	22446.82	10096.60	166.05	0.577
Concio 5	425	J[867]	ST SLU Mobili	MY-MIN	1	-49.55	-6173.38	22446.82	10096.60	166.05	0.614
Concio 4 H=var	426	1[867]	ST SLU Mobili	MY-MIN	3	-166.72	-6178.48	29746.97	10758.92	75.80	0.580
Concio 4 H=var	426	J[868]	ST SLU Mobili	MY-MIN	3	-202.05	-8409.08	33127.92	16954.83	75.79	0.502
Concio 4 H=var	427	1[868]	ST SLU Mobili	MY-MIN	3	-175.04	-8423.82	33127.92	16954.27	74.75	0.502
Concio 4 H=var	427	J[869]	ST SLU Mobili	MY-MIN	4	-253.00	-11459.08	36508.88	23252.86	75.51	0.500
Concio 4 H=200	428	1[869]	ST SLU Mobili	MY-MIN	4	-43.59	-11459.08	36508.88	23252.78	331.36	0.494
Concio 4 H=200	428	J[870]	ST SLU Mobili	MY-MIN	4	-39.71	-12255.77	36508.88	23222.27	331.36	0.529
Concio 4 H=200	429	I[870]	ST SLU Mobili	MY-MIN	4	-50.18	-12165.61	36508.88	23221.72	331.62	0.525
Concio 4 H=200	429	J[871]	ST SLU Mobili	MY-MIN	4	-52.22	-11371.02	36508.88	23254.21	331.62	0.490
Concio 4 H=var	430	I[871]	ST SLU Mobili	MY-MIN	4	-265.96	-11371.02	36508.88	23254.45	75.82	0.496
Concio 4 H=var	430	J[872]	ST SLU Mobili	MY-MIN	3	-222.84	-8362.56	33127.92	16971.15	75.06	0.500
Concio 4 H=var	431	I[872]	ST SLU Mobili	MY-MIN	3	-248.47	-8327.70	33127.92	16971.21	77.13	0.498
Concio 4 H=var	431	J[873]	ST SLU Mobili	MY-MIN	3	-213.63	-5927.31	29746.97	10799.79	77.14	0.556
Concio 3	432	I[873]	ST SLU Mobili	MY-MIN	1	-86.36	-5948.93	22446.82	10096.60	167.17	0.593
Concio 3	432	J[874]	ST SLU Mobili	MY-MIN	1	-82.17	-5541.36	22446.82	10096.60	167.17	0.553
Concio 3	433	I[874]	ST SLU Mobili	MY-MIN	1	-148.12	-5540.28	19856.21	9498.88	28.42	0.591
Concio 3	433	J[875]	ST SLU Mobili	MY-MAX	1	29.73	4014.90	45598.35	12382.22	92.77	0.325
Concio 3	434	I[875]	ST SLU Mobili	MY-MAX	1	-139.93	3679.07	55107.17	13255.76	108.93	0.280
Concio 3	434	J[876]	ST SLU Mobili	MY-MAX	1	-90.17	5131.20	55107.17	13255.76	108.93	0.389
Concio 2	435	I[876]	ST SLU Mobili	MY-MAX	1	-90.17	5130.98	50917.97	12121.96	64.49	0.425
Concio 2	435	J[877]	ST SLU Mobili	MY-MAX	1	-130.08	6181.32	50917.97	12121.96	64.49	0.513
Concio 2	436	I[877]	ST SLU Mobili	MY-MAX	1	-158.52	6064.97	44924.69	10874.24	37.65	0.561
Concio 2	436	J[878]	ST SLU Mobili	MY-MAX	1	-141.33	6335.95	44924.69	10874.24	37.65	0.586
Concio 2	437	I[878]	ST SLU Mobili	MY-MAX	1	-123.12	6476.43	53768.38	12507.78	87.77	0.520
Concio 2	437	J[879]	ST SLU Mobili	MY-MAX	1	-128.99	6090.74	53768.38	12507.78	87.77	0.489
Concio 1	438	1[879]	ST SLU Mobili	MY-MAX	1	-128.46	6090.09	49041.71	10329.67	46.48	0.592
Concio 1	438	J[880]	ST SLU Mobili	MY-MAX	1	-163.80	4360.13	49041.71	10329.67	46.48	0.425
Concio 1	439	1[880]	ST SLU Mobili	MY-MAX	1	-47.10	4778.26	43259.16	9923.08	45.39	0.483
Concio 1	439	J[881]	ST SLU Mobili	MY-MIN	3	-201.95	-795.02	15765.18	6002.81	25.32	0.145
Concio 1	440	I[881]	ST SLU Mobili	MY-MIN	3	0.00	-345.85	17827.09	6231.67	111.80	0.056
Concio 1	440	J[882]	ST SLV Long	FX-MIN	4	-0.98	-0.31	17827.09	6220.80	110.48	0.000

7.4 VERIFICA DELLE TENSIONI IN ESERCIZIO

Si effettuano le verifiche allo stato limite di esercizio (SLE) delle tensioni massime nell'acciaio delle travi, nel calcestruzzo della soletta e nelle armature della soletta.

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazioni di carichi più gravose. Dati tabulati:

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento

Lcom: combinazione di carico più gravosa

Type: tipo combinazione (caratteristica, frequente, quasi permanente)

Flange travi in acciaio:

Sigma_Ed_ser: tensione assiale massima
Tau_Ed_ser: tensione tangenziale massima

SQRT(sigma^2+3 tau^2): tensione ideale

ALW = $f_{yk} / \gamma_{M,ser}$: tensione limite

Soletta in calcestruzzo:

Sigma_c: tensione assiale massima

k*fck: tensione limite (comb. caratteristica: $k_1 = 0.6$; quasi perm.: $k_2 = 0.45$)

Armatura soletta:

Sigma_s: tensione assiale massima

k*fsk: tensione limite (comb. caratteristica: $k_3 = 0.8$)













	VERIFICATIO	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Vermed	Nerified Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified
	k*fsk (kN/m^2)	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	36000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	36000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	300000	360000	360000
×	Sigma_s (kN/m^2)	0.00	15034178	-43108.19	-36926.68	-4735726	-51333.16	-48527.93	-48157.68	-48975.53	86472.91	105463 91	10300531	210407.40	220119.25	225488.09	139944.43	16618.34	115527.27	117339.81	133804.88	139745.49	123189.81	120453.21	117307.27	127903.24	146348.59	233965.17	225319.29	133616.69	129129.79	104708.66	12720135	102209.58	88534 12	88534.12	100496.07	102213.41	127185.60	104696.71	129132.10	72526730	23026775	234060.80	14640158	127948.61	117285.06	120412.31	12.18.18.55	133768 75	119711.90	116920.81	115479.53	116571.76	139970.89	225553.75	219992.55	703020 01	105456 RG	72005.60
Reinforcement in Deck	Туре	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
	Lcom	T RARA Vento	RARA Mobili	T RARA Mobili	T RARA Mobili	FARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	KAKA Mobili	FRARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	L KAKA MODIII T RARA Mohiii	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	I KAKA Mobili	L KAKA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	I KAKA MODIII	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA Mobili	T RARA MODIII	T RARA Mohili	T RARA Mobili
	K*fck (kN/m^2)	19200 S	9200 S	19200	19200 S	9200	19200 ST	19200 ST	19200 S	19200 S	19200 ST	9200	9200	19200 ST	19200 ST	19200 ST	19200 ST	19200 S	9200	9200 8	19200 ST	19200 ST	19200 ST	19200 ST	19200 ST	19200 ST	19200 S	19200 S	9200 S	19200 ST	19200 S	19200 ST	19200 ST	19200 S	00200	19200 ST	19200 ST	19200 S	19200 ST	19200 S	9200 5	9200	19200 S	19200 ST	19200 ST	19200 ST	19200 ST	19200 ST	19200 S	9200	19200 ST	19200 ST	19200 ST	19200 ST	19200 S	19200 ST	19200 S	0000	9200	19200 ST
	Sigma_c (kN/m^2) ((00:00	1433.76	7875.94	6773.98	8575.64	9283.03	8793.31	8702.78	8851.39	7198.22	7163.56	603089	0.00	00:0	00:00	0.00	0.00	0.00	0000	0.00	00:0	00.0	00:0	0.00	0.00	0.00	00.0	00.0	4567.16	3841.76	5645.80	5689.06	7025.30	719132	7191.32	6712.10	7024.72	5688.31	5645.05	3842.79	4566.44	0000	00:00	0.00	00:0	0.00	0.00	0.00	0.00	00:0	0.00	00:0	00:0	0.00	0.00	00:0	0.00	542768	7164.77
Concrete Deck	Туре	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic :	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
	moo_l	FRARA Vento	RARA Mobili	RARA Mobili	L RARA Mobili	RARA Mobili	RARA Mobili	l RARA Mobili	l RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	FRARA Mobili	F RARA Mobili	FRARA Mobili	RARA Mobili	KAKA Mobili	RARA Mobili	RARA Mobili	F RARA Mobili	FRARA Mobili	l RARA Mobili	FRARA Mobili	l RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	F RARA Mobili	FRARA Mobili	「RARA Mobili	l RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	TRARA Mobili	F RARA Mobili	RARA Mobili	RARA Mobili	KAKA Mobili	KAKA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	FRARA Mobili	F RARA Mobili	F RARA Mobili	RARA Mobili	KAKA MODIII	RARA Mobili	RARA Mobili	FRARA Mobili	l RARA Mobili	l RARA Mobili	r RARA Mobili	RARA Mobili	DADA MODIII	RARA Mobili	RARA Mobili
	ALW (kN/m²2)	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 51	355000	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	322000 21	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 S1	322000 81	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 51	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000 ST	355000	355000 ST	355000 ST
	SQRT(sigma^2 +3tau^2) (kN/m^2)	0.00	114670 14	195657.14	189727.53	196510 09	206974.48	204876.11	1953 16.84	201237.48	183361.40	103364.06	134837.64	223475.27	219512.21	240595.09	204919.33	190200.23	188899.68	18913190	203136.42	206762.61	192691.43	193934.51	192536.38	192167.00	216024.79	256313.34	237044.03	99416.83	99143.24	111907.78	131035.99	143865.02	139436.70 154658.09	154658.09	148677.28	156349.65	16.1186.51	125276.25	98854.69	98348.26	234528 68	254184.39	213627.78	190733.21	189980.22	191936.03	190473.81	204635.62	191602.26	192838.25	191890.19	191989.93	208055.53	243470.30	222533.62	446272 80)	10503516	150599.69
	ALW SC (KN/m²2)	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35;	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204959.35	204939.33	204959.35
tructural Steel	Tau_Ed,ser (kN/m^2)	0.00	6014552	31000.28	43432.19	16103 10	143.49	12416.86	31688.76	37034.80	62855.84	4678120	51387.24	50584.41	46486.31	49120.51	4963188	40667.74	38409.40	39140 30	40642.80	43616.17	42090.17	41838.94	40126.91	40373.16	4967186	46958 06	48246.13	24951.77	23884.15	23763.47	39605.78	8939.59	305/.46 2810.52	2810.52	29931.35	36466.72	67128.33	40277.00	23489.72	73509.58	43094 27	45448.21	46059.49	38032.74	35832.66	38663.62	38598.95	4012193	42951.70	42663.07	43073.74	43394.82	53840.95	53686.06	51051.47	32050 64	29378.81	29742.15
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	Lcom	719] ST RARA Vento Characteristic	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	KAKA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	r RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	ST RARA Mobili	RARA Mobili	RARA Mobili Characteristic	RARA Mobili	RARA Mobili	RARA Mobili	KAKA Mobili	DADA MOBIII	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	PAPA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	RARA Mobili	DADA Mobili	RARA Mobili	4 J[753] ST RARA Mobili Characteristic -141514.94 35
	Position	٤	-11-	-	[721] S	17221 ST	J[723] S1	I[723] St	J[724] S	I[724] S	J[725] S.	[726] S	17261 ST	J[727]	1(727)	J[728] ST	I[728] S	J[729] S	230102	17301 51	JI731 S1	[731] S1	J[732] S1	I[732] St	J[733] St	l[733] S.	J[734] S	1734 S	1735	J[736] ST	I[736] ST	J[737] S	I[737] S	J[738] ST	1/38] V	[739] SI	J[740] ST	I[740] S	J[741] S	741] S	J 742 S	1/42 5	17431 ST	J[744] SI	[744] S	J[745] S.	I[745] S.	J[746] S	1746 S	U /4/ U	JI 7481 ST	[748] ST	J[749] Si	I[749] St	J[750] S.	[750] S	J[751] S	0 647	17521 (ST	J[753] S1
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39656.21	8959.36	35137.70	22792.53	3862741	66119.85	55379.04	63240.68	0.00	0.00	25859.28	65402.36	26305.07	36909.94	14513.44	14657.30	2192.44	7780.95	29471.35	35216.38	58695.59	4402169	42243.01	48065.34	47186.09	49582.55	51073 98	4136114	4202763	3667556	3630135	4001104	4547463	4 1937 67	4 1869 20	42494.85	40019.42	49580.04	4852113	46267.47	46388.63	24594.10	24033.58	20978.36	34963.94	7020.70	648.86	2646.33	2646.33	27522.54	54242.50 62185.19	37311.11	23823.63	23559.25	45353.95	43705.79	45959.49	47532.36	38693.66	39305.Ib	39507.57	39 lob. III	4310877	39416.32	3942120	45738.87	43212.34	53931.97	52898.76	5050169
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Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	o i i o	verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	De jije	200	200	verilled	verilled	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Vorified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Vorified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	
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331	332	332	333	334	334	335	332	336	337	337	333	338	000	655	339	940	340	\$ 555	100	402	402	5 C	200	404	405	405	406	406	407	407	a c	900	900	409	408	014	410	414	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 t t	444	5 6	2111					1 4	417	417	٠.	•	-	419	420	420	421	421		422	423	423	424	424	425	Ш		a 426		427	0 428	0 428	
Concio 4 H=va			Condio 3	- 1	1	} {	- 1	,	3	8	1	0000		Condio	_ .	Concio	_},		Concio	Concio	Concio			Concio 2	1	2	_	~	l.,	i		,	,,,	Concio	Concio 3	Concio 4 H	Concio 4 H=V:	Concio 4 H=var	Condo 4 Hav	Condio 4 H=2	Concio 4	Condio 4 HEZ	1	Concio 4 Tav	+ +	Concio 4 Hava	+ (10	Concio	Concio 5	Concio 5	110	Concio 5	Concio 6				(0)	٥	9	_o	2	Concio 5	2	Concio 5	Concio 5	(0)	4	Concio 4 H≡va	Concio 4 H=v&	Concio 4 H=v&	Concio 4 H=2(Concio 4 H=2(















Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified	Verified
360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	360000	0.00 360000
125814.31	115713.52	113257.36	120211.84 360000	119053.22	143059.70 360000	230989.94 360000	237049.30 360000	223532.50 360000	104372.10 360000	110800.25 360000	75786.87 360000	9 1950.12	-48565.13 360000	-47581.80	-48170.89 360000	-50037.60	-47893.86 360000	-50743.48	-35647.89	-41765.82	149368.16	16216.19	00.0
Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
19200 ST RARA Mobili	19200 ST RARA Mobili	19200 STRARA Mobili	19200 STRARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 STRARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 ST RARA Mobili	19200 STRARA Mobili	19200 ST RARA Mobili	19200 ST RARA Frenamento
9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	19200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST	9200 ST
0.00	0.00	0.00	0.00	0.00	0.00	0.00	L	0.00	5889.67	5337.48		7257.82			8732.05	9062.87			6556.72 1	7647.53 1	082.00	0.00	~ 00 0
									28	23	72.	72	87			06	98	93	92	92	9		-
Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic
355000 ST RARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 ST RARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 ST RARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 ST RARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 STRARA Mobili	355000 ST RARA Frenamento
204233.43	190651.32	191889.33	192872.75	192612.35	208971.00	244661.38	223616.65	227711.66	116 100 .20	104905.85	1506 12.93	162787.25	192036.64	18 7836.99	212549.12	210273.67	205896.35	248942.69	208062.84	210605.01	116045.53	45894.61	000
1.25 204959.35	.54 204959.35	3.48 204959.35	.87 204959.35	7.70 204959.35	7.35 204959.35	.22 204959.35	.63 204959.35	204959.35	1.32 204959.35	3.97 204959.35	3.31, 204959.35	39697.75 204959.35	204959.35	8975.44 204959.35	1.62 204959.35	204959.35	3.06 204959.35	7.62 204959.35	0.05 204959.35	1.45 204959.35	6.37 204959.35	2.25 204959.35	204959 35
44390.25	42886.54		42995.87	43327.70	53737.35	53562.22	50927.63	52800.33	33048.32	29409.97	29773.31	39697.75	13874.79	8975.44	35121.62	22772.53	39018.06	38607.62	66100.05	55271.45	60236.37	25442.25	000
355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000	355000
189208.38	175585.19	177132.26	177915.60	177391.23	187098.29 355000	-226390.05	205483.66 355000	208540.11	-101008.32 355000	-91708.22	-141509.38 355000	-147553.23	-190527.01, 355000	-187192.57	-203657.91 355000	-206541.16	-194489.28	-239793.28	-173731.10	-187589.09	50806.55	12821.52	000
Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic :	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic	Characteristic :	Characteristic	Characteristic	Characteristic	Characteristic
 ST RARA Mobili 	1] ST RARA Mobili	1] ST RARA Mobili	[872] ST RARA Mobili	2] ST RARA Mobili	 ST RARA Mobili 	3] ST RARA Mobili	J[874] ST RARA Mobili	4] ST RARA Mobili	5] ST RARA Mobili	5] ST RARA Mobili	[876] ST RARA Mobili	3] ST RARA Mobili	7] ST RARA Mobili	7 ST RARA Mobili	J[878] ST RARA Mobili	8] ST RARA Mobili	J[879] ST RARA Mobili	9] ST RARA Mobili	J[880] ;ST RARA Mobili	 ST RARA Mobili 	1] ST RARA Mobili	1] ST RARA Mobili	21 ST RARA Franamento Characteristic
[870]	9 J[871]	1[871]	F	1 [872]	1 \ J[873]	[873]	Ĺ.,	[874]	3 (J[875]	[875]	<u> </u>	[876]	7/1877]	3 [[877]	Ĺ	[878]		3 [879]		[880]	1[881]	[881]	[882]
20 429	20 429	var 430	var 430	var 431	var 431	432	432	433	433	434	434	435	435	436	436	437	437	438	438	439	439	440	440
Concio 4 H=20	Concio 4 H=20	Concio 4 H=var	Concio 4 H=var	Concio 4 H=var	Concio 4 H=var	Concio 3	Condio 3	Condio 3	Condio 3	Concio 3	Condio 3	Concio 2	Condio 2	Condio 2	Concio 2	Condio 2	Condio 2	Concio 1	Condio 1	Condio 1	Condio 1	Condio 1	Concio 1















7.5 VERIFICHE A FATICA

Si effettuano le verifiche allo stato limite di fatica per vita illimitata delle travi principali e delle saldature anima/piattabanda.

L'impalcato si considera caricato secondo il modello di carico a fatica 2, applicato sulle corsie convenzionali; il veicolo più gravoso viene scelto automaticamente dal programma di calcolo tra quelli della tabella 5.1.VIII (NTC 2018).

Si assume che le strutture siano sensibili alla rottura per fatica e che essa produca conseguenze significative; il coefficiente parziale di sicurezza per le verifiche è quindi pari a:

$$\gamma_{\rm Mf} = 1.35$$

Le caratteristiche resistenti (elastiche) tengono conto del contributo del calcestruzzo della soletta se compressa, se tesa tengono conto solamente dell'armatura.

La verifica viene eseguita per ogni tipologia di trave (concio) per:

a) profilato metallico: tensioni normali: $\Delta \sigma_{c} = 112 \text{ N/mm}^2$

b) profilato metallico: tensioni tangenziali: $\Delta \tau_C = 100 \text{ N/mm}^2$

c) saldature: tensioni tangenziali: $\Delta \tau_c = 80 \text{ N/mm}^2$

Seguono le verifiche eseguite per ogni tipologia di sezione all'interno della quale si sono individuate le condizioni:

- 1) ΔM massimo e ΔT associato (per verifica a)
- 2) ΔT massimo e ΔM associato (per verifiche b, c)









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SCHEMA SEZIONE COMPOSTA

VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C1

Legenda As Yg_inf(s)

Area profilo metallico Baricentro profilo metallico Altezza profilo metallico Yg_inf Jc Sc_max Mente della sezione composta
Momento d'inerzia della sezione composta
Momento statico massimo della sezione del profilo

Sp Spessore anima in corrispondenza della sezione con momento statico massimo Sc max

Larghezza dei piatti (piattabande, anime, ecc.)
Spessore dei piatti (piattabande, anime, ecc.)
Sezione resistente dei piatti (piattabande, anime, ecc.)

sezone resisserite uer platti (piattabande, anime, ecc.) Distanza baricentro della sezione composta Momento statico della sezione i_esima di attacco dei piatti in esame(piattabande, anime, ecc.) Delta di tensione tangenziale e normale degli elementi da verificare Saldatura a cordone d'angolo Larghezza della gola del cordone d'angolo (somma) S_i

Δτ e Δσ C.ANG

a P.PEN

Saldatura a piena penetrazione (spessore resistente= spessore anima)

355 N/mm²

510 N/mm²

fyk ftk

1.25 (coeff. di sicurezza saldature) **γ**м2 γм 1.35 (coeff. di sicurezza a fatica)
6.30 (coeff. di omogeneizzazione acciaio/cls.)
320 cm (base efficace soletta in cls.) Es/Ec Вс Нс 24 cm (altezza soletta in cls.)

Gap Ar1 Y(Ar1) 6 cm (distanza tra profilo metallico e soletta)
32.16 cm² (area di armatura soletta)
20 cm (distanza dal lembo inferiore della soletta dell'armatura Ar1)
32.16 cm² (area di armatura soletta)

Ar2

2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) SI (considerare o no le armature della soletta se in compressione) Y(Ar2) Ar_compr?

Caratteristiche geometriche

STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
Compr.	471.0	1.5	46.91	875818	100.0	98.88	2678605	-2396436	27089	24421.6	1.097	CLS in compressione
Teso	471.0	1.5	46.91	875818	100.0	55.33	1159041	-25948	20947	11743.6	0.987	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	94.0	1.5	141.0	48.88					ANIMA	
sez 1	0.0	0.0	0.0	-1.12	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	0.38	24421.2	1.097	C.ANG.	17.0	ANIMA-PIATTABANDA SUP.	(2 SALD.12x12 mm)
sez 3	60.0	3.0	180.0	97.38	17528.8	1.528	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
Se7 4	0.0	0.0	0.0	98 88	0.0		C.ANG.	0.0	PIATTO RINFORZO INF	

Caratteristiche con sezione avente il CLS totalmente in trazione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm	
sez.max.	94.0	1.5	141.0	5.33					ANIMA
sez 1	0.0	0.0	0.0	-44.67	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.
sez 2	50.0	3.0	150.0	-43.17	10441.4	1.110	C.ANG.	17.0	ANIMA-PIATTABANDA SUP. (2 SALD.12x12 mm)
sez 3	60.0	3.0	180.0	53.83	9689.7	1.196	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	55.33	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

TIPO DI	V(max)
COMBINAZIONE	kN
T(max)	1983.8

POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO
sez 2	106.58	261.73	VERIFICATO
sez 3	117.27	261.73	VERIFICATO
sez 4	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

ELEM./	TIPO DI	M(max)	M(min)	V(max)	V(min)
NODO	COMBINAZIONE	kNm	kNm	kN	kN
103	DM(max) - DT(ass)	3669.4	2246.1	-129.4	-82.6
102	DM(ass) - DT(max)	-22.8	-204.1	-479.3	-921.8

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	Δσε	$\Delta \sigma D/\gamma Mf$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \sigma < \Delta \sigma D/\gamma Mf$
ser may	135.5	82.0	52 54	112.0	61 14	VERIFICATO

<--Tab. C.4.2.XIV (3) Δσc=112 :Tab. C.4.2.XV (2) Δσc=112

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf$
sez. max	-32.37	-62.27	29.89	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	-25.44	-48.93	23.49	80.0	27.08	VERIFICATO
sez 3	-28.33	-54.49	26.16	80.0	27.08	VERIFICATO
sez 4	0.00	0.00	0.00	80.0	27.08	VERIFICATO

<--Tab. C.4.2.XIIIb (6) Δτc=100 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80



















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SCHEMA SEZIONE COMPOSTA

Вс

<u>3</u>——

VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C2

Legenda

As Yg_inf(s) H Area profilo metallico Baricentro profilo metallico Altezza profilo metallico Yg_inf Baricentro della sezione composta

Momento d'inerzia della sezione composta

Momento d'inerzia della sezione composta

Momento statico massimo della sezione del profilo

Spessore anima in corrispondenza della sezione con momento statico massimo Sc_max Sc_max

Sp

Larghezza dei piatti (piattabande, anime, ecc.) Spessore dei piatti (piattabande, anime, ecc.)

A Z S_i Spessive der piratu plantavante, anime, ecc.)
Sezione resistente dei piatti (piattabande, anime, ecc.)
Distanza banicentro dei piatti(piattabande, anime, ecc.) dal baricentro della sezione composta
Momento statico della sezione i_esima di attacco dei piatti in esame(piattabande, anime, ecc.)

Δτ e Δσ C.ANG a Delta di tensione tangenziale e normale degli elementi da verificare Saldatura a cordone d'angolo Larghezza della gola del cordone d'angolo (somma) Saldatura a piena penetrazione (spessore resistente= spessore anima)

P.PEN

fyk ftk 355 N/mm² 510 N/mm²

γ_{M2} γ_M Es/Ec 1.25 (coeff. di sicurezza saldature)
1.35 (coeff. di sicurezza a fatica)
6.30 (coeff. di omogeneizzazione acciaio/cls.) Bc 320 cm (base efficace soletta in cls.) Hc

24 cm (altezza soletta in cls.)
6 cm (distanza tra profilo metallico e soletta)
32.16 cm² (area di armatura soletta)

Y(Ar1) 20 cm (distanza dal lembo inferiore della soletta dell'armatura Ar1) 32.16 cm² (area di armatura soletta) Ar2

Y(Ar2) Ar_compr? 2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) SI (considerare o no le armature della soletta se in compressione)

Caratteristiche geometriche

STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
Compr.	529.5	1.5	42.11	973886	100.0	95.80	3193890	-761155	33338	28833.9	1.108	CLS in compressione
Teso	529.5	1.5	42.11	973886	100.0	50.22	1300762	-26131	25900	13175.6	0.987	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	93.0	1.5	139.5	45.30					ANIMA	
sez 1	0.0	0.0	0.0	-4.20	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	-2.70	28832.8	1.108	C.ANG.	14.1	ANIMA-PIATTABANDA SUP. (2	2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	93.80	22512.9	1.419	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2	2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	95.80	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	

Caratteristiche con sezione avente il CLS totalmente in trazione

TIPO DI V(max)

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm	
sez.max.	93.0	1.5	139.5	-0.28					ANIMA
sez 1	0.0	0.0	0.0	-49.78	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.
sez 2	50.0	3.0	150.0	-48.28	11534.4	1.128	C.ANG.	14.1	ANIMA-PIATTABANDA SUP. (2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	48.22	11573.2	1.124	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	50.22	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

COMBIN	IAZIONE	kN	
T(m	nax)	1343.0	
POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw.Ed < τw

POSIZ.	τw,Εd	τw,Rd	
	N/mm ²	N/mm ²	τ w,Ed < τ w,Rd
sez 1	0.00	261.73	VERIFICATO
sez 2	85.73	261.73	VERIFICATO
sez 3	84.49	261.73	VERIFICATO
sez 4	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

ELEM./ NODO	TIPO DI COMBINAZIONE	M(max) kNm	M(min) kNm	V(max) kN	V(min) kN
106	DM(max) - DT(ass)	2140.8	547.1	587.5	587.5
105	DM(ass) - DT(max)	3009.9	3033.7	505.7	139.3

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	Δσς	ΔσD/γMf.s	
	N/mm²	N/mm²	N/mm ²	N/mm ²	N/mm ²	Δσ < ΔσD/γMf.s
sez. max	64.2	16.4	47.80	112.0	61.14	VERIFICATO

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf.s$
sez. max	30.44	8.38	22.06	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	32.28	8.89	23.39	80.0	27.08	VERIFICATO
sez 3	25.21	6.94	18.27	80.0	27.08	VERIFICATO
507/	0.00	0.00	0.00	80.0	27.08	VERIFICATO

<--Tab. C.4.2.XIV (3) Δσc=112 ;Tab. C.4.2.XV (2) Δσc=112

<--Tab. C.4.2.XIIIb (6) Δτc=100 <--Tab. C.4.2.XVIIb (8) Δτc=80

<-- Tab. C.4.2.XVIIIb (8) ΔτC=80 <-- Tab. C.4.2.XVIIIb (8) ΔτC=80 <-- Tab. C.4.2.XVIIIb (8) ΔτC=80 <-- Tab. C.4.2.XVIIIb (8) ΔτC=80

MANDATARIA STUDIO CORONA













VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C3

vers. 20/09/2018

Legenda

Area profilo metallico Yg_inf(s) Baricentro profilo metallico Altezza profilo metallico Yg_inf Baricentro della sezione composta

Jc Sc_max Momento d'inerzia della sezione composta Momento statico massimo della sezione del profilo

Spessore anima in corrispondenza della sezione con momento statico massimo Sc_max Larghezza dei piatti (piattabande, anime, ecc.) Spessore dei piatti (piattabande, anime, ecc.)

Sezione resistente dei piatti (piattabande, anime, ecc.)

Distanza baricentro dei piatti (piattabande, anime, ecc.) dal baricentro della sezione composta Momento statico della sezione i esima di attacco dei piatti in esame(piattabande, anime, ecc.) Delta di tensione tangenziale e normale degli elementi da verificare Saldatura a cordone d'angolo Z S_i

 $\Delta \tau$ e $\Delta \sigma$ C.ANG

a P.PEN

Saldatura a cortoner o arigoto
Larghezza della gola del cordone d'angolo (somma)
Saldatura a piena penetrazione (spessore resistente= spessore anima)
355 N/mm²
510 N/mm²
1.25 (coeff. di sicurezza saldature)
1.35 (coeff. di sicurezza a fatica) **γ**м2 γм Es/Ec Bc Hc 6.30 (coeff. di omogeneizzazione acciaio/cls.)
320 cm (base efficace soletta in cls.)
24 cm (altezza soletta in cls.) Gap

6 cm (distanza tra profilo metallico e soletta)

32.16 cm² (area di armatura soletta) Ar1 Y(Ar1)

 32.16 cm² (area di armatura soletta)
 20 cm (distanza dal lembo inferiore della soletta dell'armatura Ar1)
 32.16 cm² (area di armatura soletta)
 2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) Ar2 Y(Ar2) 2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) SI (considerare o no le armature della soletta se in compressione) Ar_compr?

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SCHEMA SEZIONE COMPOSTA

Caratteristiche geometriche

ı	STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
	CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
	Compr.	576.0	2.0	42.79	1010400	100.0	94.67	3320287	-623177	35071	30462.7	1.090	CLS in compressione
ı	Teso	576.0	2.0	42.79	1010400	100.0	50.24	1334247	-26816	26555	13717.2	0.973	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm	
sez.max.	93.0	2.0	186.0	44.17					ANIMA
sez 1	0.0	0.0	0.0	-5.33	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.
sez 2	50.0	3.0	150.0	-3.83	30457.3	1.090	C.ANG.	14.1	ANIMA-PIATTABANDA SUP. (2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	92.67	22241.3	1.493	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	94.67	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.

Caratteristiche con sezione avente il CLS totalmente in trazione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	93.0	2.0	186.0	-0.26					ANIMA	
sez 1	0.0	0.0	0.0	-49.76	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	-48.26	11531.1	1.157	C.ANG.	14.1	ANIMA-PIATTABANDA SUP.	(2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	48.24	11578.7	1.152	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	50.24	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

TIPO	D DI	V(max)	
COMBIN	IAZIONE	kN	
T(m	nax)	2243.1	
POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

sez 3 137.64 261.73 sez 4 0.00 261.73

ELEM./	TIPO DI	M(max)	M(min)	V(max)	V(min)
NODO	COMBINAZIONE	kNm	kNm	kN	kN
107	DM(max) - DT(ass)	2140.8	547.3	587.5	440.9
108	DM(ass) - DT(max)	-2817.5	-2718.0	1143.0	730.9

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	Δσε	$\Delta \sigma D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \sigma < \Delta \sigma D/\gamma Mf.s$
sez may	61.0	15.6	45.44	112.0	61 14	VERIFICATO

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf.s$
sez. max	58.75	37.57	21.18	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	69.85	44.67	25.18	80.0	27.08	VERIFICATO
sez 3	70.14	44.85	25.29	80.0	27.08	VERIFICATO
sez 4	0.00	0.00	0.00	80.0	27.08	VERIFICATO

<--Tab. C.4.2.XIV (3) Δσc=112 ;Tab. C.4.2.XV (2) Δσc=112

<-Tab. C.4.2.XIIIb (6) $\Delta\tau c$ =100 <-Tab. C.4.2.XVIIb (8) $\Delta\tau c$ =80 <-Tab. C.4.2.XVIIb (8) $\Delta\tau c$ =80

<--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80

MANDATARIA STUDIO CORONA



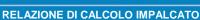












SCHEMA SEZIONE COMPOSTA

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Вс

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vers. 20/09/2018

VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C4

Legenda

Area profilo metallico Yg_inf(s) Baricentro profilo metallico Altezza profilo metallico Yg_inf Baricentro della sezione composta

Jc Sc_max Momento d'inerzia della sezione composta Momento statico massimo della sezione del profilo

Spessore anima in corrispondenza della sezione con momento statico massimo Sc_max Larghezza dei piatti (piattabande, anime, ecc.) Spessore dei piatti (piattabande, anime, ecc.)

Sezione resistente dei piatti (piattabande, anime, ecc.)

Distanza baricentro dei piatti (piattabande, anime, ecc.) dal baricentro della sezione composta Momento statico della sezione i esima di attacco dei piatti in esame(piattabande, anime, ecc.) Delta di tensione tangenziale e normale degli elementi da verificare Saldatura a cordone d'angolo Z S_i

Δτ e Δσ C.ANG

a P.PEN

Saldatura a cortoner o arigoto
Larghezza della gola del cordone d'angolo (somma)
Saldatura a piena penetrazione (spessore resistente= spessore anima)
355 N/mm²
510 N/mm²
1.25 (coeff. di sicurezza saldature)
1.35 (coeff. di sicurezza a fatica) **γ**м2 γм Es/Ec Bc Hc 6.30 (coeff. di omogeneizzazione acciaio/cls.)
320 cm (base efficace soletta in cls.)
24 cm (altezza soletta in cls.)

24 cm (altezza soletta in cls.)
6 cm (distanza tra profilo metallico e soletta)
100.48 cm² (area di armatura soletta)
20 cm (distanza dal lembo inferiore della soletta dell'armatura Ar1)
100.48 cm² (area di armatura soletta)
2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2)
SI (considerare o no le armature della soletta se in compressione) Gap Ar1 Y(Ar1)

Ar2 Y(Ar2) Ar_compr?

Caratteristiche geometriche

STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
Compr.	904.0	2.0	95.66	6157420	200.0	170.33	14481460	-488151	85018	74800.6	1.936	CLS in compressione
Teso	904.0	2.0	95.66	6157420	200.0	117.73	8594389	-104463	73002	45338.0	1.896	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm	
sez.max.	192.0	2.0	384.0	70.33					ANIMA
sez 1	0.0	0.0	0.0	-29.67	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.
sez 2	60.0	4.0	240.0	-27.67	74141.8	1.953	C.ANG.	14.1	ANIMA-PIATTABANDA SUP. (2 SALD.10x10 mm)
sez 3	70.0	4.0	280.0	168.33	47133.5	3.072	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	170.33	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.

Caratteristiche con sezione avente il CLS totalmente in trazione

POSIZ.	b	t	A	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	192.0	2.0	384.0	17.73					ANIMA	
sez 1	0.0	0.0	0.0	-82.27	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	60.0	4.0	240.0	-80.27	39211.5	2.192	C.ANG.	14.1	ANIMA-PIATTABANDA SUP.	(2 SALD.10x10 mm)
sez 3	70.0	4.0	280.0	115.73	32403.9	2.652	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	117.73	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

TIP	D DI	V(max)	
COMBIN	IAZIONE	kN	
T(n	nax)	3037.1	
POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO

POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO
sez 2	109.95	261.73	VERIFICATO
sez 3	80.97	261.73	VERIFICATO
sez 4	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

ELEM./	TIPO DI	M(max)	M(min)	V(max)	V(min)
NODO	COMBINAZIONE	kNm	kNm	kN	kN
113	DM(max) - DT(ass)	-8154.8	-9548.1	-899.4	-1169.1
112	DM(ass) - DT(max)	-8154.8	-9031 4	-899.4	-1357.0

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	Δσε	$\Delta \sigma D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \sigma < \Delta \sigma D/\gamma Mf.s$
sez may	-111.7	-130.8	19.09	112.0	61 14	VERIFICATO

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf.s$
sez. max	-23.72	-35.79	12.07	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	-29.02	-43.78	14.76	80.0	27.08	VERIFICATO
sez 3	-23.98	-36.18	12.20	80.0	27.08	VERIFICATO
sez 4	0.00	0.00	0.00	80.0	27.08	VERIFICATO

<--Tab. C.4.2.XIV (3) Δσc=112 ;Tab. C.4.2.XV (2) Δσc=112

<-Tab. C.4.2.XIIIb (6) $\Delta\tau c$ =100 <-Tab. C.4.2.XVIIb (8) $\Delta\tau c$ =80 <-Tab. C.4.2.XVIIb (8) $\Delta\tau c$ =80

<--Tab. C.4.2.XVIIb (8) Δτc=80

<--Tab. C.4.2.XVIIb (8) Δτc=80



















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SCHEMA SEZIONE COMPOSTA

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VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C5

Legenda

Area profilo metallico Yg_inf(s) H Baricentro profilo metallico Altezza profilo metallico Yg_inf Baricentro della sezione composta

Momento d'inerzia della sezione composta

Momento statico massimo della sezione del profilo

Spessore anima in corrispondenza della sezione con momento statico massimo Sc_max

Larghezza dei piatti (piattabande, anime, ecc.)

Spessore dei piatti (piattabande, anime, ecc.)

Sezione resisterite dei piatti (piattabande, anime, ecc.)
Distanza baricentro dei piatti(piattabande, anime, ecc.) dal baricentro della sezione composta
Momento statico della sezione i esima di attacco dei piatti in esame(piattabande, anime, ecc.)
Delta di tensione tangenziale e normale degli elementi da verificare

Δτ e Δσ C.ANG

P.PEN

fyk ftk

Saldatura a cordone d'angolo
Larghezza della gola del cordone d'angolo (somma)
Saldatura a piena penetrazione (spessore resistente= spessore anima)
355 N/mm²
510 N/mm²
1.25 (coeff. di sicurezza saldature) γ_{M2} γ_Mr Es/Ec Bc Hc 1,35 (coeff. di sicurezza a fatica) 6.30 (coeff. di omogeneizzazione acciaio/cls.)
320 cm (base efficace soletta in cls.) 24 cm (altezza soletta in cls.)

Gap

24 cm (altezza soletta in cis.)
6 cm (distanza tra profilo metallico e soletta)
32.16 cm² (area di armatura soletta)
20 cm (distanza dal lembo irferiore della soletta dell'armatura Ar1)
32.16 cm² (area di armatura soletta)
2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) Ar1 Y(Ar1) Ar2 Y(Ar2) SI (considerare o no le armature della soletta se in compressione) Ar_compr?

Caratteristiche geometriche

_													
	STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
	CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
	Compr.	576.0	2.0	42.79	1010407	100.0	94.67	3320294	-623178	35072	30462.7	1.090	CLS in compressione
	Teso	576.0	2.0	42.79	1010407	100.0	50.24	1334254	-26816	26555	13717.2	0.973	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S i	TIPO	а	DESCRIZIONE
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm	
sez.max.	93.0	2.0	186.0	44.17					ANIMA
sez 1	0.0	0.0	0.0	-5.33	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.
sez 2	50.0	3.0	150.0	-3.83	30457.3	1.090	C.ANG.	14.1	ANIMA-PIATTABANDA SUP. (2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	92.67	22241.3	1.493	C.ANG.	14.1	ANIMA-PIATTABANDA INF. (2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	94.67	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.

Caratteristiche con sezione avente il CLS totalmente in trazione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	93.0	2.0	186.0	-0.26					ANIMA	
sez 1	0.0	0.0	0.0	-49.76	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	-48.26	11531.1	1.157	C.ANG.	14.1	ANIMA-PIATTABANDA SUP.	(2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	48.24	11578.7	1.152	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	50.24	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

			_
TIP	O DI	V(max)	
COMBIN	IAZIONE	kN	
T(n	nax)	2125.6	
			•
POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO

PUSIZ.	τw,⊨a	TW,Ra	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO
sez 2	137.87	261.73	VERIFICATO
sez 3	130.43	261.73	VERIFICATO
sez 4	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

ELEM./	TIPO DI	M(max)	M(min)	V(max)	V(min)
NODO	COMBINAZIONE	kNm	kNm	kN	kN
118	DM(max) - DT(ass)	1038.0	-463.0	-333.3	-311.1
117	DM(acc) - DT(max)	-3505.4	-2401.9	-624.0	-1041.5

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	Δσε	ΔσD/γMf,s	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \sigma < \Delta \sigma D/\gamma Mf.s$
coz may	20.6	-17 /	47.03	1120	61 1/	VERIFICATO

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf.s$
sez. max	-32.12	-53.54	21.42	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	-38.19	-63.65	25.46	80.0	27.08	VERIFICATO
sez 3	-38.34	-63.91	25.57	80.0	27.08	VERIFICATO
507.4	0.00	0.00	0.00	80.0	27.09	VEDIEICATO

<--Tab. C.4.2.XIV (3) Δσc=112 ;Tab. C.4.2.XV (2) Δσc=112

<--Tab. C.4.2.XIIIb (6) Δτc=100

<--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80

















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VERIFICA ALLO STATO LIMITE ULTIMO E DI FATICA (VERIFICA PER VITA ILLIMITATA): CONCI C6

Legenda

Area profilo metallico Baricentro profilo metallico
Altezza profilo metallico
Baricentro della sezione composta Yg_inf(s) Yg_inf

Jc Sc_max Momento d'inerzia della sezione composta Momento statico massimo della sezione del profilo

Nomination statuci massimo della acezione dei priorito.

Spessore anima in corrispondenza della sezione con momento statico massimo Sc_max

Larghezza dei piatti (piattabande, anime, ecc.)

Spessore dei piatti (piattabande, anime, ecc.)

Sezione resistente dei piatti (piattabande, anime, ecc.)

Distanza baricentro dei piatti (piattabande, anime, ecc.) dal baricentro della sezione composta Momento statico della sezione i esima di attacco dei piatti in esame(piattabande, anime, ecc.) Delta di tensione tangenziale e normale degli elementi da verificare Saldatura a cordone d'angolo Z S_i

 $\Delta \tau$ e $\Delta \sigma$ C.ANG

a P.PEN

Saldatura a cordone d'angolo (somma)

Saldatura a piena penetrazione (spessore resistente= spessore anima)

355 Nimm²

510 Nimm²

1.25 (coeff. di sicurezza saldature)

1.35 (coeff. di sicurezza a fatica) **γ**м2 γм 1.35 (coeff. di sicurezza a fatica)
6.30 (coeff. di omogeneizzazione acciaio/cls.)
320 cm (base efficace soletta in cls.)
24 cm (altezza soletta in cls.)
6 cm (distanza tra profilo metallico e soletta)
32.16 cm² (area di armatura soletta)
20 cm (distanza dal lembo inferiore della soletta dell'armatura Ar1)
2.16 cm² (area di armatura soletta)
2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2)
2.16 cm² (area di armatura soletta)
2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) Es/Ec Bc Hc Gap

Ar1 Y(Ar1)

Ar2 Y(Ar2) 2 cm (distanza dal lembo inferiore della soletta dell'armatura Ar2) SI (considerare o no le armature della soletta se in compressione) Ar_compr?

4 3 ---34

SCHEMA SEZIONE COMPOSTA

Caratteristiche geometriche

STATO	As	Sp	Yg_inf(s)	Js	Н	Yg_inf	Jc	Wsup	Winf	Sc_max	Jc/Sc_max	DESCRIZIONE
CLS	cm ²	cm	cm	cm ⁴	cm	cm	cm ⁴	cm ³	cm ³	cm ³	m	
Compr.	501.6	1.2	41.65	951707	100.0	96.51	3115259	-893577	32278	27818.6	1.120	CLS in compressione
Teso	501.6	1.2	41.65	951707	100.0	50.21	1280596	-25722	25503	12852.8	0.996	CLS in trazione

Caratteristiche con sezione avente il CLS totalmente o parzialmente in compressione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	93.0	1.2	111.6	46.01					ANIMA	
sez 1	0.0	0.0	0.0	-3.49	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	-1.99	27818.4	1.120	C.ANG.	14.1	ANIMA-PIATTABANDA SUP.	(2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	94.51	22683.3	1.373	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	96.51	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	•

Caratteristiche con sezione avente il CLS totalmente in trazione

POSIZ.	b	t	Α	Z	S_i	Jc/S_i	TIPO	а	DESCRIZIONE	
	cm	cm	cm ²	cm	cm ³	m	SALDAT.	mm		
sez.max.	93.0	1.2	111.6	-0.29					ANIMA	
sez 1	0.0	0.0	0.0	-49.79	0.0		C.ANG.	0.0	PIATTO RINFORZO SUP.	
sez 2	50.0	3.0	150.0	-48.29	11539.4	1.110	C.ANG.	14.1	ANIMA-PIATTABANDA SUP.	(2 SALD.10x10 mm)
sez 3	60.0	4.0	240.0	48.21	11571.3	1.107	C.ANG.	14.1	ANIMA-PIATTABANDA INF.	(2 SALD.10x10 mm)
sez 4	0.0	0.0	0.0	50.21	0.0		C.ANG.	0.0	PIATTO RINFORZO INF.	

VERIFICA ALLO STATO LIMITE ULTIMO COLLEGAMENTI SALDATI

TIP	O DI	V(max)	
COMBIN	IAZIONE	kN	
T(m	nax)	1164.8	
,			
POSIZ.	τw,Ed	τw,Rd	
	N11 2	N/ 2	- Ed.

POSIZ.	τw,Ed	τw,Rd	
	N/mm ²	N/mm ²	τw,Ed < τw,Rd
sez 1	0.00	261.73	VERIFICATO
sez 2	74.22	261.73	VERIFICATO
sez 3	74.42	261.73	VERIFICATO
sez 4	0.00	261.73	VERIFICATO

VERIFICA ALLO STATO LIMITE DI FATICA (VERIFICA PER VITA ILLIMITATA):

Sollecitazioni flettenti e taglianti associate (con segno)

ELEM./	TIPO DI	M(max)	M(min)	V(max)	V(min)
NODO	COMBINAZIONE	kNm	kNm	kN	kN
119	DM(max) - DT(ass)	1037.7	-463.4	-333.3	-311.1
120	DM(ass) - DT(max)	1538.1	1531.3	-12.8	-390.5

VERIFICA (tensioni normali) DEL PROFILATO METALLICO

POSIZ.	σ inf(+)	σ inf(-)	Δσ	ΔσC	ΔσD/γMf,s	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \sigma < \Delta \sigma D/\gamma Mf.s$
sez, max	32.1	-18.2	50.32	112.0	61.14	VERIFICATO

VERIFICA (tensioni tangenziali) DEL PROFILATO E DEI COLLEGAMENTI SALDATI

POSIZ.	τ(+)	τ(-)	Δτ	ΔτC	$\Delta \tau D/\gamma Mf,s$	
	N/mm ²	N/mm ²	N/mm ²	N/mm ²	N/mm ²	$\Delta \tau < \Delta \tau D/\gamma Mf.s$
sez. max	-0.95	-29.06	28.11	100.0	33.85	VERIFICATO
sez 1	0.00	0.00	0.00	80.0	27.08	VERIFICATO
sez 2	-0.81	-24.66	23.85	80.0	27.08	VERIFICATO
sez 3	-0.66	-20.11	19.45	80.0	27.08	VERIFICATO
sez 4	0.00	0.00	0.00	80.0	27.08	VERIFICATO

<--Tab. C.4.2.XIV (3) Δσc=112 ;Tab. C.4.2.XV (2) Δσc=112

-Tab. C.4.2.XIIIb (6) Δτc=100

<--Tab. C.4.2.XVIIb (8) Δτc=80 <--Tab. C.4.2.XVIIb (8) Δτc=80

<-- Tab C 4 2 XVIIb (8) ATC=80

<--Tab. C.4.2.XVIIb (8) Δτc=80



















8 VERIFICHE DEI CONNETTORI "NELSON"

Dati connettori:

• numero per fila: 3 (C2, C6); 4 (C1, C3, C4, C5)

interasse file: 0.20 m
 diametro: 22 mm (7/8")
 altezza: 175 mm

• resistenza a rottura: 450 N/mm²

8.1 STATO LIMITE ULTIMO – RESISTENZA AL TAGLIO LONGITUDINALE

Si effettuano le verifiche allo stato limite ultimo per taglio longitudinale dei connettori trave-soletta. I coefficienti parziali per SLU assunti sono i seguenti:

 $\gamma_V = 1.25$: connettori: resistenza allo SLU

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazione di carichi più gravose. Dati tabulati:

Elem property: nome delle caratteristiche geometriche dell'elemento

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento Lcom: combinazione di carico più gravosa Type: sollecitazione (massima o minima)

V_L,Ed: sforzo di taglio longitudinale agente sulla larghezza della regione

inelastica

v_L,Ed: sforzo di taglio longitudinale di calcolo per unità di lunghezza (m)

all'interfaccia trave-soletta

P Rd: resistenza al taglio del singolo connettore "Nelson"

v_L,Rd: resistenza al taglio longitudinale per trave e per unità di lunghezza

 $v_Ed = \frac{v_L, Ed}{2 \times t_C}$ (t_c = spessore della soletta)

Condizione di verifica: Verification Ratio: $\frac{v_{L,Ed}}{v_{L,Rd}} \le 1$

Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	101	I[719]	ST SLV Vert	FX-MAX	0.75	0.68	111.48	2229.56	0.000
Concio 1	101	J[720]	ST SLU Mobili	FZ-MAX	459.66	415.52	111.48	2229.56	0.186
Concio 1	102	I[720]	ST SLU Mobili	FZ-MIN	-1588.61	1436.08	111.48	2229.56	0.644
Concio 1	102	J[721]	ST SLU Mobili	FZ-MIN	-905.65	818.69	111.48	2229.56	0.367
Concio 1	103	I[721]	ST SLU Mobili	FZ-MIN	-1111.70	1004.95	111.48	2229.56	0.451
Concio 1	103	J[722]	ST SLU Mobili	FZ-MIN	-711.45	643.14	111.48	2229.56	0.288
Concio 2	104	I[722]	ST SLU Mobili	FZ-MIN	-711.45	628.45	111.48	1672.17	0.376
Concio 2	104	J[723]	ST SLU Mobili	FZ-MAX	646.16	570.77	111.48	1672.17	0.341
Concio 2	105	I[723]	ST SLU Mobili	FZ-MIN	-726.68	641.90	111.48	1672.17	0.384
Concio 2	105	J[724]	ST SLU Mobili	FZ-MAX	959.68	847.72	111.48	1672.17	0.507
Concio 2	106	I[724]	ST SLU Mobili	FZ-MAX	733.31	647.75	111.48	1672.17	0.387
Concio 2	106	J[725]	ST SLU Mobili	FZ-MAX	1073.15	947.95	111.48	1672.17	0.567
Concio 3	107	I[725]	ST SLU Mobili	FZ-MAX	1073.15	958.43	111.48	2229.56	0.430
Concio 3	107	J[726]	ST SLU Mobili	FZ-MAX	1331.35	1189.03	111.48	2229.56	0.533
Concio 3	108	I[726]	ST SLU Mobili	FZ-MAX	1114.33	995.21	111.48	2229.56	0.446
Concio 3	108	J[727]	ST SLU Mobili	FZ-MAX	1717.48	1533.88	111.48	2229.56	0.688
Concio 3	109	I[727]	ST SLU Mobili	FZ-MAX	1502.11	1341.53	111.48	2229.56	0.602
Concio 3	109	J[728]	ST SLU Mobili	FZ-MAX	1571.10	1403.14	111.48	2229.56	0.629
Concio 4 H=var	110	I[728]	ST SLU Mobili	FZ-MAX	1558.81	1356.75	111.48	2229.56	0.609



Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 4 H=var	110	J[729]	ST SLU Mobili	FZ-MAX	1905.68	1141.46	111.48	2229.56	0.512
Concio 4 H=var	111	I[729]	ST SLU Mobili	FZ-MAX	1746.20	1045.94	111.48	2229.56	0.469
Concio 4 H=var	111	J[730]	ST SLU Mobili	FZ-MAX	2083.21	947.88	111.48	2229.56	0.425
Concio 4 H=200	112	I[730]	ST SLU Mobili	FZ-MAX	2086.73	949.48	111.48	2229.56	0.426
Concio 4 H=200	112	J[731]	ST SLU Mobili	FZ-MAX	2156.36	981.17	111.48	2229.56	0.440
Concio 4 H=200	113	I[731]	ST SLU Mobili	FZ-MIN	-2083.33	947.94	111.48	2229.56	0.425
Concio 4 H=200	113	J[732]	ST SLU Mobili	FZ-MIN	-2013.68	916.24	111.48	2229.56	0.411
Concio 4 H=var	114	I[732]	ST SLU Mobili	FZ-MIN	-2011.64	915.32	111.48	2229.56	0.411
Concio 4 H=var	114	J[733]	ST SLU Mobili	FZ-MIN	-1674.19	1002.81	111.48	2229.56	0.450
Concio 4 H=var	115	I[733]	ST SLU Mobili	FZ-MIN	-1833.51	1098.23	111.48	2229.56	0.493
Concio 4 H=var	115	J[734]	ST SLU Mobili	FZ-MIN	-1487.05	1294.29	111.48	2229.56	0.581
Concio 5	116	I[734]	ST SLU Mobili	FZ-MIN	-1497.13	1337.09	111.48	2229.56	0.600
Concio 5	116	J[735]	ST SLU Mobili	FZ-MIN	-1428.18	1275.50	111.48	2229.56	0.572
Concio 5	117	I[735]	ST SLU Mobili	FZ-MIN	-1647.05	1470.98	111.48	2229.56	0.660
Concio 5	117	J[736]	ST SLU Mobili	FZ-MIN	-1027.28	917.46	111.48	2229.56	0.412
Concio 5	118	I[736]	ST SLU Mobili	FZ-MIN	-1251.27	1117.51	111.48	2229.56	0.501
Concio 5	118	J[737]	ST SLU Mobili	FZ-MIN	-959.90	857.29	111.48	2229.56	0.385
Concio 6	119	I[737]	ST SLU Mobili	FZ-MIN	-959.90	841.38	111.48	1672.17	0.503
Concio 6	119	J[738]	ST SLU Mobili	FZ-MIN	-639.11	560.20	111.48	1672.17	0.335
Concio 6	120	I[738]	ST SLU Mobili	FZ-MIN	-873.50	765.65	111.48	1672.17	0.458
Concio 6	120	J[739]	ST SLU Mobili	FZ-MIN	-550.56	482.58	111.48	1672.17	0.289
Concio 6	121	I[739]	ST SLU Mobili	FZ-MIN	-550.56	482.58	111.48	1672.17	0.289
Concio 6	121	J[740]	ST SLU Mobili	FZ-MAX	873.32	765.49	111.48	1672.17	0.458
Concio 6	122	I[740]	ST SLU Mobili	FZ-MAX	639.07	560.17	111.48	1672.17	0.335
Concio 6	122	J[741]	ST SLU Mobili	FZ-MAX	959.76	841.26	111.48	1672.17	0.503
Concio 5	123	I[741]	ST SLU Mobili	FZ-MAX	959.76	857.16	111.48	2229.56	0.384
Concio 5	123	J[742]	ST SLU Mobili	FZ-MAX	1251.15	1117.40	111.48	2229.56	0.501
Concio 5	124	I[742]	ST SLU Mobili	FZ-MAX	1027.26	917.44	111.48	2229.56	0.411
Concio 5	124	J[743]	ST SLU Mobili	FZ-MAX	1646.81	1470.77	111.48	2229.56	0.660
Concio 5	125	I[743]	ST SLU Mobili	FZ-MAX	1428.01	1275.36	111.48	2229.56	0.572
Concio 5	125	J[744]	ST SLU Mobili	FZ-MAX	1496.96	1336.94	111.48	2229.56	0.600
Concio 4 H=var	126	I[744]	ST SLU Mobili	FZ-MAX	1486.89	1294.14	111.48	2229.56	0.580
Concio 4 H=var	126	J[745]	ST SLU Mobili	FZ-MAX	1833.31	1098.12	111.48	2229.56	0.493
Concio 4 H=var	127	I[745]	ST SLU Mobili	FZ-MAX	1673.82	1002.58	111.48	2229.56	0.450
Concio 4 H=var	127	J[746]	ST SLU Mobili	FZ-MAX	2011.21	915.12	111.48	2229.56	0.410
Concio 4 H=200	128	I[746]	ST SLU Mobili	FZ-MAX	2013.24	916.04	111.48	2229.56	0.411
Concio 4 H=200	128	J[747]	ST SLU Mobili	FZ-MAX	2082.88	947.73	111.48	2229.56	0.425
Concio 4 H=200	129	I[747]	ST SLU Mobili	FZ-MIN	-2156.82	981.38	111.48	2229.56	0.440
Concio 4 H=200	129	J[748]	ST SLU Mobili	FZ-MIN	-2087.18	949.69	111.48	2229.56	0.426
Concio 4 H=var	130	I[748]	ST SLU Mobili	FZ-MIN	-2083.64	948.08	111.48	2229.56	0.425
Concio 4 H=var	130	J[749]	ST SLU Mobili	FZ-MIN	-1746.57	1046.16	111.48	2229.56	0.469
Concio 4 H=var	131	I[749]	ST SLU Mobili	FZ-MIN	-1905.88	1141.58	111.48	2229.56	0.512
Concio 4 H=var	131		ST SLU Mobili	FZ-MIN	-1558.98	1356.89	111.48	2229.56	0.609
Concio 3	132		ST SLU Mobili	FZ-MIN	-1571.26	1403.29	111.48	2229.56	0.629
Concio 3	132	J[751]	ST SLU Mobili	FZ-MIN	-1502.27	1341.68	111.48	2229.56	0.602
Concio 3	133		ST SLU Mobili	FZ-MIN	-1717.70	1534.07	111.48	2229.56	0.688
Concio 3	133	J[752]	ST SLU Mobili	FZ-MIN	-1114.35	995.22	111.48	2229.56	0.446
Concio 3	134	I[752]	ST SLU Mobili	FZ-MIN	-1331.46	1189.12	111.48	2229.56	0.533
Concio 3	134	J[753]	ST SLU Mobili	FZ-MIN	-1073.29	958.55	111.48	2229.56	0.430
Concio 2	135	• •	ST SLU Mobili	FZ-MIN	-1073.29	948.07	111.48	1672.17	0.567
Concio 2	135		ST SLU Mobili	FZ-MIN	-733.38	647.81	111.48	1672.17	0.387
Concio 2	136		ST SLU Mobili	FZ-MIN	-959.94	847.95	111.48	1672.17	0.507
Concio 2	136	J[755]	ST SLU Mobili	FZ-MAX	726.34	641.60	111.48	1672.17	0.384
Concio 2	137	I[755]	ST SLU Mobili	FZ-MIN	-646.32	570.91	111.48	1672.17	0.341
Concio 2	137	J[756]	ST SLU Mobili	FZ-MAX	711.34	628.35	111.48	1672.17	0.376
Concio 1	138	I[756]	ST SLU Mobili	FZ-MAX	711.34	643.04	111.48	2229.56	0.288
Concio 1	138		ST SLU Mobili	FZ-MAX	1111.51	1004.79	111.48	2229.56	0.451
Concio 1	139	I[757]	ST SLU Mobili	FZ-MAX	905.47	818.53	111.48	2229.56	0.367
Concio 1	139	J[758]	ST SLU Mobili	FZ-MAX	1588.28	1435.78	111.48	2229.56	0.644











Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	140	I[758]	ST SLU Mobili	FZ-MIN	-459.66	415.52	111.48	2229.56	0.186
Concio 1	140	J[759]	ST SLV Vert	FX-MAX	0.74	0.67	111.48	2229.56	0.000
Concio 1	201	I[760]	ST SLV Vert	FX-MAX	1.00	0.91	111.48	2229.56	0.000
Concio 1	201	J[761]	ST SLU Mobili	FZ-MAX	464.88	423.09	111.48	2229.56	0.190
Concio 1	202	I[761]	ST SLU Mobili	FZ-MIN	-1564.56	1423.90	111.48	2229.56	0.639
Concio 1	202	J[762]	ST SLU Mobili	FZ-MIN	-825.57	751.35	111.48	2229.56	0.337
Concio 1	203	I[762]	ST SLU Mobili	FZ-MIN	-1090.79	992.72	111.48	2229.56	0.445
Concio 1	203	J[763]	ST SLU Mobili	FZ-MIN	-700.02	637.09	111.48	2229.56	0.286
Concio 2	204	I[763]	ST SLU Mobili	FZ-MIN	-700.02	622.84	111.48	1672.17	0.372
Concio 2	204	J[764]	ST SLU Mobili	FZ-MAX	715.93	637.00	111.48	1672.17	0.381
Concio 2	205	I[764]	ST SLU Mobili	FZ-MIN	-783.10	696.77	111.48	1672.17	0.417
Concio 2	205	J[765]	ST SLU Mobili	FZ-MAX	998.50	888.42	111.48	1672.17	0.531
Concio 2	206	I[765]	ST SLU Mobili	FZ-MAX	701.47	624.14	111.48	1672.17	0.373
Concio 2	206	J[766]	ST SLU Mobili	FZ-MAX	1049.37	933.68	111.48	1672.17	0.558
Concio 3	207	I[766]	ST SLU Mobili	FZ-MAX	1049.37	944.84	111.48	2229.56	0.424
Concio 3	207	J[767]	ST SLU Mobili	FZ-MAX	1305.40	1175.36	111.48	2229.56	0.527
Concio 3	208	I[767]	ST SLU Mobili	FZ-MAX	1052.28	947.45	111.48	2229.56	0.425
Concio 3	208	J[768]	ST SLU Mobili	FZ-MAX	1674.55	1507.74	111.48	2229.56	0.676
Concio 3	209	1[768]	ST SLU Mobili	FZ-MAX	1477.42	1330.25	111.48	2229.56	0.597
Concio 3	209	J[769]	ST SLU Mobili	FZ-MAX	1536.39	1383.34	111.48	2229.56	0.620
Concio 4 H=var	210	I[769]	ST SLU Mobili	FZ-MAX	1529.10	1347.68	111.48	2229.56	0.604
Concio 4 H=var	210	J[770]	ST SLU Mobili	FZ-MAX	1886.00	1149.27	111.48	2229.56	0.515
Concio 4 H=var	211	I[770]	ST SLU Mobili	FZ-MAX	1784.82	1087.61	111.48	2229.56	0.488
Concio 4 H=var	211	J[771]	ST SLU Mobili	FZ-MAX	2153.58	1000.16	111.48	2229.56	0.449
Concio 4 H=200	212	I[771]	ST SLU Mobili	FZ-MAX	2149.04	998.05	111.48	2229.56	0.448
Concio 4 H=200	212	J[772]	ST SLU Mobili	FZ-MAX	2221.89	1031.88	111.48	2229.56	0.463
Concio 4 H=200	213	I[772]	ST SLU Mobili	FZ-MIN	-2142.89	995.19	111.48	2229.56	0.446
Concio 4 H=200	213	J[773]	ST SLU Mobili	FZ-MIN	-2070.08	961.38	111.48	2229.56	0.431
Concio 4 H=var	214	I[773]	ST SLU Mobili	FZ-MIN	-2074.23	963.30	111.48	2229.56	0.432
Concio 4 H=var	214	J[774]	ST SLU Mobili	FZ-MIN	-1705.59	1039.33	111.48	2229.56	0.466
Concio 4 H=var	215	1[774]	ST SLU Mobili	FZ-MIN	-1808.93	1102.30	111.48	2229.56	0.494
Concio 4 H=var	215	J[775]	ST SLU Mobili	FZ-MIN	-1452.94	1280.56	111.48	2229.56	0.574
Concio 5	216	I[775]	ST SLU Mobili	FZ-MIN	-1460.40	1314.92	111.48	2229.56	0.590
Concio 5	216	J[776]	ST SLU Mobili	FZ-MIN	-1401.51	1261.90	111.48	2229.56	0.566
Concio 5	217	I[776]	ST SLU Mobili	FZ-MIN	-1605.16	1445.26	111.48	2229.56	0.648
Concio 5	217	J[777]	ST SLU Mobili	FZ-MIN	-960.87	865.16	111.48	2229.56	0.388
Concio 5	218	1[777]	ST SLU Mobili	FZ-MIN	-1226.93	1104.71	111.48	2229.56	0.495
Concio 5	218	J[778]	ST SLU Mobili	FZ-IVIIN	-933.80	840.78	111.48	2229.56	0.493
Concio 6	219	I[778]	ST SLU Mobili		-933.80	824.00			
	219	J[779]	ST SLU Mobili	FZ-MIN	626.85	553.15	111.48	1672.17	0.493
Concio 6				FZ-MAX	1		111.48	1672.17	0.331
Concio 6	220	J[779] J[780]	ST SLU Mobili	FZ-MIN	-915.94	808.24	111.48	1672.17	0.483
Concio 6	220		ST SLU Mobili	FZ-MIN	-588.73	519.51	111.48	1672.17	0.311
Concio 6	221	I[780]	ST SLU Mobili	FZ-MIN	-588.73	519.51	111.48	1672.17	0.311
Concio 6	221	J[781]	ST SLU Mobili	FZ-MAX	915.77	808.10	111.48	1672.17	0.483
Concio 6	222	I[781]	ST SLU Mobili	FZ-MIN	-627.03	553.31	111.48	1672.17	0.331
Concio 6	222	J[782]	ST SLU Mobili	FZ-MAX	933.63	823.86	111.48	1672.17	0.493
Concio 5	223	I[782]	ST SLU Mobili	FZ-MAX	933.63	840.63	111.48	2229.56	0.377
Concio 5	223	J[783]	ST SLU Mobili	FZ-MAX	1226.78	1104.57	111.48	2229.56	0.495
Concio 5	224	I[783]	ST SLU Mobili	FZ-MAX	960.83	865.11	111.48	2229.56	0.388
Concio 5	224	J[784]	ST SLU Mobili	FZ-MAX	1604.93	1445.05	111.48	2229.56	0.648
Concio 5	225	I[784]	ST SLU Mobili	FZ-MAX	1401.27	1261.68	111.48	2229.56	0.566
Concio 5	225	J[785]	ST SLU Mobili	FZ-MAX	1460.16	1314.71	111.48	2229.56	0.590
Concio 4 H=var	226	I[785]	ST SLU Mobili	FZ-MAX	1452.70	1280.35	111.48	2229.56	0.574
Concio 4 H=var	226	J[786]	ST SLU Mobili	FZ-MAX	1808.74	1102.19	111.48	2229.56	0.494
Concio 4 H=var	227	I[786]	ST SLU Mobili	FZ-MAX	1705.30	1039.15	111.48	2229.56	0.466
Concio 4 H=var	227	J[787]	ST SLU Mobili	FZ-MAX	2073.90	963.15	111.48	2229.56	0.432
Concio 4 H=200	228	I[787]	ST SLU Mobili	FZ-MAX	2069.74	961.22	111.48	2229.56	0.431
Concio 4 H=200	228	J[788]	ST SLU Mobili	FZ-MAX	2142.56	995.04	111.48	2229.56	0.446
Concio 4 H=200	229	I[788]	ST SLU Mobili	FZ-MIN	-2222.20	1032.03	111.48	2229.56	0.463









Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 4 H=200	229	J[789]	ST SLU Mobili	FZ-MIN	-2149.36	998.20	111.48	2229.56	0.448
Concio 4 H=var	230	I[789]	ST SLU Mobili	FZ-MIN	-2153.88	1000.30	111.48	2229.56	0.449
Concio 4 H=var	230	J[790]	ST SLU Mobili	FZ-MIN	-1785.08	1087.77	111.48	2229.56	0.488
Concio 4 H=var	231	I[790]	ST SLU Mobili	FZ-MIN	-1886.17	1149.37	111.48	2229.56	0.516
Concio 4 H=var	231	J[791]	ST SLU Mobili	FZ-MIN	-1529.30	1347.86	111.48	2229.56	0.605
Concio 3	232	I[791]	ST SLU Mobili	FZ-MIN	-1536.61	1383.54	111.48	2229.56	0.621
Concio 3	232	J[792]	ST SLU Mobili	FZ-MIN	-1477.64	1330.44	111.48	2229.56	0.597
Concio 3	233	I[792]	ST SLU Mobili	FZ-MIN	-1674.75	1507.92	111.48	2229.56	0.676
Concio 3	233	J[793]	ST SLU Mobili	FZ-MIN	-1052.30	947.47	111.48	2229.56	0.425
Concio 3	234	I[793]	ST SLU Mobili	FZ-MIN	-1305.55	1175.50	111.48	2229.56	0.527
Concio 3	234	J[794]	ST SLU Mobili	FZ-MIN	-1049.55	945.00	111.48	2229.56	0.424
Concio 2	235	I[794]	ST SLU Mobili	FZ-MIN	-1049.55	933.84	111.48	1672.17	0.558
Concio 2	235	J[795]	ST SLU Mobili	FZ-MIN	-701.63	624.28	111.48	1672.17	0.373
Concio 2	236	I[795]	ST SLU Mobili	FZ-MIN	-998.75	888.65	111.48	1672.17	0.531
Concio 2	236	J[796]	ST SLU Mobili	FZ-MAX	782.83	696.52	111.48	1672.17	0.417
Concio 2	237	I[796]	ST SLU Mobili	FZ-MIN	-716.10	637.16	111.48	1672.17	0.381
Concio 2	237	J[797]	ST SLU Mobili	FZ-MAX	699.87	622.71	111.48	1672.17	0.372
Concio 1	238	1[797]	ST SLU Mobili	FZ-MAX	699.87	636.95	111.48	2229.56	0.286
Concio 1	238	J[798]	ST SLU Mobili	FZ-MAX	1090.57	992.53	111.48	2229.56	0.445
Concio 1	239	I[798]	ST SLU Mobili	FZ-MAX	825.45	751.24	111.48	2229.56	0.337
Concio 1	239	J[799]	ST SLU Mobili	FZ-MAX	1564.18	1423.55	111.48	2229.56	0.638
Concio 1	240	1[799]	ST SLU Mobili	FZ-MIN	-464.88	423.09	111.48	2229.56	0.190
Concio 1	240	J[800]	ST SLV Vert	FX-MAX	0.99	0.90	111.48	2229.56	0.000
Concio 1	301	I[801]	ST SLV Vert	FX-MAX	1.00	0.91	111.48	2229.56	0.000
Concio 1	301	J[802]	ST SLU Mobili	FZ-MAX	464.88	423.09	111.48	2229.56	0.190
Concio 1	302	I[802]	ST SLU Mobili	FZ-MIN	-1565.52	1424.77	111.48	2229.56	0.639
Concio 1	302	J[803]	ST SLU Mobili	FZ-MIN	-826.53	752.22	111.48	2229.56	0.337
Concio 1	303	1[803]	ST SLU Mobili	FZ-MIN	-1091.34	993.23	111.48	2229.56	0.445
Concio 1	303	J[804]	ST SLU Mobili	FZ-MIN	-700.58	637.59	111.48	2229.56	0.286
Concio 2	304	I[804]	ST SLU Mobili	FZ-MIN	-700.58	623.34	111.48	1672.17	0.373
Concio 2	304	J[805]	ST SLU Mobili	FZ-MAX	716.48	637.49	111.48	1672.17	0.381
Concio 2	305	I[805]	ST SLU Mobili	FZ-MIN	-783.19	696.85	111.48	1672.17	0.417
Concio 2	305	J[806]	ST SLU Mobili	FZ-MAX	998.59	888.50	111.48	1672.17	0.531
Concio 2	306	I[806]	ST SLU Mobili	FZ-MAX	702.22	624.81	111.48	1672.17	0.374
Concio 2	306	J[807]	ST SLU Mobili	FZ-MAX	1050.12	934.35	111.48	1672.17	0.559
Concio 3	307	1[807]	ST SLU Mobili	FZ-MAX	1050.12	945.52	111.48	2229.56	0.424
Concio 3	307	J[808]	ST SLU Mobili	FZ-MAX	1306.15	1176.04	111.48	2229.56	0.527
Concio 3	308	1[808]	ST SLU Mobili	FZ-MAX	1053.47	948.53	111.48	2229.56	0.425
Concio 3	308	J[809]	ST SLU Mobili	FZ-MAX	1675.74	1508.81	111.48	2229.56	0.677
Concio 3	309	1[809]	ST SLU Mobili	FZ-MAX	1478.87	1331.55	111.48	2229.56	0.597
Concio 3	309	J[810]	ST SLU Mobili	FZ-MAX	1537.83	1384.64	111.48	2229.56	0.621
Concio 4 H=var	310	I[810]	ST SLU Mobili	FZ-MAX	1531.51	1349.81	111.48	2229.56	0.605
Concio 4 H=var	310	J[811]	ST SLU Mobili	FZ-MAX	1888.42	1150.74	111.48	2229.56	0.516
Concio 4 H=var	311	I[811]	ST SLU Mobili	FZ-MAX	1787.81	1089.43	111.48	2229.56	0.489
Concio 4 H=var	311	J[812]	ST SLU Mobili	FZ-MAX	2156.57	1001.55	111.48	2229.56	0.449
Concio 4 H=200	312		ST SLU Mobili	FZ-MAX	2150.99	998.95	111.48	2229.56	0.448
Concio 4 H=200	312	J[813]	ST SLU Mobili	FZ-MAX	2223.83	1032.78	111.48	2229.56	0.463
Concio 4 H=200	313	I[813]	ST SLU Mobili	FZ-MIN	-2144.83	996.09	111.48	2229.56	0.447
Concio 4 H=200	313	J[814]	ST SLU Mobili	FZ-MIN	-2072.02	962.28	111.48	2229.56	0.432
Concio 4 H=var	314		ST SLU Mobili	FZ-MIN	-2077.27	964.72	111.48	2229.56	0.433
Concio 4 H=var	314	-	ST SLU Mobili	FZ-MIN	-1708.63	1041.19	111.48	2229.56	0.467
Concio 4 H=var	315		ST SLU Mobili	FZ-MIN	-1811.49	1103.86	111.48	2229.56	0.495
Concio 4 H=var	315		ST SLU Mobili	FZ-MIN	-1455.50	1282.81	111.48	2229.56	0.575
Concio 5	316	I[816]	ST SLU Mobili	FZ-MIN	-1461.85	1316.22	111.48	2229.56	0.590
Concio 5	316		ST SLU Mobili	FZ-MIN	-1402.95	1263.19	111.48	2229.56	0.567
Concio 5	317	I[817]	ST SLU Mobili	FZ-MIN	-1606.38	1446.36	111.48	2229.56	0.649
Concio 5	317	J[818]	ST SLU Mobili	FZ-MIN	-962.10	866.26	111.48	2229.56	0.389
Concio 5	318	I[818]	ST SLU Mobili	FZ-MIN	-1227.59	1105.30	111.48	2229.56	0.496
Concio 5	318	J[819]	ST SLU Mobili	FZ-MIN	-934.46	841.37	111.48	2229.56	0.377









Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 6	319	I[819]	ST SLU Mobili	FZ-MIN	-934.46	824.58	111.48	1672.17	0.493
Concio 6	319	J[820]	ST SLU Mobili	FZ-MAX	627.51	553.73	111.48	1672.17	0.331
Concio 6	320	I[820]	ST SLU Mobili	FZ-MIN	-915.94	808.24	111.48	1672.17	0.483
Concio 6	320	J[821]	ST SLU Mobili	FZ-MIN	-588.73	519.51	111.48	1672.17	0.311
Concio 6	321	I[821]	ST SLU Mobili	FZ-MIN	-588.73	519.51	111.48	1672.17	0.311
Concio 6	321	J[822]	ST SLU Mobili	FZ-MAX	915.77	808.10	111.48	1672.17	0.483
Concio 6	322	I[822]	ST SLU Mobili	FZ-MIN	-627.71	553.90	111.48	1672.17	0.331
Concio 6	322	J[823]	ST SLU Mobili	FZ-MAX	934.31	824.45	111.48	1672.17	0.493
Concio 5	323	I[823]	ST SLU Mobili	FZ-MAX	934.31	841.24	111.48	2229.56	0.377
Concio 5	323	J[824]	ST SLU Mobili	FZ-MAX	1227.45	1105.18	111.48	2229.56	0.496
Concio 5	324	I[824]	ST SLU Mobili	FZ-MAX	962.03	866.20	111.48	2229.56	0.389
Concio 5	324	J[825]	ST SLU Mobili	FZ-MAX	1606.13	1446.14	111.48	2229.56	0.649
Concio 5	325	I[825]	ST SLU Mobili	FZ-MAX	1402.70	1262.97	111.48	2229.56	0.566
Concio 5	325	J[826]	ST SLU Mobili	FZ-MAX	1461.59	1315.99	111.48	2229.56	0.590
Concio 4 H=var	326	I[826]	ST SLU Mobili	FZ-MAX	1455.24	1282.59	111.48	2229.56	0.575
Concio 4 H=var	326	J[827]	ST SLU Mobili	FZ-MAX	1811.28	1103.73	111.48	2229.56	0.495
Concio 4 H=var	327	I[827]	ST SLU Mobili	FZ-MAX	1708.42	1041.05	111.48	2229.56	0.467
Concio 4 H=var	327	J[828]	ST SLU Mobili	FZ-MAX	2077.02	964.60	111.48	2229.56	0.433
Concio 4 H=200	328	I[828]	ST SLU Mobili	FZ-MAX	2071.76	962.16	111.48	2229.56	0.432
Concio 4 H=200	328	J[829]	ST SLU Mobili	FZ-MAX	2144.58	995.98	111.48	2229.56	0.447
Concio 4 H=200	329	I[829]	ST SLU Mobili	FZ-MIN	-2224.08	1032.90	111.48	2229.56	0.463
Concio 4 H=200	329	J[830]	ST SLU Mobili	FZ-MIN	-2151.23	999.07	111.48	2229.56	0.448
Concio 4 H=var	330	1[830]	ST SLU Mobili	FZ-MIN	-2156.82	1001.66	111.48	2229.56	0.449
Concio 4 H=var	330	J[831]	ST SLU Mobili	FZ-MIN	-1788.02	1089.56	111.48	2229.56	0.489
Concio 4 H=var	331	I[831]	ST SLU Mobili	FZ-MIN	-1888.62	1150.86	111.48	2229.56	0.516
Concio 4 H=var	331	J[832]	ST SLU Mobili	FZ-MIN	-1531.76	1350.02	111.48	2229.56	0.606
Concio 3	332	I[832]	ST SLU Mobili	FZ-MIN	-1538.08	1384.86	111.48	2229.56	0.621
Concio 3	332	J[833]	ST SLU Mobili	FZ-MIN	-1479.11	1331.77	111.48	2229.56	0.597
Concio 3	333	I[833]	ST SLU Mobili	FZ-MIN	-1675.98	1509.02	111.48	2229.56	0.677
Concio 3	333	J[834]	ST SLU Mobili	FZ-MIN	-1053.52	948.58	111.48	2229.56	0.425
Concio 3	334	I[834]	ST SLU Mobili	FZ-MIN	-1306.29	1176.16	111.48	2229.56	0.528
Concio 3	334	J[835]	ST SLU Mobili	FZ-MIN	-1050.29	945.66	111.48	2229.56	0.424
Concio 2	335	I[835]	ST SLU Mobili	FZ-MIN	-1050.29	934.50	111.48	1672.17	0.559
Concio 2	335	J[836]	ST SLU Mobili	FZ-MIN	-702.37	624.93	111.48	1672.17	0.374
Concio 2	336	I[836]	ST SLU Mobili	FZ-MIN	-998.83	888.72	111.48	1672.17	0.531
Concio 2	336	J[837]	ST SLU Mobili	FZ-MAX	782.91	696.59	111.48	1672.17	0.417
Concio 2	337	I[837]	ST SLU Mobili	FZ-MIN	-716.65	637.65	111.48	1672.17	0.381
Concio 2	337	J[838]	ST SLU Mobili	FZ-MAX	700.42	623.20	111.48	1672.17	0.373
Concio 1	338	I[838]	ST SLU Mobili	FZ-MAX	700.42	637.45	111.48	2229.56	0.286
Concio 1	338	J[839]	ST SLU Mobili	FZ-MAX	1091.12	993.03	111.48	2229.56	0.445
Concio 1	339	1[839]	ST SLU Mobili	FZ-MAX	826.42	752.12	111.48	2229.56	0.337
Concio 1	339	J[840]	ST SLU Mobili	FZ-MAX	1565.14	1424.43	111.48	2229.56	0.639
Concio 1	340	I[840]	ST SLU Mobili	FZ-MIN	-464.88	423.09	111.48	2229.56	0.190
Concio 1	340	J[841]	ST SLV Vert	FX-MAX	0.99	0.90	111.48	2229.56	0.000
Concio 1	401	I[842]	ST SLV Vert	FX-MAX	0.75	0.68	111.48	2229.56	0.000
Concio 1	401	J[843]	ST SLU Mobili	FZ-MAX	459.66	415.52	111.48	2229.56	0.186
Concio 1	402	I[843]	ST SLU Mobili	FZ-MIN	-1586.34	1434.02	111.48	2229.56	0.643
Concio 1	402	J[844]	ST SLU Mobili	FZ-MIN	-903.37	816.63	111.48	2229.56	0.366
Concio 1	403	I[844]	ST SLU Mobili	FZ-MIN	-1111.28	1004.57	111.48	2229.56	0.451
Concio 1	403	J[845]	ST SLU Mobili	FZ-MIN	-711.03	642.76	111.48	2229.56	0.288
Concio 2	404	I[845]	ST SLU Mobili	FZ-MIN	-711.03	628.08	111.48	1672.17	0.376
Concio 2	404	J[846]	ST SLU Mobili	FZ-MAX	645.74	570.40	111.48	1672.17	0.341
Concio 2	405	I[846]	ST SLU Mobili	FZ-MIN	-726.33	641.59	111.48	1672.17	0.384
Concio 2	405	J[847]	ST SLU Mobili	FZ-MAX	959.34	847.42	111.48	1672.17	0.507
Concio 2	406	I[847]	ST SLU Mobili	FZ-MAX	732.42	646.97	111.48	1672.17	0.387
Concio 2	406	J[848]	ST SLU Mobili	FZ-MAX	1072.26	947.16	111.48	1672.17	0.566
Concio 3	407	I[848]	ST SLU Mobili	FZ-MAX	1072.26	957.64	111.48	2229.56	0.430
Concio 3	407	J[849]	ST SLU Mobili	FZ-MAX	1330.46	1188.23	111.48	2229.56	0.533
Concio 3	408	I[849]	ST SLU Mobili	FZ-MAX	1111.56	992.73	111.48	2229.56	0.445





Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 3	408	J[850]	ST SLU Mobili	FZ-MAX	1714.70	1531.40	111.48	2229.56	0.687
Concio 3	409	1[850]	ST SLU Mobili	FZ-MAX	1498.65	1338.44	111.48	2229.56	0.600
Concio 3	409	J[851]	ST SLU Mobili	FZ-MAX	1567.64	1400.05	111.48	2229.56	0.628
Concio 4 H=var	410	I[851]	ST SLU Mobili	FZ-MAX	1555.92	1354.23	111.48	2229.56	0.607
Concio 4 H=var	410	J[852]	ST SLU Mobili	FZ-MAX	1902.79	1139.73	111.48	2229.56	0.511
Concio 4 H=var	411	I[852]	ST SLU Mobili	FZ-MAX	1743.02	1044.03	111.48	2229.56	0.468
Concio 4 H=var	411	J[853]	ST SLU Mobili	FZ-MAX	2080.03	946.44	111.48	2229.56	0.424
Concio 4 H=200	412	I[853]	ST SLU Mobili	FZ-MAX	2083.13	947.85	111.48	2229.56	0.425
Concio 4 H=200	412	J[854]	ST SLU Mobili	FZ-MAX	2152.77	979.53	111.48	2229.56	0.439
Concio 4 H=200	413	I[854]	ST SLU Mobili	FZ-MIN	-2079.64	946.26	111.48	2229.56	0.424
Concio 4 H=200	413	J[855]	ST SLU Mobili	FZ-MIN	-2009.99	914.57	111.48	2229.56	0.410
Concio 4 H=var	414	I[855]	ST SLU Mobili	FZ-MIN	-2008.39	913.84	111.48	2229.56	0.410
Concio 4 H=var	414	J[856]	ST SLU Mobili	FZ-MIN	-1670.94	1000.86	111.48	2229.56	0.449
Concio 4 H=var	415	I[856]	ST SLU Mobili	FZ-MIN	-1830.70	1096.55	111.48	2229.56	0.492
Concio 4 H=var	415	J[857]	ST SLU Mobili	FZ-MIN	-1484.25	1291.85	111.48	2229.56	0.579
Concio 5	416	I[857]	ST SLU Mobili	FZ-MIN	-1493.73	1334.05	111.48	2229.56	0.598
Concio 5	416	J[858]	ST SLU Mobili	FZ-MIN	-1424.78	1272.47	111.48	2229.56	0.571
Concio 5	417	1[858]	ST SLU Mobili	FZ-MIN	-1644.41	1468.62	111.48	2229.56	0.659
Concio 5	417	J[859]	ST SLU Mobili	FZ-MIN	-1024.65	915.11	111.48	2229.56	0.410
Concio 5	418	1[859]	ST SLU Mobili	FZ-MIN	-1250.61	1116.92	111.48	2229.56	0.501
Concio 5	418	J[860]	ST SLU Mobili	FZ-MIN	-959.24	856.70	111.48	2229.56	0.384
Concio 6	419	1[860]	ST SLU Mobili	FZ-MIN	-959.24	840.81	111.48	1672.17	0.503
Concio 6	419	J[861]	ST SLU Mobili	FZ-MIN	-638.45	559.62	111.48	1672.17	0.335
Concio 6	420	I[861]	ST SLU Mobili	FZ-MIN	-873.49	765.64	111.48	1672.17	0.458
Concio 6	420	J[862]	ST SLU Mobili	FZ-MIN	-550.56	482.58	111.48	1672.17	0.289
Concio 6	421	1[862]	ST SLU Mobili	FZ-MIN	-550.56	482.58	111.48	1672.17	0.289
Concio 6	421	J[863]	ST SLU Mobili	FZ-MAX	873.32	765.49	111.48	1672.17	0.458
Concio 6	422	1[863]	ST SLU Mobili	FZ-MAX	638.40	559.57	111.48	1672.17	0.335
Concio 6	422	J[864]	ST SLU Mobili	FZ-MAX	959.09	840.67	111.48	1672.17	0.503
Concio 5	423	1[864]	ST SLU Mobili	FZ-MAX	959.09	856.56	111.48	2229.56	0.384
Concio 5	423	J[865]	ST SLU Mobili	FZ-MAX	1250.47	1116.79	111.48	2229.56	0.501
Concio 5	424	1[865]	ST SLU Mobili	FZ-MAX	1024.57	915.04	111.48	2229.56	0.410
Concio 5	424	J[866]	ST SLU Mobili	FZ-MAX	1644.13	1468.37	111.48	2229.56	0.659
Concio 5	425	1[866]	ST SLU Mobili	FZ-MAX	1424.60	1272.31	111.48	2229.56	0.571
Concio 5	425	J[867]	ST SLU Mobili	FZ-MAX	1493.55	1333.89	111.48	2229.56	0.598
Concio 4 H=var	426	1[867]	ST SLU Mobili	FZ-MAX	1484.05	1291.67	111.48	2229.56	0.579
Concio 4 H=var	426	J[868]	ST SLU Mobili	FZ-MAX	1830.47	1096.42	111.48	2229.56	0.492
Concio 4 H=var	427	1[868]	ST SLU Mobili	FZ-MAX	1670.71	1000.72	111.48	2229.56	0.449
Concio 4 H=var	427	J[869]	ST SLU Mobili	FZ-MAX	2008.09	913.70	111.48	2229.56	0.410
Concio 4 H=200	428		ST SLU Mobili	FZ-MAX	2009.71	914.44	111.48	2229.56	0.410
Concio 4 H=200	428		ST SLU Mobili	FZ-MAX	2079.35	946.13	111.48	2229.56	0.424
Concio 4 H=200	429		ST SLU Mobili	FZ-MIN	-2153.07	979.67	111.48	2229.56	0.439
Concio 4 H=200	429	-	ST SLU Mobili	FZ-MIN	-2083.43	947.98	111.48	2229.56	0.425
Concio 4 H=var	430		ST SLU Mobili	FZ-MIN	-2080.33	946.57	111.48	2229.56	0.425
Concio 4 H=var	430		ST SLU Mobili	FZ-MIN	-1743.25	1044.17	111.48	2229.56	0.468
Concio 4 H=var	431		ST SLU Mobili	FZ-MIN	-1903.02	1139.87	111.48	2229.56	0.511
Concio 4 H=var	431		ST SLU Mobili	FZ-MIN	-1556.12	1354.40	111.48	2229.56	0.607
Concio 3	432		ST SLU Mobili	FZ-MIN	-1567.81	1400.21	111.48	2229.56	0.628
Concio 3	432		ST SLU Mobili	FZ-MIN	-1498.82	1338.59	111.48	2229.56	0.600
Concio 3		I[874]	ST SLU Mobili	FZ-MIN	-1714.97	1531.64	111.48	2229.56	0.687
Concio 3	433		ST SLU Mobili	FZ-MIN	-1111.62	992.79	111.48	2229.56	0.445
Concio 3	434		ST SLU Mobili	FZ-MIN	-1330.59	1188.35	111.48	2229.56	0.533
Concio 3		J[876]	ST SLU Mobili	FZ-MIN	-1072.42	957.78	111.48	2229.56	0.430
Concio 2	435	-	ST SLU Mobili	FZ-MIN	-1072.42	947.30	111.48	1672.17	0.567
Concio 2	435		ST SLU Mobili	FZ-MIN	-732.51	647.05	111.48	1672.17	0.387
Concio 2	436	-	ST SLU Mobili	FZ-MIN	-959.60	847.65	111.48	1672.17	0.507
Concio 2	436	-	ST SLU Mobili	FZ-MAX	726.00	641.30	111.48	1672.17	0.384
Concio 2	437	1[878]	ST SLU Mobili	FZ-MIN	-645.90	570.54	111.48	1672.17	0.341
Concio 2	437		ST SLU Mobili	FZ-MAX	710.92	627.98	111.48	1672.17	0.341
COTICIO Z	43/	ال (۱۵ ا	21 2FO IAIODIII	I Z-IVIMA	/ 10.52	027.36	111.40	10/2.1/	0.570







Elem property	Elem number	Position	Lcom	Туре	V_L,Ed (kN)	v_L,Ed (kN/m)	P_Rd (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	438	I[879]	ST SLU Mobili	FZ-MAX	710.92	642.66	111.48	2229.56	0.288
Concio 1	438	J[880]	ST SLU Mobili	FZ-MAX	1111.09	1004.41	111.48	2229.56	0.450
Concio 1	439	I[880]	ST SLU Mobili	FZ-MAX	903.19	816.47	111.48	2229.56	0.366
Concio 1	439	J[881]	ST SLU Mobili	FZ-MAX	1586.00	1433.72	111.48	2229.56	0.643
Concio 1	440	I[881]	ST SLU Mobili	FZ-MIN	-459.66	415.52	111.48	2229.56	0.186
Concio 1	440	J[882]	ST SLV Vert	FX-MAX	0.74	0.67	111.48	2229.56	0.000

STATO LIMITE DI ESERCIZIO - RESISTENZA AL TAGLIO LONGITUDINALE

Si effettuano le verifiche allo stato limite di esercizio per taglio longitudinale dei connettori travesoletta.

I coefficienti parziali per SLE assunti sono i seguenti:

 $k_s = 0.60$ connettori: resistenza allo SLE

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazione di carichi più gravose. Dati tabulati:

nome delle caratteristiche geometriche dell'elemento Elem property:

Elem: numero dell'elemento

nodo iniziale (I) o finale (J) dell'elemento Position:

Lcom: combinazione di carico più gravosa

Type: tipo combinazione (caratteristica, frequente, quasi permanente) V_c,Ed: sforzo di taglio longitudinale agente sulla larghezza della regione

inelastica

v_L,Ed: sforzo di taglio longitudinale di calcolo per unità di lunghezza (m)

all'interfaccia trave-soletta

P_Rd,ser = 0.6 P_Rd: resistenza al taglio (SLE) del singolo connettore "Nelson"

v_L,Rd: resistenza al taglio longitudinale per trave e per unità di lunghezza

Verification Ratio: $\frac{v_L,Ed}{v_L,Rd} \le 1$ Condizione di verifica:

Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	101	I[719]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000
Concio 1	101	J[720]	ST RARA Mobili	Characteristic	338.60	306.09	66.89	1337.73	0.229
Concio 1	102	I[720]	ST RARA Mobili	Characteristic	-1143.52	1033.72	66.89	1337.73	0.773
Concio 1	102	J[721]	ST RARA Mobili	Characteristic	-649.42	587.07	66.89	1337.73	0.439
Concio 1	103	I[721]	ST RARA Mobili	Characteristic	-802.92	725.83	66.89	1337.73	0.543
Concio 1	103	J[722]	ST RARA Mobili	Characteristic	-513.53	464.22	66.89	1337.73	0.347
Concio 2	104	I[722]	ST RARA Mobili	Characteristic	-513.53	453.62	66.89	1003.30	0.452
Concio 2	104	J[723]	ST RARA Mobili	Characteristic	488.85	431.81	66.89	1003.30	0.430
Concio 2	105	I[723]	ST RARA Mobili	Characteristic	-531.38	469.39	66.89	1003.30	0.468
Concio 2	105	J[724]	ST RARA Mobili	Characteristic	707.72	625.15	66.89	1003.30	0.623
Concio 2	106	I[724]	ST RARA Mobili	Characteristic	538.33	475.52	66.89	1003.30	0.474
Concio 2	106	J[725]	ST RARA Mobili	Characteristic	782.98	691.63	66.89	1003.30	0.689
Concio 3	107	I[725]	ST RARA Mobili	Characteristic	782.98	699.28	66.89	1337.73	0.523
Concio 3	107	J[726]	ST RARA Mobili	Characteristic	969.52	865.87	66.89	1337.73	0.647
Concio 3	108	I[726]	ST RARA Mobili	Characteristic	807.38	721.07	66.89	1337.73	0.539
Concio 3	108	J[727]	ST RARA Mobili	Characteristic	1242.34	1109.53	66.89	1337.73	0.829
Concio 3	109	I[727]	ST RARA Mobili	Characteristic	1083.65	967.80	66.89	1337.73	0.723
Concio 3	109	J[728]	ST RARA Mobili	Characteristic	1133.57	1012.39	66.89	1337.73	0.757
Concio 4 H=var	110	I[728]	ST RARA Mobili	Characteristic	1123.95	978.26	66.89	1337.73	0.731
Concio 4 H=var	110	J[729]	ST RARA Mobili	Characteristic	1374.99	823.59	66.89	1337.73	0.616
Concio 4 H=var	111	I[729]	ST RARA Mobili	Characteristic	1259.14	754.20	66.89	1337.73	0.564





Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 4 H=var	111	J[730]	ST RARA Mobili	Characteristic	1502.87	683.82	66.89	1337.73	0.511
Concio 4 H=200	112	I[730]	ST RARA Mobili	Characteristic	1506.01	685.25	66.89	1337.73	0.512
Concio 4 H=200	112	J[731]	ST RARA Mobili	Characteristic	1556.41	708.18	66.89	1337.73	0.529
Concio 4 H=200	113	I[731]	ST RARA Mobili	Characteristic	-1498.08	681.64	66.89	1337.73	0.510
Concio 4 H=200	113	J[732]	ST RARA Mobili	Characteristic	-1447.66	658.70	66.89	1337.73	0.492
Concio 4 H=var	114	I[732]	ST RARA Mobili	Characteristic	-1445.80	657.85	66.89	1337.73	0.492
Concio 4 H=var	114	J[733]	ST RARA Mobili	Characteristic	-1201.75	719.82	66.89	1337.73	0.538
Concio 4 H=var	115	I[733]	ST RARA Mobili	Characteristic	-1317.36	789.07	66.89	1337.73	0.590
Concio 4 H=var	115	J[734]	ST RARA Mobili	Characteristic	-1066.64	928.38	66.89	1337.73	0.694
Concio 5	116	1[734]	ST RARA Mobili	Characteristic	-1074.48	959.61	66.89	1337.73	0.717
Concio 5	116	J[735]	ST RARA Mobili	Characteristic	-1024.58	915.05	66.89	1337.73	0.684
Concio 5	117	1[735]	ST RARA Mobili	Characteristic	-1185.83	1059.07	66.89	1337.73	0.792
Concio 5	117	J[736]	ST RARA Mobili	Characteristic	-739.02	660.02	66.89	1337.73	0.493
Concio 5	118	1[736]	ST RARA Mobili	Characteristic	-906.51	809.60	66.89	1337.73	0.605
Concio 5	118	J[737]	ST RARA Mobili	Characteristic	-696.11	621.69	66.89 66.89	1337.73	0.465
Concio 6	119 119	J[737] J[738]	ST RARA Mobili ST RARA Mobili	Characteristic	-696.11 -465.33	610.16 407.88	66.89	1003.30 1003.30	0.608
Concio 6	120	1[738]	ST RARA Mobili	Characteristic	-403.33	561.76	66.89	1003.30	0.407
Concio 6	120	J[739]	ST RARA Mobili	Characteristic	-407.82	357.47	66.89	1003.30	0.356
Concio 6	120	1[739]	ST RARA Mobili	Characteristic Characteristic	-407.82	357.47	66.89	1003.30	0.356
Concio 6	121	J[740]	ST RARA Mobili	Characteristic	640.76	561.65	66.89	1003.30	0.560
Concio 6	122	1[740]	ST RARA Mobili	Characteristic	465.30	407.85	66.89	1003.30	0.407
Concio 6	122	J[741]	ST RARA Mobili	Characteristic	696.00	610.07	66.89	1003.30	0.608
Concio 5	123	I[741]	ST RARA Mobili	Characteristic	696.00	621.60	66.89	1337.73	0.465
Concio 5	123	J[742]	ST RARA Mobili	Characteristic	906.41	809.51	66.89	1337.73	0.605
Concio 5	124	1[742]	ST RARA Mobili	Characteristic	739.00	660.00	66.89	1337.73	0.493
Concio 5	124	J[743]	ST RARA Mobili	Characteristic	1185.66	1058.91	66.89	1337.73	0.792
Concio 5	125	1[743]	ST RARA Mobili	Characteristic	1024.46	914.94	66.89	1337.73	0.684
Concio 5	125	J[744]	ST RARA Mobili	Characteristic	1074.35	959.50	66.89	1337.73	0.717
Concio 4 H=var	126	1[744]	ST RARA Mobili	Characteristic	1066.52	928.27	66.89	1337.73	0.694
Concio 4 H=var	126	J[745]	ST RARA Mobili	Characteristic	1317.22	788.99	66.89	1337.73	0.590
Concio 4 H=var	127	I[745]	ST RARA Mobili	Characteristic	1201.49	719.67	66.89	1337.73	0.538
Concio 4 H=var	127	J[746]	ST RARA Mobili	Characteristic	1445.50	657.72	66.89	1337.73	0.492
Concio 4 H=200	128	I[746]	ST RARA Mobili	Characteristic	1447.36	658.56	66.89	1337.73	0.492
Concio 4 H=200	128	J[747]	ST RARA Mobili	Characteristic	1497.77	681.50	66.89	1337.73	0.509
Concio 4 H=200	129	I[747]	ST RARA Mobili	Characteristic	-1556.73	708.33	66.89	1337.73	0.529
Concio 4 H=200	129	J[748]	ST RARA Mobili	Characteristic	-1506.32	685.39	66.89	1337.73	0.512
Concio 4 H=var	130	1[748]	ST RARA Mobili	Characteristic	-1503.17	683.96	66.89	1337.73	0.511
Concio 4 H=var	130	J[749]	ST RARA Mobili	Characteristic	-1259.39	754.35	66.89	1337.73	0.564
Concio 4 H=var	131	I[749]	ST RARA Mobili	Characteristic	-1375.13	823.67	66.89	1337.73	0.616
Concio 4 H=var	131	J[750]	ST RARA Mobili	Characteristic	-1124.08	978.37	66.89	1337.73	0.731
Concio 3	132	I[750]	ST RARA Mobili	Characteristic	-1133.69	1012.50	66.89	1337.73	0.757
Concio 3	132	J[751]	ST RARA Mobili	Characteristic	-1083.77	967.91	66.89	1337.73	0.724
Concio 3	133		ST RARA Mobili	Characteristic	-1242.51	1109.69	66.89	1337.73	0.830
Concio 3	133	J[752]	ST RARA Mobili	Characteristic	-807.39	721.08	66.89	1337.73	0.539
Concio 3	134		ST RARA Mobili	Characteristic	-969.60	865.95	66.89	1337.73	0.647
Concio 3	134		ST RARA Mobili	Characteristic	-783.09	699.37	66.89	1337.73	0.523
Concio 2	135		ST RARA Mobili	Characteristic	-783.09	691.73	66.89	1003.30	0.689
Concio 2	135	J[754]	ST RARA Mobili	Characteristic	-538.38	475.57	66.89	1003.30	0.474
Concio 2	136		ST RARA Mobili	Characteristic	-707.91	625.32	66.89	1003.30	0.623
Concio 2	136	J[755]	ST RARA Mobili	Characteristic	531.14	469.17	66.89	1003.30	0.468
Concio 2	137	1[755]	ST RARA Mobili	Characteristic	-488.96	431.92	66.89	1003.30	0.430
Concio 2	137	J[756]	ST RARA Mobili	Characteristic	513.44	453.54	66.89	1003.30	0.452
Concio 1	138	1[756]	ST RARA Mobili	Characteristic	513.44	464.14	66.89	1337.73	0.347
Concio 1	138	J[757]	ST RARA Mobili	Characteristic	802.78	725.70	66.89	1337.73	0.542
Concio 1	139	1[757]	ST RARA Mobili	Characteristic	649.28	586.94	66.89	1337.73	0.439
Concio 1	139	J[758]	ST RARA Mobili	Characteristic	1143.27	1033.49	66.89	1337.73	0.773
Concio 1	140	1[758]	ST RARA Mobili	Characteristic	-338.60	306.09	66.89	1337.73	0.229
Concio 1	140	J[759]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000







Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	201	I[760]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000
Concio 1	201	J[761]	ST RARA Mobili	Characteristic	342.08	311.33	66.89	1337.73	0.233
Concio 1	202	I[761]	ST RARA Mobili	Characteristic	-1126.56	1025.28	66.89	1337.73	0.766
Concio 1	202	J[762]	ST RARA Mobili	Characteristic	-593.39	540.04	66.89	1337.73	0.404
Concio 1	203	I[762]	ST RARA Mobili	Characteristic	-787.16	716.39	66.89	1337.73	0.536
Concio 1	203	J[763]	ST RARA Mobili	Characteristic	-506.23	460.72	66.89	1337.73	0.344
Concio 2	204	I[763]	ST RARA Mobili	Characteristic	-506.23	450.42	66.89	1003.30	0.449
Concio 2	204	J[764]	ST RARA Mobili	Characteristic	538.78	479.38	66.89	1003.30	0.478
Concio 2	205	I[764]	ST RARA Mobili	Characteristic	-571.65	508.63	66.89	1003.30	0.507
Concio 2	205	J[765]	ST RARA Mobili	Characteristic	735.48	654.40	66.89	1003.30	0.652
Concio 2	206	1[765]	ST RARA Mobili	Characteristic	517.31	460.28	66.89	1003.30	0.459
Concio 2	206	J[766]	ST RARA Mobili	Characteristic	766.48	681.98	66.89	1003.30	0.680
Concio 3	207	1[766]	ST RARA Mobili	Characteristic	766.48	690.13	66.89	1337.73	0.516
Concio 3	207	J[767]	ST RARA Mobili	Characteristic	950.44	855.76	66.89	1337.73	0.640
Concio 3	208	1[767]	ST RARA Mobili	Characteristic	765.47	689.22	66.89	1337.73	0.515
Concio 3	208	J[768]	ST RARA Mobili	Characteristic	1212.19	1091.44	66.89	1337.73	0.816
Concio 3	209	1[768]	ST RARA Mobili	Characteristic	1068.33	961.91	66.89	1337.73	0.719
Concio 3	209	J[769]	ST RARA Mobili	Characteristic	1110.59	999.95	66.89	1337.73	0.747
Concio 4 H=var	210	1[769]	ST RARA Mobili	Characteristic	1104.75	973.68	66.89	1337.73	0.728
Concio 4 H=var	210	J[770]	ST RARA Mobili	Characteristic	1362.01	829.96	66.89	1337.73	0.620
Concio 4 H=var	211	1[770]	ST RARA Mobili	Characteristic	1290.08	786.13	66.89	1337.73	0.588
Concio 4 H=var	211	J[771]	ST RARA Mobili	Characteristic	1556.11	722.68	66.89	1337.73	0.540
Concio 4 H=200	212	I[771]	ST RARA Mobili	Characteristic	1553.68	721.55	66.89	1337.73	0.539
Concio 4 H=200	212	J[772]	ST RARA Mobili	Characteristic	1606.22	745.95	66.89	1337.73	0.558
Concio 4 H=200	213	1[772]	ST RARA Mobili	Characteristic	-1543.56	716.85	66.89	1337.73	0.536
Concio 4 H=200	213	J[773]	ST RARA Mobili	Characteristic	-1491.05	692.47	66.89	1337.73	0.518
Concio 4 H=var	214	1[773]	ST RARA Mobili	Characteristic	-1493.25	693.49	66.89	1337.73	0.518
Concio 4 H=var	214	J[774]	ST RARA Mobili	Characteristic	-1227.30	747.88	66.89	1337.73	0.559
Concio 4 H=var	215	1[774]	ST RARA Mobili	Characteristic	-1300.90	792.72	66.89	1337.73	0.593
Concio 4 H=var	215	J[775]	ST RARA Mobili	Characteristic	-1044.32	920.42	66.89	1337.73	0.688
Concio 5	216	1[775]	ST RARA Mobili	Characteristic	-1050.24	945.62	66.89	1337.73	0.707
Concio 5	216	J[776]	ST RARA Mobili	Characteristic	-1008.03	907.62	66.89	1337.73	0.678
Concio 5	217	1[776]	ST RARA Mobili	Characteristic	-1156.79	1041.55	66.89	1337.73	0.779
Concio 5	217	J[777]	ST RARA Mobili	Characteristic	-694.33	625.17	66.89	1337.73	0.467
Concio 5	218	1[777]	ST RARA Mobili	Characteristic	-888.71	800.18	66.89	1337.73	0.598
Concio 5		J[778]	ST RARA Mobili	Characteristic	-678.11	610.56	66.89	1337.73	0.456
Concio 6	219	1[778]	ST RARA Mobili	Characteristic	-678.11	598.38	66.89	1003.30	0.596
Concio 6	219	J[779]	ST RARA Mobili	Characteristic	469.97	414.71	66.89	1003.30	0.413
Concio 6	220	1[779]	ST RARA Mobili	Characteristic	-671.08	592.17	66.89	1003.30	0.590
Concio 6	220	J[780]	ST RARA Mobili	Characteristic	-436.10	384.82	66.89	1003.30	0.384
Concio 6	221	1[780]	ST RARA Mobili	Characteristic	-436.10	384.82	66.89	1003.30	0.384
Concio 6	221	J[781]	ST RARA Mobili	Characteristic	670.95	592.06	66.89	1003.30	0.590
Concio 6	222	I[781]	ST RARA Mobili	Characteristic	-470.10	414.83	66.89	1003.30	0.413
Concio 6	222	J[782] I[782]	ST RARA Mobili	Characteristic	677.99	598.27	66.89 66.89	1003.30	0.596
Concio 5			ST RARA Mobili	Characteristic	677.99	610.45		1337.73	0.456
Concio 5	223	J[783] I[783]	ST RARA Mobili ST RARA Mobili	Characteristic	888.59 694.30	800.08 625.13	66.89 66.89	1337.73	0.598
Concio 5 Concio 5	224	J[784]	ST RARA Mobili	Characteristic	1156.62	1041.40	66.89	1337.73 1337.73	0.467
				Characteristic					
Concio 5 Concio 5	225 225	J[784] J[785]	ST RARA Mobili	Characteristic	1007.86 1050.06	907.46 945.46	66.89 66.89	1337.73	0.678
Concio 5 Concio 4 H=var	225	J[785] I[785]	ST RARA Mobili ST RARA Mobili	Characteristic	1050.06	945.46	66.89 66.89	1337.73 1337.73	0.707
	226		ST RARA Mobili	Characteristic Characteristic	1300.75	792.64	66.89		0.688
Concio 4 H=var Concio 4 H=var	227	J[786]	ST RARA Mobili	Characteristic	1227.10	792.64	66.89	1337.73	0.559
Concio 4 H=var	227	J[786] J[787]	ST RARA Mobili	Characteristic	1493.02	693.38	66.89	1337.73 1337.73	0.559
Concio 4 H=200	228	I[787]	ST RARA Mobili	_	1493.02	692.36	66.89	1337.73	0.518
Concio 4 H=200	228	J[788]	ST RARA Mobili	Characteristic Characteristic	1543.33	716.75	66.89	1337.73	0.518
Concio 4 H=200	229	1[788]	ST RARA Mobili	Characteristic	-1606.44	746.06	66.89	1337.73	0.558
Concio 4 H=200	229	J[789]	ST RARA Mobili	Characteristic	-1553.90	721.66	66.89	1337.73	0.539
Concio 4 H=200	230	1[789]	ST RARA Mobili	Characteristic	-1556.32	721.00	66.89	1337.73	0.540
CUILIU 4 II-VdI	230	[נסי]ו	OT NANA IVIUDIII	Citaracteristic	-1330.32	122.18	60.69	1337./3	0.540











Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 4 H=var	230	J[790]	ST RARA Mobili	Characteristic	-1290.26	786.24	66.89	1337.73	0.588
Concio 4 H=var	231	1[790]	ST RARA Mobili	Characteristic	-1362.13	830.04	66.89	1337.73	0.620
Concio 4 H=var	231	J[791]	ST RARA Mobili	Characteristic	-1104.91	973.82	66.89	1337.73	0.728
Concio 3	232	I[791]	ST RARA Mobili	Characteristic	-1110.75	1000.10	66.89	1337.73	0.748
Concio 3	232	J[792]	ST RARA Mobili	Characteristic	-1068.49	962.05	66.89	1337.73	0.719
Concio 3	233	1[792]	ST RARA Mobili	Characteristic	-1212.35	1091.58	66.89	1337.73	0.816
Concio 3	233	J[793]	ST RARA Mobili	Characteristic	-765.49	689.24	66.89	1337.73	0.515
Concio 3	234	I[793]	ST RARA Mobili	Characteristic	-950.55	855.86	66.89	1337.73	0.640
Concio 3	234	J[794]	ST RARA Mobili	Characteristic	-766.61	690.25	66.89	1337.73	0.516
Concio 2	235	1[794]	ST RARA Mobili	Characteristic	-766.61	682.10	66.89	1003.30	0.680
Concio 2	235	J[795]	ST RARA Mobili	Characteristic	-517.43	460.38	66.89	1003.30	0.459
Concio 2	236	1[795]	ST RARA Mobili	Characteristic	-735.67	654.56	66.89	1003.30	0.652
Concio 2	236	J[796]	ST RARA Mobili	Characteristic	571.45	508.45	66.89	1003.30	0.507
Concio 2	237	1[796]	ST RARA Mobili	Characteristic	-538.91	479.50	66.89	1003.30	0.478
Concio 2	237	J[797]	ST RARA Mobili	Characteristic	506.12	450.32	66.89	1003.30	0.449
Concio 1	238	1[797]	ST RARA Mobili	Characteristic	506.12	460.62	66.89	1337.73	0.344
Concio 1	238	J[798]	ST RARA Mobili	Characteristic	786.99	716.24	66.89	1337.73	0.535
Concio 1 Concio 1	239	1[798]	ST RARA Mobili	Characteristic	593.30	539.96	66.89 66.89	1337.73 1337.73	0.404
Concio 1	239 240	J[799] I[799]	ST RARA Mobili ST RARA Mobili	Characteristic Characteristic	1126.28	1025.03	66.89		0.766
					-342.08	311.33		1337.73	
Concio 1	240	J[800]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000
Concio 1	301	I[801]	ST RARA Mobili	Characteristic			66.89	1337.73	0.000
Concio 1	301	J[802]	ST RARA Mobili	Characteristic	342.08	311.33	66.89	1337.73	0.233
Concio 1	302 302	1[802]	ST RARA Mobili	Characteristic	-1127.20 -594.03	1025.87 540.62	66.89 66.89	1337.73	0.767
Concio 1	302	J[803]	ST RARA Mobili ST RARA Mobili	Characteristic	-594.03	716.73	66.89	1337.73 1337.73	0.404
Concio 1	303	J[804]	ST RARA Mobili	Characteristic	-506.60	461.06	66.89	1337.73	0.345
Concio 2	303	I[804]	ST RARA Mobili	Characteristic Characteristic	-506.60	450.75	66.89	1003.30	0.343
Concio 2	304	J[804]	ST RARA Mobili	Characteristic	539.14	479.71	66.89	1003.30	0.449
Concio 2	305	1[805]	ST RARA Mobili	Characteristic	-571.71	508.69	66.89	1003.30	0.507
Concio 2	305	J[806]	ST RARA Mobili	Characteristic	735.54	654.45	66.89	1003.30	0.652
Concio 2	306	1[806]	ST RARA Mobili	Characteristic	517.81	460.72	66.89	1003.30	0.459
Concio 2	306	J[807]	ST RARA Mobili	Characteristic	766.98	682.43	66.89	1003.30	0.680
Concio 3	307	I[807]	ST RARA Mobili	Characteristic	766.98	690.58	66.89	1337.73	0.516
Concio 3	307	1[808]	ST RARA Mobili	Characteristic	950.94	856.21	66.89	1337.73	0.640
Concio 3		I[808]	ST RARA Mobili	Characteristic	766.27	689.94	66.89	1337.73	0.516
Concio 3	308	J[809]	ST RARA Mobili	Characteristic	1212.99	1092.16	66.89	1337.73	0.816
Concio 3	309	1[809]	ST RARA Mobili	Characteristic	1069.29	962.78	66.89	1337.73	0.720
Concio 3	309	J[810]	ST RARA Mobili	Characteristic	1111.55	1000.82	66.89	1337.73	0.748
Concio 4 H=var	310	I[810]	ST RARA Mobili	Characteristic	1106.37	975.10	66.89	1337.73	0.729
Concio 4 H=var	310	J[811]	ST RARA Mobili	Characteristic	1363.62	830.94	66.89	1337.73	0.621
Concio 4 H=var	311	I[811]	ST RARA Mobili	Characteristic	1292.07	787.34	66.89	1337.73	0.589
Concio 4 H=var	311	J[812]	ST RARA Mobili	Characteristic	1558.10	723.61	66.89	1337.73	0.541
Concio 4 H=200	312	I[812]	ST RARA Mobili	Characteristic	1554.97	722.15	66.89	1337.73	0.540
Concio 4 H=200	312	J[813]	ST RARA Mobili	Characteristic	1607.51	746.55	66.89	1337.73	0.558
Concio 4 H=200	313	I[813]	ST RARA Mobili	Characteristic	-1544.85	717.45	66.89	1337.73	0.536
Concio 4 H=200	313	J[814]	ST RARA Mobili	Characteristic	-1492.34	693.07	66.89	1337.73	0.518
Concio 4 H=var	314	I[814]	ST RARA Mobili	Characteristic	-1495.28	694.43	66.89	1337.73	0.519
Concio 4 H=var	314	J[815]	ST RARA Mobili	Characteristic	-1229.33	749.12	66.89	1337.73	0.560
Concio 4 H=var	315	I[815]	ST RARA Mobili	Characteristic	-1302.61	793.77	66.89	1337.73	0.593
Concio 4 H=var	315	J[816]	ST RARA Mobili	Characteristic	-1046.03	921.92	66.89	1337.73	0.689
Concio 5	316	I[816]	ST RARA Mobili	Characteristic	-1051.20	946.48	66.89	1337.73	0.708
Concio 5	316		ST RARA Mobili	Characteristic	-1008.99	908.48	66.89	1337.73	0.679
Concio 5	317	I[817]	ST RARA Mobili	Characteristic	-1157.60	1042.29	66.89	1337.73	0.779
Concio 5	317	J[818]	ST RARA Mobili	Characteristic	-695.15	625.90	66.89	1337.73	0.468
Concio 5	318	I[818]	ST RARA Mobili	Characteristic	-889.15	800.57	66.89	1337.73	0.598
Concio 5	318	J[819]	ST RARA Mobili	Characteristic	-678.55	610.96	66.89	1337.73	0.457
Concio 6	319	I[819]	ST RARA Mobili	Characteristic	-678.55	598.77	66.89	1003.30	0.597
Concio 6	319	J[820]	ST RARA Mobili	Characteristic	470.41	415.10	66.89	1003.30	0.414







Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 6	320	I[820]	ST RARA Mobili	Characteristic	-671.08	592.17	66.89	1003.30	0.590
Concio 6	320	J[821]	ST RARA Mobili	Characteristic	-436.10	384.82	66.89	1003.30	0.384
Concio 6	321	I[821]	ST RARA Mobili	Characteristic	-436.10	384.82	66.89	1003.30	0.384
Concio 6	321	J[822]	ST RARA Mobili	Characteristic	670.96	592.06	66.89	1003.30	0.590
Concio 6	322	I[822]	ST RARA Mobili	Characteristic	-470.55	415.23	66.89	1003.30	0.414
Concio 6	322	J[823]	ST RARA Mobili	Characteristic	678.44	598.67	66.89	1003.30	0.597
Concio 5	323	I[823]	ST RARA Mobili	Characteristic	678.44	610.86	66.89	1337.73	0.457
Concio 5	323	J[824]	ST RARA Mobili	Characteristic	889.04	800.48	66.89	1337.73	0.598
Concio 5	324	I[824]	ST RARA Mobili	Characteristic	695.10	625.85	66.89	1337.73	0.468
Concio 5	324	J[825]	ST RARA Mobili	Characteristic	1157.42	1042.12	66.89	1337.73	0.779
Concio 5	325	I[825]	ST RARA Mobili	Characteristic	1008.81	908.32	66.89	1337.73	0.679
Concio 5	325	J[826]	ST RARA Mobili	Characteristic	1051.01	946.31	66.89	1337.73	0.707
Concio 4 H=var	326	I[826]	ST RARA Mobili	Characteristic	1045.84	921.76	66.89	1337.73	0.689
Concio 4 H=var	326	J[827]	ST RARA Mobili	Characteristic	1302.45	793.67	66.89	1337.73	0.593
Concio 4 H=var	327	I[827]	ST RARA Mobili	Characteristic	1229.18	749.02	66.89	1337.73	0.560
Concio 4 H=var	327	J[828]	ST RARA Mobili	Characteristic	1495.10	694.35	66.89	1337.73	0.519
Concio 4 H=200	328	I[828]	ST RARA Mobili	Characteristic	1492.16	692.98	66.89	1337.73	0.518
Concio 4 H=200	328	J[829]	ST RARA Mobili	Characteristic	1544.67	717.37	66.89	1337.73	0.536
Concio 4 H=200	329	I[829]	ST RARA Mobili	Characteristic	-1607.69	746.64	66.89	1337.73	0.558
Concio 4 H=200	329	J[830]	ST RARA Mobili	Characteristic	-1555.15	722.24	66.89	1337.73	0.540
Concio 4 H=var	330	I[830]	ST RARA Mobili	Characteristic	-1558.28	723.69	66.89	1337.73	0.541
Concio 4 H=var	330	J[831]	ST RARA Mobili	Characteristic	-1292.22	787.44	66.89	1337.73	0.589
Concio 4 H=var	331	I[831]	ST RARA Mobili	Characteristic	-1363.77	831.04	66.89	1337.73	0.621
Concio 4 H=var	331	J[832]	ST RARA Mobili	Characteristic	-1106.54	975.26	66.89	1337.73	0.729
Concio 3	332	1[832]	ST RARA Mobili	Characteristic	-1111.73	1000.99	66.89	1337.73	0.748
Concio 3	332	J[833]	ST RARA Mobili	Characteristic	-1069.47	962.94	66.89	1337.73	0.720
Concio 3	333	1[833]	ST RARA Mobili	Characteristic	-1213.17	1092.31	66.89	1337.73	0.817
Concio 3	333	J[834]	ST RARA Mobili	Characteristic	-766.31	689.98	66.89	1337.73	0.516
Concio 3	334	1[834]	ST RARA Mobili	Characteristic	-951.04	856.30	66.89	1337.73	0.640
Concio 3	334	J[835]	ST RARA Mobili	Characteristic	-767.10	690.69	66.89	1337.73	0.516
Concio 2	335	I[835]	ST RARA Mobili	Characteristic	-767.10	682.53	66.89	1003.30	0.680
Concio 2	335	J[836]	ST RARA Mobili	Characteristic	-517.92	460.82	66.89	1003.30	0.459
Concio 2	336	1[836]	ST RARA Mobili	Characteristic	-735.72	654.61	66.89	1003.30	0.652
Concio 2	336	J[837]	ST RARA Mobili	Characteristic	571.50	508.50	66.89	1003.30	0.507
Concio 2	337	I[837]	ST RARA Mobili	Characteristic	-539.27	479.82	66.89	1003.30	0.478
Concio 2	337	J[838]	ST RARA Mobili	Characteristic	506.49	450.65	66.89	1003.30	0.449
Concio 1	338	1[838]	ST RARA Mobili	Characteristic	506.49	460.95	66.89	1337.73	0.345
Concio 1	338	J[839]	ST RARA Mobili	Characteristic	787.36	716.58	66.89	1337.73	0.536
Concio 1	339	1[839]	ST RARA Mobili	Characteristic	593.94	540.55	66.89	1337.73	0.404
Concio 1	339	J[840]	ST RARA Mobili	Characteristic	1126.93	1025.61	66.89	1337.73	0.767
Concio 1	340	I[840]	ST RARA Mobili	Characteristic	-342.08	311.33	66.89	1337.73	0.233
Concio 1	340	J[841]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000
Concio 1	401	I[842]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000
Concio 1	401	J[843]	ST RARA Mobili	Characteristic	338.60	306.09	66.89	1337.73	0.229
Concio 1	402	I[843]	ST RARA Mobili	Characteristic	-1142.00	1032.34	66.89	1337.73	0.772
Concio 1	402	J[844]	ST RARA Mobili	Characteristic	-647.91	585.69	66.89	1337.73	0.438
Concio 1	403	I[844]	ST RARA Mobili		-802.64	725.57	66.89	1337.73	0.542
Concio 1	403	J[845]	ST RARA Mobili	Characteristic Characteristic	-513.25	463.97	66.89	1337.73	0.347
	403	I[845]					66.89	1003.30	
Concio 2	404		ST RARA Mobili	Characteristic	-513.25	453.37 431.57	†		0.452
Concio 2		J[846]	ST RARA Mobili	Characteristic	488.57	431.57	66.89	1003.30	0.430
Concio 2	405	1[846]	ST RARA Mobili	Characteristic	-531.15	469.18	66.89	1003.30	0.468
Concio 2	405	J[847]	ST RARA Mobili	Characteristic	707.49	624.95	66.89	1003.30	0.623
Concio 2	406	I[847]	ST RARA Mobili	Characteristic	537.73	475.00	66.89	1003.30	0.473
Concio 2	406	J[848]	ST RARA Mobili	Characteristic	782.39	691.11	66.89	1003.30	0.689
Concio 3	407	1[848]	ST RARA Mobili	Characteristic	782.39	698.75	66.89	1337.73	0.522
Concio 3	407	J[849]	ST RARA Mobili	Characteristic	968.92	865.34	66.89	1337.73	0.647
Concio 3	408	1[849]	ST RARA Mobili	Characteristic	805.52	719.41	66.89	1337.73	0.538
Concio 3	408	J[850]	ST RARA Mobili	Characteristic	1240.49	1107.88	66.89	1337.73	0.828
Concio 3	409	I[850]	ST RARA Mobili	Characteristic	1081.34	965.74	66.89	1337.73	0.722















Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 3	409	J[851]	ST RARA Mobili	Characteristic	1131.26	1010.33	66.89	1337.73	0.755
Concio 4 H=var	410	I[851]	ST RARA Mobili	Characteristic	1122.03	976.58	66.89	1337.73	0.730
Concio 4 H=var	410	J[852]	ST RARA Mobili	Characteristic	1373.06	822.43	66.89	1337.73	0.615
Concio 4 H=var	411	I[852]	ST RARA Mobili	Characteristic	1257.02	752.93	66.89	1337.73	0.563
Concio 4 H=var	411	J[853]	ST RARA Mobili	Characteristic	1500.75	682.86	66.89	1337.73	0.510
Concio 4 H=200	412	I[853]	ST RARA Mobili	Characteristic	1503.61	684.16	66.89	1337.73	0.511
Concio 4 H=200	412	J[854]	ST RARA Mobili	Characteristic	1554.01	707.09	66.89	1337.73	0.529
Concio 4 H=200	413	I[854]	ST RARA Mobili	Characteristic	-1495.62	680.52	66.89	1337.73	0.509
Concio 4 H=200	413	J[855]	ST RARA Mobili	Characteristic	-1445.21	657.58	66.89	1337.73	0.492
Concio 4 H=var	414	I[855]	ST RARA Mobili	Characteristic	-1443.63	656.87	66.89	1337.73	0.491
Concio 4 H=var	414	J[856]	ST RARA Mobili	Characteristic	-1199.58	718.52	66.89	1337.73	0.537
Concio 4 H=var	415	I[856]	ST RARA Mobili	Characteristic	-1315.50	787.95	66.89	1337.73	0.589
Concio 4 H=var	415	J[857]	ST RARA Mobili	Characteristic	-1064.77	926.75	66.89	1337.73	0.693
Concio 5	416	I[857]	ST RARA Mobili	Characteristic	-1072.21	957.59	66.89	1337.73	0.716
Concio 5	416	J[858]	ST RARA Mobili	Characteristic	-1022.31	913.02	66.89	1337.73	0.683
Concio 5	417	I[858]	ST RARA Mobili	Characteristic	-1184.08	1057.50	66.89	1337.73	0.791
Concio 5	417	J[859]	ST RARA Mobili	Characteristic	-737.27	658.45	66.89	1337.73	0.492
Concio 5	418	1[859]	ST RARA Mobili	Characteristic	-906.07	809.21	66.89	1337.73	0.605
Concio 5	418	J[860]	ST RARA Mobili	Characteristic	-695.67	621.30	66.89	1337.73	0.464
Concio 6	419	1[860]	ST RARA Mobili	Characteristic	-695.67	609.77	66.89	1003.30	0.608
Concio 6	419	J[861]	ST RARA Mobili	Characteristic	-464.89	407.49	66.89	1003.30	0.406
Concio 6	420	I[861]	ST RARA Mobili	Characteristic	-640.89	561.76	66.89	1003.30	0.560
Concio 6	420	J[862]	ST RARA Mobili	Characteristic	-407.82	357.47	66.89	1003.30	0.356
Concio 6	421	I[862]	ST RARA Mobili	Characteristic	-407.82	357.47	66.89	1003.30	0.356
Concio 6	421	J[863]	ST RARA Mobili	Characteristic	640.76	561.65	66.89	1003.30	0.560
Concio 6	422	I[863]	ST RARA Mobili	Characteristic	464.85	407.46	66.89	1003.30	0.406
Concio 6	422	J[864]	ST RARA Mobili	Characteristic	695.55	609.67	66.89	1003.30	0.608
Concio 5	423	I[864]	ST RARA Mobili	Characteristic	695.55	621.20	66.89	1337.73	0.464
Concio 5	423	J[865]	ST RARA Mobili	Characteristic	905.96	809.11	66.89	1337.73	0.605
Concio 5	424	I[865]	ST RARA Mobili	Characteristic	737.21	658.40	66.89	1337.73	0.492
Concio 5	424	J[866]	ST RARA Mobili	Characteristic	1183.87	1057.31	66.89	1337.73	0.790
Concio 5	425	1[866]	ST RARA Mobili	Characteristic	1022.18	912.91	66.89	1337.73	0.682
Concio 5	425	J[867]	ST RARA Mobili	Characteristic	1072.07	957.47	66.89	1337.73	0.716
Concio 4 H=var	426	I[867]	ST RARA Mobili	Characteristic	1064.63	926.62	66.89	1337.73	0.693
Concio 4 H=var	426	J[868]	ST RARA Mobili	Characteristic	1315.33	787.86	66.89	1337.73	0.589
Concio 4 H=var	427	1[868]	ST RARA Mobili	Characteristic	1199.42	718.43	66.89	1337.73	0.537
Concio 4 H=var	427	J[869]	ST RARA Mobili	Characteristic	1443.43	656.77	66.89	1337.73	0.491
Concio 4 H=200	428	1[869]	ST RARA Mobili	Characteristic	1445.00	657.49	66.89	1337.73	0.491
Concio 4 H=200	428	J[870]	ST RARA Mobili	Characteristic	1495.41	680.43	66.89	1337.73	0.509
Concio 4 H=200	429	1[870]	ST RARA Mobili	Characteristic	-1554.22	707.19	66.89	1337.73	0.529
Concio 4 H=200	429	J[871]	ST RARA Mobili	Characteristic	-1503.82	684.25	66.89	1337.73	0.512
Concio 4 H=var	430	I[871]	ST RARA Mobili	Characteristic	-1500.96	682.95	66.89	1337.73	0.511
Concio 4 H=var	430	J[872]	ST RARA Mobili	Characteristic	-1257.18	753.03	66.89	1337.73	0.563
Concio 4 H=var	431	1[872]	ST RARA Mobili	Characteristic	-1373.22	822.53	66.89	1337.73	0.615
Concio 4 H=var	431	J[873]	ST RARA Mobili	Characteristic	-1122.17	976.71	66.89	1337.73	0.730
Concio 3	432	I[873]	ST RARA Mobili	Characteristic	-1131.39	1010.44	66.89	1337.73	0.755
Concio 3	432 433	J[874]	ST RARA Mobili	Characteristic	-1081.46	965.85	66.89	1337.73	0.722
Concio 3		1[874]	ST RARA Mobili	Characteristic	-1240.69	1108.06	66.89	1337.73	0.828
Concio 3	433 434	J[875] I[875]	ST RARA Mobili	Characteristic	-805.57 -969.02	719.46 865.43	66.89 66.89	1337.73 1337.73	0.538 0.647
Concio 3	434	J[875]	ST RARA Mobili ST RARA Mobili	Characteristic	-969.02 -782.51	698.86	66.89	1337.73	0.522
Concio 3	434		ST RARA Mobili	Characteristic		698.86	66.89	1003.30	0.522
Concio 2	435	J[876]	ST RARA Mobili	Characteristic Characteristic	-782.51 -537.80	475.06	66.89	1003.30	0.689
Concio 2	436	I[877]	ST RARA Mobili	Characteristic	-707.69	625.13	66.89	1003.30	0.473
Concio 2	436	J[877]	ST RARA Mobili		530.91	468.97	66.89	1003.30	0.623
Concio 2	436	I[878]	ST RARA Mobili	Characteristic Characteristic	-488.68	468.97	66.89	1003.30	0.467
Concio 2	437	J[879]	ST RARA Mobili	Characteristic	513.16	453.29	66.89	1003.30	0.450
Concio 1	437	I[879]	ST RARA Mobili	Characteristic		453.29	66.89	1337.73	0.452
	438				513.16 802.50	725.45		1337.73	0.347
Concio 1	438	J[880]	ST RARA Mobili	Characteristic	802.50	/25.45	66.89	133/./3	0.542













Elem property	Elem number	Position	Lcom	Туре	V_c,Ed (kN)	v_L,Ed (kN/m)	P_Rd_ser (kN)	v_L,Rd (kN/m)	Verif. Ratio
Concio 1	439	I[880]	ST RARA Mobili	Characteristic	647.77	585.57	66.89	1337.73	0.438
Concio 1	439	J[881]	ST RARA Mobili	Characteristic	1141.75	1032.12	66.89	1337.73	0.772
Concio 1	440	I[881]	ST RARA Mobili	Characteristic	-338.60	306.09	66.89	1337.73	0.229
Concio 1	440	J[882]	ST RARA Mobili	Characteristic	0.00	0.00	66.89	1337.73	0.000

8.3 STATO LIMITE ULTIMO DI FATICA – RESISTENZA AL TAGLIO LONGITUDINALE

Si effettuano le verifiche allo stato limite ultimo per fatica a "danneggiamento accettabile" dei connettori trave-soletta.

L'impalcato si considera caricato secondo il modello di carico a fatica 3, applicato sulla corsia convenzionale più gravosa per l'elemento considerato (ved. 3.4.2).

Si assume che le strutture siano poco sensibili alla rottura per fatica e che essa produca conseguenze significative; il coefficiente parziale di sicurezza per le verifiche è quindi pari a:

$$\gamma_{Mf} = 1.15$$

I coefficienti di equivalenza assumono i seguenti valori:

$$\lambda_{v1}$$
 = 1.55: EN 1994-2:2005, § 6.8.6.2(4)

$$\lambda_{V2} = \frac{Q_{M1}}{Q_0} \left(\frac{N_{obs}}{N_0} \right)^{1/8} = 0.770$$
: EN 1993-2, § 9.5.2

Q_{M1} = 440 kN: massa complessiva a pieno carico autotreno o autoarticolato a 5 assi

 $Q_0 = 480 \text{ kN}$

 $N_{\text{obs}} = 0.5 \times 10^6$: flusso annuo di veicoli pesanti (> 100 kN) per strade ed autostrade caratterizzate da traffico pesante di media intensità.

$$N_0 = 2 \times 10^6$$

$$\lambda_{v3} = \left(\frac{t_{ld}}{100}\right)^{1/8} = 0.871$$

t_{ld} = 50 anni: vita di progetto del ponte

 λ_{v4} = 1: fattore per traffico pesante sulle altre corsie

$$\lambda_{v} = \lambda_{v1} \cdot \lambda_{v2} \cdot \lambda_{v3} \cdot \lambda_{v4} = 1.039$$

Seguono i tabulati di calcolo per ogni asta considerata, per le combinazioni di carichi più gravose. Dati tabulati:

Elem property: nome delle caratteristiche geometriche dell'elemento

Elem: numero dell'elemento

Position: nodo iniziale (I) o finale (J) dell'elemento Lcom: combinazione di carico più gravosa

Type: sollecitazione (massima o minima) lamda_v: coefficienti di danno equivalente

delta_Tau: ampiezza delle tensioni tangenziali per il carico da fatica

delta Tau E,2: ampiezza costante delle tensioni tangenziali relative a 2x10⁶ cicli di

carico

delta_Tau_c: tensione tangenziale limite (resistenza)

Verification Ratio = $\frac{\text{delta Tau_c}}{\text{delta Tau_E,2}}$ verificato se ≤ 1



MANDANTI:









Elem property	Elem number	Position	Lcom	Туре	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 1	101	I[719]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	101	J[720]	ST FATICA DANN.ACC.	FZ-MAX	1.039	15997.582	16621.521	90000.000	0.185
Concio 1	102	I[720]	ST FATICA DANN.ACC.	FZ-MIN	1.039	62797.590	65246.827	90000.000	0.725
Concio 1	102	J[721]	ST FATICA DANN.ACC.	FY-MIN	1.039	33455.147	34759.968	90000.000	0.386
Concio 1	103	I[721]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40710.707	42298.510	90000.000	0.470
Concio 1	103	J[722]	ST FATICA DANN.ACC.	FZ-MIN	1.039	23353.152	24263.974	90000.000	0.270
Concio 2	104	1[722]	ST FATICA DANN.ACC.	FZ-MIN	1.039	30426.256	31612.944	90000.000	0.351
Concio 2	104	J[723]	ST FATICA DANN.ACC.	FZ-MAX	1.039	25073.812	26051.743	90000.000	0.290
Concio 2	105	I[723]	ST FATICA DANN.ACC.	FZ-MIN	1.039	27350.003	28416.711	90000.000	0.316
Concio 2	105	J[724]	ST FATICA DANN.ACC.	FZ-MAX	1.039	51575.754	53587.317	90000.000	0.595
Concio 2	106	I[724]	ST FATICA DANN.ACC.	FY-MAX	1.039	41362.017	42975.223	90000.000	0.478
Concio 2	106	J[725]	ST FATICA DANN.ACC.	FZ-MAX	1.039	62271.147	64699.852	90000.000	0.719
Concio 3	107	I[725]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47219.748	49061.417	90000.000	0.545
Concio 3	107	J[726]	ST FATICA DANN.ACC.	FZ-MAX	1.039	58387.098	60664.317	90000.000	0.674
Concio 3	108	I[726]	ST FATICA DANN.ACC.	FY-MAX	1.039	50536.362	52507.386	90000.000	0.583
Concio 3	108	J[727]	ST FATICA DANN.ACC.	FZ-MAX	1.039	77015.201	80018.956	90000.000	0.889
Concio 3	109	1[727]	ST FATICA DANN.ACC.	FZ-MAX	1.039	67595.195	70231.550	90000.000	0.780
Concio 3	109	J[728]	ST FATICA DANN.ACC.	FZ-MAX	1.039	70540.212	73291.428	90000.000	0.814
Concio 4 H=var	110	1[728]	ST FATICA DANN.ACC.	FZ-MAX	1.039	68170.976	70829.787	90000.000	0.787
Concio 4 H=var	110	J[728]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56773.765	58988.061	90000.000	0.787
		·							
Concio 4 H=var	111	1[729]	ST FATICA DANN ACC.	FY-MAX	1.039	51485.082	53493.108	90000.000	0.594
Concio 4 H=var	111	J[730]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46365.758	48174.120	90000.000	0.535
Concio 4 H=200	112	1[730]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46402.438	48212.230	90000.000	0.536
Concio 4 H=200	112	J[731]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47875.722	49742.975	90000.000	0.553
Concio 4 H=200	113	I[731]	ST FATICA DANN.ACC.	FZ-MIN	1.039	44003.035	45719.245	90000.000	0.508
Concio 4 H=200	113	J[732]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42530.397	44189.171	90000.000	0.491
Concio 4 H=var	114	I[732]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42537.480	44196.531	90000.000	0.491
Concio 4 H=var	114	J[733]	ST FATICA DANN.ACC.	FY-MIN	1.039	46446.856	48258.381	90000.000	0.536
Concio 4 H=var	115	I[733]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51572.658	53584.100	90000.000	0.595
Concio 4 H=var	115	J[734]	ST FATICA DANN.ACC.	FZ-MIN	1.039	60636.124	63001.060	90000.000	0.700
Concio 5	116	+	ST FATICA DANN.ACC.	FZ-MIN	1.039	62671.752	65116.081	90000.000	0.724
Concio 5	116	+	ST FATICA DANN.ACC.	FZ-MIN	1.039	59736.532	62066.382	90000.000	0.690
Concio 5	117	I[735]	ST FATICA DANN.ACC.	FZ-MIN	1.039	69146.167	71843.012	90000.000	0.798
Concio 5	117	J[736]	ST FATICA DANN.ACC.	FY-MIN	1.039	42104.830	43747.007	90000.000	0.486
Concio 5	118	I[736]	ST FATICA DANN.ACC.	FZ-MIN	1.039	50066.852	52019.565	90000.000	0.578
Concio 5	118	J[737]	ST FATICA DANN.ACC.	FZ-MIN	1.039	37578.856	39044.510	90000.000	0.434
Concio 6	119	I[737]	ST FATICA DANN.ACC.	FZ-MIN	1.039	49175.696	51093.651	90000.000	0.568
Concio 6	119	J[738]	ST FATICA DANN.ACC.	FZ-MIN	1.039	29841.411	31005.289	90000.000	0.345
Concio 6	120	I[738]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40076.750	41639.827	90000.000	0.463
Concio 6	120	J[739]	ST FATICA DANN.ACC.	FZ-MIN	1.039	21564.169	22405.216	90000.000	0.249
Concio 6	121	I[739]	ST FATICA DANN.ACC.	FZ-MIN	1.039	21564.169	22405.216	90000.000	0.249
Concio 6	121	J[740]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40069.025	41631.801	90000.000	0.463
Concio 6	122	I[740]	ST FATICA DANN.ACC.	FZ-MAX	1.039	29836.883	31000.585	90000.000	0.345
Concio 6	122	J[741]	ST FATICA DANN.ACC.	FZ-MAX	1.039	49167.650	51085.292	90000.000	0.568
Concio 5	123	I[741]	ST FATICA DANN.ACC.	FZ-MAX	1.039	37572.707	39038.122	90000.000	0.434
Concio 5	123	J[742]	ST FATICA DANN.ACC.	FZ-MAX	1.039	50061.319	52013.815	90000.000	0.578
Concio 5	124	I[742]	ST FATICA DANN.ACC.	FY-MAX	1.039	42101.392	43743.434	90000.000	0.486
Concio 5	124	J[743]	ST FATICA DANN.ACC.	FZ-MAX	1.039	69137.567	71834.078	90000.000	0.798
Concio 5	125	I[743]	ST FATICA DANN.ACC.	FZ-MAX	1.039	59731.825	62061.491	90000.000	0.690
Concio 5	125		ST FATICA DANN.ACC.	FZ-MAX	1.039	62666.774	65110.909	90000.000	0.724
Concio 4 H=var	126	·	ST FATICA DANN.ACC.	FZ-MAX	1.039	60631.213	62995.958	90000.000	0.700
Concio 4 H=var	126	<u> </u>	ST FATICA DANN.ACC.	FZ-MAX	1.039	51568.330	53579.603	90000.000	0.595
Concio 4 H=var	127	·	ST FATICA DANN.ACC.	FY-MAX	1.039	46443.892	48255.301	90000.000	0.536
Concio 4 H=var	127	<u> </u>	ST FATICA DANN.ACC.	FZ-MAX	1.039	42533.668	44192.571	90000.000	0.330
	:								
Concio 4 H=200	128		ST FATICA DANN ACC	FZ-MAX	1.039	42526.576	44185.202	90000.000	0.491
Concio 4 H=200	128	†	ST FATICA DANN ACC.	FZ-MAX	1.039	43999.083	45715.140	90000.000	0.508
Concio 4 H=200	129	I[747]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47878.899	49746.276	90000.000	0.553





Elem property	Elem number	Position	Lcom	Туре	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 4 H=200	129	J[748]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46405.491	48215.403	90000.000	0.536
Concio 4 H=var	130	I[748]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46368.914	48177.399	90000.000	0.535
Concio 4 H=var	130	J[749]	ST FATICA DANN.ACC.	FY-MIN	1.039	51487.280	53495.392	90000.000	0.594
Concio 4 H=var	131	I[749]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56777.288	58991.722	90000.000	0.656
Concio 4 H=var	131	J[750]	ST FATICA DANN.ACC.	FX-MIN	1.039	68174.579	70833.530	90000.000	0.787
Concio 3	132	I[750]	ST FATICA DANN.ACC.	FX-MIN	1.039	70543.666	73295.017	90000.000	0.814
Concio 3	132	J[751]	ST FATICA DANN.ACC.	FZ-MIN	1.039	67598.318	70234.794	90000.000	0.780
Concio 3	133	I[751]	ST FATICA DANN.ACC.	FZ-MIN	1.039	77022.097	80026.120	90000.000	0.889
Concio 3	133	J[752]	ST FATICA DANN.ACC.	FY-MIN	1.039	50539.872	52511.033	90000.000	0.584
Concio 3	134	I[752]	ST FATICA DANN.ACC.	FZ-MIN	1.039	58392.857	60670.301	90000.000	0.674
Concio 3	134	J[753]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47225.424	49067.314	90000.000	0.545
Concio 2	135	I[753]	ST FATICA DANN.ACC.	FZ-MIN	1.039	62278.633	64707.630	90000.000	0.719
Concio 2	135	J[754]	ST FATICA DANN.ACC.	FY-MIN	1.039	41366.322	42979.695	90000.000	0.478
Concio 2	136	I[754]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51585.766	53597.719	90000.000	0.596
Concio 2	136	J[755]	ST FATICA DANN.ACC.	FZ-MAX	1.039	27340.098	28406.419	90000.000	0.316
Concio 2	137	I[755]	ST FATICA DANN.ACC.	FZ-MIN	1.039	25083.017	26061.307	90000.000	0.290
Concio 2	137	J[756]	ST FATICA DANN.ACC.	FZ-MAX	1.039	30421.755	31608.267	90000.000	0.351
Concio 1	138	I[756]	ST FATICA DANN.ACC.	FZ-MAX	1.039	23349.698	24260.385	90000.000	0.270
Concio 1	138	J[757]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40703.345	42290.861	90000.000	0.470
Concio 1	139	I[757]	ST FATICA DANN.ACC.	FY-MAX	1.039	33451.001	34755.660	90000.000	0.386
Concio 1	139	J[758]	ST FATICA DANN.ACC.	FZ-MAX	1.039	62788.372	65237.250	90000.000	0.725
Concio 1	140	I[758]	ST FATICA DANN.ACC.	FZ-MIN	1.039	15997.582	16621.521	90000.000	0.185
Concio 1	140	J[759]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	201	I[760]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	201	J[761]	ST FATICA DANN.ACC.	FZ-MAX	1.039	16514.931	17159.048	90000.000	0.191
Concio 1	202	I[761]	ST FATICA DANN.ACC.	FZ-MIN	1.039	58242.286	60513.857	90000.000	0.672
Concio 1	202	J[762]	ST FATICA DANN.ACC.	FZ-MIN	1.039	24953.858	25927.111	90000.000	0.288
Concio 1	203	1[762]	ST FATICA DANN.ACC.	FZ-MIN	1.039	37959.747	39440.257	90000.000	0.438
Concio 1	203	J[763]	ST FATICA DANN.ACC.	FZ-MIN	1.039	19325.073	20078.792	90000.000	0.223
Concio 2	204	I[763]	ST FATICA DANN.ACC.	FZ-MIN	1.039	25190.803	26173.297	90000.000	0.291
Concio 2	204	J[764]	ST FATICA DANN.ACC.	FZ-MAX	1.039	29682.071	30839.734	90000.000	0.343
Concio 2	205	1[764]	ST FATICA DANN.ACC.	FZ-MIN	1.039	28394.227	29501.662	90000.000	0.328
Concio 2	205	J[765]	ST FATICA DANN.ACC.	FZ-MAX	1.039	51189.753	53186.261	90000.000	0.591
Concio 2	206	I[765]	ST FATICA DANN.ACC.	FZ-MAX	1.039	34252.518	35588.438	90000.000	0.395
Concio 2	206	J[766]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56566.467	58772.678	90000.000	0.653
Concio 3	207	1	ST FATICA DANN.ACC.	FZ-MAX	1.039	42931.690	44606.116	90000.000	0.496
Concio 3	207	J[767]	ST FATICA DANN.ACC.	FZ-MAX	1.039	55225.836	57379.759	90000.000	0.638
Concio 3	208	1[767]	ST FATICA DANN.ACC.	FZ-MAX	1.039	43613.129	45314.132	90000.000	0.504
Concio 3	208	J[768]	ST FATICA DANN.ACC.	FZ-MAX	1.039	73197.231	76052.076	90000.000	0.845
Concio 3	209	1[768]	ST FATICA DANN.ACC.	FZ-MAX	1.039	63752.565	66239.049	90000.000	0.736
Concio 3	209	J[769]	ST FATICA DANN.ACC.	FZ-MAX	1.039	66556.363	69152.201	90000.000	0.768
							68258.388		
Concio 4 H=var	210	<u> </u>	ST FATICA DANN ACC.	FZ-MAX	1.039	65696.102		90000.000	0.758
Concio 4 H=var	210	J[770]	ST FATICA DANN ACC.	FZ-MAX	1.039	56563.994	58770.108	90000.000	0.653
Concio 4 H=var	211	1[770]	ST FATICA DANN ACC.	FZ-MAX	1.039	53025.357	55093.457	90000.000	0.612
Concio 4 H=var	211	J[771]	ST FATICA DANN.ACC.	FZ-MAX	1.039	49008.456	50919.888	90000.000	0.566
Concio 4 H=200	212	I[771]	ST FATICA DANN.ACC.	FZ-MAX	1.039	48680.537	50579.180	90000.000	0.562
Concio 4 H=200	212	J[772]	ST FATICA DANN.ACC.	FZ-MAX	1.039	50422.130	52388.698	90000.000	0.582
Concio 4 H=200	213		ST FATICA DANN.ACC.	FZ-MIN	1.039	46455.653	48267.521	90000.000	0.536
Concio 4 H=200	213	1	ST FATICA DANN.ACC.	FZ-MIN	1.039	44715.771	46459.779	90000.000	0.516
Concio 4 H=var	214		ST FATICA DANN.ACC.	FZ-MIN	1.039	45080.334	46838.561	90000.000	0.520
Concio 4 H=var	214		ST FATICA DANN.ACC.	FZ-MIN	1.039	47876.655	49743.945	90000.000	0.553
Concio 4 H=var	215	<u> </u>	ST FATICA DANN.ACC.	FZ-MIN	1.039	51563.189	53574.262	90000.000	0.595
Concio 4 H=var	215	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	58492.311	60773.634	90000.000	0.675
Concio 5	216	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	59096.222	61401.099	90000.000	0.682
Concio 5	216	J[776]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56301.002	58496.859	90000.000	0.650
Concio 5	217	1[776]	ST FATICA DANN.ACC.	FZ-MIN	1.039	66162.711	68743.195	90000.000	0.764
Concio 5	217	J[777]	ST FATICA DANN.ACC.	FZ-MIN	1.039	35614.944	37004.001	90000.000	0.411
Concio 5	218	1[777]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47624.174	49481.616	90000.000	0.550
Concio 5	218	J[778]	ST FATICA DANN.ACC.	FZ-MIN	1.039	33643.702	34955.877	90000.000	0.388





Elem property	Elem number	Position	Lcom	Туре	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 6	219	I[778]	ST FATICA DANN.ACC.	FZ-MIN	1.039	43963.225	45677.883	90000.000	0.508
Concio 6	219	J[779]	ST FATICA DANN.ACC.	FZ-MIN	1.039	23093.916	23994.627	90000.000	0.267
Concio 6	220	I[779]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40486.985	42066.063	90000.000	0.467
Concio 6	220	J[780]	ST FATICA DANN.ACC.	FZ-MIN	1.039	19939.533	20717.217	90000.000	0.230
Concio 6	221	I[780]	ST FATICA DANN.ACC.	FZ-MIN	1.039	19939.533	20717.217	90000.000	0.230
Concio 6	221	J[781]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40478.718	42057.473	90000.000	0.467
Concio 6	222	I[781]	ST FATICA DANN.ACC.	FZ-MAX	1.039	23089.356	23989.889	90000.000	0.267
Concio 6	222	J[782]	ST FATICA DANN.ACC.	FZ-MAX	1.039	43955.635	45669.997	90000.000	0.507
Concio 5	223	I[782]	ST FATICA DANN.ACC.	FZ-MAX	1.039	33637.894	34949.842	90000.000	0.388
Concio 5	223	J[783]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47618.104	49475.309	90000.000	0.550
Concio 5	224	I[783]	ST FATICA DANN.ACC.	FZ-MAX	1.039	35611.402	37000.321	90000.000	0.411
Concio 5	224	J[784]	ST FATICA DANN.ACC.	FZ-MAX	1.039	66153.331	68733.449	90000.000	0.764
Concio 5	225	I[784]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56293.974	58489.557	90000.000	0.650
Concio 5	225	J[785]	ST FATICA DANN.ACC.	FZ-MAX	1.039	59088.908	61393.500	90000.000	0.682
Concio 4 H=var	226	I[785]	ST FATICA DANN.ACC.	FZ-MAX	1.039	58484.747	60765.775	90000.000	0.675
Concio 4 H=var	226	J[786]	ST FATICA DANN.ACC.	FZ-MAX	1.039	51557.787	53568.649	90000.000	0.595
Concio 4 H=var	227	I[786]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47872.708	49739.844	90000.000	0.553
Concio 4 H=var	227	J[787]	ST FATICA DANN.ACC.	FZ-MAX	1.039	45075.326	46833.359	90000.000	0.520
Concio 4 H=200	228	I[787]	ST FATICA DANN.ACC.	FZ-MAX	1.039	44710.775	46454.589	90000.000	0.516
Concio 4 H=200	228	J[788]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46450.498	48262.165	90000.000	0.536
Concio 4 H=200	229	I[788]	ST FATICA DANN.ACC.	FZ-MIN	1.039	50426.463	52393.201	90000.000	0.582
Concio 4 H=200	229	J[789]	ST FATICA DANN.ACC.	FZ-MIN	1.039	48684.722	50583.528	90000.000	0.562
Concio 4 H=var	230	1[789]	ST FATICA DANN.ACC.	FZ-MIN	1.039	49012.678	50924.275	90000.000	0.566
Concio 4 H=var	230	J[790]	ST FATICA DANN.ACC.	FZ-MIN	1.039	53028.403	55096.622	90000.000	0.612
Concio 4 H=var	231	1[790]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56568.575	58774.869	90000.000	0.653
Concio 4 H=var	231	J[791]	ST FATICA DANN.ACC.	FZ-MIN	1.039	65702.258	68264.784	90000.000	0.759
Concio 3	232	I[791]	ST FATICA DANN.ACC.	FZ-MIN	1.039	66562.233	69158.300	90000.000	0.768
Concio 3	232	J[792]	ST FATICA DANN.ACC.	FZ-MIN	1.039	63758.067	66244.765	90000.000	0.736
Concio 3	233	<u> </u>	ST FATICA DANN.ACC.	FZ-MIN	1.039	73204.941	76060.087	90000.000	0.845
Concio 3	233	J[793]	ST FATICA DANN.ACC.	FZ-MIN	1.039	43616.532	45317.668	90000.000	0.504
Concio 3	234	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	55233.263	57387.476	90000.000	0.638
Concio 3	234	<u> </u>	ST FATICA DANN.ACC.	FZ-MIN	1.039	42937.598	44612.255	90000.000	0.496
Concio 2	235	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	56574.251	58780.766	90000.000	0.653
Concio 2	235	J[795]	ST FATICA DANN.ACC.	FZ-MIN	1.039	34258.167	35594.308	90000.000	0.396
Concio 2	236	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	51200.109	53197.021	90000.000	0.591
Concio 2	236	1	ST FATICA DANN.ACC.	FZ-MAX	1.039	28383.756	29490.782	90000.000	0.328
Concio 2	237		ST FATICA DANN.ACC.	FZ-MIN	1.039	29693.331	30851.433	90000.000	0.343
Concio 2	237	J[797]	ST FATICA DANN.ACC.	FZ-MAX	1.039	25186.791	26169.129	90000.000	0.291
Concio 1	238	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	19321.996	20075.594	90000.000	0.223
Concio 1	238		ST FATICA DANN.ACC.	FZ-MAX	1.039	37951.062	39431.233	90000.000	0.438
Concio 1	239	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	24949.614	25922.702	90000.000	0.438
		†							
Concio 1	239		ST FATICA DANN ACC.	FZ-MAX	1.039	58231.206 16514.931	60502.345	90000.000	0.672
Concio 1	240	†	ST FATICA DANN.ACC.	FZ-MIN	1.039		17159.048		0.191
Concio 1	240	J[800]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	301	I[801]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	301	J[802]	ST FATICA DANN.ACC.	FZ-MAX	1.039	16514.931	17159.048	90000.000	0.191
Concio 1	302		ST FATICA DANN.ACC.	FZ-MIN	1.039	58242.286	60513.857	90000.000	0.672
Concio 1	302	†····-	ST FATICA DANN.ACC.	FZ-MIN	1.039	24953.858	25927.111	90000.000	0.288
Concio 1	303	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	37959.747	39440.257	90000.000	0.438
Concio 1	303	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	19325.072	20078.790	90000.000	0.223
Concio 2	304	†····	ST FATICA DANN.ACC.	FZ-MIN	1.039	25190.800	26173.295	90000.000	0.291
Concio 2	304	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	29682.076	30839.739	90000.000	0.343
Concio 2	305	†	ST FATICA DANN.ACC.	FZ-MIN	1.039	28394.227	29501.662	90000.000	0.328
Concio 2	305	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	51189.746	53186.253	90000.000	0.591
Concio 2	306	1[806]	ST FATICA DANN.ACC.	FZ-MAX	1.039	34252.518	35588.438	90000.000	0.395
Concio 2	306	J[807]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56566.467	58772.678	90000.000	0.653
Concio 3	307	1[807]	ST FATICA DANN.ACC.	FZ-MAX	1.039	42931.690	44606.116	90000.000	0.496
Concio 3	307	J[808]	ST FATICA DANN.ACC.	FZ-MAX	1.039	55225.836	57379.759	90000.000	0.638
Concio 3	308	I[808]	ST FATICA DANN.ACC.	FZ-MAX	1.039	43613.129	45314.132	90000.000	0.504









Elem property	Elem number	Position	Lcom	Туре	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 3	308	J[809]	ST FATICA DANN.ACC.	FZ-MAX	1.039	73197.229	76052.074	90000.000	0.845
Concio 3	309	1[809]	ST FATICA DANN.ACC.	FZ-MAX	1.039	63752.564	66239.047	90000.000	0.736
Concio 3	309	J[810]	ST FATICA DANN.ACC.	FZ-MAX	1.039	66556.363	69152.201	90000.000	0.768
Concio 4 H=var	310	I[810]	ST FATICA DANN.ACC.	FZ-MAX	1.039	65696.101	68258.386	90000.000	0.758
Concio 4 H=var	310	J[811]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56563.993	58770.107	90000.000	0.653
Concio 4 H=var	311	I[811]	ST FATICA DANN.ACC.	FZ-MAX	1.039	53025.357	55093.457	90000.000	0.612
Concio 4 H=var	311	J[812]	ST FATICA DANN.ACC.	FZ-MAX	1.039	49008.458	50919.890	90000.000	0.566
Concio 4 H=200	312	I[812]	ST FATICA DANN.ACC.	FZ-MAX	1.039	48680.539	50579.182	90000.000	0.562
Concio 4 H=200	312	J[813]	ST FATICA DANN.ACC.	FZ-MAX	1.039	50422.130	52388.698	90000.000	0.582
Concio 4 H=200	313	I[813]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46455.653	48267.521	90000.000	0.536
Concio 4 H=200	313	J[814]	ST FATICA DANN.ACC.	FZ-MIN	1.039	44715.771	46459.779	90000.000	0.516
Concio 4 H=var	314	I[814]	ST FATICA DANN.ACC.	FZ-MIN	1.039	45080.334	46838.561	90000.000	0.520
Concio 4 H=var	314	J[815]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47876.654	49743.944	90000.000	0.553
Concio 4 H=var	315	I[815]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51563.189	53574.262	90000.000	0.595
Concio 4 H=var	315	J[816]	ST FATICA DANN.ACC.	FZ-MIN	1.039	58492.311	60773.634	90000.000	0.675
Concio 5	316	I[816]	ST FATICA DANN.ACC.	FZ-MIN	1.039	59096.226	61401.102	90000.000	0.682
Concio 5	316	J[817]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56301.000	58496.857	90000.000	0.650
Concio 5	317	I[817]	ST FATICA DANN.ACC.	FZ-MIN	1.039	66162.711	68743.195	90000.000	0.764
Concio 5	317	J[818]	ST FATICA DANN.ACC.	FZ-MIN	1.039	35614.943	37004.000	90000.000	0.411
Concio 5	318	I[818]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47624.172	49481.614	90000.000	0.550
Concio 5	318	J[819]	ST FATICA DANN.ACC.	FZ-MIN	1.039	33643.702	34955.877	90000.000	0.388
Concio 6	319	I[819]	ST FATICA DANN.ACC.	FZ-MIN	1.039	43963.225	45677.883	90000.000	0.508
Concio 6	319	J[820]	ST FATICA DANN.ACC.	FZ-MIN	1.039	23093.916	23994.627	90000.000	0.267
Concio 6	320	I[820]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40486.988	42066.065	90000.000	0.467
Concio 6	320	J[821]	ST FATICA DANN.ACC.	FZ-MIN	1.039	19939.533	20717.217	90000.000	0.230
Concio 6	321	I[821]	ST FATICA DANN.ACC.	FZ-MIN	1.039	19939.533	20717.217	90000.000	0.230
Concio 6	321	J[822]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40478.718	42057.473	90000.000	0.467
Concio 6	322	I[822]	ST FATICA DANN.ACC.	FZ-MAX	1.039	23089.356	23989.889	90000.000	0.267
Concio 6	322	J[823]	ST FATICA DANN.ACC.	FZ-MAX	1.039	43955.635	45669.997	90000.000	0.507
Concio 5	323	I[823]	ST FATICA DANN.ACC.	FZ-MAX	1.039	33637.894	34949.842	90000.000	0.388
Concio 5	323	J[824]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47618.104	49475.309	90000.000	0.550
Concio 5	324	I[824]	ST FATICA DANN.ACC.	FZ-MAX	1.039	35611.401	37000.320	90000.000	0.411
Concio 5	324	J[825]	ST FATICA DANN.ACC.	FZ-MAX	1.039	66153.331	68733.449	90000.000	0.764
Concio 5	325	I[825]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56293.974	58489.557	90000.000	0.650
Concio 5	325	J[826]	ST FATICA DANN.ACC.	FZ-MAX	1.039	59088.908	61393.500	90000.000	0.682
Concio 4 H=var	326	I[826]	ST FATICA DANN.ACC.	FZ-MAX	1.039	58484.747	60765.775	90000.000	0.675
Concio 4 H=var	326	J[827]	ST FATICA DANN.ACC.	FZ-MAX	1.039	51557.790	53568.652	90000.000	0.595
Concio 4 H=var	327	I[827]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47872.708	49739.844	90000.000	0.553
Concio 4 H=var	327	J[828]	ST FATICA DANN.ACC.	FZ-MAX	1.039	45075.326	46833.359	90000.000	0.520
Concio 4 H=200	328	I[828]	ST FATICA DANN.ACC.	FZ-MAX	1.039	44710.775	46454.589	90000.000	0.516
Concio 4 H=200	328	J[829]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46450.498	48262.165	90000.000	0.536
Concio 4 H=200	329	I[829]	ST FATICA DANN.ACC.	FZ-MIN	1.039	50426.463	52393.201	90000.000	0.582
Concio 4 H=200	329	J[830]	ST FATICA DANN.ACC.	FZ-MIN	1.039	48684.722	50583.528	90000.000	0.562
Concio 4 H=var	330	I[830]	ST FATICA DANN.ACC.	FZ-MIN	1.039	49012.678	50924.275	90000.000	0.566
Concio 4 H=var	330	J[831]	ST FATICA DANN.ACC.	FZ-MIN	1.039	53028.406	55096.625	90000.000	0.612
Concio 4 H=var	331	I[831]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56568.575	58774.869	90000.000	0.653
Concio 4 H=var	331	J[832]	ST FATICA DANN.ACC.	FZ-MIN	1.039	65702.258	68264.784	90000.000	0.759
Concio 3	332	I[832]	ST FATICA DANN.ACC.	FZ-MIN	1.039	66562.233	69158.300	90000.000	0.768
Concio 3	332		ST FATICA DANN.ACC.	FZ-MIN	1.039	63758.067	66244.765	90000.000	0.736
Concio 3	333	I[833]	ST FATICA DANN.ACC.	FZ-MIN	1.039	73204.941	76060.087	90000.000	0.845
Concio 3	333	J[834]	ST FATICA DANN.ACC.	FZ-MIN	1.039	43616.532	45317.668	90000.000	0.504
Concio 3	334		ST FATICA DANN.ACC.	FZ-MIN	1.039	55233.261	57387.474	90000.000	0.638
Concio 3	334	J[835]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42937.598	44612.255	90000.000	0.496
Concio 2	335		ST FATICA DANN.ACC.	FZ-MIN	1.039	56574.251	58780.766	90000.000	0.653
Concio 2	335	J[836]	ST FATICA DANN.ACC.	FZ-MIN	1.039	34258.166	35594.307	90000.000	0.396
Concio 2	336		ST FATICA DANN.ACC.	FZ-MIN	1.039	51200.109	53197.021	90000.000	0.591
Concio 2	336	†····	ST FATICA DANN.ACC.	FZ-MAX	1.039	28383.756	29490.782	90000.000	0.331
Concio 2	337	I[837]	ST FATICA DANN.ACC.	FZ-IVIAX FZ-MIN	1.039	29693.331	30851.433	90000.000	0.328
CUTICIU Z	337	J[838]	ST FATICA DANN.ACC.	FZ-IVIIIN FZ-MAX	1.039	25186.789	26169.126	90000.000	0.343









Elem property	Elem number	Position	Lcom	Type	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 1	338	1[838]	ST FATICA DANN.ACC.	FZ-MAX	1.039	19321.994	20075.592	90000.000	0.223
Concio 1	338	J[839]	ST FATICA DANN.ACC.	FZ-MAX	1.039	37951.062	39431.233	90000.000	0.438
Concio 1	339	I[839]	ST FATICA DANN.ACC.	FZ-MAX	1.039	24949.613	25922.701	90000.000	0.288
Concio 1	339	J[840]	ST FATICA DANN.ACC.	FZ-MAX	1.039	58231.206	60502.345	90000.000	0.672
Concio 1	340	I[840]	ST FATICA DANN.ACC.	FZ-MIN	1.039	16514.931	17159.048	90000.000	0.191
Concio 1	340	J[841]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	401	1[842]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000
Concio 1	401	J[843]	ST FATICA DANN.ACC.	FZ-MAX	1.039	15997.582	16621.521	90000.000	0.185
Concio 1	402	I[843]	ST FATICA DANN.ACC.	FZ-MIN	1.039	62797.590	65246.827	90000.000	0.725
Concio 1	402	J[844]	ST FATICA DANN.ACC.	FZ-MIN	1.039	33455.147	34759.968	90000.000	0.386
Concio 1	403	1[844]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40710.707	42298.510	90000.000	0.470
	403	J[845]	ST FATICA DANN.ACC.	FZ-MIN	1.039	23353.152	24263.974	90000.000	0.470
Concio 1		†							
Concio 2	404	1[845]	ST FATICA DANN.ACC.	FZ-MIN	1.039	30426.256	31612.944	90000.000	0.351
Concio 2	404	J[846]	ST FATICA DANN.ACC.	FZ-MAX	1.039	25073.812	26051.743	90000.000	0.290
Concio 2	405	I[846]	ST FATICA DANN.ACC.	FZ-MIN	1.039	27349.998	28416.706	90000.000	0.316
Concio 2	405	J[847]	ST FATICA DANN.ACC.	FZ-MAX	1.039	51575.754	53587.317	90000.000	0.595
Concio 2	406	I[847]	ST FATICA DANN.ACC.	FZ-MAX	1.039	41362.017	42975.223	90000.000	0.478
Concio 2	406	J[848]	ST FATICA DANN.ACC.	FZ-MAX	1.039	62271.147	64699.852	90000.000	0.719
Concio 3	407	I[848]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47219.748	49061.417	90000.000	0.545
Concio 3	407	J[849]	ST FATICA DANN.ACC.	FZ-MAX	1.039	58387.098	60664.317	90000.000	0.674
Concio 3	408	I[849]	ST FATICA DANN.ACC.	FZ-MAX	1.039	50536.362	52507.386	90000.000	0.583
Concio 3	408	J[850]	ST FATICA DANN.ACC.	FZ-MAX	1.039	77015.205	80018.959	90000.000	0.889
Concio 3	409	1[850]	ST FATICA DANN.ACC.	FZ-MAX	1.039	67595.197	70231.552	90000.000	0.780
Concio 3	409	J[851]	ST FATICA DANN.ACC.	FZ-MAX	1.039	70540.212	73291.428	90000.000	0.814
Concio 4 H=var	410		ST FATICA DANN.ACC.	FZ-MAX	1.039	68170.976	70829.787	90000.000	0.787
Concio 4 H=var	410	J[852]	ST FATICA DANN.ACC.	FZ-MAX	1.039	56773.765	58988.061	90000.000	0.655
	410				1.039				0.594
Concio 4 H=var			ST FATICA DANN.ACC.	FZ-MAX		51485.082	53493.108	90000.000	
Concio 4 H=var	411	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	46365.758	48174.120	90000.000	0.535
Concio 4 H=200	412	1[853]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46402.438	48212.230	90000.000	0.536
Concio 4 H=200	412	J[854]	ST FATICA DANN.ACC.	FZ-MAX	1.039	47875.722	49742.975	90000.000	0.553
Concio 4 H=200	413	I[854]	ST FATICA DANN.ACC.	FZ-MIN	1.039	44003.035	45719.245	90000.000	0.508
Concio 4 H=200	413	J[855]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42530.395	44189.170	90000.000	0.491
Concio 4 H=var	414	I[855]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42537.481	44196.532	90000.000	0.491
Concio 4 H=var	414	J[856]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46446.856	48258.381	90000.000	0.536
Concio 4 H=var	415	I[856]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51572.660	53584.102	90000.000	0.595
Concio 4 H=var	415	J[857]	ST FATICA DANN.ACC.	FZ-MIN	1.039	60636.124	63001.060	90000.000	0.700
Concio 5	416	I[857]	ST FATICA DANN.ACC.	FZ-MIN	1.039	62671.750	65116.079	90000.000	0.724
Concio 5	416	J[858]	ST FATICA DANN.ACC.	FZ-MIN	1.039	59736.530	62066.380	90000.000	0.690
Concio 5	417	I[858]	ST FATICA DANN.ACC.	FZ-MIN	1.039	69146.167	71843.012	90000.000	0.798
Concio 5	417	J[859]	ST FATICA DANN.ACC.	FZ-MIN	1.039	42104.830	43747.007	90000.000	0.486
Concio 5	418	1[859]	ST FATICA DANN.ACC.	FZ-MIN	1.039	50066.852	52019.565	90000.000	0.578
	418	J[860]	ST FATICA DANN.ACC.	FZ-MIN	1.039		39044.508	90000.000	0.434
Concio 5	†	·	<u>.</u>	**		37578.854			
Concio 6	419	1[860]	ST FATICA DANN.ACC.	FZ-MIN	1.039	49175.694	51093.649	90000.000	0.568
Concio 6	419	J[861]	ST FATICA DANN.ACC.	FZ-MIN	1.039	29841.411	31005.289	90000.000	0.345
Concio 6	420	I[861]	ST FATICA DANN.ACC.	FZ-MIN	1.039	40076.753	41639.830	90000.000	0.463
Concio 6	420	J[862]	ST FATICA DANN.ACC.	FZ-MIN	1.039	21564.171	22405.219	90000.000	0.249
Concio 6	421	1[862]	ST FATICA DANN.ACC.	FZ-MIN	1.039	21564.171	22405.219	90000.000	0.249
Concio 6	421	J[863]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40069.028	41631.804	90000.000	0.463
Concio 6	422	I[863]	ST FATICA DANN.ACC.	FZ-MAX	1.039	29836.885	31000.586	90000.000	0.345
Concio 6	422	J[864]	ST FATICA DANN.ACC.	FZ-MAX	1.039	49167.650	51085.292	90000.000	0.568
Concio 5	423	I[864]	ST FATICA DANN.ACC.	FZ-MAX	1.039	37572.707	39038.122	90000.000	0.434
Concio 5	423	J[865]	ST FATICA DANN.ACC.	FZ-MAX	1.039	50061.319	52013.815	90000.000	0.578
Concio 5	424	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	42101.394	43743.436	90000.000	0.486
Concio 5	424	J[866]	ST FATICA DANN.ACC.	FZ-MAX	1.039	69137.564	71834.074	90000.000	0.798
Concio 5	425	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	59731.825	62061.491	90000.000	0.690
Concio 5	425	J[867]	ST FATICA DANN.ACC.		1.039	62666.774	65110.909	90000.000	0.090
	<u> </u>		<u> </u>	FZ-MAX					
Concio 4 H=var	426	·	ST FATICA DANN.ACC.	FZ-MAX	1.039	60631.213	62995.958	90000.000	0.700
Concio 4 H=var	426	†	ST FATICA DANN.ACC.	FZ-MAX	1.039	51568.330	53579.603	90000.000	0.595
Concio 4 H=var	427	I[868]	ST FATICA DANN.ACC.	FZ-MAX	1.039	46443.892	48255.301	90000.000	0.536







Elem property	Elem number	Position	Lcom	Туре	Lamda_v	Delta_Tau (kN/m^2)	Delta_Tau_E_2 (kN/m^2)	Delta_Tau_c (kN/m^2)	Verif. Ratio
Concio 4 H=var	427	J[869]	ST FATICA DANN.ACC.	FZ-MAX	1.039	42533.666	44192.569	90000.000	0.491
Concio 4 H=200	428	I[869]	ST FATICA DANN.ACC.	FZ-MAX	1.039	42526.574	44185.200	90000.000	0.491
Concio 4 H=200	428	J[870]	ST FATICA DANN.ACC.	FZ-MAX	1.039	43999.083	45715.140	90000.000	0.508
Concio 4 H=200	429	I[870]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47878.899	49746.276	90000.000	0.553
Concio 4 H=200	429	J[871]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46405.491	48215.403	90000.000	0.536
Concio 4 H=var	430	I[871]	ST FATICA DANN.ACC.	FZ-MIN	1.039	46368.914	48177.399	90000.000	0.535
Concio 4 H=var	430	J[872]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51487.280	53495.392	90000.000	0.594
Concio 4 H=var	431	I[872]	ST FATICA DANN.ACC.	FZ-MIN	1.039	56777.288	58991.722	90000.000	0.656
Concio 4 H=var	431	J[873]	ST FATICA DANN.ACC.	FX-MIN	1.039	68174.579	70833.530	90000.000	0.787
Concio 3	432	I[873]	ST FATICA DANN.ACC.	FX-MIN	1.039	70543.666	73295.017	90000.000	0.814
Concio 3	432	J[874]	ST FATICA DANN.ACC.	FZ-MIN	1.039	67598.318	70234.794	90000.000	0.780
Concio 3	433	I[874]	ST FATICA DANN.ACC.	FZ-MIN	1.039	77022.097	80026.120	90000.000	0.889
Concio 3	433	J[875]	ST FATICA DANN.ACC.	FZ-MIN	1.039	50539.870	52511.031	90000.000	0.584
Concio 3	434	I[875]	ST FATICA DANN.ACC.	FZ-MIN	1.039	58392.857	60670.301	90000.000	0.674
Concio 3	434	J[876]	ST FATICA DANN.ACC.	FZ-MIN	1.039	47225.424	49067.314	90000.000	0.545
Concio 2	435	I[876]	ST FATICA DANN.ACC.	FZ-MIN	1.039	62278.633	64707.630	90000.000	0.719
Concio 2	435	J[877]	ST FATICA DANN.ACC.	FZ-MIN	1.039	41366.322	42979.695	90000.000	0.478
Concio 2	436	I[877]	ST FATICA DANN.ACC.	FZ-MIN	1.039	51585.766	53597.719	90000.000	0.596
Concio 2	436	J[878]	ST FATICA DANN.ACC.	FZ-MAX	1.039	27340.098	28406.419	90000.000	0.316
Concio 2	437	I[878]	ST FATICA DANN.ACC.	FZ-MIN	1.039	25083.017	26061.307	90000.000	0.290
Concio 2	437	J[879]	ST FATICA DANN.ACC.	FZ-MAX	1.039	30421.755	31608.267	90000.000	0.351
Concio 1	438	I[879]	ST FATICA DANN.ACC.	FZ-MAX	1.039	23349.698	24260.385	90000.000	0.270
Concio 1	438	J[880]	ST FATICA DANN.ACC.	FZ-MAX	1.039	40703.345	42290.861	90000.000	0.470
Concio 1	439	I[880]	ST FATICA DANN.ACC.	FZ-MAX	1.039	33451.001	34755.660	90000.000	0.386
Concio 1	439	J[881]	ST FATICA DANN.ACC.	FZ-MAX	1.039	62788.372	65237.250	90000.000	0.725
Concio 1	440	I[881]	ST FATICA DANN.ACC.	FY-MAX	1.039	15997.582	16621.521	90000.000	0.185
Concio 1	440	J[882]	ST FATICA DANN.ACC.	FX-MAX	1.039	0.000	0.000	90000.000	0.000









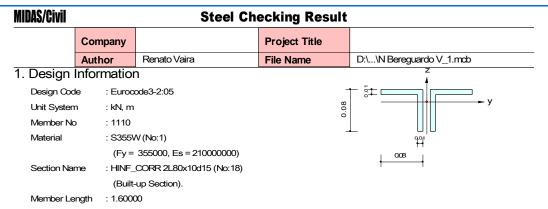




VERIFICHE DI RESISTENZA DEI PROFILATI IN ACCIAIO ALLO S.L.U.

Si effettuano le verifiche di resistenza dei diaframmi e dei controventi allo stato limite ultimo; seguono gli schemi grafici degli elementi maggiormente sollecitati.

9.1 DIAFRAMMI SU SPALLE E INTERMEDI – TRASVERSI INFERIORI



2. Member Forces

Axial Force Fxx = 384.827 (LCB: 19+, POS:I)

Bending Moments My = 1.36488, Mz = 1.22542

End Moments Myi = 1.36488, Myj = 1.26222 (for Lb)

Myi = 1.36488, Myj = 1.26222 (for Ly)

Mzi = 1.22542, Mzj = 0.30196 (for Lz)

Shear Forces Fyy = 0.96111 (LCB: 19+, POS:3/4)

	0.08000 ath 0.08000 pacing 0.01500		Web Thick 0.01000 Flg Thick 0.01000	
Area	0.00300	Asz	0.00133	
Qyb	0.00159	Ozb	0.00320	
lyy	0.00000	Izz	0.00000	
Ybar	0.08750	Zbar	0.05633	
Wely	0.00003	Welz	0.00005	
ry	0.02436	rz	0.03955	

3. Design Parameters

Unbraced Lengths Ly = 1.60000, Lz = 1.60000, Lb = 1.60000

Effective Length Factors Ky = 0.65, Kz = 1.30

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

Fzz = -2.3274 (LCB: 19-, POS:J)

4. Checking Results

Modeling, Integrated Design & Analysis Software http://www.MidasUser.com MIDAS/Civil V 8.3.5













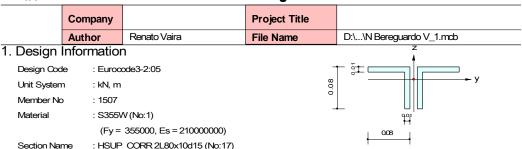


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9.2 DIAFRAMMI SU SPALLE E INTERMEDI – TRASVERSI SUPERIORI

MIDAS/Civil

Steel Checking Result



0.08000

Depth

Web Thick 0.01000

Ozb

lzz

Zbar Welz 0.00133

0.00000

0.03955

0.05633

: HSUP_CORR 2L80x10d15 (No:17) (Built-up Section).

(Built-up Section).

Member Length : 3.20000

2. Member Forces

Axial Force Fxx = -202.05 (LCB: 22-, POS:I) BTB Spacing 0.01500 Bending Moments My = -0.6134, Mz = -0.07990.00300 Myi = -0.6134, Myj = -0.6084 (for Lb) **End Moments** 0.00000 Myi = -0.6134, Myj = -0.6084 (for Ly) 0.08750 Welv Mzi = -0.0799, Mzj = -0.0799 (for Lz) 0.02436 Shear Forces Fyy = 0.07906 (LCB: 19+, POS:I)

3. Design Parameters

Unbraced Lengths Ly = 3.20000, Lz = 3.20000, Lb = 3.20000

Effective Length Factors Ky = 0.65, Kz = 0.65

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

Fzz = 0.87752 (LCB: 19+, POS:J)

Checking Results

Axial Resistance

 $\label{eq:N_Ed} $N_Ed/MlN[Nc_Rd, Nb_Rd] = 202.052/508.054 = 0.398 < 1.000O.K$$ Bending Resistance$

Bending Resistance

Combined Resistance

 $\mathsf{RNRd} \ = \mathsf{MAX}[\ \mathsf{M_Edy/Mny_Rd}, \ \mathsf{M_Edz/Mnz_Rd}\]$

Rmax1 = (M_Edy/Mny_Rd)^Alpha + (M_Edz/Mnz_Rd)^Beta

 $\label{eq:Room_reduced} \begin{aligned} & \text{Room} &= \text{N_Ed/(A*fy/Gamma_M0)}, \ \ & \text{Rbend} = \text{M_Edy/My_Rd} + \text{M_Edz/Mz_Rd} \end{aligned}$

Rc_LT1 = N_Ed/(Xiy*A*fy/Gamma_M1)

 $Rb_LT1 = (kyy^*M_Edy)/(Xi_LT^*Wply^*fy/Gamma_M1) + (kyz^*Msdz)/(Wplz^*fy$

 $Rc_LT2 = N_Ed/(Xiz^*A^*fy/Gamma_M1)$

 $Rb_LT2 = (Kzy^*M_Edy)/(Xi_LT^*Wply^*fy/Gamma_M1) + (Kzz^*Msdz)/(Wplz^*fy/Gamma_M1) \\$

 $\label{eq:Rmax} \textit{Rmax} = \textit{MAX}[\textit{RNRd}, \textit{Rmax}1, (\textit{Rcom+Rbend}), \textit{MAX}(\textit{Rc_LT1+Rb_LT1}, \textit{Rc_LT2+Rb_LT2})] = 0.452 < 1.000 \dots O.K$

Shear Resistance

Modeling, Integrated Design & Analysis Software http://www.MdasUser.com MIDAS/Civil V 8.3.5













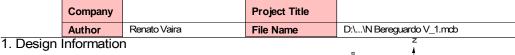


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9.3 DIAFRAMMI SU SPALLE E INTERMEDI - DIAGONALI

MIDAS/Civil

Steel Checking Result



Design Code : Eurocode3-2:05

Unit System : kN. m Member No : 1422 Material

: S355W (No:1) (Fy = 355000, Es = 210000000)

Section Name : DIAG_CORR 2L80x8d15 (No:64)

(Built-up Section).

Member Length

2. Member Forces

Axial Force Fxx = -118.45 (LCB: 19-, POS:I) Bending Moments My = -1.4358, Mz = -0.5795**End Moments** Myi = -1.4358, Myj = -0.5537 (for Lb)

> Myi = -1.4358, Myj = -0.5537 (for Ly) Mzi = -0.5795, Mzj = -0.3495 (for Lz)

Shear Forces Fyy = -0.1348 (LCB: 19-, POS:I) Fzz = -1.5834 (LCB: 19-, POS:J)

0.08000 Web Thick 0.00800 Depth Fig Width 0.08000 BTB Speaing 0.01500 Flg Thick 0.00800 0.00243 0.00107 0.00163 Ozb 0.00320 0.00000 0.00000 0.08750 Zbar Welz 0.05705 0.00004 0.02462 rz 0.03916

3. Design Parameters

Unbraced Lengths Ly = 1.70880, Lz = 1.70880, Lb = 1.70880

Effective Length Factors Ky = 0.65, Kz = 1.30

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

4. Checking Results

Axial Resistance

N_Ed/MIN[Nc_Rd, Nb_Rd] = 118.450/595.881 = 0.199 < 1.000 O.K

Bending Resistance

M_Edy/M_Rdy = 1.43584/8.34129 = 0.172 < 1.000 O.K

Combined Resistance

 $\label{eq:recommendate} Room = N_Ed/(Aeff^*fy/Gamma_M0), \ Roberto = (M_Edy+N_Ed^*eNy)/My_Rd + (M_Edz+N_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*e$

Rc_LT1 = N_Ed/(Xiy*Aeff*fy/Gamma_M1)

 $Rb_LT1 = kyy^*(M_Edy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) c_LT2 = N_Ed/(Xiz*Aeff*fy/Gamma_M1)

 $Rb_LT2 = kzy^*(M_Edzy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*$

Rmax = MAX[Rcom+Rbend, MAX(Rc_LT1+Rb_LT1, Rc_LT2+Rb_LT2)] = 0.443 < 1.000 O.K

Shear Resistance

V_Edy/Vy_Rd = 0.001 < 1.000 O.K

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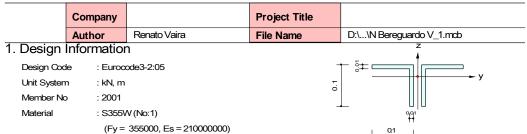


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9.4 DIAFRAMMI SU PILE - TRASVERSI INFERIORI

MIDAS/Civil

Steel Checking Result



: HINF_PILE 2L100x10d20 (No:65)

(Built-up Section).

Member Lenath : 3.20000

2. Member Forces

Section Name

Axial Force Fxx = 314.408 (LCB: 19+, POS:J) Bending Moments My = 1.26467, Mz = 2.06924**End Moments** Myi = 0.75329, Myj = 1.26467 (for Lb) Myi = 0.75329, Myj = 1.26467 (for Ly) Mzi = 1.99759, Mzj = 2.06924 (for Lz) Shear Forces Fyy = -1.2895 (LCB: 19-, POS:I)

_	0.10000 ath 0.10000 pacing 0.02000		Web Thick 0.01000 Flg Thick 0.01000	
Area	0.00380	Asz	0.00167	
Qyb	0.00254	Ozb	0.00500	
lyy	0.00000	Izz	0.00001	
Ybar	0.11000	Zbar	0.07132	
Wely	0.00005	Welz	0.00008	
ry	0.03078	rz	0.04944	

3. Design Parameters

Unbraced Lengths Ly = 3.20000, Lz = 3.20000, Lb = 3.20000

Effective Length Factors Ky = 0.65, Kz = 0.65

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

Fzz =-1.3913 (LCB: 19-, POS:J)

4. Checking Results

Axial Resistance

N_Ed/Nt_Rd = 314.41/1284.76 = 0.245 < 1.000 O.K M_Edy/M_Rdy = 1.2647/30.7498 = 0.041 < 1.000 O.K

M_Edz/M_Rdz = 2.0692/49.7000 = 0.042 < 1.000 O.K

Combined Resistance

RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd] Rmax1 = (M_Edy/Mny_Rd)^Alpha + (M_Edz/Mnz_Rd)^Beta

 $\label{eq:recommend} \mbox{Room} = \mbox{N_Ed/(A*fy/Gamma_M0)}, \ \mbox{Rbend} = \mbox{M_Edy/My_Rd} + \mbox{M_Edz/Mz_Rd}$

Shear Resistance

V_Edy/Vy_Rd = 0.003 < 1.000 O.K V_Edz/Vz_Rd = 0.004 < 1.000O.K

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9.5





DIAFRAMMI SU PILE - TRASVERSI SUPERIORI





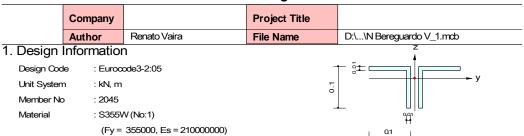






MIDAS/Civil

Steel Checking Result



: HSUP_PILE 2L100x10d20 (No:19) Section Name

(Built-up Section).

Member Length : 3.20000

2. Member Forces

Web Thick 0.01000 Flg Thick 0.01000 0.10000 Fla Width 0.10000 Axial Force Fxx = -131.46 (LCB: 22-, POS:J) BTB Spacing 0.02000 Bending Moments My = -1.1841, Mz = -0.20490.00380 0.00167 **End Moments** Myi = -0.7873, Myj = -1.1841 (for Lb) 0.00254 Ozb 0.00500 0.00001 0.07132 0.00000 lzz Myi = -0.7873, Myj = -1.1841 (for Ly) 0.11000 Zbar 0.00008 0.04944 0.00005 Mzi = -0.1488, Mzj = -0.2049 (for Lz) 0.03078 rz Shear Forces Fyy = 0.20203 (LCB: 19+, POS:I) Fzz = 1.39133 (LCB: 19+, POS:J)

3. Design Parameters

Unbraced Lengths Ly = 3.20000, Lz = 3.20000, Lb = 3.20000

Effective Length Factors Ky = 0.65, Kz = 0.65

Cmy = 1.00, Cmz = 1.00, CmLT = 1.00 Equivalent Uniform Moment Factors

4. Checking Results

Axial Resistance

N_Ed/MIN[Nc_Rd, Nb_Rd] = 131.461/823.126 = 0.160 < 1.000 O.K Bending Resistance M_Edy/M_Rdy = 1.1841/16.2916 = 0.073 < 1.000 O.K

Combined Resistance

 $\label{eq:recommendate} Room = N_Ed/(Aeff^*fy/Gamma_M0), \ Roberto = (M_Edy+N_Ed^*eNy)/My_Rd + (M_Edz+N_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*eNz)/Mz_Rd + (M_Ed^*e$

Rc_LT1 = N_Ed/(Xiy*Aeff*fy/Gamma_M1)

 $Rb_LT1 = kyy^*(M_Edy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) \\ + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Edy+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Edy+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) \\ + kyz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) N_Ed/(Xiz*Aeff*fy/Gamma_M1)

 $Rb_LT2 = kzy^*(M_Edzy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) +$

 $\label{eq:Rmax} \textit{Rmax} \;\; = \textit{MAX}[\; \textit{Rcom+Rbend}, \; \textit{MAX}(\; \textit{Rc_LT1+Rb_LT1}, \; \textit{Rc_LT2+Rb_LT2}) \;] \; = \; 0.257 < 1.000 \; \; O.K$

Shear Resistance

V_Edy/Vy_Rd = 0.001 < 1.000O.K V_Edz/Vz_Rd = 0.004 < 1.000 O.K

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9.6 **DIAFRAMMI SU PILE - DIAGONALI**

MIDAS/Civil

Steel Checking Result

	Company		Project Title	
	Author	Renato Vaira	File Name	D:\\N Bereguardo V_1.mcb
1. Design	Information	i .		
Design Coo	le : Euroo	ode3-2:05		† <u>*</u> = 1
Unit Systen	n : kN, m		0.0	y
Member No	: 2010		0	
Material	: S355V	V (No:1)	•	0.008

(Fy = 355000, Es = 210000000)

: DIAG_PILE 2L80x8d20 (No:20) Section Name

(Built-up Section).

: 1.78220 Member Length

2. Member Forces

Axial Force Fxx = -142.08 (LCB: 22-, POS:I) Bending Moments My = -0.3649, Mz = -0.2523End Moments Myi = -0.3649, Myj = -0.0558 (for Lb) Myi = -0.3649, Myj = -0.0558 (for Ly) Mzi = -0.2523, Mzj = -0.3574 (for Lz)

> Fyy = -0.5875 (LCB: 19-, POS:I) Fzz = -0.7896 (LOB: 19-, POS:J)

Depth 0.08000 Fig Width 0.08000 Web Thick 0.00800 Flg Thick 0.00800 BTB Spacing 0.02000 0.00243 0.00107 0.00163 Ozb 0.00320 Qyb 0.00000 lzz 0.00000 0.09000 Zbar Welz 0.00005 Wely

3. Design Parameters

Shear Forces

Unbraced Lengths Ly = 1.78220, Lz = 1.78220, Lb = 1.78220

Effective Length Factors Ky = 0.65, Kz = 1.30

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

4. Checking Results

Axial Resistance

N_Ed/MIN[Nc_Rd, Nb_Rd] = 142.075/598.313 = 0.237 < 1.000 O.K

Bending Resistance

 $\label{eq:m_edy_m_rady} $$M_Edy/M_Rdy = 0.36488/8.34129 = 0.044 < 1.000 \dots O.K$ M_Edz/M_Rdz = 0.2523/11.9514 = 0.021 < 1.000 O.K

 $Room = N_Ed/(Aeff^*fy/Gamma_M0), Rbend = (M_Edy+N_Ed^*eNy)/My_Rd + (M_Edz+N_Ed^*eNz)/Mz_Rd$

Rc_LT1 = N_Ed/(Xiy*Aeff*fy/Gamma_M1)

 $Rb_LT1 = kyy^*(M_Edy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) + kyz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kyz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) c LT2 = N Ed/(Xiz*Aeff*fy/Gamma M1)

 $Rb_LT2 = kzy^*(M_Edzy+N_Ed^*eNy)/(Xi_LT^*Weffy^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+N_Ed^*eNz)/(Weffz^*fy/Gamma_M1) + kzz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*(M_Edz+M1)/(Weffz^*fy/Gamma_M1) + kz^*$

 $\label{eq:Rmax} \textit{Rmax} = \textit{MAX}[\textit{Rcom+Rbend}, \textit{MAX}(\textit{Rc_LT1+Rb_LT1}, \textit{Rc_LT2+Rb_LT2})\,] = 0.310 < 1.000 \ldots... \, \text{O.K}$

Shear Resistance

V_Edy/Vy_Rd = 0.002 < 1.000 O.K V_Edz/Vz_Rd = 0.003 < 1.000 O.K

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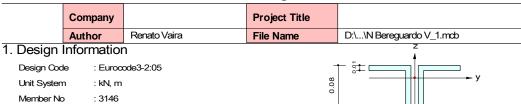


9.7 **CONTROVENTI**

MIDAS/Civil

Material

Steel Checking Result



(Fy = 355000, Es = 210000000)

: CONTROV 2L80x10d15 (No:15) Section Name

: S355W (No:1)

(Built-up Section).

Member Length : 3.05287

2. Member Forces

Axial Force Fxx = -309.24 (LCB: 19-, POS:J) Bending Moments My = -0.2944, Mz = -2.6063Myi = 0.00601, Myj = -0.2944 (for Lb) End Moments Myi = 0.00601, Myj = -0.2944 (for Ly) Mzi = -0.1103, Mzj = -2.6063 (for Lz) Shear Forces Fyy = 1.57664 (LCB: 19+, POS:J)

Depth 0.08000 Flg Width 0.08000 Web Thick 0.01000 Flg Thick 0.01000 BTB Spacing 0.01500 0.00300 0.00159 Asz Ozb 0.00133 0.00320 0.00000 lzz 0.00000 0.08750 Zbar 0.05633 0.00003 0.02436 0.00005 0.03955 rz

3. Design Parameters

Unbraced Lengths Ly = 3.05287, Lz = 3.05287, Lb = 3.05287

Ky = 0.65, Kz = 1.30Effective Length Factors

Equivalent Uniform Moment Factors Cmy = 1.00, Cmz = 1.00, CmLT = 1.00

Fzz = 0.19977 (LCB: 19+, POS:3/4)

4. Checking Results

Axial Resistance

N_Ed/MIN[Nc_Rd, Nb_Rd] = 309.240/407.225 = 0.759 < 1.000 O.K

M_Edy/M_Rdy = 0.2944/19.2503 = 0.015 < 1.000 O.K

Combined Resistance

 $RNRd = MAX[M_Edy/Mny_Rd, M_Edz/Mnz_Rd]$

 $Rmax1 = (M_Edy/Mny_Rd)^Alpha + (M_Edz/Mnz_Rd)^Beta$

 $\label{eq:Room_reduced} \begin{aligned} & \text{Room} &= \text{N_Ed/(A*fy/Gamma_M0)}, \ \ & \text{Rbend} = \text{M_Edy/My_Rd} + \text{M_Edz/Mz_Rd} \end{aligned}$

Rc_LT1 = N_Ed/(Xiy*A*fy/Gamma_M1)

 $Rb_LT1 = (kyy*M_Edy)/(Xi_LT*Wply*fy/Gamma_M1) + (kyz*Msdz)/(Wplz*fy/Gamma_M1) + (kyz*Msdz)/($

Rc_LT2 = N_Ed/(Xiz*A*fy/Gamma_M1)

 $Rb_LT2 = (Kzy^*M_Edy)/(Xi_LT^*Wply^*fy/Gamma_M1) + (Kzz^*Msdz)/(Wplz^*fy/Gamma_M1)$

 $\label{eq:Rmax} \textit{Rmax} = \textit{MAX}[\textit{RNRd}, \textit{Rmax}1, (\textit{Rcom+Rbend}), \textit{MAX}(\textit{Rc_LT1+Rb_LT1}, \textit{Rc_LT2+Rb_LT2})] = 0.911 < 1.000 \dots O.K$

V_Edy/Vy_Rd = 0.005 < 1.000 O.K V_Edz/Vz_Rd = 0.001 < 1.000 O.K

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10 VERIFICA DEI COLLEGAMENTI BULLONATI

Si verificano a taglio e rifollamento le unioni bullonate dei trasversi e dei controventi.

Si utilizzano bulloni di classe 10.9; si suppone che il piano di taglio interessi la parte filettata del bullone e si considera quindi l'area resistente efficace.

Seguono i dati generali, comuni a tutti i collegamenti.

Qualità acciaio:

Tipo	Classe	Spessore	t ≤ 40 mm	Spessore 40 mm < t ≤ 80 mm			
Προ	Classe	f _{yk} [N/mm ²]	f _{tk} [N/mm ²]	f _{yk} [N/mm ²]	f _{tk} [N/mm ²]		
Profilati	S355 W	355	510	335	490		
Lamiere	S355 W	355	510	335	490		

Coefficienti parziali di sicurezza per la verifica delle unioni (NTC 2008; Tab. 4.2.XII):

Resistenza dei bulloni e delle sezioni tese, indebolite dai fori: $\gamma_{M2} = 1.25$ Resistenza allo scorrimento allo SLU: $\gamma_{M3} = 1.25$ Resistenza allo scorrimento allo SLE: $\gamma_{M3} = 1.10$ Precarico bulloni ad alta resistenza (classe 8.8 o 10.9): $\gamma_{M7} = 1.10$

Dati meccanici e geometrici dei bulloni classe 10.9.

Resistenza di snervamento: $f_{yb} = 900 \text{ N/mm}^2$ Resistenza di rottura: $f_{tb} = 1000 \text{ N/mm}^2$

Coefficiente di attrito: $\mu = 0.30$ Tipo di serraggio: Controllato

Tutti i nodi bullonati sono verificati a rifollamento e ad attrito allo SLE; si ammette che possano non essere verificati ad attrito allo SLU; corrispondono quindi alla Categoria B (EN 1993-1-8; § 3.4).

Diametro nominale	d [mm]	M16	M20	M24	M27
Diametro fori (normali)	d ₀ [mm]	17	21	25.5	28.5
Area nominale	A [mm ²]	201	314	452	573
Area resistente (gambo filettato)	A _{res} [mm ²]	157	245	353	459
Resistenza a taglio SLU	F _{v,Rd} [kN]	62.7	97.9	141	183.8
Forza di precarico	F _{p,Cd} [kN]	109.7	171.3	246.7	321.6
Resistenza a scorrimento SLU	F _{s,Rd} [kN]	26.3	41.1	59.2	77.2
Resistenza a scorrimento SLE	F _{s,Rd,es} [kN]	29.9	46.7	67.3	87.7

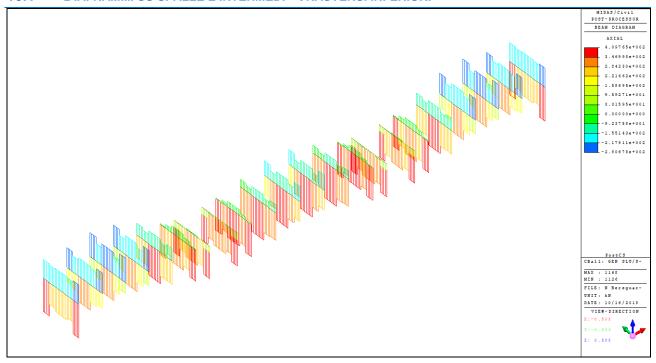




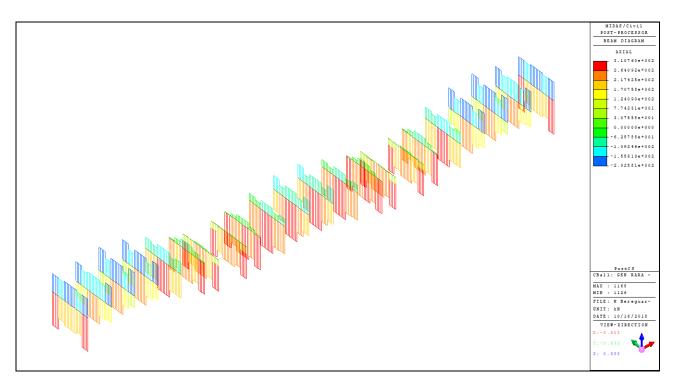




10.1 DIAFRAMMI SU SPALLE E INTERMEDI - TRASVERSI INFERIORI



TRASVERSI INFERIORI CORRENTI - SFORZO ASSIALE - INVILUPPO SLU/SLV



TRASVERSI INFERIORI CORRENTI - SFORZO ASSIALE - INVILUPPO SLE



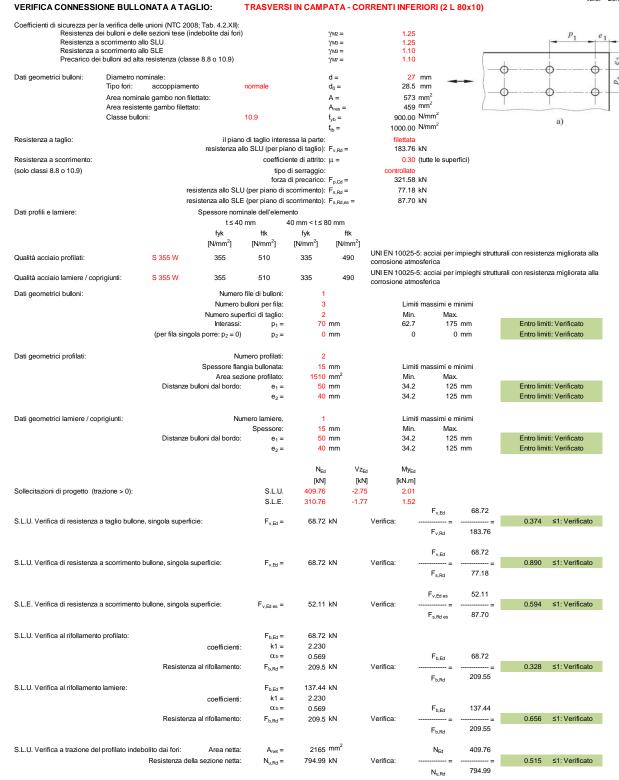








vers. 20/09/2018



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.





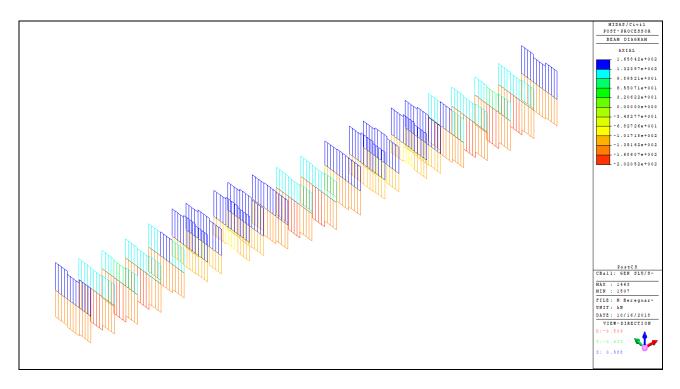




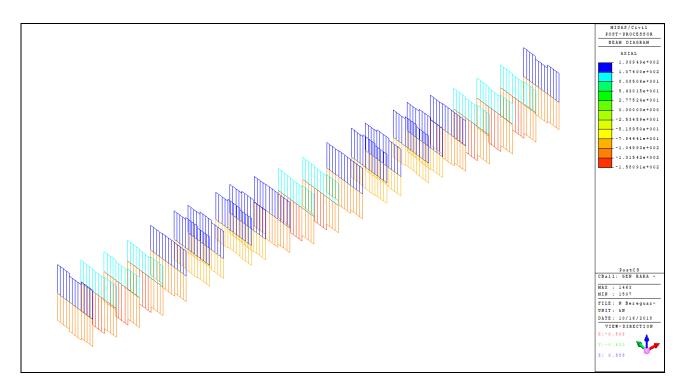




10.2 DIAFRAMMI SU SPALLE E INTERMEDI - TRASVERSI SUPERIORI



TRASVERSI SUPERIORI CORRENTI - SFORZO ASSIALE - INVILUPPO SLU



TRASVERSI SUPERIORI CORRENTI - SFORZO ASSIALE - INVILUPPO SLE



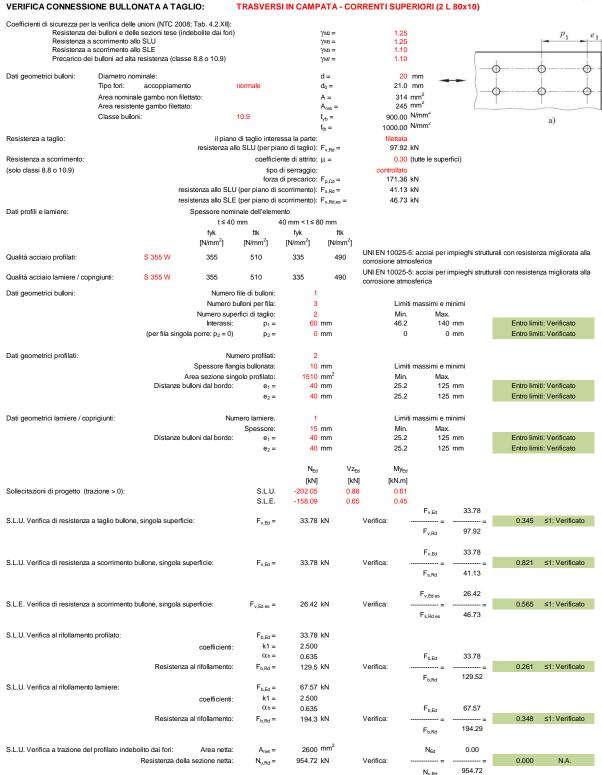








vers. 20/09/2018



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.



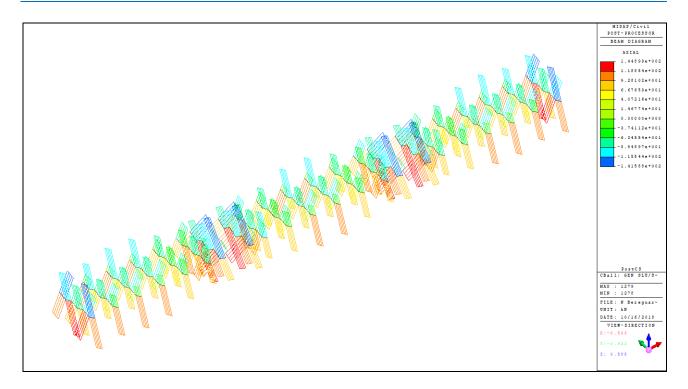




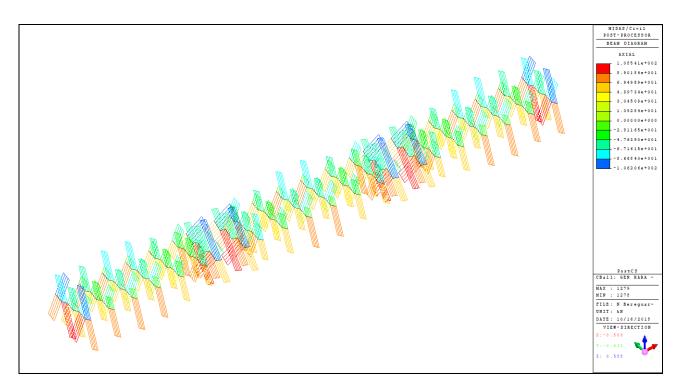




10.3 DIAFRAMMI SU SPALLE E INTERMEDI - DIAGONALI



DIAGONALI CORRENTI - SFORZO ASSIALE - INVILUPPO SLU



DIAGONALI CORRENTI - SFORZO ASSIALE - INVILUPPO SLE



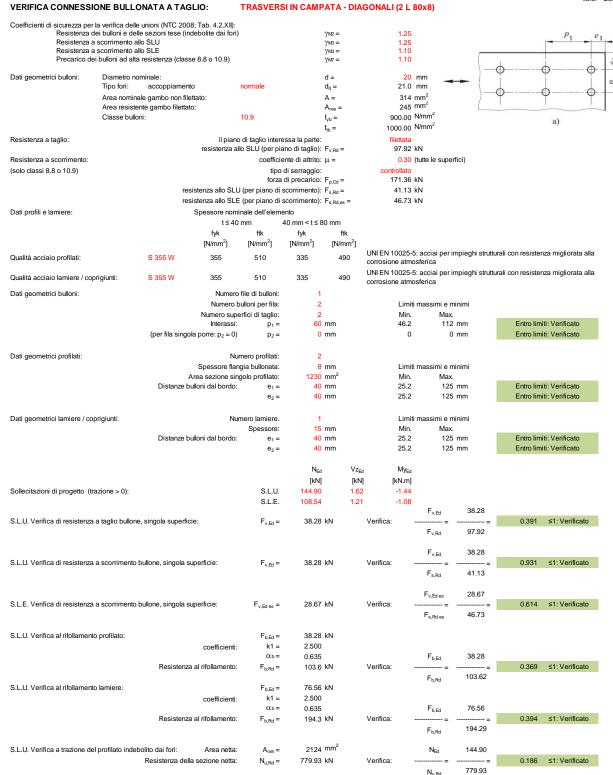








vers. 20/09/2018



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.





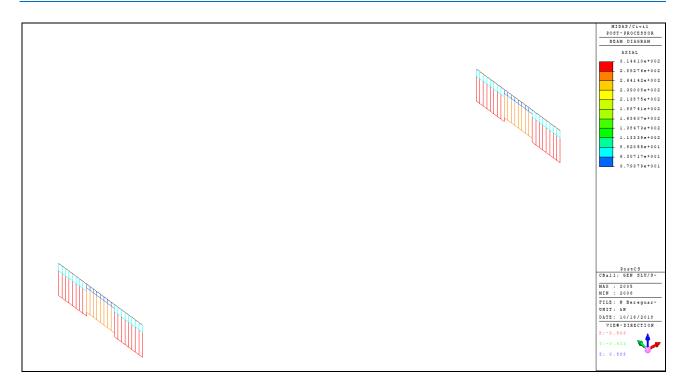




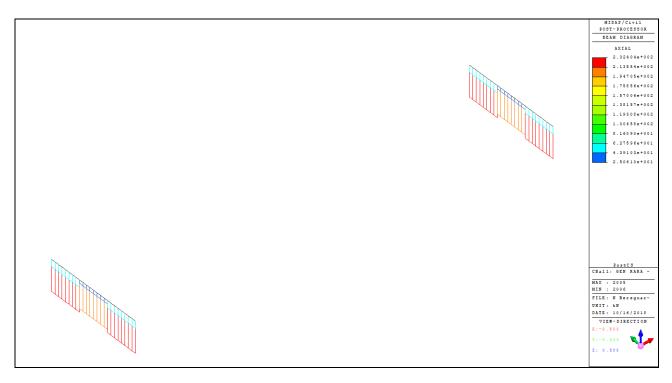




10.4 DIAFRAMMI SU PILE - TRASVERSI INFERIORI



TRASVERSI INFERIORI PILE - SFORZO ASSIALE - INVILUPPO SLU



TRASVERSI INFERIORI PILE - SFORZO ASSIALE - INVILUPPO SLE



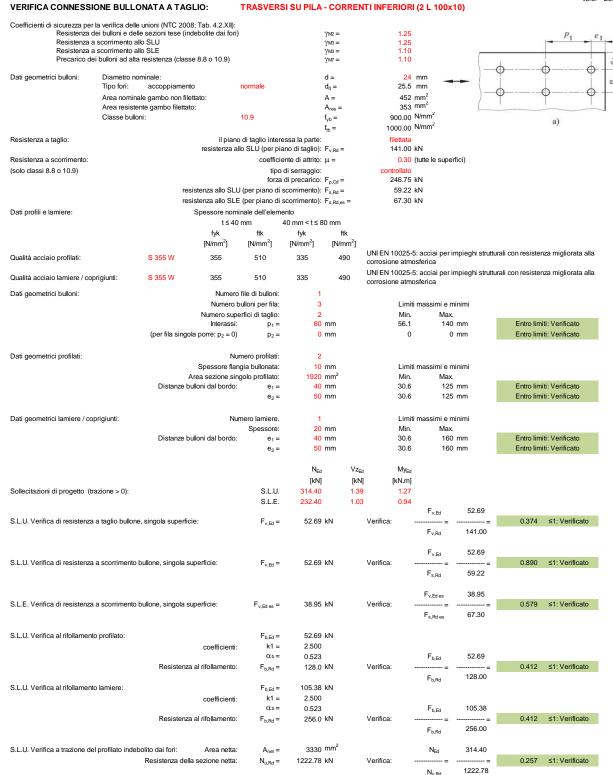








vers. 20/09/2018



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.





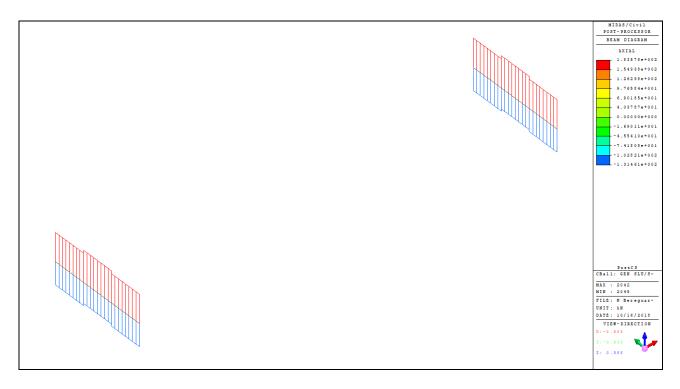




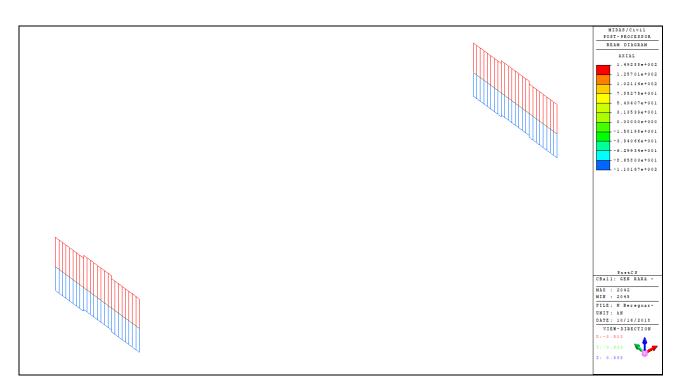




10.5 DIAFRAMMI SU PILE - TRASVERSI SUPERIORI



TRASVERSI SUPERIORI PILE - SFORZO ASSIALE - INVILUPPO SLU



TRASVERSI SUPERIORI PILE - SFORZO ASSIALE - INVILUPPO SLE



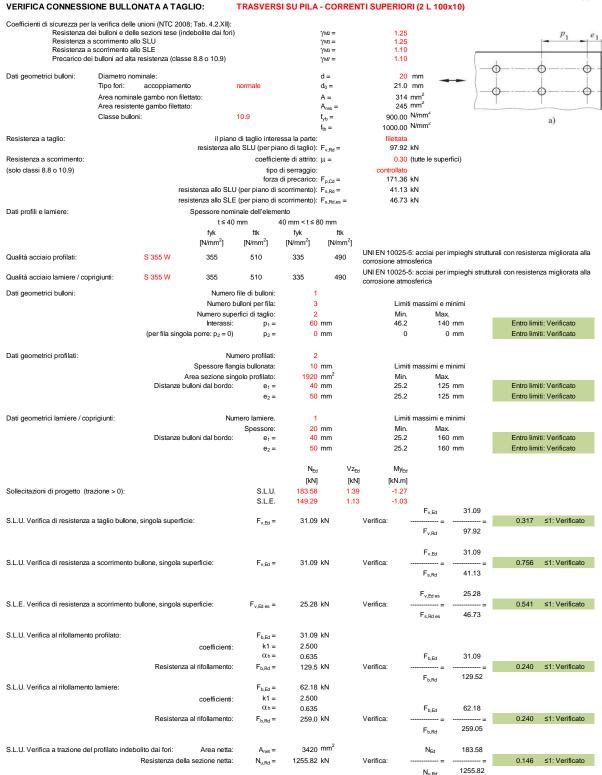








vers. 20/09/2018



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.





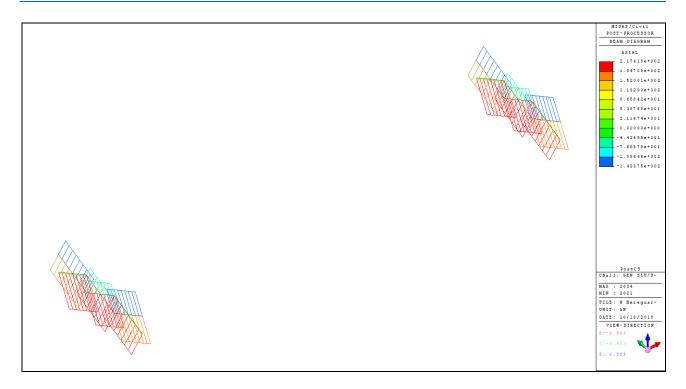




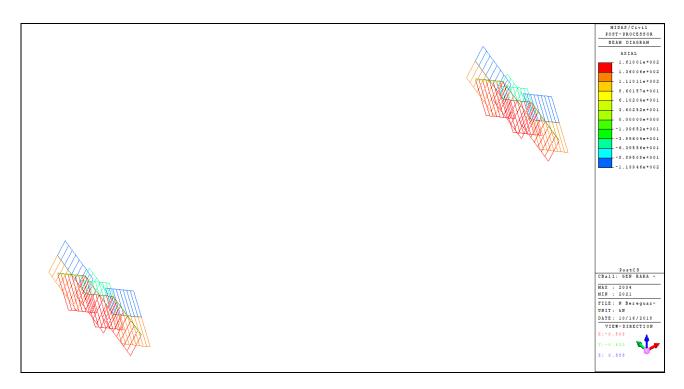




10.6 DIAFRAMMI SU PILE - DIAGONALI



DIAGONALI TRASVERSI SU PILE - SFORZO ASSIALE - INVILUPPO SLU



DIAGONALI TRASVERSI SU PILE - SFORZO ASSIALE - INVILUPPO SLE











vers. 20/09/2018 **VERIFICA CONNESSIONE BULLONATA A TAGLIO:** TRASVERSI SU PILA - DIAGONALI (2 L 80x8) Coefficienti di sicurezza per la verifica delle unioni (NTC 2008; Tab. 4.2.XII): Resistenza dei bulloni e delle sezioni tese (indebolite dai fori) Resistenza a scorrimento allo SLU 1.25 1.25 1.10 γмз = Resistenza a scorrimento allo SLE γмз = Precarico dei bulloni ad alta resistenza (classe 8.8 o 10.9) 1.10 d= 24 mm Dati geometrici bulloni: Diametro nominale: Tipo fori: accoppiamento 25.5 mm $d_0 =$ 452 mm² 353 mm² Area nominale gambo non filettato: A = Area resistente gambo filettato: A_{res} = 900.00 N/mm² Classe bulloni: 10.9 $f_{yb} =$ a) 1000.00 N/mm² $f_{tb} =$ Resistenza a taglio: il piano di taglio interessa la parte resistenza allo SLU (per piano di taglio): $F_{v,Rd} =$ 141.00 kN Resistenza a scorrimento: coefficiente di attrito: μ = 0.30 (tutte le superfici) tipo di serraggio: forza di precarico: F_{p,Cd} = (solo classi 8.8 o 10.9) controllato 246.75 kN resistenza allo SLU (per piano di scorrimento): F_{s,Rd} = 59.22 kN resistenza allo SLE (per piano di scorrimento): $F_{s,Rd,es} =$ 67.30 kN Dati profili e lamiere: Spessore nominale dell'elemento t ≤ 40 mm 40 mm < t ≤ 80 mm ftk ftk fyk fyk [N/mm²] [N/mm²] [N/mm²] UNI EN 10025-5: acciai per impieghi strutturali con resistenza migliorata alla Qualità acciaio profilati: S 355 W 355 510 335 490 UNI EN 10025-5: acciai per impieghi strutturali con resistenza migliorata alla Qualità acciaio lamiere / coprigiunti: S 355 W 490 355 510 335 corrosione atmosferica Dati geometrici bulloni: Numero file di bulloni: Numero bulloni per fila: Limiti massimi e minimi Numero superfici di taglio: Entro limiti: Verificato 112 mm Interassi 60 mm 56.1 (per fila singola porre: p₂ = 0) Entro limiti: Verificato 0 mm 0 mm p₂ = Numero profilati: Dati geometrici profilati: Spessore flangia bullonata: 8 mm Area sezione singolo profilato:
Distanze bulloni dal bordo: e₁ = 1230 mm² Min Max 125 mm Entro limiti: Verificato 40 mm 30.6 e₂ = 40 mm 30.6 125 mm Entro limiti: Verificato Dati geometrici lamiere / coprigiunti: Numero lamiere. Limiti massimi e minimi Spessore: 20 mm Min Max 40 mm 30.6 160 mm Entro limiti: Verificato Distanze bulloni dal bordo e₁ = 40 mm 30.6 160 mm Entro limiti: Verificato e₂ = My_{Ed} ٧zح N [kN] [kN] [kN.m] Sollecitazioni di progetto (trazione > 0): S.L.U. 217.42 0.79 0.63 S.L.E. 161.00 0.47 $F_{v,Ed}$ 54.63 0.387 ≤1: Verificato S.L.U. Verifica di resistenza a taglio bullone, singola superficie: F_{v Ed} = 54.63 kN Verifica: $F_{v,Rd}$ 141.00 $F_{v,Ed}$ 54.63 S.L.U. Verifica di resistenza a scorrimento bullone, singola superficie: F_{v.Ed} = 54.63 kN Verifica: 0.922 ≤1: Verificato F_{s Rd} 59.22 40.45 $F_{v,Ed\,es}$

S.L.E. Verifica di resistenza a scorrimento bullone, singola superficie:

S.L.U. Verifica al rifollamento profilato:

S.L.U. Verifica al rifollamento lamiere:

S.L.U. Verifica a trazione del profilato indebolito dai fori:

 $\begin{array}{ccc} F_{b,Ed} = & 54.63 \text{ kN} \\ \text{coefficienti:} & \text{kf} = & 2.500 \\ \alpha_b = & 0.523 \\ \text{Resistenza al rifollamento:} & F_{b,Rd} = & 102.4 \text{ kN} \\ \end{array}$

A_{net} =

N_{u Rd} =

coefficienti:

Area netta:

Resistenza al rifollamento

Resistenza della sezione netta:

 $\begin{aligned} F_{b,Ed} &= & 109.26 \text{ kN} \\ \text{k1} &= & 2.500 \\ \alpha_b &= & 0.523 \\ F_{b,Rd} &= & 256.0 \text{ kN} \end{aligned}$

2052 mm

753.49 kN

40.45 kN

Verifica:

Verifica:

Fo Rd oo

F_{b.Ed} 54.63 ———— = 0.534 ≤1: Verificato

67.30

F_{b,Ed} 109.26 -----= 0.427 ≤1: Verificato F_{b,Rd} 256.00

------= 0.289 ≤1: Verificato 753.49

0.601 ≤1: Verificato

Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria C: connessioni ad attrito allo S.L.U.



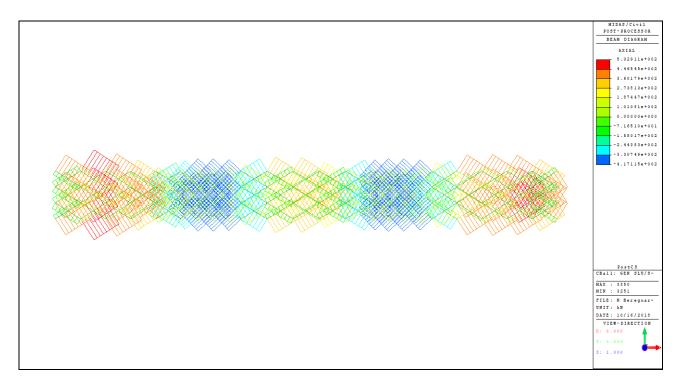




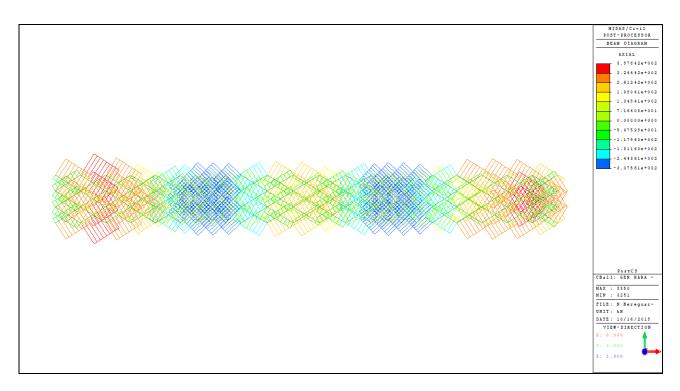




10.7 **CONTROVENTI**



CONTROVENTI - SFORZO ASSIALE - INVILUPPO SLU



CONTROVENTI - SFORZO ASSIALE - INVILUPPO SLE



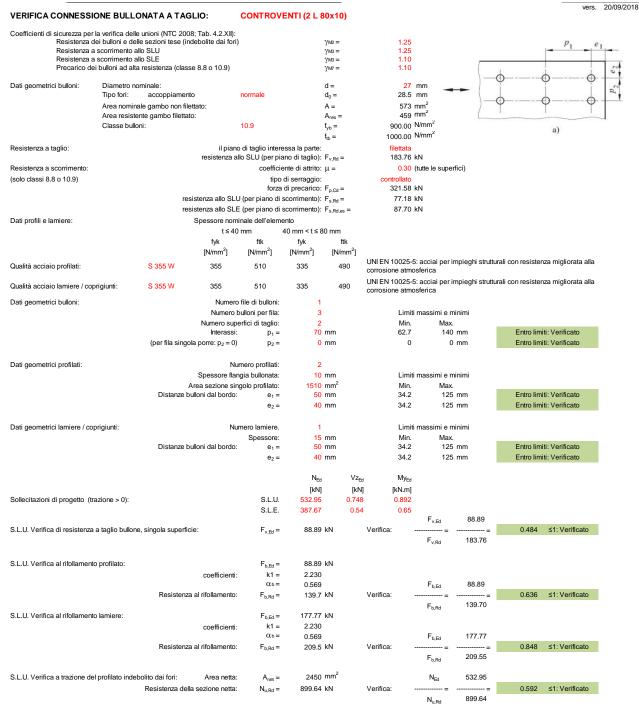








<u>Trattandosi di elementi "di montaggio" le verifiche verranno condotte per collegamenti a taglio, trascurando le verifiche per collegamenti "ad attrito".</u>



Categoria (verificata) di connessione bullonata a taglio (EN1993-1-8:2005 § 3.4):

Categoria B: connessioni ad attrito allo S.L.E.

















Si effettuano le verifiche allo stato limite ultimo degli isolatori elastomerici effettuate secondo EN 1337-3 per le fasi statiche e secondo OPCM 3274 (allegato 10.A) per le fasi sismiche.

PONTE NAVIGLIO BEREGUARDO

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VEDIEICA	ADDOCCI	ELASTOMERICI	ADMATI

VERIFICA APPOGGI ELASTOMERICI ARMATI				
		SPALLE		PILE
Dati di progetto:		450.0	_	450.0
Deformazione massima sismica di progetto SLC (d/h ≤ 2)	Dsp=	152.0 mm	Dsp=	156.0 mm
Deformazione massima statica di progetto SLU/SLD (d/h ≤1)	Dp=	76.0 mm	Dp=	78.0 mm
Risultati da modello di calcolo				
Carico verticale massimo statico SLU	V(max)=	-2068.5 kN	V(max)=	-5150.1 kN
Carico verticale minmo statico SLU	V(min)=	-583.6 kN	V(min)=	-2248.6 kN
Carico orizzontale massimo statico SLU	H(max)=	56.8 kN	H(max)=	119.6 kN
Rotazione massima statica SLU	R (max)=	2.304E-02 rad	R (max)=	5.407E-03 rad
Carico verticale massimo sismico SLC	Vs(max)=	-632.3 kN	Vs(max)=	-2454.5 kN
Carico verticale minimo sismico SLC	Vs(min)=	-492.1 kN	Vs(min)=	-1692.9 kN
Carico orizzontale massimo sismico SLC	Hs(max)=	65.1 kN	Hs(max)=	136.2 kN
Rotazione massima sismica SLC	Rs (max)=	1.346E-02 rad	Rs (max)=	2.466E-03 rad
Carico verticale massimo statico SLE (caratt.)	Ve(max)=	-1502.2 kN	V(max)=	-3735.6 kN
Carico verticale minmo statico SLE (caratt.)	Ve(min)=	-391.0 kN	V(min)=	-1546.7 kN
Carico orizzontale massimo statico SLE (caratt.)	He(max)=	41.9 kN	H(max)=	82.1 kN
Rotazione massima statica SLE (caratt.)	Re(max)=	1.479E-02 rad	R (max)=	4.090E-03 rad
Caratteristiche di progetto isolatore		SPALLE		PILE
Tensione caratteristica di snervamento lamiere (≥ 235 N/mmq)	fyk=	275 N/mmq	fyk=	275 N/mmq
Modulo di elasticità volumetrica elastomero	Eb=	2000 N/mmg	Eb=	2000 N/mmg
Modulo di elasticità tangenziale dinamico elastomero (γ = D/te = 1)	Gdin=	1.4 N/mmg	Gdin=	1.4 N/mmg
Spostamento massimo di progetto tra le due facce dell'isolatore allo SLC	de=	152 mm	de=	156 mm
Diametro elastomero	Dg=	300 mm	Dg=	450 mm
Numero di strati di elastomero	ng=	19	ng=	13
Spessore singolo strato di elastomero (5 mm< tg < 25 mm)	tg=	4 mm	tg=	6 mm
Spessore singola lamiera di acciaio interna (≥ 2 mm)	ts=	2 mm	ts=	3 mm
Spessore lamiera di acciaio esterna (≥ 20 mm)	tse=	20 mm	tse=	20 mm
Lato piastra di ancoraggio	Z=	350 mm	Z=	500 mm
Spessore piastra di ancoraggio	ta=	25 mm	ta=	25 mm
Ricoprimento laterale lamiere di acciaio (> 4 mm)	rs=	10 mm	rs=	10 mm
Diametro lamiere di acciaio interne (Dg-D' > 2x4 = 8 mm)	D'=	280 mm	D'=	430 mm
Spessore totale elastomero	te=	76 mm	te=	78 mm
Spessore complessivo isolatore (escluse piastre ancoraggio)	h=	152 mm	h=	154 mm
Spessore complessivo isolatore (incluse piastre ancoraggio)	H=	202 mm	H=	204 mm
Tensione di trazione massima (min(1;2*Gdin)	Sigma_t=	-1.00 N/mmg	Sigma_t=	-1.00 N/mmg
Fattore di forma primario	S1=	17.50	S1=	17.92
·	Fi(de)=	2.0790 rad	Fi(de)=	2.4336 rad
Modulo di compressibilità assiale	Ec=	947.51 N/mmq	Ec=	963.83 N/mmq
Rigidezza orizzontale equivalente (γ = D/te = 1)	Ke=	1302 N/mm	Ke=	2855 N/mm
Rigidezza verticale	Kv=	767676 N/mm	Kv=	1794462 N/mm













Verifiche statiche secondo EN 1337-3:2005				
Carico verticale massimo statico SLU	V(max)=	2068540 N	V(max)=	5150110 N
Carico orizzontale massimo statico SLU	H(max)=	56810 N	H(max)=	119606 N
Carico orizzontale statico a y = D/te = 1:	H(y=1)=	98960 N	$\hat{H}(y=1)=$	222660 N
Spostamento statico totale	`` Ď=	38.97 mm	`` D=	36.82 mm
Rotazione massima statica SLU	R (max)=	2.304E-02 rad	R (max)=	5.407E-03 rad
	Fi(de)=	2.8810 rad	Fi(de)=	2.9778 rad
Area ridotta efficace dell'isolatore	Ar=	51419 mmg	Ar=	130108 mmg
Deformazione di taglio massima				
dovuta alla compressione:	Gamma c=	2.4630	Gamma c=	2.3671
dovuta allo spostamento statico tot (< 1)	Gamma_s=	0.5128	Gamma_s=	0.4721
dovuta alle rotazioni	Gamma alfa=	2.5578	Gamma alfa=	0.8774
totale: (< 7)	Gamma_t=	5.5337	Gamma_t=	3.7165
2. Spessore minimo lamiere di acciaio (≥ 2 mm)	ts(min)=	2.00 mm	ts(min)=	2.25 mm
3. Rotazione limite:				
spostamento verticale massimo:	Dz=	2.468 mm	Dz=	2.614 mm
spostamento dovuto alla rotazione massima	D_alfa=	2.150 mm	D_alfa=	0.775 mm
Verifica: (Dz - D_alfa) >0	Dz - D_alfa=	0.317 mm	Dz - D_alfa=	1.839 mm
4. Verifica di instabilità: Pmax < Plim				
pressione limite	Plim=	60.175 N/mmq	Plim=	92.187 N/mmq
pressione massima: (< Plim)	Pmax=	40.229 N/mmq	Pmax=	39.583 N/mmq
Pressione sulle sottostrutture				
Diametro efficace di ripartizione a 60° (< Z)	De=	350 mm	De=	500 mm
Pressione massima SLU/SLC	P'max=	21.500 N/mmq	P'max=	26.229 N/mmq
Pressione minima SLU/SLC	P'min=	5.115 N/mmq	P'min=	8.622 N/mmq
Verifiche sismiche secondo OPCM 3274 e s.m. (Allegato 10.A)				
Sforzo normale massimo sull'isolatore allo SLC	V=	632270 N	V=	2454520 N
Carico orizzontale massimo sismico SLC	Hs(max)=	65068 N	Hs(max)=	136216 N
Carico orizzontale sismico a γ = D/te = 1:	H(γ=1)=	98960 N	H(γ=1)=	222660 N
Spostamento sismico totale	Ds=	46.03 mm (< Dsp)	Ds=	43.26 mm (< Dsp)
Rotazione massima sismica SLC	Rs (max)=	1.346E-02 rad	Rs (max)=	2.466E-03 rad
A Class off Lill's along	Fi(de)= Ar=	2.83352 rad	Fi(de)=	2.94904 rad
Area ridotta efficace dell'isolatore			Ar=	127474 mmg
	Λ1-	49594 mmq	711-	
Defense estadi di tandi e dell'elegatione	Al-	49594 mmq	7.11-	
Deformazioni di taglio dell'elastomero:		·		·
dovuta alla compressione:	Gamma_c=	0.7805	Gamma_c=	1.1515
dowta alla compressione: dowta allo spostamento sismico totale	Gamma_c= Gamma_s=	0.7805 0.6056	Gamma_c= Gamma_s=	1.1515 0.5546
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni	Gamma_c= Gamma_s= Gamma_alfa=	0.7805 0.6056 1.4944	Gamma_c= Gamma_s= Gamma_alfa=	1.1515 0.5546 0.4001
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero:	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t=	0.7805 0.6056 1.4944 2.8806	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t=	1.1515 0.5546 0.4001 2.1061
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni	Gamma_c= Gamma_s= Gamma_alfa=	0.7805 0.6056 1.4944	Gamma_c= Gamma_s= Gamma_alfa=	1.1515 0.5546 0.4001
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero: Carico assiale critico	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t=	0.7805 0.6056 1.4944 2.8806	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t=	1.1515 0.5546 0.4001 2.1061
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero: Carico assiale critico 1. Tensione degli inserti in acciaio	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr=	0.7805 0.6056 1.4944 2.8806 4796247 N	Gamma_c= Gamma_s= Gamma_lfa= Gamma_t= Vcr=	1.1515 0.5546 0.4001 2.1061 18446923 N
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero: Carico assiale critico 1. Tensione degli inserti in acciaio Tensione massimal amiere (<235 N/mmq)	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr= Sigma_s=	0.7805 0.6056 1.4944 2.8806 4796247 N	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr=	1.1515 0.5546 0.4001 2.1061 18446923 N
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero: Carico assiale critico 1. Tensione degli inserti in acciaio Tensione massimal amiere (<235 N/mmq) 2. Deformazioni di taglio massime	Gamma_c= Gamma_s= Gamma_dfa= Gamma_t= Vcr= Sigma_s= Gamma_s=	0.7805 0.6056 1.4944 2.8806 4796247 N	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr= Sigma_s= Gamma_s=	1.1515 0.5546 0.4001 2.1061 18446923 N
dowta alla compressione: dowta allo spostamento sismico totale dowta alle rotazioni Deformazione di taglio totale di progetto dell'elastomero: Carico assiale critico 1. Tensione degli inserti in acciaio Tensione massimal amiere (<235 N/mmq)	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr= Sigma_s=	0.7805 0.6056 1.4944 2.8806 4796247 N	Gamma_c= Gamma_s= Gamma_alfa= Gamma_t= Vcr=	1.1515 0.5546 0.4001 2.1061 18446923 N















Seguono i tabulati contenenti le reazioni massime e minime per ogni appoggio.

REAZIONI APPOGGI (ISOLATORI SISMICI ELASTOMERICI)

STATI LIMITE ULTIMI - STATICI

Tipo isolatore	Struttura Appoggio	No.	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	18 5	GEN SLU Mobili(max)	77	-583.61	33.25	6.35	33.85	1.302	26.00	2.29E-02
1	Spalla 1	18	GEN SLU Vento(max)	77	-630.80	50.17	4.63	50.38	1.302	38.69	2.09E-02
1	Spalla 1	18 5	GEN SLU Frenamento(max)	77	-667.21	2.53	37.90	37.98	1.302	29.17	2.09E-02
1	Spalla 1	18 5	GEN SLU Termico(max)	77	-613.19	31.42	10.29	33.06	1.302	25.39	2.11E-02
1	Spalla 1	18 5	GEN SLU Mobili(min)	77	-1942.85	-34.22	-28.02	44.23	1.302	33.97	1.66E-02
1	Spalla 1	18 5	GEN SLU Vento(min)	77	-1562.52	-51.17	-23.42	56.27	1.302	43.22	1.63E-02
1	Spalla 1	18 5	GEN SLU Frenamento(min)	77	-1526.11	-3.54	-56.70	56.81	1.302	43.63	1.64E-02
1	Spalla 1	18 5	GEN SLU Termico(min)	77	-1580.13	-32.42	-29.09	43.56	1.302	33.45	1.62E-02
1	Spalla 1	18 6	GEN SLU Mobili(max)	79	-637.79	33.34	6.48	33.96	1.302	26.08	2.21E-02
1	Spalla 1	18 6	GEN SLU Vento(max)	79	-671.03	50.32	4.67	50.54	1.302	38.81	2.03E-02
1	Spalla 1	18 6	GEN SLU Frenamento(max)	79	-675.22	2.53	38.21	38.29	1.302	29.41	2.03E-02
1	Spalla 1	18 6	GEN SLU Termico(max)	79	-637.19	31.25	10.56	32.99	1.302	25.33	2.06E-02
1	Spalla 1	18 6 18	GEN SLU Mobili(min)	79	-2068.54	-33.58	-26.07	42.51	1.302	32.65	1.66E-02
1	Spalla 1	6	GEN SLU Vento(min)	79	-1655.61	-50.56	-22.08	55.17	1.302	42.37	1.63E-02
1	Spalla 1	6	GEN SLU Frenamento(min)	79	-1651.43	-2.77	-55.62	55.69	1.302	42.77	1.63E-02
1	Spalla 1	6 18	GEN SLU Termico(min)	79	-1689.45	-31.49	-27.97	42.12	1.302	32.35	1.61E-02
1	Spalla 1	7 18	GEN SLU Mobili(max)	81	-638.64	33.59	6.49	34.21	1.302	26.27	2.21E-02
1	Spalla 1	7 18	GEN SLU Vento(max)	81	-672.45	50.57	4.68	50.79	1.302	39.00	2.03E-02
1	Spalla 1	7 18	GEN SLU Frenamento(max)	81	-675.22	2.77	38.21	38.31	1.302	29.42	2.03E-02
1	Spalla 1	7 18	GEN SLU Termico(max)	81	-638.04	31.50	10.56	33.22	1.302	25.51	2.06E-02
1	Spalla 1	7 18	GEN SLU Mobili(min)	81	-2067.69	-33.34	-26.08	42.33	1.302	32.51	1.66E-02
1	Spalla 1	7 18	GEN SLU Vento(min)	81	-1654.19	-50.33	-22.09	54.96	1.302	42.21	1.63E-02
1	Spalla 1	7 18	GEN SLU Frenamento(min)	81	-1651.43	-2.53	-55.62	55.68	1.302	42.76	1.63E-02
1	Spalla 1	7 18	GEN SLU Termico(min)	81	-1688.60	-31.26	-27.97	41.95	1.302	32.21	1.61E-02
1	Spalla 1	8	GEN SLU Mobili(max)	83	-589.48	34.26	6.33	34.84	1.302	26.76	2.30E-02
1	Spalla 1	8	GEN SLU Vento(max)	83	-640.57	51.25	4.59	51.46	1.302	39.52	2.10E-02
1	Spalla 1	8	GEN SLU Frenamento(max)	83	-667.21	3.54	37.90	38.06	1.302	29.23	2.09E-02
1	Spalla 1	8 18	GEN SLU Termico(max)	83	-619.06	32.47	10.27	34.06	1.302	26.15	2.12E-02
1	Spalla 1	8 18	GEN SLU Mobili(min)	83	-1936.98	-33.30	-28.00	43.51	1.302	33.41	1.64E-02
1	Spalla 1	8 18	GEN SLU Vento(min)	83	-1552.75	-50.25	-23.39	55.43	1.302	42.57	1.63E-02
1	Spalla 1	8 18	GEN SLU Frenamento(min)	83	-1526.11	-2.53	-56.70	56.76	1.302	43.59	1.63E-02
1	Spalla 1	8 19	GEN SLU Termico(min)	83	-1574.26	-31.47	-29.07	42.84	1.302	32.90	1.61E-02
1	Spalla 2	0 19	GEN SLU Mobili(max)	78	-583.64	33.25	28.03	43.49	1.302	33.40	1.64E-02
1	Spalla 2	0 19	GEN SLU Vento(max)	78	-630.80	50.17	23.43	55.37	1.302	42.52	1.62E-02
1	Spalla 2	0 19	GEN SLU Frenamento(max)	78	-667.24	2.53	56.70	56.76	1.302	43.59	1.63E-02
1	Spalla 2	0 19	GEN SLU Termico(max)	78	-613.21	31.42	29.09	42.82	1.302	32.88	1.61E-02
1	Spalla 2	0 19	GEN SLU Mobili(min)	78	-1942.72	-34.22	-6.35	34.80	1.302	26.73	2.30E-02
1 1	Spalla 2 Spalla 2	0 19	GEN SLU Vento(min) GEN SLU Frenamento(min)	78 78	-1562.48 -1526.04	-51.17 -3.54	-4.63 -37.90	51.38 38.06	1.302 1.302	39.46 29.23	2.10E-02 2.09E-02











		0									
1	Spalla 2	19	GEN SLU Termico(min)	78	-1580.07	-32.42	-10.30	34.02	1.302	26.12	2.12E-02
1	Spalla 2	19	GEN SLU Mobili(max)	80	-637.79	33.33	26.07	42.31	1.302	32.50	1.66E-02
1	Spalla 2	19	GEN SLU Vento(max)	80	-671.04	50.32	22.08	54.95	1.302	42.20	1.63E-02
1	Spalla 2	19	GEN SLU Frenamento(max)	80	-675.20	2.53	55.62	55.68	1.302	42.76	1.63E-02
1	Spalla 2	19	GEN SLU Termico(max)	80	-637.20	31.25	27.97	41.94	1.302	32.21	1.61E-02
1	Spalla 2	19	GEN SLU Mobili(min)	80	-2068.24	-33.58	-6.49	34.20	1.302	26.27	2.21E-02
1	Spalla 2	19 1	GEN SLU Vento(min)	80	-1655.43	-50.56	-4.67	50.78	1.302	38.99	2.03E-02
1	Spalla 2	19	GEN SLU Frenamento(min)	80	-1651.26	-2.77	-38.21	38.31	1.302	29.42	2.03E-02
1	Spalla 2	19 1 19	GEN SLU Termico(min)	80	-1689.27	-31.49	-10.56	33.21	1.302	25.51	2.06E-02
1	Spalla 2	2 19	GEN SLU Mobili(max)	82	-638.64	33.59	26.08	42.53	1.302	32.66	1.66E-02
1	Spalla 2	2 19	GEN SLU Vento(max)	82	-672.44	50.57	22.09	55.18	1.302	42.38	1.63E-02
1	Spalla 2	2 19	GEN SLU Frenamento(max)	82	-675.20	2.77	55.62	55.69	1.302	42.77	1.63E-02
1	Spalla 2	19	GEN SLU Termico(max)	82	-638.04	31.50	27.97	42.13	1.302	32.35	1.61E-02
1	Spalla 2	2 19	GEN SLU Mobili(min)	82	-2067.39	-33.34	-6.49	33.97	1.302	26.09	2.21E-02
1	Spalla 2	19	GEN SLU Vento(min)	82	-1654.02	-50.33	-4.68	50.55	1.302	38.82	2.03E-02
1	Spalla 2	2 19	GEN SLU Frenamento(min)	82	-1651.26	-2.53	-38.21	38.29	1.302	29.41	2.03E-02
1	Spalla 2	2 19	GEN SLU Termico(min)	82	-1688.42	-31.26	-10.56	33.00	1.302	25.34	2.06E-02
1	Spalla 2	3 19	GEN SLU Mobili(max)	84	-589.50	34.26	28.00	44.25	1.302	33.98	1.66E-02
1	Spalla 2	3 19	GEN SLU Vento(max)	84	-640.57	51.25	23.39	56.34	1.302	43.26	1.63E-02
1	Spalla 2	3 19	GEN SLU Frenamento(max)	84	-667.24	3.54	56.70	56.81	1.302	43.63	1.64E-02
1	Spalla 2	3 19	GEN SLU Termico(max)	84	-619.07	32.47	29.07	43.58	1.302	33.47	1.62E-02
1	Spalla 2	3 19	GEN SLU Mobili(min)	84	-1936.86	-33.30	-6.33	33.90	1.302	26.03	2.29E-02
1	Spalla 2	3 19	GEN SLU Vento(min)	84	-1552.71	-50.25	-4.59	50.46	1.302	38.75	2.09E-02
1	Spalla 2	3 19	GEN SLU Frenamento(min)	84	-1526.04	-2.53	-37.90	37.98	1.302	29.17	2.09E-02
1	Spalla 2	3 19	GEN SLU Termico(min)	84	-1574.21	-31.47	-10.27	33.10	1.302	25.42	2.11E-02
2	Pila 1	5 19	GEN SLU Mobili(max)	21	-2277.07	74.24	44.51	86.56	2.855	30.32	7.26E-04
2	Pila 1	5 19	GEN SLU Vento(max)	21	-2323.65	114.29	35.10	119.56	2.855	41.88	1.22E-03
2	Pila 1	5 19	GEN SLU Frenamento(max)	21	-2445.79	7.31	108.18	108.43	2.855	37.98	1.21E-03
2	Pila 1	5 19	GEN SLU Termico(max)	21	-2248.67	72.73	39.99	83.00	2.855	29.08	1.17E-03
2	Pila 1	5 19	GEN SLU Mobili(min)	21	-4716.86	-68.21	-18.83	70.76	2.855	24.79	5.41E-03
2	Pila 1	5 19	GEN SLU Vento(min)	21	-3987.17	-108.96	-8.04	109.26	2.855	38.27	4.81E-03
2	Pila 1	5 19	GEN SLU Frenamento(min)	21	-3865.04	-1.98	-81.12	81.14	2.855	28.43	4.77E-03
2	Pila 1	5 19	GEN SLU Termico(min)	21	-4062.16	-67.39	-12.92	68.62	2.855	24.04	4.92E-03
2	Pila 1	6 19	GEN SLU Mobili(max)	23	-2876.08	70.77	41.45	82.02	2.855	28.73	9.88E-04
2	Pila 1	6 19	GEN SLU Vento(max)	23	-2921.80	111.29	33.09	116.11	2.855	40.67	1.37E-03
2	Pila 1	6 19	GEN SLU Frenamento(max)	23	-2936.47	4.11	106.38	106.46	2.855	37.29	1.34E-03
2	Pila 1	6 19	GEN SLU Termico(max)	23	-2803.86	68.76	38.05	78.59	2.855	27.53	1.30E-03
2	Pila 1	6 19	GEN SLU Mobili(min)	23	-5146.90	-68.97	-15.32	70.65	2.855	24.75	5.02E-03
2	Pila 1	6 19	GEN SLU Vento(min)	23	-4396.70	-109.68	-5.84	109.84	2.855	38.48	4.49E-03
2	Pila 1	6 19	GEN SLU Frenamento(min)	23	-4382.03	-2.50	-79.13	79.17	2.855	27.73	4.48E-03
2	Pila 1	6 19	GEN SLU Termico(min)	23	-4514.64	-67.15	-10.80	68.01	2.855	23.83	4.57E-03
2	Pila 1	7 19	GEN SLU Mobili(max)	885	-2872.89	68.99	41.45	80.48	2.855	28.19	1.15E-03
2	Pila 1	7 19	GEN SLU Vento(max)	885	-2916.48	109.70	33.09	114.58	2.855	40.14	1.45E-03
2 2	Pila 1 Pila 1	7 19	GEN SLU Frenamento(max) GEN SLU Termico(max)	885 885	-2936.47 -2800.67	2.50 67.16	106.38 38.05	106.41 77.19	2.855 2.855	37.28 27.04	1.42E-03 1.39E-03
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2	Pila 1	19 7	GEN SLU Mobili(min)	885	-5150.09	-70.78	-15.32	72.42	2.855	25.37	4.99E-03
2	Pila 1	19 7	GEN SLU Vento(min)	885	-4402.01	-111.31	-5.84	111.46	2.855	39.05	4.46E-03
2	Pila 1	19 7	GEN SLU Frenamento(min)	885	-4382.03	-4.11	-79.13	79.24	2.855	27.76	4.45E-03
2	Pila 1	19 7	GEN SLU Termico(min)	885	-4517.83	-68.78	-10.80	69.62	2.855	24.39	4.54E-03
2	Pila 1	19 8	GEN SLU Mobili(max)	27	-2284.91	68.24	44.51	81.47	2.855	28.54	1.69E-03
2	Pila 1	19 8	GEN SLU Vento(max)	27	-2336.73	109.01	35.10	114.52	2.855	40.12	1.78E-03
2	Pila 1	19 8	GEN SLU Frenamento(max)	27	-2445.79	1.98	108.18	108.20	2.855	37.90	1.69E-03
2	Pila 1	19 8	GEN SLU Termico(max)	27	-2256.51	67.42	39.99	78.39	2.855	27.46	1.84E-03
2	Pila 1	19 8	GEN SLU Mobili(min)	27	-4709.02	-74.28	-18.83	76.63	2.855	26.84	5.19E-03
2	Pila 1	19 8	GEN SLU Vento(min)	27	-3974.09	-114.34	-8.04	114.62	2.855	40.15	4.63E-03
2	Pila 1	19 8	GEN SLU Frenamento(min)	27	-3865.04	-7.31	-81.12	81.45	2.855	28.53	4.62E-03
2	Pila 1	19 8	GEN SLU Termico(min)	27	-4054.31	-72.76	-12.92	73.90	2.855	25.89	4.71E-03
2	Pila 2	20 0	GEN SLU Mobili(max)	22	-2277.04	74.24	18.83	76.59	2.855	26.83	5.18E-03
2	Pila 2	20 0	GEN SLU Vento(max)	22	-2323.61	114.29	8.04	114.57	2.855	40.14	4.62E-03
2	Pila 2	20 0	GEN SLU Frenamento(max)	22	-2445.83	7.31	81.12	81.45	2.855	28.53	4.62E-03
2	Pila 2	20 0	GEN SLU Termico(max)	22	-2248.64	72.73	12.92	73.87	2.855	25.88	4.71E-03
2	Pila 2	20 0	GEN SLU Mobili(min)	22	-4716.90	-68.21	-44.50	81.44	2.855	28.53	1.69E-03
2	Pila 2	20 0	GEN SLU Vento(min)	22	-3987.21	-108.96	-35.10	114.47	2.855	40.10	1.79E-03
2	Pila 2	20 0	GEN SLU Frenamento(min)	22	-3865.00	-1.98	-108.18	108.20	2.855	37.90	1.69E-03
2	Pila 2	20 0	GEN SLU Termico(min)	22	-4062.18	-67.39	-39.98	78.36	2.855	27.45	1.84E-03
2	Pila 2	20 1	GEN SLU Mobili(max)	24	-2876.10	70.77	15.32	72.41	2.855	25.37	4.99E-03
2	Pila 2	20 1	GEN SLU Vento(max)	24	-2921.82	111.29	5.84	111.44	2.855	39.04	4.46E-03
2	Pila 2	20 1	GEN SLU Frenamento(max)	24	-2936.45	4.11	79.13	79.24	2.855	27.76	4.46E-03
2	Pila 2	20 1	GEN SLU Termico(max)	24	-2803.87	68.76	10.80	69.60	2.855	24.38	4.54E-03
2	Pila 2	20 1	GEN SLU Mobili(min)	24	-5146.90	-68.97	-41.45	80.47	2.855	28.19	1.15E-03
2	Pila 2	20 1	GEN SLU Vento(min)	24	-4396.68	-109.68	-33.09	114.56	2.855	40.13	1.46E-03
2	Pila 2	20 1	GEN SLU Frenamento(min)	24	-4382.05	-2.50	-106.38	106.41	2.855	37.28	1.41E-03
2	Pila 2	20 1	GEN SLU Termico(min)	24	-4514.63	-67.15	-38.05	77.18	2.855	27.04	1.39E-03
2	Pila 2	20 2	GEN SLU Mobili(max)	886	-2872.89	68.99	15.32	70.67	2.855	24.76	5.02E-03
2	Pila 2	20 2	GEN SLU Vento(max)	886	-2916.47	109.70	5.84	109.86	2.855	38.48	4.49E-03
2	Pila 2	20 2	GEN SLU Frenamento(max)	886	-2936.45	2.50	79.13	79.17	2.855	27.73	4.48E-03
2	Pila 2	20 2	GEN SLU Termico(max)	886	-2800.66	67.16	10.80	68.02	2.855	23.83	4.57E-03
2	Pila 2	20 2	GEN SLU Mobili(min)	886	-5150.11	-70.78	-41.45	82.02	2.855	28.73	9.85E-04
2	Pila 2	20 2	GEN SLU Vento(min)	886	-4402.03	-111.31	-33.09	116.12	2.855	40.68	1.37E-03
2	Pila 2	20 2	GEN SLU Frenamento(min)	886	-4382.05	-4.11	-106.38	106.46	2.855	37.29	1.34E-03
2	Pila 2	20 2	GEN SLU Termico(min)	886	-4517.84	-68.78	-38.05	78.60	2.855	27.54	1.29E-03
2	Pila 2	20 3	GEN SLU Mobili(max)	28	-2284.89	68.24	18.83	70.79	2.855	24.80	5.40E-03
2	Pila 2	20	GEN SLU Vento(max)	28	-2336.69	109.01	8.04	109.31	2.855	38.29	4.80E-03
2	Pila 2	20	GEN SLU Frenamento(max)	28	-2445.83	1.98	81.12	81.14	2.855	28.43	4.77E-03
2	Pila 2	20	GEN SLU Termico(max)	28	-2256.48	67.42	12.92	68.65	2.855	24.05	4.92E-03
2	Pila 2	20 3	GEN SLU Mobili(min)	28	-4709.05	-74.28	-44.50	86.59	2.855	30.33	7.22E-04
2	Pila 2	20 3	GEN SLU Vento(min)	28	-3974.14	-114.34	-35.10	119.61	2.855	41.90	1.21E-03
2	Pila 2	20 3	GEN SLU Frenamento(min)	28	-3865.00	-7.31	-108.18	108.43	2.855	37.98	1.20E-03
2	Pila 2	20 3	GEN SLU Termico(min)	28	-4054.34	-72.76	-39.98	83.02	2.855	29.08	1.17E-03







	Spall	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI MASSIMI:	e e	-583.61	51.25	56.70	56.81	1.302	43.63	2.30E-02
	Pile	-2248.64	114.29	108.18	119.61	2.855	41.90	5.41E-03
	Spall							
SFORZI MINIMI:	е	-2068.54	-51.17	-56.70				
	Pile	-5150.11	-114.34	-108.18				

STATI LIMITE ULTIMI - SISMICI (SLC)

STATI LIMI	TE ULTIMI -	SISMI	CI (SLC)								
Tipo isolatore	Struttura Appoggio	No. 18	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	5	GEN SLC Long(max)	77	-511.22	15.25	53.60	55.73	1.302	42.80	1.33E-02
1	Spalla 1	18 5 18	GEN SLC Trasv(max)	77	-495.89	50.94	17.34	53.81	1.302	41.33	1.33E-02
1	Spalla 1	5	GEN SLC Vert(max)	77	-505.51	15.25	17.28	23.05	1.302	17.70	1.35E-02
1	Spalla 1	18 5	GEN SLC Long(min)	77	-616.93	-16.00	-63.07	65.07	1.302	49.97	1.25E-02
1	Spalla 1	18 5 18	GEN SLC Trasv(min)	77	-632.26	-51.69	-26.81	58.23	1.302	44.72	1.25E-02
1	Spalla 1	5 18	GEN SLC Vert(min)	77	-622.64	-16.00	-26.75	31.17	1.302	23.94	1.23E-02
1	Spalla 1	6	GEN SLC Long(max)	79	-497.58	15.29	53.77	55.90	1.302	42.93	1.32E-02
1	Spalla 1	6	GEN SLC Trasv(max)	79	-501.30	51.04	17.35	53.91	1.302	41.40	1.32E-02
1	Spalla 1	6 18	GEN SLC Vert(max)	79	-492.12	15.29	17.44	23.19	1.302	17.81	1.33E-02
1	Spalla 1	6 18	GEN SLC Long(min)	79	-598.08	-15.46	-63.03	64.90	1.302	49.84	1.24E-02
1	Spalla 1	6 18	GEN SLC Trasv(min)	79	-594.36	-51.22	-26.62	57.72	1.302	44.33	1.24E-02
1	Spalla 1	6 18	GEN SLC Vert(min)	79	-603.54	-15.46	-26.71	30.86	1.302	23.70	1.23E-02
1	Spalla 1	7 18	GEN SLC Long(max)	81	-497.57	15.46	53.77	55.95	1.302	42.97	1.32E-02
1	Spalla 1	7 18	GEN SLC Trasv(max)	81	-501.30	51.22	17.35	54.08	1.302	41.53	1.32E-02
1	Spalla 1	7 18	GEN SLC Vert(max)	81	-492.11	15.46	17.44	23.31	1.302	17.90	1.33E-02
1	Spalla 1	7 18	GEN SLC Long(min)	81	-598.09	-15.29	-63.03	64.86	1.302	49.81	1.24E-02
1	Spalla 1	7 18	GEN SLC Trasv(min)	81	-594.36	-51.04	-26.62	57.56	1.302	44.21	1.24E-02
1	Spalla 1	7 18	GEN SLC Vert(min)	81	-603.54	-15.29	-26.71	30.78	1.302	23.64	1.23E-02
1	Spalla 1	8 18	GEN SLC Long(max)	83	-511.21	16.00	53.60	55.94	1.302	42.96	1.33E-02
1	Spalla 1	8 18	GEN SLC Trasv(max)	83	-495.88	51.69	17.34	54.52	1.302	41.87	1.33E-02
1	Spalla 1	8 18	GEN SLC Vert(max)	83	-505.47	16.00	17.28	23.55	1.302	18.09	1.35E-02
1	Spalla 1	8 18	GEN SLC Long(min)	83	-616.94	-15.25	-63.07	64.89	1.302	49.83	1.25E-02
1	Spalla 1	8 18	GEN SLC Trasv(min)	83	-632.27	-50.94	-26.81	57.56	1.302	44.21	1.25E-02
1	Spalla 1	8 19	GEN SLC Vert(min)	83	-622.68	-15.25	-26.75	30.79	1.302	23.65	1.23E-02
1	Spalla 2	0 19	GEN SLC Long(max)	78	-511.22	15.25	63.07	64.89	1.302	49.83	1.25E-02
1	Spalla 2	0 19	GEN SLC Trasv(max)	78	-495.89	50.94	26.81	57.56	1.302	44.21	1.25E-02
1	Spalla 2	0 19	GEN SLC Vert(max)	78	-505.50	15.25	26.75	30.79	1.302	23.65	1.23E-02
1	Spalla 2	0 19	GEN SLC Long(min)	78	-616.93	-16.00	-53.60	55.94	1.302	42.96	1.33E-02
1	Spalla 2	0 19	GEN SLC Trasv(min)	78	-632.26	-51.69	-17.34	54.52	1.302	41.87	1.33E-02
1	Spalla 2	0 19	GEN SLC Vert(min)	78	-622.65	-16.00	-17.28	23.55	1.302	18.09	1.35E-02
1	Spalla 2	1 19	GEN SLC Long(max)	80	-497.58	15.29	63.03	64.86	1.302	49.81	1.24E-02
1	Spalla 2	1 19	GEN SLC Trasv(max)	80	-501.30	51.04	26.62	57.56	1.302	44.21	1.24E-02
1	Spalla 2	1 19	GEN SLC Vert(max)	80	-492.12	15.29	26.71	30.78	1.302	23.64	1.23E-02
1	Spalla 2	1 19	GEN SLC Long(min)	80	-598.08	-15.46	-53.77	55.95	1.302	42.97	1.32E-02
1 1	Spalla 2 Spalla 2	1 19	GEN SLC Trasv(min) GEN SLC Vert(min)	80 80	-594.36 -603.54	-51.22 -15.46	-17.35 -17.44	54.08 23.31	1.302 1.302	41.53 17.90	1.32E-02 1.33E-02











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		1 19									
1	Spalla 2	2 19	GEN SLC Long(max)	82	-497.57	15.46	63.03	64.90	1.302	49.84	1.24E-02
1	Spalla 2	2 19	GEN SLC Trasv(max)	82	-501.30	51.22	26.62	57.72	1.302	44.33	1.24E-02
1	Spalla 2	19	GEN SLC Vert(max)	82	-492.12	15.46	26.71	30.86	1.302	23.70	1.23E-02
1	Spalla 2	2 19	GEN SLC Long(min)	82	-598.08	-15.29	-53.77	55.90	1.302	42.93	1.32E-02
1	Spalla 2	19	GEN SLC Trasv(min)	82	-594.36	-51.04	-17.35	53.91	1.302	41.40	1.32E-02
1	Spalla 2	19	GEN SLC Vert(min)	82	-603.54	-15.29	-17.44	23.19	1.302	17.81	1.33E-02
1	Spalla 2	3	GEN SLC Long(max)	84	-511.21	16.00	63.07	65.07	1.302	49.97	1.25E-02
1	Spalla 2	19	GEN SLC Trasv(max)	84	-495.88	51.69	26.81	58.23	1.302	44.72	1.25E-02
1	Spalla 2	19 3	GEN SLC Vert(max)	84	-505.48	16.00	26.75	31.17	1.302	23.94	1.23E-02
1	Spalla 2	19 3 19	GEN SLC Long(min)	84	-616.94	-15.25	-53.60	55.73	1.302	42.80	1.33E-02
1	Spalla 2	3 19	GEN SLC Trasv(min)	84	-632.27	-50.94	-17.34	53.81	1.302	41.33	1.33E-02
1	Spalla 2	3 19	GEN SLC Vert(min)	84	-622.67	-15.25	-17.28	23.05	1.302	17.70	1.35E-02
2	Pila 1	5 19	GEN SLC Long(max)	21	-1765.83	37.23	131.03	136.22	2.855	47.72	2.08E-03
2	Pila 1	5 19	GEN SLC Trasv(max)	21	-1692.89	117.15	51.74	128.07	2.855	44.86	2.11E-03
2	Pila 1	5 19	GEN SLC Vert(max)	21	-1741.14	37.25	51.58	63.62	2.855	22.29	2.11E-03
2	Pila 1	5 19	GEN SLC Long(min)	21	-2115.81	-33.85	-106.89	112.12	2.855	39.28	2.45E-03
2	Pila 1	5 19	GEN SLC Trasv(min)	21	-2188.75	-113.76	-27.60	117.06	2.855	41.01	2.47E-03
2	Pila 1	5 19	GEN SLC Vert(min)	21	-2140.50	-33.87	-27.44	43.59	2.855	15.27	2.42E-03
2	Pila 1	6	GEN SLC Long(max)	23	-2125.90	35.19	130.91	135.56	2.855	47.49	2.06E-03
2	Pila 1	6 19	GEN SLC Trasv(max)	23	-2119.56	115.24	51.45	126.20	2.855	44.21	2.10E-03
2	Pila 1	6 19	GEN SLC Vert(max)	23	-2096.76	35.19	51.45	62.33	2.855	21.84	2.09E-03
2	Pila 1	6 19	GEN SLC Long(min)	23	-2425.38	-34.15	-106.89	112.21	2.855	39.31	2.36E-03
2	Pila 1	6 19	GEN SLC Trasv(min)	23	-2431.71	-114.20	-27.43	117.45	2.855	41.14	2.34E-03
2	Pila 1	6 19	GEN SLC Vert(min)	23	-2454.52	-34.15	-27.43	43.80	2.855	15.34	2.33E-03
2	Pila 1	7 19	GEN SLC Long(max)	885	-2125.91	34.15	130.91	135.29	2.855	47.39	2.07E-03
2	Pila 1	7 19	GEN SLC Trasv(max)	885	-2119.57	114.20	51.45	125.25	2.855	43.88	2.12E-03
2	Pila 1	7 19	GEN SLC Vert(max)	885	-2096.78	34.15	51.45	61.75	2.855	21.63	2.10E-03
2	Pila 1	7 19	GEN SLC Long(min)	885	-2425.37	-35.19	-106.89	112.53	2.855	39.42	2.36E-03
2	Pila 1	7 19	GEN SLC Trasv(min)	885	-2431.71	-115.24	-27.43	118.46	2.855	41.50	2.33E-03
2	Pila 1	7 19	GEN SLC Vert(min)	885	-2454.50	-35.19	-27.43	44.62	2.855	15.63	2.33E-03
2	Pila 1	8 19	GEN SLC Long(max)	27	-1765.85	33.85	131.03	135.33	2.855	47.41	2.14E-03
2	Pila 1	8 19	GEN SLC Trasv(max)	27	-1692.91	113.76	51.74	124.97	2.855	43.78	2.22E-03
2	Pila 1	8 19	GEN SLC Vert(max)	27	-1741.19	33.87	51.58	61.71	2.855	21.62	2.17E-03
2	Pila 1	8 19	GEN SLC Long(min)	27	-2115.79	-37.23	-106.89	113.19	2.855	39.65	2.39E-03
2	Pila 1	8 19	GEN SLC Trasv(min)	27	-2188.74	-117.15	-27.60	120.36	2.855	42.16	2.37E-03
2	Pila 1	8	GEN SLC Vert(min)	27	-2140.45	-37.25	-27.44	46.27	2.855	16.21	2.36E-03
2	Pila 2	0 20	GEN SLC Long(max)	22	-1765.83	37.23	106.89	113.19	2.855	39.65	2.39E-03
2	Pila 2	0 20	GEN SLC Trasv(max)	22	-1692.89	117.15	27.60	120.36	2.855	42.16	2.37E-03
2	Pila 2	0 20	GEN SLC Vert(max)	22	-1741.14	37.25	27.44	46.27	2.855	16.21	2.36E-03
2	Pila 2	0 20	GEN SLC Long(min)	22	-2115.81	-33.85	-131.03	135.33	2.855	47.41	2.14E-03
2	Pila 2	0 20	GEN SLC Trasv(min)	22	-2188.75	-113.76	-51.74	124.97	2.855	43.78	2.22E-03
2	Pila 2	0 20	GEN SLC Vert(min)	22	-2140.51	-33.87	-51.58	61.71	2.855	21.62	2.17E-03
2	Pila 2	1 20	GEN SLC Long(max)	24	-2125.90	35.19	106.89	112.53	2.855	39.42	2.35E-03
2	Pila 2 Pila 2	1 20	GEN SLC Trasv(max) GEN SLC Vert(max)	24 24	-2119.56 -2096.76	115.24 35.19	27.43 27.43	118.46 44.62	2.855 2.855	41.50 15.63	2.32E-03 2.32E-03
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2	Pila 2	20	GEN SLC Long(min)	24	-2425.38	-34.15	-130.91	135.29	2.855	47.39	2.07E-03
2	Pila 2	20 1	GEN SLC Trasv(min)	24	-2431.71	-114.20	-51.45	125.25	2.855	43.88	2.12E-03
2	Pila 2	20 1 20	GEN SLC Vert(min)	24	-2454.52	-34.15	-51.45	61.75	2.855	21.63	2.10E-03
2	Pila 2	20 2 20	GEN SLC Long(max)	886	-2125.91	34.15	106.89	112.21	2.855	39.31	2.36E-03
2	Pila 2	20 20	GEN SLC Trasv(max)	886	-2119.57	114.20	27.43	117.45	2.855	41.14	2.34E-03
2	Pila 2	2 2 20	GEN SLC Vert(max)	886	-2096.78	34.15	27.43	43.80	2.855	15.34	2.33E-03
2	Pila 2	2 20	GEN SLC Long(min)	886	-2425.37	-35.19	-130.91	135.56	2.855	47.49	2.06E-03
2	Pila 2	2 20	GEN SLC Trasv(min)	886	-2431.71	-115.24	-51.45	126.20	2.855	44.21	2.10E-03
2	Pila 2	2 20	GEN SLC Vert(min)	886	-2454.50	-35.19	-51.45	62.33	2.855	21.84	2.09E-03
2	Pila 2	3 20	GEN SLC Long(max)	28	-1765.85	33.85	106.89	112.12	2.855	39.28	2.44E-03
2	Pila 2	3 20	GEN SLC Trasv(max)	28	-1692.91	113.76	27.60	117.06	2.855	41.01	2.46E-03
2	Pila 2	3 20	GEN SLC Vert(max)	28	-1741.19	33.87	27.44	43.59	2.855	15.27	2.42E-03
2	Pila 2	3 20	GEN SLC Long(min)	28	-2115.79	-37.23	-131.03	136.22	2.855	47.72	2.08E-03
2	Pila 2	3 20	GEN SLC Trasv(min)	28	-2188.74	-117.15	-51.74	128.07	2.855	44.86	2.11E-03
2	Pila 2	3	GEN SLC Vert(min)	28	-2140.46	-37.25	-51.58	63.62	2.855	22.29	2.11E-03
				Spall	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI M	ASSIMI:			Spall e Pile	-492.11 -1692.89	51.69 117.15	63.07 131.03	65.07 136.22	1.302 2.855	49.97 47.72	1.35E-02 2.47E-03
SFORZI M	INIMI:			Spall e Pile	-632.27 -2454.52	-51.69 -117.15	-63.07 -131.03				
STATI LIM	IITE ULTIMI :	- SISMI	CI (SLV)								

Tipo isolatore	Struttura Appoggio	No. 18	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	5 18	GEN SLV Long(max)	77	-514.93	12.21	43.21	44.90	1.302	34.48	1.32E-02
1	Spalla 1	5 18	GEN SLV Trasv(max)	77	-502.65	40.81	14.15	43.19	1.302	33.17	1.33E-02
1	Spalla 1	5 18	GEN SLV Vert(max)	77	-510.70	12.21	14.10	18.65	1.302	14.32	1.34E-02
1	Spalla 1	5 18	GEN SLV Long(min)	77	-613.22	-12.96	-52.68	54.25	1.302	41.66	1.25E-02
1	Spalla 1	5 18	GEN SLV Trasv(min)	77	-625.50	-41.56	-23.63	47.81	1.302	36.72	1.25E-02
1	Spalla 1	5 18	GEN SLV Vert(min)	77	-617.45	-12.96	-23.57	26.90	1.302	20.66	1.24E-02
1	Spalla 1	6	GEN SLV Long(max)	79	-500.03	12.25	43.39	45.09	1.302	34.63	1.31E-02
1	Spalla 1	6	GEN SLV Trasv(max)	79	-503.01	40.90	14.21	43.30	1.302	33.25	1.31E-02
1	Spalla 1	6	GEN SLV Vert(max)	79	-496.02	12.25	14.27	18.81	1.302	14.44	1.33E-02
1	Spalla 1	6	GEN SLV Long(min)	79	-595.63	-12.42	-52.66	54.10	1.302	41.55	1.25E-02
1	Spalla 1	6	GEN SLV Trasv(min)	79	-592.65	-41.07	-23.48	47.31	1.302	36.33	1.25E-02
1	Spalla 1	6	GEN SLV Vert(min)	79	-599.64	-12.42	-23.54	26.62	1.302	20.44	1.23E-02
1	Spalla 1	7 18	GEN SLV Long(max)	81	-500.02	12.42	43.39	45.13	1.302	34.66	1.31E-02
1	Spalla 1	7 18	GEN SLV Trasv(max)	81	-503.01	41.07	14.21	43.46	1.302	33.38	1.31E-02
1	Spalla 1	7 18	GEN SLV Vert(max)	81	-496.02	12.42	14.27	18.92	1.302	14.53	1.33E-02
1	Spalla 1	7 18	GEN SLV Long(min)	81	-595.64	-12.25	-52.66	54.07	1.302	41.52	1.25E-02
1	Spalla 1	7 18	GEN SLV Trasv(min)	81	-592.65	-40.90	-23.48	47.16	1.302	36.22	1.25E-02
1	Spalla 1	7 18	GEN SLV Vert(min)	81	-599.64	-12.25	-23.54	26.54	1.302	20.38	1.23E-02
1	Spalla 1	8 18	GEN SLV Long(max)	83	-514.92	12.96	43.21	45.11	1.302	34.65	1.32E-02
1 1	Spalla 1 Spalla 1	8 18	GEN SLV Trasv(max) GEN SLV Vert(max)	83 83	-502.64 -510.68	41.56 12.96	14.15 14.10	43.90 19.15	1.302 1.302	33.72 14.71	1.33E-02 1.34E-02









		8 18									
1	Spalla 1	8	GEN SLV Long(min)	83	-613.23	-12.21	-52.68	54.08	1.302	41.53	1.25E-02
1	Spalla 1	18 8	GEN SLV Trasv(min)	83	-625.51	-40.81	-23.63	47.16	1.302	36.22	1.25E-02
1	Spalla 1	18 8	GEN SLV Vert(min)	83	-617.47	-12.21	-23.57	26.54	1.302	20.39	1.24E-02
1	Spalla 2	19	GEN SLV Long(max)	78	-514.93	12.21	52.68	54.08	1.302	41.53	1.25E-02
1	Spalla 2	19	GEN SLV Trasv(max)	78	-502.64	40.81	23.63	47.16	1.302	36.22	1.25E-02
1	Spalla 2	19 0	GEN SLV Vert(max)	78	-510.70	12.21	23.57	26.54	1.302	20.39	1.24E-02
1	Spalla 2	19	GEN SLV Long(min)	78	-613.22	-12.96	-43.21	45.11	1.302	34.65	1.32E-02
1	Spalla 2	19 0	GEN SLV Trasv(min)	78	-625.51	-41.56	-14.15	43.90	1.302	33.72	1.33E-02
1	Spalla 2	19 0 19	GEN SLV Vert(min)	78	-617.45	-12.96	-14.10	19.15	1.302	14.71	1.34E-02
1	Spalla 2	19	GEN SLV Long(max)	80	-500.02	12.25	52.66	54.07	1.302	41.52	1.25E-02
1	Spalla 2	19	GEN SLV Trasv(max)	80	-503.01	40.90	23.48	47.16	1.302	36.22	1.25E-02
1	Spalla 2	19	GEN SLV Vert(max)	80	-496.02	12.25	23.54	26.54	1.302	20.38	1.23E-02
1	Spalla 2	19	GEN SLV Long(min)	80	-595.63	-12.42	-43.39	45.13	1.302	34.66	1.31E-02
1	Spalla 2	1	GEN SLV Trasv(min)	80	-592.65	-41.07	-14.21	43.46	1.302	33.38	1.31E-02
1	Spalla 2	19 1	GEN SLV Vert(min)	80	-599.64	-12.42	-14.27	18.92	1.302	14.53	1.32E-02
1	Spalla 2	19 2 19	GEN SLV Long(max)	82	-500.02	12.42	52.66	54.10	1.302	41.55	1.25E-02
1	Spalla 2	2	GEN SLV Trasv(max)	82	-503.01	41.07	23.48	47.31	1.302	36.33	1.25E-02
1	Spalla 2	19 2	GEN SLV Vert(max)	82	-496.02	12.42	23.54	26.62	1.302	20.44	1.23E-02
1	Spalla 2	19 2 19	GEN SLV Long(min)	82	-595.64	-12.25	-43.39	45.09	1.302	34.63	1.31E-02
1	Spalla 2	19	GEN SLV Trasv(min)	82	-592.65	-40.90	-14.21	43.30	1.302	33.25	1.31E-02
1	Spalla 2	19	GEN SLV Vert(min)	82	-599.64	-12.25	-14.27	18.81	1.302	14.44	1.32E-02
1	Spalla 2	3 19	GEN SLV Long(max)	84	-514.92	12.96	52.68	54.25	1.302	41.66	1.25E-02
1	Spalla 2	3	GEN SLV Trasv(max)	84	-502.64	41.56	23.63	47.81	1.302	36.72	1.25E-02
1	Spalla 2	3	GEN SLV Vert(max)	84	-510.68	12.96	23.57	26.90	1.302	20.66	1.24E-02
1	Spalla 2	3 19	GEN SLV Long(min)	84	-613.23	-12.21	-43.21	44.90	1.302	34.48	1.32E-02
1	Spalla 2	3 19	GEN SLV Trasv(min)	84	-625.51	-40.81	-14.15	43.19	1.302	33.17	1.33E-02
1	Spalla 2	3 19	GEN SLV Vert(min)	84	-617.47	-12.21	-14.10	18.65	1.302	14.32	1.34E-02
2	Pila 1	5 19	GEN SLV Long(max)	21	-1775.29	30.43	108.43	112.62	2.855	39.45	2.09E-03
2	Pila 1	5 19	GEN SLV Trasv(max)	21	-1716.86	94.46	44.89	104.58	2.855	36.64	2.12E-03
2	Pila 1	5 19	GEN SLV Vert(max)	21	-1756.48	30.44	44.76	54.13	2.855	18.96	2.12E-03
2	Pila 1	5 19	GEN SLV Long(min)	21	-2106.35	-27.04	-84.29	88.52	2.855	31.01	2.43E-03
2	Pila 1	5 19	GEN SLV Trasv(min)	21	-2164.78	-91.08	-20.75	93.41	2.855	32.72	2.44E-03
2	Pila 1	5 19	GEN SLV Vert(min)	21	-2125.16	-27.05	-20.62	34.01	2.855	11.92	2.40E-03
2	Pila 1	6 19	GEN SLV Long(max)	23	-2130.40	28.37	108.32	111.97	2.855	39.23	2.07E-03
2	Pila 1	6 19	GEN SLV Trasv(max)	23	-2125.34	92.52	44.65	102.73	2.855	35.99	2.11E-03
2	Pila 1	6	GEN SLV Vert(max)	23	-2108.21	28.38	44.64	52.90	2.855	18.53	2.10E-03
2	Pila 1	6	GEN SLV Long(min)	23	-2420.88	-27.33	-84.30	88.62	2.855	31.04	2.35E-03
2	Pila 1	6 19	GEN SLV Trasv(min)	23	-2425.94	-91.48	-20.63	93.78	2.855	32.85	2.33E-03
2	Pila 1	6 19	GEN SLV Vert(min)	23	-2443.07	-27.34	-20.63	34.25	2.855	12.00	2.32E-03
2	Pila 1	7 19	GEN SLV Long(max)	885	-2130.40	27.33	108.32	111.71	2.855	39.13	2.08E-03
2	Pila 1	7 19	GEN SLV Trasv(max)	885	-2125.34	91.48	44.65	101.79	2.855	35.66	2.12E-03
2	Pila 1	7 19	GEN SLV Vert(max)	885	-2108.22	27.34	44.64	52.35	2.855	18.34	2.10E-03
2	Pila 1	7 19	GEN SLV Long(min)	885	-2420.88	-28.37	-84.30	88.95	2.855	31.16	2.34E-03
2 2	Pila 1 Pila 1	7 19	, ,	885 885	-2425.93 -2443.05	-92.52 -28.38	-20.63 -20.63	94.79 35.09	2.855 2.855	33.21 12.29	2.32E-03 2.32E-03
_	1 114 1	13	CLIVOLV VEIL(IIIII)	003	2-1-10.00	-20.00	20.03	55.05	2.000	12.23	2.02L303









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RELAZIONE DI CALCOLO IMPALCATO

2	Pila 1	19 8	GEN SLV Long(max)	27	-1775.30	27.04	108.43	111.75	2.855	39.15	2.16E-03
2	Pila 1	19 8	GEN SLV Trasv(max)	27	-1716.87	91.08	44.89	101.54	2.855	35.57	2.10L-03
2	Pila 1	19 8	GEN SLV Vert(max)	27	-1716.57	27.05	44.76	52.30	2.855	18.32	2.18E-03
		19	, ,								
2	Pila 1	8 19	GEN SLV Long(min)	27	-2106.34	-30.43	-84.29	89.61	2.855	31.39	2.37E-03
2	Pila 1	8 19	GEN SLV Trasv(min)	27	-2164.77	-94.46	-20.75	96.71	2.855	33.88	2.36E-03
2	Pila 1	8 20	GEN SLV Vert(min)	27	-2125.12	-30.44	-20.62	36.77	2.855	12.88	2.35E-03
2	Pila 2	0 20	GEN SLV Long(max)	22	-1775.29	30.43	84.29	89.61	2.855	31.39	2.37E-03
2	Pila 2	0 20	GEN SLV Trasv(max)	22	-1716.86	94.46	20.75	96.71	2.855	33.88	2.35E-03
2	Pila 2	0 20	GEN SLV Vert(max)	22	-1756.48	30.44	20.62	36.77	2.855	12.88	2.35E-03
2	Pila 2	0 20	GEN SLV Long(min)	22	-2106.35	-27.04	-108.43	111.75	2.855	39.15	2.16E-03
2	Pila 2	0 20	GEN SLV Trasv(min)	22	-2164.78	-91.08	-44.89	101.54	2.855	35.57	2.21E-03
2	Pila 2	0 20	GEN SLV Vert(min)	22	-2125.16	-27.05	-44.76	52.30	2.855	18.32	2.18E-03
2	Pila 2	1 20	GEN SLV Long(max)	24	-2130.40	28.37	84.30	88.95	2.855	31.16	2.34E-03
2	Pila 2	1 20	GEN SLV Trasv(max)	24	-2125.34	92.52	20.63	94.79	2.855	33.21	2.31E-03
2	Pila 2	1 20	GEN SLV Vert(max)	24	-2108.21	28.38	20.63	35.09	2.855	12.29	2.31E-03
2	Pila 2	1 20	GEN SLV Long(min)	24	-2420.88	-27.33	-108.32	111.71	2.855	39.13	2.08E-03
2	Pila 2	1	GEN SLV Trasv(min)	24	-2425.94	-91.48	-44.65	101.79	2.855	35.66	2.12E-03
2	Pila 2	20 1 20	GEN SLV Vert(min)	24	-2443.07	-27.34	-44.64	52.35	2.855	18.34	2.10E-03
2	Pila 2	2	GEN SLV Long(max)	886	-2130.40	27.33	84.30	88.62	2.855	31.04	2.34E-03
2	Pila 2	20	GEN SLV Trasv(max)	886	-2125.34	91.48	20.63	93.78	2.855	32.85	2.33E-03
2	Pila 2	20	GEN SLV Vert(max)	886	-2108.22	27.34	20.63	34.25	2.855	12.00	2.32E-03
2	Pila 2	20	GEN SLV Long(min)	886	-2420.88	-28.37	-108.32	111.97	2.855	39.23	2.08E-03
2	Pila 2	20	GEN SLV Trasv(min)	886	-2425.93	-92.52	-44.65	102.73	2.855	35.99	2.11E-03
2	Pila 2	20	GEN SLV Vert(min)	886	-2443.05	-28.38	-44.64	52.90	2.855	18.53	2.10E-03
2	Pila 2	20 3	GEN SLV Long(max)	28	-1775.30	27.04	84.29	88.52	2.855	31.01	2.42E-03
2	Pila 2	20 3	GEN SLV Trasv(max)	28	-1716.87	91.08	20.75	93.41	2.855	32.72	2.44E-03
2	Pila 2	20	GEN SLV Vert(max)	28	-1756.52	27.05	20.62	34.01	2.855	11.92	2.40E-03
2	Pila 2		GEN SLV Long(min)	28	-2106.34	-30.43	-108.43	112.62	2.855	39.45	2.09E-03
2	Pila 2	20 3	GEN SLV Trasv(min)	28	-2164.77	-94.46	-44.89	104.58	2.855	36.64	2.12E-03
2	Pila 2	20 3	GEN SLV Vert(min)	28	-2125.12	-30.44	-44.76	54.13	2.855	18.96	2.12E-03
									Kh eq.		
					Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	(kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI M	ASSIMI:			Spall e	-496.02	41.56	52.68	54.25	1.302	41.66	1.34E-02
				Pile	-1716.86	94.46	108.43	112.62	2.855	39.45	2.44E-03
SFORZI M	IINIMI:			Spall e	-625.51	-41.56	-52.68				
III				Pile	-2443.07	-94.46	-108.43				

STATI LIMITE DI ESERCIZIO - COMBINAZIONI CARATTERISTICHE (RARE)

Tipo isolatore	Struttura Appoggio	No. 18	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	5 18	GEN RARA Mobili(max)	77	-391.02	22.58	6.47	23.49	1.302	18.04	1.72E-02
1	Spalla 1	5 18	GEN RARA Vento(max)	77	-427.16	33.70	5.19	34.10	1.302	26.19	1.57E-02
1	Spalla 1	5 18	GEN RARA Frenam(max)	77	-451.18	1.94	29.86	29.92	1.302	22.98	1.57E-02
1	Spalla 1	5 18	GEN RARA Termico(max)	77	-409.83	21.25	9.93	23.46	1.302	18.01	1.59E-02
1	Spalla 1	5	GEN RARA Mobili(min)	77	-1403.64	-23.25	-20.57	31.04	1.302	23.84	1.24E-02













		18									
1	Spalla 1	5 18	GEN RARA Vento(min)	77	-1120.74	-34.40	-17.15	38.44	1.302	29.52	1.23E-02
1	Spalla 1	5 18	GEN RARA Frenam(min)	77	-1096.71	-2.64	-41.83	41.91	1.302	32.19	1.23E-02
1	Spalla 1	5 18	GEN RARA Termico(min)	77	-1138.06	-21.95	-21.90	31.01	1.302	23.81	1.21E-02
1	Spalla 1	6 18	GEN RARA Mobili(max)	79	-432.80	22.58	6.59	23.52	1.302	18.06	1.66E-02
1	Spalla 1	6	GEN RARA Vento(max)	79	-457.67	33.75	5.24	34.15	1.302	26.23	1.53E-02
1	Spalla 1	6 18	GEN RARA Frenam(max)	79	-460.16	1.88	30.09	30.15	1.302	23.15	1.53E-02
1	Spalla 1	6	GEN RARA Termico(max)	79	-428.92	21.04	10.15	23.36	1.302	17.94	1.55E-02
1	Spalla 1	6	GEN RARA Mobili(min)	79	-1502.20	-22.75	-19.17	29.75	1.302	22.85	1.25E-02
1	Spalla 1	6	GEN RARA Vento(min)	79	-1196.08	-33.91	-16.21	37.59	1.302	28.86	1.23E-02
1	Spalla 1	6 18	GEN RARA Frenam(min)	79	-1193.59	-2.05	-41.06	41.11	1.302	31.57	1.23E-02
1	Spalla 1	6	GEN RARA Termico(min)	79	-1224.83	-21.21	-21.12	29.93	1.302	22.99	1.21E-02
1	Spalla 1	7	GEN RARA Mobili(max)	81	-433.37	22.76	6.59	23.69	1.302	18.20	1.66E-02
1	Spalla 1	18 7	GEN RARA Vento(max)	81	-458.61	33.92	5.24	34.32	1.302	26.36	1.53E-02
1	Spalla 1	18 7	GEN RARA Frenam(max)	81	-460.16	2.05	30.09	30.16	1.302	23.16	1.53E-02
1	Spalla 1	18 7	GEN RARA Termico(max)	81	-429.49	21.22	10.16	23.53	1.302	18.07	1.55E-02
1	Spalla 1	18 7	GEN RARA Mobili(min)	81	-1501.63	-22.58	-19.17	29.62	1.302	22.75	1.25E-02
1	Spalla 1	18 7	GEN RARA Vento(min)	81	-1195.14	-33.75	-16.21	37.44	1.302	28.75	1.23E-02
1	Spalla 1	18 7	GEN RARA Frenam(min)	81	-1193.59	-1.88	-41.06	41.10	1.302	31.57	1.23E-02
1	Spalla 1	18 7	GEN RARA Termico(min)	81	-1224.26	-21.05	-21.13	29.83	1.302	22.91	1.21E-02
1	Spalla 1	18	GEN RARA Mobili(max)	83	-394.93	23.28	6.46	24.16	1.302	18.55	1.73E-02
1	Spalla 1	18	GEN RARA Vento(max)	83	-433.67	34.45	5.16	34.83	1.302	26.75	1.58E-02
1	Spalla 1	18	GEN RARA Frenam(max)	83	-451.18	2.64	29.86	29.98	1.302	23.02	1.57E-02
1	Spalla 1	18	GEN RARA Termico(max)	83	-413.74	21.98	9.92	24.11	1.302	18.52	1.60E-02
1	Spalla 1	18	GEN RARA Mobili(min)	83	-1399.73	-22.61	-20.56	30.56	1.302	23.47	1.23E-02
1	Spalla 1	18	GEN RARA Vento(min)	83	-1114.22	-33.75	-17.13	37.85	1.302	29.07	1.22E-02
1	Spalla 1	18	GEN RARA Frenam(min)	83	-1096.71	-1.94	-41.83	41.87	1.302	32.16	1.22E-02
1	Spalla 1	18	GEN RARA Termico(min)	83	-1134.15	-21.28	-21.89	30.53	1.302	23.45	1.20E-02
1	Spalla 2	19	GEN RARA Mobili(max)	78	-391.05	22.58	20.57	30.54	1.302	23.46	1.23E-02
1	Spalla 2	19	GEN RARA Vento(max)	78	-427.16	33.70	17.16	37.82	1.302	29.04	1.22E-02
1	Spalla 2	19	GEN RARA Frenam(max)	78	-451.20	1.94	41.83	41.87	1.302	32.16	1.22E-02
1	Spalla 2	19	GEN RARA Termico(max)	78	-409.85	21.25	21.90	30.52	1.302	23.44	1.20E-02
1	Spalla 2	19	GEN RARA Mobili(min)	78	-1403.54	-23.25	-6.47	24.13	1.302	18.53	1.73E-02
1	Spalla 2	19	GEN RARA Vento(min)	78	-1120.70	-34.40	-5.19	34.79	1.302	26.72	1.58E-02
1	Spalla 2	19	GEN RARA Frenam(min)	78	-1096.66	-2.64	-29.86	29.98	1.302	23.02	1.57E-02
1	Spalla 2	19	GEN RARA Termico(min)	78	-1138.02	-21.95	-9.93	24.09	1.302	18.50	1.60E-02
1	Spalla 2	19	GEN RARA Mobili(max)	80	-432.80	22.58	19.17	29.62	1.302	22.75	1.25E-02
1	Spalla 2	19	GEN RARA Vento(max)	80	-457.67	33.74	16.21	37.43	1.302	28.75	1.23E-02
1	Spalla 2	19	GEN RARA Frenam(max)	80	-460.15	1.88	41.06	41.10	1.302	31.57	1.23E-02
1	Spalla 2	19	GEN RARA Termico(max)	80	-428.92	21.04	21.12	29.81	1.302	22.89	1.21E-02
1	Spalla 2	19 1	GEN RARA Mobili(min)	80	-1501.97	-22.75	-6.59	23.69	1.302	18.19	1.66E-02
1	Spalla 2	19	GEN RARA Vento(min)	80	-1195.95	-33.91	-5.24	34.31	1.302	26.35	1.53E-02
1	Spalla 2	19	GEN RARA Frenam(min)	80	-1193.47	-2.05	-30.09	30.16	1.302	23.16	1.53E-02
1	Spalla 2	19	GEN RARA Termico(min)	80	-1224.70	-21.21	-10.15	23.51	1.302	18.06	1.55E-02
1	Spalla 2	19	GEN RARA Mobili(max)	82	-433.37	22.76	19.17	29.76	1.302	22.85	1.24E-02
1	Spalla 2	19 2	GEN RARA Vento(max)	82	-458.61	33.92	16.21	37.59	1.302	28.87	1.23E-02







		19									
1	Spalla 2	2 19	GEN RARA Frenam(max)	82	-460.15	2.05	41.06	41.11	1.302	31.57	1.23E-02
1	Spalla 2	2 19	GEN RARA Termico(max)	82	-429.48	21.22	21.13	29.95	1.302	23.00	1.21E-02
1	Spalla 2	2 19	GEN RARA Mobili(min)	82	-1501.41	-22.58	-6.59	23.52	1.302	18.06	1.66E-02
1	Spalla 2	2 19	GEN RARA Vento(min)	82	-1195.01	-33.75	-5.24	34.15	1.302	26.23	1.53E-02
1	Spalla 2	2 19	GEN RARA Frenam(min)	82	-1193.47	-1.88	-30.09	30.15	1.302	23.15	1.53E-02
1	Spalla 2	2 19	GEN RARA Termico(min)	82	-1224.13	-21.05	-10.16	23.37	1.302	17.95	1.55E-02
1	Spalla 2	3 19	GEN RARA Mobili(max)	84	-394.95	23.28	20.56	31.06	1.302	23.85	1.24E-02
1	Spalla 2	3 19	GEN RARA Vento(max)	84	-433.67	34.45	17.13	38.47	1.302	29.55	1.23E-02
1	Spalla 2	3 19	GEN RARA Frenam(max)	84	-451.20	2.64	41.83	41.91	1.302	32.19	1.23E-02
1	Spalla 2	3 19	GEN RARA Termico(max)	84	-413.75	21.98	21.89	31.02	1.302	23.82	1.21E-02
1	Spalla 2	3 19	GEN RARA Mobili(min)	84	-1399.63	-22.61	-6.46	23.51	1.302	18.06	1.72E-02
1	Spalla 2	3 19	GEN RARA Vento(min)	84	-1114.19	-33.75	-5.16	34.14	1.302	26.22	1.57E-02
1	Spalla 2	3	GEN RARA Frenam(min)	84	-1096.66	-1.94	-29.86	29.92	1.302	22.98	1.57E-02
1	Spalla 2	3	GEN RARA Termico(min)	84	-1134.11	-21.28	-9.92	23.48	1.302	18.03	1.59E-02
2	Pila 1	5 19	GEN RARA Mobili(max)	21	-1579.21	50.41	34.77	61.24	2.855	21.45	5.98E-04
2	Pila 1	5 19	GEN RARA Vento(max)	21	-1617.36	76.91	27.80	81.78	2.855	28.65	9.60E-04
2	Pila 1	5 19	GEN RARA Frenam(max)	21	-1698.73	5.59	81.95	82.14	2.855	28.77	9.52E-04
2	Pila 1	5 19	GEN RARA Termico(max)	21	-1546.68	49.40	31.89	58.80	2.855	20.60	9.29E-04
2	Pila 1	5 19	GEN RARA Mobili(min)	21	-3410.03	-45.94	-13.50	47.88	2.855	16.77	4.09E-03
2	Pila 1	5 19	GEN RARA Vento(min)	21	-2865.88	-72.95	-5.51	73.16	2.855	25.63	3.64E-03
2	Pila 1	5 19	GEN RARA Frenam(min)	21	-2784.51	-1.63	-59.66	59.68	2.855	20.91	3.62E-03
2	Pila 1	5 19	GEN RARA Termico(min)	21	-2936.56	-45.45	-9.59	46.45	2.855	16.27	3.74E-03
2	Pila 1	6	GEN RARA Mobili(max)	23	-2018.29	47.71	32.52	57.74	2.855	20.23	7.83E-04
2	Pila 1	6	GEN RARA Vento(max)	23	-2052.62	74.55	26.32	79.06	2.855	27.70	1.07E-03
2	Pila 1	6	GEN RARA Frenam(max)	23	-2062.32	3.10	80.62	80.68	2.855	28.26	1.05E-03
2	Pila 1	6	GEN RARA Termico(max)	23	-1953.29	46.25	30.46	55.38	2.855	19.40	1.01E-03
2	Pila 1	6	GEN RARA Mobili(min)	23	-3733.49	-46.37	-10.91	47.64	2.855	16.69	3.80E-03
2	Pila 1	6	GEN RARA Vento(min)	23	-3177.32	-73.35	-3.89	73.45	2.855	25.73	3.40E-03
2	Pila 1	6	GEN RARA Frenam(min)	23	-3167.62	-1.90	-58.18	58.21	2.855	20.39	3.39E-03
2	Pila 1	19 6 19	GEN RARA Termico(min)	23	-3276.65	-45.05	-8.03	45.76	2.855	16.03	3.47E-03
2	Pila 1	7 19	GEN RARA Mobili(max)	885	-2016.17	46.38	32.52	56.64	2.855	19.84	9.02E-04
2	Pila 1	7	GEN RARA Vento(max)	885	-2049.08	73.36	26.32	77.94	2.855	27.30	1.13E-03
2	Pila 1	19 7 19	GEN RARA Frenam(max)	885	-2062.32	1.90	80.62	80.64	2.855	28.25	1.11E-03
2	Pila 1	7	GEN RARA Termico(max)	885	-1951.16	45.06	30.46	54.39	2.855	19.05	1.08E-03
2	Pila 1	19 7	GEN RARA Mobili(min)	885	-3735.62	-47.72	-10.91	48.95	2.855	17.15	3.77E-03
2	Pila 1	19 7	GEN RARA Vento(min)	885	-3180.86	-74.56	-3.89	74.66	2.855	26.15	3.38E-03
2	Pila 1	19 7	GEN RARA Frenam(min)	885	-3167.62	-3.10	-58.18	58.26	2.855	20.41	3.38E-03
2	Pila 1	19 7	GEN RARA Termico(min)	885	-3278.78	-46.26	-8.03	46.95	2.855	16.45	3.45E-03
2	Pila 1	19 8	GEN RARA Mobili(max)	27	-1584.45	45.96	34.77	57.63	2.855	20.19	1.30E-03
2	Pila 1	19 8	GEN RARA Vento(max)	27	-1626.08	72.99	27.80	78.10	2.855	27.36	1.38E-03
2	Pila 1	19 8	GEN RARA Frenam(max)	27	-1698.73	1.63	81.95	81.97	2.855	28.71	1.32E-03
2	Pila 1	19 8	GEN RARA Termico(max)	27	-1551.91	45.47	31.89	55.54	2.855	19.46	1.43E-03
2	Pila 1	19 8	GEN RARA Mobili(min)	27	-3404.80	-50.43	-13.50	52.21	2.855	18.29	3.92E-03
2	Pila 1	19 8	GEN RARA Vento(min)	27	-2857.16	-76.94	-5.51	77.14	2.855	27.02	3.51E-03
2	Pila 1	19 8	GEN RARA Frenam(min)	27	-2784.51	-5.59	-59.66	59.92	2.855	20.99	3.50E-03











2	Pila 1	19 8	GEN RARA Termico(min)	27	-2931.33	-49.42	-9.59	50.34	2.855	17.64	3.58E-03
2	Pila 2	20 0	GEN RARA Mobili(max)	22	-1579.20	50.41	13.50	52.19	2.855	18.28	3.92E-03
2	Pila 2	20 0	GEN RARA Vento(max)	22	-1617.34	76.91	5.50	77.11	2.855	27.01	3.50E-03
2	Pila 2	20 0	GEN RARA Frenam(max)	22	-1698.76	5.59	59.66	59.92	2.855	20.99	3.50E-03
2	Pila 2	20	GEN RARA Termico(max)	22	-1546.67	49.40	9.59	50.32	2.855	17.63	3.58E-03
2	Pila 2	20 0	GEN RARA Mobili(min)	22	-3410.05	-45.94	-34.77	57.61	2.855	20.18	1.30E-03
2	Pila 2	20 0	GEN RARA Vento(min)	22	-2865.91	-72.95	-27.80	78.07	2.855	27.35	1.38E-03
2	Pila 2	20 0	GEN RARA Frenam(min)	22	-2784.48	-1.63	-81.95	81.97	2.855	28.71	1.31E-03
2	Pila 2	20 0	GEN RARA Termico(min)	22	-2936.58	-45.45	-31.89	55.52	2.855	19.45	1.43E-03
2	Pila 2	20	GEN RARA Mobili(max)	24	-2018.30	47.71	10.91	48.94	2.855	17.14	3.77E-03
2	Pila 2	20	GEN RARA Vento(max)	24	-2052.63	74.55	3.89	74.65	2.855	26.15	3.38E-03
2	Pila 2	20	GEN RARA Frenam(max)	24	-2062.31	3.10	58.19		2.855		3.38E-03
		20	, ,					58.27		20.41	
2	Pila 2	1 20	GEN RARA Termico(max)	24	-1953.29	46.25	8.03	46.94	2.855	16.44	3.45E-03
2	Pila 2	1 20	GEN RARA Mobili(min)	24	-3733.49	-46.37	-32.52	56.64	2.855	19.84	9.03E-04
2	Pila 2	1 20	GEN RARA Vento(min)	24	-3177.31	-73.35	-26.32	77.93	2.855	27.30	1.13E-03
2	Pila 2	1 20	GEN RARA Frenam(min)	24	-3167.63	-1.90	-80.62	80.64	2.855	28.25	1.10E-03
2	Pila 2	1 20	GEN RARA Termico(min)	24	-3276.65	-45.05	-30.46	54.38	2.855	19.05	1.08E-03
2	Pila 2	2 20	GEN RARA Mobili(max)	886	-2016.16	46.38	10.91	47.65	2.855	16.69	3.80E-03
2	Pila 2	2 20	GEN RARA Vento(max)	886	-2049.07	73.36	3.89	73.46	2.855	25.73	3.40E-03
2	Pila 2	2 20	GEN RARA Frenam(max)	886	-2062.31	1.90	58.19	58.22	2.855	20.40	3.40E-03
2	Pila 2	2 20	GEN RARA Termico(max)	886	-1951.16	45.06	8.03	45.77	2.855	16.03	3.47E-03
2	Pila 2	2 20	GEN RARA Mobili(min)	886	-3735.63	-47.72	-32.52	57.75	2.855	20.23	7.80E-04
2	Pila 2	2 20	GEN RARA Vento(min)	886	-3180.87	-74.56	-26.32	79.07	2.855	27.70	1.07E-03
2	Pila 2	2 20	GEN RARA Frenam(min)	886	-3167.63	-3.10	-80.62	80.68	2.855	28.26	1.05E-03
2	Pila 2	20	GEN RARA Termico(min)	886	-3278.79	-46.26	-30.46	55.39	2.855	19.40	1.01E-03
2	Pila 2	3 20	GEN RARA Mobili(max)	28	-1584.43	45.96	13.50	47.90	2.855	16.78	4.09E-03
2	Pila 2	3 20	GEN RARA Vento(max)	28	-1626.05	72.99	5.50	73.20	2.855	25.64	3.64E-03
2	Pila 2	3 20	GEN RARA Frenam(max)	28	-1698.76	1.63	59.66	59.68	2.855	20.91	3.62E-03
2	Pila 2	3 20	GEN RARA Termico(max)	28	-1551.90	45.47	9.59	46.47	2.855	16.28	3.74E-03
2	Pila 2	3 20	GEN RARA Mobili(min)	28	-3404.82	-50.43	-34.77	61.25	2.855	21.46	5.95E-04
2	Pila 2	3 20	GEN RARA Vento(min)	28	-2857.19	-76.94	-27.80	81.81	2.855	28.66	9.57E-04
2	Pila 2	3 20	GEN RARA Frenam(min)	28	-2784.48	-5.59	-81.95	82.14	2.855	28.77	9.45E-04
2	Pila 2	3	GEN RARA Termico(min)	28	-2931.35	-49.42	-31.89	58.82	2.855	20.60	9.26E-04
				Spall	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI M	IASSIMI:			e Pile	-391.02 -1546.67	34.45 76.91	41.83 81.95	41.91 82.14	1.302 2.855	32.19 28.77	1.48E-02 4.09E-03
					1070.07	10.31	31.33	32.14	2.000	20.11	4.00L-03
SFORZI M	IINIMI:			Spall e Pile	-1502.20 -3735.63	-34.40 -76.94	-41.83 -81.95				

STATI LIMITE DI ESERCIZIO - COMBINAZIONI FREQUENTI

Tipo isolatore	Struttura Appoggio	No.	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	18 5 18	GEN FREQ Mobili(max)	77	-460.64	1.87	3.73	4.17	1.302	3.20	1.56E-02
1	Spalla 1	5	GEN FREQ Vento(max)	77	-523.87	6.30	1.37	6.45	1.302	4.95	1.31E-02













		18									
1	Spalla 1	5 18	GEN FREQ Termico(max)	77	-522.19	0.01	2.53	2.53	1.302	1.94	1.32E-02
1	Spalla 1	5 18	GEN FREQ Mobili(min)	77	-1087.25	-2.57	-15.70	15.91	1.302	12.22	1.24E-02
1	Spalla 1	5 18	GEN FREQ Vento(min)	77	-604.28	-7.05	-10.84	12.93	1.302	9.93	1.26E-02
1	Spalla 1	5 18	GEN FREQ Termico(min)	77	-605.96	-0.76	-12.00	12.02	1.302	9.23	1.26E-02
1	Spalla 1	6 18	GEN FREQ Mobili(max)	79	-470.92	1.87	3.93	4.35	1.302	3.34	1.52E-02
1	Spalla 1	6 18	GEN FREQ Vento(max)	79	-508.03	6.34	1.56	6.53	1.302	5.01	1.30E-02
1	Spalla 1	6 18	GEN FREQ Termico(max)	79	-501.40	-0.02	2.78	2.78	1.302	2.14	1.31E-02
1	Spalla 1	6 18	GEN FREQ Mobili(min)	79	-1182.83	-2.04	-14.90	15.04	1.302	11.55	1.23E-02
1	Spalla 1	6 18	GEN FREQ Vento(min)	79	-587.62	-6.51	-10.83	12.64	1.302	9.70	1.26E-02
1	Spalla 1	6 18	GEN FREQ Termico(min)	79	-594.26	-0.15	-12.05	12.05	1.302	9.25	1.25E-02
1	Spalla 1	7 18	GEN FREQ Mobili(max)	81	-470.92	2.04	3.93	4.43	1.302	3.40	1.52E-02
1	Spalla 1	7 18	GEN FREQ Vento(max)	81	-508.22	6.51	1.56	6.69	1.302	5.14	1.30E-02
1	Spalla 1	7 18	GEN FREQ Termico(max)	81	-501.40	0.15	2.78	2.78	1.302	2.14	1.31E-02
1	Spalla 1	7 18	GEN FREQ Mobili(min)	81	-1182.83	-1.87	-14.90	15.02	1.302	11.53	1.23E-02
1	Spalla 1	7 18	GEN FREQ Vento(min)	81	-587.44	-6.34	-10.83	12.55	1.302	9.64	1.26E-02
1	Spalla 1	7 18	GEN FREQ Termico(min)	81	-594.26	0.02	-12.05	12.05	1.302	9.25	1.25E-02
1	Spalla 1	8 18	GEN FREQ Mobili(max)	83	-460.64	2.57	3.73	4.53	1.302	3.48	1.57E-02
1	Spalla 1	8 18	GEN FREQ Vento(max)	83	-525.17	7.06	1.37	7.19	1.302	5.52	1.31E-02
1	Spalla 1	8 18	GEN FREQ Termico(max)	83	-522.19	0.76	2.53	2.64	1.302	2.03	1.32E-02
1	Spalla 1	8 18	GEN FREQ Mobili(min)	83	-1087.25	-1.87	-15.70	15.81	1.302	12.14	1.23E-02
1	Spalla 1	8 18	GEN FREQ Vento(min)	83	-602.98	-6.31	-10.84	12.54	1.302	9.63	1.26E-02
1	Spalla 1	8 19	GEN FREQ Termico(min)	83	-605.96	-0.01	-12.00	12.00	1.302	9.22	1.26E-02
1	Spalla 2	0	GEN FREQ Mobili(max)	78	-460.67	1.87	15.70	15.81	1.302	12.14	1.23E-02
1	Spalla 2	0	GEN FREQ Vento(max)	78	-523.87	6.30	10.84	12.54	1.302	9.63	1.26E-02
1	Spalla 2	0	GEN FREQ Termico(max)	78	-522.19	0.01	12.00	12.00	1.302	9.22	1.26E-02
1	Spalla 2	0	GEN FREQ Mobili(min)	78	-1087.19	-2.57	-3.73	4.53	1.302	3.48	1.57E-02
1	Spalla 2	0	GEN FREQ Vento(min)	78	-604.28	-7.05	-1.37	7.18	1.302	5.52	1.31E-02
1	Spalla 2	0	GEN FREQ Termico(min)	78	-605.96	-0.76	-2.53	2.64	1.302	2.03	1.32E-02
1	Spalla 2	19	GEN FREQ Mobili(max)	80	-470.92	1.87	14.90	15.02	1.302	11.53	1.23E-02
1	Spalla 2	19	GEN FREQ Vento(max)	80	-508.04	6.34	10.83	12.55	1.302	9.64	1.26E-02
1	Spalla 2	19	GEN FREQ Termico(max)	80	-501.40	-0.02	12.05	12.05	1.302	9.25	1.25E-02
1	Spalla 2	19	GEN FREQ Mobili(min)	80	-1182.70	-2.04	-3.93	4.43	1.302	3.40	1.52E-02
1	Spalla 2	19	GEN FREQ Vento(min)	80	-587.62	-6.51	-1.56	6.69	1.302	5.14	1.30E-02
1	Spalla 2	19	GEN FREQ Termico(min)	80	-594.26	-0.15	-2.78	2.78	1.302	2.14	1.31E-02
1	Spalla 2	2 19	GEN FREQ Mobili(max)	82	-470.92	2.04	14.90	15.04	1.302	11.55	1.23E-02
1	Spalla 2	2	GEN FREQ Vento(max)	82	-508.22	6.51	10.83	12.64	1.302	9.70	1.26E-02
1	Spalla 2	19 2	GEN FREQ Termico(max)	82	-501.40	0.15	12.05	12.05	1.302	9.25	1.25E-02
1	Spalla 2	19 2	GEN FREQ Mobili(min)	82	-1182.70	-1.87	-3.93	4.35	1.302	3.34	1.52E-02
1	Spalla 2	19 2	GEN FREQ Vento(min)	82	-587.44	-6.34	-1.56	6.53	1.302	5.01	1.30E-02
1	Spalla 2	19 2	GEN FREQ Termico(min)	82	-594.26	0.02	-2.78	2.78	1.302	2.14	1.31E-02
1	Spalla 2	19	GEN FREQ Mobili(max)	84	-460.67	2.57	15.70	15.91	1.302	12.22	1.24E-02
1	Spalla 2	19 3	GEN FREQ Vento(max)	84	-525.17	7.06	10.84	12.94	1.302	9.93	1.26E-02
1	Spalla 2	19 3	GEN FREQ Termico(max)	84	-522.19	0.76	12.00	12.02	1.302	9.23	1.26E-02
1	Spalla 2	19	GEN FREQ Mobili(min)	84	-1087.19	-1.87	-3.73	4.17	1.302	3.20	1.56E-02
1	Spalla 2	19 3	GEN FREQ Vento(min)	84	-602.98	-6.31	-1.37	6.46	1.302	4.96	1.31E-02











		19									
1	Spalla 2	3 19	GEN FREQ Termico(min)	84	-605.96	-0.01	-2.53	2.53	1.302	1.94	1.32E-02
2	Pila 1	5 19	GEN FREQ Mobili(max)	21	-1725.12	5.33	26.55	27.08	2.855	9.49	9.66E-04
2	Pila 1	5 19	GEN FREQ Vento(max)	21	-1795.14	17.24	17.32	24.44	2.855	8.56	2.15E-03
2	Pila 1	5 19	GEN FREQ Termico(max)	21	-1785.66	3.23	18.32	18.60	2.855	6.52	2.14E-03
2	Pila 1	5 19	GEN FREQ Mobili(min)	21	-2758.12	-1.38	-4.26	4.48	2.855	1.57	3.59E-03
2	Pila 1	5 19	GEN FREQ Vento(min)	21	-2086.50	-13.85	6.82	15.44	2.855	5.41	2.36E-03
2	Pila 1	5	GEN FREQ Termico(min)	21	-2095.98	0.16	5.82	5.82	2.855	2.04	2.38E-03
2	Pila 1	19 6	GEN FREQ Mobili(max)	23	-2088.98	3.03	25.21	25.39	2.855	8.89	1.07E-03
2	Pila 1	19 6	GEN FREQ Vento(max)	23	-2144.13	15.17	17.23	22.96	2.855	8.04	2.13E-03
2	Pila 1	19 6	GEN FREQ Termico(max)	23	-2120.35	0.95	18.26	18.28	2.855	6.41	2.11E-03
2	Pila 1	19 6	GEN FREQ Mobili(min)	23	-3140.96	-1.82	-2.78	3.32	2.855	1.16	3.38E-03
2	Pila 1	19 6	GEN FREQ Vento(min)	23	-2407.14	-14.13	6.79	15.68	2.855	5.49	2.29E-03
2	Pila 1	19 6	GEN FREQ Termico(min)	23	-2430.93	0.09	5.76	5.76	2.855	2.02	2.31E-03
2	Pila 1	19 7	GEN FREQ Mobili(max)	885	-2088.98	1.82	25.21	25.28	2.855	8.85	1.12E-03
2	Pila 1	19 7	GEN FREQ Vento(max)	885	-2143.42	14.13	17.23	22.28	2.855	7.81	2.13E-03
2	Pila 1	19 7	GEN FREQ Termico(max)	885	-2120.35	-0.09	18.26	18.26	2.855	6.40	2.11E-03
2	Pila 1	19 7	GEN FREQ Mobili(min)	885	-3140.96	-3.03	-2.78	4.11	2.855	1.44	3.36E-03
2	Pila 1	19 7	GEN FREQ Vento(min)	885	-2407.85	-15.17	6.79	16.62	2.855	5.82	2.29E-03
2	Pila 1	19 7	GEN FREQ Termico(min)	885	-2430.93	-0.95	5.76	5.84	2.855	2.05	2.30E-03
2	Pila 1	19 8	GEN FREQ Mobili(max)	27	-1725.12	1.38	26.55	26.59	2.855	9.31	1.30E-03
2	Pila 1	19 8	GEN FREQ Vento(max)	27	-1796.89	13.86	17.32	22.18	2.855	7.77	2.20E-03
2	Pila 1	19 8	GEN FREQ Termico(max)	27	-1785.66	-0.16	18.32	18.32	2.855	6.42	2.19E-03
2	Pila 1	19 8	GEN FREQ Mobili(min)	27	-2758.12	-5.33	-4.26	6.82	2.855	2.39	3.48E-03
2	Pila 1	19 8	GEN FREQ Vento(min)	27	-2084.76	-17.24	6.82	18.54	2.855	6.49	2.32E-03
2	Pila 1	19 8	GEN FREQ Termico(min)	27	-2095.98	-3.23	5.82	6.66	2.855	2.33	2.33E-03
2	Pila 2	20 0	GEN FREQ Mobili(max)	22	-1725.12	5.33	4.26	6.82	2.855	2.39	3.48E-03
2	Pila 2	20	GEN FREQ Vento(max)	22	-1795.14	17.24	-6.82	18.54	2.855	6.49	2.31E-03
2	Pila 2	20 0	GEN FREQ Termico(max)	22	-1785.66	3.23	-5.82	6.66	2.855	2.33	2.33E-03
2	Pila 2	20 0	GEN FREQ Mobili(min)	22	-2758.12	-1.38	-26.55	26.59	2.855	9.31	1.30E-03
2	Pila 2	20 0	GEN FREQ Vento(min)	22	-2086.51	-13.85	-17.32	22.18	2.855	7.77	2.20E-03
2	Pila 2	20	GEN FREQ Termico(min)	22	-2095.98	0.16	-18.32	18.32	2.855	6.42	2.19E-03
2	Pila 2	20	GEN FREQ Mobili(max)	24	-2088.99	3.03	2.78	4.11	2.855	1.44	3.36E-03
2	Pila 2	20	GEN FREQ Vento(max)	24	-2144.14	15.17	-6.79	16.62	2.855	5.82	2.29E-03
2	Pila 2	20	GEN FREQ Termico(max)	24	-2120.35	0.95	-5.76	5.84	2.855	2.05	2.30E-03
2	Pila 2	20	GEN FREQ Mobili(min)	24	-3140.96	-1.83	-25.21	25.28	2.855	8.85	1.12E-03
2	Pila 2	20	GEN FREQ Vento(min)	24	-2407.14	-14.13	-17.23	22.28	2.855	7.81	2.13E-03
2	Pila 2	20	GEN FREQ Termico(min)	24	-2430.93	0.09	-18.26	18.26	2.855	6.40	2.11E-03
2	Pila 2	20	GEN FREQ Mobili(max)	886	-2088.99	1.83	2.78	3.33	2.855	1.17	3.38E-03
2	Pila 2	20	GEN FREQ Vento(max)	886	-2143.42	14.13	-6.79	15.68	2.855	5.49	2.29E-03
2	Pila 2	20 2	GEN FREQ Termico(max)	886	-2120.35	-0.09	-5.76	5.76	2.855	2.02	2.31E-03
2	Pila 2	20 2	GEN FREQ Mobili(min)	886	-3140.96	-3.03	-25.21	25.39	2.855	8.89	1.07E-03
2	Pila 2	20 2 20	GEN FREQ Vento(min)	886	-2407.86	-15.17	-17.23	22.96	2.855	8.04	2.12E-03
2	Pila 2	20 2 20	GEN FREQ Termico(min)	886	-2430.93	-0.95	-18.26	18.28	2.855	6.41	2.11E-03
2	Pila 2	3 20	GEN FREQ Mobili(max)	28	-1725.12	1.38	4.26	4.48	2.855	1.57	3.59E-03
2	Pila 2	3	GEN FREQ Vento(max)	28	-1796.88	13.86	-6.82	15.45	2.855	5.41	2.36E-03













2	Pila 2	20 3 20	GEN FREQ Termico(max)	28	-1785.66	-0.16	-5.82	5.82	2.855	2.04	2.38E-03
2	Pila 2	3 20	GEN FREQ Mobili(min)	28	-2758.12	-5.33	-26.55	27.08	2.855	9.49	9.65E-04
2	Pila 2	3 20	GEN FREQ Vento(min)	28	-2084.76	-17.24	-17.32	24.44	2.855	8.56	2.15E-03
2	Pila 2	3	GEN FREQ Termico(min)	28	-2095.98	-3.23	-18.32	18.60	2.855	6.52	2.13E-03
				Snall	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI	MASSIMI:			Spall e Pile							

STATI LIMITE DI ESERCIZIO - COMBINAZIONI QUASI PERMANENTI

Tipo isolatore	Struttura Appoggio	No.	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	18 5 18	GEN Q.P.(max)	77	-529.17	-0.06	1.32	1.32	1.302	1.01	1.31E-02
1	Spalla 1	5 18	GEN Q.P.(min)	77	-598.98	-0.70	-10.79	10.81	1.302	8.30	1.26E-02
1	Spalla 1	6 18	GEN Q.P.(max)	79	-509.14	-0.03	1.54	1.54	1.302	1.18	1.30E-02
1	Spalla 1	6 18	GEN Q.P.(min)	79	-586.52	-0.14	-10.81	10.81	1.302	8.30	1.26E-02
1	Spalla 1	7 18	GEN Q.P.(max)	81	-509.14	0.14	1.54	1.55	1.302	1.19	1.30E-02
1	Spalla 1	7 18	GEN Q.P.(min)	81	-586.52	0.03	-10.81	10.81	1.302	8.30	1.26E-02
1	Spalla 1	8 18	GEN Q.P.(max)	83	-529.17	0.70	1.32	1.49	1.302	1.15	1.31E-02
1	Spalla 1	8 19	GEN Q.P.(min)	83	-598.98	0.06	-10.79	10.79	1.302	8.29	1.26E-02
1	Spalla 2	0 19	GEN Q.P.(max)	78	-529.17	-0.06	10.79	10.79	1.302	8.29	1.26E-02
1	Spalla 2	0	GEN Q.P.(min)	78	-598.98	-0.70	-1.32	1.49	1.302	1.15	1.31E-02
1	Spalla 2	1 19	GEN Q.P.(max)	80	-509.14	-0.03	10.81	10.81	1.302	8.30	1.26E-02
1	Spalla 2	19	GEN Q.P.(min)	80	-586.52	-0.14	-1.54	1.55	1.302	1.19	1.30E-02
1	Spalla 2	19	GEN Q.P.(max)	82	-509.14	0.14	10.81	10.81	1.302	8.30	1.26E-02
1	Spalla 2	19	GEN Q.P.(min)	82	-586.52	0.03	-1.54	1.54	1.302	1.18	1.30E-02
1	Spalla 2	3 19	GEN Q.P.(max)	84	-529.17	0.70	10.79	10.81	1.302	8.30	1.26E-02
1	Spalla 2	3 19	GEN Q.P.(min)	84	-598.98	0.06	-1.32	1.32	1.302	1.01	1.31E-02
2	Pila 1	5 19	GEN Q.P.(max)	21	-1811.52	2.97	17.28	17.53	2.855	6.14	2.15E-03
2	Pila 1	5 19	GEN Q.P.(min)	21	-2070.12	0.41	6.86	6.87	2.855	2.41	2.36E-03
2	Pila 1	6 19	GEN Q.P.(max)	23	-2146.23	0.88	17.22	17.24	2.855	6.04	2.13E-03
2	Pila 1	6 19	GEN Q.P.(min)	23	-2405.05	0.16	6.80	6.80	2.855	2.38	2.29E-03
2	Pila 1	7 19	GEN Q.P.(max)	885	-2146.23	-0.16	17.22	17.22	2.855	6.03	2.13E-03
2	Pila 1	7 19	GEN Q.P.(min)	885	-2405.05	-0.88	6.80	6.86	2.855	2.40	2.29E-03
2	Pila 1	8 19	GEN Q.P.(max)	27	-1811.52	-0.41	17.28	17.28	2.855	6.06	2.20E-03
2	Pila 1	8	GEN Q.P.(min)	27	-2070.12	-2.97	6.86	7.48	2.855	2.62	2.31E-03
2	Pila 2	0 20	GEN Q.P.(max)	22	-1811.52	2.97	-6.86	7.48	2.855	2.62	2.31E-03
2	Pila 2	0 20	GEN Q.P.(min)	22	-2070.12	0.41	-17.28	17.28	2.855	6.06	2.20E-03
2	Pila 2	1 20	GEN Q.P.(max)	24	-2146.23	0.88	-6.80	6.86	2.855	2.40	2.29E-03
2	Pila 2	1 20	GEN Q.P.(min)	24	-2405.05	0.16	-17.22	17.22	2.855	6.03	2.13E-03
2	Pila 2	2 20	GEN Q.P.(max)	886	-2146.23	-0.16	-6.80	6.80	2.855	2.38	2.29E-03
2	Pila 2		GEN Q.P.(min)	886	-2405.05	-0.88	-17.22	17.24	2.855	6.04	2.13E-03













2	Pila 2	20 3 20	GEN Q.P.(max)	28	-1811.52	-0.41	-6.86	6.87	2.855	2.41	2.36E-03
2	Pila 2	3	GEN Q.P.(min)	28	-2070.12	-2.97	-17.28	17.53	2.855	6.14	2.15E-03
					Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
SFORZI N	MASSIMI:			Spall e Pile	-509.14 -1811.52	0.70 2.97	10.81 17.28	10.81 17.53	1.302 2.855	8.30 6.14	1.31E-02 2.36E-03
SFORZI N	MINIMI:			Spall e Pile	-598.98 -2405.05	-0.70 -2.97	-10.81 -17.28				

STATI LIMITE DI ESERCIZIO - SISMICI (SLD)

Tipo isolatore	Struttura Appoggio	No. 18	Load	Node	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
1	Spalla 1	5	GEN SLD Long(max)	77	-523.46	4.92	18.32	18.97	1.302	14.57	1.32E-02
1	Spalla 1	18 5	GEN SLD Trasv(max)	77	-518.48	16.53	6.53	17.77	1.302	13.65	1.32E-02
1	Spalla 1	18 5 18	GEN SLD Vert(max)	77	-521.93	4.92	6.50	8.15	1.302	6.26	1.32E-02
1	Spalla 1	5 18	GEN SLD Long(min)	77	-604.69	-5.67	-27.79	28.36	1.302	21.78	1.26E-02
1	Spalla 1	5 18	GEN SLD Trasv(min)	77	-609.67	-17.28	-16.00	23.55	1.302	18.09	1.26E-02
1	Spalla 1	5 18	GEN SLD Vert(min)	77	-606.22	-5.67	-15.97	16.95	1.302	13.01	1.26E-02
1	Spalla 1	6 18	GEN SLD Long(max)	79	-505.51	4.95	18.52	19.17	1.302	14.72	1.31E-02
1	Spalla 1	6 18	GEN SLD Trasv(max)	79	-506.73	16.57	6.68	17.87	1.302	13.72	1.31E-02
1	Spalla 1	6 18	GEN SLD Vert(max)	79	-504.09	4.95	6.71	8.34	1.302	6.40	1.31E-02
1	Spalla 1	6 18	GEN SLD Long(min)	79	-590.15	-5.12	-27.79	28.26	1.302	21.70	1.25E-02
1	Spalla 1	6 18	GEN SLD Trasv(min)	79	-588.93	-16.75	-15.95	23.13	1.302	17.76	1.25E-02
1	Spalla 1	6 18	GEN SLD Vert(min)	79	-591.57	-5.12	-15.97	16.77	1.302	12.88	1.25E-02
1	Spalla 1	7 18	GEN SLD Long(max)	81	-505.51	5.12	18.52	19.21	1.302	14.76	1.31E-02
1	Spalla 1	7 18	GEN SLD Trasv(max)	81	-506.72	16.75	6.68	18.03	1.302	13.85	1.31E-02
1	Spalla 1	7 18	GEN SLD Vert(max)	81	-504.09	5.12	6.71	8.44	1.302	6.48	1.31E-02
1	Spalla 1	7 18	GEN SLD Long(min)	81	-590.15	-4.95	-27.79	28.23	1.302	21.68	1.25E-02
1	Spalla 1	7 18	GEN SLD Trasv(min)	81	-588.93	-16.57	-15.95	23.00	1.302	17.66	1.25E-02
1	Spalla 1	7 18	GEN SLD Vert(min)	81	-591.57	-4.95	-15.97	16.72	1.302	12.84	1.25E-02
1	Spalla 1	8 18	GEN SLD Long(max)	83	-523.45	5.67	18.32	19.18	1.302	14.73	1.32E-02
1	Spalla 1	8	GEN SLD Trasv(max)	83	-518.47	17.28	6.53	18.47	1.302	14.19	1.32E-02
1	Spalla 1	8	GEN SLD Vert(max)	83	-521.93	5.67	6.50	8.63	1.302	6.62	1.32E-02
1	Spalla 1	8	GEN SLD Long(min)	83	-604.70	-4.92	-27.79	28.22	1.302	21.67	1.26E-02
1	Spalla 1	8	GEN SLD Trasv(min)	83	-609.68	-16.53	-16.00	23.01	1.302	17.67	1.26E-02
1	Spalla 1	8	GEN SLD Vert(min)	83	-606.23	-4.92	-15.97	16.71	1.302	12.83	1.26E-02
1	Spalla 2	0	GEN SLD Long(max)	78	-523.46	4.92	27.79	28.22	1.302	21.67	1.26E-02
1	Spalla 2	0 19	GEN SLD Trasv(max)	78	-518.48	16.53	16.00	23.01	1.302	17.67	1.26E-02
1	Spalla 2	0 19	GEN SLD Vert(max)	78	-521.93	4.92	15.97	16.71	1.302	12.83	1.26E-02
1	Spalla 2	0	GEN SLD Long(min)	78	-604.69	-5.67	-18.32	19.18	1.302	14.73	1.32E-02
1	Spalla 2	0 19	GEN SLD Trasv(min)	78	-609.67	-17.28	-6.53	18.47	1.302	14.19	1.32E-02
1	Spalla 2	0	GEN SLD Vert(min)	78	-606.22	-5.67	-6.50	8.63	1.302	6.62	1.32E-02
1	Spalla 2	1	GEN SLD Long(max)	80	-505.51	4.95	27.79	28.23	1.302	21.68	1.25E-02
1	Spalla 2		GEN SLD Trasv(max)	80	-506.73	16.57	15.95	23.00	1.302	17.66	1.25E-02









		19									
1	Spalla 2	1 19	GEN SLD Vert(max)	80	-504.09	4.95	15.97	16.72	1.302	12.84	1.25E-02
1	Spalla 2	1 1 19	GEN SLD Long(min)	80	-590.15	-5.12	-18.52	19.21	1.302	14.76	1.31E-02
1	Spalla 2	1 19	GEN SLD Trasv(min)	80	-588.93	-16.75	-6.68	18.03	1.302	13.85	1.31E-02
1	Spalla 2	1 1 19	GEN SLD Vert(min)	80	-591.57	-5.12	-6.71	8.44	1.302	6.48	1.31E-02
1	Spalla 2	19	GEN SLD Long(max)	82	-505.51	5.12	27.79	28.26	1.302	21.70	1.25E-02
1	Spalla 2	19	GEN SLD Trasv(max)	82	-506.72	16.75	15.95	23.13	1.302	17.76	1.25E-02
1	Spalla 2	19 19	GEN SLD Vert(max)	82	-504.09	5.12	15.97	16.77	1.302	12.88	1.25E-02
1	Spalla 2	19	GEN SLD Long(min)	82	-590.15	-4.95	-18.52	19.17	1.302	14.72	1.31E-02
1	Spalla 2	19	GEN SLD Trasv(min)	82	-588.93	-16.57	-6.68	17.87	1.302	13.72	1.31E-02
1	Spalla 2	19	GEN SLD Vert(min)	82	-591.57	-4.95	-6.71	8.34	1.302	6.40	1.31E-02
1	Spalla 2	3 19	GEN SLD Long(max)	84	-523.45	5.67	27.79	28.36	1.302	21.78	1.26E-02
1	Spalla 2	3	GEN SLD Trasv(max)	84	-518.47	17.28	16.00	23.55	1.302	18.09	1.26E-02
1	Spalla 2	19 3	GEN SLD Vert(max)	84	-521.93	5.67	15.97	16.95	1.302	13.01	1.26E-02
1	Spalla 2	19 3	GEN SLD Long(min)	84	-604.70	-4.92	-18.32	18.97	1.302	14.57	1.32E-02
1	Spalla 2	19 3	GEN SLD Trasv(min)	84	-609.68	-16.53	-6.53	17.77	1.302	13.65	1.32E-02
1	Spalla 2	19 3	GEN SLD Vert(min)	84	-606.22	-4.92	-6.50	8.15	1.302	6.26	1.32E-02
2	Pila 1	19 5	GEN SLD Long(max)	21	-1796.98	14.11	54.27	56.07	2.855	19.64	2.13E-03
2	Pila 1	19 5	GEN SLD Trasv(max)	21	-1773.31	40.09	28.48	49.18	2.855	17.23	2.14E-03
2	Pila 1	19 5	GEN SLD Vert(max)	21	-1789.90	14.12	28.43	31.74	2.855	11.12	2.14E-03
2	Pila 1	19 5	GEN SLD Long(min)	21	-2084.66	-10.73	-30.13	31.98	2.855	11.20	2.39E-03
2	Pila 1	19 5	GEN SLD Trasv(min)	21	-2108.33	-36.71	-4.35	36.97	2.855	12.95	2.39E-03
2	Pila 1	19 5	GEN SLD Vert(min)	21	-2091.75	-10.73	-4.29	11.56	2.855	4.05	2.38E-03
2	Pila 1	19 6	GEN SLD Long(max)	23	-2140.00	12.03	54.18	55.50	2.855	19.44	2.10E-03
2	Pila 1	19	GEN SLD Trasv(max)	23	-2137.99	38.06	28.35	47.46	2.855	16.63	2.12E-03
2	Pila 1	19 6	GEN SLD Vert(max)	23	-2131.64	12.03	28.34	30.79	2.855	10.79	2.12E-03
2	Pila 1	19	GEN SLD Long(min)	23	-2411.28	-10.99	-30.16	32.10	2.855	11.24	2.31E-03
2	Pila 1	19	GEN SLD Trasv(min)	23	-2413.29	-37.02	-4.33	37.27	2.855	13.06	2.30E-03
2	Pila 1	19 6	GEN SLD Vert(min)	23	-2419.63	-11.00	-4.32	11.82	2.855	4.14	2.30E-03
2	Pila 1	19 7	GEN SLD Long(max)	885	-2140.00	10.99	54.18	55.28	2.855	19.37	2.11E-03
2	Pila 1	19 7	GEN SLD Trasv(max)	885	-2137.99	37.02	28.35	46.63	2.855	16.33	2.12E-03
2	Pila 1	19 7	GEN SLD Vert(max)	885	-2131.65	11.00	28.34	30.40	2.855	10.65	2.12E-03
2	Pila 1	19 7	GEN SLD Long(min)	885	-2411.28	-12.03	-30.16	32.47	2.855	11.37	2.31E-03
2	Pila 1	19 7	GEN SLD Trasv(min)	885	-2413.29	-38.06	-4.33	38.31	2.855	13.42	2.30E-03
2	Pila 1	19 7	GEN SLD Vert(min)	885	-2419.63	-12.03	-4.32	12.78	2.855	4.48	2.30E-03
2	Pila 1	19 8	GEN SLD Long(max)	27	-1796.99	10.73	54.27	55.32	2.855	19.38	2.18E-03
2	Pila 1	19 8	GEN SLD Trasv(max)	27	-1773.31	36.71	28.48	46.46	2.855	16.28	2.20E-03
2	Pila 1	19 8	GEN SLD Vert(max)	27	-1789.91	10.73	28.43	30.39	2.855	10.65	2.19E-03
2	Pila 1	19 8	GEN SLD Long(min)	27	-2084.66	-14.11	-30.13	33.27	2.855	11.65	2.34E-03
2	Pila 1	19 8	GEN SLD Trasv(min)	27	-2108.33	-40.09	-4.35	40.33	2.855	14.13	2.33E-03
2	Pila 1	19 8	GEN SLD Vert(min)	27	-2091.73	-14.12	-4.29	14.76	2.855	5.17	2.33E-03
2	Pila 2	20 0	GEN SLD Long(max)	22	-1796.98	14.11	30.13	33.27	2.855	11.65	2.34E-03
2	Pila 2	20 0	GEN SLD Trasv(max)	22	-1773.31	40.09	4.35	40.33	2.855	14.13	2.33E-03
2	Pila 2	20 0	GEN SLD Vert(max)	22	-1789.90	14.12	4.29	14.76	2.855	5.17	2.33E-03
2	Pila 2	20 0	GEN SLD Long(min)	22	-2084.66	-10.73	-54.27	55.32	2.855	19.38	2.18E-03
2	Pila 2	20 0	5 , ,	22	-2108.33	-36.71	-28.48	46.46	2.855	16.28	2.20E-03
_	1 11U Z	J	CLIT OLD TIASV(IIIII)	22	2100.00	50.71	20.40	70.70	2.000	10.20	Z.ZUL-UU









SFORZI MINIMI:				Spall e Pile	-609.68 -2419.63	-17.28 -40.09	-27.79 -54.27					
SFORZI MASSIMI:		SIMI:			e Pile	-504.09 -1773.31	17.28 40.09	27.79 54.27	28.36 56.07	1.302 2.855	21.78 19.64	1.32E-02 2.39E-03
					Spall	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Shear- tot (kN)	Kh eq. (kN/mm)	Deform. (mm)	Rotazion e (rad)
2	2 P	ila 2	20 3	GEN SLD Vert(min)	28	-2091.73	-14.12	-28.43	31.74	2.855	11.12	2.14E-03
2	2 P	ila 2	20 3	GEN SLD Trasv(min)	28	-2108.33	-40.09	-28.48	49.18	2.855	17.23	2.13E-03
2	2 P	ila 2	20 3	GEN SLD Long(min)	28	-2084.66	-14.11	-54.27	56.07	2.855	19.64	2.13E-03
2	2 P	ila 2	20 3	GEN SLD Vert(max)	28	-1789.91	10.73	4.29	11.56	2.855	4.05	2.37E-03
2	2 P	ila 2	20 3	GEN SLD Trasv(max)	28	-1773.31	36.71	4.35	36.97	2.855	12.95	2.39E-03
2	2 P	ila 2	20 3	GEN SLD Long(max)	28	-1796.99	10.73	30.13	31.98	2.855	11.20	2.38E-03
2	2 P	ila 2	20	GEN SLD Vert(min)	886	-2419.63	-12.03	-28.34	30.79	2.855	10.79	2.11E-03
2	2 P	ila 2	20	GEN SLD Trasv(min)	886	-2413.29	-38.06	-28.35	47.46	2.855	16.63	2.12E-03
2	2 P	ila 2	2	GEN SLD Long(min)	886	-2411.28	-12.03	-54.18	55.50	2.855	19.44	2.10E-03
2	2 P	ila 2	20 2 20	GEN SLD Vert(max)	886	-2131.65	11.00	4.32	11.82	2.855	4.14	2.30E-03
2	2 P	ila 2	20 2 20	GEN SLD Trasv(max)	886	-2137.99	37.02	4.33	37.27	2.855	13.06	2.30E-03
2	2 P	ila 2	20	GEN SLD Long(max)	886	-2140.00	10.99	30.16	32.10	2.855	11.24	2.31E-03
2	2 P	ila 2	1	GEN SLD Vert(min)	24	-2419.63	-11.00	-28.34	30.40	2.855	10.65	2.12E-03
2	2 P	ila 2	20 1 20	GEN SLD Trasv(min)	24	-2413.29	-37.02	-28.35	46.63	2.855	16.33	2.12E-03
2	2 P	ila 2	20	GEN SLD Long(min)	24	-2411.28	-10.99	-54.18	55.28	2.855	19.37	2.11E-03
2	2 P	ila 2	1	GEN SLD Vert(max)	24	-2131.64	12.03	4.32	12.78	2.855	4.48	2.30E-03
2	2 P	ila 2	20 1 20	GEN SLD Trasv(max)	24	-2137.99	38.06	4.33	38.31	2.855	13.42	2.30E-03
2	2 P	ila 2	1 20	GEN SLD Long(max)	24	-2140.00	12.03	30.16	32.47	2.855	11.37	2.31E-03
2	2 P	ila 2	20 0 20	GEN SLD Vert(min)	22	-2091.75	-10.73	-28.43	30.39	2.855	10.65	2.19E-03
			20									













SOLLECITAZIONI SULLE SOTTOSTRUTTURE

Seguono le sollecitazioni calcolate per le sezioni di sommità e di spiccato plinto delle pile e all'altezza dei baggioli delle spalle.

REAZIONI PILE (sezione di spiccato plinto e sommità) E SPALLE (baggioli)

Dati	sezione	pila

(cls): 17.517 mq Area sezione A = Momento d'inerzia longitudinale JI= 3.202 m^4 199.561 m^4 Momento d'inerzia trasversale Jt= Modulo resistente longitudinale WI= 4.269 mc Modulo resistente trasversale 38.012 mc

STATI LIMITE ULTIMI - STATICI

STRUTTURA	Node	Load	FX	FY	FZ	МХ	MY	MZ	Smax	Smin
			(kN)	(kN)	(kN)	(kN*m)	(kN*m)	(kN*m)	(kN/mq)	(kN/mq)
Spalla 1	883	GEN SLU Mobili(max)	100.51	133.10	5783.99	5905.60	-0.06	38.85		
Spalla 1	883	GEN SLU Vento(max)	85.74	201.12	4826.68	3861.05	-0.06	25.12		
Spalla 1	883	GEN SLU Frenamento(max)	220.26	10.15	4841.16	3536.75	-0.06 -0.06	21.38		
Spalla 1	883 883	GEN SLU Termico(max) GEN SLU Mobili(min)	109.21 -25.06	124.73 -133.10	4850.32 2809.43	3731.33 -5905.60	-0.06	23.62 -38.85		
Spalla 1	883	` '	-25.06 -17.64	-133.10	2956.45	-3861.05	-0.09	-38.85		
Spalla 1 Spalla 1	883	GEN SLU Vento(min) GEN SLU Frenamento(min)	-17.04	-201.12	2936.43	-3536.75	-0.08	-25.12		
•	883	` '	-152.16 -41.12	-10.15	2941.97	-3536.75	-0.08	-21.38		
Spalla 1	884	GEN SLU Termico(min) GEN SLU Mobili(max)	25.06	133.10	5783.65	-3/31.33 5905.05	0.09	38.86		
Spalla 2	884	• •	25.06 17.64	201.11	4826.51	3861.02	0.09	25.13		
Spalla 2	884	GEN SLU Vento(max)	152.17				0.08	25.13		
Spalla 2	884	GEN SLU Frenamento(max)	41.12	10.15 124.73	4841.03 4850.14	3536.35 3731.15	0.08	23.63		
Spalla 2	884	GEN SLU Termico(max) GEN SLU Mobili(min)	-100.51	-133.10	2809.43	-5905.05	0.08	-38.86		
Spalla 2	884		-100.51	-133.10	2956.45	-3861.02	0.06	-38.80		
Spalla 2 Spalla 2	884	GEN SLU Vento(min) GEN SLU Frenamento(min)	-85.74 -220.26	-10.15	2936.43	-3536.35	0.06	-25.13		
•	884	GEN SLU Termico(min)	-220.26	-10.15	2941.92	-3731.15	0.06	-21.38		
Spalla 2	25	GEN SLU Mobili(max)	54.73	276.86	16122.42	9934.56	0.08	-23.63 89.05	-659	-1182
Pila 1 (sommità)	25 25	GEN SLU Vento(max)	19.08	439.15	14177.01	6074.28	0.03	53.52	-650	-1182 -969
Pila 1 (sommità)			312.61	10.76	14177.01	4910.98	0.02	50.26	-680	-969 -939
Pila 1 (sommità) Pila 1 (sommità)	25 25	GEN SLU Frenamento(max) GEN SLU Termico(max)	39.08	267.80	14180.16	5608.96	0.02	52.21	-663	-959 -958
,		` '								
Pila 1 (sommità)	25 25	GEN SLU Mobili(min)	-160.52 -128.84	-276.86 -439.15	11453.34 11619.01	-9934.56	0.00 0.00	-89.05	-392 -503	-915 -823
Pila 1 (sommità)	25 25	GEN SLU Vento(min)	-128.84	-439.15		-6074.28	0.00	-53.52	-503 -534	-823 -792
Pila 1 (sommità) Pila 1 (sommità)	25 25	GEN SLU Frenamento(min) GEN SLU Termico(min)	-422.37 -148.84	-10.76	11615.86 11595.38	-4910.98 -5608.96	0.00	-50.26 -52.21	-534 -514	-792 -810
,	25 26	` '		276.86	16122.46	9934.92	0.00	-52.21 89.03	-514 -659	-810 -1182
Pila 2 (sommità)	26	GEN SLU Mobili(max) GEN SLU Vento(max)	160.53 128.84	439.15	14177.03	6074.78	0.00	53.49	-650	-969
Pila 2 (sommità) Pila 2 (sommità)	26	GEN SLU Frenamento(max)	422.38	10.76	14177.03	4911.01	0.00	50.26	-680	-939
Pila 2 (sommità)	26	GEN SLU Termico(max)	148.84	267.80	14200.66	5609.27	0.00	52.20	-663	-958
Pila 2 (sommità)	26	GEN SLU Mobili(min)	-54.73	-276.86	11453.35	-9934.92	-0.03	-89.03	-392	-915
Pila 2 (sommità)	26	GEN SLU Vento(min)	-19.08	-439.15	11619.02	-9934.92 -6074.78	-0.03	-53.49	-592	-823
Pila 2 (sommità)	26	GEN SLU Frenamento(min)	-312.62	-439.13	11615.02	-4911.01	-0.02	-50.26	-534	-823 -792
Pila 2 (sommità)	26	GEN SLU Termico(min)	-312.62	-10.76	11515.91	-4911.01 -5609.27	-0.02	-50.26	-534 -514	-792 -810
	1	GEN SLU Mobili(max)	-39.08 54.63	283.25	18546.37	11055.63	223.97	-52.20 89.05	-514 -715	-810 -1402
Pila 1 (spiccato)	1	GEN SLU Vento(max)	19.04	449.83	16600.95	7876.72	78.07	53.52	-715 -722	-1402
Pila 1 (spiccato)	1	, ,	312.57	10.74	16604.10	4935.08	1281.55	50.26	-722 -518	-1173 -1378
Pila 1 (spiccato)		GEN SLU Frenamento(max) GEN SLU Termico(max)	39.04	274.20	16624.59	6700.06	160.07	52.22	-735	-1378
Pila 1 (spiccato)	1	GEN SLU Mobili(min)	-160.16	-283.25	13877.27	-11055.63	-656.63	-89.05	-735 -348	-1163
Pila 1 (spiccato)		` '							-348 -471	
Pila 1 (spiccato)	1	GEN SLU Vento(min) GEN SLU Frenamento(min)	-128.63 -422.16	-449.83 -10.74	14042.95 14039.80	-7876.72 -4935.08	-527.35 -1730.82	-53.52 -50.26	-266	-1132 -1337
Pila 1 (spiccato)									-481	
Pila 1 (spiccato)	1	GEN SLU Termico(min)	-148.63	-274.20	14019.31	-6700.06	-609.35	-52.22		-1119
Pila 2 (spiccato)	2	GEN SLU Mobili(max)	160.16	283.25	18546.41	11055.98	656.64	89.04	-614	-1503
Pila 2 (spiccato)	2	GEN SLU Vento(max)	128.63	449.83	16600.97	7877.22	527.35	53.50	-617	-1278
Pila 2 (spiccato)	2	GEN SLU Frenamento(max)	422.16	10.74	16604.07	4935.10	1730.86	50.26	-413	-1483
Pila 2 (spiccato)	2	GEN SLU Termico(max)	148.63	274.20	16624.61	6700.37	609.35	52.20	-630	-1268
Pila 2 (spiccato)	2	GEN SLU Mobili(min)	-54.63	-283.25	13877.28	-11055.98	-223.97	-89.04	-449 576	-1136
Pila 2 (spiccato)	2	GEN SLU Vento(min)	-19.04	-449.83	14042.95	-7877.22	-78.07	-53.50	-576	-1027
Pila 2 (spiccato)	2	GEN SLU Frenamento(min)	-312.58	-10.74	14039.85	-4935.10	-1281.58	-50.26	-371	-1232
Pila 2 (spiccato)	2	GEN SLU Termico(min)	-39.04	-274.20	14019.31	-6700.37	-160.07	-52.20	-587	-1014

TENSIONI MAX/MIN (sezione interamente reagente) -266

STATI LIMITE ULTIMI - SISMICI (SLV)













STRUTTURA	Node	Load	FX	FY	FZ	MX	MY	MZ	Smax	Smin
			(kN)	(kN)	(kN)	(kN*m)	(kN*m)	(kN*m)	(kN/mq)	(kN/mq)
Spalla 1	883	GEN SLV Long(max)	210.48	49.07	2281.36	62.95	-0.05	0.80		
Spalla 1	883	GEN SLV Trasv(max)	93.54	163.58	2267.68	208.48	-0.05	2.67		
Spalla 1	883	GEN SLV Vert(max)	94.03	49.08	2297.57	64.30	-0.05	0.80		
Spalla 1	883	GEN SLV Long(min)	-173.01	-49.07	2166.26	-62.95	-0.05	-0.80		
Spalla 1	883	GEN SLV Trasv(min)	-56.06	-163.58	2179.94	-208.48	-0.05	-2.67		
Spalla 1	883	GEN SLV Vert(min)	-56.55	-49.08	2150.05	-64.30	-0.05	-0.80		
Spalla 2	884	GEN SLV Long(max)	173.01	49.07	2281.36	62.91	0.05	0.80		
Spalla 2	884	GEN SLV Trasv(max)	56.06	163.58	2267.68	208.43	0.05	2.67		
Spalla 2	884	GEN SLV Vert(max)	56.55	49.08	2297.57	64.15	0.05	0.80		
Spalla 2	884	GEN SLV Long(min)	-210.48	-49.07	2166.26	-62.91	0.05	-0.80		
Spalla 2	884	GEN SLV Trasv(min)	-93.54	-163.58	2179.94	-208.43	0.05	-2.67		
Spalla 2	884	GEN SLV Vert(min)	-94.03	-49.08	2150.05	-64.15	0.05	-0.80		
Pila 1 (sommità)	25	GEN SLV Long(max)	337.84	110.70	8504.71	261.84	0.01	0.87	-479	-492
Pila 1 (sommità)	25	GEN SLV Trasv(max)	82.31	367.26	8498.60	857.89	0.01	2.88	-463	-508
Pila 1 (sommità)	25	GEN SLV Vert(max)	82.55	112.43	8586.54	276.68	0.01	0.87	-483	-497
Pila 1 (sommità)	25	GEN SLV Long(min)	-434.16	-110.70	8361.13	-261.84	0.01	-0.87	-470	-484
Pila 1 (sommità)	25	GEN SLV Trasv(min)	-178.63	-367.26	8367.25	-857.89	0.01	-2.88	-455	-500
Pila 1 (sommità)	25	GEN SLV Vert(min)	-178.86	-112.43	8279.30	-276.68	0.01	-0.87	-465	-480
Pila 2 (sommità)	26	GEN SLV Long(max)	434.16	110.70	8504.71	261.89	-0.01	0.87	-479	-492
Pila 2 (sommità)	26	GEN SLV Trasv(max)	178.63	367.26	8498.60	857.94	-0.01	2.88	-463	-508
Pila 2 (sommità)	26	GEN SLV Vert(max)	178.87	112.43	8586.54	276.84	-0.01	0.87	-483	-497
Pila 2 (sommità)	26	GEN SLV Long(min)	-337.84	-110.70	8361.13	-261.89	-0.01	-0.87	-470	-484
Pila 2 (sommità)	26	GEN SLV Trasv(min)	-82.31	-367.26	8367.25	-857.94	-0.01	-2.88	-455	-500
Pila 2 (sommità)	26	GEN SLV Vert(min)	-82.55	-112.43	8279.30	-276.84	-0.01	-0.87	-465	-480
Pila 1 (spiccato)	1	GEN SLV Long(max)	397.76	145.18	10305.24	737.57	1495.92	0.87	-218	-958
Pila 1 (spiccato)	1	GEN SLV Trasv(max)	100.39	468.00	10300.64	2434.67	370.68	2.88	-437	-739
Pila 1 (spiccato)	1	GEN SLV Vert(max)	100.67	161.04	10397.25	761.35	371.67	0.87	-486	-701
Pila 1 (spiccato)	1	GEN SLV Long(min)	-494.08	-145.18	10151.62	-737.57	-1890.81	-0.87	-117	-1042
Pila 1 (spiccato)	1	GEN SLV Trasv(min)	-196.71	-468.00	10156.21	-2434.67	-765.56	-2.88	-336	-823
Pila 1 (spiccato)	1	GEN SLV Vert(min)	-196.99	-161.04	10059.61	-761.35	-766.55	-0.87	-375	-774
Pila 2 (spiccato)	2	GEN SLV Long(max)	494.08	145.18	10305.24	737.62	1890.81	0.87	-126	-1051
Pila 2 (spiccato)	2	GEN SLV Trasv(max)	196.71	468.00	10300.65	2434.71	765.56	2.88	-345	-831
Pila 2 (spiccato)	2	GEN SLV Vert(max)	197.00	161.05	10397.25	761.51	766.55	0.87	-394	-793
Pila 2 (spiccato)	2	GEN SLV Long(min)	-397.76	-145.18	10151.62	-737.62	-1495.92	-0.87	-210	-949
Pila 2 (spiccato)	2	GEN SLV Trasv(min)	-100.39	-468.00	10156.21	-2434.71	-370.68	-2.88	-429	-731
Pila 2 (spiccato)	2	GEN SLV Vert(min)	-100.68	-161.05	10059.61	-761.51	-371.67	-0.87	-467	-681

TENSIONI		
MAX/MIN		
(sezione		
interamente		
reagente)	-117	-1051

STATI LIMITE DI ESERCIZIO - COMBINAZIONI CARATTERISTICHE (RARE)

STRUTTURA	Node	Load	FX	FY	FZ	MX	MY	MZ	Smax	Smin
			(kN)	(kN)	(kN)	(kN*m)	(kN*m)	(kN*m)	(kN/mq)	(kN/mq)
Spalla 1	883	GEN RARA Mobili(max)	73.84	90.11	4141.24	4360.11	-0.04	28.61		
Spalla 1	883	GEN RARA Vento(max)	62.89	134.83	3432.12	2836.01	-0.05	18.33		
Spalla 1	883	GEN RARA Frenam(max)	162.54	7.52	3442.87	2619.82	-0.05	15.84		
Spalla 1	883	GEN RARA Termico(max)	82.45	83.91	3451.84	2749.53	-0.05	17.33		
Spalla 1	883	GEN RARA Mobili(min)	-25.70	-90.11	1931.30	-4360.11	-0.07	-28.61		
Spalla 1	883	GEN RARA Vento(min)	-20.21	-134.83	2040.21	-2836.01	-0.06	-18.33		
Spalla 1	883	GEN RARA Frenam(min)	-119.86	-7.52	2029.45	-2619.82	-0.06	-15.84		
Spalla 1	883	GEN RARA Termico(min)	-39.77	-83.91	2020.49	-2749.53	-0.06	-17.33		
Spalla 2	884	GEN RARA Mobili(max)	25.70	90.10	4141.00	4359.68	0.07	28.62		
Spalla 2	884	GEN RARA Vento(max)	20.21	134.83	3431.99	2835.97	0.06	18.34		
Spalla 2	884	GEN RARA Frenam(max)	119.86	7.52	3442.78	2619.52	0.06	15.84		
Spalla 2	884	GEN RARA Termico(max)	39.77	83.91	3451.71	2749.39	0.06	17.34		
Spalla 2	884	GEN RARA Mobili(min)	-73.84	-90.10	1931.30	-4359.68	0.04	-28.62		
Spalla 2	884	GEN RARA Vento(min)	-62.89	-134.83	2040.21	-2835.97	0.05	-18.34		
Spalla 2	884	GEN RARA Frenam(min)	-162.54	-7.52	2029.42	-2619.52	0.05	-15.84		
Spalla 2	884	GEN RARA Termico(min)	-82.45	-83.91	2020.49	-2749.39	0.05	-17.34		
Pila 1 (sommità)	25	GEN RARA Mobili(max)	38.83	186.04	11563.21	7307.23	0.02	65.82	-468	-852
Pila 1 (sommità)	25	GEN RARA Vento(max)	12.42	293.57	10122.15	4413.30	0.01	39.40	-462	-694
Pila 1 (sommità)	25	GEN RARA Frenam(max)	229.85	7.97	10124.51	3637.76	0.01	37.23	-482	-674
Pila 1 (sommità)	25	GEN RARA Termico(max)	29.09	179.33	10141.87	4103.08	0.02	38.53	-471	-687
Pila 1 (sommità)	25	GEN RARA Mobili(min)	-126.18	-186.04	8098.06	-7307.23	0.00	-65.82	-270	-655
Pila 1 (sommità)	25	GEN RARA Vento(min)	-102.71	-293.57	8220.79	-4413.30	0.00	-39.40	-353	-585
Pila 1 (sommità)	25	GEN RARA Frenam(min)	-320.14	-7.97	8218.43	-3637.76	0.00	-37.23	-373	-565
Pila 1 (sommità)	25	GEN RARA Termico(min)	-119.38	-179.33	8201.06	-4103.08	0.00	-38.53	-360	-576
Pila 2 (sommità)	26	GEN RARA Mobili(max)	126.18	186.04	11563.24	7307.48	0.00	65.81	-468	-852
Pila 2 (sommità)	26	GEN RARA Vento(max)	102.71	293.56	10122.16	4413.63	0.00	39.39	-462	-694
Pila 2 (sommità)	26	GEN RARA Frenam(max)	320.15	7.97	10124.49	3637.78	0.00	37.23	-482	-674
Pila 2 (sommità)	26	GEN RARA Termico(max)	119.38	179.33	10141.89	4103.29	0.00	38.52	-471	-687
Pila 2 (sommità)	26	GEN RARA Mobili(min)	-38.83	-186.04	8098.06	-7307.48	-0.02	-65.81	-270	-655
Pila 2 (sommità)	26	GEN RARA Vento(min)	-12.42	-293.56	8220.79	-4413.63	-0.01	-39.39	-353	-585
Pila 2 (sommità)	26	GEN RARA Frenam(min)	-229.86	-7.97	8218.46	-3637.78	-0.01	-37.23	-373	-565
Pila 2 (sommità)	26	GEN RARA Termico(min)	-29.09	-179.33	8201.07	-4103.29	-0.02	-38.52	-360	-576





Pila 1 (spiccato)	1	GEN RARA Mobili(max)	38.75	190.30	13358.73	8058.62	158.88	65.82	-513	-1012
Pila 1 (spiccato)	1	GEN RARA Vento(max)	12.39	300.68	11917.67	5616.71	50.80	39.40	-521	-840
Pila 1 (spiccato)	1	GEN RARA Frenam(max)	229.82	7.96	11920.03	3655.61	942.26	37.23	-364	-997
Pila 1 (spiccato)	1	GEN RARA Termico(max)	29.06	183.59	11937.39	4832.27	119.14	38.53	-526	-837
Pila 1 (spiccato)	1	GEN RARA Mobili(min)	-125.91	-190.30	9893.56	-8058.62	-516.20	-65.82	-232	-898
Pila 1 (spiccato)	1	GEN RARA Vento(min)	-102.55	-300.68	10016.30	-5616.71	-420.43	-39.40	-326	-818
Pila 1 (spiccato)	1	GEN RARA Frenam(min)	-319.98	-7.96	10013.93	-3655.61	-1311.90	-37.23	-168	-975
Pila 1 (spiccato)	1	GEN RARA Termico(min)	-119.22	-183.59	9996.57	-4832.27	-488.77	-38.53	-329	-812
Pila 2 (spiccato)	2	GEN RARA Mobili(max)	125.91	190.30	13358.76	8058.85	516.21	65.81	-430	-1096
Pila 2 (spiccato)	2	GEN RARA Vento(max)	102.55	300.68	11917.68	5617.04	420.44	39.39	-434	-927
Pila 2 (spiccato)	2	GEN RARA Frenam(max)	319.98	7.96	11920.01	3655.63	1311.92	37.23	-277	-1084
Pila 2 (spiccato)	2	GEN RARA Termico(max)	119.22	183.59	11937.40	4832.48	488.77	38.52	-440	-923
Pila 2 (spiccato)	2	GEN RARA Mobili(min)	-38.75	-190.30	9893.57	-8058.85	-158.88	-65.81	-316	-814
Pila 2 (spiccato)	2	GEN RARA Vento(min)	-12.39	-300.68	10016.30	-5617.04	-50.80	-39.39	-412	-731
Pila 2 (spiccato)	2	GEN RARA Frenam(min)	-229.83	-7.96	10013.97	-3655.63	-942.29	-37.23	-255	-889
Pila 2 (spiccato)	2	GEN RARA Termico(min)	-29.06	-183.59	9996.58	-4832.48	-119.14	-38.52	-416	-726

TENSIONI MAX/MIN (sezione interamente -168 -1096 reagente)

STATI LIMITE DI ESERCIZIO - COMBINAZIONI FREQUENTI

STRUTTURA	Node	Load	FX	FY	FZ	MX	MY	MZ	Smax	Smin
			(kN)	(kN)	(kN)	(kN*m)	(kN*m)	(kN*m)	(kN/mq)	(kN/mq)
Spalla 1	883	GEN FREQ Mobili(max)	57.96	7.52	3426.91	2619.82	-0.05	15.84		
Spalla 1	883	GEN FREQ Vento(max)	43.22	25.46	2248.64	43.24	-0.05	0.50		
Spalla 1	883	GEN FREQ Termico(max)	48.10	0.00	2253.55	0.00	-0.05	0.00		
Spalla 1	883	GEN FREQ Mobili(min)	-15.28	-7.52	2045.42	-2619.82	-0.06	-15.84		
Spalla 1	883	GEN FREQ Vento(min)	-5.74	-25.46	2198.98	-43.24	-0.05	-0.50		
Spalla 1	883	GEN FREQ Termico(min)	-10.63	0.00	2194.07	0.00	-0.05	0.00		
Spalla 2	884	GEN FREQ Mobili(max)	15.28	7.52	3426.78	2619.52	0.06	15.84		
Spalla 2	884	GEN FREQ Vento(max)	5.74	25.46	2248.64	43.29	0.05	0.50		
Spalla 2	884	GEN FREQ Termico(max)	10.63	0.00	2253.55	0.00	0.05	0.00		
Spalla 2	884	GEN FREQ Mobili(min)	-57.96	-7.52	2045.42	-2619.52	0.05	-15.84		
Spalla 2	884	GEN FREQ Vento(min)	-43.22	-25.46	2198.98	-43.29	0.05	-0.50		
Spalla 2	884	GEN FREQ Termico(min)	-48.10	0.00	2194.07	0.00	0.05	0.00		
Pila 1 (sommità)	25	GEN FREQ Mobili(max)	8.25	7.97	10116.95	3637.76	0.01	37.23	-482	-673
Pila 1 (sommità)	25	GEN FREQ Vento(max)	-27.32	57.12	8457.75	155.11	0.01	0.43	-479	-487
Pila 1 (sommità)	25	GEN FREQ Termico(max)	-23.16	0.00	8462.66	0.00	0.01	0.00	-483	-483
Pila 1 (sommità)	25	GEN FREQ Mobili(min)	-98.54	-7.97	8225.99	-3637.76	0.00	-37.23	-374	-565
Pila 1 (sommità)	25	GEN FREQ Vento(min)	-68.99	-57.12	8408.09	-155.11	0.01	-0.43	-476	-484
Pila 1 (sommità)	25	GEN FREQ Termico(min)	-73.16	0.00	8403.19	0.00	0.01	0.00	-480	-480
Pila 2 (sommità)	26	GEN FREQ Mobili(max)	98.54	7.97	10116.96	3637.78	0.00	37.23	-482	-673
Pila 2 (sommità)	26	GEN FREQ Vento(max)	68.99	57.12	8457.75	155.17	-0.01	0.43	-479	-487
Pila 2 (sommità)	26	GEN FREQ Termico(max)	73.16	0.00	8462.66	0.00	-0.01	0.00	-483	-483
Pila 2 (sommità)	26	GEN FREQ Mobili(min)	-8.25	-7.97	8226.00	-3637.78	-0.01	-37.23	-374	-565
Pila 2 (sommità)	26	GEN FREQ Vento(min)	27.32	-57.12	8408.09	-155.17	-0.01	-0.43	-476	-484
Pila 2 (sommità)	26	GEN FREQ Termico(min)	23.16	0.00	8403.19	0.00	-0.01	0.00	-480	-480
Pila 1 (spiccato)	1	GEN FREQ Mobili(max)	8.22	7.96	11912.46	3655.61	33.71	37.23	-576	-784
Pila 1 (spiccato)	1	GEN FREQ Vento(max)	-27.32	58.55	10253.26	392.22	-112.02	0.43	-549	-622
Pila 1 (spiccato)	1	GEN FREQ Termico(max)	-23.16	0.00	10258.16	0.00	-94.94	0.00	-563	-608
Pila 1 (spiccato)	1	GEN FREQ Mobili(min)	-98.38	-7.96	10021.50	-3655.61	-403.34	-37.23	-381	-763
Pila 1 (spiccato)	1	GEN FREQ Vento(min)	-68.99	-58.55	10203.60	-392.22	-282.86	-0.43	-506	-659
Pila 1 (spiccato)	1	GEN FREQ Termico(min)	-73.16	0.00	10198.69	0.00	-299.95	0.00	-512	-652
Pila 2 (spiccato)	2	GEN FREQ Mobili(max)	98.38	7.96	11912.47	3655.63	403.35	37.23	-489	-871
Pila 2 (spiccato)	2	GEN FREQ Vento(max)	68.99	58.55	10253.26	392.28	282.86	0.43	-509	-662
Pila 2 (spiccato)	2	GEN FREQ Termico(max)	73.16	0.00	10258.16	0.00	299.95	0.00	-515	-656
Pila 2 (spiccato)	2	GEN FREQ Mobili(min)	-8.22	-7.96	10021.50	-3655.63	-33.71	-37.23	-468	-676
Pila 2 (spiccato)	2	GEN FREQ Vento(min)	27.32	-58.55	10203.60	-392.28	112.02	-0.43	-546	-619
Pila 2 (spiccato)	2	GEN FREQ Termico(min)	23.16	0.00	10198.69	0.00	94.94	0.00	-560	-604

TENSIONI MAX/MIN (sezione interamente reagente) -374

STATI LIMITE DI ESERCIZIO - COMBINAZIONI QUASI PERMANENTI

STRUTTURA	Node	Load	FX	FY	FZ	MX	MY	MZ	Smax	Smin
			(kN)	(kN)	(kN)	(kN*m)	(kN*m)	(kN*m)	(kN/mq)	(kN/mq)
Spalla 1	883	GEN Q.P.(max)	43.21	0.00	2248.59	0.00	-0.05	0.00		
Spalla 1	883	GEN Q.P.(min)	-5.73	0.00	2199.03	0.00	-0.05	0.00		
Spalla 2	884	GEN Q.P.(max)	5.73	0.00	2248.59	0.00	0.05	0.00		
Spalla 2	884	GEN Q.P.(min)	-43.21	0.00	2199.03	0.00	0.05	0.00		
Pila 1 (sommità)	25	GEN Q.P.(max)	-27.32	0.00	8457.70	0.00	0.01	0.00		
Pila 1 (sommità)	25	GEN Q.P.(min)	-68.99	0.00	8408.14	0.00	0.01	0.00		
Pila 2 (sommità)	26	GEN Q.P.(max)	68.99	0.00	8457.70	0.00	-0.01	0.00		





Pila 2 (sommità)	26	GEN Q.P.(min)	27.32	0.00	8408.14	0.00	-0.01	0.00		
Pila 1 (spiccato)	1	GEN Q.P.(max)	-27.32	0.00	10253.21	0.00	-112.02	0.00	-559	-612
Pila 1 (spiccato)	1	GEN Q.P.(min)	-68.99	0.00	10203.65	0.00	-282.86	0.00	-516	-649
Pila 2 (spiccato)	2	GEN Q.P.(max)	68.99	0.00	10253.21	0.00	282.86	0.00	-519	-652
Pila 2 (spiccato)	2	GEN O P (min)	27 22	0.00	10203 65	0.00	112 02	0.00	-556	-609

TENSIONI MAX/MIN (sezione interamente reagente) -516

13 VERIFICHE TRASVERSALI DELLA SOLETTA STRADALE DI SCORRIMENTO

13.1 **VERIFICA IN FASE COSTRUTTIVA**

In fase costruttiva la sezione resistente è rappresentata dai tralicci inseriti nelle lastre prefabbricate, sollecitati dal peso della soletta e dal carico accidentale previsto da EN 1991-1-6, § 4.11.2.











13.1.1 FASE COSTRUTTIVA - SBALZO LATERALE

VERIFICA LASTRE IN C.A. TRALICCIATE PREFABBRICATE

LASTRE PREFABBRICATE PONTE NAVIGLIO BEREGUARDO - CAMPATA A SBALZO: L= 120 cm

DATI GENERALI LASTRA PREFABBRICATA.

A) Incastro - B) Estremo libero (a sbalzo) Schema vincolare in fase costruttiva: Luce di calcolo della lastra: 120 cm Larghezza di calcolo della lastra: B_C= 240 cm Altezza calcestruzzo lastra: H_C= 6 cm Altezza della soletta (getto in opera): 24 cm H_S= 25 kN/m³ Peso specifico calcestruzzo: g_c= Vincolo laterale armature offerto dalla lastra presente nella sezione di verifica: NO

DATI TRALICCI E ARMATURA AGGIUNTIVA LASTRA PREFABBRICATA.

Numero tralicci per lastra: 4 $N_{tr} =$ Altezza nominale del traliccio: 20.5 cm H_T= Altezza utile del traliccio: 18.8 cm H_U= Larghezza traliccio: B_T= 12.0 cm Passo staffe: 20.0 cm P_{ST}= Ricoprimento tralicci e armature aggiuntive (dal bordo inferiore lastra): R_{IT}= 4.0 cm 210 000 N/mm² Modulo elastico acciaio Es= Coefficiente parziale di sicurezza dell'acciaio armature: 1.15

DATI ARMATURA LASTRA PREFABBRICATA.

Tipo di acciaio

Resistenza caratteristica acciaio

Resistenza di calcolo acciaio

Diametro:

Numero di ferri per traliccio (Arm. agg. per lastra):

Area di armatura per lastra:

Inclinazione ferri in direzione longitudinale:

Inclinazione ferri in direzione trasversale:

Coefficiente di vincolo:

Lunghezza di calcolo per instabilità aste compresse

Lunghezza libera d'inflessione ($L_0 = \beta * L$):

		Singolo traliccio		Arm. agg.	
	Corr. Superiore	Corr.Inferiori	Staffe	lastra	
	B450C	B450C	B450C	B450C	
f _{Yk} =	450.00	450.00	450.00	450.00	N/mm ²
f _{Yd} =	391.30	391.30	391.30	391.30	N/mm ²
Φ=	16	12	10	0	mm
N _F =	1	2	2	0	
A _F =	8.042	9.048	6.283	0.000	cm ²
α=	0.00	0.00	70.97	0.00	0
γ=	0.00	0.00	80.93	0.00	٥
β=	1	1	1	1	
L=	20.00	20.00	20.14	40.00	cm
L ₀ =	20.00	20.00	20.14	40.00	cm

DATI DI CARICO NOTA: Per le azioni in fase di costruzione durante il getto di calcestruzzo ci si riferisce a: UNI EN 1991-1-6, § 4.11.2.

Coefficiente parziale dei carichi permanenti strutturali (peso lastra): γ_{g1} = 1.35 Coefficiente parziale dei carichi permanenti portati (getto in opera): γ_{g2} = 1.5 Coefficiente parziale dei carichi variabili (sovraccarichi): γ_{q} = 1.5

	Estensione del carico	permanente (X1=X2 per	r carico concentrato):	Da X1 (cm)	A X2 (cm)
Peso strutturale lastra:		G ₁ =	1.50 kN/mq	0	120
Permanente portato 1:	getto in opera soletta:	G _{2,1} =	6.00 kN/mq	0	120
Permanente portato 2:		G _{2,2} =	0.00 kN/m	0	0
Permanente portato 3:		G _{2,3} =	0.00 kN/m	0	0
Sovraccarico all'interno dell'a	rea di lavoro di 3 m x 3 m (L se minore):	Q ₁ =	0.75 kN/mq		
Sovraccarico all'esterno dell'a	area di lavoro di 3 m x 3 m (L se minore):	Q ₂ =	0.75 kN/ma		

SOLLECITAZIONI ALLO S.L.U. NOTA: Le sollecitazioni si intendono riferite alla larghezza della lastra.

Momento flettente di progetto: M_{sd} = -21.00 KN.m Sforzo di taglio di progetto: V_{sd} = 34.99 KN

VERIFICA ALLO S.L.U..

Sforzi assiali nei correnti ($N_{Sd}=M_{Sd}/H_U$)

Sforzi assiali nelle staffe ($N_{Sd}=V_{Sd}/(Sen(\alpha)*Sen(\gamma))$

Carico elastico crítico $(N_{CR}=p^2*E_S*J/L_0^2)$ Snellezza adimensionale $(\lambda=(A_f f_{Yk}/N_{CR})^{0.5})$ Fattore di imperfezione (NTC 2008; tab. 4.2.VI) Coefficiente di stabilità delle aste compresse:

Fattore di riduzione Resistenza di calcolo a compressione (instabilità)

Resistenza di calcolo a trazione e compressione

Considerare instabilità delle aste compresse (non incluse nel cls.)

Resistenza di calcolo considerata (ferro singolo)

Sforzo assiale di calcolo (ferro singolo)

Coefficiente di sfruttamento ($N_{Sd}/N_{Rd} < 1$: verificato)

	Corr. Superiore (Teso)	Corr.Inferiori (Compresso)	Staffe (Compresso)	Arm. Agg. (Compresso)	
N _{CR} =	·	52.742	25.088	0.000	kΝ
λ=	0.737	0.982	1.187	0.000	
α=	0.490	0.490	0.490	0.490	
Φ=	0.903	1.174	1.446	0.451	
χ=	0.702	0.550	0.440	1.000	
N _{b,Rd} =	-55.217	-24.352	-13.524	0.000	kΝ
N _{c,Rd} =	±78.676	±44.255	±30.733	±0.000	kΝ
SI/NO	NO	SI	SI	SI	
N _{Rd} =	78.676	-24.352	-13.524	0.000	kN
N _{Sd} =	27.919	-13.960	4.685	0.000	kΝ
$N_{Sd}/N_{Rd}=$	0.355	0.573	0.346	0.000	









13.1.2 FASE COSTRUTTIVA - CAMPATA TRA LE TRAVI

La lastra è semplicemente appoggiata agli estremi sulla luce di 280 cm.

VERIFICA LASTRE IN C.A. TRALICCIATE PREFABBRICATE

LASTRE PREFABBRICATE PONTE NAVIGLIO BEREGUARDO - TRA TRAVI: L= 280 cm

DATI GENERALI LASTRA PREFABBRICATA.

Schema vincolare in fase costruttiva:	A) Appoggio - B) Appoggio
Luce di calcolo della lastra:	L=	280 cm
Larghezza di calcolo della lastra:	B _C =	240 cm
Altezza calcestruzzo lastra:	H _C =	6 cm
Altezza della soletta (getto in opera):	H _S =	36 cm
Peso specifico calcestruzzo:	g _c =	25 kN/m ³
Vincolo laterale armature offerto dalla lastra presente nella sezione di verifica:		SI

DATI TRALICCI E ARMATURA AGGIUNTIVA LASTRA PREFABBRICATA.

Numero tralicci per lastra:	$N_{tr}=$	4
Altezza nominale del traliccio:	H _T =	20.5 cm
Altezza utile del traliccio:	H _U =	18.8 cm
Larghezza traliccio:	B _T =	12.0 cm
Passo staffe:	P _{ST} =	20.0 cm
Ricoprimento tralicci e armature aggiuntive (dal bordo inferiore lastra):	R _{IT} =	4.0 cm
Modulo elastico acciaio	E _S =	210 000 N/mm ²
Coefficiente parziale di sicurezza dell'acciaio armature:	γ _S =	1.15

DATI ARMATURA LASTRA PREFABBRICATA.

Tipo di acciaio
Resistenza caratteristica acciaio
Resistenza di calcolo acciaio
Diametro:
Numero di ferri per traliccio (Arm. agg. per lastra):
Area di armatura per lastra:
Inclinazione ferri in direzione longitudinale:

Area di armatura per lastra:
Inclinazione ferri in direzione longitudinale:
Inclinazione ferri in direzione trasversale:
Coefficiente di vincolo:
Lunghezza di calcolo per instabilità aste compresse
Lunghezza libera d'inflessione $(L_0 = \beta * L)$:

[5	Singolo traliccio		Arm. agg.	
Γ	Corr. Superiore	Corr.Inferiori	Staffe	lastra	
	B450C	B450C	B450C	B450C	
f _{Yk} =	450.00	450.00	450.00	450.00	N/m
f _{Yd} =	391.30	391.30	391.30	391.30	N/m
Φ=	16	12	10	0	mm
N _F =	1	2	2	0	
A _F =	8.042	9.048	6.283	0.000	cm ²
α=	0.00	0.00	70.97	0.00	0
γ=	0.00	0.00	80.93	0.00	٥
β=	1	1	1	1	
L=	20.00	20.00	20.14	40.00	cm
L ₀ =	20.00	20.00	20.14	40.00	cm

DATI DI CARICO NOTA: Per le azioni in fase di costruzione durante il getto di calcestruzzo ci si riferisce a: UNI EN 1991-1-6, § 4.11.2.

Coefficiente parziale dei carichi permanenti strutturali (peso lastra): γ_{g1} = 1.35 Coefficiente parziale dei carichi permanenti portati (getto in opera): γ_{g2} = 1.5 Coefficiente parziale dei carichi variabili (sovraccarichi): γ_{q} = 1.5

	Estensione del carico permanente (X1=X2 per carico concentrato):			Da X1 (cm)	A X2 (cm)
Peso strutturale lastra:		G ₁ =	1.50 kN/mq	0	280
Permanente portato 1:	getto in opera soletta:	G _{2,1} =	9.00 kN/mq	0	280
Permanente portato 2:		G _{2,2} =	0.00 kN/m	0	0
Permanente portato 3:		G _{2,3} =	0.00 kN/m	0	0
Sovraccarico all'interno dell'a	rea di lavoro di 3 m x 3 m (L se minore):	Q ₁ =	0.9 kN/mq		
Sovraccarico all'esterno dell'a	area di lavoro di 3 m x 3 m (L se minore):	Q ₂ =	0.75 kN/mg		

SOLLECITAZIONI ALLO S.L.U. NOTA: Le sollecitazioni si intendono riferite alla larghezza della lastra.

Momento flettente di progetto:	M _{Sd} =	39.69 KN.m
Sforzo di taglio di progetto:	V _{sd} =	56.70 KN

VERIFICA ALLO S.L.U..

Sforzi assiali nei correnti (N_{Sd} = M_{Sd} / H_{U})

Sforzi assiali nelle staffe ($N_{Sd}=V_{Sd}/(Sen(\alpha)^*Sen(\gamma))$

Carico elastico critico ($N_{CR}=p^{2*}E_s^*J/L_0^*2$)
Snellezza adimensionale ($\lambda=(A_f\,f_{Yk}/N_{CR})^{0.5}$)
Fattore di imperfezione (NTC 2008; tab. 4.2.VI)
Coefficiente di stabilità delle aste compresse:
Fattore di riduzione
Resistenza di calcolo a compressione (instabilità)
Resistenza di calcolo a trazione e compressione
Considerare instabilità delle aste compresse (non incluse nel cls.)

Resistenza di calcolo considerata (ferro singolo)
Sforzo assiale di calcolo (ferro singolo)

Coefficiente di sfruttamento ($N_{Sd}/N_{Rd} < 1$: verificato)

	Corr. Superiore (Compresso)	Corr.Inferiori (Teso)	Staffe (Compresso)	Arm. Agg. (Teso)	
N _{CR} =	166.690	52.742	25.088	0.000	kΝ
λ=	0.737	0.982	1.187	0.000	
α=	0.490	0.490	0.490	0.490	
Φ=	0.903	1.174	1.446	0.451	
χ=	0.702	0.550	0.440	1.000	
N _{b,Rd} =	-55.217	-24.352	-13.524	0.000	kΝ
N _{c,Rd} =	±78.676	±44.255	±30.733	±0.000	kΝ
SI/NO	SI	NO	SI	NO	
N _{Rd} =	-55.217	44.255	-13.524	0.000	kN
N _{Sd} =	-52.779	26.390	7.592	0.000	kΝ
$N_{Sd}/N_{Rd}=$	0.956	0.596	0.561	0.000	











13.2 **VERIFICA IN ESERCIZIO - SBALZO LATERALE**

La verifica viene svolta per lo sbalzo avente una luce L= 1.20 m dall'asse trave.

Verifica dello sbalzo tr	asversale: sezione corrente	е		L=	1.200 m
Altezza della lastra prefa	bbricata				0.060 m
Altezza totale soletta all'					0.300 m
Altezza totale soletta all'	estremita' libera				0.300 m
Lunghezza di calcolo del	lo sbalzo				1.200 m
Larghezza del marciapie	de				0.750 m
Altezza del marciapiede					0.350 m
Peso specifico calcestru	zzo armato				25.000 kN/m^3
Altezza della massicciat	а				0.200 m
Peso della massicciata					4.400 kN/m^2
Peso del sicurvia					0.800 kN/m
Distanza asse sicurvia d	a incastro				0.825 m
Peso del parapetto					0.000 kN/m
Distanza asse parapetto	da incastro				0.000 m
Peso della veletta	2.000 kN/m				
Distanza asse veletta da	1.250 m				
Carico della folla (di com	binazione)				0.000 kN/m
Distanza asse folla da in	castro				0.000 m
Coefficiente dinamico					1.000
Schema di carico 1:	Larghezza delle colonne di	carico			3.000 m
	Interasse ruote in senso tra				2.000 m
	Interasse ruote in senso lo	ngitudinale			1.200 m
	Lati dell'impronta ruota:	L=	0.400 m	T=	0.400 m
			1° colonna	2° colonna	3° colonna
	Peso singola ruota		150.000	100.000	50.000 kN
	Carico distribuito		9.000	2.500	2.500 kN/m^2
Schema di carico 2:	Interasse ruote in senso tra				2.000 m
	Interasse ruote in senso lo	•			0.000 m
	Lati dell'impronta ruota:	L=	0.350 m	T=	0.600 m
	Peso singola ruota				200.000 kN
•	ticale dei carichi nello spesso				45.000 °
Angolo di ripartizione oriz	zzontale dei carichi (effetto pia	astra)			45.000 °

Tabella dei carichi mobili

n° ruote = numero ruote carico considerato braccio del carico in esame (risultante) b= larghezza di ripartizione del carico ruote Irip = carico distribuito sulla larghezza di ripartizione q=

			Massimo momento flettente			Massi	mo sforzo di t	aglio
	n° carico	n° ruote	bm (m)	Irip (m)	qm (kN/m)	bt (m)	Irip (m)	qt (kN/m)
Вa	Schema 1 - distribuito		0.225	1.000	4.050	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	1.040	0.000	0.000	1.040	0.000
8	Schema 1 - 1° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
-	Schema 1 - 2° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
na	Schema 1 - distribuito		0.000	1.000	0.000	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	1.040	0.000	0.000	1.040	0.000
8	Schema 1 - 1° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
2	Schema 1 - 2° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
a	Schema 1 - distribuito		0.000	1.000	0.000	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	1.040	0.000	0.000	1.040	0.000
1 -	Schema 1 - 1° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
ကိ	Schema 1 - 2° fila	2	0.000	2.240	0.000	0.000	2.240	0.000
	Schema 2 - 1° fila	1	0.000	0.000	0.000	0.000	0.990	0.000
	Schema 2 - 2° fila	1	0.000	0.000	0.000	0.000	0.990	0.000

100.000 kN Effetto d'urto sul sicurvia (azione eccezionale) Altezza della forza d'urto da estradosso soletta 1.150 m Larghezza di ripartizione urto 3.090 m















Sollecitazioni all'incastro; sezione corrente

Tipo di carico	Tagli	Momenti	Sf.norm
	(kN/m)	(kNm/m)	(kN/m)
Peso proprio (rettangolo)	9.000	-5.400	0.000
Peso proprio (triangolo)	0.000	0.000	0.000
Marciapiede	6.563	-5.414	0.000
Massicciata	1.980	-0.446	0.000
Sicurvia	0.800	-0.660	0.000
Parapetto	0.000	0.000	0.000
Veletta	2.000	-2.500	0.000
Folla	0.000	0.000	0.000
Schema 1 - distribuito	0.000	-0.911	0.000
Schema 1 (tandem max)	0.000	0.000	0.000
Schema 2 (max)	46.512	-23.256	0.000
Urto	0.000	-42.071	32.362

Coefficienti parziali	(γΧΨ)	SLU	SLU ECC:	SLE (rare)	SLE (frequenti) SLE	E (quasi perm.)
Carichi permanenti		1.350	1.000	1.000	1.000	1.000
Carichi mobili - Tandem		1.350	1.000	1.000	0.750	0.000
Carichi mobili - Distribuiti		1.350	1.000	1.000	0.400	0.000

Sollecitazioni complessive all'incastro; sezione corrente

Tipo di carico	Tagli	Momenti	Sf.norm	
	(kN/m)	(kNm/m)	(kN/m)	
SLU Totali perm.+ mobili	90.253	-50.862	0.000	
SLU ECC. Totali perm.+ mobili + urto	66.854	-79.747	32.362	
SLE (rare) Totali perm.+ mobili	66.854	-37.675	0.000	
SLE (frequenti) Totali perm.+ mobili	55.226	-31.861	0.000	
SLE (quasi perm.) Totali perm.+ mobili	20.343	-14.420	0.000	

Dimensionamento armature minime allo SLU

Resistenza di calcolo calcestruzzo:	fcd=	18.13 N/mmq
Resistenza di calcolo armatura:	fsd=	391.30 N/mmq
Modulo di elasticità armatura:	Es=	210000 N/mmq
Ricoprimento armature:	Ry=	50 mm
Inclinazione delle staffe (45°<= \alpha <= 90°)	α=	90.00 °
Inclinazione di calcolo dei puntoni di calcestruzzo	θ =	21.80 °
Altezza utile della sezione di incastro	d=	25.00 cm
Altezza minima sezione reagente:	X=	2.19 cm
Area di armatura tesa minima:	As(sup)=	8.93 cmq/m
Area di armatura compressa minima:	As(inf)=	0.00 cmq/m
Verifica resistenza al taglio, solo cls.	Vrd,c=	129.06 kN
Coefficiente di sicurezza, solo cls.	Vrd,c/Vsd=	1.430 >1: Verificato
Area di armatura trasversale necessaria per taglio:	Ast=	N.D. cmq/mq

Dimensionamento armature minime allo SLE

		SLE (frequenti)	SLE (quasi perm.)
Valore limite di apertura fessure:	wd=	0.2	0.2 mm
Tensione di calcolo armatura:	Sa=	160	160 N/mmq
Tensione nel calcestruzzo	Sc=	4.07	2.55 N/mmq
Area di armatura tesa minima:	As(sup)=	8.77	3.85 cmq/m

















13.3 VERIFICA IN ESERCIZIO - SBALZO LATERALE IN PROSSIMITÀ DEI GIUNTI SPALLA

La verifica viene svolta per lo sbalzo avente una luce L= 1.20 m dall'asse trave considerando, in questo caso, che i carichi variabili si ripartiscono da un solo lato.

Verifica dello sbalzo ti	rasversale: sezione di estremità		L =	1.200 m
Altezza della lastra prefa		0.060 m		
Altezza totale soletta all	'incastro			0.300 m
Altezza totale soletta all	'estremita' libera			0.300 m
Lunghezza di calcolo de	llo sbalzo			1.200 m
Larghezza del marciapie	de			0.750 m
Altezza del marciapiede				0.350 m
Peso specifico calcestru	izzo armato			25.000 kN/m^3
Altezza della massicciat	a			0.200 m
Peso della massicciata				4.400 kN/m^2
Peso del sicurvia				0.800 kN/m
Distanza asse sicurvia d	a incastro			0.825 m
Peso del parapetto				0.000 kN/m
Distanza asse parapetto	da incastro			0.000 m
Peso della veletta				2.000 kN/m
Distanza asse veletta da	incastro			1.250 m
Carico della folla (di com	binazione)			0.000 kN/m
Distanza asse folla da in	castro			0.000 m
Coefficiente dinamico				1.000
Schema di carico 1:	Larghezza delle colonne di carico			3.000 m
	Interasse ruote in senso trasversale			2.000 m
	Interasse ruote in senso longitudinale			1.200 m
	Lati dell'impronta ruota: L=	0.400 m	T=	0.400 m
		1° colonna	2° colonna	3° colonna
	Peso singola ruota	150.000	100.000	50.000 kN
	Carico distribuito	9.000	2.500	2.500 kN/m^2
Schema di carico 2:	Interasse ruote in senso trasversale			2.000 m
	Interasse ruote in senso longitudinale			0.000 m
	Lati dell'impronta ruota: L=	0.350 m	T=	0.600 m
	Peso singola ruota			200.000 kN
• .	ticale dei carichi nello spessore			45.000 °
Angolo di ripartizione ori:	zzontale dei carichi (effetto piastra)			45.000 °

Tabella dei carichi mobili

n° ruote = numero ruote carico considerato
b= braccio del carico in esame (risultante)
lrip = larghezza di ripartizione del carico ruote
q= carico distribuito sulla larghezza di ripartizione

			Massimo momento flettente			Massi	mo sforzo di ta	aglio
	n° carico	n° ruote	bm (m)	Irip (m)	qm (kN/m)	bt (m)	Irip (m)	qt (kN/m)
na	Schema 1 - distribuito		0.225	1.000	4.050	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	0.720	0.000	0.000	0.720	0.000
8	Schema 1 - 1° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
-	Schema 1 - 2° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
a	Schema 1 - distribuito		0.000	1.000	0.000	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	0.720	0.000	0.000	0.720	0.000
3	Schema 1 - 1° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
2	Schema 1 - 2° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
na	Schema 1 - distribuito		0.000	1.000	0.000	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	0.720	0.000	0.000	0.720	0.000
	Schema 1 - 1° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
ကိ	Schema 1 - 2° fila	2	0.000	1.920	0.000	0.000	1.920	0.000
	Schema 2 - 1° fila	1	0.150	0.820	243.902	0.150	0.820	73.171
	Schema 2 - 2° fila	1	0.000	0.000	0.000	0.000	0.670	0.000

Effetto d'urto sul sicurvia (azione eccezionale) 100.000 kN Altezza della forza d'urto da estradosso soletta 1.150 m Larghezza di ripartizione urto 1.795 m













Sollecitazioni all'incastro; sezione di estremità

Tipo di carico	Tagli (kN/m)	Momenti (kNm/m)	Sf.norm (kN/m)
Peso proprio (rettangolo)	9.000	-5.400	0.000
Peso proprio (triangolo)	0.000	0.000	0.000
Marciapiede	6.563	-5.414	0.000
Massicciata	1.980	-0.446	0.000
Sicurvia	0.800	-0.660	0.000
Parapetto	0.000	0.000	0.000
Veletta	2.000	-2.500	0.000
Folla	0.000	0.000	0.000
Schema 1 - distribuito	0.000	-0.911	0.000
Schema 1 (tandem max)	0.000	0.000	0.000
Schema 2 (max)	73.171	-36.585	0.000
Urto	0.000	-72.423	55.710

Coefficienti parziali	(γΧΨ)	SLU	SLU ECC:	SLE (rare)	SLE (frequenti) SLE	(quasi perm.)
Carichi permanenti		1.350	1.000	1.000	1.000	1.000
Carichi mobili - Tandem		1.350	1.000	1.000	0.750	0.000
Carichi mobili - Distribuiti		1.350	1.000	1.000	0.400	0.000

Sollecitazioni complessive all'incastro; sezione di estremità

Tipo di carico	Tagli	Momenti	Sf.norm	
	(kN/m)	(kNm/m)	(kN/m)	
SLU Totali perm.+ mobili	126.243	-68.857	0.000	
SLU ECC. Totali perm.+ mobili + urto	93.513	-123.428	55.710	
SLE (rare) Totali perm.+ mobili	93.513	-51.005	0.000	
SLE (frequenti) Totali perm.+ mobili	75.221	-41.859	0.000	
SLE (quasi perm.) Totali perm.+ mobili	20.343	-14.420	0.000	

Dimensionamento armature minime allo SLU

Resistenza di calcolo calcestruzzo:	fcd=	18.13 N/mmq
Resistenza di calcolo armatura:	fsd=	391.30 N/mmq
Modulo di elasticità armatura:	Es=	210000 N/mmq
Ricoprimento armature:	Ry=	50 mm
Inclinazione delle staffe (45°<= α <=90°)	α=	90.00 °
Inclinazione di calcolo dei puntoni di calcestruzzo	θ =	21.80 °
Altezza utile della sezione di incastro	d=	25.00 cm
Altezza sezione reagente:	X=	1.96 cm
Area di armatura tesa minima:	As(sup)=	14.17 cmq/m
Area di armatura compressa minima:	As(inf)=	0.00 cmq/m
Verifica resistenza al taglio, solo cls.	Vrd,c=	129.06 kN
Coefficiente di sicurezza, solo cls.	Vrd,c/Vsd=	1.022 >1: Verificato
Area di armatura trasversale necessaria per taglio:	Ast=	N.D. cmq/mq

Dimensionamento armature minime allo SLE

		SLE (frequenti) SLE (q	uasi perm.)
Valore limite di apertura fessure:	wd=	0.2	0.2 mm
Tensione di calcolo armatura:	Sa=	160	160 N/mmq
Tensione nel calcestruzzo	Sc=	4.81	2.55 N/mmq
Area di armatura tesa minima:	As(sup)=	11.67	3.85 cmg/m

















13.4 VERIFICA IN ESERCIZIO - SOLETTA INTERNA TRA LE TRAVI

La soletta tra le travi si schematizza come trave semi-incastrata di luce 3.20 m per una larghezza di calcolo unitaria.

Verifica soletta tra le travi(o su travi a canaletta)					3.200 m
Altezza della lastra prefa		0.060 m			
Altezza della soletta					0.360 m
Luce di calcolo					3.200 m
Peso specifico calcestru	ızzo armato				25.000 kN/m^3
Altezza della massiccia	ta				0.100 m
Peso della massicciata					2.500 kN/m^2
Coefficiente dinamico					1.000
Schema di carico 1:	Larghezza delle colonne di	carico			3.000 m
	Interasse ruote in senso tra	sversale			2.000 m
	Interasse ruote in senso lor	ngitudinale			1.200 m
	Lati dell'impronta ruota:	L=	0.400 m	T=	0.400 m
			1° colonna	2° colonna	3° colonna
	Peso singola ruota		150.000	100.000	50.000 kN
	Carico distribuito		9.000	2.500	2.500 kN/m^2
Schema di carico 2:	Interasse ruote in senso tra	sversale			2.000 m
	Interasse ruote in senso lor	ngitudinale			0.000 m
	Lati dell'impronta ruota:	L=	0.350 m	T=	0.600 m
	Peso singola ruota				200.000 kN
Angolo di ripartizione ve	rticale dei carichi nello spessor	е			45.000 °
Angolo di ripartizione ori	zzontale dei carichi (effetto pia	stra)			45.000 °
Efficienza minima dei vn	coli di incastro (0=appoggio; 1:	=incastro perfe	etto)		0.750

Tabella dei carichi mobili

numero ruote carico considerato n° ruote =

distanza dall'incastro del carico in esame (disposizione di momento massimo) xm = distanza dall'incastro del carico in esame (disposizione di taglio massimo) xt =

Irip = larghezza di ripartizione del carico ruote q= carico distribuito sulla larghezza di ripartizione

			Massimo momento flettente			Mass	simo sforzo di tag	lio
	n° carico	n° ruote	xm (m)	Irip (m)	qm (kN/m)	xt (m)	Irip (m)	qt (kN/m)
Ja	Schema 1 - distribuito		2.150	1.000	18.900	1.620	1.000	27.000
olonna	Schema 1 - 1° fila	1	1.600	2.500	60.000	0.620	2.500	60.000
0	Schema 1 - 1° fila	2	1.600	3.700	81.081	0.620	3.700	81.081
٠	Schema 1 - 2° fila	2	0.000	0.000	0.000	2.620	3.700	81.081
Ja	Schema 1 - distribuito		1.500	1.000	7.500	2.950	1.000	1.250
colonna	Schema 1 - 1° fila	1	0.600	2.500	40.000	3.200	2.500	40.000
	Schema 1 - 1° fila	2	0.600	3.700	54.054	3.200	3.700	54.054
2°	Schema 1 - 2° fila	2	0.000	0.000	0.000	0.000	0.000	0.000
Ja	Schema 1 - distribuito		0.000	1.000	0.000	0.000	1.000	0.000
colonna	Schema 1 - 1° fila	1	0.000	0.000	0.000	0.000	0.000	0.000
	Schema 1 - 1° fila	2	0.000	0.000	0.000	0.000	0.000	0.000
ကိ	Schema 1 - 2° fila	2	0.000	0.000	0.000	0.000	0.000	0.000
	Schema 2 - 1° fila	1	1.600	2.450	81.633	0.620	2.450	81.633
	Schema 2 - 2° fila	1	0.000	0.000	0.000	2.620	2.450	81.633

Sollecitazioni massime/minime

Tipo di carico	Taglio max (kN/m)	Momento max (kNm/m)	Momento min (kNm/m)
Peso soletta	14.400	5.760	-7.680
Massicciata	4.000	1.600	-2.133
Schema 1 - distribuito	14.901	6.204	-8.885
Schema 1 (max/min)	134.952	38.822	-51.349
Schema 2 (max/min)	82.505	30.556	-37.450

Coefficienti parziali	(γΧΨ)	SLU	SLE (rare)	SLE (frequenti) SLE (quasi perm.)
Carichi permanenti		1.350	1.000	1.000	1.000
Carichi mobili - Tandem		1.350	1.000	0.750	0.000
Carichi mobili - Distribuiti		1.350	1.000	0.400	0.000













Sollecitazioni complessive massime/minime

Tipo di carico	Taglio max	Momento max	Momento min
and the second s	(kN/m)	(kNm/m)	(kNm/m)
SLU Totali perm.+ mobili	227.142	70.722	-94.564
SLE (rare) Totali perm.+ mobili	168.253	52.387	-70.047
SLE (frequenti) Totali perm.+ mobili	125.575	38.959	-51.879
SLE (quasi perm.) Totali perm.+ mobili	18.400	7.360	-9.813

Dimensionamento armature minime allo SLU

Resistenza di calcolo calcestruzzo:	fcd=	19.83 N/mmq
Resistenza di calcolo armatura:	fsd=	391.30 N/mmq
Modulo di elasticità armatura:	Es=	210000.00 N/mmq
Ricoprimento armature:	Ry(sup)=	50 mm
	Ry(inf)=	70 mm
Inclinazione delle staffe (45°<= \alpha <= 90°)	α=	90.00 °
Inclinazione di calcolo dei puntoni di calcestruzzo	θ =	21.80 °

		Momento max	Momento min	
Altezza utile della sezione	d=	29.00	31.00	cm
Altezza sezione reagente:	X=	1.57	1.97	cm
Area di armatura superiore minima:	As(sup)=	0.00	8.00	cmq/m
Area di armatura inferiore minima:	As(inf)=	6.37	0.00	cmq/m
Verifica resistenza al taglio, solo cls.	Vrd,c=		155.43	kN
Coefficiente di sicurezza, solo cls.	Vrd,c/Vsd=		0.684	<1: NON Verificato
Area di armatura trasversale necessaria per ta	Ast=		8.32	cmq/mq

Dimensionamento armature minime allo SLE (frequenti)

		Moi	mento max	Momento min	
Valore limite di apertura fessure:	wd=		0.2	0.	2 mm
Tensione di calcolo armatura:	Sa=		160	16	0 N/mmq
Tensione nel calcestruzzo		Sc=	3.84	4.2	1 N/mmq
Area di armatura superiore minima:		As(sup)=	0.00	11.5	5 cmq/m
Area di armatura inferiore minima:		As(inf)=	9.21	0.0	0 cma/m













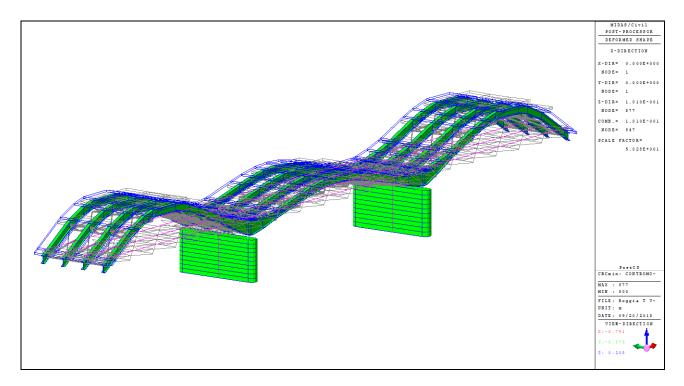




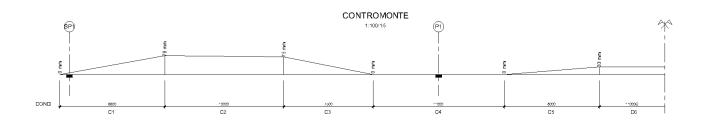
CONTROMONTE TRAVI

Le travature vengono realizzate con una controfreccia pari all'inverso delle deformazioni permanenti più il 25% dei carichi mobili, nella combinazione caratteristica; l'andamento dei singoli conci è rettilineo.

Nel diagramma seguente sono evidenziate le deformazioni da ottenere.



DEFORMATA - CONTROMONTE DI PROGETTO



CONTROMONTE EFFETTIVE (1/2 IMPALCATO)















TIPO DI ANALISI SVOLTA

- Analisi strutturale condotta di tipo statico e dinamico lineare
- Metodo adottato per la risoluzione del problema strutturale: Metodo agli elementi finiti con software Midas/Civil 2015 v.1.2.

VERIFICA DEI CONTENUTI DI CUI AL PAR. 10.2 DELLE N.T.C. 2008

- Metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Metodo semiprobabilistico agli Stati Limite
- Combinazioni di carico adottate: Le combinazioni di carico adottate sono riportate nel paragrafo 5 "Combinazioni di carico" e sono state scelte in modo da massimizzare tutte le sollecitazioni sulla struttura. L'impiego delle combinazioni adottate è esaustivo delle configurazioni studiate per la struttura in esame.

ORIGINE E CARATTERISTICHE DEI CODICI DI CALCOLO

- Vedi paragrafo 2 "Modellazione strutturale".

AFFIDABILITÀ DEI CODICI UTILIZZATI

- Vedi paragrafo 2 "Modellazione strutturale".

VALIDAZIONE DEI CODICI.

- Nel caso in cui si rendesse necessaria una validazione indipendente del calcolo strutturale, i calcoli potranno essere eseguiti nuovamente da soggetto diverso da quello originario mediante programmi di calcolo diversi da quelli usati originariamente e ciò al fine di eseguire un effettivo controllo incrociato sui risultati delle elaborazioni. Al fondo della presente relazione si riporta il tabulato di input del modello strutturale con tutte le informazioni sufficienti a rendere ripercorribili tutti i calcoli effettuati.

MODALITÀ DI PRESENTAZIONE DEI RISULTATI.

- Il percorso che ha condotto ai risultati è stato: modellazione della struttura, analisi dei carichi e disposizione degli stessi sul modello; calcolo delle sollecitazioni; verifica degli elementi ritenuti significativi. La quantità di informazioni che ha accompagnato l'utilizzo del software in input e in output è cospicua. Per non appesantire eccessivamente la relazione di calcolo, si è operata la scelta di fornire soltanto una sintesi completa ed efficace dei risultati privilegiando schemi grafici ai tabulati. E' comunque disponibile su supporto informatico l'intero sviluppo dei tabulati di output con tutte le informazioni necessarie alla eventuale riproduzione del calcolo automatico.

INFORMAZIONI GENERALI SULL'ELABORAZIONE.

- Al termine della elaborazione sono stati svolti estesi controlli per l'esame dei risultati e per una valutazione complessiva dell'elaborazione dal punto di vista del corretto comportamento del modello.

GIUDIZIO MOTIVATO DI ACCETTABILITÀ DEI RISULTATI.

- I risultati della elaborazione sono stati analizzati criticamente mediante confronto con calcoli di massima eseguiti manualmente; tali controlli sommari hanno portato a confermare la validità dei risultati. I risultati delle elaborazioni sono quindi stati sottoposti a controlli che ne hanno comprovato l'attendibilità. In particolare si è svolto il controllo di equilibrio tra reazioni vincolari e carichi applicati.





MIDAS A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Carriedan.	Company	Studio Corona srl	Client	ZANA
SECTION CONTRACTOR AND ADDRESS OF THE PARTY	Author	R.V.	File Name	N Bereguardo V 1.mct

; ; MIDAS/Civil Text(MCT) File. ; Date: 2018/10/16

*VERSION 8.3.5

*UNIT ; Unit System KN , M, J, C

*PROJINFO ; Project Information REVISION:1 USER:Renato Vaira ADDRESS:Studio Corona TITLE:VIADOTTO NAVIGLIO BEREGUARDO

*STRUCTYPE ; Structure Type 0, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR·MATL·CODE ; Rebar Material Code UNI(RC), B450C, UNI(RC), B450C

*NODE ; Nodes 1, 31, 0, ·6.8 2, 69, 0, ·6.8 21, 31, 4.8, 2.7 22, 69, 4.8, 2.7 23, 31, 16, 2.7 24, 69, 16, 2.7 25, 31, 0, -2.7 26, 69, 0, 2.7 27, 31, 4.8, 2.7 28, 69, 4.8, 2.7 31, 31, 4.8, 2.3 32, 69, 4.8, 2.3 33, 31, ·1.6, ·2.3 34, 69, ·16, ·2.3 35, 31, 16, 2.3 36, 69, 16, 2.3 37, 31, 4.8, 2.3 38, 69, 4.8, 2.3 41, 31, 4.8, 2.13 42, 69, 4.8, 2.13 43, 31, 16, 2.13 44, 69, 16, 2.13 45, 31, 16, ·2.13 46, 69, 1.6, ·2.13 47, 31, 4.8, 2.13 48, 69, 4.8, 2.13 51, 31, ·4.8, ·2.03 52, 69, 4.8, 2.03 53, 31, 1.6, 2.03 54, 69, 16, 2.03 55, 31, 1.6, 2.03 56, 69, 1.6, -2.03 57, 31, 4.8, 2.03

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89, 66, ·4.8, ·1.63 90, 72, ·4.8, ·1.63 91, 28, ·1.6, ·1.63

A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PERSON OF TH	Author	R.V.	File Name	N Bereguardo V_1.mct

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MIDAS A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onue unua	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V 1.mct

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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onnegativ.	Company	Studio Corona srl	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Bereguardo V_1.mct

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392, 63, 0, ·1.06 393, 75, 0, ·1.06

A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuseum.	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Bereguardo V_1.mct

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Orașina.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PARTY OF THE	Author	R.V.	File Name	N Bereguardo V 1.mct

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A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguina.	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

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723, 10, ·4.8, 0 724, 15, ·4.8, 0 MIDAS A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onue unua	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V 1.mct

725, 18, -4.8, 0 726, 20, ·4.8, 0 727, 25, ·4.8, 0 728, 25.5, -4.8, 0 729, 28, ·4.8, 0 730, 30.5, ·4.8, 0 731, 31, ·4.8, 0 732, 315, -4.8, 0 733, 34, 4.8, 0 734, 36.5, -4.8, 0 735, 37, 4.8, 0 736, 42.2, -4.8, 0 737, 44.5, -4.8, 0 738, 47.4, -4.8, 0 739, 50, 4.8, 0 740, 52.6, ·4.8, 0 741, 55.5, ·4.8, 0 742, 57.8, ·4.8, 0 743, 63, ·4.8, 0 744, 63.5, -4.8, 0 745, 66, -4.8, 0 746, 68.5, -4.8, 0 747, 69, 4.8, 0 748, 69.5, 4.8, 0 749, 72, ·4.8, 0 750, 74.5, ·4.8, 0 751, 75, -4.8, 0 752, 80, ·4.8, 0 753, 82, ·4.8, 0 754, 85, -4.8, 0 755, 90, -4.8, 0 756, 92, 4.8, 0 757, 95, -4.8, 0 758, 100, -4.8, 0 759, 100.8, -4.8, 0 760, .0.8, .16, 0 761, 0, ·16, 0 762, 5, ·16, 0 763, 8, ·16, 0 764, 10, 16, 0 765, 15, ·1.6, 0 766, 18, ·1.6, 0 767, 20, -16, 0 768, 25, 16, 0 769, 25.5, -1.6, 0 770, 28, -16, 0 771, 30.5, -1.6, 0 772, 31, 16, 0 773, 315, 16, 0 774, 34, ·16, 0 775, 36.5, ·16, 0 776, 37, ·16, 0 777, 42.2, ·16, 0 778, 44.5, 16, 0 779, 47.4, 1.6, 0 780, 50, -16, 0 781, 52.6, ·1.6, 0 782, 55.5, ·1.6, 0 783, 57.8, ·1.6, 0 784, 63, -1.6, 0 785, 63.5, ·1.6, 0 786, 66, 16, 0 787, 68.5, ·1.6, 0 788, 69, -16, 0 789, 69.5, -1.6, 0 790, 72, 16, 0 791, 74.5, 1.6, 0 792, 75, 16, 0 793, 80, ·1.6, 0 794, 82, 16, 0 795, 85, 16, 0 796, 90, 16, 0 797, 92, -16, 0 798, 95, -16, 0

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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

One com	Company	Studio Corona sr l	Client	ZANA
THE OWNER AND ADDRESS OF THE PARTY OF THE PA	Author	R.V.	File Name	N Bereguardo V 1.mct

808, 20, 16, 0 809, 25, 16, 0 810, 25.5, 1.6, 0 811, 28, 16, 0 812, 30.5, 1.6, 0 813, 31, 16, 0 814, 315, 16, 0 815, 34, 16, 0 816, 36.5, 1.6, 0 817, 37, 16, 0 818, 42.2, 1.6, 0 819, 44.5, 1.6, 0 820, 47.4, 16, 0 821, 50, 16, 0 822, 52.6, 16, 0 823, 55.5, 16, 0 824, 57.8, 16, 0 825, 63, 16, 0 826, 63.5, 16, 0 827, 66, 16, 0 828, 68.5, 16, 0 829, 69, 16, 0 830, 69.5, 16, 0 831, 72, 16, 0 832, 74.5, 16, 0 833, 75, 16, 0 834, 80, 16, 0 835, 82, 16, 0 836, 85, 16, 0 837, 90, 16, 0 838, 92, 16, 0 839, 95, 16, 0 840, 100, 16, 0 841, 100.8, 1.6, 0 842, 0.8, 4.8, 0 843, 0, 4.8, 0 844, 5, 4.8, 0 845, 8, 4.8, 0 846, 10, 4.8, 0 847, 15, 4.8, 0 848, 18, 4.8, 0 849, 20, 4.8, 0 850, 25, 4.8, 0 851, 25.5, 4.8, 0 852, 28, 4.8, 0 853, 30.5, 4.8, 0 854, 31, 4.8, 0 855, 315, 4.8, 0 856, 34, 4.8, 0 857, 36.5, 4.8, 0 858, 37, 4.8, 0 859, 42.2, 4.8, 0 860, 44.5, 4.8, 0 861, 47.4, 4.8, 0 862, 50, 4.8, 0 863, 52.6, 4.8, 0 864, 55.5, 4.8, 0 865, 57.8, 4.8, 0 866, 63, 4.8, 0 867, 63.5, 4.8, 0 868, 66, 4.8, 0 869, 68.5, 4.8, 0 870, 69, 4.8, 0 871, 69.5, 4.8, 0 872, 72, 4.8, 0 873, 74.5, 4.8, 0

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO					
Onegana.	Company	Studio Corona srl	Client	ZANA	
and the second	Author	R.V.	File Name	N Bereguardo V_1.mct	

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

(Carriedan)	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Berequardo V 1.mct

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR AND AND	Author	R.V.	File Name	N Bereguardo V 1.mct

431, BEAM, 5, 10, 872, 873, 0 432, BEAM, 5, 14, 873, 874, 433, BEAM, 5, 14, 874, 875, 434, BEAM, 5, 14, 875, 876, 435, BEAM , 5, 4, 876, 877, 436, BEAM , 5, 4, 877, 878, n 437, BEAM , 5, 4, 878, 879, 0 438, BEAM, 5, 3, 879, 880, 0 439, BEAM, 5, 3, 880, 881, 440, BEAM, 5, 3, 881, 882, 1014, BEAM, 1, 18, 107, 111, 180 1015, BEAM , 1, 18, 111, 115, 180 1016, BEAM , 1, 18, 115, 119, 180 1017, BEAM , 1, 18, 119, 123, 180 1018, BEAM , 1, 18, 123, 127, 180 1019, BEAM , 1, 18, 127, 131, 180 1022, BEAM , 1, 18, 108, 112, 180 1023, BEAM , 1, 18, 112, 116, 180 1024, BEAM , 1, 18, 116, 120, 180 1025, BEAM, 1, 18, 120, 124, 180 1026, BEAM, 1, 18, 124, 128, 180 1027, BEAM, 1, 18, 128, 132, 180 1030, BEAM, 1, 18, 109, 113, 180 1031, BEAM , 1, 18, 113, 117, 180 1032, BEAM , 1, 18, 117, 121, 180 1033, BEAM , 1, 18, 121, 125, 180 1034, BEAM , 1, 18, 125, 129, 180 1035, BEAM, 1, 18, 129, 133, 180 1038, BEAM , 1, 18, 110, 114, 180 1039, BEAM , 1, 18, 114, 118, 180 1040, BEAM , 1, 18, 118, 122, 180 1041, BEAM, 1, 18, 122, 126, 180 1042, BEAM , 1, 18, 126, 130, 180 1043, BEAM, 1, 18, 130, 134, 180 1110, BEAM , 1, 18, 327, 345, 180 1111, BEAM , 1, 18, 345, 363, 180 1112, BEAM , 1, 18, 363, 381, 180 1113, BEAM , 1, 18, 381, 399, 180 1114, BEAM , 1, 18, 399, 417, 180 1114, BEAM, 1115, BEAM , 1118, BEAM , 1, 18, 417, 435, 180 1118, BEAM , 1, 18, 328, 346, 180 1119, BEAM , 1, 18, 346, 364, 180 1120, BEAM, 1, 18, 364, 382, 180 1121, BEAM, 1, 18, 382, 400, 180 1122, BEAM, 1, 18, 400, 418, 180 1123, BEAM, 1, 18, 418, 436, 180 1126, BEAM, 1, 18, 329, 347, 180 1127, BEAM , 1, 18, 347, 365, 180 $1128, BEAM \ , \ 1, \ 18, \ 365, \ 383, \ 180$ 1129, BEAM , 1, 18, 383, 401, 180 1130, BEAM, 1, 18, 401, 419, 180 1131, BEAM , 1, 18, 419, 437, 180 1134, BEAM , 1, 18, 330, 348, 180 1135, BEAM , 1, 18, 348, 366, 180 1136, BEAM, 1, 18, 366, 384, 180 1137, BEAM , 1, 18, 384, 402, 180 1138, BEAM, 1, 18, 402, 420, 180 1139, BEAM, 1, 18, 420, 438, 180 1142, BEAM , 1, 18, 331, 349, 180 1143, BEAM , 1, 18, 349, 367, 180 1144, BEAM , 1, 18, 367, 385, 180 1145, BEAM , 1, 18, 385, 403, 180 1146, BEAM, 1, 18, 403, 421, 180 1147, BEAM , 1, 18, 421, 439, 180 1150, BEAM, 1, 18, 332, 350, 180 1151, BEAM , 1, 18, 350, 368, 180 1152, BEAM, 1, 18, 368, 386, 180 1153, BEAM, 1, 18, 386, 404, 180 1154, BEAM , 1, 18, 404, 422, 180 1155, BEAM , 1, 18, 422, 440, 180 1158, BEAM , 1, 18, 333, 351, 180 1159, BEAM , 1, 18, 351, 369, 180 1160, BEAM , 1, 18, 369, 387, 180 1161, BEAM , 1, 18, 387, 405, 180 1162, BEAM, 1, 18, 405, 423, 180 1163, BEAM, 1, 18, 423, 441, 180 1166, BEAM, 1, 18, 334, 352, 180 1167, BEAM, 1, 18, 352, 370, 180 1168, BEAM , 1, 18, 370, 388, 180 1169, BEAM , 1, 18, 388, 406, 180 1170, BEAM , 1, 18, 406, 424, 180 1171, BEAM , 1, 18, 424, 442, 180 1174, BEAM , 1, 18, 335, 353, 180



A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onne man	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE	Author	R.V.	File Name	N Receduardo V 1 mct

1175, BEAM, 1, 18, 353, 371, 180 1176, BEAM, 1, 18, 371, 389, 180 1177, BEAM, 1, 18, 389, 407, 180 1178, BEAM , 1, 18, 407, 425, 180 1179, BEAM, 1, 18, 425, 443, 180 $1182, BEAM \ , \ 1, \ 18, \ 336, \ 3\underline{5}4, \ 180$ 1183, BEAM , 1, 18, 354, 372, 180 1184, BEAM, 1, 18, 372, 390, 180 1185, BEAM, 1, 18, 390, 408, 180 1186, BEAM, 1, 18, 408, 426, 180 1187, BEAM, 1, 18, 426, 444, 180 1190, BEAM, 1, 18, 337, 355, 180 1191, BEAM, 1, 18, 355, 373, 180 1192, BEAM, 1, 18, 373, 391, 180 1193, BEAM , 1, 18, 391, 409, 180 1194, BEAM , 1, 18, 409, 427, 180 1195, BEAM , 1, 18, 427, 445, 180 1193, BEAM , 1, 18, 338, 356, 180 1199, BEAM , 1, 18, 356, 374, 180 1200, BEAM , 1, 18, 374, 392, 180 1201, BEAM , 1, 18, 392, 410, 180 1202, BEAM, 1, 18, 410, 428, 180 1203, BEAM, 1, 18, 428, 446, 180 1206, BEAM, 1, 18, 339, 357, 180 1207, BEAM , 1, 18, 357, 375, 180 1208, BEAM , 1, 18, 375, 393, 180 1209, BEAM, 1, 18, 393, 411, 180 1210, BEAM , 1, 18, 411, 429, 180 1211, BEAM , 1, 18, 429, 447, 180 1214, BEAM , 1, 18, 340, 358, 180 1215, BEAM , 1, 18, 358, 376, 180 1216, BEAM , 1, 18, 376, 394, 180 1217, BEAM, 1, 18, 394, 412, 180 1218, BEAM, 1, 18, 412, 430, 180 1219, BEAM, 1, 18, 430, 448, 180 1222, BEAM , 1, 18, 341, 359, 180 1223, BEAM , 1, 18, 359, 377, 180 1224, BEAM , 1, 18, 377, 395, 180 1225, BEAM , 1, 18, 395, 413, 180 1226, BEAM , 1, 18, 413, 431, 180 1227, BEAM, 1, 18, 431, 449, 180 1230, BEAM, 1, 18, 342, 360, 180 1231, BEAM, 1, 18, 360, 378, 180 1232, BEAM, 1, 18, 378, 396, 180 1233, BEAM, 1, 18, 396, 414, 180 1234, BEAM , 1, 18, 414, 432, 180 1235, BEAM , 1, 18, 432, 450, 180 1238, BEAM , 1, 18, 343, 361, 180 1239, BEAM , 1, 18, 361, 379, 180 1240, BEAM , 1, 18, 379, 397, 180 1241, BEAM , 1, 18, 397, 415, 180 1242, BEAM , 1, 18, 415, 433, 180 1243, BEAM, 1, 18, 433, 451, 180 1246, BEAM, 1, 18, 344, 362, 180 1247, BEAM, 1, 18, 362, 380, 180 1248, BEAM, 1, 18, 380, 398, 180 1249, BEAM , 1, 18, 398, 416, 180 1250, BEAM, 1, 18, 416, 434, 180 1251, BEAM , 1, 18, 434, 452, 180 1254, BEAM , 1, 64, 495, 111, 180 1255, BEAM , 1, 64, 111, 519, 180 1256, BEAM , 1, 64, 519, 119, 180 1257, BEAM , 1, 64, 119, 543, 180 1258, BEAM, 1, 64, 543, 127, 180 1259, BEAM, 1, 64, 127, 567, 180 1262, BEAM , 1, 64, 497, 112, 180 1263, BEAM, 1, 64, 112, 521, 180 1264, BEAM , 1, 64, 521, 120, 180 1265, BEAM , 1, 64, 120, 545, 180 1266, BEAM , 1, 64, 545, 128, 180 1267, BEAM , 1, 64, 128, 569, 180 1270, BEAM , 1, 64, 504, 113, 180 1271, BEAM, 1, 64, 113, 528, 180 1272, BEAM , 1, 64, 528, 121, 180 1273, BEAM, 1, 64, 121, 552, 180 1274, BEAM, 1, 64, 552, 129, 180 1275, BEAM , 1, 64, 129, 576, 180 1278, BEAM , 1, 64, 506, 114, 180 1279, BEAM , 1, 64, 114, 530, 180 1280, BEAM , 1, 64, 530, 122, 180 1281, BEAM , 1, 64, 122, 554, 180 1282, BEAM , 1, 64, 554, 130, 180 1283, BEAM , 1, 64, 130, 578, 180



A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR AND AND	Author	R.V.	File Name	N Bereguardo V 1.mct

1286, BEAM, 1, 64, 489, 345, 180 1287, BEAM , 1, 64, 345, 513, 180 1288, BEAM , 1, 64, 513, 381, 180 1289, BEAM , 1, 64, 381, 537, 180 1290, BEAM, 1, 64, 537, 417, 180 1291, BEAM , 1, 64, 417, 561, 180 1294, BEAM , 1, 64, 490, 346, 180 1295, BEAM , 1, 64, 346, 514, 180 1296, BEAM , 1, 64, 514, 382, 180 1297, BEAM , 1, 64, 382, 538, 180 1298, BEAM, 1, 64, 538, 418, 180 1299, BEAM , 1, 64, 418, 562, 180 1302, BEAM , 1, 64, 491, 347, 180 1303, BEAM , 1, 64, 347, 515, 180 1304, BEAM , 1, 64, 515, 383, 180 1305, BEAM , 1, 64, 383, 539, 180 1306, BEAM , 1, 64, 539, 419, 180 1307, BEAM, 1, 64, 419, 563, 180 1310, BEAM, 1, 64, 492, 348, 180 1311, BEAM, 1, 64, 348, 516, 180 1312, BEAM, 1, 64, 516, 384, 180 1313, BEAM, 1, 64, 384, 540, 180 1314, BEAM, 1, 64, 540, 420, 180 1315, BEAM , 1, 64, 420, 564, 180 1318, BEAM , 1, 64, 493, 349, 180 1319, BEAM , 1, 64, 349, 517, 180 1320, BEAM , 1, 64, 517, 385, 180 1321, BEAM , 1, 64, 385, 541, 180 1322, BEAM , 1, 64, 541, 421, 180 1323, BEAM , 1, 64, 421, 565, 180 1326, BEAM , 1, 64, 494, 350, 180 1327, BEAM, 1, 64, 350, 518, 180 1328, BEAM, 1, 64, 518, 386, 180 1329, BEAM, 1, 64, 386, 542, 180 1330, BEAM, 1, 64, 542, 422, 180 1331, BEAM , 1, 64, 422, 566, 180 1334, BEAM , 1, 64, 498, 351, 180 1335, BEAM , 1, 64, 351, 522, 180 1336, BEAM , 1, 64, 522, 387, 180 1337, BEAM , 1, 64, 387, 546, 180 1338, BEAM, 1, 64, 546, 423, 180 1339, BEAM, 1, 64, 423, 570, 180 1342, BEAM, 1, 64, 499, 352, 180 1343, BEAM, 1, 64, 352, 523, 180 1344, BEAM, 1, 64, 523, 388, 180 1345, BEAM , 1, 64, 388, 547, 180 1346, BEAM , 1, 64, 547, 424, 180 1347, BEAM , 1, 64, 424, 571, 180 1350, BEAM , 1, 64, 500, 353, 180 1351, BEAM , 1, 64, 353, 524, 180 1352, BEAM , 1, 64, 524, 389, 180 1353, BEAM , 1, 64, 389, 548, 180 1354, BEAM, 1, 64, 548, 425, 180 1355, BEAM, 1, 64, 425, 572, 180 1358, BEAM, 1, 64, 501, 354, 180 1359, BEAM, 1, 64, 354, 525, 180 1360, BEAM, 1, 64, 525, 390, 180 1361, BEAM, 1, 64, 390, 549, 180 1362, BEAM , 1, 64, 549, 426, 180 1363, BEAM , 1, 64, 426, 573, 180 1366, BEAM , 1, 64, 502, 355, 180 1367, BEAM , 1, 64, 355, 526, 180 1368, BEAM, 1, 64, 526, 391, 180 1369, BEAM , 1, 64, 391, 550, 180 1370, BEAM , 1, 64, 550, 427, 180 1371, BEAM, 1, 64, 427, 574, 180 1374, BEAM , 1, 64, 503, 356, 180 1375, BEAM , 1, 64, 356, 527, 180 1376, BEAM , 1, 64, 527, 392, 180 1377, BEAM , 1, 64, 392, 551, 180 1378, BEAM , 1, 64, 551, 428, 180 1379, BEAM , 1, 64, 428, 575, 180 1382, BEAM, 1, 64, 507, 357, 180 1383, BEAM, 1, 64, 357, 531, 180 1384, BEAM, 1, 64, 531, 393, 180 1385, BEAM, 1, 64, 393, 555, 180 1386, BEAM, 1, 64, 555, 429, 180 1387, BEAM, 1, 64, 429, 579, 180 1390, BEAM, 1, 64, 508, 358, 180 1391, BEAM , 1, 64, 358, 532, 180 1392, BEAM , 1, 64, 532, 394, 180 1393, BEAM , 1, 64, 394, 556, 180 1394, BEAM , 1, 64, 556, 430, 180



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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

(Carried Water	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY NAMED IN	Author	R.V.	File Name	N Bereguardo V 1.mct

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1395, BEAM, 1, 64, 430, 580, 180
1398, BEAM, 1, 64, 509, 359, 180
1399, BEAM, 1, 64, 359, 533, 180
1400, BEAM , 1, 64, 533, 395, 180
1401, BEAM , 1, 64, 395, 557, 180
1402, BEAM , 1, 64, 557, 431, 180
1403, BEAM , 1, 64, 431, 581, 180
1406, BEAM, 1, 64, 510, 360, 180
1407, BEAM, 1, 64, 360, 534, 180
1408, BEAM, 1, 64, 534, 396, 180
1409, BEAM, 1, 64, 396, 558, 180
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1411, BEAM , 1, 64, 432, 582, 180
1414, BEAM , 1, 64, 511, 361, 180
1415, BEAM , 1, 64, 361, 535, 180
1416, BEAM , 1, 64, 535, 397, 180
1417, BEAM , 1, 64, 397, 559, 180
1418, BEAM , 1, 64, 559, 433, 180
1419, BEAM , 1, 64, 433, 583, 180
1422, BEAM , 1, 64, 512, 362, 180
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1424, BEAM , 1, 64, 536, 398, 180
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1427, BEAM , 1, 64, 434, 584, 180
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1431, BEAM , 1, 17, 631, 653, 0
1432, BEAM , 1, 17, 653, 675, 0
1434, BEAM , 1, 17, 610, 632, 0
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1436, BEAM , 1, 17, 654, 676, 0
1438, BEAM , 1, 17, 611, 633, 0
1439, BEAM, 1, 17, 633, 655,
1440, BEAM , 1, 17, 655, 677,
1442, BEAM , 1, 17, 612, 634,
1443, BEAM , 1, 17, 634, 656,
1444, BEAM , 1, 17, 656, 678, 1446, BEAM , 1, 17, 613, 635,
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1447, BEAM , 1, 17, 635, 657,
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1448, BEAM, 1, 17, 657, 679, 1450, BEAM, 1, 17, 614, 636,
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1456, BEAM, 1, 17, 659, 681,
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1474, BEAM , 1, 17, 620, 642, 1475, BEAM , 1, 17, 642, 664,
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1483, BEAM, 1, 17, 644, 666,
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1487, BEAM , 1, 17, 645, 667,
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1506, BEAM , 1, 17, 628, 650,
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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onegann.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PARTY OF THE	Author	R.V.	File Name	N Bereguardo V 1.mct

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2003, BEAM , 1, 65, 2005, BEAM , 1, 65,
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2006, BEAM , 1, 65, 2007, BEAM , 1, 65,
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2010, BEAM , 1, 20, 169, 53, 180
2011, BEAM , 1, 20, 53, 171, 180
2012, BEAM , 1, 20, 171, 55, 180
2013, BEAM , 1, 20, 55, 173, 180
2014, BEAM , 1, 20, 173, 57, 180
2017, BEAM, 1, 20,
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2018, BEAM , 1, 20, 170, 54, 180
2019, BEAM , 1, 20,
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2020, BEAM , 1, 20, 172, 56, 180
2021, BEAM , 1, 20, 56, 174, 180
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3002, BEAM , 1, 15, 195, 210, 90
3003, BEAM , 1, 15, 210, 228, 90
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3005, BEAM , 1, 15, 243, 261, 90
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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onegann.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PARTY OF THE	Author	R.V.	File Name	N Bereguardo V 1.mct

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3109, BEAM, 1, 15,
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3117, BEAM , 1, 15,
3118, BEAM , 1, 15,
3121, BEAM , 1, 15,
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 3123, BEAM , 1, 15,
                                 92, 66,
3124, BEAM, 1, 15,
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3125, BEAM , 1, 15,
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3130, BEAM, 1, 15, 144, 92, 90
3131, BEAM, 1, 15, 92, 148, 90
3132, BEAM, 1, 15, 148, 96, 90
3133, BEAM , 1, 15, 96, 152, 90
3134, BEAM , 1, 15, 152, 100, 90
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3139, BEAM, 1, 15, 216, 148, 90
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3154, BEAM, 1, 15, 200, 217, 90
3155, BEAM , 1, 15, 217, 233, 90
3156, BEAM, 1, 15, 233, 250, 90
3157, BEAM , 1, 15, 250, 266, 90
3158, BEAM , 1, 15, 266, 283, 90
3161, BEAM , 1, 15, 184, 201, 90
3162, BEAM , 1, 15, 201, 217, 90
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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onneman.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE	Author	R.V.	File Name	N Rereguardo V 1.mct

3163, BEAM , 1, 15, 217, 234, 90 3164, BEAM , 1, 15, 234, 250, 90 3165, BEAM , 1, 15, 250, 267, 90 3166, BEAM, 1, 15, 267, 283, 90 3169, BEAM, 1, 15, 185, 201, 90 3170, BEAM , 1, 15, 201, 218, 90 3171, BEAM , 1, 15, 218, 234, 90 3172, BEAM , 1, 15, 234, 251, 90 3173, BEAM , 1, 15, 251, 267, 90 3174, BEAM , 1, 15, 267, 284, 90 3177, BEAM, 1, 15, 185, 202, 90 3178, BEAM , 1, 15, 202, 218, 90 3179, BEAM , 1, 15, 218, 235, 90 3180, BEAM , 1, 15, 235, 251, 90 3181, BEAM , 1, 15, 251, 268, 90 3182, BEAM , 1, 15, 268, 284, 90 3185, BEAM, 1, 15, 186, 202, 90 3186, BEAM, 1, 15, 202, 219, 90 3187, BEAM, 1, 15, 219, 235, 90 3188, BEAM, 1, 15, 235, 252, 90 3189, BEAM, 1, 15, 252, 268, 90 3190, BEAM, 1, 15, 268, 285, 90 3193, BEAM, 1, 15, 186, 203, 90 3194, BEAM, 1, 15, 203, 219, 90 3195, BEAM, 1, 15, 219, 236, 90 3196, BEAM , 1, 15, 236, 252, 90 3197, BEAM , 1, 15, 252, 269, 90 3198, BEAM , 1, 15, 269, 285, 90 3201, BEAM , 1, 15, 187, 203, 90 3202, BEAM , 1, 15, 203, 220, 90 3203, BEAM , 1, 15, 220, 236, 90 3204, BEAM , 1, 15, 236, 253, 90 3205, BEAM , 1, 15, 253, 269, 90 3206, BEAM , 1, 15, 269, 286, 90 3209, BEAM , 1, 15, 187, 204, 90 3210, BEAM , 1, 15, 204, 220, 90 3211, BEAM , 1, 15, 220, 237, 90 3212, BEAM , 1, 15, 237, 253, 90 3213, BEAM , 1, 15, 253, 270, 90 3214, BEAM , 1, 15, 270, 286, 90 3217, BEAM , 1, 15, 188, 204, 90 3218, BEAM , 1, 15, 204, 221, 90 3219, BEAM , 1, 15, 221, 237, 90 3220, BEAM , 1, 15, 237, 254, 90 3221, BEAM , 1, 15, 254, 270, 90 3222, BEAM , 1, 15, 270, 287, 90 3225, BEAM , 1, 15, 188, 145, 90 3225, BEAM , 1, 15, 188, 149, 90
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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

(Carried Water	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY NAMED IN	Author	R.V.	File Name	N Bereguardo V 1.mct

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4011, BEAM, 3, 46, 2, 896, 0
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4012, BEAM, 3, 46, 896, 897, 0
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MIDAS A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onne man	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE	Author	R.V.	File Name	N Receduardo V 1 mct

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5120, BEAM, 2, 22, 799, 758,
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*EROUP ; Eroup

TRAVI PRINCIPALI, 719to882, 101to140 201to240 301to340 401to440, 0

A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onegana.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PARTY OF THE	Author	R.V.	File Name	N Bereguardo V_1.mct

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TRASVERSI INTERMEDI, 107to134 327to452 489to495 497to504 506to519 521to528 \
         530to543 545to552 554to567 569to576 578to584 609to696, 1014to1019 \
        1022to1027 1030to1035 1038to1043 1110to1422by8 1111to1423by8 \
        1112 to 1424 by 8\ 1113 to 1425 by 8\ 1114 to 1426 by 8\ 1115 to 1427 by 8\ 1430 to 1514 by 4\ \backslash
        1431to1515bv4 1432to1516bv4. 0
   TRASVERSI PILE, 51to58 169to174 496to568bv24 505to577bv24, 2001to2003 \
        2005to2007 2009to2014 2017to2022 2025to2030 2033to2038 2041to2043 \
        2045to2047, 0
   PILE ,122526, 4001to4020, 0
NODI ,1221to2831to3841to4851to5861to7277to8487to102107to134\
        143to154 159to166 169to174 177to293 327to452 489to584 609to696 719to886, \
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        3002 to 3362 by 8\ 3003 to 3363 by 8\ 3004 to 3364 by 8\ 3005 to 3365 by 8\ 3006 to 3366 by 8, 0
   \textbf{SOLETTA FITTIZIA, , 5009} \\ \textbf{to 5053} \\ \textbf{by 4 5010} \\ \textbf{to 5054} \\ \textbf{by 4 5011} \\ \textbf{to 5055} \\ \textbf{by 4 5070} \\ \textbf{to 5102} \\ \textbf{by 4 } \\ \textbf{4 5011} \\ \textbf{to 5055} \\ \textbf{by 4 5070} \\ \textbf{to 5102} \\ \textbf{by 4 } \\ \textbf{4 5011} \\ \textbf{5055} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ \textbf{5056} \\ 
         5071to5103by4 5072to5104by4 5110to5112 5114to5116 5118to5120, 0
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RIGID LINK, O
APPOGET SPALLE, O
SUPPORTI, O
CONTRIFITTIZI SOLETTA, O
APPOEET PILE, 6492008
*LOAD GROUP ; Load Group
PESO SOLETTA
PESO FINITURE
PESO ACCIATO E PILE
*MATERIAL ; Material
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    2, CONC, C32/40 SOL.TRASV, 0, 0, 1, C, YES, 0.05, 2, 3.3345e-007, 0.2, 10000e-005, 0, 0
   3, CONC, C32/40 PILE , 0, 0, , C, NO, 0.05, 1, NTCO8(RC) , , C32/40 4, CONC, C32/40 SOLETTA , 0, 0, , C, YES, 0.05, 2, 3.3345e·007, 0.2, 10000e·005, 0, 0
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                                                         , 0, 0, , C, YES, 0.05, 2, 2.1000e·008, 0.3, 1.2000e·005, 88.53, 9.02,\
                                       2, 3.3345e 007, 0.2, 10000e 005, 0, 0
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2,255, 0, 0, 0,255, 0, 0, 0,255, NO, 0.5
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NAME=SOLETTA, CODE, EUROPEAN, 40000, 2
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     4, COMPOSITE, C2 Esterno , CT, O, O, O, O, O, O, YES, I
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        0, 0, 0, 0, 0, 0
       2.8.1.0. 2.8.0.24.0.06. 6.2978.0.0.3.0.2.NO..
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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Carriero Colenta.	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V_1.mct

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5, TAPERED , C4 Interno Sx , CT, O, O, O, O, O, O, O, YES, CP_I, 1, 1, CMP-I
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  3.2, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
  3.2,\, 1.92,\, 0.02,\, 0.6,\, ,\, 0.04,\, 0.7,\, ,\, 0.04
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  0, 0, 0, 0, 0, 0
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3.2, L92, O.02, O.6, , O.04, O.7, , O.04
3.2, O.92, O.02, O.6, , O.04, O.7, , O.04
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  0, 0, 0, 0, 0, 0
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8, COMPOSITE, C6 Interno , CT, O, O, O, O, O, O, YES, I 0.93, 0.012, 0.5, 0.03, 0.6, 0.04
  0, 0, 0, 0, 0, 0
3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO,,
9, TAPERED , C4 Esterno Sx , CT, 0, 0, 0, 0, 0, 0, 0, 0, VES, CP_I, 1, 1, CMP-I
1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO,,
  2.8, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
  2.8, 1.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
  0, 0, 0, 0, 0, 0
  0, 0, 0, 0, 0, 0
10, TAPERED , C4 Esterno Dx , CT, O, O, O, O, O, O, O, O, YES, CP_I, 1, 1, CMP-I
  1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
  2.8, 1.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
  2.8, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
  0, 0, 0, 0, 0, 0
  0, 0, 0, 0, 0, 0
11, COMPOSITE, C3 Interno
                                        , CT, O, O, O, O, O, O, YES, I
  0.93, 0.02, 0.5, 0.03, 0.6, 0.04
  0, 0, 0, 0, 0, 0
3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
12, COMPOSITE, C5 Esterno , CT, 0, 0, 0, 0, 0, 0, YES, I
  0.93, 0.02, 0.5, 0.03, 0.6, 0.04
  0, 0, 0, 0, 0, 0
0, 0, 0, 0, 0, 0
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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onegann.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PARTY OF THE	Author	R.V.	File Name	N Bereguardo V 1.mct

A834 ABBIATEGRASSO

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0
  2.8, 1, 0, \ \ 2.8, 0.24, 0.06, \ \ 6.2978, 0, 0.3, 0.2, N0, \\
 14, COMPOSTTE, C3 Esterno , CT, O, O, O, O, O, O, YES, I 0.93, 0.02, 0.5, 0.03, 0.6, 0.04
   0. 0. 0. 0. 0. 0
  2.8, 1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 15, DBUSER , CONTROV 2L80x10d15, CC, O, O, O, O, O, YES, 2L, 2, O.O8, O.O8, O.O1, O.O1, O.O15, O, O, O, O
 16, COMPOSITE, C4 Interno Centr, CT, O, O, O, O, O, O, YES, I
   1.92, 0.02, 0.6, 0.04, 0.7, 0.04
   0, 0, 0, 0, 0, 0
   3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 17, DBUSER , HSU1_CORR 2L80x10d15, CC, O, O, O, O, O, YES, 2L , 2, 0.08, 0.08, 0.01, 0.01, 0.015, O, O, O, O
 18, DBUSER , HINF_CORR 2L80×10d15, CC, O, O, O, O, O, VES, 2L, 2, 0.08, 0.08, 0.01, 0.01, 0.015, O, O, O, O, O
 19, DBUSER , HSUP_PILE 2L100×10d20, CC, O, O, O, O, O, VES, 2L, 2, O.1, O.1, O.01, O.01, O.02, O, O, O, O
 20. DBUSER
                , DIAE_PILE 2L80x8d20, CC, 0, 1, 0, 0, 0, VES, 2L, 2, 0.08, 0.08, 0.008, 0.008, 0.02, 0, 0, 0, 0
 21, COMPOSITE, C4 Esterno Centr, CT, O, O, O, O, O, O, YES, I
   192, 0.02, 0.6, 0.04, 0.7, 0.04
   0, 0, 0, 0, 0, 0
   0
  2.8, 1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 22, DBUSER , 330x30
                                , RT, O, O, 1, O.8, O, O, NO, SB , 2, O.3, 3.3, O, O, O, O, O, O, O, O
23, DBUSER , 500x30
                                 , CT, O, O, O, O, O, NO, SB , 2, O.3, 5, O, O, O, O, O, O, O, O
 24, DBUSER , 400x30
                                 , LT, O, 1, 1, 15, O, O, NO, SB , 2, O.3, 4, O, O, O, O, O, O, O, O
 25, DBUSER , 300x30
                                 , CT, O, O, O, O, O, NO, SB , 2, O.3, 3, O, O, O, O, O, O, O, O
 26, DBUSER , 400x30 dx
                                  , RT, O, 1, 1, 1.5, O, O, NO, SB , 2, O.3, 4, O, O, O, O, O, O, O, O
                ,520x30
27, DBUSER
                                  , CT, O, O, O, O, O, O, NO, SB , 2, O.3, 5.2, O, O, O, O, O, O, O, O
46, DBUSER , PILA , CC, O, O, O, O, O, YES, STRK, 2, 15, 12, O, O, O, O, O, O, O, O, O 
64, DBUSER , DIAG CORR 2180x8d15, CC, O, O, O, O, O, VES, 2L, 2, 0.08, 0.08, 0.008, 0.008, 0.015, O, O, O, O
 65, DBUSER , HINF_PILE 2L100×10d20, CC, 0, 0, 0, 0, 0, 0, YES, 2L , 2, 0.1, 0.1, 0.01, 0.01, 0.02, 0, 0, 0, 0
*SECT-COLOR
 1,255, 0, 0, 0,255, 0, 0, 0,255, NO, 0.5
 2,255, 0, 0, 0,255, 0, 0, 0,255, NO, 0.5
 3, 3, 111, 0, 93, 255, 87, 3, 111, 0, NO, 0.5
 4, 70, 70, 0, 192, 255, 0, 70, 70, 0, N0, 0.5
 5, 255, 0, 0, 0, 255, 0, 0, 0, 255, N0, 0.5
6, 0, 13, 13, 0, 128, 128, 0, 13, 13, N0, 0.5
 7, 255, 0, 0, 0, 255, 0, 0, 0, 255, N0, 0.5
8, 123, 40, 0, 255, 192, 160, 123, 40, 0, N0, 0.5
 9, 3, 0, 108, 163, 160, 255, 3, 0, 108, NO, 0.5
10, 3, 111, 66, 163, 255, 160, 3, 111, 66, NO, 0.5
 11, 255, 0, 0, 0, 255, 0, 0, 0, 255, NO, 0.5
 12, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
 13, 0, 72, 72, 0, 192, 192, 0, 72, 72, N0, 0.5
 14, 102, 69, 0, 192, 128, 0, 102, 69, 0, NO, 0.5
 15, 65, 165, 65, 192, 192, 192, 65, 165, 65, NO, 0.5
 16, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
 17, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
18, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
19, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
20, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
21, 87, 87, 0, 192, 192, 0, 87, 87, 0, NO, 0.5
22, 70, 70, 0, 192, 255, 0, 70, 70, 0, N0, 0.5
23, 121, 0, 91, 255, 0, 192, 121, 0, 91, NO, 0.5
24, 89, 0, 162, 212, 160, 255, 89, 0, 162, NO, 0.5
 25, 0, 43, 19, 0, 128, 57, 0, 43, 19, NO, 0.5
 26, 115, 0, 0, 255, 87, 87, 115, 0, 0, NO, 0.5
 27, 34, 77, 0, 85, 192, 0, 34, 77, 0, NO, 0.5
46, 85, 32, 0, 192, 72, 0, 85, 32, 0, N0, 0.5
64, 85, 32, 0, 192, 72, 0, 85, 32, 0, N0, 0.5
65, 85, 32, 0, 192, 72, 0, 85, 32, 0, N0, 0.5
*COMP-GEN-SECT-PSC-DESIGN ; Composite Section for PSC Design
  8,\, \mathsf{N}\, \mathsf{0},\,\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0},\, \mathsf{0}
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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onegann.	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V 1.mct

```
*DEN-SECT
 1, COMPOSITE, Clinterno , CT, O, O, O, O, O, O, YES, I
   0.94, 0.015, 0.5, 0.03, 0.6, 0.03
   0, 0, 0, 0, 0, 0
 3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, N0, , 2, COMPOSITE, C2 Interno , CT, 0, 0, 0, 0, 0, 0, VES, I 0.93, 0.015, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 3, COMPOSITE, C1 Esterno , CT, O, O, O, O, O, O, YES, I 0.94, 0.015, 0.5, 0.03, 0.6, 0.03
   0, 0, 0, 0, 0, 0
 2.8, 1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, , 4, COMPOSITE, C2 Esterno , CT, O, O, O, O, O, O, YES, I
   0.93, 0.015, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   2.8, 1, 0, \ 2.8, 0.24, 0.06, \ 6.2978, 0, 0.3, 0.2, \texttt{NO},,
 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO,
3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO,
3.2, 0.92, 0.02, 0.6, 0.04, 0.7, 0.04
3.2, 1.92, 0.02, 0.6, 0.04, 0.7, 0.04
   0, 0, 0, 0, 0, 0
   0, 0, 0, 0, 0, 0
   0
 6, TAPERED , C4 Interno Dx , CT, O, O, O, O, O, O, O, O, VES, CP_I, 1, 1, CMP-I 1, O, 3.2, 0.24, 0.06, 6.2978, O, 0.3, 0.2, NO, , 3.2, 192, 0.02, 0.6, , 0.04, 0.7, , 0.04
   3.2, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
   0, 0, 0, 0, 0, 0
   0, 0, 0, 0, 0, 0
   Π
   N
 7, COMPOSITE, C5 Interno
                                     , CT, O, O, O, O, O, O, YES, I
   0.93, 0.02, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
 3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, N0, , 8, COMPOSITE, C6 Interno , CT, 0, 0, 0, 0, 0, 0, VES, I 0.93, 0.012, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 9, TAPERED , C4 Esterno Sx , CT, O, O, O, O, O, O, O, YES, CP_I, 1, 1, CMP-I
   1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
   2.8, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
   2.8, 192, 0.02, 0.6, , 0.04, 0.7, , 0.04
   0, 0, 0, 0, 0, 0
   0
   0
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MIDAS A834 ABBIATEERASSO

PROJECT TITLE :

PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Bereguardo V_1.mct

```
0, 0, 0, 0, 0, 0
 10, TAPERED , C4 Esterno Bx , CT, O, O, O, O, O, O, O, O, YES, CP_I, 1, 1, CMP-I 1, O, 2.8, O.24, O.06, 6.2978, O, O.3, O.2, NO, , 2.8, L92, O.02, O.6, , O.04, O.7, , 0.04
   2.8, 0.92, 0.02, 0.6, , 0.04, 0.7, , 0.04
   0, 0, 0, 0, 0, 0
   0, 0, 0, 0, 0, 0
   Π
 11, COMPOSITE, C3 Interno
                                    , CT, O, O, O, O, O, O, YES, I
   0.93, 0.02, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO,
 12, COMPOSITE, C5 Esterno , CT, O, O, O, O, O, O, YES, I 0.93, 0.02, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   2.8, 1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 13, COMPOSITE, C6 Esterno , CT, O, O, O, O, O, O, YES, I 0.93, 0.012, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   2.8, 1, 0, \ \ 2.8, 0.24, 0.06, \ \ 6.2978, 0, 0.3, 0.2, N0,,
 14, COMPOSITE, C3 Esterno , CT, O, O, O, O, O, O, YES, I 0.93, 0.02, 0.5, 0.03, 0.6, 0.04
   0, 0, 0, 0, 0, 0
   2.8, 1, 0, \ 2.8, 0.24, 0.06, \ 6.2978, 0, 0.3, 0.2, \mathtt{NO},,
 15, DBUSER , CONTROV 2L80×10d15, CC, O, O, O, O, O, YES, 2L , 2, 0.08, 0.08, 0.01, 0.01, 0.015, O, O, O, O
 16, COMPOSITE, C4 Interno Centr, CT, O, O, O, O, O, O, YES, I
   192, 0.02, 0.6, 0.04, 0.7, 0.04
   0, 0, 0, 0, 0, 0
   3.2, 1, 0, 3.2, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 17, DBUSER , HSUP_CORR 2L80×10d15, CC, O, O, O, O, O, O, YES, 2L , 2, O.O8, O.O8, O.O1, O.O1, O.O15, O, O, O, O
 18, DBUSER , HINF_CORR 2L80×10d15, CC, O, O, O, O, O, O, YES, 2L , 2, O.O8, O.O8, O.O1, O.O1, O.O15, O, O, O, O
 19, DBUSER , HSUP_PILE 2L100x10d20, CC, 0, 0, 0, 0, 0, 0, YES, 2L , 2, 0.1, 0.1, 0.01, 0.01, 0.02, 0, 0, 0, 0
 20, DBUSER , DIA6_PILE 2L80x8d20, CC, O, 1, O, O, O, YES, 2L, 2, 0.08, 0.08, 0.008, 0.008, 0.02, O, O, O, O, O
 21, COMPOSITE, C4 Esterno Centr, CT, O, O, O, O, O, O, YES, I
   1.92, 0.02, 0.6, 0.04, 0.7, 0.04
   0, 0, 0, 0, 0, 0
   2.8, 1, 0, 2.8, 0.24, 0.06, 6.2978, 0, 0.3, 0.2, NO, ,
 22, DBUSER , 330x30
                                  , RT, O, O, 1, O.8, O, O, NO, SB , 2, O.3, 3.3, O, O, O, O, O, O, O, O
 23, DBUSER , 500x30
                                   , CT, O, O, O, O, O, O, NO, SB , 2, O.3, 5, O, O, O, O, O, O, O, O
 24, DBUSER , 400x30
                                    , LT, 0, 1, 1, 15, 0, 0, N0, SB , 2, 0.3, 4, 0, 0, 0, 0, 0, 0, 0, 0 \,
                                 25, DBUSER , 300x30
26, DBUSER , 400x30 dx
 27, DBUSER , 520x30
 46, DBUSER , PILA
64, BBUSER , DIAG CORR 2L80x8d15, CC, 0, 0, 0, 0, 0, VES, 2L, 2, 0.08, 0.08, 0.008, 0.008, 0.005, 0, 0, 0, 0, 0  
65, DBUSER , HINF_PILE 2L100x10d20, CC, 0, 0, 0, 0, 0, VES, 2L, 2, 0.1, 0.1, 0.01, 0.01, 0.02, 0, 0, 0, 0
*REBAR-PSC ; Reinforcement of Section
 SECT=1, YES, NO, NO
    N0,,,,N0,,,,,N0,,,N0,,,N0,,,N0,,
   I, P16, 16, 0, 0, 0, 0.05, 0.2, 2
I, P16, 16, 0, 0, 0, 0.22, 0.2, 2
    J, P16, 16, 0, 0, 0, 0.05, 0.2, 2
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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

J, 716, 16, 0, 0, 0, 0.22, 0.2, 2 SECT=2, YES, NO, NO NO,,,, NO,,,,, NO,,,, NO,,, NO,, I, 116, 16, 0, 0, 0, 0.05, 0.2, 2 I, P16, 16, 0, 0, 0, 0.22, 0.2, 2 J, P16, 16, 0, 0, 0, 0.05, 0.2, 2 J, P16, 16, 0, 0, 0, 0.22, 0.2, 2 SECT:3, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,, NO,, I, 116, 14, 0, 0, 0, 0.22, 0.2, 2 I, 116, 14, 0, 0, 0, 0.05, 0.2, 2 J, 116, 14, 0, 0, 0, 0.22, 0.2, 2 J, P16, 14, 0, 0, 0, 0.05, 0.2, 2 SECT:4, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,, NO,,, I, P16, 14, O, O, O, O.O5, O.2, 2 I, 116, 14, 0, 0, 0, 0.22, 0.2, 2 J, P16, 14, 0, 0, 0, 0.05, 0.2, 2 J, 116, 14, 0, 0, 0, 0.22, 0.2, 2 SECT=5, YES, NO, YES NO,,,, NO,,,,,, NO,,,, NO,,, NO,, 1, 120, 32, 0, 0, 0, 0.05, 0.1, 2 1, 120, 32, 0, 0, 0, 0.22, 0.1, 2 J, 120, 32, 0, 0, 0, 0.05, 0.1, 2 J, 120, 32, 0, 0, 0, 0.22, 0.1, 2 SECT=6, YES, NO, YES NO, , , , NO, , , , , NO, , , , NO, , , NO, , , NO, , , I, **1**20, 32, 0, 0, 0, 0.22, 0.1, 2 I, 120, 32, 0, 0, 0, 0.05, 0.1, 2 J, 120, 32, 0, 0, 0, 0.22, 0.1, 2 J, 120, 32, 0, 0, 0, 0.05, 0.1, 2 SECT=7, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,,, NO,, I, 120, 16, 0, 0, 0, 0.22, 0.2, 2 I, 120, 16, 0, 0, 0, 0.05, 0.2, 2 J, **?**20, 16, 0, 0, 0, 0.22, 0.2, 2 J, 120, 16, 0, 0, 0, 0.05, 0.2, 2 SECT:8, YES, NO, NO NO,,,, NO,,,,, NO,,,, NO,,, NO,,, I, P16, 16, O, O, O, O.05, O.2, 2 I, P16, 16, 0, 0, 0, 0.22, 0.2, 2 J, P16, 16, 0, 0, 0, 0.05, 0.2, 2 J, 116, 16, 0, 0, 0, 0.22, 0.2, 2 SECT:9, YES, NO, YES NO,,,, NO,,,,, NO,,,, NO,,, NO,, I, 120, 28, 0, 0, 0, 0.22, 0.1, 2 I, 120, 28, 0, 0, 0, 0.05, 0.1, 2 J, 120, 28, 0, 0, 0, 0.22, 0.1, 2 J, 120, 28, 0, 0, 0, 0.05, 0.1, 2 SECT-10, YES, NO, YES NO,,,, NO,,,,, NO,,,, NO,,, NO,,, I, 120, 28, 0, 0, 0, 0.05, 0.1, 2 I, 120, 28, 0, 0, 0, 0.22, 0.1, 2 J, 120, 28, 0, 0, 0, 0.05, 0.1, 2 J, 120, 28, 0, 0, 0, 0.22, 0.1, 2 SECT:11, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,, NO,, I, 120, 16, 0, 0, 0, 0.05, 0.2, 2 I, 120, 16, 0, 0, 0, 0.22, 0.2, 2 J, 120, 16, 0, 0, 0, 0.05, 0.2, 2 J, 120, 16, 0, 0, 0, 0.22, 0.2, 2 SECT-12, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,, NO,, I, 120, 14, 0, 0, 0, 0.22, 0.2, 2 1, 120, 14, 0, 0, 0, 0.05, 0.2, 2 J, 120, 14, 0, 0, 0, 0.22, 0.2, 2 J, 120, 14, 0, 0, 0, 0.05, 0.2, 2 SECT:13, YES, NO, NO J, 116, 14, 0, 0, 0, 0.22, 0.2, 2 SECT:14, YES, NO, NO NO,,,, NO,,,,,, NO,,,, NO,,, NO,, I, 120, 14, 0, 0, 0, 0.22, 0.2, 2 I, 120, 14, 0, 0, 0, 0.05, 0.2, 2 J, 120, 14, 0, 0, 0, 0.22, 0.2, 2 J, 120, 14, 0, 0, 0, 0.05, 0.2, 2 SECT=16, YES, NO, YES NO,,,, NO,,,,, NO,,,, NO,,, NO,,, I, **1**20, 32, 0, 0, 0, 0.05, 0.1, 2 I, 120, 32, 0, 0, 0, 0.22, 0.1, 2

A834 ABBIATEERASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onus union	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

1, 120, 32, 0, 0, 0, 0.05, 0.1, 2 1, 120, 32, 0, 0, 0, 0.22, 0.1, 2 SECT-21, YES, NO, YES NO, ..., NO, ..., NO, .., NO, ., NO, ., 1, 120, 28, 0, 0, 0, 0.22, 0.1, 2 1, 120, 28, 0, 0, 0, 0.22, 0.1, 2 1, 120, 28, 0, 0, 0, 0.22, 0.1, 2

J, 120, 28, 0, 0, 0, 0.05, 0.1, 2

*TS-EROUP ; Tapered Section Group T3 SX, 310 31L, LINEAR, , , , LINEAR, , , , 0 T3 DX, 314 315, LINEAR,,,, LINEAR,,,, 0 T1 SX, 110 111, LINEAR, , , , LINEAR, , , , 0 T1 DX, 114 115, LINEAR, , , , LINEAR, , , , 0 T2 SX, 210 211, LINEAR, , , , LINEAR, , , , 0 T2 DX, 214 215, LINEAR, , , , LINEAR, , , , 0 T4 SX, 410 411, LINEAR,,,, LINEAR,,,, 0 T4 DX, 414 415, LINEAR,,,, LINEAR,,,, 0 T1 SX 2, 126 127, LINEAR,,,, LINEAR,,,, 0
T1 DX 2, 130 131, LINEAR,,,, LINEAR,,,, 0 T2 SX 2, 226 227, LINEAR,,,, LINEAR,,,, 0 T2 DX 2, 230 231, LINEAR, , , , LINEAR, , , , 0 T3 SX 2, 326 327, LINEAR,,,, LINEAR,,,, 0 T3 DX 2, 330 331, LINEAR,,,, LINEAR,,,, 0 T4 SX 2, 426 427, LINEAR, , , , LINEAR, , , , 0 T4 DX 2, 430 431, LINEAR,,,, LINEAR,,,, 0

'STLDCASE; Static Load Cases
Peso acciaio e pile, D,
Peso soletta, D,
Finiture, DW,
Vento strutture (Y'), W,
Vento mobili (Y'), WL,
Frenamento (X'), BRK,
Termico Unif. 15°, T,
Termico diff. '5°/H, TPE,

*D&N-CTRL ; &eneral Design Data NO, NO, YES, , , , , , O, 3D, YES, NO, NO, O, 1, NO, 2

*D&N·STEEL ; Steel Design Code CODE=Eurocode3-2:05, NO, O 105, 11, 125, O, O

*CONSTRAINT ; Supports 12883884, 111111, SUPPORTI

*ELASTICLINK

*MEMBERTYPE ; Modify Member Type

1014to1019 1022to1027 1030to1035 1038to1043 1110to1422by8, BRACE, 0
1111to1423by8 1112to1424by8 1113to1425by8 1114to1426by8, BRACE, 0
1115to1427by8 1430to1514by4 1431to1515by4 1432to1516by4 2001to2003, BRACE, 0
2005to2007 2009to2014 2017to2022 2025to2030 2033to2038 2041to2043, BRACE, 0
2045to2047 3001to3361by8 3002to3362by8 3003to3363by8 3004to3364by8, BRACE, 0
3005to3365by8 3000to3366by8, BRACE, 0

*RICIDLINK ; Rigid Link
25, 11111, 21 23 27 885, RICID LINK
26, 11111, 22 24 28 886, RICID LINK
720, 11111, 159 177 327 489 609, RICID LINK
721, 11111, 178 328 490 610, RICID LINK
723, 11111, 179 329 491 611, RICID LINK
724, 11111, 180 330 492 612, RICID LINK
726, 11111, 181 331 493 613, RICID LINK
727, 11111, 182 332 494 614, RICID LINK



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onne union	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

729, 111111, 87 107 495 615, RIGID LINK 731, 111111, 31 41 51 496, RIEID LINK 733, 111111, 88 108 497 616, RIGID LINK 735, 111111, 183 333 498 617, RIGID LINK 736, 111111, 184 334 499 618, RIGID LINK 738. 111111. 185 335 500 619. RIGID LINK 740, 111111, 186 336 501 620, RIGID LINK 742, 111111, 187 337 502 621, RIETD LINK 743, 111111, 188 338 503 622, RIGID LINK 745, 111111, 89 109 504 623, RIGID LINK 747, 111111, 32 42 52 505, RIGID LINK 749, 111111, 90 110 506 624, RICTO LINK 751, 111111, 189 339 507 625, RIETD LINK 752, 11111, 190 340 508 626, RICID LINK 754, 11111, 191 341 509 627, RIETD LINK 755, 111111, 192 342 510 628, RIGID LINK 757, 111111, 193 343 511 629, RIGID LINK 758, 111111, 160 194 344 512 630, RIGID LINK 761, 111111, 161 210 363 513 631, RICID LINK 762, 111111, 211 364 514 632, RICTO LINK 764, 111111, 212 365 515 633, RICTO LINK 765, 111111, 213 366 516 634, RIETD LINK 767, 111111, 214 367 517 635, RIETD LINK 768, 111111, 215 368 518 636, RIETD LINK 770, 111111, 91 115 519 637, RIETD LINK 772, 11111, 33 43 53 520, RIGID LINK 774, 11111, 92 116 521 638, RIGID LINK 776, 111111, 216 369 522 639, RIGID LINK 777, 111111, 217 370 523 640, RIGID LINK 779, 111111, 218 371 524 641, RIETD LINK 781, 111111, 219 372 525 642, RIGID LINK 783, 11111, 220 373 526 643, **RIGID** LINK 784, 111111, 221 374 527 644, **RIGID** LINK 786, 111111, 93 117 528 645, RIGID LINK 788, 111111, 34 44 54 529, RIETD LINK 790, 111111, 94 118 530 646, RIGID LINK 792, 111111, 222 375 531 647, RIGID LINK 793. 111111. 223 376 532 648. RIGID LINK 795, 111111, 224 377 533 649, RIGID LINK 796, 111111, 225 378 534 650, RIGID LINK 798, 111111, 226 379 535 651, RIGID LINK 799, 111111, 162 227 380 536 652, RIGID LINK 802, 111111, 163 243 399 537 653, RIGID LINK 803, 111111, 244 400 538 654, RIGID LINK 805, 11111, 245 401 539 655, RIGID LINK 806, 111111, 246 402 540 656, RIGID LINK 808, 111111, 247 403 541 657, RIGID LINK 809. 111111. 248 404 542 658. RIGID LINK 811, 111111, 95 123 543 659, RIGID LINK 813. 111111. 35 45 55 544. RIGID LINK 815, 111111, 96 124 545 660, RIGID LINK 817, 111111, 249 405 546 661, RIETD LINK 818, 111111, 250 406 547 662, RIGID LINK 820, 111111, 251 407 548 663, RIGID LINK 822, 111111, 252 408 549 664, RIGID LINK 824, 11111, 253 409 550 665, RIGID LINK 825, 11111, 254 410 551 666, RIGID LINK 827. 111111. 97 125 552 667. RIGID LINK 829, 111111, 36 46 56 553, RIGID LINK 831, 111111, 98 126 554 668, RIGID LINK 833, 111111, 255 411 555 669, RIGID LINK 834, 111111, 256 412 556 670, RIGID LINK 836, 11111, 257 413 557 671, RIGID LINK 837, 111111, 258 414 558 672, RIGID LINK 839, 111111, 259 415 559 673, RIGID LINK 840, 111111, 164 260 416 560 674, RIGID LINK 843, 11111, 165 276 435 561 675, RICID LINK 844, 11111, 277 436 562 676, RICID LINK 846, 111111, 278 437 563 677, RIETD LINK 847, 111111, 279 438 564 678, RIGID LINK 849, 111111, 280 439 565 679, RIGID LINK 850, 111111, 281 440 566 680, RIGID LINK 852, 111111, 99 131 567 681, RIGID LINK 854, 11111, 37 47 57 568, RIGID LINK 856, 111111, 100 132 569 682, RIGID LINK 858, 111111, 282 441 570 683, RIGID LINK 859, 111111, 283 442 571 684, RICTO LINK 861, 111111, 284 443 572 685, RICID LINK 863, 111111, 285 444 573 686, RIGID LINK 865, 111111, 286 445 574 687, RIGID LINK 866, 111111, 287 446 575 688, RIGID LINK 868, 111111, 101 133 576 689, RIGID LINK 870, 111111, 38 48 58 577, RIGID LINK



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onus union	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

872, 11111, 102 134 578 690, RIGID LINK 874, 11111, 288 447 579 691, RIGID LINK 875, 11111, 289 448 580 692, RIGID LINK 877, 111111, 290 449 581 693, RIGID LINK 878, 11111, 291 450 582 694, RIGID LINK 880, 11111, 292 451 583 695, RIGID LINK 881, 11111, 166 293 452 584 696, RIGID LINK 883, 11111, 77to83by2, RIGID LINK 884, 111111, 78to84by2, RIGID LINK

*LOADTOMASS, XYZ, YES, YES, YES, YES, 9.806 Peso soletta, 1, Finiture, 1

*USE-STLD, Peso acciaio e pile

*SELFWEIGHT, O. O. ·1. PESO ACCIAIO E PILE

; End of data for load case [Peso acciaio e pile] ------

*USE-STLD, Peso soletta

BEAMLOAD; Element Beam Loads 101, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 102, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 103, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 104, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 105, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 106, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, FESO SOLETTA, NO, 0, 0, NO 107, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, FESO SOLETTA, NO, 0, 0, NO 108, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, FESO SOLETTA, NO, 0, 0, NO 109, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 110, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 111, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 112, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 113, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 114, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 115, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 116, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, 1ESO SOLETTA, NO, 0, 0, NO 117, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 118, BEAM , UNILOAD, CZ, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 119, BEAM , UNILOAD, EZ, NO, NO, adir[1], , , , , , 21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 120, BEAM , UNILOAD, EZ, NO, NO, adir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 121, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 122, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 123, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 124, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 125, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 126, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 127, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 128, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 129, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 130, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 131, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 132, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 133, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 134, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 135, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 137, BEAM , UNILOAD, 67, NO, NO, adir[1], , , , o, -21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 138, BEAM , UNILOAD, 67, NO, NO, adir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 139, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 140, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, reso soletta, No, 0, 0, No 201, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 202, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 203. BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 204. BEAM 205, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 206, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 207, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 208, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 209, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 210, BEAM , UNILOAD, &Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 211, BEAM , UNILOAD, 62, NO, NO, abir[1], ..., 0, 24, 1, 24, 0, 0, 0, 0, 1250 SOLETTA, NO, 0, 0, NO 212, BEAM , UNILOAD, 62, NO, NO, abir[1], ..., 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 213, BEAM , UNILOAD, 62, NO, NO, abir[1], ..., 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 214, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 215, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 216, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 217, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 218, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 219, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 220, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, RESO SOLETTA, NO, 0, 0, NO 221, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PERSON OF TH	Author	R.V.	File Name	N Bereguardo V_1.mct

222, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 24, 1, \cdot 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 224. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 225, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 24, 1, \cdot 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO $226, BEAM \ \ , UNILOAD, 6Z, NO \ , NO, \ aDir[1], \ , \ , \ 0, \ 24, \ 1, \ 24, \ 0, \ 0, \ 0, \ 0, \ PESO \ SOLETTA, NO, \ 0, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \ 0, \ NO, \$ 228, BEAM , UNILOAD, €Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 229, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 230, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 231, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 232, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, :24, 1, :24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 233, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 234. BEAM $235, BEAM \ \ , UNILOAD, \ EZ, \ NO \ , \ NO, \ aDir[1], \ , \ , \ 0, \ 24, \ 1, \ 24, \ 0, \ 0, \ 0, \ 0, \ PESO \ SOLETTA, \ NO, \ 0, \ NO,$ $236, BEAM \ \ , UNILOAD, \ CZ, \ NO \ , \ NO, \ aDir[1], \ , \ , \ 0, \ \cdot 24, \ 1, \ \cdot 24, \ 0, \ 0, \ 0, \ PESO \ SOLETTA, \ NO, \ 0, \ NO,$ 238, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, 24, 1, 24, 0, 0, 0, PESO SOLETTA, NO, 0, NO 239, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 240, BEAM , UNILOAD, €Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 302, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, -24, 1, -24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 304, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, -24, 1, -24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 305, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 306, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO $307, BEAM \ \ , UNILOAD, 6Z, NO \ , NO, \ aDir[1], \ , \ , \ 0, \ 24, \ 1, \ 24, \ 0, \ 0, \ 0, \ 0, \ PESO \ SOLETTA, NO, \ 0, \ NO, \$ 308, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 309, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, 1250 SOLETTA, NO, 0, 0, NO 310, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, 1250 SOLETTA, NO, 0, 0, NO 311, BEAM , UNILOAD, 62, NO, NO, abir[1], , , , 0, 24, 1, 24, 0, 0, 0, 1850 SOLETTA, NO, 0, 0, NO 312, BEAM , UNILOAD, 62, NO, NO, abir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, 1850 SOLETTA, NO, 0, 0, NO 313, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 314, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 315, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 316, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 318, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 320, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 321, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, 1250 SOLETTA, NO, 0, 0, NO 322, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, TESO SOLETTA, NO, 0, 0, NO 323, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 324, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, -24, 1, -24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 325, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 326, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 327, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 328, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 330, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 331, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 24, 1, 24, O, O, O, O, RESO SOLETTA, NO, O, O, NO 332, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 333, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 334, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 335, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 336, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, -24, 1, -24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 337, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·24, 1, ·24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 338. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 24, 1, \cdot 24, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 339, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·24, 1, ·24, O, O, O, O, PESO SOLETTA, NO, O, O, NO 340, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 24, 1, 24, 0, 0, 0, 0, TESO SOLETTA, NO, 0, 0, NO 402, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, PESO SOLETTA, NO, O, O, NO 403, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 404, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 406. BEAM UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 408. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 409. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 21, 1, \cdot 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 411, BEAM , UNILOAD, 6Z, NO , NO, a $Dir[1], \dots, 0$, 21, 1, 21, 0, 0, 0, 0, 1ESO SOLETTA, NO, 0, 0, NO 412, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 21, 1, \cdot 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 413, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 414, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 415, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 416, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 417, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 418, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 419, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 420, BEAM , UNILOAD, 67, NO , NO , aDir[1], , , , 0, \cdot 21, 1, \cdot 21, 0, 0, 0, 0, PESO SOLETTA, NO , 0, 0, NO 421, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 422, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 423, BEAM , UNILOAD, 67, NO , NO, abir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 424, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onne union	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

425, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 21, 1, \cdot 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 427. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 428, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 429, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, TESO SOLETTA, NO, 0, 0, NO 430, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 21, 1, 21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 431, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·21, 1, ·21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 432, BEAM , UNILOAD, €Z, NO , NO, aDir[1], , , , 0, -21, 1, -21, 0, 0, 0, 0, PESO SOLETTA, NO, 0, 0, NO 433, BEAM , UNILOAD, &Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 434, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 435, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 436, BEAM , UNILOAD, 6Z, NO , NO, aBir[1], , , , O, -21, 1, -21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 437, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 438, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·21, 1, ·21, O, O, O, O, PESO SOLETTA, NO, O, O, NO 439, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 21, 1, 21, O, O, O, O, PESO SOLETTA, NO, O, O, NO

: End of data for load case [Peso soletta] ------

*USE-STLD. Finiture

BEAMLOAD; Element Beam Loads 101, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, O, 1ESO FINITURE, NO, O, O, NO 102, BEAM , UNILOAD, EZ, NO, YES, O, EY, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 103, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 104, BEAM , UNILOAN, &Z, NO, YES, O, &Y, O.46, O.46, NO, O, 21.25, 1, 21.25, 0, O, O, O, PESO FINITURE, NO, O, O, NO 105, BEAM , UNILOAD, &Z, NO , YES, O, &Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 106, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·O.46, ·O.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 107, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, 0, O, O, PESO FINITURE, NO, O, O, NO 108, BEAM . UNILOAD, 6Z, NO , YES, O, 6Y, -0.46, -0.46, NO, O, -21.25, 1, -21.25, 0, O, O, PESO FINITURE, NO, O, O, NO 109, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 110, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, 1ESO FINITURE, NO, O, O, NO 111, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 112, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, 1ESO FINITURE, NO, O, NO 113, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 114, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 115, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 116, BEAM , UNILOAD, 62, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 117, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 118, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 119, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·O.46, ·O.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 120, BEAM , UNILOAD, 62, NO , YES, O, 64, -0.46, -0.46, NO, O, -21.25, 1, -21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 121, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 122, BEAM , UNILOAD, 62, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 123, BEAM , UNILOAD, 62, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 124, BEAM , UNILOAD, 67, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, D, PESO FINITURE, NO, O, O, NO 125, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 126, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 127, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 128, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 129, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 130, BEAM , UNILOAD, FZ, NO, YES, O, FY, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, NO 131, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 132, BEAM , UNILOAD, 62, NO , YES, O, 64, -0.46, -0.46, NO, O, -21.25, 1, -21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 133, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 134, BEAM , UNILOAD, 62, NO, YES, O, 64, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 135, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, PESO FINITURE, NO, O, O, NO 136, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 137, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, ·0.46, ·0.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 138, BEAM , UNILOAN, &Z, NO, YES, O, &Y, -0.46, -0.46, NO, O, -2125, 1, -2125, 0, O, O, O, PESO FINITURE, NO, O, O, NO 139, BEAM , UNILOAD, &Z, NO , YES, O, &Y, -0.46, -0.46, NO, O, -2125, 1, -2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 140, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 201, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 202, BEAM , UNILOAD, 67, NO, NO, abir[1], , , , 0, 25.6, 1, 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 205, BEAM , UNILOAD, &Z, NO , NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, NO $207, BEAM \ , UNILOAD, 6Z, NO \ , NO \ , aDir[1], \ , \ , \ 0, \ \cdot 25.6, \ 1, \ \cdot 25.6, \ 0, \ 0, \ 0, \ 0, \ PESO \ FINITURE, NO \ , \ 0, \ NO \ , \ NO \$ 208, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO $\textbf{209, BEAM} \quad , \textbf{UNILOAD, 6Z, NO} \ , \textbf{NO} \ , \textbf{aDir}[1], \textbf{,,,} \ \textbf{0,} \ \textbf{25.6, 1,} \ \textbf{25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO} \\$ 210, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, 25.6, 1, 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 211, BEAM , UNILOAD, 67, NO, NO, aBir[1], , , , , 25.6, 1, 25.6, 0, 0, 0, 0, TESO FINITURE, NO, 0, 0, NO 212, BEAM , UNILOAD, 67, NO, NO, aBir[1], , , , 0, 25.6, 1, 25.6, 0, 0, 0, 0, TESO FINITURE, NO, 0, 0, NO 213, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 214, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 215, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 216, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 217, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, NO 218, BEAM , UNILOAD, CZ, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 219, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, NO 220, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 221, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PERSON OF TH	Author	R.V.	File Name	N Bereguardo V_1.mct

222, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 25.6, 1, \cdot 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 224. BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, :25.6, 1, :25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO $226, BEAM \ \ , UNILOAD, 6Z, NO \ , NO, \ aDir[1], , , , \ O, \ 25.6, 1, \ 25.6, 0, 0, 0, 0, 1ESO \ FINITURE, NO, 0, 0, NO \ \ ADIR[1],$ 228, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 229, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, NO 230, BEAM , UNILOAD, 62, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 231, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 232, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 233, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO , UNILOAD, 6Z, NO , NO, aDir[1], , , , 0, \cdot 25.6, 1, \cdot 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 234. BEAM 235, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO $238, BEAM \ , UNILOAD, 67, NO \ , NO \ , aDir[1], , , , \ O, \cdot 25.6, 1, \cdot 25.6, 0, 0, 0, 0, PESO FINITURE, NO \ , 0, 0, NO \ , NO \$ 239, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 240, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 302, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , 0, ·25.6, 1, ·25.6, 0, 0, 0, 0, YESO FINITURE, NO, 0, 0, NO , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 304, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 305, BEAM , UNILOAD, 6Z, NO , NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO $308, BEAM \ , UNILOAD, 6Z, NO \ , NO \ , aDir[1], \dots \ , 0, \ .25.6, 1, \ .25.6, 0, 0, 0, 0, PESO FINITURE, NO \ , 0, 0, NO \ ,$ 311, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, :25.6, 1, :25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 312, BEAM , UNILOAD, 67, NO, NO, aDir[1], , , , 0, :25.6, 1, :25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 313, BEAM , UNILOAD, &Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 314, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 315, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 316, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO $317, BEAM \ , UNILOAD, 67, NO, NO, aDir[1], , , , O, \cdot 25.6, 1, \cdot 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO$ $\textbf{318, BEAM} \ \ \textbf{, UNILOAD, 6Z, NO, NO, aDir} \textbf{[1], , , , 0, } \textbf{25.6, 1, } \textbf{25.6, 0, 0, 0, 0, } \textbf{PESO FINITURE, NO, 0, 0, NO } \textbf{NO} \textbf{ADIR} \textbf{[1], } \textbf{ADIR} \textbf{[2], }$ $\textbf{319, BEAM} \ \ , \textbf{UNILOAD, 67, NO} \ , \textbf{NO}, \textbf{aDir}[1], \textbf{,,,} \ \textbf{0,} \ \textbf{25.6, 1,} \ \textbf{25.6, 0, 0, 0, 0, PESO FINITURE}, \textbf{NO}, \textbf{0, 0, NO}$ 320, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, RESO FINITURE, NO, O, O, NO 322, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 323, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 324, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 325, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 326, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 327, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 328, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 329, BEAM , UNILOAD, 6Z, NO , NO, $aDir[1], \dots, 0$, .25.6, 1, .25.6, 0, 0, 0, 0, 1ESO FINITURE, NO, 0, 0, NO 331, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 332, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 333, BEAM , UNILOAD, 6Z, NO , NO, aDir $[1], \dots, 0$, 25.6, 1, 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO 334, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, 25.6, 1, 25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 335, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 336, BEAM , UNILOAD, &Z, NO, NO, aDir[1], , , , O, -25.6, 1, -25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 337, BEAM , UNILOAD, 6Z, NO, NO, aDir[1], , , , O, ·25.6, 1, ·25.6, O, O, O, O, PESO FINITURE, NO, O, O, NO 338. BEAM , UNILOAD, 6Z, NO , NO, aBir[1], , , , 0, \cdot 25.6, 1, \cdot 25.6, 0, 0, 0, 0, PESO FINITURE, NO, 0, 0, NO $\textbf{339}, \textbf{BEAM} \ \ , \textbf{UNILOAD}, \textbf{6Z}, \textbf{NO} \ , \textbf{NO}, \textbf{aDir}[\textbf{1}], , , , \textbf{0}, \ \textbf{25.6}, \textbf{1}, \ \textbf{25.6}, \textbf{0}, \textbf{0}, \textbf{0}, \textbf{0}, \textbf{PESO} \ \textbf{FINITURE}, \textbf{NO}, \textbf{0}, \textbf{0}, \textbf{NO}, \textbf{0$ $340, BEAM\ , UNILOAD, 6Z, NO\ , NO\ , aDir[1], , , , \, 0, \cdot 25.6, \, 1, \cdot 25.6, \, 0, \, 0, \, 0, \, 0, \, PESO\ FINITURE, NO\ , \, 0, \, NO\ , \, NO$ 401 BEAM . UNILOAD, 6Z, NO. YES, O. 6Y, O.46, O.46, NO. O. 21.25, 1, 21.25, O. O. O. PESO FINITURE, NO. O. O. NO 402, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 403. BEAM . UNILOAD, 6Z. NO. YES, O. FY, O.46, O.46, NO. O. 21.25. 1. 21.25. 0, O. O. O. TESO FINITURE. NO. O. O. NO 404, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, DESO FINITURE, NO, O, NO , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 408. BEAM , UNILOAD, EZ, NO , YES, O, EY, O.46, O.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 409. BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 2L25, 1, 2L25, O, O, O, O, PESO FINITURE, NO, O, O, NO 410, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO $411, BEAM \ \ , UNILOAD, 6Z, NO \ , YES, O \ , 6Y, O.46, O.46, NO \ , O \ \ 21.25, 1, \ \ 21.25, O \ , O \ , O \ , O \ , PESO FINITURE, NO \ , O \ , NO \ \ , O$ 412, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 413, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 414, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 415, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 416, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 417, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 418, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 419, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 420, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 421, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, NO 422, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2L25, 1, 2L25, O, O, O, O, PESO FINITURE, NO, O, O, NO
423, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2L25, 1, 2L25, O, O, O, O, PESO FINITURE, NO, O, O, NO 424. BEAM . UNILOAD, 67. NO. YES, O. 6Y, 0.46. 0.46. NO. O. 21.25. 1. 21.25. 0. O. O. O. PESO FINITURE, NO. O. O. NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

425, BEAM , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, ·21.25, 1, ·21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO , UNILOAD, 6Z, NO , YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 427. BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, O, PESO FINITURE, NO, O, O, NO 428, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 429, BEAM , UNILOAD, &Z, NO, YES, O, &Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 430, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, -2L25, 1, -2L25, O, O, O, O, PESO FINITURE, NO, O, O, NO
431, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, -2L25, 1, -2L25, O, O, O, O, PESO FINITURE, NO, O, O, NO 432, BEAM , UNILOAD, £Z, NO, YES, O, £Y, 0.46, 0.46, NO, O, 21.25, 1, 21.25, 0, 0, 0, 0, reso finiture, No, O, No 433, BEAM , UNILOAD, &Z, NO, YES, O, &Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 434, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 2125, 1, 2125, O, O, O, DESO FINITURE, NO, O, O, NO 435, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 436, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO , UNILOAD, 6Z, NO , YES, O, 6Y, 0.46, 0.46, NO, O, \cdot 21.25, 1, \cdot 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 437. BEAM 438, BEAM , UNILOAD, CZ, NO, YES, O, CY, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, PESO FINITURE, NO, O, O, NO 439, BEAM , UNILOAD, &Z, NO, YES, O, &Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO 440, BEAM , UNILOAD, 6Z, NO, YES, O, 6Y, O.46, O.46, NO, O, 21.25, 1, 21.25, O, O, O, O, PESO FINITURE, NO, O, O, NO

; End of data for load case [Finiture] ------

*USE-STLD, Vento strutture (Y-)

BEAMLOAD; Element Beam Loads 101, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.25, 0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, 1, NO, 0, NO 102, BEAM , UNILOAD, FY, NO , YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 103, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 104, BEAM , UNILOAD, $\mathbf{fV},$ NO , YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 105, BEAM , UNILOAD, $\mathbf{fV},$ NO , YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 108, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 109, BEAM , UNILOAD, FY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, O, NO 110, BEAM , UNILOAD, EY, NO, YES, 1, LZ, '0.25, '0.51, YES, 0, 3.03, 1, 3.71, 0, 0, 0, 0, NO, 0, NO 111, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.51, ·0.76, YES, 0, 3.71, 1, 4.38, 0, 0, 0, 0, , NO, 0, NO 112, BEAM , UNILOAD, FY, NO, YES, 1, LZ, -0.76, -0.76, NO, O, 4.38, 1, 4.38, O, O, O, O, NO, O, NO 113, BEAM , UNILOAD, FY, NO, YES, 1, LZ, ·0.76, ·0.76, NO, O, 4.38, 1, 4.38, O, O, O, O, NO, O, NO 114, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.76, ·0.51, YES, 0, 4.38, 1, 3.71, 0, 0, 0, 0, , NO, 0, 0, NO 115, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.51, ·0.25, YES, 0, 3.71, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 116, BEAM , UNILOAD, FY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, , NO, O, NO 117, BEAM , UNILOAD, 64, NO, YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 118, BEAM , UNILOAD, 64, NO, YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, 0, NO, 0, 0, NO 119, BEAM , UNILOAD, FY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, O, NO 120, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, NO, 0, 0, NO 121, BEAM , UNILOAD, EY, NO, YES, 1, LZ, '0.25, '0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, NO, 0, NO 122, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 123, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 124, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 125, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 126, BEAM , UNILOAN, EY, NO, YES, 1, LZ, -0.25, -0.51, YES, 0, 3.03, 1, 3.71, 0, 0, 0, 0, NO, 0, 0, NO, 127, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.51, -0.76, YES, 0, 3.71, 1, 4.38, 0, 0, 0, 0, NO, 0, 0, NO 128, BEAM , UNILOAD, CY, NO, YES, 1, LZ, -0.76, -0.76, NO, 0, 4.38, 1, 4.38, 0, 0, 0, 0, NO, 0, 0, NO 129, BEAM , UNILOAD, CY, NO, YES, 1, LZ, -0.76, -0.76, NO, 0, 4.38, 1, 4.38, 0, 0, 0, 0, NO, 0, 0, NO 130, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.76, -0.51, YES, 0, 4.38, 1, 3.71, 0, 0, 0, 0, , NO, 0, 0, NO 131, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.51, -0.25, YES, 0, 3.71, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 132, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 133, BEAM , UNILOAD, FY, NO, YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 134, BEAM , UNILOAD, EY, NO , YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 135, BEAM , UNILOAD, &Y, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 136, BEAM , UNILOAD, EY, NO, YES, 1, LZ, ·0.25, ·0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 138, BEAM , UNILOAD, EV, NO , YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 139, BEAM , UNILOAD, EV, NO , YES, 1, LZ, -0.25, -0.25, NO, 0, 3.03, 1, 3.03, 0, 0, 0, 0, , NO, 0, 0, NO 140, BEAM , UNILOAD, EY, NO, YES, 1, LZ, -0.25, -0.25, NO, O, 3.03, 1, 3.03, O, O, O, O, NO, O, NO 401, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO 402, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO 403, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, 0, 0, NO 405, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, NO 406. BEAM , UNILOAD, FY, NO , YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, 0, NO, 0, NO 407, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, O, 2.69, 1, 2.69, O, O, O, O, NO, NO, NO 408, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, 0, 0, NO 409, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO 410, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.2, YES, 0, 2.69, 1, 2.35, 0, 0, 0, 0, , No, 0, 0, No, 0, N 412, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.29, 0.29, NO, 0, 2.01, 1, 2.01, 0, 0, 0, 0, , NO, 0, 0, NO 413, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.29, 0.29, NO, 0, 2.01, 1, 2.01, 0, 0, 0, 0, NO, 0, 0, NO 414, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.29, 0.2, YES, 0, 2.01, 1, 2.35, 0, 0, 0, 0, , NO, 0, 0, NO 415, BEAM , UNILOAD, FY, NO, YES, 1, LZ, O.Z, O.11, YES, O, 2.35, 1, 2.69, O, O, O, O, NO, O, NO 416, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, NO, NO 417, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO 418, BEAM , UNILOAD, FY, NO , YES, 1, LZ, O.11, O.11, NO, O, 2.69, 1, 2.69, O, O, O, O, NO, O, NO 419, BEAM , UNILOAD, EY, NO, YES, 1, LZ, O.11, O.11, NO, O, 2.69, 1, 2.69, O, O, O, O, NO, NO 420. BEAM . UNILOAD, FY. NO. YES, 1, LZ, 0.11, 0.11, NO. 0, 2,69, 1, 2,69, 0, 0, 0, 0, . NO. 0, 0, NO

421, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguna.	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

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422, BEAM   , UNILOAD, FY, NO , YES, 1, LZ, O.11, O.11, NO, O, 2.69, 1, 2.69, O, O, O, O, , NO, O, O, NO
423, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, NO
424, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO
427, BEAM , UNILOAD, 6Y, NO, YES, 1, LZ, 0.2, 0.29, YES, 0, 2.35, 1, 2.01, 0, 0, 0, 0, NO, 0, 0, NO 428, BEAM , UNILOAD, 6Y, NO, YES, 1, LZ, 0.29, 0.29, NO, 0, 2.01, 1, 2.01, 0, 0, 0, 0, NO, 0, NO, 0, NO
429, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.29, 0.29, NO, 0, 2.01, 1, 2.01, 0, 0, 0, 0, NO, 0, NO
430, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.29, 0.2, YES, 0, 2.01, 1, 2.35, 0, 0, 0, 0, , NO, 0, 0, NO
431, BEAM , UNILOAD, FY, NO, YES, 1, LZ, O.2, O.11, YES, O, 2.35, 1, 2.69, O, O, O, O, NO, O, NO
432, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, 0, NO
433, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, 0, NO, 0, NO
434, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO
435, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, 0, NO, NO
437, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO
438, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, 0, 0, NO 439, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, NO, 0, 0, NO
440, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 0.11, 0.11, NO, 0, 2.69, 1, 2.69, 0, 0, 0, 0, , NO, 0, 0, NO
4001, BEAM , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4002, BEAM , UNILOAD, FY, NO, NO, aDir[1], , , , 6.76965e-016, 174, 1, 174, 0, 0, 0, 0, NO, 0, NO
4003, BEAM , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4004, BEAM
               , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 1.74, 1, 1.74, 0, 0, 0, 0, , NO, 0, 0, NO
4005, BEAM , UNILOAD, EY, NO , NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4006, BEAM \ , UNILOAD, \ CY, \ NO \ , \ NO, \ aBir[1], \ , \ , \ 0, \ 1.74, \ 1, \ 1.74, \ 0, \ 0, \ 0, \ 0, \ NO, \ 0, \ NO
4008, BEAM , UNILOAD, &Y, NO, NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, NO
4010, BEAM , UNILOAD, FY, NO, NO, abir[1], , , , 148932e-015, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4011, BEAM , UNILOAD, 6Y, NO, NO, abir[1], , , 0, 174, 1, 174, 0, 0, 0, 0, NO, 0, 0, NO 4012, BEAM , UNILOAD, 6Y, NO, NO, abir[1], , , 0, 174, 1, 174, 0, 0, 0, 0, NO, 0, 0, NO 4013, BEAM , UNILOAD, 6Y, NO, NO, abir[1], , , 5.41572e-016, 174, 1, 174, 0, 0, 0, 0, NO, NO, NO
               , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 1.74, 1, 1.74, 0, 0, 0, 0, , NO, 0, 0, NO
4015, BEAM , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4016, BEAM , UNILOAD, EY, NO, NO, aDir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4017, BEAM , UNILOAD, EY, NO , NO, aBir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
4018, BEAM
              , UNILOAD, EY, NO , NO, aDir[1], , , , 0, 1.74, 1, 1.74, 0, 0, 0, 0, , NO, 0, 0, NO
4019, BEAM , UNILOAD, FY, NO , NO, abir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, NO 4020, BEAM , UNILOAD, FY, NO , NO, abir[1], , , , 0, 174, 1, 174, 0, 0, 0, 0, , NO, 0, 0, NO
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; End of data for load case [Vento strutture (Y1)] ------

*USE-STLD, Vento mobili (Y·)

*BEAMLOAD ; Element Beam Loads 101, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, NO 102, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, , NO, O, NO 103, BEAM , UNILOAD, &Y, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, NO 104, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, 0, NO 105, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 106, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 107, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 108, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 109, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 110, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 111, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, NO 112, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, , NO, O, NO 114, BEAM , UNILOAN, FY, NO, YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, NO, 0, NO 115, BEAM , UNILOAN, FY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, 0, NO 116, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 2, Z, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, 0, NO 117, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 2, Z, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, NO, 0, NO 118, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, NO, O, O, NO 119, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 120, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 121, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 122, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, , NO, O, O, NO 123, BEAM , UNILOAD, &Y, NO, YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, , NO, O, NO 124, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, NO 125, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, NO, O, NO 126, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, NO, O, NO 127, BEAM , UNILOAD, CY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, 1, NO, 0, 0, NO 128, BEAM , UNILOAD, CY, NO, YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, 0, NO 129, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 130, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, O, 2.32, 1, 2.32, O, O, O, O, NO, O, O, NO 131, BEAM , UNILOAD, FY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, NO 132, BEAM , UNILOAD, FY, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 133, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, NO, 0, NO 134, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 135, BEAM , UNILOAD, &Y, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, NO 136, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 137, BEAM , UNILOAD, EY, NO , YES, 1, LZ, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO 138, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO

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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

CENTRAL CONTRAL SECTION SELECTION SE	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V_1.mct

139, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO
140, BEAM , UNILOAD, EY, NO, YES, 1, LZ, 2, 2, NO, 0, 2.32, 1, 2.32, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [Vento mobili (Y-)] ------

*USE-STLD, Frenamento (X+)

*BEAMLOAD : Element Beam Loads 101, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 102, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 103, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 104, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, 0, NO 105, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 106, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, NO 107, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO $108, BEAM \ \ , UNILOAD, \ EX, \ NO \ , \ YES, \ 1, \ LZ, \ 0, \ 0, \ NO, \ 0, \ L56, \ 1, \ L56, \ 0, \ 0, \ 0, \ 0, \ NO, \ 0, \ NO, \$ 109, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 110, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, O, NO 111, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, O, NO 112, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 113, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, O, NO 115, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 116, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 117, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, NO 118, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 119, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 120, BEAM , UNILOAD, &X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, 0, NO 121, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 122, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, NO 123, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, , NO, O, O, NO 124, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 125, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 126, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 127, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 128, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 129, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 130, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 131, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, 0, NO 132, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 133, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 134, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 135, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 136, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 137, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 138, BEAM , UNILOAD, &X, NO , YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, NO, 0, NO 139, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 140, BEAM , UNILOAD, ϵ X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, , NO, 0, NO 201, BEAM , UNILOAD, ϵ X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 202, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 203, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 204, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 205, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 206, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 207, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 208, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 209. BEAM , UNILOAD, ϵ X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, 0, NO 210, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, L56, 1, L56, O, O, O, O, NO, O, NO 211, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, NO 212, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 213, BEAM , UNILOAD, €X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 214, BEAM , UNILOAD, €X, NO, YES, 1, LZ, O, O, NO, O, 1, 156, 1, 156, O, O, O, O, NO, O, O, NO 215, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 216, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 217, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 218, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 219, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 220, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 221, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 222, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 223, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 224, BEAM , UNILOAD, 6X, NO, YES, 1, 12, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 1, NO, 0, 0, NO 225, BEAM , UNILOAD, 6X, NO, YES, 1, 12, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 226, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 227, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 228, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 229, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 230, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 231, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 232, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 233, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 234, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 1,56, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 235, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO



PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Описии.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR OF THE PERSON OF TH	Author	R.V.	File Name	N Bereguardo V_1.mct

236, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 237, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 238, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 239. BEAM , UNILOAD, ϵ X, NO , YES, 1, LZ, 0, 0, NO, 0, 1.56, 1, 1.56, 0, 0, 0, 0, NO, 0, 0, NO 240. BEAM . UNILOAD. EX. NO. YES. 1. LZ. O. O. NO. O. 156. 1. 156. O. O. O. O. NO. O. NO. 301, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 1, NO, 0, NO 302, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 1, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO, 0, NO 303, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 304, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 1, NO, 0, 0, NO 305, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 306, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 307, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 308, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 309, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 310, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO $\textbf{311, BEAM} \ \ \textbf{, UNILOAD, £X, NO, YES, 1, LZ, 0, 0, NO, 0, 1.56, 1, 1.56, 0, 0, 0, 0, 0, 0, 0, NO}$ 312, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 1.56, 1, 1.56, 0, 0, 0, 0, NO, 0, 0, NO 313, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 1.56, 1, 1.56, 0, 0, 0, 0, NO, 0, NO, NO 314, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 1, NO, 0, 0, NO 315, BEAM , UNILOAD, EX, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 316, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, O, NO 317, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 318, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 319, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 320, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 321, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 322, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 323, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO, NO 324, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 325, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO, 326, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO, 0, NO 327, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 328, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 329, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 330, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 322, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 333, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 334, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 335, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, 0, NO 336, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 337, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 338, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 339, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 340, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO $\textbf{401}, \textbf{BEAM} \ \ \textbf{, UNILOAD, £X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 0, NO, 0, NO}$ 402, BEAM , UNILOAD, &X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, NO 403, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO $404, BEAM \;\;\; , UNILOAD, & X, NO \;\;, YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, , NO, 0, 0, NO \\ 405, BEAM \;\;\; , UNILOAD, & X, NO \;\;, YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, , NO, 0, 0, NO \\ 406, BEAM \;\;\; , UNILOAD, & X, NO \;\;, YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, , NO, 0, 0, NO \\ 406, BEAM \;\;\; , UNILOAD, & X, NO \;\;, YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, , NO, 0, 0, NO \\ 406, BEAM \;\;\; , UNILOAD, & X, NO \;\;, YES, 1, LZ, 0, 0, NO, 0, L56, 1, L56, 0, 0, 0, 0, NO, 0, 0, NO \\ 407, MARCHAEL REPROPERTY AND MARCHAEL$ 407, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 408, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 409. BEAM 410, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO $\textbf{411, BEAM} \ \ \textbf{, UNILOAD, £X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 0, 0, 0, NO}$ 413, BEAM , UNILOAD, &X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, NO 414, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, , NO, O, O, NO 415, BEAM , UNILOAD, &X, NO , YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, O, NO 416, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, 1, NO, 0, NO, 417, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0 418, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 419, BEAM , UNILOAD, 6X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 420, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, O, NO 421, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 422, BEAM , UNILOAD, EX, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 425, BEAM , UNILOAD, EX, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 426, BEAM , UNILOAD, EX, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, NO, 0, NO 427, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 428. BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 429. BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 431, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 432, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO 433, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, NO 434, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, NO 436, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, NO, O, NO 437, BEAM , UNILOAD, 6X, NO , YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, NO, O, O, NO 438, BEAM , UNILOAD, EX, NO, YES, 1, LZ, O, O, NO, O, 156, 1, 156, O, O, O, O, , NO, O, NO

A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuseum.	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Bereguardo V_1.mct

439, BEAM , UNILOAD, &X, NO, YES, 1, LZ, O, O, NO, O, 1.56, 1, 1.56, O, O, O, O, NO, O, NO $440, BEAM \ \ , UNILOAD, \&X, NO \,, YES, 1, LZ, 0, 0, NO, 0, 156, 1, 156, 0, 0, 0, 0, , NO, 0, NO$

; End of data for load case [Frenamento (X1)] ------

*USE-STLD, Termico Unif. -15°

*ELTEMPER ; Element Temperatures

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR DATE	Author	R.V.	File Name	N Bereduardo V 1.mct

236, 15,

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MIDAS A834 ABBIATEGRASSO

Onneman	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR DATE	Author	R.V.	File Name	N Receduardo V 1.mct

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 $\underline{\mathbf{MIDAS}}$

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Onue chain.	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY NAMED IN	Author	R.V.	File Name	N Bereguardo V 1.mct

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PROJECT TITLE :	PONTE NAVIGLIO BEREGUARDO

(Carriedan)	Company	Studio Corona sr l	Client	ZANA
STATE OF THE PARTY	Author	R.V.	File Name	N Berequardo V 1.mct

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUA	ARDO
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Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR DATE	Author	R.V.	File Name	N Bereduardo V 1.mct

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUA	ARDO
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Onuceans.	Company	Studio Corona sr l	Client	гана
COLUMN TAL	Author	R V	File Name	N Receduardo V 1.mct

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Modeling, Integrated Design & Analysis Software http://www.MidasUser.com

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A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR DATE	Author	R.V.	File Name	N Bereduardo V 1.mct

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Modeling, Integrated Design & Analysis Software http://www.MidasUser.com

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MIDAS A834 ABBIATEGRASSO

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COLUMN TAL	Author	R V	File Name	N Receduardo V 1.mct

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MIDAS A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO Studio Corona srl Client ANAS Company THE RESERVE OF THE PERSON NAMED IN Author R.V. File Name N Bereguardo V_1.mct

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*THERERAD ; Temperature Gradient
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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onun chair.	Company	Studio Corona sr l	Client	ZANA
CONTRACTOR AND AND	Author	R.V.	File Name	N Bereguardo V 1.mct

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317, 1, 5, YES, 0, 0, YES, 0,

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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

318, 1, 5, YES, 0, 0, YES, 0, 319, 1, 5, YES, 0, 0, YES, 0,

Onue unua	Company	Studio Corona sr l	Client	ZANA
	Author	R.V.	File Name	N Bereguardo V 1.mct

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    CONTROVENTI. 1
 ABNDR-RIGID LINK, DEFORMED, APPOGGI STALLE, DEFORMED, SUPPORTI, DEFORMED
    APPOSET PILE, DEFORMED
 ALOAD: PESO SOLETTA, LAST, PESO ACCIAIO E PILE, FIRST
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 AELEM-SOLETTA FITTIZIA, 1
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SFUNCTION ; Spectrum Function
 FUNC\mbox{-}SLD\mbox{ }0\mbox{-}izz\mbox{, 1, 0, 1, 9.806, 0.05, , 10000000}
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     0.000000, 0.04167, 0.123550, 0.10794
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MIDAS ARBA ARRIATEGRASSO PROJECT TITLE : PONTE NAVIGLIO BEREGUARDO Client Studio Corona sel ANAS Company Section Contract Party R.V. Author File Name N Bereguardo V_1.mct 0.370650, 0.10794, 0.434480, 0.09209 0.498310, 0.08029, 0.562150, 0.07117 0.625980, 0.06392, 0.689810, 0.058 0.753640. 0.05309, 0.817480, 0.04894 0.881310. 0.0454, 0.945140, 0.042331.008970. 0.03965, 1072810, 0.03729 1.136640. 0.0352, 1.200470, 0.03333 1264300, 0.03165, 1.287200, 0.03108 1288200, 0.02536, 1.328130, 0.0246 1.391970, 0.02347, 1.455800, 0.02244 1519630, 0.0215, 1.583460, 0.02063 1647300, 0.01983, 1.711130, 0.01909 1.820120, 0.01687, 1.929120, 0.01502 2.038110. 0.01346, 2.147100, 0.01213 2.256100. 0.01098, 2.365090, 0.00999 0.00913, 2.583080, 2.474090. 0.00838 0.00771, 2.801070, 2,692070. 0.00712 2.910060, 0.0066, 3.019050, 0.00613 3.128050, 0.00571, 3.237040, 0.00533 0.00499, 3.455030, 3.346040, 0.00468 3.564020, 0.0044, 3.673020, 0.00414 3.782010, 0.00391, 3.891010, 0.00369 4.000000, 0.00349 FUNC-SLD Vert, 1, 0, 1, 9.806, 0.05, , 1000000 USER n.nooooo, 0.00625, 0.050000, 0.01610 0.150000. 0.01619, 0.235000, 0.01034 0.00759, 0.405000, 0.00496, 0.575000, 0.320000, 0.006 0.490000, 0.00422 0.660000, 0.00368, 0.745000, 0.00326 0.00293, 0.915000, 0.830000, 0.00265 1000000, 0.00243, 1094000, 0.00203 1188000, 0.00172, 1.281000, 0.00148 1375000, 0.00128, 1.469000, 0.00113 1563000, 0.00099, 1656000, 0.00089 1.750000, 0.00079, 1844000, 0.00071 1.938000. 0.00065, 2.031000, 0.00059 2 125000 0.00054, 2.219000. 0.00049 0.00045, 2.406000, 2.313000. 0.00042 2.500000, 0.00039, 2.594000, 0.00036 2.688000, 0.00034, 2.781000, 0.00031 2.875000, 0.00029, 2.969000, 0.00028 3.063000, 0.00026, 3.156000, 0.00024 3.250000, 0.00023, 3.344000, 0.00022 3.438000, 0.00021, 3.531000, 0.00019 3.625000, 0.00018, 3.719000, 0.00018 3.813000. 0.00017, 3.906000, 0.00016 4.000000 0.00015 FUNC-SLV Orizz, 1, 0, 1, 9.806, 0.05, , 1000000 LISER 0.000000, 0.07665, 0.157190, 0.2091 0.471580, 0.2091, 0.535050, 0.18429 0.598520, 0.16475, 0.661990, 0.14895 0.725450, 0.13592, 0.788920, 0.12499 0.852390, 0.11568, 0.915860, 0.10766 0.979330, 0.10069, 1.042790, 0.09456 1106260, 0.08913, 1.169730, 0.0843 1233200. 0.07996, 1.287200, 0.0766 0.0625, 1.296670, 1.288200. 0.06209 1.360130. 0.05919, 1.423600, 0.05655 0.05414, 1550540, 1.487070. 0.05192 0.04988, 1677470, 1614010, 0.048 1740940, 0.04625, 1.804410, 0.04462 1908960, 0.03987, 2.013510, 0.03583 2.118070, 0.03238, 2.222620, 0.02941 2.327170, 0.02682, 2.431720, 0.02457 2.536270, 0.02258, 2.640830, 0.02083 2.745380. 0.01927, 2.849930, 0.01789 2.954480. 0.01664, 3.059030, 0.015520.01452, 3.268140, 0.01277, 3.477240, 3.163590, 0.0136 0.01201 3.372690, 0.01132, 3.686340, 0.01011, 3.895450, 3.581790. 0.01069 3.790900, 0.00957 4.000000, 0.00908

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A834 ABBIATEGRASSO

ANAS

PROJECT TITLE : PONTE NAVIGLIO BEREGUARDO Client Studio Corona sel Company and the same of th R.V. Author File Name N Bereguardo V_1.mct 1.188000, 0.00453, 1.281000, 0.00389 1.375000, 0.00338, 1469000, 0.00296 1563000, 0.00261, 1.656000, 0.00233 1.750000. 0.00208, 1844000, 0.00188 1.938000 0.0017, 2.031000, 0.00155 0.00141, 2.219000. 2.125000. 0.0013 0.00119, 2.406000, 2.313000, 0.0011 2.500000, 0.00102, 2.594000, 0.00095 0.00088, 2.781000, 2.688000, 0.00082 2.875000, 0.00077, 2.969000, 0.00072 3.063000, 0.00068, 3.156000, 0.00064 3.250000, 0.0006, 3.344000, 0.00057 3.438000, 0.00054, 3.531000, 0.00051 3.625000. 0.00049, 3.719000, 0.00046 3.813000. 0.00044, 3.906000, 0.00042 4.000000. 0.0004 FUNC=SLC Orizz, 1, 0, 1, 9.806, 0.05, , 1.000000 USER 0.000000, 0.08969, 0.162320, 0.25268 0.486970, 0.25268, 0.551360, 0.22317 0.615750, 0.19983, 0.680140, 0.744530, 0.16527, 0.808920, 0.15211 0.873310, 0.1409, 0.937700, 0.13122 1002090, 0.12279, 1066480, 0.11538 1.130870. 0.10881, 1.195260, 0.10295 0.09768, 1287200, 1.259650. 0.09559 0.07799, 1.324040, 0.07588 1288200, 0.07236, 1.452820, 0.06622, 1581600, 0.06915 1.388430. 1517210, 0.06352 1645990, 0.06104, 1.710380, 0.05874 0.05661, 1.839160, 1774770, 0.05463 1942060, 0.04899, 2.044960, 0.04419 2.147850, 0.04005, 2.250750, 0.03648 2.353650, 0.03336, 2.456540, 0.03062 2.559440, 0.02821, 2.662340, 0.02607 2.765240, 0.02416, 2.868130, 0.02246 2.971030. 0.02093, 3.073930, 0.01956 3 176820 0.01831, 3.279720, 0.01718 3.382620, 0.01615, 3.485510, 0.01521 3.588410, 0.01435, 3.691310, 0.01356 3.794210, 0.01284, 3.897100, 0.01217 4.000000, 0.01155 FUNC=SLC Vert, 1, 0, 1, 9.806, 0.05, , 1.000000 USER 0.000000, 0.01974, 0.050000, 0.05561 0.150000, 0.05561, 0.235000, 0.03549 0.320000. 0.02607, 0.405000, 0.0206 0.490000. 0.01702, 0.575000, 0.01451 0.660000 0.01264 0.745000 0.0112 0.830000. 0.01005, 0.915000, 0.00912 1000000, 0.00834, 1.094000, 0.00697 1.188000, 0.00591, 1.281000, 0.00508 0.00441, 1.469000, 1.375000, 0.00387 1563000, 0.00342, 1656000, 0.00304 1.750000, 0.00272, 1844000, 0.00245 1938000, 0.00222, 2.031000, 0.00202 2.125000, 0.00185, 2.219000, 0.00169 2.313000. 0.00156, 2.406000, 0.00144 0.00133, 2.594000, 2.500000. 0.00124 2.688000. 0.00115, 2.781000, 0.00108 0.00101, 2.969000, 0.00095 2.875000. 3.063000, 0.00089, 3.156000, 0.00084 0.00079, 3.344000, 3.250000, 0.00075 0.00071, 3.531000, 3.438000, 0.00067 3.625000, 0.00063, 3.719000, 0.0006 3.813000, 0.00057, 3.906000, 0.00055 4.000000. 0.00052 *SPLDCASE ; Spectrum Load Cases NAME=SLD Long (X1), XY, 0, 1, 1, NO, NO, LOG, COC, YES, O, NO SLD Orizz NAME:SLD Trasy (Y1), XY, 90, 1, 1, NO, NO, LOG, CQC, YES, O, NO SLD Orizz NAME=SLD Vert (Z1), Z, O, 1, 1, NO, NO, LOG, CQC, YES, O, NO SLD Vert

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NAME-SLV Trasv (Y·), XY, 90, 1, 1, NO, NO, LOG,

NAME:SLV Long (X1), XY, 0, 1, 1, NO, NO, LOE,

CQC, YES, O, NO SLV Orizz

COC. YES, O. NO

A834 ABBIATEGRASSO

PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Onus union	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

SLV Orizz

NAME:SLV Vert (Z·), Z, O, 1, 1, NO, NO, LOE,

QC, YES, O, NO

SLV Vert

NAME:SLCLong (X·), XY, O, 1, 1, NO, NO, LOE,

QC, YES, O, NO

SLC Orizz

NAME:SLC Trasy (Y·), XY, 90, 1, 1, NO, NO, LOE,

QC, YES, O, NO

SLC Orizz

NAME:SLC Vert (Z·), Z, O, 1, 1, NO, NO, LOE,

QC, YES, O, NO

SLC Orizz

NAME:SLC Vert (Z·), Z, O, 1, 1, NO, NO, LOE,

CQC, YES, O, NO

SLC Vert

*MVLDCODE ; Moving Load Code CODE:EUROCODE

LINELANE; Traffic Line Lanes**
NAMEDX**1, LANE**, 0, 0, BOTH**, 3, 2
**101, 1.05, 0, N0, 0, 102, 1.05, 0, N0, 0, 103, 1.05, 0, N0, 0
**104, 1.05, 0, N0, 0, 105, 1.05, 0, N0, 0, 106, 1.05, 0, N0, 0
**107, 1.05, 0, N0, 0, 108, 1.05, 0, N0, 0, 109, 1.05, 0, N0, 0
**110, 1.05, 0, N0, 0, 111, 1.05, 0, N0, 0, 112, 1.05, 0, N0, 0
**113, 1.05, 0, N0, 0, 114, 1.05, 0, N0, 0, 115, 1.05, 0, N0, 0
**119, 1.05, 0, N0, 0, 117, 1.05, 0, N0, 0, 118, 1.05, 0, N0, 0
**119, 1.05, 0, N0, 0, 120, 1.05, 0, N0, 0, 121, 1.05, 0, N0, 0
**122, 1.05, 0, N0, 0, 123, 1.05, 0, N0, 0, 124, 1.05, 0, N0, 0
**125, 1.05, 0, N0, 0, 126, 1.05, 0, N0, 0, 127, 1.05, 0, N0, 0
**121, 1.05, 0, N0, 0, 129, 1.05, 0, N0, 0, 130, 1.05, 0, N0, 0
**131, 1.05, 0, N0, 0, 132, 1.05, 0, N0, 0, 133, 1.05, 0, N0, 0
**134, 1.05, 0, N0, 0, 138, 1.05, 0, N0, 0, 134, 1.05, 0, N0, 0
**137, 1.05, 0, N0, 0, 138, 1.05, 0, N0, 0, 139, 1.05, 0, N0, 0

140, ·1.05, 0, N0, 0 NAME=DX 2, LANE, , 0, 0, BOTH, 3, 2

201, -0.85, 0, N0, 0, 202, -0.85, 0, N0, 0, 203, -0.85, 0, N0, 0, 204, -0.85, 0, N0, 0, 205, -0.85, 0, N0, 0, 206, -0.85, 0, N0, 0, 207, -0.85, 0, N0, 0, 208, -0.85, 0, N0, 0, 209, -0.85, 0, N0, 0, 210, -0.85, 0, N0, 0, 211, -0.85, 0, N0, 0, 212, -0.85, 0, N0, 0, 213, -0.85, 0, N0, 0, 214, -0.85, 0, N0, 0, 215, -0.85, 0, N0, 0, 216, -0.85, 0, N0, 0, 217, -0.85, 0, N0, 0, 218, -0.85, 0, N0, 0, 217, -0.85, 0, N0, 0, 218, -0.85, 0, N0, 0, 220, -0.85, 0, N0, 0, 221, -0.85, 0, N0, 0, 222, -0.85, 0, N0, 0, 223, -0.85, 0, N0, 0, 224, -0.85, 0, N0, 0, 225, -0.85, 0, N0, 0, 225, -0.85, 0, N0, 0, 226, -0.85, 0, N0, 0, 227, -0.85, 0, N0, 0, 228, -0.85, 0, N0, 0, 229, -0.85, 0, N0, 0, 233, -0.85, 0, N0, 0, 234, -0.85, 0, N0, 0, 235, -0.85, 0, N0, 0, 236, -0.85, 0, N0, 0, 237, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 238, -0.85, 0, N0, 0, 239, -0.85, 0, N0, 0

${\tt NAME=DX\ 3,\ LANE,\ ,\ 0,\ 0,\ BOTH,\ 3,\ 2}$

301, '0.65, '0, N0, 0, '302, '0.65, 0, N0, 0, 303, '0.65, 0, N0, 0, 304, '0.65, 0, N0, 0, 305, '0.65, 0, N0, 0, 306, '0.65, 0, N0, 0, 307, '0.65, 0, N0, 0, 308, '0.65, 0, N0, 0, 310, '0.65, 0, N0, 0, 311, '0.65, 0, N0, 0, 312, '0.65, 0, N0, 0, 313, '0.65, 0, N0, 0, 314, '0.65, 0, N0, 0, 312, '0.65, 0, N0, 0, 316, '0.65, 0, N0, 0, 317, '0.65, 0, N0, 0, 318, '0.65, 0, N0, 0, 316, '0.65, 0, N0, 0, 320, '0.65, 0, N0, 0, 322, '0.65, 0, N0, 0, 322, '0.65, 0, N0, 0, 322, '0.65, 0, N0, 0, 323, '0.65, 0, N0, 0, 324, '0.65, 0, N0, 0, 325, '0.65, 0, N0, 0, 326, '0.65, 0, N0, 0, 327, '0.65, 0, N0, 0, 328, '0.65, 0, N0, 0, 332, '0.65, 0, N0, 0, 333, '0.65, 0, N0, 0, 334, '0.65, 0, N0, 0, 332, '0.65, 0, N0, 0, 334, '0.65, 0, N0, 0, 335, '0.65, 0, N0, 0, 336, '0.65, 0, N0, 0, 337, '0.65, 0, N0, 0, 338, '0.65, 0, N0, 0, 339, '0.65, 0, N0, 0, 337, '0.65, 0, N0, 0, 338, '0.65, 0, N0, 0, 339, '0.65, 0, N0, 0, 334, '0.65, 0, N0, 0, 338, '0.65, 0, N0, 0, 339, '0.65, 0, N0, 0, 340, '0.65, 0, N0, 0, 338, '0.65, 0, N0, 0, 339, '0.65, 0, N0, 0, 340, '0.65, 0, N0, 0, '0.50, '

NAME=DX RIM, LANE, , 0, 0, BOTH, 15, 0

401, 0.3, 0, N0, 0, 402, 0.3, 0, N0, 0, 403, 0.3, 0, N0, 0, 404, 0.3, 0, N0, 0, 405, 0.3, 0, N0, 0, 406, 0.3, 0, N0, 0, 407, 0.3, 0, N0, 0, 408, 0.3, 0, N0, 0, 409, 0.3, 0, N0, 0, 410, 0.3, 0, N0, 0, 411, 0.3, 0, N0, 0, 412, 0.3, 0, N0, 0, 415, 0.3, 0, N0, 0, 415, 0.3, 0, N0, 0, 417, 0.3, 0, N0, 0, 418, 0.3, 0, N0, 0, 422, 0.3, 0, N0, 0, 423, 0.3, 0, N0, 0, 424, 0.3, 0, N0, 0, 425, 0.3, 0, N0, 0, 425, 0.3, 0, N0, 0, 429, 0.3, 0, N0, 0, 427, 0.3, 0, N0, 0, 428, 0.3, 0, N0, 0, 429, 0.3, 0, N0, 0, 427, 0.3, 0, N0, 0, 431, 0.3, 0, N0, 0, 432, 0.3, 0, N0, 0, 434, 0.3, 0, N0, 0, 435, 0.3, 0, N0, 0, 439, 0.3, 0, N0, 0, 440, 0.3, 0, N0, 0, 437, 0.3, 0, N0, 0, 438, 0.3, 0, N0, 0, 439, 0.3, 0, N0, 0, 440, 0.3, 0, N0, 0, 0

NAME=SX 1, LANE, , 0, 0, BOTH, 3, 2

401, 105, 0, N0, 0, 402, 105, 0, N0, 0, 403, 105, 0, N0, 0 404, 105, 0, N0, 0, 405, 105, 0, N0, 0, 406, 105, 0, N0, 0 407, 105, 0, N0, 0, 408, 105, 0, N0, 0, 409, 105, 0, N0, 0 410, 105, 0, N0, 0, 411, 105, 0, N0, 0, 412, 105, 0, N0, 0

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PROJECT TITLE: PONTE NAVIGLIO BEREGUARDO

Osuguina.	Company	Studio Corona sr l	Client	ZANA
Section Control Section	Author	R.V.	File Name	N Bereguardo V_1.mct

NAME=SX 2, LANE, , 0, 0, BOTH, 3, 2

301, 0.85, 0, N0, 0, 302, 0.85, 0, N0, 0, 303, 0.85, 0, N0, 0, 304, 0.85, 0, N0, 0, 305, 0.85, 0, N0, 0, 306, 0.85, 0, N0, 0, 307, 0.85, 0, N0, 0, 308, 0.85, 0, N0, 0, 309, 0.85, 0, N0, 0, 310, 0.85, 0, N0, 0, 311, 0.85, 0, N0, 0, 312, 0.85, 0, N0, 0, 313, 0.85, 0, N0, 0, 314, 0.85, 0, N0, 0, 315, 0.85, 0, N0, 0, 314, 0.85, 0, N0, 0, 315, 0.85, 0, N0, 0, 317, 0.85, 0, N0, 0, 318, 0.85, 0, N0, 0, 320, 0.85, 0, N0, 0, 321, 0.85, 0, N0, 0, 322, 0.85, 0, N0, 0, 323, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 323, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 328, 0.85, 0, N0, 0, 327, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 324, 0.85, 0, N0, 0, 325, 0.85, 0, N0, 0, 333, 0.85, 0, N0, 0, 334, 0.85, 0, N0, 0, 335, 0.85, 0, N0, 0, 336, 0.85, 0, N0, 0, 337, 0.85, 0, N0, 0, 338, 0.85, 0, N0, 0, 339, 0.85, 0, N0, 0, 340, 0.85, 0, N0, 0, 338, 0.85, 0, N0, 0, 339, 0.85, 0, N0, 0, 340, 0.85, 0, N0, 0, 338, 0.85, 0, N0, 0, 339, 0.85, 0, N0, 0, 340, 0.85, 0, N0, 0

NAME:SX 3, LANE, , 0, 0, BOTH, 3, 2

201, 0.65, 0, N0, 0, 202, 0.65, 0, N0, 0, 203, 0.65, 0, N0, 0
204, 0.65, 0, N0, 0, 205, 0.65, 0, N0, 0, 206, 0.65, 0, N0, 0
207, 0.65, 0, N0, 0, 208, 0.65, 0, N0, 0, 209, 0.65, 0, N0, 0
210, 0.65, 0, N0, 0, 211, 0.65, 0, N0, 0, 212, 0.65, 0, N0, 0
213, 0.65, 0, N0, 0, 214, 0.65, 0, N0, 0, 215, 0.65, 0, N0, 0
216, 0.65, 0, N0, 0, 217, 0.65, 0, N0, 0, 218, 0.65, 0, N0, 0
219, 0.65, 0, N0, 0, 220, 0.65, 0, N0, 0, 221, 0.65, 0, N0, 0
222, 0.65, 0, N0, 0, 223, 0.65, 0, N0, 0, 224, 0.65, 0, N0, 0
225, 0.65, 0, N0, 0, 226, 0.65, 0, N0, 0, 224, 0.65, 0, N0, 0
228, 0.65, 0, N0, 0, 229, 0.65, 0, N0, 0, 227, 0.65, 0, N0, 0
231, 0.65, 0, N0, 0, 232, 0.65, 0, N0, 0, 233, 0.65, 0, N0, 0
234, 0.65, 0, N0, 0, 235, 0.65, 0, N0, 0, 236, 0.65, 0, N0, 0
237, 0.65, 0, N0, 0, 238, 0.65, 0, N0, 0, 239, 0.65, 0, N0, 0
240, 0.65, 0, N0, 0, 238, 0.65, 0, N0, 0, 239, 0.65, 0, N0, 0

NAME=SX RIM, LANE, , O, O, BOTH, 15, O

101, -0.3, 0, N0, 0, 102, -0.3, 0, N0, 0, 103, -0.3, 0, N0, 0
104, -0.3, 0, N0, 0, 105, -0.3, 0, N0, 0, 106, -0.3, 0, N0, 0
107, -0.3, 0, N0, 0, 108, -0.3, 0, N0, 0, 109, -0.3, 0, N0, 0
110, -0.3, 0, N0, 0, 111, -0.3, 0, N0, 0, 112, -0.3, 0, N0, 0
113, -0.3, 0, N0, 0, 114, -0.3, 0, N0, 0, 115, -0.3, 0, N0, 0
116, -0.3, 0, N0, 0, 120, -0.3, 0, N0, 0, 118, -0.3, 0, N0, 0
119, -0.3, 0, N0, 0, 120, -0.3, 0, N0, 0, 121, -0.3, 0, N0, 0
122, -0.3, 0, N0, 0, 123, -0.3, 0, N0, 0, 124, -0.3, 0, N0, 0
125, -0.3, 0, N0, 0, 129, -0.3, 0, N0, 0, 127, -0.3, 0, N0, 0
128, -0.3, 0, N0, 0, 129, -0.3, 0, N0, 0, 130, -0.3, 0, N0, 0
131, -0.3, 0, N0, 0, 132, -0.3, 0, N0, 0, 133, -0.3, 0, N0, 0
134, -0.3, 0, N0, 0, 135, -0.3, 0, N0, 0, 136, -0.3, 0, N0, 0
137, -0.3, 0, N0, 0, 135, -0.3, 0, N0, 0, 136, -0.3, 0, N0, 0
137, -0.3, 0, N0, 0, 138, -0.3, 0, N0, 0, 139, -0.3, 0, N0, 0

*VEHICLE : Vehicles

NAME-Fatica 2-A, I, 3, Fatigue Load Model 2 (280), , , 1, , , NAME-Fatica 2-B, I, 3, Fatigue Load Model 2 (360), , , 1, , , NAME-Fatica 2-C, I, 3, Fatigue Load Model 2 (560), , , 1, , , NAME-Fatica 2-B, I, 3, Fatigue Load Model 2 (560), , , 1, , , NAME-Fatica 3 (1 veicolo), I, 3, Fatigue Load Model 3 (010), , , 1, , , NAME-Schema 1, I, Load Model 1, 0.75, 0.4, , I, I, I, I, I, I, I

*MVLDCASE(EURO) ; Moving Load Cases